Township of Douro-Dummer
Agenda for a Regular Meeting of Council

Tuesday, June 7, 2022, 5:00 p.m.
Douro-Dummer YouTube Channel
https://www.youtube.com/channel/UCPpzm-uRBZRDjB89o2X6R_A

Please note, that Council may, by general consensus,
change the order of the agenda, without prior notification,
in order to expedite the efficiency of conducting business

Electronic Meetings
On August 4, 2020 Council amended the Township Procedure By-Law to permit meetings to be held electronically and to allow members participating electronically to be counted towards quorum.

Until further notice, regular meetings of Council are being held electronically. Meetings will be recorded and live-streamed on the Township YouTube channel.

Please contact the Acting Clerk if you require an alternative method to virtually attend the meeting. martinac@dourodummer.on.ca or 705-652-8392 x210

Pages

1. Call to Order

2. Land Acknowledgement

3. Moment of Silent Reflection

4. Disclosure of Pecuniary Interest:

5. Adoption of Agenda: June 7, 2022

6. Adoption of Minutes and Business Arising rom the Minutes.

13. Accounts:

13.1. Accounts - May 7 to May 27, 2022 342

14. Reports derived from previous Notice of Motions:

15. Notices of Motion - No Debate

16. Announcements:

17. Closed Session:

17.1. Reason for Closed Session:

Section 239 (2) of the Municipal Act, 2001, S.O. 2001, c. 25

(b) personal matters about an identifiable individual, including municipal or local board employees;(Personnel Matters)

(f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose;

18. Rise from Closed Session with or without a Report

19. Matters Arising from Closed Session:

20. Confirming By-law - 2022-31 355

21. Next Meeting: June 21, 2022

22. Adjournment

Minutes of the Special Meeting of Council of the Township of Douro-Dummer

May 10, 2022, 6:00 PM
Township Douro-Dummer YouTube Channel
https://www.youtube.com/channel/UCPpzm-uRBZRDjB89o2X6R_A

Present:	**Mayor J. Murray Jones**
	Deputy Mayor Karl Moher
	Councillor Shelagh Landsmann
	Councillor Heather Watson
	Councillor Thomas Watt
Staff Present:	**CAO, Elana Arthurs**
	Acting Clerk Martina Chait-Hartwig

1. Reason(s) for Special Meeting:

   The Mayor called the meeting to order at 6:00 p.m. and stated the reason that our special meeting this evening to see a presentation from our CAO Elana Arthurs regarding Off-Road Vehicles on Municipal Roads in the Township and to receive comments from the public.

2. Land Acknowledgement

   The Mayor recited the Land Acknowledgement.

3. Disclosure of Pecuniary Interest:

   The Mayor reminded members of Council of their obligation to declare any pecuniary interest they might have. None were declared.

4. Adoption of Agenda: May 10, 2022

Resolution Number 166-2022

Moved By: Councillor Landsmann
Seconded By: Councillor Watson

That the agenda for the Special Council Meeting, dated May 10, 2022, be adopted, as circulated. Carried

5. Delegations, Petitions or Presentations:

5.1 Off-Road Vehicle Use on Municipal Roads

CAO, Elana Arthurs presented an overview of the use of Off-Road Vehicles on Municipal Roads in the Township of Douro-Dummer.

5.2 Public Meeting

That the Public meeting to discuss Off-Road Vehicles on the municipal roads in Douro-Dummer be declared open. (6:06 p.m.)

Members of the public submitted comments via the audio function and on the chat function.

In attendance:

Russell Rowe and Dorothy Tuckerman, Douro-Dummer are not in support of ORV's on the municipal roads.

Don Benson, Douro-Dummer is not in support of ORV's on the municipal roads.

Doug Andrews and John Good, Douro-Dummer are not in support of ORV's on the municipal roads.

Brent Whetung, Douro-Dummer commented in support of ORV's on the municipal roads.

Sherry Nelson, Douro-Dummer in support of ORV's on the municipal roads.

Harold Nelson, Douro-Dummer in support of ORV's on the municipal roads.

Steve Kelly, Douro-Dummer in support of ORV's on the municipal roads.

Nancy Thompson, Douro-Dummer cautions ORV's from using municipal roads.

6. Adjournment

Resolution Number 167-2022

Moved By: Councillor Landsmann
Seconded By: Councillor Watson

That this meeting adjourn 6:31 p.m. Carried

_____

Deputy Mayor, Karl Moher

_____

Acting Clerk, Martina Chait-Hartwig

Minutes of the Special Meeting of Council of the Township of Douro-Dummer

May 17, 2022, 4:00 PM
Township Douro-Dummer YouTube Channel
https://www.youtube.com/channel/UCPpzm-uRBZRDjB89o2X6R_A

Present:	Deputy Mayor Karl Moher Councillor Shelagh Landsmann Councillor Heather Watson Councillor Thomas Watt
Members Absent:	Mayor J. Murray Jones
Staff Present:	CAO, Elana Arthurs Acting Clerk Martina Chait-Hartwig
Also Present:	Paula Boutis, Aird Berlis

1. Call to Order

With a quorum of Council being present, the Deputy Mayor called the meeting to order at 4:03 p.m.

2. Land Acknowledgement

The Deputy Mayor recited the Land Acknowledgement and Council observed a moment of silent reflection.

3. Approval of Closed Session Agenda - May 17, 2022

4. Declaration of Pecuniary Interest

The Deputy Mayor reminded members of Council of their obligation to declare any pecuniary interest they might have. None were declared.

5. Move into Closed Session

6. Closed Session Items

Resolution Number - 146-2022

Moved by: Councillor Landsmann
Seconded by: Councillor Watt

That Council move into Closed Session for reasons stated (4:04 p.m.) Carried

6.1 (f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose;

6.2 (f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose

7. Out of Closed Session

Resolution Number - 147-2022

Moved by: Councillor Landsmann
Seconded by: Councillor Watt

That Council come out of closed session at 4:59 p.m. without a report. Carried

8. Rise from Closed Session with or without a Report: None

9. Matters Arising from Closed Session: None

10. Adjournment

Resolution Number 148-2022

Moved by: Councillor Watson
Seconded by: Councillor Watt

That the meeting adjourn at (5:01 p.m.). Carried

_____
Deputy Mayor, Karl Moher

_____
Acting Clerk, Martina Chait-Hartwig

Minutes of the Regular Meeting of Council of the Township of Douro-Dummer

May 17, 2022, 5:00 PM
Township Douro-Dummer YouTube Channel
https://www.youtube.com/channel/UCPpzm-uRBZRDjB89o2X6R_A

Present:	**Deputy Mayor Karl Moher**
	Councillor Shelagh Landsmann
	Councillor Heather Watson
	Councillor Thomas Watt
Members Absent:	**Mayor J. Murray Jones**
Staff Present:	**CAO, Elana Arthurs**
	Acting Clerk, Martina Chait-Hartwig
	Acting Treasure, Paul Creamer
	Manager of Public Works, Jake Condon
	Chief Building Official, Brian Fawcett

1. Call to Order

With a quorum of Council being present, the Deputy Mayor called the meeting to order at 5:00 p.m.

2. Land Acknowledgement

That Deputy Mayor recited the Land Acknowledgement.

3. Moment of Silent Reflection

The Council observed a moment of silent reflection.

4. Disclosure of Pecuniary Interest:

The Deputy Mayor reminded members of Council of their obligation to declare any pecuniary interest they might have. None were declared.

5. Adoption of Agenda: May 17, 2022

Resolution Number 149-2022

Moved by: Councillor Watt
Seconded by: Councillor Watson

That the agenda for the Regular Council Meeting, dated May 17, 2022, be adopted, as circulated. Carried

6. Adoption of Minutes and Business Arising from the Minutes

6.1 Council Meeting Minutes - May 3, 2022

Resolution Number 150-2022

Moved by: Councillor Watt
Seconded by: Councillor Watson

That the Minutes from the Regular Council Meeting, held on May 3, 2022, be received and adopted, as amended. Carried

6.2 Appointments to Arena Facilities Future Ad-Hoc Committee

Resolution Number 151-2022

Moved by: Councillor Watson
Seconded by: Councillor Watt

That Jim Bailey, Gerard Sullivan, Kerri Riel and Liam Ryan be appointed to the Arena Facilities Future Ad-Hoc Committee effective May 17, 2022.

Carried

7. Consent Agenda (Reports voted upon by ONE motion) - No Debate: None

8. Delegations, Petitions, Presentations or Public Meetings:

8.1 Delegation - Michael Gisinky, Opening of Eight Line Road Dummer, Clerk/Planning-2021-39

Resolution Number 152-2022

Moved by: Councillor Watson
Seconded by: Councillor Landsmann

That the presentation from Mr. Gisinky requesting changes to the requirements of the Road Opening Policy be received. Carried

9. Staff Reports:

9.1 Report and Capital Project Status - May 2022

Resolution Number 153-2022

Moved by: Councillor Watt
Seconded by: Councillor Watson

That the report and capital project status for May 2022 be received with thanks. Carried

9.2 Report to Council - Animal Control Services Agreement, Building Department-2022-05

Resolution Number 154-2022

Moved by: Councillor Watson
Seconded by: Councillor Watt

That the report, dated May 17, 2022, regarding Animal Control Services Agreement be received and that Council authorize the agreement between the Township of Douro-Dummer and Peterborough Humane Society for the continued operation of small animal control services. Carried

9.3 Report to Council - Building Department Structures and Unusual Buildings Policy, Building Department-2022-08

Resolution Number 155-2022

Moved by: Councillor Watson
Seconded by: Councillor Landsmann

That the report, dated May 17, 2022, regarding Building Department Structures and Unusual Buildings be received, that the Policy be entered into the Policy Manual as Policy P-11 and that Council Resolutions 160-2020 and 07-2021 be resolved with the approval of the Policy by the Chief Building Official. Carried

9.4 Report to Council - 2022 Surface Treatment, Public Works-2022-07

Resolution Number 156-2022

Moved by: Councillor Watson
Seconded by: Councillor Watt

That the report, dated May 17, 2022, regarding the 2022 Surface Treatment Tender be received; and

Miller Paving Limited be awarded the 2022 Surface Treatment tender for the Township's surface treatment requirements;

That Council approve the amended projects outlined in the report with any cost overture be drawn from reserves and finally that the Manager of Public Works and Acting Treasure bring back the report regarding the funding opportunities for the two projects removed from the work plan. Carried

9.5 Report to Council - Birchview Road Speed Reduction, C.A.O.-2022-13

Resolution Number 157-2022

Moved by: Councillor Watt
Seconded by: Councillor Landsmann

That the report, dated May 17, 2022 regarding Birchview Road Speed Reduction be received; and

That staff prepare a speed reduction request policy, that By-law No. 2018-39, as amended be further amended to reduce the speed on Douglas Road to 50 Km/h from 60 Km/h and that a decision on Birchview Road be deferred pending additional information from the solicitor and engineers.

Carried

10. Committee Minutes and Other Reports:

10.1 Deputy Mayor Moher - Update on County Council Matters

Resolution Number 158-2022

Moved by: Councillor Watt
Seconded by: Councillor Watson

That the verbal report from Deputy Mayor Moher regarding an update on County Council matters be received. Carried

10.2 County of Peterborough - Official Plan Technical Advisory Committee Meeting Minutes - April 14, 2022

Resolution Number 159-2022

Moved by: Councillor Watson
Seconded by: Councillor Landsmann

That the minutes from County of Peterborough, Official Plan Technical Advisory Committee Meeting No. 37 be received. Carried

10.3 Planning Committee Minutes - April 29, 2022

Resolution Number 160-2022

Moved by: Councillor Watson
Seconded by: Councillor Landsmann

That the minutes from the Planning Committee Meeting held on April 29, 2022, be received and approved. Carried

11. Correspondence – Action Items:

11.1 Notice from AMO - Delegation Request Form

Resolution Number 161-2022

Moved by: Councillor Watt
Seconded by: Councillor Landsmann

Letter from Ministry of Municipal Affairs & Housing dated May 3, 2022 regarding the Association of Municipalities of Ontario (AMO) 2022 Delegation Form be received. Carried

11.2 Township of Havelock-Belmont-Methuen - Rural Transportation Pilot Project

Resolution Number 162-2022

Moved by: Councillor Watson
Seconded by: Councillor Watt

Letter from Bob Angione CAO/Clerk from the Township of Havelock-Belmont-Methuen dated May 9, 2022 regarding the Rural Transportation Pilot Project be received and supported and further that the Township join any discussions that are taking place. Carried

11.3 County of Peterborough - 2021 Diversion Report

Resolution Number 163-2022

Moved by: Councillor Landsmann
Seconded by: Councillor Watson

Reports from Catrina Switzer, Waste Management Administrative Coordinator, county of Peterborough dated May 5, 2022 regarding the Resource Productivity and Recovery Authority Datacall and Waste Management Master Plan Update to Council be received. Carried

12. By-laws:

12.1 2022-23 - Adoption of Tax Rates, Penalty and Interest for 2022

Moved by: Councillor Landsmann
Seconded by: Councillor Watt

A By-law 2022-23, being a By-law to adoption of Tax rates, Penalty and Interest for 2022 of the Township of Douro-Dummer be passed, in open council this 17th day of May, 2022 and that the Deputy Mayor and the Acting Clerk be directed to sign same and affix the Corporate Seal thereto.

Carried

12.2 2022-24 - To authorize the Service Agreement between the Township of Douro-Dummer and the Peterborough Humane Society

Moved by: Councillor Watson
Seconded by: Councillor Watt

A By-law 2022-24, being a By-law to authorize the service agreement between the Township of Douro-Dummer and the Peterborough Humane Society be passed, in open council this 17th day of May, 2022 and that the Deputy Mayor and the Acting Clerk be directed to sign same and affix the Corporate Seal thereto. Carried

12.3 2022-25 - Lease agreement with Waste connections of Canada

Moved by: Councillor Watt
Seconded by: Councillor Landsmann

A By-law 2022-25, being a By-law to authorize the lease agreement between the Township of Douro-Dummer and the Waste Connections of Canada be deferred. Carried

13. Accounts:

13.1 Township Accounts - May 17, 2022

Resolution Number 164-2022

Moved by: Councillor Landsmann
Seconded by: Councillor Watson

That the Township Accounts - May 17, 2022 be moved to Committee of Whole and Council sends any question in advance.
Carried

14. Reports derived from previous Notice of Motions: None

15. Notices of Motion - No Debate: None

16. Announcements:

Councillor Watson provides an update on the 2022 Canada Day Parade.

17. Closed Session: None

18. Rise from Closed Session with or without a Report: None

19. Matters Arising from Closed Session: None

20. Confirming By-law - 2022-26

Moved by: Councillor Landsmann
Seconded by: Councillor Watson

That By-law Number 2022-25, being a By-law to confirm the proceedings of the Regular Meeting of Council, held on the 19 day of May, 2022, be passed in open Council and that the Deputy Mayor and the Acting Clerk be directed to sign same and affix the Corporate Seal thereto. Carried

21. Next Meeting

Planning Committee Meeting – May 27, 2022

Committee of the Whole – May 31, 2022

Council Regular Meeting – June 7, 2022

22. Adjournment

Resolution Number 165-2022

Moved by: Councillor Landsmann
Seconded by: Councillor Watt

That this meeting adjourn at 6:28 p.m. Carried

_____

Deputy Mayor, Karl Moher

_____

Acting Clerk, Martina Chait-Hartwig

Minutes of the Emergency Meeting of Council of the Township of Douro-Dummer

May 26, 2022, 9:30 AM
Township Douro-Dummer YouTube Channel
https://www.youtube.com/channel/UCPpzm-uRBZRDjB89o2X6R_A

Present:	**Mayor J. Murray Jones**
	Deputy Mayor Karl Moher
	Councillor Shelagh Landsmann
	Councillor Heather Watson
	Councillor Thomas Watt
Staff Present	**CAO, Elana Arthurs**
	Acting Clerk Martina Chait-Hartwig
	Chief Building Official Brian Fawcett

1. Reason(s) for Emergency Meeting:

   The Mayor called the meeting to order at 9:34 a.m. and stated the reason for the Emergency Meeting is to present a By-law to Council for the appointment of additional Building Inspectors to the Building Department to address building damage from the storm which took place on May 21, 2022.

2. Land Acknowledgement

   The Mayor recited the Land Acknowledgement.

3. Disclosure of Pecuniary Interest:

   The Mayor reminded members of Council of their obligation to declare any pecuniary interest they might have. None were declared.

4. Adoption of Agenda: Emergency Council Meeting May 26, 2022

Resolution Number 168-2022

Moved By: Councillor Watson
Seconded By: Councillor Landsmann

That the agenda for the Emergency Council Meeting, dated May 26, 2022, be adopted, as circulated. Carried

5. By-laws:

5.1 By-law Number 2022-27

Moved By: Deputy Mayor Moher
Seconded By: Councillor Landsmann

A By-law 2022-27, being a By-law to appoint a Chief Building Official and Inspectors of the Township of Douro-Dummer be passed, in open council this 26th day of May, 2022 and that the Mayor and the Acting Clerk be directed to sign same and affix the Corporate Seal thereto. Carried

6. Confirming By-law: 2022-28

Moved By: Councillor Watt
Seconded By: Councillor Landsmann

That By-law Number 2022-28, being a By-law to confirm the proceedings of the Emergency Meeting of Council, held on the 26th day of May, 2022, be passed in open Council and that the Mayor and the Acting Clerk be directed to sign same and affix the Corporate Seal thereto. Carried

7. Adjournment

Resolution Number 169-2022

Moved By: Councillor Watson
Seconded By: Deputy Mayor Moher

That this meeting adjourn 9:50 a.m. Carried

_____

Mayor, J. Murray Jones

_____

Acting Clerk, Martina Chait-Hartwig

To: Tricia Clarkson
Peterborough This Week
Opinion column “Trees for Life”
May 12,22

From: Peter Cowan
996 Ivandale Rd
Douro Dummer cowanphc@gmail.com 705 761 3370

Hello Ms. Clarkson.

Your article, in the May 12th issue of Peterborough This Week on the great job that Peterborough is doing in tree planting, caught my attention.

I want to encourage you to look at two related issues in our locality, both of which are a spin-off from the positive vibes that planting new trees creates.

First is the flip side of that tree planting coin which is the relative benefits of planting a thousand new trees versus keeping a mature tree living over a 10-year span. I predict you could confirm my conviction that protecting existing trees is a higher priority than planting new ones and with immediate benefit.

I feel a reasonable analogy would be cutting down a fruit bearing tree in its prime, only to replace it with a sapling.

No matter what the ratio, I'm pretty sure you would agree that we all need to reconsider the ease with which we cut down mature trees. In this context I'd like to point out what's been happening in my township and suggest that if you looked at the rest of the county and further, you might see that the benefits associated with all the tree planting that Peterborough has done in the past year have been more than offset by all the mature trees that have been cut down in just "upgrading" a short length of rural road.
Every Township needs to consider the downside of removing a mature tree. They need to know how many new seedlings it would take to give the same benefit over a 10-year period of JUST ONE mature tree. I would bet it's in the thousands.

Others have looked at this. Attached is a paragraph by William Moomaw published in Yale Environment 360 (link attached) where he points out that the benefit from planting seedlings comes many decades later compared to the IMMEDIATE benefit from mature trees .

With that in mind, I would also encourage you, then, to look at the policies and procedures in the various townships to determine just how much they understand this concept because, based on what my neighbours and I saw last year in Douro-dummer Township, this aspect of environmentalism is non-existent.

6 pages

If you or someone you know has the skills to do the calculation, I'm betting you would find that the dozens, if not hundreds of mature trees that the township ripped out on just a one and a half kilometre stretch of East White Lake and Ivandale roads in our community, MORE than offset ALL the benefit that the rest of Peterborough County contributed to the environment by tree planting in the last YEAR!

This Township has a standard for road Improvement that requires a huge right of way, even for little used roads, that does not take into account what the residents would prefer nor probably the immediate financial costs, nor, apparently, the impact on the environment.

The attached pictures illustrate the deforestation on east White Lake rd. and Ivandale in order to "enable proper snow removal, sight lines and a road allowance suitable for road bed improvements". But wait!. There are also pictures of White Lake rd west which services many more properties, has no cleared shoulders extremely poor sight lines, mature trees inches from the road bed and property owner mail boxes and structures just clear of the pavement yet is hard surfaced, seems to be plowed without problems, is quite functional without frequent collisions and looks like a cottage road should.

I'm a cynic and I believe that we will never fix the environmental problems. What happened on our street proves that individuals can never fix the problem when the next level up, their whole township, seems to ignore it.

I'm impressed with your dedication and I hope you can prove me wrong but at this point I think there are far bigger fish to fry than the little seedlings as well as low hanging fruit left to rot. The most frustrating aspect is that changing the current road specifications would make our community more beautiful, save us money AND help the environment TODAY, not just in 30 years.

Peter Cowan
Ivandale Rd
Douro Dummer

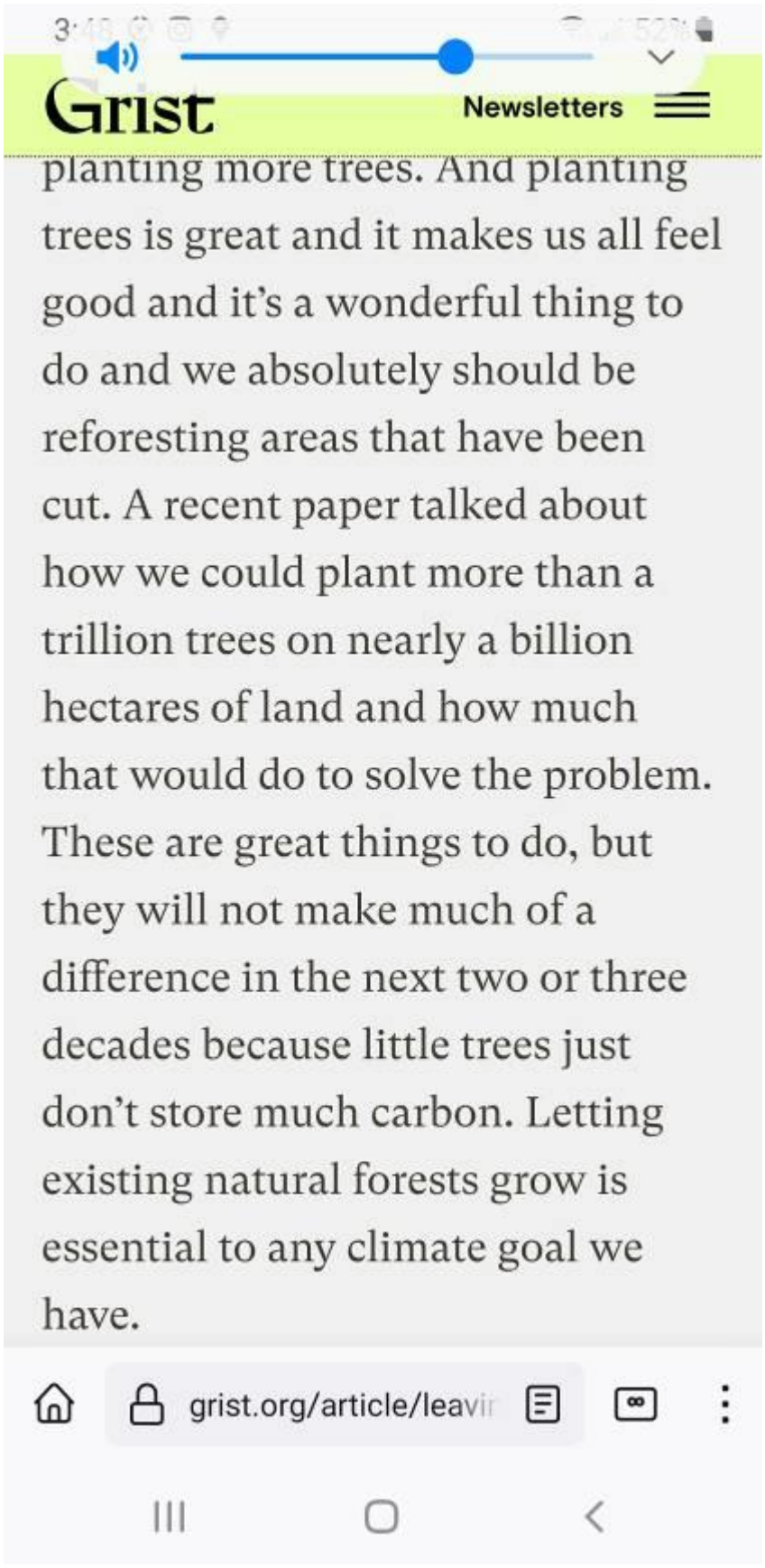
https://grist.org/article/leaving-trees-standing-might-be-more-important-than-planting-new-ones/

This is White Lake Road WEST, No cleared shoulder, mature trees and structures near pavement, wires not cleared, beautiful canopy, JUST LIKE Ivandale was before the slaughter. This road also services dozens more properties than does the East road.

This is what Ivandale and White Lake Rd E look like now

Notice the “so necessary “ sight lines” on this road that serves 12 properties and dead ends in ½ km. This doesn’t show the destroyed flower beds residents had at the shoulders Nor the piles of mature logs that lined the roads, Something like what this storm has accomplished!

Key message from Yale 360 article on next page.


Grist
Newsletters
planting more trees. And planting trees is great and it makes us all feel good and it's a wonderful thing to do and we absolutely should be reforesting areas that have been cut. A recent paper talked about how we could plant more than a trillion trees on nearly a billion hectares of land and how much that would do to solve the problem. These are great things to do, but they will not make much of a difference in the next two or three decades because little trees just don't store much carbon. Letting existing natural forests grow is essential to any climate goal we have.
grist.org/article/leavi

Township of Douro-Dummer

Report to Council
Re: Clerk/Planning-2022-40
From: Martina Chait-Hartwig
Date: June 7, 2022
Re: Application to Rezone – File: R-01-22
Sculich and Stein

Applicant: Judith Sculich and David Stein
Agent: Holly Richards-Conley, Black Point Construction Services and Laura Stone, KDM Planning Inc.
Legal Description: Concession 8, Part Lot 32, Dummer Ward
1304 Whetung Road
Roll No.: 1522-020-005-35700

Recommendation:
That the Clerk/Planning-2022-40 report, dated June 7, 2022 regarding the zoning by-law amendment for Judith Sculich and David Stein (File R-01-22, Roll No. 1522-020-005-35700) be approved as presented.

Overview: The owners have applied to amend the existing zoning of a parcel of land in Part Lot 32, Concession 8, in the former Township of Dummer, (now the Dummer Ward of the Township of Douro-Dummer) in the County of Peterborough.

The land in question is currently zoned Limited Service Residential (LSR) Zone. The effect of this By-law Amendment to create a Special District to recognize the existing water yard setback of **16.6m (54.46')** and to allow for the existing dwelling to be demolished and rebuilt.

Conformity to Provincial Policy Statement and Growth Plan for the Greater Golden Horseshoe:

The application appears to be in conformity with both the Provincial Policy Statement and the Growth Plan.

- The submitted topographical survey indicates that the proposed development will be located outside the floodplain of Stoney Lake as per the ORCA floodplain mapping.
- A planting plan which shows that additional plantings will be completed to improve the shoreline and replace trees lots to development
- A Planning Justification report and an Archeological Study were both submitted in support of the application.

There is no evidence that the application conflicts with the Growth Plan.

Conformity to Official Plan: The Official Plan designates the property as Lakeshore Residential. Residential uses are allowed in this designation.

Comments:
Comments have been received from the following parties:
- Dawn Berney and Chris Geggie – In support
- Grant Greenwood – In support
- Tara Greenwood and Dwayne O'Leary – In support

- David Satok – In support
- Brent Whetung – In opposition

Conclusion: The requested zoning by-law amendment meets the requirements of the Provincial Policy Statement, the Growth Plan and meets the intent of the Official Plan.

Financial Impact: All costs related to a rezoning are the responsibility of the owner.

Strategic Plan Applicability: To preserve and enhance the natural heritage features and resources of the Township.

Sustainability Plan Applicability: N/A

Report Approval Details

Document Title:	R-01-22 Sculich and Stein.docx
Attachments:	- R-01-22 Application, redacted.pdf - R-01-22 - Zoning Poster - Virtual Meeting.pdf - R-01-22 - ZBA Notice (virtual).docx
Final Approval Date:	Jun 1, 2022

This report and all of its attachments were approved and signed as outlined below:

Elana Arthurs

From: Grant Greenwood
Sent: Monday, May 23, 2022 4:49 PM
To: Martina Chait <MartinaC@dourodummer.on.ca>
Subject: Application R-01-22

Dear Martina,

We are writing regarding file R-01-22 (Schulich/Stein).

We have no issues or concerns with this proposed amendment. Please note this on the subject file.

Regards,

Grant and Jane Greenwood
Trappers Lane

From: Dr. David Satok
Sent: Monday, May 23, 2022 9:27 AM
To: Martina Chait <MartinaC@dourodummer.on.ca>
Subject: Support for file R-01-02 (Schulich/Stein)

Dear Martina,

I am writing in support of file R-01-22 (Schulich/Stein).
We have no issues or concerns with the amendment being proposed.
Thank you for noting this.

Thank you,

David Satok
South Bayshore Road West
Douro-Dummer

-----Original Message-----
From: Tara Greenwood
Sent: Monday, May 23, 2022 6:22 PM
To: Martina Chait <MartinaC@dourodummer.on.ca>
Subject: 1304 Whetung Road application

Hi Martina.
We have received the notice regarding the by-law amendment for 1304 Whetung Road and do not have any objections or concerns with what is being proposed.

Best regards,
Tara Greenwood and Dwayne O'Leary
Trapper's Lane

Sent from my iPhone

From: Dawn Adrienne
Sent: Saturday, May 21, 2022 1:04 PM
To: Martina Chait <MartinaC@dourodummer.on.ca>
Subject: Schulich/Stein file R-01-22

Dear Martina,

We are writing **in support** of file name R-01-22 (Schulich/Stein).

We have no issues or concerns with the amendment being proposed.

Thank you for noting this.

Best regards,

Dawn Berney and Chris Geggie
Whetung Bay Road

Brent Whetung

Requested link to attend meeting

In opposition, will read statement at meeting.

Township of Douro-Dummer

Notice of Complete Application and Virtual Public Meeting Concerning a proposed Zoning By-law Amendment Application R-01-22

The meeting will be held through <u>electronic</u> means

Take Notice that the Council of the Township of Douro-Dummer will hold a public meeting of the Committee of Adjustment to consider a proposed minor variance under Section 34 of the Planning Act, R.S.O. 1990, as amended.

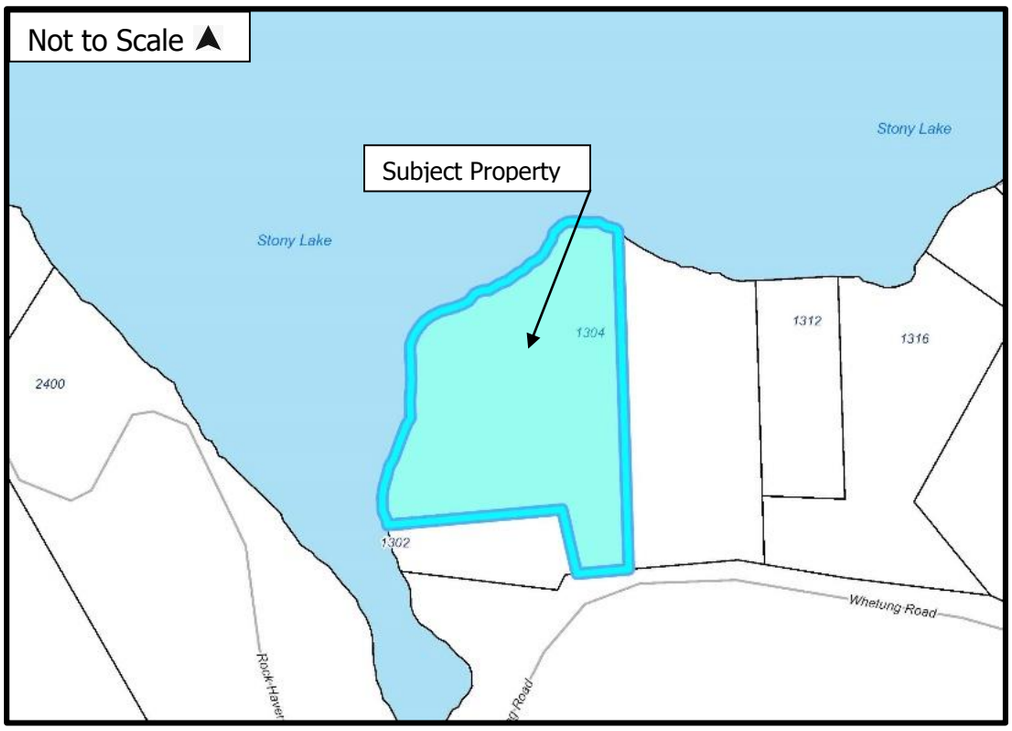
Date and Time: **Tuesday, June 7, 2022 at 5:00 p.m.**
Location: Due to the physical distancing requirements imposed as a result of the ongoing COVID-19 pandemic, this meeting will be held electronically.

<u>Public Hearing</u>: To participate in this electronic meeting in real time, please contact the Clerk by email, no later than 4:00 p.m. on the day prior to the scheduled meeting and you will be provided with an invitation to join the meeting using your computer or telephone. Although it is possible for members of the public to "attend" a meeting electronically, and provide verbal submissions, we encourage you to communicate with Council by forwarding written comments in support or in opposition to martinac@dourodummer.on.ca.

If you wish to view the public meeting in real time, but do not wish to speak to the application, the meeting will be hosted on the Township's YouTube Channel. The meeting will also be recorded and available after the meeting for public viewing on the same platform.

Legal Description/ Address:	Concession 8, Part Lot 32, Dummer Ward 1304 Whetung Road Roll No.: 1522-020-005-35700
Owner/Applicant: **Agent:**	Judith Sculich and David Stein Holly Richard-Conley (Black Point Construction Services) and Laura Stone (KDM Planning Inc.)
File Name:	R-01-22

Key Map:



(over)

Purpose and Effect of Application:
The owners have applied to amend the existing zoning of a parcel of land in Part Lot 32, Concession 8, in the former Township of Dummer, (now the Dummer Ward of the Township of Douro-Dummer) in the County of Peterborough.

The land in question is currently zoned Limited Service Residential (LSR) Zone. The effect of this By-law Amendment to create a Special District to recognize the existing water yard setback of **16.6m (54.46')** and to allow for the existing dwelling to be demolished and rebuilt.

The Right to Appeal
If a person or public body would otherwise have an ability to appeal the decision of the Township of Douro-Dummer to the Ontario Land Tribunal but the person or public body does not make oral submissions at a public meeting or make written submissions to the Township of Douro-Dummer before the by-law is passed, the person or public body is not entitled to appeal the decision.

If a person or public body does not make oral submissions at a public meeting, or make written submissions to the Township of Douro-Dummer before the by-law is passed, the person or public body may not be added as a party to the hearing of an appeal before the Ontario Land Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so.

Any person may attend the electronic/virtual public meeting and make written and/or verbal submissions either in support of or in opposition to the proposed zoning by-law amendment. In order to make arrangements to attend the virtual meeting, please contact the Acting Clerk by email at martinac@dourodummer.on.ca no later than 4:00 p.m. on the day prior to the scheduled meeting. It is the responsibility of the interested member of the public to have technology in place to connect to the meeting.

Additional Information relating to the proposed zoning by-law amendment is available by contacting the undersigned.

Notification: If you wish to be notified of the decision of the Council of the Township of Douro-Dummer on the proposed zoning by-law amendment, you must make a written request to the Clerk of the Township of Douro-Dummer using the contact information provided below.

Accessibility: If you have accessibility needs and require alternative formats or other accommodations, please contact the undersigned.

Privacy Disclosure: All written submissions, documents, correspondence, e-mails or other communications (including your name and address) are collected under the authority of the *Planning Act* and become part of the public record and may be made available for public viewing or distribution. Please note that by submitting any of this information, you are providing the Township with your consent to use and disclose this information as part of the planning process.

Dated this 13th day of May, 2022 at the Township of Douro-Dummer.

Martina Chait-Hartwig,
Acting Clerk
705-652-8392 Ext. 210
martinac@dourodummer.on.ca

Township of Douro-Dummer

Notice of Complete Application and Virtual Public Meeting Concerning a proposed Zoning By-law Amendment Application R-01-22

The meeting will be held through <u>electronic</u> means

Take Notice that the Council of the Township of Douro-Dummer will hold a public meeting of the Committee of Adjustment to consider a proposed minor variance under Section 34 of the Planning Act, R.S.O. 1990, as amended.

Date and Time: **Tuesday, June 7, 2022 at 5:00 p.m.**
Location: Due to the physical distancing requirements imposed as a result of the ongoing COVID-19 pandemic, this meeting will be held electronically.

<u>Public Hearing</u>: To participate in this electronic meeting in real time, please contact the Clerk by email, no later than 4:00 p.m. on the day prior to the scheduled meeting and you will be provided with an invitation to join the meeting using your computer or telephone. Although it is possible for members of the public to "attend" a meeting electronically, and provide verbal submissions, we encourage you to communicate with Council by forwarding written comments in support or in opposition to martinac@dourodummer.on.ca.

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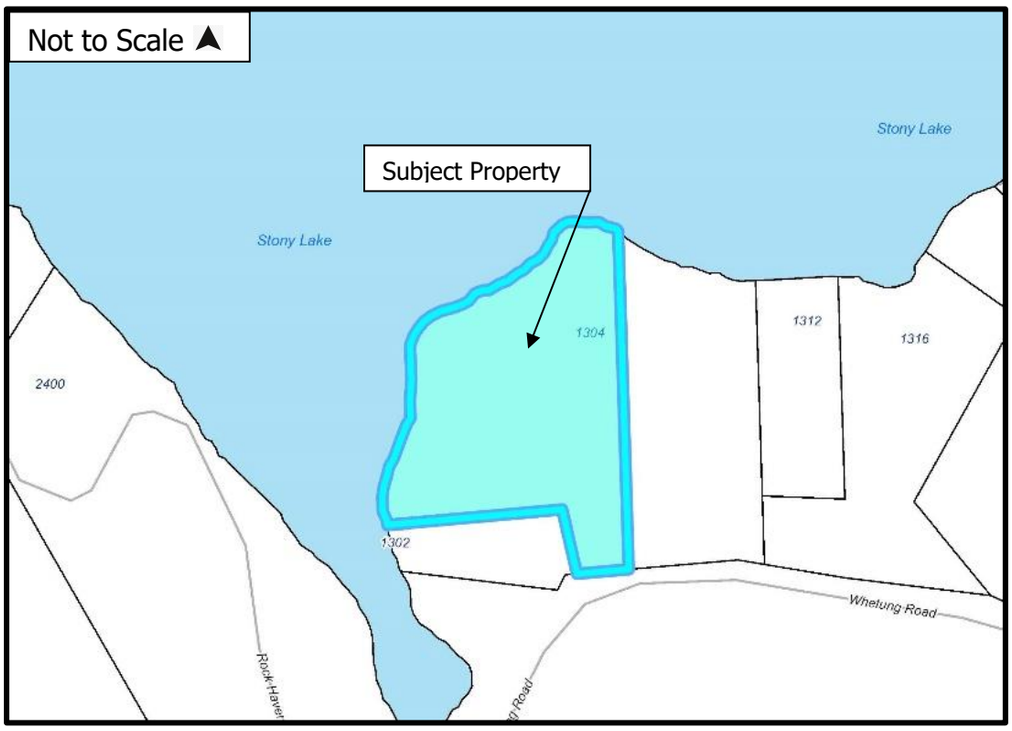

(over)

Purpose and Effect of Application:
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Notification: If you wish to be notified of the decision of the Council of the Township of Douro-Dummer on the proposed zoning by-law amendment, you must make a written request to the Clerk of the Township of Douro-Dummer using the contact information provided below.

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Dated this 13th day of May, 2022 at the Township of Douro-Dummer.

Martina Chait-Hartwig,
Acting Clerk
705-652-8392 Ext. 210
martinac@dourodummer.on.ca

Office Use Only	
File No.	
Date App. Submitted	
Application Fee	$
Date Fee Received	
Date Application Deemed Complete	
Roll No.	

Township of Douro-Dummer Application for Amendment to Zoning By-law #10-1996, as amended

(Section 34 of the Planning Act, R.S.O. 1990, c. P. 13, as amended)

1.0 Applicant Information

Registered Owner(s): [redacted]

(Please Indicate Name(s) *Exactly* as Shown on the Transfer/Deed of Land)

Address: [redacted]

[redacted]

[redacted]

Email: [redacted]

Phone: (home) [redacted]

Phone: (work)

Phone: (cell)

Fax:

2.0 Agent Information

Authorized Agent (if any): Holly Richards-Conley (Black Point) and Laura Stone (KMD)

Address: 195 Barcroft Rd.

Lakehurst, ON

K0L 1J0

Email: holly@blackpointservices.com

Phone: (home)

Phone: (work)

Phone: (cell) 705-772-0792

Fax:

3.0 Other Information – Charges Against the Land

If known, the name(s) and address(es) of holder(s) of any mortgages, charges or other encumbrance(s) in respect of the subject land: N/A

4.0 Legal Description/Location/Property Characteristics/Access to Subject Land:

County	Township	Ward (Former Township)
Peterborough	Douro-Dummer	Dummer

Concession Number(s)	Lot Number(s)	Legal Description:
8	Part Lot 32	01304 Whetung Rd.

Registered Plan No:	Lot(s)/ Block No.	Civic/911 Address:
		1304 Whetung Rd.

Reference Plan No:	Part Number(s):	Are there any easements or restrictive covenants affecting the property?
45R8828 1-6 and RP 45R13315	Parts 1-4	No

Date subject land was purchased by current	2010

4.1 Dimensions of the Subject Land

Frontage:	Depth:	Area:
■Water: 187.45m ■Road: 70.76m	Irregular ☐Min: ☐Max:	8830.50 sq. m

4.2 Access to the Subject Land

Access to Subject Property –	■ Existing or ☐ Proposed
☐ Municipal Road – maintained year round	■ Private Road
☐ County Road	☐ Right-of-way
☐ Provincial Highway	☐ Water
☐ Other public road (Specify):	
Name of Road/Street:	Whetung Rd.

If access to the land is by water only:	
Where are parking and docking facilities:	N/A
Approximate distance from subject land:	N/A
Approximate distance from nearest public road:	N/A

5.0 Official Plan Designation and Zoning

Official Plan Designation: Lakeshore Residential

Please provide an explanation of how the application for rezoning will conform to the Official Plan
See Attached Planning Justification Report

Zoning By-law Designation: Limited Service Residential

Is the subject land in an area where zoning conditions apply? ■ Yes ☐ No. If yes, please explain how the application conforms to the Official Plan policies relating to zoning with conditions: See Attached Planning Justification Report

5.1 Density and Height Requirements

Are there minimum and maximum density requirements on the property: ☐ Yes ■ No
If Yes, what are they and are they being met?

Are there minimum and maximum height requirements on the property: ☐ Yes ■ No
If Yes, what are they and are they being met?

6.0 Purpose of the Application

Please describe the nature and extent of the rezoning request:
Section 7.2.1 h) To reduce the minimum water yard setback from 30m to 16.6m to the dwelling.

Please explain the reason for the requested rezoning: Please see attached Planning Justification Report.

7.0 Settlement/Employment Areas

Does the application propose to implement or alter a boundary of an area of settlement:
☐ Yes ■ No If Yes, please explain the details of the Official Plan or Official Plan Amendment that deal with this matter?

Does the application propose to remove land from an area of employment (Hamlet or Special Industrial properties: ☐ Yes ■ No If Yes, please explain the details of the Official Plan or Official Plan Amendment that deal with this matter?

8.0 Property Characteristics, Access and Servicing Information

Water Supply:

■ Existing
☐ Proposed

Please identify the type of water supply serving the subject property:

☐ Privately-owned/operated individual well
☐ Privately-owned/operated communal well
☐ Publicly-owned/operated piped water system
■ Lake or other water body
☐ Other (specify): _____

Storm Drainage:

■ Existing
☐ Proposed

Please identify the type of storm drainage serving the subject property:

☐ Sewers ☐ Ditches ☐ Swales

■ Other (specify): Natural Drainage

Sewage Disposal:

■ Existing
☐ Proposed

Please identify the type of sewage disposal serving the subject property:

■ Privately-owned/operated individual septic system
☐ Privately-owned/operated communal septic system
☐ Publicly-owned/operated sanitary sewage system
☐ Privy
☐ Other (specify): _____

If the sewage disposal system is proposed, have you obtained a permit from the Peterborough Public Health? ☐ Yes or ■ No

Permit Number:_____

Does the application permit development on Privately-owned/operated individual or communal septic systems and more than 4500 Litres of effluent would be produced per day as a result of the development being completed?
(this is usually anything above or beyond a regular single family dwelling)
☐ Yes or ■ No
If yes, the following are required:
a) A servicing options report Date received:_____
b) A hydrogeological report Date received:_____

Source Water Protection Area:

Is your property within a vulnerable area as defined by the Source Water Protection Plan? ☐ Yes or ■ No

If yes, have you attached the required clearance notice from the Risk Management Official with your application? ☐ Yes or ■ No

9.0 Existing and Proposed Uses and Structures:

What is the subject land currently used for? Residential

How long have the existing uses of the subject land continued? 1920's of 1930's

What are the proposed uses of the subject land? Residential

In the tables below, please provide information regarding all existing and proposed structures (this information must also be included on the site plan provided with the application). **Please note** that an up-to-date location survey will be required.

Existing Structures (in metric)

Type of Structure	Ground Floor Area	Gross Floor Area	Number of Storeys	Length	Width	Height	Date Constructed
See Attached Appendixes							

Please place an asterisk (*) beside any existing structure that will be demolished.

Proposed Structures (in metric)

Type of Structure	Ground Floor Area	Gross Floor Area	Number of Storeys	Length	Width	Height
See Attached Appendixes						

Will the proposal add any of the following?

	Yes	No	If yes, please provide:	Existing	Proposed
Total Living Area	☑	☐	**Size**	192 sq. m	7,997 sq. m
Bedrooms	☑	☐	**Number**	4	6
Bathrooms	☑	☐	**Number**	2	4
New Plumbing Fixtures	☑	☐	**Number of Fixtures**	11	+/-20

10.0 Existing and Proposed Structures: Setbacks

In the tables below, please provide information regarding all existing and proposed structures (this information must also be included on the site plan provided with the application). **Please note** that an up-to-date location survey will be required.

Existing Structures (in metric)

Type of Structure	Front Lot Line	Rear Lot Line	Side Lot Line	Side Lot Line	Water yard	Other (specify)
See Attached Appendixes						

Please place an asterisk (*) beside any existing structure that will be demolished.

Proposed Structures (in metric)

Type of Structure	Front Lot Line	Rear Lot Line	Side Lot Line	Side Lot Line	Water yard	Other (specify)
See Attached Appendixes						

Note: Information regarding the definitions of the requested dimensions and setbacks can be obtained from the Township's Zoning By-law 2010-55.

Lot Coverage (in metric and percentage)

	Existing	Proposed
Principle Use (i.e. Dwelling)	See Attached Appendixes	See Attached Appendixes
Accessory Structures		
Total		

11.0 Other Information:

Please provide any additional information that you feel may be relevant in the review of this application on additional pages as necessary along with any required studies.

12.0 Other Planning Applications

Please indicate if the subject land is or has been the subject of an application under the Planning Act.

Type of Planning Application	Yes	No	File Number	Status
Approval of Plan of Subdivision (under Section 51)	☐	☑		
Consent (Severance) (Section 53)	☐	☑		
Minor Variance (Section 45)	☐	☑		
Other:	☐	☑		

13.0 Provincial Plans

Is the application consistent with the Provincial Policy Statements? ■ Yes or ☐ No

Is the subject property within an area of land designated under any provincial plan(s)? ☒ Yes or ☐ No
(Growth Plan applies to the entire County of Peterborough)

If yes, does the application conform to or meet the intent of the provincial plan(s)? ■ Yes or ☐ No

14.0 Public Consultation Strategy:

Please provide a description of the Public Consultation Strategy that will be used by the applicant during the zoning by-law amendment process to ensure that the public is consulted, please attached additional pages if needed:

As per the normal process, the notices will be sent out by the township to neighbouring property owners and the notices posted publicly on the property by the property owner. The owners will also reach out directly to neighbouring property owners to see if they have any concerns. Otonabee Conservation and Curve Lake First Nation were also consulted as part of the pre-consultation meeting with the township staff.

15.0 Authorization by Owner to Appoint an Agent:

I/We See Attached Authorization, being the owner(s) of the subject land, hereby, authorize _____ to be the applicant in the submission of this application.

Signature _____ Date_____

Signature _____ Date_____

16.0 Freedom of Information:

For the purposes of the Freedom of Information and Protection of Privacy Act, I/We authorize and consent to the use by or the disclosure to any person or public body or publishing on the Municipal website any information that is collected under the authority of the Planning Act for the purposes of processing this application.

[redacted] 2022-04-21

Owner/Applicant/Agent Signature Date

Owner/Applicant/Agent Signature Date

17.0 Access to Property:

I/We Holly Richards-Conley, hereby, authorize the members of the Council of the Township of Douro-Dummer or their agent(s)/representative(s) to attend at the subject property located at [*insert address]* 1304 Whetung Rd.

[redacted] 2022-04-21

Owner/Applicant/Agent Signature Date

18.0 Declaration of Applicant:

I/We Holly Richards-Conley (name of owner(s)/agent(s)) of the Municipality of Trent Lakes (city/town/township in which you reside) in the County of Peterborough (County/Upper-tier municipality, if applicable) in Province of Ontario (Province/Territory) solemnly declare that:

All the statements contained in this application and provided by me are true and I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath

Declared before me at the Township of Douro-Dummer in the County of Peterborough this 22 day of April, 2022.

[redacted]

Signature of Commissioner, etc.

Martina Chait-Hartwig
Deputy Clerk
Commissioner of Oath
Township of Douro-Dummer

To be signed in the presence of a Commissioner for taking affidavits

[redacted]

Owner/Applicant Agent Signature

Owner/Applicant Agent Signature

This application must be accompanied by the Township of Douro-Dummer Zoning By-law Amendment Fee ($1500.00) plus the ORCA Fee in cash, by Interac or cheque made payable to the Treasurer of the Township of Douro-Dummer).

Personal information contained on this form, collected pursuant to the Planning Act, will be used for the purpose of responding to the initial application. Questions should be directed to the Freedom of Information and Privacy Coordinator at the institution conducting the procedures under the Act.

File Name/No._____
Roll No. _____

Affidavit

In the Matter of a **Zoning By-law** application to the Township of Douro-Dummer,

I/We, Holly Richards-Conley, make oath and say that:
[Print Owner/Applicant/Agent name]

1. I am: *[Place a clear mark within the square opposite one of the following paragraphs that describes capacity of deponents.]*

the applicant or one of the applicants in the Application(s).

the authorized agent acting in this matter for the applicant or applicants.

an officer of the corporate applicant named in the Application(s).

2. On or before the *[Insert date]* TBD,
I will ensure that the notice or notices of the Application(s) provided to me (or the Applicant, as the case may be) by the Township of Douro-Dummer have been posted so as to be clearly visible and legible from a public highway, or other place to which the public has access, at every separately assessed property in the area that constitutes the subject land of the Application(s) or, where posting on the property was impractical, at a nearby location so as to adequately indicate to the public what property is the subject of the Application(s).
Should the notice(s) be removed, by any means from the posting area(s), I will immediately contact the Township of Douro-Dummer Planning Department for replacement copies of the notice(s).

Declared before me at the Township of Douro-Dummer in the County of Peterborough this 22 day of April, 2022.

To be signed in the presence of a Commissioner for taking affidavits

[redacted]
Owner/Applicant Agent Signature

Signature of Commissioner, etc.

Owner/Applicant Agent Signature

Martina Chait-Hartwig
Deputy Clerk
Commissioner of Oath
Township of Douro-Dummer

Note: Failure to post the notices, as required by this Affidavit, may result in additional costs and/or delays with your application.

Township of Douro-Dummer

Planning Application Costs Acknowledgement Form

I/We, Holly Richards-Conley
[Print Owner/Applicant/Agent name]

do hereby acknowledge and agree that the payment of the fee that is submitted with this application for a Zoning By-law Amendment, as being an application fee only, will be used to defray the costs of processing this application, and;

do also hereby acknowledge and agree to assume all costs** incurred by the Township of Douro-Dummer associated with the processing of this application that exceed the amount of the application fee, including, but not restricted to, Professional Planning Fees, Engineering Fees and Legal Fees, in addition to the municipal costs associated with this application, and;

do also hereby acknowledge and agree to assume all costs** incurred by the Township of Douro-Dummer associated with any Appeal to the Local Planning Appeal Tribunal with respect to this application.

Dated this 22 day of April, 2022.

[redacted]
Owner/Applicant/Agent Signature

** Written consent from the applicant will be obtained prior to any such additional costs being incurred.

Client Authorization Form

Black Point Construction Services
195 Barcroft Rd.
Lakehurst, ON K0L 1J0
(705) 772-0792
holly@blackpointservices.com

I/We Judy Schulich + David Stein have authorized Black Point Construction Services (Holly Richards-Conley) to act on my/our behalf to submit planning applications, consult with local municipal authorities and/or obtain permits pertaining to my property located at:

Street Address: 1304 Whetung Rd

City: Douro-Dummer Postal Code: K0L 2H0

For the purpose of: Permitting a cottage build.

I/we also give permission for the above mentioned agents and representatives to use photos of the above mentioned projects for marketing/media purposes. **If you check "No" below, please note that photos of your property may still be taken by Black Point Construction Services. Some planning and permit issuing agencies require on-site photos as part of your planning application and/or other permit submissions and will be used for such.**

(Yes, we give permission for photos to be used for media purposes
✓ No, we do not give permission for photos to be used for media purposes

Disclaimer:

Black Point Construction is not responsible for work carried out by the Property Owner(s), General Contractor(s) and or Sub-Contractor(s) on or at the above noted property, therefore to the fullest extent permitted by law, the property owner shall indemnify, hold harmless and defend Black Point Construction from and against claims, damages, losses and expenses, including but not limited to attorney's fees, charges and expenses, arising out of or resulting from performance or non-performance by the Property Owner(s), General Contractor(s) and or Sub-Contractor(s). Please note that Black Point Construction is also not responsible for arranging Building Permit Inspections.

Authorized signature(s):
If there are multiple names listed on the tax bill as owners, a signature must be provided for each name listed.

[redacted] _____

[redacted] _____

Date: OCTOBER 26, 2021

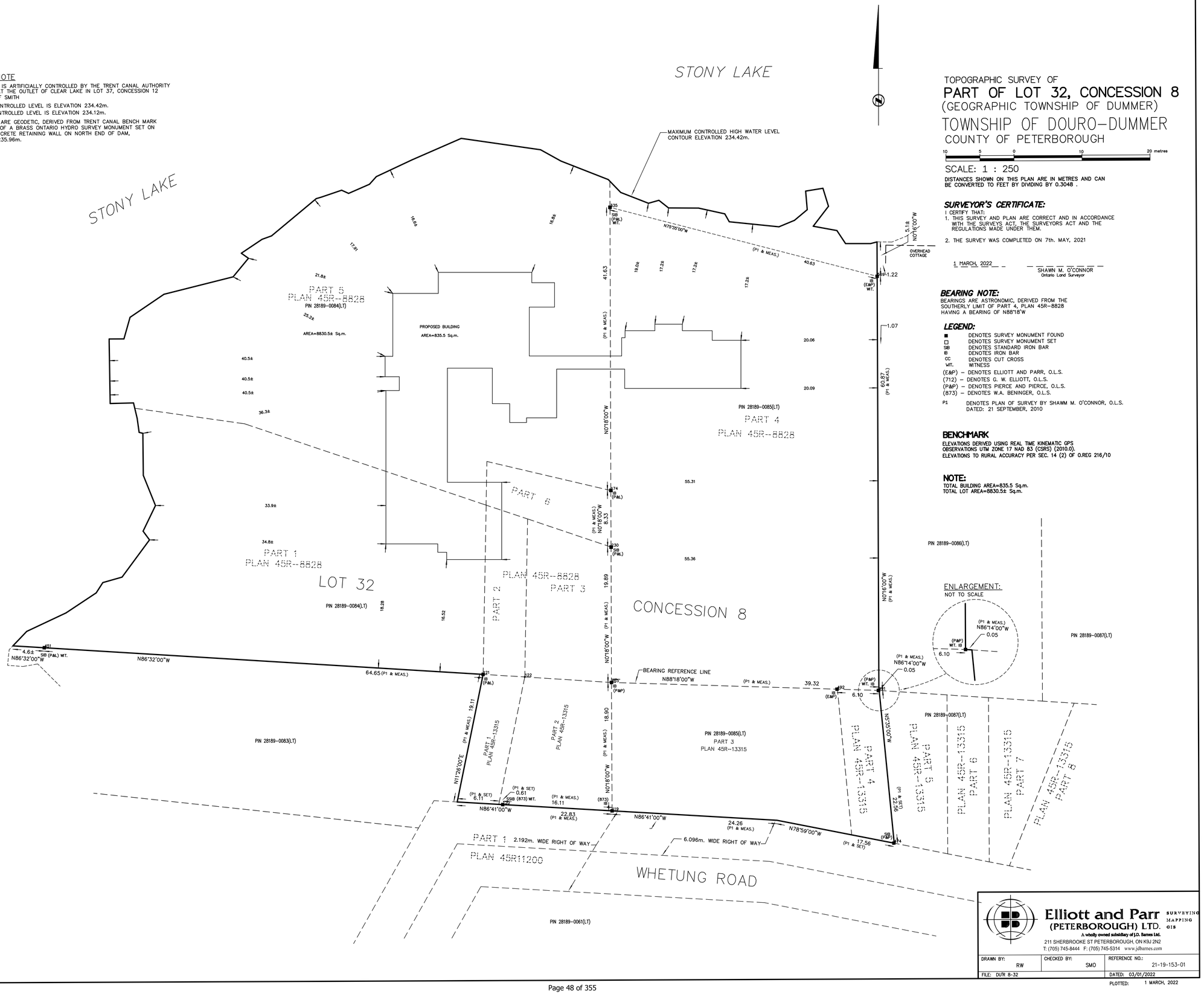
WATER NOTE

STONY LAKE IS ARTIFICIALLY CONTROLLED BY THE TRENT CANAL AUTHORITY BY A DAM AT THE OUTLET OF CLEAR LAKE IN LOT 37, CONCESSION 12 TOWNSHIP OF SMITH

MAXIMUM CONTROLLED LEVEL IS ELEVATION 234.42m.

MINIMUM CONTROLLED LEVEL IS ELEVATION 234.12m.

ELEVATIONS ARE GEODETIC, DERIVED FROM TRENT CANAL BENCH MARK CONSISTING OF A BRASS ONTARIO HYDRO SURVEY MONUMENT SET ON TOP OF CONCRETE RETAINING WALL ON NORTH END OF DAM, ELEVATION 235.96m.



TOPOGRAPHIC SURVEY OF

PART OF LOT 32, CONCESSION 8

(GEOGRAPHIC TOWNSHIP OF DUMMER)

TOWNSHIP OF DOURO-DUMMER

COUNTY OF PETERBOROUGH

10 5 0 10 20 metres

SCALE: 1 : 250

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048 .

SURVEYOR'S CERTIFICATE:

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.

2. THE SURVEY WAS COMPLETED ON 7th. MAY, 2021

1 MARCH, 2022

SHAWN M. O'CONNOR
Ontario Land Surveyor

BEARING NOTE:

BEARINGS ARE ASTRONOMIC, DERIVED FROM THE SOUTHERLY LIMIT OF PART 4, PLAN 45R-8828 HAVING A BEARING OF N88°18'W

LEGEND:

- ■ DENOTES SURVEY MONUMENT FOUND
- □ DENOTES SURVEY MONUMENT SET
- SIB DENOTES STANDARD IRON BAR
- IB DENOTES IRON BAR
- CC DENOTES CUT CROSS
- WIT. WITNESS
- (E&P) – DENOTES ELLIOTT AND PARR, O.L.S.
- (712) – DENOTES G. W. ELLIOTT, O.L.S.
- (P&P) – DENOTES PIERCE AND PIERCE, O.L.S.
- (873) – DENOTES W.A. BENINGER, O.L.S.
- P1 DENOTES PLAN OF SURVEY BY SHAWM M. O'CONNOR, O.L.S. DATED: 21 SEPTEMBER, 2010

BENCHMARK

ELEVATIONS DERIVED USING REAL TIME KINEMATIC GPS OBSERVATIONS UTM ZONE 17 NAD 83 (CSRS) (2010.0). ELEVATIONS TO RURAL ACCURACY PER SEC. 14 (2) OF O.REG 216/10

NOTE:

TOTAL BUILDING AREA=835.5 Sq.m.
TOTAL LOT AREA=8830.5± Sq.m.

Elliott and Parr (PETERBOROUGH) LTD.
SURVEYING MAPPING GIS
A wholly owned subsidiary of J.D. Barnes Ltd.
211 SHERBROOKE ST PETERBOROUGH, ON K9J 2N2
T: (705) 745-8444 F: (705) 745-5314 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
RW	SMO	21-19-153-01
FILE: DUR 8-32		DATED: 03/01/2022

PLOTTED: 1 MARCH, 2022

STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT OF 1304 WHETUNG ROAD, LOT 32, CONCESSION 8, GEOGRAPHIC TOWNSHIP OF DUMMER, TOWNSHIP OF DOURO-DUMMER, PETERBOROUGH COUNTY, ONTARIO

Original Report

For:

Black Point Construction Services

From:
Northeastern Archaeological Associates Ltd.
Licenced to: Dr. Lawrence Jackson (P-025)
PIF#: P025-0744-2021

March 3, 2022

Northeastern Archaeological Associates Limited
P.O. Box 493,
Port Hope, Ontario
L1A 3Z4
905-342-3250

EXECUTIVE SUMMARY

Northeastern Archaeological Associates Limited, Port Hope was contacted by Holly Richards-Conley of Black Point Construction Services requesting that, in compliance with the requirements outlined by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), a Stage 1 and 2 Archaeological Assessment be conducted at 1304 Whetung Road, Lot 32, Concession 8, Geographic Township of Dummer, Township of Douro-Dummer, Peterborough County, Ontario. The assessment of the subject property was triggered by the Ontario Planning and Development Act, 1994, as the subject property is planned to undergo a minor variance. Permission to work on the public property was provided by Black Point Construction Services.

The property consists of a cottage, frame garage, dock, deck with a hot tub, a hot tub pump shed, boathouse and dock, and a gravel driveway. The east third of the property is wooded with sections of bare rock, and the west two-thirds is maintained lawn. The assessment was conducted on December 3, 2021, under clear and cool conditions. The soil and subsoil were not frozen and were able to be dug and screened with no issue. The property is bordered to the north by Stony Lake, east by a wooden fenceline and iron property bars, south by Whetung Road, an iron property bars and a wood fence, and west by Stony Lake and iron property bars. All property edges were also confirmed through the use of provided mapping and GPS. Stage 1 research indicated that the property is of high archaeological potential, as outlined by the Standards and Guidelines for Consulting Archaeologists (MTC 2011), because of its proximity to water and its proximity to registered archaeological sites as per standard 1.3.1.

This assessment did not result in the discovery of any material of cultural significance. Given this result, it is the recommendation of Northeastern Archaeological Associates Limited that no further archaeological assessment be required on the subject property. If any archaeological resources should be discovered during the course of development, all excavation must stop immediately, and an archaeologist must be contacted. The entire subject property was assessed.

1.0PROJECT PERSONNEL

Project Director:	Dr. Lawrence Jackson (P025) -Report Preparation
Field Director(s):	Daniel Smith (R1216) -Field Director Julie Bazeley (R1279) -Report Preparation -Graphics
Field Technician(s):	Jelissa Kollaard

Table 1: Project Personnel and Breakdown of Relevant Duties

2.0 PROJECT CONTEXT

2.1 Development Context

The Ontario Heritage Act, R.S.O. 1990 c. O.18, requires anyone wishing to carry out archaeological fieldwork in Ontario to have a license from the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI). All licensees are to file a report with the MHSTCI containing details of the fieldwork that has been done for each project. Following standards and guidelines set out by the Ministry of Tourism and Culture (2011) is a condition of a licence to conduct archaeological fieldwork in Ontario. Northeastern Archaeological Associates Ltd. confirms that this report meets ministry report requirements as set out in the 2011 Standards and Guidelines for Consultant Archaeologists and is filed in fulfillment of the terms and conditions of an archaeological license. The assessment of the subject property was triggered by the Ontario Planning and Development Act, 1994, as the subject property is planned to undergo a minor variance. Permission to work on the public property was provided by Black Point Construction Services.

In compliance with the requirements outlined by the MHSTCI, a Stage 1 and 2 archaeological assessment was carried out at 1304 Whetung Road, Lot 32, Concession 8, Geographic Township of Dummer, Township of Douro-Dummer, Peterborough County, Ontario. The contract was awarded to Northeastern Archaeological Associates Limited on December 1st, 2021. Prior to the subject property assessment, Curve Lake First Nation was contacted. Due to a liaison being unavailable, permission was given to proceed with the assessment. This report has been provided to Curve Lake First Nation for comments prior to its submission.

The subject property is an approximately 0.79-hectare squarish area is bordered to the north by Stony Lake, east by a wooden fenceline and iron property bars, south by Whetung Road, an iron property bars and a wood fence, and west by Stony Lake and iron property bars. All property edges were also confirmed through the use of provided mapping and GPS. The subject property consists of a cottage, frame garage, dock, deck with a hot tub, a hot tub pump shed, boathouse and dock, and a gravel driveway. The east third of the property is wooded with sections of bare rock, and the west two-thirds is maintained lawn. The assessment was conducted on December 3, 2021, under clear and cool conditions. The soil and subsoil were not frozen and were able to be dug and screened with no issue. All property edges were also confirmed through the use of provided mapping and GPS. Any documentation generated in relation to this property is shown in this report.

2.2 Historical Context

Indigenous Knowledge

Northeastern includes this section provided by Curve Lake First Nation because it amplifies on indigenous history and treaty history for the area.

"The traditional homelands of the Michi Saagiig (Mississauga Anishinaabeg) encompass a vast area of what is now known as southern Ontario. The Michi Saagiig are known as "the people of the big river mouths" and were also known as the "Salmon People" who occupied and fished the north shore of Lake Ontario where the various tributaries emptied into the lake. Their territories extended north into and beyond the Kawarthas as winter hunting grounds on which they would break off into smaller social groups for the season, hunting and trapping on these lands, then returning to the lakeshore in spring for the summer months. The Michi Saagiig were a highly mobile people, travelling vast distances to procure subsistence for their people. They were also known as the "Peacekeepers" among Indigenous nations. The Michi Saagiig homelands were located directly between two very powerful Confederacies: The Three Fires Confederacy to the north and the Haudenosaunee Confederacy to the south. The Michi Saagiig were the negotiators, the messengers, the diplomats, and they successfully mediated peace throughout this area of Ontario for countless generations. Michi Saagiig oral histories speak to their people being in this area of Ontario for thousands of years. These stories recount the "Old Ones" who spoke an ancient Algonquian dialect. The histories explain that the current Ojibwa phonology is the 5th transformation of this language, demonstrating a linguistic connection that spans back into deep time. The Michi Saagiig of today are the descendants of the ancient peoples who lived in Ontario during the Archaic and Paleo-Indian periods. They are the original inhabitants of southern Ontario, and they are still here today.

The traditional territories of the Michi Saagiig span from Gananoque in the east, all along the north shore of Lake Ontario, west to the north shore of Lake Erie at Long Point. The territory

spreads as far north as the tributaries that flow into these lakes, from Bancroft and north of the Haliburton highlands. This also includes all the tributaries that flow from the height of land north of Toronto like the Oak Ridges Moraine, and all of the rivers that flow into Lake Ontario (the Rideau, the Salmon, the Ganaraska, the Moira, the Trent, the Don, the Rouge, the Etobicoke, the Humber, and the Credit, as well as Wilmot and 16 Mile Creeks) through Burlington Bay and the Niagara region including the Welland and Niagara Rivers, and beyond. The western side of the Michi Saagiig Nation was located around the Grand River which was used as a portage route as the Niagara portage was too dangerous. The Michi Saagiig would portage from present-day Burlington to the Grand River and travel south to the open water on Lake Erie. Michi Saagiig oral histories also speak to the occurrence of people coming into their territories sometime between 800-1000 A.D. seeking to establish villages and a corn growing economy – these newcomers included peoples that would later be known as the Huron-Wendat, Neutral, Petun, and Tobacco Nations. The Michi Saagiig made Treaties with these newcomers and granted them permission to stay with the understanding that they were visitors in these lands. Wampum was made to record these contracts, ceremonies would have bound each nation to their respective responsibilities within the political relationship, and these contracts would have been renewed annually (see Gitiga Migizi and Kapyrka 2015). These visitors were extremely successful as their corn economy grew as well as their populations. However, it was understood by all nations involved that this area of Ontario were the homeland territories of the Michi Saagiig. The Odawa Nation worked with the Michi Saagiig to meet with the Huron-Wendat, the Petun, Neutral, and Tobacco Nations to continue the amicable political and economic relationship that existed – a symbiotic relationship that was mainly policed and enforced by the Odawa people. Problems arose for the Michi Saagiig in the 1600s when the European way of life was introduced into southern Ontario. Also, around the same time, the Haudenosaunee were given firearms by the colonial governments in New York and Albany which ultimately made an expansion possible for them into Michi Saagiig territories. There began skirmishes with the various nations living in Ontario at the time. The Haudenosaunee engaged in fighting with the Huron-Wendat and between that and the onslaught of European diseases, the Iroquoian speaking peoples in Ontario were decimated. The onset of colonial settlement and missionary involvement severely disrupted the original relationships between these Indigenous nations. Disease and warfare had a devastating impact upon the Indigenous peoples of Ontario, especially the large sedentary villages, which mostly included Iroquoian speaking peoples. The Michi Saagiig were largely able to avoid the devastation caused by these processes by retreating to their wintering grounds to the north, essentially waiting for the smoke to clear.

Michi Saagiig Elder Gitiga Migizi (2017) recounts:

> "*We weren't affected as much as the larger villages because we learned to paddle away for several years until everything settled down. And we came back and tried to bury the bones of the Huron but it was overwhelming, it was all over, there were bones all over – that is our story.*

> *There is a misnomer here, that this area of Ontario is not our traditional territory and that we came in here after the Huron-Wendat left or were defeated, but that is not true. That is a big misconception of our history that needs to be corrected. We are the traditional people, we are the ones that signed treaties with the Crown. We are recognized as the ones who signed these treaties and we are the ones to be dealt with officially in any matters concerning territory in southern Ontario. We had peacemakers go to the Haudenosaunee and live amongst them in order to change their ways. We had also diplomatically dealt with some of the strong chiefs to the north and tried to make peace as much as possible. So we are very important in terms of keeping the balance of relationships in harmony. Some of the old leaders recognized that it became increasingly difficult to keep the peace after the Europeans introduced guns. But we still continued to meet, and we still continued to have some wampum, which doesn't mean we negated our territory or gave up our territory – we did not do that. We still consider ourselves a sovereign nation despite legal challenges against that. We still view ourselves as a nation and the government must negotiate from that basis*."

Often times, southern Ontario is described as being "vacant" after the dispersal of the Huron-Wendat peoples in 1649 (who fled east to Quebec and south to the United States). This is misleading as these territories remained the homelands of the Michi Saagiig Nation. The Michi Saagiig participated in eighteen treaties from 1781 to 1923 to allow the growing number of European settlers to establish in Ontario. Pressures from increased settlement forced the Michi Saagiig to slowly move into small family groups around the present-day communities: Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, Scugog Island First Nation, New Credit First Nation, and Mississauga First Nation. The Michi Saagiig have been in Ontario for thousands of years, and they remain here to this day."

Pre-contact Period

The Precontact period began with the arrival of nomadic peoples after the gradual retreat of the glaciers approximately 12,000 years ago (Karrow and Warner 1990).

Palaeo-Indian Period (12,000-10,000 BP) - The Palaeoindian period was characterized by people that lived in small family groups, using a highly distinctive stone tool technology (fluted and lanceolate points) to hunt large Late Pleistocene and other fauna associated with the cooler environments of the period (Ellis and Deller 1990; Jackson 1998, 2019). Small group mobility is believed to have ranged up to 200 km annually.

Archaic Period (10,000-3000 BP) - As the climate in southern Ontario warmed, indigenous populations adapted to these new environments. New technologies and subsistence strategies were

introduced and developed. Woodworking implements such as groundstone axes, adzes and gouges began to appear, as did net-sinkers (for fishing), numerous types of spear points and items made from native copper, which was mined from the Lake Superior region. The presence of native copper on archaeological sites in southern Ontario and adjacent areas suggests that Archaic groups were involved in long distance exchange and interaction. The trade networks established at this time were to persist between indigenous groups until European contact. Archaic peoples became seasonal hunters and gatherers to exploit seasonably available resources in differing geographic areas. As the seasons changed, these bands split into smaller groups and moved inland to exploit other resources available during the fall and winter such as deer, rabbit, squirrel and bear, which thrived in the forested margins of these areas (Ellis et al. 1990).

Woodland Period (3000 BP to European contact) – This period saw the gradual establishment of important technological and subsistence changes, initially the appearance of clay pots (Jackson 1982; Spence et al. 1990) in the Early Woodland period among Algonkian speaking populations. Population increases also led to the establishment of larger camps and villages during the Middle Woodland. Elaborate burial rituals and the interment of numerous exotic grave goods with the deceased distinguish the Early and Middle Woodland. Increased trade and interaction between southern Ontario populations and groups as far away as the Atlantic coast and the Ohio Valley was taking place. During the late Middle Woodland, there were two major subsistence innovations, the harvesting of wild rice throughout south-central and northern Ontario and the introduction of maize agriculture which prelude the archaeological Late Woodland period. Algonkian speaking (Anishinabek) peoples relied heavily on wild rice and Iroquoian speaking peoples on maize (Jackson n.d). The Late Woodland is known for large sedentary villages in south-central and southwestern Ontario after about 1000 A.D. and increasing development of trade and warfare just prior to European contact. Both Algonkian and Iroquoian speaking peoples occupied the landscape of southern Ontario during this period. Although it is widely assumed that Iroquoian speaking peoples were sedentary in southern Ontario, populations did shift regionally, for unknown and likely socio-political reasons, and locally due to soil depletion from maize horticulture requiring regular relocation of villages. Anishinabek peoples had extensive hunting and gathering territories throughout south-central Ontario and have been described as strategic sedentarists (Thomas 2014).

A general timeline of archaeological periods and associated cultural groups in Central Ontario is provided as Table 2 below.

Period	Group(s)	Date Range	Culture/Technology
Palaeo-Indian			
	Fluted Point	11800-10500 B.P.	Seasonal Hunters
	Holcombe, Hi-Lo	10500-9800 B.P	Paleo Point Technology
Archaic			
Early	Side Notched Corner Notched Bifurcate Point	9800-9500 B.P 9500-8900 B.P 8900-8000 B.P	Hunters and Gatherers
Middle	Early Middle Archaic Laurentian	8000-5500 B.P 5500-4000 B.P.	Focused Seasonal Resource Areas
Late	Narrow Point Broad Point Small Point Glacial Kame	4500-3000 B.P 4000-3500 B.P 3500-3000 B.P ca. 3000 B.P	Polished and Groundstone Tools, River/Lakeshore Settlement, Burial Ceremonialism
Woodland			
Early	Meadowood Middlesex	3000-2400 B.P 2400-2000 B.P	Introduction of Pottery Elaborate Burials
Middle	Point Peninsula/Laurel Sandbanks/Princess Point	2000-1300 B.P 1500-1200 B.P	Long-Distance Trade Burial Mounds, Agriculture
Late	Pickering Middleport Anishinabek and Iroquois	1100-600 B.P 600-360 B.P.	Transition to Fortified Villages, Horticulture, Large Village Sites, Alliances, Trade/Warfare
Historic			
	Mississauga	360-present	Mission villages and Reserves
	Euro-Canadian		European Settlement

Table 2: General Archaeological Timeline of Central Ontario

Indigenous Treaty History

The subject property is located within Treaty Lands of the Williams Treaties First Nations. Signatories of the Williams Treaties include Beausoleil First Nation, Georgina First Nation, Rama First Nation, Scugog Island First Nation, Curve Lake First Nation, Hiawatha First Nation and Alderville First Nation. The first three groups are more commonly known as Chippewas while the latter four are more commonly known as Mississaugas. Geographically, the closest First Nation band to the subject property is Curve Lake First Nation. The subject property is in lands which under the Williams Treaties (1923) recognized a prior surrender to the government of Upper Canada known as Rice Lake Treaty #20. This treaty was with various principal men of the tribes of the "Chippewas" who "inhabited the back parts of the Newcastle District". By the mid to late 19th century some of these same peoples were referred to as Mississaugas. Signatories to Rice Lake Treaty #20 were Curve Lake First Nation, Hiawatha First Nation, and Scugog Island First Nation (Dave Mowat, pers. comm. 2018).

Curve Lake First Nation occupies the reserve lands situated on the peninsula between Buckhorn Lake and Upper Chemong/Mud Lake approximately 23 km southwest of the subject property. The initial surrender of lands related to Indigenous peoples in areas north of Rice Lake came in the form of the 1818 treaty signed in Newcastle of (Rice Lake Treaty 20); the surrender of 1,951,000 acres of land in the "back parts" of the Newcastle District – which included the modern Peterborough, Hastings and Victoria Counties- with the islands of the Trent watershed being reserved (Whetung-Derrick 2015). Many of the pre-confederation treaties did not include reserve lands for indigenous populations, with the Crown expecting the assimilation of indigenous populations to "resolve" this issue (Whetung-Derrick 2015).

As a result, Christian missions were established to both convert indigenous populations to Christianity and to instill an agriculturally based lifestyle. The mission at Curve Lake was established in 1829 as the "Chemong Mission" and was eventually recognized as "the Mud Lake Indian Reserve". The term Chemong is a corruption of the word "Oshkigmong", referring to the bow-like shape of the lake or "curve in the Lake" (Whetung-Derrick 2015). From 1830 to 1833 Reverend Peter Jones from the Credit River visited the village and baptised four children, by 1850 the community was predominantly Methodist Christians (Whetung-Derrick 2015). On April 3rd, 1837 the New England Company, a society with the purpose of converting indigenous populations in British North America to Christianity, was granted 1600 acres, the modern Curve Lake First Nation Territory, by the Colonial Government to be held in trust for the Mud Lake Indian Band (Whetung-Derrick 2015). Baptist Minister Reverend Richard Scott of the New England Company was assigned to Mud Lake in 1829 to oversee the mission (Whetung-Derrick 2015).

In 1856 the Mississaugas of Mud Lake [later Curve Lake], Hiawatha, and Scugog surrendered all of the islands in the Trent River watershed with Treaty 78. Preceding this, Indian

Agents under the Superintendent of Indian Affairs sold over 1,000 islands for "the benefit of the three Bands". The 110 islands and shoals that were not sold in this way have since been designated as reserve lands to be held jointly by the three First Nations (Whetung-Derrick 2015).

In 1889 the New England Company transferred 1,548 acres of the Mud Lake Reserve to the Department of Indian Affairs for 1$. The remaining 115-acres of the "Chemong Mission" at the south end of the peninsula was reserved as it held the Mission House acting as a form of schoolhouse for the instruction of agriculture and as a residential school. In the 1890s the New England Company ended the mission at Mud Lake to focus on sending missions deeper into British North America. The New England Company property was later sold to A.E. Kennedy in 1898 after "expressed concerns" by Curve Lake residents who were leasing the land. Kennedy later sold the land to the Mud Lake Band in 1902. The funds for this purchase came from the previous "sale" of the Islands of the Trent River (Whetung-Derrick 2015).

In 1964 the reserve name was changed to the "Curve Lake Reserve", which it uses today (Whetung-Derrick 2015). In 1967 the reserve was given local autonomy to "manage and expend Band revenue funds within the limits of amounts approved by the Minister of Indian Affairs". Additionally, the same year saw the hiring of William F. Whetung as the first Band Administrator for Curve Lake further allowing Curve Lake First Nation to self-govern (Whetung-Derrick 2015).

Post-Contact History of the Township of Douro-Dummer

The subject property is located on part of Lot 32, Concession 8 in geographic Dummer Township, County of Peterborough, which was amalgamated into the Township of Douro-Dummer on January 01, 1998. (AMCTO 2017).

This area has a varied Euro-Canadian history, beginning in the early 1800s. Prior to 1825, there were less than 500 settlers in all of the townships north of Rice Lake. In 1825, however, the Honorable Peter Robinson brought 415 Irish families to settle in this area. Peterborough County, part of Newcastle District, was created in 1845 from the north riding of Northumberland County. In 1850, the United Counties of Peterborough and Victoria were formed as part of Colbourne District, although the two counties again separated in 1861. The Town of Peterborough, which is at the junction of Douro, Otonabee, Smith, and North Monaghan Townships, was incorporated in 1850 and became a city in 1904.

Dummer Township was first surveyed in 1823, and the colonization of the Township began with the arrival of 2,000 Irish and English emigrants in the summer of 1831, with another large group of Scottish emigrants arriving the following year. These first settlers were granted 100 acres of land per family, which had to be paid for after eight years at a cost of about $80. Services and supplies for the early settlers of the township had to be obtained in either the town of Peterborough or, later, the village of Warsaw until the other settlements in Dummer had grown sufficiently to

sustain their own. Eventually, a post office was established at Halls Glen along with eight churches and a school, with other amenities available at McCracken's Landing or Lakefield. Therefore, this area has a lengthy history of Euro-Canadian settlement dating back to the 1830s.

Subject Property History

The 1875 Robert Romaine map of Dummer Township (Map 10.7) indicates that the subject property was owned by John Carveth. However, the Township map does not indicate any structures within the lot and concession. The map indicates that the closest structures to the subject property were a post office 1.3km south, and a school 1.5km southeast of the property. The 1875 Directory of Douro, Lakeland, Dummer indicates that John Carveth settled in the Township in 1846 from England.

Land registry records indicated that Dummer Township was originally granted from the Crown to Allan [Illegible] in 1851. Allen [illegible] is later recorded as having sold the lot and concession to [illegible] Nicholl in 1841. It is unclear why the Crown patent is listed as ten years later than the proceeding land sales.

In 1842 [Illegible] Nicholl sold the lot and concession to John Carveth. Later in 1892, John Carveth et ux sold the lot and concession to Christopher Crowe. In 1900 Christopher Crowe et ux sold the south half of the lot and concession to Isaac N. Ackerman, and in 1906 Crowe et ux sold a portion of the north half of the lot and concession to [Illegible] the King. Unfortunately, due to the poor legibility of the document, it is not possible to trace the lot history further as it was not possible to determine what land was sold or transferred.

The 1871 Census of Canada reports John Carveth as being a 51-year-old Farmer is married to Louisa Carveth a 51-year-old. Four children are also recorded: Annabelle (24-years-old), Hannah (22-years-old), William (21-years-old), and George (19-years-old).

Aerial photography of the subject property from 1962 shows that the property had fewer standing structures than it does today and more mature trees. The main roads present today existed at that time. The general area does not appear to have gone through major changes since 1962 other than the construction of several cottages and the addition of several docks (Map 10.8).

Physiography and Registered Archaeological Sites

The structural geology of Peterborough County was created by the Pleistocene glaciation at approximately 1.65 million years ago through four to twenty separate periods of glaciation. The melting of the ice sheets during this period washed away most of the soil from the underlying bedrock that had been previously laid, remodeling the area into the current landscape. Therefore, the result of the Wisconsin glaciation retreating northward through Peterborough created most of the modern

landscape. Specifically, the retreat of the Lake Simcoe lobe created the landscape of the Peterborough to Rice Lake region (Ecclestone and Cogley 2009).

The subject property is located in the Dummer Moraines physiographic region of southern Ontario (Chapman and Putnam 1984). The Dummer Moraines are composed of rough stony land covering about 600 square miles (965.606 square kilometres) from the Kawartha Lakes northeast to the Canadian Shield. Most of this landscape is within the historic Dummer Township leading to the name of the region. Other historic Townships within this region include Belmont, Marmora, Madoc, Rawdon, Huntington, Hungerford, and Sheffield. The region is primarily composed of bedrock of the Bobcaygeon and Gull River Formations, with some overlap with the Lindsay and Verulam geological formations. Despite the rocky nature of the soil composition, agriculture was attempted after the clearing of stones from irregular plots of land. Tracts of bare limestone, intermittent swamps, and heavily bouldered soil made development difficult in this region (Chapman and Putnam 1984).

The subject property is an approximately 0.79-hectare squarish area bordered to the north by Stony Lake, east by a wooden fenceline and property bar, south by Whetung Road, an iron property bar and a wood fence, and east by Stony Lake and iron bars. All property edges were also confirmed through the use of provided mapping and GPS.

A search of the archaeological sites database of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries indicated that there are three registered archaeological sites within two kilometers of the subject property. No sites are within or adjacent to the subject property. All sites are over 500m away from the subject property edges.

Borden Number	Site Name	Time Period	Affinity	Site Type	Current Development Review Status
BdGm-6	Sagadowa				
BdGm-5	Drain	Woodland		Village	
BdGm-21	Christiane	Pre-Contact	Huron-Wendat, Iroquoian	Village	

Table 3: Registered Archaeological Sites in a 2 km radius of Subject Property.

A search of the archaeological report database of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries indicated that there is one other archaeological assessment report within 50 meters of the subject property edges.

PIF Number	Status	Filed Date
P025-0691-2021	In Register	18/10/2021
Report Title	STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT OF 2412 WHETUNG BAY ROAD, LOT 32, CONCESSION 8, GEOGRAPHIC TOWNSHIP OF DUMMER, TOWNSHIP OF DOURO-DUMMER, COUNTY OF PETERBOROUGH, ONTARIO	

The Stage 1 and 2 assessment of 2412 Whetung Bay Road, Lot 32, Concession 8, Geographic Township of Dummer, Township of Douro-Dummer, County of Peterborough, Ontario was conducted by Northeastern Archaeological Services Limited. The report was submitted by Lawrence Jackson (P025) in October, 2021. The property was assessed on April 14, 2021 through shovel testing. The assessment did not result in the discovery of any material of cultural significance and it was recommended that no further archaeological assessment be required within the subject property.

The closest water source to the subject property is Stony Lake, located along the northern and western property edges. The historic mapping from 1875 does not indicate any structures within the subject property. The closest historic structures are a post office 1.3km south, and a school 1.5km southeast of the subject property.

Stage 1 found the property to have high archaeological potential for First Nations and Euro-Canadian sites based on the following identified features of archaeological potential:

- Proximity to Water Source: Stony Lake
- Proximity to Registered Archaeological Sites

3.0 FIELD METHODS

This property is considered high potential according to the 2011 Standards set out for consulting Archaeologists by the Ministry of Tourism and Culture due to its proximity to primary water sources and registered archaeological sites. In accordance with these standards, the property was surveyed at 5-meter intervals. Stage 2 survey methodologies are illustrated in Map 10.5. The location, number, and orientation of all photos displayed in this report are illustrated in Map 10.6.

The property consists of a cottage, frame garage, dock, deck with a hot tub, a hot tub pump shed, boathouse and dock, and a gravel driveway. The east third of the property is wooded with sections of bare rock, and the west two-thirds is maintained lawn. The subject property is bordered to the north by Stony Lake, east by a wooden fenceline and property bar, south by Whetung Road, an iron property bar and a wood fence, and west by Stony Lake and iron bars (Images 9.1, 9.3, 9.5, 9.9, and 9.14). Provided mapping and GPS was used to assist in the confirmation of property boundaries.

All shovel tests were excavated to a minimum of 30cm in diameter and into the top 5cm of subsoil or to bedrock. All excavations were examined for evidence of cultural features, stratigraphy, or evidence of disturbance. Additionally, test pits were conducted within 1m of all standing structures within the subject property. All excavations were filled after they were screened through a 6mm mesh rocker screen.

The soil in the maintained lawn area, covering two thirds of the subject property, is partially disturbed with a layer of fill added above the natural soil profile while the soil in the wooded area, covering the remaining third of the property, appears to be undisturbed. The soil profile in the wooded area consisted of dark brown/black topsoil with a maximum depth of 10cm over orange sandy subsoil (Image 9.2). Soil profiles in this area thinned towards the lake edges until bedrock exposure, though the area of exposed bedrock did not impact the shovel test survey. All areas of bare rock were visually inspected for petroglyphs. The sections of maintained lawn had a soil profile that consisted of a 20cm layer of brown fill over a 10cm layer of dark brown/black topsoil above orange sandy subsoil (Image 9.11).

Approximately 89% of the subject property was assessed with a shovel test survey as per Standards 1., a., e. of Section 2.1.2 (MTC, 2011). The entire property was assessed visually. Areas suitable for test-pit assessment included the maintained lawn and the wooded area. This area is visible in Report Images 9.1, 9.3-9.10, 9.12, and 9.14, and is shaded in green in Map 10.5.

Approximately 11% of the study area was completely disturbed. This included the cottage, frame garage, dock, deck, hot tub pump shed, boathouse and dock, and gravel driveway. These areas were visually assessed only as per Standard 2. b., Section 2.1 (MTCS 2011). They are visible in Images 9.3, 9.6, and 9.12-9.14 and are shaded in orange in Map 10.5.

Stage 2 testing was conducted under clear and cool conditions on December 3, 2021.

4.0 RECORD OF FINDS

Stage 2 assessment of the subject property did not result in the discovery of any material of cultural significance or otherwise.

4.1 FIELD DOCUMENTATION

The Stage 2 assessment produced 50 fieldwork and field condition photos, five modified aerial photograph/subject property maps, and one page of field notes. All documents are on file at *Northeastern Archaeological Associates* offices.

5.0 ANALYSIS AND CONCLUSIONS

No material of cultural significance, value, or interest (CHVI) was recovered during Stage 2 test-pit assessment at 5-meter intervals within the subject property, as described in Section 3.0 of this report. The lack of recovered material during Stage 2 Assessment makes it unlikely that any archaeological resources exist within the subject property at 1304 Whetung Road, Lot 32, Concession 8, Geographic Township of Dummer, Township of Douro-Dummer, Peterborough County, Ontario. The entirety of the subject property was assessed.

6.0 RECOMMENDATIONS

Based on the Stage 2 assessment results it is the recommendation of Northeastern Archaeological Associates Ltd. that the property at 1304 Whetung Road, Lot 32, Concession 8, Geographic Township of Dummer, Township of Douro-Dummer, Peterborough County, Ontario does not possess any cultural heritage value or interest, and that no further archaeological work is required within the subject property. If any archaeological resources should be discovered during the course of development, all excavation must stop immediately, and an archaeologist must be contacted.

7.0 ADVICE ON COMPLIANCE WITH LEGISLATION

a. This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licencing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

b. Matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Heritage, Sport, Tourism and Culture Industries, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

c. It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licenced archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been entered in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act.

d. Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act.

e. The Cemeteries Act, R.S.O. 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (proclaimed in force July 01, 2012) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

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Northeastern Archaeological Associates Limitred.
2021 STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT OF 2412 WHETUNG BAY ROAD, LOT 32, CONCESSION 8, GEOGRAPHIC TOWNSHIP OF DUMMER, TOWNSHIP OF DOURO-DUMMER, COUNTY OF PETERBOROUGH, ONTARIO. Report of File with the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries

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Section 9.0: Figures

Image 9.1: Oriented E- View of Northeastern Employee Testing Along the Western Property Edge

Image 9.2: Oriented N- Shovel Test in Southwestern Portion of the Subject Property in the Wooded Area Displaying the Soil Profile Typical of the Testable Units in This Portion

Image 9.3: Oriented N- View of Northeastern Employee Testing Along the Western Property Edge by the Boathouse and Dock

Image 9.4: Oriented W- View of Northeastern Employee Testing a Portion of the Maintained Lawn Area Near the Western Property Edge

Image 9.5: Oriented W- View of the Wooden Fenceline Marking the Southern Border of the Subject Property

Image 9.6: Oriented S- View of the Wooded Area Near the Driveway

Image 9.7: Oriented N- View of Northeastern Employee Testing in Wooded Area

Image 9.8: Oriented S- View of Wooded Area with Areas of Exposed Limestone

Image 9.9: Oriented S- View of Eastern Property Edge Marked by Iron Bars and a Wooden Fenceline

Image 9.10: Oriented W- View of the Maintained Lawn and Dock

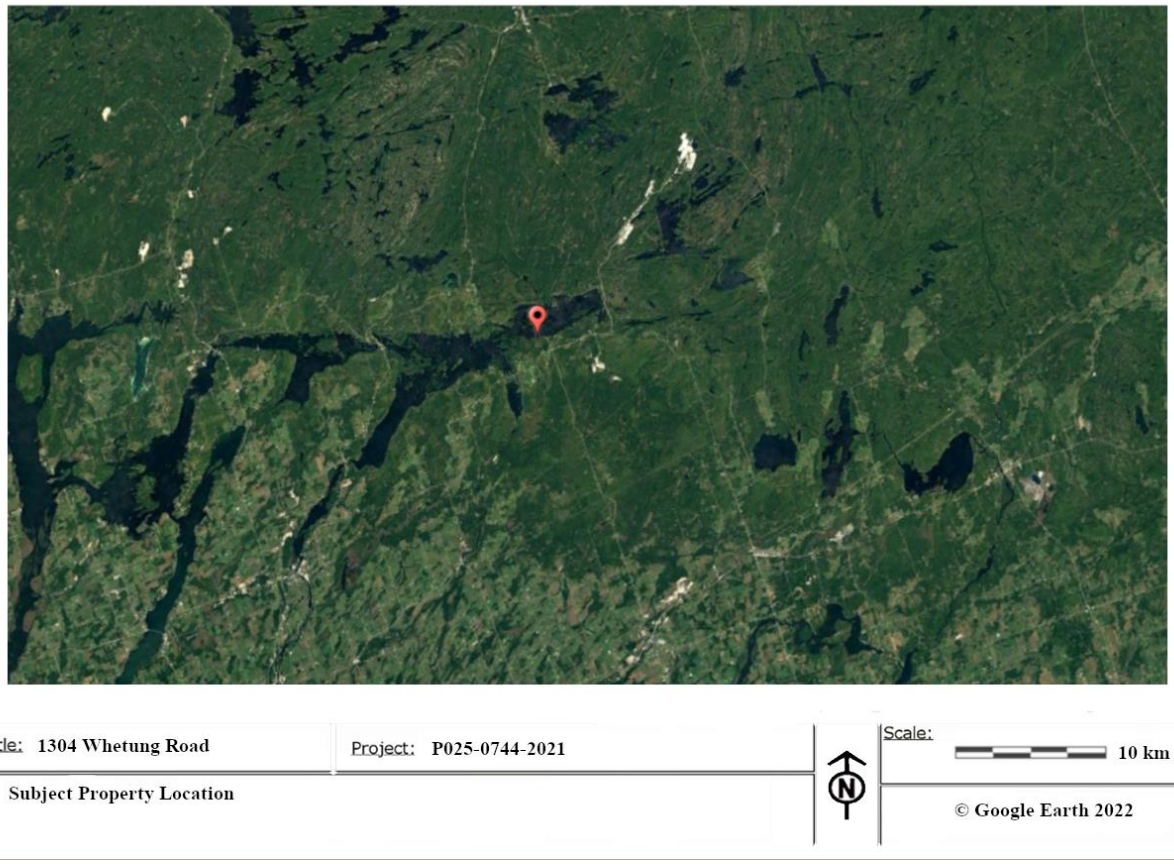
Image 9.11: Oriented N- Shovel Test in Northern Portion of the Subject Property in the Maintained Lawn Area Displaying the Soil Profile Typical of the Testable Units in This Portion

Image 9.12: Oriented S- View of the Cottage from the Dock

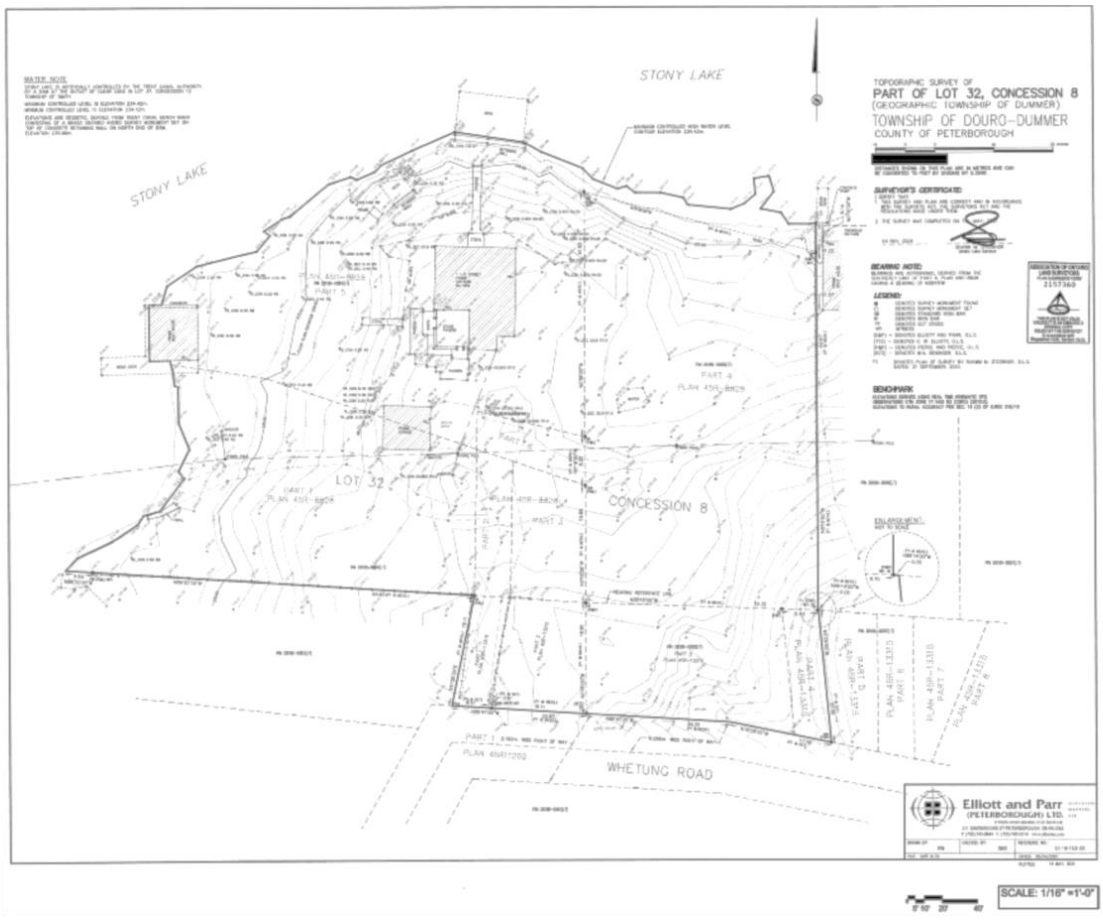
Image 9.13: Oriented NW- View of the Hot Tub Pump Shed and Edge of the Hot Tub Deck

Image 9.14: Oriented SE- View of Northeastern Employee Testing along the Northwestern Property Edge by the Boathouse and Water

Section 10.0: Mapping and Graphics



Map 10.1: View of the Subject Property within Peterborough County

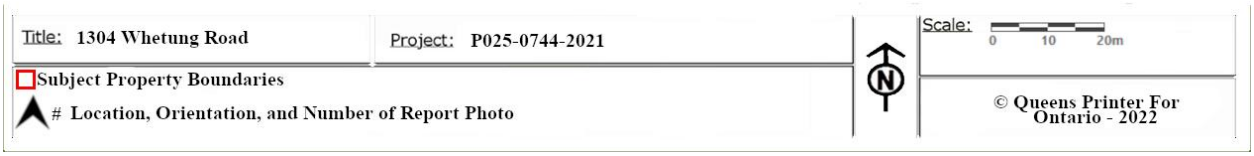


Map 10.2: Subject Property Survey Plan, Courtesy of Proponent

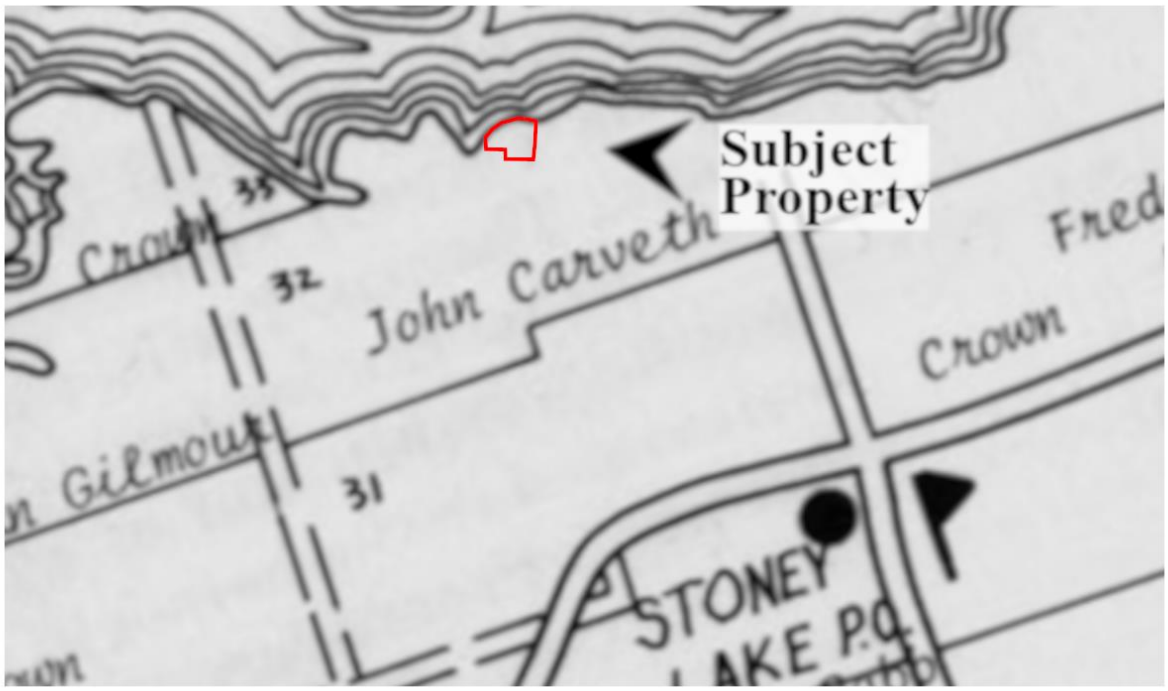
Map 10.3: Topographic Map of the Subject Property

Map 10.4: Aerial View of the Subject Property

Map 10.5: Zones of Shovel Testing Survey and Complete Disturbance Within the Subject Property

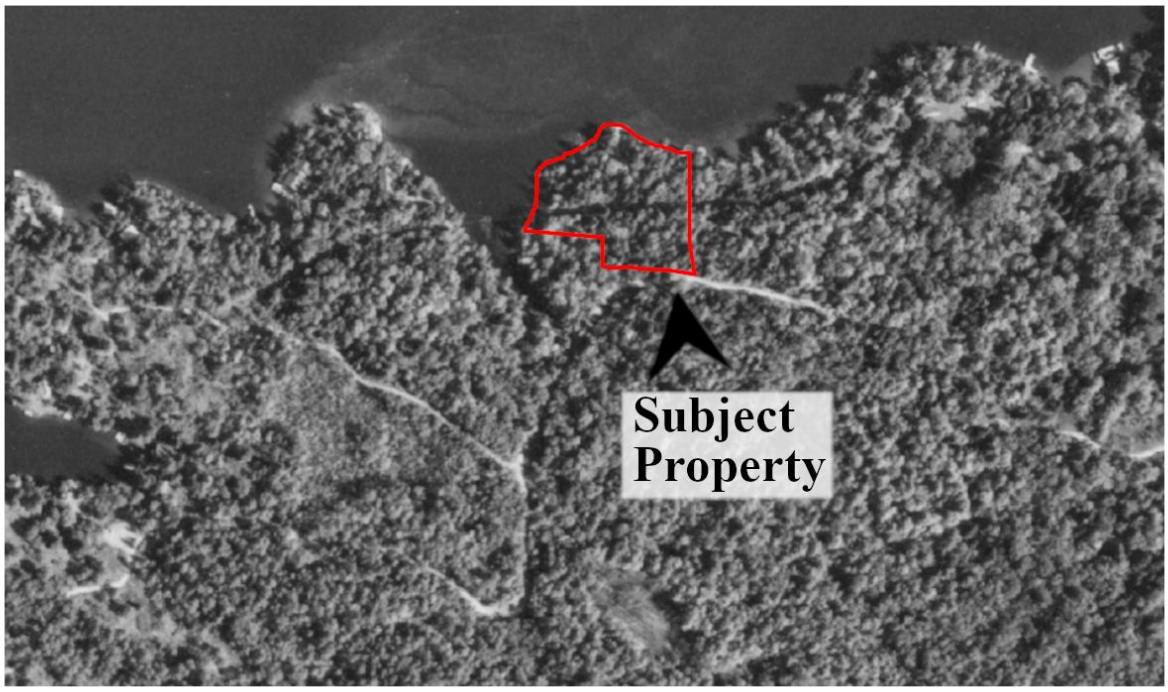


Map 10.6: Location and Orientation of Images Presented in this Report



Title: 1875 Map of Dummer Township
Project: P025-0744-2021
Subject Property Location
Scale: 300 m (Approx.)
Robert Romaine Map of Peterborough Town and Ashburnham Village 1875

Map 10.7: 1875 Robert Romaine Map of Dummer Township Indicating the Approximate Location of the Subject Property



Title: 1304 Whetung Road
Project: P025-0744-2021
Subject Property Location
Scale: 0 50 100m
National Air Photo Library (A17848-103, (Line No. 30E))

Map 10.8: 1962 Aerial Photograph Depicting the Subject Property

Ministry of Heritage, Sport, Tourism, and Culture Industries

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Ontario

Apr 13, 2022

Lawrence Jackson (P025)
Northeastern Archaeological Associates Ltd.
PO BOX 493 Port Hope ON L1A 3Z4

RE: Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "STAGE 1 &2 ARCHAEOLOGICAL ASSESSMENT OF 1304 WHETUNG ROAD, LOT 32, CONCESSION 8, GEOGRAPHIC TOWNSHIP OF DUMMER, TOWNSHIP OF DOURO-DUMMER, PETERBOROUGH COUNTY, ONTARIO", Dated Apr 8, 2022, Filed with MHSTCI Toronto Office on N/A, MHSTCI Project Information Form Number P025-0744-2021, MHSTCI File Number 0015865

Dear Dr. Jackson:

The above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18, has been entered into the Ontario Public Register of Archaeological Reports without technical review.[1]

Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require further information, please do not hesitate to send your inquiry to Archaeology@Ontario.ca

cc. Archaeology Licensing Officer
Holly Richards-Conley,Black Point Construction Services
Brian Fawcett,Township of Douro-Dummer

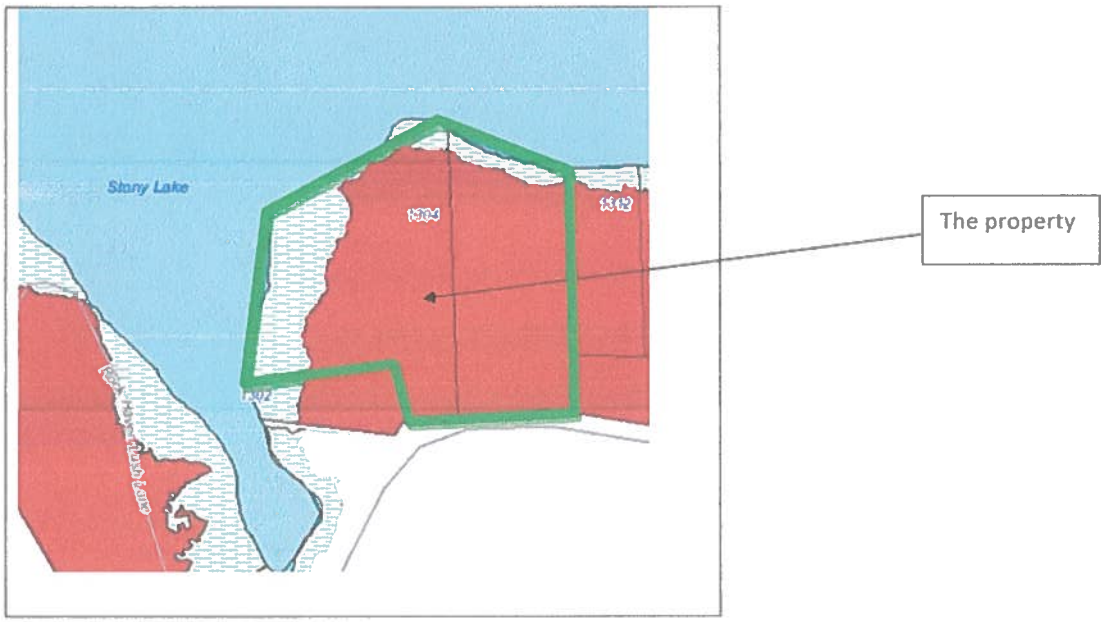
1*In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.*

Planning Justification Report
Zoning By-law Amendment Application
1304 Whetung Road, Township of Douro-Dummer
County of Peterborough

Introduction

This Planning Justification Report has been prepared in support of a Zoning By-law Amendment (ZBLA) Application filed with the Township of Douro-Dummer regarding the property known municipally as 1304 Whetung Road (Stoney Lake).

The Property



(Source: County of Peterborough Website, March 2022)

The ZBLA Application seeks to permit a tear-down and reconstruction of a residential dwelling on a footprint larger than what is existing. The proposed dwelling will not be located closer to the water than the existing high water mark setback. The proposal requests the following exception:

Notwithstanding Section 7.2.1 (h), the water yard setback shall not be less than 16.07 metres for a reconstructed dwelling with a maximum building area of 835.5 square metres.

Analysis

2020 Provincial Policy Statement (2020 PPS)

The 2020 PPS sets forth a series of policies that address a range of land use, planning, development, and related topics on a provincial wide basis.

With respect to the Zoning By-law Amendment Application, the following policies of the 2020 PPS are considered to have direct relevancy:

Section	Title - Comments
Part III	How to Read the Provincial Policy Statement The provincial policy-led planning system recognizes and addresses the complex inter-relationships among environmental, economic and social factors in land use planning. The Provincial Policy Statement supports a comprehensive, integrated and long-term approach to planning, and recognizes linkages among policy areas. Read the Entire Provincial Policy Statement The Provincial Policy Statement is more than a set of individual policies. It is to be read in its entirety and the relevant policies are to be applied to each situation. When more than one policy is relevant, a decision-maker should consider all of the relevant policies to understand how they work together. The language of each policy, including the Implementation and Interpretation policies, will assist decision-makers in understanding how the policies are to be implemented. While specific policies sometimes refer to other policies for ease of use, these cross-references do not take away from the need to read the Provincial Policy Statement as a whole. There is no implied priority in the order in which the policies appear. **Opinion: The entire document has been reviewed for the**

	purpose of preparing this Planning Justification Report.
1.0	Building Strong Healthy Communities Ontario is a vast province with urban, rural, and northern communities with diversity in population, economic activities, pace of growth, service levels and physical and natural conditions. Ontario's long-term prosperity, environmental health and social well-being depend on wisely managing change and promoting efficient land use and development patterns. Efficient land use and development patterns support sustainability by promoting strong, liveable, healthy and resilient communities, protecting the environment and public health and safety, and facilitating economic growth.
1.1.1	Healthy, liveable and safe communities are sustained by: a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term; b) accommodating an appropriate range and mix of residential (including second units, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs; c) avoiding development and land use patterns which may cause environmental or public health and safety concerns; d) avoiding development and land use patterns that would prevent the efficient expansion of settlement areas in those areas which are adjacent or close to settlement areas; **Opinion: The ZBLA Application is required to permit the redevelopment of an existing seasonal residential dwelling. The proposed expansion does not represent a risk or hazard to Stoney Lake and its environs.**
1.1.3	Settlement Areas Settlement areas are urban areas and rural settlement areas, and include cities, towns, villages and hamlets. Ontario's settlement

	areas vary significantly in terms of size, density, population, economic activity, diversity and intensity of land uses, service levels, and types of infrastructure available. **Opinion: The property is not part of a Rural Settlement Area.**
1.1.4	Rural Areas in Municipalities Rural areas are important to the economic success of the Province and our quality of life. Rural areas are a system of lands that may include rural settlement areas, rural lands, prime agricultural areas, natural heritage features and areas, and other resource areas. Rural areas and urban areas are interdependent in terms of markets, resources and amenities. It is important to leverage rural assets and amenities and protect the environment as a foundation for a sustainable economy. Ontario's rural areas have diverse population levels, natural resources, geographies and physical characteristics, and economies. Across rural Ontario, local circumstances vary by region. For example, northern Ontario's natural environment and vast geography offer different opportunities than the predominately agricultural areas of southern regions of the Province. **Opinion: The property is located within the rural area of the Township (and County of Peterborough) and is not designated as a Rural Settlement Area. Rather the property enjoys an established waterfront resource-based setting – Stoney Lake.**
1.1.5	Rural Lands in Municipalities 1.1.5.1 When directing development on rural lands, a planning authority shall apply the relevant policies of Section 1: Building Strong Healthy Communities, as well as the policies of Section 2: Wise Use and Management of Resources and Section 3: Protecting Public Health and Safety. 1.1.5.2 On rural lands located in municipalities, permitted uses are: a) the management or use of resources;

	b) resource-based recreational uses (including recreational dwellings); **c) limited residential development;** f) other rural land uses. 1.1.5.3 Recreational, tourism and other economic opportunities should be promoted. 1.1.5.4 Development that is compatible with the rural landscape and can be sustained by rural service levels should be promoted. **Opinion: The Zoning By-law Amendment Application, if approved, would permit an appropriate expansion of an existing resource-based residential dwelling.**
1.6	Infrastructure and Public Service Facilities
1.6.6.4	Where municipal sewage services and municipal water services or private communal sewage services and private communal water services are not available, planned or feasible, individual on-site sewage services and individual on-site water services may be used provided that site conditions are suitable for the long-term provision of such services with no negative impacts. In settlement areas, individual on-site sewage services and individual on-site water services may be used for infilling and minor rounding out of existing development. **Opinion: The property relies upon private water and waste-water facilities.**
2.1	Natural Heritage 2.1.1 Natural features and areas shall be protected for the long term. 2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements. **Opinion: The proposed dwelling is not closer to the high water mark than the existing dwelling.**

It is our professional opinion that the Zoning By-law Amendment Application is consistent with the policy directives of the 2020 PPS.

2019 A Place to Grow- Growth Plan for the Greater Golden Horseshoe (2019 Growth Plan)

The 2019 A Place to Grow Plan came into effect on May 16, 2019 replacing the July 1, 2017 Growth Plan (which replaced the 2005 Growth Plan). The new 2019 Plan sets forth a series of detailed policies addressing population and employment growth and other related development, planning and land use matters for the Greater Golden Horseshoe Area. The County of Peterborough is located within the eastern portion of the outer-ring part of the 2019 Plan.

Relative to the Zoning By-law Amendment Application, the following policies of the 2019 A Place to Grow Plan are considered to have direct relevancy:

Policy	Title - Details
1.2.1	Guiding Principles The successful realization of this vision for the GGH centres on effective collaboration amongst the Province, other levels of government, First Nations and Métis communities, residents, private and non-profit sectors across all industries, and other stakeholders. The policies of this Plan regarding how land is developed, resources are managed and protected, and public dollars are invested are based on the following principles: • Support the achievement of complete communities that are designed to support healthy and active living and meet people's needs for daily living throughout an entire lifetime. • Prioritize intensification and higher densities in strategic growth areas to make efficient use of land and infrastructure and support transit viability. • Provide flexibility to capitalize on new economic and employment opportunities as they emerge, while providing certainty for traditional industries, including resource-based sectors. • Support a range and mix of housing options, including second units and affordable housing, to serve all sizes, incomes, and ages of households.

	• Improve the integration of land use planning with planning and investment in infrastructure and public service facilities, including integrated service delivery through community hubs, by all levels of government. • Provide for different approaches to manage growth that recognize the diversity of communities in the GGH. • Protect and enhance natural heritage, hydrologic, and landform systems, features, and functions. • Support and enhance the long-term viability and productivity of agriculture by protecting prime agricultural areas and the agri-food network. • Conserve and promote cultural heritage resources to support the social, economic, and cultural well-being of all communities, including First Nations and Métis communities. • Integrate climate change considerations into planning and managing growth such as planning for more resilient communities and infrastructure – that are adaptive to the impacts of a changing climate – and moving towards environmentally sustainable communities by incorporating approaches to reduce greenhouse gas emissions. **Opinion: The ZBLA Application conforms to the policies of Section 1.2.1 of the Plan. The use of the property is compatible with area land uses and does not represent an environmental hazard.**
1.2.2	Legislative Authority This Plan is issued under the authority of section 7 of the Places to Grow Act, 2005. It was approved through an Order in Council under that Act to come into effect on May 16, 2019. This Plan replaces the Growth Plan for the Greater Golden Horseshoe, 2017 that took effect on July 1, 2017.
	Read the Entire Plan This Plan is to be read in its entirety and the relevant policies are to be applied to each situation. The language of each policy, including

	the policies in Section 5, will assist decision-makers in understanding how the policies are to be implemented. While some policies refer to other policies for ease of use, these cross-references do not take away from the need to read the Plan as a whole. There is no implied priority in the order in which the policies appear. **Opinion: The entire document has been reviewed for the purpose of preparing this Planning Justification Report.**
2.2	Policies for Where and How to Grow 2.2.1 Managing Growth 1. Population and employment forecasts contained in Schedule 3 will be used for planning and managing growth in the GGH to the horizon of this Plan in accordance with the policies in subsection 5.2.4. 2. Forecasted growth to the horizon of this Plan will be allocated based on the following: a) the vast majority of growth will be directed to settlement areas that: i. have a delineated built boundary; ii. have existing or planned municipal water and wastewater systems; and iii. can support the achievement of complete communities; **Opinion: The property does not form part of a designated rural settlement area.**
	c) within settlement areas, growth will be focused in: i. delineated built-up areas; ii. strategic growth areas; iii. locations with existing or planned transit, with a priority on higher order transit where it exists or is planned; and

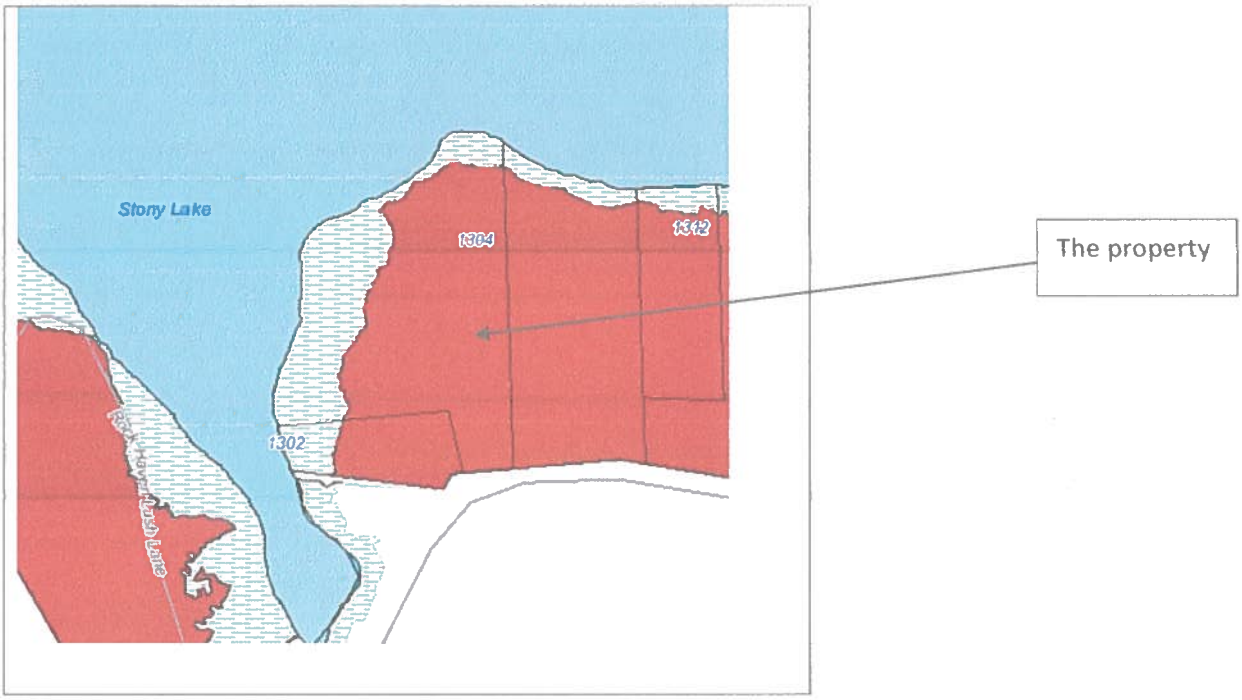
	iv. areas with existing or planned public service facilities; d) development will be directed to settlement areas, except where the policies of this Plan permit otherwise; **Opinion: The property does not form part of a designated rural settlement area.**
2.2.9	Rural Areas
2.2.9.1	1. Municipalities are encouraged to plan for a variety of cultural and economic opportunities within rural settlements to serve the needs of rural residents and area businesses. **Opinion: The property does not form part of a rural settlement area, but rather, it forms part of a resource-based area (Stoney Lake).**
2.2.9	3. Subject to the policies in Section 4, development outside of settlement areas may be permitted on rural lands for: a) the management or use of resources; b) resource-based recreational uses; and c) other rural land uses that are not appropriate in settlement areas provided they: i. are compatible with the rural landscape and surrounding local land uses; ii. will be sustained by rural service levels; and iii. will not adversely affect the protection of agricultural uses and other resource-based uses such as mineral aggregate operations. **Opinion: The use of the property can be sustained by rural service levels and is compatible with area (Stoney Lake) properties.** 4. Where permitted on rural lands, resource-based recreational uses should be limited to tourism-related and recreational uses that are compatible with the scale, character, and capacity of the resource and the surrounding rural landscape, and may include:

	a) commercial uses to serve the needs of visitors; and b) where appropriate, resource-based recreational dwellings for seasonal accommodation. **Opinion: The property has an established resource-based setting (Stoney Lake).**

It is our professional planning opinions that the Zoning By-law Amendment Application is in Conformity with the policies of the 2019 Growth Plan.

Township Official Plan

The property is currently designated as "Lakeshore Residential" with a small amount of "Environmental Constraint" at the shoreline.



(Source: County of Peterborough Website, March 2022)

Section	Title - Comments
6.2.6	Lakeshore Residential
6.2.6.1	General Principles

	Permanent single detached dwellings and cottages in shoreline areas along publicly maintained roads are the predominant use of land within the Lakeshore Residential designation. However, in the Township of Douro-Dummer, permanent single-detached dwellings and seasonal cottages may also be permitted on private roads and deeded right-of-ways subject to the provisions of the Township's Zoning By-law. This designation provides for the conversion of seasonal cottages to permanent dwellings by amendment to the Zoning By-law, where necessary. For the purposes of this plan, the terms "cottage" and "seasonal residence" are used interchangeably.
6.2.6.2	Permitted Uses The predominant use of land within the Lakeshore Residential designation shall be for the permanent single-detached dwellings and seasonal cottages on public roads. This category may include retail and service commercial uses of limited extent which provide primarily for the day-to-day commercial needs of the lakeshore residents. Home occupations and Bed and Breakfasts may be permitted subject to an amendment to the implementing Zoning By-law to recognize same. Subdivisions and condominiums outside of settlement area boundaries for permanent residential use may only be permitted in site specific locations designated for such use as of June 16, 2006.
6.2.6.3	Lakeshore Residential Policies a) The intent of this category is to make provision for permanent single detached dwellings and seasonal cottages based on public road access. This designation also provides policies to guide the conversion of seasonal cottages to permanent dwellings by amendment to the Zoning By-law, where necessary. c) General Permitted Exceptions Notwithstanding anything in this section to the contrary,

	structures such as pumphouses, boathouses, docks, open decks and stairs shall be a permitted use and may encroach into the 30 metre setback without a minor variance provided that the property owner can demonstrate to the Township's satisfaction, and if appropriate, the authority having jurisdiction over the waterway, that it does not negatively affect the waterfront environment. If addressed in the Zoning By-law, applicable standards must be met. Structures legally existing as of the date of Official Plan Amendment No. 3 comes into effect (October 22, 2008) that do not comply with the required water setback provision that require the replacement due to structural defects or destruction by fire or other natural causes or by permission of the Township will be permitted to be replaced on the same footprint and may only be enlarged in accordance with the provisions of the Zoning By-law and where the enlargement does not further encroach into the 30 metre water setback. Sewage system leaving beds requiring replacement due to structural damage or malfunction should be setback a minimum of 30 metres from the high water mark if possible or to the greatest setback that is achievable to the satisfaction of the Peterborough County-City Health Unit. Due to their importance to ensuring public health and/or safety, a minor variance will not be required in the case where the replacement leaching beds must be located within the 30 metre water setback. Existing Structures Minor variances or zoning changes to accommodate proposed expansions of a structurally-permanent nature to existing structures and/or septic systems that further reduce any applicable minimum water setback shall not be permitted unless it is a matter of public health and/or safety. **Opinion: The reconstructed dwelling is proposed to be situated at the same high water mark setback as the existing cottage with an expanded footprint. The dwelling will not be**

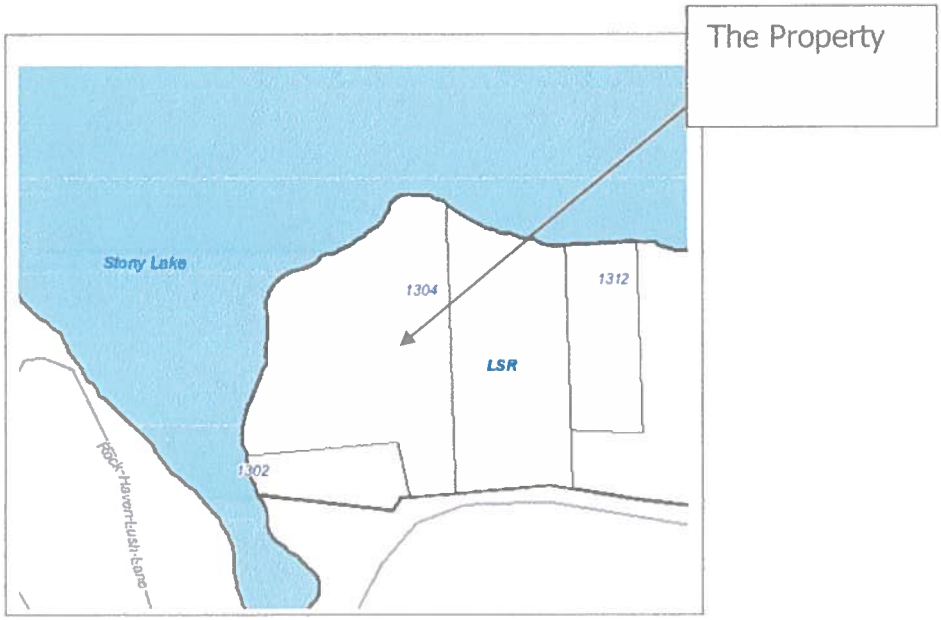
	encroaching further towards the high water mark than what is existing. Further, the proposed septic system will be located well beyond the 30 metre high water mark setback and is subject to a permit from the Peterborough Health Unit.

It is our professional planning opinion that the proposed Zoning By-law Amendment Application is in keeping with the general purpose and intent of the policies of the Official Plan.

Township of Douro-Dummer Zoning By-law (Zoning By-law)

The property is currently zoned 'LSR – Limited Services Residential' by the Zoning By-law.

Zoning Map Detail



(Source: County of Peterborough Website, March 2022)

As the dwelling is proposed to be demolished and rebuilt within the 30 metre high water mark setback, a Zoning By-law Amendment is required to permit the proposal. It should be noted that because of the demolition of the existing building, the lateral expansion regulation in the Comprehensive Zoning By-law does not apply to this

application.

The proposal requests the following exception:

Notwithstanding Section 7.2.1 (h), the water yard setback shall not be less than 16.07 metres for a reconstructed dwelling with a maximum building area of 835.5 square metres.

It is our professional opinion that the Zoning By-law Amendment Application is in keeping with the general purpose and intent of the regulatory provisions of the Township Zoning By-law.

The rebuild of the dwelling will have a lot coverage of 9.46% and an accessory structure lot coverage of 1.01% for a total building coverage of 10.48%. The proposed dwelling is no closer to the waterfront than that of the existing cottage. This property was initially two separate properties and have been merged to create what is essentially a double lot. The existing cottage is approximately one hundred (100) years old and as such, it is not reasonable to renovate the cottage to a standard that an addition can be applied for.

The proposed location of the septic limits the distance that the dwelling can be setback from the water yard as it is imperative that the septic maintains a 30 metre setback from the high water mark. The shape of the property does not provide an opportunity to move the dwelling further from the water without having the septic location encroaching towards adjacent properties or the road.

The dwelling design is such to compliment the shape of the property, which juts into Stoney Lake. While the proposed dwelling is larger than the existing (2.25% lot coverage), 43.42% of the proposed dwelling is located beyond 30 metres from the high water mark. Additionally, the proposed dwelling is one-storey so the elevation of the structure is limited and complimentary to the topography of the property.

A planting plan will be provided to Otonabee Region Conservation Authority, as required. Further, an Archeological Study (Stage 2) was completed and submitted to both Curve Lake First Nation and the Ministry of Sport, Tourism and Culture. It is noted in this report that nothing of importance was found during the study.

The completed project does not represent an over-development of the property. From our site-area visit, we are satisfied that the property development would not create an incompatible use of land. There exists a mixture of building types and property development within proximity of this waterfront property.

Summary

It is our Professional Planning Opinion that the Zoning By-law Amendment Application, serving to permit an expansion of the existing seasonal dwelling is:

- Consistent with policy directives of the 2020 PPS;
- In Conformity with the policy directives of the 2019 A Place to Grow Plan;
- In keeping with the general purpose and intent of the policy provisions/directives of both the County of Peterborough and the Township of Douro-Dummer Official Plan;
- In keeping with the general purpose and intent of the regulatory provisions of the Township of Douro-Dummer; and
- Representative of Good Planning.

Respectfully Submitted,

Prepared by:

Laura Stone, Planner

Reviewed by:

Kevin M. Duguay, MCIP, RPP

Planting Plan

1304 Whetung Rd.

Overview

The property located at 1304 Whetung Rd. is a highly vegetated property. With some open, grassy spots, the majority of this property contains large, mature pines, birch and native ground cover. The rear or roadside of the property is mostly cedar trees, with some birch spotted through-out.

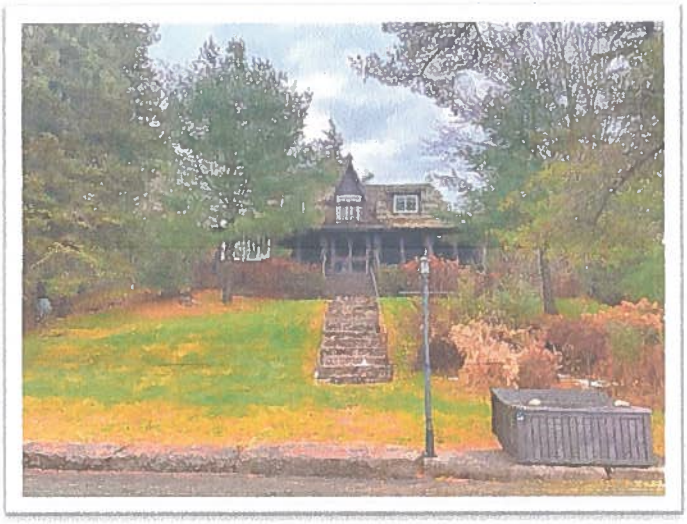
The shoreline to the NE of the property, and alongside the East property line contains many large mature Eastern White Pine.

The entire shoreline is naturalized with no armour stone, or sloped rip-rap.

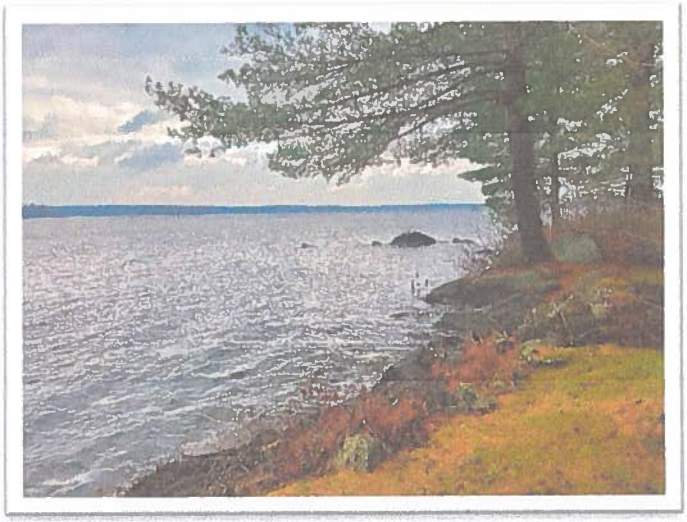
Proposal

Given that the proposed dwelling is going in the already developed area of the lot and the proposed septic location is an existing largely grassed area with no trees, there will be limited tree removal required for construction purposes. There are some small landscaping trees along the existing house envelope that will need to be removed. Any tree removed during construction will be replaced with new trees in an alternative location.

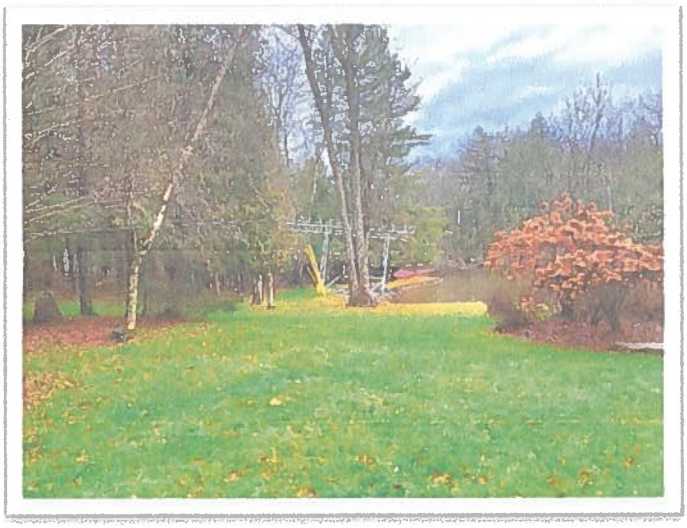
There are areas along the shoreline that, although natural, have limited vegetation along the rocks.
In Area A and B, along side the existing dock, the owners are proposing the addition of some lower lying shoreline vegetation like Red Osier Dogwood, and Sweetgale.



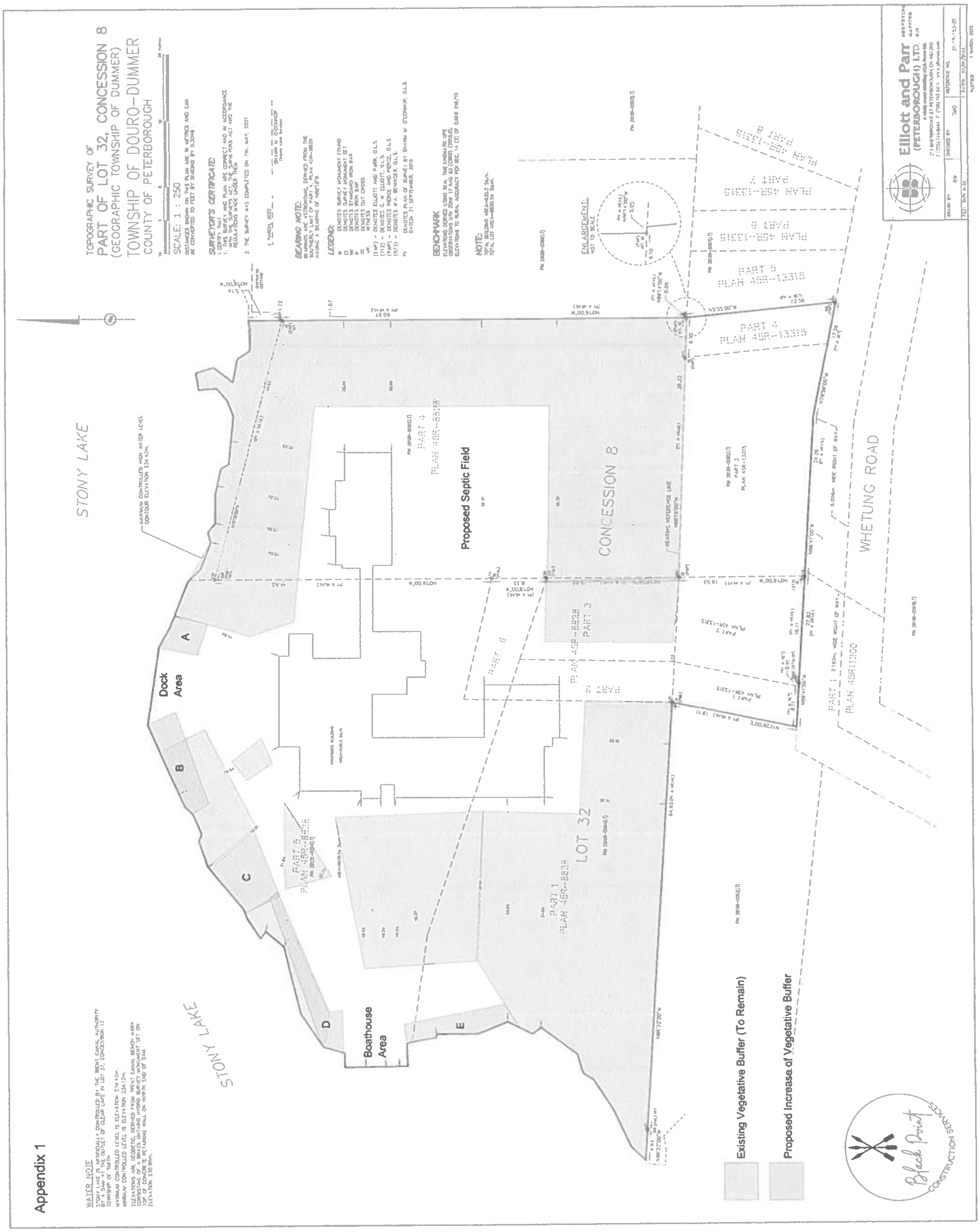
In Area C and D, although there are some large, mature Eastern White Pines, and Birch, the shoreline area will benefit from the addition of the native shoreline vegetation. Similar to area A and B, Red Osier Dogwood, or Sweetgale will be use.



In Area E, there is no vegetation along this part of the shore. The grass runs right up to the stones along the shoreline and boathouse. This area will be re-vegetated with some low-lying vegetation similar to the rest of the shoreline, but will also include the planting of some additional white pine, upland from the smaller vegetation.



Please see the attached Appendix 1, outlining the existing and proposed vegetative areas.


Appendix 1
TOPOGRAPHIC SURVEY OF
PART OF LOT 32, CONCESSION 8
(GEOGRAPHIC TOWNSHIP OF DUMMER)
TOWNSHIP OF DOURO-DUMMER
COUNTY OF PETERBOROUGH
SCALE: 1 : 250
STONY LAKE
WHETUNG ROAD
CONCESSION 8
LOT 32
Proposed Septic Field
Dock Area
Boathouse Area
A
B
C
D
E
Existing Vegetative Buffer (To Remain)
Proposed Increase of Vegetative Buffer
Elliott and Parr (PETERBOROUGH) LTD.
Black Point CONSTRUCTION SERVICES

Hello Township Council,

I want to thank you for allowing me to attend this evening.

A little background on St. Joseph's School- The school is the only school in the small and close knit community of Douro. The school is the location of a before and after school program facilitated by Compass Early Learning Centre, a not for profit organization. During the Covid 19 school lockdowns CELC has also provided emergency child care to front line workers under the direction of the provincial government. SJCES is a school that supports a diverse group of students with varying special needs. The school has welcomed these students with a focus on being inclusive and accessible.

St. Joseph's school Douro is looking to replace the current inaccessible and broken playground with playground equipment that can be used by all student and community members. Several of the students who have special needs are no longer able to interact on the playground equipment due physical restrictions and limitations. SJCES students diagnosis include Down Syndrome, Cornelia de Lange Syndrome, Sturge Weber Syndrome, and Cerebral Palsey. The physical limitations include lack of physical coordination, paralysis of limbs, upper limb differences, cognitive impairment resulting in lack of awareness regarding dangerous situations as well as receptive language processing delays.

The goal of this project is to create an inclusive playground with equipment that children of all abilities can access and enjoy. The total cost will be around $200,000 with $78,100 dollars raised through a grant and fundraising. The climber does need to be completed within 2 years or we are required to pay that grant back.

I am hear to ask for:

-A reimbursement of the $300 rental fee for the Garage Sale event St. Joseph's School held at the Douro Arena May 6th and 7th

-The Douro Fire Department often does a yearly charity and if they would be interested in donating the money this year to the Douro School

-The Township put in 2023s budget donating funds toward this project that will benefit all members of the Douro Community.

I want to thank you for taking the time this evening. The volunteer committee with the Douro School understands that COVID has put extra strain on local businesses and the financial support of many communities but something that it has not impacted is Douro's strong support for each other. We hope that you each understand the need for the playground and the inclusivity that Douro is.

Thank you,

Request to Address Council

If you would like to attend as a delegation before Council for the Township of Douro-Dummer or the Committee of the Whole, you must complete this form and submit it to the Municipal Office. Please note that the deadline for delegation requests is 12-noon, on the Tuesday prior to the meeting date (seven days before the meeting date).

A copy of any presentation or supporting materials is also required to be submitted at 12-noon, on the Tuesday prior to the meeting date. The only formats accepted are as follows: PFD, PowerPoint, Word, Excel or Jpeg.

Please note that as per Procedural By-law 2021-73, only three Delegations shall be scheduled for each meeting. The time limit of 10 minutes shall be strictly enforced.

Name of Individual(s) *

Nicole Sullivan

Name of Organization:

St. Joseph's CES Volunteer and Fundraising Committee

Please Provide an Email Address:

nicolesullivan@trentu.ca

Please provide a phone number:

7057613205

Nature of delegation request: *

I am hear to ask for:
-A reimbursement of the $300 rental fee for the Garage Sale event St. Joseph's School held at the Douro Arena May 6th and 7th
-The Douro Fire Department often does a yearly charity and if they would be interested in donating the money this year to the Douro St. Joseph's School to build a New Accessible Playground
-The Township put in 2023s budget donating funds toward a New Accessible Playground that will benefit all members of the Douro Community.

Please upload any additional information you wish to submit.

File Name
Hello Township Council.docx 13.9 KB

Please provide a signature *

For the purposes of the Freedom of Information and Protection of Privacy Act, by submitting this form, I/we authorize and consent to the use by, or the disclosure, to any person or public body or publishing on the Municipal website any information that is contained in this submission and recognize that my/our name may become part of the public record.

Thank You

Change the text for this message.

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Name of Individual(s) *

Debra Satok

Name of Organization:

Please provide the name of the organization you may be representing.

Please Provide an Email Address:

dsatok@rogers.com

Please provide a phone number:

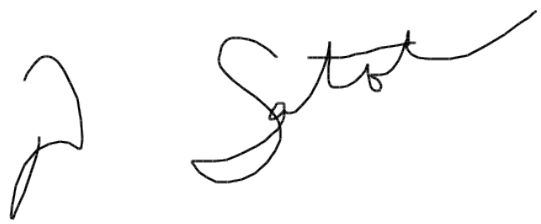
416-315-0646

Nature of delegation request: *

I would like to share my thoughts on Short Term Rentals

Please upload any additional information you wish to submit.

Please provide a signature *



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Name of Individual(s) *

Douglas Owens

Name of Organization:

Please provide the name of the organization you may be representing.myself and Brent Whetung may join with me in the presentation

Please Provide an Email Address:

Please provide an email address for contact dowens@owenswright.com

Please provide a phone number:

Please provide a phone number for contact4163184141

Nature of delegation request: *

Please provide information on what you wish to present or discuss with Council on April 5,22 Council held a special meeting to receive Short Term Rental submissions and Township CAO Elana Arthur first gave a dissertation on all the benefits in her view supporting STR's and then a number of un identified speakers all operators of STR spoke in favour of such view. Myself and Brent Whetung were the first parties to address Council past August 4/21 and CAO Elana Arthur was in attendance and heard our presentation wherein I , also pointed out I had experience in that I sat as cottage representative on The Township Planning committee that dealt with the mandated merged of Douro and Dummer Townships Official Plans and general zoning bylaw in effect at present. The purpose of the April 5/22 was for council to help understand STR's and public input was welcomed. Neither myself nor Brent Whetung received any notice of the meeting from Township nor from the councillor who represents our shoreline area who resides nearby and knows me well . This is intentional suppression of my views and those of Brent Whetung and i (we) wish to address Council on this serious matter and ask for an investigation pursuant to the Municipal Act and ask that Elana Arthur be excluded from tabulation of the public opinion poll on STR's and that The Clerk assume control of this task and if completed to review the accuracy of the tallied result and that Elana Clark be restricted from presenting any further personal views to Council on this matter till investigation is complete. This was an attempt to manipulate the presentation to Council and sway their understanding of this issue. Press May be in attendance

Please upload any additional information you wish to submit.

Please provide a signature *

For the purposes of the Freedom of Information and Protection of Privacy Act, by submitting this form, I/we authorize and consent to the use by, or the disclosure, to any person or public body or publishing on the Municipal website any information that is contained in this submission and recognize that my/our name may become part of the public record.

Thank You

Change the text for this message.

DELEGATION TO COUNCIL

JUNE 7, 2022

DOUG OWENS

The Role of Municipal Government

Transparency and the public trust

- The Municipal Act is a legislative framework for municipalities that recognizes municipalities as responsible local governments with a broad range of powers – balancing local autonomy and flexibility with requirements for improved accountability and transparency of municipal operations
- Council meetings must be open to the public and business conducted in a transparent and accountable way
- Central parts of council decision making – including deliberation and voting – take place there - It is paramount that council meetings be properly called and organized, and that proper procedures are followed

CAO – Role and Duties

Maintaining a culture of integrity

- As head of the public services, this role comes with significant responsibility, education and experience to maintain a culture of integrity
- Obligated to provide the best information and advice to Council
- Must operate independently, advising Council and carrying out Council's direction while remaining unaffected by political influence*
- The CAO has the ultimate responsibility for the accuracy of information presented to Council and has a responsibility to provide impartial advice to Council
- The CAO is responsible for leading and fostering a *"culture rooted in the highest ethical standards"**

*Source: *Transparency and The Public Trust (Collingwood Judicial Inquiry) Associate Chief Justice Frank Marrocco Commissioner*

Transparency and Accountability

Public Participation

- Show of hands of anyone on council or working with council in context of the issue of STRs, who has a STR in Ontario
- Show of hands for anyone with one degree of separation/has family or friends with STRs in Ontario and explain that relationship to the delegation

Proof of Bias

April 2022 Special Council Meeting

- Elana informed Doug Owens that he is to monitor social media and the Township website to learn about Council Meetings
- Clip is proof CAO personally called Nina:

https://youtube.com/clip/Ugkx2Rl5oFejBIvyOx1V3a4e3QqLi0hQnSp_

- Implied benefits of STRs is given 1:52 seconds (6:42 – 8:34) whereas challenges of STRs are given 39 seconds (8:39-9:18)
- CAO continues to refer to short term renters as families which points to a softening of the issue
- A clear example of bias in this clip sounds like an advertisement to rent a cottage in Douro-Dummer vs other areas in the province:

https://youtube.com/clip/UgkxP_70fq2Whg5WE6Ev5mGPfdwue3uXHDAL

- “Why Rent Short Term” slide is CAO selling in STRs, clip indicates promotion of STRs over hotel stays:

https://youtube.com/clip/UgkxS0NkNF-6cqcCbOSIMh01wJsQcMd1J5y3

Proof Bias Continued…

August 2021 Council Meeting

- Delegation presented August 3, 2021 to Council
- Resolution for Next Steps entailed:
  - Doug Owens' recommendation for council to obtain opinion letter from Aird & Berlis LLP was accepted – 10 months later only now Aird & Berlis engaged as per Doug prompting
  - Purpose of retaining counsel was to review current by-law along with existing provisions and how they relate to STRs
  - Also discussed risk of grandfathering inadvertently STR uses for similar counsel review
  - Motion was carried *(Moved by: Councillor Watson Seconded by: Councillor Watt)* that staff proceed with sending warning letters to those currently in contravention of the Township's Zoning Regulations after receiving legal counsel, and further that staff move forward with a public process to address short term rentals in the township and report back to Council soon

Next Steps

April 2022 Special Council Meeting

- CAO bias: treats one side different than the other
- CAO excludes one side from April 2022 Special Meeting
- CAO clearly favors STRs (see previous clips)
- CAO did not follow through with Next Steps from August 2021 Council Meeting

Delegation Requesting:

- Requesting removal of CAO from STR file and that all related matters be supervised by town clerk
- Requesting Minister of Municipal Affairs and Ontario Ombudsman conduct an informed review – supervise and review all polls taken, intake of information, emails and surveys requires oversight
- Proper time given to review by all interested parties and the resulting digest of the opinion of Aird & Berlis
- That the draft County Plan remove the words " economic benefit" and urging instead a County wide approach respecting the sensitive lake ecology First Nations views and rights of shoreline residents to their quiet enjoyment and reflecting STR's are commercial uses

- IN SUMMARY -

Elana as CAO you have endeavoured to manipulate Council exclude myself and Mr Whetung from any input , failed to retain legal counsel in a timely manner following Aug4/21 resolution of Council and at this very late date are now engaging counsel arising from my inquiries. We need proper analysis from Aird Berlis of our current bylaw and circulation of such opinion to all interested parties to then address next steps for Council. This matter cannot be railroaded through by you as the Township CAO. You have eroded the public trust. You have overstepped your role as CAO in failing to present a balanced viewpoint to Council .

THANK YOU

Township of Douro-Dummer

Report and Capital Project Status

- Directed by Council and/or CAO
- Directed by the Province/legislation
- Directed by an Agency

Report Status

Department	Date Requested	Directed By	Resolution/Direction	Est. Report Date
Clerk	May 4, 2021	Council	Fee for Muzzle Order Appeal Process * to be combined with the revised animal control by-law and in consultation with a neighbouring municipality	~~August 2021~~ ~~October 2021~~ ~~February 2022~~ New contract with PHS is now in place.
Clerk	May 4, 2021	Council	Lessner Road Allowance and Closure - Appraisal received April 2022 - Report in Closed session	~~October 2021~~ Spring 2022
CAO	June 1, 2021	Council	Future ORV Use in the Township - Report on Agenda for April 5, 2022 - Public Meeting – May 10, 2022	~~October 2021~~ ~~December 2021~~ June 2022 (pending the County Consultation)
Public Works / CAO	May 17, 2022	Council	Speed Limit Reduction Request Policy & Follow up on Birchview Road Speed Study Report	August 2022

Public Works	February 16, 2021	Council	County Road 38 Boulevard Maintenance	Revisit 2022
Public Works	February 26, 2021	Council	Sidewalk/Shoulder Maintenance Program	Revisit 2022
CAO	August 3, 2021	Council	Public Process to Address Short Term Rentals	~~May 2022~~ June 2022
Building Department	December 21, 2021	Council	Building Department Customer Service Policy with Wait Times	~~Second Meeting in May 2022~~ Pending outcome of Report regarding Staffing Levels
Clerks	February 1, 2022	Council	Review of New Procedural By-law	Complete
Building Department	February 8, 2022	Council/COW	Policy Regarding Low Level Decks	Complete
Clerks and Finance	March 15, 2022	Council	Comprehensive Council Remuneration By-law	Summer 2022
Clerks	March 29, 2022	HR Committee	Revise and Consolidate Township Social Media Policy	Summer 2022
Clerks	April 12, 2022	COW	Update to Complaint Policy	Summer 2022
Corporate	May 3, 2022	Council	Future Gravel Resources	Fall 2022

Capital Project Status

Department	Capital Project List	Status
General Government	Demolition of Old House at Fifth Line	Barn to be removed Spring 2022 and house to follow in June 2022
General Government	Employee and Council Compensation Review	Complete
General Government	New Cubicle Walls	On hold pending Covid-19 update
General Government	New Sloped Roof - Town Hall	Drawings being completed
General Government	Office and Lower Level Painting – Town Hall	Office Painting is complete Lower Level – 2022
General Government	Bathroom Touchless Fixtures	Deferred to 2022
General Government	Asset Management Plan	Ongoing
General Government	Computer Modernization	Summer 2022
General Government	Finance Modernization	Fall 2022
Building Department	Lower Level Office Renovations	Tender awarded – in progress

Building Department	Boat and Trailer	Late Spring 2022
Building Department	Cloud Permitting Software	Launched January 2022
Fire	Douro Station Reconfiguration	Ongoing
Fire	Station 1 Tanker	Delivered
Fire	Station 2 Pumper	RFP Awarded
Fire	Equipment: - Bunker Gear - Extrication Tools - Fire Helmets - Vehicle Stabilization Kit - Lifting Air Bags - Ground Monitor - Forestry Pump - Electronic Sign	Items to be received throughout 2022
Transportation Services	Fuel Pumps – Douro & Warsaw	Ongoing
Transportation Services	Replacement of Pickup Truck	Complete
Transportation Services	Replacement of Volvo Grader	Complete

Transportation Services	Roads Needs Study	Complete
Transportation Services	Loader	RFP Distributed
Transportation Services	3pt Hitch Side Mower	Complete
Transportation Services	One Ton Pickup Truck with snow plow	RFP Distributed
Parks and Recreation	Douro Ice Resurfacer	RFP Awarded
Parks and Recreation	Harvest Room Floor	On hold – researching options – part of budget process
Parks and Recreation	Infield Groomer	Alternative Option Approved by Council – Complete
Parks and Recreation	Parks and Rec Master Plan - Implementation	On hold due to Covid-19
Parks and Recreation	Douro & Warsaw Arena Exterior Doors	Complete
Parks and Recreation	Tables and Chairs	Summer 2022
Parks and Recreation	Lime Kiln Restoration – 2022 Budget	Fall 2022

Township of Douro-Dummer

Report to Council
Re: Fire Chief-2022-07
From: Chuck Pedersen
Date: June 7, 2022
Re: Douro-Dummer Fuel Depots

Recommendation:
That the Fire Chief-2022-07 report, dated June 7th, 2022, regarding Douro-Dummer Fuel Depots be received and that Council approve the decommissioning of the Douro Public Works fuel depot, along with the replacement of the Warsaw Public Works fuel depot through a sole source process; and furthermore that Council direct staff to work with County staff to set up fuel distribution and tracking out of the County Public Works yard in Douro, for the Townships Douro Ward fleet.

Overview:
The 2021 budget provided funds to replace our aging fuel pump infrastructure. An RFQ was sent out with no reply for tank replacement and one response for fuel monitoring system. This project was carried over to 2022. The fuel system in place at Warsaw and Douro public works (PW) is beyond its life expectancy and we can no longer get these pumps serviced due to lack of parts. The tanks in Warsaw and Douro are beyond their life expectancy.

There is opportunity to work with the County of Peterborough to accommodate some of our fleet. This would be on a trial basis to ensure it will work as both parties intend it to, with anticipation to become a permanent answer. The solution we are proposing is to send Donwood Fire Station, Douro Fire Station, Parks and Recreation and Douro PW to the County fuel depot in Douro to get their fuel. This will allow us to decommission the Douro PW fuel station and use the pump, meter, hose and nozzle at the new fuel station in Warsaw. Warsaw fuel depot will replace three tanks, reusing the one pump from Douro and adding two new pumps, meters, hoses and nozzles. This will eliminate future costs of running both stations, but still give us our own control of fuel supply in emergencies and save much staff time for refueling and keeps fire station 4 fleet (our busiest station) in its response area and station 5 closer to its response area. This will also benefit PW as a majority of their fleet is in Warsaw now, and if a new PW depot is built, then all vehicles will be operating out of Warsaw. To fuel graders, excavator, back hoe, tractor, etc. this would take additional time, as they are slow moving vehicles to drive to County fuel depot or to fill with our mobile fuel tank, that would take 2 trips per vehicle to fill.

Conclusion:
Based on conversations with suppliers, it is understood that there was lack of interest of fuel tank supply through our RFQ as the value for companies is the delivery of fuel, not the sale of tanks. We have priced fuel tanks from our fuel supplier and they are willing to work with us for temporary tank drops as we prepare the existing cement pad to receive the new tanks and tracking system. Based on this, we would like to proceed with a sole source process; one for fuel tanks and distribution system and one for fuel tracking system.

Financial Impact:
We have an approved budget of $50,000 and it is anticipated that we would be $15-20,000 under budget to complete this project. The partnership with the County will have some nominal administrative charges, but will outweigh the cost of ownership of a fuel station at our Douro PW.

Strategic Plan Applicability:
To effectively respond to the challenges of addressing the Township's municipal infrastructure needs as well as effectively managing the assets of the corporation.

Sustainability Plan Applicability:
N/A

Report Approval Details

Document Title:	Douro-Dummer Fuel Depots.docx
Attachments:	
Final Approval Date:	May 31, 2022

This report and all of its attachments were approved and signed as outlined below:

Martina Chait-Hartwig

Elana Arthurs

Township of Douro-Dummer

Report to Council
Re: C.A.O.-2022-14
From: Elana Arthurs
Date: June 7, 2022
Re: Off Road Vehicle Use on Township and County Roads

Recommendation:

That the C.A.O.-2022-14 report, dated June 7, 2022 regarding Off Road Vehicle Use on Township and County Roads be received; and
That Council provide direction to staff on communicating their position to the County regarding the recommended use of off-road vehicles on County Roads.

Overview:

Following the presentation from County of Peterborough staff and representatives from Stantec Consulting on options for off road vehicle use on County Roads, staff were directed to hold a public meeting and allow for public input on the recommendations.

A public meeting was held on May 10, 2022 providing information on off road vehicles, the recommendations from the County of Peterborough and options for municipal road use for consideration and comment from the public.

At that meeting there were a number of comments made both from those in attendance and those observing via YouTube. Staff also collected over 20 written comments that were received via email and have been provided to Council separate from this report due to the confidential information contained within those comments. Many of those that spoke during the public meeting also provided written submissions but the overall response was the majority are not in support of off-road vehicles on any road in the Township. Some were in favour and a few would consider permitting off-road vehicles with confirmation that there would be strict rules and enforcement.

Those are not in favour of permitting off-road vehicle use expressed a number of concerns including the municipal risk and associated liability, the ability to enforce rules and regulations, noise and general road safety.

Those in support spoke to the enjoyment they experience through use of their off-road vehicle and supporting local businesses while riding. The comments included a position that as a safe operator they should not be unfairly punished because of those that don't follow the rules.

Conclusion:

The County has completed their review, and provided recommendations for permitting off-road vehicles on selected County Roads and is seeking comments on those recommendations from Council.
Staff provided a presentation offering options for Council to consider and is seeking direction on those options for off-road use on Township Roads.

Financial Impact:

There is no financial impact at this time.

Strategic Plan Applicability:

To develop and/or assist with the development and delivery of social and recreational programs as well as effectively maintaining and updating recreational facilities to promote healthy lifestyles and meet the broad range of community needs.

Sustainability Plan Applicability:

N/A

OFF ROAD VEHICLES

BACKGROUND AND MOVING FORWARD IN THE TOWNSHIP OF DOURO-DUMMER

TUESDAY, MAY 10TH – 6:00 P.M.

INTENT OF THE PUBLIC MEETING

The intent of this public meeting is hear from those who wish to provide comments on the use of off-road vehicles in the Township of Douro-Dummer.

Staff will:

- review what has transpired in the Township to date and the current status.
- review the changes in legislation and how that impacts the municipality.
- outline the options for consideration.

BACKGROUND AND TIMELINE

- June 2021– Following the change in regulation that required a by-law to prohibit off road vehicles on roadways, Douro-Dummer Council adopted a by-law to restrict the use of off road vehicles to the Twelfth Line and Simpson Road
- September 2021 – Presentation to Council from the County of Peterborough & Stantec Consulting on options for off road vehicle use on County Roads
- April 2022 – Staff prepared a report to Council including the final recommendations from the County of Peterborough. Council requested public consultation prior to making a decision
- May 2022 – Following the public meeting tonight, staff will report back for a decision at an upcoming Council meeting

COMMON OFF ROAD VEHICLES

All Terrain Vehicle - ATV

Side by Side

EXPANDED TYPES OF OFF ROAD VEHICLES

Off-road Motorcycles

Extreme-terrain Vehicles

COUNTY OF PETERBOROUGH TRANSPORTATION MASTER PLAN

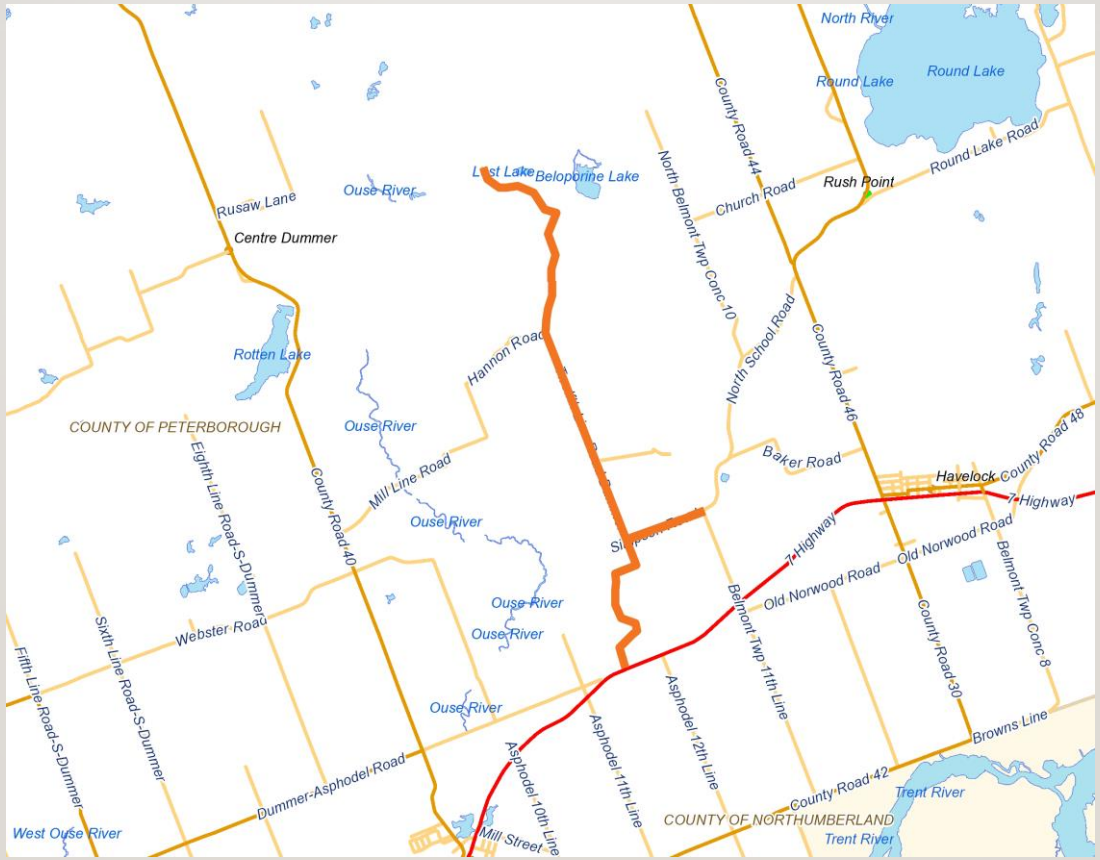
The County of Peterborough reviewed the use of Off Road Vehicles on County Roads in parallel with an update to the County's Transportation Master Plan.

The intent was to identify opportunities to support safe ORV use.

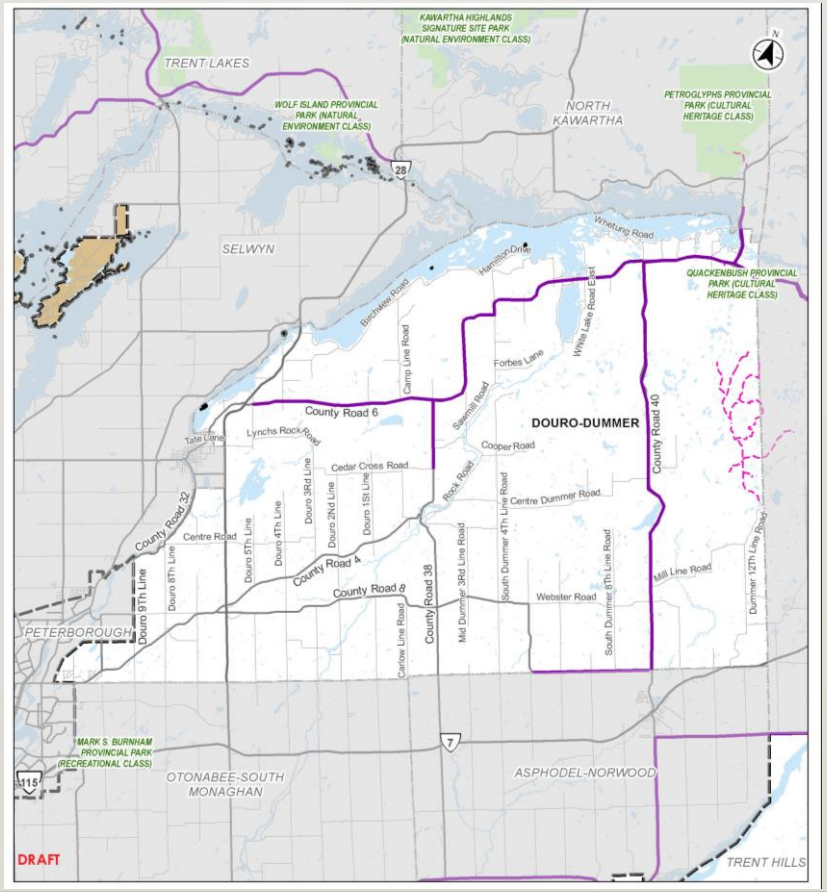
Consultation occurred with the public, First Nations, lower-tier municipalities and active transportation users to address potential concerns and need related to ORV use on County Roads.

After gathering feedback a draft report was presented to Council. County staff then met with Township staff and a final report was provided for in April 2022 for Council to provide comments on the options presented for ORV use.

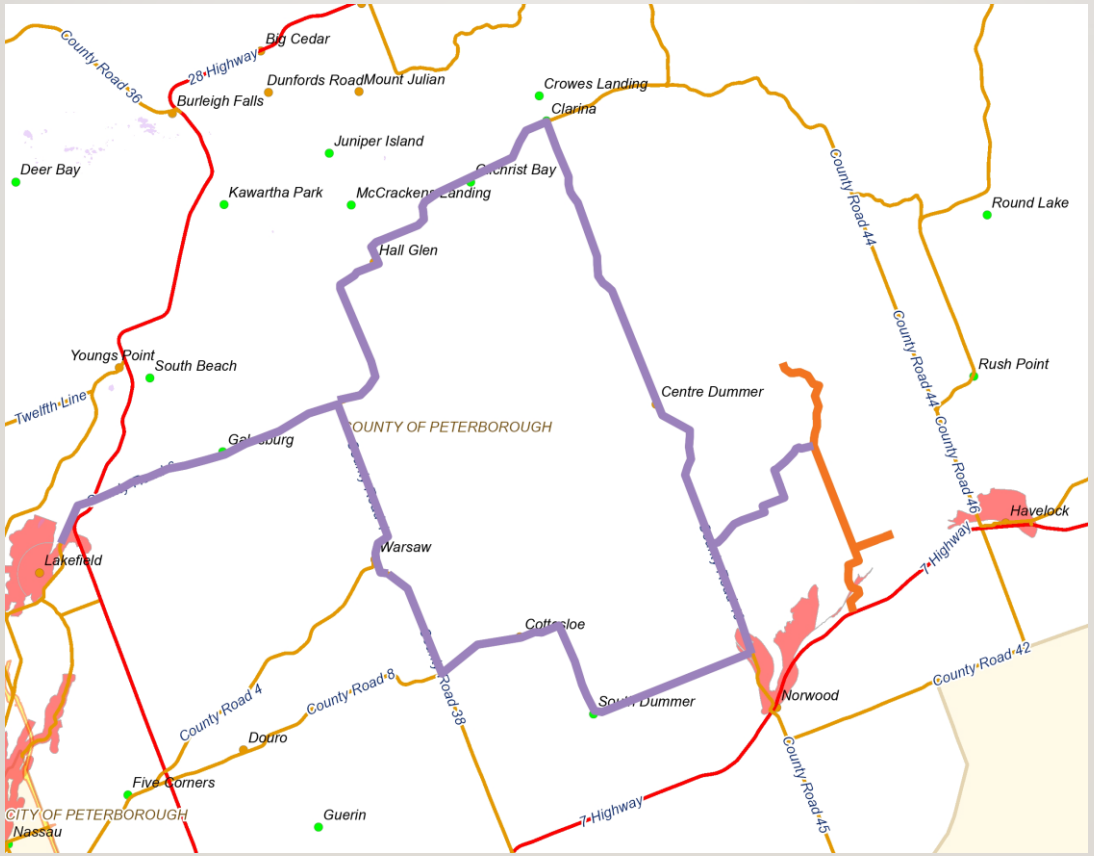
THE CURRENT STATE IN THE TOWNSHIP OF DOURO-DUMMER



THE COUNTY RECOMMENDATION FOR COUNTY ROAD USE ONLY



POSSIBLE OPTION FOR COUNTY & MUNICIPAL ROAD USE



NEXT STEPS

- Gather input at this meeting
- Staff will summarize all comments received
- Staff will bring forward a report at the May 17th Regular Council Meeting for Council to make a decision on ORV use in the Township of Douro-Dummer.
- Staff will communicate the direction of Council regarding ORV use on County Roads to the County of Peterborough.

Questions & Comments

Township of Douro-Dummer

Report to Council
Re: Public Works-2022-09
From: Jake Condon
Date: June 7, 2022
Re: Purchase of Wheeled Loader

Recommendation:
That the Public Works-2022-09 report, dated June 7, 2022, regarding the purchase of a wheeled loader be received and that Council award the tender to Brandt Tractor Ltd. in the amount of $285,540.58 inclusive of the extended warranty (excl. HST); and further that the 2008 John Deere loader be deemed surplus to the operation and authorize the Manager to proceed with the sale of the vehicle.

Overview:
Council approved, through the 2022 budget process, the purchase of a 2022 wheeled loader for the Public Works Department to replace the current 2008 John Deere loader. An RFP was issued and closed at 12:00 noon on Friday, May 6, 2022, there were four (4) submissions received.

Conclusion:
The following is a summary of the RFP results, listed in the table below. Brandt Tractor Ltd is the lowest tendered price meeting **all** the specifications included in the tender document. Brandt offers local parts and service, as well as a delivery date in 2022.

Company	Delivery	Total	Extended Warranty	Total Amount (excl. HST)
Brandt Tractor Ltd - John Deere	**60-90 days**	**$273,500.00**	**$12,040.58**	**$285,540.58**
Toromont - Caterpillar	April 2023	$347,585.00	$12,490.00	$360,075.00
Bob Mark – Hyundai	March 2023	$284,766.00	$10,169.55	$294,935.55
John's Equipment - JCB	February 2023	$266,365.00	$17,512.00	$283,877.00

Financial Impact:
The 2022 budgeted amount to purchase the loader is $275,000. Any overages related to the purchase of the new unit will be funded through the sale of the surplus loader.

Strategic Plan Applicability:
To ensure that the public works department operates efficiently and effectively.

Sustainability Plan Applicability:
N/A

Report Approval Details

Document Title:	Purchase of Wheeled Loader.docx
Attachments:	
Final Approval Date:	Jun 1, 2022

This report and all of its attachments were approved and signed as outlined below:

Martina Chait-Hartwig

Elana Arthurs

Township of Douro-Dummer

Report to Council
Re: Building Department-2022-10
From: Brian Fawcett
Date: June 7, 2022
Re: Building Department Volume and Staffing Levels

Recommendation:
That the Building Department-2022-10 report, dated June 7th, 2022 regarding Building Department volume and staffing levels be received; and

That Council authorization the creation of one (1) full-time permanent Building Official / By-law Enforcement Officer position and one (1) full-time contract Building Official / By-law Enforcement / Permit Technician for a one (1) year period with the understanding that the Building Department continues to operate on complete cost recovery.

Overview:
The Building Code Act and its regulation, the Ontario Building Code, is enacted by the Provincial government and implemented at the local municipal level. The purpose of this legislation is to promote the safety and accessibility of buildings that are constructed, renovated and modified. Building Officials promote the health and safety of buildings for property owners and also to the benefit of all members of the public.

Through the Building Code Act:

> "The council of each municipality shall appoint a chief building official and such inspectors as are necessary for the enforcement of this Act in the areas in which the municipality has jurisdiction."

The Douro-Dummer Building Department full-time staff complement currently consists of a Chief Building Official, one Building Official / By-law Enforcement Officer and one Administrative Assistant position. The Administrative Assistant position is a new position that was created and filled late February, 2022 and uses the title of Building Administrator.

The reality is that our current staffing levels are insufficient to effectively administer and enforce the Building Code Act. There are a wide variety of reasons to speculate for the increases to the volume of applications being processed and with the future being unpredictable, it is appropriate to review our current position and workload.

Historical permit volumes for the municipality indicated a level of stability from 2010 to 2017. In the years since 2017, the permit volume has effectively doubled on average and in 2021 the construction value was nearly triple the previous values. This indicates that not only are we issuing more permits, but the permits are larger and more complex than before and subsequently creating need for additional inspections.

As of May 31, 2022, the Township currently has over 1000 permits that are active. If the remaining work for these permits is considered, this is equivalent to roughly 2 years of full time work just to inspect and manage these open permits, which does not include the volume of new permits being issued and inspected.

As of the end of May 2022, we have surpassed the average volume of the entirety of one pre-2018 year.

I have prepared new a customer service policy and workflows for internal measures that we are working to implement, but without appropriate staffing levels to handle this volume, it would be unfair to our customers to implement a benchmark that we is unachievable. Not only does this put unnecessary stress on our existing staff but this could expose the municipality to liability (for failing to meet implemented policy directives).

Although permit volume is a stable benchmark to utilize, there are a variety of other metrics that demonstrate workloads have drastically increased. In 2019, I personally responded to and received approximately 5600 emails. In 2021, this number grew to 9700. This represents an increase of 70% of inquires/correspondence using this method alone, for only one staff member.

To put the 9700 emails into perspective, if one were to assume that each email requires a mere 10 minutes of time on average (some emails can take more than an hour, some are under a minute), this is 1600 hours that I spent last year reading and responding to emails, which is more hours than I am available in the office for. In 2022, this correspondence volume is anticipated to be reduced for the CBO with Council's previous approval of the full-time administrative position.

Further to our regular and routine work, the May 21, 2022 wind storm has caused a significant surge in volume for permits, we are anticipating more than an additional 100 permits just related to these repairs.

These references are not including any analysis of the other duties that this department is responsible for, including by-law enforcement.

To move forward, based on our current situation and outstanding permit volumes, it is recommended that Council consider the following staffing resources for the department to effectively administer and enforce the Building Code Act:

- 1x Chief Building Official
- 2x Building Official / By-law Enforcement Officer
- 1x Building Official I / By-law Enforcement Officer / Permit Technician – Contract
- 1x Building Administrator

The expectation is the two new positions to be created and filled, would be done on the basis that the department continues to operate on complete cost recovery. It is anticipated that the one Building Official / By-law Enforcement Officer permanent position would be maintained in perpetuity. This would compliment our current Building Official, allowing for one to be primarily field inspection, and the other being primarily office, to do plans examination and provide technical information to the public. The

other contract position would be posted for a one-year term, which would be needed now to handle the volume (including storm related permits), but the flexibility to eliminate this position after one year could be appropriate.

Conclusion:
With an increase of volume in the last few years, coupled with our current open/outstanding permits, there is a sufficient volume needing appropriate staffing levels. Our current full-time staff level is 2 technical and 1 administrative, whereas the current necessary levels are 4 technical and 1 administrative. In order to provide effective service levels and efficient customer service, as well as properly administer and enforce the Building Code Act, the Municipality needs the appropriate staffing levels. This is not only for the benefit of our property owners, but a requirement for ensuring that buildings are safe and accessible for all members of the public.

Financial Impact:
While there is a cost to additional staffing levels, the Building Department operates on complete cost recovery, with the costs covered by building permit fees. The department has sufficient reserves to maintain these staffing positions should volume decrease in future years. Should volume continue to decrease, the contract position would be eliminated.

Strategic Plan Applicability:
To ensure and enable an effective and efficient municipal administration.

Sustainability Plan Applicability:
N/A

Report Approval Details

Document Title:	Building Department Volume and Staffing Levels.docx
Attachments:	
Final Approval Date:	Jun 1, 2022

This report and all of its attachments were approved and signed as outlined below:

Martina Chait-Hartwig

Elana Arthurs

Township of Douro-Dummer

Report to Council
Re: Treasurer-2022-08
From: Paul Creamer
Date: June 7, 2022
Re: 2022 OCIF Allocation

Recommendation:
That the Treasurer-2022-08 report, dated June 7, 2022 regarding 2022 OCIF Allocation be received and;

That $40,000 of the additional Ontario Community Infrastructure Program funds allocated to the Township Douro-Dummer be used to fund the road construction projects on Bradfield Road and Douro 8th Line Road.

Overview:
On May 17, 2022, the Director of Public Works provided report Public Works-2022-07 – which addressed the results of the tender for the 2022 Surface Treatment program. The result of the tender was approximately $90,000 over the budgeted amount of $294,655. In the report it was recommended to fund $50,000 of the cost overage from reserves and delay projects on Bradfield Road and Douro 8th Line Road to make up for the remaining $40,000 overage.

The Township receives an allocation each year for the Ontario Community Infrastructure Fund (OCIF). Eligible capital expenditures include capital expenditures on core infrastructure projects (such as roads, bridges, water and wastewater, including sanitary and stormwater facilities) that are part of an asset management plan are eligible, including:

- capital construction of new core infrastructure to be owned by the recipient that addresses an existing health or safety issue
- capital maintenance for the renewal, rehabilitation and replacement of core infrastructure owned by the recipient
- debt-financing charges specifically associated with the capital construction and maintenance of core infrastructure are eligible, if started after January 1, 2017.

For 2022, the Township budgeted $93,165 but was announced after the Township passed the budget that the allocation is $223,448 which is $130,283 more than the budget.

Conclusion:
It has been the Township's practice to use the OCIF allocation for road construction projects and it is critical for the Township to stay on top of the road maintenance program to ensure the roads continue to be in good shape. Therefore, it is recommended to fund the projects on Bradfield Road and Douro 8th Line Road from OCIF in the amount of $40,000.

Additional uses of the OCIF allocation will continue to be explored in 2022, however, if the funds are not used in 2022 the unspent allocation can be carried forward to the 2023 Capital Budget.

Financial Impact:
$40,000 of the additional OCIF funds the Township was allocated are to be used to complete the originally planned roads program.

Strategic Plan Applicability:
To effectively respond to the challenges of addressing the Township's municipal infrastructure needs as well as effectively managing the assets of the corporation.

Report Approval Details

Document Title:	2022 Ontario Community Infrastructure Fund (OCIF) Update.docx
Attachments:	
Final Approval Date:	Jun 1, 2022

This report and all of its attachments were approved and signed as outlined below:

Martina Chait-Hartwig

Elana Arthurs

Township of Douro-Dummer

Report to Council
Re: Treasurer-2022-09
From: Paul Creamer
Date: June 7, 2022
Re: Douro South Park Improvements Funding

Recommendation:
That the Treasurer-2022-09 report, dated June 7, 2022, regarding the Douro South Park Improvements Funding be received and;

That the project be funded by $294,750 from the Canada Community Revitalization Fund (75%), $80,000 from Parkland Reserves and $18,250 from the Capital Project/Purchases Reserve.

Overview:
In the 2022 Capital Budget Council approved a project for improvements to be made to Douro South Park which included rebuilding of the canteen (which will also include some storage and washrooms), add tennis/pickleball courts and to make the park more accessible by constructing a ramp.

The 2022 Budget included $400,000 total for the completion of the project to be funded $320,000 (80%) through the Canada Community Revitalization Fund and $80,000 (20%) through the Parkland Reserve.

Conclusion:
The project is dependent on the grant application being accepted. The application is still pending but is being reviewed by the Federal Government. During conversations with the review team it was determined that the incorrect funding allocation was applied, an 80/20 split was applied but it should have been 75/25. The review team requires an updated motion from Council which indicates Council is in support of the project and the terms of the funding program.

A detailed cost breakdown of the project was completed and it was estimated that the project will cost $393,000 which results in the following allocation:

- Canada Community Revitalization Fund - 75% - $294,750
- Township Funds – 25% - $98,250
    - Parkland Reserve - $80,000
    - Capital Project/Purchases Reserve - $18,250

Financial Impact:
The Capital Project/Purchases had a forecasted 2022 year-end balance of $1,617,708 which is sufficient to fund the additional $18,250 required for Douro South Park Improvements project.

Strategic Plan Applicability:
To develop and/or assist with the development and delivery of social and recreational programs as well as effectively maintaining and updating recreational facilities to promote healthy lifestyles and meet the broad range of community needs.

Report Approval Details

Document Title:	Douro South Park Improvements Funding.docx
Attachments:	
Final Approval Date:	Jun 1, 2022

This report and all of its attachments were approved and signed as outlined below:

Martina Chait-Hartwig

Elana Arthurs

Township of Douro-Dummer

Report to Council
Re: Treasurer-2022-10
From: Paul Creamer
Date: June 7, 2022
Re: Asset Management Plan Funding

Recommendation:
That the Treasurer-2022-10 report, dated June 7, 2022 regarding Asset Management Funding be received and;

That $50,430.14 of the costs for the Asset Management Plan be funded through the Modernization Fund.

Overview:
On February 16, 2021 Council received report Treasurer-2021-04 regarding an Update on the Federation of Canadian Municipalities' (FCM) Asset Management Grant Application. In that report it identified that the Township would be applying for $50,000 from FCM to fund the Asset Management Plan and that the remaining costs of would be funded through the levy. The Township's application to FCM was unsuccessful and therefore an alternative funding source for the Asset Management Plan needs to be determined.

On November 2, 2021 Council received report Treasurer-2021-13 which provided an update on Modernization Funding. In that report it showed that there was $302,430.14 unallocated. In the 2022 Budget Council approved expenditures in the amount of $252,000 which left $50,430.14 unallocated.

Conclusion:
Public Sector Digest has submitted a scope of work for the project at a cost of $54,000. It is being recommended that the Modernization Fund be used to fund $50,430.14 and levy dollars be used to fund the remaining costs. This represents a reduction in the previously committed levy costs.

Financial Impact:
Asset Management Plan will now be funded through the Modernization Fund instead of the FCM grant due to the application being unsuccessful.

Strategic Plan Applicability:
To effectively respond to the challenges of addressing the Township's municipal infrastructure needs as well as effectively managing the assets of the corporation.

Report Approval Details

Document Title:	Asset Management Plan Funding.docx
Attachments:	
Final Approval Date:	Jun 1, 2022

This report and all of its attachments were approved and signed as outlined below:

Martina Chait-Hartwig

Elana Arthurs

Township of Douro-Dummer

Report to Council
Re: Clerk/Planning-2022-39
From: Martina Chait-Hartwig
Date: June 7, 2022
Re: Site Plan Application for St. Joseph's Catholic Elementary School

Recommendation:
That the Clerk/Planning-2022-39 report, dated June 7, 2022, regarding the Site Plan Amendment for St. Joseph's Catholic Elementary School be received and that the Mayor and Acting Clerk be given delegated authority to sign the Site Plan Agreement once clearance has been provided from all statutory agencies.

Overview:
The Township is in receipt of a complete application for a Site Plan Amendment from the Peterborough, Victoria, Northumberland and Clarington Catholic School Board for St. Joseph's Catholic Elementary School located in the hamlet of Douro at 405 Douro Fourth Line Road. The application was deemed complete on April 25, 2022.

The purpose of the Site Plan Amendment applications is to allow for the removal of portable classrooms and the construction of a single-story addition containing four new classrooms, a new library, staff room and parking lot.

In support of the applications, the following studies were submitted and circulated for comments from statutory agencies and municipal staff:

Schedule 1: Architectural Drawings prepared by Salter Pilon Architecture, dated March 29, 2022

Schedule 2: Civil Drawing prepared by WSP, dated March 7, 2022

Schedule 3: Electrical Site Plan prepared by DEI Consulting Engineers, dated February 2022

Schedule 4: Landscape Drawings prepared by Hill Design Studio Inc., dated September 27, 2021

Schedule 5: Stormwater Management Report prepared by WSP, dated March 4, 2022

Schedule 6: Traffic Impact Assessment, prepared by Tranplan Associates Inc., dated March 2022

So far, the results of the staff review and peer review have all been satisfactory and the application does not appear to create any new land use conflicts.

Conclusion:
The Board has indicated that they are under a strict deadline for this project. While there are parts of the Site Plan application process that cannot be rushed such as the peer review of technical documents, staff would like to assist in moving this project forward faster by receiving delegated authority from Council to have the Mayor and

Acting Clerk delegated the authority to sign the agreement once the peer review process is complete instead of having the applicant wait until the next Council meeting for a By-law to be passed. In support of these request, staff have prepared a draft agreement which is attached to this report for review.

Financial Impact:
All costs related to Site Plan Applications such as peer review fees and legal costs are the responsibility of the applicant.

Strategic Plan Applicability:
To set out a direction of focus for economic development while utilizing resources to facilitate the promotion of the community.

Sustainability Plan Applicability:
N/A

Report Approval Details

Document Title:	Site Plan Amendment for St. Joseph's School Addition.docx
Attachments:	- 1 - Authorization-to-Act-as-Agent.pdf - 2 - Application for Site Plan Approval.pdf - 3 - Architectural Drawings - IFSPA.pdf - 4 - Civil Drawings - IFSPA.pdf - 5 - Electrical Site Plan - IFSPA.pdf - 6 - Landscape Drawings - IFSPA.pdf - 7 - SWM Report - IFSPA.pdf - 8 - TIS - IFSPA.pdf - 2022 - St. Joseph's Catholic School - Site Plan Agreement.docx
Final Approval Date:	May 31, 2022

This report and all of its attachments were approved and signed as outlined below:

Elana Arthurs

The Township of Douro-Dummer
894 South St., PO Box 92
Warsaw, ON
K0L 3A0
Phone: 705-652-8392

Authorization to Act as Agent for Building Permit Application

I, Richard Driscoll (PVNCCDSB), owner of the property located at
(Print Name of Owner)
405 Douro Fourth Line, Douro - Roll# 152201000215700, hereby give permission for
(Address or Roll #)
Salter Pilon Architecture (& Employees) to make application under, receive
(Print Name of Agent)
information and discuss matters pertaining to the *Building Code Act*.

Signature of Owner: _____ Date: March 28, 2022

Signature of Applicant: _____ Date: Sept. 24, 2021

TOWNSHIP OF DOURO-DUMMER
APPLICATION FOR SITE PLAN APPROVAL

APPLICANT INFORMATION

APPLICANT'S NAME	TELEPHONE NO.	SOLICITOR'S NAME	TELEPHONE NO.
Richard Driscoll (PVNCCDSB)	705-748-4861 x 1249		
STREET ADDRESS		STREET ADDRESS	
1355 Lansdowne St. W.			
CITY / PROVINCE / POSTAL CODE		CITY / PROVINCE / POSTAL CODE	
Peterborough / ON / K9J 7M3			
AGENT'S NAME	TELEPHONE NO.	OWNER'S NAME (Signatory to Agreement)	TELEPHONE NO.
Gerry Pilon (Salter Pilon Architecture Inc.)	705-737-3530	Richard Driscoll (PVNCCDSB)	705-748-4861 x 1249
STREET ADDRESS		STREET ADDRESS	
151 Ferris Lane		1355 Lansdowne St. W.	
CITY / PROVINCE / POSTAL CODE		CITY / PROVINCE / POSTAL CODE	
Barrie / ON / L4M 6C1		Peterborough / ON / K9J 7M3	
ARCHITECT/ENGINEER'S NAME	TELEPHONE NO.	PLANNING CONSULTANT'S NAME	TELEPHONE NO.
Gerry Pilon (Salter Pilon Architecture Inc.)	705-737-3530		
STREET ADDRESS		STREET ADDRESS	
151 Ferris Lane			
CITY / PROVINCE / POSTAL CODE		CITY / PROVINCE / POSTAL CODE	
Barrie / ON / L4M 6C1			

LOCATION AND DESCRIPTION OF PROPERTY

STREET ADDRESS – IF INDIVIDUAL PROPERTY (OR GROUP OF PROPERTIES)		LOT	CONCESSION
St. Jospeh CES, 405 Douro 4th Line			
NEAREST INTERSECTION(S)	EXISTING EASEMENTS YES / NO	REGISTERED PLAN NO.	LOT/BLOCK NO.
Douro 4th Line and County Road 8			
FRONTAGE (m)	DEPTH (m)	AREA (m^2)	
74.52m (west)	288,84m	38618.5m²	
LAND USE DESIGNATION (OFFICIAL PLAN)		PRESENT ZONING OF LAND	
I		I	
PRESENT USE OF LAND			
Elementary School			
PROPOSED USE OF LAND			
Elementary School			

INFORMATION ON PROPOSED DEVELOPMENT

CONSTRUCTION YR. MO. DAY TO **START** (ESTIMATE)	CONSTRUCTION YR. MO. DAY TO **END** (ESTIMATE)	DIMENSIONS OF BUILDINGS(S)	
22 05 01	22 12 31	Building shape is irregular, approximately 55mx65m	
NUMBER OF STOREYS	GROUND FLOOR AREA (m^2)	TOTAL FLOOR AREA (m^2)	FLOOR AREA OF ADDITIONS (m^2)
1	2,502.5m²	2,502.5m²	630.5m²
NUMBER OF PARKING SPACES	23	NATURE OF PROJECT: (ie. Commercial, Industrial etc.)	Institutional

RESIDENTIAL DATA (IF APPLICABLE) TYPE & NUMBER OF UNITS	BACHELOR	1 BEDROOM	2 BEDROOM	3 BEDROOM
	OTHER		TOTAL UNITS	

I hereby agree to bear the cost of all consulting planning, engineering, legal and registration fees related to this application as deemed necessary by the Municipality on request, to be applied to such costs, and for which the Municipality will account.

RETURN APPLICATION TO:

Township of Douro-Dummer
894 South Street, P.O. Box 92
Warsaw, Ontario K0L 3A0

Richard Driscoll — 2022-03-29

APPLICANT'S SIGNATURE — DATE

Peterborough Victoria Northumberland and Clarington Catholic District School Board

St. Joseph Catholic Elementary School

405 Douro 4th Line, Douro, ON

ISSUED FOR SITE PLAN APPROVAL
Date: March 29, 2022

CONSULTING TEAM

ARCHITECTURAL

SALTER PILON ARCHITECTURE INC.
151 FERRIS LANE, SUITE 400
BARRIE, ONTARIO
L4M 6C1
T: 705-737-3530
F: 705-737-3539

STRUCTURAL

RAVENS CONSULTING ENGINEERS
1061 EGLINTON AVENUE WEST, SUITE 201
TORONTO, ONTARIO
M6C 2C9
T: 416-782-1644
F: 416-782-7154

CIVIL

WSP
100 COMMERCE VALLEY DR. WEST,
THORNHILL, ONTARIO
L3T 0A1
T: 905-882-1100
F: 905-882-0055

LANDSCAPE

HILL DESIGN STUDIO INC.
355-50 OTTAWA ST. S.
KITCHENER, ONTARIO
N2G 3S7
T: 226-686-0700

MECHANICAL / ELECTRICAL

DEI CONSULTING ENGINEERS
55 NORTHLAND ROAD,
WATERLOO, ONTARIO
N2V 1Y8
T: 519-725-3555
F: 519-725-2515

Architectural - Drawing List

Sheet Number	Sheet Name
A101	Site Plan, Legends & General Notes
A102	Demolition Site Plan, Site Details & Demoltion Notes
A103	Demolition Floor & Roof Plans, Elevations & Removals Notes
A201	Fire Separations, General Notes & Misc. Details
A202	Floor Plan & Details
A203	Roof Plan & Miscellaneous Details
A204	Enlarged Plans & Miscellaneous Details
A205	Enlarged Plans & Miscellaneous Details
A301	Exterior Elevations & Details
A302	Curtainwall / Screen Elevations, Room & Door Schedules
A401	Wall Sections & Details
A402	Wall Sections
A403	Wall Sections & Details
A404	Wall Sections & Details
A405	Wall Sections & Miscellaneous Details
A601	Interior Elevations and Millwork Details
A701	Reflected Ceiling Plan & Details

Civil Drawing List

Sheet Number	Sheet Name
NT1	Notes and Details
SG1	Site Grading Plan
SS1	Site Servicing Plan
ESC1	Erosion and Sediment Control Plan

Landscape Drawing List

Sheet Number	Sheet Name
L1	Tree Preservation Plan
L2	Landscape Plan
L3	Details

Structural Drawing List

Sheet Number	Sheet Name
S101	Foundation Plan
S102	Roof Framing Plan
S201	Foundation Sections & Column Schedule
S202	Roof Sections
S301	Typical Details & General Notes

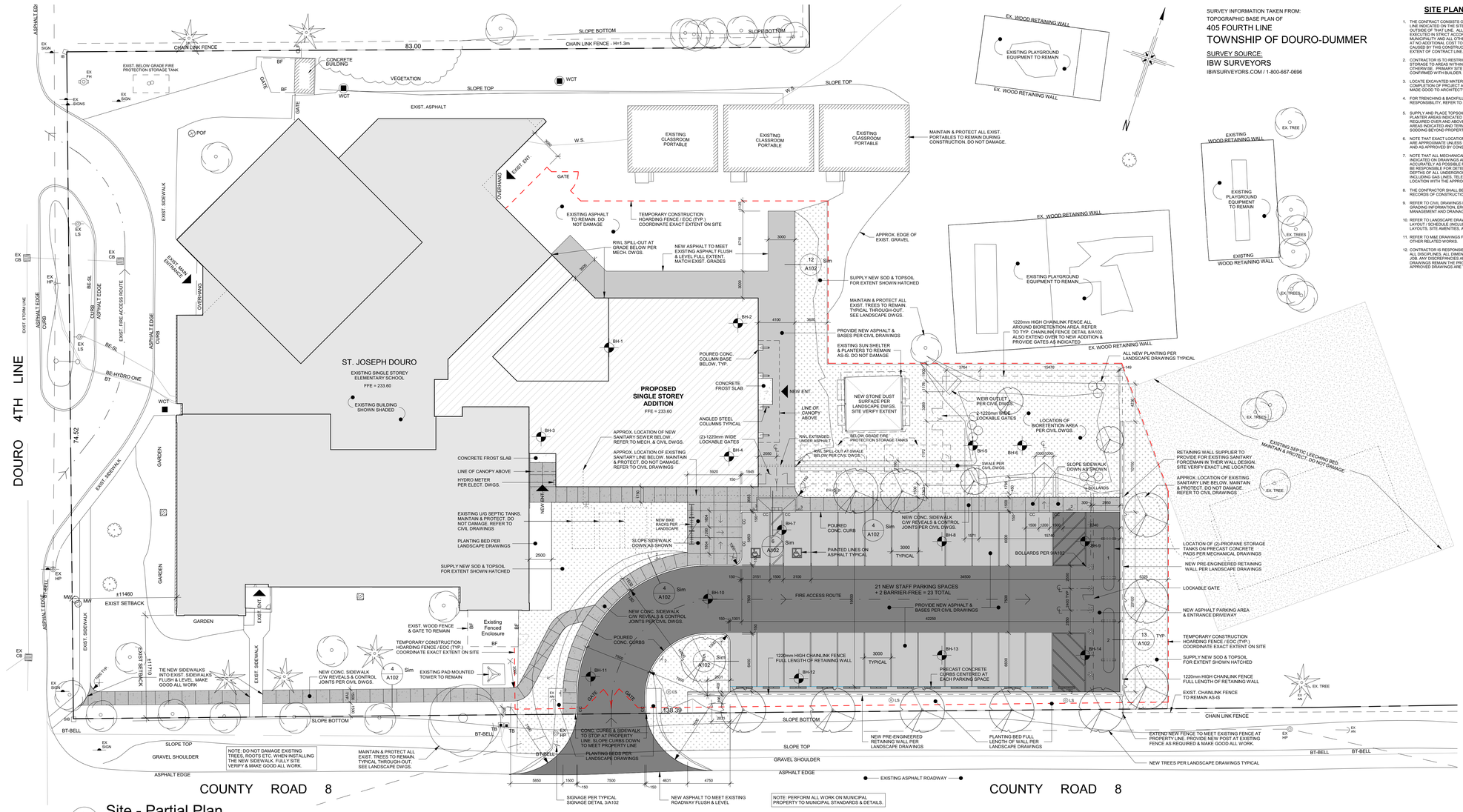
Mechanical Drawing List

Sheet Number	Sheet Name
M101	Site Plan, Legend, Schedules & Details
M201	Floor Plan - Plumbing & Drainage Demolition
M202	Floor Plan - Ventilation & Heating Demolition
M301	Floor Plan - Plumbing & Drainage Renovation & Details
M302	Floor Plan - Ventilation & Heating Renovation & Details
M401	Mechanical Room Demo and Reno Plans & Details
M402	Mechanical Room Schematic Renovation
M501	Roof Plan & Details

Electrical Drawing List

Sheet Number	Sheet Name
E101	Site Plan
E201	Floor Plan - Demolition
E301	Floor Plan - Renovation Lighting
E401	Floor Plan - Renovation Power/Systems
E402	Roof Plan - Renovation Power/Systems
E501	Distribution Riser Diagram
E601	Schedules and Details
E701	Lighting Control Diagrams

salterpilon architecture



1 / A101 Site - Partial Plan

1 : 200

SURVEY INFORMATION TAKEN FROM:
TOPOGRAPHIC BASE PLAN OF
405 FOURTH LINE
TOWNSHIP OF DOURO-DUMMER

SURVEY SOURCE:
IBW SURVEYORS
IBWSURVEYORS.COM / 1-800-667-0696

SITE PLAN GENERAL NOTES:

1. THE CONTRACT CONSISTS OF ALL WORK WITHIN THE 'EXTENT OF CONTRACT' LINE INDICATED ON THE SITE PLAN PLUS ANY WORK SPECIFICALLY NOTED ON THE DRAWINGS. ALL WORK SHOWN ON THE DRAWINGS AND IN THIS MUST BE EXECUTED IN STRICT ACCORDANCE WITH THE STANDARDS OF THE MUNICIPALITY AND ALL OTHER AUTHORITIES HAVING JURISDICTION. MAKE GOOD AT NO ADDITIONAL COST TO THE OWNER OR MUNICIPALITY ANY DAMAGE CAUSED BY THIS CONSTRUCTION TO MATERIALS OR FINISHES BEYOND THE EXTENT OF CONTRACT LINE.
2. CONTRACTOR IS TO RESTRICT ALL WORK, EQUIPMENT, AND MATERIALS STORAGE TO AREAS WITHIN EXTENT OF CONTRACT LINE EXCEPT WHERE NOTED OTHERWISE. PRIMARY SITE ACCESS POINT & CONSTRUCTION PARKING IS TO BE CONFIRMED WITH BUILDER. NO PARKING IN MUNICIPALITY RIGHT-OF-WAY.
3. LOCATE EXCAVATED MATERIALS & TOPSOIL PILES AS DIRECTED. AT COMPLETION OF PROJECT ANY EXCESS MATERIAL IS TO BE REMOVED AND AREA MADE GOOD TO ARCHITECTS SATISFACTION.
4. FOR TRENCHING & BACKFILLING OF ALL SERVICE LINES AND DIVISION OF RESPONSIBILITY, REFER TO APPROPRIATE SECTIONS IN SPECIFICATIONS.
5. SUPPLY AND PLACE TOPSOIL TO THICKNESS SPECIFIED OVER ALL SODDED AND PLANTER AREAS INDICATED ON DRAWINGS. PROVIDE ADDITIONAL TOPSOIL AS REQUIRED OVER AND ABOVE TOPSOIL TAKEN FROM SITE. PROVIDE SODDING TO AREAS INDICATED AND TERMINATE AT 'EXTENT OF CONTRACT' LINE. EXTEND SODDING BEYOND PROPERTY LINES TO ROADWAYS WHERE INDICATED.
6. NOTE THAT EXACT LOCATIONS OF ALL NEW MECHANICAL & ELECTRICAL ITEMS ARE APPROXIMATE UNLESS DIMENSION GIVEN. ADJUST LOCATION AS REQUIRED AND AS APPROVED BY CONSULTANT TO SUIT SITE CONDITIONS.
7. NOTE THAT ALL MECHANICAL AND ELECTRICAL UNDERGROUND SERVICE LINES INDICATED ON DRAWINGS ARE APPROXIMATE ONLY AND ARE INDICATED AS ACCURATELY AS POSSIBLE FROM INFORMATION SUPPLIED. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING & MARKING EXACT TYPES, LOCATIONS AND DEPTHS OF ALL UNDERGROUND SERVICES IN AREA OF NEW CONSTRUCTION INCLUDING GAS LINES, TELEPHONE CABLE TV, ETC. AND VERIFY THEIR LOCATION WITH THE APPROPRIATE AUTHORITIES BEFORE EXCAVATING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE RECORDS OF CONSTRUCTION TO FACILITATE AS-CONSTRUCTED DRAWINGS.
9. REFER TO CIVIL DRAWINGS FOR SITE SERVICING, ALL NEW & EXISTING GRADING INFORMATION, EROSION AND SEDIMENT CONTROL, STORM WATER MANAGEMENT AND DRAINAGE, AND ANY OTHER RELATED WORKS.
10. REFER TO LANDSCAPE DRAWINGS FOR PLANTING, SODDING, TREE AND SHRUB LAYOUT / SCHEDULE (INCLUDING PRESERVATION AND REMOVALS), PAVER LAYOUTS, SITE AMENITIES, AND ANY OTHER RELATED WORKS.
11. REFER TO M&E DRAWINGS FOR SITE LIGHTING / POWER, CISTERNS, AND ANY OTHER RELATED WORKS.
12. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DRAWINGS FROM ALL DISCIPLINES. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED ON THE JOB. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT. ALL DRAWINGS REMAIN THE PROPERTY OF THE CONSULTANT. ONLY LATEST APPROVED DRAWINGS ARE TO BE USED FOR CONSTRUCTION.

Peterborough Victoria Northumberland and Clarington Catholic District School Board

No.	Revision	Date
4	Issued for Site Plan Approval	March 29, 2022
3	Re-Issued for Building Permit	March 28, 2022
2	Issued for Construction	February 23, 2022
1	Issued for Permit & Tender	September 27, 2021

Orientation

Seal

ONTARIO ASSOCIATION OF ARCHITECTS
GERRY P. PILON
LICENCE
5042

All dimensions to be checked and verified on the job by the Contractor. Any discrepancies are to be reported to the Consultant prior to action. Only the latest approved drawings to be used for construction in conformance with all applicable codes, by-laws and regulations. All drawings remain the property of the Consultant.

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Project Information

St. Joseph C.E.S.- Addition and Alterations

405 Douro 4th Line, Douro, ON

For

PVNCCDSB

Drawing Title

Site Plan, Legends & General Notes

Date	Project No	Drawing No
Feb. 23, 2022	18048	A101
Drawn by: JJ, TES		
Scale: As indicated		

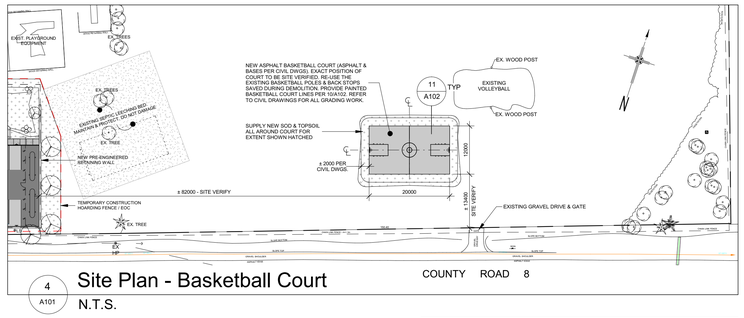
PROJECT AREAS

NEW CONSTRUCTION	630.5 m²
EXISTING BUILDING	1,872 m²
TOTAL PROJECT AREA	2,502.5 m²
EXISTING RENOVATED	293.6 m²

O.B.C. Matrix - St. Joseph Catholic Elementary School

ITEM	ONTARIO BUILDING CODE DATA MATRIX PARTS 3 & 9			OBC REFERENCE
1	PROJECT DESCRIPTION ☐ CHANGE OF USE ☒ ALTERATION ☐ NEW ☒ ADDITION	FOR EXISTING	☒ P11 ☒ PART 3 FOR NEW BLDG	☐ PART 9 2.2.1 & 9.10.1.3
2	MAJOR OCCUPANCY(S) - ELEMENTARY SCHOOL		3.2.2.24	9.10.2
3	BUILDING AREA (M²) - EXISTING: 1872 M² + NEW ADDITION: 630.5 M²		1.1.3.2	1.1.3.2
4	GROSS AREA (M²) - 2502.5 M²		1.1.3.2	1.1.3.2
5	NUMBER OF STOREYS - 1 STOREY			2.1.1.3
6	HEIGHT OF BUILDING (M) - 6.4m		3.2.1.1 & 1.1.3.2	2.1.1.3
7	NUMBER OF STREETS/ACCESS ROUTES 1 STREET - Fire Route indicated on drawings		3.2.2.10 & 3.2.5.5	
8	BUILDING CLASSIFICATIONS GROUP 'A' - Division 2, up to 2 Storeys		3.2.2.24	9.10.4
9	SPRINKLER SYSTEM PROPOSED - ☐ ENTIRE BUILDING ☐ IN LIEU OF ROOF RATING ☐ BASEMENT ONLY ☒ NOT REQUIRED		3.2.2.24	9.10.8
10	STANDPIPE REQUIRED	☐ YES ☒ NO	3.2.9	
11	FIRE ALARM REQUIRED	☒ YES ☐ NO	3.2.4	9.10.7.2
12	WATER SERVICE /SUPPLY IS ADEQUATE	☐ YES ☒ NO	3.2.5.7	
13	HIGH BUILDING	☐ YES ☒ NO	3.2.6	
14	PERMITTED CONSTRUCTION ☐ COMBUSTIBLE ☐ NON-COMBUSTIBLE ☒ BOTH ACTUAL CONSTRUCTION ☐ COMBUSTIBLE ☒ NON-COMBUSTIBLE ☐ BOTH		3.2.2.24	9.10.6
15	MEZZANINE(S) AREA (M²) - 27.74 M²		3.2.1.1	9.10.4.1
16	OCCUPANT LOAD BASED ON ☐ M² / PERSON ☒ DESIGN OF BUILDING OCCUPANCY GROUP 'A' LOAD PERSONS		3.1.17	9.9.1.3
17	BARRIER-FREE DESIGN	☒ YES ☐ NO (EXPLAIN)	3.8	9.5.2
18	HAZARDOUS SUBSTANCES	☐ YES ☒ NO	3.2.1.2(1) & 3.3.1.19(1)	9.1.10.3
19	REQUIRED FIRE RESISTANCE RATING (FRR)	HORIZONTAL ASSEMBLIES FRR (HOURS): FLOORS N/A; ROOF 3/4 HOUR; MEZZANINE 3/4 HOUR — LISTED DESIGN No. OR DESCRIPTION (SG-2): N/A; N/A; N/A	3.2.2.24	9.10.8
		FRR OF SUPPORTING MEMBERS: FLOORS N/A; ROOF 3/4 HOUR; MEZZANINE 3/4 HOUR — LISTED DESIGN No. OR DESCRIPTION (SG-2): N/A; N/A; N/A		
20	SPATIAL SEPARATION **REFER TO NOTES REGARDING DEMOLITION / CONSTRUCTION PHASING		3.2.3	9.10.14

PROJECT STATISTICS	REQUIRED	PROVIDED
ZONING	I (INSTITUTIONAL)	I
TOTAL LOT FRONTAGE (WEST)	90m	74.52 m (EXISTING)
TOTAL LOT AREA	1.6ha	38618.5 m²
TOTAL BUILDING AREA (EXISTING + NEW ADDITION)		2502.5 m²
% OF BUILDING LOT COVERAGE	25% maximum	6.48 %
EXISTING BUILDING AREA (TOTAL)		1872 m²
EXISTING BUILDING "A" AREA		779 m²
EXISTING BUILDING "B" AREA		1093 m²
RENOVATION AREA		293.6 m²
ADDITION AREA (TOTAL)		630.5 m²
ADDITION AREA BUILDING "A"		230 m²
ADDITION AREA BUILDING "B"		400.5 m²
REVISED TOTAL BUILDING "A" AREA		1009 m²
REVISED TOTAL BUILDING "B" AREA		1493.5 m²
BUILDING HEIGHT	10.5m maximum	6.4 m
BUILDING TO PROPERTY SETBACKS		
FRONT YARD SETBACK (WEST)	15.0m minimum	11.46 m (EXISTING)
REAR YARD SETBACK (EAST)	7.5m	212.05 m
INTERIOR SIDE YARD SETBACK (NORTH)	7.5m	7.62 m (EXISTING)
EXTERIOR SIDE YARD SETBACK (SOUTH)	15.0m	11.71 m (EXISTING)
PARKING STALLS		
ELEMENTARY SCHOOLS REQUIRE THE GREATER OF 1.5 PARKING SPACES PER CLASSROOM, OR 1 SPACE PER 3.2M² OF GYM/AUDITORIUM ***EXISTING SCHOOL HAS NO ON SITE PARKING. THERE IS AN AGREEMENT WITH THE CHURCH ACROSS THE ROAD THAT PERMITS USE OF THE CHURCH PARKING. FOUR PORTABLES ARE BEING REMOVED FROM THE SITE UPON COMPLETION OF THE PROJECT, SO PARKING DEMANDS WILL NOT INCREASE AS A RESULT OF THIS PROPOSAL.	75	23***



4 / A101 Site Plan - Basketball Court

N.T.S.

ITEM	ONTARIO BUILDING CODE DATA MATRIX PART 11 - RENOVATION OF EXISTING BUILDING		OBC REFERENCE
1	BUILDING CLASSIFICATION DESCRIBE EXISTING USE - GROUP 'A' DIV 2, up to 2 Storeys, 1 Street CONSTRUCTION INDEX - 5 HAZARD INDEX - 6 ☒ NOT APPLICABLE		11.2.1 T 11.2.1.1A T 11.2.1.1B TO N
2	ALTERATION TO EXISTING BUILDING IS -	☐ BASIC RENOVATION ☒ EXTENSIVE RENOVATION	11.3.3.1 11.3.3.2
3	REDUCTION IN PERFORMANCE LEVEL -		11.4.2
	STRUCTURAL -	☒ YES ☐ NO	11.4.2.1
	BY INCREASE IN OCCUPANT LOAD -	☒ YES ☐ NO	11.4.2.2
	BY CHANGE OF MAJOR OCCUPANCY -	☐ YES ☒ NO	11.4.2.3
	PLUMBING -	☒ YES ☐ NO	11.4.2.4
	SEWAGE SYSTEM -	☐ YES ☒ NO	11.4.2.5
4	COMPENSATING CONSTRUCTION -		11.4.3
	STRUCTURAL -	☒ YES ☐ NO	11.4.3.2
	BY INCREASE IN OCCUPANT LOAD -	☒ YES ☐ NO	11.4.3.3
	BY CHANGE OF MAJOR OCCUPANCY -	☐ YES ☒ NO	11.4.3.4
	PLUMBING -	☒ YES ☐ NO	11.4.3.5
	SEWAGE SYSTEM -	☒ YES ☐ NO	11.4.3.6
5	COMPLIANCE ALTERNATIVES PROPOSED	☐ YES ☒ NO	11.5.1

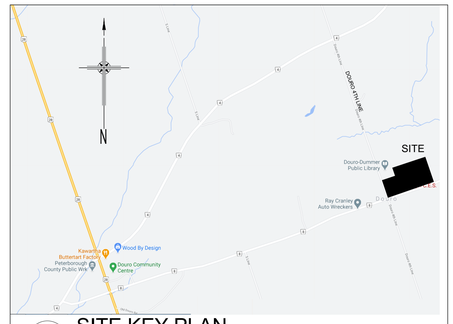
2 / A101 Overall Site Plan

N.T.S.

SITE LEGEND

- LS — INDICATES POLE MOUNTED LIGHT STANDARD BY ELECTRICAL
- PROPERTY LINE
- EXTENT OF CONTRACT & CONSTRUCTION HOARDING FENCE W/ LOCKABLE GATES
- FH — INDICATES FIRE HYDRANT PER CIVIL
- INDICATES POST MOUNTED SIGN
- BH1 — INDICATES BOREHOLE LOCATION. REFER TO GEOTECHNICAL INVESTIGATION REPORT.
- CC — INDICATES CONCRETE CURB CUT
- INDICATES EXISTING TREES TO REMAIN. REFER TO LANDSCAPE DRAWINGS

- HEAVY-DUTY ASPHALT
- LIGHT-DUTY ASPHALT
- GRASS / SOD / TOPSOIL
- CONCRETE PAVING / SIDEWALK
- EXISTING SEPTIC BED



3 / A101 SITE KEY PLAN

N.T.S.

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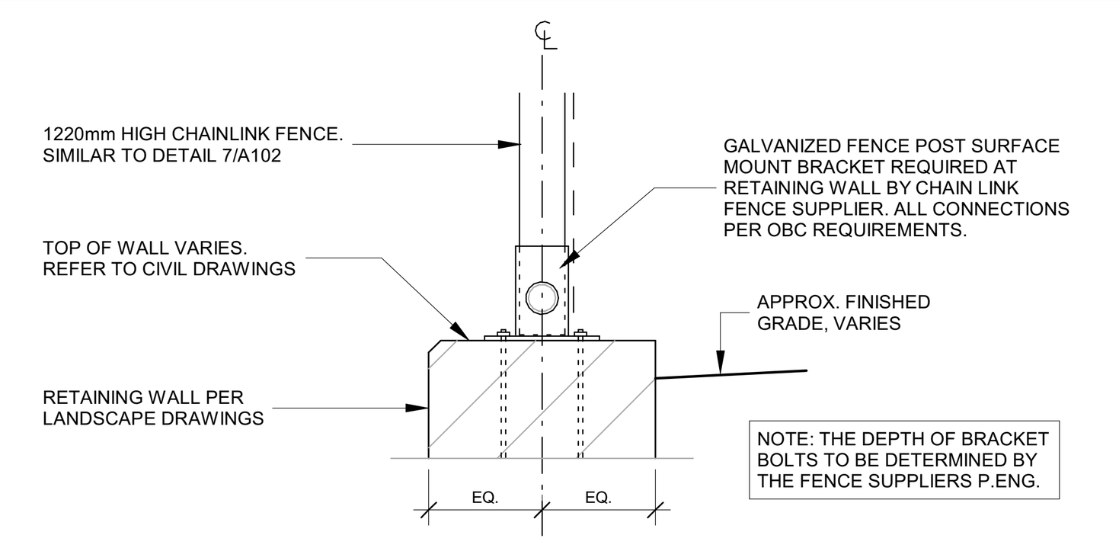
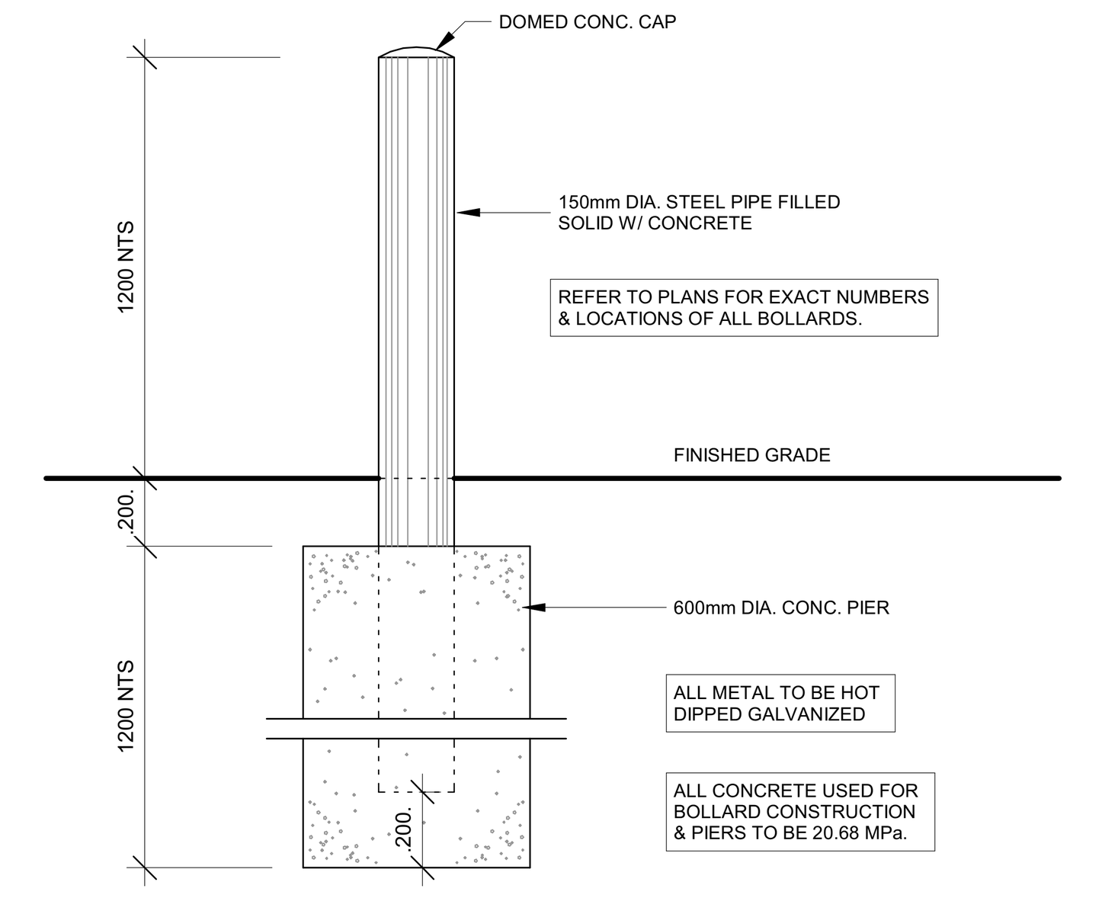


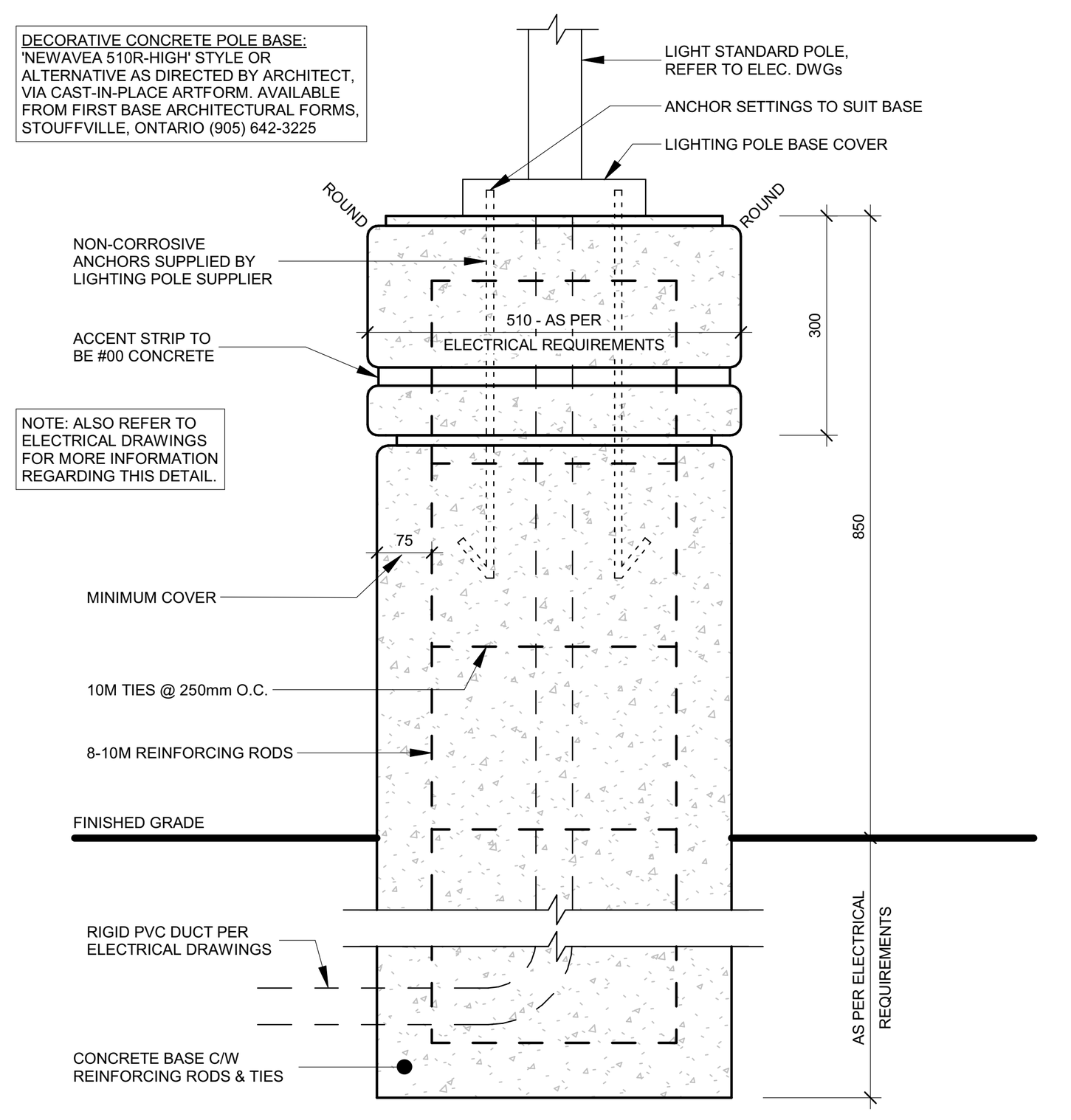
13 A102 Chain link Fence Detail at Retaining Wall

N.T.S.



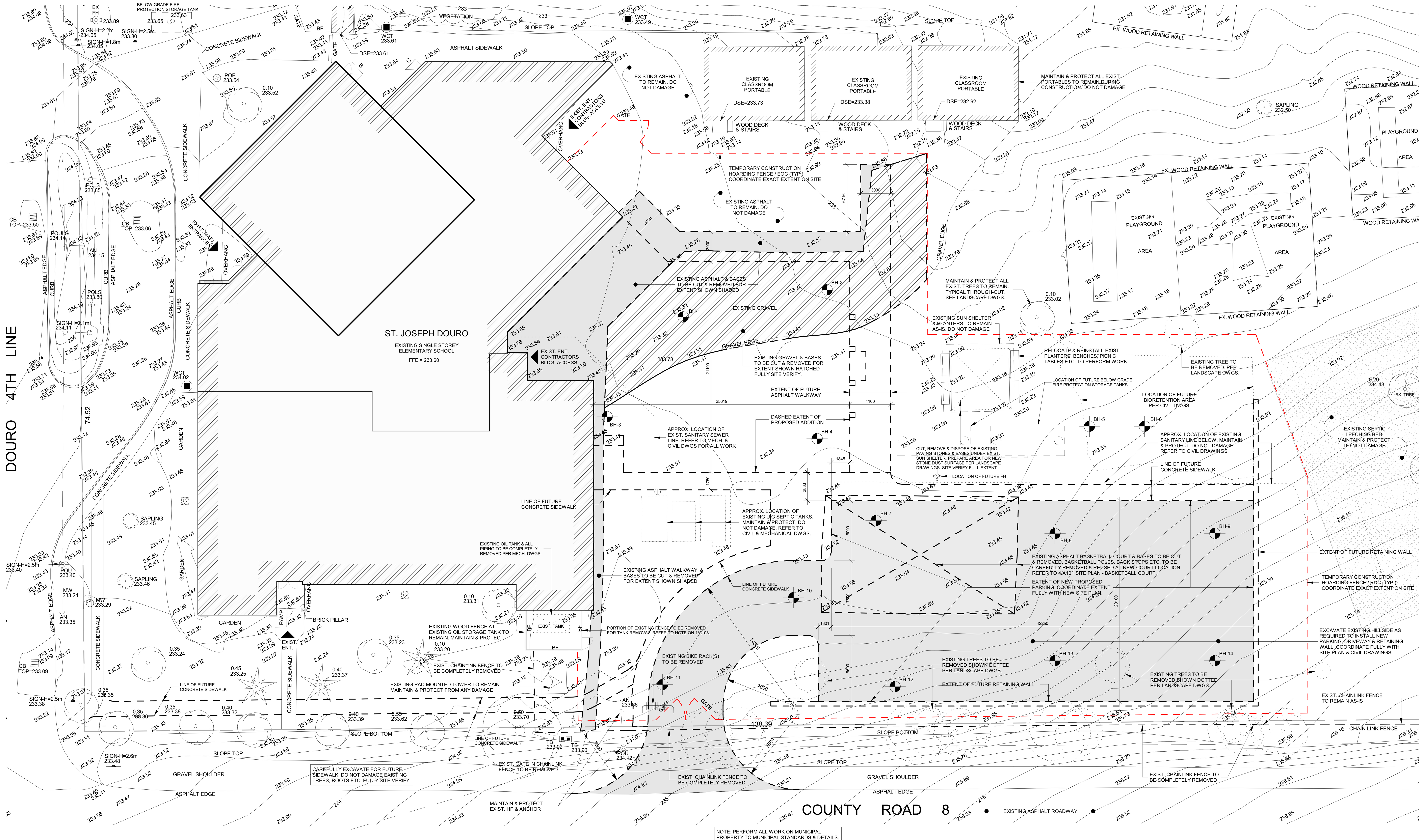
9 A102 Bollard Detail

1 : 10



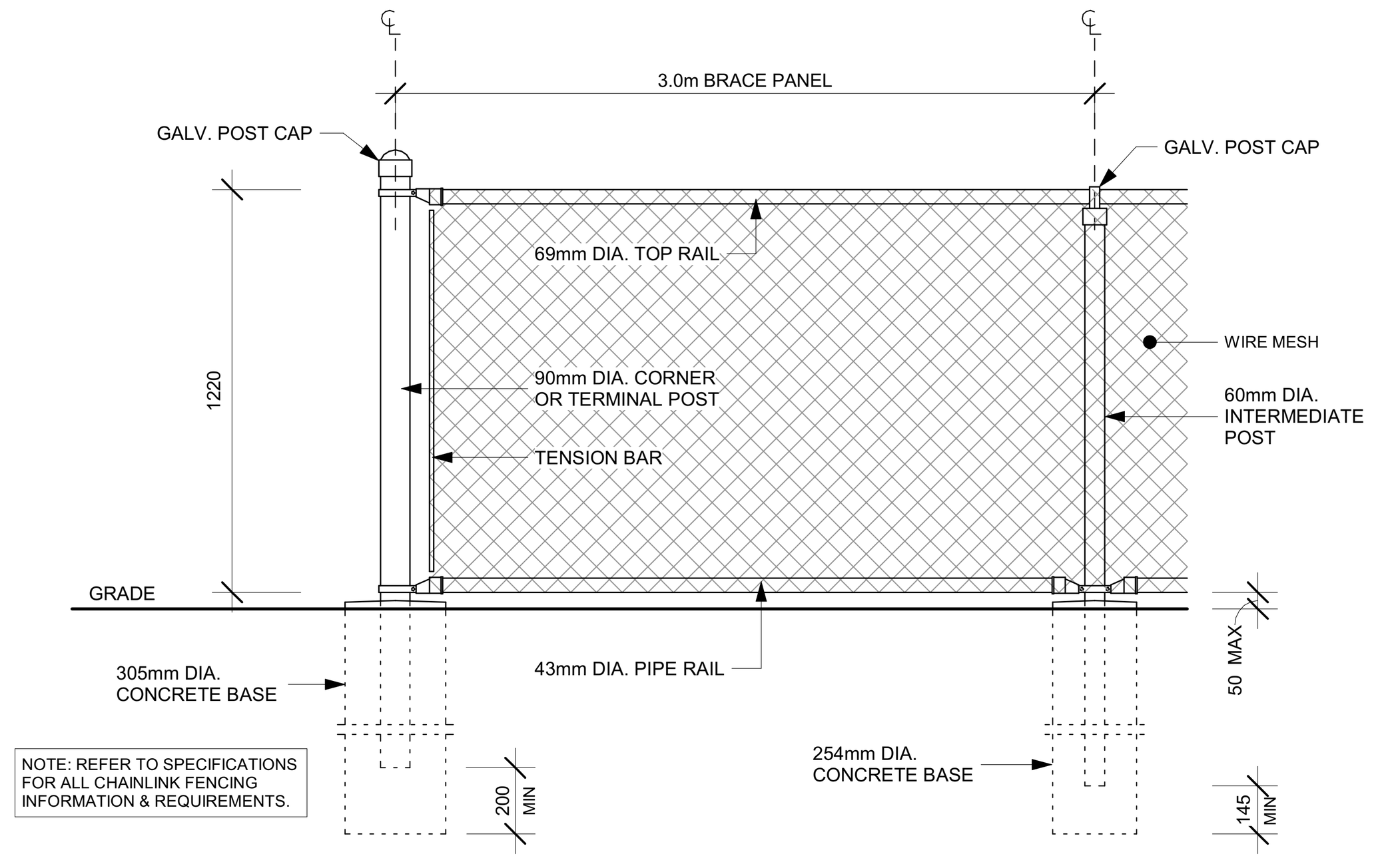
8 A102 Light Standard Base Detail

1 : 10



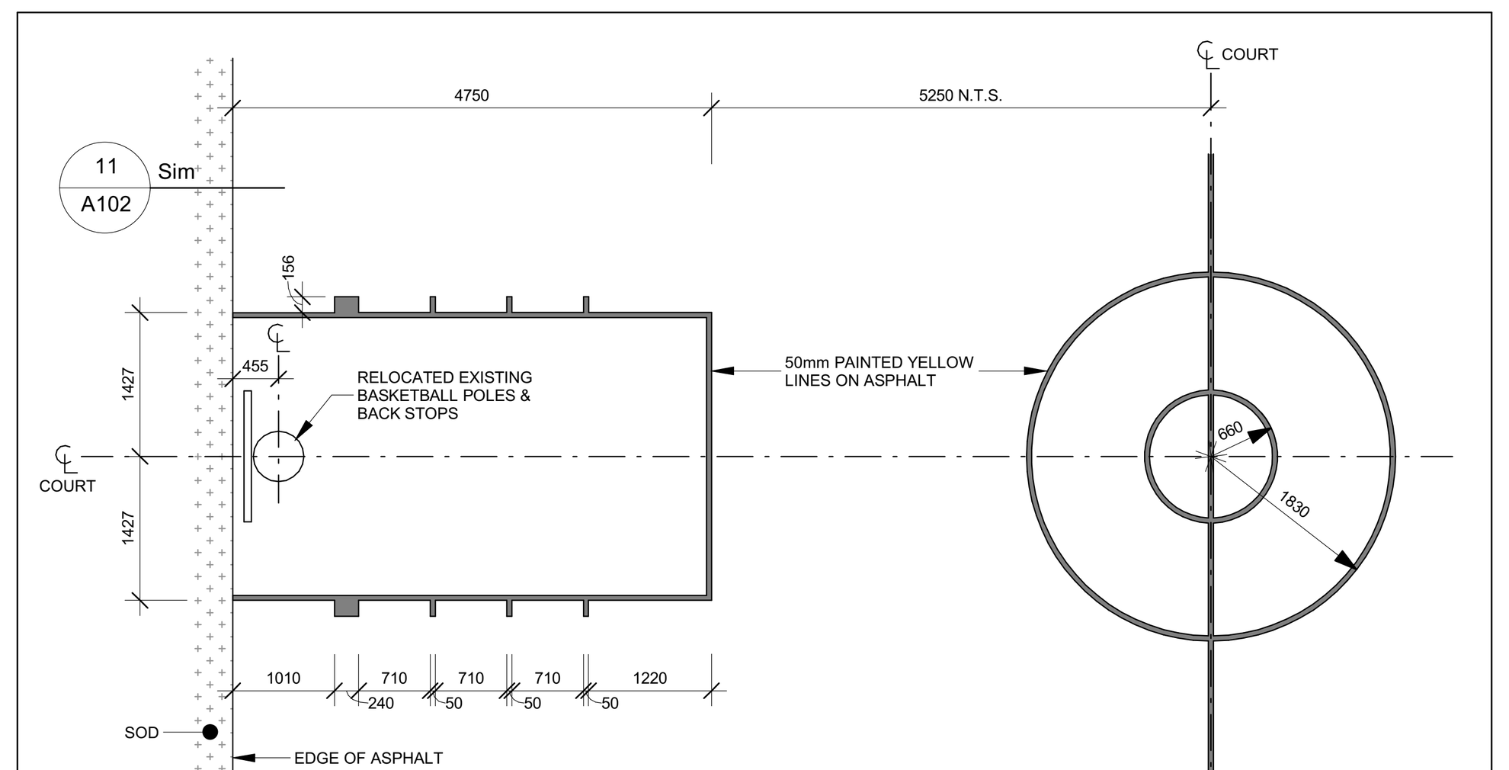
1 A102 Demolition Site Plan

1 : 200



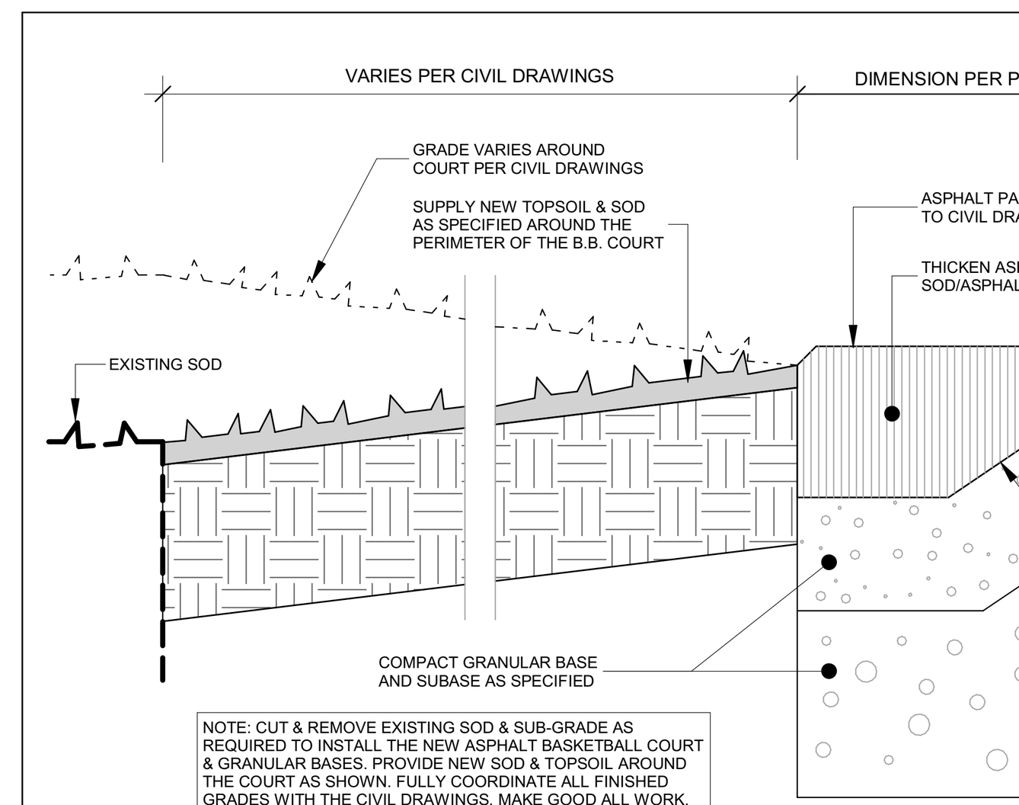
7 A102 Typical Chainlink Fence Detail

1 : 20



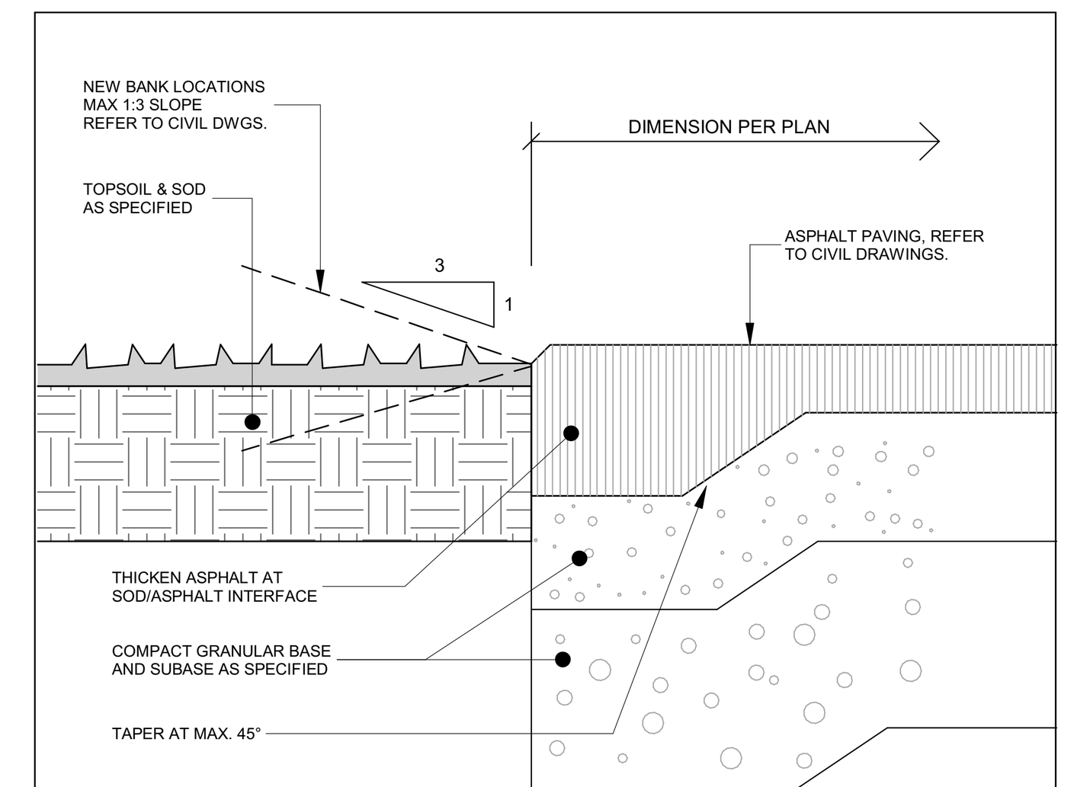
10 A102 Basketball Court Lines

1 : 75



11 A102 Asphalt to Sod at Court

1 : 10



12 A102 Asphalt to Sod Interface

1 : 10

Demolition General Notes:

ALL EXISTING ITEMS INDICATED ON DRAWINGS ARE APPROXIMATE ONLY AND ARE INDICATED AS ACCURATELY AS POSSIBLE FROM INFORMATION PROVIDED AND OBSERVATIONS ON SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATIONS OR ALL EXISTING ITEMS PRIOR TO COMMENCEMENT OF DEMOLITION AND CONSTRUCTION ACTIVITIES.

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ALL EXISTING MECHANICAL AND ELECTRICAL SERVICE DISCONNECTIONS, DEMOLITION AND ALTERATIONS.

REFER TO STRUCTURAL DRAWINGS FOR ANY REQUIRED BRACING AND SHORING PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION ACTIVITIES

WHERE EXISTING WALLS ARE REMOVED, REPAIR REMAINING ADJACENT ELEMENTS TO MATCH EXISTING. MAKE GOOD ALL WORK.

REFER TO SPECIFICATIONS FOR INFORMATION PERTAINING TO DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS.

REFER TO THE APPROPRIATE PROJECT SPECIFICATIONS, CIVIL PLANS AND/OR LANDSCAPING PLANS FOR ANY FURTHER SITE DEMOLITION REQUIREMENTS

ALL GRADING, GRASS AND PLANTING CONDITIONS ADJACENT TO ITEMS REMOVED FROM SITE OR ALTERED ARE TO BE RETURNED TO THEIR ORIGINAL CONDITIONS. MAKE GOOD ALL NEW TRANSITIONS AND COORDINATE ALL SITEWORK WITH THE APPROPRIATE CIVIL OR LANDSCAPE PLANS. MAKE GOOD ALL WORK.

ALL DEMOLISHED ITEMS NOT BEING SALVAGED FOR FUTURE USE ARE TO BE DISPOSED OF IN A LEGAL MANNER OFF SITE IN ACCORDANCE WITH ALL AHJS STANDARD PRACTICES.

NOTE: REFER ALSO TO DEMOLITION PLANS, DEMOLITION ELEVATIONS & REMOVALS NOTES ON DRAWING A103.

PAINTING:
REPAIR & CLEAN EXISTING WALLS & MAKE READY FOR NEW WALL FINISH

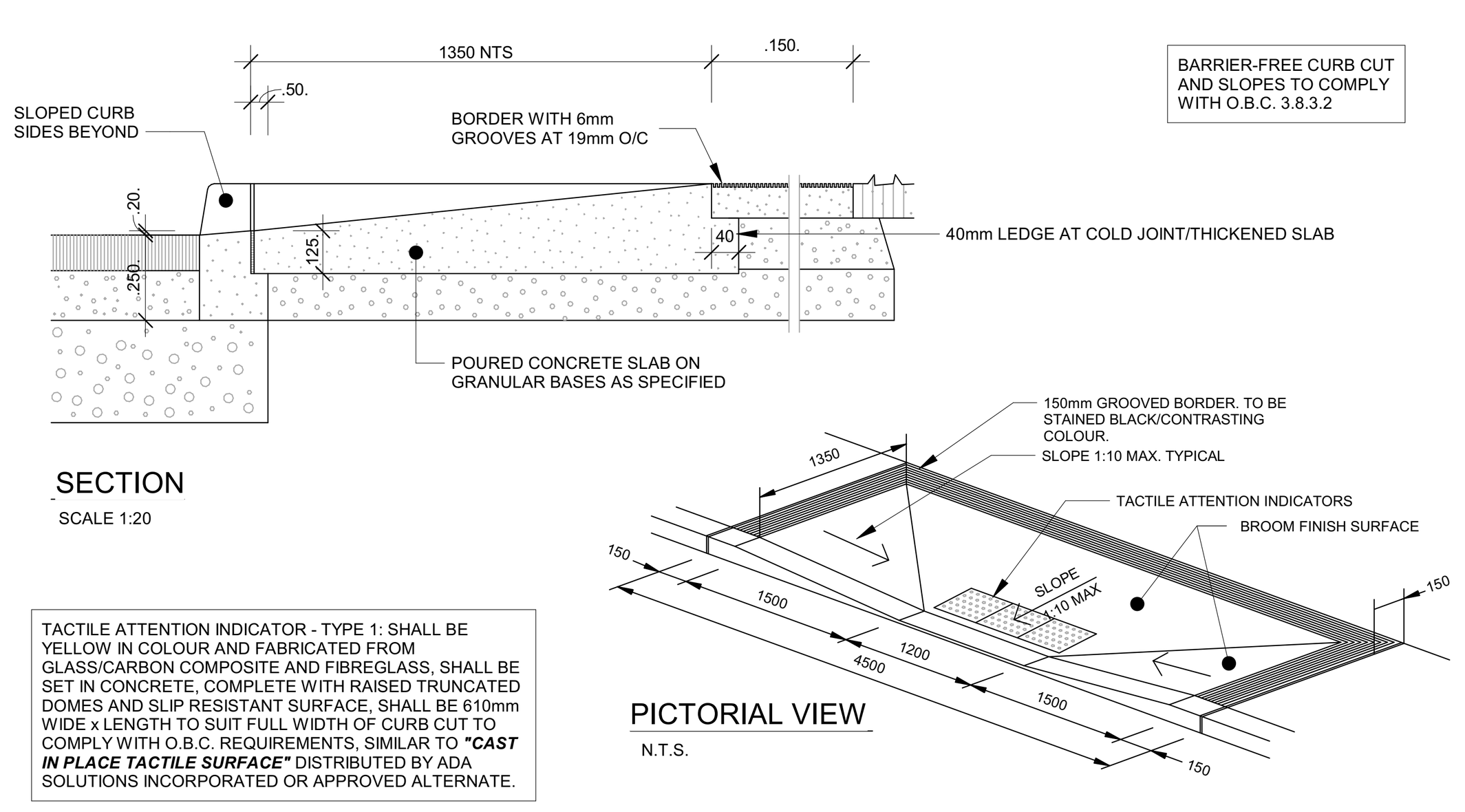
CEILING:
ALL LIGHT FIXTURES, MECHANICAL & ELECTRICAL EQUIPMENT AND DEVICES THAT ARE LOCATED IN CEILINGS SCHEDULED FOR DEMOLITION ARE TO BE TERMINATED, REMOVED OR RELOCATED PER THE APPROPRIATE MECHANICAL OR ELECTRICAL DESIGN BY OTHERS.

FOUNDATIONS:
DO NOT UNDERMINE EXISTING CONCRETE SLAB ON GRADE OR EXISTING FOUNDATIONS. REINSTATE & MAKE GOOD EXISTING BASES UNDER EDGE OF EXISTING SLAB. PROVIDE NEW BASES AS REQUIRED. COMPACT BASES TO MIN. 98% SPMDD.

MILLWORK:
WALLS, FLOORS AND CEILINGS REVEALED BY REMOVAL OR DEMOLITION OF EXISTING MILLWORK TO BE PATCHED AND MADE GOOD FOR ALL TRADES AND BE READY FOR APPLICATION OF NEW FINISHES PER PROPOSED PLANS

FLOORING:
MAINTAIN AND PROTECT EXISTING TERRAZZO FLOOR (THAT IS NOT SCHEDULED TO BE DEMOLISHED) FROM DAMAGE

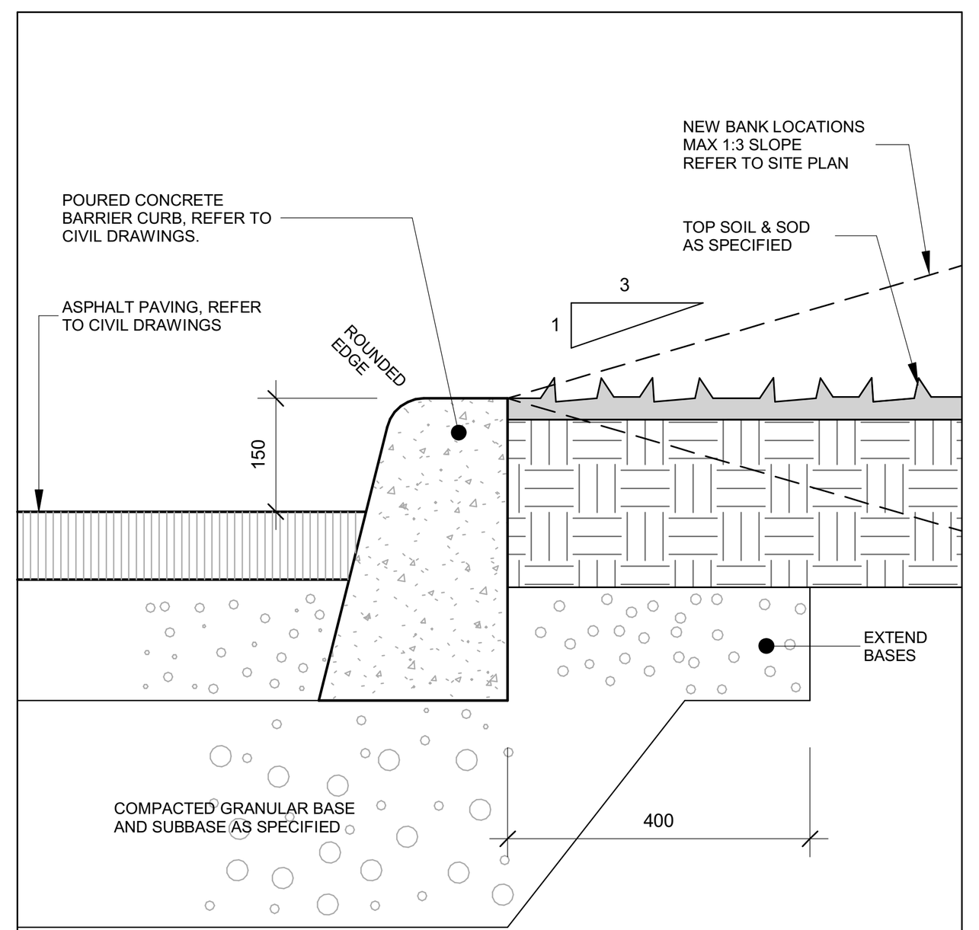
ADDITIONAL REMOVALS CALLED FOR, OR IMPLIED AS A RESULT OF NEW CONSTRUCTION WORK AS DETAILED, ARE TO BE CARRIED OUT AS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR COMPLETE INSPECTION OF ALL EXISTING CONDITIONS TO DETERMINE THE EXTENT OF DEMOLITION AND REMOVAL NECESSARY TO COMPLETE ALL WORK TO THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. REFER TO MECHANICAL AND ELECTRICAL DOCUMENTS FOR DEMOLITION AND REMOVAL OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT AND SERVICES. ALL EXISTING STRUCTURES SHALL BE REVIEWED TO DETERMINE REQUIRED BRACING AND SHORING PRIOR TO THE COMMENCEMENT OF DEMOLITION ACTIVITIES



TACTILE ATTENTION INDICATOR - TYPE 1: SHALL BE YELLOW IN COLOUR AND FABRICATED FROM GLASS/CARBON COMPOSITE AND FIBREGLASS, SHALL BE SET IN CONCRETE, COMPLETE WITH RAISED TRUNCATED DOMES AND SLIP RESISTANT SURFACE, SHALL BE 610mm WIDE x LENGTH TO SUIT FULL WIDTH OF CURB CUT TO COMPLY WITH O.B.C. REQUIREMENTS, SIMILAR TO ***"CAST IN PLACE TACTILE SURFACE"*** DISTRIBUTED BY ADA SOLUTIONS INCORPORATED OR APPROVED ALTERNATE.

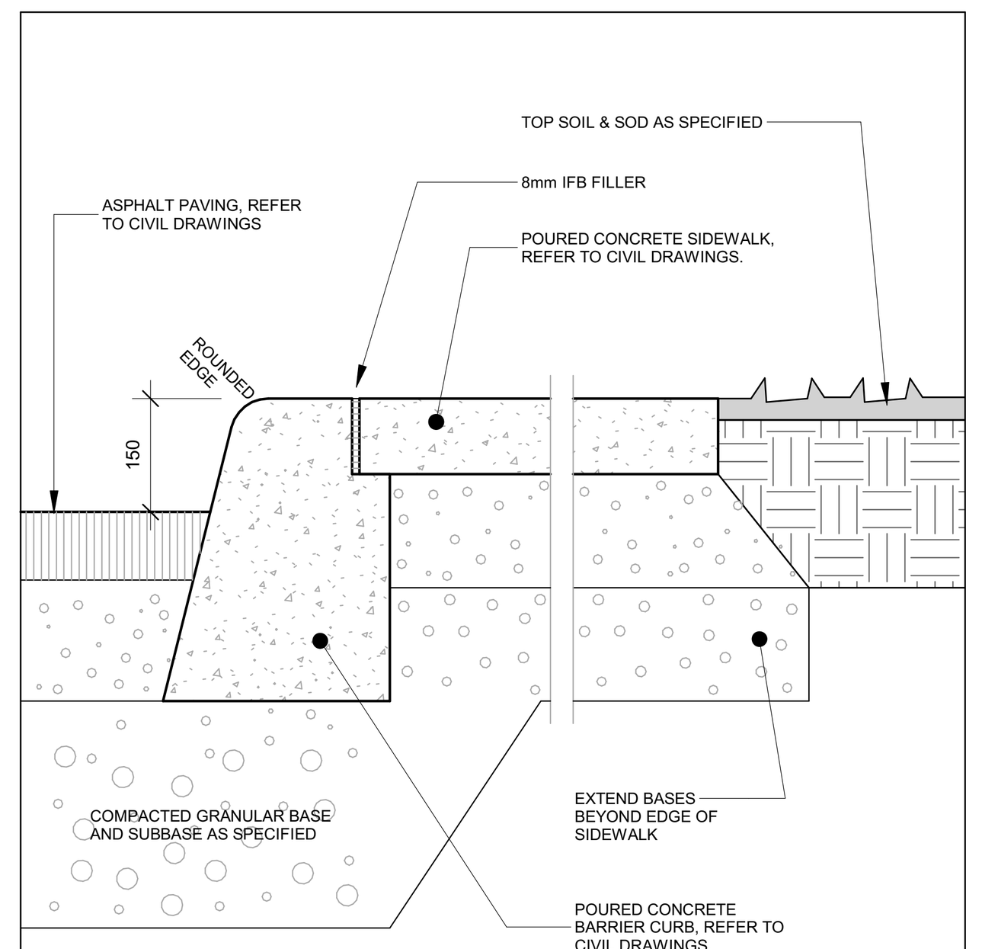
6 A102 B.F. Curb Cut at Sidewalk

AS NOTED



5 A102 Concrete Curb - Sod

1 : 10



4 A102 Concrete Curb - Sidewalk

1 : 10

PAVEMENT MARKINGS:

SCOPE OF WORK TO INCLUDE 'LINE PAINTING', 'ZONE MARKING', AND 'BARRIER-FREE PARKING SYMBOLS'.

TRAFFIC PAINT: TO OPSS 1716, WATER BORNE TRAFFIC PAINT. COLOURS WHITE, YELLOW AND BLUE.

APPLY PAINT BY BRUSH OR SPRAY, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND OPSS 532.

PARKING LINES: 100mm WIDE SOLID YELLOW LINES, AT LOCATIONS SHOWN ON THIS DRAWING.

BARRIER-FREE SYMBOLS: AS PER DETAILS SHOWN AND AT LOCATIONS SHOWN ON THIS DRAWING.

LOADING ZONES AND ISLANDS: SOLID WHITE PARALLEL LINES, HATCHED AT 45°, SPACED AT 600mm O.C., MIN 100mm WIDE.

EXTERIOR SIGNAGE NOTES:

NOTE: ALL SIGNAGE TO MUNICIPAL STANDARDS AND DETAILS

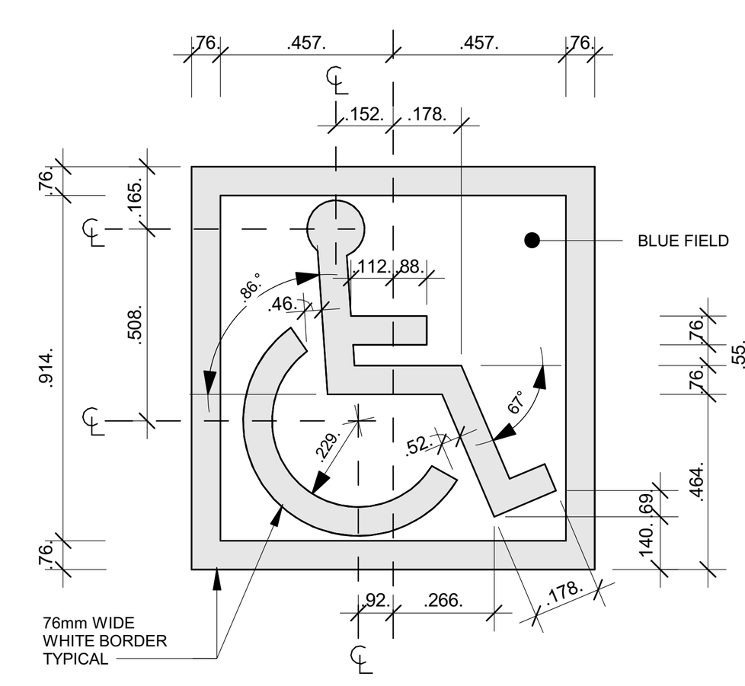
NOTE: ALL LETTERING AND COLOURS TO MEET M.T.O. STANDARDS

FACES TO CONFORM TO REG.486 OF THE HIGHWAY TRAFFIC ACT.

FINISHED SIGNS AND SYMBOLS SHALL BE APPLIED TO 1.63mm UTILITY GRADE ALUMINUM WITH BRIGHT WHITE MILL BAKED FINISH ON BOTH SIDES (UNLESS NOTED OTHERWISE). ALL INKS SHALL BE GLOSSY

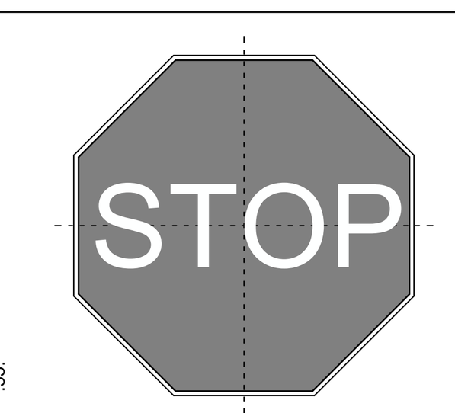
NOTE: REFER TO SITE PLAN FOR NUMBERS & GENERAL LOCATIONS OF SIGNS.

NOTE: FINAL POSITIONING OF SIGNS TO BE DETERMINED ON SITE

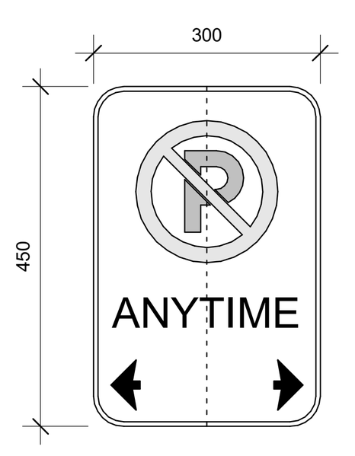


BARRIER FREE PARKING SYMBOL PAINTED ON ASPHALT

PROVIDE PAINTED SYMBOL ON ASPHALT AT EACH BARRIER-FREE PARKING STALL.



SIGN TYPE 1



SIGN TYPE 2

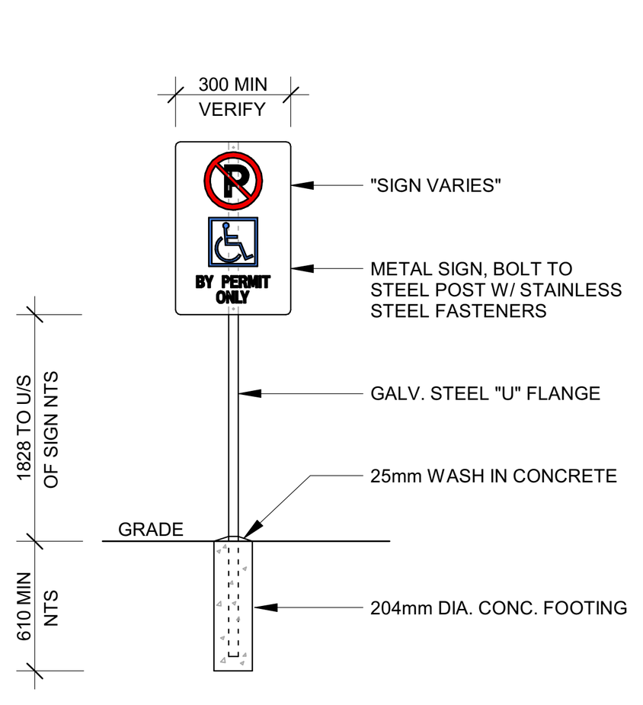
SIGN TYPE 3

NOTE: INDICATED NEW SIGNAGE MOUNTED ON POST

REFER TO SPECIFICATIONS SECTION 10 14 53 'CODE AND BYLAW SIGNAGE', AND 32 12 16 'ASPHALTIC CONCRETE PAVING'

3 A102 Traffic Signage

1 : 10



2 A102 Sign Post Detail

N.T.S.

Peterborough Victoria Northumberland and Clarington Catholic District School Board

SURVEY INFORMATION TAKEN FROM:
TOPOGRAPHIC BASE PLAN OF
405 FOURTH LINE
TOWNSHIP OF DOURO-DUMMER
SURVEY SOURCE:
IBW SURVEYORS
IBWSURVEYORS.COM / 1-800-667-0696

No.	Revision	Date
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3	Re-Issued for Building Permit	March 28, 2022
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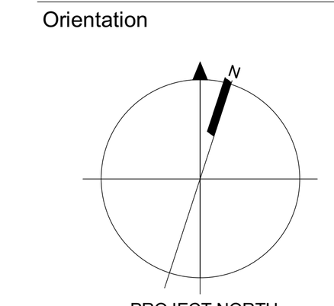
Orientation



Seal

ONTARIO ASSOCIATION OF ARCHITECTS
GERRY P. PILON
LICENCE
5042

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Project Information

St. Joseph C.E.S.- Addition and Alterations

405 Douro 4th Line, Douro, ON

For

PVNCCDSB

Drawing Title

Demolition Site Plan, Site Details & Demoltion Notes

Date	Project No	Drawing No
Feb. 23, 2022	18048	A102
Drawn by JJ, TES		
Scale As indicated		

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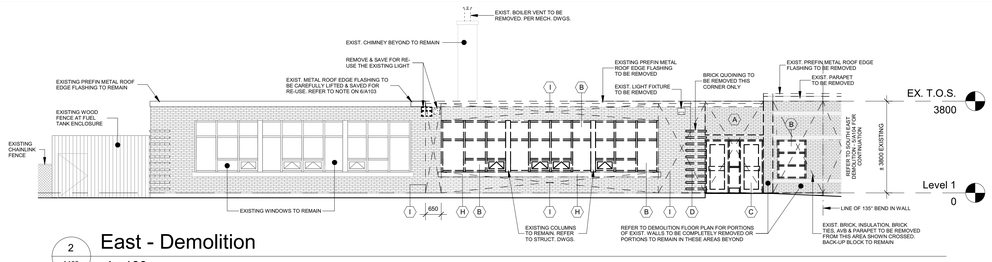
2022-03-29 3:25:22 PM



2 / A103 **East - Demolition**

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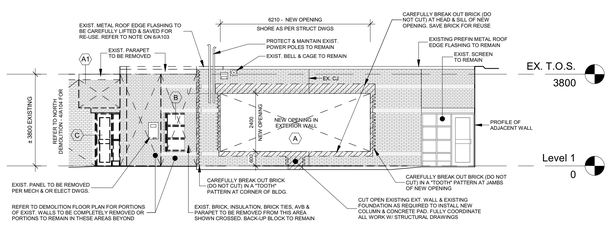

3 / A103 **North East - Demolition**

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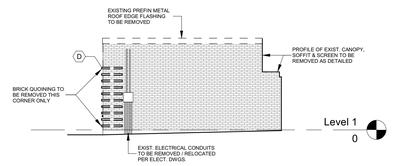

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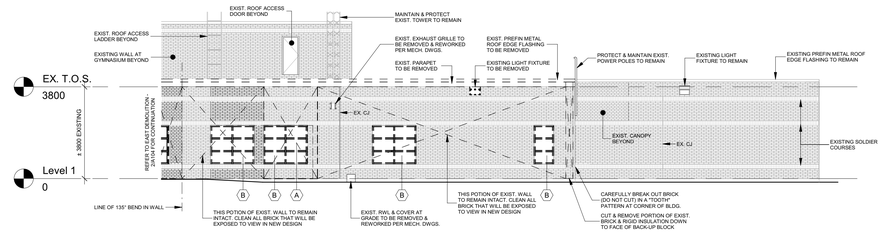
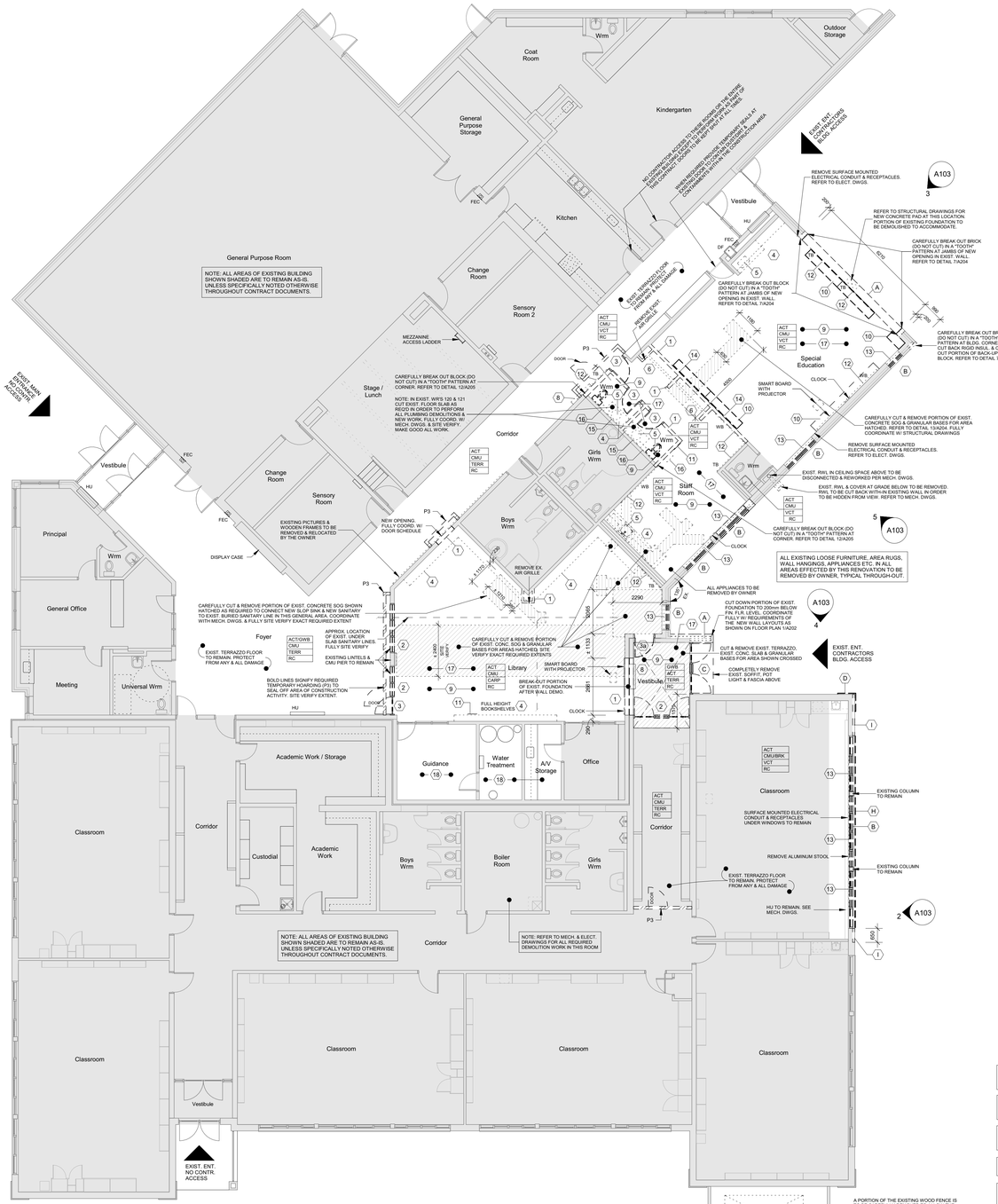


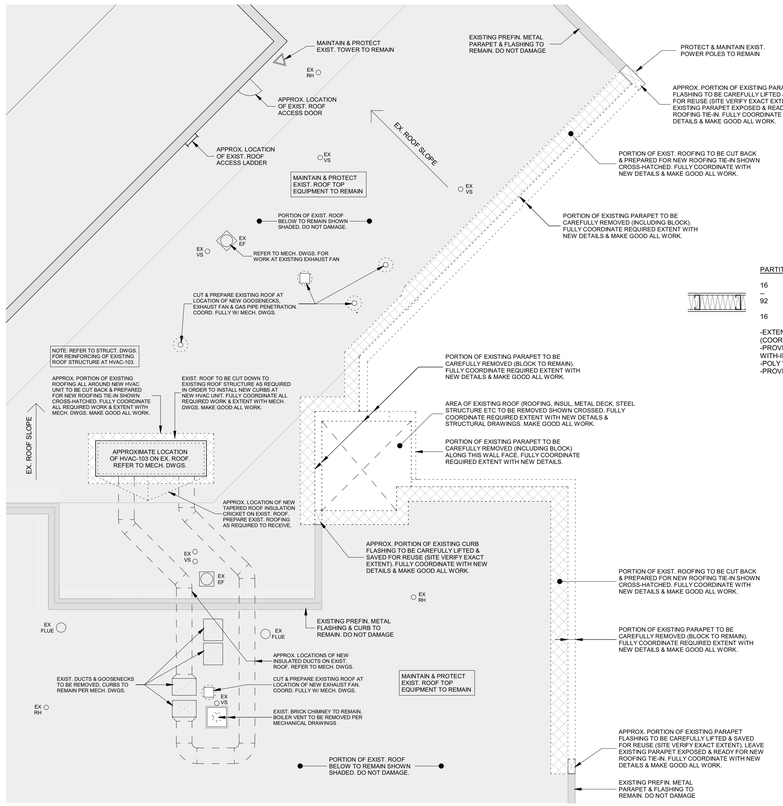
5 / A103 **South East - Demolition**

1 : 100



1 / A103 **Demolition Floor Plan**

1 : 100



6 / A103 **Partial Demolition Roof Plan**

1 : 100

NOTE: ALL EXISTING ROOF TOP EQUIPMENT LOCATIONS ARE APPROXIMATE ONLY. FULLY SITE VERIFY & NOTIFY CONSULTANTS OF ANY DISCREPANCIES.

REFER TO MECHANICAL & ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ALL EXISTING MECHANICAL & ELECTRICAL SERVICE DISCONNECTS, DEMOLITIONS & ALTERATIONS ETC.

PRIOR TO COMMENCING ANY DEMOLITION WORK ALL EXISTING SERVICES ARE TO BE LOCATED & MARKED. PROTECT ANY & ALL SERVICES NOT AFFECTED BY NEW WORK FOR ENTIRE LENGTH OF CONTRACT.

REFER TO STRUCTURAL DRAWINGS FOR ALL TEMPORARY BRACING, SHORING, NEEDLING & DEMOLITION ASSOCIATED WITH STRUCTURAL ITEMS.

NOTE: ALSO REFER TO SPECIFICATIONS - DIVISION 02 - DEMOLITION AND REMOVALS - SECTION 02 40 00.

NOTE: CAREFULLY REMOVE & SAVE EXISTING FACE BRICK FOR RE-USE. REFER TO FLOOR PLANS & DETAILS FOR REQUIRED AREAS OF RE-USE. REMOVE EXISTING MORTAR & CLEAN BRICK OF ALL DIRT & CONTAMINANTS. DISPOSE OF ANY EXISTING BRICK NOT RE-USED.

ALL EXISTING MECHANICAL AND ELECTRICAL UNDER-SLAB & ABOVE CEILING SERVICE LINES INDICATED ON DRAWINGS ARE APPROXIMATE ONLY AND ARE INDICATED AS ACCURATELY AS POSSIBLE FROM INFORMATION SUPPLIED. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT TYPES, LOCATIONS, DEPTHS AND MARKING ALL SERVICES WITH-IN ALL AREAS OF RENOVATION INCLUDING BUT NOT LIMITED TO GAS LINES, WATER LINES, SANITARY LINES, ELECTRICAL LINES, TELEPHONE, CABLE TV ETC. AND VERIFY THEIR EXACT LOCATION WITH THE APPROPRIATE AUTHORITIES BEFORE EXCAVATING.

NOTE: ALSO REFER TO DEMOLITION SITE PLAN & DEMOLITION GENERAL NOTES ON DRAWING A102.

REMOVALS NOTES:

ALL EXISTING CEILING, WALL, FLOOR & BASE FINISHES ARE IDENTFIED THUS AND ARE INCLUDED IN THIS LEGEND AS A GUIDE. REMOVE AND REPLACE AND FINISH ONLY THOSE FINISHES SPECIFICALLY NOTED ON DRAWINGS OR WHERE NEW MATERIALS OR FINISHES ARE SPECIFICALLY NOTED IN ROOM FINISH SCHEDULES

XXXX	- INDICATES EXISTING CEILING MATERIALS
XXXX	- INDICATES EXISTING WALL MATERIALS
XXXX	- INDICATES EXISTING BASE MATERIALS
XXXX	- INDICATES EXISTING FLOOR MATERIALS

DEMOLITION ABBREVIATIONS:

ACT	- ACOUSTIC TILE
CAR	- CARPET
CMU	- CONCRETE MASONRY UNITS
CONC	- CONCRETE
ES	- EXPOSED STRUCTURE
EX	- EXISTING
GWB	- GYPSUM WALL BOARD
RC	- RUBBER COVE
RF	- RUBBER FLOORING
SAT	- SPECIAL ACOUSTIC TILE
SF	- SPECIAL FLOORING
TERR	- TERRAZZO
WD	- WOOD
VCT	- VINYL COMPOSITION TILE

ITEMIZED LIST OF EXISTING EQUIPMENT AND BUILDING PORTIONS TO BE REMOVED:

NOTE: THIS LIST IS PRESENTED AS A PARTIAL LIST OF EXISTING ITEMS AND IS REPRESENTATIVE ONLY OF THE NATURE AND TYPE OF ITEMS TO BE REMOVED. ADDITIONAL REMOVALS CALLED FOR, OR IMPLIED AS A RESULT OF NEW CONSTRUCTION WORK AS DETAILED, ARE TO BE CARRIED OUT AS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR COMPLETE INSPECTION OF ALL EXISTING CONDITIONS TO DETERMINE THE EXTENT OF DEMOLITION AND REMOVAL NECESSARY TO COMPLETE ALL WORK TO THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. REFER TO MECHANICAL & ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DEMOLITION AND REMOVAL OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT AND SERVICES.

PORTIONS OF EXISTING WALL SYSTEMS TO BE REMOVED TO EXTENT INDICATED. REMOVE FULL HEIGHT (OR AS INDICATED) & PROVIDE STRUCTURAL SUPPORT AS REQUIRED. REPAIR REMAINING ADJACENT ELEMENTS TO MATCH EXISTING. MAKE GOOD ALL WORK.

INDICATES EXISTING DOORS & FRAMES TO BE REMOVED. REPAIR & MAKE GOOD EXISTING JAMBS TO REMAIN. SEE PLANS FOR LOCATIONS.

PARTITION TYPE P2 - TEMPORARY HOARDING:

16	PLYWOOD SHEATHING (PAINTED ON OCCUPIED SIDE)
--	6mil POLY VAPOUR BARRIER
92	METAL STUDS 405mm O/C FILL STUDS WITH SOUND BATT INSULATION
16	PLYWOOD SHEATHING

-EXTEND PARTITION TO U/S OF EXISTING CEILING & OR DECK (COORDINATE ON SITE)
-PROVIDE SEALS TO CONTAIN DUST/DIRT & CONTAINMENTS WITH-IN CONSTRUCTION AREA
-POLY VAPOUR BARRIER TO BE CONTINUOUS
-PROVIDE LOCKABLE DOOR(S) WHERE INDICATED

CONTRACTORS ARE ONLY PERMITTED TO USE THE ENTRANCE(S) AS INDICATED ON THE DEMOLITION PLAN.

CONTRACTORS ARE NOT ALLOWED ACCESS TO ANY OTHER AREAS OF THE EXISTING BUILDING EXCEPT TO PERFORM ANY & ALL WORK AS PART OF THIS CONTRACT.

CONTRACTORS ARE NOT TO USE THE EXISTING BUILDING WASHROOM FACILITES.

NOTE: THE DEMOLITION CONTRACTORS' ENGINEER SHALL REVIEW AND ADVISE ON ANY REQUIRED BRACING, SHORING, NEEDLING ETC.

EXTERIOR ELEMENTS:

- (A) PORTION OF EXTERIOR MASONRY WALL
- (A1) PORTION OF EXTERIOR MASONRY WALL
- (B) ALUMINUM WINDOWS / CURTAIN WALL INCLUDING STOOLS, SILLS ETC.
- (C) ALUMINUM ENTRY SCREEN
- (D) BRICK QUOINING (ORIGINAL BUILDING)
- (E) PREFIN METAL ROOF EDGE FLASHING
- (F) MISC. ELECTRICAL EQUIPMENT
- (G) MISC. MECHANICAL EQUIPMENT
- (H) PRECAST WINDOW SILL
- (I) FACE BRICK & MORTAR JOINT. EXISTING BACK-UP BLOCK TO REMAIN.

INTERIOR ELEMENTS:

- (1) PORTION OF CMU PARTITIONS
- (2) HOLLOW METAL SCREENS
- (3) DOORS & FRAMES
- (3a) DOOR ONLY FRAMES TO REMAIN
- (4) MISC. BUILT-IN MILLWORK AND CABINETRY
- (5) MISC. PLUMBING FIXTURES. REFER TO MECH DRAWINGS
- (6) METAL COAT RACK AND OVER SHELF (ADULTS)
- (7) METAL COAT RACK (STUDENTS)
- (8) HEATING UNITS. RELOCATE OR DEMOLISH. REFER TO MECH. DWGS.
- (9) FLOOR / BASE FINISHES
- (10) LOW SHELVING & BOOKCASES
- (11) INTERCOM SYSTEM. REFER TO ELECT. DWGS.
- (12) TP's & WB's TO BE CAREFULLY REMOVED & REINSTALLED PER OWNER DIRECTION, OR TURNED OVER TO OWNER. FULLY COORDINATE.
- (13) WINDOW COVERS/BLINDS TO BE CAREFULLY REMOVED & TURNED OVER TO OWNER. FULLY COORDINATE.
- (14) CHALKBOARDS
- (15) MIRROR TO BE CAREFULLY REMOVED & RELOCATED. FULLY COORDINATE.
- (16) PAPER TOWEL DISPENSER TO BE CAREFULLY REMOVED & RELOCATED. FULLY COORDINATE.
- (17) ACT CEILINGS, LIGHTS, S/A & R/A DIFFUSERS ETC. TO BE REMOVED & DISPOSED OF
- (18) ACT CEILINGS, LIGHTS, S/A & R/A DIFFUSERS ETC. TO BE CAREFULLY REMOVED TO PERFORM WORK & SAVED FOR RE-USE. REFER TO STRUCTURAL DRAWINGS, FLOOR PLAN 1/A202, FIRE SEPARATION KEY PLAN 10/A201 & REFLECTED CEILING PLAN 1/A701 FOR MORE INFORMATION ON REQ'D WORK AT THESE 3-EXISTING ROOMS.

No.	Revision	Date
4	Issued for Site Plan Approval	March 29, 2022
3	Re-Issued for Building Permit	March 28, 2022
2	Issued for Construction	February 23, 2022
1	Issued for Permit & Tender	September 27, 2021

Orientation

PROJECT NORTH

Seal

ONTARIO ASSOCIATION OF ARCHITECTS — GERRY P. PILON LICENCE 5042

All dimensions to be checked and verified on the job by the Contractor. Any discrepancies are to be reported to the Consultant prior to action. Only the latest approved drawings to be used for construction in conformance with all applicable codes, by-laws and regulations. All drawings remain the property of the Consultant.

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Project Information

St. Joseph C.E.S.- Addition and Alterations

405 Douro 4th Line, Douro, ON

For

PVNCCDSB

Drawing Title

Demolition Floor & Roof Plans, Elevations & Removals Notes

Date	Project No	Drawing No
Feb. 23, 2022	18048	A103
Drawn by JJ, AP, TES		
Scale As indicated		

GENERAL NOTES

ALL DIMENSIONS ARE IN MILLIMETERS [mm] UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO THE COMMENCEMENT OF WORK.

THE SPECIFICATIONS, INSTALLATION, AND PERFORMANCE OF AIR BARRIER SYSTEMS AND VAPOUR BARRIERS MUST MEET OR EXCEED DIV. B PART 5 OF THE ONTARIO BUILDING CODE.

STEEL STUD FRAMING & PARTITIONING

CONTRACTOR TO ENSURE THAT STEEL STUD THICKNESS, SIZE, AND SPACING IS ADEQUATE FOR THE HEIGHTS OF PARTITIONS INDICATED. ADD BRACING AS REQUIRED.

PROVIDE FOR DEFLECTION ALLOWANCE [SLIP JOINT] AT TOP OF ALL WALLS ABUTTING ROOF STRUCTURE/DECK.

GYPSUM BOARD WALL & PARTITIONS

ALL GYPSUM BOARD & STEEL STUD WALLS & PARTITIONS ARE TO EXTEND TO THE U/S OF DECK UNLESS OTHERWISE NOTED.

FOR PARTITIONS WITH ACOUSTIC BLANKET INSULATION, RECESSED OUTLETS ARE TO BE STAGGERED. APPLY CONTINUOUS ACOUSTIC SEALANT TO BOTH SIDES OF TRACK AT THE JUNCTIONS WITH FLOORS AND STRUCTURAL SLABS, AND AROUND PENETRATIONS TO PARTITIONS.

DO NOT SCREW METAL STUDS TO CURTAIN WALL MULLIONS OR TEE BAR GRIDS.

TYPICAL INTERIOR DOORS PROVIDE MIN. 50mm CLEARANCE FROM DOOR JAMB TO ADJOINING PERPENDICULAR PARTITION.

CONCRETE MASONRY UNITS (CMU) [INTERIOR]

THICKNESS OF STRUCTURAL CONCRETE MASONRY UNIT WALLS NOTED IN STRUCTURAL DRAWINGS. HEIGHT OF CONCRETE MASONRY UNIT WALLS TO BE TO UNDERSIDE OF FLOOR/ROOF DECK ABOVE UNLESS OTHERWISE NOTED.

WHERE CMU PARTITION IS A STRUCTURAL BEARING WALL REFER ALSO TO THE STRUCTURAL DRAWINGS FOR DESIGN.

CONCRETE MASONRY UNIT (CMU)

WHERE CONCRETE UNIT MASONRY WALLS ABUT REINFORCED CONCRETE WALLS AND PIERS, RAKE BACK MORTAR JOINT WHERE THE TWO MATERIALS MEET AND PROVIDE CONTINUOUS SEALANT.

FIRE RATED WALL & PARTITION ASSEMBLIES

F.R.R. REFERS TO WALLS, PARTITIONS, FLOORS, AND CEILINGS THAT HAVE A FIRE RESISTANCE RATING.

AT RECESSED PANEL INSTALLATIONS [E.G. ELECTRICAL PANELS] WITHIN RATED WALLS PROVIDE FOR CONTINUITY OF THE REQUIRED RATING BEHIND THE PANEL. REFER TO THE ONTARIO BUILDING CODE DIVISION B, SECTION 3.1.9.2 FOR REQUIREMENTS FOR COMBUSTIBILITY OF SERVICE PENETRATIONS AND SECTION 3.1.10.2 FOR RATING OF FIREWALLS.

ACOUSTIC PARTITIONS

WHERE ACOUSTIC BLANKET INSULATION IS SPECIFIED AS A COMPONENT PART OF A WALL OR PARTITION ASSEMBLY, PROVIDE A CONTINUOUS SEALANT TO BOTH SIDES OF STUDS AND TRACKS ALONG PARTITION PERIMETER.

IN ACOUSTIC PARTITIONS, RECESSED OUTLETS ARE TO BE STAGGERED, AND CONTINUOUS FLEXIBLE SEALANT IS TO BE PROVIDED AT THE JUNCTIONS WITH FLOORS AND CEILINGS, AND STRUCTURAL MEMBERS. PROVIDE FLEXIBLE SEALANT AROUND PENETRATIONS IN THE PARTITION.

DUCT PENETRATIONS THROUGH BLOCK WALLS & FLOOR ASSEMBLIES

WHERE DUCTS, PIPES, AND CONDUITS PENETRATE EXPOSED CONCRETE UNIT MASONRY WALLS, CUT BLOCKS TO SUIT REQUIRED OPENINGS TO MINIMIZE PATCHING.

BLOCKING FOR MILLWORK & SPECIALITIES

PROVIDE BLOCKING TO PARTITIONS AND WALLS FOR MILLWORK AND CASEWORK.

PROVIDE BLOCKING TO PARTITIONS AND WALLS FOR HANDRAILS, GRAB BARS,BULLETIN BOARDS, WHITEBOARDS, MIRRORS, AND OTHER WALL MOUNTED MESSAGE BOARDS. WASHROOM ACCESSORIES AND AS INDICATED ON DRAWINGS.

MASONRY VENEER

ENSURE THAT A CONTINUOUS AVB MEMBRANE IS MAINTAINED WHEREVER BRICK TIES PENETRATE EXTERIOR SHEATHING OR CONCRETE MASONRY UNIT.

VERIFY WITH STRUCTURAL ENGINEER IF SHEAR CONNECTORS ARE REQUIRED FOR BRICK/BLOCK TIES.

ROOF ASSEMBLIES

UPSTANDS ON ROOF FOR MECHANICAL UNITS, PARAPETS, SKYLIGHTS TO COME COMPLETE WITH CANT STRIPS.

CONTINUOUS VAPOUR RETARDER MEMBRANE COMPONENT OF ROOF ASSEMBLIES TO BE WRAPPED UP AT ALL PARAPETS, CURBS, EXTERIOR WALL ASSEMBLIES BY A MIN. 200mm OR AS DETAILED ON DRAWINGS. TIE INTO VAPOUR BARRIER & AVB MEMBRANES ON ALL VERTICAL SURFACES. PROVIDE 'PEEL & STICK' TYPE TRANSITION MEMBRANES IN ORDER TO ENSURE CONTINUITY OF AVB AND AIR BARRIER MEMBRANES.

REFLECTED CEILING PLAN NOTES

CONFIRM ALL MECHANICAL AND ELECTRICAL SERVICES AND FIXTURES WITH MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. QUANTITIES AND TYPES OF FIXTURES SHALL BE AS PER MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. EXACT LOCATION SHALL BE AS PER ARCHITECTURAL REFLECTED CEILING PLANS U.N.O.

REFLECTED CEILING PLANS MAY NOT SHOW ALL MECHANICAL AND ELECTRICAL FIXTURES.

WHERE MECHANICAL AND ELECTRICAL FIXTURES PENETRATE AN ACOUSTIC PARTITION, PATCH AND PROVIDE AN AIR-TIGHT SEAL AROUND PENETRATION. AT FIRE SEPARATIONS USE FIRESTOP MATERIAL AT PENETRATIONS TO MATCH THE FIRE RATING OF THE PARTITION, WALL, OR FLOOR ASSEMBLY.

COORDINATE ALL SERVICES INSTALLED WITHIN THE CEILING SYSTEM. COORDINATE ALL PENETRATIONS AND ACCESS PANELS WITH THE CEILING SUPPORT SYSTEM.

REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FIRE EXIT SIGNAGE.

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL LOCATIONS AND SIZES OF ACCESS PANELS.

LOCATE SPRINKLERS, DETECTORS, SPEAKERS, ETC. ON CENTER LINE OR MID-POINT OF ACT CEILING PANELS U.N.O.

LOCATE LIGHT FIXTURES ON CENTER OF ACOUSTIC CEILING TILES U.N.O.

FIRE SEPARATIONS ARE TO EXTEND TO THE UNDERSIDE OF THE DECK AND STRUCTURE COMPLETE WITH FIRESTOP MATERIAL AND SMOKE SEAL AS REQUIRED. REFER TO FIRE SEPARATION LEGEND ON DRAWING A200.

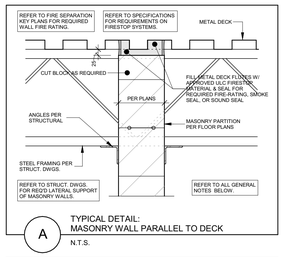
FLOOR PLAN GENERAL NOTES:

1. DIMENSIONS SHOWN ARE TAKEN TO FACE OF CMU, POURED CONCRETE, OR METAL STUD UNLESS NOTED OTHERWISE. ALL GWB OR CMU PARTITIONS TO EXTEND TIGHT TO U/S OF FLOOR OR ROOF DECKS UNLESS NOTED OTHERWISE.
2. REFER TO FIRE SEPARATION KEYPLANS FOR LOCATIONS OF ALL RATED WALLS.
3. ALL INTERIOR ALUM SCREENS SHALL HAVE GWB AND METAL STUD ASSEMBLIES FROM TOP OF SCREEN/DOOR FRAME TO UNDERSIDE OF DECKS UNLESS A LINTEL HAS BEEN PROVIDED BY STRUCTURAL WITH BLOCK WALL ABOVE TO U/S DECKS. WHERE SCREENS OR DOORS OCCUR WITHIN WALLS CONSTRUCTED AS FIRE SEPARATIONS, THE WALL ABOVE SUCH SCREENS OR DOORS SHALL BE CONSTRUCTED TO PROVIDE THE REQUIRED FIRE RESISTANCE RATING INDICATED.
4. WHERE FIRE RATED PARTITIONS ABUT NON-RATED PARTITIONS THE FIRE RATED ASSEMBLY SHALL BE CONTINUOUS AND UNINTERRUPTED BY THE ABUTTING WALLS TO MAINTAIN A CONTINUOUS FIRE SEPARATION.
5. SEAL PERIMETER OF WALLS AND AROUND PENETRATIONS THROUGH WALLS WITH ACOUSTIC SEALANT WHERE SOUND ATTENUATION BATTS ARE CALLED FOR ON THE WALL TYPE
6. SEAL PERIMETER OF FIRE RATED WALLS AND AROUND PENETRATIONS THROUGH FIRE RATED WALLS WITH APPROVED FIRESTOPPING MATERIALS.
7. REFER TO STRUCTURAL DRAWINGS FOR LATERAL SUPPORT AT THE TOP OF CMU WALLS.
8. ON ALL EXPOSED CORNERS OF EXPOSED MASONRY WALLS PROVIDE BULLNOSE BLOCK UNLESS NOTED OTHERWISE.
9. REFER TO ELECTRICAL DWGS FOR LOCATIONS OF PANELS, DOOR CONTROLS, SECURITY DEVICES ETC NOT SHOWN ON ARCHITECTURAL DRAWINGS.

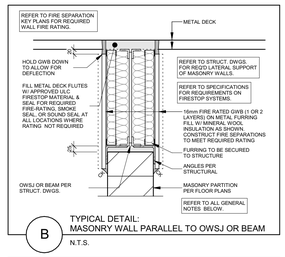
GENERAL ABBREVIATION LIST:

(NOTE: NOT ALL ABBREVIATIONS ARE USED)

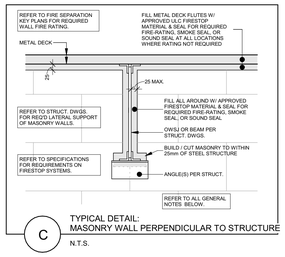
ACT	Acoustic Ceiling Tile	GALV.	Galvanized	R	Radius
ACP	Aluminum Composite Panel	GB	Grab Bar	R/A	Return Air
ACS	Adult Change Station	GWB	Gypsum Wall Board	RA-x	Roof Anchor
AFF	Above Finished Floor			RC	Shower Rod & Curtain
ALUM	Aluminum	HD	Hand Dryer	RCB	Rubber Cove Base
ARCH	Architectural	HB	Hose Bibb	RD	Roof Drain
AV	Air Vapour Barrier	HDWD	Hardwood	REL	Relocated
		HM	Hollow Metal	REQ'D	Required
BCC	Barrier Free Curb Cut	HORIZ.	Horizontal	RH	Robe Hook
BF	Barrier Free	HP	High Point	RSD	Relief Scupper Drain
BFPB	Barrier Free Push Button	HPL	High Pressure Laminate	RS	Roller Shades
BLK	Block	HR	Hand Rail		
BLKG	Blocking	HRD	Hair Dryer	S	Liquid Soap Dispenser
BN	Bullnose	HS	Hand Sanitizer Dispenser	SD	Soap Dispenser
BOL	Bollard	HSS	Hollow Steel Section	SH	Shower Head
BRK/BLK	Brick/Block	HT	Height	SC	Shower Controls
		HW	Headwall	SH/C	Shower Head & Control
CBD	Cement Board	HWV	Hygienic Wall Cladding	SVC	Shower Valve Control Box
CG	Corner Guard	HWS	Hand Wash Sink	SND	Sanitary Napkin Disposal Unit
CH	Coat Hook			SPEC'D	Specified
CK	Caulk	IC	Intumescent Coating	SPS	Solid Polymer Surface
CLG	Ceiling	IFB	Impregnated Fibreboard	S.S.	Stainless Steel
COL.	Column	INSUL.	Insulation	STL	Steel
CONC	Concrete			STN	Stone
CONST	Construction	JT	Joint	STRUCT.	Structural
CONT.	Continuous	JS	Janitor Sheif	SUSP.	Suspended
CR	Crash Rail				
CRS	Course	LF	Light Fixture	TB	Tack Board
CT	Ceramic Tile	LP	Low Point	TEL	Telephone
C/W	Complete With			T.O.S.	Top of Structure
C.W.	Curtain Wall	M	Mirror	TT	Toilet Tissue Holder
CWP	Composite Wood Panels	MAX.	Maximum	TWB	Towel Bar
		MECH	Mechanical	TYP	Typical
DCS	Diaper Change Station	MIN.	Minimum		
DIA	Diameter	MM	Millimeters	U.N.O.	Unless Noted Otherwise
DIM	Dimensions	MPS	Mop Sink	UR	Urinal
DIVS.	Divisions	MS	Metal Stud	U/S	Underside
DN	Down	MTL	Metal		
DWGS	Drawings			VPAB	Vapour Permeable Air Barrier
DS	Door Stop	NC	Nurse Call	VERT.	Vertical
		N.I.C.	Not In Contract	VEST	Vestibule
ECR	Electronic Card Reader	N.T.S.	Not To Scale		
EHO	Electronic Hold Open			W/	With
ELECT	Electrical	O.C.	On Centre	WB	White Board
EPX	Epoxy Flooring	O.H.	Overhead	WB2	'Wattaliker' White Board
EQ.	Equal	OWSJ	Open Web Steel Joist	WC	Water Closet
ES	Exposed Structure			WD	Wood
EXT	Exterior	PBL	Push Button Lock	WR	Washroom
EW	Eye Wash	PB	Panic Button	WPP	Wall Protection Cladding
		PCS	Pieces		
FD	Floor Drain	PLAM	Plastic Laminate		
FE	Fire Extinguisher	PLYWD	Plywood (Veneer Core)		
FEC	Fire Extinguisher Cabinet	PREFIN.	Prefinished		
FIN.	Finish	PREMANUF	Premanufactured		
FLR	Floor	PRC	Privacy Curtain & Rod		
FRR	Fire Resistance Rating	PS	Pull Station		
FND	Foundation	PT	Paint		
FS	Folding Seat	PTD	Paper Towel Dispenser		
		PTD/WR	Paper Towel Dispenser & Waste Receptacle		
		PPT	Preservative Pressure Treated		



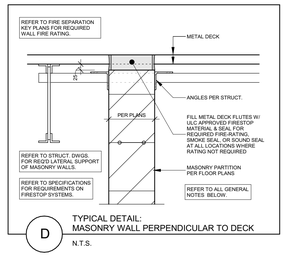
A — TYPICAL DETAIL: MASONRY WALL PARALLEL TO DECK
N.T.S.



B — TYPICAL DETAIL: MASONRY WALL PARALLEL TO OWSJ OR BEAM
N.T.S.



C — TYPICAL DETAIL: MASONRY WALL PERPENDICULAR TO STRUCTURE
N.T.S.

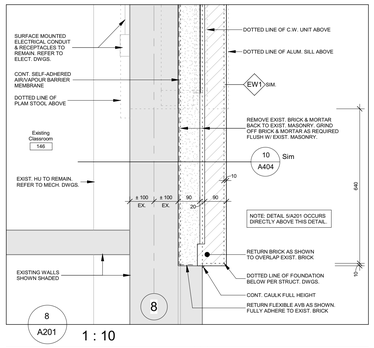


D — TYPICAL DETAIL: MASONRY WALL PERPENDICULAR TO DECK
N.T.S.

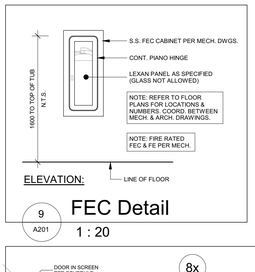
GENERAL NOTES:

1. **- THESE DETAILS SHALL APPLY TO ALL WALLS THAT FORM ANY PART OF A RATED AND NON-RATED FIRE SEPARATION, AND ALL WALLS THAT REQUIRE ACOUSTIC PERFORMANCE. THESE DETAILS SHALL ALSO APPLY TO ALL OTHER WALLS THAT DO NOT FORM A REQUIRED FIRE SEPARATION OR ACOUSTIC PARTITION, IN THE INSTANCE WHERE WALLS NOT REQUIRED TO HAVE FIRE RATINGS OR ACOUSTIC PERFORMANCES ARE EXPOSED TO VIEW (IE. NO CEILING) PROVIDE ACOUSTIC SEALANT IN LIEU OF FIRE STOPPING. IN THE INSTANCE WHERE WALLS NOT REQUIRED TO HAVE FIRE RATINGS OR ACOUSTIC PERFORMANCES ARE CONCEALED (IE. ABOVE SUSPENDED CEILINGS) ACOUSTIC SEALANT CAN BE OMITTED.**

2. **- THESE ABOVE DETAILS SHALL ALSO APPLY TO CONDITIONS WHERE THE FLOOR STRUCTURE IS CONSTRUCTED OF PRECAST AND/OR CAST-IN-PLACE CONCRETE. THE ABOVE DETAILS AND CONDITIONS ARE SIMILARLY APPLICABLE TO SEVERAL CONSTRUCTION TYPES, AND WALLS SHALL BE CONSTRUCTED TO MAINTAIN THE SAME LEVEL OF FIRE PROTECTION OR ACOUSTIC PERFORMANCE VALUE AS DETAILED AND REQUIRED BY THE OBC.**

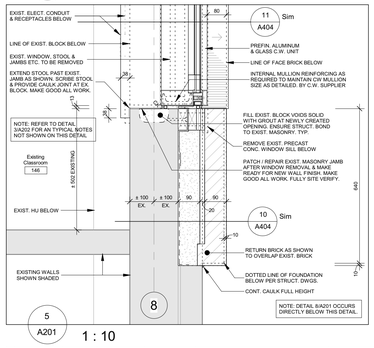


8 A201 — 1 : 10

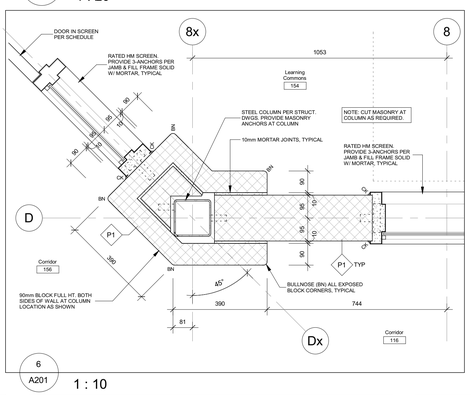


ELEVATION:

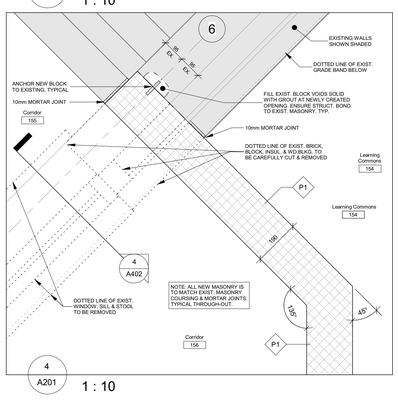
9 A201 — FEC Detail — 1 : 20



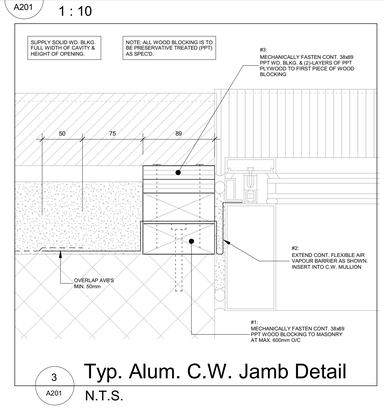
5 A201 — 1 : 10



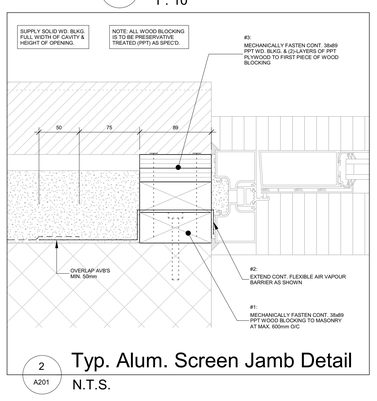
6 A201 — 1 : 10



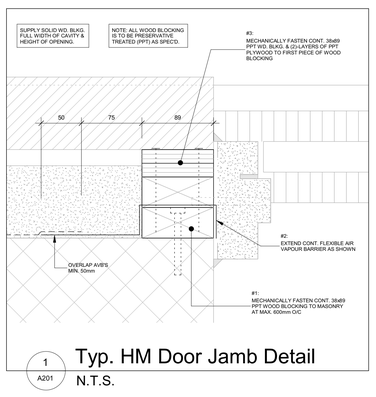
4 A201 — 1 : 10



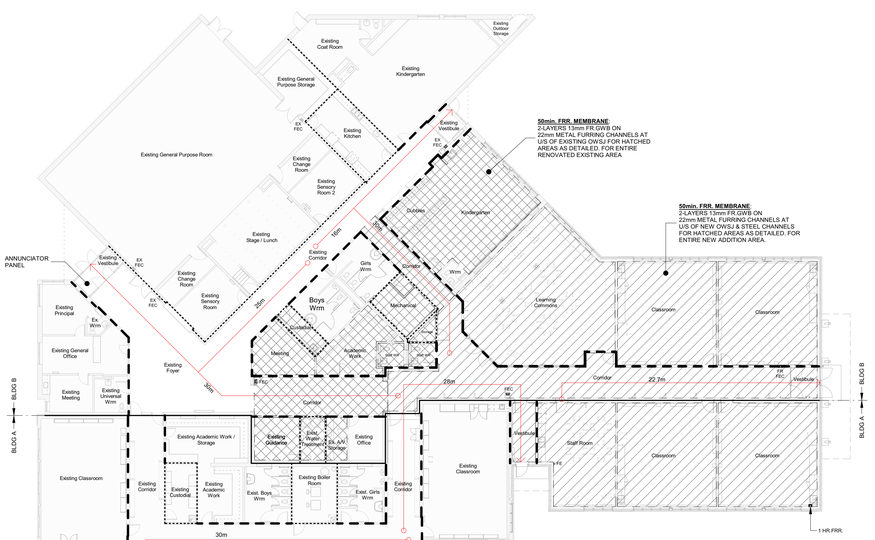
3 A201 — Typ. Alum. C.W. Jamb Detail — N.T.S.



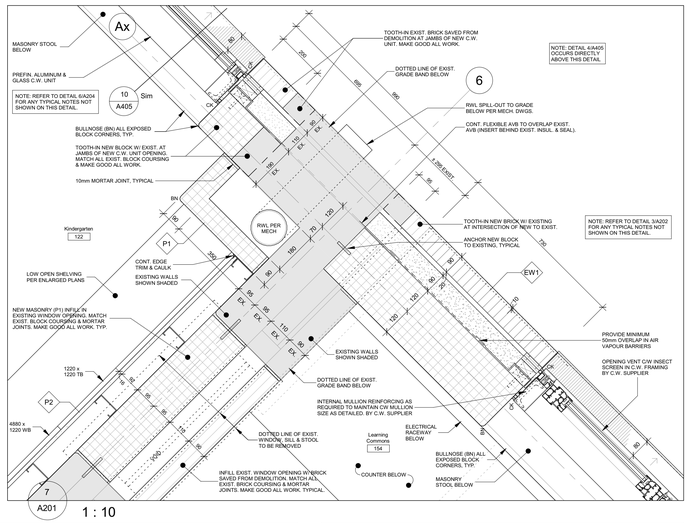
2 A201 — Typ. Alum. Screen Jamb Detail — N.T.S.



1 A201 — Typ. HM Door Jamb Detail — N.T.S.



10 A201 — Fire Separtion Key Plan — 1 : 200



No.	Revision	Date
4	Issued for Site Plan Approval	March 29, 2022
3	Re-Issued for Building Permit	March 28, 2022
2	Issued for Construction	February 23, 2022
1	Issued for Permit & Tender	September 27, 2021

Orientation

PROJECT NORTH

Seal

ONTARIO ASSOCIATION OF ARCHITECTS — GERRY P. PILON — LICENCE 5042

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151 Ferris Lane, Suite 400 — Barrie, Ontario L4M 6C1
salterpilon.com — t: 705.737.3530

Project Information

St. Joseph C.E.S.- Addition and Alterations

405 Douro 4th Line, Douro, ON

For

PVNCCDSB

Drawing Title

Fire Separations, General Notes & Misc. Details

Date	Project No	Drawing No
Feb. 23, 2022	18048	A201
Drawn by: JJ, TES		
Scale: As indicated		

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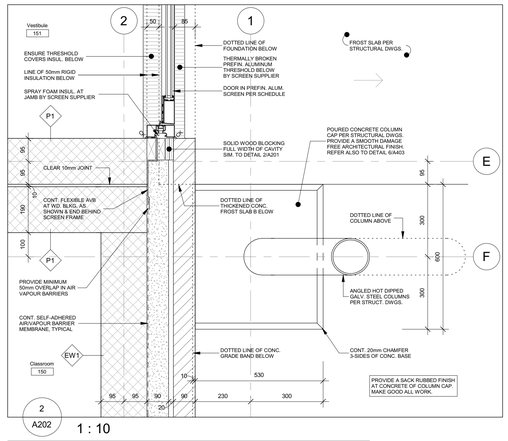
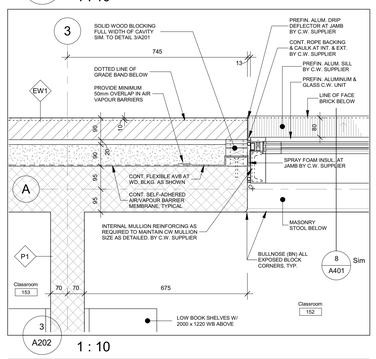
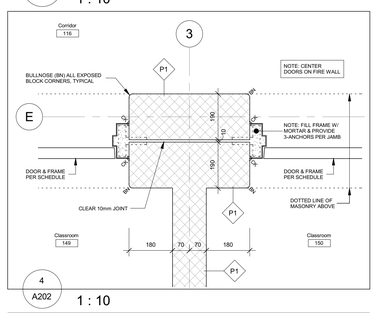
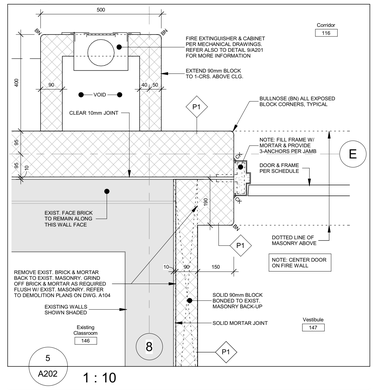
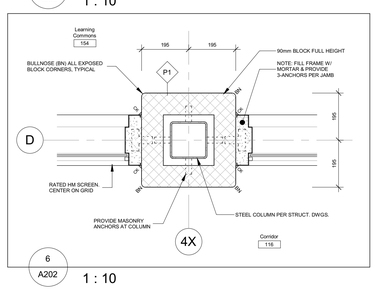










Wall & Partition Types:

EXTERIOR WALL TYPE EW-1:

90mm ARCHITECTURAL BRICK VENEER (REFER TO EXTERIOR ELEVATIONS FOR COURSING PATTERN)
20mm MAXIMUM CONTINUOUS AIR SPACE
90mm SPRAY APPLIED INSULATION
-- CONT. SELF-ADHERED AIR/VAPOUR BARRIER MEMBRANE
190mm CMU BACK-UP (LIGHT WEIGHT) (140, 190, 240 OR 290 CMU AS PER PLANS)

EXTERIOR WALL TYPE EW-2:

19mm VERTICAL PREFINISHED METAL SIDING
-- HORIZONTAL THERMALLY BROKEN GALV. Z-GIRTS
5mm CONTINUOUS AIRSPACE
90mm SPRAY APPLIED INSULATION
-- CONT. SELF-ADHERED AIR/VAPOUR BARRIER MEMBRANE
190mm CMU BACK-UP (LIGHT WEIGHT) (140, 190, 240 OR 290 CMU AS PER PLANS)

PARTITION TYPE P1 - CMU PLAIN FACED:

190mm CMU PLAIN FACED BOTH SIDES (90, 140, 240 or 290 CMU PER PLANS) PROVIDE BULLNOSE EDGE AT ALL EXPOSED CORNERS

PARTITION TYPE P2 - GWB ON ONE SIDE OF METAL STUDS:

16mm ABUSE-RESISTANT GYPSUM WALL BOARD
92mm METAL STUDS 400mm O/C
FILL STUDS WITH SOUND BATT INSULATION
16 PLYWOOD SHEATHING

-CARRY PARTITION FROM FIN FLOOR TO U/S OF DECK UNLESS NOTED/SHOWN OTHERWISE.
-PROVIDE FOR DEFLECTION IN M.S. DESIGN

PARTITION TYPE P3 - TEMPORARY HOARDING:

16 PLYWOOD SHEATHING (PAINTED ON OCCUPIED SIDE)
-- 6mil POLY VAPOUR BARRIER
92 METAL STUDS 400mm O/C
FILL STUDS WITH SOUND BATT INSULATION
16 PLYWOOD SHEATHING

-EXTEND PARTITION TO U/S OF EXISTING CEILING & OR DECK (COORDINATE ON SITE)
-PROVIDE SEALS TO CONTAIN DUST/DIRT & CONTAINMENTS WITH-IN CONSTRUCTION AREA
-POLY VAPOUR BARRIER TO BE CONTINUOUS
-PROVIDE LOCKABLE DOOR(S) WHERE INDICATED
-ADJUST EXACT REQUIRED EXTENT ON SITE

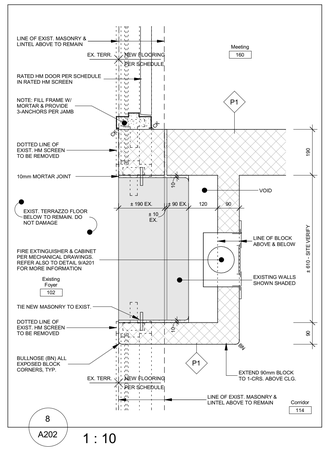
NOTE: UNLESS INDICATED OTHERWISE, EXTEND ALL PARTITIONS FULL HEIGHT TO U/S OF STRUCTURE.

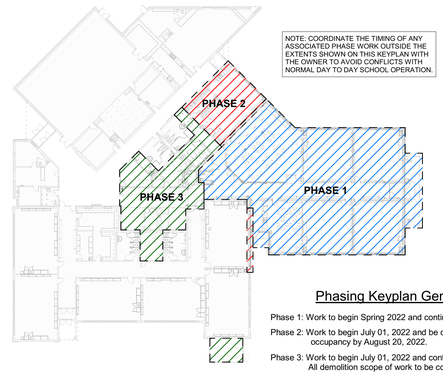
NOTE: REFER TO FIRE SEPARATION PLANS & DETAILS FOR REQUIRED F.R.R. OF ARCHITECTURAL ELEMENTS.

NOTE: PROVIDE CAVITY WALL VENTS (CWV) AT TOP & BOTTOM OF CAVITY WALLS, ABOVE & BELOW ALL OPENINGS.

NOTE: PROVIDE WEEP HOLES (WH) AT BOTTOM OF CAVITY WALLS & ABOVE ALL OPENINGS.

NOTE: PROVIDE A BULLNOSE (BN) AT ALL EXPOSED CMU CORNERS.





NOTE: COORDINATE THE TIMING OF ANY ASSOCIATED PHASE WORK OUTSIDE THE EXTENTS SHOWN ON THIS KEYPLAN WITH THE OWNER TO AVOID CONFLICTS WITH NORMAL DAY TO DAY SCHOOL OPERATION.

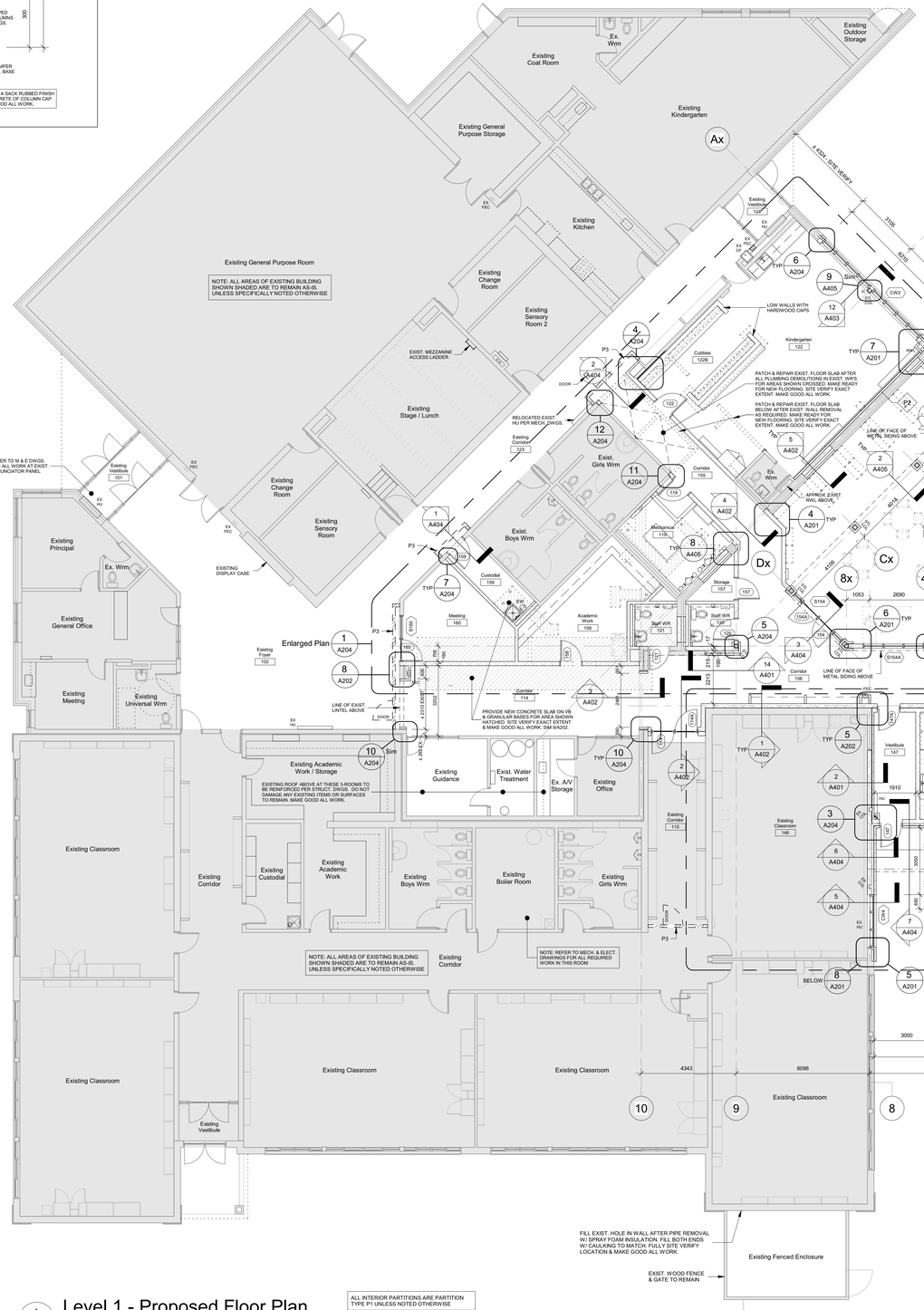
Phasing Keyplan General Notes:

Phase 1: Work to begin Spring 2022 and continue to substantial completion.

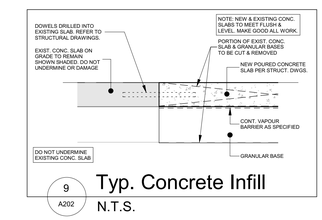
Phase 2: Work to begin July 01, 2022 and be comlpete and ready for occupancy by August 20, 2022.

Phase 3: Work to begin July 01, 2022 and continue to substantial completion. All demolition scope of work to be completed by August 20, 2022.

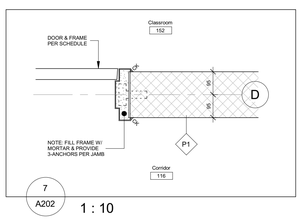
10 A202 **Phasing Keyplan**
N.T.S.



1 A202 **Level 1 - Proposed Floor Plan**
1 : 100



9 A202 **Typ. Concrete Infill**
N.T.S.



7 A202 1 : 10

No.	Revision	Date
4	Issued for Site Plan Approval	March 29, 2022
3	Re-Issued for Building Permit	March 28, 2022
2	Issued for Construction	February 23, 2022
1	Issued for Permit & Tender	September 27, 2021

Orientation: PROJECT NORTH

Seal: ONTARIO ASSOCIATION OF ARCHITECTS — GERRY P. PILON LICENCE 5042

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Project Information
St. Joseph C.E.S.- Addition and Alterations
405 Douro 4th Line, Douro, ON

For
PVNCCDSB

Drawing Title
Floor Plan & Details

Date	Project No	Drawing No
Feb. 23, 2022	18048	A202
Drawn by JJ, TES		
Scale As indicated		

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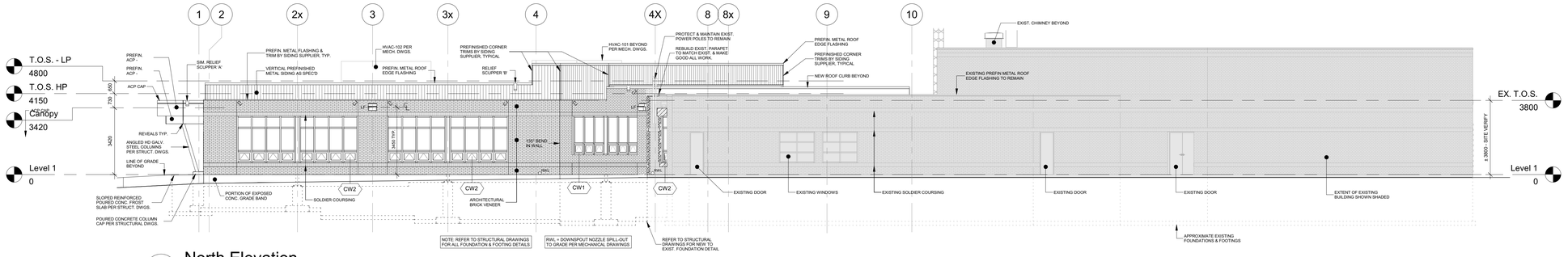
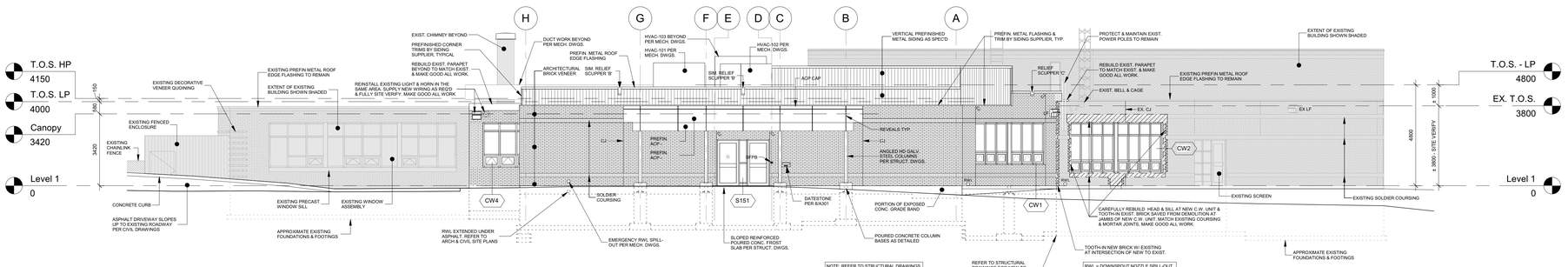
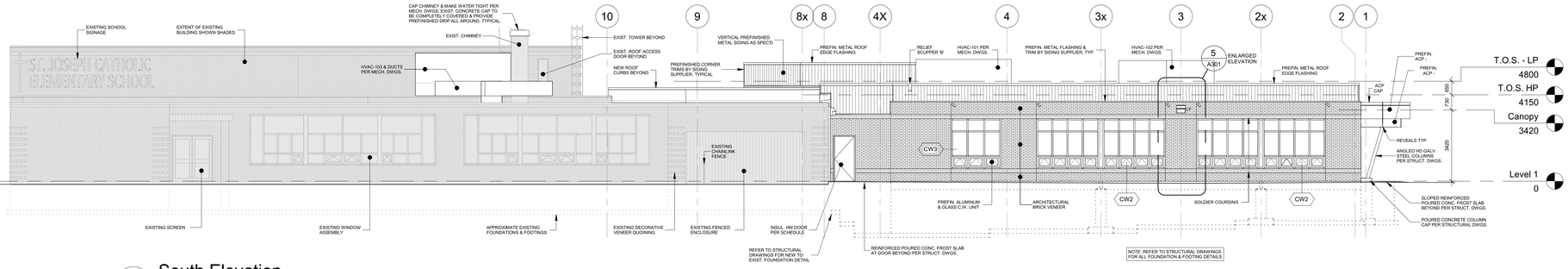


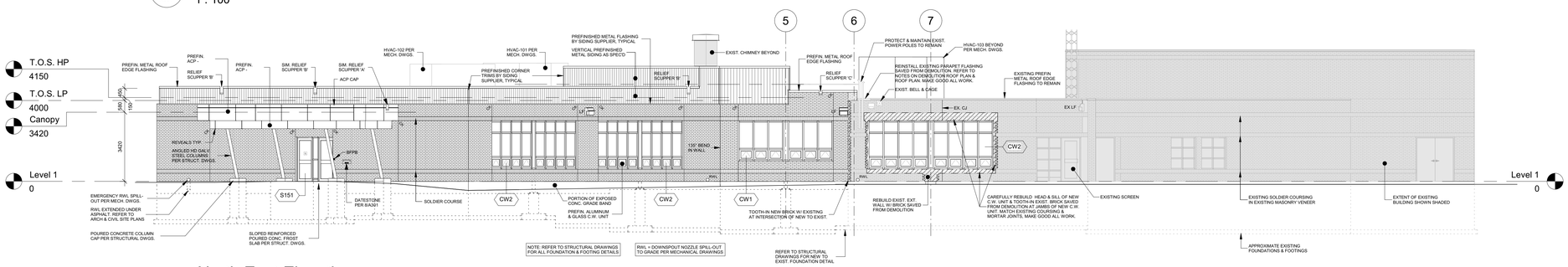
1 A301 **North Elevation**
1 : 100



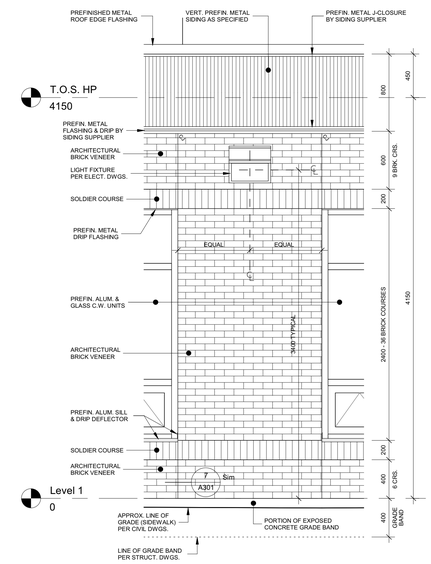
2 A301 **East Elevation**
1 : 100



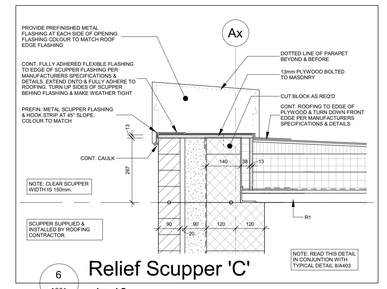
3 A301 **South Elevation**
1 : 100



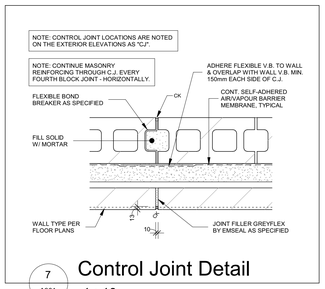
4 A301 **North East Elevation**
1 : 100



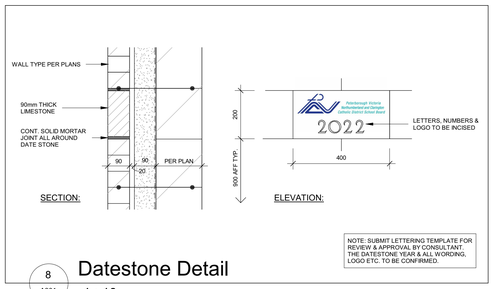
5 A301 **Enlarged Elevation**
1 : 25



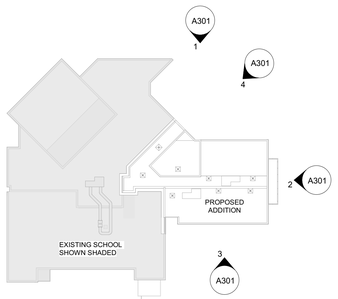
6 A301 **Relief Scupper 'C'**
1 : 10



7 A301 **Control Joint Detail**
1 : 10



8 A301 **Datestone Detail**
1 : 10



25 A301 **Elevation Key Plan**
N.T.S.

No.	Revision	Date
4	Issued for Site Plan Approval	March 29, 2022
3	Re-Issued for Building Permit	March 28, 2022
2	Issued for Construction	February 23, 2022
1	Issued for Permit & Tender	September 27, 2021

Orientation

PROJECT NORTH

Seal

ONTARIO ASSOCIATION OF ARCHITECTS
GERRY P. PILON
LICENCE
5042

ELEVATION NOTES:

FOUNDATION WALL & FOOTINGS ARE PER THE STRUCTURAL DRAWINGS. REFER TO THE STRUCTURAL DRAWINGS FOR THE REQUIRED DEPTHS, SIZES, REINFORCING ETC.

LOCATIONS OF ALL MECHANICAL & ELECTRICAL ITEMS MUST BE CO-ORDINATED WITH THE MECHANICAL & ELECTRICAL DRAWINGS. (ie. HOSEBIBS, GRILLES, LIGHTS etc.) ON SITE WITH ALL TRADES INVOLVED IN THE WORK.

CJ - CONTROL JOINT LOCATIONS. REFER TO DETAIL 7/A301

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151 Ferris Lane, Suite 400 Barrie, Ontario L4M 6C1
salterpilon.com t: 705.737.3530

Project Information

St. Joseph C.E.S.- Addition and Alterations

405 Douro 4th Line, Douro, ON

For

PVNCCDSB

Drawing Title

Exterior Elevations & Details

Date	Project No	Drawing No
Feb. 23, 2022	18048	A301
Drawn by JJ, TES		
Scale As indicated		

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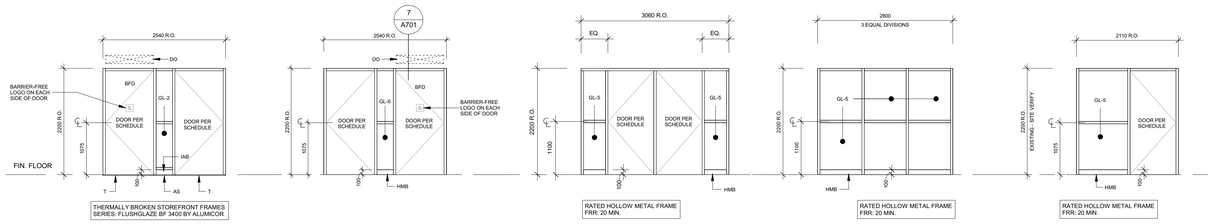


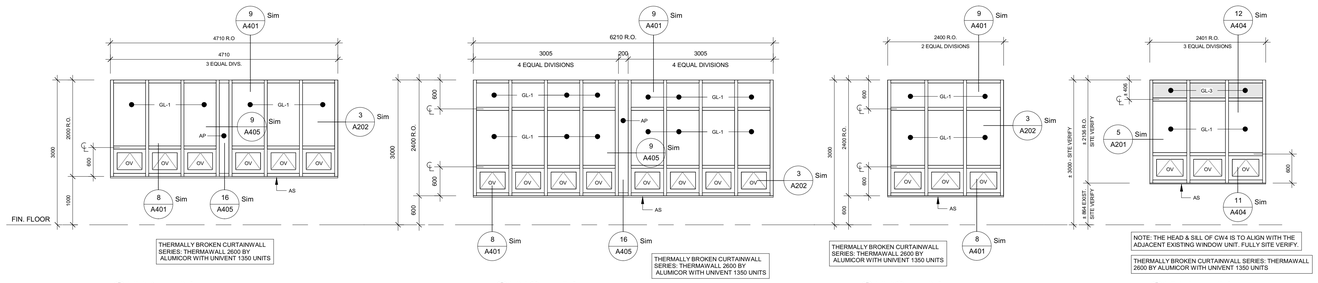
A A302 — S151 - AL — 1 : 50

B A302 — S151A - HM — 1 : 50

C A302 — S154 - HM — 1 : 50

D A302 — S154A - HM — S154B - SIM. — 1 : 50

E A302 — S160 - HM — 1 : 50



F A302 — CW1 - Alum — 1 : 50

G A302 — CW2 - Alum — 1 : 50

H A302 — CW3 - Alum — 1 : 50

I A302 — CW4 - Alum — 1 : 50

TYPICAL NOTES & LEGEND:

AB	- ALUMINUM BASE
AL	- ALUMINUM
AP	- ALUMINUM PANEL
AR	- ALUMINUM RAIL (BOTTOM/TOP)
AS	- ALUMINUM SILL
ACP	- ALUMINUM CORNER PANEL
ASP	- ALUMINUM SPANDREL PANEL
BFD	- BARRIER FREE DOOR
DO	- DOOR OPERATOR
DA	- DOOR ADAPTOR
GF	- GLASS FILM
HM	- HOLLOW METAL
HMB	- HOLLOW METAL BASE
IAB	- INSULATED ALUMINUM BASE
IACP	- INSULATED ALUMINUM CORNER PANEL
IME	- INTERNAL MULLION EXTENSION
ME	- MULLION EXTENSIONS
OV	- OPERABLE VENT
RO	- ROUGH OPENING
SSG	- STRUCTURAL SILICONE GLAZING MULLION
T	- THERMALLY BROKEN THRESHOLD
VIS	- VISUAL IMPEDIMENT STRIP

REFER TO SPECIFICATION SECTION 08 80 00 - GLAZING FOR GL TYPES.

GL-1	(TYPICAL INSULATED EXTERIOR): 6mm CLEAR TEMPERED EXTERIOR LITE, LOW-E COATING ON SURFACE #2, ARGON FILLED AIR SPACE, 6mm CLEAR TEMPERED INTERIOR LIGHT, 25mm OVERALL THICKNESS.
GL-2	(TYPICAL AT ENTRANCE DOORS, GYM) 6mm CLEAR TEMPERED EXTERIOR LITE, LOW-E COATING ON SURFACE #2, ARGON FILLED AIR SPACE, 7mm LAMINATED SAFETY GLASS INTERIOR LITE, 25mm OVERALL THICKNESS.
GL-3:	6mm THICK SPANDREL GLASS WITH GALVANIZED METAL BACK-PAN FILLED WITH SEMI-RIGID INSULATION PROVIDE PREFIN ALUM PANEL ON INTERIOR SIDE TO MATCH MULLION FRAMING
GL-4:	6mm CLEAR TEMPERED
GL-5:	5mm FIRE RATED GLASS
GL-6:	6mm CLEAR TEMPERED/LAMINATED GLASS

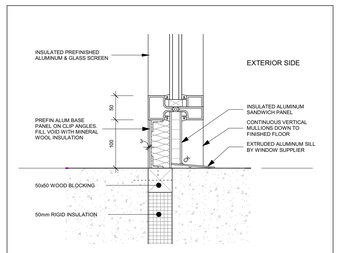
NOTE: SITE VERIFY ALL ROUGH OPENINGS BEFORE FABRICATION OF ANY UNITS.

NOTE: SUPPLY INTERNAL MULLION REINFORCING AS REQUIRED TO MAINTAIN MULLION SIZE AS DETAILED. TYPICAL AT ALL CURTAIN WALL UNITS. BY C.W. SUPPLIER.

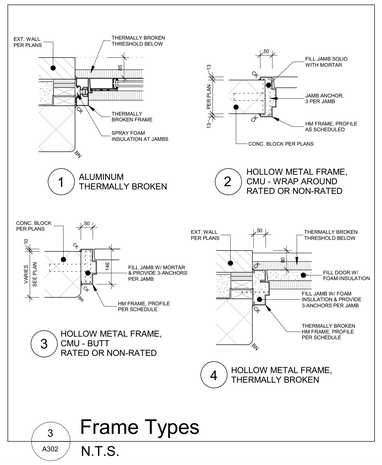
REFER TO FLOOR PLANS & ELEVATIONS FOR ALL LOCATIONS & QUANTITIES.

NOTE: SECURELY FASTEN THE HEADS OF ALL SCREENS TO THE STRUCTURE PROVIDED.

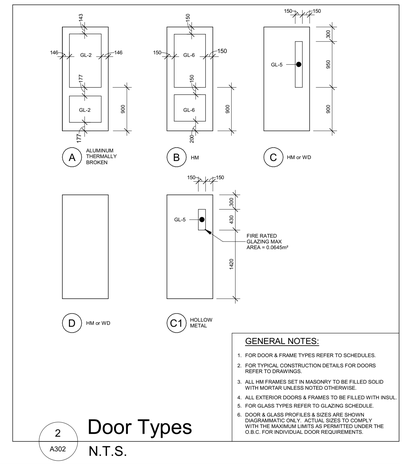
NOTE: AT ALL IME LOCATIONS PROVIDE FOR ROOF DEFLECTION IN CONNECTION DETAIL.



1 A302 — Typ. Insul. Alum. Base — 1 : 5



3 A302 — Frame Types — N.T.S.



2 A302 — Door Types — N.T.S.

GENERAL NOTES:

1. FOR DOOR & FRAME TYPES REFER TO SCHEDULES.
2. FOR TYPICAL CONSTRUCTION DETAILS FOR DOORS REFER TO DRAWINGS.
3. ALL HM FRAMES SET IN MASONRY TO BE FILLED SOLID WITH MORTAR UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR DOORS & FRAMES TO BE FILLED WITH INSUL.
5. FOR GLASS TYPES REFER TO GLAZING SCHEDULE.
6. DOOR & GLASS PROFILES & SIZES ARE SHOWN DIAGRAMMATIC ONLY. ACTUAL SIZES TO COMPLY WITH THE MAXIMUM LIMITS AS PERMITTED UNDER THE O.B.C. FOR INDIVIDUAL DOOR REQUIREMENTS.

Door & Frame Schedules

Door Schedule						Frame Schedule					
NUMBER	TYPE	SIZE (WxHxT)	MATERIAL	FINISH	GLAZING	F.R.R.	PROFILE	FINISH	MATERIAL	F.R.R.	HDWR.	REMARKS
114	C1	1000 x 2150 x 45	WD	PLAM	GL-5	90 min	3	PT	HM	90 min	SEE HS	Refer to Finish Hardware Schedule
114A	C1	1000 x 2150 x 45	WD	PLAM	GL-5	90 min	3	PT	HM	90 min	SEE HS	Refer to Finish Hardware Schedule
119	D	950 x 2150 x 45	WD	PLAM		45 min	2	PT	HM	45 min	SEE HS	Refer to Finish Hardware Schedule
120	D	950 x 2150 x 45	WD	PLAM		20 min	2	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule
121	D	900 x 2150 x 45	WD	PLAM		20 min	2 (Exist)	PT	HM (Exist)	20 min.	SEE HS	Refer to Finish Hardware Schedule, New Door in Existng Frame - Site Verify
122	C	950 x 2150 x 45	WD	PLAM	GL-5	20 min	2	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule
147	D	950 x 2150 x 45	HM	PT			4	PT	HM		SEE HS	Refer to Finish Hardware Schedule, Insulate Door & Frame, TB Frame
147A	C1	950 x 2150 x 45	WD	PLAM	GL-5	90 min	3	PT	HM	90 min	SEE HS	Refer to Finish Hardware Schedule
148	C1	950 x 2150 x 45	WD	PLAM	GL-5	90 min	3	PT	HM	90 min	SEE HS	Refer to Finish Hardware Schedule
149	C1	950 x 2150 x 45	WD	PLAM	GL-5	90 min	3	PT	HM	90 min	SEE HS	Refer to Finish Hardware Schedule
150	C1	950 x 2150 x 45	WD	PLAM	GL-5	90 min	3	PT	HM	90 min	SEE HS	Refer to Finish Hardware Schedule
151	A	1000 x 2150 x 57	AL	FF	GL-2		1	FF	AL		SEE HS	Refer to Finish Hardware Schedule,TB Door & Frame, Screen S151
151A	A	1000 x 2150 x 57	AL	FF	GL-2		1	FF	AL		SEE HS	Refer to Finish Hardware Schedule,TB Door & Frame, Screen S151
151B	B	1000 x 2150 x 45	HM	PT	GL-6		3	PT	HM		SEE HS	Refer to Finish Hardware Schedule, Screen S151A
151C	B	1000 x 2150 x 45	HM	PT	GL-6		3	PT	HM		SEE HS	Refer to Finish Hardware Schedule, Screen S151A
152	C	950 x 2150 x 45	WD	PLAM	GL-5	20 min	2	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule
153	C	950 x 2150 x 45	WD	PLAM	GL-5	20 min	2	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule
154	B	951 x 2150 x 45	HM	PT	GL-5	20 min	3	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule, Screen S154
154A	B	951 x 2150 x 45	HM	PT	GL-5	20 min	3	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule, Screen S154
154B	C	950 x 2150 x 45	WD	PLAM	GL-5	20 min	2	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule
157	D	950 x 2150 x 45	WD	PLAM		45 min	2	PT	HM	45 min	SEE HS	Refer to Finish Hardware Schedule
158	D	950 x 2150 x 45	WD	PLAM		20 min	2	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule
159	D	950 x 2150 x 45	WD	PLAM		45 min	3	PT	HM	45 min	SEE HS	Refer to Finish Hardware Schedule
160	B	950 x 2150 x 45	HM	PT	GL-5	20 min	3	PT	HM	20 min.	SEE HS	Refer to Finish Hardware Schedule, Screen 160

Room Finish Schedule

		Floor		Base		Walls								Ceiling		
						North Wall		East Wall		South Wall		West Wall				
No.	Name	Mat.	Fin.	Mat.	Fin.	Mat.	Fin.	Mat.	Fin.	Mat.	Fin.	Mat.	Fin.	Mat.	Fin.	Comments
101	Existing Vestibule	EX	-	EX	-											
102	Existing Foyer	EX	-	EX	-	EX	PT-1	CMU/S156	PT-1/PT-2	EX/HM	PT-1/PT-2	EX/HM	PT-1/PT-2	EX/GWB	-	ACCENT BULKHEAD TO BE PAINTED PT-3
114	Corridor	CT-1	-	RB-1	-	CMU/HM	PT-1/PT-2	CMU	PT-1	CMU/HM	PT-1/PT-2	CMU	PT-1	ACT-1/GWB	-/PT-3	HM FRAMES - PT-2
115	Existing Corridor															
116	Corridor	CT-1	-	RB-1	-	CMU/HM	PT-1/PT-2	CMU/S156	PT-1/PT-2	CMU/HM	PT-1/PT-2	-	-	ACT-1	-	HM FRAMES - PT-2
119	Mechanical	CONC/ CFAW	SEAL	RB-1	-	CMU/HM	PT-1/PT-2	CMU	PT-1	CMU	PT-1	CMU	PT-1	ACT-1	-	HM FRAMES - PT-2, CFAW ON EQUIPMENT SIDE OF CURB
120	Staff WR	CT-1	-	CTB-1	DM-1	CMU	EP-1	CMU	EP-1	CMU/HM	EP-1/PT-2	CMU	EP-1	ACT-1	-	WASHROOM ACCESSORIES - FF
121	Staff WR	CT-1	-	CT-1	DM-1	CMU	EP-1	CMU	EP-1	CMU/HM	EP-1/PT-2	CMU	EP-1	ACT-1	-	WASHROOM ACCESSORIES - FF
122	Kindergarten	RSF-1	-	RB-1	-	CMU/CW2	PT-1/FF	CMU	PT-1	CMU	PT-1	CMU	PT-1	ACT-1	-	MILLWORK - MEL-1, COUNTERTOP - PL-1, LOW WALL CAP - STN-1
122B	Cubbies	RSF-1	-	RB-1	-	CMU/WD	PT-1/STN-1	CMU/WD	PT-1/STN-1	CMU	PT-1	CMU	PT-1	ACT-1	-	SUPPORT BRACKETS - PT-2, CUBBIES - STN-1, WD CAP-STN-1
123	Existing Corridor	CT-1	-	RB-1	-	EX	EX	CMU	PT-1	-	-	EX	EX	ACT-1	-	REPAIR AND MAKE GOOD FINISHES TO MATCH
124	Existing Vestibule	EX	-	EX	-											
146	Existing Classroom	VCT-1	WAX	RB-1	-	CMU	PT-1	CMU/CW3/ CW5	PT-1/FF	CMU	PT-1	CMU/HM	PT-1/PT-2	ACT-1/GWB	-/PT-3	
147	Vestibule	CT-1	-	RB-1	-	CMU/HM	PT-1/PT-2	CMU	PT-1	CMU/HM	PT-1/PT-2	CMU	PT-1	ACT-1	-	
148	Staff Room	LVT-1	-	RB-1	-	CMU/HM	PT-1/PT-2	CMU	PT-1	CMU/W1	PT-1/FF	CMU	PT-1	ACT-1/GWB	-/PT-3	MILLWORK - MEL-1, COUNTERTOP - PL-1
149	Classroom	VCT-1	WAX	RB-1	-	CMU/HM	PT-1/PT-2	CMU	PT-1	CMU/CW2	PT-1/FF	CMU	PT-1	ACT-1/GWB	-/PT-3	MILLWORK - MEL-1, COUNTERTOP - PL-1
150	Classroom	VCT-1	WAX	RB-1	-	CMU/HM	PT-1/PT-2	CMU	PT-1	CMU/CW2	PT-1/FF	CMU	PT-1	ACT-1/GWB	-/PT-3	MILLWORK - MEL-1, COUNTERTOP - PL-1
151	Vestibule	CT-1	-	RB-1	-	CMU	PT-1	CMU/CW1	PT-1/FF	CMU	PT-1	CMU/HM	PT-1/PT-2	GWB	PT-3	
152	Classroom	VCT-1	WAX	RB-1	-	CMU/CW2	PT-1/FF	CMU	PT-1	CMU/HM	PT-1/PT-2	CMU	PT-1	ACT-1/GWB	-/PT-3	MILLWORK - MEL-1, COUNTERTOP - PL-1
153	Classroom	VCT-1	WAX	RB-1	-	CMU/CW2	PT-1/FF	CMU	PT-1	CMU/HM	PT-1/PT-2	CMU	PT-1	ACT-1/GWB	-/PT-3	MILLWORK - MEL-1, COUNTERTOP - PL-1
154	Learning Commons	RSF -2	-	RB-1	-	CMU/CW4	PT-1/FF	CMU	PT-1	CMU/HM	PT-1/PT-2	CMU	PT-1	ACT-1/GWB	-/PT-3	
155	Corridor	CT-1	-	CTB-1	DM-1	CMU/HM	PT-1/PT-2	-	-	CMU/HM	PT-1/PT-2	-	-	ACT-1	-	HM FRAMES - PT-2, CT-1 TO MEET FLUSH WITH EXISTING TERRAZZO
156	Corridor															
157	Storage															
158	Academic Work	VCT-1	WAX	RB-1	-	CMU	PT-1	CMU	PT-1	CMU/HM	PT-1/PT-2	CMU	PT-1	ACT-1	-	MILLWORK - MEL-1, COUNTERTOP - PL-1
159	Custodial					CMU	EP-1							ACT-1	-	HM FRAMES - PT-2
160	Meeting															

No.	Revision	Date
4	Issued for Site Plan Approval	March 29, 2022
3	Re-Issued for Building Permit	March 28, 2022
2	Issued for Construction	February 23, 2022
1	Issued for Permit & Tender	September 27, 2021

Orientation

Seal: ONTARIO ASSOCIATION OF ARCHITECTS — GERRY P. PILON LICENCE 5042

All dimensions to be checked and verified on the job by the Contractor. Any discrepancies are to be reported to the Consultant prior to action. Only the latest approved drawings to be used for construction in conformance with all applicable codes, by-laws and regulations. All drawings remain the property of the Consultant.

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salterpilon architecture

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Project Information

St. Joseph C.E.S.- Addition and Alterations

405 Douro 4th Line, Douro, ON

For PVNCCDSB

Drawing Title

Curtainwall / Screen Elevations, Room & Door Schedules

Date	Project No	Drawing No
Feb. 23, 2022	18048	A302
Drawn by JJ, TES, AS		
Scale As indicated		

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2022-03-29 3:25:50 PM

GENERAL NOTES

1. SITE PREPARATION

a. Site erosion and sediment control per WSP drawing ESC1.

2. SEDIMENT CONTROL MEASURES

a. Protect all exposed surfaces and control all runoff during construction.

b. Protect all catch basins, maintenance holes and pipe ends from sediment intrusion with geotextile (Terrafix 270r).

c. Prevent wind-blown dust.

d. Keep all sumps clean during construction.

e. All of the above notes and any sediment and erosion control measures are at a minimum to be in accordance with the Ontario Ministry of Natural Resources guidelines on erosion and sediment control for urban construction sites.

f. The Contractor shall construct temporary measures to control silt from entering the storm drainage system to the specifications outlined in the guidelines on erosion and sediment control for urban construction sites prepared by the Ontario Ministry of Natural Resources. These measures are to be installed prior to commencing any construction for this project, and are to remain in place until construction has been completed to the satisfaction of the City engineer.

g. All work shall meet at a minimum, standards and specifications of the City of Peterborough.

h. The Contractor is responsible for cleanup of mudtracking on a daily basis or on a more frequent basis if directed by the City or the Engineer. Any tracking of deleterious materials along any roads/driveways and or other properties aside from the site shall be mitigated immediately.

3. GENERAL

a. All services shall be installed and tested to the current Ontario Building Code, City of Peterborough Standards (City Std.), Peterborough Utilities Commission Standards (PUC Std.), Ontario Provincial Standard Drawings (OPSD), and Ontario Provincial Standard Standard Specifications (OPSS), unless otherwise specified and to the satisfaction of the City of Peterborough, the Peterborough Utilities Services Incorporated (PUSI), the Engineer, and the Geotechnical Engineer.

b. The position of existing pole lines, conduits, watermains, sewers and other underground and aboveground utilities, structures and appurtenances is not necessarily shown on the contract drawing, and where shown, the accuracy of the position of such utilities and structures is not guaranteed. Prior to construction, the Contractor shall satisfy himself of the exact location of all such utilities and structures, shall adequately support them, and shall assume all liability for damage to them during the course of construction. Any relocation of existing utilities required by the development of subject lands is to be undertaken at the Contractor's expense.

c. The Contractor must notify all existing utility company officials five (5) business days prior to start of construction and have all existing utilities and services located in the field or exposed prior to the start of construction, including but not limited to Hydro, Bell, Cable TV and Gas lines.

d. All trenching to be in accordance with the latest revisions of the Occupational Health and Safety Act and Regulations for Construction Projects. Refer to geotechnical report for excavation recommendations.

e. All trenches shall be backfilled in accordance with the site geotechnical report dated March 15, 2021, reference number: 11223722, by GHD

f. All disturbed areas outside of the proposed grading limits to be restored to original elevations and conditions unless otherwise specified. All restoration shall be completed with the geotechnical requirements for backfill, compaction and approved engineering drawings. Sodded areas to be restored with No.1 Nursery sod and 150mm of topsoil.

g. The Contractor shall limit construction activity only to within the limits of construction shown.

h. All dimensions and elevations in metres, pipe sizes in millimetres.

i. Contractor shall satisfy himself of all geotechnical information and recommendations. Borehole logs and geotechnical information from Geotechnical report prepared by GHD, reference 11223722. Groundwater table is shallow. If necessary, a wellpoint dewatering system may be required during the construction of underground services. Soils are susceptible to frost damage. Contractor to provide adequate temporary frost protection for exposed soils as required. Frost damaged soils to be removed, replaced and recompacted to satisfaction of Geotechnical Engineer.

j. Construction vehicles entering/exiting the site shall be routed along the County Road 8.

k. Use of sewer stone (HL8 course aggregate) and clear stone are not permitted on this site, except where specifically noted on drawing.

l. The topsoil and the organic soil will generate volatile gases under anaerobic conditions and are unsuitable for engineering application. For the environmental as well as the geotechnical wellbeing of the future development, they shall not be buried within the building envelope or deeper than one metre below the exterior finished grade to the satisfaction of the Geotechnical Engineer.

m. Each and every footing base must be field reviewed and accepted in writing by the Geotechnical Engineer prior to placing concrete. This field review is required under Section 4.2.2.3 of the Ontario Building Code.

n. Alternative materials may be acceptable, provided approval has first been obtained from the City/City Engineer, the Commissioner of the PUC, and/or Geotechnical Engineer

o. No blasting is permitted.

p. Contractor to expose and verify location, elevation, and size of existing pipes. Contractor to verify location, elevation, and size of all proposed building services to be constructed by others. If there are any discrepancies contractor is to notify the Engineer 48 hours prior to construction.

q. Maintain traffic on municipal and regional roads at all times. All existing services are to remain in service at all times during construction (unless otherwise noted).

r. At least 48 hours prior to commencing construction for services within a municipal right-of-way and/or municipal easements the contractor is to obtain a permit of approved work from the City.

s. Contractor shall coordinate with the landscape contractor for planting bed locations and corresponding subgrade elevations.

4. WATERMAINS

a. All watermain and watermain appurtenance construction, installation and testing shall conform to the current PUSI standards and specifications, Ministry of Environment (MOE) guidelines, NFPA 24 and as noted below.

b. All watermain 100 to 300 mm diameter (inclusive) to be Polyvinyl Chloride (PVC) Class 150 DR18 meeting AWWA specification C-900 and CSA-B137.2,3.

c. Fittings to be Cast or Ductile Iron in conformance with AWWA/C110. or PVC in conformance with CSA B137.3.

d. Where watermains cross over other utilities, a minimum 0.30m clearance shall be maintained; where watermains cross under other utilities, a minimum 0.50 m clearance shall be maintained, while still maintaining a minimum depth of cover at all times. Where vertical separation cannot be maintained, the sewer shall be constructed of material and with joints that are equivalent to watermain standards of construction and shall be pressure tested to ensure water tightness.

e. Watermains shall be installed with a minimum cover of 1.8m from final grade to obvert of pipe. If minimum cover cannot be provided, insulate per PUSI standard A2371.

f. Lateral separation of watermains to storm or sanitary sewers to be 2.5 m (clear).

g. Watermain bedding and cover shall conform to OPSD 802.010 Class B. Bedding and cover material to be compacted (95% SPMDD) Granular 'A' (OPSS 514). At crossings, Contractor to adequately support pipe with granular bedding or concrete as required.

h. Watermain joints shall be restrained by concrete thust blocks and mechanical restraints. Concrete thrust blocks to be provided at all bends, tees, hydrants, plugs, etc. Thrust block installation and area per PUSI Std. 6.1.5.22, A1719 and A2200 (minimum area to be per Std. 6.1.5.22 or 1.35 times A1719/A2200). Mechanical restraints per UNI-B-13-92 where bedding consists of disturbed native material or in areas of fill/engineered fill, at all tees, bends, hydrants, ends of mains and connections 100 mm and larger, by using EBAA Iron, Uni-Flange Pipe Products Inc., or approved equal per PUC Std. 6.1.3.10. Restraint lengths as noted on chart on this drawing.

i. Pipe joint deflection should be used wherever possible to minimize the use of bends. Wherever it is necessary to deflect from a straight line, either in the vertical or horizontal plane, the amount of deflection shall be a maximum 70% of the manufacturer's recommendations. Deflection in the barrel is not permitted.

j. Contractor to measure and provide non-typical angle bends as required.

k. Contractor to use maximum 45° bends where watermain crosses under sewers.

l. All hydrants to be installed per PUSI Std. A1633. Accepted fire hydrant to have FM & UCL approvals and conform to AWWA C502. Hydrant size and configuration to conform to PUSI Std. 6.1.3.8. (Century Hydrant, hose nozzles at 90°) Fire hydrant caps colour coded to indicate water flow and water system per NFPA. Hydrant to be oriented so storz nozzle faces adjacent road/fire route and is unobstructed. Granular "A" (OPSS 1010) to be used in place of 20 mm crushed stone. Hydrant to open left.

m. Hydrants to be flow tested and results submitted to the Fire Chief prior to occupancy.

n. Hydrant flange elevations shall be set at a grade that will give a flange elevation of 75 mm to 225 mm above the final grade. Specified flange grades are a guide only. Install per PUSI std. A1633.

o. Hydrants shall be located a minimum of 1.2 metres measured from the edge of hydrant to the edge of driveways, roadways, utilities, light poles, curbs, sidewalks, or other above-ground obstacles.

p. Hydrants shall be installed such that the rod stem length shall not exceed 1.7m measured from the break-off flange. If the barrel length exceeds 1.7m then a hydrant that can be raised from the bottom without increasing rod length is to be used.

q. 100 mm to 300 mm diameter valves shall be resilient seat gate valves manufactured to AWWA C-509-94 installed in round cast iron valve box with inside screw non-rising spindle (open right), complete with mechanical joint ends.

r. All direct buried valves and fittings to have Anodes, in accordance with ASTM 418.1, to be installed on alternating bolts. Refer to PUSI Std. 6.4.3 for approved materials. Refer to PUSI Std. 6.4.5 for installation details.

s. All weld connections to be coated with "TC Mastic" or approved equivalent.

t. For trench backfill refer to storm sewer notes (5 g,h,i)

u. Valve chamber cover to be stamped "WATER" and "DANGER".

v. Tracer wire is to be installed on all new installations of PVC watermain pipe for locating purposes. Tracer wire consisting of #14 AWG solid copper TWU with plastic coat must be installed along the pipe, strapped to the pipe at 3 m intervals. The wire shall be brought to the surface at all hydrants and valve boxes per PUSI Std. 6.1.5.14. A continuous wire shall be used between surface points.

w. The inspector may test the tracing wire for continuity. If the tracer wire is not continuous from valve to valve, the contractor shall, at his own expense, replace or repair the wire.

x. All water customers supplied by a watermain to be shut down shall be notified by the contractor at least 24 hours in advance of the shut down or as required by the PUSI. Notifications shall take place under the Engineer's direction.

y. All watermain shall be tested in accordance with the Ontario Building Code (OBC), including 7.3.7., and to the satisfaction of the PUSI.

z. Discharge chlorinated water to sanitary sewer system per specifications and to the satisfaction of the City/PUS. Prior to discharge, contact City for discharge requirements and permit:
Kent Keeling
Chief Environmental Officer
Environmental Protecton Division
(705) 742-7777 x2629
cell: (705) 740-3697

5. PAVEMENT AND SURFACE WORKS

a. Native subgrade shall have a crossfall of 2% and the material shall be approved by the Geotechnical Engineer.

b. Exposed subgrade approved by the Geotechnical Engineer shall be compacted to 95% MPMDD. The granular base and sub-base should be compacted to 98% and 95% of their MPMDD respectively. Unsuitable areas may require sub-excavation and re-compaction or increased thickness of granular sub-base, as directed by the Geotechnical Engineer.

c. The suitability and compaction of all existing and fill materials shall be confirmed by a Geotechnical Engineer prior to placement of pavement base course material.

d. Install subdrains at locations indicated on servicing drawing per detail on this drawing. Locations include (but are not limited to) catchbasins. Minimum length of subdrain section is 5m unless otherwise noted.

e. Fabric filter encased subdrains (see detail on this drawing) to meet the City requirements.

f. Pavement structure:

For Heavy Duty use within Property

40 mm	HL3 (OPSS 1150)
50 mm	HL8 (OPSS 1150)
150 mm	Granular 'A' (OPSS 1010)
450 mm	Granular 'B' (OPSS 1010)
690 mm	

For Light Duty use within Property

40 mm	HL3 (OPSS 1150)
50 mm	HL8 (OPSS 1150)
150 mm	Granular 'A' (OPSS 1010)
300 mm	Granular 'B' (OPSS 1010)
540 mm	

Based on the Geotechnical Investigation Report prepared for Peterborough Victoria, Northumberland and Clarington Catholic School Board c/o Salter Pilon Architecture Inc. by GHD Prepared on March 15 ,2021, reference number: 11223722.

g. All disturbed pavement on adjacent roads shall be restored to existing depths and types of materials or better upon completion of pavement works.

h. Concrete sidewalk shall be min. 1.50m wide (or as noted on site plan) as per OPSD 310.010, OPSD 310.020 and CP351.02. Thickness of concrete shall be 125mm with compacted 150mm of Granular 'A' base course. At driveways, provide 200mm of concrete with compacted 300mm of Granular 'A' base course. Concrete to be C2 Exposure, 32Mpa.

i. Concrete sidewalk shall be depressed and ramped at all intersections as per revised OPSD 310.030

j. Depressed curb shall be used at all walkways, sidewalk crossings and accessible parking stalls in accordance with revised OPSD 310.030.

k. Concrete curb within the Site shall be Concrete Barrier Curb as per OPSD 600.110, unless underwise specified

l. Driveways and curb at entrances through municipal boulevards to conform to OPSD 350.010, unless otherwise indicated on the drawings.

Pavement markings to be applied after base asphalt if top asphalt is not scheduled to follow within 24 hours and base asphalt pavement surfaces are to be used by the public. After top asphalt, pavement markings to be applied with double coat.

6. COMPACTION REQUIREMENTS

a. Engineered fill to be compacted to not less than 95% MPMDD under the full time supervision of the Geotechnical Engineer.

b. Prior to constructing the pavements, all service trenches must be compacted to at least 95% Modified Proctor Maximum Dry Density (MPMDD) also refer to storm sewer notes 5g. Backfill under sidewalks and buildings to be compacted to 95% MPMDD.

c. The subgrade should be properly shaped and crowned. Proof-rolling using static smooth drum roller to identify incompetent/unstable subgrade areas and should be sub-excavated and properly replaced with suitable approved backfill compacted to 95% MPMDD as directed by the Geotechnical Engineer.

d. The granular base material shall be compacted to 98% MPMDD. Sub-base material shall be compacted to 95% MPMDD.

e. The asphalt concrete must be compacted per OPSS 310.

7. REINSTATEMENT

a. All surface features not designated as to be removed including but not limited to curbs, landscaping, pavement, pavement marking and sidewalks but are disturbed, damaged or removed during the contractor's activities shall be reinstated to its original conditions at no extra cost.

b. All existing features that are to remain, i.e. manhole lids, catchbasins, valve chamber lids, valve boxes, etc. shall be adjusted to suit the finished elevations as required.

8. PERMITS AND APPROVALS

The following approvals are required prior to commencing construction.
Owner has applied for the following permits/approvals:
Site Plan Approval (or Clearance Letter from City)
ORCA Fill Permit (if applicable)
Building Permit
MOE Permit to take water
Contractor shall be responsible for securing all other necessary permits.

The Contractor shall not commence work in any area requiring a permit until the Contractor possesses a copy of a permit, together with any and all conditions, drawings and sketches attached to the permit.

The Contractor shall keep a copy of all permits and attachments on site at all times and shall produce them on demand by the Municipality, Consultant, Owner or approving authority.

9. BENCHMARK

ELEVATIONS ARE GEODETIC AND REFERRED TO COSINE BENCHMARK 00820040002 AND HAVING A GEODETIC ELEVATION OF 231.110 METRES.

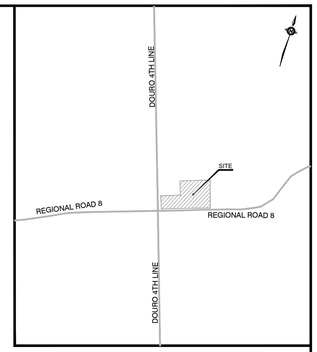
LIST OF DRAWINGS

FOR CIVIL SITE PREPARATION, GRADING AND SERVICING REFER TO THE FOLLOWING. THESE DRAWINGS ARE TO BE USED IN CONJUCTION WITH EACH OTHER AND THE CONTRACT SPECIFICATIONS.

NT1	NOTES AND DETAILS
SS1	SITE SERVICING PLAN
SG1	SITE GRADING PLAN
ESC1	EROSION AND SEDIMENT CONTROL PLAN

WATERMAIN RESTRAINT LENGTHS (CONTINUATION OF SECTION H OF WATERMAIN NOTES ON THIS DRAWING):
All bends, reducers, tees, plugs and valves to be restrained to minimum pipe lengths (on all sides of the fitting unless otherwise noted) in accordance to the chart below. Note that when any fitting is within the influence of another fitting, the total restraint lengths should be accumulative and add the overlapping restraint lengths each way

Fitting	45° Vertical Bend		Horizontal Bends				
	Up Thrust	Down Thrust	45° or Less	90°	Reducer	Tee	Plug and Valves
300ø Pipe	5m	2m		6m	20m on 150ø	2m	13.5m
150ø, 100ø Pipe	5m	2m	1.5m	3m	5.5m on 100ø	2m	6.5m



KEY PLAN NTS

LEGEND

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7	ISSUED FOR SITE PLAN APPLICATION	GW	2022-03-07	AK
6	ISSUED FOR TENDER - ADDENDUM No. 2	GW	2021-11-12	AK
5	DRAFT FOR COORDINATION	GW	2021-11-08	AK
4	ISSUED FOR PERMIT & TENDER	GW	2021-09-27	AK
3	DRAFT FOR COORDINATION	GW	2021-08-25	AK

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CLIENT
SALTER PILON ARCHITECTURE INC.

MUNICIPALITY
TOWNSHIP OF DOURO-DUMMER

PROJECT TITLE
ST. JOSEPH C.E.S ADDITION

SHEET TITLE
NOTES AND DETAILS

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2022-03-08
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DESIGNED	DRAWN	CHECKED
G.W	CAD 10/12	A.K

SCALE	DATE
1:200	NOVEMBER 2020

DWG. NUMBER	SHEET NUMBER
20M-01337	NT1

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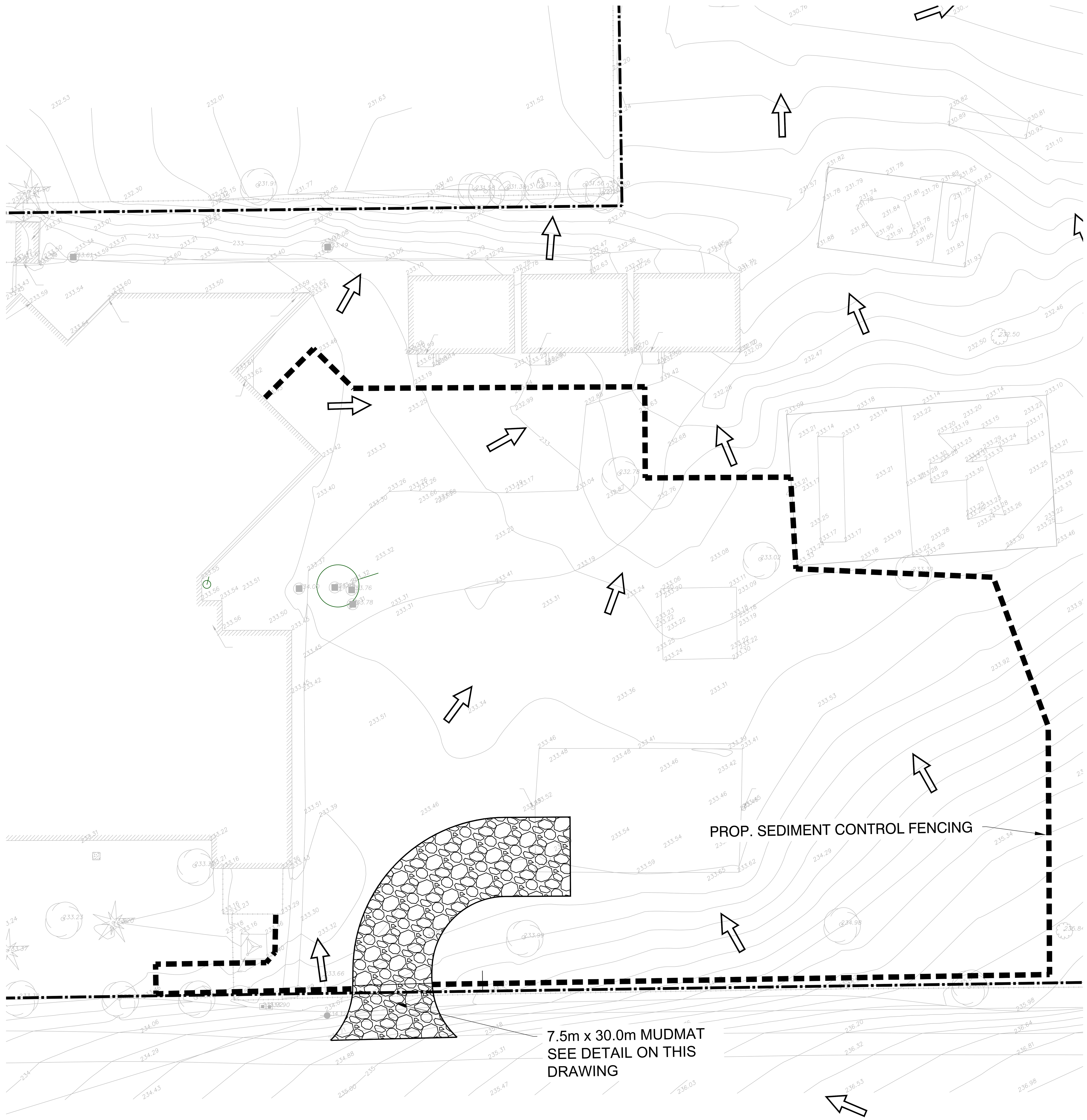
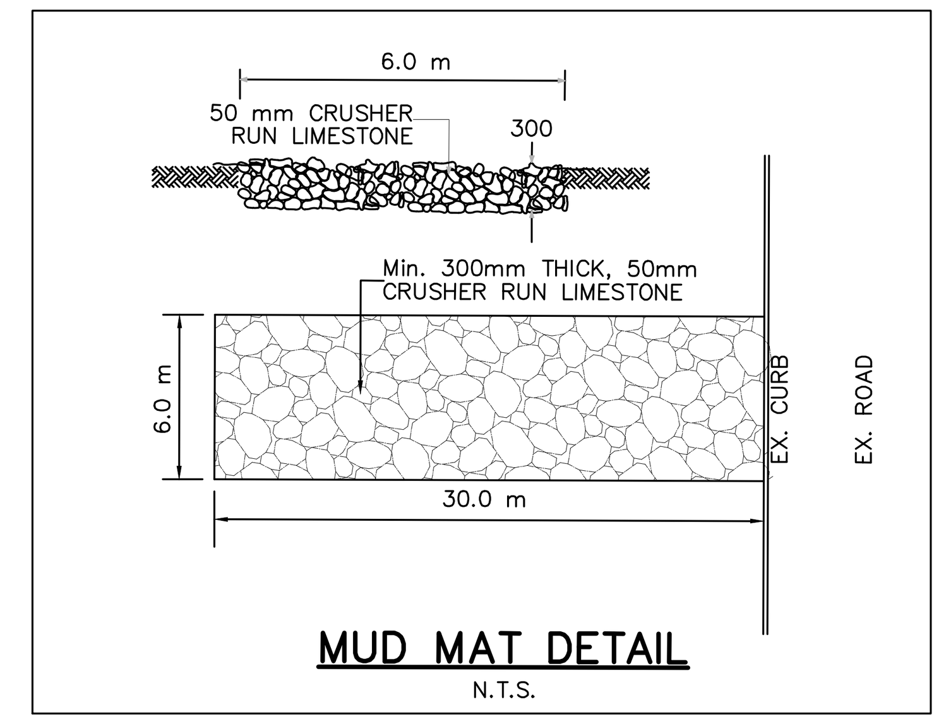
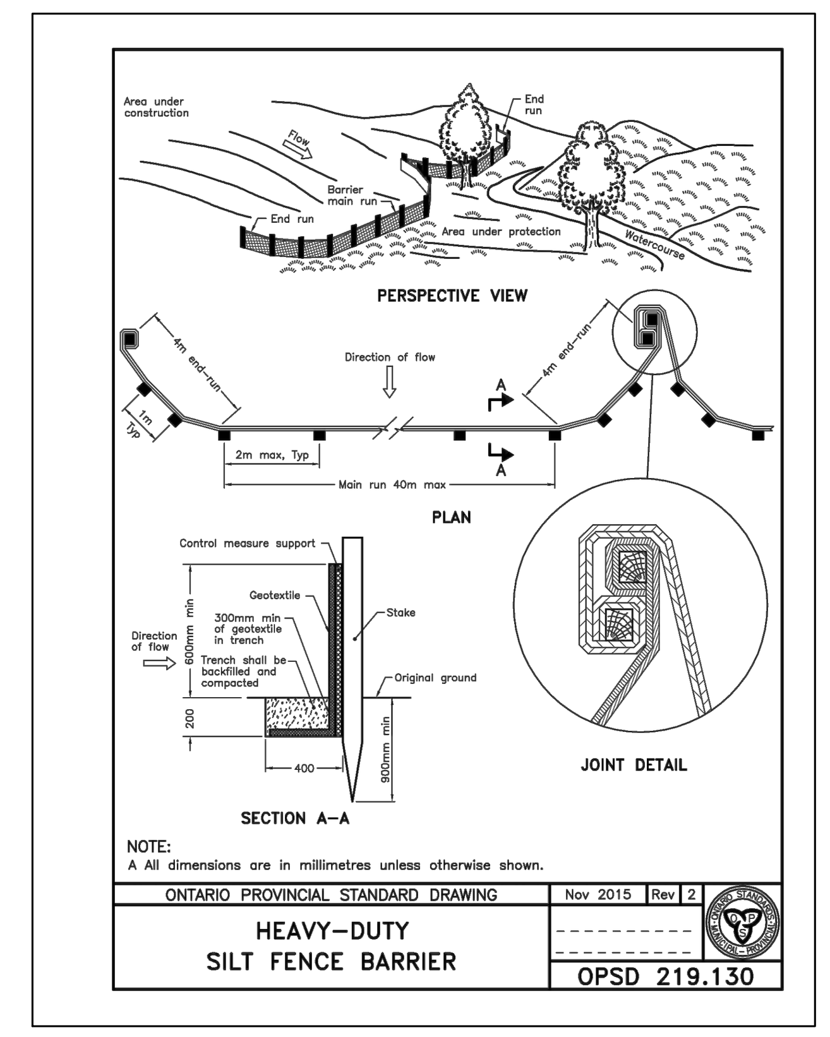
PLOTDATE Mar 07, 2022 - 1:29pm CAGW0715\GS





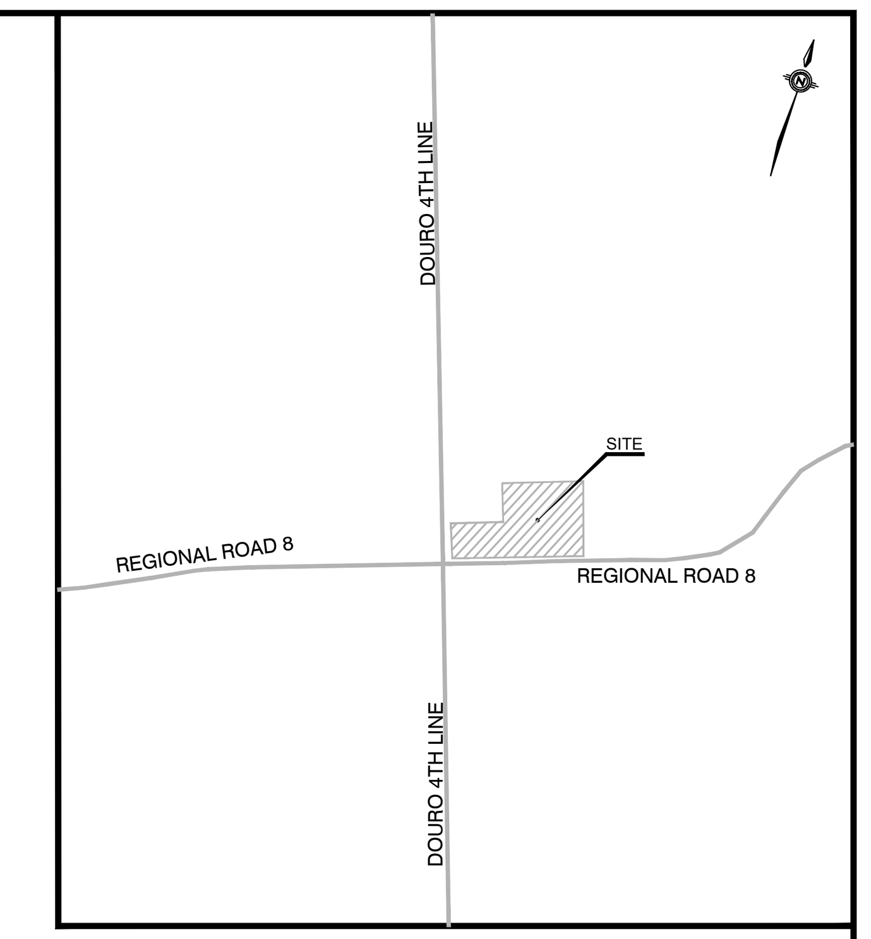
MUD MAT DETAIL

N.T.S.



ADDITIONAL EROSION AND SEDIMENT CONTROL NOTES

1. SILT FENCE TO BE ERECTED AROUND PERIMETER OF SITE AS PER OPSD 219-130.
2. ALL EXISTING CATCHBASINS ON SITE AND ADJACENT MUNICIPAL CATCHBASINS ARE TO HAVE SEDIMENT CONTROL DEVICE INSTALLED AS PER THE DETAIL ON THIS DRAWING.
3. ALL CONSTRUCTION VEHICLES TO ENTER AND LEAVE THE SITE AT APPROVED LOCATIONS ONLY AND MUST PASS OVER RIP-RAP VIBRATION PAD. CONSTRUCTION VEHICLES TO MINIMIZE MUD-TRACKING AND DUST WHEN ENTERING OR LEAVING THE SITE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SEDIMENTATION AND EROSION CONTROL DEVICES AND STRUCTURES IN GOOD WORKING ORDER AT ALL TIMES. CONTRACTOR SHALL INSPECT SUCH DEVICES REGULARLY AND AFTER EACH RAINFALL EVENT.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL SEDIMENTATION AND EROSION CONTROL DEVICES AND STRUCTURES ONCE SODDING IS IN PLACE.
6. THE SITE WILL BE WET DOWN IF NECESSARY Y TO CONTROL DUST. DUST CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE KEPT UNDER CONTROL ON ALL ROADWAYS TO THE SATISFACTION OF THE CITY.
7. IN THE CASE OF ANY CONFLICT WITH ANOTHER PLAN, THIS PLAN PREVAILS ONLY IN RESPECT TO CONSTRUCTION MEASURES AND ACTIVATES SUCH AS THE CONSTRUCTION ACCESS, SILT FENCE, SECURITY FENCE, SEDIMENT CONTROL AND MUD MATS.



KEY PLAN NTS

LEGEND

- LIMIT OF PROPERTY
- SILTATION CONTROL FENCE
- MUD MAT (CONSTRUCTION ACCESS)
- OVERLAND FLOW ROUTE

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ST. JOSEPH C.E.S ADDITION

SHEET TITLE
EROSION AND SEDIMENT CONTROL PLAN

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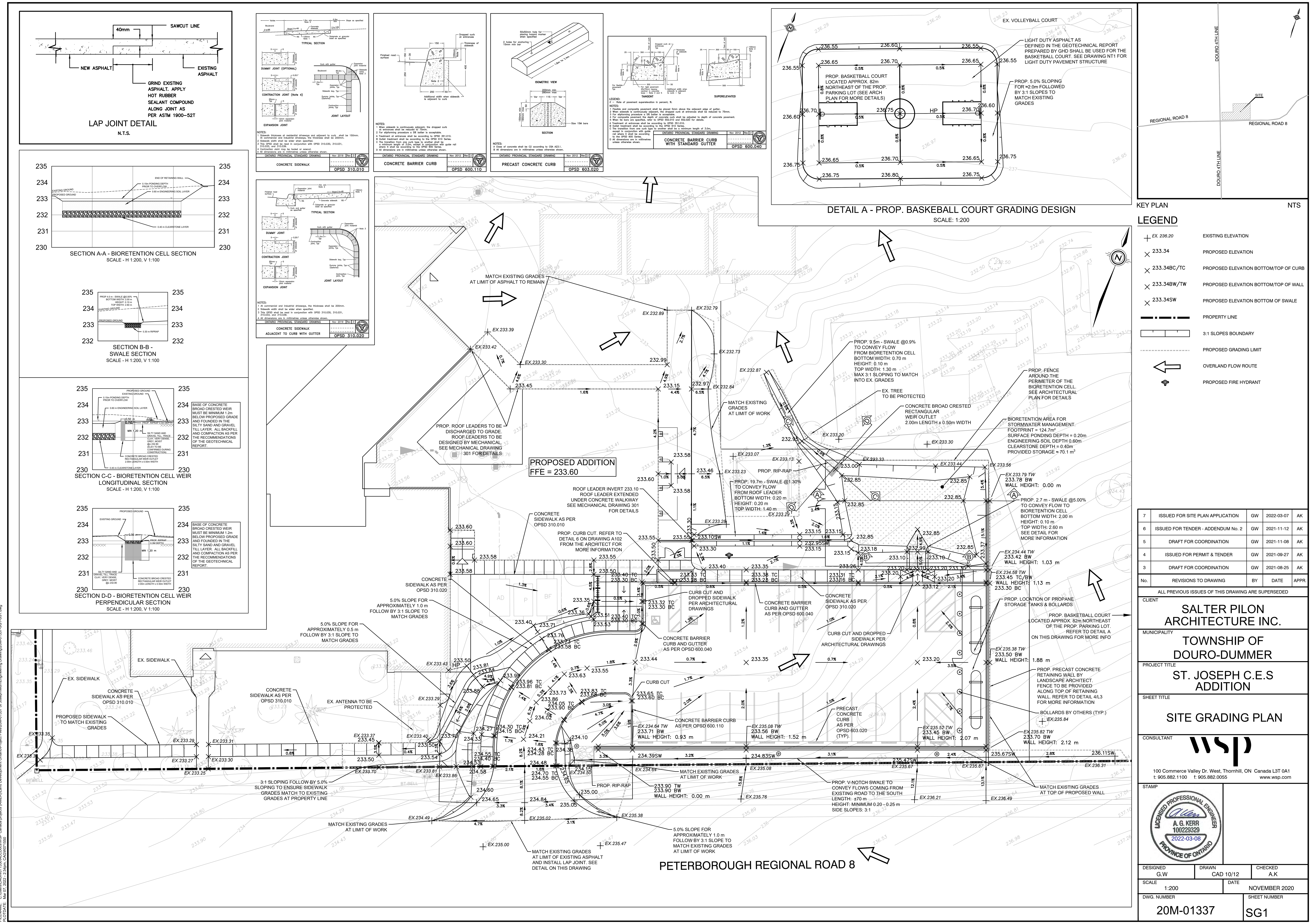

LAP JOINT DETAIL
N.T.S.
SAWCUT LINE
40mm
NEW ASPHALT
EXISTING ASPHALT
GRIND EXISTING ASPHALT. APPLY HOT RUBBER SEALANT COMPOUND ALONG JOINT AS PER ASTM 1900-52T
CONCRETE SIDEWALK
OPSD 310.010
CONCRETE BARRIER CURB
OPSD 600.110
PRECAST CONCRETE CURB
OPSD 603.020
CONCRETE BARRIER CURB WITH STANDARD GUTTER
OPSD 600.040
CONCRETE SIDEWALK ADJACENT TO CURB WITH GUTTER
OPSD 310.020
SECTION A-A - BIORETENTION CELL SECTION
SCALE - H 1:200, V 1:100
SECTION B-B - SWALE SECTION
SCALE - H 1:200, V 1:100
SECTION C-C - BIORETENTION CELL WEIR LONGITUDINAL SECTION
SCALE - H 1:200, V 1:100
SECTION D-D - BIORETENTION CELL WEIR PERPENDICULAR SECTION
SCALE - H 1:200, V 1:100
DETAIL A - PROP. BASKETBALL COURT GRADING DESIGN
SCALE: 1:200
EX. VOLLEYBALL COURT
LIGHT DUTY ASPHALT AS DEFINED IN THE GEOTECHNICAL REPORT PREPARED BY GHD SHALL BE USED FOR THE BASKETBALL COURT. SEE DRAWING NT1 FOR LIGHT DUTY PAVEMENT STRUCTURE
PROP. BASKETBALL COURT LOCATED APPROX. 82m NORTHEAST OF THE PROP. PARKING LOT (SEE ARCH PLAN FOR MORE DETAILS)
PROP. 5.0% SLOPING FOR ≈2.0m FOLLOWED BY 3:1 SLOPES TO MATCH EXISTING GRADES
KEY PLAN
NTS
DOURO 4TH LINE
REGIONAL ROAD 8
SITE
LEGEND
EX. 236.20 EXISTING ELEVATION
233.34 PROPOSED ELEVATION
233.34BC/TC PROPOSED ELEVATION BOTTOM/TOP OF CURB
233.34BW/TW PROPOSED ELEVATION BOTTOM/TOP OF WALL
233.34SW PROPOSED ELEVATION BOTTOM OF SWALE
PROPERTY LINE
3:1 SLOPES BOUNDARY
PROPOSED GRADING LIMIT
OVERLAND FLOW ROUTE
PROPOSED FIRE HYDRANT
PROPOSED ADDITION
FFE = 233.60
MATCH EXISTING GRADES AT LIMIT OF ASPHALT TO REMAIN
PROP. ROOF LEADERS TO BE DISCHARGED TO GRADE. ROOF LEADERS TO BE DESIGNED BY MECHANICAL. SEE MECHANICAL DRAWING 301 FOR DETAILS
PROP. 9.5m - SWALE @0.9% TO CONVEY FLOW FROM BIORETENTION CELL BOTTOM WIDTH: 0.70 m HEIGHT: 0.10 m TOP WIDTH: 1.30 m MAX 3:1 SLOPING TO MATCH INTO EX. GRADES
EX. TREE TO BE PROTECTED
CONCRETE BROAD CRESTED RECTANGULAR WEIR OUTLET 2.00m LENGTH x 0.50m WIDTH
PROP. FENCE AROUND THE PERIMETER OF THE BIORETENTION CELL. SEE ARCHITECTURAL PLAN FOR DETAILS
BIORETENTION AREA FOR STORMWATER MANAGEMENT. FOOTPRINT = 124.7m² SURFACE PONDING DEPTH = 0.20m ENGINEERING SOIL DEPTH 0.60m CLEARSTONE DEPTH = 0.40m PROVIDED STORAGE = 70.1 m³
MATCH EXISTING GRADES AT LIMIT OF WORK
PROP. RIP-RAP
PROP. 19.7m - SWALE @1.30% TO CONVEY FLOW FROM ROOF LEADER BOTTOM WIDTH: 0.20 m HEIGHT: 0.20 m TOP WIDTH: 1.40 m
PROP. 2.7 m - SWALE @5.00% TO CONVEY FLOW TO BIORETENTION CELL BOTTOM WIDTH: 2.00 m HEIGHT: 0.10 m TOP WIDTH: 2.60 m SEE DETAIL FOR MORE INFORMATION
ROOF LEADER INVERT 233.10 ROOF LEADER EXTENDED UNDER CONCRETE WALKWAY SEE MECHANICAL DRAWING 301 FOR DETAILS
CONCRETE SIDEWALK AS PER OPSD 310.010
PROP. CURB CUT. REFER TO DETAIL 6 ON DRAWING A102 FROM THE ARCHITECT FOR MORE INFORMATION
CONCRETE SIDEWALK AS PER OPSD 310.020
5.0% SLOPE FOR APPROXIMATELY 1.0 m FOLLOW BY 3:1 SLOPE TO MATCH GRADES
5.0% SLOPE FOR APPROXIMATELY 0.5 m FOLLOW BY 3:1 SLOPE TO MATCH GRADES
CURB CUT AND DROPPED SIDEWALK PER ARCHITECTURAL DRAWINGS
CONCRETE BARRIER CURB AND GUTTER AS PER OPSD 600.040
CONCRETE BARRIER CURB AND GUTTER AS PER OPSD 600.040
PROP. LOCATION OF PROPANE STORAGE TANKS & BOLLARDS
PROP. BASKETBALL COURT LOCATED APPROX. 82m NORTHEAST OF THE PROP. PARKING LOT. REFER TO DETAIL A ON THIS DRAWING FOR MORE INFO
PROP. PRECAST CONCRETE RETAINING WALL BY LANDSCAPE ARCHITECT. FENCE TO BE PROVIDED ALONG TOP OF RETAINING WALL. REFER TO DETAIL 4/L3 FOR MORE INFORMATION
BOLLARDS BY OTHERS (TYP.)
EX. SIDEWALK
CONCRETE SIDEWALK AS PER OPSD 310.010
EX. ANTENNA TO BE PROTECTED
PROPOSED SIDEWALK TO MATCH EXISTING GRADES
CURB CUT
CONCRETE BARRIER CURB AS PER OPSD 600.110
PRECAST CONCRETE CURB AS PER OPSD 603.020 (TYP).
3:1 SLOPING FOLLOW BY 5.0% SLOPING TO ENSURE SIDEWALK GRADES MATCH TO EXISTING GRADES AT PROPERTY LINE
MATCH EXISTING GRADES AT LIMIT OF WORK
PROP. RIP-RAP
PROP. V-NOTCH SWALE TO CONVEY FLOWS COMING FROM EXISTING ROAD TO THE SOUTH LENGTH: ±70 m HEIGHT: MINIMUM 0.20 - 0.25 m SIDE SLOPES: 3:1
MATCH EXISTING GRADES AT TOP OF PROPOSED WALL
5.0% SLOPE FOR APPROXIMATELY 1.0 m FOLLOW BY 3:1 SLOPE TO MATCH EXISTING GRADES AT LIMIT OF WORK
MATCH EXISTING GRADES AT LIMIT OF EXISTING ASPHALT AND INSTALL LAP JOINT. SEE DETAIL ON THIS DRAWING
PETERBOROUGH REGIONAL ROAD 8
7 ISSUED FOR SITE PLAN APPLICATION GW 2022-03-07 AK
6 ISSUED FOR TENDER - ADDENDUM No. 2 GW 2021-11-12 AK
5 DRAFT FOR COORDINATION GW 2021-11-08 AK
4 ISSUED FOR PERMIT & TENDER GW 2021-09-27 AK
3 DRAFT FOR COORDINATION GW 2021-08-25 AK
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SHEET NUMBER SG1

PROP. ROOF LEADERS TO BE DISCHARGED TO GRADE. ROOF LEADERS TO BE DESIGNED BY MECHANICAL. SEE MECHANICAL DRAWING 301 FOR DETAILS

DOMESTIC WATER FOR BUILDING ADDITION TO BE PROVIDED FROM EXISTING BUILDING DOMESTIC WATER SUPPLY BY MECHANICAL

ROOFTOP TO BE EQUIPPED WITH FLOW CONTROL ROOF DRAINS

EXISTING 150mm SANITARY SEWER INV. ±232.78 AT FACE OF EXISTING BUILDING

EXISTING 150mm SANITARY GRAVITY SEWER UNDER PROPOSED BUILDING FOOTPRINT TO BE REMOVED. NEW SANITARY SYSTEM TO BE PROPOSED. SEE MECHANICAL DRAWING 301 FOR MORE INFORMATION

ROOF LEADER TO BE DISCHARGED TO PROPOSED SWALE RODENT GRATE TO BE PROVIDED AT THE OUTLET INV. 233.10

ROOF LEADER TO BE EXTENDED UNDER CONCRETE SIDEWALK SEE MECHANICAL DRAWING 301 FOR DETAILS

INSULATION TO BE PROVIDED FOR ROOF LEADER UNDER SIDEWALK

MECHANICAL TO CONNECT TO EXISTING 150mm SANITARY GRAVITY SEWER. SEE MECHANICAL DRAWING 301 FOR DETAILS.

EXISTING SEPTIC TANKS

PROPOSED BELOW GRADE FIRE PROTECTION STORAGE TANKS. MODEL: 68200 FIRE SUPPRESSION TANK BY NEWMARKET PRECAST

BIORETENTION AREA FOR STORMWATER MANAGEMENT. SEE SITE GRADING PLAN FOR DETAILS

150mm PVC DR-18 WATERMAIN

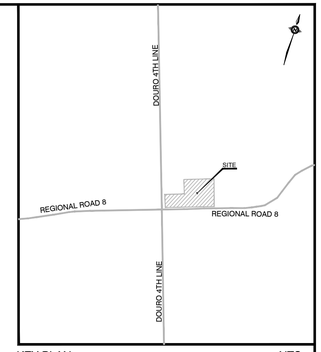
EX. 50mm HDPE SANITARY FORCEMAIN

PROPOSED KOCHEK DH611 DRY HYDRANT CONNECTED TO FIRE PROTECTION STORAGE TANKS

EXISTING SEPTIC BED

EXISTING 50mm HDPE SANITARY FORCEMAIN UNDER RETAINING WALL. ELEVATION OF EXISTING LINE TO BE CONFIRMED. RETAINING WALL SUPPLIER TO PROVIDE FOR THE EXISTING SANITARY FORCEMAIN IN THEIR WALL DESIGN.

PETERBOROUGH REGIONAL ROAD 8



KEY PLAN NTS

LEGEND

- PROPERTY LINE
- PROPOSED WATERMAIN
- PROPOSED FIRE HYDRANT
- EXISTING SANITARY FORCEMAIN
- PROPOSED ROOF LEADER

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DWG. NUMBER	SHEET NUMBER
20M-01337	SS1

FILENAME: C:\Users\CAGW07565\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\20M-01337 St Joseph\Mech\Engineering Drawing\20M-01337-SS1-SS1.dwg
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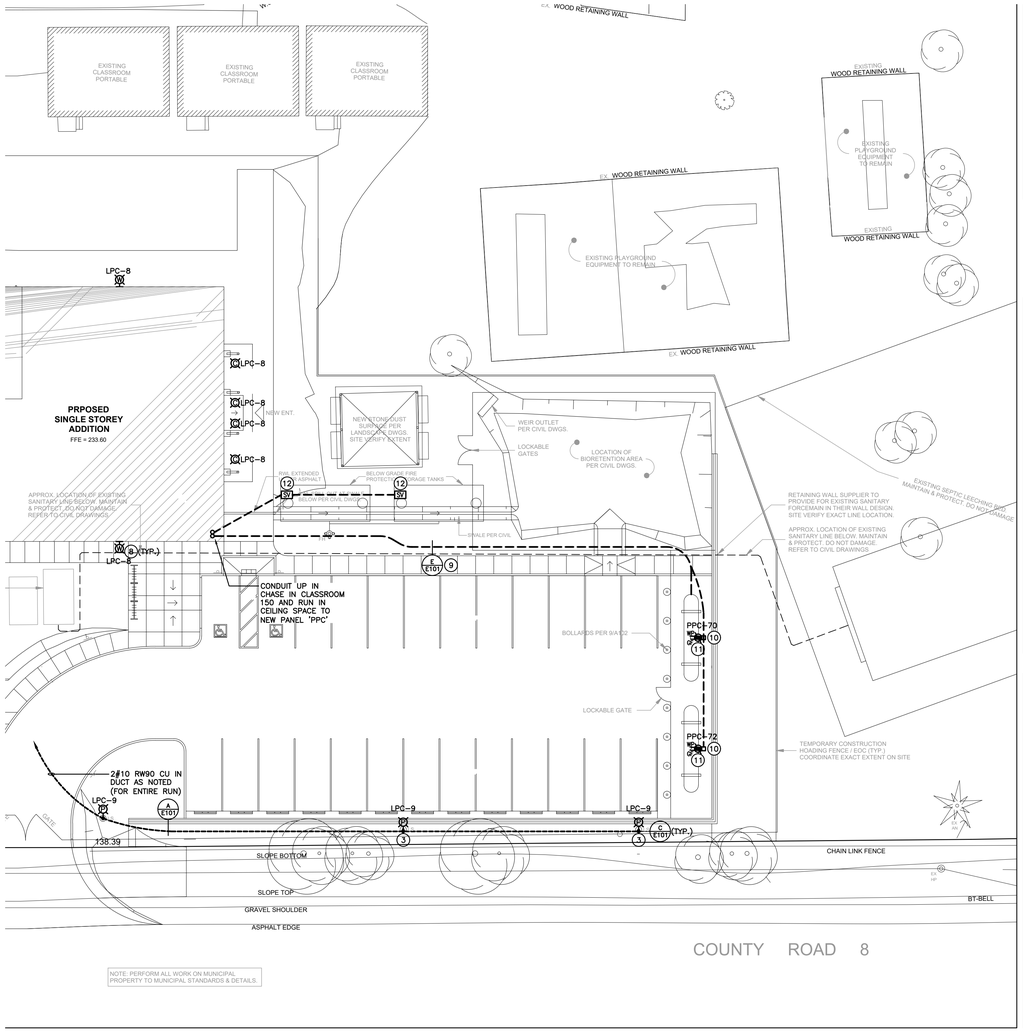


NOTE: PERFORM ALL WORK ON MUNICIPAL PROPERTY TO MUNICIPAL STANDARDS & DETAILS.

6 INDICATES LOCATION OF NEW EXTERIOR UTILITY METER P-BASE ENCLOSURE.

7 INDICATES APPROXIMATE ROUTING OF NEW SECONDARY DUCTBANK FROM UTILITY POLE 3 PHASE RISER TO NEW MAIN SWITCHBOARD. REFER TO DETAIL 'B/E101'.

8 MOUNT WALLPACKS AT APPROX. 3400mm AFG (CONFIRM WITH ARCHITECTURAL ELEVATIONS).

9 THIS CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND GENERAL TRADES FOR TRENCHING RESPONSIBILITY FOR SHARED TRENCH.

10 PROVIDE A 4"X4" POST C/W SONOTUBE BASE. POST IS TO EXTEND 4' A.F.G. TO SUIT RECEPTACLE MOUNTING FOR PROPANE TANK WARMING BLANKETS.

11 PROVIDE T-SLOT GROUND FAULT RECEPTACLE COMPLETE WITH "HEAVY DUTY IN-USE" WEATHER-PROOF COVER. COORDINATE PLACEMENT WITH MECHANICAL TRADE. INDICATED DEVICE IS TO BE MOUNTED ±36" (900mm) ABOVE FINISHED GRADE LEVEL.

12 INDICATES FIRE ALARM SUPERVISORY CONNECTION TO BELOW GRADE FIRE PROTECTION STORAGE TANKS. PROVIDE FIRE ALARM SUPERVISED CABLING IN 21mm PVC CONDUIT TO ACCESSIBLE LOCATION FOR NEW INITIATING CIRCUIT EOL IN ACCESSIBLE LOCATION WITHIN NEW ADDITION. COORDINATE FINAL LOCATION WITH CIVIL CONTRACTOR AND STORAGE TANK PROVIDER.

ELECTRICAL SERVICE-SCOPE OF WORK

HYDRO ONE INC. (UTILITY) WILL PROVIDE THE FOLLOWING WORK. COST WILL BE PART OF THE ALLOWANCE FOR UTILITY WORK AS LISTED IN SPECIFICATIONS

1 REMOVAL OF EXISTING POLE MOUNT TRANSFORMERS.

2 REPLACEMENT OF EXISTING HYDRO POLE AT TRANSFORMER LOCATION.

3 SUPPLY AND INSTALL NEW POLE MOUNTED TRANSFORMERS.

4 CONNECTION OF SECONDARY CABLES AT WEATHERHEAD.

5 SUPPLY AND INSTALLATION OF NEW METERING INSTRUMENTATION AND P-BASE EXTERIOR METERING ENCLOSURE.

6 INSTALLATION OF 3 PHASE RISER DUCTS (SUPPLIED BY ELECTRICAL CONTRACTOR).

THE ELECTRICAL CONTRACTOR FOR THE BUILDING OWNER (CUSTOMER) SHALL BE RESPONSIBLE FOR THE FOLLOWING:

1 INSTALLATION OF NEW EXTERIOR P-BASE METERING ENCLOSURE AND CONDUIT TO SWITCHBOARD UTILITY COMPARTMENT AND METER CABINET.

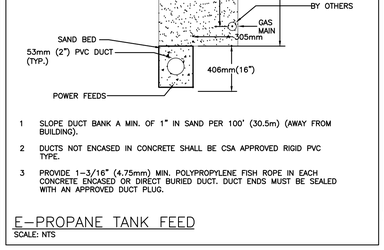
2 SUPPLY AND INSTALLATION OF CONCRETE ENCASED SECONDARY DUCTBANK FROM 3 PHASE RISER AT TRANSFORMER HYDRO POLE TO MAIN SWITCHBOARD.

3 SUPPLY AND INSTALLATION OF SECONDARY CABLES IN DUCT BANK C/W CONNECTION AT MAIN SWITCHBOARD AND SPARE CABLE AT WEATHER HEAD (FINAL CONNECTION AT TRANSFORMER BY UTILITY).

4 SERVICE GROUND AT MAIN SWITCHBOARD PER ELECTRICAL CODE AND AS SHOWN. PROVIDE COORDINATION STUDY PER SPECIFICATIONS.

5 ALL WORK SHALL MEET UTILITY REQUIREMENTS & INSPECTION. ELECTRICAL CONTRACTOR TO CO-ORDINATE WITH UTILITY PRIOR TO PROCEEDING.

6 SUPPLY OF 3 PHASE RISER DUCTS (FOR UTILITY TO INSTALL).



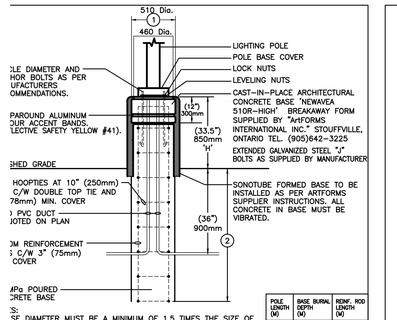
1 SLOPE DUCT BANK A MIN. OF 1" IN SAND PER 100' (30.5m) (AWAY FROM BUILDING).

2 DUCTS NOT ENCASED IN CONCRETE SHALL BE CSA APPROVED RIGID PVC TYPE.

3 PROVIDE 1-3/16" (4.75mm) MIN. POLYPROPYLENE FISH ROPE IN EACH CONCRETE ENCASED OR DIRECT BURIED DUCT. DUCT ENDS MUST BE SEALED WITH AN APPROVED DUCT PLUG.

E-PROPANE TANK FEED

SCALE: NTS



CLE DIAMETER AND HOR BOLTS AS PER UFACTURERS OMMENDATIONS.

PAROUND ALUMINUM OUR ACCENT BANDS. LECTIVE SAFETY YELLOW #41).

SHED GRADE

HOOPTIES AT 10" (250mm) C/W DOUBLE TOP TIE AND 78mm) MIN. COVER

) PVC DUCT JOTED ON PLAN

OM REINFORCEMENT : C/W 3" (75mm) COVER

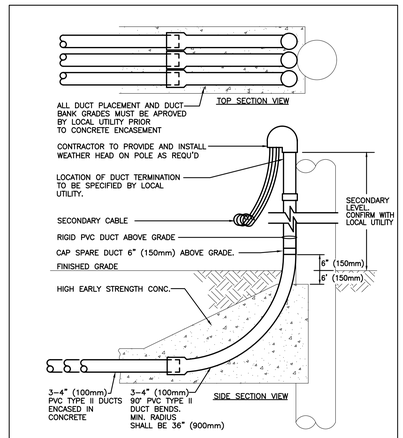
MPa POURED CRETE BASE

S:
SE DIAMETER MUST BE A MINIMUM OF 1.5 TIMES THE SIZE OF IE MANUFACTURER'S RECOMMENDED BOLT CIRCLE DIAMETER. BOLT OVER MUST NOT OVERHANG BASE. CONTRACTOR IS TO CONFIRM SE DIAMETER ON FIXTURE SHOP DRAWINGS.
FER TO CHART INDICATING BASE BURIAL DEPTH.

POLE LENGTH (M)	BASE BURIAL DEPTH (M)	REINF. ROD LENGTH (M)
3.0	1.50	H+1.35
5.6	2.15	H+2.00
7.0	2.15	H+2.00
7.5	2.15	H+2.00
8.7	2.45	H+2.30
9.0	2.45	H+2.30
10.0	2.75	H+2.60
12.0	2.75	H+2.60
13.6	2.90	H+2.75
15.1	3.05	H+2.90

E-LIGHT STANDARD DETAIL

ALE: NTS



D-DUCTBANK TERMINATION AT POLE

SCALE: NTS

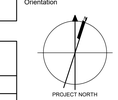
EXTERIOR LIGHT FIXTURE SCHEDULE

Item	Manufacturer/Catalog Number	Voltage	Lamp	Mounting	Description
C (4)	COOPER CAT. HOUSING: #LDBB-40-D010 POWER MODULE: #ERBB-3040-8040 TRIM: #BLB-W-1-L1 INDY CAT. #L8-WET SERIES ELITE CAT. #HH8-LED-4000L-DIM10-MVOLT-WD-40K-90-HH8-8501-CL-WH	120V	42W 4000lm LED ARRAY 4000°K	RECESSED	200mm# (8") LED CANOPY DOWNLIGHT FIXTURE, SELF-FLANGED, DAMP LOCATION C/W SPECULAR CLEAR FINISH, WIDE BEAM REFLECTOR AND IP65 GASKET KIT. CONFIRM FIT IN CANOPY PRIOR TO SHOP DRAWINGS.
P (4)	McGRAW-EDISON CAT. #GLEON-SA-3B-740U-T4FT-XX-HSS POLE: COOPER CAT. #RSS5A17 LITHONIA CAT. #DSX1 SERIES GARDCO CAT. #ES-3-32L-1A-MV-G2-4-HS (3)	120V	LED 12389 LUMENS 4000K 124W	POLE	POLE MOUNTED DECORATIVE LED FIXTURE C/W EXTRUDED ALUMINUM ENCLOSURE, LOW PROFILE DESIGN, TYPE "T4FT" DISTRIBUTION OPTICS WITH HOUSE SIDE SHIELD AND 17' (5.18m) STRAIGHT 5" ROUND POLE C/W DECORATIVE ROUND BASE COVER. ENTIRE ASSEMBLY SHALL HAVE STANDARD FINISH TO SUIT ARCHITECT.
W (4)	COOPER CAT. #ENC-E02-LED-E1-BL3-XX LITHONIA CAT. #WSR-LED-P2-40K-SR3-MVOLT-DDBXD DECO CAT. #D440-60-40-UNV-D-T3-CU GARDCO CAT. #104L-32L-530-NW-G1-3-UNV-XX	120V	47W 5405lm LED ARRAY 4000°K	WALL MOUNT	WALL MOUNTED SCONCE FIXTURE C/W CAST ALUMINUM HOUSING, TYPE 3 DISTRIBUTION C/W BACK LIGHT CONTROL AND TOOLESS ENTRY TO HINGED LENS ASSEMBLY. MOUNTED PER ARCHITECTURAL DRAWINGS, ENTIRE ASSEMBLY SHALL HAVE STANDARD FINISH TO BE CHOSEN BY ARCHITECT.

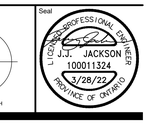
NOTES:
1. FOR FURTHER LIGHT FIXTURE INFORMATION REFER TO SPECIFICATION.
2. LED LUMEN VALUES QUOTED FOR FIXTURES ARE TO BE CONSIDERED MINIMUM, AND AS ABSOLUTE OR DELIVERED LUMENS, LUMEN VALUES SHOULD NOT EXCEED MORE THAN 10% OF SPECIFIED OUTPUT.
3. WHERE NOTED ABOVE THAT FIXTURES ARE TO HAVE FINISH TO SUIT ARCHITECT THE FINISH WILL BE SELECTED FROM MANUFACTURER'S STANDARD COLOUR CHART. PROVIDE THIS COLOUR CHART WITH SHOP DRAWING SUBMITTAL.
4. EQUAL MANUFACTURERS FOR THIS FIXTURE MUST CONTACT THE CONSULTANTS OFFICE A MINIMUM OF 10 CALENDAR DAYS PRIOR TO TENDER CLOSE TO OBTAIN AN ELECTRONIC VERSION OF THE SITE PLAN. THEY MUST THEN PROVIDE PHOTOMETRIC ANALYSIS FOR THE EXTERIOR FIXTURE LAYOUT INDICATED USING THEIR PROPOSED FIXTURE.
5. IF THERE ARE ANY DISCREPANCIES BETWEEN THE FIXTURE PART NUMBER AND DESCRIPTION, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO BRING THIS TO THE ELECTRICAL CONSULTANTS ATTENTION PRIOR TO SHOP DRAWING REVIEW.

No.	Revision	Date
5	RE-ISSUED FOR BUILDING PERMIT	28 MAR 2022
4	ISSUED FOR CONSTRUCTION	23 FEB 2022
3	ADDENDUM #1	26 OCT 2021
2	ISSUED FOR PERMIT & TENDER	27 SEPT 2021
1	ISSUED FOR 80% COORDINATION	04 AUG 2021

Orientation



Seal



DEI Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC
55 Northland Road, Waterloo, ON, N2V 1Y8
Phone: 519-725-3555
Website: deiassociates.ca
Project Number: 20233

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.
The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.
Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.
Do not scale this drawing.
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Project Information

St. Joseph C.E.S.- Addition and Alterations

405 Douro 4th Line, Lakefield, ON

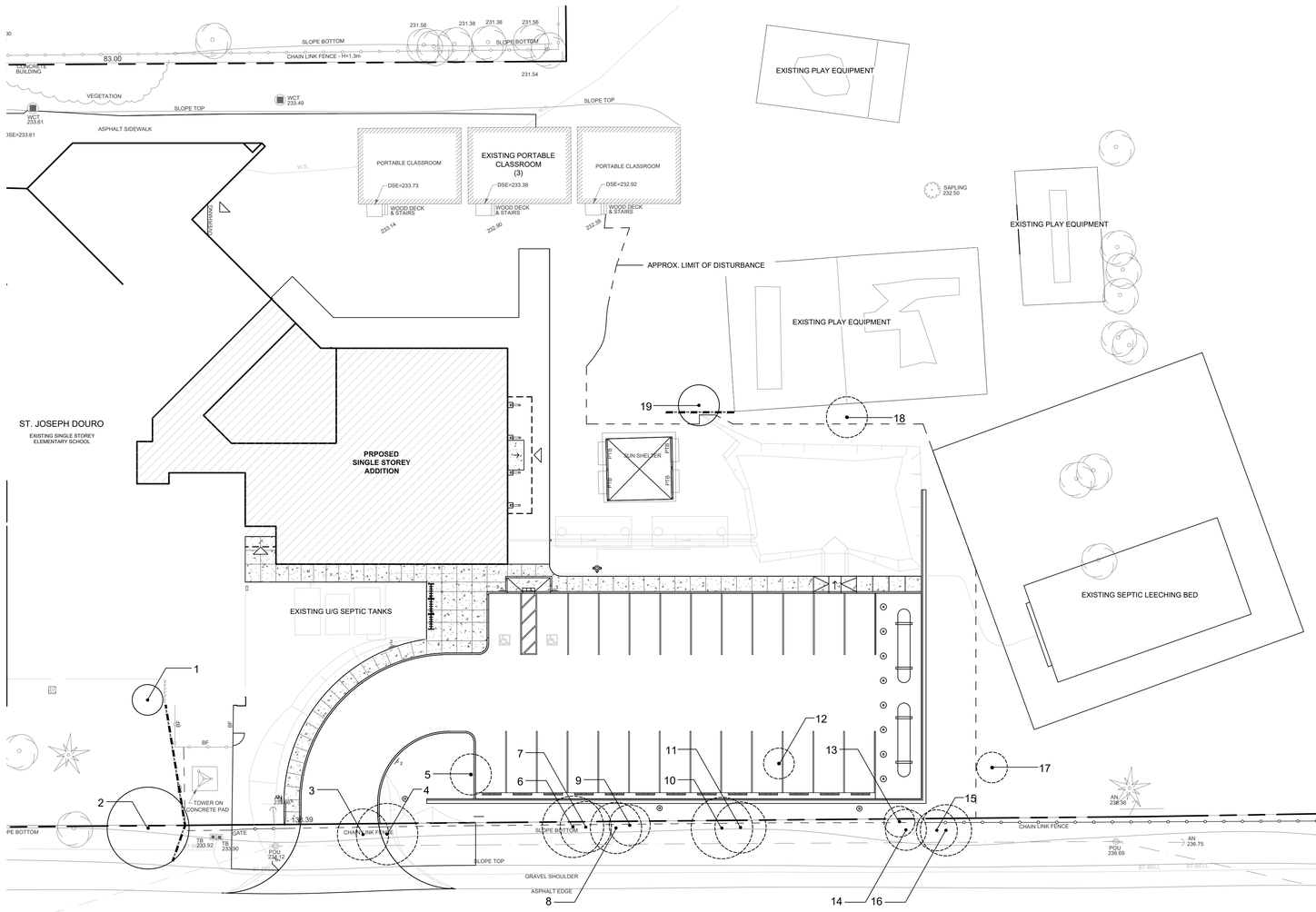
For

PVNCCDSB

Drawing Title

Site Plan

Date	Project No	Drawing No
February 2022	18048	E101
Drawn by KF		
Scale AS NOTED		



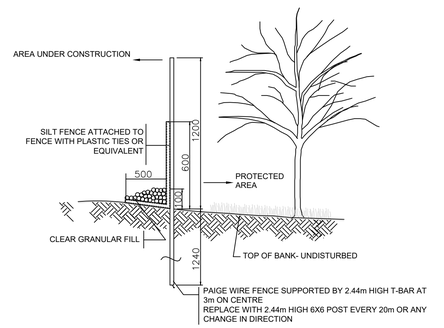
; fence, EAB??

LEGEND

	EXISTING INVENTORIED TREES TO REMAIN
	EXISTING INVENTORIED TREES TO BE REMOVED
	TREE PROTECTION FENCE

NOTES:

SITE VISIT DATE: APRIL 13, 2021
TREE INVENTORY COMPLETED BY HILL DESIGN STUDIO.
TREE LOCATIONS AND DRIPLINES BASED ON SURVEY DATED JANUARY 18, 2017 AND HILL DESIGN STUDIO FIELD SURVEY.



1 TREE PROTECTION FENCING
NTS

TREE PROTECTION NOTES

1. AS PART OF ANY TREE REMOVAL OPERATION ALL STEMS, LIMBS AND STUMPS SHOULD BE REMOVED FROM THE SITE.

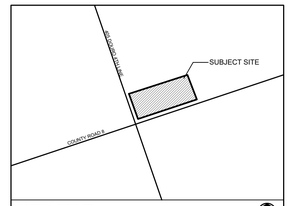
2. UPON COMPLETION OF ANY TREE REMOVAL OPERATIONS, TREE PROTECTION FENCING SHOULD BE INSTALLED AS ILLUSTRATED. THIS PROTECTION FENCING SHOULD BE MAINTAINED UNTIL ALL EXCAVATION AND B1UILDING CONSTRUCTION WORK IS COMPLETED.

3. ANY ROOTS DISTURBED DURING CONSTRUCTION SHOULD BE CUT CLEANLY AND BURIED IMMEDIATELY.

4. NO HEAVY EQUIPMENT OR STOCKING OF MATERIAL SHALL OCCUR WITHIN THE DRIPLINES OF ANY TREES THAT ARE TO BE PRESERVED.

5. TREE PROTECTION MEASURES TO BE INSPECTED BY LANDSCAPE ARCHITECT AND TOWNSHIP STAFF PRIOR TO START OF CONSTRUCTION.

6. IF CONSTRUCTION OR ANY WORK OCCURS WITHIN THE TREE PRESERVATION ZONE, INSIDE THE LIMITS OF THE TREE PROTECTION FENCE, IT IS NECESSARY TO ONLY USE HAND TOOLS. NO MACHINERY WILL BE PERMITTED IN THIS ZONE.



GENERAL NOTES

1. ALL WORKMANSHIP WILL BE TO THE STANDARDS OF LANDSCAPE ONTARIO.

2. ALL PLANT MATERIAL TO BE NO.1 GRADE NURSERY GROWN IN ACCORDANCE WITH THE CANADIAN STANDARDS FOR NURSERY STOCK, 9TH EDITION, 2017, BY THE CANADIAN NURSERY TRADES ASSOCIATION.

3. BACKFILL WILL CONSIST OF SOIL NATIVE TO THE SITE OR GENERAL SOIL TYPE/CLASS NATIVE TO THE SITE. TOPSOIL TO BE TESTED FOR NUTRIENT VALUE, AND AMENDED FOR OPTIMAL GROWTH AS PER THE RECOMMENDATIONS OF THE SOIL TEST.

4. CONTRACTOR SHALL MAINTAIN ALL LANDSCAPE AREAS UNTIL OWNER'S ACCEPTANCE OF PROJECT.

5. CONTRACTOR TO LOCATE ALL UNDERGROUND UTILITIES.

6. PLANTING MAY BE ADJUSTED TO SUIT LOCATIONS OF SITE UTILITY STRUCTURES/SERVICES.

7. ALL MATERIALS MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

8. SPREAD MULCH TO A MINIMUM OF 100mm COMPACTED DEPTH ON ALL TREE PITS AND PLANTING BEDS.

9. CHECK AND VERIFY ALL DIMENSIONS AND QUANTITIES PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES ARE TO BE REPORTED IN WRITING TO THE LANDSCAPE ARCHITECT. QUANTITIES NOTED WITHIN THE PLAN SUPERCEDE THOSE IN THE PLANT LIST. ANY SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.

10. SOD AS MARKED WITH NURSERY SOD ON A MINIMUM OF 100mm OF CLEAN TOPSOIL. FINE GRADE AND SOD ALL BOULEVARD AREAS TO MUNICIPAL SPECIFICATIONS AND REPAIR DAMAGE TO ADJACENT PROPERTIES, AS REQUIRED.

11. FINAL INSPECTION AND ACCEPTANCE OF PLANTING WORK SHALL COINCIDE WITH THE FINAL INSPECTION AND ACCEPTANCE OF ALL WORK INCLUDED IN THE CONTRACT.

12. ALL SEEDED SLOPES 3:1 AND GREATER TO RECEIVE EROSION CONTROL MATTING. PIN SOD ON ALL SLOPES OF 3:1 OR GREATER.

13. SUBMIT A WRITTEN GUARANTEE TO THE EFFECT THAT ALL PLANTS ACCEPTED DURING THE PERIOD OF JANUARY 1st TO JULY 15th SHALL BE GUARANTEED UNTIL JULY 15th THE FOLLOWING YEAR. PLANTS ACCEPTED DURING THE PERIOD OF JULY 15th TO DECEMBER 31st SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF ACCEPTANCE. THE GUARANTEE PERIODS LISTED ABOVE SHALL APPLY TO ALL "NURSERY GROWN" PLANTS.

14. AT THE TIME OF FINAL INSPECTION ALL PLANTS SHALL BE IN A HEALTHY, VIGOUROUS GROWING CONDITION, PLANTED IN FULL ACCORDANCE WITH DRAWINGS AND CONDITIONS.

15. SITE PLAN INFORMATION AS PER SALTER PILON ARCHITECTURE.

16. ENGINEERING AS PER WSP, AND IS PROVIDED FOR INFORMATION ONLY.

17. SITE LIGHTING BY OTHERS

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
AARON W. HILL
OALA
MEMBER

REVISIONS

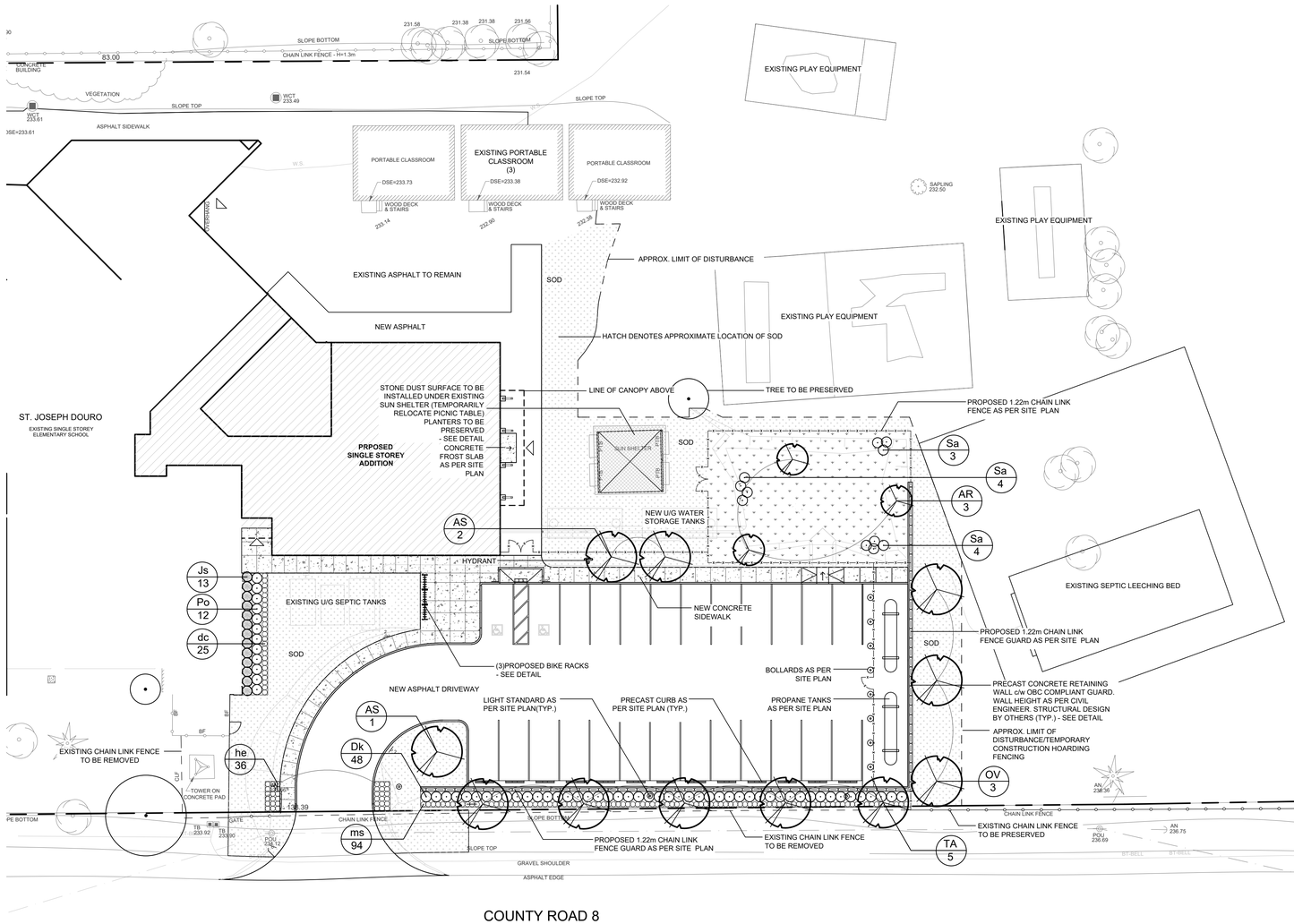
no.	date	description	by
1.	SEPT.27.21	Issued for Approval	DPV

St. Joseph Catholic Elementary School
405 Douro 4th Line
Lakefield, ON

Tree Preservation Plan

Hill Design Studio Inc
226-686-0700 www.hilldesign.ca

PROJECT NO.: 2021-16	DRAWN BY: DPV
SCALE: 1:250	DESIGNED BY: AWH/DPV
SHEET: L1	APPROVED BY: AWH
	PLOT DATE: SEPT.27.21



COUNTY ROAD 8

HYDROSEED FOR BIORETENTION AREA

SWM POND MIX WET/DRY MIX (OSC #8245)

3%	BLACK EYED SUSAN (RUDBECKIA HIRTA)
20%	CANADIAN WILD RYE (ELYMUS CANADENSIS)
17%	FOX SEDGE (CAREX VULPINOIDEA)
15%	INDIAN GRASS (SORGHASTRUM NUTANS)
3%	NEW ENGLAND ASTER (ASTER NOVAE-ANGLIAE)
1%	SPOTTED JOE PYE WEED (EUPATORIUM MACULATUM)
20%	SWITCHGRASS (PANICUM VIRGATUM)
20%	VIRGINIA WILD RYE (ELYMUS VIRGINICUS)
1%	WILD BERGAMOT (MONARDA FISTULOSA)

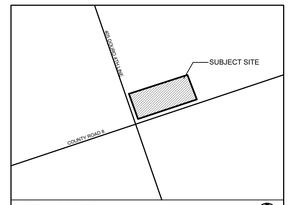
TO BE APPLIED AT A RATE OF 25kg/ha

ANNUAL RYE GRASS (NURSE CROP)

100% ANNUAL RYE GRASS (LOLIUM MULTIFLORUM)

TO BE APPLIED AT A RATE OF 22kg/ha

NOTE:
HYDROSEED MIXES AS PER OSC
(PHONE) 1-800-465-5849



KEY MAP N.T.S.

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ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
AARON W. HILL
OALA
MEMBER

REVISIONS

no.	date	description	by
1.	SEPT.27.21	Issued for Approval	DPV

St. Joseph Catholic Elementary School
405 Douro 4th Line
Lakefield, ON

Landscape Plan

Hill Design Studio Inc.
226-686-0700 www.hilldesign.ca

PROJECT NO.: 2021-16	DRAWN BY: DPV
SCALE: 1:250	DESIGNED BY: AWH/DPV
SHEET: L2	APPROVED BY: AWH
	PLOT DATE: SEPT.27.21

ER CUT A LEADER
VE ONLY DEAD OR
AGED LIMBS

LONG WOOD STAKES
) ATTACH TO TREE
NO. 14 GALV. WIRE
ASED WITH RUBBER
DEN HOSE AT POINT OF
TACT WITH TREE

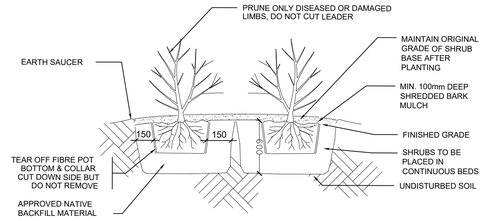
E: T-BAR STAKES ARE
TO BE DRIVEN
OUGH ROOT BALL

NDABLE PROTECTIVE TREE GUARD,
m HIGH.

HED GRADE

CUT AND REMOVE TOP
1/3 OF BURLAP, WIRE, AND TWINE

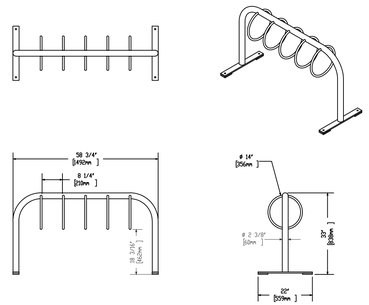
STURBED SOIL



2 SHRUB PLANTING DETAIL
NTS

BIKE RACK BY MAGLIN
(OR APPROVED EQUAL)
T 1-800-716-5506
F 1-877-260-9393
WWW.MAGLIN.COM
SALES@MAGLIN.COM

SPECIFICATIONS:
MODEL: MBR300-5-S
FINISH: BLACK POWDER COAT
OPTIONS: NONE
INSTALLATION: SURFACE MOUNT

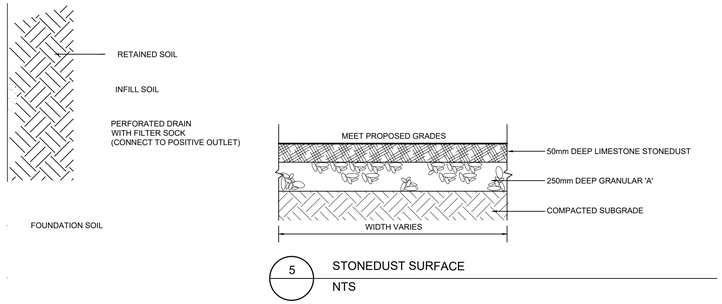


3 BIKE RACK DETAIL
NTS

WALL BY UNILOCK (OR APPROVED EQUAL)

CEIVE OBC COMPLIANT GUARD AS

O TOP COURSE. TOP 3 COURSES TO BE
ITHER AS REQUIRED BY MANUFACTURER.



5 STONEDUST SURFACE
NTS

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
AARON W. HILL
OALA
MEMBER

REVISIONS

no.	date	description	by
1.	SEPT.27.21	Issued for Approval	DPV

St. Joseph Catholic Elementary School
405 Douro 4th Line
Lakefield, ON

Details

Hill Design Studio Inc.
226-686-0700 www.hilldesign.ca

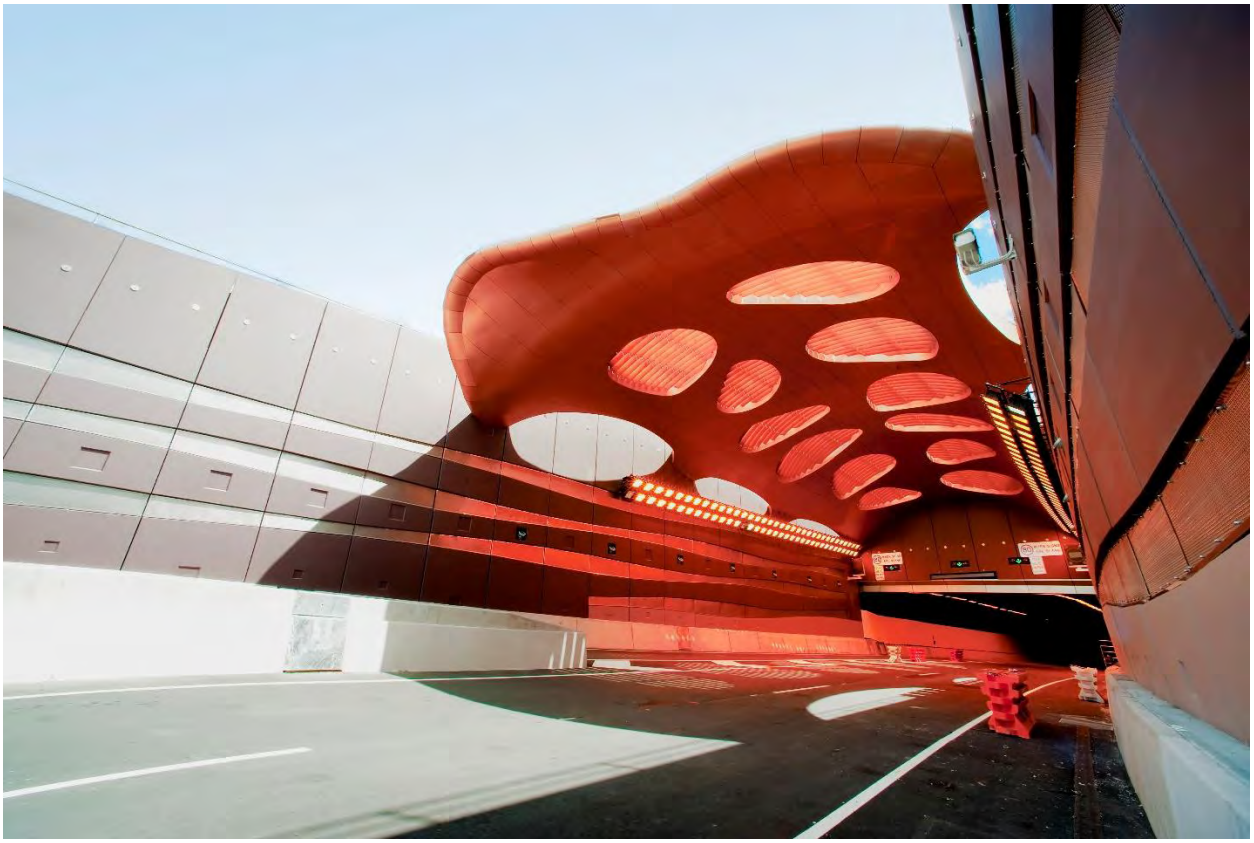
PROJECT NO.: 2021-16
DRAWN BY: DPV
SCALE:
DESIGNED BY: AWH/DPV
SHEET: L3
APPROVED BY: AWH
PLOT DATE: SEPT.27.21

Salter Pilon Architecture

St. Joseph Douro Addition and Parking Lot

Stormwater Management Report

March 04, 2022 Original



St. Joseph Douro Addition and Parking Lot

Stormwater Management Report

Salter Pilon Architecture

Original

Project No.: 20M-01337-00
Date: March 04, 2022

WSP
100 Commerce Valley Drive West
Thornhill, ON
Canada L3T 0A1

T: +1 905 882-1100
F: +1 905 882-0055
wsp.com

Revision History

FIRST ISSUE

September 23, 2021	Building Permit and Tender		
Prepared by	Reviewed by		
Jennifer Chan, EIT	Vladimir Nikolic, P.Eng.		
REVISION 1			
March 4, 2022	Site Plan Application		
Prepared by	Reviewed by		
Jennifer Chan, P.Eng.	Vladimir Nikolic, P.Eng.		
REVISION 2			
FINAL			

Signatures

Prepared by

Jennifer Chan, P.Eng.
Project Engineer, Water Resources

Approved[1] by

Vladimir Nikolic, P.Eng.
Project Engineer, Water Resources

04.03.2022
Date

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Contributors

Client

	Salter Pilon Architecture

WSP

Project Engineer	Jennifer Chan, P.Eng.
Designer	Gordon Wong, EIT
Project Engineer	Vladimir Nikolic, P.Eng.
Project Manager	Andrew Kerr, P.Eng.

TABLE OF CONTENTS

Tables

Figures

Appendices

1 INTRODUCTION

1.1 Scope

WSP has been retained by Salter Pilon Architecture to prepare a Stormwater Management (SWM) report to support the building permit and tender application for the proposed expansion at St. Joseph C.E.S in Douro, Ontario. This SWM report examines the potential water quality, quantity and balance impacts of the proposed development and summarizes how each will be addressed in accordance with the Township of Douro-Dummer and the Ministry of Environment, Conservation and Parks (MECP).

1.2 Site Location

The site is located at the northeast corner of Douro 4th Line and Regional Road 8. The location of the proposed development is illustrated in **Figure 1**.

1.3 Stormwater Management Plan Objectives

The objectives of the stormwater management plan are as follows:

- Determine site specific stormwater management requirements to ensure that the proposals are in conformance with the MECP's Design Manual;
- Evaluate various stormwater management practices that meet the requirements of the City and recommend a preferred strategy; and
- Prepare a stormwater management report documenting the strategy along with the technical information necessary for the justification and sizing of the proposed stormwater management facilities.

1.4 Design Criteria

The Otonabee Region Conservation Authority (ORCA) issued the Watershed Planning & Regulations Policy Manual (December 2015) and Ministry of Environment, Conservation and Parks issued the Stormwater Management Planning and Design Manual (March 2003) to provide direction on the management of rainfall and runoff in Ontario. A summary of the stormwater management criteria applicable to this project is as follows:

- **Water Balance** – This site is not located within a CTC Source Water Protection Area nor in an ORCA regulated area. As per best practices, the site will target the retention of the 5 mm storm event and utilize Low Impact Development (LID) measures where feasible.
- **Water Quality** – Under the MECP, the site is required to target a long-term removal of 80% total suspended solids (TSS) on an annual loading basis.
- **Water Quantity** – The 2-, 5-, 10-, 25-, 50- and 100-year storm events will be controlled from post-development to pre-development levels.
- **Erosion Control** – This site is below 2 ha and does not discharge directly into a stream; the potential of stream erosion is low. During construction, appropriate erosion and sediment controls will be implemented.

@2021 Google - MAP DATA @2021 TELE ATLAS

0 50 100 150 200m

CLIENT
SALTER PILON ARCHITECTURE INC.

TITLE
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL

SITE LOCATION

Checked V.N	Drawn AutoCAD/G.W
Date MARCH 2022	Proj. No. 20M-1337-00
Scale AS SHOWN	Figure No. 1

FIGURE 1.dwg Fig 1 - Site Location C:\Users\chanj\BIM 360\WSP Canada projects (AMER)\Land Development Ontario\Project Files\20M-01337 St Joseph\SWM\Figures\ Mar 01, 2022 - 10:18am

2 PRE-DEVELOPMENT CONDITIONS

2.1 General

The school's total property is 3.87 ha; however, the majority of this area is not part of the proposed building addition, parking lot and basketball court; therefore, only 0.35 ha will be developed and considered in the SWM design of this report.

The 0.35 ha development area is currently pervious landscaping and an impervious paved basketball court. The development area generally drains to the north. To the south of the site, there is a 0.16 ha area of Regional Road 8 that drains to a ditch on the north side of the road before draining to the subject development area; this external area will be conveyed through the proposed SWM system.

The existing conditions are presented in **Figure 2**.

2.2 Rainfall Information

The rainfall intensity for the site was calculated using the following equation: $I = \frac{A}{(T+B)^C}$

Where;

I = rainfall intensity in mm/hour

T = time of concentration in hours

A, B and C = constant parameters (see below)

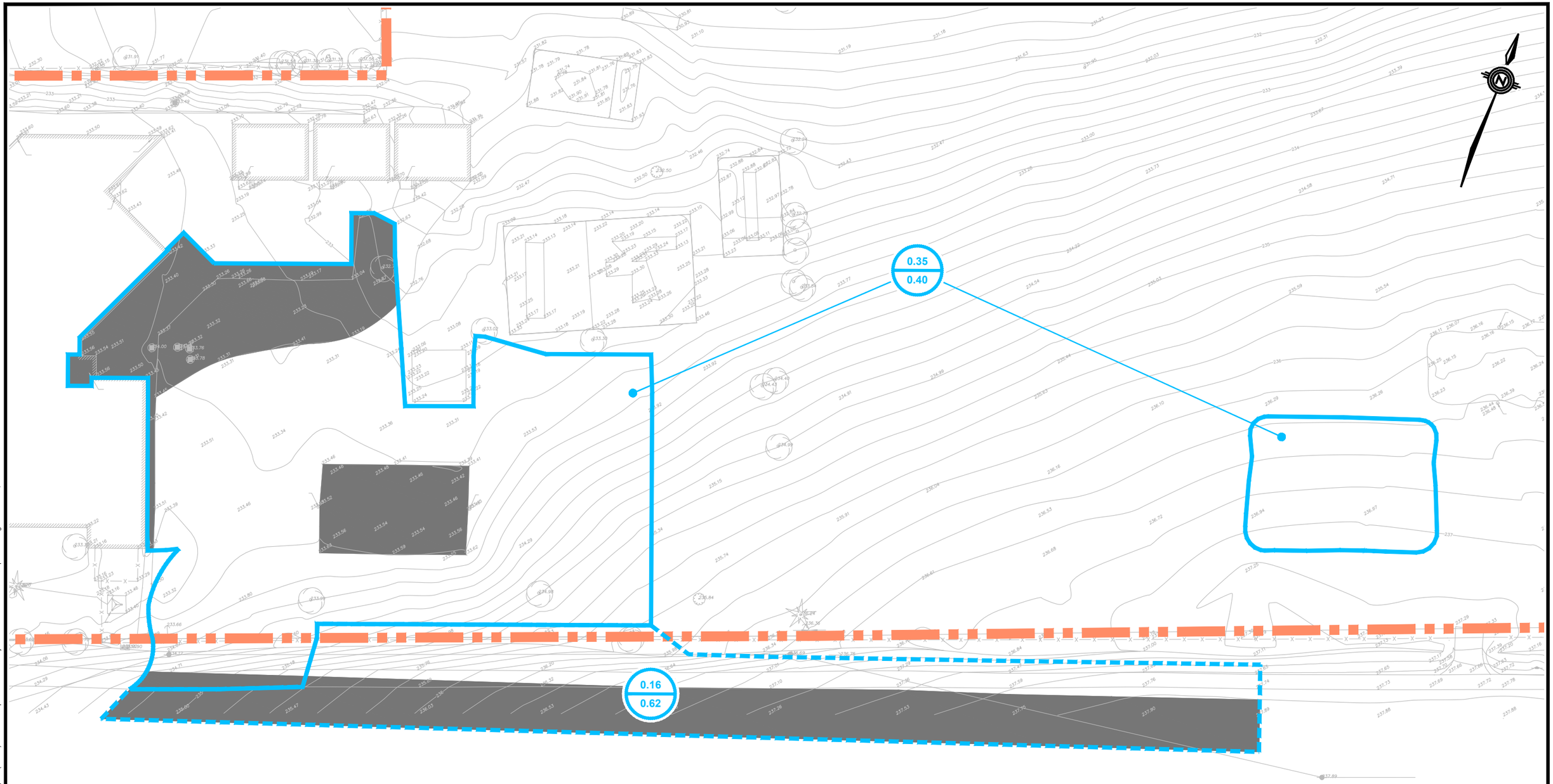
The parameters (A, B and C) were taken from the 2002 Peterborough Airport IDF curves. They are summarized in **Table 2.1**.

Table 2.1 Rainfall Parameters

RETURN PERIOD (years)	2	5	10	25	50	100
A	662	1098	1560	2010	2200	2507
B	7.5	10.1	13.0	14.0	14.6	14.8
C	0.79	0.83	0.86	0.88	0.87	0.88

Source: City of Toronto Wet Weather Flow Management Guidelines (November 2006)

An initial time of concentration, T_C, of 10 minutes (or 0.167 hours) is recommended for small sites.



LEGEND

- PROPERTY BOUNDARY
- DEVELOPMENT/SUB-CATCHMENT BOUNDARY
- EXTERNAL SUB-CATCHMENT BOUNDARY
- 0.43 / 0.78 — DRAINAGE AREA (ha) / RUNOFF COEFFICIENT
- IMPERVIOUS SURFACES WITH BOUNDARY

CLIENT: SALTER PILON ARCHITECTURE INC.

TITLE: ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL

EXISTING CONDITIONS

Checked: V.N	Drawn: AutoCAD/G.W.
Date: MARCH 2022	Proj. No.: 20M-01337-00
Scale: 1:500	Figure No.: 2

FIGURE 2.dwg Fig 2 - Ex. Cond C:\Users\achan\BIM 360\WSP Canada projects (AMER)\Land Development Ontario\Project Files\20M-01337 St.Joseph\SWM\Figures\ Mar 01, 2022 - 10:30am

2.3 Allowable Flow Rates

As discussed in Section 1.4, the 2- to 100-year storm events will be controlled from post-development to pre-development levels. The Rational Method was used to calculate the pre-development flow rates for the development and external area.

The calculated peak flow rates are summarized in **Table 2.2**. Detailed calculations are attached in **Appendix A**.

Table 2.2 Pre-Development Peak Flow Rates

RETURN PERIOD (YEARS)	RAINFALL INTENSITY (mm/hour)	DEVELOPMENT AREA EXISTING PEAK FLOW RATE (L/s)	EXTERNAL AREA PEAK FLOW RATE (L/s)	ALLOWABLE RELEASE RATE (L/s)
2	69.0	26.9	19.5	**46.4**
5	91.0	35.5	25.7	**61.1**
10	105.2	41.0	29.7	**70.7**
25	122.6	47.8	34.6	**82.4**
50	135.6	52.9	38.2	**91.1**
100	148.6	57.9	41.9	**99.9**

3 POST-DEVELOPMENT CONDITIONS

3.1 General

The proposed development consists of the construction of a building expansion and parking lot. The stormwater strategy for this proposed development consists of a bioretention facility and rooftop storage.

In the existing conditions, there is a 0.16 ha external area that drains to the site; the flows from this area will be conveyed through the proposed SWM system.

An area breakdown of the proposed development is provided in **Table 3.1**. The proposed conditions are shown in **Figure 3**.

Table 3.1: Proposed Condition – Area Breakdown

LAND-USE	AREA (m^2)	% COVERAGE	RUNOFF COEFFICIENT
Impervious Roof	681	20	0.90
Soft Landscaping	1,037	30	0.25
At-grade Impervious	1,754	51	0.90
Total Development Area	**3,472**	100	**0.71**
External Impervious	933	-	0.9
External Pervious	699	-	0.25
Total External Area	**1,632**	-	**0.62**

3.2 Water Balance

The site will target the retention of the 5 mm storm event as best practices.

Allowing for initial abstraction of 1 mm from impervious surfaces and 5 mm from pervious surfaces (soft landscaping), a water balance of 9.74 m^3 after abstractions will be retained. This volume will be provided within the bioretention cell, below the outlet. Section 3.4 discusses the details and configuration of the bioretention cell.

In the Geotechnical Investigation Report dated March 2021, GHD conducted Falling Head Tests to measure the hydraulic conductivity of the native soils at the development area. From their tests, it was estimated that the hydraulic conductivity ranges from 10^{-5}

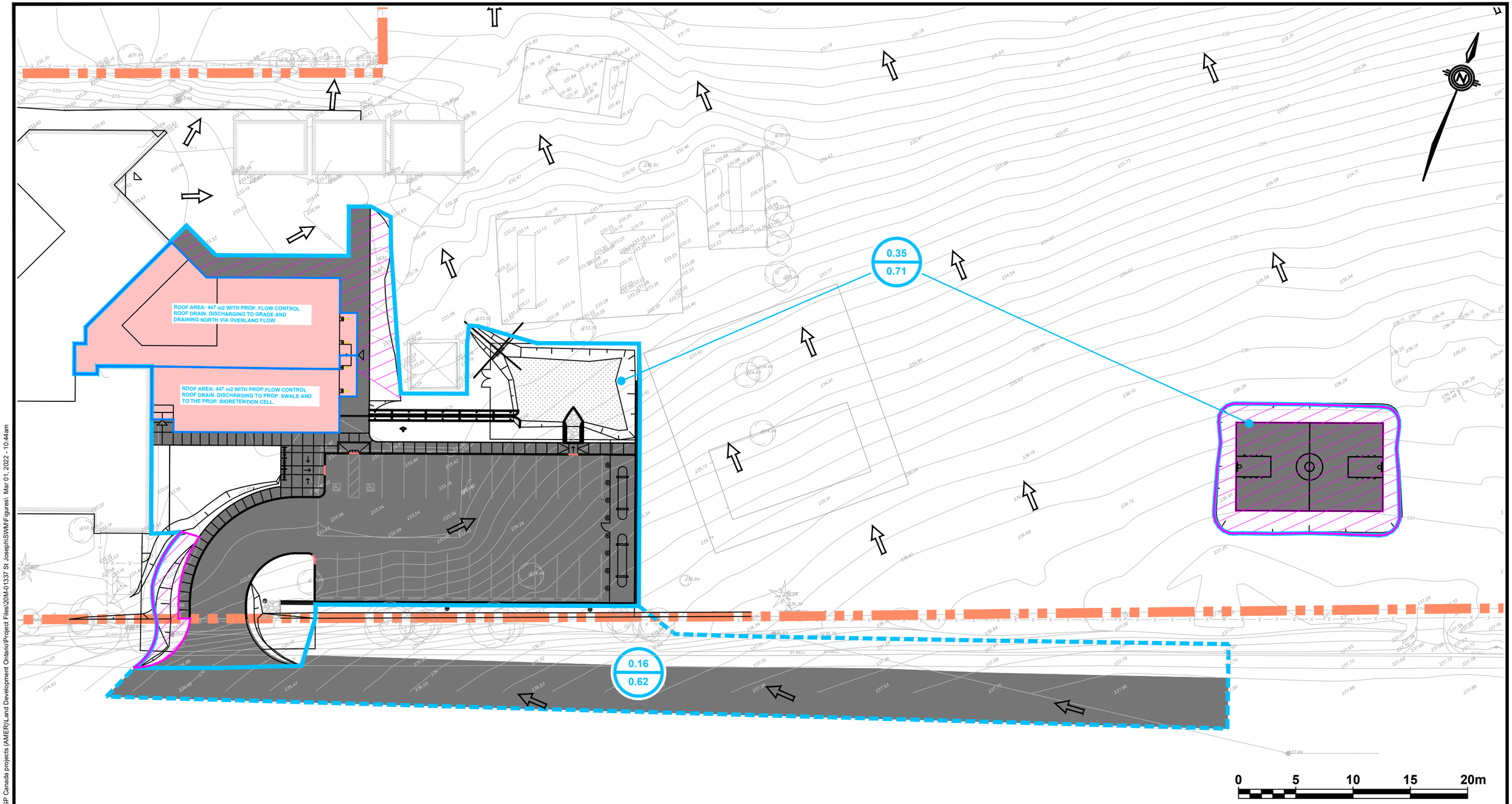
to 10^{-6} cm/s; this is equivalent to an infiltration rate between 12-30 mm/hr according to the Supplementary Guidelines to the Ontario Building Code. To be conservative it is assumed that the native site soil has a design infiltration rate of 12 mm/hr. While 12 mm/hr is slightly lower than the MECP's recommended 15 mm/hr infiltration rate, the design of the engineered fill and clearstone layer in the bioretention facility will have drawdown time of 69.1 hours which is within the 72-hour window recommended by the MECP.

Furthermore, monitoring wells were installed throughout the site and the groundwater level ranges from 3.0 to over 5.2 m below ground surface. For BH6, which is located within the footprint of the bioretention cell, the borehole was 5.2 m deep and free of groundwater accumulation upon completion. The below ground portion of the bioretention facility will be 1.0 m deep; there will be at least 4.2 m of clearance between the bottom of the facility and the groundwater.

A summary of the water balance calculation for this site is provided below in **Table 3.2**. A summary of the water balance and drawdown time calculations is provided in **Appendix A**.

Table 3.2 Water Balance Calculation

SURFACE TYPE	AREA (m^2)	INITIAL ABSTRACTION (m)	VOLUME ABSTRACTED (m^3)	5 mm VOLUME (m^3)	WATER BALANCE (m^3)
Impervious Roof Area	681	0.001	0.68	3.41	2.72
Soft Landscaping	1,027	0.005	5.14	5.14	0.00
At-Grade Impervious	1,754	0.001	1.75	8.77	7.02
Total Site Area	**3,462**	-	**7.57**	**17.31**	**9.74**



LEGEND

- PROPERTY BOUNDARY
- DEVELOPMENT/SUB-CATCHMENT BOUNDARY
- EXTERNAL SUB-CATCHMENT BOUNDARY
- 0.43 / 0.78 — DRAINAGE AREA (ha) / RUNOFF COEFFICIENT
- IMPERVIOUS SURFACES WITHIN BOUNDARY
- UNCONTROLLED AREAS WITHIN BOUNDARY
- IMPERVIOUS ROOFTOP WITHIN BOUNDARY
- OVERLAND FLOW DIRECTION

CLIENT: SALTER PILON ARCHITECTURE INC.

TITLE: ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL

PROPOSED CONDITIONS

Checked: V.N	Drawn: AutoCAD/G.W.
Date: MARCH 2022	Proj. No.: 20M-01337-00
Scale: 1:500	Figure No.: 3

FIGURE 3.dwg Fig 3 - Pr. Cond C:\Users\chanj\BIM 360\WSP Canada projects (AMER)\Land Development Ontario\Project Files\20M-01337 St. Joseph\SWM\Figures\ Mar 01, 2022 - 10:44am

3.3 Water Quality Control

As noted in Section 1.4, the site will target the Enhanced Protection Level - 80% TSS removal as per the MECP criteria. Within the site, the proposed roof area is not prone to sediment generation and may be considered clean for the purposes of water quality control. Stormwater runoff from vehicular surfaces and parking area are sediment generating and will require water quality treatment.

A bioretention cell was designed to provide an infiltration volume to meet the water quality requirement. Using Table 3.2 of the MECP Design Manual, the minimum required storage volume is calculated using the development area and percent impervious for an infiltration facility. The required volume for this 0.35 ha area is 12.17 m^3; the bioretention cell will provide this minimum volume within the engineered fill and clearstone layers. Section 3.4 discusses the details and configuration of the bioretention cell. Water quality calculations can be found in **Appendix A**.

3.4 Water Quantity Control

As noted in 2.3, the 2- to 100-year storm events will be controlled from post-development to pre-development levels.

To meet the quantity control requirements, the development area will utilize roof drains for the building expansion and a bioretention facility. The majority of the site will drain to the bioretention facility while a portion of the roof will discharge to grade and flow north via overland flow. A small portion of the landscaped area to the west of the ramp driveway will discharge west, off site. The proposed basketball court area will also drain north uncontrolled via overland flow.

The controlled portion of the roof discharging to the bioretention facility will provide 6.7 m^3 of storage and 3 roof drains while the portion of the roof discharging at grade will provide 13.3 m^3 of storage and 5 roof drains. Each of the roof drains are specified to have a maximum discharge of 1.51 L/s with a ponding depth of 0.15 m. Note that the detailed specification/configuration of the roof storage, recommended roof drains and its flow rates will be provided by the responsible mechanical engineer.

The bioretention facility will have a footprint of 124.7 m^2 and will be comprised of three stacked layers: 250 mm depth of ponding, 600 mm depth of engineered fill and 400 mm depth of clearstone. The total storage volume provided is 78.0 m^3; the outlet is a broad-crested rectangular weir 2.0 m long by 0.5 m breadth set at 1.15 m above the bottom of

clearstone. As such, 42.4 m^3 will be provided within the engineered fill and clearstone layer for water quality and water balance control.

From a conservative modelling perspective, it is assumed the clearstone portion of the bioretention cell is full at the beginning of each storm event.

The 'HydroCAD' software package (Version 10.00) has been used to model the behaviour of the proposed SWM system and determine its response under various storm events. This software utilises the Modified Rational Method to calculate flow rates and related storage values. Detailed output from the modelling is included in **Appendix B**.

A summary of the modelled peak discharge rates for the roof storage discharging to the bioretention cell, roof storage discharging to grade, and the uncontrolled area are presented in **Table 3.3**. A summary of the modelled peak discharge rates for the bioretention cell and overall development area are presented in **Table 3.4.**

Table 3.3 Summary of Modelling Results – Roof Storage and Uncontrolled Areas

RETURN PERIOD (YEARS)	DISCHARGE FROM UNCONTROLLED AREA* (L/s)	DISCHARGE FROM ROOF STORAGE TO BIORETENTION** (L/s)	DISCHARGE FROM ROOF STORAGE TO GRADE** (L/s)
2	8.0	1.7	2.9
5	10.6	2.0	3.5
10	12.3	2.3	3.9
25	14.3	2.5	4.2
50	15.8	2.6	4.4
100	17.3	2.7	4.6

**Peak flow from uncontrolled area occurs at 10 minutes for the 100-year event*
***Peak flow from roof storage to bioretention facility occurs at 31 minutes for the 100-year event*
****Peak flow from the roof storage to grade occurs at 35 minutes for the 100-year event*

Table 3.4 Summary of Modelling Results – Bioretention Facility and Overall Development Site

RETURN PERIOD (YEARS)	BIORETENTION FACILITY PEAK ELEVATION (m)	BIORETENTION FACILITY UTILIZED STORAGE (m^3)	BIORETENTION FACILITY DISCHARGE (L/s)	TOTAL DEVELOPMENT AREA DISCHARGE (L/s)	ALLOWABLE RELEASE RATE (L/s)
2	1.152	62.9	0.6	8.5	46.4
5	1.189	68.5	22.4	29.7	61.1
10	1.205	70.9	37.1	47.2	70.7
25	1.218	72.9	51.2	64.0	82.4
50	1.227	74.3	61.3	76.1	91.1
100	1.234	75.4	69.6	**85.9**	99.9

The HydroCAD model was used to determine the event duration that generates the highest peak flows from the development area. This as been iteratively determined at t_d = 21 minutes (for the 100-year event) according to the Modified Rational Method process. **Table 3.4** presents the highest flows from the bioretention facility during the 21-minute event for the 2-100 year storms.

Note that the peak flows from the roof storages, uncontrolled area and bioretention facility occur at different times within the storm event; as such the total site discharge rate is not necessarily the sum of the peak discharge rates of the roof storages, uncontrolled area and bioretention facility as demonstrated in the tables above.

The modelling results demonstrate that the post-development peak flow rates for all events up to the 100-year storm are lower than the allowable release rate established in Section 2.3. The required storage for the bioretention facility to control the 100-year post-development runoff is 75.4 m^3 which is less than the provided volume. Note that this utilized volume includes the previously quoted water balance storage.

3.5 Erosion Control

This site is below 2 ha and does not discharge directly into a stream; the potential of stream erosion is low. During construction, appropriate erosion and sediment controls will be implemented.

During construction, there is potential for short-term sediment wash-off from the site. To protect the downstream receiving watercourse, on-site erosion and sediment control (ESC) measures are necessary during construction.

The ESC measures focus on minimizing adverse environmental impacts by restricting the mobilization and transport of sediment, the following general practices are recommended:

- ESC measures should be in place prior to the commencement of construction, and not removed until the end of the construction period, when the site has been stabilized.
- All disturbed areas should be stabilized as quickly as possible. Stabilization of disturbed areas may be accomplished by sodding, seeding, mulching, hydro-seeding, planting, or covering of constructed slopes with appropriate material such as geotextile or jute mesh.
- Access to the construction site must be minimized and installed with aggregates.
- A continuous siltation fence must be constructed along the perimeter of the proposed development.

Routine inspection and maintenance of the ESC measures is required to ensure these measures to function properly and effectively. An ESC plan will be submitted under separate cover.

4 CONCLUSIONS

A stormwater management plan has been prepared to support the building permit and tender application for the proposed development at St. Joseph C.E.S. The key points are summarized below.

Water Balance

The bioretention facility will provide the required water balance volume of 9.74 m^3 within the engineered fill and clearstone layer to retain the 5 mm storm event.

Water Quality

The bioretention facility will provide the required 12.17 m^3 infiltration volume within the engineered fill and clearstone layer to meet the MECP's required 80% TSS removal.

Water Quantity

Roof storage and a bioretention facility will be used to control the discharge from the post-development conditions to pre-development flows. The roof storage will have roof drains and the bioretention facility will have a broad-crested rectangular weir.

Erosion Control

This site is below 2 ha and does not discharge directly into a stream; the potential of stream erosion is low. During construction, appropriate erosion and sediment controls will be implemented.

The report has demonstrated that the proposed stormwater management strategy will address the stormwater management related impacts from this project in adherence with the Ministry of Environment, Conservation and Parks design guidelines.

Respectfully submitted,

WSP

BIBLIOGRAPHY

- Ministry of Environment, Conservation and Parks. (2003, March). Stormwater Management Planning and Design Manual. Retrieved September 22, 2021
- Otonabee Conservation Authority. (2005, December). Watershed Planning &Regulations Policy Manual. Retrieved September 22, 2021

APPENDIX

A Stormwater Management Calculations

	Stormwater Management Calculations	Project:	St Joseph Catholic Elementary School	No.:	20M-01337-00	
	Area Takeoff	By:	GW/JKC	Date:	3/4/2022	Page: 1
		Checked:	VN			

Pre-Development Area Takeoff

Land Use	Area (m2)	Runoff C	% Imperviou	%Coverage
Impervious Roof Area	0	0.9	100	0%
Soft Landscaping	2649	0.25	0	76%
At-Grade Impervious	823	0.9	100	24%
Total Development Area	**3472**	**0.40**	**23.69**	
External Impervious	933	0.9	100	
External Pervious	699	0.25	0	
External Area	**1632**	**0.62**	**57.19**	

Post Development Area Takeoff

Land Use	Area (m2)	Runoff C	% Imperviou	%Coverage
Impervious Roof Area	681	0.9	100	20%
Soft Landscaping	1037	0.25	0	30%
At-Grade Impervious	1754	0.9	100	51%
Total Development Area	**3472**	**0.71**	**70**	100%
External Impervious	933	0.9	100	
External Pervious	699	0.25	0	
External Area	**1632**	**0.62**	**57.19**	

Total Area Discharging to Bioretention Cell

Land Use	Area (m2)	Runoff C	% Imperviou	%Coverage
Impervious Roof Area	233.6	0.9	100	7%
Soft Landscaping	703.0	0.25	0	20%
At-Grade Impervious	1376.0	0.9	100	40%
Total Development Area	**2312.6**	**0.70**	**69.60**	
External Impervious	933.1	0.9	100	
External Pervious	698.5	0.25	0	
External Area	**1631.6**	**0.62**	**57.19**	

Uncontrolled Area

Land Use	Area (m2)	Runoff C	% Imperviou	%Coverage
Impervious Roof Area*	447.4	0.9	100	13%
Soft Landscaping**	333.7	0.25	0	10%
At-Grade Impervious***	378.2	0.9	100	11%
Total Uncontrolled Area	**1159.3**	**0.71**	**71.22**	

**Note: 447.4 m2 of the roof has roof drains but will not discharge to the Bioretention Cell. It will discharge to grade and flow north via overland flow*

***Note: 63.8 m2 of the landscape area to the west of the ramp discharge west and not to the north*

****This includes the impervious paved area of the basketball court*

Calculation of existing runoff rate is undertaken using the Rational Method: Q = 2.78 CIA

Where: Q = Peak flow rate (litres/second)
C = Runoff coefficient
I = Rainfall intensity (mm/hour)
A = Catchment area (hectares)

Area, A **0.35** hectares
Runoff Coef, C* **0.40**

$$I = \frac{A}{(T+B)^C}$$

Rainfall Intensity is calculated based on the 2002 Peterborough Airport IDF curves:

Where: I = Rainfall Intensity in mm/hr
T = Time of Concentration in minutes, use
A, B, C = Rainfall parameters from Peterborough Airport

Return Period (Years)	2	5	10	25	50	100
A	662	1098	1560	2010	2200	2507
B	7.5	10.1	13.0	14.0	14.6	14.8
C	0.79	0.83	0.86	0.88	0.87	0.88
T (mins) **	10	10	10	10	10	10
T (hrs)	0.167	0.167	0.167	0.167	0.167	0.167
I (mm/hr)	69.0	91.0	105.2	122.6	135.6	148.6
Q Site (L/sec)	**26.9**	**35.5**	**41.0**	**47.8**	**52.9**	**57.9**
Q Site (m^3/sec)	0.03	0.04	0.04	0.05	0.05	0.06
Q Allowable (Site + External) (L/s)	**46.4**	**61.1**	**70.7**	**82.4**	**91.1**	**99.9**

* Note recommended minimum value for time of concentration for small sites (<2.0 ha) is 10 minutes.

Calculation of existing runoff rate is undertaken using the Rational Method: Q = 2.78 CIA

Where: Q = Peak flow rate (litres/second)
C = Runoff coefficient
I = Rainfall intensity (mm/hour)
A = Catchment area (hectares)

Area, A **0.16** hectares
Runoff Coef, C* **0.62**

$$I = \frac{A}{(T+B)^C}$$

Rainfall Intensity is calculated based on the 2002 Peterborough Airport IDF curves:

Where: I = Rainfall Intensity in mm/hr
T = Time of Concentration in minutes, use
A, B, C = Rainfall parameters from Peterborough Airport

Return Period (Years)	2	5	10	25	50	100
A	662.0	1098.0	1560.0	2010.0	2200.0	2507.0
B	7.5	10.1	13.0	14.0	14.6	14.8
C	0.79	0.83	0.86	0.88	0.87	0.88
T (mins) **	10	10	10	10	10	10
T (hrs)	0.167	0.167	0.167	0.167	0.167	0.167
I (mm/hr)	69.0	91.0	105.2	122.6	135.6	148.6
Q (litres/sec)	**19.5**	**25.7**	**29.7**	**34.6**	**38.2**	**41.9**
Q (m^3/sec)	0.02	0.03	0.03	0.03	0.04	0.04

* Note recommended minimum value for time of concentration for small sites (<2.0 ha) is 10 minutes.

No Water Balance Criteria was determined for this Site. As per best practices, the stormwater management facility will be designed to retain the runoff from a 5 mm storm event for infiltration into the native soil

The current area measurements and land use types for the site are as follows:

Land Use	Area (m^2)	Runoff C	Impervious
Impervious Roof Area	681	0.90	100%
Soft Landscaping	1,037	0.25	0%
At-Grade Impervious	1,754	0.90	100%
Total Site Area:	3,472	0.90	100%

Surface Type	Area (m^2)	Initial Abstraction (m)	Volume Abstracted (m^3)	5 mm Volume (m^3)	Water Balance (m^3)
Impervious Roof Area	681	0.001	0.68	3.41	2.72
Soft Landscaping	1,037	0.005	5.18	5.18	0.00
At-Grade Impervious	1,754	0.001	1.75	8.77	7.02
Total Site Area:	**3,472**	-	**7.62**	**17.36**	**9.74**

For the purposes of the water balance calculation it is assumed that green roofs can accept 5 mm of rainfall without producing any runoff. It is assumed that the remaining hard surfaces on the site can abstract 1 mm of rainfall, and that all soft landscaped areas can absorb 5 mm.

Therefore, volume of runoff during a 5 mm storm event: 9.74 m^3

Water Balance

Water Balance Requirement 9.74 m^3

Infiltration Gallery Area 124.70 m^2

Bioretention Layers	Depth (mm)	Depth (m)	Porosity	Storage Volume (m^3)
Ponding	200	0.2	1.0	27.7
Engineered Fill	600	0.6	0.3	22.4
Clearstone	400	0.4	0.4	20.0
Total				**70.1**

*Weir is set at the top of the egineered fill

42.4 m^3 is greater than 9.74 m^3. Therefore, the bioretention cell meets the water balance requirement.

Water Quality

The TSS removal efficiency of the infiltration system shall be evaluated per Table 3.2 of 2003 MECP SWMPDM

Table 3.2 Water Quality Storage Requirements based on Receiving Waters[1, 2]

Protection Level	SWMP Type	Storage Volume (m^3/ha) for Impervious Level			
		35%	55%	70%	85%
Enhanced 80% long-term S.S. removal	Infiltration	25	30	35	40
	Wetlands	80	105	120	140
	Hybrid Wet Pond/Wetland	110	150	175	195
	Wet Pond	140	190	225	250
Normal 70% long-term S.S. removal	Infiltration	20	20	25	30
	Wetlands	60	70	80	90
	Hybrid Wet Pond/Wetland	75	90	105	120
	Wet Pond	90	110	130	150
Basic 60% long-term S.S. removal	Infiltration	20	20	20	20
	Wetlands	60	60	60	60
	Hybrid Wet Pond/Wetland	60	70	75	80
	Wet Pond	60	75	85	95
	Dry Pond (Continuous Flow)	90	150	200	240

Catchment Area (ha)*	Imperviousness (%)
0.35	70.1%

SWMP Type	Infiltration	
Target TSS Removal	80	%
Required Storage Volume (m^3/ha)	35.05	m^3/ha
Required Storage Volume (m^3)	**12.17**	m^3

42.4 m^3 is greater than 12.17 m^3. Therefore, the bioretention cell meets the water quality requirement.

A Geotechnical Investigation Report dated March 15, 2021 has been prepared by GHD. The subsurface includes topsoil, fill and till. Monitoring wells were installed throughout the site and the groundwater level ranges from 3.0 to over 5.2 m below the ground surface. For BH 6, which is located within the footprint of the proposed stormwater management facility, the borehole was 5.2 m deep and it was free of groundwater accumulation upon completion.

Additionally, GHD conducting Falling Head tests to measure the hydraulic conductivity of the native site soils. From their tests, it was estimated that the hydraulic conductivity ranges from 10^-5 to 10^-6 cm/s; this is equivalent to an infiltration rate between 12-30 mm/hr according to the Supplementary Guidelines to the Ontario Building Code. To be conservative it is assumed that the native site soils has an infiltration rate of 12 mm/hr

The following calculation determines the drawdown time for the infiltration system.

$$T = \frac{n}{q} * \frac{A}{P} * \ln\left(\frac{d + \frac{A}{P}}{\frac{A}{P}}\right)$$

Where
T = Time to Drain (hours)
n = void ratio of soil
A = Area of infiltration system (m^2)
d = depth of water (m)
q = Infiltration rate of soil (m/h)
P = perimeter length of base of infiltration system (m)

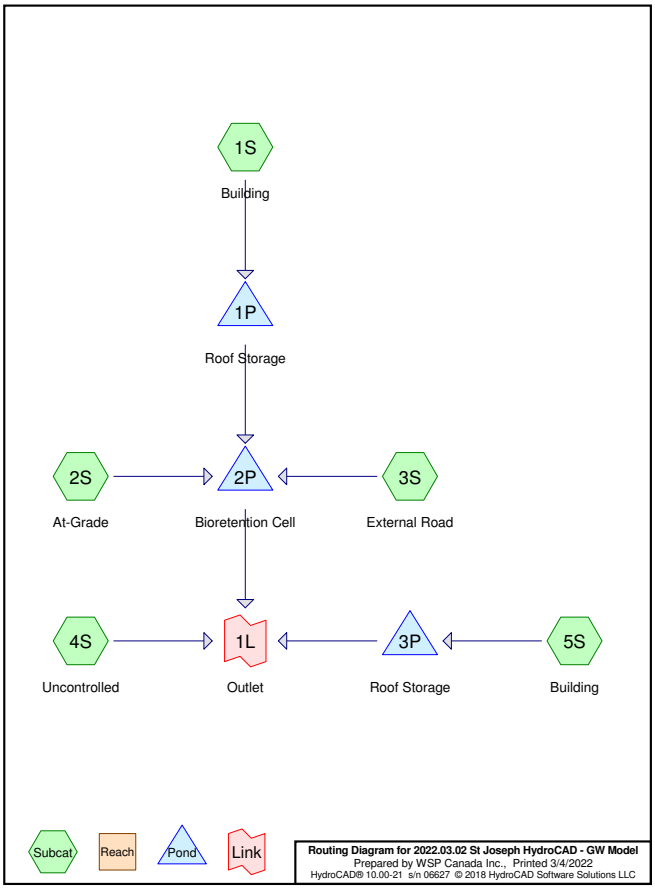
For this site:

n	**0.4**	
A	**124.7 m^2**	
d	1.00 m	*Depth of engineered soil and clearstone layer
q	0.012 m/h	
P	54.6	
Safety Factor	2.5	
T	69.1 h	

Therefore the engineered soil and clearstonr layers will fully drain in 69.1 hours. This is within the 72 hour window required for full drawdown.

APPENDIX

B Hydrologic Modelling Results



Area Listing (all nodes)

Area (sq-meters)	C	Description (subcatchment-numbers)
1,754.2	0.90	At-Grade Impervious (2S, 4S)
933.1	0.90	External Impervious (3S)
698.5	0.25	External Pervious (3S)
681.0	0.90	Impervious Roof (1S, 5S)
1,027.2	0.25	Soft Landscaping (2S, 4S)
5,094.0	**0.68**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-meters)	Soil Group	Subcatchment Numbers
0.0	HSG A	
0.0	HSG B	
0.0	HSG C	
0.0	HSG D	
5,094.0	Other	1S, 2S, 3S, 4S, 5S
5,094.0		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Runoff Area=233.6 m² 0.00% Impervious Runoff Depth=15 mm
Tc=10.0 min C=0.90 Runoff=0.0027 m³/s 3.5 m³

Subcatchment 2S: At-Grade Runoff Area=2,069.5 m² 0.00% Impervious Runoff Depth=11 mm
Tc=10.0 min C=0.68 Runoff=0.0183 m³/s 23.1 m³

Subcatchment 3S: External Road Runoff Area=1,631.6 m² 0.00% Impervious Runoff Depth=10 mm
Tc=10.0 min C=0.62 Runoff=0.0132 m³/s 16.6 m³

Subcatchment 4S: Uncontrolled Runoff Area=711.9 m² 0.00% Impervious Runoff Depth=10 mm
Tc=10.0 min C=0.60 Runoff=0.0056 m³/s 7.0 m³

Subcatchment 5S: Building Runoff Area=447.4 m² 0.00% Impervious Runoff Depth=15 mm
Tc=10.0 min C=0.90 Runoff=0.0053 m³/s 6.6 m³

Pond 1P: Roof Storage Peak Elev=10.059 m Storage=1.3 m³ Inflow=0.0027 m³/s 3.5 m³
Outflow=0.0018 m³/s 3.5 m³

Pond 2P: Bioretention Cell Peak Elev=1.152 m Storage=62.9 m³ Inflow=0.0333 m³/s 43.2 m³
Outflow=0.0006 m³/s 0.5 m³

Pond 3P: Roof Storage Peak Elev=10.060 m Storage=2.9 m³ Inflow=0.0053 m³/s 6.6 m³
Outflow=0.0030 m³/s 6.6 m³

Link 1L: Outlet Inflow=0.0085 m³/s 14.1 m³
Primary=0.0085 m³/s 14.1 m³

Total Runoff Area = 5,094.0 m² Runoff Volume = 56.8 m³ Average Runoff Depth = 11 mm
100.00% Pervious = 5,094.0 m² 0.00% Impervious = 0.0 m²

Summary for Subcatchment 1S: Building

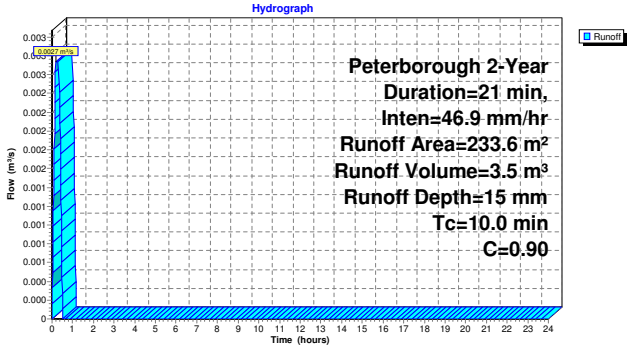
Runoff = 0.0027 m³/s @ 0.17 hrs, Volume= 3.5 m³, Depth= 15 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 2-Year Duration=21 min, Inten=46.9 mm/hr

Area (m²)	C	Description
233.6	0.90	Impervious Roof
233.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 1S: Building



Summary for Subcatchment 2S: At-Grade

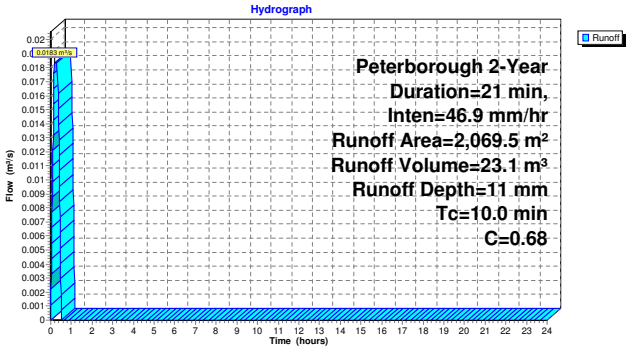
Runoff = 0.0183 m³/s @ 0.17 hrs, Volume= 23.1 m³, Depth= 11 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 2-Year Duration=21 min, Inten=46.9 mm/hr

Area (m²)	C	Description
693.5	0.25	Soft Landscaping
1,376.0	0.90	At-Grade Impervious
2,069.5	0.68	Weighted Average
2,069.5		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 2S: At-Grade



Summary for Subcatchment 3S: External Road

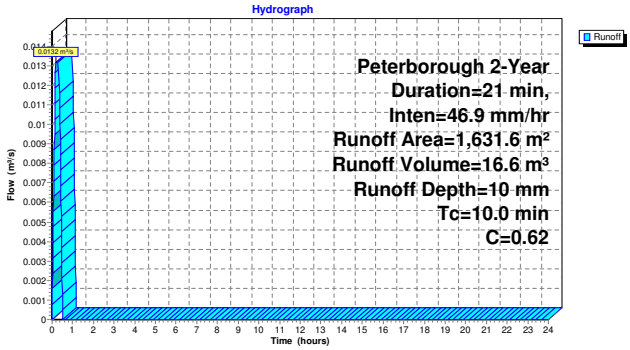
Runoff = 0.0132 m³/s @ 0.17 hrs, Volume= 16.6 m³, Depth= 10 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 2-Year Duration=21 min, Inten=46.9 mm/hr

Area (m²)	C	Description
933.1	0.90	External Impervious
698.5	0.25	External Pervious
1,631.6	0.62	Weighted Average
1,631.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 3S: External Road



Summary for Subcatchment 4S: Uncontrolled

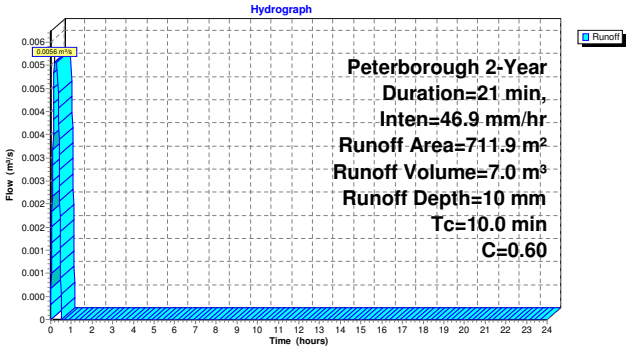
Runoff = 0.0056 m³/s @ 0.17 hrs, Volume= 7.0 m³, Depth= 10 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 2-Year Duration=21 min, Inten=46.9 mm/hr

Area (m²)	C	Description
333.7	0.25	Soft Landscaping
378.2	0.90	At-Grade Impervious
711.9	0.60	Weighted Average
711.9		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 4S: Uncontrolled



Summary for Subcatchment 5S: Building

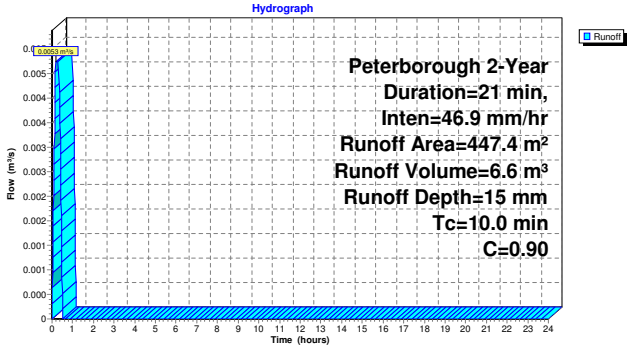
Runoff = 0.0053 m³/s @ 0.17 hrs, Volume= 6.6 m³, Depth= 15 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 2-Year Duration=21 min, Inten=46.9 mm/hr

Area (m²)	C	Description
447.4	0.90	Impervious Roof
447.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry, Time of Concentration (Direct Entry)**

Subcatchment 5S: Building



Summary for Pond 1P: Roof Storage

Inflow Area = 233.6 m², 0.00% Impervious, Inflow Depth = 15 mm for 2-Year event
Inflow = 0.0027 m³/s @ 0.17 hrs, Volume= 3.5 m³
Outflow = 0.0018 m³/s @ 0.41 hrs, Volume= 3.5 m³, Atten= 36%, Lag= 14.4 min
Primary = 0.0018 m³/s @ 0.41 hrs, Volume= 3.5 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.059 m @ 0.41 hrs Surf.Area= 68.5 m² Storage= 1.3 m³

Plug-Flow detention time= 8.6 min calculated for 3.5 m³ (100% of inflow)
Center-of-Mass det. time= 8.6 min (24.1 - 15.5)

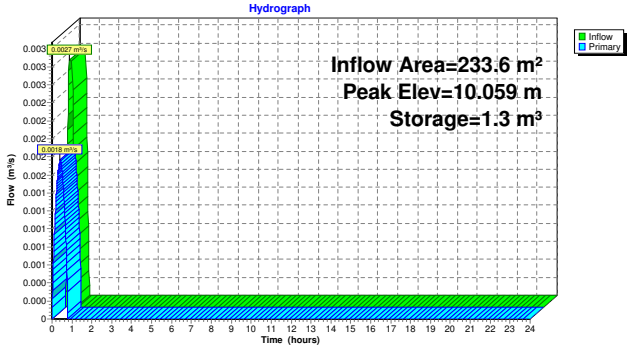
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	6.7 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	200.0	6.7	6.7	200.0

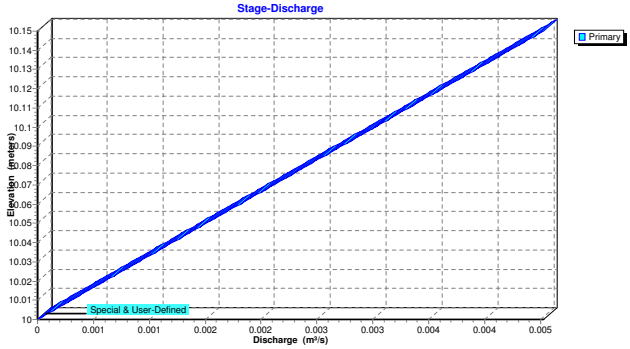
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 3.00**
			Head (meters) 0.000 0.150
			Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0018 m³/s @ 0.41 hrs HW=10.059 m (Free Discharge)
↑**1=Special & User-Defined** (Custom Controls 0.0018 m³/s)

Pond 1P: Roof Storage



Pond 1P: Roof Storage



Stage-Discharge for Pond 1P: Roof Storage

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0016	10.104	0.0031
10.001	0.0000	10.053	0.0016	10.105	0.0032
10.002	0.0001	10.054	0.0016	10.106	0.0032
10.003	0.0001	10.055	0.0017	10.107	0.0032
10.004	0.0001	10.056	0.0017	10.108	0.0033
10.005	0.0002	10.057	0.0017	10.109	0.0033
10.006	0.0002	10.058	0.0018	10.110	0.0033
10.007	0.0002	10.059	0.0018	10.111	0.0034
10.008	0.0002	10.060	0.0018	10.112	0.0034
10.009	0.0003	10.061	0.0018	10.113	0.0034
10.010	0.0003	10.062	0.0019	10.114	0.0034
10.011	0.0003	10.063	0.0019	10.115	0.0035
10.012	0.0004	10.064	0.0019	10.116	0.0035
10.013	0.0004	10.065	0.0020	10.117	0.0035
10.014	0.0004	10.066	0.0020	10.118	0.0036
10.015	0.0005	10.067	0.0020	10.119	0.0036
10.016	0.0005	10.068	0.0021	10.120	0.0036
10.017	0.0005	10.069	0.0021	10.121	0.0037
10.018	0.0005	10.070	0.0021	10.122	0.0037
10.019	0.0006	10.071	0.0021	10.123	0.0037
10.020	0.0006	10.072	0.0022	10.124	0.0037
10.021	0.0006	10.073	0.0022	10.125	0.0038
10.022	0.0007	10.074	0.0022	10.126	0.0038
10.023	0.0007	10.075	0.0023	10.127	0.0038
10.024	0.0007	10.076	0.0023	10.128	0.0039
10.025	0.0008	10.077	0.0023	10.129	0.0039
10.026	0.0008	10.078	0.0024	10.130	0.0039
10.027	0.0008	10.079	0.0024	10.131	0.0040
10.028	0.0008	10.080	0.0024	10.132	0.0040
10.029	0.0009	10.081	0.0024	10.133	0.0040
10.030	0.0009	10.082	0.0025	10.134	0.0040
10.031	0.0009	10.083	0.0025	10.135	0.0041
10.032	0.0010	10.084	0.0025	10.136	0.0041
10.033	0.0010	10.085	0.0026	10.137	0.0041
10.034	0.0010	10.086	0.0026	10.138	0.0042
10.035	0.0011	10.087	0.0026	10.139	0.0042
10.036	0.0011	10.088	0.0027	10.140	0.0042
10.037	0.0011	10.089	0.0027	10.141	0.0043
10.038	0.0011	10.090	0.0027	10.142	0.0043
10.039	0.0012	10.091	0.0027	10.143	0.0043
10.040	0.0012	10.092	0.0028	10.144	0.0043
10.041	0.0012	10.093	0.0028	10.145	0.0044
10.042	0.0013	10.094	0.0028	10.146	0.0044
10.043	0.0013	10.095	0.0029	10.147	0.0044
10.044	0.0013	10.096	0.0029	10.148	0.0045
10.045	0.0014	10.097	0.0029	10.149	0.0045
10.046	0.0014	10.098	0.0030	10.150	**0.0045**
10.047	0.0014	10.099	0.0030		
10.048	0.0014	10.100	0.0030		
10.049	0.0015	10.101	0.0031		
10.050	0.0015	10.102	0.0031		
10.051	0.0015	10.103	0.0031		

Summary for Pond 2P: Bioretention Cell

Inflow Area = 3,934.7 m², 0.00% Impervious, Inflow Depth = 11 mm for 2-Year event
Inflow = 0.0333 m³/s @ 0.35 hrs, Volume= 43.2 m³
Outflow = 0.0006 m³/s @ 0.75 hrs, Volume= 0.5 m³, Atten= 98%, Lag= 23.8 min
Primary = 0.0006 m³/s @ 0.75 hrs, Volume= 0.5 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Starting Elev= 0.400 m Surf.Area= 249.4 m² Storage= 20.0 m³
Peak Elev= 1.152 m @ 0.75 hrs Surf.Area= 395.4 m² Storage= 62.9 m³ (43.0 m³ above start)

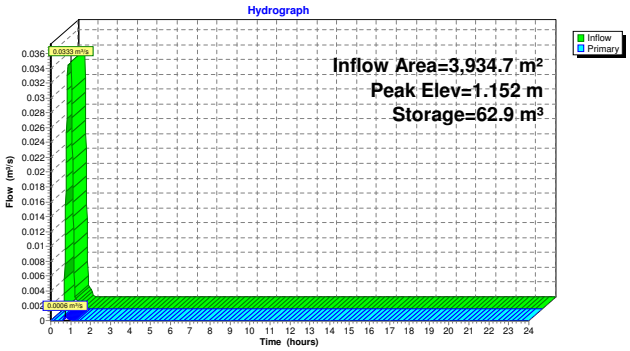
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 32.5 min (48.6 - 16.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1.000 m	35.6 m³	**12.47 mW x 10.00 mL x 0.25 mH Ponding Z=3.0**
#2	0.400 m	22.4 m³	**12.47 mW x 10.00 mL x 0.60 mH Engineered Soil Media** 74.8 m³ Overall x 30.0% Voids
#3	0.000 m	20.0 m³	**12.47 mW x 10.00 mL x 0.40 mH Clear Stone** 49.9 m³ Overall x 40.0% Voids
		78.0 m³	Total Available Storage

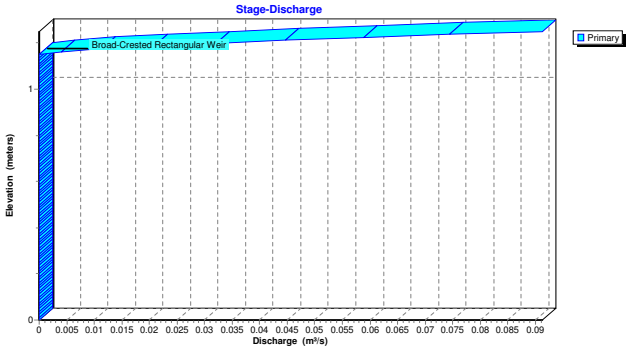
Device	Routing	Invert	Outlet Devices
#1	Primary	1.150 m	**2.00 m long x 0.50 m breadth Broad-Crested Rectangular Weir** Head (meters) 0.061 0.122 0.183 0.244 0.305 0.366 0.427 0.488 0.549 0.610 0.762 0.914 1.067 Coef. (Metric) 1.43 1.45 1.45 1.47 1.50 1.55 1.59 1.67 1.67 1.64 1.78 1.81 1.83

Primary OutFlow Max=0.0002 m³/s @ 0.75 hrs HW=1.152 m (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 0.0002 m³/s @ 0.06 m/s)

Pond 2P: Bioretention Cell



Pond 2P: Bioretention Cell



Stage-Discharge for Pond 2P: Bioretention Cell

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
0.000	0.0000	0.780	0.0000
0.015	0.0000	0.795	0.0000
0.030	0.0000	0.810	0.0000
0.045	0.0000	0.825	0.0000
0.060	0.0000	0.840	0.0000
0.075	0.0000	0.855	0.0000
0.090	0.0000	0.870	0.0000
0.105	0.0000	0.885	0.0000
0.120	0.0000	0.900	0.0000
0.135	0.0000	0.915	0.0000
0.150	0.0000	0.930	0.0000
0.165	0.0000	0.945	0.0000
0.180	0.0000	0.960	0.0000
0.195	0.0000	0.975	0.0000
0.210	0.0000	0.990	0.0000
0.225	0.0000	1.005	0.0000
0.240	0.0000	1.020	0.0000
0.255	0.0000	1.035	0.0000
0.270	0.0000	1.050	0.0000
0.285	0.0000	1.065	0.0000
0.300	0.0000	1.080	0.0000
0.315	0.0000	1.095	0.0000
0.330	0.0000	1.110	0.0000
0.345	0.0000	1.125	0.0000
0.360	0.0000	1.140	0.0000
0.375	0.0000	1.155	0.0010
0.390	0.0000	1.170	0.0081
0.405	0.0000	1.185	0.0187
0.420	0.0000	1.200	0.0320
0.435	0.0000	1.215	0.0474
0.450	0.0000	1.230	0.0650
0.465	0.0000	1.245	**0.0844**
0.480	0.0000		
0.495	0.0000		
0.510	0.0000		
0.525	0.0000		
0.540	0.0000		
0.555	0.0000		
0.570	0.0000		
0.585	0.0000		
0.600	0.0000		
0.615	0.0000		
0.630	0.0000		
0.645	0.0000		
0.660	0.0000		
0.675	0.0000		
0.690	0.0000		
0.705	0.0000		
0.720	0.0000		
0.735	0.0000		
0.750	0.0000		
0.765	0.0000		

Summary for Pond 3P: Roof Storage

Inflow Area = 447.4 m², 0.00% Impervious, Inflow Depth = 15 mm for 2-Year event
Inflow = 0.0053 m³/s @ 0.17 hrs, Volume= 6.6 m³
Outflow = 0.0030 m³/s @ 0.42 hrs, Volume= 6.6 m³, Atten= 42%, Lag= 15.0 min
Primary = 0.0030 m³/s @ 0.42 hrs, Volume= 6.6 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.060 m @ 0.42 hrs Surf.Area= 145.9 m² Storage= 2.9 m³

Plug-Flow detention time= 10.8 min calculated for 6.6 m³ (100% of inflow)
Center-of-Mass det. time= 10.8 min (26.3 - 15.5)

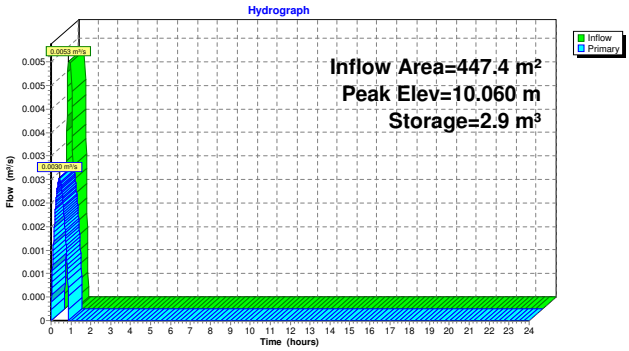
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	13.3 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	400.0	13.3	13.3	400.0

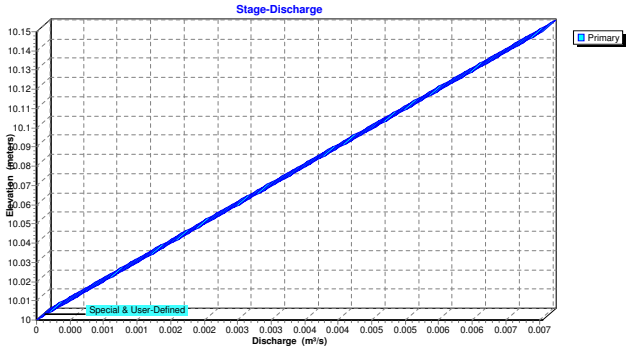
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 5.00** Head (meters) 0.000 0.150 Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0030 m³/s @ 0.42 hrs HW=10.060 m (Free Discharge)
└**1=Special & User-Defined** (Custom Controls 0.0030 m³/s)

Pond 3P: Roof Storage



Pond 3P: Roof Storage



Stage-Discharge for Pond 3P: Roof Storage

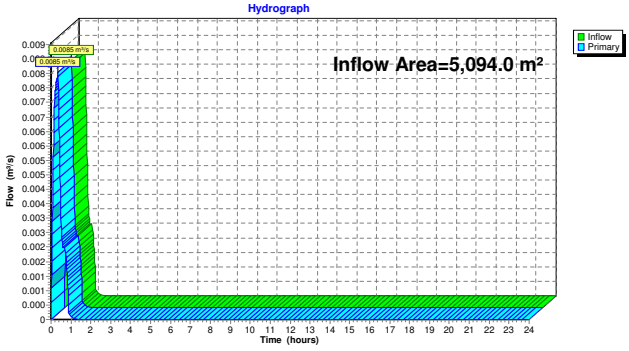
Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0026	10.104	0.0052
10.001	0.0001	10.053	0.0027	10.105	0.0053
10.002	0.0001	10.054	0.0027	10.106	0.0053
10.003	0.0002	10.055	0.0028	10.107	0.0054
10.004	0.0002	10.056	0.0028	10.108	0.0054
10.005	0.0003	10.057	0.0029	10.109	0.0055
10.006	0.0003	10.058	0.0029	10.110	0.0055
10.007	0.0004	10.059	0.0030	10.111	0.0056
10.008	0.0004	10.060	0.0030	10.112	0.0056
10.009	0.0005	10.061	0.0031	10.113	0.0057
10.010	0.0005	10.062	0.0031	10.114	0.0057
10.011	0.0006	10.063	0.0032	10.115	0.0058
10.012	0.0006	10.064	0.0032	10.116	0.0058
10.013	0.0007	10.065	0.0033	10.117	0.0059
10.014	0.0007	10.066	0.0033	10.118	0.0059
10.015	0.0008	10.067	0.0034	10.119	0.0060
10.016	0.0008	10.068	0.0034	10.120	0.0060
10.017	0.0009	10.069	0.0035	10.121	0.0061
10.018	0.0009	10.070	0.0035	10.122	0.0061
10.019	0.0010	10.071	0.0036	10.123	0.0062
10.020	0.0010	10.072	0.0036	10.124	0.0062
10.021	0.0011	10.073	0.0037	10.125	0.0063
10.022	0.0011	10.074	0.0037	10.126	0.0063
10.023	0.0012	10.075	0.0038	10.127	0.0064
10.024	0.0012	10.076	0.0038	10.128	0.0064
10.025	0.0013	10.077	0.0039	10.129	0.0065
10.026	0.0013	10.078	0.0039	10.130	0.0065
10.027	0.0014	10.079	0.0040	10.131	0.0066
10.028	0.0014	10.080	0.0040	10.132	0.0066
10.029	0.0015	10.081	0.0041	10.133	0.0067
10.030	0.0015	10.082	0.0041	10.134	0.0067
10.031	0.0016	10.083	0.0042	10.135	0.0068
10.032	0.0016	10.084	0.0042	10.136	0.0068
10.033	0.0017	10.085	0.0043	10.137	0.0069
10.034	0.0017	10.086	0.0043	10.138	0.0069
10.035	0.0018	10.087	0.0044	10.139	0.0070
10.036	0.0018	10.088	0.0044	10.140	0.0070
10.037	0.0019	10.089	0.0045	10.141	0.0071
10.038	0.0019	10.090	0.0045	10.142	0.0071
10.039	0.0020	10.091	0.0046	10.143	0.0072
10.040	0.0020	10.092	0.0046	10.144	0.0072
10.041	0.0021	10.093	0.0047	10.145	0.0073
10.042	0.0021	10.094	0.0047	10.146	0.0073
10.043	0.0022	10.095	0.0048	10.147	0.0074
10.044	0.0022	10.096	0.0048	10.148	0.0074
10.045	0.0023	10.097	0.0049	10.149	0.0075
10.046	0.0023	10.098	0.0049	10.150	**0.0076**
10.047	0.0024	10.099	0.0050		
10.048	0.0024	10.100	0.0050		
10.049	0.0025	10.101	0.0051		
10.050	0.0025	10.102	0.0051		
10.051	0.0026	10.103	0.0052		

Summary for Link 1L: Outlet

Inflow Area = 5,094.0 m², 0.00% Impervious, Inflow Depth = 3 mm for 2-Year event
Inflow = 0.0085 m³/s @ 0.35 hrs, Volume= 14.1 m³
Primary = 0.0085 m³/s @ 0.35 hrs, Volume= 14.1 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 1L: Outlet



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Runoff Area=233.6 m² 0.00% Impervious Runoff Depth=20 mm
Tc=10.0 min C=0.90 Runoff=0.0037 m³/s 4.7 m³

Subcatchment 2S: At-Grade Runoff Area=2,069.5 m² 0.00% Impervious Runoff Depth=15 mm
Tc=10.0 min C=0.68 Runoff=0.0248 m³/s 31.2 m³

Subcatchment 3S: External Road Runoff Area=1,631.6 m² 0.00% Impervious Runoff Depth=14 mm
Tc=10.0 min C=0.62 Runoff=0.0178 m³/s 22.4 m³

Subcatchment 4S: Uncontrolled Runoff Area=711.9 m² 0.00% Impervious Runoff Depth=13 mm
Tc=10.0 min C=0.60 Runoff=0.0075 m³/s 9.5 m³

Subcatchment 5S: Building Runoff Area=447.4 m² 0.00% Impervious Runoff Depth=20 mm
Tc=10.0 min C=0.90 Runoff=0.0071 m³/s 8.9 m³

Pond 1P: Roof Storage Peak Elev=10.069 m Storage=2.1 m³ Inflow=0.0037 m³/s 4.7 m³
Outflow=0.0021 m³/s 4.7 m³

Pond 2P: Bioretention Cell Peak Elev=1.189 m Storage=68.5 m³ Inflow=0.0445 m³/s 58.3 m³
Outflow=0.0224 m³/s 15.6 m³

Pond 3P: Roof Storage Peak Elev=10.070 m Storage=4.6 m³ Inflow=0.0071 m³/s 8.9 m³
Outflow=0.0035 m³/s 8.9 m³

Link 1L: Outlet Inflow=0.0297 m³/s 34.0 m³
Primary=0.0297 m³/s 34.0 m³

Total Runoff Area = 5,094.0 m² Runoff Volume = 76.7 m³ Average Runoff Depth = 15 mm
100.00% Pervious = 5,094.0 m² 0.00% Impervious = 0.0 m²

Summary for Subcatchment 1S: Building

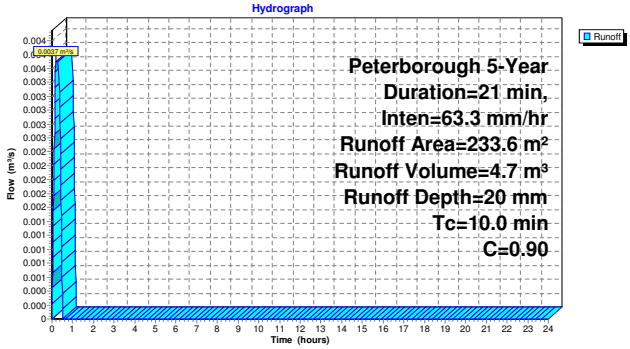
Runoff = 0.0037 m³/s @ 0.17 hrs, Volume= 4.7 m³, Depth= 20 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 5-Year Duration=21 min, Inten=63.3 mm/hr

Area (m²)	C	Description
233.6	0.90	Impervious Roof
233.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 1S: Building



Summary for Subcatchment 2S: At-Grade

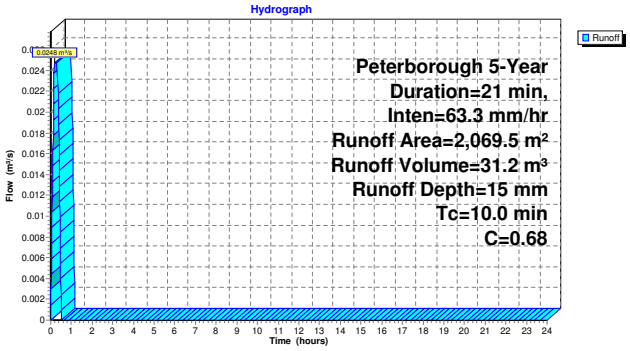
Runoff = 0.0248 m³/s @ 0.17 hrs, Volume= 31.2 m³, Depth= 15 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 5-Year Duration=21 min, Inten=63.3 mm/hr

Area (m²)	C	Description
693.5	0.25	Soft Landscaping
1,376.0	0.90	At-Grade Impervious
2,069.5	0.68	Weighted Average
2,069.5		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 2S: At-Grade



Summary for Subcatchment 3S: External Road

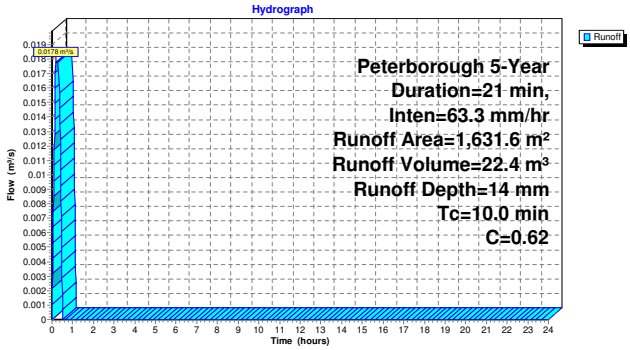
Runoff = 0.0178 m³/s @ 0.17 hrs, Volume= 22.4 m³, Depth= 14 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 5-Year Duration=21 min, Inten=63.3 mm/hr

Area (m²)	C	Description
933.1	0.90	External Impervious
698.5	0.25	External Pervious
1,631.6	0.62	Weighted Average
1,631.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 3S: External Road



Summary for Subcatchment 4S: Uncontrolled

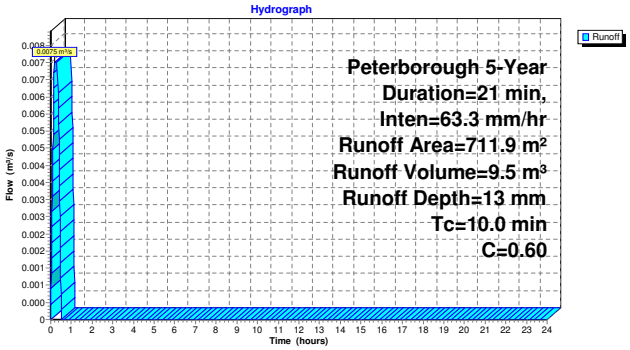
Runoff = 0.0075 m³/s @ 0.17 hrs, Volume= 9.5 m³, Depth= 13 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 5-Year Duration=21 min, Inten=63.3 mm/hr

Area (m²)	C	Description
333.7	0.25	Soft Landscaping
378.2	0.90	At-Grade Impervious
711.9	0.60	Weighted Average
711.9		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 4S: Uncontrolled



Summary for Subcatchment 5S: Building

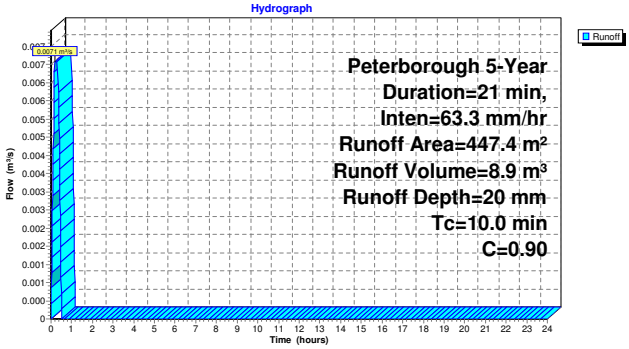
Runoff = 0.0071 m³/s @ 0.17 hrs, Volume= 8.9 m³, Depth= 20 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 5-Year Duration=21 min, Inten=63.3 mm/hr

Area (m²)	C	Description
447.4	0.90	Impervious Roof
447.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry, Time of Concentration (Direct Entry)**

Subcatchment 5S: Building



Summary for Pond 1P: Roof Storage

Inflow Area = 233.6 m², 0.00% Impervious, Inflow Depth = 20 mm for 5-Year event
Inflow = 0.0037 m³/s @ 0.17 hrs, Volume= 4.7 m³
Outflow = 0.0021 m³/s @ 0.42 hrs, Volume= 4.7 m³, Atten= 44%, Lag= 15.2 min
Primary = 0.0021 m³/s @ 0.42 hrs, Volume= 4.7 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.069 m @ 0.42 hrs Surf.Area= 94.0 m² Storage= 2.1 m³

Plug-Flow detention time= 11.5 min calculated for 4.7 m³ (100% of inflow)
Center-of-Mass det. time= 11.6 min (27.1 - 15.5)

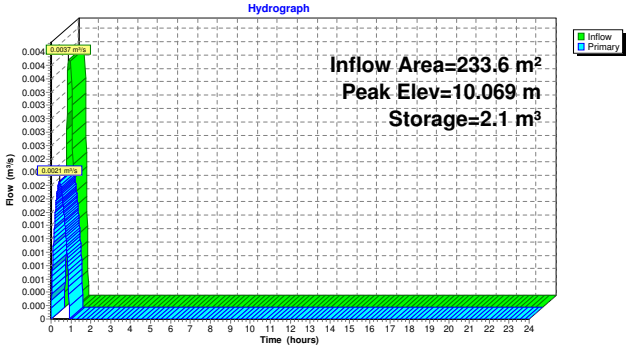
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	6.7 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	200.0	6.7	6.7	200.0

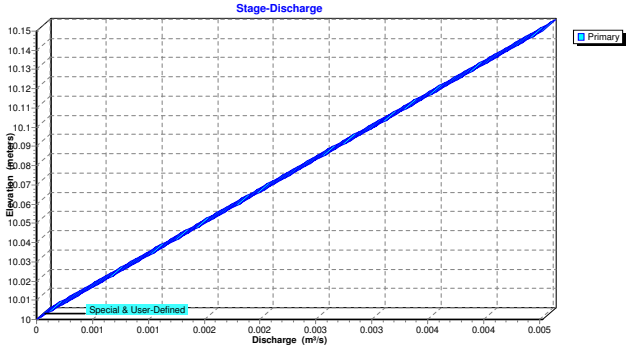
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 3.00**
			Head (meters) 0.000 0.150
			Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0021 m³/s @ 0.42 hrs HW=10.069 m (Free Discharge)
1=Special & User-Defined (Custom Controls 0.0021 m³/s)

Pond 1P: Roof Storage



Pond 1P: Roof Storage



Stage-Discharge for Pond 1P: Roof Storage

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0016	10.104	0.0031
10.001	0.0000	10.053	0.0016	10.105	0.0032
10.002	0.0001	10.054	0.0016	10.106	0.0032
10.003	0.0001	10.055	0.0017	10.107	0.0032
10.004	0.0001	10.056	0.0017	10.108	0.0033
10.005	0.0002	10.057	0.0017	10.109	0.0033
10.006	0.0002	10.058	0.0018	10.110	0.0033
10.007	0.0002	10.059	0.0018	10.111	0.0034
10.008	0.0002	10.060	0.0018	10.112	0.0034
10.009	0.0003	10.061	0.0018	10.113	0.0034
10.010	0.0003	10.062	0.0019	10.114	0.0034
10.011	0.0003	10.063	0.0019	10.115	0.0035
10.012	0.0004	10.064	0.0019	10.116	0.0035
10.013	0.0004	10.065	0.0020	10.117	0.0035
10.014	0.0004	10.066	0.0020	10.118	0.0036
10.015	0.0005	10.067	0.0020	10.119	0.0036
10.016	0.0005	10.068	0.0021	10.120	0.0036
10.017	0.0005	10.069	0.0021	10.121	0.0037
10.018	0.0005	10.070	0.0021	10.122	0.0037
10.019	0.0006	10.071	0.0021	10.123	0.0037
10.020	0.0006	10.072	0.0022	10.124	0.0037
10.021	0.0006	10.073	0.0022	10.125	0.0038
10.022	0.0007	10.074	0.0022	10.126	0.0038
10.023	0.0007	10.075	0.0023	10.127	0.0038
10.024	0.0007	10.076	0.0023	10.128	0.0039
10.025	0.0008	10.077	0.0023	10.129	0.0039
10.026	0.0008	10.078	0.0024	10.130	0.0039
10.027	0.0008	10.079	0.0024	10.131	0.0040
10.028	0.0008	10.080	0.0024	10.132	0.0040
10.029	0.0009	10.081	0.0024	10.133	0.0040
10.030	0.0009	10.082	0.0025	10.134	0.0040
10.031	0.0009	10.083	0.0025	10.135	0.0041
10.032	0.0010	10.084	0.0025	10.136	0.0041
10.033	0.0010	10.085	0.0026	10.137	0.0041
10.034	0.0010	10.086	0.0026	10.138	0.0042
10.035	0.0011	10.087	0.0026	10.139	0.0042
10.036	0.0011	10.088	0.0027	10.140	0.0042
10.037	0.0011	10.089	0.0027	10.141	0.0043
10.038	0.0011	10.090	0.0027	10.142	0.0043
10.039	0.0012	10.091	0.0027	10.143	0.0043
10.040	0.0012	10.092	0.0028	10.144	0.0043
10.041	0.0012	10.093	0.0028	10.145	0.0044
10.042	0.0013	10.094	0.0028	10.146	0.0044
10.043	0.0013	10.095	0.0029	10.147	0.0044
10.044	0.0013	10.096	0.0029	10.148	0.0045
10.045	0.0014	10.097	0.0029	10.149	0.0045
10.046	0.0014	10.098	0.0030	10.150	**0.0045**
10.047	0.0014	10.099	0.0030		
10.048	0.0014	10.100	0.0030		
10.049	0.0015	10.101	0.0031		
10.050	0.0015	10.102	0.0031		
10.051	0.0015	10.103	0.0031		

Summary for Pond 2P: Bioretention Cell

Inflow Area = 3,934.7 m², 0.00% Impervious, Inflow Depth = 15 mm for 5-Year event
Inflow = 0.0445 m³/s @ 0.35 hrs, Volume= 58.3 m³
Outflow = 0.0224 m³/s @ 0.44 hrs, Volume= 15.6 m³, Atten= 50%, Lag= 5.2 min
Primary = 0.0224 m³/s @ 0.44 hrs, Volume= 15.6 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Starting Elev= 0.400 m Surf.Area= 249.4 m² Storage= 20.0 m³
Peak Elev= 1.189 m @ 0.44 hrs Surf.Area= 400.9 m² Storage= 68.5 m³ (48.6 m³ above start)

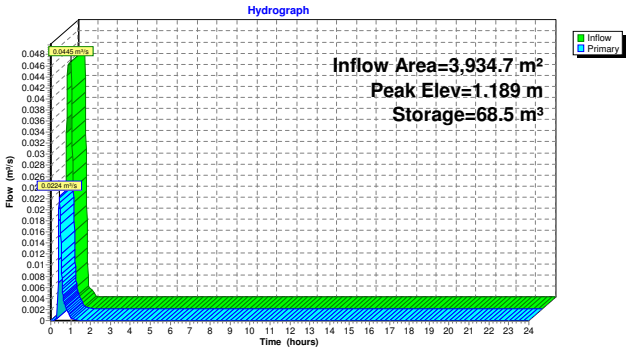
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 15.5 min (31.9 - 16.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1.000 m	35.6 m³	**12.47 mW x 10.00 mL x 0.25 mH Ponding Z=3.0**
#2	0.400 m	22.4 m³	**12.47 mW x 10.00 mL x 0.60 mH Engineered Soil Media** 74.8 m³ Overall x 30.0% Voids
#3	0.000 m	20.0 m³	**12.47 mW x 10.00 mL x 0.40 mH Clear Stone** 49.9 m³ Overall x 40.0% Voids
		78.0 m³	Total Available Storage

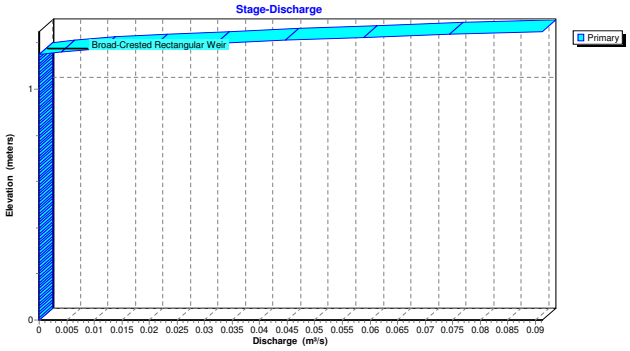
Device	Routing	Invert	Outlet Devices
#1	Primary	1.150 m	**2.00 m long x 0.50 m breadth Broad-Crested Rectangular Weir** Head (meters) 0.061 0.122 0.183 0.244 0.305 0.366 0.427 0.488 0.549 0.610 0.762 0.914 1.067 Coef. (Metric) 1.43 1.45 1.45 1.47 1.50 1.55 1.59 1.67 1.67 1.64 1.78 1.81 1.83

Primary OutFlow Max=0.0223 m³/s @ 0.44 hrs HW=1.189 m (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.0223 m³/s @ 0.28 m/s)

Pond 2P: Bioretention Cell



Pond 2P: Bioretention Cell



Stage-Discharge for Pond 2P: Bioretention Cell

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
0.000	0.0000	0.780	0.0000
0.015	0.0000	0.795	0.0000
0.030	0.0000	0.810	0.0000
0.045	0.0000	0.825	0.0000
0.060	0.0000	0.840	0.0000
0.075	0.0000	0.855	0.0000
0.090	0.0000	0.870	0.0000
0.105	0.0000	0.885	0.0000
0.120	0.0000	0.900	0.0000
0.135	0.0000	0.915	0.0000
0.150	0.0000	0.930	0.0000
0.165	0.0000	0.945	0.0000
0.180	0.0000	0.960	0.0000
0.195	0.0000	0.975	0.0000
0.210	0.0000	0.990	0.0000
0.225	0.0000	1.005	0.0000
0.240	0.0000	1.020	0.0000
0.255	0.0000	1.035	0.0000
0.270	0.0000	1.050	0.0000
0.285	0.0000	1.065	0.0000
0.300	0.0000	1.080	0.0000
0.315	0.0000	1.095	0.0000
0.330	0.0000	1.110	0.0000
0.345	0.0000	1.125	0.0000
0.360	0.0000	1.140	0.0000
0.375	0.0000	1.155	0.0010
0.390	0.0000	1.170	0.0081
0.405	0.0000	1.185	0.0187
0.420	0.0000	1.200	0.0320
0.435	0.0000	1.215	0.0474
0.450	0.0000	1.230	0.0650
0.465	0.0000	1.245	**0.0844**
0.480	0.0000		
0.495	0.0000		
0.510	0.0000		
0.525	0.0000		
0.540	0.0000		
0.555	0.0000		
0.570	0.0000		
0.585	0.0000		
0.600	0.0000		
0.615	0.0000		
0.630	0.0000		
0.645	0.0000		
0.660	0.0000		
0.675	0.0000		
0.690	0.0000		
0.705	0.0000		
0.720	0.0000		
0.735	0.0000		
0.750	0.0000		
0.765	0.0000		

Summary for Pond 3P: Roof Storage

Inflow Area = 447.4 m², 0.00% Impervious, Inflow Depth = 20 mm for 5-Year event
Inflow = 0.0071 m³/s @ 0.17 hrs, Volume= 8.9 m³
Outflow = 0.0035 m³/s @ 0.43 hrs, Volume= 8.9 m³, Atten= 50%, Lag= 15.8 min
Primary = 0.0035 m³/s @ 0.43 hrs, Volume= 8.9 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.070 m @ 0.43 hrs Surf.Area= 196.8 m² Storage= 4.6 m³

Plug-Flow detention time= 14.3 min calculated for 8.9 m³ (100% of inflow)
Center-of-Mass det. time= 14.3 min (29.8 - 15.5)

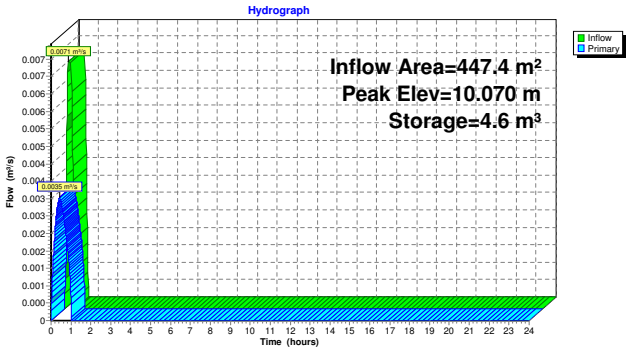
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	13.3 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	400.0	13.3	13.3	400.0

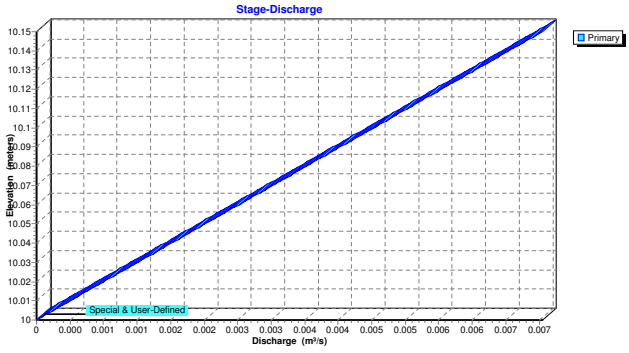
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 5.00** Head (meters) 0.000 0.150 Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0035 m³/s @ 0.43 hrs HW=10.070 m (Free Discharge)
1=Special & User-Defined (Custom Controls 0.0035 m³/s)

Pond 3P: Roof Storage



Pond 3P: Roof Storage



Stage-Discharge for Pond 3P: Roof Storage

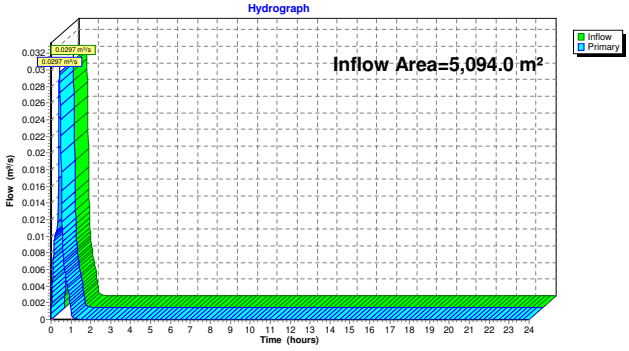
Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0026	10.104	0.0052
10.001	0.0001	10.053	0.0027	10.105	0.0053
10.002	0.0001	10.054	0.0027	10.106	0.0053
10.003	0.0002	10.055	0.0028	10.107	0.0054
10.004	0.0002	10.056	0.0028	10.108	0.0054
10.005	0.0003	10.057	0.0029	10.109	0.0055
10.006	0.0003	10.058	0.0029	10.110	0.0055
10.007	0.0004	10.059	0.0030	10.111	0.0056
10.008	0.0004	10.060	0.0030	10.112	0.0056
10.009	0.0005	10.061	0.0031	10.113	0.0057
10.010	0.0005	10.062	0.0031	10.114	0.0057
10.011	0.0006	10.063	0.0032	10.115	0.0058
10.012	0.0006	10.064	0.0032	10.116	0.0058
10.013	0.0007	10.065	0.0033	10.117	0.0059
10.014	0.0007	10.066	0.0033	10.118	0.0059
10.015	0.0008	10.067	0.0034	10.119	0.0060
10.016	0.0008	10.068	0.0034	10.120	0.0060
10.017	0.0009	10.069	0.0035	10.121	0.0061
10.018	0.0009	10.070	0.0035	10.122	0.0061
10.019	0.0010	10.071	0.0036	10.123	0.0062
10.020	0.0010	10.072	0.0036	10.124	0.0062
10.021	0.0011	10.073	0.0037	10.125	0.0063
10.022	0.0011	10.074	0.0037	10.126	0.0063
10.023	0.0012	10.075	0.0038	10.127	0.0064
10.024	0.0012	10.076	0.0038	10.128	0.0064
10.025	0.0013	10.077	0.0039	10.129	0.0065
10.026	0.0013	10.078	0.0039	10.130	0.0065
10.027	0.0014	10.079	0.0040	10.131	0.0066
10.028	0.0014	10.080	0.0040	10.132	0.0066
10.029	0.0015	10.081	0.0041	10.133	0.0067
10.030	0.0015	10.082	0.0041	10.134	0.0067
10.031	0.0016	10.083	0.0042	10.135	0.0068
10.032	0.0016	10.084	0.0042	10.136	0.0068
10.033	0.0017	10.085	0.0043	10.137	0.0069
10.034	0.0017	10.086	0.0043	10.138	0.0069
10.035	0.0018	10.087	0.0044	10.139	0.0070
10.036	0.0018	10.088	0.0044	10.140	0.0070
10.037	0.0019	10.089	0.0045	10.141	0.0071
10.038	0.0019	10.090	0.0045	10.142	0.0071
10.039	0.0020	10.091	0.0046	10.143	0.0072
10.040	0.0020	10.092	0.0046	10.144	0.0072
10.041	0.0021	10.093	0.0047	10.145	0.0073
10.042	0.0021	10.094	0.0047	10.146	0.0073
10.043	0.0022	10.095	0.0048	10.147	0.0074
10.044	0.0022	10.096	0.0048	10.148	0.0074
10.045	0.0023	10.097	0.0049	10.149	0.0075
10.046	0.0023	10.098	0.0049	10.150	**0.0076**
10.047	0.0024	10.099	0.0050		
10.048	0.0024	10.100	0.0050		
10.049	0.0025	10.101	0.0051		
10.050	0.0025	10.102	0.0051		
10.051	0.0026	10.103	0.0052		

Summary for Link 1L: Outlet

Inflow Area = 5,094.0 m², 0.00% Impervious, Inflow Depth = 7 mm for 5-Year event
Inflow = 0.0297 m³/s @ 0.43 hrs, Volume= 34.0 m³
Primary = 0.0297 m³/s @ 0.43 hrs, Volume= 34.0 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 1L: Outlet



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Runoff Area=233.6 m² 0.00% Impervious Runoff Depth=24 mm
Tc=10.0 min C=0.90 Runoff=0.0044 m³/s 5.5 m³

Subcatchment 2S: At-Grade Runoff Area=2,069.5 m² 0.00% Impervious Runoff Depth=18 mm
Tc=10.0 min C=0.68 Runoff=0.0294 m³/s 37.0 m³

Subcatchment 3S: External Road Runoff Area=1,631.6 m² 0.00% Impervious Runoff Depth=16 mm
Tc=10.0 min C=0.62 Runoff=0.0211 m³/s 26.6 m³

Subcatchment 4S: Uncontrolled Runoff Area=711.9 m² 0.00% Impervious Runoff Depth=16 mm
Tc=10.0 min C=0.60 Runoff=0.0089 m³/s 11.2 m³

Subcatchment 5S: Building Runoff Area=447.4 m² 0.00% Impervious Runoff Depth=24 mm
Tc=10.0 min C=0.90 Runoff=0.0084 m³/s 10.6 m³

Pond 1P: Roof Storage Peak Elev=10.075 m Storage=2.8 m³ Inflow=0.0044 m³/s 5.5 m³
Outflow=0.0023 m³/s 5.5 m³

Pond 2P: Bioretention Cell Peak Elev=1.205 m Storage=70.9 m³ Inflow=0.0527 m³/s 69.2 m³
Outflow=0.0371 m³/s 26.4 m³

Pond 3P: Roof Storage Peak Elev=10.076 m Storage=5.9 m³ Inflow=0.0084 m³/s 10.6 m³
Outflow=0.0038 m³/s 10.6 m³

Link 1L: Outlet Inflow=0.0472 m³/s 48.3 m³
Primary=0.0472 m³/s 48.3 m³

Total Runoff Area = 5,094.0 m² Runoff Volume = 91.0 m³ Average Runoff Depth = 18 mm
100.00% Pervious = 5,094.0 m² 0.00% Impervious = 0.0 m²

Summary for Subcatchment 1S: Building

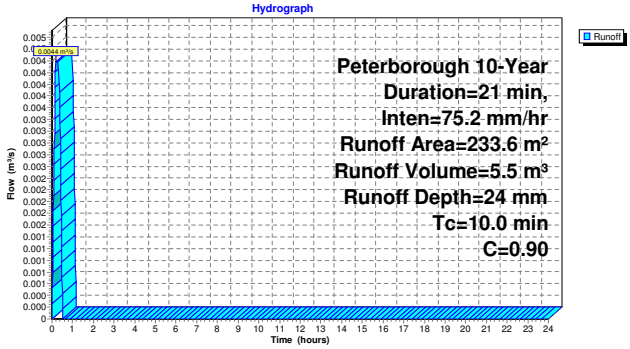
Runoff = 0.0044 m³/s @ 0.17 hrs, Volume= 5.5 m³, Depth= 24 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 10-Year Duration=21 min, Inten=75.2 mm/hr

Area (m²)	C	Description
233.6	0.90	Impervious Roof
233.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 1S: Building



Summary for Subcatchment 2S: At-Grade

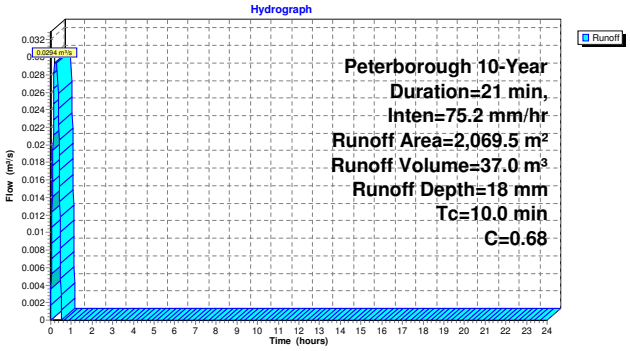
Runoff = 0.0294 m³/s @ 0.17 hrs, Volume= 37.0 m³, Depth= 18 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 10-Year Duration=21 min, Inten=75.2 mm/hr

Area (m²)	C	Description
693.5	0.25	Soft Landscaping
1,376.0	0.90	At-Grade Impervious
2,069.5	0.68	Weighted Average
2,069.5		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 2S: At-Grade



Summary for Subcatchment 3S: External Road

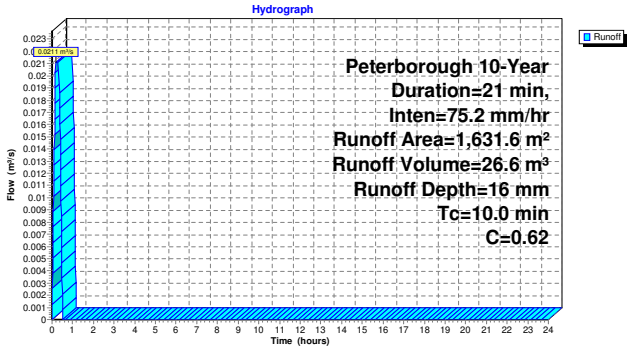
Runoff = 0.0211 m³/s @ 0.17 hrs, Volume= 26.6 m³, Depth= 16 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 10-Year Duration=21 min, Inten=75.2 mm/hr

Area (m²)	C	Description
933.1	0.90	External Impervious
698.5	0.25	External Pervious
1,631.6	0.62	Weighted Average
1,631.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 3S: External Road



Summary for Subcatchment 4S: Uncontrolled

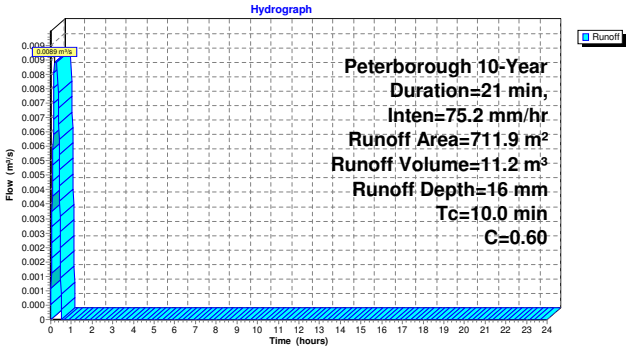
Runoff = 0.0089 m³/s @ 0.17 hrs, Volume= 11.2 m³, Depth= 16 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 10-Year Duration=21 min, Inten=75.2 mm/hr

Area (m²)	C	Description
333.7	0.25	Soft Landscaping
378.2	0.90	At-Grade Impervious
711.9	0.60	Weighted Average
711.9		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 4S: Uncontrolled



Summary for Subcatchment 5S: Building

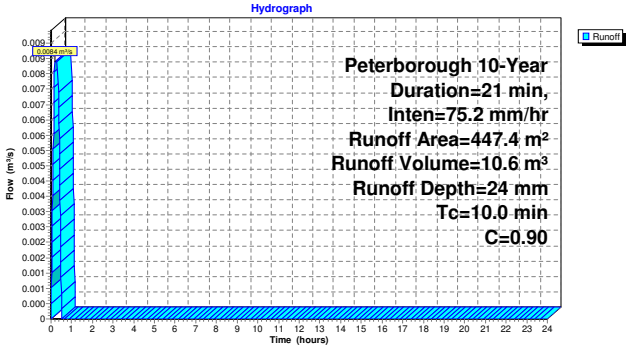
Runoff = 0.0084 m³/s @ 0.17 hrs, Volume= 10.6 m³, Depth= 24 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 10-Year Duration=21 min, Inten=75.2 mm/hr

Area (m²)	C	Description
447.4	0.90	Impervious Roof
447.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry, Time of Concentration (Direct Entry)**

Subcatchment 5S: Building



Summary for Pond 1P: Roof Storage

Inflow Area = 233.6 m², 0.00% Impervious, Inflow Depth = 24 mm for 10-Year event
Inflow = 0.0044 m³/s @ 0.17 hrs, Volume= 5.5 m³
Outflow = 0.0023 m³/s @ 0.43 hrs, Volume= 5.5 m³, Atten= 49%, Lag= 15.7 min
Primary = 0.0023 m³/s @ 0.43 hrs, Volume= 5.5 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.075 m @ 0.43 hrs Surf.Area= 111.5 m² Storage= 2.8 m³

Plug-Flow detention time= 13.6 min calculated for 5.5 m³ (100% of inflow)
Center-of-Mass det. time= 13.6 min (29.1 - 15.5)

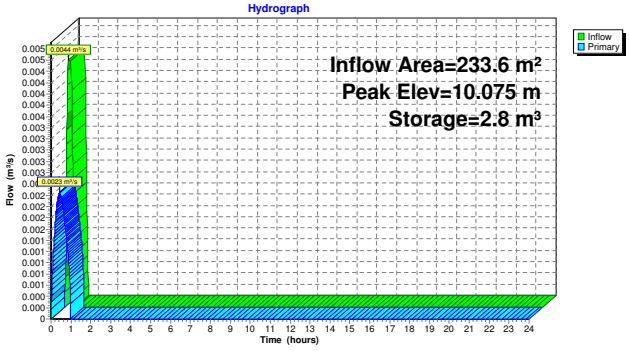
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	6.7 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	200.0	6.7	6.7	200.0

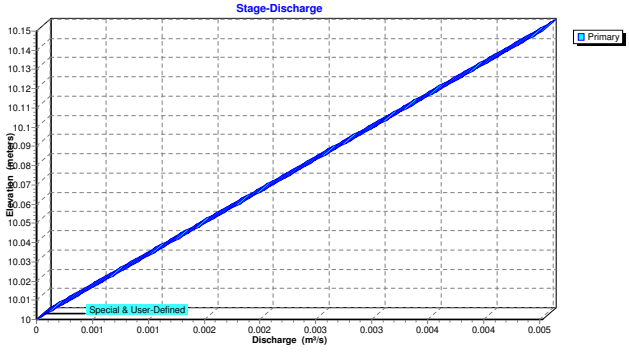
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 3.00**
			Head (meters) 0.000 0.150
			Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0023 m³/s @ 0.43 hrs HW=10.075 m (Free Discharge)
1=Special & User-Defined (Custom Controls 0.0023 m³/s)

Pond 1P: Roof Storage



Pond 1P: Roof Storage



Stage-Discharge for Pond 1P: Roof Storage

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0016	10.104	0.0031
10.001	0.0000	10.053	0.0016	10.105	0.0032
10.002	0.0001	10.054	0.0016	10.106	0.0032
10.003	0.0001	10.055	0.0017	10.107	0.0032
10.004	0.0001	10.056	0.0017	10.108	0.0033
10.005	0.0002	10.057	0.0017	10.109	0.0033
10.006	0.0002	10.058	0.0018	10.110	0.0033
10.007	0.0002	10.059	0.0018	10.111	0.0034
10.008	0.0002	10.060	0.0018	10.112	0.0034
10.009	0.0003	10.061	0.0018	10.113	0.0034
10.010	0.0003	10.062	0.0019	10.114	0.0034
10.011	0.0003	10.063	0.0019	10.115	0.0035
10.012	0.0004	10.064	0.0019	10.116	0.0035
10.013	0.0004	10.065	0.0020	10.117	0.0035
10.014	0.0004	10.066	0.0020	10.118	0.0036
10.015	0.0005	10.067	0.0020	10.119	0.0036
10.016	0.0005	10.068	0.0021	10.120	0.0036
10.017	0.0005	10.069	0.0021	10.121	0.0037
10.018	0.0005	10.070	0.0021	10.122	0.0037
10.019	0.0006	10.071	0.0021	10.123	0.0037
10.020	0.0006	10.072	0.0022	10.124	0.0037
10.021	0.0006	10.073	0.0022	10.125	0.0038
10.022	0.0007	10.074	0.0022	10.126	0.0038
10.023	0.0007	10.075	0.0023	10.127	0.0038
10.024	0.0007	10.076	0.0023	10.128	0.0039
10.025	0.0008	10.077	0.0023	10.129	0.0039
10.026	0.0008	10.078	0.0024	10.130	0.0039
10.027	0.0008	10.079	0.0024	10.131	0.0040
10.028	0.0008	10.080	0.0024	10.132	0.0040
10.029	0.0009	10.081	0.0024	10.133	0.0040
10.030	0.0009	10.082	0.0025	10.134	0.0040
10.031	0.0009	10.083	0.0025	10.135	0.0041
10.032	0.0010	10.084	0.0025	10.136	0.0041
10.033	0.0010	10.085	0.0026	10.137	0.0041
10.034	0.0010	10.086	0.0026	10.138	0.0042
10.035	0.0011	10.087	0.0026	10.139	0.0042
10.036	0.0011	10.088	0.0027	10.140	0.0042
10.037	0.0011	10.089	0.0027	10.141	0.0043
10.038	0.0011	10.090	0.0027	10.142	0.0043
10.039	0.0012	10.091	0.0027	10.143	0.0043
10.040	0.0012	10.092	0.0028	10.144	0.0043
10.041	0.0012	10.093	0.0028	10.145	0.0044
10.042	0.0013	10.094	0.0028	10.146	0.0044
10.043	0.0013	10.095	0.0029	10.147	0.0044
10.044	0.0013	10.096	0.0029	10.148	0.0045
10.045	0.0014	10.097	0.0029	10.149	0.0045
10.046	0.0014	10.098	0.0030	10.150	**0.0045**
10.047	0.0014	10.099	0.0030		
10.048	0.0014	10.100	0.0030		
10.049	0.0015	10.101	0.0031		
10.050	0.0015	10.102	0.0031		
10.051	0.0015	10.103	0.0031		

Summary for Pond 2P: Bioretention Cell

Inflow Area = 3,934.7 m², 0.00% Impervious, Inflow Depth = 18 mm for 10-Year event
Inflow = 0.0527 m³/s @ 0.35 hrs, Volume= 69.2 m³
Outflow = 0.0371 m³/s @ 0.40 hrs, Volume= 26.4 m³, Atten= 30%, Lag= 3.1 min
Primary = 0.0371 m³/s @ 0.40 hrs, Volume= 26.4 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Starting Elev= 0.400 m Surf.Area= 249.4 m² Storage= 20.0 m³
Peak Elev= 1.205 m @ 0.40 hrs Surf.Area= 403.3 m² Storage= 70.9 m³ (50.9 m³ above start)

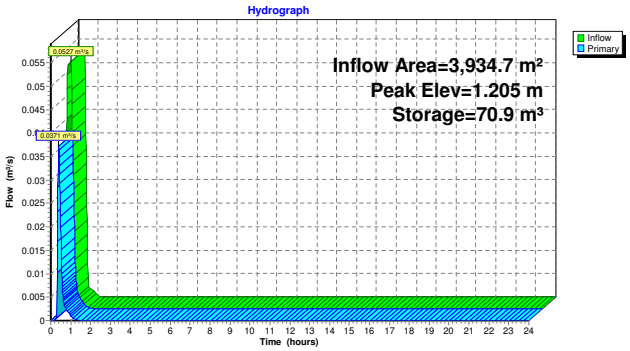
Plug-Flow detention time= 38.5 min calculated for 6.5 m³ (9% of inflow)
Center-of-Mass det. time= 13.0 min (29.6 - 16.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1.000 m	35.6 m³	**12.47 mW x 10.00 mL x 0.25 mH Ponding Z=3.0**
#2	0.400 m	22.4 m³	**12.47 mW x 10.00 mL x 0.60 mH Engineered Soil Media** 74.8 m³ Overall x 30.0% Voids
#3	0.000 m	20.0 m³	**12.47 mW x 10.00 mL x 0.40 mH Clear Stone** 49.9 m³ Overall x 40.0% Voids
		78.0 m³	Total Available Storage

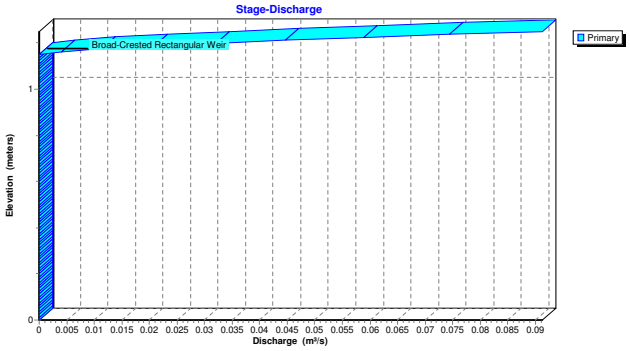
Device	Routing	Invert	Outlet Devices
#1	Primary	1.150 m	**2.00 m long x 0.50 m breadth Broad-Crested Rectangular Weir** Head (meters) 0.061 0.122 0.183 0.244 0.305 0.366 0.427 0.488 0.549 0.610 0.762 0.914 1.067 Coef. (Metric) 1.43 1.45 1.45 1.47 1.50 1.55 1.59 1.67 1.67 1.64 1.78 1.81 1.83

Primary OutFlow Max=0.0368 m³/s @ 0.40 hrs HW=1.205 m (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.0368 m³/s @ 0.34 m/s)

Pond 2P: Bioretention Cell



Pond 2P: Bioretention Cell



Stage-Discharge for Pond 2P: Bioretention Cell

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
0.000	0.0000	0.780	0.0000
0.015	0.0000	0.795	0.0000
0.030	0.0000	0.810	0.0000
0.045	0.0000	0.825	0.0000
0.060	0.0000	0.840	0.0000
0.075	0.0000	0.855	0.0000
0.090	0.0000	0.870	0.0000
0.105	0.0000	0.885	0.0000
0.120	0.0000	0.900	0.0000
0.135	0.0000	0.915	0.0000
0.150	0.0000	0.930	0.0000
0.165	0.0000	0.945	0.0000
0.180	0.0000	0.960	0.0000
0.195	0.0000	0.975	0.0000
0.210	0.0000	0.990	0.0000
0.225	0.0000	1.005	0.0000
0.240	0.0000	1.020	0.0000
0.255	0.0000	1.035	0.0000
0.270	0.0000	1.050	0.0000
0.285	0.0000	1.065	0.0000
0.300	0.0000	1.080	0.0000
0.315	0.0000	1.095	0.0000
0.330	0.0000	1.110	0.0000
0.345	0.0000	1.125	0.0000
0.360	0.0000	1.140	0.0000
0.375	0.0000	1.155	0.0010
0.390	0.0000	1.170	0.0081
0.405	0.0000	1.185	0.0187
0.420	0.0000	1.200	0.0320
0.435	0.0000	1.215	0.0474
0.450	0.0000	1.230	0.0650
0.465	0.0000	1.245	**0.0844**
0.480	0.0000		
0.495	0.0000		
0.510	0.0000		
0.525	0.0000		
0.540	0.0000		
0.555	0.0000		
0.570	0.0000		
0.585	0.0000		
0.600	0.0000		
0.615	0.0000		
0.630	0.0000		
0.645	0.0000		
0.660	0.0000		
0.675	0.0000		
0.690	0.0000		
0.705	0.0000		
0.720	0.0000		
0.735	0.0000		
0.750	0.0000		
0.765	0.0000		

Summary for Pond 3P: Roof Storage

Inflow Area = 447.4 m², 0.00% Impervious, Inflow Depth = 24 mm for 10-Year event
Inflow = 0.0084 m³/s @ 0.17 hrs, Volume= 10.6 m³
Outflow = 0.0038 m³/s @ 0.44 hrs, Volume= 10.6 m³, Atten= 54%, Lag= 16.2 min
Primary = 0.0038 m³/s @ 0.44 hrs, Volume= 10.6 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.076 m @ 0.44 hrs Surf.Area= 231.5 m² Storage= 5.9 m³

Plug-Flow detention time= 16.7 min calculated for 10.6 m³ (100% of inflow)
Center-of-Mass det. time= 16.7 min (32.2 - 15.5)

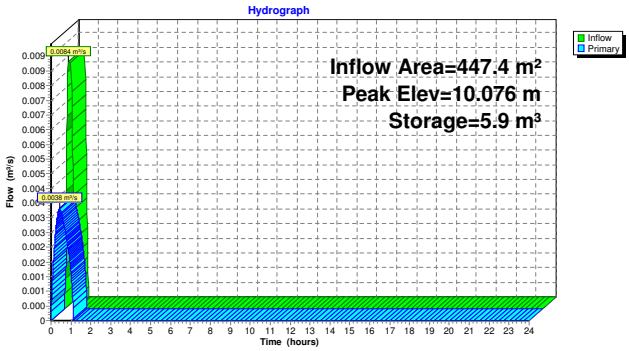
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	13.3 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	400.0	13.3	13.3	400.0

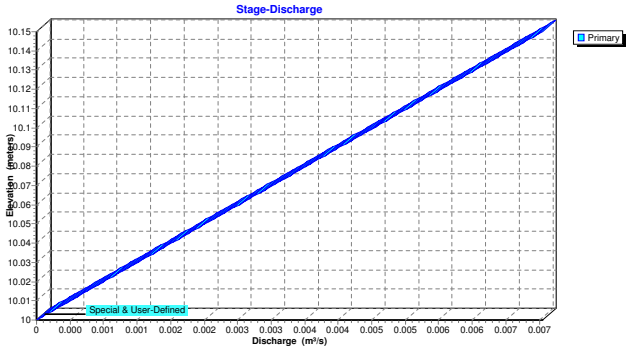
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 5.00** Head (meters) 0.000 0.150 Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0038 m³/s @ 0.44 hrs HW=10.076 m (Free Discharge)
1=Special & User-Defined (Custom Controls 0.0038 m³/s)

Pond 3P: Roof Storage



Pond 3P: Roof Storage



Stage-Discharge for Pond 3P: Roof Storage

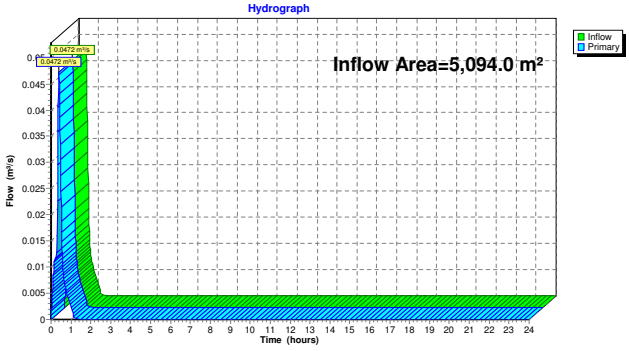
Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0026	10.104	0.0052
10.001	0.0001	10.053	0.0027	10.105	0.0053
10.002	0.0001	10.054	0.0027	10.106	0.0053
10.003	0.0002	10.055	0.0028	10.107	0.0054
10.004	0.0002	10.056	0.0028	10.108	0.0054
10.005	0.0003	10.057	0.0029	10.109	0.0055
10.006	0.0003	10.058	0.0029	10.110	0.0055
10.007	0.0004	10.059	0.0030	10.111	0.0056
10.008	0.0004	10.060	0.0030	10.112	0.0056
10.009	0.0005	10.061	0.0031	10.113	0.0057
10.010	0.0005	10.062	0.0031	10.114	0.0057
10.011	0.0006	10.063	0.0032	10.115	0.0058
10.012	0.0006	10.064	0.0032	10.116	0.0058
10.013	0.0007	10.065	0.0033	10.117	0.0059
10.014	0.0007	10.066	0.0033	10.118	0.0059
10.015	0.0008	10.067	0.0034	10.119	0.0060
10.016	0.0008	10.068	0.0034	10.120	0.0060
10.017	0.0009	10.069	0.0035	10.121	0.0061
10.018	0.0009	10.070	0.0035	10.122	0.0061
10.019	0.0010	10.071	0.0036	10.123	0.0062
10.020	0.0010	10.072	0.0036	10.124	0.0062
10.021	0.0011	10.073	0.0037	10.125	0.0063
10.022	0.0011	10.074	0.0037	10.126	0.0063
10.023	0.0012	10.075	0.0038	10.127	0.0064
10.024	0.0012	10.076	0.0038	10.128	0.0064
10.025	0.0013	10.077	0.0039	10.129	0.0065
10.026	0.0013	10.078	0.0039	10.130	0.0065
10.027	0.0014	10.079	0.0040	10.131	0.0066
10.028	0.0014	10.080	0.0040	10.132	0.0066
10.029	0.0015	10.081	0.0041	10.133	0.0067
10.030	0.0015	10.082	0.0041	10.134	0.0067
10.031	0.0016	10.083	0.0042	10.135	0.0068
10.032	0.0016	10.084	0.0042	10.136	0.0068
10.033	0.0017	10.085	0.0043	10.137	0.0069
10.034	0.0017	10.086	0.0043	10.138	0.0069
10.035	0.0018	10.087	0.0044	10.139	0.0070
10.036	0.0018	10.088	0.0044	10.140	0.0070
10.037	0.0019	10.089	0.0045	10.141	0.0071
10.038	0.0019	10.090	0.0045	10.142	0.0071
10.039	0.0020	10.091	0.0046	10.143	0.0072
10.040	0.0020	10.092	0.0046	10.144	0.0072
10.041	0.0021	10.093	0.0047	10.145	0.0073
10.042	0.0021	10.094	0.0047	10.146	0.0073
10.043	0.0022	10.095	0.0048	10.147	0.0074
10.044	0.0022	10.096	0.0048	10.148	0.0074
10.045	0.0023	10.097	0.0049	10.149	0.0075
10.046	0.0023	10.098	0.0049	10.150	**0.0076**
10.047	0.0024	10.099	0.0050		
10.048	0.0024	10.100	0.0050		
10.049	0.0025	10.101	0.0051		
10.050	0.0025	10.102	0.0051		
10.051	0.0026	10.103	0.0052		

Summary for Link 1L: Outlet

Inflow Area = 5,094.0 m², 0.00% Impervious, Inflow Depth = 9 mm for 10-Year event
Inflow = 0.0472 m³/s @ 0.40 hrs, Volume= 48.3 m³
Primary = 0.0472 m³/s @ 0.40 hrs, Volume= 48.3 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 1L: Outlet



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Runoff Area=233.6 m² 0.00% Impervious Runoff Depth=28 mm
Tc=10.0 min C=0.90 Runoff=0.0051 m³/s 6.5 m³

Subcatchment 2S: At-Grade Runoff Area=2,069.5 m² 0.00% Impervious Runoff Depth=21 mm
Tc=10.0 min C=0.68 Runoff=0.0344 m³/s 43.3 m³

Subcatchment 3S: External Road Runoff Area=1,631.6 m² 0.00% Impervious Runoff Depth=19 mm
Tc=10.0 min C=0.62 Runoff=0.0247 m³/s 31.2 m³

Subcatchment 4S: Uncontrolled Runoff Area=711.9 m² 0.00% Impervious Runoff Depth=18 mm
Tc=10.0 min C=0.60 Runoff=0.0104 m³/s 13.2 m³

Subcatchment 5S: Building Runoff Area=447.4 m² 0.00% Impervious Runoff Depth=28 mm
Tc=10.0 min C=0.90 Runoff=0.0098 m³/s 12.4 m³

Pond 1P: Roof Storage Peak Elev=10.081 m Storage=3.5 m³ Inflow=0.0051 m³/s 6.5 m³
Outflow=0.0024 m³/s 6.5 m³

Pond 2P: Bioretention Cell Peak Elev=1.218 m Storage=72.9 m³ Inflow=0.0614 m³/s 81.0 m³
Outflow=0.0512 m³/s 38.3 m³

Pond 3P: Roof Storage Peak Elev=10.082 m Storage=7.3 m³ Inflow=0.0098 m³/s 12.4 m³
Outflow=0.0041 m³/s 12.4 m³

Link 1L: Outlet Inflow=0.0640 m³/s 63.8 m³
Primary=0.0640 m³/s 63.8 m³

Total Runoff Area = 5,094.0 m² Runoff Volume = 106.5 m³ Average Runoff Depth = 21 mm
100.00% Pervious = 5,094.0 m² 0.00% Impervious = 0.0 m²

Summary for Subcatchment 1S: Building

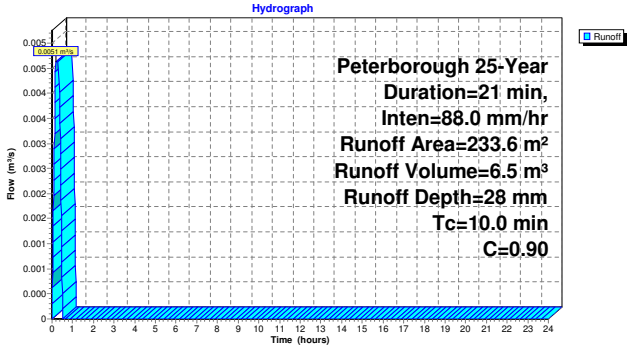
Runoff = 0.0051 m³/s @ 0.17 hrs, Volume= 6.5 m³, Depth= 28 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 25-Year Duration=21 min, Inten=88.0 mm/hr

Area (m²)	C	Description
233.6	0.90	Impervious Roof
233.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 1S: Building



Summary for Subcatchment 2S: At-Grade

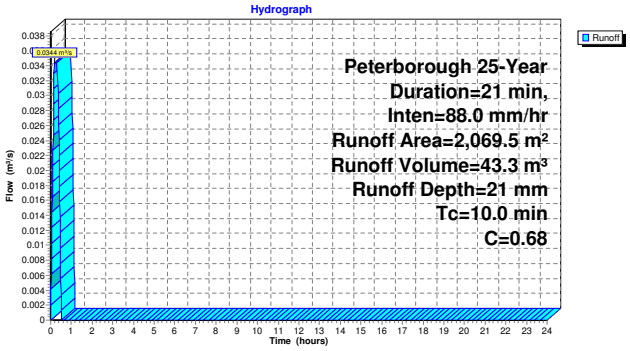
Runoff = 0.0344 m³/s @ 0.17 hrs, Volume= 43.3 m³, Depth= 21 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 25-Year Duration=21 min, Inten=88.0 mm/hr

Area (m²)	C	Description
693.5	0.25	Soft Landscaping
1,376.0	0.90	At-Grade Impervious
2,069.5	0.68	Weighted Average
2,069.5		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 2S: At-Grade



Summary for Subcatchment 3S: External Road

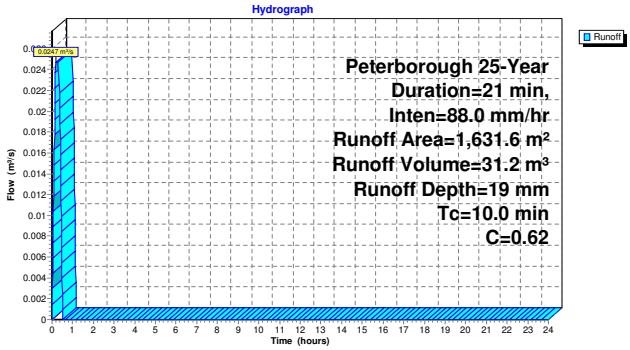
Runoff = 0.0247 m³/s @ 0.17 hrs, Volume= 31.2 m³, Depth= 19 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 25-Year Duration=21 min, Inten=88.0 mm/hr

Area (m²)	C	Description
933.1	0.90	External Impervious
698.5	0.25	External Pervious
1,631.6	0.62	Weighted Average
1,631.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 3S: External Road



Summary for Subcatchment 4S: Uncontrolled

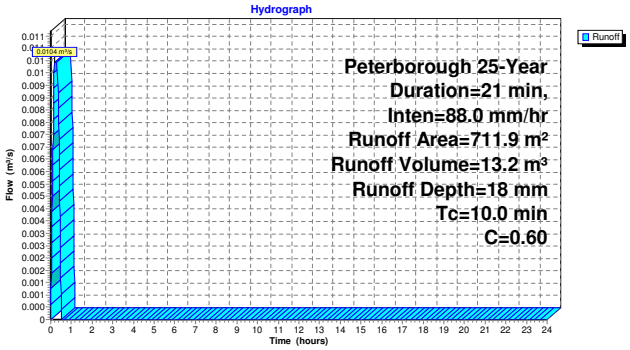
Runoff = 0.0104 m³/s @ 0.17 hrs, Volume= 13.2 m³, Depth= 18 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 25-Year Duration=21 min, Inten=88.0 mm/hr

Area (m²)	C	Description
333.7	0.25	Soft Landscaping
378.2	0.90	At-Grade Impervious
711.9	0.60	Weighted Average
711.9		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 4S: Uncontrolled



Summary for Subcatchment 5S: Building

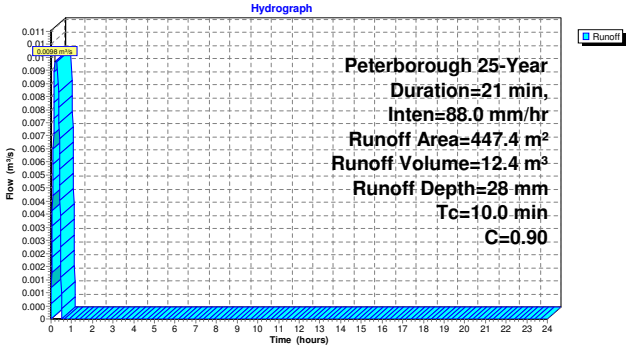
Runoff = 0.0098 m³/s @ 0.17 hrs, Volume= 12.4 m³, Depth= 28 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 25-Year Duration=21 min, Inten=88.0 mm/hr

Area (m²)	C	Description
447.4	0.90	Impervious Roof
447.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry, Time of Concentration (Direct Entry)**

Subcatchment 5S: Building



Summary for Pond 1P: Roof Storage

Inflow Area = 233.6 m², 0.00% Impervious, Inflow Depth = 28 mm for 25-Year event
Inflow = 0.0051 m³/s @ 0.17 hrs, Volume= 6.5 m³
Outflow = 0.0024 m³/s @ 0.44 hrs, Volume= 6.5 m³, Atten= 53%, Lag= 16.1 min
Primary = 0.0024 m³/s @ 0.44 hrs, Volume= 6.5 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.081 m @ 0.44 hrs Surf.Area= 129.7 m² Storage= 3.5 m³

Plug-Flow detention time= 15.7 min calculated for 6.5 m³ (100% of inflow)
Center-of-Mass det. time= 15.7 min (31.2 - 15.5)

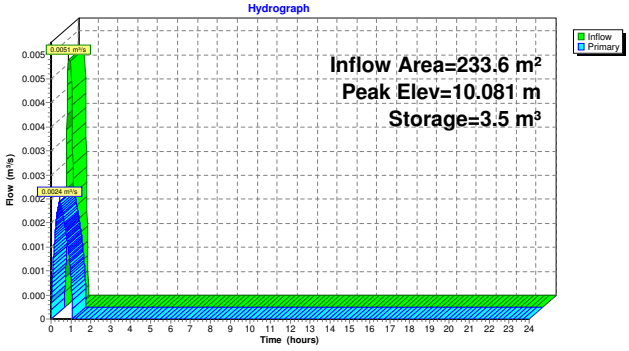
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	6.7 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	200.0	6.7	6.7	200.0

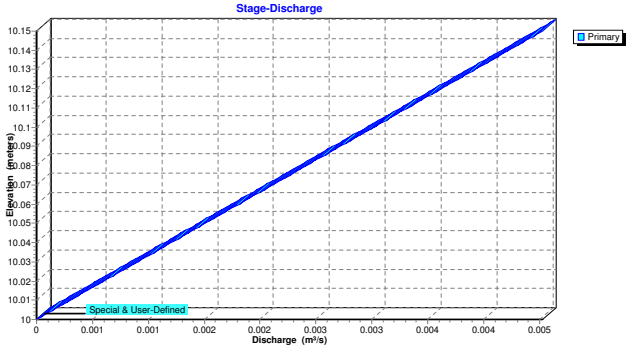
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 3.00**
			Head (meters) 0.000 0.150
			Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0024 m³/s @ 0.44 hrs HW=10.081 m (Free Discharge)
↑**1=Special & User-Defined** (Custom Controls 0.0024 m³/s)

Pond 1P: Roof Storage



Pond 1P: Roof Storage



Stage-Discharge for Pond 1P: Roof Storage

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0016	10.104	0.0031
10.001	0.0000	10.053	0.0016	10.105	0.0032
10.002	0.0001	10.054	0.0016	10.106	0.0032
10.003	0.0001	10.055	0.0017	10.107	0.0032
10.004	0.0001	10.056	0.0017	10.108	0.0033
10.005	0.0002	10.057	0.0017	10.109	0.0033
10.006	0.0002	10.058	0.0018	10.110	0.0033
10.007	0.0002	10.059	0.0018	10.111	0.0034
10.008	0.0002	10.060	0.0018	10.112	0.0034
10.009	0.0003	10.061	0.0018	10.113	0.0034
10.010	0.0003	10.062	0.0019	10.114	0.0034
10.011	0.0003	10.063	0.0019	10.115	0.0035
10.012	0.0004	10.064	0.0019	10.116	0.0035
10.013	0.0004	10.065	0.0020	10.117	0.0035
10.014	0.0004	10.066	0.0020	10.118	0.0036
10.015	0.0005	10.067	0.0020	10.119	0.0036
10.016	0.0005	10.068	0.0021	10.120	0.0036
10.017	0.0005	10.069	0.0021	10.121	0.0037
10.018	0.0005	10.070	0.0021	10.122	0.0037
10.019	0.0006	10.071	0.0021	10.123	0.0037
10.020	0.0006	10.072	0.0022	10.124	0.0037
10.021	0.0006	10.073	0.0022	10.125	0.0038
10.022	0.0007	10.074	0.0022	10.126	0.0038
10.023	0.0007	10.075	0.0023	10.127	0.0038
10.024	0.0007	10.076	0.0023	10.128	0.0039
10.025	0.0008	10.077	0.0023	10.129	0.0039
10.026	0.0008	10.078	0.0024	10.130	0.0039
10.027	0.0008	10.079	0.0024	10.131	0.0040
10.028	0.0008	10.080	0.0024	10.132	0.0040
10.029	0.0009	10.081	0.0024	10.133	0.0040
10.030	0.0009	10.082	0.0025	10.134	0.0040
10.031	0.0009	10.083	0.0025	10.135	0.0041
10.032	0.0010	10.084	0.0025	10.136	0.0041
10.033	0.0010	10.085	0.0026	10.137	0.0041
10.034	0.0010	10.086	0.0026	10.138	0.0042
10.035	0.0011	10.087	0.0026	10.139	0.0042
10.036	0.0011	10.088	0.0027	10.140	0.0042
10.037	0.0011	10.089	0.0027	10.141	0.0043
10.038	0.0011	10.090	0.0027	10.142	0.0043
10.039	0.0012	10.091	0.0027	10.143	0.0043
10.040	0.0012	10.092	0.0028	10.144	0.0043
10.041	0.0012	10.093	0.0028	10.145	0.0044
10.042	0.0013	10.094	0.0028	10.146	0.0044
10.043	0.0013	10.095	0.0029	10.147	0.0044
10.044	0.0013	10.096	0.0029	10.148	0.0045
10.045	0.0014	10.097	0.0029	10.149	0.0045
10.046	0.0014	10.098	0.0030	10.150	**0.0045**
10.047	0.0014	10.099	0.0030		
10.048	0.0014	10.100	0.0030		
10.049	0.0015	10.101	0.0031		
10.050	0.0015	10.102	0.0031		
10.051	0.0015	10.103	0.0031		

Summary for Pond 2P: Bioretention Cell

Inflow Area = 3,934.7 m², 0.00% Impervious, Inflow Depth = 21 mm for 25-Year event
Inflow = 0.0614 m³/s @ 0.35 hrs, Volume= 81.0 m³
Outflow = 0.0512 m³/s @ 0.38 hrs, Volume= 38.3 m³, Atten= 17%, Lag= 1.8 min
Primary = 0.0512 m³/s @ 0.38 hrs, Volume= 38.3 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Starting Elev= 0.400 m Surf.Area= 249.4 m² Storage= 20.0 m³
Peak Elev= 1.218 m @ 0.38 hrs Surf.Area= 405.2 m² Storage= 72.9 m³ (53.0 m³ above start)

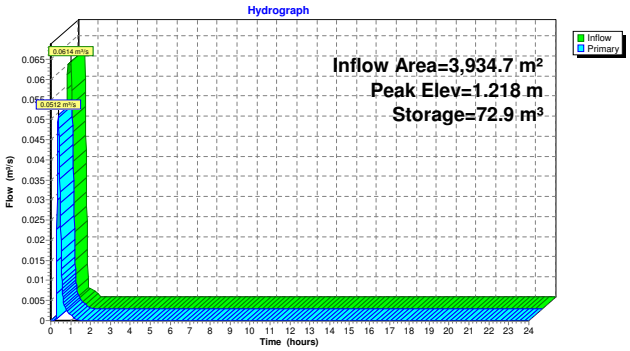
Plug-Flow detention time= 27.9 min calculated for 18.3 m³ (23% of inflow)
Center-of-Mass det. time= 11.3 min (28.1 - 16.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1.000 m	35.6 m³	**12.47 mW x 10.00 mL x 0.25 mH Ponding Z=3.0**
#2	0.400 m	22.4 m³	**12.47 mW x 10.00 mL x 0.60 mH Engineered Soil Media** 74.8 m³ Overall x 30.0% Voids
#3	0.000 m	20.0 m³	**12.47 mW x 10.00 mL x 0.40 mH Clear Stone** 49.9 m³ Overall x 40.0% Voids
		78.0 m³	Total Available Storage

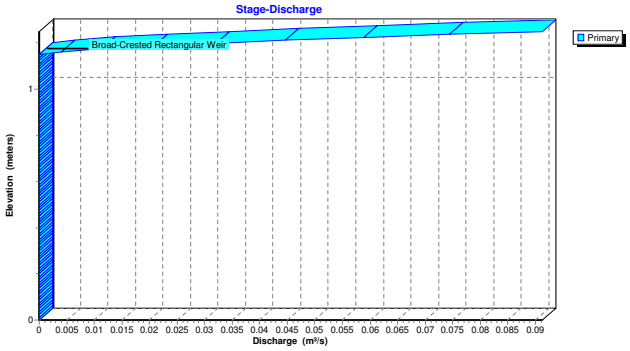
Device	Routing	Invert	Outlet Devices
#1	Primary	1.150 m	**2.00 m long x 0.50 m breadth Broad-Crested Rectangular Weir** Head (meters) 0.061 0.122 0.183 0.244 0.305 0.366 0.427 0.488 0.549 0.610 0.762 0.914 1.067 Coef. (Metric) 1.43 1.45 1.45 1.47 1.50 1.55 1.59 1.67 1.67 1.64 1.78 1.81 1.83

Primary OutFlow Max=0.0510 m³/s @ 0.38 hrs HW=1.218 m (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.0510 m³/s @ 0.37 m/s)

Pond 2P: Bioretention Cell



Pond 2P: Bioretention Cell



Stage-Discharge for Pond 2P: Bioretention Cell

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
0.000	0.0000	0.780	0.0000
0.015	0.0000	0.795	0.0000
0.030	0.0000	0.810	0.0000
0.045	0.0000	0.825	0.0000
0.060	0.0000	0.840	0.0000
0.075	0.0000	0.855	0.0000
0.090	0.0000	0.870	0.0000
0.105	0.0000	0.885	0.0000
0.120	0.0000	0.900	0.0000
0.135	0.0000	0.915	0.0000
0.150	0.0000	0.930	0.0000
0.165	0.0000	0.945	0.0000
0.180	0.0000	0.960	0.0000
0.195	0.0000	0.975	0.0000
0.210	0.0000	0.990	0.0000
0.225	0.0000	1.005	0.0000
0.240	0.0000	1.020	0.0000
0.255	0.0000	1.035	0.0000
0.270	0.0000	1.050	0.0000
0.285	0.0000	1.065	0.0000
0.300	0.0000	1.080	0.0000
0.315	0.0000	1.095	0.0000
0.330	0.0000	1.110	0.0000
0.345	0.0000	1.125	0.0000
0.360	0.0000	1.140	0.0000
0.375	0.0000	1.155	0.0010
0.390	0.0000	1.170	0.0081
0.405	0.0000	1.185	0.0187
0.420	0.0000	1.200	0.0320
0.435	0.0000	1.215	0.0474
0.450	0.0000	1.230	0.0650
0.465	0.0000	1.245	**0.0844**
0.480	0.0000		
0.495	0.0000		
0.510	0.0000		
0.525	0.0000		
0.540	0.0000		
0.555	0.0000		
0.570	0.0000		
0.585	0.0000		
0.600	0.0000		
0.615	0.0000		
0.630	0.0000		
0.645	0.0000		
0.660	0.0000		
0.675	0.0000		
0.690	0.0000		
0.705	0.0000		
0.720	0.0000		
0.735	0.0000		
0.750	0.0000		
0.765	0.0000		

Summary for Pond 3P: Roof Storage

Inflow Area = 447.4 m², 0.00% Impervious, Inflow Depth = 28 mm for 25-Year event
Inflow = 0.0098 m³/s @ 0.17 hrs, Volume= 12.4 m³
Outflow = 0.0041 m³/s @ 0.45 hrs, Volume= 12.4 m³, Atten= 58%, Lag= 16.6 min
Primary = 0.0041 m³/s @ 0.45 hrs, Volume= 12.4 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.082 m @ 0.45 hrs Surf.Area= 267.5 m² Storage= 7.3 m³

Plug-Flow detention time= 19.2 min calculated for 12.4 m³ (100% of inflow)
Center-of-Mass det. time= 19.2 min (34.7 - 15.5)

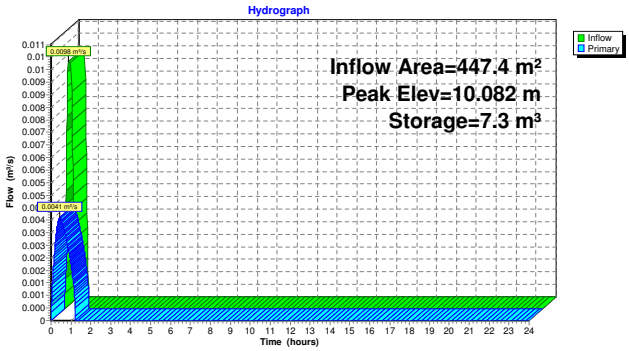
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	13.3 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	400.0	13.3	13.3	400.0

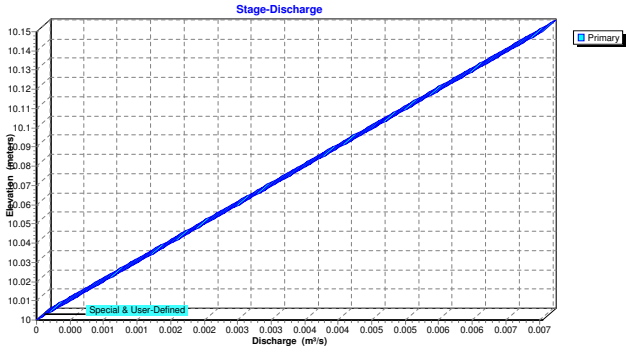
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 5.00** Head (meters) 0.000 0.150 Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0041 m³/s @ 0.45 hrs HW=10.082 m (Free Discharge)
1=Special & User-Defined (Custom Controls 0.0041 m³/s)

Pond 3P: Roof Storage



Pond 3P: Roof Storage



Stage-Discharge for Pond 3P: Roof Storage

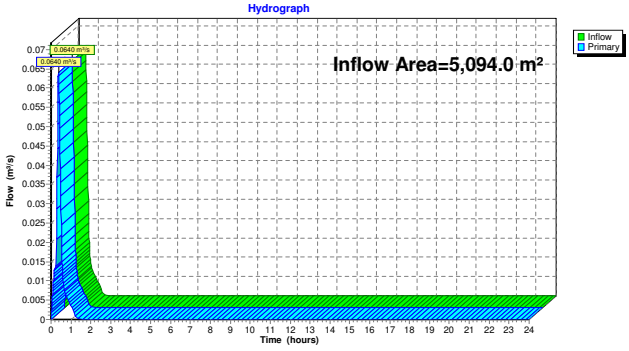
Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0026	10.104	0.0052
10.001	0.0001	10.053	0.0027	10.105	0.0053
10.002	0.0001	10.054	0.0027	10.106	0.0053
10.003	0.0002	10.055	0.0028	10.107	0.0054
10.004	0.0002	10.056	0.0028	10.108	0.0054
10.005	0.0003	10.057	0.0029	10.109	0.0055
10.006	0.0003	10.058	0.0029	10.110	0.0055
10.007	0.0004	10.059	0.0030	10.111	0.0056
10.008	0.0004	10.060	0.0030	10.112	0.0056
10.009	0.0005	10.061	0.0031	10.113	0.0057
10.010	0.0005	10.062	0.0031	10.114	0.0057
10.011	0.0006	10.063	0.0032	10.115	0.0058
10.012	0.0006	10.064	0.0032	10.116	0.0058
10.013	0.0007	10.065	0.0033	10.117	0.0059
10.014	0.0007	10.066	0.0033	10.118	0.0059
10.015	0.0008	10.067	0.0034	10.119	0.0060
10.016	0.0008	10.068	0.0034	10.120	0.0060
10.017	0.0009	10.069	0.0035	10.121	0.0061
10.018	0.0009	10.070	0.0035	10.122	0.0061
10.019	0.0010	10.071	0.0036	10.123	0.0062
10.020	0.0010	10.072	0.0036	10.124	0.0062
10.021	0.0011	10.073	0.0037	10.125	0.0063
10.022	0.0011	10.074	0.0037	10.126	0.0063
10.023	0.0012	10.075	0.0038	10.127	0.0064
10.024	0.0012	10.076	0.0038	10.128	0.0064
10.025	0.0013	10.077	0.0039	10.129	0.0065
10.026	0.0013	10.078	0.0039	10.130	0.0065
10.027	0.0014	10.079	0.0040	10.131	0.0066
10.028	0.0014	10.080	0.0040	10.132	0.0066
10.029	0.0015	10.081	0.0041	10.133	0.0067
10.030	0.0015	10.082	0.0041	10.134	0.0067
10.031	0.0016	10.083	0.0042	10.135	0.0068
10.032	0.0016	10.084	0.0042	10.136	0.0068
10.033	0.0017	10.085	0.0043	10.137	0.0069
10.034	0.0017	10.086	0.0043	10.138	0.0069
10.035	0.0018	10.087	0.0044	10.139	0.0070
10.036	0.0018	10.088	0.0044	10.140	0.0070
10.037	0.0019	10.089	0.0045	10.141	0.0071
10.038	0.0019	10.090	0.0045	10.142	0.0071
10.039	0.0020	10.091	0.0046	10.143	0.0072
10.040	0.0020	10.092	0.0046	10.144	0.0072
10.041	0.0021	10.093	0.0047	10.145	0.0073
10.042	0.0021	10.094	0.0047	10.146	0.0073
10.043	0.0022	10.095	0.0048	10.147	0.0074
10.044	0.0022	10.096	0.0048	10.148	0.0074
10.045	0.0023	10.097	0.0049	10.149	0.0075
10.046	0.0023	10.098	0.0049	10.150	**0.0076**
10.047	0.0024	10.099	0.0050		
10.048	0.0024	10.100	0.0050		
10.049	0.0025	10.101	0.0051		
10.050	0.0025	10.102	0.0051		
10.051	0.0026	10.103	0.0052		

Summary for Link 1L: Outlet

Inflow Area = 5,094.0 m², 0.00% Impervious, Inflow Depth = 13 mm for 25-Year event
Inflow = 0.0640 m³/s @ 0.37 hrs, Volume= 63.8 m³
Primary = 0.0640 m³/s @ 0.37 hrs, Volume= 63.8 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 1L: Outlet



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Runoff Area=233.6 m² 0.00% Impervious Runoff Depth=31 mm
Tc=10.0 min C=0.90 Runoff=0.0057 m³/s 7.2 m³

Subcatchment 2S: At-Grade Runoff Area=2,069.5 m² 0.00% Impervious Runoff Depth=23 mm
Tc=10.0 min C=0.68 Runoff=0.0384 m³/s 48.4 m³

Subcatchment 3S: External Road Runoff Area=1,631.6 m² 0.00% Impervious Runoff Depth=21 mm
Tc=10.0 min C=0.62 Runoff=0.0276 m³/s 34.8 m³

Subcatchment 4S: Uncontrolled Runoff Area=711.9 m² 0.00% Impervious Runoff Depth=21 mm
Tc=10.0 min C=0.60 Runoff=0.0117 m³/s 14.7 m³

Subcatchment 5S: Building Runoff Area=447.4 m² 0.00% Impervious Runoff Depth=31 mm
Tc=10.0 min C=0.90 Runoff=0.0110 m³/s 13.9 m³

Pond 1P: Roof Storage Peak Elev=10.085 m Storage=4.1 m³ Inflow=0.0057 m³/s 7.2 m³
Outflow=0.0026 m³/s 7.2 m³

Pond 2P: Bioretention Cell Peak Elev=1.227 m Storage=74.3 m³ Inflow=0.0685 m³/s 90.5 m³
Outflow=0.0613 m³/s 47.8 m³

Pond 3P: Roof Storage Peak Elev=10.086 m Storage=8.5 m³ Inflow=0.0110 m³/s 13.9 m³
Outflow=0.0043 m³/s 13.9 m³

Link 1L: Outlet Inflow=0.0761 m³/s 76.3 m³
Primary=0.0761 m³/s 76.3 m³

Total Runoff Area = 5,094.0 m² Runoff Volume = 119.0 m³ Average Runoff Depth = 23 mm
100.00% Pervious = 5,094.0 m² 0.00% Impervious = 0.0 m²

Summary for Subcatchment 1S: Building

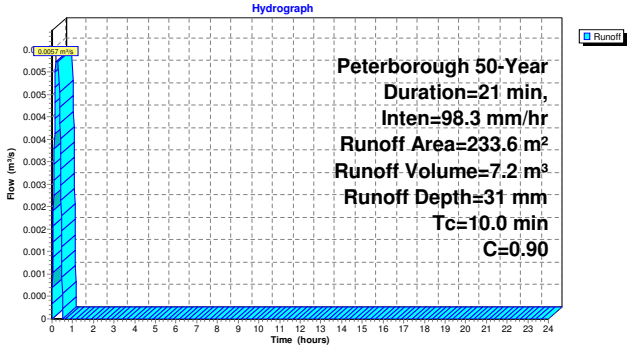
Runoff = 0.0057 m³/s @ 0.17 hrs, Volume= 7.2 m³, Depth= 31 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 50-Year Duration=21 min, Inten=98.3 mm/hr

Area (m²)	C	Description
233.6	0.90	Impervious Roof
233.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 1S: Building



Summary for Subcatchment 2S: At-Grade

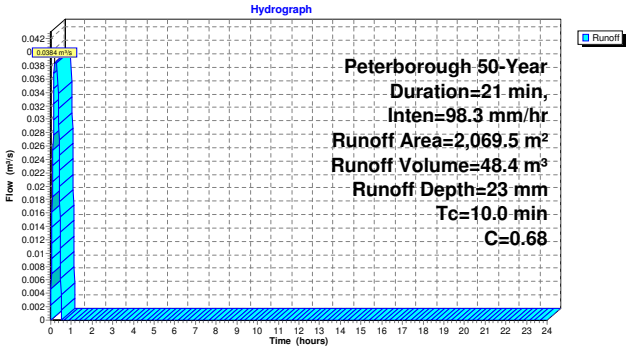
Runoff = 0.0384 m³/s @ 0.17 hrs, Volume= 48.4 m³, Depth= 23 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 50-Year Duration=21 min, Inten=98.3 mm/hr

Area (m²)	C	Description
693.5	0.25	Soft Landscaping
1,376.0	0.90	At-Grade Impervious
2,069.5	0.68	Weighted Average
2,069.5		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 2S: At-Grade



Summary for Subcatchment 3S: External Road

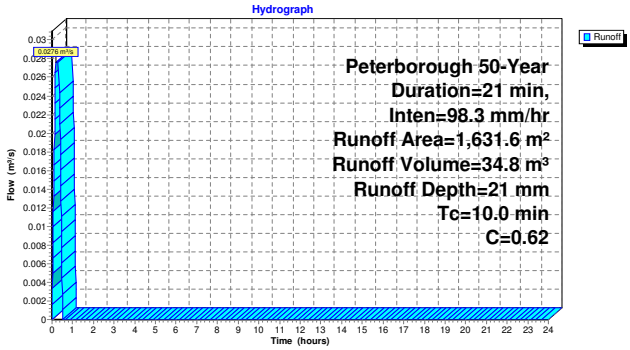
Runoff = 0.0276 m³/s @ 0.17 hrs, Volume= 34.8 m³, Depth= 21 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 50-Year Duration=21 min, Inten=98.3 mm/hr

Area (m²)	C	Description
933.1	0.90	External Impervious
698.5	0.25	External Pervious
1,631.6	0.62	Weighted Average
1,631.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 3S: External Road



Summary for Subcatchment 4S: Uncontrolled

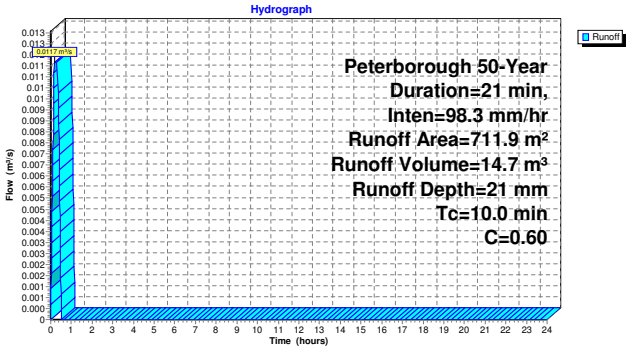
Runoff = 0.0117 m³/s @ 0.17 hrs, Volume= 14.7 m³, Depth= 21 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 50-Year Duration=21 min, Inten=98.3 mm/hr

Area (m²)	C	Description
333.7	0.25	Soft Landscaping
378.2	0.90	At-Grade Impervious
711.9	0.60	Weighted Average
711.9		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 4S: Uncontrolled



Summary for Subcatchment 5S: Building

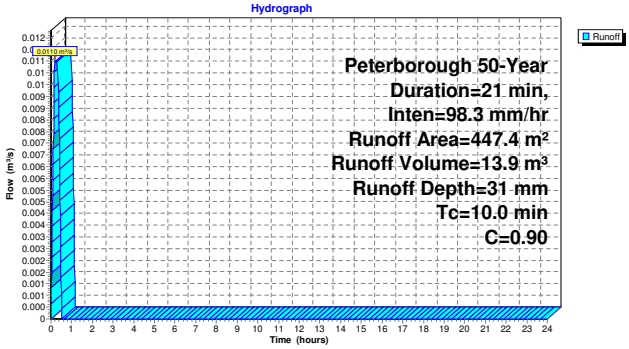
Runoff = 0.0110 m³/s @ 0.17 hrs, Volume= 13.9 m³, Depth= 31 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 50-Year Duration=21 min, Inten=98.3 mm/hr

Area (m²)	C	Description
447.4	0.90	Impervious Roof
447.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry, Time of Concentration (Direct Entry)**

Subcatchment 5S: Building



Summary for Pond 1P: Roof Storage

Inflow Area = 233.6 m², 0.00% Impervious, Inflow Depth = 31 mm for 50-Year event
Inflow = 0.0057 m³/s @ 0.17 hrs, Volume= 7.2 m³
Outflow = 0.0026 m³/s @ 0.44 hrs, Volume= 7.2 m³, Atten= 55%, Lag= 16.3 min
Primary = 0.0026 m³/s @ 0.44 hrs, Volume= 7.2 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.085 m @ 0.44 hrs Surf.Area= 143.9 m² Storage= 4.1 m³

Plug-Flow detention time= 17.3 min calculated for 7.2 m³ (100% of inflow)
Center-of-Mass det. time= 17.3 min (32.8 - 15.5)

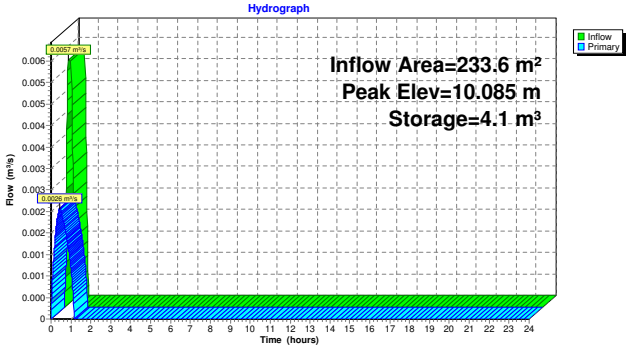
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	6.7 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	200.0	6.7	6.7	200.0

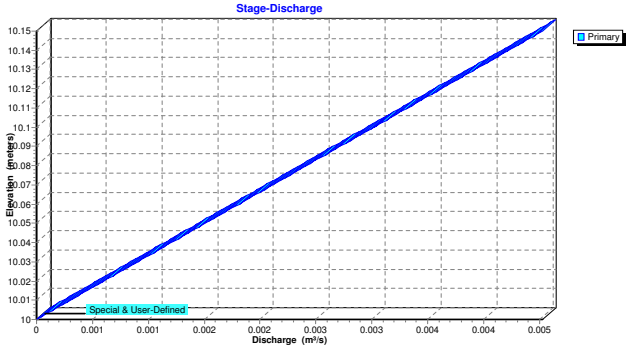
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 3.00**
			Head (meters) 0.000 0.150
			Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0026 m³/s @ 0.44 hrs HW=10.085 m (Free Discharge)
↑**1=Special & User-Defined** (Custom Controls 0.0026 m³/s)

Pond 1P: Roof Storage



Pond 1P: Roof Storage



Stage-Discharge for Pond 1P: Roof Storage

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0016	10.104	0.0031
10.001	0.0000	10.053	0.0016	10.105	0.0032
10.002	0.0001	10.054	0.0016	10.106	0.0032
10.003	0.0001	10.055	0.0017	10.107	0.0032
10.004	0.0001	10.056	0.0017	10.108	0.0033
10.005	0.0002	10.057	0.0017	10.109	0.0033
10.006	0.0002	10.058	0.0018	10.110	0.0033
10.007	0.0002	10.059	0.0018	10.111	0.0034
10.008	0.0002	10.060	0.0018	10.112	0.0034
10.009	0.0003	10.061	0.0018	10.113	0.0034
10.010	0.0003	10.062	0.0019	10.114	0.0034
10.011	0.0003	10.063	0.0019	10.115	0.0035
10.012	0.0004	10.064	0.0019	10.116	0.0035
10.013	0.0004	10.065	0.0020	10.117	0.0035
10.014	0.0004	10.066	0.0020	10.118	0.0036
10.015	0.0005	10.067	0.0020	10.119	0.0036
10.016	0.0005	10.068	0.0021	10.120	0.0036
10.017	0.0005	10.069	0.0021	10.121	0.0037
10.018	0.0005	10.070	0.0021	10.122	0.0037
10.019	0.0006	10.071	0.0021	10.123	0.0037
10.020	0.0006	10.072	0.0022	10.124	0.0037
10.021	0.0006	10.073	0.0022	10.125	0.0038
10.022	0.0007	10.074	0.0022	10.126	0.0038
10.023	0.0007	10.075	0.0023	10.127	0.0038
10.024	0.0007	10.076	0.0023	10.128	0.0039
10.025	0.0008	10.077	0.0023	10.129	0.0039
10.026	0.0008	10.078	0.0024	10.130	0.0039
10.027	0.0008	10.079	0.0024	10.131	0.0040
10.028	0.0008	10.080	0.0024	10.132	0.0040
10.029	0.0009	10.081	0.0024	10.133	0.0040
10.030	0.0009	10.082	0.0025	10.134	0.0040
10.031	0.0009	10.083	0.0025	10.135	0.0041
10.032	0.0010	10.084	0.0025	10.136	0.0041
10.033	0.0010	10.085	0.0026	10.137	0.0041
10.034	0.0010	10.086	0.0026	10.138	0.0042
10.035	0.0011	10.087	0.0026	10.139	0.0042
10.036	0.0011	10.088	0.0027	10.140	0.0042
10.037	0.0011	10.089	0.0027	10.141	0.0043
10.038	0.0011	10.090	0.0027	10.142	0.0043
10.039	0.0012	10.091	0.0027	10.143	0.0043
10.040	0.0012	10.092	0.0028	10.144	0.0043
10.041	0.0012	10.093	0.0028	10.145	0.0044
10.042	0.0013	10.094	0.0028	10.146	0.0044
10.043	0.0013	10.095	0.0029	10.147	0.0044
10.044	0.0013	10.096	0.0029	10.148	0.0045
10.045	0.0014	10.097	0.0029	10.149	0.0045
10.046	0.0014	10.098	0.0030	10.150	**0.0045**
10.047	0.0014	10.099	0.0030		
10.048	0.0014	10.100	0.0030		
10.049	0.0015	10.101	0.0031		
10.050	0.0015	10.102	0.0031		
10.051	0.0015	10.103	0.0031		

Summary for Pond 2P: Bioretention Cell

Inflow Area = 3,934.7 m², 0.00% Impervious, Inflow Depth = 23 mm for 50-Year event
Inflow = 0.0685 m³/s @ 0.35 hrs, Volume= 90.5 m³
Outflow = 0.0613 m³/s @ 0.37 hrs, Volume= 47.8 m³, Atten= 11%, Lag= 1.1 min
Primary = 0.0613 m³/s @ 0.37 hrs, Volume= 47.8 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Starting Elev= 0.400 m Surf.Area= 249.4 m² Storage= 20.0 m³
Peak Elev= 1.227 m @ 0.37 hrs Surf.Area= 406.5 m² Storage= 74.3 m³ (54.4 m³ above start)

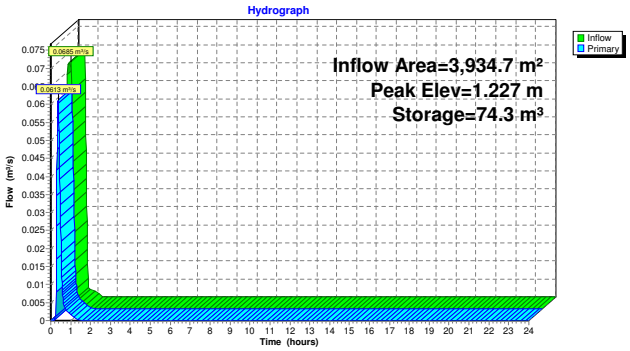
Plug-Flow detention time= 24.4 min calculated for 27.8 m³ (31% of inflow)
Center-of-Mass det. time= 10.4 min (27.3 - 16.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1.000 m	35.6 m³	**12.47 mW x 10.00 mL x 0.25 mH Ponding Z=3.0**
#2	0.400 m	22.4 m³	**12.47 mW x 10.00 mL x 0.60 mH Engineered Soil Media** 74.8 m³ Overall x 30.0% Voids
#3	0.000 m	20.0 m³	**12.47 mW x 10.00 mL x 0.40 mH Clear Stone** 49.9 m³ Overall x 40.0% Voids
		78.0 m³	Total Available Storage

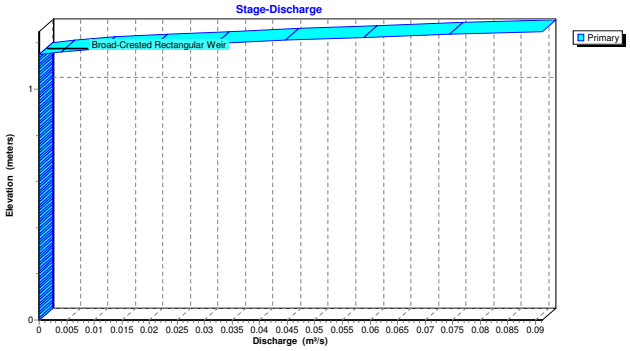
Device	Routing	Invert	Outlet Devices
#1	Primary	1.150 m	**2.00 m long x 0.50 m breadth Broad-Crested Rectangular Weir** Head (meters) 0.061 0.122 0.183 0.244 0.305 0.366 0.427 0.488 0.549 0.610 0.762 0.914 1.067 Coef. (Metric) 1.43 1.45 1.45 1.47 1.50 1.55 1.59 1.67 1.67 1.64 1.78 1.81 1.83

Primary OutFlow Max=0.0612 m³/s @ 0.37 hrs HW=1.227 m (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 0.0612 m³/s @ 0.40 m/s)

Pond 2P: Bioretention Cell



Pond 2P: Bioretention Cell



Stage-Discharge for Pond 2P: Bioretention Cell

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
0.000	0.0000	0.780	0.0000
0.015	0.0000	0.795	0.0000
0.030	0.0000	0.810	0.0000
0.045	0.0000	0.825	0.0000
0.060	0.0000	0.840	0.0000
0.075	0.0000	0.855	0.0000
0.090	0.0000	0.870	0.0000
0.105	0.0000	0.885	0.0000
0.120	0.0000	0.900	0.0000
0.135	0.0000	0.915	0.0000
0.150	0.0000	0.930	0.0000
0.165	0.0000	0.945	0.0000
0.180	0.0000	0.960	0.0000
0.195	0.0000	0.975	0.0000
0.210	0.0000	0.990	0.0000
0.225	0.0000	1.005	0.0000
0.240	0.0000	1.020	0.0000
0.255	0.0000	1.035	0.0000
0.270	0.0000	1.050	0.0000
0.285	0.0000	1.065	0.0000
0.300	0.0000	1.080	0.0000
0.315	0.0000	1.095	0.0000
0.330	0.0000	1.110	0.0000
0.345	0.0000	1.125	0.0000
0.360	0.0000	1.140	0.0000
0.375	0.0000	1.155	0.0010
0.390	0.0000	1.170	0.0081
0.405	0.0000	1.185	0.0187
0.420	0.0000	1.200	0.0320
0.435	0.0000	1.215	0.0474
0.450	0.0000	1.230	0.0650
0.465	0.0000	1.245	**0.0844**
0.480	0.0000		
0.495	0.0000		
0.510	0.0000		
0.525	0.0000		
0.540	0.0000		
0.555	0.0000		
0.570	0.0000		
0.585	0.0000		
0.600	0.0000		
0.615	0.0000		
0.630	0.0000		
0.645	0.0000		
0.660	0.0000		
0.675	0.0000		
0.690	0.0000		
0.705	0.0000		
0.720	0.0000		
0.735	0.0000		
0.750	0.0000		
0.765	0.0000		

Summary for Pond 3P: Roof Storage

Inflow Area = 447.4 m², 0.00% Impervious, Inflow Depth = 31 mm for 50-Year event
Inflow = 0.0110 m³/s @ 0.17 hrs, Volume= 13.9 m³
Outflow = 0.0043 m³/s @ 0.45 hrs, Volume= 13.9 m³, Atten= 61%, Lag= 16.9 min
Primary = 0.0043 m³/s @ 0.45 hrs, Volume= 13.9 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.086 m @ 0.45 hrs Surf.Area= 295.5 m² Storage= 8.5 m³

Plug-Flow detention time= 21.1 min calculated for 13.9 m³ (100% of inflow)
Center-of-Mass det. time= 21.1 min (36.6 - 15.5)

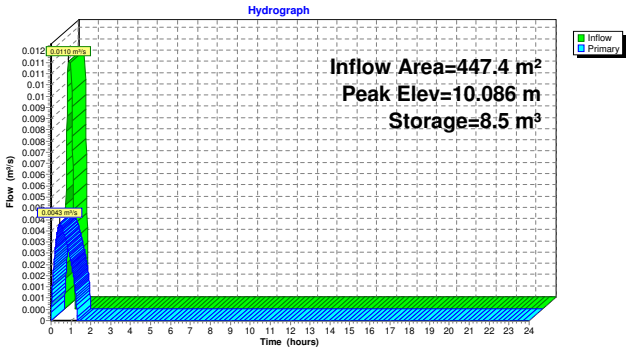
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	13.3 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	400.0	13.3	13.3	400.0

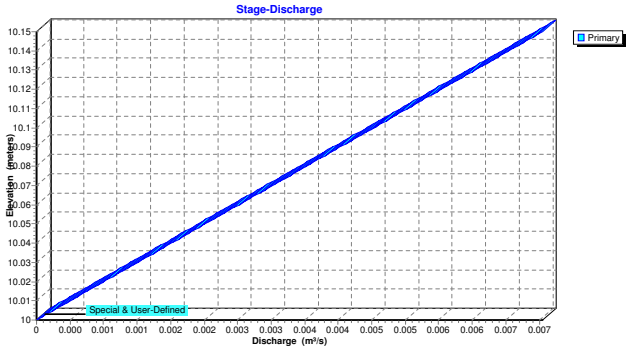
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 5.00** Head (meters) 0.000 0.150 Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0043 m³/s @ 0.45 hrs HW=10.086 m (Free Discharge)
└**1=Special & User-Defined** (Custom Controls 0.0043 m³/s)

Pond 3P: Roof Storage



Pond 3P: Roof Storage



Stage-Discharge for Pond 3P: Roof Storage

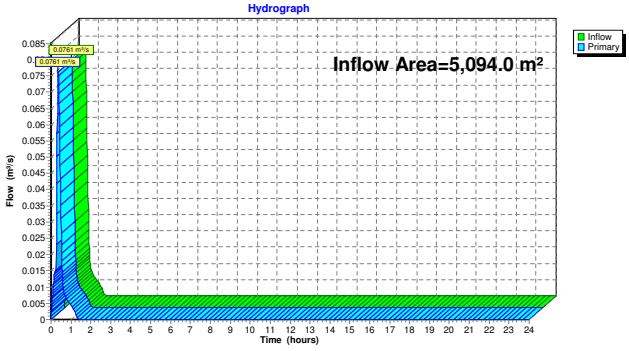
Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0026	10.104	0.0052
10.001	0.0001	10.053	0.0027	10.105	0.0053
10.002	0.0001	10.054	0.0027	10.106	0.0053
10.003	0.0002	10.055	0.0028	10.107	0.0054
10.004	0.0002	10.056	0.0028	10.108	0.0054
10.005	0.0003	10.057	0.0029	10.109	0.0055
10.006	0.0003	10.058	0.0029	10.110	0.0055
10.007	0.0004	10.059	0.0030	10.111	0.0056
10.008	0.0004	10.060	0.0030	10.112	0.0056
10.009	0.0005	10.061	0.0031	10.113	0.0057
10.010	0.0005	10.062	0.0031	10.114	0.0057
10.011	0.0006	10.063	0.0032	10.115	0.0058
10.012	0.0006	10.064	0.0032	10.116	0.0058
10.013	0.0007	10.065	0.0033	10.117	0.0059
10.014	0.0007	10.066	0.0033	10.118	0.0059
10.015	0.0008	10.067	0.0034	10.119	0.0060
10.016	0.0008	10.068	0.0034	10.120	0.0060
10.017	0.0009	10.069	0.0035	10.121	0.0061
10.018	0.0009	10.070	0.0035	10.122	0.0061
10.019	0.0010	10.071	0.0036	10.123	0.0062
10.020	0.0010	10.072	0.0036	10.124	0.0062
10.021	0.0011	10.073	0.0037	10.125	0.0063
10.022	0.0011	10.074	0.0037	10.126	0.0063
10.023	0.0012	10.075	0.0038	10.127	0.0064
10.024	0.0012	10.076	0.0038	10.128	0.0064
10.025	0.0013	10.077	0.0039	10.129	0.0065
10.026	0.0013	10.078	0.0039	10.130	0.0065
10.027	0.0014	10.079	0.0040	10.131	0.0066
10.028	0.0014	10.080	0.0040	10.132	0.0066
10.029	0.0015	10.081	0.0041	10.133	0.0067
10.030	0.0015	10.082	0.0041	10.134	0.0067
10.031	0.0016	10.083	0.0042	10.135	0.0068
10.032	0.0016	10.084	0.0042	10.136	0.0068
10.033	0.0017	10.085	0.0043	10.137	0.0069
10.034	0.0017	10.086	0.0043	10.138	0.0069
10.035	0.0018	10.087	0.0044	10.139	0.0070
10.036	0.0018	10.088	0.0044	10.140	0.0070
10.037	0.0019	10.089	0.0045	10.141	0.0071
10.038	0.0019	10.090	0.0045	10.142	0.0071
10.039	0.0020	10.091	0.0046	10.143	0.0072
10.040	0.0020	10.092	0.0046	10.144	0.0072
10.041	0.0021	10.093	0.0047	10.145	0.0073
10.042	0.0021	10.094	0.0047	10.146	0.0073
10.043	0.0022	10.095	0.0048	10.147	0.0074
10.044	0.0022	10.096	0.0048	10.148	0.0074
10.045	0.0023	10.097	0.0049	10.149	0.0075
10.046	0.0023	10.098	0.0049	10.150	**0.0076**
10.047	0.0024	10.099	0.0050		
10.048	0.0024	10.100	0.0050		
10.049	0.0025	10.101	0.0051		
10.050	0.0025	10.102	0.0051		
10.051	0.0026	10.103	0.0052		

Summary for Link 1L: Outlet

Inflow Area = 5,094.0 m², 0.00% Impervious, Inflow Depth = 15 mm for 50-Year event
Inflow = 0.0761 m³/s @ 0.36 hrs, Volume= 76.3 m³
Primary = 0.0761 m³/s @ 0.36 hrs, Volume= 76.3 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 1L: Outlet



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Building Runoff Area=233.6 m² 0.00% Impervious Runoff Depth=34 mm
Tc=10.0 min C=0.90 Runoff=0.0063 m³/s 7.9 m³

Subcatchment 2S: At-Grade Runoff Area=2,069.5 m² 0.00% Impervious Runoff Depth=26 mm
Tc=10.0 min C=0.68 Runoff=0.0421 m³/s 53.0 m³

Subcatchment 3S: External Road Runoff Area=1,631.6 m² 0.00% Impervious Runoff Depth=23 mm
Tc=10.0 min C=0.62 Runoff=0.0302 m³/s 38.1 m³

Subcatchment 4S: Uncontrolled Runoff Area=711.9 m² 0.00% Impervious Runoff Depth=23 mm
Tc=10.0 min C=0.60 Runoff=0.0128 m³/s 16.1 m³

Subcatchment 5S: Building Runoff Area=447.4 m² 0.00% Impervious Runoff Depth=34 mm
Tc=10.0 min C=0.90 Runoff=0.0120 m³/s 15.2 m³

Pond 1P: Roof Storage Peak Elev=10.088 m Storage=4.6 m³ Inflow=0.0063 m³/s 7.9 m³
Outflow=0.0027 m³/s 7.9 m³

Pond 2P: Bioretention Cell Peak Elev=1.234 m Storage=75.4 m³ Inflow=0.0748 m³/s 99.0 m³
Outflow=0.0696 m³/s 56.3 m³

Pond 3P: Roof Storage Peak Elev=10.089 m Storage=9.5 m³ Inflow=0.0120 m³/s 15.2 m³
Outflow=0.0045 m³/s 15.2 m³

Link 1L: Outlet Inflow=0.0859 m³/s 87.5 m³
Primary=0.0859 m³/s 87.5 m³

Total Runoff Area = 5,094.0 m² Runoff Volume = 130.2 m³ Average Runoff Depth = 26 mm
100.00% Pervious = 5,094.0 m² 0.00% Impervious = 0.0 m²

Summary for Subcatchment 1S: Building

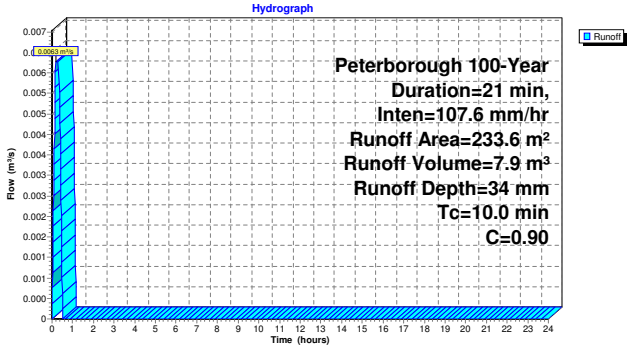
Runoff = 0.0063 m³/s @ 0.17 hrs, Volume= 7.9 m³, Depth= 34 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 100-Year Duration=21 min, Inten=107.6 mm/hr

Area (m²)	C	Description
233.6	0.90	Impervious Roof
233.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 1S: Building



Summary for Subcatchment 2S: At-Grade

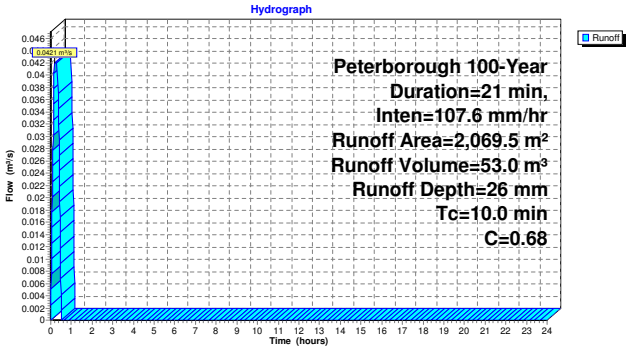
Runoff = 0.0421 m³/s @ 0.17 hrs, Volume= 53.0 m³, Depth= 26 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 100-Year Duration=21 min, Inten=107.6 mm/hr

Area (m²)	C	Description
693.5	0.25	Soft Landscaping
1,376.0	0.90	At-Grade Impervious
2,069.5	0.68	Weighted Average
2,069.5		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 2S: At-Grade



Summary for Subcatchment 3S: External Road

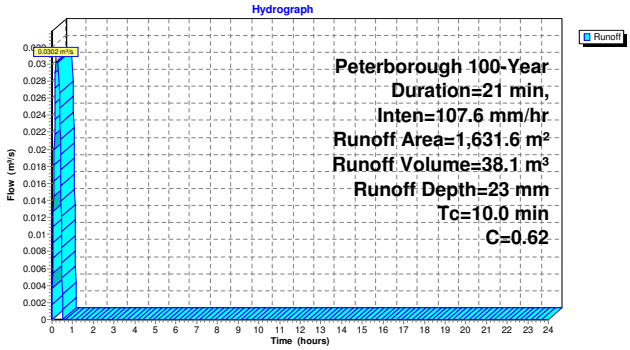
Runoff = 0.0302 m³/s @ 0.17 hrs, Volume= 38.1 m³, Depth= 23 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 100-Year Duration=21 min, Inten=107.6 mm/hr

Area (m²)	C	Description
933.1	0.90	External Impervious
698.5	0.25	External Pervious
1,631.6	0.62	Weighted Average
1,631.6		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 3S: External Road



Summary for Subcatchment 4S: Uncontrolled

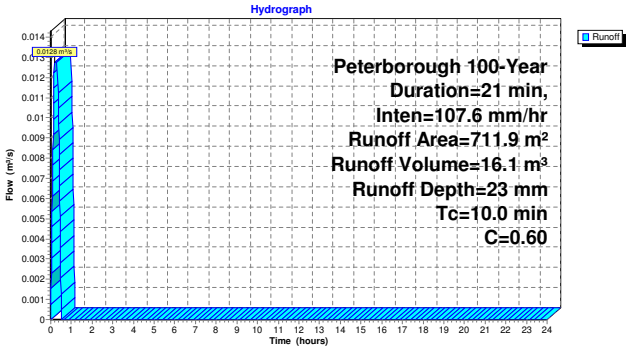
Runoff = 0.0128 m³/s @ 0.17 hrs, Volume= 16.1 m³, Depth= 23 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 100-Year Duration=21 min, Inten=107.6 mm/hr

Area (m²)	C	Description
333.7	0.25	Soft Landscaping
378.2	0.90	At-Grade Impervious
711.9	0.60	Weighted Average
711.9		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					Direct Entry, Time of Concentration (Direct Entry)

Subcatchment 4S: Uncontrolled



Summary for Subcatchment 5S: Building

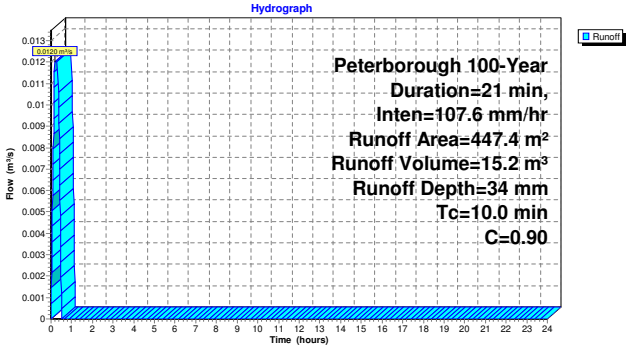
Runoff = 0.0120 m³/s @ 0.17 hrs, Volume= 15.2 m³, Depth= 34 mm

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peterborough 100-Year Duration=21 min, Inten=107.6 mm/hr

Area (m²)	C	Description
447.4	0.90	Impervious Roof
447.4		100.00% Pervious Area

Tc (min)	Length (meters)	Slope (m/m)	Velocity (m/sec)	Capacity (m³/s)	Description
10.0					**Direct Entry, Time of Concentration (Direct Entry)**

Subcatchment 5S: Building



Summary for Pond 1P: Roof Storage

Inflow Area = 233.6 m², 0.00% Impervious, Inflow Depth = 34 mm for 100-Year event
Inflow = 0.0063 m³/s @ 0.17 hrs, Volume= 7.9 m³
Outflow = 0.0027 m³/s @ 0.45 hrs, Volume= 7.9 m³, Atten= 58%, Lag= 16.6 min
Primary = 0.0027 m³/s @ 0.45 hrs, Volume= 7.9 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.088 m @ 0.45 hrs Surf.Area= 156.3 m² Storage= 4.6 m³

Plug-Flow detention time= 18.7 min calculated for 7.9 m³ (100% of inflow)
Center-of-Mass det. time= 18.7 min (34.2 - 15.5)

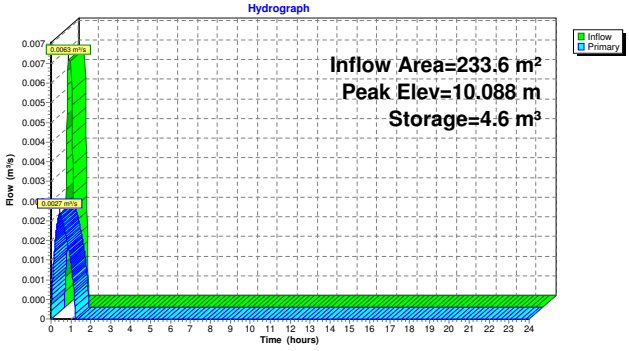
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	6.7 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	200.0	6.7	6.7	200.0

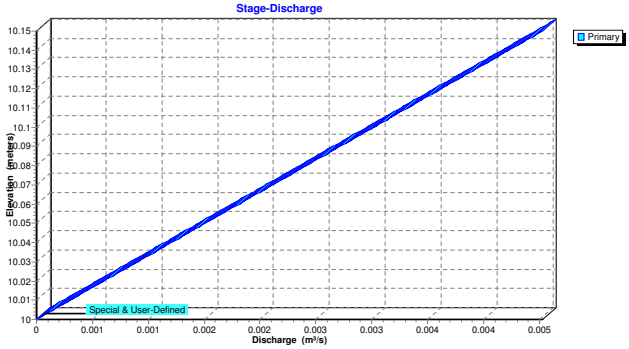
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 3.00**
			Head (meters) 0.000 0.150
			Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0027 m³/s @ 0.45 hrs HW=10.088 m (Free Discharge)
↑**1=Special & User-Defined** (Custom Controls 0.0027 m³/s)

Pond 1P: Roof Storage



Pond 1P: Roof Storage



Stage-Discharge for Pond 1P: Roof Storage

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0016	10.104	0.0031
10.001	0.0000	10.053	0.0016	10.105	0.0032
10.002	0.0001	10.054	0.0016	10.106	0.0032
10.003	0.0001	10.055	0.0017	10.107	0.0032
10.004	0.0001	10.056	0.0017	10.108	0.0033
10.005	0.0002	10.057	0.0017	10.109	0.0033
10.006	0.0002	10.058	0.0018	10.110	0.0033
10.007	0.0002	10.059	0.0018	10.111	0.0034
10.008	0.0002	10.060	0.0018	10.112	0.0034
10.009	0.0003	10.061	0.0018	10.113	0.0034
10.010	0.0003	10.062	0.0019	10.114	0.0034
10.011	0.0003	10.063	0.0019	10.115	0.0035
10.012	0.0004	10.064	0.0019	10.116	0.0035
10.013	0.0004	10.065	0.0020	10.117	0.0035
10.014	0.0004	10.066	0.0020	10.118	0.0036
10.015	0.0005	10.067	0.0020	10.119	0.0036
10.016	0.0005	10.068	0.0021	10.120	0.0036
10.017	0.0005	10.069	0.0021	10.121	0.0037
10.018	0.0005	10.070	0.0021	10.122	0.0037
10.019	0.0006	10.071	0.0021	10.123	0.0037
10.020	0.0006	10.072	0.0022	10.124	0.0037
10.021	0.0006	10.073	0.0022	10.125	0.0038
10.022	0.0007	10.074	0.0022	10.126	0.0038
10.023	0.0007	10.075	0.0023	10.127	0.0038
10.024	0.0007	10.076	0.0023	10.128	0.0039
10.025	0.0008	10.077	0.0023	10.129	0.0039
10.026	0.0008	10.078	0.0024	10.130	0.0039
10.027	0.0008	10.079	0.0024	10.131	0.0040
10.028	0.0008	10.080	0.0024	10.132	0.0040
10.029	0.0009	10.081	0.0024	10.133	0.0040
10.030	0.0009	10.082	0.0025	10.134	0.0040
10.031	0.0009	10.083	0.0025	10.135	0.0041
10.032	0.0010	10.084	0.0025	10.136	0.0041
10.033	0.0010	10.085	0.0026	10.137	0.0041
10.034	0.0010	10.086	0.0026	10.138	0.0042
10.035	0.0011	10.087	0.0026	10.139	0.0042
10.036	0.0011	10.088	0.0027	10.140	0.0042
10.037	0.0011	10.089	0.0027	10.141	0.0043
10.038	0.0011	10.090	0.0027	10.142	0.0043
10.039	0.0012	10.091	0.0027	10.143	0.0043
10.040	0.0012	10.092	0.0028	10.144	0.0043
10.041	0.0012	10.093	0.0028	10.145	0.0044
10.042	0.0013	10.094	0.0028	10.146	0.0044
10.043	0.0013	10.095	0.0029	10.147	0.0044
10.044	0.0013	10.096	0.0029	10.148	0.0045
10.045	0.0014	10.097	0.0029	10.149	0.0045
10.046	0.0014	10.098	0.0030	10.150	**0.0045**
10.047	0.0014	10.099	0.0030		
10.048	0.0014	10.100	0.0030		
10.049	0.0015	10.101	0.0031		
10.050	0.0015	10.102	0.0031		
10.051	0.0015	10.103	0.0031		

Summary for Pond 2P: Bioretention Cell

Inflow Area = 3,934.7 m², 0.00% Impervious, Inflow Depth = 25 mm for 100-Year event
Inflow = 0.0748 m³/s @ 0.35 hrs, Volume= 99.0 m³
Outflow = 0.0696 m³/s @ 0.36 hrs, Volume= 56.3 m³, Atten= 7%, Lag= 0.8 min
Primary = 0.0696 m³/s @ 0.36 hrs, Volume= 56.3 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Starting Elev= 0.400 m Surf.Area= 249.4 m² Storage= 20.0 m³
Peak Elev= 1.234 m @ 0.36 hrs Surf.Area= 407.6 m² Storage= 75.4 m³ (55.4 m³ above start)

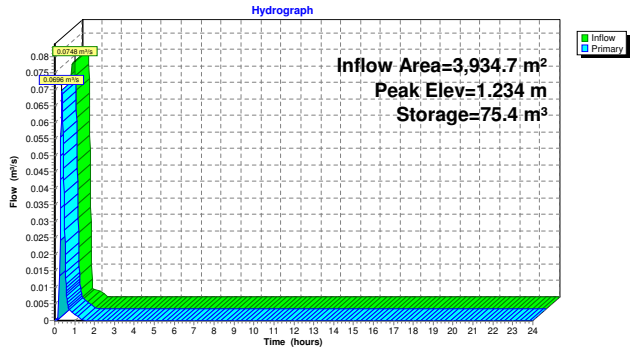
Plug-Flow detention time= 22.3 min calculated for 36.3 m³ (37% of inflow)
Center-of-Mass det. time= 9.7 min (26.7 - 17.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1.000 m	35.6 m³	**12.47 mW x 10.00 mL x 0.25 mH Ponding Z=3.0**
#2	0.400 m	22.4 m³	**12.47 mW x 10.00 mL x 0.60 mH Engineered Soil Media** 74.8 m³ Overall x 30.0% Voids
#3	0.000 m	20.0 m³	**12.47 mW x 10.00 mL x 0.40 mH Clear Stone** 49.9 m³ Overall x 40.0% Voids
		78.0 m³	Total Available Storage

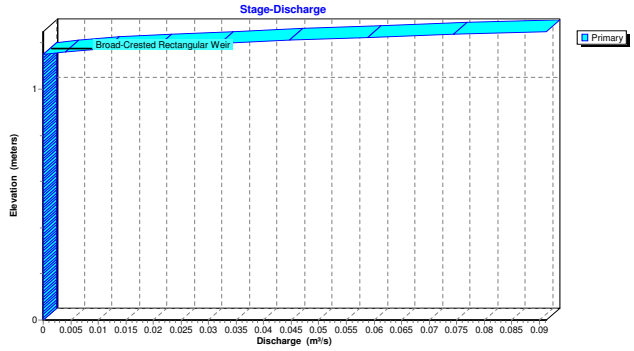
Device	Routing	Invert	Outlet Devices
#1	Primary	1.150 m	**2.00 m long x 0.50 m breadth Broad-Crested Rectangular Weir** Head (meters) 0.061 0.122 0.183 0.244 0.305 0.366 0.427 0.488 0.549 0.610 0.762 0.914 1.067 Coef. (Metric) 1.43 1.45 1.45 1.47 1.50 1.55 1.59 1.67 1.67 1.64 1.78 1.81 1.83

Primary OutFlow Max=0.0693 m³/s @ 0.36 hrs HW=1.233 m (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.0693 m³/s @ 0.42 m/s)

Pond 2P: Bioretention Cell



Pond 2P: Bioretention Cell



Stage-Discharge for Pond 2P: Bioretention Cell

Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
0.000	0.0000	0.780	0.0000
0.015	0.0000	0.795	0.0000
0.030	0.0000	0.810	0.0000
0.045	0.0000	0.825	0.0000
0.060	0.0000	0.840	0.0000
0.075	0.0000	0.855	0.0000
0.090	0.0000	0.870	0.0000
0.105	0.0000	0.885	0.0000
0.120	0.0000	0.900	0.0000
0.135	0.0000	0.915	0.0000
0.150	0.0000	0.930	0.0000
0.165	0.0000	0.945	0.0000
0.180	0.0000	0.960	0.0000
0.195	0.0000	0.975	0.0000
0.210	0.0000	0.990	0.0000
0.225	0.0000	1.005	0.0000
0.240	0.0000	1.020	0.0000
0.255	0.0000	1.035	0.0000
0.270	0.0000	1.050	0.0000
0.285	0.0000	1.065	0.0000
0.300	0.0000	1.080	0.0000
0.315	0.0000	1.095	0.0000
0.330	0.0000	1.110	0.0000
0.345	0.0000	1.125	0.0000
0.360	0.0000	1.140	0.0000
0.375	0.0000	1.155	0.0010
0.390	0.0000	1.170	0.0081
0.405	0.0000	1.185	0.0187
0.420	0.0000	1.200	0.0320
0.435	0.0000	1.215	0.0474
0.450	0.0000	1.230	0.0650
0.465	0.0000	1.245	**0.0844**
0.480	0.0000		
0.495	0.0000		
0.510	0.0000		
0.525	0.0000		
0.540	0.0000		
0.555	0.0000		
0.570	0.0000		
0.585	0.0000		
0.600	0.0000		
0.615	0.0000		
0.630	0.0000		
0.645	0.0000		
0.660	0.0000		
0.675	0.0000		
0.690	0.0000		
0.705	0.0000		
0.720	0.0000		
0.735	0.0000		
0.750	0.0000		
0.765	0.0000		

Summary for Pond 3P: Roof Storage

Inflow Area = 447.4 m², 0.00% Impervious, Inflow Depth = 34 mm for 100-Year event
Inflow = 0.0120 m³/s @ 0.17 hrs, Volume= 15.2 m³
Outflow = 0.0045 m³/s @ 0.45 hrs, Volume= 15.2 m³, Atten= 63%, Lag= 17.1 min
Primary = 0.0045 m³/s @ 0.45 hrs, Volume= 15.2 m³

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 10.089 m @ 0.45 hrs Surf.Area= 319.9 m² Storage= 9.5 m³

Plug-Flow detention time= 22.7 min calculated for 15.2 m³ (100% of inflow)
Center-of-Mass det. time= 22.7 min (38.2 - 15.5)

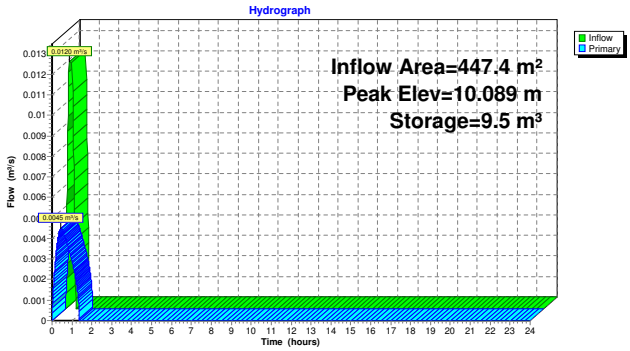
Volume	Invert	Avail.Storage	Storage Description
#1	10.000 m	13.3 m³	**Custom Stage Data (Pyramidal)** Listed below (Recalc)

Elevation (meters)	Surf.Area (sq-meters)	Inc.Store (cubic-meters)	Cum.Store (cubic-meters)	Wet.Area (sq-meters)
10.000	0.0	0.0	0.0	0.0
10.100	400.0	13.3	13.3	400.0

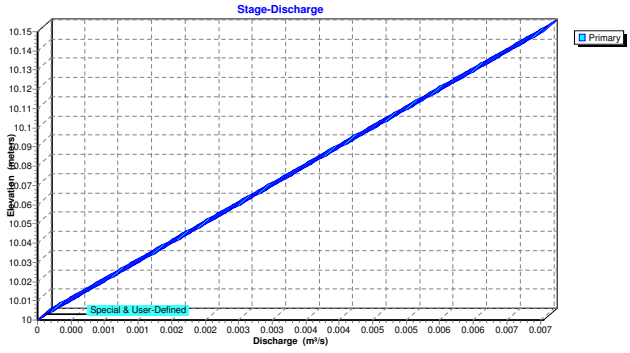
Device	Routing	Invert	Outlet Devices
#1	Primary	10.000 m	**Special & User-Defined X 5.00** Head (meters) 0.000 0.150 Disch. (m³/s) 0.00000 0.00151

Primary OutFlow Max=0.0045 m³/s @ 0.45 hrs HW=10.089 m (Free Discharge)
1=Special & User-Defined (Custom Controls 0.0045 m³/s)

Pond 3P: Roof Storage



Pond 3P: Roof Storage



Stage-Discharge for Pond 3P: Roof Storage

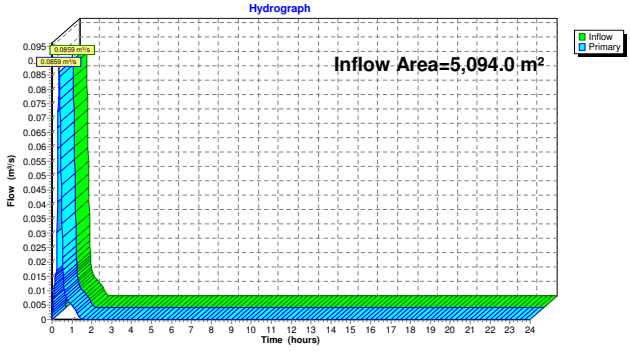
Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)	Elevation (meters)	Primary (m³/s)
10.000	0.0000	10.052	0.0026	10.104	0.0052
10.001	0.0001	10.053	0.0027	10.105	0.0053
10.002	0.0001	10.054	0.0027	10.106	0.0053
10.003	0.0002	10.055	0.0028	10.107	0.0054
10.004	0.0002	10.056	0.0028	10.108	0.0054
10.005	0.0003	10.057	0.0029	10.109	0.0055
10.006	0.0003	10.058	0.0029	10.110	0.0055
10.007	0.0004	10.059	0.0030	10.111	0.0056
10.008	0.0004	10.060	0.0030	10.112	0.0056
10.009	0.0005	10.061	0.0031	10.113	0.0057
10.010	0.0005	10.062	0.0031	10.114	0.0057
10.011	0.0006	10.063	0.0032	10.115	0.0058
10.012	0.0006	10.064	0.0032	10.116	0.0058
10.013	0.0007	10.065	0.0033	10.117	0.0059
10.014	0.0007	10.066	0.0033	10.118	0.0059
10.015	0.0008	10.067	0.0034	10.119	0.0060
10.016	0.0008	10.068	0.0034	10.120	0.0060
10.017	0.0009	10.069	0.0035	10.121	0.0061
10.018	0.0009	10.070	0.0035	10.122	0.0061
10.019	0.0010	10.071	0.0036	10.123	0.0062
10.020	0.0010	10.072	0.0036	10.124	0.0062
10.021	0.0011	10.073	0.0037	10.125	0.0063
10.022	0.0011	10.074	0.0037	10.126	0.0063
10.023	0.0012	10.075	0.0038	10.127	0.0064
10.024	0.0012	10.076	0.0038	10.128	0.0064
10.025	0.0013	10.077	0.0039	10.129	0.0065
10.026	0.0013	10.078	0.0039	10.130	0.0065
10.027	0.0014	10.079	0.0040	10.131	0.0066
10.028	0.0014	10.080	0.0040	10.132	0.0066
10.029	0.0015	10.081	0.0041	10.133	0.0067
10.030	0.0015	10.082	0.0041	10.134	0.0067
10.031	0.0016	10.083	0.0042	10.135	0.0068
10.032	0.0016	10.084	0.0042	10.136	0.0068
10.033	0.0017	10.085	0.0043	10.137	0.0069
10.034	0.0017	10.086	0.0043	10.138	0.0069
10.035	0.0018	10.087	0.0044	10.139	0.0070
10.036	0.0018	10.088	0.0044	10.140	0.0070
10.037	0.0019	10.089	0.0045	10.141	0.0071
10.038	0.0019	10.090	0.0045	10.142	0.0071
10.039	0.0020	10.091	0.0046	10.143	0.0072
10.040	0.0020	10.092	0.0046	10.144	0.0072
10.041	0.0021	10.093	0.0047	10.145	0.0073
10.042	0.0021	10.094	0.0047	10.146	0.0073
10.043	0.0022	10.095	0.0048	10.147	0.0074
10.044	0.0022	10.096	0.0048	10.148	0.0074
10.045	0.0023	10.097	0.0049	10.149	0.0075
10.046	0.0023	10.098	0.0049	10.150	**0.0076**
10.047	0.0024	10.099	0.0050		
10.048	0.0024	10.100	0.0050		
10.049	0.0025	10.101	0.0051		
10.050	0.0025	10.102	0.0051		
10.051	0.0026	10.103	0.0052		

Summary for Link 1L: Outlet

Inflow Area = 5,094.0 m², 0.00% Impervious, Inflow Depth = 17 mm for 100-Year event
Inflow = 0.0859 m³/s @ 0.36 hrs, Volume= 87.5 m³
Primary = 0.0859 m³/s @ 0.36 hrs, Volume= 87.5 m³, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 1L: Outlet



Proposed New Parking Lot Development

St. Joseph's Catholic Elementary School, Douro
Township of Douro-Dummer
County of Peterborough

Traffic Impact Assessment

Prepared by:

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Prepared for:

PVNCCD School Board

March, 2022

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March 11, 2022

Mr. James Jeffery
Salter Pilon Architecture Inc.
151 Ferris Lane, Suite 400,
Barrie, Ontario
L4M 6C1

Dear Mr. Jeffery:

Re: Traffic Impact Assessment Study for the Proposed New Parking Lot at St. Joseph's Catholic Elementary School, Douro, Township of Douro-Dummer, County of Peterborough

As requested, we have conducted a Traffic Impact Assessment Study in support of the proposed New Parking Lot at St. Joseph's Catholic Elementary School (St. Joseph's CES) on Douro 4th Line (4th Line) and Peterborough County Road 8 (CR 8) in Douro, in the Township of Douro-Dummer. This document describes the study process and the study findings.

1. Introduction

The St. Joseph's Catholic Elementary School on 4th Line and CR 8 northeast quadrant in Douro, in the Township of Douro-Dummer had been the subject of traffic assessment in 2018 as part of the "Traffic Assessment Study" to provide initial findings and suggestions for improvements regarding the school's traffic related issues, such as, no on-site school parking lot and students bus loading/unloading in front of the school on 4th Line and the general drop-off/pick-up of students using passenger vehicles at the school's front entrance. The study was carried out by Tranplan Associates, retained by the Peterborough Victoria Northumberland and Clarington Catholic District School Board (PVNCCDSB). The 2018 study provided the following conclusions and recommendations:

- St. Joseph's Elementary School in Douro currently operates without a

dedicated parking lot on site. The school has permissions to use St. Joseph's church parking lot (across the street) most of the time when there are no special events scheduled at church. During the special event days, the school related parking moves to on-street parking on County Road 8 or on Douro 4th Line.

- In general, most of the school related traffic (other than school buses) activities are largely spread out between on-street near the school or the at the St. Joseph's Church during the peak AM drop-off and PM pick-up times.

- There are no reported (significant) or observed traffic issues during field surveys carried out at the school during the AM and PM peak times at St. Joseph's.

- At the school main entrance on 4th Line, where the school bus loading and unloading take place, is limited in terms of functionality due to the size of the bus loop and the room required for the number of school buses when all buses arrive at the same time.

- If opportunities arise to provide major improvements, such as, to develop an on-site parking facility with driveway access on County Road 8 east of Douro 4th Line intersection, to create an on-site drop-off/pick-up, loading/un-loading operations, every attempt should be made to provide safe access to school by pedestrians and to separate the school bus and private vehicle operations as it relates to students' drop-off/pick-up operations.

Since then, the PVNC School Board has developed a plan to provide an on-site parking lot in addition to the proposed addition to the existing school facility to replace the portable classrooms. The new parking lot will mainly be for staff and visitors with the parking lot access driveway on CR 8. It allows for the staff who will be at the school for the duration of the school day to park on site, while maintaining the church and on-street parking be available for short-term/

temporary parking needs. Exhibit 1.1 shows the location of the study site and shows the proposed parking lot.

2. Extent of the Analysis

This traffic impact assessment Terms of Reference for the new parking lot at St. Joseph's Catholic Elementary Public School was provided by the County of Peterborough and the study consisted of the following process:

1. Contacted Peterborough County staff to determine their concerns and requirements.
2. Reviewed initial plans for the development.
3. Visited the site and inspected the access routes to/from the site.
4. Reviewed and commented on the revised plans after the assessment of initial findings from the field observations and data collection.
5. Assessed the traffic impact assessments for the new parking lot driveway to ensure conformity to County standards as well as safe vehicle movements and circulation throughout the parking lot.
   **It is noted that the intersection capacity analysis is not carried out or necessary/requested since based on field observation from 2018 and 2021, there are no traffic congestion/capacity related issues on the school access associated roadways.*
6. Prepared this documentation of the analysis.

3. Existing Conditions/Operations

Tranplan conducted field observations and field data collection at the subject school during the month of October 2021. It is noted that the field observations were carried out during COVID-19 when the provincial travel restrictions were relaxed and when the schools were open to in-class learning. However, it was found that overall traffic patterns in the vicinity of the school have changed, the peak hour traffic volumes were found to be lower, but the school related

Exhibit 1.1: Study Site and Proposed New Parking Lot

activities remained relatively same when compared to 2018 observations. As such, the pre-COVID, 2018 conditions/traffic volumes are used for study assessments (see, Appendix A). It would be considered the "worst case" scenario.

Currently, the school operating times for St. Joseph's CES is between 8:45 AM and 3:20 PM. It is served by five school buses, arriving at various times between 8:30 AM and 8:40 AM in the morning and between 2:50 PM and 3:15 PM in the afternoon. The school bus loading/un-loading takes place in the loading/un-loading area in front of the school. The loading/un-loading area is one-way driveway system (all vehicles are to enter through the south driveway and exit via the north driveway). If the buses are parked perfectly, up to four long school buses can fit in the school bus loading/un-loading driveway loop. However, during the morning drop-off operation, only one school bus drops off the students at a time where in the afternoon pick-up operations, four school buses are parked in the driveway loop waiting for students to be let out of the school. One school bus wait on street until opening comes up and picks up students at the designated loading/unloading area driveway loop.

The following are relevant traffic observations during the peak AM and PM drop-off and pick-up times:

AM Peak Drop-off Operation

- In the morning between 8:20 AM and 9:20 AM, total of approximately 20 vehicles (including five school buses) were observed entering the school driveway loop site and the same number of vehicles were observed leaving the school driveway loop.
- Approximately 25 vehicles were observed to park on Douro 4th Line, County Road 8 and three vehicles were parked at the church parking lot.
- In total, 20 student/pedestrians were observed having to cross Douro 4th Line to get to school.
- The field observations indicate that most of the students are dropped-off between 8:30 AM and 8:45 AM at the same time when the school buses

are unloading the students.

- In total, five school buses were observed. The average unloading of the students took less than two minutes (time observed in a bus arriving into the loading area, unloading of the students and departing) per school bus.
- In the morning, even though the school buses arrive at different times, only the buses within the loading area are allowed to let the children off the school buses. As such, significant queuing takes place as the school buses wait to get in to the loading area. On the day of the site visit, two school buses were waiting to enter the loading area effectively extending the queue on Douro 4th Line to the Douro 4th Line/County Road 8 intersection.
- Furthermore, on the day of the field observation, a funeral was held at the church, thereby limiting the church parking lot use by the school traffic. As such, the drop-off operations were being conducted on-street.
- On-Street parking is available on Douro 4th Line and on County Road 8. It provides legal short-term parking for drop-off operation (park the vehicle and walk the student into school).

PM Peak Pick-up Operation

The pick-up operation takes place between 2:45 PM and 3:45 PM (students are let out at 3:20 PM). The first school bus arrives around 2:45 PM and by 3:05 PM, four school buses occupy all available waiting spaces for school buses in the loading/unloading driveway loop. The fifth school bus arrived at 3:15 PM, waits in queue, on street when the children are let out at 3:20 PM. On the day of the field work and traffic surveys, the following (mainly passenger vehicle observations) were recorded:

- There were 10 vehicles that arrived between 2:45 PM and 3:20 PM to pick-up the students, where 5 vehicles parked on church parking lot and five vehicles were parked on-street on Douro 4th Line.

- Five additional vehicles arrived after 3:20 PM to pick-up students after the last bell. All five vehicles parked on-street and picked-up the students when they came out of the school.
- At 3:25 PM, school buses begin to leave the school driveway loop and all five school buses leave the school by 3:30 PM.
- The majority of pedestrian movements were observed when the parents cross Douro 4th Line from the church parking lot to the school and back with the students when they are let out.
- People walking from the parked vehicles to the school's front door to pick-up the children and walking back to the vehicles were the only pedestrians observed during the afternoon pick-up times.
- Most of the school buses left the loading area within ten minutes after the students were let out of the school. Each school bus pick-up operation took about a minute (less than a minute) to load the students and drive away.

4. Proposed Site Plan/New Parking Lot Review

The proposed site plan, Exhibit 1.2, shows the new parking lot at the St. Joseph's Catholic Elementary School with driveway access on County Road 8. It indicates a parking lot capacity of 25 passenger vehicles. It is our understanding that, all parking spaces will be dedicated to long-term parking for all school staff (including teachers) and some visitors. For school drop-off and pick-up operations, the current operations on 4th Line and (to the less extent) the use of Church parking lot will be maintained.

4.1 Parking Lot Driveway Intersection Spacing Review

The intersection spacing assessment is carried out based on the County of Peterborough/TAC Design Criteria, for the proposed parking lot driveway in relation to intersection of County Road 8/4th Line. The intersection spacing review is illustrated in Exhibit 1.3. TAC Chapter 8, Section 8.8, including Table 1.1: Figure 8.8.2: Suggested Minimum Corner Clearances to

Exhibit 1.2: Proposed Site Plan/New Parking Lot

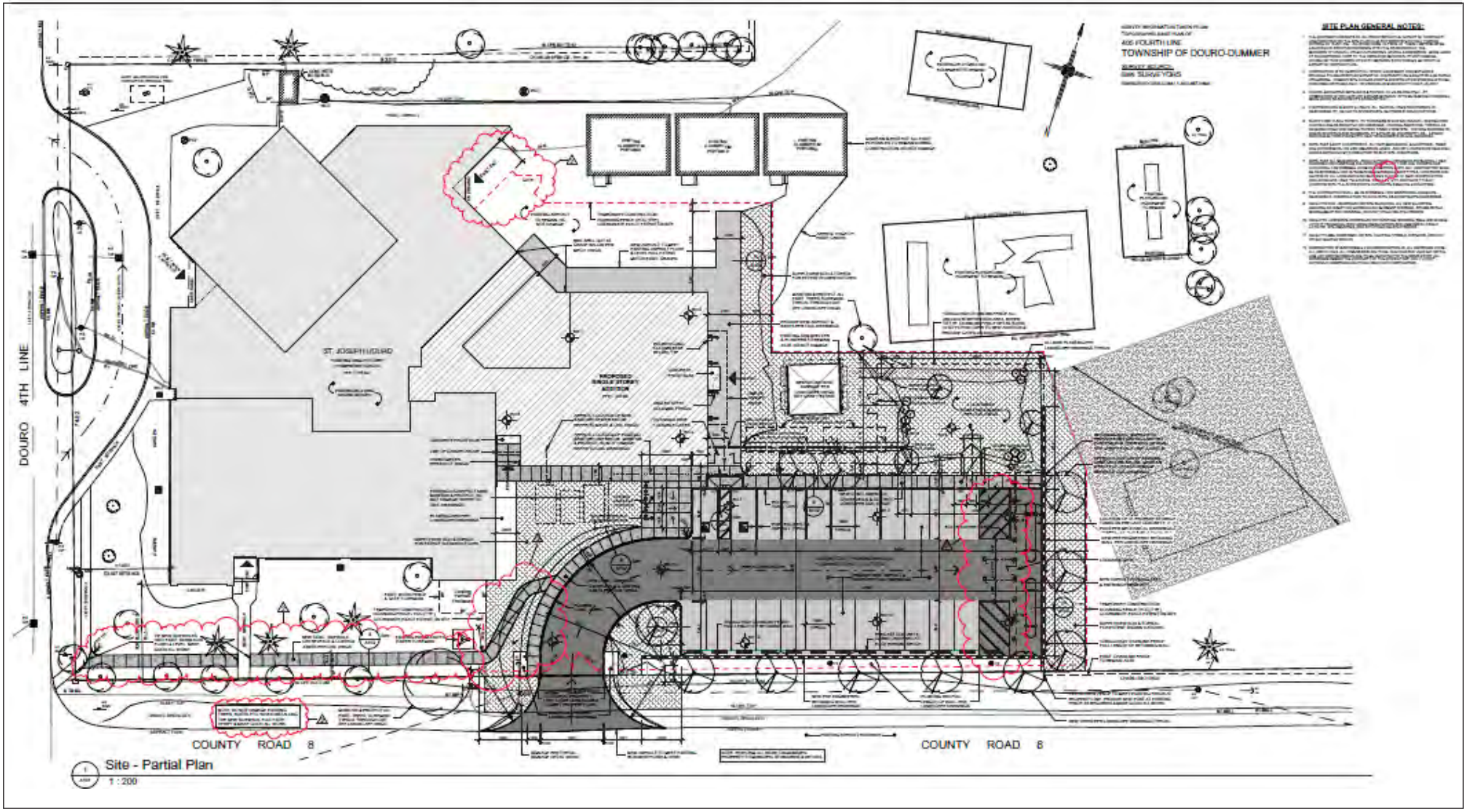
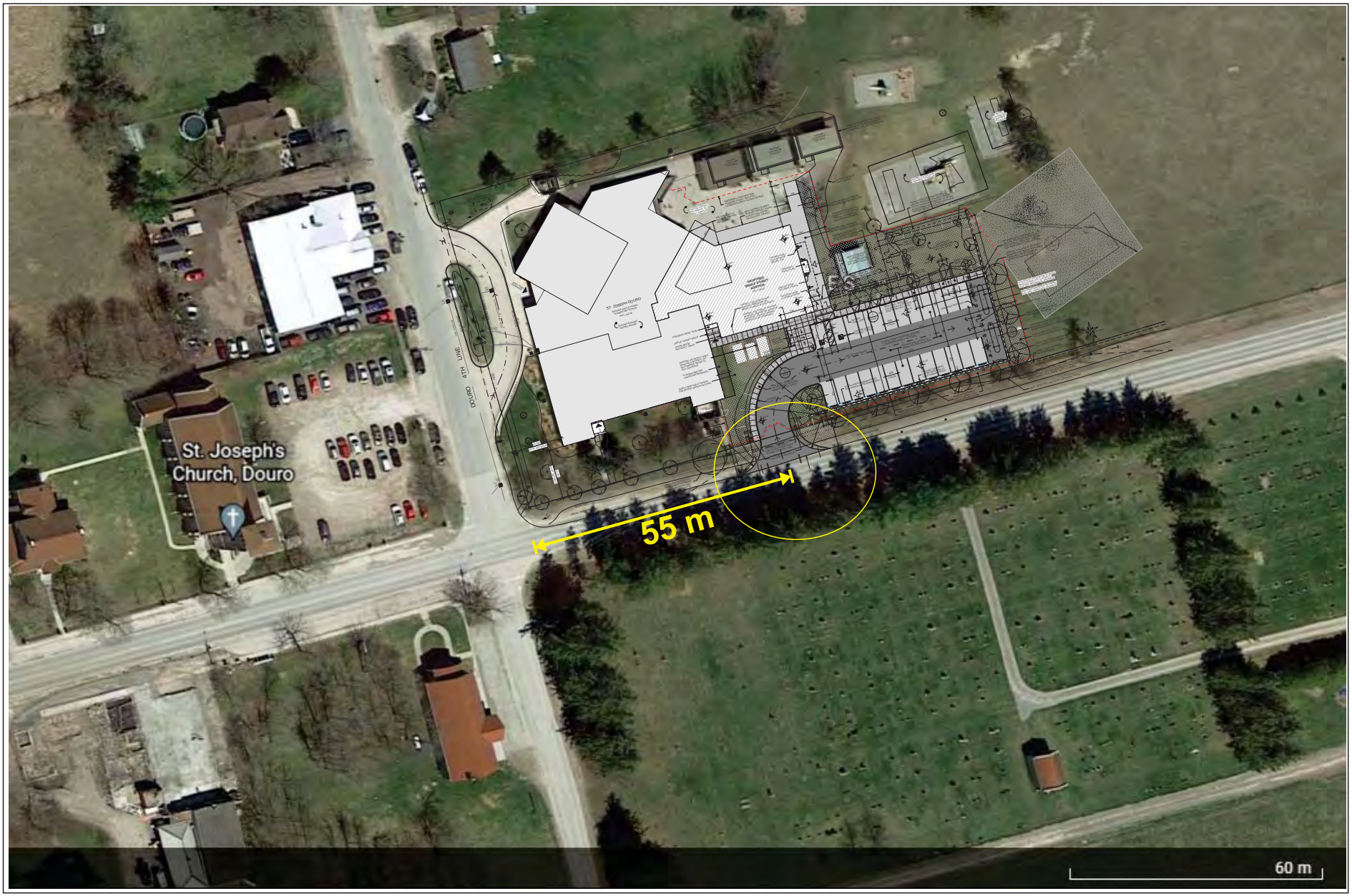
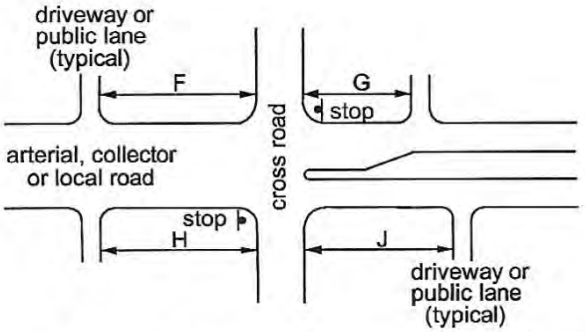


Exhibit 1.3: New Parking Lot Driveway Distance from 4th Line/County Road 8 Intersection



Accesses or Public Lanes at Major Intersections, the following is provided:

Table 1.1: Figure 8.8.2: Suggested Minimum Corner Clearances to Accesses or Public Lanes at Major Intersections



item	min. clearance, m		
	arterial	collector [b]	local [b]
F	35	20	15
G	# [a]	25	15
H	25	25	15
J	35	20	15

Notes: a. Distance (#) positions driveway or public lane in advance of the left turn storage length (min.) plus bay taper (des.).
b. Lesser values reflect lower volumes and reduces level of service on collectors and locals.

stop control at the cross road

Figure 8.8.2: Suggested Minimum Corner Clearances to Accesses or Public Lanes at Major Intersections

As Figure 8.8.2 in Table 1.1 indicates, the suggested minimum corner clearance is 35 m. The proposed driveway is approximately 55 m.

4.2 Parking Lot Driveway Sight Distance Review

The excerpt of the relevant section of the Transportation Association, Canada (TAC) Geometric Design Guide for Canadian Roads, 2017, is provided in the Technical Appendix appended to this report (see Appendix B: Excerpts from TAC Chapter 9 – Intersections). It defines the intersection sight distance, on page 60 of Chapter 9, as "the sight distance available from a point where vehicles are required to stop on the intersection road, while drivers are looking left and right along the major roadway, before entering the intersection. The intersection sight distance is adequate when it allows the design vehicles to safely make all

maneuvers that are permitted by the layout (e.g., left turns, right turns, through moves), without significantly affecting vehicles travelling on the main roadway".

Furthermore, in determining the intersection sight distance requirements, TAC has adopted the gap acceptance methodology outlined in "AASHTO's Policy on Geometric Design of Highways and Streets, 6th Editions, 2011". The "gap acceptance" is measured in seconds, a time required for a "minor-road vehicle to accelerate from a stop and complete a left turn without unduly interfering with major-road traffic operations."

Based on TAC standards, the available sight distance can be measured by a reviewing the sightlines as per the proposed site access road/parking lot driveway location from the Site Plan and the available topographic survey/air photo overlay and confirmed through field measurements, or by a "travel time" survey (measuring travel time of available sight distance) of traffic passing through the site access road/parking lot driveway on County Road 8.

Based on the TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the following table provides the intersection sight distance standards for ~~7~~0 km/h – 80 km/h design speed:

Table 1.2: Intersection Sight Distances

	Intersection Sight Distance			
Design Speed	Minimum Stopping Distance (m)	Left Turns from Minor Road (m)	Right Turns from Minor Road (m)	Left Turns from Major Road (m)
Time Gap		7.5 sec.	6.5 sec.	5.5 sec.
70 km/h	**105**	**150**	**130**	**110**
80 km/h	**130**	**170**	**145**	**125**

Exhibit 1.4 provides approximate "airline" distances of relevant sight distances measured (showing proposed frontage of proposed parking lot

Exhibit 1.4: New Parking Lot Driveway Sight Distance to East

driveway on CR 8) using Google Aerial Photo Distance Measure Function from the approximate location of the proposed driveway on CR 8. It indicates that minimum sight distance (to east) of approximately 170 m is available. This "airline" distance was confirmed through field measurements (using Walking Measuring Wheel) of available sight distance to the east from the approximate location of the proposed parking lot driveway, as illustrated in Exhibit 1.4.

Time Gap Survey

A "time gap" measurement study was carried out by Tranplan Associates during the field survey conducted in the afternoon of October 28, 2021 and recorded the "travel time" of traffic passing through the proposed parking lot driveway on CR 8 using video recordings. It is noted that the time gap survey observed and measured travel time of only 5 vehicles (observed for approximately 15 minutes period) travelling westbound on CR 8. The vehicles approaching the driveway were observed to measure travel time from the point where the vehicle was visible (nearest point) from the driveway to the vehicle passing through the driveway. Exhibit 1.5 describes the start and end locations for travel time measurement. The average travel time or "time gap" for the observed vehicles was 10.8 seconds. Based on the survey results, there are sufficient "time gaps" on County Road 8 for 80 km/h design speed for a vehicle to make a left turn from the proposed parking lot driveway to head west on CR 8.

4.3 Auxiliary Lanes at Parking Lot Driveway

Auxiliary turning lanes (right turn and left turn lanes) analysis at the proposed parking lot driveway is based on Tranplan observed 2018 data as well as County of Peterborough reported 2018 AADT for the section of CR 8 (identified in County Files as 008-03080) between CON.4/5, HAMLET OF DOURO-to-COUNTY ROAD 38, which indicates daily traffic of 1,250 vehicles. In general, peak hour volume represents approximately 10% of the daily traffic, which would indicate approximately 125 vehicles travelling in both direction in CR 8 in the vicinity of the proposed parking

Exhibit 1.5: Travel Time Measurement Start and End Locations

lot driveway. As a "worst case" scenario, for the purposes of right turn lane and the left turn lane warrant analysis, the study considered 125 vehicles travelling in one direction (in advancing direction) and assumed 75% (approximately 95 vehicles) of the traffic to be in the opposing direction for the peak hour of analysis. Furthermore, for a right turn lane warrant analysis, all parking lot related vehicles (25 vehicles) would be making a right turns into the parking lot and for left turn lane warrant analysis, all vehicles are assumed to make left turns into the parking lot.

Auxiliary turning lanes (right turn and left turn lanes) warrant analysis, see Appendix C, indicates that the peak hour traffic volumes on CR 8 are so low that it doesn't meet the minimum required warrant volumes.

5. Internal Site Circulation

The proposed parking lot was reviewed for parking lot layout, regular passenger vehicles circulations and general access. The site access and the internal circulation are based on the Transportation Association, Canada (TAC) Passenger Design Vehicle Standards. The access to the site and the vehicle movements from the site entrance to the parking area and the maneuvering in and out of the parking stalls have been tested using *AutoTurn* Software version 9 (submitted as autocad file). The vehicle turning diagram indicates that the passenger vehicles have ease of access/egress using the proposed driveways. There are no issues with any of the parking stalls for the vehicle to maneuver in and out of the parking stalls.

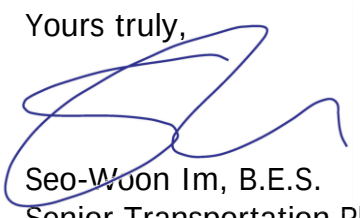
6. Summary

In summary, the proposed parking lot is designed appropriately. The driveway access on County Road 8 is located sufficiently away (approximately 55 m) from

CR 8/4th Line intersection and has sufficient sight distance for the vehicles to safely turn to/from the parking lot driveway onto County Road 8 traffic stream. The study analysis also indicated that auxiliary turning lanes are not required at the proposed parking lot driveway and no mitigation measures are required on County Road 8 or on Douro 4th Line.

Additional background information on the study analysis is available in the study working files. If you should require any additional information on the study analysis, please do not hesitate to contact me at your convenience.

Yours truly,



Seo-Woon Im, B.E.S.
Senior Transportation Planner
Tranplan Associates

TECHNICAL APPENDIX

APPENDIX A: 2018 Observed Traffic Data

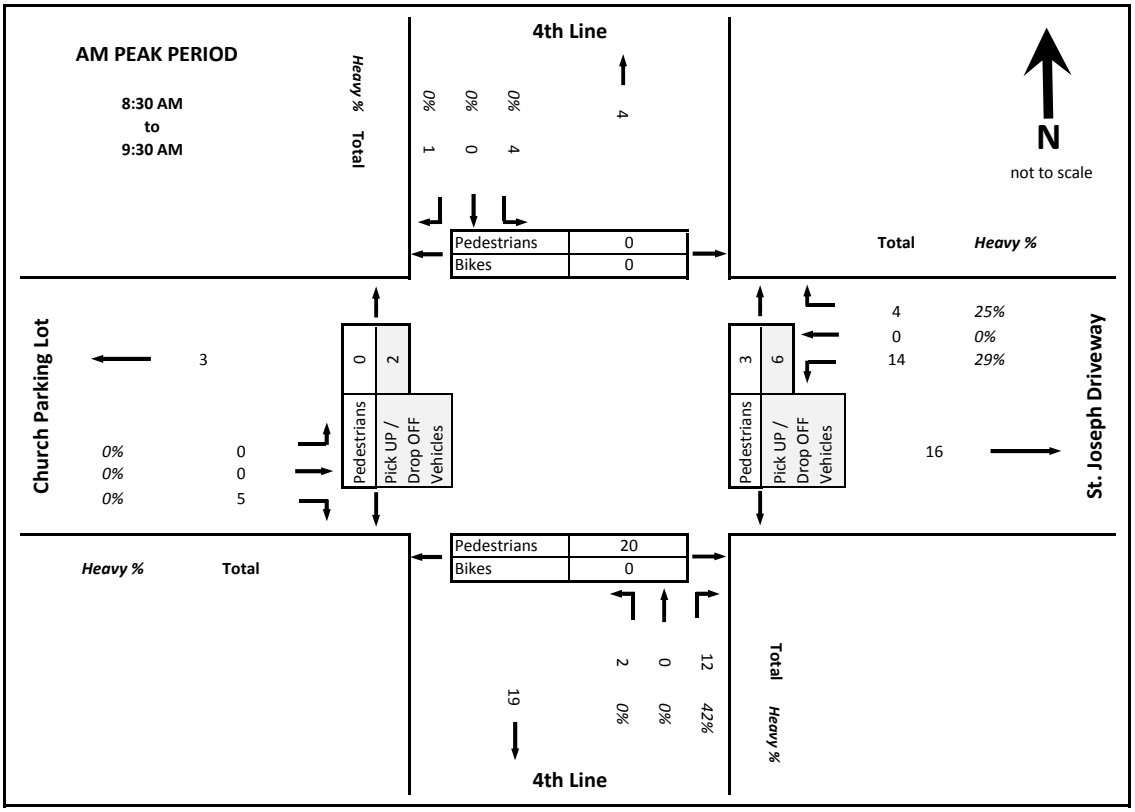
DATE	03-Apr-2018	VIDEO AUDIT of ST. Joseph C.E.S. (Duoro) Vehicular and Pedestrian Traffic				
TIME	Observation	school related?	from	Action	to	Trip Details
before footage	SCHOOLBUS #1 IN DRIVEWAY	yes	unknown	Park/Stop	driveway	origin unknown
8:30:20 AM	PED west to east from Vehicle DROP OFF	yes	Westside of 4th Line	crossing	school	1xPED, silver sedan, south facing
8:30:20 AM	PED west to east from Vehicle DROP OFF	yes	Westside of 4th Line	crossing	school	1xPED, silver sedan, south facing
8:30:20 AM	PED west to east from Vehicle DROP OFF	yes	Westside of 4th Line	crossing	school	1xPED, silver sedan, south facing
8:30:32 AM	SCHOOLBUS #2	yes	Hwy 8	EBL	4th Line	NBR to school driveway
8:30:50 AM	SCHOOLBUS #3	yes	Hwy 8	EBL	4th Line	NBR to school driveway
8:30:55 AM	PED east to west return to Vehicle	yes	school	crossing	West of 4th Line	1xPED, silver sedan, south facing
8:31:20 AM	Vehicle EXIT	yes	4th Line	SBR	Hwy 8	silver sedan
8:33:07 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	Westside of 4th Line	1xPED, black pickup, north facing
8:33:07 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	Westside of 4th Line	1xPED, black pickup, north facing
8:33:21 AM	SCHOOLBUS #1 EXITS	yes	driveway	WBL	4th Line	SBL @ Hwy8/4thLine
8:33:42 AM	Vehicle EXIT	yes	Eastside of 4th Line	NBT	4th Line	black pickup
8:33:49 AM	SCHOOLBUS #4	yes	4th Line @HWY8	NBT	4th Line @HWY8	NBR to school driveway
8:34:22 AM	PED from Vehicle DROP OFF	yes	Westside of 4th Line	U-turn	Eastside of 4th Line	1XPED, dark Pickup, behind bus, drop off likely
8:35:25 AM	SCHOOLBUS #2 EXITS	yes	driveway	WBL	4th Line	SBR @ Hwy8/4thLine
8:35:43 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	Eastside of 4th Line	1xPED, black minivan, north facing
8:35:43 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	Eastside of 4th Line	1xPED, black minivan, north facing
8:35:50 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	Eastside of 4th Line	1xPED, red sedan, north facing
8:35:58 AM	Vehicle EXIT	yes	Eastside of 4th Line	NBT	4th Line	dark pickup, behind bus now in view
8:36:00 AM	SCHOOLBUS #5	yes	4th Line @HWY8	NBT	4th Line @HWY8	NBR to school driveway
8:36:19 AM	Vehicle EXIT	yes	Eastside of 4th Line	U-turn	Westside of 4th Line	red sedan, north facing, SBR @ Hwy8/4thLine
8:36:49 AM	SCHOOLBUS #3 EXITS	yes	driveway	WBL	4th Line	SBR @ Hwy8/4thLine
8:36:56 AM	Vehicle EXIT	yes	Eastside of 4th Line	U-turn	Westside of 4th Line	black minivan, north facing, SBR @ Hwy8/4thLine
8:36:59 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	Eastside of 4th Line	1xPED, black pickup, north facing
8:37:05 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	Eastside of 4th Line	1xPED, red sedan, north facing
8:37:19 AM	Vehicle Entry	yes	Hwy 8	EBL	4th Line	silver minivan, NBL to church Lot
8:37:32AM	Vehicle EXIT	yes	Eastside of 4th Line	U-turn	Westside of 4th Line	red sedan, north facing, SBR @ Hwy8/4thLine
8:37:40 AM	Vehicle EXIT	yes	Eastside of 4th Line	U-turn	Westside of 4th Line	black pickup, north facing, SBR @ Hwy8/4thLine
8:38:06 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	Eastside of 4th Line	1xPED, silver pickup, north facing
8:38:06 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	Eastside of 4th Line	1xPED, silver pickup, north facing
8:38:16 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	driveway	1xPED, silver SUV, NBR to driveway
8:38:20 AM	SCHOOLBUS #4 EXITS	yes	driveway	WBL	4th Line	SBR @ Hwy8/4thLine
8:38:27 AM	SCHOOLBUS #5 EXITS	yes	driveway	WBR	4th Line	NBT on 4th Line
8:39:40 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	4th Line	1xPED, silver hatchback, NBR to driveway
8:40:05 AM	PED from Vehicle DROP OFF	yes	4th Line	SBL	driveway	1xPED, dark hatchback
8:40:07 AM	PED west to east from Vehicle DROP OFF	yes	church lot	crossing	school	1xPED, silver minivan in church lot
8:40:07 AM	PED west to east from Vehicle DROP OFF	yes	church lot	crossing	school	1xPED, silver minivan in church lot
8:40:07 AM	PED west to east from Vehicle DROP OFF	yes	church lot	crossing	school	1xPED, silver minivan in church lot
8:40:33 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	silver SUV, SBR @ Hwy8/4thLine
8:40:38 AM	Vehicle EXIT	yes	driveway	WBR	4th Line	silver pickup, NBT @ 4thLine
8:40:55 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
8:41:39 AM	Vehicle EXIT	yes	church lot	EBR	4th Line	blue sedan, SBT @ Hwy8/4th
8:42:35 AM	PED from Vehicle DROP OFF	yes	4th Line	SBL	driveway	1xPED, dark sedan
8:42:37 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
8:42:55 AM	PED south to north ENTRY	yes	SE corner of hwy8/4thLine	crossing	NE corner of hwy8/4thLine	1xPedestrian
8:43:04 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	dark hatchback, SBL @ Hwy8/4thLine
8:44:00 AM	Vehicle EXIT	yes	driveway	WBR	4th Line	dark sedan, NBT @ 4thLine
8:44:07 AM	Vehicle EXIT	yes	church lot	EBR	4th Line	silver minivan, SBR @ Hwy8/4th
8:44:24 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	4th Line	1xPED, red minivan, NBR to driveway
8:44:40 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	4th Line	1xPED, white sedan, NBR to driveway
8:45:00 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	4th Line	1xPED, black hatchback, NBR to driveway
8:45:10 AM	PED west to east ENTRY	yes	NW corner of hwy8/4thLine	crossing	NE corner of hwy8/4thLine	1xPedestrian
8:45:10 AM	PED west to east ENTRY	yes	NW corner of hwy8/4thLine	crossing	NE corner of hwy8/4thLine	1xPedestrian
8:45:48 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	red minivan, SBL @ Hwy8/4thLine
8:46:14 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	white sedan, SBR @ Hwy8/4thLine
8:46:30 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	4th Line	1xPED, black pickup, NBR to driveway
8:46:40 AM	PED east to west EXIT	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian, parent after drop off of child
8:47:00 AM	PED west to east from Vehicle DROP OFF	yes	Westside of 4th Line	crossing	school	1xPED, White SUV, south facing, SBT on 4thLine
8:47:00 AM	PED west to east from Vehicle DROP OFF	yes	Westside of 4th Line	crossing	school	1xPED, White SUV, south facing, SBT on 4thLine
8:47:30 AM	PED from Vehicle DROP OFF	yes	4th Line	SBL	driveway	1xPED, dark minivan
8:49:00 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	black pickup, SBR @ Hwy8/4thLine
8:49:02 AM	Vehicle EXIT	yes	driveway	WBR	4th Line	black sedan, NBT @ 4thLine
8:50:56 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
8:51:26 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
8:51:50 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
8:52:00 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	dark minivan, SBT @ Hwy8/4thLine
8:52:30 AM	Vehicle EXIT	yes	Westside of 4th Line	SBR	Hwy 8	westside parked White SUV south facing
8:52:33 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	4th Line	1xPED, black pickup, NBR to driveway
8:52:37 AM	Vehicle EXIT	yes	church lot	EBR	4th Line	silver sedan, SBR @ Hwy8/4th
8:52:39 AM	Vehicle Entry	yes	Hwy 8	EBL	4th Line	white sedan, NBL to church Lot
8:52:52 AM	PED from Vehicle DROP OFF	yes	4th Line	SBL	driveway	1xPED, dark minivan
8:53:22 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
8:53:34 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	white pickup, SBR @ Hwy8/4thLine
8:53:35 AM	Vehicle EXIT	yes	church lot	EBR	4th Line	black minivan, SBT @ Hwy8/4th
8:53:49 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	dark minivan, SBR @ Hwy8/4thLine
8:53:55 AM	PED from Vehicle DROP OFF	yes	church lot	crossing	school	1xPedestrian
8:57:06 AM	Vehicle Entry	yes	4th Line	SBR	church lot	grey sedan
8:57:42 AM	PED south to north ENTRY	yes	SE corner of hwy8/4thLine	crossing	NE corner of hwy8/4thLine	1xPedestrian
8:57:51 AM	Vehicle EXIT	yes	church lot	EBR	4th Line	white SUV, SBR @ Hwy8/4th
9:00:00 AM	PED EXIT	yes	school	EASTBOUND	eastwards	ped walks on lawn eastwards

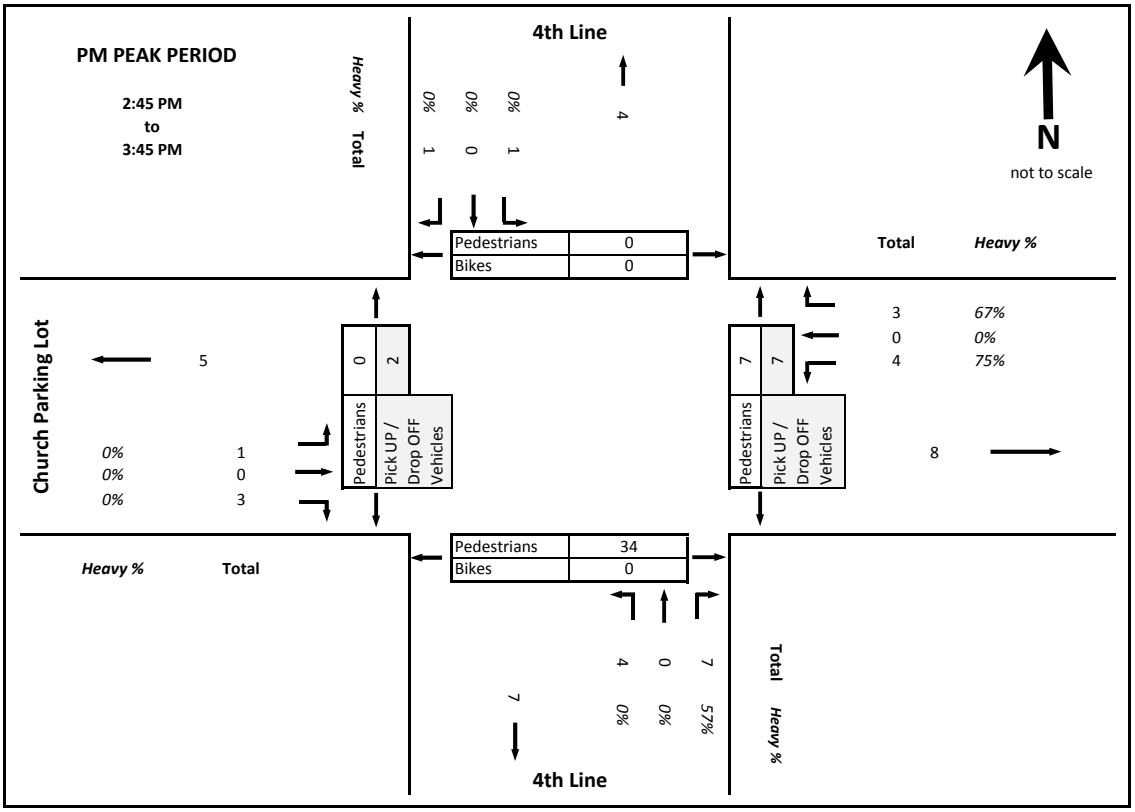
9:00:15 AM	PED west to east from Vehicle DROP OFF	yes	church lot	crossing	school	1xPedestrian
9:00:39 AM	PED from Vehicle DROP OFF	yes	Hwy 8	WBR	4th Line	1xPED, dark sedan, NBR to driveway
9:01:02 AM	PED from Vehicle DROP OFF	yes	Hwy 8	EBL	4th Line	1xPED, dark sedan, NBR to driveway
9:01:20 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	dark sedan, SBR @ Hwy8/4thLine
9:03:07 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	dark sedan, SBR @ Hwy8/4thLine
9:11:45 AM	PED Entry	yes	eastwards	NORTHBOUND	school	ped walks on lawn northwards from eastside
9:24:30 AM	PED from Vehicle DROP OFF	yes	4th Line	SBL	driveway	1xPED, dark hatchback
9:27:40 AM	Vehicle EXIT	yes	driveway	WBL	4th Line	dark hatchback, SBL @ Hwy8/4thLine
9:29:40 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
9:29:40 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
9:29:40 AM	PED east to west return to Vehicle	yes	school	crossing	church lot	1xPED, return to vehicle
9:29:42 AM	Vehicle Entry	yes	Hwy 8	EBL	4th Line	BOX TRUCK, NBR to driveway
9:30:00 AM	end of video viewing	NO				

DATE	03-Apr-2018	VIDEO AUDIT of ST. Joseph C.E.S. (Duoro) Vehicular and Pedestrian Traffic				
TIME	Observation	school related?	from	Action	to	Trip Details
before footage	SCHOOLBUS #1 on street parked Eastside	yes	unknown	Park/Stop	Eastside of 4th Line	origin unknown
2:45:00 PM	VIEWING BEGINS	NO				
2:50:59 PM	Vehicle Entry	yes	4th Line	NBL	church lot	White SUV, from EBL hwy8/4thLine
2:52:16 PM	PED west to east	yes	church lot	crossing	school	1xPedestrian
2:53:55 PM	SCHOOLBUS #1 on street parked Eastside	yes	4th Line	NBR	driveway	SCHOOL BUS #1 enters driveway
2:55:07 PM	SCHOOLBUS #2	yes	Hwy 8	EBL	4th Line	NBR to eastside of 4th Line
2:57:03 PM	SCHOOLBUS #3	yes	Hwy 8	EBL	4th Line	NBR to school driveway
3:05:55 PM	SCHOOLBUS #4	yes	Hwy 8	EBL	4th Line	NBR to school driveway
3:09:44 PM	Vehicle Entry	yes	4th Line	NBL	church lot	black sedan, from EBL hwy8/4thLine
3:13:57 PM	Vehicle Entry	yes	4th Line	NBL	church lot	dark red pickup, from WBR hwy8/4thLine
3:14:01 PM	SCHOOLBUS #5	yes	Hwy 8	EBL	4th Line	NBR to school driveway
3:14:15 PM	PED west to east	yes	church lot	crossing	school	1xPedestrian
3:14:32 PM	Vehicle Entry	yes	4th Line	NBR	driveway	brown pickup, from EBL hwy8/4thLine
3:15:26 PM	Vehicle Entry	yes	4th Line	to	Westside of 4th Line	silver minivan, from EBL hwy8/4th, northfacing on street
3:15:41 PM	Vehicle Entry	yes	4th Line	to	Eastside of 4th Line	silver minivan, from EBL hwy8/4th, not in view
3:16:48 PM	PED west to east	yes	church lot	crossing	school	1xPedestrian
3:16:48 PM	PED west to east	yes	church lot	crossing	school	1xPedestrian
3:16:48 PM	PED west to east	yes	church lot	crossing	school	1xPedestrian
3:17:14 PM	PED west to east	yes	NW corner of hwy8/4thLine	crossing	NE corner of hwy8/4thLine	1xPedestrian
3:19:03 PM	PED east to west PICK UP	yes	school	crossing	church lot	1xPedestrian
3:19:03 PM	PED east to west PICK UP	yes	school	crossing	church lot	1xPedestrian
3:19:03 PM	PED east to west PICK UP	yes	school	crossing	church lot	1xPedestrian
3:19:55 PM	Vehicle EXIT	yes	church lot	EBR	4th Line	black pickup, SBL @ Hwy8/4th
3:19:59 PM	Vehicle Entry	yes	4th Line	NBR	driveway	white sedan, from EBL hwy8/4thLine
3:20:44 PM	Vehicle Entry	yes	Eastside of 4th Line	U-turn	Westside of 4th Line	silver SUV, from NBT hwy8/4thLine
3:20:50 PM	Vehicle Entry	yes	4th Line	NBL	church lot	dark blue hatchback, from WBR hwy8/4thLine
3:21:23 PM	PED east to west	yes	school	to	NW corner of hwy8/4thLine	1xPedestrian
3:21:23 PM	PED east to west	yes	school	to	NW corner of hwy8/4thLine	1xPedestrian
3:21:23 PM	PED EXIT	yes	school	EASTBOUND	eastwards	1xPedestrian
3:21:35 PM	PED west to east	yes	church lot	crossing	school	1xPedestrian
3:21:38 PM	PED west to east	yes	NW corner of hwy8/4thLine	crossing	NE corner of hwy8/4thLine	1xPedestrian
3:21:45 PM	PED west to east	yes	church lot	crossing	school	1xPedestrian
3:21:48 PM	PED east to west	yes	school	to	NW corner of hwy8/4thLine	1xPedestrian
3:23:20 PM	Vehicle EXIT	yes	driveway	WBR	4th Line	brown pickup, NBT on 4th Line
3:23:24 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:23:24 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:23:24 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:23:35 PM	PED east to west PICK UP	yes	school	to	Westside of 4th Line	1xPedestrian, white SUV, south facing
3:23:35 PM	PED east to west PICK UP	yes	school	to	Westside of 4th Line	1xPedestrian, white SUV, south facing
3:23:35 PM	PED east to west PICK UP	yes	school	to	Westside of 4th Line	1xPedestrian, white SUV, south facing
3:23:41 PM	PED east to west	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian
3:23:41 PM	PED east to west	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian
3:23:41 PM	PED east to west	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian
3:23:57 PM	Vehicle EXIT	yes	4th Line	SBT	Hwy 8	white SUV, westside southfacing
3:24:00 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:24:00 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:24:09 PM	PED east to west	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian
3:24:09 PM	PED east to west	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian
3:24:09 PM	PED east to west	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian
3:24:58 PM	Vehicle EXIT	yes	Eastside of 4th Line	U-turn	Westside of 4th Line	white sedan, exits SBR hwy8/4thLine
3:25:05 PM	PED PICK UP	yes	southside of Hwy8	U-turn	NE corner of hwy8/4thLine	red sedan, exits WBT hwy8/4thLine
3:25:20 PM	PED north to south EXIT	yes	NE corner of hwy8/4thLine	crossing	SE corner of hwy8/4thLine	1xPedestrian
3:25:20 PM	PED north to south EXIT	yes	NE corner of hwy8/4thLine	crossing	SE corner of hwy8/4thLine	1xPedestrian
3:25:20 PM	PED north to south EXIT	yes	NE corner of hwy8/4thLine	crossing	SE corner of hwy8/4thLine	1xPedestrian
3:25:20 PM	PED north to south EXIT	yes	NE corner of hwy8/4thLine	crossing	SE corner of hwy8/4thLine	1xPedestrian
3:25:20 PM	PED north to south EXIT	yes	NE corner of hwy8/4thLine	crossing	SE corner of hwy8/4thLine	1xPedestrian
3:25:34 PM	SCHOOLBUS #1 EXITS	yes	driveway	WBL	4th Line	SBL @ Hwy8/4thLine
3:25:35 PM	Vehicle Entry	yes	4th Line	SBR	church lot	silver minivan, from SBT 4thLine
3:25:50 PM	Vehicle EXIT	yes	church lot	EBR	4th Line	dark blue hatchback, SBL @ Hwy8/4th
3:25:53 PM	SCHOOLBUS #3 EXITS	yes	driveway	WBR	4th Line	NBT on 4thLine
3:26:55 PM	On street Parking - Vehicle Pick UP	yes	Hwy 8	WBR	Eastside of 4th Line	white pickup, eastside of 4thLine, north facing
3:27:01 PM	SCHOOLBUS #4 EXITS	yes	driveway	WBL	4th Line	SBR @ Hwy8/4thLine
3:27:06 PM	SCHOOLBUS #2 EXITS	yes	4th Line	NBT	4th Line	from eastside of 4thLine curb
3:27:25 PM	Vehicle EXIT	yes	church lot	EBL	4th Line	black sedan, NBT on 4thLine
3:28:01 PM	PED PICK UP	yes	school	to	Eastside of 4th Line	1xPedestrian, no street crossing, white pickup
3:28:03 PM	Vehicle EXIT	yes	4th Line	NBT	4th Line	white pickup, eastside of 4thLine, north facing
3:28:20 PM	SCHOOLBUS #5 EXITS	yes	driveway	WBL	4th Line	SBT @ Hwy8/4thLine
3:28:49 PM	PED north to south EXIT	yes	NE corner of hwy8/4thLine	crossing	SE corner of hwy8/4thLine	1xPedestrian
3:29:25 PM	PED EXIT	yes	school	EASTBOUND	eastwards	1xPedestrian
3:29:50 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:29:50 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:31:00 PM	PED EXIT	yes	school	EASTBOUND	eastwards	1xPedestrian
3:31:00 PM	PED EXIT	yes	school	EASTBOUND	eastwards	1xPedestrian
3:31:58 PM	Vehicle EXIT	yes	church lot	EBL	4th Line	white SUV, NBT on 4thLine
3:34:01 PM	Vehicle Entry	yes	NE corner of hwy8/4thLine	EBT	Hwy 8	grey hatchback, EBT goes to opposing traffic lane to pick up
3:34:13 PM	Vehicle Entry	yes	4th Line	SBL	driveway	white SUV, from SBT on 4thLine
3:35:08 PM	PED east to west	yes	NE corner of hwy8/4thLine	crossing	NW corner of hwy8/4thLine	1xPedestrian
3:35:09 PM	PED EXIT	yes	school	EASTBOUND	eastwards	1xPedestrian
3:35:09 PM	PED EXIT	yes	school	EASTBOUND	eastwards	1xPedestrian
3:35:25 PM	PED east to west	yes	school	to	church lot	1xPedestrian
3:36:15 PM	Vehicle EXIT	yes	4th Line	SBL	Hwy 8	teacher? Black pickup on westside of 4thLine
3:36:38 PM	Vehicle EXIT	yes	church lot	EBR	4th Line	grey hatchback, SBR @ Hwy8/4th
3:37:23 PM	PED north to south EXIT	yes	NE corner of hwy8/4thLine	crossing	SE corner of hwy8/4thLine	1xPedestrian
3:41:30 PM	Vehicle EXIT	yes	Eastside of 4th Line	NBT	4th Line	1xped enters vehicle on Eastside of 4th
3:43:00 PM	Vehicle EXIT	yes	Eastside of 4th Line	NBT	4th Line	1xped enters vehicle on Eastside of 4th, uses driveway to leave, exits SBR @ hwy8/4th
3:43:43 PM	Vehicle EXIT	yes	driveway	WBL	4th Line	white sedan, SBR @ Hwy8/4thLine
3:44:40 PM	Vehicle EXIT	yes	NE corner of hwy8/4thLine	WBT	Hwy 8	1xped enters vehicle on NE corner of hwy8 parked on grass, exits WBT @ hwy8/4th
3:45:00 PM	END OF FOOTAGE VIEWING	NO				

TURNING MOVEMENT DIAGRAMS

North-South Road: 4th Line | Municipality: Duoro | Day: Tuesday
East-West Road: Church Parking Lot / St. Joseph Driveway | Weather: Mainly Clear | Survey Date: April 3, 2018





APPENDIX B: TAC Sight Distance Excerpts

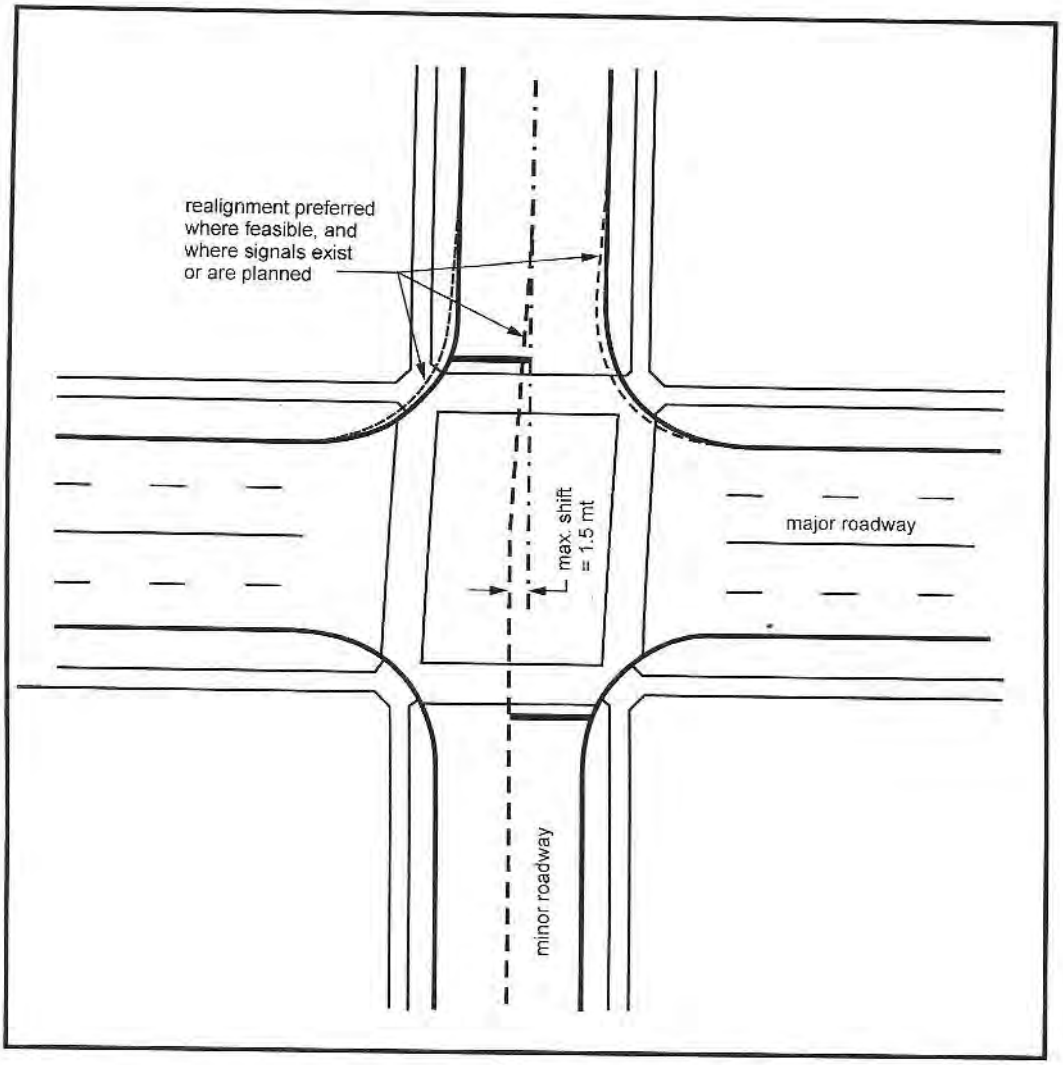


Figure 9.7.11: Shifts in Horizontal Alignment across Intersections

9.8 SIGHT DISTANCE

Potential road user (e.g., vehicles, cyclists and pedestrians) conflicts exist at every intersection. However, the possibility of these conflicts actually occurring can be greatly reduced through proper channelization and appropriate traffic controls. The avoidance of collisions and the efficiency of operation must still depend, to a large extent, on the judgement, capabilities, and responses of the individual road user. The intersection design must therefore provide sufficient sight distance for road users to perceive potential conflicts and to carry out the actions needed to negotiate the intersection safely.

Sight distance requirements must be considered both for approaching the intersection and departing from the stopped position at the intersection.

The minimum sight distance criterion for vehicles approaching an intersection, or travelling along a turning roadway, is stopping sight distance based on design speed. However, due to the relatively complex situations that drivers often encounter at intersections, it is desirable to provide more than the minimum stopping sight distance to enhance safety.

Providing decision sight distance is desirable wherever feasible, and is particularly desirable in advance of the critical intersection decision points. These include locations where drivers must make instantaneous decisions, where information and potential conflicts are difficult to perceive, and where unexpected maneuvers may be required. Values for stopping sight distance and for decision sight distance for different design vehicles over a range of design speeds are provided in **Chapter 2**.

Intersection sight distance is defined as the sight distance available from a point where vehicles are required to stop on the intersecting road, while drivers are looking left and right along the major roadway, before entering the intersection. The intersection sight distance is adequate when it allows the design vehicles to safely make all the maneuvers that are permitted by the layout (e.g., left turns, right turns, through moves), without significantly affecting vehicles travelling on the main roadway, as is described in further detail throughout this section.

Intersection sight distance is also a function of design vehicles. The design vehicle is typically defined as a vehicle that uses a given intersection daily or on a regular basis. It does not include a vehicle that may occur irregularly. As a result, very large vehicles such as long combination vehicles (LCVs) are rarely used as design vehicles. However, LCVs may be selected as design vehicles for some western Canadian highways, where they are common. In such a case, the designer must keep in mind that LCVs require more time than smaller vehicles to execute a turn or crossing maneuver, and therefore require more sight distance. Data for regionally-specific vehicles should be developed by the affected road authority to complement guidelines presented in this Guide.

For a discussion on sight distance considerations for pedestrians and cyclists at intersections, refer to **Chapter 6** and **Chapter 5** respectively.

9.9 AASHTO INTERSECTION SIGHT DISTANCE MODEL

9.9.1 PREFACE

This section presents the methodology for determining intersection sight distance requirements. This methodology reflects the most current North American approach adopted by AASHTO and is thoroughly grounded in research and technical analysis. In preparing this section on intersection sight distance, the gap acceptance methodology outlined in AASHTO's *Policy on Geometric Design of Highways and Streets*, 6th Edition, 2011 was adopted. The text in this section has been adapted, and in some cases used verbatim, from this AASHTO document.

9.9.2 SIGHT TRIANGLES

Specified areas along intersection approach legs and across their included corners should be clear of obstructions that might block a driver's view of potentially conflicting vehicles. These specified areas are known as clear sight triangles. The dimensions of the legs of the sight triangles depend on the design speeds of the intersecting roadways and the type of traffic control used at the intersection. These dimensions are based on observed driver behaviour and are documented by space-time profiles and speed choices of drivers on intersection approaches.[65] Two types of clear sight triangles are considered in intersection design: approach sight triangles and departure sight triangles.

9.9.2.1 Approach Sight Triangles

Each quadrant of an intersection should contain a triangular area free of obstructions that might block an approaching driver's view of potentially conflicting vehicles. The length of the legs of this triangular area, along both intersecting roadways, should be such that the drivers can see any potentially conflicting vehicles in both the horizontal and vertical plane in sufficient time to slow or stop before colliding within the intersection. **Figure 9.9.1** shows typical clear sight triangles to the left and to the right for a vehicle approaching an uncontrolled or yield-controlled intersection.

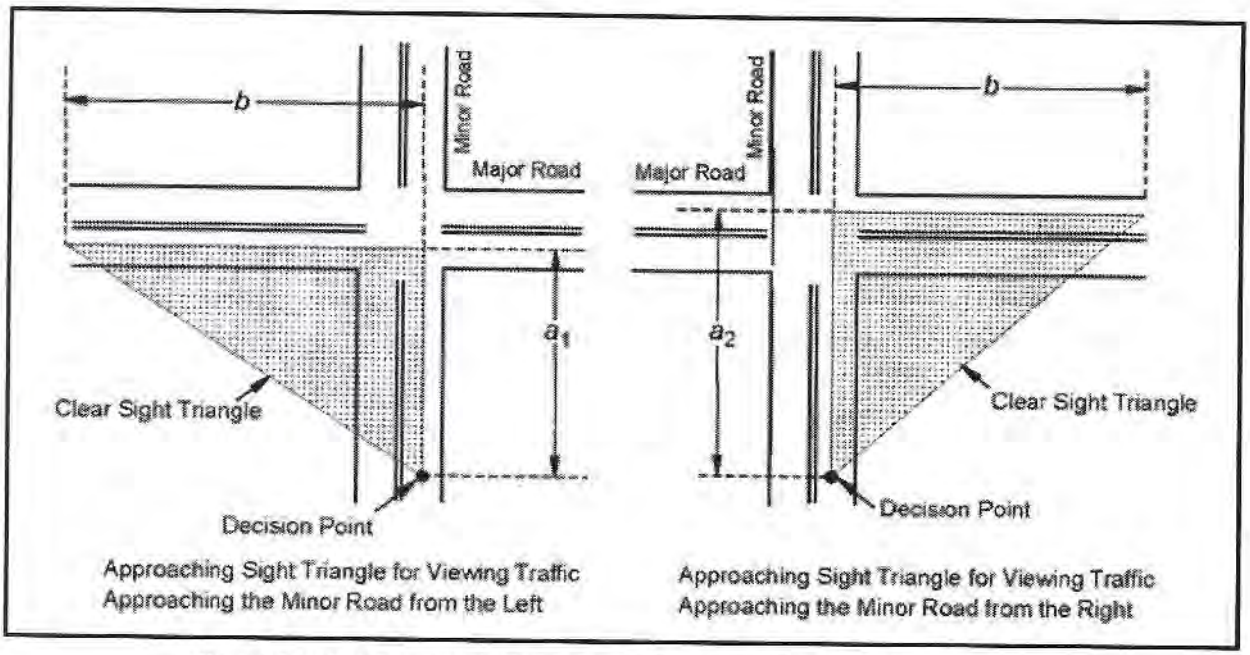


Figure 9.9.1: Approach Sight Triangle (Uncontrolled or Yield-Controlled)

The vertex of the sight triangle on a minor-road approach (or an uncontrolled approach) represents the decision point for the minor-road driver (see **Figure 9.9.1**). This decision point is the location at which the minor-road driver should begin to brake to a stop if another vehicle is present on an intersecting approach. The distance from the major road, along the minor road, is illustrated by the distance a_1 to the left and a_2 to the right. Distance a_2 is equal to distance a_1 plus the width of the lane(s) departing from the intersection on the major road to the right. Distance a_2 should also include the width of any median present on the major road unless the median is wide enough to permit a vehicle to stop before entering or crossing the roadway beyond the median.

The geometry of a clear sight triangle is such that when the driver of a vehicle without the right-of-way sees a vehicle that has the right-of-way on an intersecting approach, the driver of that potentially conflicting vehicle can also see the first vehicle. Distance b illustrates the length of this leg of the sight triangle. Thus, providing a clear sight triangle for vehicles without the right-of-way also allows the drivers of vehicles with the right-of-way to slow, stop, or avoid other vehicles if necessary.

Although desirable at higher volume intersections, approach sight triangles like those shown in Figure **Figure 9.9.1** may not be needed for intersection approaches controlled by stop signs or traffic signals. In that case, the need for approaching vehicles to stop at the intersection is determined by the traffic control devices and not by the presence or absence of vehicles on the intersecting approaches.

9.9.2.2 Departure Sight Triangles

A second type of clear sight triangle provides sight distance sufficient for a stopped driver on a minor-road approach to depart from the intersection and enter or cross the major road. **Figure 9.9.2** shows typical departure sight triangles to the left and to the right of the location of a stopped vehicle on the minor road.

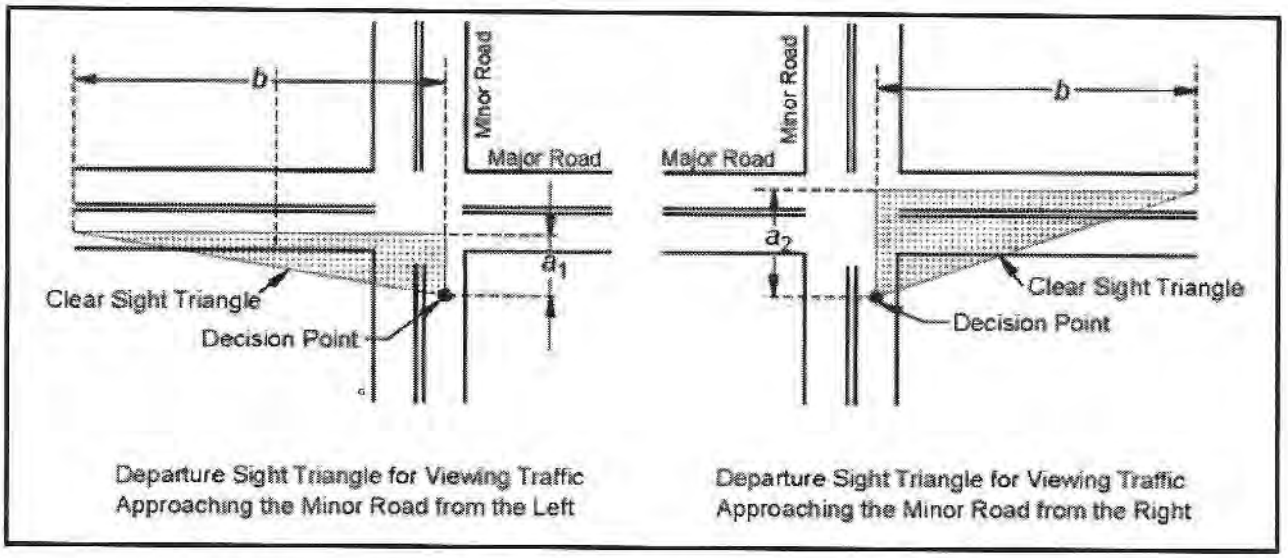


Figure 9.9.2: Departure Sight Triangles (Stop-Controlled)

Departure sight triangles should be provided in each quadrant of each intersection approach controlled by stop or yield signs. Departure sight triangles should also be provided for some signalized intersection approaches. Distance a_2 in **Figure 9.9.2** is equal to distance a_1 plus the width of the lane(s) departing from the intersection on the major road to the right. Distance a_2 should also include the width of any median present on the major road, unless the median is wide enough to permit a vehicle to stop before entering or crossing the roadway beyond the median. The appropriate measurement of distances a_1 and a_2 for departure sight triangles depends on the placement of any marked stop line that may be present and may therefore vary with site-specific conditions.

The recommended dimensions of the clear sight triangle for desirable traffic operations where stopped vehicles enter or cross a major road are based on assumptions derived from field observations of driver gap-acceptance behaviour.[66] Providing clear sight triangles like those shown in **Figure 9.9.2** also allows the drivers of vehicles on the major road to see any vehicles stopped on the minor-road approach and to be prepared to slow or stop, if needed.

9.9.2.3 Intersection Control

The recommended dimensions of the sight triangles vary with the type of traffic control used at an intersection because different types of control impose different legal constraints on drivers and, therefore, result in different driver behaviour. Procedures to determine sight distances at intersections are presented below, according to different types of traffic control, as follows:

- Case A – Intersections with no control
- Case B – Intersections with stop control on the minor road

- Case B1 – Left turn from the minor road
- Case B2 – Right turn from the minor road
- Case B3 – Crossing maneuver from the minor road
- Case C – Intersections with yield control on the minor road
- Case C1 – Crossing maneuver from the minor road
- Case C2 – Left or right turn from the minor road
- Case D – Intersections with traffic signal control
- Case E – Intersections with all-way stop control
- Case F – Left turns from the major road

Case A – Intersections with No Control

For intersections not controlled by yield signs, stop signs, or traffic signals, the driver of a vehicle approaching an intersection should be able to see potentially conflicting vehicles in sufficient time to stop before reaching the intersection. The location of the decision point (driver's eye) of the sight triangles on each approach is determined from a model that is analogous to the stopping sight distance model, with slightly different assumptions.

While some perceptual tasks at intersections may need substantially less time, the detection and recognition of a vehicle that is a substantial distance away on an intersecting approach, and is near the limits of the driver's peripheral vision, may take up to 2.5 s. The distance to brake to a stop can be determined from the same braking coefficients used to determine the stopping sight distance in **Table 2.5.2** (see Section 2.5 of this Guide).

Field observations indicate that vehicles approaching uncontrolled intersections typically slow to approximately 50% of their mid-block running speed. This occurs even when no potentially conflicting vehicles are present.[67] This initial slowing typically occurs at deceleration rates up to 1.5 m/s^2. Deceleration at this gradual rate has been observed to begin even before a potentially conflicting vehicle comes into view. Braking at greater deceleration rates, which can approach those assumed in stopping sight distance, can begin up to 2.5 s after a vehicle on the intersecting approach comes into view. Thus, approaching vehicles may be traveling at less than their mid-block running speed during all or part of the perception-reaction time and can, therefore, where needed, brake to a stop from a speed less than the mid-block running speed.

Table 9.9.1 shows the distance traveled by an approaching vehicle during perception-reaction and braking time, as a function of the design speed of the roadway on which the intersection approach is located. These distances should be used as the legs of the sight triangles shown in **Figure 9.9.1** as dimensions a_1 and b. Distance a_2 is longer than distance a_1, as defined in **Section 9.2.1**. Referring to **Figure 9.9.1**, a major roadway with an assumed design speed of 80 km/h and a minor roadway with an assumed design speed of 50 km/h needs a clear sight triangle with legs extending at least 75 m and 45 m along the major and minor roadways, respectively.

Table 9.9.1: Length of Sight Triangle Leg – Case A, No Traffic Control

Design Speed	Length of Leg (m)
20	20
30	25
40	35
50	45
60	55
70	65
80	75
90	90
100	105
110	120
120	135
130	150

Where the grade along an intersection approach exceeds 3%, the leg of the clear sight triangle along that approach should be adjusted by multiplying the appropriate sight distance from **Table 9.9.1** by the appropriate adjustment factor from **Table 9.9.2**.

Table 9.9.2: Adjustment Factors for Sight Distance Based on Approach Grade

Approach Grade (%)	Design Speed (km/h)													
	20	30	40	50	60	70	80	90	100	110	120	130	—	—
-6	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	—	—
-5	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	—	—
-4	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	—	—
-3 to +3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	—
+4	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	—	—
+5	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	—	—
+6	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	—	—

The departure sight triangle like that shown in **Figure 9.9.2** is typically not needed at an uncontrolled intersection since these intersections typically have very low traffic volumes. If a motorist needs to stop at an uncontrolled intersection because of a conflicting vehicle on an intersecting approach, it is very unlikely another potentially conflicting vehicle will be encountered as the first vehicle departs the intersection.

This clear triangular area will allow the vehicles on either road to stop, if needed, before reaching the intersection. If the design speed of any approach is not known, it can be estimated by using the 85th percentile of the mid-block running speeds for that approach.

The distances shown in **Table 9.9.1** are generally less than the corresponding values of stopping sight distance for the same design speed. This relationship is illustrated in **Figure 9.9.3**. Where a clear sight triangle has legs that correspond to the stopping sight distances on their respective approaches, an even greater margin of efficient operation is provided. However, since field observations show that motorists slow down to some extent on approaches to uncontrolled intersections, it is not essential to provide a clear sight triangle with legs equal to the full stopping sight distance.

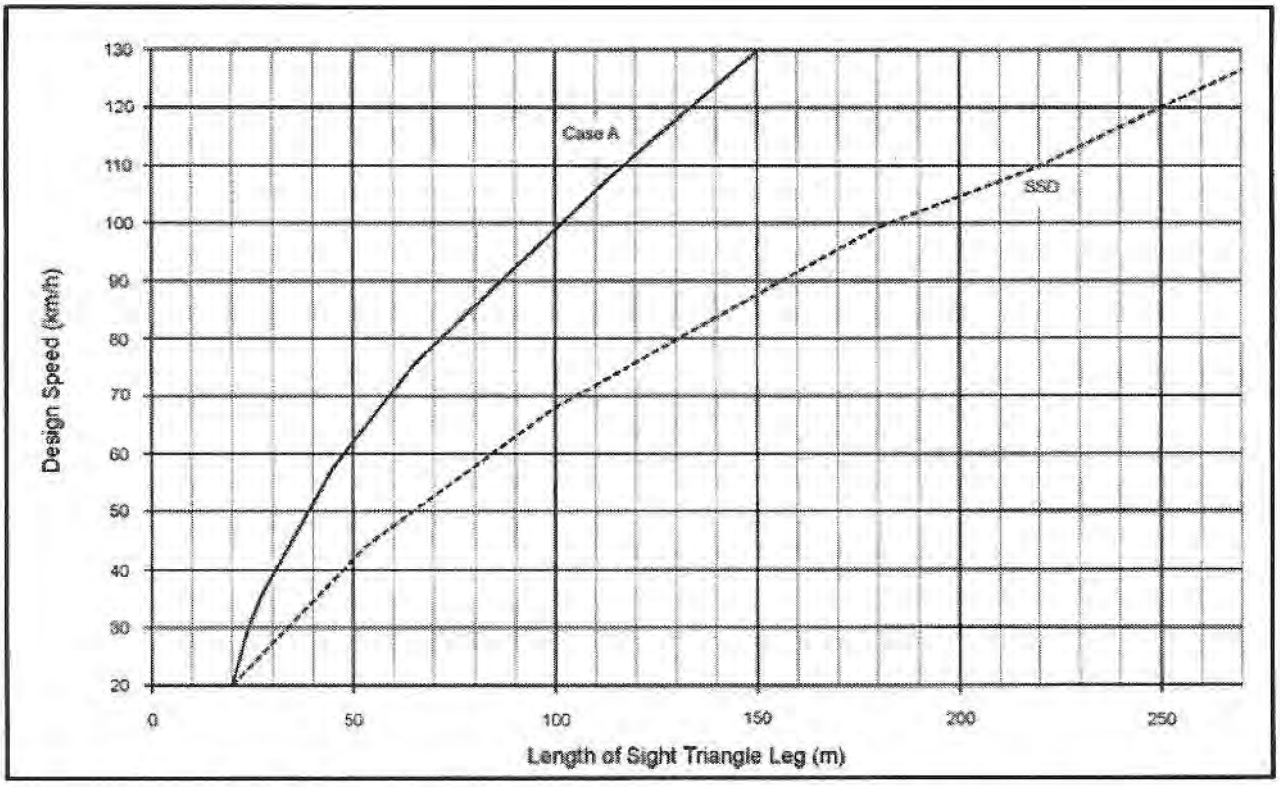


Figure 9.9.3: Length of Sight Triangle Leg – Case A, No Traffic Control

Case B – Intersections with Stop Control on the Minor Road

Departure sight triangles for intersections with stop control on the minor road should be considered for three situations:

- Case B1 – Left turns from the minor road
- Case B2 – Right turns from the minor road
- Case B3 – Crossing the major road from a minor-road approach

Intersection sight distance criteria for stop-controlled intersections are longer than the minimum stopping sight distance to allow the intersection to operate smoothly. Minor-road vehicle operators can wait until they can proceed safely without forcing a major-road vehicle to slow to less than 70% of their initial speed.

Case B1 – Left Turn from the Minor Road

Departure sight triangles for traffic approaching from either the right or the left, like those shown in **Figure 9.9.2**, should be provided for left turns from the minor road onto the major road for all stop-controlled approaches. The length of the leg of the departure sight triangle along the major road in both directions, shown as distance b in **Figure 9.9.2**, is the recommended intersection sight distance for Case B1.

The vertex (decision point) of the departure sight triangle on the minor road should be 4.4 m from the edge of the major-road traveled way. This represents the typical position of the minor-road driver's eye when a vehicle is stopped relatively close to the major road. Field observations of vehicle stopping positions found that, where needed, drivers will stop with the front of their vehicle 2.0 m or less from the edge of the major-road traveled way. Measurements of passenger cars indicate that the distance from the front of the vehicle to the driver's eye for the current North American passenger car population is nearly always 2.4 m or less.[68] Where practical, it is desirable to increase the distance from the edge of the major-road traveled way to the vertex of the clear sight triangle from 4.4 m to 5.4 m. This increase allows 3.0 m from the edge of the major-road traveled way to the front of the stopped vehicle, providing a larger sight triangle. The length of the sight triangle along the minor road (distance a in **Figure 9.9.2**) is the sum of the distance from the major road plus ½ lane width for vehicles approaching from the left, or 1½ lane widths for vehicles approaching from the right.

Field observations of the gaps in major-road traffic actually accepted by drivers turning onto the major road have shown that the values in **Table 9.9.3** provide sufficient time for the minor-road vehicle to accelerate from a stop and complete a left turn without unduly interfering with major-road traffic operations. The time gap acceptance time does not vary with approach speed on the major road. A constant value of time gap, independent of approach speed, can be used as a basis for intersection sight distance determinations. Observations have also shown that major-road drivers will reduce their speed to some extent when minor-road vehicles turn onto the major road. Where the time gap acceptance values in **Table 9.9.3** are used to determine the length of the leg of the departure sight triangle, most major-road drivers should not need to reduce speed to less than 70% of their initial speed.[69]

The intersection sight distance in both directions should be equal to the distance traveled at the design speed of the major road during a period of time equal to the time gap. In applying **Table 9.9.3**, it can usually be assumed that the minor-road vehicle is a passenger car; however, road authorities may provide more precise guidance on selection of the required design vehicle. Where substantial volumes of heavy vehicles enter the major road (e.g., from a ramp terminal), the use of tabulated values for single-unit or combination trucks should be considered.

Table 9.9.3 includes appropriate adjustments to the gap times for the number of lanes on the major road and for the approach grade of the minor road. The adjustment for the grade of the minor-road approach is needed only if the rear wheels of the design vehicle would be on an upgrade that exceeds 3% when the vehicle is at the stop line of the minor-road approach.

Table 9.9.3: Time Gap for Case B1, Left Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck (WB 19 and WB 20)	11.5
Longer truck	To be established by road authority

Notes: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with grades of 3% or less. The table values should be adjusted as follows:

- For multi-lane highways: For left turns onto two-lane highways with more than two lanes, add 0.5 s for passenger cars and 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle.
- For minor approach grades: If the approach grade is an upgrade that exceeds 3%, add 0.2 s for each percent grade for left turns.
- Some road authorities use higher values for certain specialized vehicles (e.g., Alberta uses 22 s for very long log trucks).

The intersection sight distance along the major road (distance b in **Figure 9.9.2**) is determined by:

$$ISD = 0.278\ V_{major}\ t_g \qquad (9.9.1)$$

Where:

ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)
V_{major} = design speed of the major road (km/h)
t_g = time gap for minor road vehicle to enter the major road (s)

For example, a passenger car turning left onto a two-lane major road should be provided sight distance equivalent to a time gap of 7.5 s in major-road traffic. If the design speed of the major road is 100 km/h, this corresponds to a sight distance of 0.278(100)(7.5) = 208.5 or 210 m, rounded for design.

A passenger car turning left onto a four-lane undivided roadway will need to cross two near lanes, rather than one. This increases the recommended gap in major-road traffic from 7.5 to 8.0 s. The corresponding value of sight distance for this example would be 223 m. If the minor-road approach to such an intersection is located on a 4% upgrade, then the time gap selected for intersection sight distance design for left turns should be increased from 8.0 to 8.8 s, equivalent to an increase of 0.2 s for each percent grade.

The design values for intersection sight distance for passenger cars are shown in **Table 9.9.4**. **Figure 9.9.4** includes design values, based on the time gaps for the design vehicles included in **Table 9.9.3**.

No adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major- and minor-road vehicle will be on the same grade when departing from the intersection. However, if the minor-road design vehicle is a heavy truck and the intersection is located near a sag vertical curve with grades over 3%, then an adjustment to extend the recommended sight distance based on the major-road grade should be considered.

Table 9.9.4: Design Intersection Sight Distance – Case B1, Left Turn From Stop

Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (m)	Design (m)
20	20	41.7	45
30	35	62.6	65
40	50	83.4	85
50	65	104.3	105
60	85	125.1	130
70	105	146.0	150
80	130	166.8	170
90	160	187.7	190
100	185	208.5	210
110	220	229.4	230
120	250	250.2	255
130	285	271.1	275

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3% or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

Sight distance design for left turns at divided-highway intersections should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for a divided-highway intersection is larger than a passenger car, then sight distance for left turns will need to be checked for that selected design vehicle and for smaller design vehicles as well. If the divided-highway median is wide enough to store the design vehicle with a clearance to the through lanes of approximately 1 m at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of case B3.

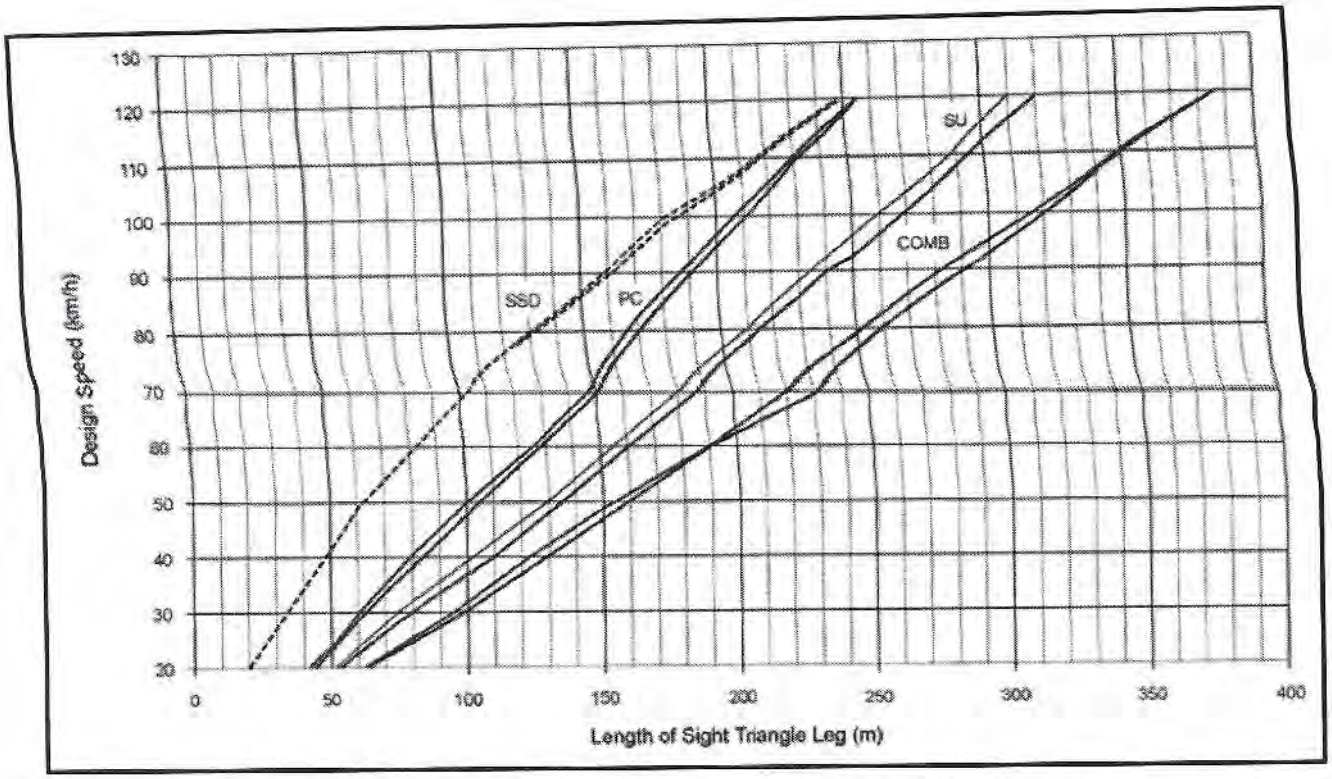


Figure 9.9.4: Intersection Sight Distance – Case B1, Left Turn from Stop (Calculated and Design Values Plotted)

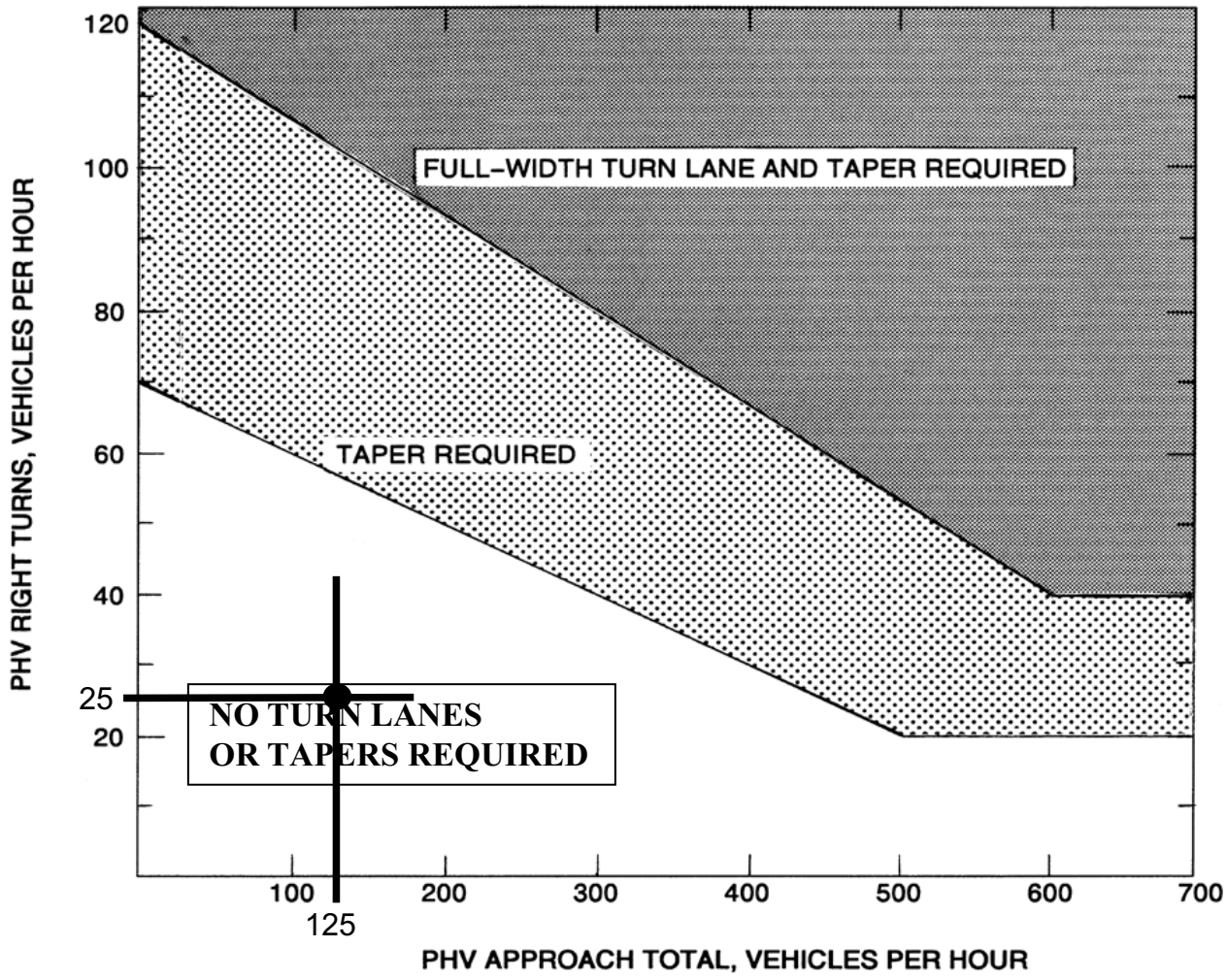
If the design vehicle can be stored in the median with adequate clearance to the through lanes, a departure sight triangle to the right for left turns should be provided for that design vehicle turning left from the median roadway. Where the median is not wide enough to store the design vehicle, a departure sight triangle should be provided for that design vehicle to turn left from the minor-road approach.

The median width should be considered in determining the number of lanes to be crossed. The median width should be converted to equivalent lanes. For example, a 7.2-m median should be considered as two additional lanes to be crossed in applying the multilane highway adjustment for time gaps in **Table 9.9.3**. Furthermore, a departure sight triangle for left turns from the median roadway should be provided for the largest design vehicle that can be stored on the median roadway with adequate clearance to the through lanes. If a divided highway intersection has a 12 m median width and the design vehicle for sight distance is a 22 m combination truck, departure sight triangles should be provided for the combination truck turning left from the minor-road approach and through the median. In addition, a departure sight triangle should also be provided to the right for a 9 m single unit truck turning left from a stopped position in the median.

Case B2 – Right Turn from the Minor Road

A departure sight triangle for traffic approaching from the left like that shown in **Figure 9.9.2** should be provided for right turns from the minor road onto the major road. The intersection sight distance for right turns is determined in the same manner as for case B1, except that the time gaps (t_g) in **Table 9.9.3** should be adjusted. Field observations indicate that, in making right turns, drivers generally accept gaps that are slightly shorter than those accepted in making left turns.[70]

APPENDIX C: Auxiliary Turning Lane Warrants



Appropriate Radius required at all Intersections and Entrances (Commercial or Private).

LEGEND

PHV - Peak Hour Volume (also Design Hourly Volume equivalent)

Adjustment for Right Turns

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.
Adjusted right turns = PHV Right Turns - 20
If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour
D = the percent of traffic in the peak direction of flow

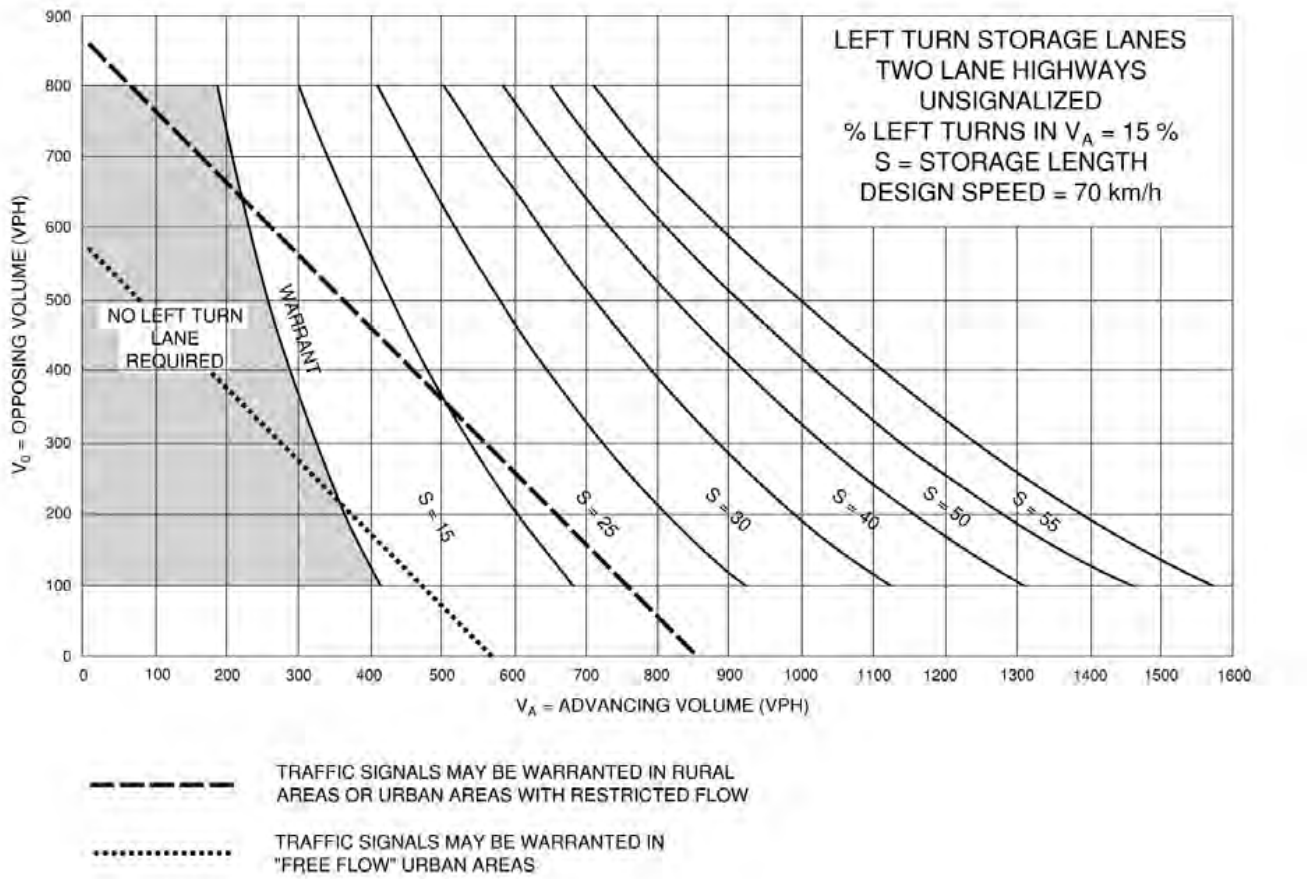
Note: An average of 11% for K x D will suffice.

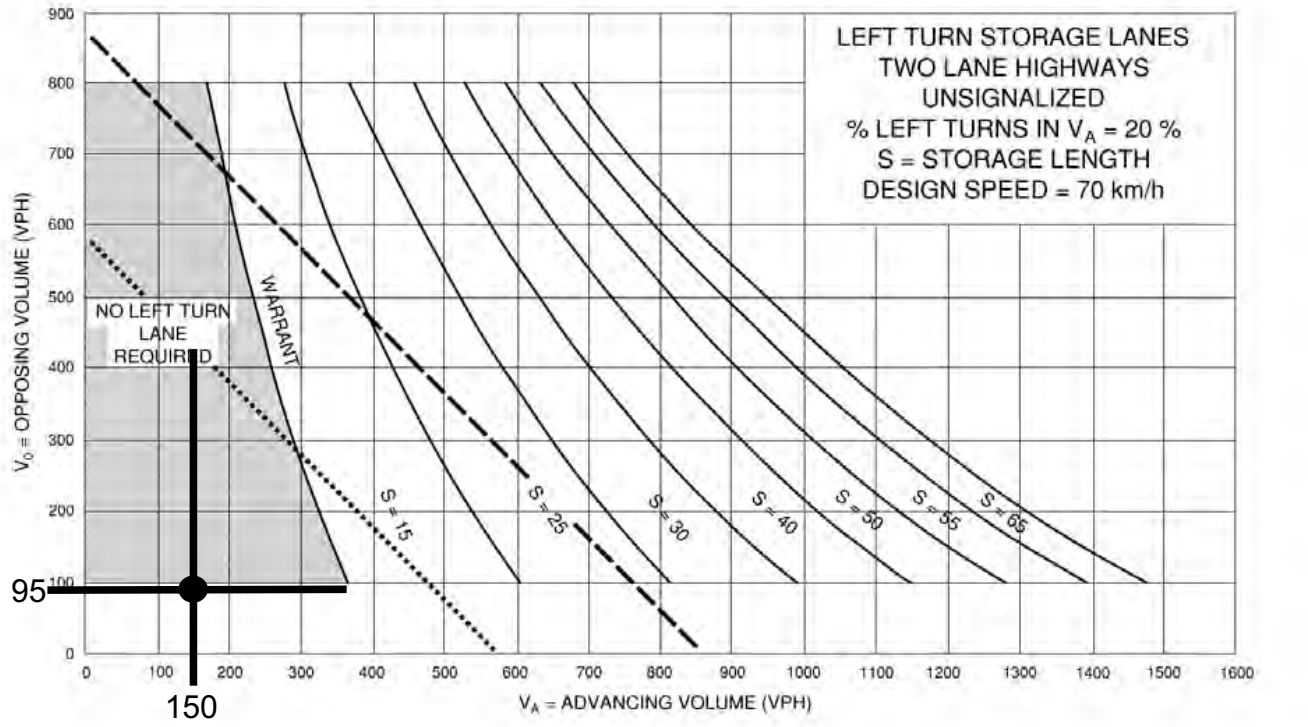
When right turn facilities are warranted, see Figure 3-1 for design criteria.*

FIGURE 3-26 WARRANTS FOR RIGHT TURN TREATMENT (2-LANE HIGHWAY)

* Rev. 1/15

Exhibit 9A-11





Advancing volume = 150, includes Left Turn volume 25 (17%)

SITE PLAN AGREEMENT

THIS AGREEMENT made this_____ day of June, A.D. 2022.

BETWEEN:

Peterborough, Victoria, Northumberland and Clarington Catholic District School Board
Hereinafter called the "**OWNER**"

OF THE FIRST PART

AND

THE CORPORATION OF THE TOWNSHIP OF DOURO-DUMMER
Hereinafter called the "**MUNICIPALITY**"

OF THE SECOND PART

WHEREAS the Owner has represented to the Municipality that the lands described in Schedule "A" attached hereto are owned by it as stated in the Certificate of Ownership attached to this Agreement as Schedule "B", and further warrants that all municipal taxes levied against the lands have been paid and will be paid as the same falls due;

AND WHEREAS the Owner would like to construct an addition to the existing school located on the property subject to the Site Plan Agreement;

AND WHEREAS the parties desire to enter into a Site Plan Agreement in regard to certain on-site features of the development of the said property and the provision of services thereto;

NOW, THEREFORE, THIS AGREEMENT WITNESSETH that the parties hereto for themselves, their heirs, executors, administrators, successors and assigns, do covenant and agree as follows:

In this Agreement:

(a) "Municipal Engineer" means the Engineer for the time being of the Corporation of the Township of Douro-Dummer;

(b) "Owner" includes a mortgagee in possession, a tenant in possession pursuant to a leasehold interest, and an encumbrancer in possession, and may mean more than one Owner as specified in the Certificate of Ownership;

(c) "services" or "facilities" includes sewers, grading, drainage work, roads, curbs, sodding, landscaping, sidewalks, walkways, fencing, signs and other works required to be provided pursuant to this Agreement;

(d) where the context permits, words importing the singular number or the masculine or neuter gender also include more persons, parties or things of the same kind than one, and females as well as males.

1. The obligations imposed pursuant to this Agreement affect the land described in Schedule "A" hereto and any restrictive covenants expressed herein run with the land and bind successors in title to the said property as well as the successors and assigns of the Owner.

2. The encumbrancer, if any, agrees to satisfy all of the obligations imposed pursuant to this document if it should enter into possession of the said lands.

3. The following schedules are attached to and form part of this Agreement and no building, structure, or other facility shall be erected, altered or placed on the said lands except in accordance with the attached Schedules and Plans:

Schedule 1: Architectural Drawings prepared by Salter Pilon Architecture, dated March 29, 2022

Schedule 2: Civil Drawing prepared by WSP, dated March 7, 2022

Schedule 3: Electrical Site Plan prepared by DEI Consulting Engineers, dated February 2022

Schedule 4: Landscape Drawings prepared by Hill Design Studio Inc., dated September 27, 2021

Schedule 5: Stormwater Management Report prepared by WSP, dated March 4, 2022

Schedule 6: Traffic Impact Assessment, prepared by Tranplan Associates Inc., dated March 2022

The Owner agrees to provide the Municipality with any and all plans, information, sketches, surveys or reports as may be requested by the Municipality during the term of this agreement. _____ Initials

4. It is hereby understood and agreed that if construction is not commenced within one-year (1) from the date of this agreement, that the Municipality, at its option, may declare the plans in this agreement null and void and require the submission of new plans.

5. The Owner shall perform all the work and provide all the materials necessary for the construction of the addition as outlined in the Schedules which are attached and noted as Schedules ‘1’ through ‘6’, both inclusive, to this Agreement. Such work shall be fully completed no later than August 31, 2023 (known as "the completion date").

6. The Owner shall prevent damage being caused to existing public highways, other public works, or municipal property in the course of the development of the said lands and shall restore such property to the condition it was in prior to the commencement of development.

7. The Owner shall keep all municipal taxes into good standing as at the date of the execution of this agreement and shall keep all municipal taxes levied against the lands and premises described in Schedule "A" in good standing thereafter.

8. The Owner shall, during excavation and construction on the site, maintain and keep the site in a satisfactory condition, and without limiting the generality of the foregoing, shall:

a) prevent any damage to abutting properties from erosion, runoff, surface water drainage or other nuisance; and
b) keep all construction materials, bags, dust or other debris on the site and clean abutting properties immediately if this obligation is not performed.

9. In the event of the sale of the said lands the Owner will obtain the Purchaser's covenant, in writing, to assume full and complete responsibility for the performance of the Owner's continuing obligations under this Agreement including the payment of municipal taxes as the same fall due.

10. The Owner shall bear all costs and expenses incurred by the Municipality in retaining consultants to provide advice and assistance to the staff of the Municipality in reviewing, considering and analyzing any aspect of the application for approval of development of the land described in Schedule "A" hereto annexed, whether such costs and expenses were incurred prior to execution of this agreement or subsequent to such execution. Without limiting the generality of the foregoing, the Owner specifically acknowledges that the Municipality shall require written confirmation from its consultants that the work illustrated in the schedules referenced in paragraph 3 of this agreement has been inspected when advised that the same has been completed by the Owner and has been found to be in compliance with the approved schedules.

The cost of such inspection shall be bourne by the Owner and may be deducted from any security held by the Municipality to ensure performance of the Owner's obligations. Upon receiving the aforesaid written confirmation from its consultants, the Municipality covenants and agrees to surrender to the Owner any remaining security which it might hold. The Municipality may require the Owner to deposit with the Municipality financial security in a form satisfactory to the Municipality, sufficient to meet such anticipated costs and expenses. In the event that the Owner fails to deposit such security within 10 days of written demand by the Municipality, the Municipality may discontinue all procedures relating to the development of the lands and may cause the Owner to delay commencement of or cease further work on the project until such time as the requirements of the section have been satisfied. Without limiting the generality of the foregoing, upon execution of the agreement, the Owner shall if not already completed deposit $5250.00 with the Municipal Clerk as security towards the cost incurred by the Municipality as outlined above. The Owner shall maintain the security deposit at the sum of $5250.00 at all times until the Municipality confirms that the Owner has satisfied all requirements of the agreement herein.

11. The Owner further warrants that this Agreement is in registerable form, or will be brought into registerable form, and shall be registered on title at the Owner’s expense, and that actual notice of the existence and terms of this Agreement have been provided to any party who has executed, or will execute an offer or option to purchase the said lands. Concurrently with the execution of this Agreement, the Owner shall provide the Municipality with adequate security as outlined herein and all instruments necessary to implement the conveyance of lands, easements, or other interests to the Municipality as well as give priority of registration to this Agreement.

12. The Owner shall deposit with the Municipal Clerk an irrevocable letter of credit in satisfactory form in favour of the Municipality from any Chartered Bank in Canada, for the amount set out in Schedule "C". It shall be on such terms that the Bank shall pay to the Municipality such sums as may be requested from time to time to the maximum limit of the credit without recourse. The letter of credit shall continue to run until the completion date and may be extended at the option of the Municipality if the said services or facilities on the site have not been completed or provided. The letter of credit shall be in such a form that it cannot be revoked unless authorized by the Municipal Clerk and cannot be transferred to any other party. The Owner shall further pay the levies referred to in Schedule "C" annexed hereto upon execution of this agreement.

13. The Owner acknowledges that this agreement shall not in any way relieve it of responsibility for the payment of fees, levies or other charges imposed by the Municipality or by other levels of government.

14. In the event the Owner fails to install or maintain the facilities covered by this Agreement, or fails to proceed expeditiously, or fails to install the services in accordance with the specifications and requirements of this Agreement, then, upon the Municipal Engineer, or his designate, giving seven (7) days' written notice by prepaid registered mail to the Owner, the Municipality, through its employees, agents, or contractors may, without further notice, enter upon the lands and proceed to supply all materials and to do all the necessary inspections and works in connection with the facilities including the repair or reconstruction of faulty work and the replacement of materials which are not in accordance with plans or specifications and to charge the cost thereof, together with the cost of engineering, and any other reasonable expenses incurred by the Municipality, against the Owner. Such entry and work shall not be deemed as acceptance or assumption of said facilities nor an assumption by the Municipality of any liability. It is expressly agreed that the Owner or any person in possession shall not question the cost incurred by the Municipality for labour, materials and all other costs incidental to do the said work and this provision shall be deemed to operate as an effective estoppel in judicial proceedings if such costs are challenged or placed in question. The Owner agrees to permit the Municipal Engineer, or its agents, to enter on the lands at any time to inspect the work. The Municipality may perform any of the required services and collect the cost for the enforcement of this Agreement, as well as for the provision or installation of the requisite services for the said lands, from the security filed by the Owner or may collect the same in the same manner as municipal taxes.

15. The Owner further agrees that entry and performance of works or procedures by the Municipality as herein provided shall not constitute a trespass and the Municipality shall not be responsible for any damages caused in the performance of such work except such damages as may be directly caused by the negligence of the agents, contractors, servants or workmen of the Municipality.

16. The Owner shall indemnify and save the Municipality harmless from any and all actions, claims or demands made or brought against the Municipality by any person or persons for damages arising out of the negligent act, or omissions, or breaches of the Owners, its agents, servants, workmen, and sub-contractors, and assigns in respect of its obligations under this Agreement. It is expressly acknowledged that the Municipality does not warrant the quality of work performed on behalf of the Owner.

17. Unless otherwise stipulated in this Agreement minor alterations or changes to the plan may be requested by the Owner. For the purposes of this provision a minor amendment is deemed to be:

(a) A modification to a specific provision of the Agreement which will not conflict with the general intent and purpose of the Site Plan Agreement.

Such requests shall be made to the Municipal Clerk who may authorize the change, in writing. A building permit may be required to implement the proposed alteration.

18. In the event that the Owner shall hereafter propose to alter or amend a previously approved Site Plan elevation drawing or landscape drawing, the Owner shall, if directed by the Municipality so do so, provide written notice of such proposed alteration or amendment to all Owners of land which abut the lands described in Schedule "A" hereto annexed, to such extent, in such form and in such manner as the Municipality may from time to time specify, and the Owner shall file with the Municipality such evidence as the Municipality may require as to the giving of such notice. The Municipality shall thereupon either process the application for approval of the proposed alteration or amendment or require that the Owner give to such abutting Owner such further and/or other notice and information as the Municipality may specify, prior to the processing of the application.

19. Any notice required to be given pursuant to the terms hereof shall be in writing and sent by prepaid registered mail, or personally delivered, to the other party at the following address:

(a) Notice to the Owner shall be addressed Richard Discoll, PVNCCDSB, 1355 Lansdowne Street West, Peterborough, ON K9J 7M3 or via email to rdriscoll@pvnccdsb.on.ca, and such shall be deemed to be effective notice.

(b) Notice to the Municipality shall be addressed to Martina Chait-Hartwig, Acting Clerk, 894 South Street, PO Box 92, Warsaw, Ontario, KOL 3A0 or via email to martinac@dourodummer.on.ca, and such shall be deemed to be effective notice.

The Owner shall advise the Municipality of any changes of address and subsequent purchasers shall advise the Clerk, in writing, of any changes for service of Notices pursuant to this Agreement. Any such notice that is mailed shall be deemed to be received by the addressee on the fifth day after it is mailed.

20. Notwithstanding any provision hereof relating to notice, the Municipality may, in case of emergency as determined by the Municipal Engineer, perform such work as the said Engineer may consider necessary without notice and all other provisions hereof shall apply mutatis mutandis.

21. The Owner further warrants that this Agreement is in registerable form, or will be brought into registerable form, at the Owner's expense, and that actual notice of the existence and terms of this Agreement have been provided to any party who has executed, or will execute an offer or option to purchase the said lands. Concurrently with the execution of this Agreement, the Owner shall provide the Municipality with adequate security as outlined herein and all instruments necessary to implement the conveyance of lands, easements, or other interests to the Municipality.

22. Notwithstanding anything in this agreement to the contrary, in the event that the Owner is delayed in the performance of any of the Owner's obligations pursuant to this agreement for any reason which the Municipality recognizes as being beyond the control of the Owner, the Owner shall be permitted such extension of time as the Municipality may, in writing, grant for the performance of such obligations.

23. The Municipality may elect to enforce any or all of the enforcement provisions of this agreement in such order or succession as the Municipality may see fit and exercise of any one or more of such provisions shall not preclude exercise of any other of such provisions until such time as complete compliance with this agreement by the Owner has taken place.

24. The Owner shall provide adequate security to the Site during the course of construction. If the structure or building has not been completed by the 31st day of August, 2023, then the Municipality may take appropriate steps to secure the Site and to assess any costs incurred thereby against the Owner. In order to provide adequate security to the Site during the course of construction, the Owner acknowledges that the Municipality may construct an appropriate barrier or fence around the perimeter of the subject lands and assess all costs against the Owner.

25. The Owner hereby acknowledges that he has understood the provisions of this agreement and is familiar with the plans referred to this agreement. The Owner agrees that the requirements of this agreement and the plans shall be brought to the attention of its agents and contractors who are constructing this development. The Owner acknowledges that it is aware of the requirements of the Site Plan Control By-laws of the Municipality and that a penalty for breach of the Site Plan Control By-laws, in the event the plans are not complied with, may result in a charge under Section 67 of the Planning Act, R.S.O. 1990, Chapter P13, as amended.

26. This agreement shall be binding upon the parties, their successors or assigns, but shall not be assignable without the express written approval of the parties.

27. This agreement shall constitute the entire agreement between the parties and there is no representation, warranty, collateral agreement or condition affecting this agreement other than as expressed herein in writing.

28. This agreement shall be construed in accordance with the laws of the Province of Ontario.

29. Should any provision of this agreement be found to be invalid by a Court of competent jurisdiction, that provision shall be severable from the remainder of this agreement and the remainder of this agreement shall remain in full force and effect.

30. This Site Plan Third Amending Agreement may be executed in counterpart and each counterpart shall be deemed to be an original and all counterparts taken together shall constitute one fully executed copy of the original Site Plan Agreement.

WITNESS the respective corporate seals of the respective corporate parties hereto, duly affixed under the hands of their respective signing officers, duly authorized in that behalf.

SIGNED, SEALED AND DELIVERED)
in the presence of)
) Peterborough, Victoria, Northumberland and Clarington Catholic District School Board
) Per:
)_____
) Isabel Grace
) I have the authority to bind the Corporation.

THE CORPORATION OF THE
TOWNSHIP OF DOURO-DUMMER
Per:

_____
J. Murray Jones, Mayor

_____
Martina Chait-Hartwig, Acting Clerk
We have the authority to bind the Corporation.

SCHEDULE"A"

DESCRIPTION OF THE LAND

Concession 4, Part Lot 6, Douro Ward, Formerly Township of Douro, Douro-Dummer

SCHEDULE "B"

Certificate of Ownership.

SOLICITOR'S CERTIFICATE

I, _____, _____ , of the City of Peterborough, a Solicitor duly authorized to practice law in the Province of Ontario, DO HEREBY PROVIDE AN OPINION that **Peterborough, Victoria, Northumberland and Clarington Catholic School Board** is the true Owner in fee simple of all lands included in the plan as described in Schedule "A" to this Agreement, in accordance with Instrument No. _____
registered in the Land Registry Office for the Land Registry Division of Peterborough on June xx, 2022.

I FURTHER PROVIDE AN OPINION THAT is the true Owner in fee simple of all land, if any, to be conveyed to the Municipality over which easements or rights are to be conveyed to the Municipality pursuant to the terms of this Agreement.

I FURTHER REPRESENT that such lands are free from all encumbrances save and except the following:

This certificate is given by me to the Municipality for the purpose of having the said Municipality act in reliance on it and approving and registering the said proposed Site Plan Agreement.

DATED at Peterborough, this day of June, 2022,

_____
Barrister and Solicitor

_____

_____
Address

_____
Telephone Number

TO:
The Corporation of the Township of
Douro-Dummer
894 South Street, PO Box 92
Warsaw, ON KOL 3A0
Attention: Martina Chait-Hartwig,
Acting Clerk

AND TO:
LLF Lawyers LLP
Attention: Jim Baird
Township Solicitors
332 Aylmer Street North, PO Box 1146
Peterborough, ON K9J 7H4

SCHEDULE "C"

The letter of credit deposited in favour of the Municipality shall be in the amount of $10,000.00.

SCHEDULE "1"

SCHEDULE "2"

SCHEDULE "3"

SCHEDULE "4"

SCHEDULE "5"

SCHEDULE "6"

Schedule 1 through 6 as identified in paragraph 3 of the Agreement herein are all on file at the municipal office and may be viewed upon request during normal business hours.

Township of Douro-Dummer

Report to Council
Re: Clerk/Planning-2022-32
From: Martina Chait-Hartwig
Date: June 7, 2022
Re: to Bill 109, the More Homes for Everyone Act, 2022

Recommendation:
That the Clerk/Planning-2022-32 report, dated June 7, 2022 regarding Bill 109, the More Homes for Everyone Act, 2022 be received and that staff be directed to complete the following:

- Bring forward an updated Site Plan Control By-law which delegates all Site Plan approvals to staff for the next Council meeting,
- That staff prepare a Pre-Consultation By-law to assist in mitigating the application fees refund requirements and to have any changes in place by January 1, 2023
- That staff work with the County of Peterborough to ensure that the language in the Official Plan is sufficient to ensure that the Township can request that peer reviews be completed prior to a Planning Act application being deemed complete.

Overview:
On March 30, 2022 the Provincial government introduced its More Homes for Everyone Plan which proposes legislative and regulatory changes to make it easier to buy a home by increasing the housing supply in Ontario. The provincial plan aims to build homes faster, make it easier and less expensive to build more affordable housing and protect home buyers and renters through the legislative and regulatory changes. The proposed amendments will make changes to the processes in place for Zoning By-law Amendments, Plans of Subdivision and Site Plan applications to speed up approvals and incentivize decisions within set timelines.

For example, the Planning Act will be amended to delegate approval of Site Plan applications to municipal staff and extend the timeline from 30 to 60 days to issue a decision. Other changes will mandate refunds from 25% to 50% of applications fees if decisions not made within the 60 days. In addition, proposed amendments will require partial refunding of Zoning By-law Amendment fees if they fail to have a decision on an application within 90 days (or 120 days if concurrent with an Official Plan Amendment). Through these amendments, the Province is also proposing what can be required as a condition of draft approval for Plans of Subdivision as well as give municipalities a one-time discretionary authority to reinstate draft approved Plans of Subdivision that have lapsed within the past five years without a new application. The Province considers these changes as streamlining the decision making process.

In addition, provincial housing policies and priority projects will be expedited through a new tool called the Community Infrastructure & Housing Accelerator. Other changes will increase public reporting, public consultations and changes related to Development Charges and Community Benefits Charges while strengthening protections for purchasers of new homes.

Each of the major changes that will be enacted by this Bill are summarized below along with the potential impacts to the Township.

Planning Act

Bill 109 contains a number of changes to the Planning Act that are applicable to the municipality as the approval authority for Zoning By-law Amendments, Site Plan Control, and Minor Variances.

Refund of Fees

- The Bill will require municipalities to gradually refund application fees to applicants who do not receive a decision on their Zoning By-law Amendment applications or Site Plan applications within the legislated timelines. This would apply to applications made on or after January 1, 2023.

  As a consequence of the proposed Planning Act changes, the Township will need to implement a Pre-Consultation By-law and will need to update our Site Plan Control By-law.

  The professional peer review process that is required to ensure that technical reports submitted in support of Planning Act applications are satisfactory is the main reason that our review times often extend past the timelines specified in the Planning Act. We often must wait to obtain responses from the applicant and/or other commenting agencies. In spite of the fact that the municipality has little to no control over these delays, the legislation provides no recognition of this fact. In calls with the Ministry, staff and other across the Province have advised that the new authority provided to establish complete application requirements for Site Plan Control applications, similar to those currently in place for Zoning Amendment applications, will allow municipalities to overcome these challenges.

  To help address this issue staff would like to create a policy to include the peer review in the pre-consultation process by making it mandatory that any necessary supporting reports for a Planning Act application be peer reviewed as part of the complete application. This is in keeping with the Ministry suggestion that municipalities can use their authority to determine what a complete application includes in order to address the issue of delays which are beyond the municipality's control leading to lost fee revenue. Staff will need to review the legal and policy implications of this to determine the best way to enact this process change.

Delegation of Site Plan Approval to Staff

- The Bill requires that decisions on all Site Plan applications be delegated to staff for applications made on or after July 1, 2022.

The Township processes only one or two Site Plan approvals in a given year but with increased development interest in the community there is the possibility that this number will increase. Council could continue to be made aware of Site Plan approvals granted by staff through regular summary reporting.

Establishment of Municipal Authority to Prescribe Complete Application Requirements for Site Plan Applications

- The Bill establishes a regulation-making authority and municipal by-law authority to prescribe complete application requirements for Site Plan applications. As discussed above this authority may help to address some of the potential issues related to the fee refund timelines. This would require amendments to the Site Plan Control By-law. It is noted that this authority may only be exercised where the Official Plan contains provisions permitting the exercise of this authority.

Development Charges

Part of Schedule 2 of Bill 109 proposes to make a change to the Development Charges Act, 1997. The proposal seeks to improve transparency of reporting on development charges. The proposed amendments would specify that Treasurers' statements are to be made available to the public on a municipality's website, or in the municipality's office if no such website is available, and in any manner as may be prescribed in the future. Municipalities are already required to make these statements available to the public. The Township already follows this practice so this change will not increase the workload of staff or change our internal processes.

Community Infrastructure and Housing Accelerator (CIHA) Tool

Bill 109 establishes a new Community Infrastructure and Housing Accelerator (CIHA) tool for municipal requests to expedite Zoning By-law Amendment outside of the Greenbelt area. A CIHA order which would be issued by the Minister of Municipal Affairs and Housing could be used to regulate the use of land and the location, use, height, size and spacing of buildings and structures to permit certain types of development. The requesting municipality is responsible for providing public notice, undertaking consultation and ensuring the order, once made, is made available to the public.

This new order, to be a called a Minister's Order, is similar to a Minister's Zoning Order under section 47 of the Planning Act. A Minister's Order could be requested by Council on an active application that has been submitted through the regular planning process under the Planning Act, through request to Council by a proponent or through staff recommendation. At this time staff have not done a fulsome review of the CIHA guidelines as at this time it is not expected to be used in any upcoming development application taking place in the Township.

Conclusion:
Staff are reviewing the impacts of Bill 109 on our planning processes and the planning services that we offer to the public. With the arrival of a Planner at the end of June, we will have the capacity and ability to review the tools we currently have in place and the various changes that will be required. If the recommendations in this report are approved it is anticipated that minor changes to the Site Plan Control By-law will be brought back to Council at the next meeting to comply with the July 1, 2022 deadline for the delegation of site plan control approval to staff and that a more fulsome review and re-writing of the By-law plus the introduction of a Pre-Consultation By-law will come forward to Council later in 2022.

Financial Impact:
None at this time but it is anticipated that without proper policies and procedures in place the Township could see the cost of processing Planning Act applications rise.

Strategic Plan Applicability:
To ensure and enable an effective and efficient municipal administration.

Sustainability Plan Applicability:
N/A

Report Approval Details

Document Title:	Report Regarding Bill 109.docx
Attachments:	- Bill 109 Presentation April 20 2022 FINAL.pdf - Bill 109 Qs As Municipal Session May 3 2022 FINAL.pdf
Final Approval Date:	Jun 1, 2022

This report and all of its attachments were approved and signed as outlined below:

Elana Arthurs

Ministry of Municipal Affairs and Housing

Technical Overview

Bill 109, the More Homes for Everyone Act, 2022

April 2022

Ontario

Context

More Homes for Everyone builds on the success of the Housing Supply Action Plan 2019 by introducing a range of cross-government initiatives that will help increase supply, address market speculation, and protect homebuyers, owners and renters.

Legislative and Regulatory Changes

- Changes to the Planning Act, Development Charges Act, 1997, City of Toronto Act, 2006 and to regulations under the Planning Act and Development Charges Act, 1997.
- Legislative amendments to and regulatory amendments under the New Home Construction Licensing Act, 2017 and the Ontario New Home Warranties Plan Act to strengthen consumer protection for new home purchasers.

Other Initiatives Included in the Plan

- Funding commitments and policy and program changes that represent cross-government efforts that will help increase supply and improve affordability.

More Homes for Everyone

Less red tape, more homes

Make it easier to build community housing

Protect home buyers, homeowners and renters

Summary of Legislative Changes

On March 30, 2022, the government introduced Bill 109, the More Homes for Everyone Act. The Bill was passed by the Legislature and received Royal Assent on April 14, 2022.

Schedules 1, 2 and 5 of the bill make changes to the Planning Act, City of Toronto Act, 2006 and the Development Charges Act, 1997 to:

- Make changes related to zoning, plan of subdivision and site plan application processes to expedite approvals and incent timely decisions
- Ensure provincial housing policies are implemented and priority projects are expedited by making changes to provide the Minister of Municipal Affairs and Housing with new tools to address dispute resolution, and
- Enhance transparency and increase certainty of development costs through changes to development-related charges.

The changes in Schedules 1, 2 and 5 came into force on April 14, 2022 upon Royal Assent except as otherwise noted.

Schedules 3 and 4 of the bill make amendments to the New Home Construction Licensing Act, 2017 (Licensing Act) and to the Ontario New Home Warranties Plan Act (Warranties Act) to strengthen protections for purchasers of new homes.

Minister's Authority Regarding Official Plans

Change	Bill and Leg. References
The changes provide the Minister of Municipal Affairs and Housing with discretionary authority to suspend the time period for the Minister to make a decision on official plans and amendments. For official plans and amendments before the Minister on March 30, 2022 (i.e., date of introduction) the following are suspended: • the ability to appeal in respect of the Minister's failure to make a decision where the 120-day time period has expired prior to March 30, 2022 and no appeals have been filed prior to that date, and • the 120-day time period for those matters that are still within the 120-day time period on March 30, 2022. The changes also give the Minister discretionary authority to refer all or part(s) of an official plan matter to the Ontario Land Tribunal (OLT) for a recommendation, and forward all of an official plan matter to the OLT to make a decision.	**Bill References:** Schedule 5 of Bill, sections 1 and 3. **Planning Act References:** New subsections 17 (40.1) to (40.1.3) provide rules respecting when the Minister as an approval authority can provide notice to suspend the period of time after which there may be appeals of the failure to make a decision in respect of a plan. New subsections 17 (55) to (64) provide a process for the Minister as an approval authority to refer plans to the Ontario Land Tribunal for a recommendation or a decision.

Minister's order at request of municipality (Community Infrastructure and Housing Accelerator)

Change	Bill and Leg. References
The changes establish a new Minister's order-making authority to respond to municipal council resolutions requesting expedited zoning. The tool cannot be used in the Greenbelt Area. The Minister shall also issue guidelines governing the scope of how this authority may be used, and the guidelines need to be in place before an order could be made. The requesting municipality is responsible for providing public notice, undertaking public consultation and ensuring the order is made available to the public. Provincial plans, the Provincial Policy Statement and municipal official plans do not apply to the Minister's order. In issuing an order, the Minister is able to: • provide exemption for other necessary planning related approvals from provincial plans, the Provincial Policy Statement and municipal official plans, if requested by the municipality, and • impose conditions on municipality and/or proponent. Where conditions were imposed, the Minister or the municipality is able to require agreements to be entered into that could be registered on title. Once in effect, only the Minister would be able to make any changes to the order. The Minister could amend an order at the request of the municipality or could revoke or amend an order at any time at their own discretion, without having to undertake consultation or provide notice. The Minister's order would not be subject to appeal.	**Bill References:** Schedule 5 of Bill, sections 2 and 5. **Planning Act References:** An additional type of Minister's order is added to the Act in section 34.1. These orders are made by the Minister at the request of a municipality. This section sets out the process and rules respecting such orders.

Refunds of Zoning By-law Application Fees

Change	Bill and Leg. References
The changes require municipalities to gradually refund zoning by-law amendment application fees if they fail to make a decision on an application within the following legislated timelines: • 50% of the fee if the decision is not made within 90 days (or 120 days if concurrent with an official plan amendment application) from the date the municipality received the complete application and fee, • 75% of the fee if the decision is not made within 150 days (or 180 days if concurrent with an official plan amendment application) from the date the municipality received the complete application and fee, and • 100% of the fee if the decision is not made within 210 days (or 240 days if concurrent with an official plan amendment application) from the date the municipality received the complete application and fee. The change to require a gradual refund of zoning bylaw amendment application fees will apply to all applications received on or after January 1, 2023.	**Bill References:** Schedule 5 of Bill, section 4. **Planning Act References:** New subsection 34 (10.12) provides rules respecting when municipalities are required to refund fees in respect of applications under that section.

Site Plan Control

Change	Bill and Leg. References
The changes: • establish complete application requirements for site plan control, with recourse if the application has not been deemed complete within 30 days of acceptance by the municipality, • extend site plan control application timelines from 30 to 60 days, and • require that site plan control decisions be made by staff (instead of municipal councils or committees of council) and that this will apply to all site plan applications received on or after July 1, 2022. Complementary changes reflecting the site plan control changes in the Planning Act have also been made to the site plan control provisions in the City of Toronto Act, 2006.	**Bill References:** Schedule 1 of Bill (complementary changes to the City of Toronto Act, 2006), subsections 1 (1)-(3) and 1 (5)-(8) and section 2, and Schedule 5 of Bill (Planning Act), subsections 7 (1)-(4) and 7 (6)-(9). **Planning Act References:** A number of amendments are made to section 41. A number of subsections are added that set out the rules respecting consultations with municipalities before plans and drawings are submitted for approval and respecting completeness of applications made under this section. New subsection (4.0.1) provides for the appointment of an authorized person for the purposes of subsection (4).

Site Plan Control

Change	Bill and Leg. References
The changes require municipalities to gradually refund site plan control application fees if an approval is not made within the following legislated timelines: • 50% of the fee if the decision is not made within 60 days from the date the municipality received the complete application and fee • 75% of the fee if the decision is not made within 90 days from the date the municipality received the complete application and fee, and • 100% of the fee if the decision is not made within 120 days from the date the municipality received the complete application and fee. The change to require a gradual refund of site plan application fees will apply to all applications received on or after January 1, 2023. Complementary changes reflecting the site plan control changes in the Planning Act have also been made to the site plan control provisions in the City of Toronto Act, 2006.	**Bill References:** Schedule 1 (complementary changes to the City of Toronto Act, 2006), subsection 1 (4) and Schedule 5 of Bill (Planning Act) subsection 7 (5). **Planning Act References:** A number of amendments are made to section 41. A number of subsections are added that set out the rules respecting consultations with municipalities before plans and drawings are submitted for approval and respecting completeness of applications made under this section. New subsection (4.0.1) provides for the appointment of an authorized person for the purposes of subsection (4). **City of Toronto Act, 2006 References:** Various amendments to section 114, including: • Subsection (4) is replaced with a number of subsections that set out the rules respecting consultations with the City before plans and drawings are submitted for approval and respecting completeness of applications made under this section. • New subsection (5.1) provides for the appointment of an authorized person for the purposes of subsection (5). Various related amendments are made to section 114.

Plans of Subdivision

Change	Bill and Leg. References
The changes establish a one-time discretionary authority to allow municipalities to reinstate draft plans of subdivision that have lapsed within the past five years without the need for a new application. This authority only applies where no agreements of purchase and sale had been entered into prior to the lapsing of the draft plan of subdivision. The changes also establish regulation-making authority for the province to prescribe what can and/or cannot be required as a condition of draft plan of subdivision approval.	**Bill References:** Schedule 5 of Bill, section 9. **Planning Act References:** New rules are added to section 51 with respect to extensions of approvals by approval authorities.

Public Reporting Requirements

Change	Bill and Leg. References
The changes establish authority for the Minister of Municipal Affairs and Housing to require public reporting by planning authorities on development applications and approvals, including the format of municipal reporting (i.e. data standard).	**Bill References:** Schedule 5 of Bill, sections 11 and 12. **Planning Act References:** New section 64 provides the Minister with authority to require reporting by planning authorities on planning matters.

Community Benefits Charge By-law Reviews

Change	Bill and Leg. References
The changes require any municipality with a community benefits charge by-law to publicly consult and complete a review no later than five years after the by-law is passed, and every five years thereafter. After reviewing the community benefits charge by-law, a municipality must pass a resolution indicating whether a revision is needed. If a municipality does not pass a resolution within the timeframe, the community benefits charge by-law would expire, and a new by-law would need to be passed in order to charge for community benefits.	**Bill References:** Schedule 5 of Bill, section 6. **Planning Act References:** New subsections 37 (54) to (59) require regular reviews of community benefits charge by-laws and provide rules respecting such reviews.

Transit-Oriented Communities and Parkland

Change	Bill and Leg. References
The changes specify a tiered alternative parkland dedication rate for transit-oriented community development sites, based on the amount or value of development land. The alternative dedication rate will be structured as follows: • for sites 5 hectares or less, parkland will be dedicated up to 10% of the land or its value • for sites greater than 5 hectares, parkland will be dedicated up to 15% of the land or its value. Changes also provide for encumbered land (i.e., land that is subject to a restriction or stratified ownership) in respect of transit-oriented community developments identified in a Minister's order (Minister of Infrastructure), to be conveyed to a municipality for park or other public recreational purposes. Encumbered parkland will be deemed to count towards any municipal parkland dedication requirements. Transit-oriented community lands subject to the tiered alternative dedication rates on parkland will be identified pursuant to subsection 2 (1) of the Transit-Oriented Communities Act, 2020.	**Bill References:** Schedule 5 of Bill, sections 8 and 10. **Planning Act References:** Amendments are made to sections 42 and 51.1 with respect to parkland requirements on land designated as transit-oriented community land under the Transit-Oriented Communities Act, 2020.

Surety Bonds

Change	Bill and Leg. References
The changes provide the Minister of Municipal Affairs and Housing with regulation-making authority to authorize owners of land and applicants to stipulate the type of surety bonds and other prescribed instruments which may be used to secure agreement obligations in connection with local approval of land use planning matters. The regulation-making power enables the Minister to prescribe the circumstances when this authority may be used by owners of land and applicants. The regulation-making authority regarding surety bonds will come into force on a day to be named by proclamation.	**Bill References:** Schedule 5 of Bill, section 13. **Planning Act References:** New section 70.3.1 provides the Minister with authority to make certain regulations respecting surety bonds and other instruments in connection with approvals with respect to land use planning.

Development Charge Reporting on Municipal Website

Change	Bill and Leg. References
The Development Charges Act, 1997, requires the municipal treasurer to provide the municipal council with an annual financial statement related to development charges and reserve funds each year. The amendments require municipalities that have passed a development charge by-law, to make this statement available to the public on the website of the municipality. The Lieutenant Governor in Council also has the regulation-making authority to prescribe further requirements on the manner in which statements are made publicly available. In circumstances where a municipality does not have a website, the statement must be made available in the municipal office.	**Bill Reference:** Schedule 2 of Bill. **Development Charges Act, 1997 References:** The Schedule amends the Development Charges Act, 1997 with respect to the publication of the statement of the treasurer under section 43 of the Act.

New Home Construction Licensing Act, 2017

The Ministry of Government and Consumer Services is making amendments to the New Home Construction Licensing Act, 2017 (Licensing Act) and to the Ontario New Home Warranties Plan Act (Warranties Act) to strengthen protections for purchasers of new homes.

LICENSING: Amendments would to help address the issue of inappropriate or unethical behaviour by new home builders and vendors, and also enhance the Home Construction Regulatory Authority's (HCRA) enforcement powers, among other things. The amendments:

- Enhance consumer protection by giving additional tools to the HCRA, such as ensuring the registrar does not require a complaint to be received to take certain actions
- Encourage compliance with the rules by increasing the maximum amount of a fine that the Discipline Committee may impose if a licensee contravenes the Code of Ethics, from $25,000 to $50,000 for individual licensees, and $100,000 for non-individual licensees
- Establish the authority for the Discipline Committee to impose an additional fine in an amount equal to the monetary benefit acquired by a licensee as a result of a breach of the Code of Ethics
- Clarify the authority for the Discipline Committee to consider repeat contraventions as part of its determination when imposing fines for any type of Code of Ethics violations
- Increase the maximum administrative penalty amount from $10,000 to $25,000
- Establish the authority for an assessor to impose an additional administrative penalty in an amount equal to the monetary benefit acquired by a person as a result of a contravention
- Create the authority for a court to impose an additional fine for a conviction in an amount equal to the monetary benefit acquired by a person as a result of an offence
- Clarify that the registrar can review whether an applicant's past or ongoing conduct either is or will be in contravention of the Licensing Act and prescribed legislation, and
- Clarify under the Licensing Act that an assessor may impose an administrative penalty if the person has contravened, or is contravening, a prescribed provision of the Warranties Act or the regulations or the by-laws made under it.

Ontario New Home Warranties Plan Act

NEW HOME WARRANTIES: Amendments provide Tarion regulatory authority to extend the duration of statutory warranties for items in a new home that are not completed when the warranties for the home begin (i.e. when the home is completed for the homeowner's possession).

- Tarion's authority will be subject to the Minister of Government and Consumer Services' approval and the Lieutenant Governor in Council will retain authority to make these regulations.

Opportunities for Missing Middle and Multi-Generational Housing and Gentle Density

The Ministry of Municipal Affairs and Housing is seeking feedback on opportunities to increase missing middle and gentle density, including multigenerational housing to address the housing supply crisis. Specifically, the Ministry is seeking feedback on best practices and examples of how the government can support the creation of more missing middle housing, including multigenerational housing, in Ontario.

Discussion Questions:

1. What are the biggest barriers and delays to diversifying the types of housing built in existing neighbourhoods?
2. What further changes to the planning and development process would you suggest to make it easier to support gentle density and build missing middle housing and multigenerational housing, in Ontario?
3. Are you aware of innovative approaches to land use planning and community building from other places that would help increase the supply of missing middle and multigenerational housing?
4. Are there any other changes that would help support opportunities for missing middle and multigenerational housing?

Seeking Feedback on Housing Needs in Rural and Northern Municipalities

The government recognizes the importance of supporting a range of housing options and increasing overall housing supply in rural and northern municipalities.

- The aim of this posting (ERO 019-5287) is to seek feedback on the specific challenges and barriers faced by rural and northern municipalities to better understand their unique housing needs. For example, we acknowledge that Northern Ontario faces challenges due to high construction costs to build new housing.
- The posting also seeks ideas, solutions, or proposals on potential ways to help address the housing needs in these areas. This could include a range of land use planning and non-land use planning tools.
- The Ministry welcomes feedback on the following discussion questions.

Discussion Questions

1. What are the key barriers impacting your municipality in meeting its housing needs that may be unique to northern and rural communities?
2. What kind of flexibility is needed to address housing needs in your municipality?
3. What potential tools or policies could the government consider to address housing needs in your municipality while balancing other provincial priorities?
4. Do you have other suggestions for ways to improve housing supply and needs in rural and northern municipalities?

Other Initiatives in More Homes for Everyone

In addition to the legislative and related regulatory changes included in More Homes for Everyone, there are various cross-ministry initiatives that will also help to increase the supply of housing including:

- Establishing an Ontario Housing Supply Working Group with partner ministries, municipal and federal governments and industry to review how new housing tools are being used and recommend annual updates to Ontario's housing plan, including new policy and legislative changes
- Consulting on enhancing access to financing for non-profit housing providers
- Building Code changes to enable partial/early occupancy of super-tall buildings, allowing streamlined approval of CSA certified multi-unit modular buildings, enabling construction of 12-storey mass timber buildings, and making it easier for building inspector training/internships. Also exploring potential changes to enable partial/early occupancy of super-tall buildings, and longer-term potential changes to allow single means of egress for 4-6 storey buildings
- Leveraging provincial surplus land for non-profit and supportive housing through a proposed Centre of Realty Excellence
- Working with municipalities to ensure a more efficient and consistent approvals process and facilitate e-permitting (Ontario Digital Service)
- Reporting to municipalities on the results of MOF's annual population projections with a focus on emerging and key population growth trends
- Implementing the Transit-Oriented Communities program
- Connecting transit ridership forecasts to population growth for housing and employment
- Collaborating with the federal government on the housing accelerator fund and rent-to-own program, and advocating for Ontario's fair share of federal funding

Question and Comments

- For a copy of Bill 109, the More Homes for Everyone Act, 2022, please visit the Legislative Assembly of Ontario website

- Comments were invited through the Environmental Registry of Ontario and the Regulatory Registry:

Environmental Registry of Ontario Postings:

- More Homes for Everyone Plan – Proposed Planning Act Changes
- Community Infrastructure and Housing Accelerator – Proposed Guideline
- Housing needs of rural and northern municipalities
- Opportunities to increase missing middle housing and gentle density

Regulatory Registry Postings:

- Proposed Planning Act Changes
- Proposed Development Charges Act Changes
- Proposed New Home Construction Licensing Act, 2017 Changes
- Proposed Ontario New Home Warranties Plan Act Changes
- Proposed Regulatory Changes - Condominium Cancellations
- Access to financing for not-for-profit housing developers

Questions from Municipal Outreach Session (April 20, 2022)

Community Infrastructure and Housing Accelerator

1. **Are there timelines that apply to the Minister's response to requests for the community infrastructure and housing accelerator tool?**

   There are no legislative timelines for the Minister to respond to municipal requests for the community infrastructure and housing accelerator tool.

2. **Is there any opportunity for municipal cost recovery for accelerator tool work undertaken by municipal staff on behalf of a landowner?**

   The legislative changes do not provide for a specific fee to be charged to process a community infrastructure and housing accelerator request. Municipalities could consider whether they could use any of their existing authority to levy fees and charges in respect of work undertaken in respect of accelerator tool requests.

3. **If the Minister makes a Community Infrastructure and Housing Accelerator order, can it be assumed that the Minister has consulted with other provincial or local authorities that may have legislation pertinent to the rezoning?**

   The tool is intended to be used for priority projects and its use will be evaluated on a case-by-case basis. MMAH would engage partner ministries, the municipality that submitted the request, stakeholders, Indigenous communities and other parties as appropriate, when a CIHA order request has been received.

Fee Refunds

4. **Does the clock for fee refunds start from the date the application is received or when it is deemed to be complete?**

   The new complete application requirements for site plan are generally the same as the requirements that currently apply to other types of matters under the Planning Act.

   The changes give a municipality the authority to refuse to accept/consider a site plan application until they have received all the necessary information and material and any fee. Until these are received, the municipality would be able to refuse to accept the application and the timelines for review would not begin.

5. **What if SPC approvals timelines are not met due to other parties' failure to provide comments/information (applicants, agencies, provincial ministries, federal government, etc.) i.e., circumstances beyond municipal control?**

The new complete application requirements for site plan are generally the same as the requirements that currently apply to other types of matters under the Planning Act.

As a result, the changes allow municipalities, through their official plans, to establish additional information and material required to review the site plans beyond what is currently in the legislation.

The changes give a municipality the authority to refuse to accept/consider a site plan application until they have received all the necessary information and material and any fee. Until these are received, the municipality would be able to refuse to accept the application and the timelines for review would not begin.

A determination on whether the application is complete or not, including any disputes regarding reasonableness, would be addressed in a similar manner as with other types of planning applications under the Planning Act.

In addition, as the fee refunds are proposed to take effect January 1, 2023, this would provide time for municipalities to develop official plan policies which would assist in ensuring site plan applications include any additional information and material to qualify as a complete application so that the timelines could begin.

Also starting January 1, 2023, the provincial government has also committed to providing comments on housing applications within 45 days.

6. **If a ministry/agency exceeds 45 days to provide comments on an application can a municipality proceed with consideration of the proposal in absence of the comments in order to meet approval timelines?**

   The municipality should make a decision with the information that is available to them. If there is not sufficient information before the municipality to consider the application, the application may need to be refused.

7. **Will there be regulations that stipulate how refunds are made (e.g., will the applicant have to request a refund)?**

   No, the legislation does not provide for regulatory authority to specify how the refunds are to be given.

   The changes provide that applicants are entitled to a refund when the legislated timelines are exceeded.

   This means that municipalities need to ensure that they have administrative measures in place to be able to provide refunds immediately if they fail to meet timelines.

   However, these changes will not take effect until January 1, 2023, to allow time for municipalities to make improvements to their application review and approval

processes, including augmenting complete application requirements, in order to increase their ability to meet timelines and avoid owing refunds.

8. **What implications are there for external agencies (e.g., conservation authorities, upper tier governments) who also have fees for certain applications and are actively involved in review of site plan applications, zoning amendments, etc.? Will the Municipality have to refund all the fees including external agency fees?**

   The municipality is responsible to refund any fee paid pursuant to section 69 of the Planning Act.

9. **The penalty on decisions related to site plans - is that to get to a yes/no decision or to complete the process (agreement/conditions done)?**

   The decision for site plan is related to the approval of plans and/or drawings. If the approval is going to be conditional, then the conditions need to be specified. However, any agreements required as a condition of approval can be developed later.

10. **If a rezoning is submitted with an Upper Tier OPA, the local municipality can't pass the by-law until the upper-tier Council has adopted the OPA. Is there any remedy for the local municipality to recoup their fees if the Upper Tier takes over 120 days?**

    If a municipality does not make a decision within the legislated timelines, they would be required to gradually refund the application fee to the applicant. Municipalities can consider using complete application requirements to ensure that timelines for processing applications do not begin until any impediments to making a timely decision are addressed.

11. **What happens if a municipality disputes the refund of fees? Is there recourse?**

    Any recourse regarding disputes over refund of fees would be through the courts.

12. **Does the requirement for graduated refund of fees apply to CPPS or development permit by-laws?**

    The legislative changes relate to zoning by-law applications and site plans. Where a community planning permit system exists, to the extent an applicant is seeking to amend a community planning permit by-law, section 4 of O. Reg. 173/16 provides that the by-law is deemed generally to be a zoning by-law. By contrast, an application for a community planning permit arises under section 10 of O. Reg. 173/16 and there are no provisions related to graduated refunds of fees for these applications.

13. Will the Province be providing funding for additional resources to expedite applications?

The province has invested up to $350 million through the Streamline Development Approval Fund, Municipal Modernization Program, and Audit and Accountability Fund to help municipalities implement efficiencies and identify cost savings. These programs can help municipalities cut red tape, streamline and modernize municipal planning processes including official plan and zoning updates, and plan of subdivision and site plan approvals, as well as improve their delivery of other local services.

Furthermore, the province is collaborating with key stakeholders to develop a data standard for development approvals. A data standard would provide consistent rules and guidelines that could be used by all players in the development process and would support further modernization in Ontario's housing and development sectors.

Mandatory Delegation ("assignment") of Site Plan

14. Will the delegation to staff of SPC decisions require a Delegation By-law passed by Council?

No. The new authority in effect "assigns" the power to municipal staff but relies on municipalities to identify the appropriate person(s). The new subsection 41 (4.0.1) of the Planning Act is the provision that would govern the identification of the individuals who would be empowered to give site plan approval. This new authority requires council to pass a by-law to identify the person(s) (i.e., an officer, employee or agent of the municipality) who will carry out the site plan approvals. This change will not take effect until July 1 to allow time for municipalities to take any necessary actions to implement this change.

15. What happens if a municipal council does not delegate the authority to approve site plans (i.e., does not pass a by-law)?

If a council wishes to continue to use site plan control, it will be required to appoint an officer, employee or agent of the municipality as an authorized person to carry out the site plan control approvals. For applications submitted on and after July 1, 2022, councils will have no authority to give site plan approvals.

16. With the mandatory delegation of Site Plan approval to staff, are "bump ups" for approval to Council still permissible? What if a proponent objects to having their site plan application considered by the delegate? Could the matter be deferred to Council?

The new authority in effect "assigns" the power to approve site plans and/or drawings to municipal staff. For applications submitted on and after July 1, 2022, councils will have no authority to give site plan approvals.

This change would not address the local administration of site plan control, provided the decision was made by the official identified by municipal council.

17. What is the 'approval' being delegated to staff? Approval of drawings? Entering into an agreement? Conditional Approval?

The decision for site plan is related to the approval of plans and/or drawings, including any conditions. The approval may also include requirements for agreements. The changes do not impact the identification of the signatory(ies) of those agreements on behalf of municipalities.

18. Does mandatory delegation of site plan approval eliminate Planning Advisory Committees?

No. Bill 109 did not make any changes to the provisions dealing with planning advisory committees.

19. Do staff have the authority to enter into a site plan agreement (including the authority to bind)?

The changes do not impact the identification of the signatory(ies) of site plan agreements on behalf of municipalities.

20. Are Community Planning Permits required to be delegated to staff?

Bill 109 did not make any changes related to delegation in the context of the community planning permit system.

Reinstatement of Lapsed Draft Plans of Subdivision

21. How would approval authorities know for certain that no agreements of purchase had been completed for a given plan of subdivision?

In considering whether a draft approval should be reinstated, the proposed legislative change would require the owner of the proposed plan of subdivision to provide to the approval authority an affidavit or sworn declaration certifying that no purchase and sale agreement had been entered into for of any land within the plan of subdivision.

22. Applications might have been initially files a long time ago and may not reflect all significant policy changes made since then, what applies?

Although this proposed new authority would be a discretionary power, when considering the re-instatement of a draft plan approval, the approval authority would still be required to ensure that their decision is consistent with and conforms to provincial policies and plans. If the proposal no longer reflects the current policy environment, the draft plan could not be re-instated or may need modifications to the original approval.

Building Code

23. Did MMAH consult with any fire organizations over the 12-storey mass timber buildings? Or the potential single means of egress for 4-6 storey buildings? Has this Building Code change passed? Did the Ministry consult with Emergency Service Providers?

One priority identified by the Housing Affordability Task Force was to reduce barriers to small multi-unit residential buildings that could increase housing supply. The Task Force specifically identified potential Building Code changes that would allow a single means of egress where appropriate to improve the economic viability and supply of these small multi-unit residential buildings.

On April 1, 2022, the Minister of Municipal Affairs and Housing wrote the Chair of the Canadian Commission on Building and Fire Codes requesting the prioritization of investigating National Construction Code changes to support the Task Force recommendation, while continuing to protect health and safety. Once the research has been completed, should the government proceed with the single egress concept, a specific code proposal would be consulted on to ensure that the public and key building industry and fire safety stakeholders have an opportunity to provide feedback.

As part of investigating this issue, it is recognized that that the requirement for two means of egress is an important part of the interdependent system of fire and life safety requirements, and that changes to a major element like egress requires substantial stakeholder consultation and research, assessment of a large number of related building code provisions including potential enhancements of compensating fire and life safety measures, and review of intersecting regulations and legislation including the Planning Act and Fire Protection and Prevention Act.

Other

24. How will membership in the Ontario Housing Supply Working Group be determined?

A diversity of stakeholders with expertise in housing will be considered. This will include experts from both the public and private sector to ensure that all perspectives and experiences are reflected.

25. **Are there any proposed corresponding changes related to Registry Office processes as significant delays are experienced getting site plan agreements registered on title where mortgage postponements are required? Will there be any change in the process to ensure that site plan agreements are not removed from title when mortgages are discharged to avoid this timely process?**

The Land Registry Office does not enforce the requirement for mortgage postponements. If delays are being experienced relating to mortgage postponements, the matter should be raised with mortgage lenders. The Land Registry Office is not aware of circumstances where site plan agreements have been removed from title when a mortgage has been discharged.

Further, site plan agreements would be registered after an approval on a site plan application has been given. Beyond providing authority for the registration and enforcement of an agreement required as a condition of site plan approval, the Planning Act does not address Registry Office processes which are not part of the site plan process.

26. Is the Province extending the July 1st, 2022, Growth Plan conformity date for municipalities in the Greater Golden Horseshoe for Municipal Comprehensive Reviews/Official Plans?

Upper and single-tier municipalities in the Greater Golden Horseshoe are required to meet the July 1, 2022, date of conformity established by the Minister of Municipal Affairs of Housing under the Places to Grow Act.

27. Can additional time (e.g., 60+ days) be provided to submit comments on the accelerator tool policies and topic specific housing consultations to allow for meaningful and well considered feedback from municipalities on those matters?

The ERO postings for these consultations close on April 29, but beyond that date municipalities are still welcome to send further feedback to planningconsultation@ontario.ca

Douro-Dummer Historical Committee Meeting
Thursday, April 21, 2022. 7:00 p.m.
Held at Douro-Dummer Public Library, Douro

Present:	Margie Morrissey	Shelagh Landsmann	MikeTowns
	Judy Bryan	Annette Dunford	Ruth Benson

Regrets: Amie Brock. Roberta Thompson

Margie called the meeting to order at 7:00 p.m. It appeared that no one had received a copy of the March minutes. Thus no adoption of the minutes could be made. (Margie will check with Amie as to their status.)

Old Barns at Douro

Patrick Leahy had talked about a fence around the building after fixing it/them up, with a pathway to it. Amie had not found anyone interested in purchasing the old logs. Discussion was held about what were we actually considering restoring it for. They are both in bad shape, and the costs would be quite high to try and restore if. The thought of it being restored could be beneficial to show children how it was in the past. It was decided that the price would to too high to even consider it. The Building Inspector and Parks and Rec Manager looked at the site.

Motion: By Judy Brian; Seconded by Mike Towns
That the idea of renovating/repairing either of the barns be shelved for now.
Carried

Small Fire Hall Building at the Library

The committee wondered what was to become of the small single vehicle fire hall in the Library Parking lot. Would it/Could it be used as a museum. No further comments were made about that.

Lime Kiln

Discussion took place about what was required to make the property "safe". It was suggested that Justin Hamersma could make a grate, or that could be tendered out. It was also agreed that Weity Hamersma be invited to the May meeting. The fact is that other than the 2022 budget, there will be no future funds for work at this time.

Old Cemetery Monuments

Following an article from Municipal World which was provided to the committee at a past meeting, it was felt there were no major concerns with our abandoned cemeteries, based on the issues in the printed article.

Motion: By Ruth Benson; Seconded by Shelagh Landsmann
That the meeting be adjourned at 7:55 p.m.
Carried

Next meeting, Thursday, May 19, 2022

Minutes Recorded by: Margie Morrissey / Shelagh Landsmann

Minutes of the Township of Douro-Dummer Planning Committee Meeting

May 27, 2022, 9:00 AM
Township Douro-Dummer YouTube Channel
https://www.youtube.com/channel/UCPpzm-uRBZRDjB89o2X6R_A

Present:	**Chair, Deputy Mayor - Karl Moher**
	Member - Wendy Dunford
	Member - Jim Patterson
	Member - Jim Mollohan
Members Absent:	**Member - Rod Manley**
Staff Present:	**Acting Clerk - Martina Chait-Hartwig**
	Building Administrator – Leisha Newton

1. Call to Order by Chair:

   The Chair called the meeting to order at 9:00 a.m.

2. Disclosure of Pecuniary Interest:

   The Chair reminded members of their obligation to declare any pecuniary interest they might have. None were declared.

3. Approval of Minutes: April 29, 2022

   Resolution Number 13-2022
   Moved By: Jim Mollohan
   Seconded By: Wendy Dunford
   That the Minutes from the Planning Committee Meeting, held on April 29, 2022, be received and approved, as amended. Carried

4. Severance Applications:

4.1 B-15-22 - Smith, ClerkPlanning-2022-33

Lot 14, Concession 3,

Dummer Ward, Roll No. 1522-020-003-32401

New Lot will front on Rock Road South of Douglas Road

Creation of one residential lot

Martina Chait-Hartwig, Secretary reviewed the planning report for the application.

In attendance:

Marnie Saunders, Agent - Present

Peter and Wendy Smith, Owners – Present

Resolution Number 14-2022

Moved By: Jim Patterson

Seconded By: Wendy Dunford

That it be recommended to Council that Severance Application B-15-22 for Peter and Wendy Smith be approved, and if approved by the Peterborough County Land Division Committee that the following conditions be imposed:

- $1250.00 cash-in-lieu of parkland be paid to the municipality
- That a 3-metre strip of frontage from the severed parcel be deeded to the Township for road widening purposes
- That the farm entrance be upgraded to residential standard with new culvert to the satisfaction of the Manager of Public Works
- That a test hole for the septic system be inspected, there is a fee to inspect test holes to ensure a septic system would be viable – current fees are $150 per lot severed and applicant is responsible for the digging of the test holes
- A Mitigation Measures Agreement is to be entered into between the Owner and the Municipality and registered on title at the owner's expense, which would recognize the recommendations included in Section 5 of the Opinion Letter prepared by D.M. Wills and Associates. dated January 25, 2022.

Carried

4.2 B-23-22 - Webster, ClerkPlanning-2022-34

1797 County Road 6

Lot 25, Concession 3,

Dummer Ward, Roll No. 1522-020-004-09100

Purpose of the application - Creation of one new lot

Martina Chait-Hartwig, Secretary reviewed the planning report for the application.

In attendance:

Sherry Webster, Owner – Present

Resolution Number 15-2022

Moved By: Wendy Dunford
Seconded By: Jim Mollohan
That it be recommended to Council that Severance Application B-23-22 for Sherry Webster be approved, and if approved by the Peterborough County Land Division Committee that the following conditions be imposed:
- $1250.00 cash-in-lieu of parkland be paid to the municipality
- That a test hole for the septic system be inspected, there is a fee to inspect test holes to ensure a septic system would be viable – current fees are $150 per lot severed and applicant is responsible for the digging of the test holes
- A Mitigation Measures Agreement is to be entered into between the Owner and the Municipality and registered on title at the owner's expense, which would recognize the recommendations included in Section 7.0 of the Environmental Impact Study prepared by Cambium Inc. dated January 24, 2022.
- That the Vegetative Protective Zone identified by Cambium on Figure 4 of the EIS, on the severed lot be zoned Environmental Constraint (EC) in the Township Zoning By-law. Carried

4.3 B-27-22 – Minshall-McGriskin, ClerkPlanning-2022-36

David Minshall and Valerie McGriskin

Pt Lot 12, Concession 1

Douro Ward, Roll No. 010-002-03001

921 Douro First Line Road

Purpose of the application - Creation of one new lot

Martina Chait-Hartwig, Secretary reviewed the planning report for the application.

In attendance:

David Minshall and Valerie McGriskin, Owners – Present

Resolution Number 16-2022

Moved By: Jim Mollohan

Seconded By: Jim Patterson

That it be recommended to Council that Severance Application B-27-22 for David Minshall and Valerie McGriskin be approved, and if approved by the Peterborough County Land Division Committee that the following conditions be imposed:

- $1250.00 cash-in-lieu of parkland be paid to the municipality
- That a 3-metre strip of frontage from the severed parcel be deeded to the Township for road widening purposes
- That a new entrance with new culvert be installed to the satisfaction of the Manager of Public Works
- That a test hole for the septic system be inspected, there is a fee to inspect test holes to ensure a septic system would be viable – current fees are $150 per lot severed and applicant is responsible for the digging of the test holes
- A Mitigation Measures Agreement is to be entered into between the Owner and the Municipality and registered on title at the owner's expense, which would recognize the recommendations included in Section 5 and 7 of Natural Heritage Evaluation, completed by Cambium dated December 20, 2021.

Carried

5. Next Meeting Date: June 24, 2022

6. Adjournment

Resolution Number 17-2022
Moved By: Jim Patterson
Seconded By: Wendy Dunford

That this meeting adjourn at 9:31 a.m. Carried

_____

Chair, Karl Moher

_____

Secretary, Martina Chait-Hartwig

Minutes of the Committee of the Whole of the Township of Douro-Dummer

May 31, 2022, 10:00 AM
Township Douro-Dummer YouTube Channel
https://www.youtube.com/channel/UCPpzm-uRBZRDjB89o2X6R_A

Present:	**Deputy Mayor Karl Moher** **Councillor Shelagh Landsmann** **Councillor Heather Watson** **Councillor Thomas Watt**
Members Absent	**Mayor J. Murray Jones**
Staff Present	**CAO - Elana Arthurs** **Acting Clerk - Martina Chait-Hartwig** **Interim Treasurer - Paul Creamer** **Manager of Public Works - Jake Condon** **Chief Building Official - Brian Fawcett** **Manager of Recreation Facilities - Mike Mood** **Fire Chief - Chuck Pedersen**

1. Call to Order

   With a quorum of the Committee being present, the Chair called the meeting to order at 10:07 a.m.

2. Land Acknowledgement

   The Chair recited the Land Acknowledgement.

3. Disclosure of Pecuniary Interest:

   The Chair reminded members of Committee of their obligation to declare any pecuniary interest they might have. None were declared.

4. Adoption of Agenda: May 31, 2022

Moved By: Councillor Watt
Seconded By: Councillor Landsmann

That the agenda for the Committee of the Whole Meeting, dated May 31, 2022, be adopted, as circulated. Carried

5. Delegations, Petitions or Presentations: None

6. Reports - Managers' Updates

6.1 Township Accounts - May 17, 2022

Moved By: Deputy Mayor Moher
Seconded By: Councillor Landsmann

That the Township Accounts dated May 17, 2022 be received with thanks.
Carried

6.2 Committee of the Whole - Stoney Lake Road Landfill Annual Monitoring, Public Works-2022-11

Moved By: Councillor Watt
Seconded By: Councillor Landsmann

That the report, dated May 31, 2022 regarding the Warsaw and Stoney Lake Road Landfill Annual Monitoring be received for information.
Carried

6.3 Committee of the Whole - Department Update - April and May, Public Works-2022-12

Moved By: Deputy Mayor Moher
Seconded By: Councillor Watt

That Public Works Department Monthly Report - April 2022 and May 2022, Public Works-2022-12 be received. Carried

6.4 Committee of the Whole - Department Update - April and May, 2022, Recreation Facilities-2022-05

Moved By: Councillor Landsmann
Seconded By: Deputy Mayor Moher

That the verbal report for the Building department for April and May 2022 provided by Chief Building Official, Brian Fawcett be received.

Carried

6.5 Committee of the Whole - department Update - April and May 2022, Building

Moved By: Councillor Watt
Seconded By: Deputy Mayor Moher

That the verbal report for the building department for April and May 2022 provided by Chief Building Official, Brain Fawcett be received. Carried

6.6 Committee of the Whole - Department Update - April and May 2022, Fire Chief-2022-06

Moved By: Councillor Landsmann
Seconded By: Councillor Watt

That Fire Department Monthly Report - April 2022 and May 2022, Fire Chief-2022-06 be received. Carried

6.7 Committee of the Whole - Department Update - April and May 2022, Treasurer-2022-07

Moved By: Councillor Watt
Seconded By: Deputy Mayor Moher

That Treasurer Department Monthly Report - April 2022 and May 2022, Treasure -2022-07 be received. Carried

6.8 Committee of the Whole - Department Update - April and May 2022, ClerkPlanning-2022-37

Moved By: Deputy Mayor Moher
Seconded By: Councillor Landsmann

That Clerk-Planning Department Monthly Report - April 2022 and May 2022, ClerkPlanning-2022-37 be received. Carried

6.9 Committee of the Whole - Department Update - April and May 2022, CAO-2022-24

Moved By: Councillor Watt
Seconded By: Deputy Mayor Moher

That Office of the CAO Monthly Report - April 2022 and May 2022, C.A.O.-2022-04 be received. Carried

7. New Business to be requested for next Meeting: None

8. Closed Session

Moved By: Councillor Landsmann
Seconded By: Councillor Watt

That Committee enter into Closed Session under Section 239 (2) of the Municipal Act, 2001, S.O. 2001, c.25, (c) a proposed or pending acquisition or disposition of land by the municipality or local board (11:41 a.m.). Carried

9. Rise from Closed Session with or without a Report

Moved By: Councillor Landsmann
Seconded By: Councillor Watt

That Committee rise from Closed Session without a report (11:54 a.m.). Carried

10. Matters Arising from Closed Session: None

11. Next Meeting: August 9, 2022

12. Adjournment

Moved By: Councillor Landsmann
Seconded By: Deputy Mayor Moher

That this meeting adjourn at 11:55 a.m. Carried

_____

Chair, Heather Watson

_____

Acting Clerk, Martina Chait-Hartwig

May 24, 2022

Ministry of Municipal Affairs and Housing
College Park, 17th Floor
777 Bay Street
Toronto, Ontario
M7A 2J3

ATTENTION: Honorable Minister Steve Clark

Dear Minister Clark:

RE: Ontario Must Build it Right the First Time

Please be advised that the Council of the Corporation of the Township of Lanark Highlands passed the following resolution at their regular meeting held May 10th, 2022:

Moved by Councillor Jeannie Kelso *Seconded by Reeve Peter McLaren*

***THAT**, the Council of the Township of Lanark Highlands support the City of Waterloo's resolution re: Ontario Must Build it Right the First Time;*

***AND THAT**, this resolution be provided to the Minister of Municipal Affairs and Housing and to all Ontario Municipalities.*

Carried

Sincerely,

Amanda Noël

Amanda Noël,
Clerk

Encl.

c. c. All Ontario Municipalities

March 23, 2022

Hon. Steve Clark
Minister of Municipal Affairs and Housing
College Park, 17th Floor
777 Bay St.
Toronto, ON M7A 2J3

RE: Resolution from the City of Waterloo passed March 21st, 2022 re: Ontario Must Build it Right the First Time

---

Dear Minister Clark,

Please be advised that the Council of the Corporation of the City of Waterloo at its Council meeting held on Monday, March 21st, 2022 resolved as follows:

> WHEREAS the Province of Ontario adopted greenhouse gas reduction targets of 30% by 2030, and emissions from buildings represented 22% of the province's 2017 emissions,
>
> WHEREAS all Waterloo Region municipalities, including the City of Waterloo, adopted greenhouse gas reduction targets of 80% below 2012 levels by 2050 and endorsed in principle a 50% reduction by 2030 interim target that requires the support of bold and immediate provincial and federal actions,
>
> WHEREAS greenhouse gas emissions from buildings represent 45% of all emissions in Waterloo Region, and an important strategy in the TransformWR community climate action strategy, adopted by all Councils in Waterloo Region, targets new buildings to be net-zero carbon or able to transition to net-zero carbon using region-wide building standards and building capacity and expertise of building operators, property managers, and in the design and construction sector,
>
> WHEREAS the City of Waterloo recently adopted a net-zero carbon policy for new local government buildings and endorsed a corporate greenhouse gas and energy roadmap to achieve a 50% emissions reduction by 2030 for existing local government buildings and net-zero emissions by 2050 (provided the provincial electricity grid is also net-zero emissions),
>
> WHEREAS the draft National Model Building Code proposes energy performance tiers for new buildings and a pathway to requiring net zero ready construction in new buildings, allowing the building industry, skilled trades, and suppliers to adapt on a predictable and reasonable timeline while encouraging innovation;

WHEREAS the Ministry of Municipal Affairs and Housing is consulting on changes for the next edition of the Ontario Building Code (ERO #: 019-4974) that generally aligns with the draft National Model Building Code except it does not propose adopting energy performance tiers, it does not propose timelines for increasing minimum energy performance standards step-by-step to the highest energy performance tier, and, according to Efficiency Canada and The Atmospheric Fund, it proposes adopting minimum energy performance standards that do not materially improve on the requirements in the current Ontario Building code;

WHEREAS buildings with better energy performance provide owners and occupants with lower energy bills, improved building comfort, and resilience from power disruptions that are expected to be more common in a changing climate, tackling both inequality and energy poverty;

WHEREAS municipalities are already leading the way in adopting or developing energy performance tiers as part of Green Development Standards, including Toronto and Whitby with adopted standards and Ottawa, Pickering, and others with standards in development;

WHEREAS the City of Waterloo is finalizing Green Development Standards for its west side employment lands and actively pursuing Green Development Standards in partnership with the Region of Waterloo, the Cities of Kitchener and Cambridge, and all local electricity and gas utilities through WR Community Energy;

WHEREAS while expensive retrofits of the current building stock to achieve future net zero requirements could be aligned with end-of-life replacement cycles to be more cost-efficient, new buildings that are not constructed to be net zero ready will require substantial retrofits before end-of-life replacement cycles at significantly more cost, making it more cost-efficient to build it right the first time.

THEREFORE BE IT RESOLVED THAT Council request the Province of Ontario to include energy performance tiers and timelines for increasing minimum energy performance standards step-by-step to the highest energy performance tier in the next edition of the Ontario Building Code, consistent with the intent of the draft National Model Building Code and the necessity of bold and immediate provincial action on climate change;

THAT Council request the Province of Ontario to adopt a more ambitious energy performance tier of the draft National Model Building Code as the minimum requirement for the next edition of the Ontario Building Code than those currently proposed;

THAT Council request the Province of Ontario provide authority to municipalities to adopt a specific higher energy performance tier than the Ontario Building Code, which would provide more consistency for developers and homebuilders than the emerging patchwork of municipal Green Development Standards;

THAT Council request the Province of Ontario to facilitate capacity, education and training in the implementation of the National Model Building Code for municipal planning and building inspection staff, developers, and homebuilders to help build capacity; and

THAT this resolution be provided to the Minister of Municipal Affairs and Housing, to area MPPs, and to all Ontario Municipalities.

Please accept this letter for information purposes only.

If you have any questions or require additional information, please contact me.

Sincerely,

Julie Scott
City Clerk, City of Waterloo

CC (by email):

Catherine Fife, M.P.P (Waterloo)
Laura Mae Lindo, M.P.P (Kitchener Centre)
Belinda C. Karahalios, M.P.P (Cambridge)
Amy Fee, M.P.P (Kitchener-South Hespeler)
Mike Harris, M.P.P (Kitchener-Conestoga)

MUNICIPALITY OF
SHUNIAH

COUNCIL RESOLUTION

Resolution No.: 174-22

Date: May 24, 2022

Moved By: MEGHAN CHOMUT

Seconded By: DON SMITH

THAT Council hereby receives the Community Schools Alliance Action Plan and Social and Economic Impact for Small Communities in Ontario Study;

WHEREAS all students should have the opportunity to attend elementary and secondary school in their home community;

THEREFORE, BE IT RESOLVED THAT:

1. The province increase the Rural and Northern Education Fund (RNEF) to $50 million;

2. Should the current moratorium on accommodation reviews and school closures be lifted, we ask that the moratorium remain in place for schools that qualify for the RNEF until a thorough review of the education funding formula is completed;

3. Before templates required by the 2018 Pupil Accommodation Review Guide (PARG) are developed, there be consultation with school boards and community groups including the Community Schools Alliance.

AND FURTHER THAT a copy of this resolution be forwarded to Ontario municipalities, Community Schools Alliance, local MP's and MPP's and the Premier of Ontario.

☑ **Carried** ☐ **Defeated** ☐ **Amended** ☐ **Deferred**

Signature

Municipality of Shuniah, 420 Leslie Avenue, Thunder Bay, Ontario, P7A 1X8

The Corporation of the Township of Douro-Dummer

By-law Number 2022-29

Being a By-law to amend By-law 2018-39, as amended (A By-law to Restrict the Rate of Speed for Motor Vehicles on Highway Portions within the Township of Douro-Dummer) (Douglas Road)

Whereas, Section 128(2) of the Highway Traffic Act, R.S.O. 1990 Chapter H.8, provides that the council of a municipality and the trustees of a police village may, for motor vehicles driven on a highway or portion of a highway under its jurisdiction, by by-law prescribe a rate of speed different from the rate set out in subsection (1) of Section 128;

Whereas, Section 128(3) of the Highway Traffic Act, R.S.O., 1990 Chapter H.8 provides that the rate of speed prescribed under subsection 2 shall be 40, 50, 60, 70, 80, 90, or 100 kilometers per hour;

Whereas the Municipality has the authority to pass by-laws to regulate the foregoing, pursuant to the Municipal Act, 2001, as amended;

And Whereas, it is deemed expedient by Council to restrict the speed of motor vehicles on certain highways in the Corporation of the Township of Douro-Dummer;

Now Therefore the Council of The Corporation of the Township of Douro-Dummer enacts as follows:

1. That Appendix "A" to By-Law 2018-39, as amended, is further amended by removing the whole of Douglas Road in the 60 km/h listing.

2. That Appendix "B" to By-law 2018-39, as amended, is further amended by including the whole of Douglas Road in the 50 km/h listing attached hereto as Schedule "A".

3. That the deeming of Douglas Road as a 50 km/h road becomes effective once appropriate signage is in place.

4. That By-law Number 2018-39, as amended, is hereby further amended.

5. That the Mayor and the Acting Clerk be directed to sign same and affix the Corporate Seal to this By-law.

Passed in open Council this 7th day of June, 2022.

_____
Mayor, J. Murray Jones

_____
Acting Clerk, Martina Chait-Hartwig

Schedule "A"

Appendix "B"

As per Section "1" of the by-law and in compliance with the regulations under the Highway Traffic Act, the maximum rate of speed thereon shall be 50 kilometers per hour for motor vehicles on the roads listed below:

Road Name	From:	To:	Ward
Camp Line Road	County Road 6	1.6 Kilometers North of County Road 6	Douro
Caves Road	County Road 4	Third Line Road North Dummer	Dummer
Clifford Road	South Street	Third Line Road Mid Dummer	Dummer
Division Road	County Road 4	Intersection with Burnham Line	Douro
Douglas Road	Rock Road	Fourth Line Road Dummer	Dummer
Payne Line Road	County Road 4	Cedar Cross Road	Dummer
Rock Road	South Street	Douglas Road	Dummer
Rock Road	Douglas Road	Cooper Road	Dummer
Television Road	Parkhill Road (County Road 4)	North Limit of Television Road	Douro

The Corporation of the Township of Douro-Dummer

By-law Number 2022-30

Being a By-law to amend By-law Number 10-1996, as amended, otherwise known as "The Township of Douro-Dummer Comprehensive Zoning By-law"

Whereas By-law Number 10-1996, as amended, regulates the use of land and the use and erection of buildings and structures within the Township of Douro-Dummer;

And Whereas Section 34 of The Planning Act, RSO 1990, as amended, permits the Council to pass an amending Zoning By-law;

And Whereas the Council of the Township of Douro-Dummer deems it advisable to amend By-law No. 10-1996 as amended;

Now Therefore the Council of the Township of Douro-Dummer hereby enacts as follows:

1. The area affected by this By-law consists of land in Concession 8, Part Lot 32, Dummer Ward, in the County of Peterborough, as indicated on Schedule "A" attached hereto, and forming part of this by-law, more particularly described as:

Concession 8, Part Lot 32, Registered Plan Number 45R-8828 1-6 and RP 45R13315; Parts 1-4, Dummer Ward
1305 Whetung Road
Roll No.: 1522-020-005-35700

as indicated on Schedule "A" attached hereto, and forming part of this by-law.

2. Section 21 - Special Districts is amended by the addition of a new subsection "21.253, Special District 253 (S.D. 253) Zone" immediately following Section 21.252, "Special District 252 (S.D. 252) Zone" respectively as follows:

a) 21.253 Special District 253 (S.D. 253) Zone
Roll No. 020-005-35700
No person shall within any Special District 253 (S.D. 253) Zone use any land, or erect, alter or use any building or structure except in accordance with the following provisions:

21.253.1 Permitted Uses

21.253.1.1 all uses permitted in the Limited Service Residential (LSR) Zone of By-law 10-1996, as amended, shall apply.

21.253.2 Special Provisions

All provisions and regulations of the Limited Service Residential (LSR) Zone of By-law 10-1996, as amended, shall apply with the following exceptions:

(i) Minimum Water Yard Setback for Dwelling 16.07 m

All minimum setbacks for all buildings and structures, existing and proposed at the time of passing of this by-law shall be shown on the Survey, prepared by Elliott and Parr (Peterborough) Ltd. dated March 1, 2022 and attached to this by-law as Schedule 'B'.

All provisions and regulations of the Limited Service Residential Zone of By-law 10-1996, as amended, shall apply to any further development, not shown on the above noted Survey, on the subject property.

3. The area shown on Schedule "A" of this By-law, identified as  shall henceforth be zoned "Special District 253 (S.D. 253) Zone" and shall cease to be zoned "Limited Service Residential (LSR) Zone".

4. Schedule 'B-8' of By-law No. 10-1996, as amended, is hereby further amended in accordance with the provisions of this By-law.

5. All other relevant provisions of By-law 10-1996, as amended, shall apply.

If no notice of objection is filed with the Clerk within the time provided, this By-law shall become effective on the date of passing hereof, subject to the provisions of The Planning Act, RSO 1990, as amended.

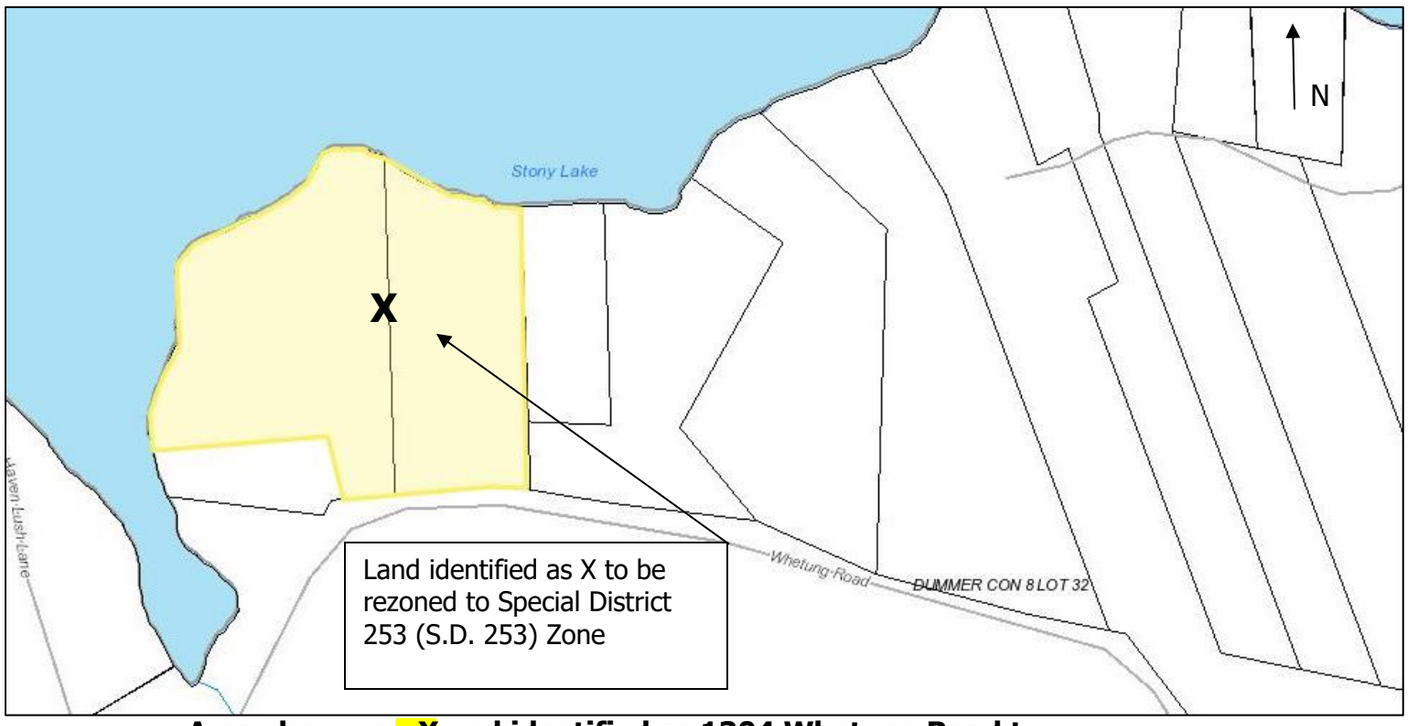
Passed in Open Council this 7th day of June, 2022.

_____
Mayor, J. Murray Jones

_____
Acting Clerk, Martina Chait-Hartwig

File: R-01-22
Roll No. 1522-020-005-35700

Schedule "A" to By-law 2022-30



Area shown as X and identified as 1304 Whetung Road to be rezoned to Special District Zone 253.

This is Schedule 'A' to By-law No. 2022-30 passed this 7th day of June, 2022.

_____
Mayor, J. Murray Jones

_____
Acting Clerk, Martina Chait-Hartwig

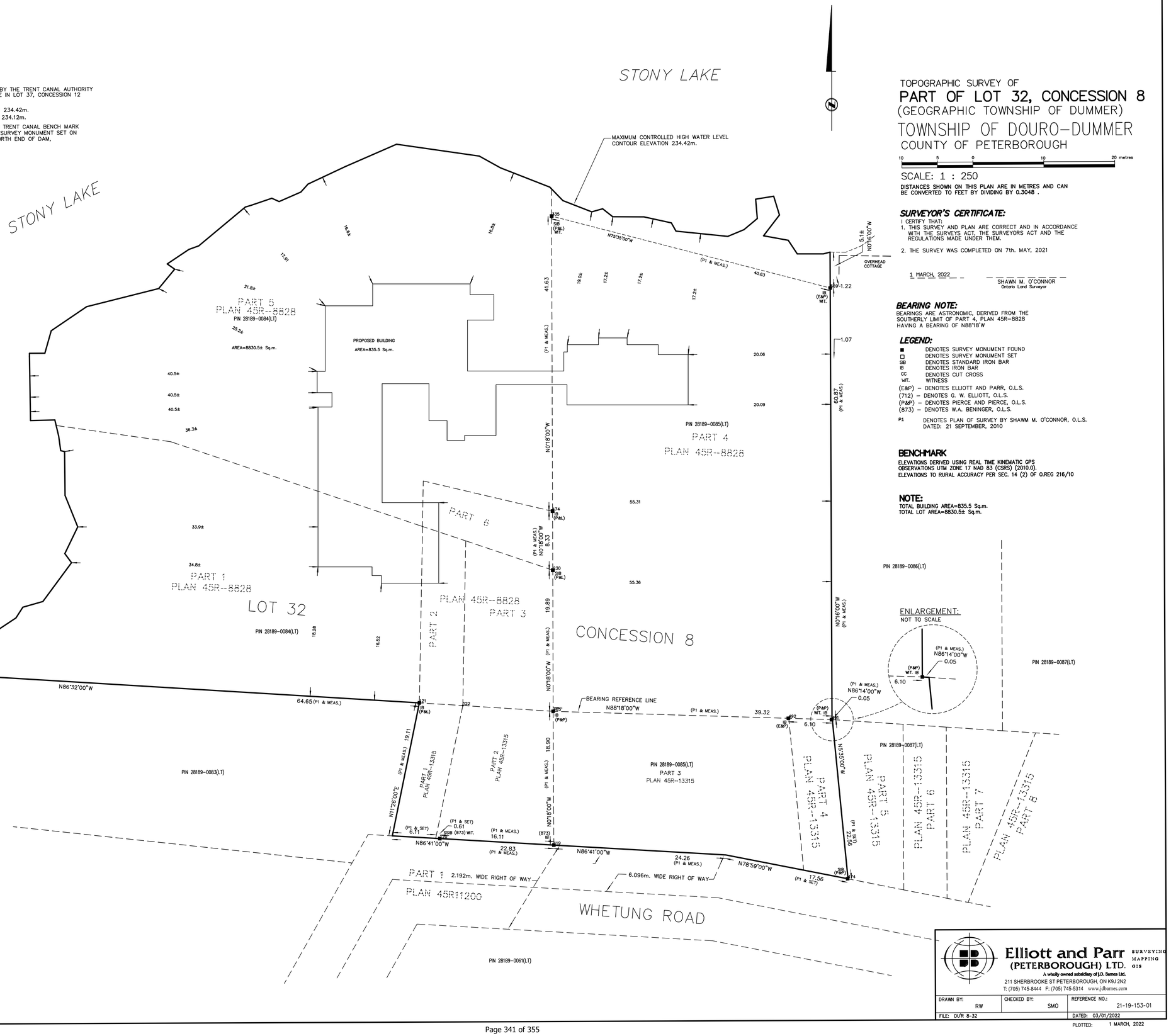
WATER NOTE

STONY LAKE IS ARTIFICIALLY CONTROLLED BY THE TRENT CANAL AUTHORITY BY A DAM AT THE OUTLET OF CLEAR LAKE IN LOT 37, CONCESSION 12 TOWNSHIP OF SMITH

MAXIMUM CONTROLLED LEVEL IS ELEVATION 234.42m.

MINIMUM CONTROLLED LEVEL IS ELEVATION 234.12m.

ELEVATIONS ARE GEODETIC, DERIVED FROM TRENT CANAL BENCH MARK CONSISTING OF A BRASS ONTARIO HYDRO SURVEY MONUMENT SET ON TOP OF CONCRETE RETAINING WALL ON NORTH END OF DAM, ELEVATION 235.96m.



TOPOGRAPHIC SURVEY OF

PART OF LOT 32, CONCESSION 8

(GEOGRAPHIC TOWNSHIP OF DUMMER)

TOWNSHIP OF DOURO-DUMMER

COUNTY OF PETERBOROUGH

10 5 0 10 20 metres

SCALE: 1 : 250

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048 .

SURVEYOR'S CERTIFICATE:

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.

2. THE SURVEY WAS COMPLETED ON 7th. MAY, 2021

1 MARCH, 2022

SHAWN M. O'CONNOR
Ontario Land Surveyor

BEARING NOTE:

BEARINGS ARE ASTRONOMIC, DERIVED FROM THE SOUTHERLY LIMIT OF PART 4, PLAN 45R-8828 HAVING A BEARING OF N88°18'W

LEGEND:

- ■ DENOTES SURVEY MONUMENT FOUND
- □ DENOTES SURVEY MONUMENT SET
- SIB DENOTES STANDARD IRON BAR
- IB DENOTES IRON BAR
- CC DENOTES CUT CROSS
- WIT. WITNESS
- (E&P) – DENOTES ELLIOTT AND PARR, O.L.S.
- (712) – DENOTES G. W. ELLIOTT, O.L.S.
- (P&P) – DENOTES PIERCE AND PIERCE, O.L.S.
- (873) – DENOTES W.A. BENINGER, O.L.S.
- P1 DENOTES PLAN OF SURVEY BY SHAWM M. O'CONNOR, O.L.S. DATED: 21 SEPTEMBER, 2010

BENCHMARK

ELEVATIONS DERIVED USING REAL TIME KINEMATIC GPS OBSERVATIONS UTM ZONE 17 NAD 83 (CSRS) (2010.0). ELEVATIONS TO RURAL ACCURACY PER SEC. 14 (2) OF O.REG 216/10

NOTE:

TOTAL BUILDING AREA=835.5 Sq.m.
TOTAL LOT AREA=8830.5± Sq.m.

Elliott and Parr (PETERBOROUGH) LTD.
SURVEYING MAPPING GIS
A wholly owned subsidiary of J.D. Barnes Ltd.
211 SHERBROOKE ST PETERBOROUGH, ON K9J 2N2
T: (705) 745-8444 F: (705) 745-5314 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
RW	SMO	21-19-153-01
FILE: DUR 8-32		DATED: 03/01/2022

PLOTTED: 1 MARCH, 2022

Accounts Payable Summary - May 7/22 to May 27/22

Cheque Number	Voucher Number	Vendor Name	Description	Amount
0				
2 General Government				
55609	66935	BELL MOBILITY INC.	CELL - CAO	$69.08
00-02-0250-3310				
55613	66923	T.G. QUIRK GARAGE	OFFICE WATER	$56.00
00-02-0250-4114				
55613	66924	T.G. QUIRK GARAGE	OFFICE WATER	$64.00
00-02-0250-4114				
55614	66976	UPS CANADA	FREIGHT	$5.02
00-02-0250-4200				
EFT000000006169	67018	CHARTIS INSURANCE COMPANY		$14.22
00-02-0250-2410				
EFT000000006174	66917	CARMICHAEL ENGINEERING LTD	INSPEC. & PREVENTATIVE MAINT.	$1,298.20
00-02-0250-5160				
EFT000000006177	66914	CUNNINGHAM SWAN LAWYERS	INTEGRITY COMMISSIONER	$305.28
00-02-0240-3810				
EFT000000006177	66915	CUNNINGHAM SWAN LAWYERS	CODE OF CONDUCT COMPLAINT	$737.76
00-02-0240-3810				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$681.89
00-02-0250-3110				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$227.29
00-02-0251-3110				
EFT000000006186	66919	IRON MOUNTAIN CANADA CORP.	SHREDDING SERVICES	$662.01
00-02-0250-3900				
EFT000000006193	66918	MICRO AGE COMPUTER STORES	CONTRACT SUPPORT	$882.26
00-02-0250-5170				
EFT000000006193	66920	MICRO AGE COMPUTER STORES	MANAGED SERVICES	$1,281.16
00-02-0250-5180				
EFT000000006197	66983	NEXICOM INC.	INTERNET, CONFERENCE CALLING	$101.76
00-02-0250-3900				
EFT000000006200	66916	ONTARIO MUNICIPAL ADMINIST	2022 OMAA SINGLE MEMBERSHIP	$447.74
00-02-0250-2601				
EFT000000006206	66913	SHRP LIMITED	CONSULTING SERVICES	$1,017.60
00-02-0250-3832				
EFT000000006217	66921	XEROX CANADA LTD.	COPIER USAGE	$73.67
00-02-0250-5164				

Cheque Number	Voucher Number	Vendor Name	Description	Amount
EFT000000006217	66922	XEROX CANADA LTD.	COPIER LEASE	$133.50
00-02-0250-3210				
55615	67037	BELL CANADA	OFFICE TOLL FREE	$12.39
00-02-0250-3300				
55615	67041	BELL CANADA	OFFICE	$628.47
00-02-0250-3300				
55615	67042	BELL CANADA	OFFICE INTERNET	$146.47
00-02-0250-3320				
55616	67039	HEART & STROKE FOUNDATION	IN MEMORY	$50.00
00-02-0240-7500				
55621	67038	PETTY CASH - GENERAL	REPLENISH PETTY CASH	$36.05
00-02-0250-4114				
55621	67038	PETTY CASH - GENERAL	REPLENISH PETTY CASH	$5.09
00-02-0250-4110				
55623	67075	THE TECHNICAL STANDARDS AN	OFFICE ELEVATOR FOLLOW UP	$160.27
00-02-0250-3500				
55623	67075	THE TECHNICAL STANDARDS AN	OFFICE ELEVATOR FOLLOW UP	$160.27
00-02-0251-3500				
55624	67050	UPS CANADA	FREIGHT	$17.17
00-02-0250-4200				
55624	67067	UPS CANADA	ROADS - FREIGHT	$9.94
00-02-0250-4200				
EFT000000006223	67051	CANADIAN SPRINGS	COFFEE	$74.51
00-02-0250-4114				
EFT000000006223	67051	CANADIAN SPRINGS	COFFEE	$38.10
00-02-0250-4114				
EFT000000006226	67049	CITY OF PETERBOROUGH	CANDIDATE 101 SESS - FRED DEAN	$226.26
00-02-0241-2603				
EFT000000006233	67095		CELL PHONE PROTECTION CASE	$96.67
00-02-0250-4600				
EFT000000006239	67047		OUTDOOR OFFICE PLANTER	$33.05
00-02-0250-5121				
EFT000000006239	67048		FLOWERS FOR OUTSIDE PLANTERS	$46.81
00-02-0250-5121				
EFT000000006241	67035	STAPLES ADVANTAGE CANADA	OFFICE SUPPLIES	$63.41
00-02-0250-4110				
EFT000000006241	67072	STAPLES ADVANTAGE CANADA	OFFICE SUPPLIES - FIRE & OFFIC	$105.99
00-02-0250-4110				

Cheque Number	Voucher Number	Vendor Name	Description	Amount
General Government				
Total For Department	2	$9,969.36		
4 Protection Services				
55608	66991	BELL CANADA	F/H #1	$73.21
00-04-0410-3300				
55608	66992	BELL CANADA	F/H #5	$59.20
00-04-0410-3300				
55609	66936	BELL MOBILITY INC.	CELL - MANAGER OF BLEO	$50.63
00-04-0440-3310				
55609	66967	BELL MOBILITY INC.	CELL - FIRE CHIEF	$50.81
00-04-0410-3310				
55609	66974	BELL MOBILITY INC.	FIRE/BLEO TABLETS	$180.25
00-04-0410-3310				
55609	66974	BELL MOBILITY INC.	FIRE/BLEO TABLETS	$25.30
00-04-0440-3310				
55611	66968	MEDIGAS PETERBOROUGH	FIRE - OXYGEN	$56.00
00-04-0410-3900				
55613	66971	T.G. QUIRK GARAGE	FORESTRY PUMP PLUGS	$41.52
00-04-0410-5166				
55614	66976	UPS CANADA	FREIGHT	$11.89
00-04-0410-4200				
EFT000000006171	66969	BEARCOM CANADA CORP.	FIRE - AC CHARGER FOR HEADSET	$45.79
00-04-0410-5163				
EFT000000006176	66973	CITY OF PETERBOROUGH	CYLINDER FILLS	$111.94
00-04-0410-5161				
EFT000000006180	66984	ENBRIDGE	F/H #1 - NATURAL GAS	$971.32
00-04-0410-3100				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$797.17
00-04-0410-3110				
EFT000000006189	66989	KELLY'S FUEL	F/H #2 - PROPANE	$518.01
00-04-0410-3100				
EFT000000006196	66912		BLEO POSTAGE & MILEAGE	$33.03
00-04-0440-4210				
EFT000000006196	66912		BLEO POSTAGE & MILEAGE	$18.67
00-04-0440-2500				
EFT000000006197	66983	NEXICOM INC.	INTERNET, CONFERENCE CALLING	$71.17

Cheque Number	Voucher Number	Vendor Name	Description	Amount
00-04-0410-3320				
EFT000000006197	66983	NEXICOM INC.	INTERNET, CONFERENCE CALLING	$71.17
00-04-0420-3320				
EFT000000006205	66985	SCOTT DRUMMOND MOTORS LTD.	LOF, TIRE ROTATION, INSPECTION	$229.26
00-04-0410-5190				
EFT000000006205	66985	SCOTT DRUMMOND MOTORS LTD.	LOF, TIRE ROTATION, INSPECTION	$187.55
00-04-0410-5194				
EFT000000006205	66987	SCOTT DRUMMOND MOTORS LTD.	SERVICE	$64.56
00-04-0410-5190				
EFT000000006205	66987	SCOTT DRUMMOND MOTORS LTD.	SERVICE	$87.53
00-04-0410-5194				
EFT000000006208	66972	TAS-PAGE COMMUNICATIONS &	SYSTEM ACCESS FEE MAY & JUNE	$101.76
00-04-0410-3330				
EFT000000006209	66970	THE DUMMER NEWS	BURN PERMIT AD	$36.63
00-04-0410-4300				
EFT000000006218	66990	XPLORNET COMMUNICATIONS IN	F/H #1 - INTERNET	$86.48
00-04-0410-3320				
55615	67040	BELL CANADA	POLICING	$67.34
00-04-0420-3300				
55615	67041	BELL CANADA	OFFICE	$104.74
00-04-0450-3300				
55615	67083	BELL CANADA	F/H #4	$62.05
00-04-0410-3300				
55617	67070	INFINITY FINE HOMES	REFUND BUILDING PERM OVER PYMT	$45.00
00-04-0440-8100				
55619	67062	MINISTER OF FINANCE TO	MNRF FOREST PROTECTION FEES	$1,137.10
00-04-0410-3900				
55620	67036	MINISTER OF FINANCE (POLIC	MAY POLICING	$80,325.00
00-04-0420-3900				
EFT000000006219	67046	Livestock Evaluator	LVSTCK CLAIM APR26/22	$80.00
00-04-0443-3901				
EFT000000006219	67046	Livestock Evaluator	LVSTCK CLAIM APR26/22	$60.42
00-04-0443-2500				
EFT000000006222	67045	BOLTS PLUS INCORPORATED	HARDWARE/SUPPLIES	$337.43
00-04-0440-4117				
EFT000000006222	67045	BOLTS PLUS INCORPORATED	HARDWARE/SUPPLIES	$217.66
00-04-0440-5168				
EFT000000006231	67057		SWIMWEAR PROP FOR PUBLIC ED.	$12.51

Cheque Number	Voucher Number	Vendor Name	Description	Amount
00-04-0410-4600				
EFT000000006231	67058		FLSE II ACCOMODATIONS	$518.25
00-04-0410-2604				
EFT000000006231	67059		FLSE II - MILEAGE	$197.75
00-04-0410-2604				
EFT000000006231	67076		FLSE II	$23.40
00-04-0410-2604				
EFT000000006231	67076		FLSE II	$7.00
00-04-0410-2604				
EFT000000006232	67044	MICRO AGE COMPUTER STORES	WIN PRO 10 LIC ONLINE DOWNLOAD	$273.73
00-04-0440-5380				
EFT000000006234	67060	MUNICIPAL EQUIPMENT	FORESTRY SUPPLIES	$779.79
00-04-0410-5168				
EFT000000006236	67079	NOYES' REPAIR CENTRE	REPL AIR HOSE RR BRAKE CHAMBER	$101.76
00-04-0410-5195				
EFT000000006236	67080	NOYES' REPAIR CENTRE	LOF, CHECK FLUIDS,TIRES,LIGHTS	$137.37
00-04-0410-5194				
EFT000000006236	67081	NOYES' REPAIR CENTRE	CHECK FOR CERT	$412.12
00-04-0410-3500				
EFT000000006241	67072	STAPLES ADVANTAGE CANADA	OFFICE SUPPLIES - FIRE & OFFIC	$53.91
00-04-0410-4110				
EFT000000006243	67074	TREASURER OF THE COUNTY OF	2ND QUARTER FIRE DISPATCH	$6,529.45
00-04-0410-3240				
EFT000000006246	67061	UAP AUTO PARTS (664) - LAK	MINIATURE LAMP	$4.77
00-04-0410-4600				
Protection Services				
Total For Department	4	$95,469.40		

Cheque Number	Voucher Number	Vendor Name	Description	Amount
6 Transportation Services				
55609	66937	BELL MOBILITY INC.	CELL - MANAGER OF PUBLIC WORKS	$19.39
00-06-0600-3310				
55609	66939	BELL MOBILITY INC.	CELL - LEAD HAND	$19.54
00-06-0600-3310				
55612	67006	PETERBOROUGH AUTOMOTIVE &	FUEL FILTER	$6.72
00-06-0600-5160				
55613	67000	T.G. QUIRK GARAGE	SPARK PLUGS FOR CHAINSAWS	$13.83
00-06-0600-5191				
55613	67001	T.G. QUIRK GARAGE	CHAINSAW OIL	$10.11
00-06-0600-5191				
55613	67002	T.G. QUIRK GARAGE	CHAINSAW OIL	$18.15
00-06-0600-5191				
55613	67003	T.G. QUIRK GARAGE	CHAINSAW, GAS, OIL	$22.25
00-06-0600-5191				
EFT000000006172	66995	BRANDT TRACTOR LTD.	METER	$345.81
00-06-0600-5195				
EFT000000006172	66996	BRANDT TRACTOR LTD.	LAMP	$230.64
00-06-0600-5195				
EFT000000006175	66930	CAVENDISH RADIO AND TOWERS	ROADS - RADIO AIR TIME - MAY	$251.86
00-06-0600-3330				
EFT000000006176	66929	CITY OF PETERBOROUGH	MATTRESSES	$16.00
00-06-0600-5121				
EFT000000006181	66997	FAIRVIEW TRUCKING INC.	STREET SWEEPING	$18,795.08
00-06-0600-3900				
EFT000000006182	67009	FUHRMANN AGGREGATE CONSULT	COMPLETE ANN COMPLIANCE REPORT	$534.24
00-06-0600-3900				
EFT000000006184	67012	HOLLAND	REPL STARTER, LH FR SUSPENSION	$976.89
00-06-0600-5195				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$1,221.82
00-06-0600-3110				
EFT000000006197	66983	NEXICOM INC.	INTERNET, CONFERENCE CALLING	$71.17
00-06-0600-3320				
EFT000000006198	67004	NOBLE CORPORATION	PVC CEMENT, ELBOW, TEE, PIPE	$164.45
00-06-0600-5160				
EFT000000006207	66998	STRONGCO EQUIPMENT	TEMPERATURE SENSOR	$57.97
00-06-0600-5195				
EFT000000006207	67011	STRONGCO EQUIPMENT	BRAKE PAD KITS	$303.15

Cheque Number	Voucher Number	Vendor Name	Description	Amount
00-06-0600-5195				
EFT000000006208	66933	TAS-PAGE COMMUNICATIONS &	CALL PROCESSING & MSG CENTRE	$129.51
00-06-0600-3240				
EFT000000006210	67005	UAP AUTO PARTS (664) - LAK	HARDWARE	$15.00
00-06-0600-5195				
EFT000000006212	67014	WASTE CONNECTIONS OF CANAD	WASTEBINS,CURBSIDE, GREEN BIN	$42.73
00-06-0600-3250				
EFT000000006213	67007	WHITE'S WEARPARTS LTD.	BOLTS	$267.42
00-06-0600-5160				
EFT000000006213	67008	WHITE'S WEARPARTS LTD.	GRADER BLADES	$5,639.13
00-06-0600-5160				
EFT000000006214	66931	WINSLOW-GEROLAMY MOTORS LT	FLEETRIT	$146.47
00-06-0600-5160				
EFT000000006214	66932	WINSLOW-GEROLAMY MOTORS LT	DEF DRUM, INSP BOOK	$65.05
00-06-0600-5160				
EFT000000006214	66993	WINSLOW-GEROLAMY MOTORS LT	OIL	$125.95
00-06-0600-5194				
EFT000000006214	66994	WINSLOW-GEROLAMY MOTORS LT	OIL	$125.95
00-06-0600-5194				
EFT000000006214	66999	WINSLOW-GEROLAMY MOTORS LT	OIL, FILTERS	$484.27
00-06-0600-5160				
EFT000000006214	67013	WINSLOW-GEROLAMY MOTORS LT	BATTERY - GRADER	$155.07
00-06-0600-5160				
EFT000000006216	66934	WURTH CANADA LTD.	3M TEMFLEX, THUNDER BIT PREM	$71.33
00-06-0600-4600				
55615	67089	BELL CANADA	WARSAW GARAGE	$93.05
00-06-0600-3300				
55615	67103	BELL CANADA	DOURO GARAGE	$68.05
00-06-0600-3300				
55618	67071	JESSE'S TAP & GRILL	ROAD SUPERVISOR MEETING LUNCH	$1,586.79
00-06-0600-4700				
55618	67071	JESSE'S TAP & GRILL	ROAD SUPERVISOR MEETING LUNCH	$233.90
00-06-0600-4700				
55622	67066	PUROLATOR COURIER LTD.	ROADS - FREIGHT	$9.17
00-06-0600-4200				
55624	67067	UPS CANADA	ROADS - FREIGHT	$5.19

Cheque Number	Voucher Number	Vendor Name	Description	Amount
00-06-0600-4200				
EFT000000006221	67100	B.M.R. MFG. INC.	SIGNS, POSTS	$1,205.25
00-06-0600-4600				
EFT000000006225	67063	CHAMPION COMMERCIAL PRODUC	CABLE TIES	$1,578.09
00-06-0600-4600				
EFT000000006227	67104		BEAVER REMOVAL	$750.00
00-06-0600-3900				
EFT000000006228	67065	D.M. WILLS ASSOCIATES LIMI	DALEVIEW RD RECONSTRUCTION	$158.75
00-06-0600-3832				
EFT000000006229	67093	KEN GRADY AUTOMOTIVE REPAI	SAFETY INSPECTION	$135.84
00-06-0600-3500				
EFT000000006229	67094	KEN GRADY AUTOMOTIVE REPAI	LEFT U JOINT, SEAL	$464.16
00-06-0600-5195				
EFT000000006230	67088	LIFTLOCK CITY FREIGHTLINER	WINCH FRM DITCH & TOW	$585.12
00-06-0600-3900				
EFT000000006236	67086	NOYES' REPAIR CENTRE	INSTALL 2 TIRE PLUGS	$63.09
00-06-0600-5195				
EFT000000006236	67087	NOYES' REPAIR CENTRE	CHECK LGHTS, REPL FLASHER	$212.47
00-06-0600-5195				
EFT000000006242	67099	STRONGCO EQUIPMENT	OIL PRESSURE SWITCH	$293.21
00-06-0600-5195				
EFT000000006244	67043	TRI-LINE ELECTRICAL SERVIC	REPLC DEFCTV SOLAR INVERTR DFH	$610.56
00-06-0603-5165				
EFT000000006246	67084	UAP AUTO PARTS (664) - LAK	WELDING WIRE	$39.27
00-06-0600-4600				
EFT000000006246	67085	UAP AUTO PARTS (664) - LAK	WELDING WIRE	$18.71
00-06-0600-4600				
EFT000000006248	67090	WINSLOW-GEROLAMY MOTORS LT	EXHAUST STACK	$63.89
00-06-0600-5195				
EFT000000006248	67091	WINSLOW-GEROLAMY MOTORS LT	EXHAUST CLAMP	$15.25
00-06-0600-5160				
EFT000000006248	67092	WINSLOW-GEROLAMY MOTORS LT	STARTER MOTOR	$407.03
00-06-0600-5195				
EFT000000006248	67102	WINSLOW-GEROLAMY MOTORS LT	BOLT U SPRINGS, NUTS	$121.39
00-06-0600-5195				
Transportation Services				
Total For Department	6	$39,065.18		

Cheque Number	Voucher Number	Vendor Name	Description	Amount
8 Environmental Services				
55609	66938	BELL MOBILITY INC.	CELL - HG TRANSFER STATION ATT	$23.27
00-08-0802-3310				
EFT000000006173	66942	CAMBIUM ENVIRONMENTAL	CNTY RD 6 GRND WTR MNTRNG	$6,219.28
00-08-0800-3832				
EFT000000006173	66943	CAMBIUM ENVIRONMENTAL	STONEY LAKE 2021 REPORTING	$3,810.23
00-08-0800-3832				
EFT000000006173	66944	CAMBIUM ENVIRONMENTAL	HG TSF STN MONITORING	$7,564.01
00-08-0802-3832				
EFT000000006173	66945	CAMBIUM ENVIRONMENTAL	HG TSF STN 2021 REPORTING	$3,707.35
00-08-0802-3832				
EFT000000006173	66946	CAMBIUM ENVIRONMENTAL	CNTY RD 4 2021 REPORTING	$2,393.81
00-08-0801-3832				
EFT000000006173	66947	CAMBIUM ENVIRONMENTAL	CNTY RD 4 GRND WTR MNTRNG	$12,162.09
00-08-0801-3832				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$105.88
00-08-0802-3110				
EFT000000006187	66952	JOHNNY ON THE SPOT	HG TSF PORTABLE TOILET	$101.76
00-08-0802-3900				
EFT000000006212	67014	WASTE CONNECTIONS OF CANAD	WASTEBINS,CURBSIDE, GREEN BIN	$234.05
00-08-0800-3900				
EFT000000006212	67014	WASTE CONNECTIONS OF CANAD	WASTEBINS,CURBSIDE, GREEN BIN	$17,532.16
00-08-0800-3251				
EFT000000006212	67014	WASTE CONNECTIONS OF CANAD	WASTEBINS,CURBSIDE, GREEN BIN	$85.37
00-08-0802-5121				
EFT000000006237	67077	ORKIN CANADA INC	HG TSF STN PEST CONTROL	$145.26
00-08-0802-5121				
Environmental Services				
Total For Department	8	$54,083.05		

Cheque Number	Voucher Number	Vendor Name	Description	Amount
16 Recreation & Cultural Services				
55609	66962	BELL MOBILITY INC.	CELL - PARKS	$23.27
00-16-1600-3310				
55609	66965	BELL MOBILITY INC.	CELL - ASST TO MGR PARKS & REC	$2.37
00-16-1610-3310				
55609	66965	BELL MOBILITY INC.	CELL - ASST TO MGR PARKS & REC	$2.38
00-16-1620-3310				
55609	67017	BELL MOBILITY INC.	CELL - MGR OF PARKS & REC	$9.53
00-16-1610-3310				
55609	67017	BELL MOBILITY INC.	CELL - MGR OF PARKS & REC	$9.52
00-16-1620-3310				
55610	66966	DULUX PAINTS	PAINT SUPPLIES	$221.23
00-16-1600-5130				
55610	66966	DULUX PAINTS	PAINT SUPPLIES	$337.48
00-16-1610-5121				
55613	67015	T.G. QUIRK GARAGE	TOW ICE MACHINES, REPAIR DOURO	$1,480.50
00-16-1610-5165				
EFT000000006168	66958	ALF CURTIS HOME IMPROVEMEN	WARSAW CC FIBER ROOF COATING	$41.78
00-16-1620-5145				
EFT000000006174	66957	CARMICHAEL ENGINEERING LTD	DOURO CC 4 CRANKCASE HEATERS	$860.00
00-16-1610-5165				
EFT000000006178	66954	DEETH & WHITE LTD/FITZGERA	WARSAW CC FURNACE OIL	$12.74
00-16-1620-3100				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$31.16
00-16-1600-3110				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$372.37
00-16-1640-3110				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$10,610.46
00-16-1610-3110				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$3,092.43
00-16-1620-3110				
EFT000000006185	67016	HYDRO ONE INC.	INVOICE DATED MAY 5, 2022	$270.64
00-16-1601-3110				
EFT000000006188	66960	KAWARTHA HARDWARE	PAINT SUPPLIES	$5.28
00-16-1600-4118				
EFT000000006190	66961	LAKEFIELD FOODLAND	DOURO BAR SUPPLIES	$20.35
00-16-1612-4118				
EFT000000006190	66961	LAKEFIELD FOODLAND	DOURO BAR SUPPLIES	$52.47

Cheque Number	Voucher Number	Vendor Name	Description	Amount
00-16-1612-4118				
EFT000000006191	66953	LEAHY EXCAVATION INC.	PARKS - 12 YARDS TOPSOIL	$219.80
00-16-1600-5121				
EFT000000006194	66959	MK SERVICES AND CONSULTING	DOURO CC WATER TREATMNT AGRMNT	$650.00
00-16-1610-5160				
EFT000000006195	66955	NEDCO - DIV OF REXEL CANAD	DOURO CC LENS	$30.95
00-16-1610-5145				
EFT000000006195	66956	NEDCO - DIV OF REXEL CANAD	DOURO CC LENS CUT	$108.84
00-16-1610-5145				
EFT000000006197	66983	NEXICOM INC.	INTERNET, CONFERENCE CALLING	$71.17
00-16-1610-3320				
EFT000000006201	66964	PACIFIC TIER SOLUTIONS INC	PARKS/CC BOOKING SOFTWARE	$832.75
00-16-1600-5180				
EFT000000006201	66964	PACIFIC TIER SOLUTIONS INC	PARKS/CC BOOKING SOFTWARE	$818.36
00-16-1610-5180				
EFT000000006201	66964	PACIFIC TIER SOLUTIONS INC	PARKS/CC BOOKING SOFTWARE	$818.36
00-16-1620-5180				
EFT000000006203	66963	PEAVEY MART	LAWN SWEEPER	$178.07
00-16-1600-5168				
EFT000000006203	66963	PEAVEY MART	LAWN SWEEPER	$87.50
00-16-1610-5168				
EFT000000006203	66963	PEAVEY MART	LAWN SWEEPER	$87.50
00-16-1620-5168				
EFT000000006204	66928	SCHOOLHOUSE PRODUCTS INC.	SHELVING UNIT/ASSEMBLY&INSTALL	$1,994.50
00-16-1640-5340				
55615	67053	BELL CANADA	LIBRARY	$89.27
00-16-1640-3300				
55615	67068	BELL CANADA	WARSAW CC	$44.51
00-16-1620-3300				
55615	67068	BELL CANADA	WARSAW CC	$44.52
00-16-1610-3300				
55615	67069	BELL CANADA	DOURO CC	$34.00
00-16-1610-3300				
55615	67069	BELL CANADA	DOURO CC	$34.01
00-16-1620-3300				
55619	67052	MINISTER OF FINANCE TO	BACK DAM LAND USE PERMIT	$64.24
00-16-1600-3900				
EFT000000006224	67054	CASEY'S PROPANE INC	LIBRARY - PROPANE	$546.32

Cheque Number	Voucher Number	Vendor Name	Description	Amount
00-16-1640-3100				
EFT000000006235	67056	NEXICOM INC.	INTERNET - LIBRARY	$76.26
00-16-1640-3320				
EFT000000006241	67055	STAPLES ADVANTAGE CANADA	LIBRARY - VACCUM	$318.28
00-16-1640-4600				
EFT000000006245	67073	TUMBLEWEED PRESS INC.	3 YEAR PLATINUM SUBSC. RENEWAL	$711.61
00-16-1640-4410				
Recreation & Cultural Services				
Total For Department	16	$25,078.87		
18 Planning & Development				
EFT000000006179	66927	Committee member	APR COA-PLANNING & MILEAGE	$95.00
00-18-1805-3901				
EFT000000006179	66927	Committee member	APR COA-PLANNING & MILEAGE	$9.34
00-18-1805-2500				
EFT000000006202	66925	Committee member	APR COA - PLANNING	$95.00
00-18-1805-3901				
Planning & Development				
Total For Department	18	$199.34		
Total For Fund	0	$223,865.20		
5				
4 Protection Services				
EFT000000006183	66986	HARRIS SEPTIC PUMPING & HA	F/H #2 - PORTABLE TOILET	$111.93
05-04-0410-0341				
EFT000000006203	66988	PEAVEY MART	F/H #2 - HOOKS, HANGERS	$19.29
05-04-0410-0341				
EFT000000006220	67082	BEARCOM CANADA CORP.	F/H #2 - EXTEND CABLE	$130.19
05-04-0410-0341				
Protection Services				
Total For Department	4	$261.41		

Cheque Number	Voucher Number	Vendor Name	Description	Amount
6 Transportation Services				
EFT000000006170	66941	ARMTEC INC.	CULVERT	$1,688.71
05-06-0600-0212				
EFT000000006215	66926	W.O. STINSON & SON LTD	WARSAW GAS 972.8 L	$1,461.60
05-06-0600-0240				
EFT000000006215	66940	W.O. STINSON & SON LTD	WARSAW DYED DIESEL 14000.0 L	$2,115.73
05-06-0600-0242				
EFT000000006215	66948	W.O. STINSON & SON LTD	WARSAW GAS 357.2 L	$557.77
05-06-0600-0240				
EFT000000006215	66949	W.O. STINSON & SON LTD	WARSAW CLEAR DIESEL 1000.0 L	$1,943.72
05-06-0600-0241				
EFT000000006215	66950	W.O. STINSON & SON LTD	WARSAW DYED DIESEL 1800.0 L	$3,236.76
05-06-0600-0242				
EFT000000006215	66951	W.O. STINSON & SON LTD	DOURO CLEAR DIESEL 800.0 L	$1,554.97
05-06-0600-0231				
EFT000000006220	67101	BEARCOM CANADA CORP.	INSTALL RADIO, ANTENNA, ETC	$480.09
05-06-0600-0391				
EFT000000006238	67097	PEAVEY MART	MATERIALS	$8.11
05-06-0600-0391				
EFT000000006240	67096	ROSS DUNFORD CONTRACTING	BRUSHING	$15,603.15
05-06-0600-0401				
EFT000000006249	67064	W.O. STINSON & SON LTD	WARSAW DYED DIESEL 1100.0 LL	$2,061.97
05-06-0600-0242				
Transportation Services				
Total For Department	6	$30,712.58		
16 Recreation & Cultural Services				
EFT000000006247	67078	WHITEHOTS INC.	LIBRARY BOOKS	$1,135.79
05-16-1640-0361				
Recreation & Cultural Services				
Total For Department	16	$1,135.79		
18 Planning & Development				
EFT000000006192	66982	MCLEAN, SIMON & ASSOCIATES	APPRAISAL REPORT	$4,011.38
05-18-1800-0311				
Planning & Development				
Total For Department	18	$4,011.38		

The Corporation of the Township of Douro-Dummer

By-law Number 2022-31

Being a By-law of The Corporation of the Township of Douro-Dummer to confirm the proceedings of the proceedings of the Regular Electronic Meeting of Council held on the 7th day of June, 2022.

The Municipal Council of The Corporation of the Township of Douro-Dummer Enacts as follows:

1. **That** the action of the Council at its regular electronic meeting held on June 7, 2022 in respect to each motion, resolution, and other action passed and taken by the Council at its said meeting is, except where prior approval of the Local Planning Appeal Tribunal is required, hereby approved, ratified, and confirmed.

2. **That** the Mayor and the proper officers of the Township are hereby authorized to do all things necessary to obtain approvals where required, and to execute all documents as may be necessary in that behalf and the Acting Clerk is hereby authorized and directed to affix the Corporate Seal to all such documents.

Passed in Open Council this 7th day of June, 2022.

_____
Mayor, J. Murray Jones

_____
Acting Clerk, Martina Chait-Hartwig