Planning Department Development Application Form

Complete Application

A complete development application consists of the following:

1. A completed, signed, and notarized application form
2. Supporting information adequate to illustrate your proposal as indicated in **Section H** of this application form
3. Written authorization from the registered owner of the subject lands where the applicant is not the owner as per Section N
4. Cash, debit, credit or cheque payable to Norfolk County in the amount set out in the user fees By-Law that will be accepted and deposited once the application has been deemed complete.

Pre-Submission Consultation:

Norfolk County requires a Pre-Consultation Meeting for all applications; however, minor applications may be exempted depending on the nature of the proposal. The purpose of a Pre-Consultation Meeting is to provide the applicant with an opportunity to present the proposed application, discuss potential issues, and for the Norfolk County and Agency staff to identify the application requirements. Application requirements, as detailed in the Pre-Consultation Meeting Comments, are valid for one year after the meeting date.

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Payment is required once your application is deemed complete. Pre-payments will not be accepted.

Norfolk County collects personal information submitted through this form under the Municipal Freedom of Information and Protection Act's authority. Norfolk County will use this information for the purposes indicated or implied by this form. You can direct questions about collecting personal information to Norfolk GIS Services at NorfolkGIS@norfolkcounty.ca.

Additional studies required for the complete application shall be at the applicant's sole expense. Sometimes, peer reviews may be necessary to review particular studies at the applicant's expense. In these caseds, Norfolk County staff will select the company to complete the peer review.

Norfolk County will refund the original fee if applicants withdraw their applications before circulation. If Norfolk County must recirculate your drawings, there will be an additional fee. If Norfolk County must do more than three reviews of engineering drawings due to revisions by the owner or failure to revise engineering drawings as requested, Norfolk County will charge an additional fee. Full refunds are only available before Norfolk County has circulated the application.

Notification Sign Requirements

For public notification, Norfolk County will provide you with a sign to indicate the intent and purpose of your development application. It is your responsibility to:

1. Post one sign per frontage in a conspicuous location on the subject lands.
2. Ensure one sign is posted at the front of the subject lands at least three feet above ground level and not on a tree.
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Contact Us

For additional information or assistance completing this application, please contact a Planner at 519-426-5870 or 519-875-4485 extension 1842 or planning@norfolkcounty.ca. Please submit the completed application and fees to the attention of the Planning Department at 185 Robinson Street, Suite 200, Simcoe, ON N3Y 5L6.

For Office Use Only:

File Number	_____	Public Notice Sign	_____
Related File Number	_____	Application Fee	_____
Pre-consultation Meeting	_____	Conservation Authority Fee	_____
Application Submitted	_____	Well & Septic Info Provided	_____
Complete Application	_____	Planner	_____

Check the type of planning application(s) you are submitting.

- ☒ Official Plan Amendment
- ☒ Zoning By-Law Amendment
- ☐ Temporary Use By-law
- ☐ Draft Plan of Subdivision/Vacant Land Condominium
- ☐ Condominium Exemption
- ☐ Site Plan Application
- ☐ Extension of a Temporary Use By-law
- ☐ Part Lot Control
- ☐ Cash-in-Lieu of Parking
- ☐ Renewable Energy Project or Radio Communication Tower

Please summarize the desired result of this application (for example, a special zoning provision on the subject lands to include additional use(s), changing the zone or official plan designation of the subject lands, creating a certain number of lots, or similar)

Please see Planning Justification Report prepared by G. Douglas Vallee Limited

Property Assessment Roll Number: 49404006500

A. Applicant Information

Name of Owner Aldershot Homes Ltd - c/o Gabriel Gasbarrini

Address 33 Memorial Drive Suite 101

Town and Postal Code Brantford Ontario, N3R 5R8

Phone Number

Cell Number

Email award33101@gmail.com

Name of Applicant G Douglas Vallee Limited - c/o Eldon Darbyson

Address 2 Talbot Street N

Town and Postal Code Simcoe, Ontario N3Y 3W4

Phone Number (519) 426-6270x120

Cell Number

Email eldondarbyson@gdvallee.ca

Name of Agent same as applicant

Address

Town and Postal Code

Phone Number

Cell Number

Email

Unless otherwise directed, Norfolk County will forward all correspondence and notices regarding this application to both owner and agent noted above.

☐ Owner ☐ Agent ☐ Applicant

Names and addresses of any holder of any mortgagees, charges or other encumbrances on the subject lands:

B. Location, Legal Description and Property Information

1. Legal Description (include Geographic Township, Concession Number, Lot Number, Block Number and Urban Area or Hamlet):
   MID CON NTR PT LOT 187 PT RD ALLOW RP 37R11418 PART 1 TO 5

   Municipal Civic Address: 10 Highway 59

   Present Official Plan Designation(s): Urban Residential, Commercial

   Present Zoning: Development Zone, Service Commercial

2. Is there a special provision or site specific zone on the subject lands?

   ☐ Yes ▣ No If yes, please specify corresponding number:

3. Present use of the subject lands:
   Vacant

4. Please describe **all existing** buildings or structures on the subject lands and whether they will be retained, demolished or removed. If retaining the buildings or structures, please describe the type of buildings or structures, and illustrate the setback, in metric units, from the front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:
   Existing metal clad structure on the property

5. If an addition to an existing building is being proposed, please explain what it will be used for (for example: bedroom, kitchen, or bathroom). If new fixtures are proposed, please describe.
   N/A

6. Please describe **all proposed** buildings or structures/additions on the subject lands. Describe the type of buildings or structures/additions, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:
   Please see Planning Justification Report prepared by G. Douglas Vallee Limited

7. Are any existing buildings on the subject lands designated under the *Ontario Heritage Act* as being architecturally and/or historically significant? Yes ☐ No ▣

   If yes, identify and provide details of the building:

8. If known, the length of time the existing uses have continued on the subject lands:
   Unknown

9. Existing use of abutting properties:
   Residential, Motel, Contractor

10. Are there any easements or restrictive covenants affecting the subject lands?

    ☐ Yes ▣ No If yes, describe the easement or restrictive covenant and its effect:

C. Purpose of Development Application

Note: Please complete all that apply.

1. Please explain what you propose to do on the subject lands/premises which makes this development application necessary:
   Please see Planning Justification Report prepared by G. Douglas Vallee Limited

2. Please explain why it is not possible to comply with the provision(s) of the Zoning By-law/and or Official Plan:
   Please see Planning Justification Report prepared by G. Douglas Vallee Limited

3. Does the requested amendment alter all or any part of the boundary of an area of settlement in the municipality or implement a new area of settlement in the municipality? ☐ Yes ▣ No If yes, describe its effect:

4. Does the requested amendment remove the subject land from an area of employment? ☐ Yes ▣ No If yes, describe its effect:

5. Does the requested amendment alter, replace, or delete a policy of the Official Plan? ☐ Yes ☒ No If yes, identify the policy, and also include a proposed text of the policy amendment (if additional space is required, please attach a separate sheet):

   _____

   _____

   _____

6. Description of land intended to be severed in metric units:
   Frontage: _____
   Depth: _____
   Width: _____
   Lot Area: _____
   Present Use: _____
   Proposed Use: _____
   Proposed final lot size (if boundary adjustment): _____
   If a boundary adjustment, identify the assessment roll number and property owner of the lands to which the parcel will be added: _____

   _____

   Description of land intended to be retained in metric units:
   Frontage: _____
   Depth: _____
   Width: _____
   Lot Area: _____
   Present Use: _____
   Proposed Use: _____
   Buildings on retained land: _____
7. Description of proposed right-of-way/easement:
   Frontage: _____
   Depth: _____
   Width: _____
   Area: _____
   Proposed use: _____
8. Name of person(s), if known, to whom lands or interest in lands to be transferred, leased or charged (if known):

   _____

9. **Site Information**	**Zoning**	**Proposed**
Please indicate unit of measurement, for example: m, m^2 or %		
Lot frontage	_____	_____
Lot depth	_____	_____
Lot width	_____	_____
Lot area	_____	_____
Lot coverage	_____	_____
Front yard	_____	_____
Rear yard	_____	_____
Left Interior side yard	_____	_____
Right Interior side yard	_____	_____
Exterior side yard (corner lot)	_____	_____
Landscaped open space	_____	_____
Entrance access width	_____	_____
Exit access width	_____	_____
Size of fencing or screening	_____	_____
Type of fencing	_____	_____
10. Building Size		
Number of storeys	_____	_____
Building height	_____	_____
Total ground floor area	_____	_____
Total gross floor area	_____	_____
Total useable floor area	_____	_____
11. Off Street Parking and Loading Facilities		
Number of off street parking spaces	_____	_____
Number of visitor parking spaces	_____	_____
Number of accessible parking spaces	_____	_____
Number of off street loading facilities	_____	_____

12. Residential (if applicable) **Please see Planning Justification Report**

Number of buildings existing: _____

Number of buildings proposed: _____

Is this a conversion or addition to an existing building? ☐ Yes ☐ No

If yes, describe: _____

Type	**Number of Units**	**Floor Area per Unit in m2**
Single Detached	_____	_____
Semi-Detached	_____	_____
Duplex	_____	_____
Triplex	_____	_____
Four-plex	_____	_____
Street Townhouse	_____	_____
Stacked Townhouse	_____	_____
Apartment - Bachelor	_____	_____
Apartment - One bedroom	_____	_____
Apartment - Two bedroom	_____	_____
Apartment - Three bedroom	_____	_____

Other facilities provided (for example: play facilities, underground parking, games room, or swimming pool):

13. Commercial/Industrial Uses (if applicable)

Number of buildings existing: _____

Number of buildings proposed: _____

Is this a conversion or addition to an existing building? ☐ Yes ☐ No

If yes, describe:

_____

Indicate the gross floor area by the type of use (for example: office, retail, or storage):

_____

_____

_____

Seating Capacity (for assembly halls or similar): _____

Total number of fixed seats: _____

Describe the type of business(es) proposed: _____

Total number of staff proposed initially: _____

Total number of staff proposed in five years: _____

Maximum number of staff on the largest shift: _____

Is open storage required: ☐ Yes ☐ No

Is a residential use proposed as part of, or accessory to commercial/industrial use?

☐ Yes ☐ No If yes please describe:

_____

_____

14. Institutional (if applicable)

Describe the type of use proposed: _____

Seating capacity (if applicable): _____

Number of beds (if applicable): _____

Total number of staff proposed initially: _____

Total number of staff proposed in five years: _____

Maximum number of staff on the largest shift: _____

Indicate the gross floor area by the type of use (for example: office, retail, or storage):

_____

_____

_____

15. Describe Recreational or Other Use(s) (if applicable)

_____

_____

_____

_____

_____

D. Previous Use of the Property

1. Has there been an industrial or commercial use on the subject lands or adjacent lands? ■ Yes ☐ No ☐ Unknown

   If yes, specify the uses (for example: gas station or petroleum storage):
   Adjacent parcel. Uses described in report

2. Is there reason to believe the subject lands may have been contaminated by former uses on the site or adjacent sites? ☐ Yes ■ No ☐ Unknown
3. Provide the information you used to determine the answers to the above questions:
   Property Owner has no knowledge of former contamination. Lands are vacant.
4. If you answered yes to any of the above questions in Section D, a previous use inventory showing all known former uses of the subject lands, or if appropriate, the adjacent lands, is needed. Is the previous use inventory attached? ☐ Yes ☐ No

E. Provincial Policy

1. Is the requested amendment consistent with the provincial policy statements issued under subsection 3(1) of the *Planning Act, R.S.O. 1990, c. P. 13*? ■ Yes ☐ No

   If no, please explain:

2. It is owner's responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals, including the Endangered Species Act, 2007. Have the subject lands been screened to ensure that development or site alteration will not have any impact on the habitat for endangered or threatened species further to the provincial policy statement subsection 2.1.7? ■ Yes ☐ No

   If no, please explain:

3. Have the subject lands been screened to ensure that development or site alteration will not have any impact on source water protection? ☒ Yes ☐ No

   If no, please explain:

   _____

   _____

   Note: If in an area of source water Wellhead Protection Area (WHPA) A, B or C please attach relevant information and approved mitigation measures from the Risk Manager Official.

4. Are any of the following uses or features on the subject lands or within 500 metres of the subject lands, unless otherwise specified? Please check boxes, if applicable.

   Livestock facility or stockyard (submit MDS Calculation with application)

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Wooded area

   ☐ On the subject lands or ☒ within 500 meters – distance _____

   Municipal Landfill

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Sewage treatment plant or waste stabilization plant

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Provincially significant wetland (class 1, 2 or 3) or other environmental feature

   ☐ On the subject lands or ☒ within 500 meters – distance _____

   Floodplain

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Rehabilitated mine site

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Non-operating mine site within one kilometre

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Active mine site within one kilometre

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Industrial or commercial use (specify the use(s))

   ☐ On the subject lands or ☒ within 500 meters – distance _____

   Active railway line

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Seasonal wetness of lands

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Erosion

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Abandoned gas wells

   ☐ On the subject lands or ☐ within 500 meters – distance _____

F. Servicing and Access

1. Indicate what services are available or proposed:
   Water Supply
   - ■ Municipal piped water
   - ☐ Individual wells
   - ☐ Communal wells
   - ☐ Other (describe below)

   _____

   Sewage Treatment
   - ■ Municipal sewers
   - ☐ Septic tank and tile bed in good working order
   - ☐ Communal system
   - ☐ Other (describe below)

   _____

   Storm Drainage
   - ■ Storm sewers
   - ☐ Other (describe below)
   - ☐ Open ditches

   _____

2. Existing or proposed access to subject lands:
   - ■ Municipal road
   - ☐ Unopened road
   - ☐ Provincial highway
   - ☐ Other (describe below)

   Name of road/street: Hawtrey Road

G. Other Information

1. Does the application involve a local business? ☐ Yes ■ No
   If yes, how many people are employed on the subject lands?

   _____

2. Is there any other information that you think may be useful in the review of this application? If so, explain below or attach on a separate page.
   Please see Planning Justification Report prepared by G. Douglas Vallee Limited

H. Supporting Material to be submitted by Applicant

In order for your application to be considered complete, **folded** hard copies (number of paper copies as directed by the planner) and an **electronic version (PDF) of the properly named site plan drawings, additional plans, studies and reports** will be required, including but not limited to the following details:

1. Concept/Layout Plan
2. All measurements in metric
3. Key map
4. Scale, legend and north arrow
5. Legal description and municipal address
6. Development name
7. Drawing title, number, original date and revision dates
8. Owner's name, address and telephone number
9. Engineer's name, address and telephone number
10. Professional engineer's stamp
11. Existing and proposed easements and right of ways
12. Zoning compliance table – required versus proposed
13. Parking space totals – required and proposed
14. All entrances to parking areas marked with directional arrows
15. Loading spaces, facilities and routes (for commercial developments)
16. All dimensions of the subject lands
17. Dimensions and setbacks of all buildings and structures
18. Location and setbacks of septic system and well from all existing and proposed lot lines, and all existing and proposed structures
19. Gross, ground and useable floor area
20. Lot coverage
21. Floor area ratio
22. Building entrances, building type, height, grades and extent of overhangs
23. Names, dimensions and location of adjacent streets including daylighting triangles
24. Driveways, curbs, drop curbs, pavement markings, widths, radii and traffic directional signs
25. All exterior stairways and ramps with dimensions and setbacks
26. Retaining walls including materials proposed
27. Fire access and routes
28. Location, dimensions and number of parking spaces (including visitor and accessible) and drive aisles
29. Location of mechanical room, and other building services (e.g. A/C, HRV)
30. Refuse disposal and storage areas including any related screening (if indoors, need notation on site plan)
31. Winter snow storage location

32. Landscape areas with dimensions
33. Natural features, watercourses and trees
34. Fire hydrants and utilities location
35. Fencing, screening and buffering – size, type and location
36. All hard surface materials
37. Light standards and wall mounted lights (plus a note on the site plan that all outdoor lighting is to be dark sky compliant)
38. Business signs (make sure they are not in sight lines)
39. Sidewalks and walkways with dimensions
40. Pedestrian access routes into site and around site
41. Bicycle parking
42. Architectural elevations of all building sides
43. All other requirements as per the pre-consultation meeting

In addition, the following additional plans, studies and reports, including but not limited to, **may** also be required as part of the complete application submission:

☐ Zoning Deficiency Form

☐ On-Site Sewage Disposal System Evaluation Form (to verify location and condition)

☐ Architectural Plan

☐ Buildings Elevation Plan

☐ Cut and Fill Plan

☐ Erosion and Sediment Control Plan

☐ Grading and Drainage Control Plan (around perimeter and within site) (existing and proposed)

☐ Landscape Plan

☐ Photometric (Lighting) Plan

☐ Plan and Profile Drawings

▣ Site Servicing Plan

☐ Storm water Management Plan

☐ Street Sign and Traffic Plan

☐ Street Tree Planting Plan

☐ Tree Preservation Plan

▣ Archaeological Assessment

☐ Environmental Impact Study

- ☒ Functional Servicing Report
- ☒ Geotechnical Study / Hydrogeological Review
- ☐ Minimum Distance Separation Schedule
- ☒ Noise or Vibration Study
- ☐ Record of Site Condition
- ☒ Storm water Management Report
- ☒ Traffic Impact Study – please contact the Planner to verify the scope required

Site Plan applications will require the following supporting materials:

1. Two (2) complete sets of the site plan drawings folded to 8½ x 11 and an electronic version in PDF format
2. Letter requesting that the Holding be removed (if applicable)
3. A cost estimate prepared by the applicant's engineer
4. An estimate for Parkland dedication by a certified land appraiser
5. Property Identification Number (PIN) printout

Standard condominium exemptions will require the following supporting materials:

- ☐ Plan of standard condominium (2 paper copies and 1 electronic copy)
- ☐ Draft condominium declaration
- ☐ Property Identification Number (PIN) printout

Your development approval might also be dependent on other relevant federal or provincial legislation, municipal by-laws or other agency approvals.

All final plans must include the owner's signature as well as the engineer's signature and seal.

I. Development Agreements

A development agreement may be required prior to site plan approval, subdivision and condominium applications. Should this be necessary for your development, you will be contacted by the agreement administrator with further details of the requirements including but not limited to insurance coverage, professional liability for your engineer, additional fees and securities.

J. Transfers, Easements and Postponement of Interest

The owner acknowledges and agrees that if required, it is their solicitor's responsibility on behalf of the owner, to disclose the registration of all transfer(s) of land and/or easement in favour of the County and/or utilities. Also, the owner further acknowledges and agrees that it is their solicitor's responsibility on behalf of the owner for the registration of postponements of any charges in favour of the County.

K. Permission to Enter Subject Lands

Permission is hereby granted to Norfolk County officers, employees or agents, to enter the premises subject to this application for the purposes of making inspections associated with this application, during normal and reasonable working hours.

L. Freedom of Information

For the purposes of the *Municipal Freedom of Information and Protection of Privacy Act*, I authorize and consent to the use by or the disclosure to any person or public body any information that is collected under the authority of the *Planning Act, R.S.O. 1990, c. P. 13* for the purposes of processing this application.

_____	JAN 30, 2025
Owner/Applicant Signature	Date

M. Owner's Authorization

If the applicant/agent is not the registered owner of the lands that is the subject of this application, the owner(s) must complete the authorization set out below.

I/We Aldershot Homes Ltd - c/o Gabriel Gasbarrini am/are the registered owner(s) of the lands that is the subject of this application.

I/We authorize G. Douglas Vallee Limited to make this application on my/our behalf and to provide any of my/our personal information necessary for the processing of this application. Moreover, this shall be your good and sufficient authorization for so doing.

_____	JAN 30, 2025
Owner	Date
_____	_____
Owner	Date

N. Declaration

I, Gabriel Gasbarrini of Aldershot Homes Ltd

solemnly declare that:

all of the above statements and the statements contained in all of the exhibits transmitted herewith 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 and by virtue of *The Canada Evidence Act*.

Declared before me at:

NORFOLK COUNTY

Owner/Applicant Signature

In SIMCOE

This 30TH day of JANUARY

A.D., 2025

A Commissioner, etc.

ELDON FRASER DARBYSON,
a Commissioner, etc., Province of Ontario,
for G. Douglas Vallee Limited.
Expires August 21, 2027.

vallee

Consulting Engineers,
Architects & Planners

January 29, 2025

Norfolk County Planning Department
Community Development Division
12 Gilbertson Drive, Simcoe, Ontario, N3Y 3N3

Attention: **Planning Department**

Reference: **10 Highway 59, Delhi**
Zoning Bylaw Amendment Application
Our Project 21-008 – Peach Barn Estates Condominium

Introduction

G. Douglas Vallee Limited is the agent acting on behalf of Aldershot Homes for the development of 10 Highway 59, Delhi.

Please accept this package as our formal application for a Zoning Bylaw Amendment. Included with this application are the following documents:

1. Signed Norfolk County Zoning Bylaw Amendment application form.
2. Planning Justification Report prepared by G. Douglas Vallee Limited, dated January 29, 2025
3. Site Plan & Site Servicing Plan prepared by G. Douglas Vallee Limited, dated January 29, 2025
4. Functional Servicing Report prepared by G. Douglas Vallee Limited, dated January 29, 2025.
5. Traffic Impact Brief prepared by RC Spencer Associates Inc. November 2024.
6. Ministry confirmation of Review and Entry into the Ontario Public Register for Archaeological Reports
7. Phase one and Phase two Archaeological Assessment, dated November 1, 2024
8. Land Use Compatibility Study prepared by Sonair Environmental, dated November 20, 2024
9. Geotechnical Investigation prepared by Landtek Limited, dated January 23, 2023
10. Plan 37R 143 prepared by John F. Weston, dated May 8, 1973
11. Plan 37R 11418 prepared by MacAulay White & Muir Ltd, dated March 16, 2021

We trust that the information provided as part of this submission will be to the satisfaction of Norfolk County.

Please advise when the fee for the zoning by-law amendment application can be submitted, as well as confirming the amount. We look forward to working with you on this project.

Yours truly,

Eldon Darbyson, BES, RPP, MCIP
Director of Planning
G. DOUGLAS VALLEE LIMITED
Consulting Engineers, Architects & Planners

H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Agency\OPA-ZBA Application\Working Files\2025.01.29 Cover Letter.docx

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For Office Use Only:

File Number	_____	Public Notice Sign	_____
Related File Number	_____	Application Fee	_____
Pre-consultation Meeting	_____	Conservation Authority Fee	_____
Application Submitted	_____	Well & Septic Info Provided	_____
Complete Application	_____	Planner	_____

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Please summarize the desired result of this application (for example, a special zoning provision on the subject lands to include additional use(s), changing the zone or official plan designation of the subject lands, creating a certain number of lots, or similar)

_____
_____
_____
_____
_____
_____
_____

Property Assessment Roll Number: _____

A. Applicant Information

Name of Owner _____

Address _____

Town and Postal Code _____

Phone Number _____

Cell Number _____

Email _____

Name of Applicant _____

Address _____

Town and Postal Code _____

Phone Number _____

Cell Number _____

Email _____

Name of Agent _____

Address _____

Town and Postal Code _____

Phone Number _____

Cell Number _____

Email _____

Unless otherwise directed, Norfolk County will forward all correspondence and notices regarding this application to both owner and agent noted above.

☐ Owner ☐ Agent ☐ Applicant

Names and addresses of any holder of any mortgagees, charges or other encumbrances on the subject lands:

_____

_____

B. Location, Legal Description and Property Information

1. Legal Description (include Geographic Township, Concession Number, Lot Number, Block Number and Urban Area or Hamlet):

   _____

   _____

   Municipal Civic Address: _____

   Present Official Plan Designation(s): _____

   Present Zoning: _____

2. Is there a special provision or site specific zone on the subject lands?

   ☐ Yes ☐ No If yes, please specify corresponding number:

   _____

3. Present use of the subject lands:

   _____

   _____

4. Please describe **all existing** buildings or structures on the subject lands and whether they will be retained, demolished or removed. If retaining the buildings or structures, please describe the type of buildings or structures, and illustrate the setback, in metric units, from the front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:

   _____

   _____

   _____

5. If an addition to an existing building is being proposed, please explain what it will be used for (for example: bedroom, kitchen, or bathroom). If new fixtures are proposed, please describe.

   _____

   _____

   _____

6. Please describe **all proposed** buildings or structures/additions on the subject lands. Describe the type of buildings or structures/additions, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:

   _____

   _____

   _____

7. Are any existing buildings on the subject lands designated under the *Ontario Heritage Act* as being architecturally and/or historically significant? Yes ☐ No ☐

   If yes, identify and provide details of the building:

   _____

   _____

8. If known, the length of time the existing uses have continued on the subject lands:

   _____

9. Existing use of abutting properties:

   _____

10. Are there any easements or restrictive covenants affecting the subject lands?

    ☐ Yes ☐ No If yes, describe the easement or restrictive covenant and its effect:

    _____

C. Purpose of Development Application

Note: Please complete all that apply.

1. Please explain what you propose to do on the subject lands/premises which makes this development application necessary:

   _____

   _____

   _____

   _____

2. Please explain why it is not possible to comply with the provision(s) of the Zoning By-law/and or Official Plan:

   _____

   _____

   _____

3. Does the requested amendment alter all or any part of the boundary of an area of settlement in the municipality or implement a new area of settlement in the municipality? ☐ Yes ☐ No If yes, describe its effect:

   _____

   _____

   _____

4. Does the requested amendment remove the subject land from an area of employment? ☐ Yes ☐ No If yes, describe its effect:

   _____

   _____

   _____

5. Does the requested amendment alter, replace, or delete a policy of the Official Plan? ☐ Yes ☐ No If yes, identify the policy, and also include a proposed text of the policy amendment (if additional space is required, please attach a separate sheet):

   _____

   _____

   _____

6. Description of land intended to be severed in metric units:
   Frontage: _____
   Depth: _____
   Width: _____
   Lot Area: _____
   Present Use: _____
   Proposed Use: _____
   Proposed final lot size (if boundary adjustment): _____
   If a boundary adjustment, identify the assessment roll number and property owner of the lands to which the parcel will be added: _____

   _____

   Description of land intended to be retained in metric units:
   Frontage: _____
   Depth: _____
   Width: _____
   Lot Area: _____
   Present Use: _____
   Proposed Use: _____
   Buildings on retained land: _____
7. Description of proposed right-of-way/easement:
   Frontage: _____
   Depth: _____
   Width: _____
   Area: _____
   Proposed use: _____
8. Name of person(s), if known, to whom lands or interest in lands to be transferred, leased or charged (if known):

   _____

9. **Site Information**	**Zoning**	**Proposed**
Please indicate unit of measurement, for example: m, m^2 or %		
Lot frontage	_____	_____
Lot depth	_____	_____
Lot width	_____	_____
Lot area	_____	_____
Lot coverage	_____	_____
Front yard	_____	_____
Rear yard	_____	_____
Left Interior side yard	_____	_____
Right Interior side yard	_____	_____
Exterior side yard (corner lot)	_____	_____
Landscaped open space	_____	_____
Entrance access width	_____	_____
Exit access width	_____	_____
Size of fencing or screening	_____	_____
Type of fencing	_____	_____
10. Building Size		
Number of storeys	_____	_____
Building height	_____	_____
Total ground floor area	_____	_____
Total gross floor area	_____	_____
Total useable floor area	_____	_____
11. Off Street Parking and Loading Facilities		
Number of off street parking spaces	_____	_____
Number of visitor parking spaces	_____	_____
Number of accessible parking spaces	_____	_____
Number of off street loading facilities	_____	_____

12. Residential (if applicable) **Please see Planning Justification Report**

Number of buildings existing: _____

Number of buildings proposed: _____

Is this a conversion or addition to an existing building? ☐ Yes ☐ No

If yes, describe: _____

Type	**Number of Units**	**Floor Area per Unit in m2**
Single Detached	_____	_____
Semi-Detached	_____	_____
Duplex	_____	_____
Triplex	_____	_____
Four-plex	_____	_____
Street Townhouse	_____	_____
Stacked Townhouse	_____	_____
Apartment - Bachelor	_____	_____
Apartment - One bedroom	_____	_____
Apartment - Two bedroom	_____	_____
Apartment - Three bedroom	_____	_____

Other facilities provided (for example: play facilities, underground parking, games room, or swimming pool):

13. Commercial/Industrial Uses (if applicable)

Number of buildings existing: _____

Number of buildings proposed: _____

Is this a conversion or addition to an existing building? ☐ Yes ☐ No

If yes, describe:

_____

Indicate the gross floor area by the type of use (for example: office, retail, or storage):

_____

_____

_____

Seating Capacity (for assembly halls or similar): _____

Total number of fixed seats: _____

Describe the type of business(es) proposed: _____

Total number of staff proposed initially: _____

Total number of staff proposed in five years: _____

Maximum number of staff on the largest shift: _____

Is open storage required: ☐ Yes ☐ No

Is a residential use proposed as part of, or accessory to commercial/industrial use?

☐ Yes ☐ No If yes please describe:

_____

_____

14. Institutional (if applicable)

Describe the type of use proposed: _____

Seating capacity (if applicable): _____

Number of beds (if applicable): _____

Total number of staff proposed initially: _____

Total number of staff proposed in five years: _____

Maximum number of staff on the largest shift: _____

Indicate the gross floor area by the type of use (for example: office, retail, or storage):

_____

_____

_____

15. Describe Recreational or Other Use(s) (if applicable)

_____

_____

_____

_____

_____

D. Previous Use of the Property

1. Has there been an industrial or commercial use on the subject lands or adjacent lands? ☐ Yes ☐ No ☐ Unknown
   If yes, specify the uses (for example: gas station or petroleum storage):

   _____

   _____
2. Is there reason to believe the subject lands may have been contaminated by former uses on the site or adjacent sites?☐ Yes ☐ No ☐ Unknown
3. Provide the information you used to determine the answers to the above questions:

   _____

   _____

   _____
4. If you answered yes to any of the above questions in Section D, a previous use inventory showing all known former uses of the subject lands, or if appropriate, the adjacent lands, is needed. Is the previous use inventory attached? ☐ Yes ☐ No

E. Provincial Policy

1. Is the requested amendment consistent with the provincial policy statements issued under subsection 3(1) of the *Planning Act, R.S.O. 1990, c. P. 13*? ☐ Yes ☐ No

   If no, please explain:

   _____

   _____

   _____
2. It is owner's responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals, including the Endangered Species Act, 2007. Have the subject lands been screened to ensure that development or site alteration will not have any impact on the habitat for endangered or threatened species further to the provincial policy statement subsection 2.1.7? ☐ Yes ☐ No

   If no, please explain:

   _____

   _____

   _____

3. Have the subject lands been screened to ensure that development or site alteration will not have any impact on source water protection? ☐ Yes ☐ No

   If no, please explain:

   _____

   _____

   Note: If in an area of source water Wellhead Protection Area (WHPA) A, B or C please attach relevant information and approved mitigation measures from the Risk Manager Official.

4. Are any of the following uses or features on the subject lands or within 500 metres of the subject lands, unless otherwise specified? Please check boxes, if applicable.

   Livestock facility or stockyard (submit MDS Calculation with application)

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Wooded area

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Municipal Landfill

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Sewage treatment plant or waste stabilization plant

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Provincially significant wetland (class 1, 2 or 3) or other environmental feature

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Floodplain

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Rehabilitated mine site

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Non-operating mine site within one kilometre

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Active mine site within one kilometre

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Industrial or commercial use (specify the use(s))

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Active railway line

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Seasonal wetness of lands

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Erosion

   ☐ On the subject lands or ☐ within 500 meters – distance _____

   Abandoned gas wells

   ☐ On the subject lands or ☐ within 500 meters – distance _____

F. Servicing and Access

1. Indicate what services are available or proposed:
   Water Supply
   - ☐ Municipal piped water
   - ☐ Communal wells
   - ☐ Individual wells
   - ☐ Other (describe below)

   _____

   Sewage Treatment
   - ☐ Municipal sewers
   - ☐ Communal system
   - ☐ Septic tank and tile bed in good working order
   - ☐ Other (describe below)

   _____

   Storm Drainage
   - ☐ Storm sewers
   - ☐ Open ditches
   - ☐ Other (describe below)

   _____

2. Existing or proposed access to subject lands:
   - ☐ Municipal road
   - ☐ Provincial highway
   - ☐ Unopened road
   - ☐ Other (describe below)

   Name of road/street: _____

G. Other Information

1. Does the application involve a local business? ☐ Yes ☐ No
   If yes, how many people are employed on the subject lands?
   _____
2. Is there any other information that you think may be useful in the review of this application? If so, explain below or attach on a separate page.
   _____
   _____
   _____
   _____

H. Supporting Material to be submitted by Applicant

In order for your application to be considered complete, **folded** hard copies (number of paper copies as directed by the planner) and an **electronic version (PDF) of the properly named site plan drawings, additional plans, studies and reports** will be required, including but not limited to the following details:

1. Concept/Layout Plan
2. All measurements in metric
3. Key map
4. Scale, legend and north arrow
5. Legal description and municipal address
6. Development name
7. Drawing title, number, original date and revision dates
8. Owner's name, address and telephone number
9. Engineer's name, address and telephone number
10. Professional engineer's stamp
11. Existing and proposed easements and right of ways
12. Zoning compliance table – required versus proposed
13. Parking space totals – required and proposed
14. All entrances to parking areas marked with directional arrows
15. Loading spaces, facilities and routes (for commercial developments)
16. All dimensions of the subject lands
17. Dimensions and setbacks of all buildings and structures
18. Location and setbacks of septic system and well from all existing and proposed lot lines, and all existing and proposed structures
19. Gross, ground and useable floor area
20. Lot coverage
21. Floor area ratio
22. Building entrances, building type, height, grades and extent of overhangs
23. Names, dimensions and location of adjacent streets including daylighting triangles
24. Driveways, curbs, drop curbs, pavement markings, widths, radii and traffic directional signs
25. All exterior stairways and ramps with dimensions and setbacks
26. Retaining walls including materials proposed
27. Fire access and routes
28. Location, dimensions and number of parking spaces (including visitor and accessible) and drive aisles
29. Location of mechanical room, and other building services (e.g. A/C, HRV)
30. Refuse disposal and storage areas including any related screening (if indoors, need notation on site plan)
31. Winter snow storage location

32. Landscape areas with dimensions
33. Natural features, watercourses and trees
34. Fire hydrants and utilities location
35. Fencing, screening and buffering – size, type and location
36. All hard surface materials
37. Light standards and wall mounted lights (plus a note on the site plan that all outdoor lighting is to be dark sky compliant)
38. Business signs (make sure they are not in sight lines)
39. Sidewalks and walkways with dimensions
40. Pedestrian access routes into site and around site
41. Bicycle parking
42. Architectural elevations of all building sides
43. All other requirements as per the pre-consultation meeting

In addition, the following additional plans, studies and reports, including but not limited to, **may** also be required as part of the complete application submission:

☐ Zoning Deficiency Form

☐ On-Site Sewage Disposal System Evaluation Form (to verify location and condition)

☐ Architectural Plan

☐ Buildings Elevation Plan

☐ Cut and Fill Plan

☐ Erosion and Sediment Control Plan

☐ Grading and Drainage Control Plan (around perimeter and within site) (existing and proposed)

☐ Landscape Plan

☐ Photometric (Lighting) Plan

☐ Plan and Profile Drawings

☐ Site Servicing Plan

☐ Storm water Management Plan

☐ Street Sign and Traffic Plan

☐ Street Tree Planting Plan

☐ Tree Preservation Plan

☐ Archaeological Assessment

☐ Environmental Impact Study

☐ Functional Servicing Report

☐ Geotechnical Study / Hydrogeological Review

☐ Minimum Distance Separation Schedule

☐ Noise or Vibration Study

☐ Record of Site Condition

☐ Storm water Management Report

☐ Traffic Impact Study – please contact the Planner to verify the scope required

Site Plan applications will require the following supporting materials:

1. Two (2) complete sets of the site plan drawings folded to 8½ x 11 and an electronic version in PDF format
2. Letter requesting that the Holding be removed (if applicable)
3. A cost estimate prepared by the applicant's engineer
4. An estimate for Parkland dedication by a certified land appraiser
5. Property Identification Number (PIN) printout

Standard condominium exemptions will require the following supporting materials:

☐ Plan of standard condominium (2 paper copies and 1 electronic copy)

☐ Draft condominium declaration

☐ Property Identification Number (PIN) printout

Your development approval might also be dependent on other relevant federal or provincial legislation, municipal by-laws or other agency approvals.

All final plans must include the owner's signature as well as the engineer's signature and seal.

I. Development Agreements

A development agreement may be required prior to site plan approval, subdivision and condominium applications. Should this be necessary for your development, you will be contacted by the agreement administrator with further details of the requirements including but not limited to insurance coverage, professional liability for your engineer, additional fees and securities.

J. Transfers, Easements and Postponement of Interest

The owner acknowledges and agrees that if required, it is their solicitor's responsibility on behalf of the owner, to disclose the registration of all transfer(s) of land and/or easement in favour of the County and/or utilities. Also, the owner further acknowledges and agrees that it is their solicitor's responsibility on behalf of the owner for the registration of postponements of any charges in favour of the County.

K. Permission to Enter Subject Lands

Permission is hereby granted to Norfolk County officers, employees or agents, to enter the premises subject to this application for the purposes of making inspections associated with this application, during normal and reasonable working hours.

L. Freedom of Information

For the purposes of the *Municipal Freedom of Information and Protection of Privacy Act*, I authorize and consent to the use by or the disclosure to any person or public body any information that is collected under the authority of the *Planning Act, R.S.O. 1990, c. P. 13* for the purposes of processing this application.

_____	JAN 30, 2025
Owner/Applicant Signature	Date

M. Owner's Authorization

If the applicant/agent is not the registered owner of the lands that is the subject of this application, the owner(s) must complete the authorization set out below.

I/We Aldershot Homes Ltd - c/o Gabriel Gasbarrini am/are the registered owner(s) of the lands that is the subject of this application.

I/We authorize G. Douglas Vallee Limited to make this application on my/our behalf and to provide any of my/our personal information necessary for the processing of this application. Moreover, this shall be your good and sufficient authorization for so doing.

_____	JAN 30, 2025
Owner	Date
_____	_____
Owner	Date

N. Declaration

I, Gabriel Gasbarrini of Aldershot Homes Ltd

solemnly declare that:

all of the above statements and the statements contained in all of the exhibits transmitted herewith 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 and by virtue of *The Canada Evidence Act*.

Declared before me at:

NORFOLK COUNTY

Owner/Applicant Signature

In SIMCOE

This 30TH day of JANUARY

A.D., 2025

A Commissioner, etc.

ELDON FRASER DARBYSON,
a Commissioner, etc., Province of Ontario,
for G. Douglas Vallee Limited.
Expires August 21, 2027.

Ministry of Citizenship and Multiculturalism (MCM)

Archaeology Program Unit
Heritage Branch
Citizenship, Inclusion and Heritage Division
5th Floor, 400 University Ave.
Toronto ON M7A 2R9
Tel.: (705) 492-1395
Email: Rebecca.Gray@Ontario.ca

Ministère des Affaires civiques et du Multiculturalisme (MCM)

Unité des programme d'archéologie
Direction du patrimoine
Division de la citoyenneté, de l'inclusion et du patrimoine
5e étage, 400 ave. University
Toronto ON M7A 2R9
Tél. : (705) 492-1395
Email: Rebecca.Gray@Ontario.ca

Ontario

Dec 20, 2024

Kristy O'Neal (P066)
Archaeological Consultants Canada
81045 Fiddlers Green Hamilton ON L9G 4X1

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "Stage 1 & 2 Archaeological Assessment Proposed Development 10 Norfolk County Highway 59, Part of Lot 187, North Side of Talbot Road East, Delhi, Geographic Township of Middleton, County of Norfolk, Ontario Original Report", Dated Nov 1, 2024, Filed with MCM on Nov 21, 2024, MCM Project Information Form Number P066-0387-2024, MCM File Number 0022530

Dear No Contact Title O'Neal:

This office has reviewed 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.[1] This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 *Standards and Guidelines for Consultant Archaeologists* set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Figure 6 of the above titled report and recommends the following:

Subject to acceptance of the results and approval of the recommendations, MCM is requested to deem this report compliant with ministry requirements for archaeological fieldwork and reporting and to issue a letter accepting this report into the Ontario Public Register of Archaeological Reports.
The following recommendation is provided for consideration by the Proponent and by the MCM:

1. No artifacts or other archaeological resources were identified during the Stage 1 & 2 archaeological assessment. The subject property has now been fully assessed according to the Ontario Ministry of Citizenship and Multiculturalism's 2011 Standards and Guidelines for Consultant Archaeologists. No further archaeological assessment of the property is required.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 *Standards and Guidelines for*

Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. 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 any further information regarding this matter, please feel free to contact me.

Sincerely,

Rebecca Gray
Archaeology Review Officer

cc. Archaeology Licensing Officer
Cameron Cluett,G. Douglas Vallee Limited
Andrew Wallace,Norfolk County

[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.*

vallee

Consulting Engineers,
Architects & Planners

January 29, 2025

Aldershot Homes Ltd.
33 Memorial Drive Suite 101
Brantford ON
N5R 5R8

Attention: **Mr. Gabriel Gasbarrini**

Reference: **Functional Servicing Report**
Peach Barn Estates Condominium
Delhi – Norfolk County
Project No. 21-008

Introduction

G. Douglas Vallee Limited has been retained by Aldershot Homes to prepare a Functional Servicing Report in support of a Zoning By-Law Amendment (ZBA) and subsequent Site Plan application for the Peach Barn Estates Condominium development. This development consists of constructing 25 single-storey residential condominium dwellings on a vacant piece of land at the northeast corner of the intersection of Talbot Road (Ontario Highway 3) and Norfolk County Road 59 in Delhi, Norfolk County (the 'Site') as shown on Figure 1 below. This report presents the functional servicing for the proposed Peach Barn Estates Condominium, including sanitary servicing, storm servicing, domestic water servicing, and water supply for fire protection.

Figure 1 - Site Location

The 1.25 ha development site is currently vacant land and primarily comprised of manicured grass. The majority of the site is defined as “Development Zone (D) under the Norfolk County Zoning By-Law 1-Z-2014 with the remaining lands defined as Service Commercial Zone (SC). The municipal address of the site is 10 County Road 59 and is legally described as Parts 1-5 of 37R-11418. The site has frontage on Hawtrey Road and Talbot Road (Ontario Highway 3) in addition to County Road 59.

The proposed development consists of the following construction:

- Twenty-five (25) single-storey residential dwellings.
- One access road entering the site from Hawtrey Road and associated parking infrastructure.
- Storm and sanitary infrastructure to support proposed construction.
- Water servicing and fire protection.
- Underground stormwater management chamber to provide Stormwater Management control.
- Curbs, sidewalks, swales, and other miscellaneous items to support proposed construction.

Sanitary Servicing

As-constructed drawings from Norfolk County indicate an existing 250mmø sanitary gravity sewer along Hawtrey Road which then crosses County Road 59 to Arnold Sayeau Drive as shown on Woodland Green Subdivision Drawing 1 (Rev 2) by Cyril J. Demeyere Limited, September 1993. From Arnold Sayeau Drive, the sanitary sewer generally drains south towards the Western Ave Pumping Station (PS5) and ultimately the Delhi Wastewater Treatment Facility (Map 4.49, ISMP 2016).

A sanitary outlet to the proposed development will be provided by connecting to the existing 250mmø sanitary sewer on Hawtrey Road. Vallee requests that sanitary hydraulic modelling be completed by Norfolk County’s consultant to determine if the existing County infrastructure downstream from the proposed development provides adequate capacity to accommodate the estimated sanitary design flows from the proposed development further downstream.

Sanitary design flows were calculated using the Norfolk County Design Criteria. Table 1 presents the design population for the development. Supporting calculations can be found in Appendix B.

Table 1 - Sanitary Design Flows

Units	25
Population Density	2.75 persons/unit
Population	69
Per Capita Flow (L/person/day)	450 L/person/day
Peak Extraneous Flow Factor (L/sec/hectare)	4.284
Cumulative Area (ha)	1.247
Infiltration Flow (L/s)	0.349
Average Sewage Flow (L/s)	0.36
Peak Design Flow (L/s)	1.89

As shown in Table 1, the proposed development will generate approximately 1.89 L/s of sanitary flow under peak conditions that outlet to the existing sanitary sewer on Hawtrey Road. The existing 250mmø sewer has a slope of 0.3% and a capacity of 32.6 L/s. Therefore, the proposed development will use 6% of the capacity of the existing Hawtrey Road sewer. Internally, a 200mmø sanitary sewer will be constructed to provide basement gravity sanitary service to all 25 units. Under peak design flow conditions, the capacity of the internal 200mmø sewer will not exceed 9%.

It is understood that Norfolk County is in the process of updating their Engineering Standards but has yet to formally approve the new standard. Although a DRAFT version of the updated standards has been reviewed by Vallee, the existing Norfolk County Design Criteria were used for the basis of this report. It should be noted that the DRAFT copy of the updated standards for sanitary design is less conservative than the existing standard. Therefore, it can be assumed that the conclusions of this report will remain valid upon acceptance of the new Engineering Standards Design Criteria.

Water Servicing

As-constructed drawings from Norfolk County indicate an existing 200mmø ductile iron watermain on Hawtrey Road at the proposed site entrance. The proposed development will be serviced by a 150mmø watermain which will connect to the Hawtrey Road watermain.

A review of the Simcoe watermain hydraulic model is requested to be completed by County consulting engineers to determine the proposed development's impact on the existing watermain network ensure adequate system flows and pressures during average day, peak hour, and fire flow scenarios.

Norfolk County's design criteria stipulate under normal operating conditions and fire flow conditions that watermain pressures maintain a minimum pressure of 280 kPa and 140 kPa, respectively.

Domestic Water Demand

Table 2 below summarizes the domestic water demand for the proposed development:

Table 2 - Domestic Water Demand	
Units	25
Population Density	2.75 persons/unit
Population	69
Average Daily Water Demand (L/person/day)	450 L/person/day
Average Daily Water Demand	0.36 L/s
Maximum Day Demand Factor (Residential)	2.25
Maximum Day Demand	0.81 L/s
Peak Hourly Demand Factor	4.00
Peak Hourly Demand	1.44 L/s

The Norfolk County ISMP indicates that the watermain pressure at Hawtrey Road under peak hour demand is within the range of 350-550 kPa under 2015 and future 2041 build-out conditions (ISMP Appendix C, Figures 9 and 11). Therefore, it is not anticipated that the proposed development will impact system pressures of the surrounding watermain network.

Fire Protection

Two (2) fire hydrants will be included with the proposed on-site watermain to provide fire protection for the development.

Typically, available fire flow during Maximum Day Demand is the crucial criteria when evaluating a watermain distribution system's ability to service a residential development. The estimated fire flow for the proposed development has been determined using the recommendations of the Fire Underwriters Survey (FUS) – 2020. Using the FUS recommendations, the minimum required fire flow for the proposed development was calculated as 83 L/s. Supporting calculations and fire separation distances are detailed in Appendix B. The Norfolk County ISMP indicates that the available fire flow under maximum day demand at the intersection of Hawtrey Road and Melody Drive is between 83-159 L/s (ISMP Appendix C, Figures 10 and 12)., the lower limit of which matches the calculated fire flow requirement for the development.

It is recommended that Norfolk County's engineering consultant model the surrounding area to verify if the existing watermain network has adequate capacity to provide domestic water supply and fire protection to the proposed development. A water demand of 83.81 L/s (Max Day + Fire Flow) should be used for the proposed development in hydraulic model to verify conformance with Norfolk County minimum watermain pressures under fire flow conditions (min = 140 kPa).

It is understood that Norfolk County is in the process of updating their Engineering Standards but has yet to formally approve the new standard. Although a DRAFT version of the updated standards has been reviewed by Vallee, the existing Norfolk County Design Criteria were used for the basis of this report. It should be noted that the DRAFT copy of the updated standards for calculating fire flow requirements indicates that required fire flow for Residential – Single Land Use is 80 L/s (50 L/s + 30 L/s adjustment for structure separation less than 3m). Therefore, it can be assumed that the conclusions of this report will remain valid upon acceptance of the new Engineering Standards Design Criteria.

Storm Drainage

As-constructed drawings from Norfolk County indicate an existing 450mmø storm sewer on the west side of County Road 59. It is assumed the subject lands were included within the catchment area for this sewer when it was designed in the 1980s. This assumption is supported by the Norfolk ISMP as shown by catchment D-03 on Figure 3D - Appendix G.

Storm drainage will be provided on the Site through a network of swales and catchbasins which drain to a proposed on-site storm sewer. The on-site storm sewer will need to cross County Road 59 and connect to the existing 450mmø sewer to provide a storm drainage outlet for the Site.

It is unknown what runoff coefficient was assigned to the subject lands for the original design of the Country Road 59 sewer. Therefore, on-site stormwater management will be provided to restrict post-development run-off to pre-development peak flows, using the existing grassed undeveloped site as the "pre-development" condition. A detailed Stormwater Management Report will be prepared at the Site Plan Application stage of the project once zoning is in place. A summary of the preliminary stormwater management design for the proposed development is included in the following section of this report.

Stormwater Management Brief

A preliminary design review has been completed to estimate the stormwater management requirements for the proposed development. It is proposed to restrict post-development peak flows to pre-development levels for the 2 through 100-year storm events using an underground stormwater chamber with a restricted outlet to the existing County Road 59 storm sewer. A Geotechnical Investigation at the Site was completed by Landtek dated January 23, 2023. The investigation describes soil conditions consisting of loose to compact native sand overlain by sandy fill ranging in thickness from 0.7 to 2.3m. Groundwater was not encountered in the exploration depth of 5m.

The porous nature of the native sandy soil on Site will be ideal conditions for Low Impact Development design, which reduces post-development run-off to the existing storm sewer network. A combination of infiltration at the underground storage chamber and soakaway pits at each unit will be used as part of the stormwater management design. It is proposed to use a Stormtech® Chamber by ADS Inc. or an approved equivalent for the underground stormwater management system. The model and size of the ADS chamber will be determined during detailed design.

Pre-Development Conditions

The Site is a relatively flat open space lawn with surface drainage flowing to the south. Using the Rational Method, pre-development flows have been estimated for the Site assuming a drainage area of 1.511 ha and runoff coefficient (C) = 0.25. The pre-development drainage area assumes rear-yard drainage from the residential lots on Melody Drive drain through the Site. Estimated peak flows range from 52 to 149 L/s for the 2 through 100-year storm events. The estimated pre-development peak flows were used as “allowable release rates” for the post-development condition to estimate required stormwater management storage volume. Refer to Appendix C for Pre-Development Flow calculations.

Post-Development Conditions

The proposed development consists of constructing 25 single-family dwellings and one two-way access road with the remainder of the Site being landscaped. Assuming the same tributary area as the pre-development condition of 1.511 ha and a post-development runoff coefficient (C) = 0.51, unrestricted peak flows have been estimated to range from 106 to 434 L/s for the 2 through 100-year storm events using the Rational Method. Therefore, outlet flow control and on-site stormwater management is required to restrict post-development flows to pre-development levels.

The required storage volume for on-site stormwater management has been estimated by combining an assumed infiltration rate and the allowable release rate from the Site. Infiltration flow was calculated as 45 L/s by using an estimated infiltration rate of 100mm/hr and a contact area of 450m^2. When combining this infiltration rate with the allowable release rate for the Site, the required storage volume was calculated to be 127m^3. Due to the preliminary nature of these design calculations, a factor of safety of 1.2 was applied to the required storage volume, which results in a total estimated storage volume of 152m^3 (1.2 * 127m^3). Refer to Appendix C for Post-Development Flow and Required Storage calculations.

Detailed Design

Upon approval of the Zoning By-Law amendment application, detailed design for a Site Plan Application will be completed for the proposed stormwater management system. Detailed design will include but not be limited to preparing a Visual OTTHYMO™ model to calculate pre- and post-development run-off, sizing of outlet control structures, selection of a stormwater management chamber product, and consideration of soakaway pit and stormwater chamber infiltration.

Roadwork

The Site has frontage to three (3) existing roads: Hawtrey Road, Norfolk County Road 59, and Talbot Road (Ontario Highway 3). A single two-way traffic access road will be constructed for the proposed development which connects to Hawtrey Road only. No vehicle access will be provided directly to the County Road 59 right-of-way. Eight (8) visitor parking stalls will be provided at the site entrance on the east side of the access road. Two (2) parking spaces will be provided at each building unit by a single car garage and single lane driveway.

The access road for the development will serve as the fire route for all building units. A turnaround is proposed on the south side of the access road at the midpoint of adjacent to Unit 16 to allow for emergency vehicle use. The location of the proposed turnaround is within Part 5 of 37R-11418 of the property, where there is an existing gravel driveway with access from Talbot Road (Ontario Highway 3). An access easement exists over Part 5 which allows the neighbouring property at 391 Talbot Road (Timberwood Designs Custom Cabinetry) to use this driveway access. An alternative driveway entrance to 391 Talbot Road does not exist and the easement is required to provide access to the property.

Vehicle traffic from the proposed development will be prevented from the existing driveway entrance to Talbot Road (Ontario Highway 3) through the use of knock-down bollards within the emergency turnaround area. The bollards will be located to not impact vehicle traffic to the rear parking lot of 391 Talbot Road.

Conclusions and Recommendations

This Functional Servicing Report for the proposed Peach Barn Estates Condominium development can be summarized as follows:

- The proposed development will be serviced by a sanitary sewer which connects to the existing 250mmø sewer on Hawtrey Road.
- Peak sanitary design flows (1.89 L/s) use 6% of the existing Hawtrey Road sanitary sewer capacity.
- Water service will be provided by a 150mmø watermain which connects to the existing 200mmø ductile iron watermain on Hawtrey Road.
- Domestic water flows have been calculated as 0.36 L/s, 0.81 L/s, and 1.44 L/s under average day, maximum day, and peak hour demands.
- The required fire flow for the proposed development (83 L/s) was less than the available fire flow (83-159 L/s) (Norfolk County, ISMP 2016).
- A review of the County's hydraulic model of the existing watermain network is recommended to determine the water servicing capacity and constraints caused by the development under average day demand, peak hour demand, and fire flow conditions. Max day plus fire flow (83.81 L/s) should be used to evaluate the proposed development's impact on the existing watermain network.
- Existing Norfolk County Design Criteria were used as the basis for this report. The anticipated 2025 Engineering Standards update is not expected to change the conclusions of this report.
- Surface drainage will be serviced by a storm sewer which connects to the existing 450mmø storm sewer on County Road 59.
- Preliminary design estimates 155m^3 of on-site stormwater management storage is required to restrict post-development run-off to predevelopment levels.
- Detailed stormwater management design will be completed as part of a Site Plan Application.
- Vehicular traffic will access the site from Hawtrey Road and access to Talbot Road (Ontario Highway 3) will be prevented.

It is recommended that this report be provided to the Norfolk County and the Long Point Region Conservation Authority in support of the application for site plan approval of the proposed development.

We trust that this information is complete and sufficient for submission. Should you have any questions or require further information please do not hesitate to contact us.

Respectfully submitted,

Cameron Cluett, P.Eng.
G. DOUGLAS VALLEE LIMITED
Consulting Engineers, Architects and Planners

H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Design\Civil\FSR\21-008 FSR.docx

Encl.

Appendix A

– Peach Barn Estates Drawing C100 (Rev 0) – Site Plan
(G. Douglas Vallee Ltd., January 29, 2025)

– Peach Barn Estates Drawing C102 (Rev 0) – Servicing Plan
(G. Douglas Vallee Ltd., January 29, 2025)

– Woodland Green Subdivision Drawing 1 (Rev 2) – Hawtrey Road
(Cyril J. Demeyere Ltd., September 1993)

– Delhi Industrial Park Drawing A1-80515-P4A (Rev 2) – External Servicing (Hawtrey Road)
(Proctor & Redfern Ltd., October 1981)

Appendix B

– Sanitary Flow Calculations
– Domestic Water Demand Calculations
– FUS Fire Flow Calculations

Appendix C

– Pre-Development Drainage Conditions Plan
– Post-Development Drainage Conditions Plan
– Preliminary Stormwater Management Calculations

APPENDIX A

Peach Barn Estates Drawing C100 (Rev 0) – Site Plan
(G. Douglas Vallee Ltd., January 29, 2025)

Peach Barn Estates Drawing C102 (Rev 0) – Servicing Plan
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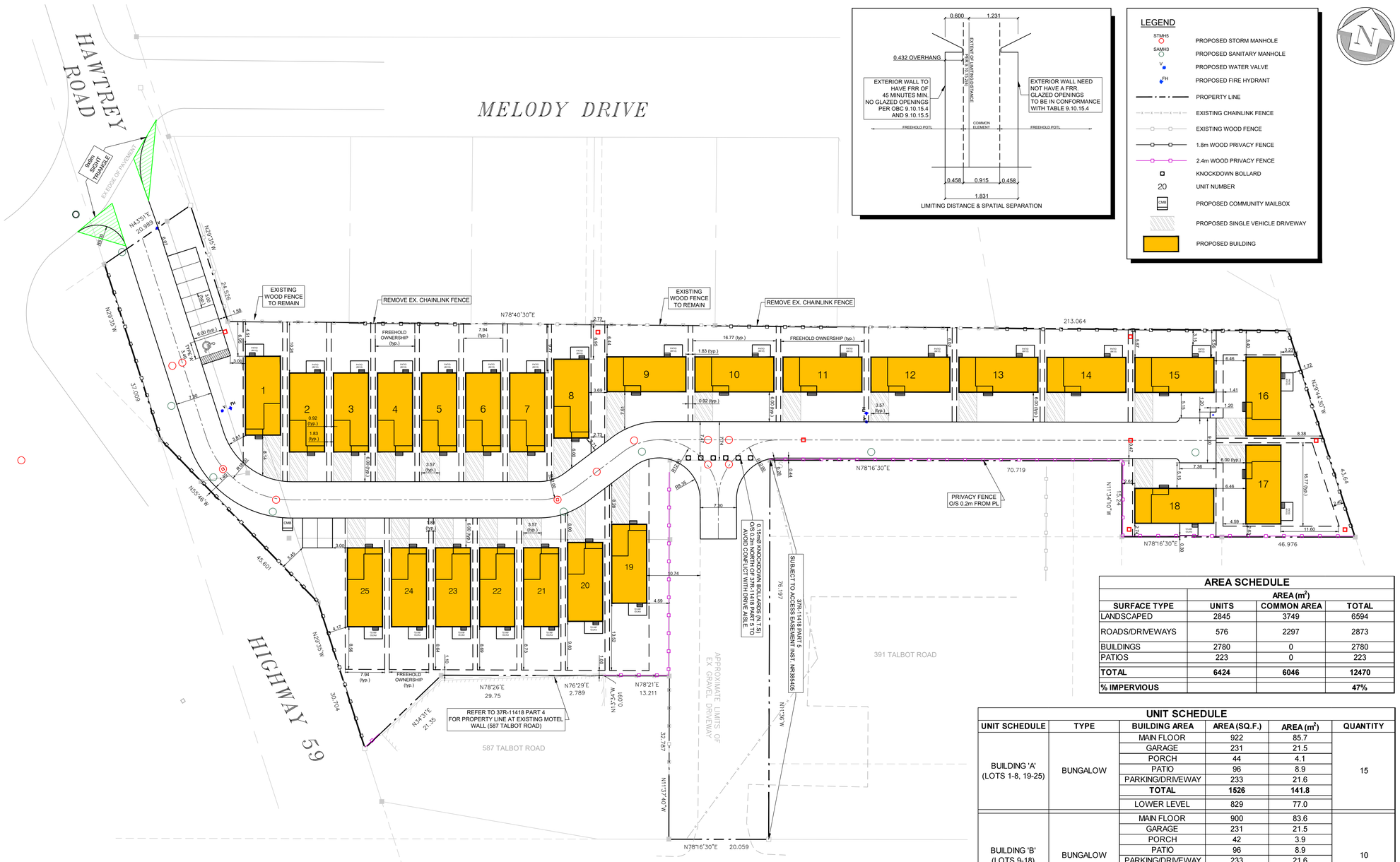
(Proctor & Redfern Ltd., October 1981)



LEGEND

- PROPOSED STORM MANHOLE (STMH5)
- PROPOSED SANITARY MANHOLE (SAMH3)
- PROPOSED WATER VALVE (V)
- PROPOSED FIRE HYDRANT (FH)
- PROPERTY LINE
- EXISTING CHAINLINK FENCE
- EXISTING WOOD FENCE
- 1.8m WOOD PRIVACY FENCE
- 2.4m WOOD PRIVACY FENCE
- KNOCKDOWN BOLLARD
- 20 — UNIT NUMBER
- CMB — PROPOSED COMMUNITY MAILBOX
- PROPOSED SINGLE VEHICLE DRIVEWAY
- PROPOSED BUILDING

REV. No.	DATE	REVISION
0	01/29/2025	ISSUED FOR ZBA APPLICATION

NOTE:
THE CONTRACTOR IS CAUTIONED THAT ALL OF THE EXISTING UTILITIES ARE NOT INDICATED ON THIS DRAWING. THE CONTRACTOR MUST ARRANGE FOR LOCATES FROM EACH AREA UTILITY COMPANY PRIOR TO ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES INCLUDING THOSE NOT INDICATED ON THIS DRAWING. G. DOUGLAS VALLEE LTD. CANNOT ACCEPT RESPONSIBILITY FOR DAMAGE TO ANY EXISTING UTILITY WHICH MAY OR MAY NOT BE INDICATED ON THIS DRAWING.

ALL WORK, MATERIALS AND PROCESSES TO CONFORM TO NORFOLK COUNTY STANDARDS AND SPECIFICATIONS

SURVEY INFORMATION

LEGAL DESCRIPTION: PART OF ROAD ALLOWANCE BETWEEN LOTS 45 AND 46 AND PART OF LOT 187, CONCESSION NORTH OF TALBOT ROAD (GEOGRAPHIC TOWNSHIP OF MIDDLETOWN), NORFOLK COUNTY, 37R-11418

TOPOGRAPHIC SURVEY: COMPLETED BY G. DOUGLAS VALLEE LTD., JANUARY 29, 2021

OWNER INFORMATION

ALDERSHOT HOMES LTD.
GABRIEL GASBARRINI, PRESIDENT
519-752-0557
33 MEMORIAL DRIVE, SUITE 101, BRANTFORD, ON, N3R 5R8

AREA SCHEDULE

SURFACE TYPE	AREA (m^2) UNITS	COMMON AREA	TOTAL
LANDSCAPED	2845	3749	6594
ROADS/DRIVEWAYS	576	2297	2873
BUILDINGS	2780	0	2780
PATIOS	223	0	223
TOTAL	**6424**	**6046**	**12470**
% IMPERVIOUS			**47%**

UNIT SCHEDULE

UNIT SCHEDULE	TYPE	BUILDING AREA	AREA (SQ.F.)	AREA (m^2)	QUANTITY
BUILDING 'A' (LOTS 1-8, 19-25)	BUNGALOW	MAIN FLOOR	922	85.7	15
		GARAGE	231	21.5	
		PORCH	44	4.1	
		PATIO	96	8.9	
		PARKING/DRIVEWAY	233	21.6	
		TOTAL	**1526**	**141.8**	
		LOWER LEVEL	829	77.0	
BUILDING 'B' (LOTS 9-18)	BUNGALOW	MAIN FLOOR	900	83.6	10
		GARAGE	231	21.5	
		PORCH	42	3.9	
		PATIO	96	8.9	
		PARKING/DRIVEWAY	233	21.6	
		TOTAL	**1502**	**139.5**	
		LOWER LEVEL	814	75.6	

PROPOSED PARKING TABLE

SECTION 4.0 - THE ZONING BY-LAW OF NORFOLK COUNTY

PROVISION	DESCRIPTION	REQUIRED	PROVIDED	COMMENT
4.1.3	PARKING SPACE DIMENSION	3m X 5.8m	3m X 6m	VEHICLES PARKED SIDE BY SIDE, 90 DEGREE PARKING
4.1.4	PARKING AISLE REQUIREMENTS	7.3 m		90 DEGREE PARKING
4.3.1	ACCESSIBLE PARKING SPACE WIDTH	3.4m		
4.3.2	ACCESS AISLE	1.5m		
4.3.3	MINIMUM NUMBER OF ACCESSIBLE PARKING	1 - TYPE 'A' 0 - TYPE 'B'	1 - TYPE 'A' 0 - TYPE 'B'	
4.9 a)	NUMBER OF PARKING SPACES (2 SPACES/UNITS)	50	50	1 GARAGE, 1 DRIVEWAY
4.9 f)	VISITOR PARKING (1 SPACE/3 UNITS)	9	9	8 STANDARD + 1 ACCESSIBLE

ZONING TABLE

5.4 URBAN RESIDENTIAL TYPE 4 ZONE (R4-xx) - THE ZONING BY-LAW OF NORFOLK COUNTY

PROVISION	DESCRIPTION	REQUIRED	PROVIDED	SPECIAL PROVISION REQUIRED	COMMENT
5.4.1	PERMITTED USES	ADD MULTIPLE SINGLE DETACHED DWELLINGS.			
5.4.2 a) i)	MINIMUM LOT AREA: ATTACHED GARAGE	4,875 sq. m	12,470 sq. m		25 DWELLINGS x 195 sq. m = 4,875 sq. m
5.4.2 b) i)	MINIMUM LOT FRONTAGE: INTERIOR LOT	30 m	20 m	YES	HAWTREY ROAD
5.4.2 c) i)	MINIMUM FRONT YARD: ATTACHED GARAGE	6 m	+20 m		
5.4.2 d) i)	MINIMUM EXTERIOR SIDE YARD	6 m	4.0 m	YES	PROPOSED CONDITION: COUNTY HIGHWAY 59
5.4.2 e)	MINIMUM INTERIOR SIDE YARD	3 m	2.7 m	YES	PROPOSED CONDITION: NOT INCLUDING STEPS.
5.4.2 f) i)	MINIMUM REAR YARD: ATTACHED GARAGE	7.5 m	3.0 m	YES	PROPOSED CONDITION: EASTERLY MOST PROPERTY LINE, NOT INCLUDING STEPS.
5.4.2 g)	MINIMUM SEPARATION BETWEEN TOWNHOUSE DWELLINGS	2 m	1.8 m	YES	PROPOSED CONDITION: ALL BUILDINGS. SEE SPATIAL SEPARATION & LIMITING DISTANCE DETAIL THIS PAGE.
5.4.2 h)	MAXIMUM BUILDING HEIGHT	11 m	MAX 11 m		
N/A	MAXIMUM LOT COVERAGE	N/A	50%		PROPOSED CONDITION: INCLUDING PATIOS AND DRIVEWAYS

SCALE:
0 5 10 15 20
HORIZONTAL: 1:400

vallee
Consulting Engineers, Architects & Planners
G. DOUGLAS VALLEE LIMITED
2 TALBOT STREET NORTH
SIMCOE, ONTARIO N3Y 3W4
(519) 426-6270

Stamp

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project Title
PEACH BARN ESTATES
10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title
SITE PLAN

Designed by :	Drawn By :
CJC	CJC
Checked by :	Date Started :
JTI	JUNE 2024
Drawing Scale :	Drawing No.
1:400	C100
Project No.	
21-008	

DATE LAST PLOTTED : January 29, 2025
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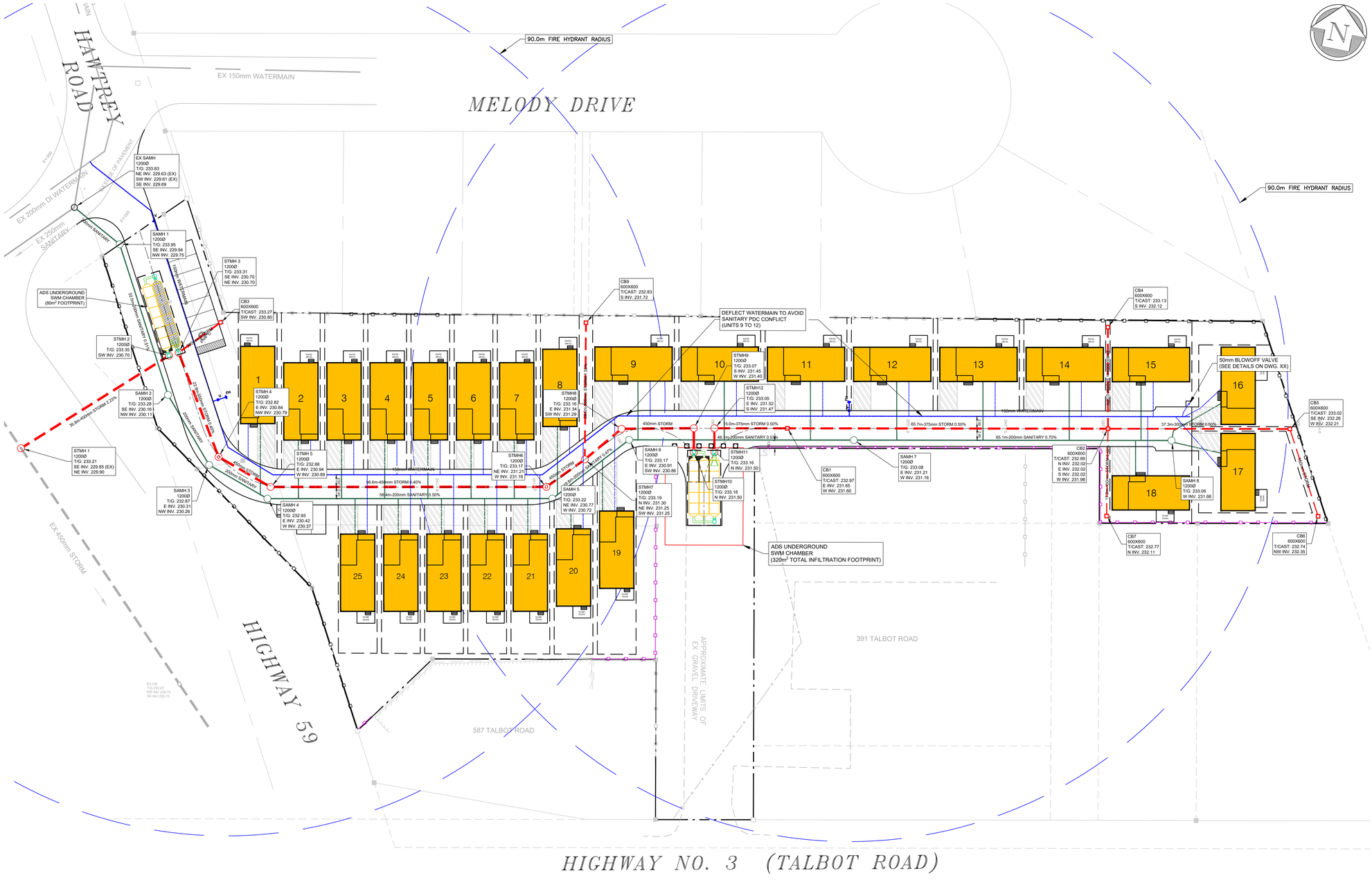

REV. No.	DATE	REVISION
0	01/29/2025	ISSUED FOR ZBA APPLICATION

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TOPOGRAPHIC SURVEY: COMPLETED BY G. DOUGLAS VALLEE LTD., JANUARY 29, 2021

OWNER INFORMATION

ALDERSHOT HOMES LTD.
GABRIEL GASBARRINI, PRESIDENT
519-752-0557
33 MEMORIAL DRIVE, SUITE 101, BRANTFORD, ON, N3R 5R8

SCALE:
5 10 15 20
HORIZONTAL: 1:400

GENERAL NOTES:

1. ALL WATERMAINS SHALL HAVE A MINIMUM 1.70M DEPTH OF COVER, MEASURED FROM THE TOP OF THE PIPE TO FINISHED GRADE.
2. ALL WATERMAINS SHALL BE INSTALLED AS PER NORFOLK COUNTY 'STANDARDIZATION OF SERVICE LOCATIONS' AND SHALL CONFORM TO THE MINISTRY OF THE ENVIRONMENT'S PROCEDURE F-6-1 – PROCEDURES TO GOVERN SEPARATION OF SEWERS AND WATERMAINS.
3. ALL PIPE AND APPURTENANCES SHALL CONFORM TO THE LATEST REVISED APPLICABLE SPECIFICATIONS OF THE AMERICAN WATERWORKS ASSOCIATION (AWWA) AND MUST BE APPROVED FOR USE BY NORFOLK COUNTY
4. VALVES SHALL BE PLACED AT THE LIMITS OF EVERY INTERSECTION AND UNDER NORMAL CIRCUMSTANCES, THREE VALVES SHALL BE PROVIDED AT TEE INTERSECTIONS, AND FOUR VALVES AT CROSS INTERSECTIONS. MAIN LINE VALVES AT INTERSECTIONS SHALL BE SET IN LINE WITH THE PROPERTY LINE OF THE INTERSECTING STREET.
5. ALL WATER SERVICES SHALL BE INSTALLED AT RIGHT ANGLES TO THE WATERMAIN. NEW CONNECTIONS SHALL BE 3.0M FROM THE SIDE PROPERTY LINE OR AS APPROVED BY THE MANAGER OF ENVIRONMENTAL SERVICES OR DESIGNATE.
6. SERVICE CONNECTIONS TO PVC MAINS SHALL BE CONNECTED BY USING PVC MOULDED / FABRICATED TEE. NO SADDLES WILL BE PERMITTED WITHIN A NEW SUBDIVISION. PERMISSION FOR USE OF STAINLESS STEEL SADDLES WILL BE GRANTED FOR CONNECTION TO AN EXISTING MAIN
7. ALL SERVICE PIPES FOR 19MM, 25MM, 38MM AND 50MM SERVICES SHALL BE OF SOFT COPPER TYPE K, THIRD PARTY CERTIFIED WITH WARNOCK-HERSEY STAMP. KINKED, CRUSHED OR DISTORTED TUBING OR SOLDER TYPE FITTINGS WILL NOT BE PERMITTED.
8. A PACKAGED ANODE SHALL BE INSTALLED ON ALL METALLIC BENDS, TEES, CROSSES, VALVES, REDUCERS, ETC. AND AT EACH WATER SERVICE CONNECTION. THE PACKAGED ANODE SHALL BE PLACED AT THE SAME ELEVATION AS THE BASE OF THE FITTING OR PIPE. THE ANODE SHALL BE LOCATED AT LEAST 1.0M HORIZONTALLY AWAY FROM THE FITTING, PIPE OR WATER SERVICES AND AT LEAST 1.5M HORIZONTALLY AWAY FROM THE CURB STOP.
9. PIPE BEDDING SHALL BE CLASS B BEDDING WITH 150MM GRANULAR A BEDDING AND 300MM GRANULAR A COVER, COMPACTED TO 95% PROCTOR DENSITY.
10. BACKFILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 300MM IN DEPTH FOR THE FULL TRENCH WIDTH. EACH LAYER SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DRY DENSITY. CARE SHALL BE EXERCISED DURING BACKFILL OPERATIONS SO THAT THE WATERMAIN IS NOT DAMAGED OR DISPLACED.

LEGEND

- STMHS — PROPOSED STORM MANHOLE
- SAMHS — PROPOSED SANITARY MANHOLE
- PROPOSED WATERMAIN
- WV — PROPOSED WATER VALVE
- FH — PROPOSED FIRE HYDRANT
- PROPERTY LINE
- KNOCKDOWN BOLLARD
- 20 — UNIT NUMBER
- PROPOSED SINGLE CAR DRIVEWAY
- PROPOSED BUILDING

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2 TALBOT STREET NORTH
SIMCOE, ONTARIO N3Y 3W4
(519) 426-6270

Stamp

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project Title
PEACH BARN ESTATES
10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title
SERVICING PLAN

Designed by : CJC	Drawn By : CJC
Checked by : JTI	Date Started : JUNE 2024
Drawing Scale : 1:400	Drawing No. C102
Project No. 21-008	

DATE LAST PLOTTED : January 29, 2025
FILE PATH: H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Drawings\Civil\03-Production Drawings\C102 Servicing Plan.dwg

HIGHWAY Nº 59

ARNOLD SAYEAU DR.

MELODY DR. BLOMMAERT SUBDIVISION

THERESA STREET

HAWTREY ROAD

TOWNSHIP OF DELHI

CONCESSION I N.T.R.

LOT 187 (46)

CONCESSION I N.T.R.

LOT 186 (45)

PHASE I

8 (M.T.O.)

NOTE: CB 8 & 10 CONNECTIONS TO EXISTING STORM TO BE CORE & SEAL.

BM TOP N.W. CORNER CONC. PAD FOR BELL PEDESTAL. ELEV. 234·201

BM 1A SPIKE ON WEST SIDE OF H.P. ELEV. 234·451

BM 1 SPIKE ON WEST SIDE OF HP. ELEV 235·025

4·0m - 450mm ϕ C.M.P., 1·6mm, P.G. SET HYD. GRADE 300mm BELOW ℄ ROAD FILL WALKWAY & HYD. AS DIRECTED BY ENGINEER. PLACE 100mm TOPSOIL AND SEED.

13·2m - 450mm ϕ BIG 'O' BOSS 2000 STORM @ 0·30%

SEE TYPICAL X-SECTION FOR HAWTREY ROAD RESTORATION

NOTE: SANITARY P.D.C.'s ARE 125mm ϕ. CHAINAGES FOR P.D.C.'s ARE MEASURED TO DOWNSTREAM MANHOLE.

SEE DWG. Nº 2

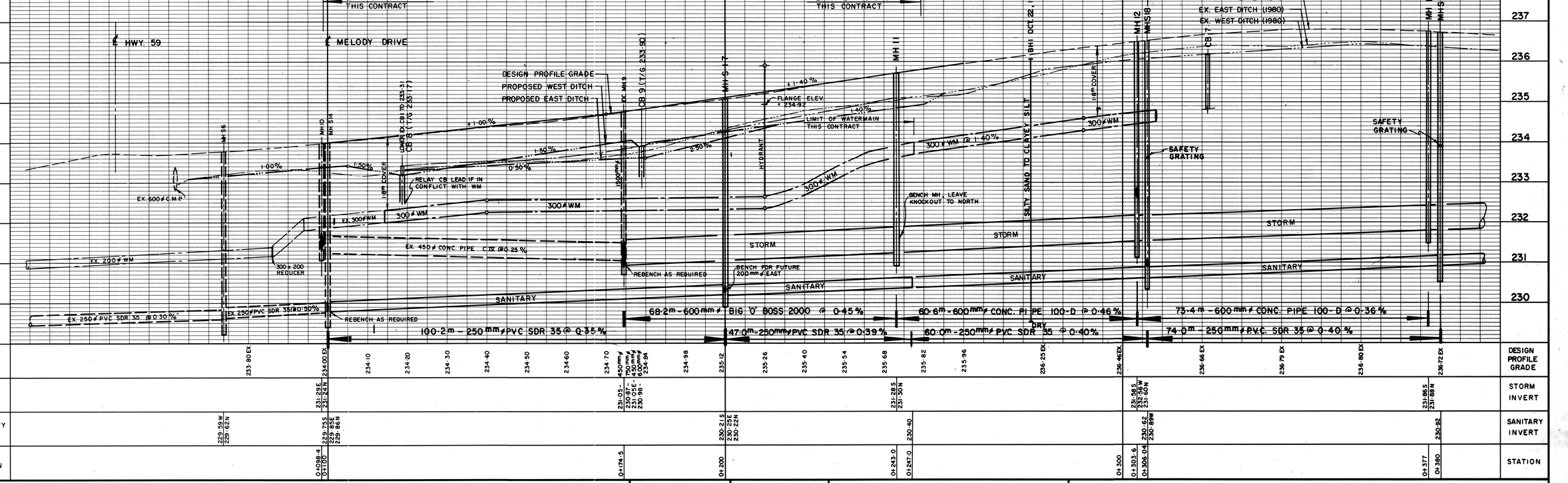
SEE DWG. Nº 3

NORTH

LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- MH MANHOLE
- CB CATCHBASIN
- W PROPOSED WATERMAIN
- HYD HYDRANT
- WV WATERVALVE
- B BURIED BELL
- T BURIED TV CABLE
- H BURIED HYDRO

FOR GENERAL NOTES SEE DWG. Nº 7



TOWNSHIP OF DELHI
DRAWINGS APPROVED BY
D. Anderson

REGISTERED PROFESSIONAL ENGINEER J. D. WIEBE PROVINCE OF ONTARIO

REGISTERED PROFESSIONAL ENGINEER C. DEMEYERE CIVIL PROVINCE OF ONTARIO

METRIC SCALE. HORIZ. 1:500, VERT. 1:50

Nº	REVISION	DATE	BY
2	PHASE I - AS-CONSTRUCTED-1993 MIRACLE CONSTRUCTION LTD.- WOODSTOCK	SEPT., 93	D.N.
1	REVISED FOR CONSTRUCTION	25 JUNE 93	J.D.W.

REGIONAL MUNICIPALITY OF HALDIMAND-NORFOLK

CYRIL J. DEMEYERE LIMITED
CONSULTING ENGINEERS
TILLSONBURG, ONTARIO

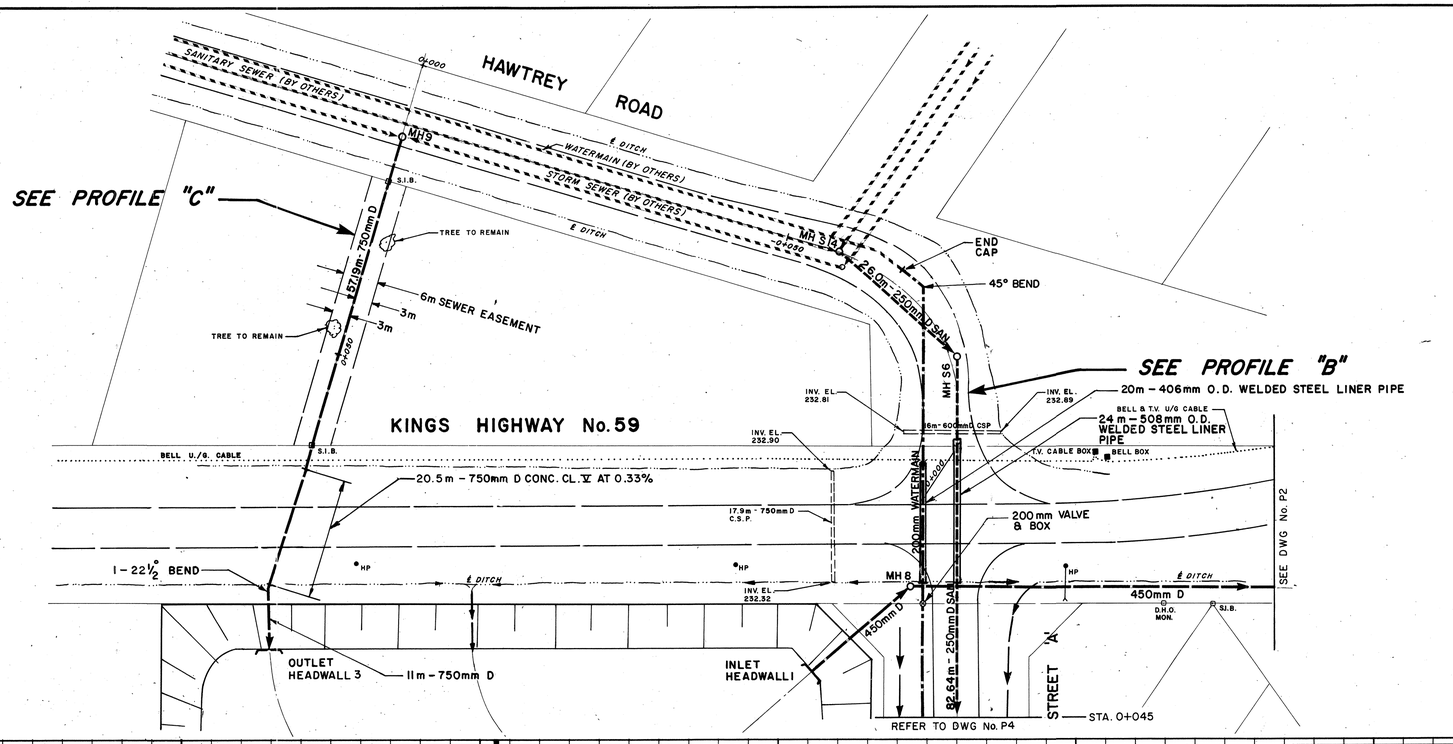
DESIGN BY: P.J.P. J.D.W. | DRAWN BY: D.L.S. | CHECKED BY: J.D.W. C.J.D.
PROJECT Nº: 8904 | SURVEY BY: W.G.M. | DATE: JUNE, 1993

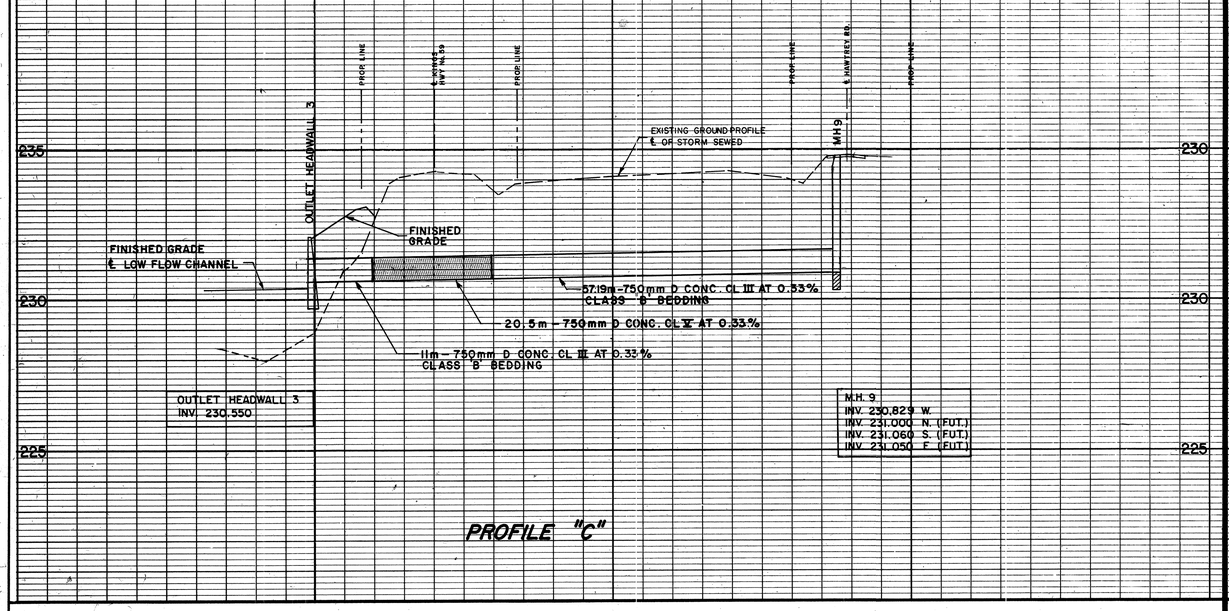
TOWNSHIP OF DELHI
WOODLAND GREEN SUBDIVISION

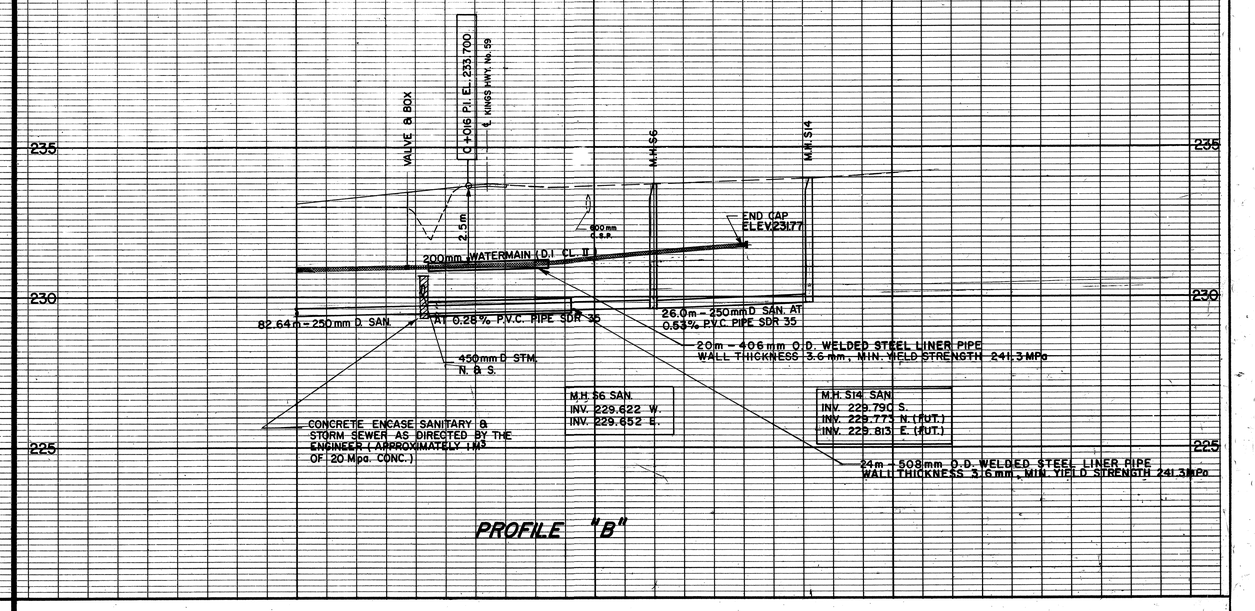
HAWTREY ROAD

DRAWING Nº

D-185







Ground

Invert

Chainage 0+100 0+050 0+000 0+045 0+000 0+050

Ground

Invert

Chainage

Notes:

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

Approved

No.	Zone	Revision	Date	Initial
2		AS CONSTRUCTED	OCT. 13/81	D.K.
1		WATERMAIN LOCATION ON STREET "A" MOVED FROM ℄ SOUTH SIDE OF ℄ OF ROAD TO NORTH SIDE.	DEC. 23/80	H.F.M./D.F.

REGISTERED PROFESSIONAL ENGINEER — CIVIL — W. T. ROBINSON — PROVINCE OF ONTARIO

Regional Municipality of Haldimand-Norfolk
Township of Delhi
Delhi Industrial Park

EXTERNAL SERVICING (HAWTREY ROAD)

Proctor & Redfern Limited
Consulting Engineers
Toronto, St. Catharines

10 0 5 METRES HORIZONTAL — 1 0 1 METRES VERTICAL — Date: DEC. 1980

Drawn By D.M.F. — Ckd. By H.F.M. — Field Book — Drawing No. A1-80515-P4A — Rev. 2

D-123

D-123

APPENDIX B

Sanitary Flow Calculations

Domestic Water Demand Calculations

FUS Fire Flow Calculations

vallee
Consulting Engineers, Architects & Planners

Subject:	Peach Barn Estates - FSR		
Date:	1/29/2025	By:	CJC
Project #:	21-008	Page:	1

Norfolk County Design Criteria Section 9.2 - Sanitary Sewage Flow

9.2.01 Tributary Population

Residential Development:	2.75	persons/unit
Units:	25	Units
Number of Persons:	69	persons
Site Area	1.247	ha

9.2.02 Sewage Flow

Residential Development:	0.45	m^3/person/day
Average Sewage Flow:	0.36	L/s

9.2.03 Peak Sanitary Flow Factor

Residential Peaking Factor Formula:

$M = 1 + (14/(4 + P^2))$

P =	0.069
M =	4.284

9.2.04 Infiltration Allowance

Infiltration Allowance:	0.28	L/s/ha
Infiltration Allowance:	0.349	L/s

9.2.05 Design Flow

Design Flow = (Average Sewage Flow * Peak Sanitary Flow Factor) + Infil. Allowance

Design Flow =	1.89	L/s

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Subject:	Peach Barn Estates - FSR		
Date:	1/29/2025	By:	CJC
Project #:	21-008	Page:	2

DOMESTIC WATER DEMAND

Total Number of Units	25	units
Zoning of Land	Residential	
Equiv. Population Density	2.75	ppl/unit
Equiv. Population	69	persons

Average Daily Demand

Av. Daily Demand Per Capita	0.45	m³/capita/day
Average Daily Demand	31.05	m³/day
	0.36	l/s

Maximum Daily Demand

Maximum Daily Demand Peaking Factor	2.25	
Maximum Daily Demand	69.86	m³/day
	0.81	l/s

Peak Hourly Demand

Peak Hourly Demand Peaking Factor	4	
Peak Hourly Demand	5.18	m³/hour
	1.44	l/s

FUS FIRE FLOW REQUIREMENT

1) Fire Flow Requirement

$F_1=220C(A^{1/2})$ (L/min)

C=	1.5	Wood Frame Construction
A=	142	Floor Area (m^2) = Main floor area
	1	Total Storeys
A=	142	Total Fire Area (m^2) = Main floor area * total storeys
F_1=	3932	L/min
F_1=	**4000**	**L/min** (Round to the nearest 1,000 l/min)

2) Occupancy

Occupancy Type: Limited Combustible Contents

Reduction: 15%

Surcharge: 0%

$F_2=F_1-(F_1*Reduction)+(F_1*Surcharge)$ (L/min)

F_2= 3400 L/min

3) Sprinkler System

Sprinkler System: Not Applicable (assumed no sprinkler system in service)

Reduction: 0%

$F_3=F_2*Reduction$ (L/min)

F_3= 0 L/min

4) Separation

Location	Direction	Distance (m)	Length-Height factor	Exposed Building Const. Type	Surcharge
Side[1]	East	1.8	15	Type V	20%
Front[2]	North	19.5	18	Type V	10%
Rear[3]	South	10.1	46	Type III	7%
Side[4]	West	1.8	15	Type V	20%
		Total:			57%

F4=(TOTAL)*F2 (L/min)

F_4= 1938 L/min

Total Fire Flow

$F=F_2-F_3+F_4$ = 5338 L/min

= 5000 L/min (Round to the nearest 1,000 l/min)

= **83.33 L/s**

Notes:

1) All calculations and factors from Part 2 "Water Supply for Public Fire Protection" by the Fire Underwriters Survey, 2020.

2) Separation surcharges from Table 6 (FUS, 2020) below used for calculation of F_4.

Table 6 Exposure Adjustment Charges for Subject Building considering Construction type of Exposed Building Face

Distance (m) to the Exposure	Length-height factor of exposing building face	Type V	Type III-IV[2]	Type III-IV[3]	Type I-II[2]	Type I-II[3]
0 to 3	0-20	20%	15%	5%	10%	0%
	21-40	21%	16%	6%	11%	1%
	41-60	22%	17%	7%	12%	2%
	61-80	23%	18%	8%	13%	3%
	81-100	24%	19%	9%	14%	4%
	Over 100	25%	20%	10%	15%	5%
3.1 to 10	0-20	15%	10%	3%	6%	0%
	21-40	16%	11%	4%	7%	0%
	41-60	17%	12%	5%	8%	1%
	61-80	18%	13%	6%	9%	2%
	81-100	19%	14%	7%	10%	3%
	Over 100	20%	15%	8%	11%	4%
10.1 to 20	0-20	10%	5%	0%	3%	0%
	21-40	11%	6%	1%	4%	0%
	41-60	12%	7%	2%	5%	0%
	61-80	13%	8%	3%	6%	1%
	81-100	14%	9%	4%	7%	2%
	Over 100	15%	10%	5%	8%	3%
20.1 to 30	0-20	0%	0%	0%	0%	0%
	21-40	2%	1%	0%	0%	0%
	41-60	4%	2%	0%	1%	0%
	61-80	6%	3%	1%	2%	0%
	81-100	8%	4%	2%	3%	0%
	Over 100	10%	5%	3%	4%	0%
Over 30 m	all sizes	0%	0%	0%	0%	0%

1, 4

2

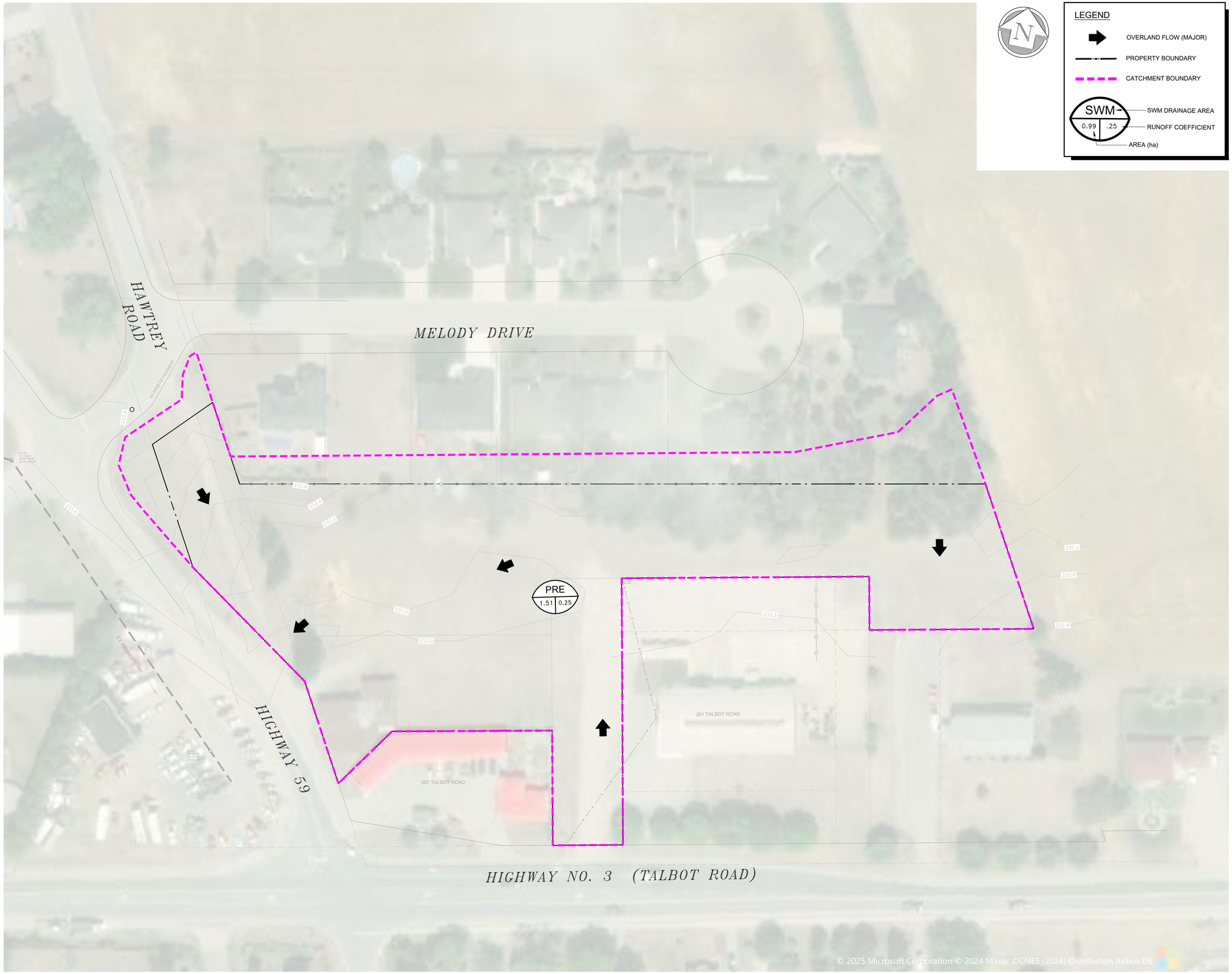
3

APPENDIX C

Pre-Development Drainage Conditions Plan

Post-Development Drainage Conditions Plan

Preliminary Stormwater Management Calculations



REV. No.	DATE	REVISION
0	01/29/2025	ISSUED FOR FUNCTIONAL SERVICING REPORT

SCALE:
5 15 25
HORIZONTAL : 1 : 500

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G. DOUGLAS VALLEE LIMITED
2 TALBOT STREET NORTH
SIMCOE, ONTARIO N3Y 3W4
(519) 426-6270

Stamp

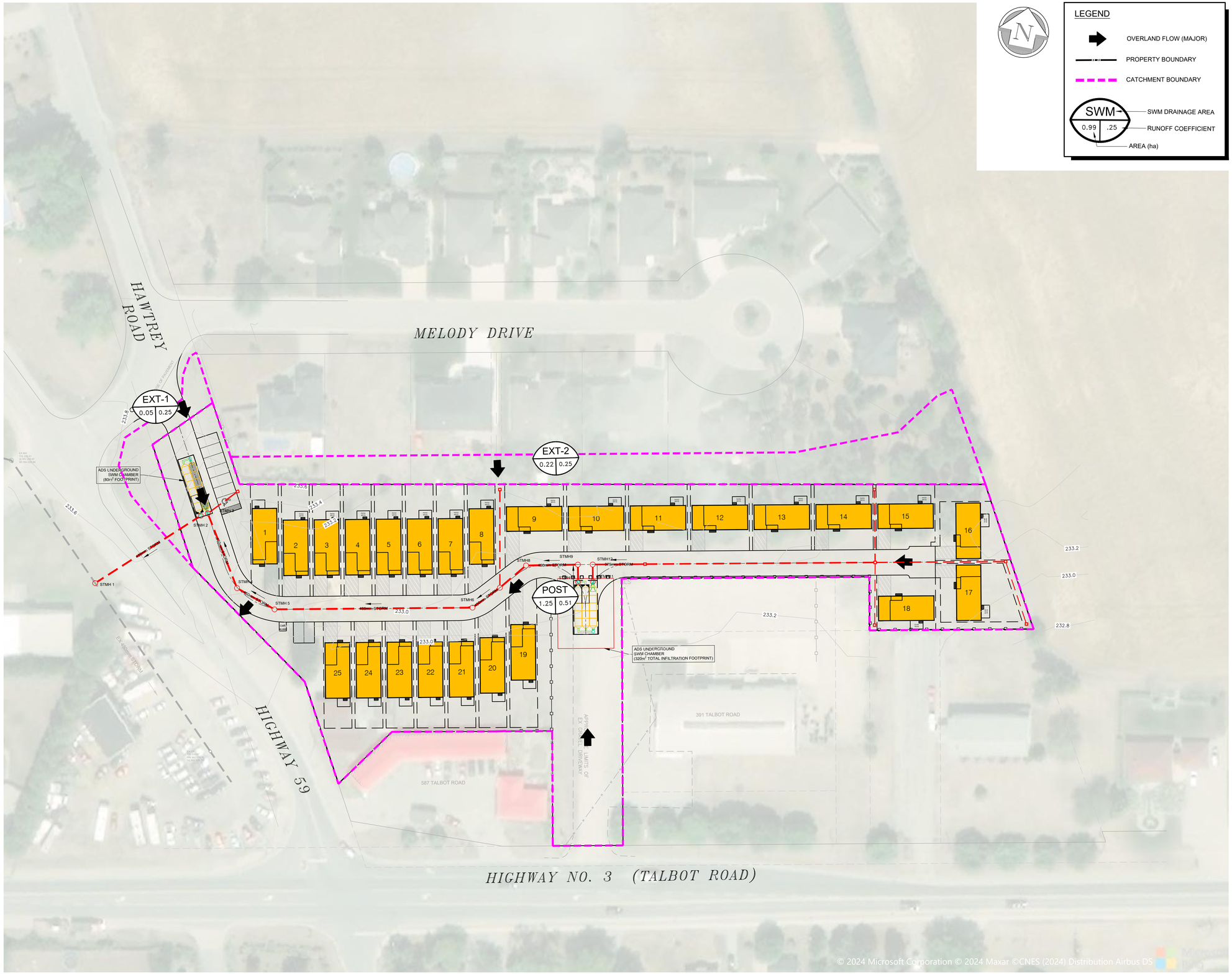
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project Title
PEACH BARN ESTATES
10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title
PRE-DEVELOPMENT DRAINAGE CONDITIONS

Designed by : CJC	Drawn By : CJC
Checked by : JTI	Date Started : JUNE 2024
Drawing Scale : 1:500	Drawing No. FIG 1
Project No. 21-008	

DATE LAST PLOTTED: January 29, 2025
FILE PATH: H:\Projects\2021\21-008 Hawtrey Road Creek Investigation\Drawings\Civil\03-Production Drawings\21-008 Pre Drainage Conditions.dwg



LEGEND

- OVERLAND FLOW (MAJOR)
- PROPERTY BOUNDARY
- CATCHMENT BOUNDARY
- SWM → SWM DRAINAGE AREA
- 0.99 / .25 → RUNOFF COEFFICIENT
- AREA (ha)

REV. No.	DATE	REVISION
0	01/29/2025	ISSUED FOR FUNCTIONAL SERVICING REPORT

SCALE:
HORIZONTAL: 1 : 500

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2 TALBOT STREET NORTH
SIMCOE, ONTARIO N3Y 3W4
(519) 426-6270

Stamp

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project Title
PEACH BARN ESTATES
10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title
POST-DEVELOPMENT DRAINAGE CONDITIONS

Designed by : CJC	Drawn By : CJC
Checked by : JTI	Date Started : JUNE 2024
Drawing Scale : 1:500	Drawing No. FIG 2
Project No. 21-008	

DATE LAST PLOTTED: January 29, 2025
FILE PATH: H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Drawings\Civil\SWM\Production Drawings\21-008 Post Drainage Conditions .dwg

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Subject:	Peach Barn Estates - FSR Prelim SWM Design		
Date:	1/29/2025	By:	CJC
Project #:	21-008	Page:	1

CATCHMENT PARAMETERS

Drainage Area	Area (ha)	Runoff Coefficient Areas (ha)			Composite Runoff Coeff.	L (m)	Slope (%)	
		0.25	0.95					
PRE	1.511	1.511	0.00		0.25	50	1.00	
POST	1.247	0.676	0.571		0.57			
EXT-1	0.047	0.047	0.000		0.25			
EXT-2	0.217	0.217	0.000		0.25			
POST-TOTAL	1.511	0.940	0.571		0.51			<-- USED FOR SWM STORAGE ESTIMATE

RAINFALL IDF CURVES (NORFOLK COUNTY)

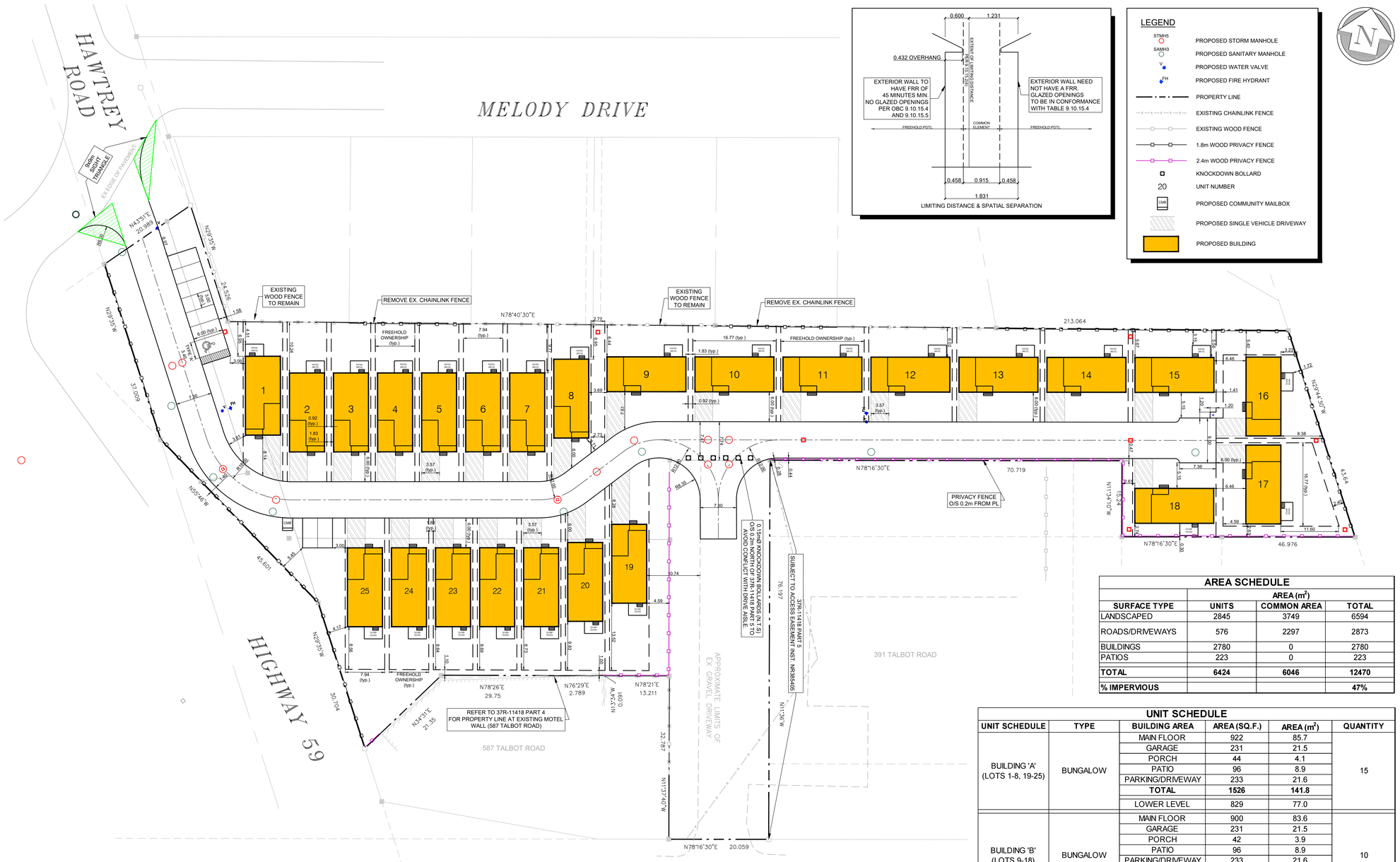
Return Period	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
A	529.711	583.017	670.324	721.533	766.038	801.041
B	4.501	3.007	3.007	2.253	1.898	1.501
C	0.745	0.703	0.698	0.679	0.668	0.657

PRE-DEVELOPMENT RELEASE RATES (LIMITS)

Return Period	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
I (mm/hr)	49.5	65.1	76.1	90.5	102.4	113.2
C	0.25	0.25	0.25	0.25	0.25	0.25
Ca	1	1	1	1.1	1.2	1.25
A (ha)	1.511	1.511	1.511	1.511	1.511	1.511
Tc (min)	19.59	19.59	19.59	19.02	18.44	18.15
Q (l/s)	51.9	68.3	79.8	104.5	128.9	148.5

POST-DEVELOPMENT ESTIMATED STORAGE (RATIONAL METHOD)

Return Period	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Est. Peak Runoff to SWM (L/s	105.6	139.0	162.3	312.3	379.2	434.0
Est. Infiltration Rate (mm/hr)	100	100	100	100	100	100
Infiltration Area (m^2)	450	450	450	450	450	450
Infiltration Flow (L/s)	45.0	45.0	45.0	45.0	45.0	45.0
Max Rate of Release (L/s)	51.9	68.3	79.8	104.5	128.9	148.5
Storage Req. (m^3)	19.4	39.7	53.9	80.0	105.5	126.7



LEGEND

- PROPOSED STORM MANHOLE (STMH5)
- PROPOSED SANITARY MANHOLE (SAMH3)
- PROPOSED WATER VALVE (V)
- PROPOSED FIRE HYDRANT (FH)
- PROPERTY LINE
- EXISTING CHAINLINK FENCE
- EXISTING WOOD FENCE
- 1.8m WOOD PRIVACY FENCE
- 2.4m WOOD PRIVACY FENCE
- KNOCKDOWN BOLLARD
- 20 — UNIT NUMBER
- CMB — PROPOSED COMMUNITY MAILBOX
- PROPOSED SINGLE VEHICLE DRIVEWAY
- PROPOSED BUILDING

REV. No.	DATE	REVISION
0	01/29/2025	ISSUED FOR ZBA APPLICATION

NOTE:
THE CONTRACTOR IS CAUTIONED THAT ALL OF THE EXISTING UTILITIES ARE NOT INDICATED ON THIS DRAWING. THE CONTRACTOR MUST ARRANGE FOR LOCATES FROM EACH AREA UTILITY COMPANY PRIOR TO ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES INCLUDING THOSE NOT INDICATED ON THIS DRAWING. G. DOUGLAS VALLEE LTD. CANNOT ACCEPT RESPONSIBILITY FOR DAMAGE TO ANY EXISTING UTILITY WHICH MAY OR MAY NOT BE INDICATED ON THIS DRAWING.

ALL WORK, MATERIALS AND PROCESSES TO CONFORM TO NORFOLK COUNTY STANDARDS AND SPECIFICATIONS

SURVEY INFORMATION

LEGAL DESCRIPTION: PART OF ROAD ALLOWANCE BETWEEN LOTS 45 AND 46 AND PART OF LOT 187, CONCESSION NORTH OF TALBOT ROAD (GEOGRAPHIC TOWNSHIP OF MIDDLETOWN), NORFOLK COUNTY, 37R-11418

TOPOGRAPHIC SURVEY: COMPLETED BY G. DOUGLAS VALLEE LTD., JANUARY 29, 2021

OWNER INFORMATION

ALDERSHOT HOMES LTD.
GABRIEL GASBARRINI, PRESIDENT
519-752-0557
33 MEMORIAL DRIVE, SUITE 101, BRANTFORD, ON, N3R 5R8

AREA SCHEDULE

SURFACE TYPE	AREA (m^2) UNITS	COMMON AREA	TOTAL
LANDSCAPED	2845	3749	6594
ROADS/DRIVEWAYS	576	2297	2873
BUILDINGS	2780	0	2780
PATIOS	223	0	223
TOTAL	**6424**	**6046**	**12470**
% IMPERVIOUS			**47%**

UNIT SCHEDULE

UNIT SCHEDULE	TYPE	BUILDING AREA	AREA (SQ.F.)	AREA (m^2)	QUANTITY
BUILDING 'A' (LOTS 1-8, 19-25)	BUNGALOW	MAIN FLOOR	922	85.7	15
		GARAGE	231	21.5	
		PORCH	44	4.1	
		PATIO	96	8.9	
		PARKING/DRIVEWAY	233	21.6	
		TOTAL	**1526**	**141.8**	
		LOWER LEVEL	829	77.0	
BUILDING 'B' (LOTS 9-18)	BUNGALOW	MAIN FLOOR	900	83.6	10
		GARAGE	231	21.5	
		PORCH	42	3.9	
		PATIO	96	8.9	
		PARKING/DRIVEWAY	233	21.6	
		TOTAL	**1502**	**139.5**	
		LOWER LEVEL	814	75.6	

PROPOSED PARKING TABLE

SECTION 4.0 - THE ZONING BY-LAW OF NORFOLK COUNTY

PROVISION	DESCRIPTION	REQUIRED	PROVIDED	COMMENT
4.1.3	PARKING SPACE DIMENSION	3m X 5.8m	3m X 6m	VEHICLES PARKED SIDE BY SIDE, 90 DEGREE PARKING
4.1.4	PARKING AISLE REQUIREMENTS	7.3 m		90 DEGREE PARKING
4.3.1	ACCESSIBLE PARKING SPACE WIDTH	3.4m		
4.3.2	ACCESS AISLE	1.5m		
4.3.3	MINIMUM NUMBER OF ACCESSIBLE PARKING	1 - TYPE 'A' 0 - TYPE 'B'	1 - TYPE 'A' 0 - TYPE 'B'	
4.9 a)	NUMBER OF PARKING SPACES (2 SPACES/UNITS)	50	50	1 GARAGE, 1 DRIVEWAY
4.9 f)	VISITOR PARKING (1 SPACE/3 UNITS)	9	9	8 STANDARD + 1 ACCESSIBLE

ZONING TABLE

5.4 URBAN RESIDENTIAL TYPE 4 ZONE (R4-xx) - THE ZONING BY-LAW OF NORFOLK COUNTY

PROVISION	DESCRIPTION	REQUIRED	PROVIDED	SPECIAL PROVISION REQUIRED	COMMENT
5.4.1	PERMITTED USES	ADD MULTIPLE SINGLE DETACHED DWELLINGS.			
5.4.2 a) i)	MINIMUM LOT AREA: ATTACHED GARAGE	4,875 sq. m	12,470 sq. m		25 DWELLINGS x 195 sq. m = 4,875 sq. m
5.4.2 b) i)	MINIMUM LOT FRONTAGE: INTERIOR LOT	30 m	20 m	YES	HAWTREY ROAD
5.4.2 c) i)	MINIMUM FRONT YARD: ATTACHED GARAGE	6 m	+20 m		
5.4.2 d) i)	MINIMUM EXTERIOR SIDE YARD	6 m	4.0 m	YES	PROPOSED CONDITION: COUNTY HIGHWAY 59
5.4.2 e)	MINIMUM INTERIOR SIDE YARD	3 m	2.7 m	YES	PROPOSED CONDITION: NOT INCLUDING STEPS.
5.4.2 f) i)	MINIMUM REAR YARD: ATTACHED GARAGE	7.5 m	3.0 m	YES	PROPOSED CONDITION: EASTERLY MOST PROPERTY LINE, NOT INCLUDING STEPS.
5.4.2 g)	MINIMUM SEPARATION BETWEEN TOWNHOUSE DWELLINGS	2 m	1.8 m	YES	PROPOSED CONDITION: ALL BUILDINGS. SEE SPATIAL SEPARATION & LIMITING DISTANCE DETAIL THIS PAGE.
5.4.2 h)	MAXIMUM BUILDING HEIGHT	11 m	MAX 11 m		
N/A	MAXIMUM LOT COVERAGE	N/A	50%		PROPOSED CONDITION: INCLUDING PATIOS AND DRIVEWAYS

SCALE:
0 5 10 15 20
HORIZONTAL: 1:400

vallee
Consulting Engineers, Architects & Planners
G. DOUGLAS VALLEE LIMITED
2 TALBOT STREET NORTH
SIMCOE, ONTARIO N3Y 3W4
(519) 426-6270

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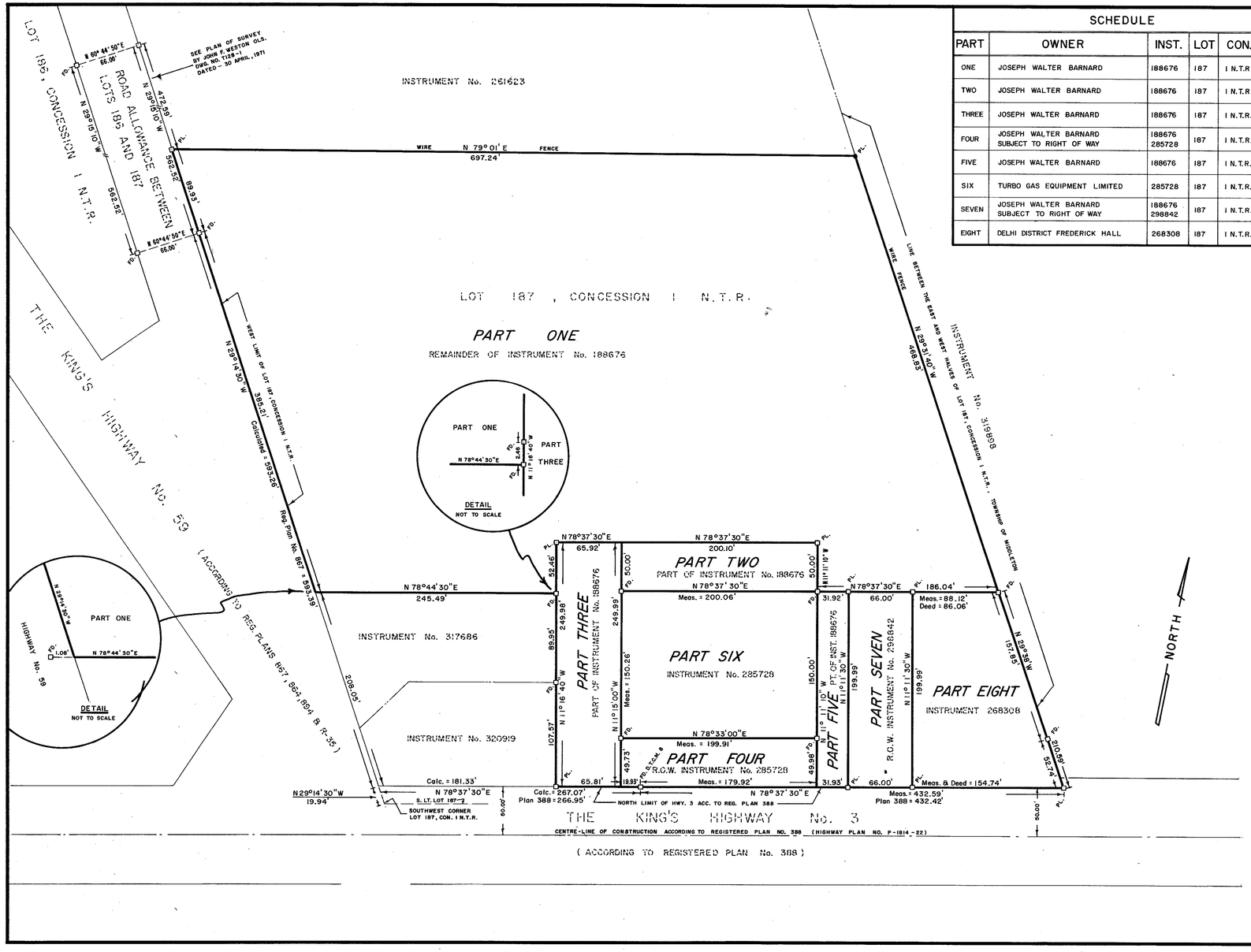
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project Title
PEACH BARN ESTATES
10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title
SITE PLAN

Designed by :	Drawn By :
CJC	CJC
Checked by :	Date Started :
JTI	JUNE 2024
Drawing Scale :	Drawing No.
1:400	C100
Project No.	
21-008	

DATE LAST PLOTTED : January 29, 2025
FILE PATH : H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Drawings\Civil\3d-Production Drawings\C100 Site Plan.dwg



SCHEDULE

PART	OWNER	INST.	LOT	CON.	AREA
ONE	JOSEPH WALTER BARNARD	188676	187	I N.T.R.	6.873 Ac.
TWO	JOSEPH WALTER BARNARD	188676	187	I N.T.R.	0.230 Ac.
THREE	JOSEPH WALTER BARNARD	188676	187	I N.T.R.	0.378 Ac.
FOUR	JOSEPH WALTER BARNARD SUBJECT TO RIGHT OF WAY	188676 285728	187	I N.T.R.	0.229 Ac.
FIVE	JOSEPH WALTER BARNARD	188676	187	I N.T.R.	0.147 Ac.
SIX	TURBO GAS EQUIPMENT LIMITED	285728	187	I N.T.R.	0.689 Ac.
SEVEN	JOSEPH WALTER BARNARD SUBJECT TO RIGHT OF WAY	188676 298842	187	I N.T.R.	0.303 Ac.
EIGHT	DELHI DISTRICT FREDERICK HALL	268308	187	I N.T.R.	0.557 Ac.

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER PART II OF THE REGISTRY ACT

DATED - 10 MAY 1973

John F. Weston

RECEIVED AND DEPOSITED AS PLAN 37R 143

DATED - May 15th 1973

N. L. Laurence

REGISTRAR FOR THE REGISTRY DIVISION OF NORFOLK (No. 37)

345387

CAUTION: THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF SECTIONS 29, 32 OR 33 OF THE PLANNING ACT.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT:

(1) - THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE REGISTRY ACT AND THE REGULATIONS MADE THEREUNDER.

(2) - THIS SURVEY WAS COMPLETED ON THE 3rd. DAY OF MAY, 1973.

DATED - 10 MAY 1973

John F. Weston
JOHN F. WESTON
ONTARIO LAND SURVEYOR

NOTES -

- BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE MERIDIAN THROUGH THE SOUTHEAST CORNER OF LOT 186, CONCESSION I N.T.R., TOWNSHIP OF MIDDLETON. THEY ARE BASED ON THE NORTH LIMIT OF THE KING'S HIGHWAY No. 3, ACCORDING TO REGISTERED PLAN No. 388, ACROSS THE WEST HALF OF LOT 187, CONCESSION I N.T.R., TOWNSHIP OF MIDDLETON.
- DEPARTMENT OF TRANSPORT AND COMMUNICATIONS' CONCRETE MONUMENTS ARE SHOWN THUS ——— D.T.C.M. 8
- STANDARD IRON BARS, ONE INCH SQUARE, ARE SHOWN THUS ———
- IRON BARS, FIVE-EIGHTHS OF AN INCH SQUARE, ARE SHOWN THUS ———

PART OF LOT 187, CONCESSION I N.T.R.
TOWNSHIP OF MIDDLETON

SCALE - 1 inch = 60 feet 8 MAY, 1973

JOHN F. WESTON MEIC. P.ENG. OLS.
25 DELEVAN CRESCENT
TILLSONBURG, ONTARIO
N4G 3N6

D-136

LANDTEK LIMITED
Consulting Engineers

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L8W 2E1

Phone: 905-383-3733
engineering@landtek.ca
www.landtek.ca

Geotechnical Investigation
Proposed Residential Development
10 Highway 59
Delhi, Ontario

Prepared for:

Award Construction/Aldershot Homes Limited
33 Memorial Drive, Suite 101
Brantford, Ontario
N3R 5R8

Landtek File: 22236
January 23, 2023

EXECUTIVE SUMMARY

SCOPE OF SERVICES

Proposed Development	From the preliminary concept plan provided to Landtek by G. Douglas Valee Limited, it is understood that the proposed development is to consist of approximately 16 single family dwelling lots with paved access roads, parking areas and Municipal road pavement extensions. It is assumed that no significant grade changes are required, and that the residential structures will include for a maximum of one level of heated, habitable basement.
Report Deliverables	The Geotechnical Investigation is required to determine the subsurface conditions underlying the site and to provide design and construction recommendations for the proposed new residential development and road pavement construction.

SITE DETAILS AND SETTING

Coordinates	540137, 4744978	**Geodetic Elev.**	218 m to 222 m
Site Description	The investigated site area is irregular in shape and encompasses a total area of approximately 13,160 m2 (3.3 acres). The site has a relatively flat topography and is bound by existing residential properties to the north, Highway 59 to the west, agricultural land to the east, and by commercial buildings to the south.		
Geology	An approximately 150 mm thick layer of organic soil was encountered from ground surface in all the boreholes. Fill materials comprising predominantly of silty sand were encountered in all boreholes underlying the topsoil and extends to depths of approximately 0.7 m to 2.3 m below existing ground level. Sand was encountered in all boreholes underlying the fill material and extends the full depth of drilling of approximately 5.0 m below existing ground level.		
Groundwater	No groundwater, water seepage or saturated soils were encountered in any boreholes during this investigation.		

ENGINEERING CONSIDERATIONS

Foundations	It is considered by Landtek that bearing conditions to support any shallow seated concrete footings can be provided by the native sand soils. It has been assumed that the proposed structures will include either a ground-bearing floor slab or a maximum of one level of heated basement.
Frost Susceptibility	The anticipated depths for foundations are considered to be below the maximum extents of influence from frost penetration in the Delhi area. Foundations in the limestone bedrock are generally deemed exempt from any frost protection requirements.
Settlements	The general limiting of the total settlement to 25 mm and the differential settlement to 19 mm by the recommended geotechnical reaction at the SLS is considered appropriate for foundations in native soils. Settlements for foundations seated within bedrock are to be deemed negligible.
Earthquake Considerations	Based on the soils conditions encountered, and in accordance with Table 4.1.8.4.A. of the current Ontario Building Code, the site is considered to be a 'C' Site Class for foundations seated within the overburden soils.

CONSTRUCTION CONSIDERATIONS

Excavations	The subsurface soils to be encountered during excavation at the site are expected, in general, to behave as *"Type 2"* materials according to the OHSA classification in Part III. Type 2 materials are characteristic of the generally compact "…*sand*…" and the overlying "fill material". It should be possible to excavate the overburden soils with a hydraulic backhoe. Excavation slopes in the overburden soils are expected to be stable for the construction period at slopes of 45° degrees.
Subsurface Concrete	Experience in the area indicates that the native soils generally have a mild sulphate environment and a low chloride concentration. It is recommended that subsurface concrete at the site have the following characteristics for General Use (GU), normal Portland cement.
Dewatering	It is expected that groundwater seepages experienced during excavation work should be able to be controlled by pumping from sumps at the base of the excavation. Water seepage into open excavations is not expected to be a construction issue such that the project would require either registration under the Environmental Activity and Sector Registry framework or a Permit To Take Water for amounts greater than 400,000 l/day.

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APPENDICES

1.0 INTRODUCTION

Landtek Limited (herein "*Landtek*") is pleased to submit this geotechnical investigation report for the proposed new, residential development at the site identified as civic address 10 Highway 59 in Delhi, Ontario. Authorization to proceed with the work was received from Mr. Gabriel Gasbarrini on behalf of Aldershot Homes/Award Construction Limited on May 31st, 2022.

From the preliminary concept plan provided to Landtek by G. Douglas Valee Limited, it is understood that the proposed development is to consist of approximately 16 single family dwelling lots with paved access roads, parking areas and Municipal road pavement extensions.

It is assumed that no significant grade changes are required, and that the residential structures will include for a maximum of one level of heated, habitable basement. On this basis, it is anticipated that foundations will be seated at depths of approximately 2.0 m below existing ground level.

The primary objectives of this investigation are:

- To confirm the subsurface soil and groundwater conditions for foundation design and construction;
- Provide design and construction recommendations with regards to building foundations, floor slabs, pavement structures, and subsurface drainage and utilities; and,
- Assess the characteristics of the soils to be excavated and their suitability for reuse on site.

This report has been prepared for the Client, the nominated engineers, designers, and project managers pertaining to the proposed residential development at the site identified as civic address 10 Highway 59 in Delhi, Ontario. Further dissemination of this report is not permitted without Landtek's prior written approval. Further details of the limitations of this report are presented in Appendix A.

2.0 SITE SETTING

2.1 Site Location and Description

The site is located in Delhi, Ontario, and is centered at approximate grid reference 540137, 4744978 (UTM 17T coordinates). The approximate Geodetic elevation at the borehole locations ranges from 218 m to 222 m.

The site location is shown in Figure 2.1.1 below.

Figure 2.1.1: Area of Proposed Development

The investigated site area is irregular in shape and encompasses a total area of approximately 13,160 m^2 (3.3 acres). The site has a relatively flat topography and generally covered with maintained grasses, with mature trees on the northeast side of the site.

The site is bound by existing residential properties to the north, Highway 59 to the west, agricultural land to the east, and by commercial buildings to the south.

2.2 Published Geology

Based on previous geotechnical experience for the area and a review of the existing geological publications for the site area, Ontario Geological Survey (OGS) Map P2473: "*Quaternary Geology of the Tillsonburg Area*", the native subsurface soil conditions in the area of the site are anticipated to consist of glaciolacustrine fine to medium sand deposits.

Information provided by historical borehole records in the vicinity of the site and held by the OGS generally confirms the anticipated geological conditions beneath the site. Based on the data from records for Borehole ID number 856378, located approximately 780 m west of the site, the

superficial soil profile confirms the presence of sand deposits to approximately 5.5 m underlain by silt deposits to 6.7 m.

3.0 FIELDWORK AND INVESTIGATION METHODOLOGY

Fieldwork undertaken at the site by Landtek included clearance of underground services, borehole layout, borehole drilling and soil sampling, and field supervision. A total of five boreholes (boreholes BH1 to BH5) were drilled on August 22nd, 2022. All boreholes were logged using those standard symbols and terms defined in Appendix B. The Borehole Location Plan, Drawing 22236-01, and associated borehole logs are provided in Appendix C.

The boreholes were drilled using a track-mounted drilling rig equipped with continuous flight, solid stem augers, and were advanced to depths between approximately 5.0 m below existing ground level. Standard Penetration Tests (SPT's) and split spoon samples were taken during drilling at selected depths. Full time supervision of drilling and soil sampling operations was carried out by a representative of Landtek.

All soil samples were transported to the Landtek's in-house, Canadian Council of Independent Laboratories (CCIL) certified laboratory and visually examined to determine their textural classification. Moisture content testing was carried out on all samples. No chemical testing is proposed.

Borehole locations and approximate Geodetic elevations were established using field measurements relative to existing site features. Boreholes and depth-related remarks are reported relative to existing ground level.

4.0 SUBSURFACE CONDITIONS

4.1 Overview

The borehole information is generally consistent with the geological data identified in Sections 2.2, with the predominant native soils comprising of silt and clay deposits.

The detailed borehole logs are presented in Appendix C, with the ground conditions encountered by the boreholes discussed in the following sections.

4.2 Organic Soil

An approximately 150 mm thick layer of organic soil was encountered from ground surface in all the boreholes.

It should be noted that organic soil thicknesses may vary across the site, and the thicknesses measured at the borehole locations may not be representative of the organic soil depths throughout the site area.

4.3 Fill Materials

Fill materials comprising predominantly of silty sand were encountered in all boreholes underlying the topsoil and extends to depths of approximately 0.7 m to 2.3 m below existing ground level. The fill is brown in colour and contains variable fractions of gravel and clay.

SPT ‘‘N’’ values ranging from 2 to 21 were reported, indicating the fill to be of a poor level of compaction and are as expected for a fill material placed under uncontrolled conditions. Moisture content results of 2 % to 14 % were recorded within fill material samples collected during drilling.

The moisture content results are presented on the borehole logs in Appendix C.

4.4 Sand

Sand was encountered in all boreholes underlying the fill material and extends the full depth of drilling of approximately 5.0 m below existing ground level. The sand is generally brown in colour and includes trace gravel.

SPT ‘‘N’’ values ranging from 2 to 25 were reported, indicating the sand to be of a loose to compact, but generally compact consistency. Moisture contents range between 2 % and 14 % which is indicative of a dry to moist soil with sand as the primary constituents.

The moisture content results are presented on the borehole logs in Appendix C.

4.5 Bedrock

Bedrock was not encountered during this investigation.

4.6 Groundwater

No groundwater, water seepages or wet soils were encountered during drilling, indicating no static groundwater levels to have been encountered within the investigation depth ranges.

It should be noted that groundwater conditions and surface water flow conditions are expected to vary according to the time of the year and seasonal precipitation levels. Water seepage may be also anticipated from soil fissures and any fill materials present at the site.

5.0 FOUNDATION DESIGN CONSIDERATIONS

5.1 Foundations Design

It has been assumed that the proposed structures will include for a maximum of one level of heated basement. Based on the ground conditions observed at the borehole locations, it is considered by Landtek that bearing conditions to support any shallow seated concrete footings can be provided by the native soils. The existing fill materials present at the site are not considered suitable as a founding stratum due to the risks associated with excessive and differential settlements.

Table 5.1.1 summarizes the recommended geotechnical reactions at the Serviceability Limit State (herein "*SLS*") and factored geotechnical resistances at the Ultimate Limit State (herein "*ULS*") for the native soils. It should be noted that the design parameters have been determined by Landtek for the design stage only.

Where the bearing levels of the footings are at different design elevations, the footing base levels should be stepped along a line of 7V:10H, drawn upwards from the lowest footing, to avoid overlapping stresses.

Subsurface conditions can vary over relatively short distances and the subsurface conditions revealed at the test locations may not be representative of subsurface conditions across the site. Therefore, a Geotechnical Engineer should be engaged during construction to examine the exposed sub-soil quality and condition, and confirm the subsurface conditions are consistent with design assumptions. This is in compliance with field review requirements in the National Building Code, Volume 1, Clause 4.2.2.3.

Table 5.1.1: Recommended Limit State Foundation Design Values

Founding Depth Range	Founding Stratum	Foundation Design Value	
		SLS [1,2]	ULS [3,4]
±2.0 m to ±3.0 m	Sand	100 kPa	150 kPa

Notes:
1. The National Building Code general safety criterion for the serviceability limit states is: SLS resistance ≥ effect of service loads.
2. Recommended SLS bearing values conform to Estimated Values based on soil types given in Tables K-8 and K-9 of the National Building Codes User's Guide.
3. The ULS resistance factor for shallow foundations is 0.5, as given in Table K-1 of the National Building Code User's Guide.
4. The National Building Code general safety criterion for the ultimate limit states is: factored ULS resistance ≥ effect of factored loads.

5.2 Foundations on Engineered Fill

In the event that engineered fill f engineered fill is required to support building foundations, it is considered by Landtek that such relatively lightly loaded structures can be adequately supported by conventional strip or pad footings founded on the engineered fill for a geotechnical reaction at the SLS of 100 kPa, and a factored geotechnical resistance at the ULS of 150 kPa. It should be noted however, that this is very much dependent upon the nature and condition of the fill placed, the condition of the sub-grade upon which it is being placed, and the methods adopted for the placement and compaction of the fill materials.

Where there is a requirement to raise the existing grade and generate the necessary founding subgrade, the engineered fill must be selected with care, then placed and compacted under strictly controlled conditions. The following recommendations are provided to address the selection of fill material as well as the placement and compaction of engineered fill.

- Processed imported granular material or consistent quality imported clean earth fill, can be considered for engineered fill provided the soil moisture content is within about 2 % of the optimum value of the material. Imported fill should meet the environmental requirements established for the site;
- Engineered fill should only be placed in an area that has been satisfactorily prepared by stripping existing fill and organic soils, and proof rolling the native exposed soil with at least five passes of a minimum 10-ton static pad-foot steel drum type roller;
- Engineered fill should be placed in maximum 300 mm, loose lifts and compacted to a target value of 100 % Standard Proctor Maximum Dry Density (herein "*SPMDD*"). The placement and compaction of each lift should be monitored full time by Landtek, with in-place compaction determined using nuclear moisture/density testing equipment;
- Fill layers that do not meet the compaction requirements, or become wet or frozen, should not be approved for the placement of additional material;
- For engineered fill placement over large areas of varying elevation, the locations of quality control density tests should be recorded by total station survey; and,
- As a precautionary measure and to mitigate cracking, it is recommended that reinforcing steel be provided in footings on engineered fill, and at the top of poured concrete foundation walls. Two 15M bars (continuous) are recommended as a minimum for footing placement. The Structural Engineer should be consulted to confirm the design of such steel reinforcement.

5.3 Frost Susceptibility

The sandy soils encountered at shallow depths across the site are considered sensitive to water and frost, and their physical and mechanical properties are dependent on in-situ moisture content. As such, the founding soils at the site are considered to have a moderate to high frost susceptibility, being classified as Frost Group "*F4*" (Table 13.1 of the "*Canadian Foundation Engineering Manual*", 4th Edition). However, the identified depths for foundations seated within the overburden soils, as given in Section 5.1 are considered to be below the maximum extents of influence from frost penetration in the Delhi area.

Should any re-grading be required as part of the proposed development and adjacent to the new structures, it will be important to ensure that the associated exterior footings will have a minimum of 1.2 m of soil cover, or equivalent suitable insulation, for frost protection.

5.4 Settlement Considerations

Based on the outline information provided for the nature of the proposed development of the site, it is anticipated that the loads to be applied to the ground by any such structure will be generally moderate intensity. As such, associated settlements are not expected to be large.

Therefore, the general limiting of the total settlement to 25 mm and the differential settlement to 19 mm by the recommended geotechnical reaction at the SLS is considered appropriate.

5.5 Seismic Design Considerations

Based on the soils conditions encountered, and in accordance with Table 4.1.8.4.A. of the current Ontario Building Code (herein "*OBC*"), the site is considered to be a 'C' Site Class for foundations seated within the overburden soils. The acceleration and velocity-based site coefficients, F_a and F_v, should be determined from Tables 4.1.8.4.B. and 4.1.8.4.C. respectively of the OBC for the above recommended Site Class. The seismic design data given in Table 1.2 of Supplementary

Standard SB-1 in Volume 2 of the OBC, for selected Municipal locations, should be used to complete the seismic analysis.

5.6 Damp Proofing Considerations

The subsurface areas should be damp proofed and comply with the OBC requirements. As a minimum it is recommended that the damp proofing system include a Delta Drainage Board or MiraDrain 2000 series product, or an approved alternative, along with an asphalt-based spray-on wall coating.

6.0 FLOOR SLAB AND PERIMETER DRAINAGE CONSIDERATIONS

Based on the borehole soil conditions and preliminary design information provided to Landtek, it should be possible to construct the lowest (i.e., basement) floor slab level using slab-on-grade methods. The subgrade support conditions are anticipated to be sand, which should provide competent conditions for placing the vapour barrier material.

After the subgrade has been prepared to the underfloor design elevation it is recommended that the area be assessed by Landtek to determine if there is a need for any remedial work. The assessment should include visual observation and proof rolling.

It is recommended that a minimum 200 mm layer of clear 19 mm crushed quarried stone be used as the vapour barrier under the floor slab. The vapour barrier stone should meet the requirements of Ontario Provincial Standard Specifications (herein "*OPSS*") 1004 for 19 mm Type II clear stone. If a graded crushed stone is substituted for clear stone, the material should be limited to a maximum of 5 % fines (passing the 0.075 mm sieve). The floor slab thickness should meet the specifications of the project based on anticipated floor loadings.

The finished exterior ground surface should be sloped away from the buildings at a grade in the order of 2 %.

The concrete properties should meet the requirements of OPSS 1350. Contraction and isolation jointing practices should be in accordance with current Portland Cement Association recommendations, as given in the engineering bulletin "*Concrete Floors on Ground*", second edition, by R. E. Spears, and W. C. Panarese.

The design of concrete slabs on native soils may be made on the basis of a value of modulus of subgrade reaction of 30 MPa/m for native soils.

Perimeter drainage should be provided around all subsurface floor areas where water may accumulate. Underfloor drains may be required depending on excavation and groundwater seepage conditions. This given, it is recommended that underfloor drains be provided at all deep foundation locations. The drainage system should comply with the OBC and associated amendments. Further details pertaining to perimeter and underfloor drainage systems are provided in Drawings 22236-02 and 22236-03 respectively, in Appendix D.

7.0 EARTH PRESSURE CONSIDERATIONS ON SUBSURFACE WALLS

The earth pressure, p, acting on subsurface walls at any depth, h, in metres below the ground surface assumes an equivalent triangular fluid pressure distribution and may be calculated using the expression below. It is assumed that granular material is used as backfill. Allowances for pressure due to compaction operations should be included in the earth pressure determinations and a value of 12 kPa is applicable for a vibratory compactor and granular material.

If the structure retaining soil can move slightly, the active earth pressure case can be used in determining the lateral earth pressure. For restrained structures and no yielding an "at rest" earth pressure condition should be used. The determination of the earth pressures should be based on the following expression:

$$P_1 = K (\delta h + q)$$

where:

P_1 = the pressure in kPa acting against any subsurface wall at depth, h, in metres (feet) below the ground surface;

K = the at rest earth pressure coefficient considered appropriate for subsurface walls; OPSS 1010 Granular B Type 1 (pit-run sand and gravel) material has an effective angle of friction estimated to be 32° with a corresponding at rest earth pressure coefficient, K_o, of 0.45; and,

δ = the moist bulk unit weight of the retained backfill; 21.5 kN/m^3.

and,

q = the value for any adjacent surcharge in kPa, which may be acting close to the wall; and,

h = the depth, in m, at which the pressure is calculated

Backfill materials required for behind the retaining structure is assumed to meet an OPSS 1010 Granular B Type 1 pit-run sand and gravel material or OPSS 1010 Granular A. The granular fill should be compacted to a minimum of 98 % of the material's SPMDD, or to the levels and backfilling procedures specified. Table 7.1 below provides those lateral earth pressure parameters for the predominant soils anticipated at the site.

Table 7.1: Recommended Lateral Pressure Parameters

Parameter	Site Soils (Generalized)	OPSS 1010 Granular A	OPSS 1010 Granular B Type I
Angle of Internal Friction, ϕ	35°	35°	32°
Unit Weight (KN/m^3)	16	23	22
Passive Earth Pressure Coefficient, K_p	4.20	3.70	3.25
At-Rest Earth Pressure Coefficient, K_o	0.38	0.43	0.47
Active Earth Pressure Coefficient, K_a	0.24	0.27	0.31

8.0 SUBSURFACE CONCRETE

8.1 Concrete Class Considerations

The requirements for subsurface concrete subject to a sulphate and chloride environment are presented in Canadian Standards Association specification, CSA A23.1-14 *"Concrete Materials and Methods of Concrete Construction, Tables 1-4"*. Experience in the area indicates that the native soils generally have a mild sulphate environment and a low chloride concentration. It is recommended that subsurface concrete at the site have the following characteristics for General Use (GU), normal Portland cement:

- minimum 56-day strength = 30 MPa;
- maximum water to cement ratio = 0.50;
- cementing materials:
  MS hydraulic cement or MSb; as per tables 3 and 4 respectively in CSA A23.1-14; and,
- air content:
  4 – 7 % for 14 mm to 20 mm nominal size coarse aggregate
  3 – 6 % for 28 mm to 40 mm nominal size coarse aggregate

The concrete should be placed without segregation and should be consolidated to achieve a uniform dense mass.

8.2 Methods for Specifying Concrete

Alternative methods of specifying concrete for a project are outlined in CSA A23.1-14 and allow for "*Performance*" or "*Prescription*" based methods. Each method attaches different levels of responsibility to the owner, the contractor, and the concrete supplier. The pros and cons of each method should be examined prior to completion of the specifications for the project.

9.0 EXCAVATION AND BACKFILL CONSIDERATIONS

9.1 General Excavation Considerations

All temporary excavations and unbraced side slopes in the soils should conform to standards set out in the Occupational Health and Safety Act, Ontario Regulation 213/91 "*Construction Projects*" (herein "*OHSA*"). The subsurface soils to be encountered during excavation at the site are expected, in general, to behave as *"Type 2"* materials according to the OHSA classification in Part III. Type 2 materials are characteristic of the generally compact "sand", while the overlying *"fill material*" is expected to behave as a *"Type 2"* material.

It should be possible to excavate the overburden soils with a hydraulic backhoe. Excavation slopes in the overburden soils are expected to be stable for the construction period at slopes of 45° degrees.

Excavations for new foundations should satisfy the criteria given in the example shown in Figure 9.1.1 to avoid overlapping stresses and minimize the risk of undermining existing adjacent structures, including utilities, and/or triggering additional settlements of the existing structures due to soil disturbance.

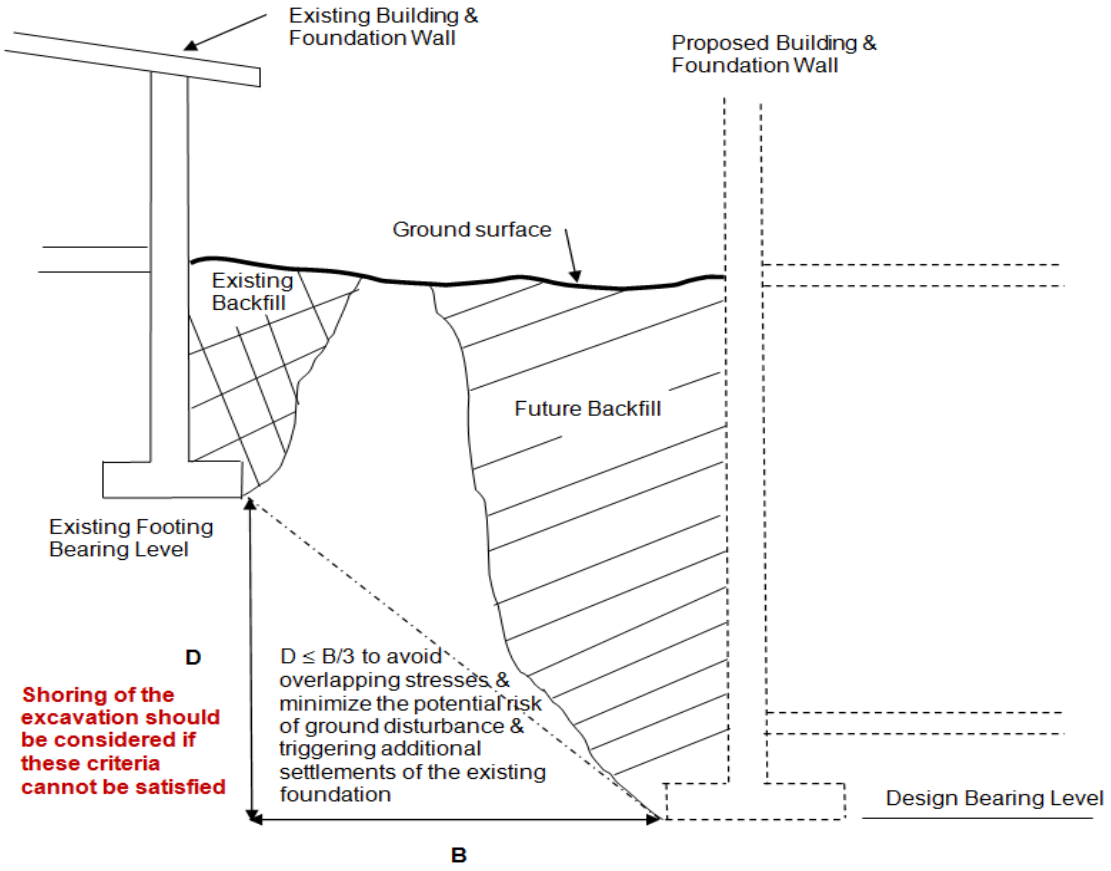

Figure 9.1.1: Criteria for Assessing Excavation Shoring Requirements (Not to Scale)

Consideration should be given to any existing trench excavations and associated backfill that may be present directly behind cut slopes within the native soils that may appear to be stable on first excavation. In these circumstances, slopes can suddenly slough or collapse due to the affects of the adjacent backfill.

Consequently, for excavation conditions that cannot satisfy the OHSA requirements for unbraced 1H:1V side slopes, a trench box system should be used, or temporary shoring should be installed to maintain safe working conditions. This may be more applicable to service trench excavations, though may also apply to basement excavations etc., particularly when in close proximity to new road pavements or associated infrastructure.

9.2 Construction Dewatering Considerations

It has been assumed that the proposed development will include for one level of basement with finished floor slab levels approximately 1.5 m below existing ground level. Foundations are anticipated to be no deeper than approximately 2.0 m below existing ground level.

No groundwater was encountered during the investigation, though water seepage is expected to be variable and will depend upon the depth of the excavations, the time of year, and precipitation levels preceding construction.

Given the anticipated founding depths and the absence of static groundwater within the excavation profile depth, groundwater seepages into open excavations is not expected be a construction issue such that the project would require either registration under the Environmental Activity and Sector Registry (herein "*EASR*") framework (i.e. exceeding 50,000 l/day but less than 400,000 l/day) or a Permit To Take Water (herein "*PTTW*") for amounts greater than 400,000 l/day and will be manageable using sump pumps per standard construction dewatering practices.

9.3 General Backfill Considerations

Backfill next to foundation walls and within service trenches should be selected to be compactable in narrow trench conditions. The overburden soils are expected to be reusable as trench backfill and backfill around the proposed structures on the site. Any variation in the moisture contents of the soils encountered may require selective separation of material to avoid the use of wet soil.

Site servicing trench backfill should be uniformly compacted to a density that minimizes the risk of long-term settlements. It is recommended that the target compaction specification for trench backfill be 97 % SPMDD with no individual test below 95 % SPMDD.

During inclement weather the native soils may become too wet to achieve satisfactory compaction. If construction is proposed for late in the year, a reduced level of trench compaction with a higher risk of future settlements is to be anticipated, and it is recommended that provisional contract quantities be established for the supply and placement of imported granular fill under such circumstances. The imported granular should meet the requirements of OPSS 1010 for Granular B Type I material as a minimum requirement.

10.0 SITE SERVICING CONSIDERATIONS

10.1 General Servicing Considerations

There is no indication that special pipe bedding materials or procedures are required for the installation of services. All bedding cover and backfill materials should be selected in accordance with OPSS 1010 Aggregates – Base, Subbase, Select Subgrade, and Backfill Material.

The pipes should be placed with a minimum bedding thickness in conformance of OPSD 802.010 series (typical 150 mm for flexible pipes, OPSD 802.010, 802.013 and 802.014). The use of normal Class B type bedding is applicable for the pipe.

Bedding material shall be placed in layers not exceeding 300 mm in thickness, loose measurement, and compacted to 95 % of the SPMDD before a subsequent layer is placed. Site servicing trench backfill should be uniformly compacted to a density that minimizes the risk of long-term settlements. Bedding on each side of the pipe shall be completed simultaneously. At no time shall the levels on each side differ by more than the 300 mm uncompacted layer. The remainder of the trench should be backfilled as per the requirements defined in Section 9.0.

It is assumed all services will have a minimum of 1.2 m of soil cover for frost protection. For services installed at shallower depths and within the overburden soils, suitable insulation for frost protection is recommended.

10.2 Storm Water Management Considerations

At the time of issue of this report, the investigation was completed over the wider development area and the location of the proposed Storm Water Management (SWM) pond is unknown. It is expected that the pond design is to be that of a flood storage pond to be constructed predominately by excavation into the native soils, with limited grade raising required using engineered fill. The side slopes of the SWM pond should be of between 4H:1V. No groundwater was encountered, with all boreholes remaining dry to the maximum drill depth.

It is anticipated that the outfall of the SWM pond is to be such that the pond will remain dry during normal operation, only retaining water during rainfall or snow melt events, and that the high-water (100-year ponding) level of the SWM pond will be in the order of 2.0 m to 2.5 m above the pond base.

Based on the findings of the investigation completed at the site, it is anticipated that the SWM pond base will be above any static groundwater regime present beneath the site and thus will not require considerations towards any hydraulic uplift. On this basis, the construction will require the inclusion of a standard clay liner to reduce any potential communication between any deeper groundwater system and the stormwater retained by the pond.

The following recommendations and general comments are provided for consideration for the SWM pond liner design:

- The clay liner materials required should be of high clay-containing soils of low permability; in the order of 1 x 10^{-6} to 1 x 10^{-7} cm/s;
- A minimum clay liner thickness of 300 mm is considered appropriate for the SWM pond;
- Consideration should be given to the application of a geo-synthetic liner to maintain the design pond water levels and ensure separation of the storm water retained in the pond from the deeper groundwater regime. A Bentofix SNRWL Series product is recommended, specifically

a Thermal Lock ® Geosynthetic Clay Liner (GCL), consisting of 90% montmorillonite clay as a minimum, with reinforced geotextile upper and lower layers. The product manufacturer should be consulted beforehand to confirm suitability for application, and the installation should ensure a minimum 1.0 m overlap for each liner sheet to allow appropriate bonding of the clay sheets when activated by water; and,

- Pond side slopes of 4H:1V should be protected from erosion by an appropriate vegetative cover.

11.0 SOIL MANAGEMENT CONSIDERATIONS

Construction for the proposed development may involve cut and fill operations. From a geotechnical perspective, and in order to optimize the use of the on-site soils, a Soil Management Plan should be established. The plan objective should be to achieve a self-sustainable development with respect to excavated materials and control the placement of organic soils so that there is negligible impact on the settlement performance of the compacted fill material.

The soil management criteria should be as follows:

- Surface vegetation, topsoil and organic soils should not be placed within the proposed roadways, below finished subgrade level for pavement construction or building limits. These materials should be placed in landscaped areas where settlements are not critical;
- Excavated soils for structural fill in pavement areas and building floor slab areas, which does not have topsoil or organic matter and are compactable with moisture contents within 2 % to 3 % of the optimum value, should be placed and compacted to a target density of 97 % of the SPMDD with no individual test result below 95 % SPMDD; if engineered fill is required to support building foundations, the engineered fill should be placed and compacted in lifts to a target density of 100 % SPMDD with no individual tests below 98 % SPMDD; the soil should be placed in a loose lift thickness not exceeding 250 mm and should be compacted using a large (10 ton or larger) pad-foot type roller with vibratory capability; if engineered fill to support building foundations is being considered it is recommended that a pre-construction meeting be scheduled to review the proposed fill materials, fill placement and compaction procedures, and the testing and inspection requirements;
- Soils to be placed in landscaped areas where settlements are not critical should receive nominal compaction effort in order to achieve at least 90 % of the SPMDD; and,
- Prior to the placement of underfloor granular fill, the exposed subgrade soil should be inspected and proof-rolled using a loaded tandem axle truck and traversing the exposed subgrade for full coverage; the proof-rolling should be monitored by a geotechnical representative of this office to delineate any soft areas which may require repair.

12.0 PAVEMENT CONSIDERATIONS

12.1 At-Grade Pavement Design Considerations

The proposed development includes ground level asphalt pavement for internal subdivision roads that are to be adopted by the Regional Municipality of Norfolk County (herein "*Norfolk County*"). Recommended pavement structure layer thicknesses are provided in Table 12.1.1. Site specific development requirements set out by the Town of Delhi may override the recommendations of this report.

The recommended pavement design section takes into account the accepted design practice that the total pavement structure thickness should meet or exceed one-half the anticipated depth of frost penetration for the geographical area (i.e., 1.2 m) or as close as practicable. Should any proposed road pavements be constructed for adoption by Norfolk County, then such pavements are to be constructed in accordance with Norfolk County's pavement design requirements.

Table 12.1.1: Recommended Asphalt Pavement Structure Layer Thicknesses

Pavement Layer	Driveways	Municipal Road Pavements
Surface Course Asphalt OPSS HL 3 or SP 9.5 mm	50 mm	40 mm
Binder Course Asphalt OPSS HL 8 or SP 19 mm	-	60 mm
Granular Base OPSS Granular A	200 mm	150 mm
Granular Subbase OPSS Granular B, Type II	-	350 mm[1]
Total Thickness	250 mm	600 mm

Notes:
1. If construction proceeds late in the year (i.e., November and December), the design thickness of pavement granular materials may have to be increased to address potential problems with subgrade instability and facilitate construction vehicle and truck access.

12.2 Pavement Construction Considerations

The overall performance of the pavement structure will greatly depend upon the support provided by the developed subgrade. A number of factors should be considered at the construction stages to ensure that an acceptable subgrade condition is developed and maintained:

- Sub-drains should be installed and should be 100 mm diameter perforated plastic pipe, with outfalls to catch basins at a continuous and uniform grade. The sub-drains should conform to OPSD 216.01;
- Any soft areas of notable deflection to the subgrade should be sub-excavated and replaced with a suitable backfill material approved by a qualified geotechnical engineer and compacted to 98 % of its SPMDD;
- The subgrade should be properly shaped, crowned and then proof-rolled under the full-time observation of a geotechnical representative of this office to delineate any soft areas which may require repair before placing the granular materials; and,
- Surface water should not be allowed to pond on the surface of or adjacent to the outside edges of any developed subgrade.

Should the pavements proposed for the development be constructed as a two-stage paving operation, it will be important to ensure that the following is undertaken to develop the surface of the binder course being used as a "*temporary*" surface during the construction phase:

- The surface is thoroughly cleaned and power washed to remove all residual contaminants;
- All deficiencies are corrected to meet the required design specifications; and,
- A suitable tack coat is appropriately applied immediately prior to the placement of the upper asphaltic concrete course(s).

Such preparatory works are to be completed in accordance with the appropriate OPSS, as required.

12.3 Pavement Materials

12.3.1 Granular Base Course and Subbase

The granular base course materials should meet OPSS Granular "A" specifications. Quarried 20 mm limestone crushed to Granular "A" gradation specifications is recommended. If the option with granular subbase material is used, the granular subbase should meet OPSS Granular B Type II requirements for 100 % crushed quarried bedrock (50 mm crusher-run limestone).

12.3.2 Hot Mix Asphalt

The binder course and surface course asphalt should meet current specifications for HL 8 and HL 3 respectively.

The standard asphalt binder grade for the climate conditions in the Delhi area is PG 58-28. Given the anticipated low volume of commercial truck traffic it is considered that there is no requirement for a bump up to a higher PG grade of asphalt cement.

12.3.3 Compaction

Granular base course and subbase course fill material should be compacted to 100 % SPMDD. Hot mix asphalt should be compacted to the criteria set out by Norfolk County.

12.4 Sidewalk Considerations

The design and construction of the proposed concrete sidewalks should be completed to the satisfaction of the Norfolk County's Engineering Standards, and as detailed in Table 12.4.1. The concrete and aggregates should be produced and placed to meet those standards also stipulated by Norfolk County's Engineering Standards.

Table 12.4.1: Minimum Concrete Sidewalk Specifications

Materials	Compaction Requirements	Layer Thickness
Normal Portland GU (30 MPa) (CAN3-CSA A23.1) - Class C-2	N/A	125 mm
Granular "A" Base	95 % SPMDD*	150 mm

* Standard Proctor Maximum Dry Density

It should be noted that the concrete sidewalk design specified in Table 12.4.1 addresses a use by pedestrian traffic only and does not include for use by vehicular traffic.

Where finished sidewalks are on level ground, and to ensure that they remain free of ponding water, a final slope/gradient of the concrete sidewalk surface of at least 2 % should be maintained. In addition, construction joints in the sidewalk concrete should be properly sealed (e.g., bitumen filler) to minimize the water migration.

13.0 CLOSURE

The Limitations of Report, as stated in Appendix A, are an integral part of this report.

Soil samples will be retained and stored by Landtek for a period of three months after the report is issued. The samples will be disposed of at the end of the three-month period unless a written request from the client to extend the storage period is received.

We trust this report will be of assistance with the design and construction of the proposed development. Should you have any questions, please do not hesitate to contact our office.

Yours sincerely,

LANDTEK LIMITED

Joey Di Cienzo, E.I.T.
Author

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APPENDIX A
LIMITATIONS OF REPORT

The conclusions and recommendations given in this report are based on information determined at the borehole locations. Subsurface and ground water conditions between and beyond the Boreholes may be different from those encountered at the borehole locations, and conditions may become apparent during construction that could not be detected or anticipated at the time of the geotechnical investigation. It is recommended practice that Landtek be retained during construction to confirm that the subsurface conditions throughout the site are consistent with the conditions encountered in the Boreholes.

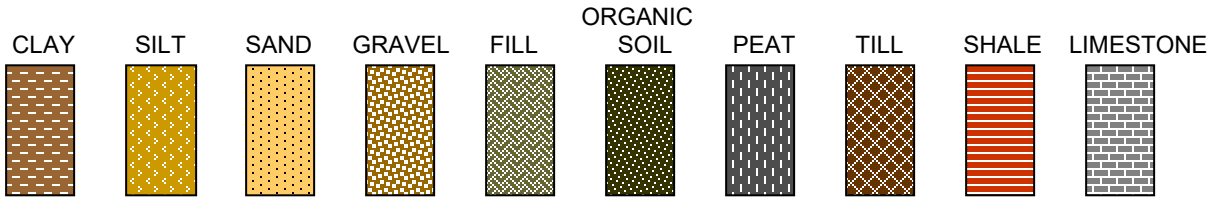
The comments made in this report on potential construction problems and possible remedial methods are intended only for the guidance of the designer. The number of Boreholes may not be sufficient to determine all the factors that may influence construction methods and costs. For example, the thickness and quality of surficial topsoil or fill layers may vary markedly and unpredictably. Additionally, bedrock contact depths throughout the site may vary significantly from what was encountered at the exact borehole locations. Contractors bidding on the project or undertaking construction on the site should make their own interpretation of the factual borehole information, and establish their own conclusions as to how the subsurface conditions may affect their work.

The survey elevations in the report were obtained by Landtek Limited or others, and are strictly for use by Landtek in the preparation of the geotechnical report. The elevations should not be used by any other parties for any other purpose.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Landtek Limited accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

This report does not reflect environmental issues or concerns related to the property unless otherwise stated in the report. The design recommendations given in the report are applicable only to the project described in the text and then only if constructed substantially in accordance with the details stated in this report. Since all details of the design may not be known, it is recommended that Landtek Limited be retained during the final design stage to verify that the design is consistent with the report recommendations, and that the assumptions made in the report are still valid.

APPENDIX B
SYMBOLS AND TERMS USED IN THE REPORT



RELATIVE PROPORTIONS

Term	Range
Trace	0 - 5%
A Little	5 – 15%
Some	15 – 30%
With	30 – 50%

CLASSIFICATION BY PARTICLE SIZE

Boulder ---------- > 200 mm
Cobble ---------- 80 mm – 200 mm
Gravel -
Coarse ---------- 19 mm – 80 mm
Fine ---------- 4.75 mm – 19 mm
Sand -
Coarse ---------- 4.75 mm – 2 mm
Medium -------- 2 mm – 0.425 mm
Fine ---------- 0.425 mm – 0.75 mm
Silt ---------- 0.075 mm – 0.002 mm
Clay ---------- < 0.002 mm

DENSITY OF NON-COHESIVE SOILS

Descriptive Term	Relative Density	Standard Penetration Test
Very Loose	0 – 15%	0 – 4 Blows Per 300 mm Penetration
Loose	15 – 35%	4 – 10 Blows Per 300 mm Penetration
Compact	35 – 65%	10 – 30 Blows Per 300 mm Penetration
Dense	65 – 85%	30 – 50 Blows Per 300 mm Penetration
Very Dense	85 – 100%	Over 50 Blows Per 300 mm Penetration

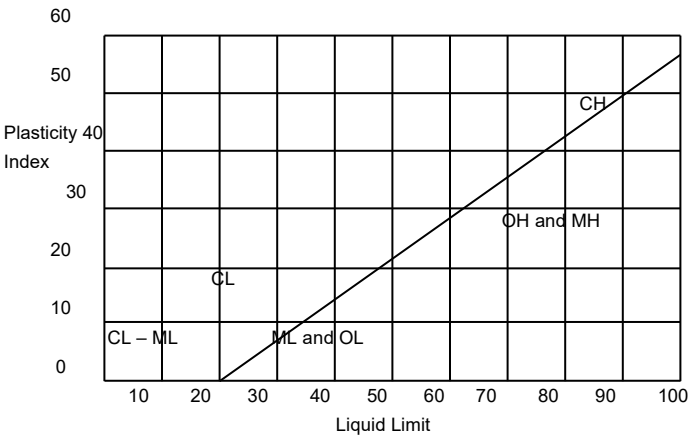
CONSISTENCY OF COHESIVE SOILS

Descriptive Term	Undrained Shear Strength kPa (psf)	N Value Standard Penetration Test	Remarks
Very Soft	< 12 (< 250)	< 2	Can penetrate with fist
Soft	12 – 25 (250 – 500)	2 – 4	Can indent with fist
Firm	25 – 50 (500 –1000)	4 – 8	Can penetrate with thumb
Stiff	50 – 100 (1000 – 2000)	8 – 15	Can indent with thumb
Very Stiff	100 – 200 (2000 – 4000)	15 – 30	Can indent with thumb-nail
Hard	> 200 (> 4000)	> 30	Can indent with thumb-nail

Notes: 1. Relative density determined by standard laboratory tests.
2. N value – blows/300 mm penetration of a 623 N (140 Lb.) hammer falling 760 mm (30 in.) on a 50 mm O.D. split spoon soil sampler. The split spoon sampler is driven 450 mm (18 in.) or 610 mm (24 in.). The “N” value is the Standard Penetration Test (SPT) value and is normally taken as the number of blows to advance the sampler the last 300 mm.

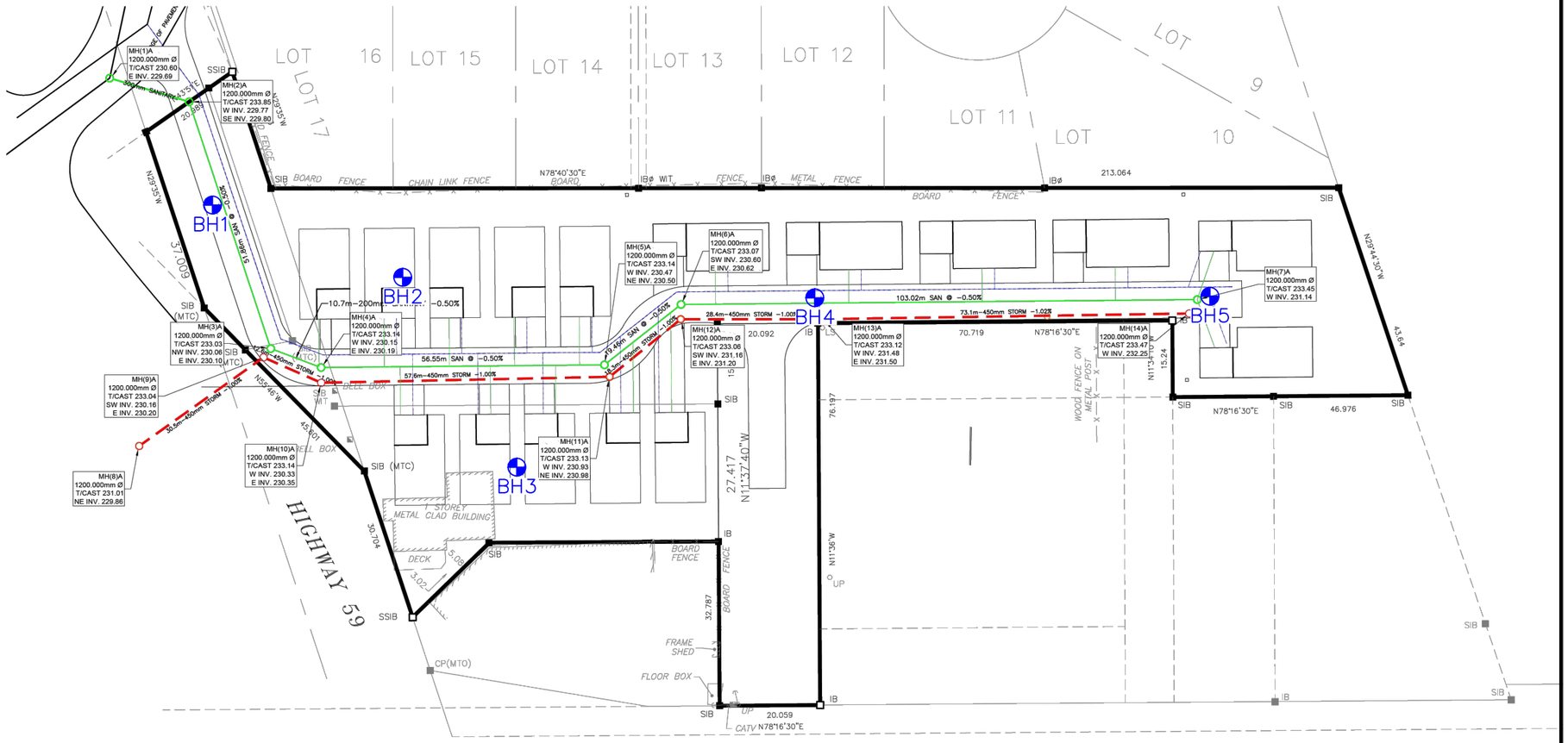
APPENDIX B CONTINUED
CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES
ASTM Designation: D 2487 - 69 AND D 2488 – 69
(Unified Soil Classification System)

Major Divisions			Group Symbols	Typical Names	Classification Criteria		
Coarse-grained soils More than 50% retained on No. 200 sieve *	Gravels 50% or more of coarse fraction retained on No. 4 sieve	Clean gravels	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines Less than 5% pass No. 200 sieve . . . . . GW, GP, SW, SP More than 12% pass No. 200 sieve . . . . . GM, GC, SM, SC 5 to 12% pass No.200 sieve . . . . . Borderline classifications requiring use of dual symbols	C_u=D60/D10 greater than 4; C_z = $(D30)^2$/(D10xD60) between 1 and 3	
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines		Not meeting both criteria for GW	
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures		Atterberg limits above "A" line with P.I. greater than 7	
	Sands More than 50% of coarse fraction passes No. 4 sieve	Clean Sands	SW	Well-graded sands and gravelly sands, little or no fines		C_u=D60/D10 greater than 6; C_z = $(D30)^2$/ (D10xD60) between 1 and 3	
			SP	Poorly graded sands and gravelly sands, little or no fines		Not meeting both criteria for SW	
		Sands with fines	SM	Silty sands, sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures		Atterberg limits above "A" line with P.I. greater than 7	
Fine-grained soils 50% or more passes No. 200 sieve *	Silts and clays Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	Plasticity Chart For classification of fine-grained soils and fine fraction of coarse-grained soils. Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols. Equation of A-line: PI=0.73 (LL-20)		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silts			
			OL	Organic silts and organic silts of low plasticity			
	Silts and clays Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts			
			CH	Inorganic clays of high plasticity, fat clays			
			OH	Organic clays of medium to high plasticity			
	Highly organic soils		Pt	Peat, much and other highly organic soils	* Based on the material passing the 3 in. (76mm) sieve.		



APPENDIX C

DRAWING 22236-01 – BOREHOLE LOCATION PLAN
BOREHOLE LOGS



HIGHWAY NO. 3 (TALBOT ROAD)

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www.landtek.ca

project location

Location plan an extract from XXXX©

Legend:

- Approximate location of borehole drilled by Landtek Limited at August 22nd, 2022.

Notes:

Base drawing provided by Weston Consulting

revisions

#	date	revision/comment

client
Award Construction

municipality
Norfolk County

project
Geotechnical Investigation
10 Highway 59, Delhi, Ontario

sheet
Borehole Location Plan

date: January 9th, 2022
drawn: MDC
checked: JDC
project #: 22236
scale: 1:2

22236-01

LOG OF BOREHOLE BH1

Project No.: 22236
Project Name: 10 Highway 59, Delhi
Location: 10 Highway 59, Delhi

Drill Date: 2022-08-22
Drilling Method: Solid Stem
Datum:

Northing: 42.856433
Easting: -80.509764
Ground Surface Elevation: 0

Depth Scale (m)	Stratigraphic Symbol	Depth/Elevation (m)	Description	Number	Type	Blow Counts/150 mm	N Value	Comments
			Organic Soil	1	SS	8 11 10	21	
			Fill Sand, trace gravel. Brown, compact, moist.					
			...clayey silt, trace sand. Soft.	2	SS	1 1 1	2	
1		-1.0						
			Sand trace gravel. Brown, loose, dry.	3	SS	1 1 4	5	
2		-2.0						
			...no gravel. Compact.	4	SS	3 6 5	11	
3		-3.0		5	SS	2 3 8	11	
4		-4.0	...trace gravel.	6	SS	3 5 8	13	
5		-5.0	End of Log					

Penetration / Strength Results
Undrained Shear Strength Values (kPa): 40 80 120 160
Penetration Test Values (Blows / 0.3m): 20 40 60 80

Moisture / Plasticity
PL MC LL
Moisture / Plasticity: 10 20 30 40
3.0
13.0
14.0
5.0
4.0
3.0

Well Details

Groundwater Conditions

Headspace Vapor (ppm) [LEL(%)]

Additional Notes:
1. Borehole open to approximately 5.0 m depth on completion.
2. Groundwater or water seepage not encountered.
3.
4.

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LOG OF BOREHOLE BH2

Project No.: 22236
Project Name: 10 Highway 59, Delhi
Location: 10 Highway 59, Delhi

Drill Date: 2022-08-22
Drilling Method: Solid Stem
Datum:

Northing: 42.85634
Easting: -80.509289
Ground Surface Elevation: 0

Depth Scale (m)	Stratigraphic Symbol	Depth/Elevation (m)	Description	Number	Type	Blow Counts/150 mm	N Value	Comments
			GeotechTopsoil Organic Soil					
			Fill Silty sand, trace gravel. Brown, compact, moist.	1	SS	5 8 6	14	
			...sandy silt. Loose.	2	SS	1 1 1	2	
1		-1.0						
			...silt, trace slay, trace sand.	3	SS	1 1 1	2	
2		-2.0						
			Sand trace gravel. Brown, compact, dry.	4	SS	6 10 12	22	
3		-3.0		5	SS	8 10 10	20	
4		-4.0		6	SS	10 12 13	25	
5		-5.0	End of Log					

Penetration / Strength Results: Undrained Shear Strength Values (kPa) 40 80 120 160; Penetration Test Values (Blows / 0.3m) 20 40 60 80

Moisture / Plasticity: PL MC LL; Moisture / Plasticity 10 20 30 40

Moisture / Plasticity values: 5.0, 11.0, 14.0, 4.0, 3.0, 4.0

Well Details | Groundwater Conditions | Headspace Vapor (ppm) [LEL(%)]

Additional Notes:
1. Borehole open to approximately 5.0 m depth on completion.
2. Groundwater or water seepage not encountered.
3.
4.

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LOG OF BOREHOLE BH3

Project No.: 22236
Project Name: 10 Highway 59, Delhi
Location: 10 Highway 59, Delhi

Drill Date: 2022-08-22
Drilling Method:
Datum:

Northing: 42.856146
Easting: -80.508805
Ground Surface Elevation: 0

Depth Scale (m)	Stratigraphic Symbol	Depth/Elevation (m)	Description	Number	Type	Blow Counts/150 mm	N Value	Undrained Shear Strength Values (kPa) 40 80 120 160 / Penetration Test Values (Blows / 0.3m) 20 40 60 80	Moisture / Plasticity PL MC LL / Moisture / Plasticity 10 20 30 40	Well Details	Groundwater Conditions	Headspace Vapor (ppm) [LEL(%)]	Comments
			Organic Soil										
			Fill Silty sand, trace gravel. Brown, loose, moist.	1	SS	3 4 3	7		2.0				
			Sand trace gravel. Brown, compact, moist.										
1		-1.0		2	SS	5 5 6	11		3.0				
				3	SS	6 6 6	12		3.0				
2		-2.0											
				4	SS	5 7 8	15		4.0				
3		-3.0		5	SS	6 8 11	19		3.0				
4		-4.0											
				6	SS	6 9 10	19		4.0				
5		-5.0	End of Log										

Additional Notes:
1. Borehole open to approximately 5.0 m depth on completion.
2. Groundwater or water seepage not encountered.
3.
4.

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LOG OF BOREHOLE BH4

Project No.: 22236
Project Name: 10 Highway 59, Delhi
Location: 10 Highway 59, Delhi

Drill Date: 2022-08-22
Drilling Method: Solid Stem
Datum:

Northing: 42.856518
Easting: -80.508267
Ground Surface Elevation: 0

Depth Scale (m)	Stratigraphic Symbol	Depth/Elevation (m)	Description	Number	Type	Blow Counts/150 mm	N Value	Undrained Shear Strength (kPa) 40 80 120 160 / Penetration Test Values (Blows / 0.3m) 20 40 60 80	Moisture / Plasticity PL MC LL / Moisture / Plasticity 10 20 30 40	Well Details	Groundwater Conditions	Headspace Vapor (ppm) [LEL(%)]	Comments
			Organic Soil										
			Fill Silty sand, trace gravel. Brown, loose to compact, moist.	1	SS	4 5 5	10		3.0				
1		-1.0	**Sand** trace gravel. Brown, loose, dry to moist.	2	SS	1 1 1	2		8.0				
				3	SS	1 1 1	2		6.0				
2		-2.0		4	SS	2 2 3	5		3.0				
3		-3.0		5	SS	2 3 3	6		3.0				
4		-4.0	...compact, moist.	6	SS	4 6 8	14		4.0				
5		-5.0	End of Log										

Additional Notes:
1. Borehole open to approximately 5.0 m depth on completion.
2. Groundwater or water seepage not encountered.
3.
4.

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LOG OF BOREHOLE BH5

Project No.: 22236
Project Name: 10 Highway 59, Delhi
Location: 10 Highway 59, Delhi

Drill Date: 2022-08-22
Drilling Method: Solid Stem
Datum:

Northing: 42.85664
Easting: -80.507248
Ground Surface Elevation: 0

Depth Scale (m)	Stratigraphic Symbol	Depth/Elevation (m)	Description	Number	Type	Blow Counts/150 mm	N Value	Comments
			Organic soil					
			Fill Silty sand, trace gravel. Brown, compact, moist.	1	SS	5 6 6	12	
1		-1.0	**Sand** trace gravel. Brown, loose to compact, moist.	2	SS	2 4 6	10	
			...compact.	3	SS	5 9 9	18	
2		-2.0		4	SS	2 3 10	13	
3		-3.0		5	SS	5 9 11	20	
4		-4.0		6	SS	4 7 9	16	
5		-5.0	End of Log					

Penetration / Strength Results
Undrained Shear Strength Values (kPa): 40 80 120 160
Penetration Test Values (Blows / 0.3m): 20 40 60 80

Moisture / Plasticity
PL MC LL
Moisture / Plasticity: 10 20 30 40
1.0
3.0
2.0
4.0
4.0
3.0

Well Details

Groundwater Conditions

Headspace Vapor (ppm) [LEL(%)]

Additional Notes:
1. Borehole open to approximately 5.0 m depth on completion.
2. Groundwater or water seepage not encountered.
3.
4.

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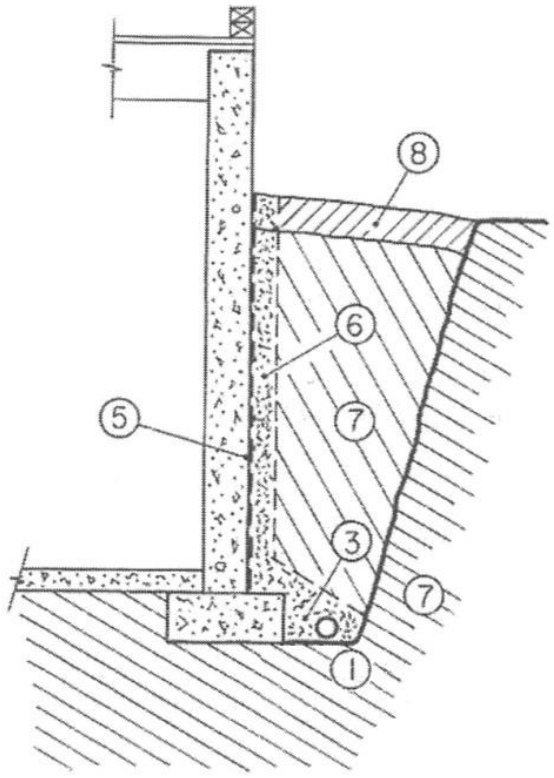
APPENDIX D

DRAWING 22236-02 – ENGINEERING COMMENTARIES – GENERAL REQUIREMENTS FOR DRAINAGE TO BASEMENT STRUCTURES

DRAWING 22236-03 – ENGINEERING COMMENTARIES – GENERAL REQUIREMENTS FOR UNDERFLOOR DRAINAGE SYSTEM



① 100 mm, perforated or slotted pipe placed below the upper level of the floor slab.;
③ Filter material that is compatible with the grain size characteristics of the fine grained foundation and backfill soils, as well as with the perforations of the pipe;
④ Filter material continuously or intermittently placed next to the foundation wall to intercept water draining from window wells, down exterior walls and from low areas near the building;
⑤ Damp-proofing on wall – optional depending on the quality of the concrete wall;
⑥ Optional use of sheet drain, or synthetic fire blanket, next to the foundation wall to replace the soil filter according to ④;
⑦ Foundation and backfill soils, which may contain fine grained and erosion-susceptible materials;
⑧ "*Topping off*" material is to be graded such that it slopes outwards to lead surface water away from the building. It is usually desirable to use low permeability topsoil to reduce the risk of overloading the drainage pipe.

Based on Figure 12.1, Canadian Foundation Engineers Manual, Fourth Edition, 2006.

Additional Notes:

1. The perforated or slotted drainage pipe is to lead to a positive drainage sump or outlet. The invert of the pipe is to be a minimum of 150 mm below the underside of the proposed floor slab.
2. Backfill materials to the interior of the foundation walls may be clean, organic-free soils that can be compacted to the specified density within in a confined space.
3. Heavy, vibratory compaction equipment should not be used within 450 mm of the foundation wall. Fill is not to be placed or compacted within 1.8 m of the wall unless fill is being placed simultaneously on both sides of the wall.
4. The moisture barrier beneath the floor slab is to comprise at least 200 mm of compacted19mm clear stone or an equivalent free-draining material.
5. Should the 19 mm clear stone require surface blinding then 6mm stone chips are to be used.
6. The slab on grade should not be structurally connected to the foundation wall or footing.

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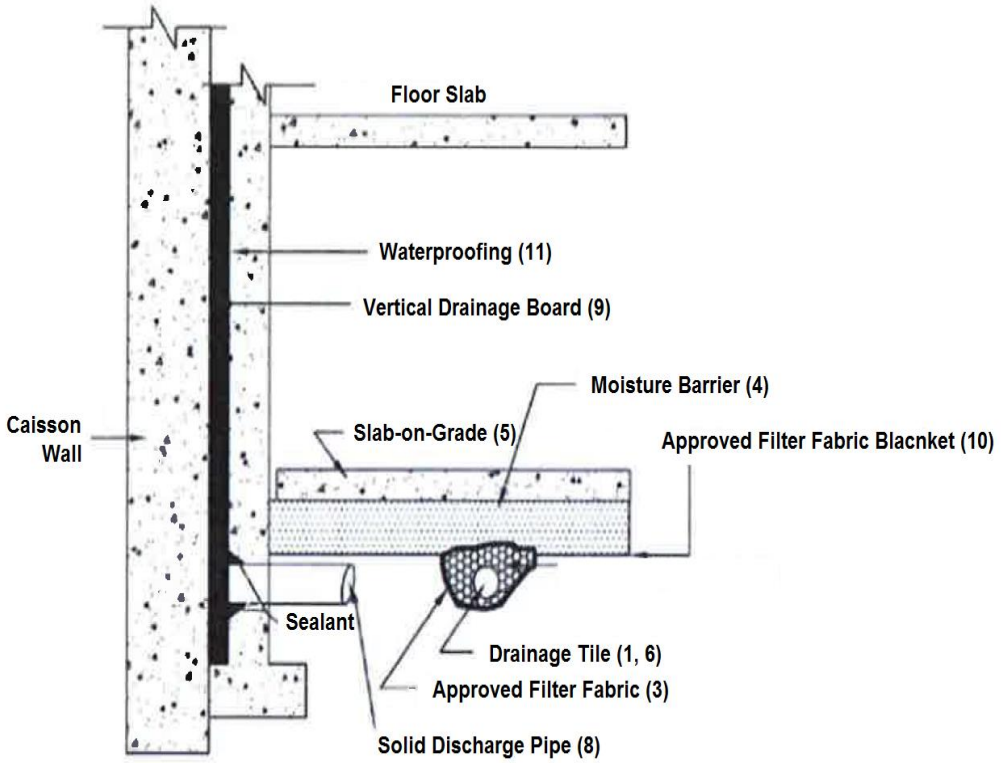
General Requirements for Drainage to Basement Structures

client	1376412 Ontario Limited % A J Clarke & Associates Ltd.		
project	10 Highway 59, Delhi, Ontario		
project #	22236	drawing #	22236-02



Notes:

1. Drainage tile, if required for permanent dewatering, to consist of 100 mm diameter weeping tile or equivalent perforated pipe leading to a positive sump or outlet, spaced between columns;
2. 19 mm clear stone – 150 mm top and side of drain. If the drain is not on the footing then place 100 mm of 19 mm clear stone below the drain;
3. Wrap the clear stone with an approved filter fabric (e.g., Terrafix 270R or equivalent);
4. Moisture barrier to be at least 200 mm of compacted, 19 mm clear stone or equivalent (and approved), free-draining material. A vapour barrier may be required for specialty floor coverings;
5. Typically, the slab-on-grade is not structurally connected to the wall or footing. However, if it is connected to the walls it should be designed accordingly;
6. Underfloor drain invert, where to be installed, to be at least 300 mm below underside of floor slab. Drainage tile should be placed in parallel rows 6 m to 8 m centres one way. Place drains on 100 mm of 19 mm clear stone and 150 mm of 19 mm clear stone on top and sides. Enclose clear stone with filter fabric as prescribed in Note (3);
7. Do not connect any underfloor drainage to perimeter drainage. The two systems are to remain separate.
8. Locate solid discharge at the middle of each bay between soldier piles;
9. Vertical drainage board (e.g., MiraDrain 6000 or equivalent) with filter cloth should be continuous from bottom to 1.2 m below exterior finished grade;
10. The entire subgrade is to be sealed with an approved filter fabric as in Note (3) where non-cohesive (silty/sandy/granular) soils are encountered below the groundwater table;
11. Where no permanent dewatering is proposed, the basement walls must be waterproofed below the seasonally highest groundwater level (plus 1.0 m to 1.5 m buffer) using bentonite or an equivalent waterproofing system;
12. The Geotechnical Report should be reviewed for site-specific details. Final detail must be approved before system is considered acceptable.

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General Requirements for Underfloor Drainage Systems

client	1376412 Ontario Limited % A J Clarke & Associates Ltd.
project	10 Highway 59, Delhi, Ontario
project #	22236
drawing #	22236-03

Zoning By-law Amendment

Peach Barn Estates, Delhi
Aldershot Homes

Planning Justification Report

Updated: January 29, 2025

vallee
Consulting Engineers, Architects & Planners

Table of Contents

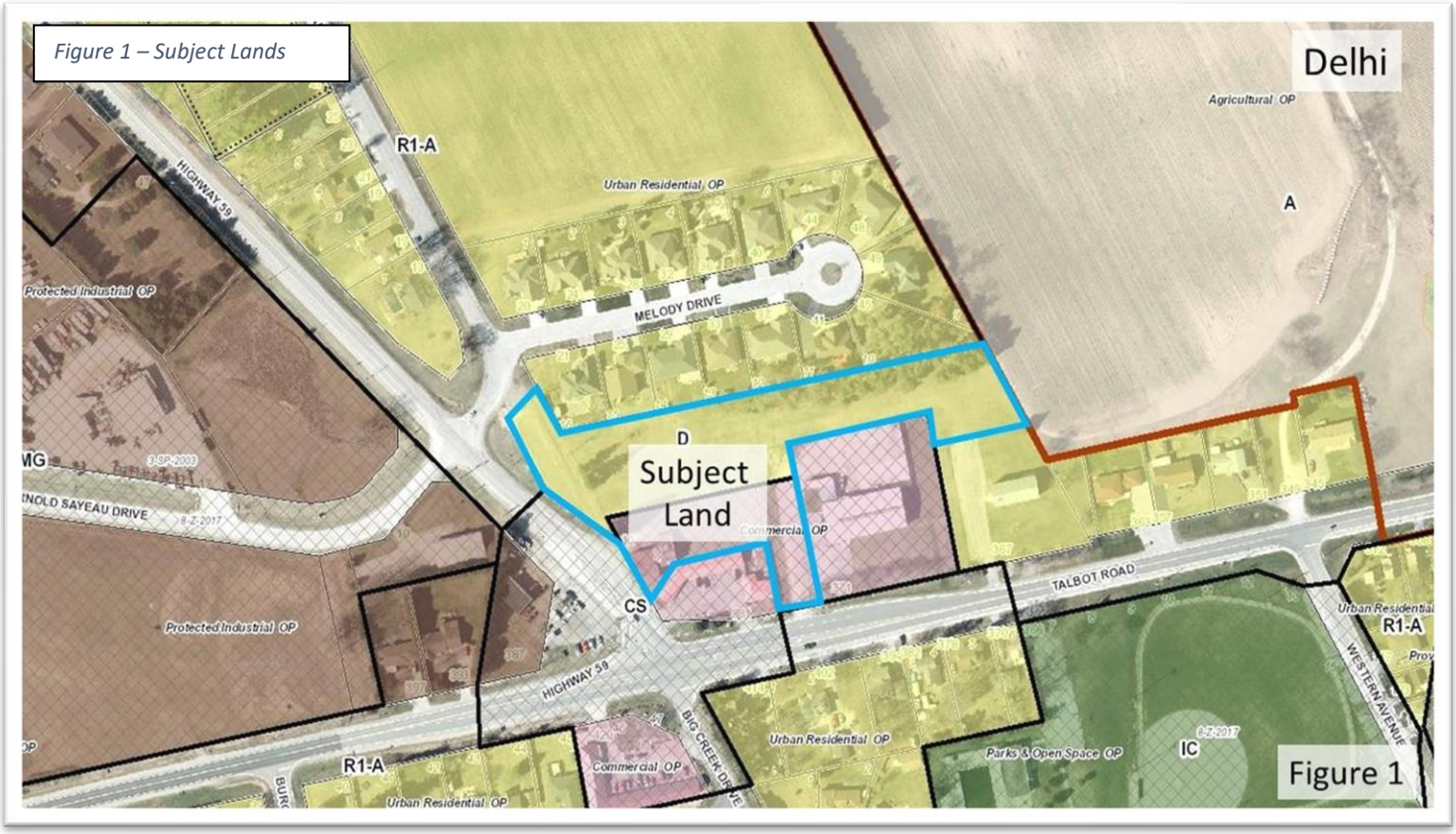
Introduction

G. Douglas Vallee Limited, on behalf of the Aldershot Homes, is making application to amend the Norfolk County Zoning By-law to facilitate the development of a 25-unit single detached residential condominium on approximately 1.25 hectares of land in Delhi. The area is made up of a mix of residential, commercial, park and industrial lands.

A site plan application, followed by an exemption from draft plan of condominium are intended to follow a successful zoning by-law amendment.

Planning Observations:

The lands are within Delhi, near the intersection of Highway 59, Talbot Road (Highway 3) and Hawtrey Road. They are located within 8 kilometres of the Courtland Industrial area, nearly adjacent to north-westerly Delhi Industrial area. An existing 16 lot residential subdivision exists off of Hawtrey Road on Melody Drive. Additional residential lands exist along Hawtrey Road traveling north of the subject lands, and a few large lot single detached dwellings on Highway 59, and along Talbot Road near the intersection of Highway 59 and Talbot Road. The lands are within approximately 30m of a protected industrial zone/designation. (See Figure 1 – Subject Lands)



Studies:
The following studies have been completed in support of the proposed applications:

- Functional Servicing Report prepared by G. Douglas Vallee Limited, dated January 29, 2025.
- Traffic Impact Brief prepared by RC Spencer Associates Inc., dated November 2024.
- Archaeological study prepared by Archaeological Consultants Canada, dated November 1, 2024.
- Geotechnical Investigation prepared by Landtek Limited, dated January 23, 2023
- Land Use Compatibility Study prepared by Sonair, dated November 20, 2024.

Development Review Summary:

- Implements Section 2 of the Planning Act.
- Is consistent with the intent of the Provincial Policy.
- Implements the Goals and Objectives of the Norfolk County Official Plan.
- Traffic generation does not negatively impact the existing road network.
- Provides additional forms of housing encouraged by the Norfolk County Official Plan.
- Has no impact on surrounding land uses and complies with D6 Guidelines for compatibility.
- Controls stormwater to County standards.
- Can be serviced with municipal water and wastewater.
- Represents good planning.

Description:
The subject lands are approximately 1.25 hectares (3 acres) in area and are located on Hawtrey Road in Delhi, Norfolk County. There is an existing old single-storey metal-clad building on the property. The adjacent Maple Leaf Motel encroaches onto the subject lands. Period The lands are designated Residential and Commercial in accordance with the Official Plan. The lands are zoned Development (D) and Service Commercial (SC), in accordance with the Norfolk County Zoning Bylaw. The property is maintained and comprised of primarily grass with a few trees. There is a common access that serves the Timberwoods Designs Cabinetry business on Highway 3. See Figure 2 – Description.

Surrounding uses include:

- **North**: Existing Residential Subdivision
- **South:** Commercial uses including Maple Leaf Motel and Timberwoods Designs Cabinetry
- **East**: Agriculture
- **West**: DaSilva Auto, Residential Dwellings, and vacant lands

Figure 2 – Description

Planning Applications:

There are 3 planning applications required to facilitate the proposed development and one application that is not required for technical reasons.

1. Zoning By-law Amendment (See details below)
   To facilitate the proposed condominium, a Zoning By-law Amendment is required to add a residential use to the Urban Residential Type 4 Zone (R4) with special provisions.

2. Site Plan
   To design the site, function and control of elements of the proposed condominium including elements such as servicing, stormwater, landscaping, access and hard surfaces.

3. Exemption of Draft Plan of Condominium Approval
   To facilitate the ability to control how the units and condominium corporation function together within the lands and to establish the ability to sell units.

X Official Plan Amendment (Not required)
See Section 9.6.1 d) iii) and 9.11 b). Both include policy that recognize that the designation is approximate or an error, a technical revision to Schedule B-17 may occur to change the Commercial designation portion of the subject property from Commercial to Residential, without an amendment to the Official Plan.

Proposed Zoning By-law Amendment:

To rezone the portion of lands currently zoned Development and Service Commercial to:

Urban Residential Type 4 Zone (R4) with a special provision: (on zoning Schedule "A20")

5.4.1 Permitted Uses

- Add Multiple Single Detached Dwellings as a permitted use.

5.4.2 Provisions

- Subject to the R4 Street Townhouse zone provisions to the whole of the lot.
- Rear yard setback is defined as the easterly most property line.
- Minimum rear yard setback reduction from 7.5 metres to 3 metres
- Front lot line is deemed to be Hawtrey Road.
- Minimum lot frontage from 30 metres to 20 metres.
- Exterior side yard defined as the lot lines on Highway 59 and Highway 3.
- Exterior side yard setback to Highway 59 of 4 metres.
- All other lot lines that are not a rear or front lot line are deemed to be interior side lot lines.
- Interior side yard setback reduction from 3 metres to 2.7 metres
- Separation between units reduction from 2 metres to 1.8 metres

Other Sections (2.88, 3.11.2, 4.2.3 b))

- Modifications to the definition of a 'lot', the applicability of a private condominium road, and permissions for the location of visitor parking.

The proposed zoning by-law provisions are designed to implement the site plan included as Appendix A. The site plan demonstrates that the proposed dwelling units will comply with these provisions and those other provisions of the R4 Zone including separation between units. Details of the proposed provisions are discussed further in this report.

List of Appendices

Several appendices for part of this report which include:

Appendix A – Site Plan
Appendix B – Planning Act – Matters of Provincial Interest
Appendix C – Provincial Planning Statement 2024 Review
Appendix D – Norfolk Official Plan Review

Planning Review:

The proposed Zoning By-law amendment was prepared considering several planning documents including the *Planning Act*, Provincial Policy Statement, Norfolk County Official Plan, and the Norfolk County Zoning By-law 1-ZA-2014.

Planning Act

Section 2	Lists matters of provincial interest to have regard to.
Section 3	Requires that, in exercising any authority that affects a planning matter, planning authorities "shall be consistent with the policy statements" issued under the Act and "shall conform with the provincial plans that are in effect on that date, or shall not conflict with them, as the case may be".
Section 34	Allows amendments to the Zoning By-law.
Section 51	Allows the application for draft plan of condominium.

Provincial Interest

Section 2 of the *Planning Act* establishes matters of provincial interest. The Minister, the council of a municipality, a local board, a planning board, and the Tribunal, in carrying out their responsibilities under this Act, shall have regard to, among other matters, matters of provincial interest. These matters are reviewed in Appendix B.

It is noted that these provincial interests are from the highest level of policy being the *Planning Act*; however, the intent of the owner's application meets these interests and are demonstrated in this report.

Section 3 of the *Planning Act* requires that, in exercising any authority that affects a planning matter, planning authorities "shall be consistent with the policy statements" issued under the *Act* and "shall conform with the

provincial plans that are in effect on that date, or shall not conflict with them, as the case may be". Section 34 of the *Planning Act* allows for the consideration of amendments to the Zoning By-law.

Provincial Planning Statement (2024)

The subject land is identified as being within an Urban Settlement Area, according to the Provincial Planning Statement, 2024 (PPS). Details describing the applicable Provincial policies and how the application is consistent with the PPS are included in Appendix C.

The Provincial Planning Statement (PPS) is Ontario's key policy framework for guiding land use planning to promote efficient, sustainable, and equitable growth. It aims to encourage compact development, optimize the use of land and infrastructure, and create complete, inclusive communities with diverse housing, transportation, and employment options. The PPS also seeks to protect natural resources, mitigate environmental impacts, and ensure public health and safety. Additionally, it supports economic growth by safeguarding employment lands and promoting land use compatibility to prevent conflicts. Ultimately, the PPS balances Ontario's growth needs with long-term environmental, social, and economic sustainability.

Building Homes, Sustainable Strong and Competitive Communities
Planning for People and Homes (Sections 2.1 and 2.2)

- **Housing Options**: The development will provide additional residential units, contributing to housing attainability, especially for fixed-income individuals. The design will add to the diversity of housing options and densities in the area as per provincial goals for mixed-use communities.
- **Infrastructure Capacity**: The area has sufficient infrastructure, including water and sewage, which supports the development of the proposed residential units. This aligns with the provincial requirement for municipalities to maintain a supply of serviced land.
- **Transit and Active Transportation**: The development is near public transit (600 meters to a bus stop) and is in close proximity to existing sidewalks, supporting active transportation.

Settlement Area and Land Use Compatibility (Section 2.3)

- **Infill and Intensification**: The development uses an underutilized parcel of land for residential intensification. The proposed land use is compatible with existing surrounding uses, including nearby industrial, commercial, and residential lands.
- **Industrial Proximity**: Despite being near industrial lands, existing residential units are located even closer to these industrial areas. This suggests that the infill development will not negatively impact the industrial area's viability or freight operations. Similarly, the reverse is also reasonable to conclude.

Employment Areas and Transition (Section 2.8)

- **Compatibility with Employment Uses**: The area includes a mix of residential, commercial, and industrial uses. The Land Use Compatibility analysis prepared by Sonair confirms the development is compatible with surrounding industrial land uses and that the development will not further impact the employment area and its ability to develop.

Energy Conservation, Air Quality and Climate Change (Section 2.9)

- **Sustainability**: The development incorporates compact design and is transit-supportive being in close proximity to a bus stop, helping reduce greenhouse gas emissions. Local sidewalks and proximity to essential services will reduce reliance on private vehicles and encourage active transportation.

Land Use Compatibility (Section 3.5)

- **Sensitive Land Uses**: The policies focus on balancing industrial and sensitive land uses, avoiding negative impacts, and protecting long-term industrial operations. The Land Use Compatibility analysis prepared by Sonair confirms the development is compatible with surrounding industrial land uses, with no additional mitigation required.

Infrastructure, Sewage, and Stormwater Management (Section 3.6)

- **Efficient Use of Municipal Services**: The development will connect to existing municipal sewage and water systems, optimizing their use. Water modeling confirms that the development can be sustained without impacting service capacity.
- **Stormwater Management**: The site design incorporates green infrastructure and minimizes stormwater runoff, aligning with best practices for sustainable stormwater management.

Public Spaces and Active Communities (Section 3.9)

- **Recreation and Open Spaces**: The development is located near public recreational facilities, including baseball diamonds, a public pool, and parklands. The area supports opportunities for active lifestyles, although the development itself is not directly providing new public spaces.

The proposed 25-unit infill development is largely compliant with the relevant policies outlined in the Provincial Planning Statement 2024. Given the nearby existing area residential development, compatibility with the adjacent industrial lands is unlikely to be an issue. The development leverages existing infrastructure and supports provincial goals for intensification, transit-supportive communities, and sustainable land use practices.

<u>Norfolk County Official Plan</u>

Technical Revision to Schedule B-17

The lands are designated both Residential and Commercial. The Commercial Designation on Schedule B-17 does not follow a property line where it abuts the Residential Designation. The following Official Plan policy allow revisions to the Plan without a formal amendment.

9.6 Development Control
9.6.1 Official Plan Amendments

d) Technical revisions to this Plan will not require an Official Plan Amendment provided they do not change the intent of the Plan. Technical revisions include:
   iii) Correcting grammatical, dimensional and **boundary**, mathematical or typographical errors;

This Schedule modification is a technical revision which is captured by Section 9.6.1 d) iii) whereby the boundary appears to be an error.

Official Plan Section 9.11 Interpretation includes:

b) The **boundaries between land uses** designated on Schedule "B" **are approximate except where they coincide with** roads, railways, rivers, other bodies of water or other **clearly defined physical features**. Future streets shown on Schedules to this Plan are shown in approximate locations only. Provided that the intent of this Plan is maintained, minor adjustments to the location of boundaries shown on the Schedules to this Plan shall not require an amendment to the Plan.

Since Section 9.6.1 d) iii) and 9.11 b) both include policy that recognize that the designation is approximate or an error, a technical revision to Schedule B-17 may occur to change the Commercial designation portion of the subject property from Commercial to Residential, without an amendment to the Official Plan.

Policy Review:
The subject property is designated both Urban Residential and Commercial in accordance with Schedule "B-17" of the Norfolk County Official Plan. Several sections of the Official Plan are applicable when considering a zoning bylaw amendment to implement a draft plan of residential condominium. As part of this report the following sections were reviewed and considered:

a) Section 2.2 – Goals and Objectives
b) Section 5.3 – Housing
c) Section 5.4 – Community Design
d) Section 6.4 – Urban Areas
e) Section 6.5.3 – Delhi Urban Area
f) Section 7.7 – Urban Residential Designation
g) Section 8.0 – Networks and Infrastructure
h) Section 8.9 – Water and Wastewater Services

Generally, the policies of the official plan direct and encourage the greatest amount of development to take place within the six urban areas within Norfolk County. The lands are currently within the Urban Area of Delhi and are designated for residential development, notwithstanding the above noted technical modification to the location of the Residential/Commercial designation. The policy of the Official Plan encourages this form of development and is reviewed in detail at Appendix C.

On a high level, details of the Official Plan policies are captured by the overarching Goals and Objectives. Section 2.2 of the Official Plan set out six "Goals and Objectives" to which the following five are applicable to the proposed residential development:

- Protecting and Enhancing the Natural Environment
- Maintaining and Enhancing the Rural and Small-Town Character
- Maintaining a High Quality of Life
- Upgrading and Expanding Infrastructure
- A Well Governed, Well Planned and Sustainable County

The proposed amendment achieves the 'Goals and Objectives' of the Official Plan. Given the lands are within an area designated for residential development, the proposed applications will provide a more efficient use of lands by providing more compact housing forms and densities that cater to people with fixed incomes and designed for accessibility.

The Official Plan specifically encourages residential intensification within its Urban Residential Areas. Section 5.3.1 seeks to implement a minimum density of 15uph within the County's six urban areas. The proposed application will implement a density of 20 uph, exceeding the County's minimum target. The proposed amendment and future plan of condominium will implement a more efficient and compact form of development while ensuring compatibility with the existing uses in the area through similar housing types.

The subject lands are underutilized. They are located nearby to the Trans Canada Trail and are adjacent to a potential extension of the On-Road Cycling Route identified on Schedule I-4 of the Official Plan. The County Official Plan supports the development of vacant and underutilized lands that are compact and efficiently used and lends support to the location of the development having access to a connection to active transportation and networks as identified on Schedule "I".

Norfolk County's existing infrastructure capacity will be reviewed by Norfolk County's consultant (RV Anderson Associates) in consideration of the connections proposed to service this development and considering the Functional Servicing Report prepared by G. Douglas Vallee Limited. The proposed infrastructure will be designed and constructed in accordance with Norfolk County's requirements and will be subject to Norfolk County's approval through the plan of subdivision process.

Official Plan Summary:
The proposed development on Hawtrey Road aligns closely with Norfolk County's Official Plan policies, supporting objectives for growth, intensification, and housing diversity within urban areas. The project contributes to residential intensification by efficiently utilizing a vacant parcel of land, achieving a density of approximately 20 units per hectare. It provides much-needed housing options, particularly for seniors and individuals with fixed incomes, while maintaining compatibility with the surrounding neighbourhood. The design emphasizes safety, aesthetic appeal, and integration with existing municipal infrastructure, including water, wastewater, and transportation systems.

This compact and well-planned development advances the County's goals for sustainable urban growth, enhancing the character of the Delhi Urban Area while meeting infill and intensification targets. It contributes to a range of housing types, addressing affordability and accessibility. The project's alignment with community design principles and policy objectives ensures it supports high-quality, inclusive neighbourhoods, reinforcing Delhi's role as a focal point for growth and residential diversity within Norfolk County.

Accordingly, the proposed application meets the intent and purpose of the Official Plan and represents good planning.

Norfolk County Zoning By-law

It is proposed to rezone the subject property from Development and Service Commercial to Urban Residential Type 4 Zone (R4) with a special provision and to amend Schedule "A20" of the Norfolk County Zoning By-law.

The purpose of the zoning amendment is to facilitate the development of a condominium in accordance with the proposed site plan drawing submitted with this application. In order to achieve the condominium design, it appears necessary to amend several items of the zoning by-law.

The special provision proposes to add Multiple Single Detached Dwellings on a lot as a permitted use with the following zoning provisions:

Rear yard setback is defined as the easterly most property line **Comment:** Defining the rear yard assist with implementation clarity of the proposed site plan.

- Rear yard setback reduction from 7.5 metres to 3.0 metres

Comment: There are no impacts apparent to the reduction of the setback as the adjacent property is of a different zone with its own setbacks. This facilitates the efficient use of the lands.

- Front lot line is deemed to be Hawtrey Road.
  Comment: Due to the very irregular shape of the lot, it is proposed that lot lines be defined so as to avoid misinterpretation of the implementation of the proposed site plan layout.

- Minimum lot frontage from 30 metres to 20 metres.
  Comment: The connection of the road for the development is to Hawtrey Rd which is existing. Proper access can be established and is supported by the traffic impact study. As such, it is appropriate to permit the proposed reduced frontage.

- Exterior side yard defined as the lot lines on Highway 59 and Highway 3.
  Comment: Defining these lot lines maintains the intent of the by-law definitions as they both abut a public highway, while clarifying their position as boundaries to the irregular shaped property. This is to avoid confusion when implementing the site plan design.

- Exterior side yard setback to Highway 59 of 4 metres.
  Comment: This is to capture the setback of unit 25. There is sufficient physical space between the proposed unit boundary and the actual public highway. Furthermore, a fence will be installed along the property line of Highway 59, adding a barrier between the private yards and dwellings to the highway.

- All other lot lines that are not a rear or front lot line are deemed to be interior side lot lines.
  Comment: As previously mentioned above, it is important to define the lot lines for this irregular shaped lots to ensure proper implementation of the proposed site plan. No impacts are created from deeming the lot lines as proposed.

- Interior side yard setback reduction from 3 metres to 2.7 metres (not including steps.)
  Comment: The proposed reduction to the interior side yard setback is primarily to facilitate units 16, 17 and 18 in the proposed site plan. Without a reduction in setback, the units would not be able to be constructed, resulting in a reduction in units, and an inefficient design. However, it is recommended that the 2.7 metre setback be applied to all interior side yards to capture all units within the design. For example: a) Unit 25 requires a 4m setback. b) Units 14 and 15 require a 5 metre setback. c) The remaining units all will meet a 6 metre setback. Rather than defining setbacks for each unit in its proposed position, it is more reasonable to continue the same 2.7 metre setback throughout the development, noting that the intent is to provide more traditional rear yard amenity space to all other units. In terms of steps, Section 3.10 f) allow for the projection of steps into a required rear yard of not greater than 1.5 metres.
- Modifications to the definition of a ‘lot’, the applicability of a private condominium road, and permissions for the location of visitor parking. The following is a table to describe the proposed changes to Sections 2.88, 3.11.2 and 4.2.3 b) of the zoning by-law.

- Separation between units reduction from 2 metres to 1.8 metres.
  Comment: The units will be designed to comply with the Ontario Building Code. Ample access between units will be maintained. The reduction does not create any impacts.

Section	Existing	Provided
2.88	"LOT" shall mean a parcel of land which can be legally conveyed. Where two (2) adjoining lots are in common ownership and a main building straddles the lots, the two (2) lots are deemed to be one (1) lot for the purposes of establishing interior side yards.	In lieu of Section 2.88 the definition of a LOT shall not apply to the individual condominium units. The LOT shall be defined as the parcel of land (1.3ha) consisting of entire condominium block. The Norfolk County Zoning By-law provisions regarding the definition of a LOT are unclear in its application to a condominium development. The inclusion of this provision will clearly define the LOT and corresponding yard provisions. It will enhance the ability to interpret and apply the zoning by-law at the Site Plan approvals stage.
3.11.2	For the purposes of this Subsection, a private condominium road servicing a condominium development shall be deemed to be an open, constructed and year-round improved street.	In lieu of Section 3.11.2, the private condominium road shall not be deemed an improved street. See Section 2.88 above. The inclusion of this provision will clearly define the required yard and corresponding setback provisions for the entire condominium block. This will enhance the ability to interpret and apply the appropriate zoning by-law provisions for individual condominium units which will assist staff and residents when considering potential future additions such as decks.
	PARKING COMMENT	Parking complies with the zoning by-law. See Appendix A Site Plan.
4.2.3 b)	Not more than one (1) required parking space may be located within the required front yard or required exterior side yard [7-Z-2018];	Section 4.2.3 b) shall not apply. Visitor parking spaces shall be permitted in the required front yard.

		The front yard is required for vehicle access and to ensure visitor parking can be provided without compromising the ability to provide housing units. There are no safety impacts generated by the proposed location of the parking, there remains a significant amount of landscaped open space to improve the aesthetics of the development and the visibility triangle remains unaffected. See traffic impact study.

Supporting Studies

Several studies have been conducted to determine the feasibility of the proposed development. This section of the report summarizes the studies, which conclude general support for the zoning by-law amendment application.

Functional Servicing Report

This report discusses Sanitary Capacity, Water Servicing, Fire Protection, Stormwater Management and Access. Generally, the report demonstrates that the development is achievable, assuming that the required additional studies, detailed designs, and recommendations are completed and approved. The report indicates no major engineering constraints that would render the project unfeasible. By addressing the identified actions (e.g., modeling, detailed stormwater design), the project is well-positioned for approval and successful implementation.

Traffic Impact Brief

This report considers several factors when assessing the proposed development including trip generation and distribution, traffic capacity and level of service, geometric and traffic control improvements, and a sight line analysis.

The report concludes that the development will not adversely affect the existing or future traffic conditions at the Highway 59 and Talbot Road (Highway 3) intersection or surrounding roads, and the intersection will continue to operate at acceptable service levels without requiring upgrades. Both Norfolk County and the Ministry of Transportation confirm that the emergency access route to Highway 3 will not impact public traffic. This access is solely for the use of emergency vehicles.

The report recommends that road network improvements are not necessary.

Archaeological
The archaeological study has revealed that no artifacts or other archaeological resources were identified during the Stage 1 & 2 archaeological assessment. The subject property has now been fully assessed according to the Ontario Ministry of Citizenship and Multiculturalism's 2011 Standards and Guidelines for Consultant Archaeologists. No further archaeological assessment of the property is required.

This report is confirmed by the Ministry of Citizenship and Multiculturalism (MCM) on December 20, 2024.

Geotechnical Investigation
The geotechnical investigation indicates that the site is suitable for development, provided the recommendations for foundation design, drainage, and construction practices are followed. With proper implementation of these guidelines, the proposed development should proceed without geotechnical issues.

Land Use Compatibility Study
The land use compatibility report concludes that the proposed development is compatible with surrounding land uses under MECP D-Series Guidelines. Dust, odour, and noise/vibration impacts from surrounding facilities are minimal and are not expected to adversely affect the proposed development.

The report concluded that the finings of the Land Use Compatibility study expect the proposed development to be compatible with the surrounding land uses and vice-versa.

Conclusion

The proposed Zoning By-law Amendment facilitates the development of a 25-unit residential condominium within the Urban Area of Delhi, addressing Norfolk County's strategic goals for intensification and housing diversification. This proposal aligns with the Provincial Planning Statement (2024) by optimizing land and infrastructure use, contributing to a compact, transit-supportive community, and reinforcing housing attainability and accessibility objectives.

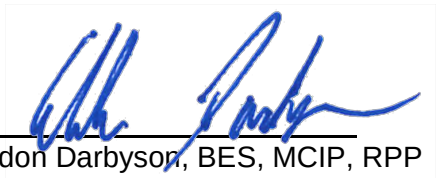
The development meets the Norfolk County Official Plan's intent to focus growth in designated urban areas and aligns with its policies encouraging residential intensification, active transportation, and the efficient use of municipal infrastructure. The project's design and compatibility with adjacent land uses have been thoroughly analyzed, with supporting studies confirming the absence of adverse impacts on traffic, servicing, or the surrounding land uses.

Special provisions proposed under the Urban Residential Type 4 (R4) zoning enable the site to deliver a high-quality residential environment while maintaining compliance with municipal and provincial planning goals and objectives. Furthermore, the integration of a moderate compact form of development and the alignment with active transportation networks ensures that the project contributes positively to Norfolk County's long-term vision for sustainable urban growth.

This application proposes residential development that is both compatible with and complementary to the existing community fabric. The development aligns with Norfolk County's planning objectives and responds effectively to local housing needs.

Accordingly, it is recommended that the proposed Zoning By-law Amendment be approved as it represents good planning and is in the public interest.

Report prepared by:



Eldon Darbyson, BES, MCIP, RPP
G. DOUGLAS VALLEE LIMITED
Consulting Engineers, Architects & Planners
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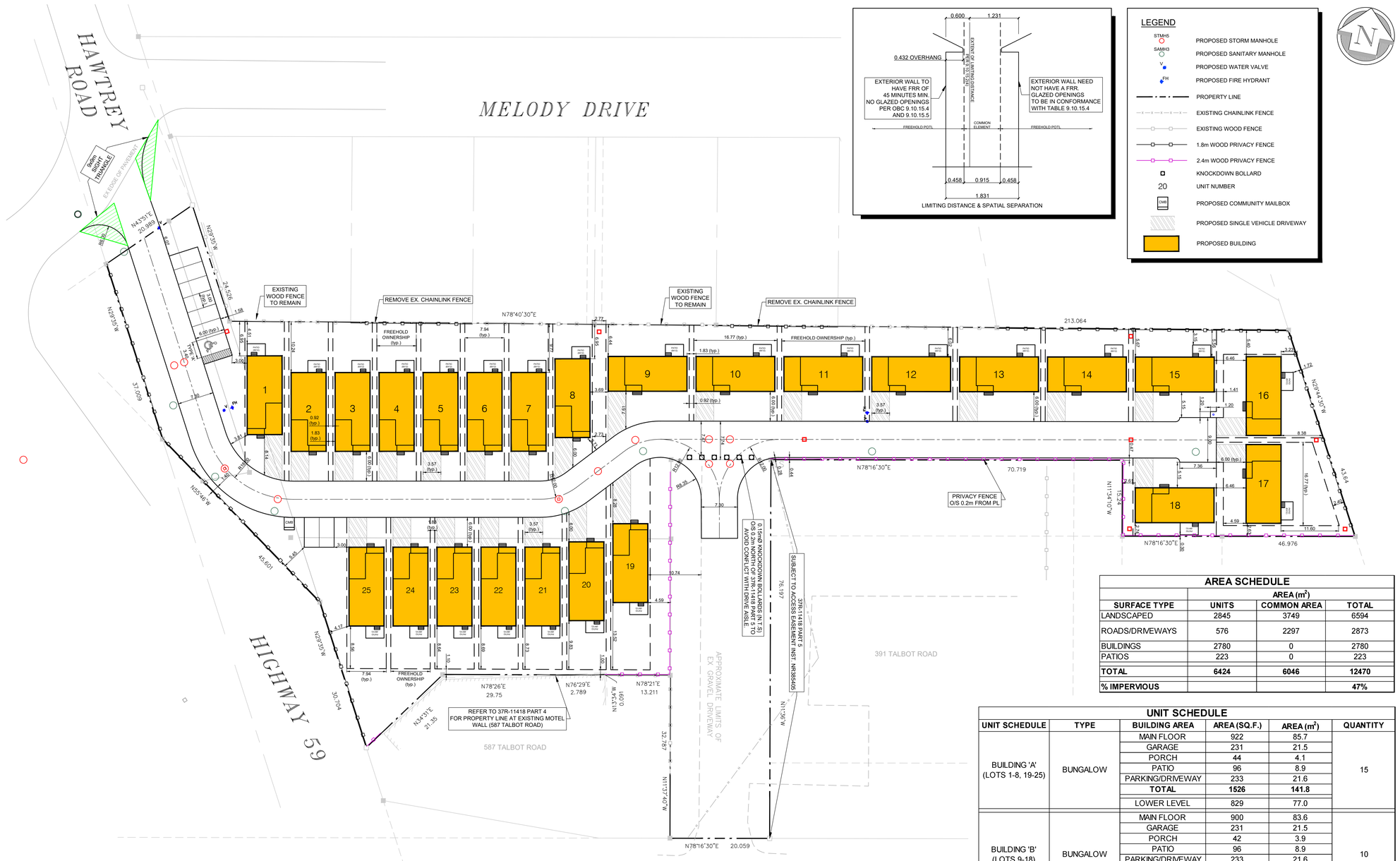
Appendices

Appendix A - Site Plan



REV. No.	DATE	REVISION
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NOTE:
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ALL WORK, MATERIALS AND PROCESSES TO CONFORM TO NORFOLK COUNTY STANDARDS AND SPECIFICATIONS

SURVEY INFORMATION

LEGAL DESCRIPTION: PART OF ROAD ALLOWANCE BETWEEN LOTS 45 AND 46 AND PART OF LOT 187, CONCESSION NORTH OF TALBOT ROAD (GEOGRAPHIC TOWNSHIP OF MIDDLETOWN), NORFOLK COUNTY, 37R-11418

TOPOGRAPHIC SURVEY: COMPLETED BY G. DOUGLAS VALLEE LTD., JANUARY 29, 2021

OWNER INFORMATION

ALDERSHOT HOMES LTD.
GABRIEL GASBARRINI, PRESIDENT
519-752-0557
33 MEMORIAL DRIVE, SUITE 101, BRANTFORD, ON, N3R 5R8

SCALE:
5 10 15 20
HORIZONTAL: 1:400

AREA SCHEDULE

	AREA (m^2)		
SURFACE TYPE	UNITS	COMMON AREA	TOTAL
LANDSCAPED	2845	3749	6594
ROADS/DRIVEWAYS	576	2297	2873
BUILDINGS	2780	0	2780
PATIOS	223	0	223
TOTAL	**6424**	**6046**	**12470**
% IMPERVIOUS			**47%**

UNIT SCHEDULE

UNIT SCHEDULE	TYPE	BUILDING AREA	AREA (SQ.F.)	AREA (m^2)	QUANTITY
BUILDING 'A' (LOTS 1-8, 19-25)	BUNGALOW	MAIN FLOOR	922	85.7	15
		GARAGE	231	21.5	
		PORCH	44	4.1	
		PATIO	96	8.9	
		PARKING/DRIVEWAY	233	21.6	
		TOTAL	**1526**	**141.8**	
		LOWER LEVEL	829	77.0	
BUILDING 'B' (LOTS 9-18)	BUNGALOW	MAIN FLOOR	900	83.6	10
		GARAGE	231	21.5	
		PORCH	42	3.9	
		PATIO	96	8.9	
		PARKING/DRIVEWAY	233	21.6	
		TOTAL	**1502**	**139.5**	
		LOWER LEVEL	814	75.6	

PROPOSED PARKING TABLE

SECTION 4.0 - THE ZONING BY-LAW OF NORFOLK COUNTY

PROVISION	DESCRIPTION	REQUIRED	PROVIDED	COMMENT
4.1.3	PARKING SPACE DIMENSION	3m X 5.8m	3m X 6m	VEHICLES PARKED SIDE BY SIDE, 90 DEGREE PARKING
4.1.4	PARKING AISLE REQUIREMENTS	7.3 m		90 DEGREE PARKING
4.3.1	ACCESSIBLE PARKING SPACE WIDTH	3.4m		
4.3.2	ACCESS AISLE	1.5m		
4.3.3	MINIMUM NUMBER OF ACCESSIBLE PARKING	1 - TYPE 'A' 0 - TYPE 'B'	1 - TYPE 'A' 0 - TYPE 'B'	
4.9 a)	NUMBER OF PARKING SPACES (2 SPACES/UNITS)	50	50	1 GARAGE, 1 DRIVEWAY
4.9 f)	VISITOR PARKING (1 SPACE/3 UNITS)	9	9	8 STANDARD + 1 ACCESSIBLE

ZONING TABLE

5.4 URBAN RESIDENTIAL TYPE 4 ZONE (R4-xx) - THE ZONING BY-LAW OF NORFOLK COUNTY

PROVISION	DESCRIPTION	REQUIRED	PROVIDED	SPECIAL PROVISION REQUIRED	COMMENT
5.4.1	PERMITTED USES	ADD MULTIPLE SINGLE DETACHED DWELLINGS.			
5.4.2 a) i)	MINIMUM LOT AREA: ATTACHED GARAGE	4,875 sq. m	12,470 sq. m		25 DWELLINGS x 195 sq. m = 4,875 sq. m
5.4.2 b) i)	MINIMUM LOT FRONTAGE: INTERIOR LOT	30 m	20 m	YES	HAWTREY ROAD
5.4.2 c) i)	MINIMUM FRONT YARD: ATTACHED GARAGE	6 m	+20 m		
5.4.2 d) i)	MINIMUM EXTERIOR SIDE YARD	6 m	4.0 m	YES	PROPOSED CONDITION: COUNTY HIGHWAY 59
5.4.2 e)	MINIMUM INTERIOR SIDE YARD	3 m	2.7 m	YES	PROPOSED CONDITION: NOT INCLUDING STEPS.
5.4.2 f) i)	MINIMUM REAR YARD: ATTACHED GARAGE	7.5 m	3.0 m	YES	PROPOSED CONDITION: EASTERLY MOST PROPERTY LINE, NOT INCLUDING STEPS.
5.4.2 g)	MINIMUM SEPARATION BETWEEN TOWNHOUSE DWELLINGS	2 m	1.8 m	YES	PROPOSED CONDITION: ALL BUILDINGS. SEE SPATIAL SEPARATION & LIMITING DISTANCE DETAIL THIS PAGE.
5.4.2 h)	MAXIMUM BUILDING HEIGHT	11 m	MAX 11 m		
N/A	MAXIMUM LOT COVERAGE	N/A	50%		PROPOSED CONDITION: INCLUDING PATIOS AND DRIVEWAYS

vallee
Consulting Engineers, Architects & Planners
G. DOUGLAS VALLEE LIMITED
2 TALBOT STREET NORTH
SIMCOE, ONTARIO N3Y 3W4
(519) 426-6270

Stamp

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

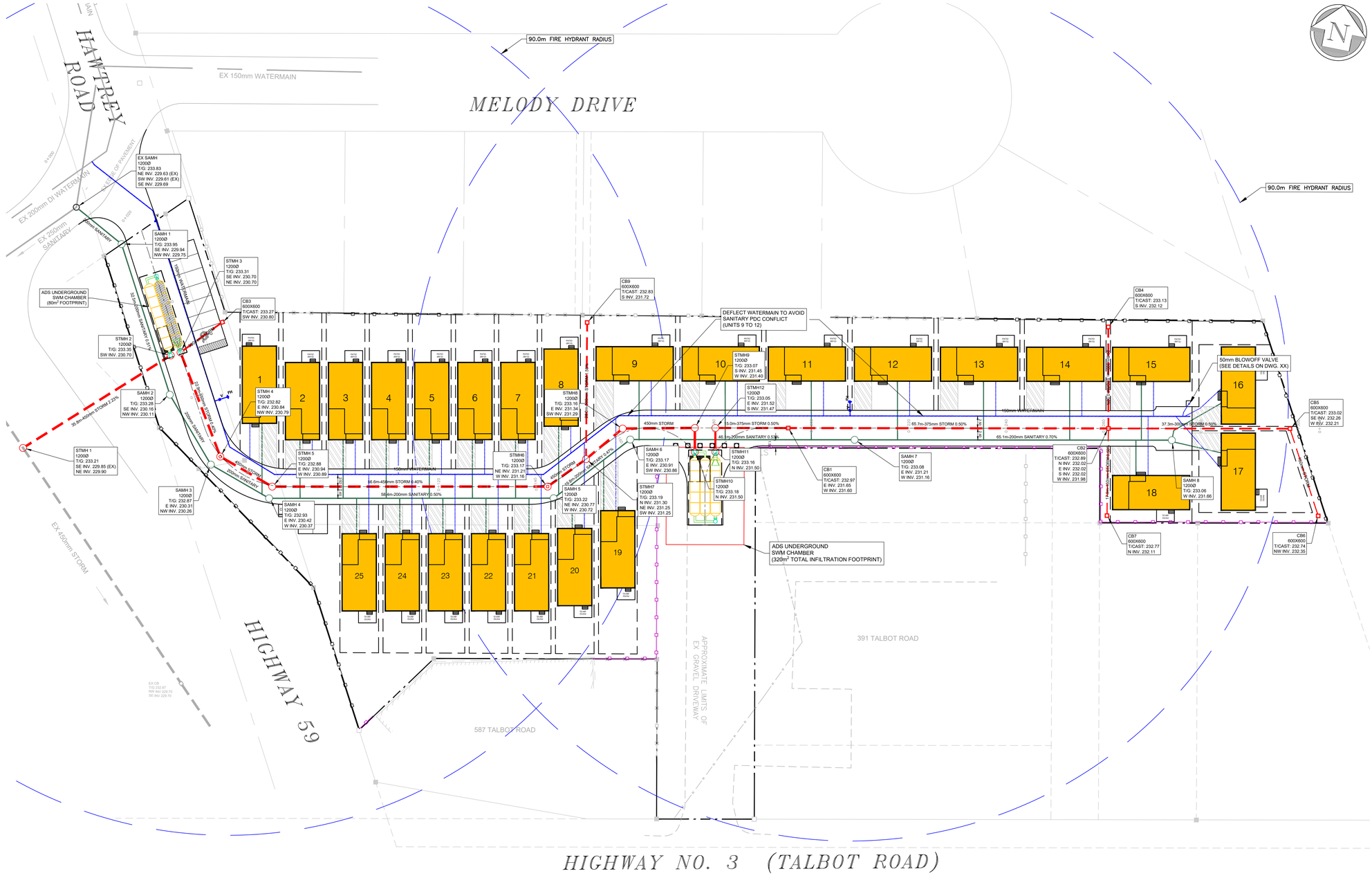
Project Title

PEACH BARN ESTATES
10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title: SITE PLAN

Designed by : CJC	Drawn By : CJC
Checked by : JTI	Date Started : JUNE 2024
Drawing Scale : 1:400	Drawing No. C100
Project No. 21-008	

DATE LAST PLOTTED : January 29, 2025
FILE PATH : H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Drawings\Civil\In Production Drawings\100 Site Plan.dwg



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519-752-0557
33 MEMORIAL DRIVE, SUITE 101, BRANTFORD, ON, N3R 5R8

SCALE:
5 10 15 20
HORIZONTAL: 1:400

GENERAL NOTES:

1. ALL WATERMAINS SHALL HAVE A MINIMUM 1.70M DEPTH OF COVER, MEASURED FROM THE TOP OF THE PIPE TO FINISHED GRADE.
2. ALL WATERMAINS SHALL BE INSTALLED AS PER NORFOLK COUNTY 'STANDARDIZATION OF SERVICE LOCATIONS' AND SHALL CONFORM TO THE MINISTRY OF THE ENVIRONMENT'S PROCEDURE F-6-1 – PROCEDURES TO GOVERN SEPARATION OF SEWERS AND WATERMAINS.
3. ALL PIPE AND APPURTENANCES SHALL CONFORM TO THE LATEST REVISED APPLICABLE SPECIFICATIONS OF THE AMERICAN WATERWORKS ASSOCIATION (AWWA) AND MUST BE APPROVED FOR USE BY NORFOLK COUNTY
4. VALVES SHALL BE PLACED AT THE LIMITS OF EVERY INTERSECTION AND UNDER NORMAL CIRCUMSTANCES, THREE VALVES SHALL BE PROVIDED AT TEE INTERSECTIONS, AND FOUR VALVES AT CROSS INTERSECTIONS. MAIN LINE VALVES AT INTERSECTIONS SHALL BE SET IN LINE WITH THE PROPERTY LINE OF THE INTERSECTING STREET.
5. ALL WATER SERVICES SHALL BE INSTALLED AT RIGHT ANGLES TO THE WATERMAIN. NEW CONNECTIONS SHALL BE 3.0M FROM THE SIDE PROPERTY LINE OR AS APPROVED BY THE MANAGER OF ENVIRONMENTAL SERVICES OR DESIGNATE.
6. SERVICE CONNECTIONS TO PVC MAINS SHALL BE CONNECTED BY USING PVC MOULDED / FABRICATED TEE. NO SADDLES WILL BE PERMITTED WITHIN A NEW SUBDIVISION. PERMISSION FOR USE OF STAINLESS STEEL SADDLES WILL BE GRANTED FOR CONNECTION TO AN EXISTING MAIN
7. ALL SERVICE PIPES FOR 19MM, 25MM, 38MM AND 50MM SERVICES SHALL BE OF SOFT COPPER TYPE K, THIRD PARTY CERTIFIED WITH WARNOCK-HERSEY STAMP. KINKED, CRUSHED OR DISTORTED TUBING OR SOLDER TYPE FITTINGS WILL NOT BE PERMITTED.
8. A PACKAGED ANODE SHALL BE INSTALLED ON ALL METALLIC BENDS, TEES, CROSSES, VALVES, REDUCERS, ETC. AND AT EACH WATER SERVICE CONNECTION. THE PACKAGED ANODE SHALL BE PLACED AT THE SAME ELEVATION AS THE BASE OF THE FITTING OR PIPE. THE ANODE SHALL BE LOCATED AT LEAST 1.0M HORIZONTALLY AWAY FROM THE FITTING, PIPE OR WATER SERVICES AND AT LEAST 1.5M HORIZONTALLY AWAY FROM THE CURB STOP.
9. PIPE BEDDING SHALL BE CLASS B BEDDING WITH 150MM GRANULAR A BEDDING AND 300MM GRANULAR A COVER, COMPACTED TO 95% PROCTOR DENSITY.
10. BACKFILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 300MM IN DEPTH FOR THE FULL TRENCH WIDTH. EACH LAYER SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DRY DENSITY. CARE SHALL BE EXERCISED DURING BACKFILL OPERATIONS SO THAT THE WATERMAIN IS NOT DAMAGED OR DISPLACED.

LEGEND

- STMH5 — PROPOSED STORM MANHOLE
- SAMH3 — PROPOSED SANITARY MANHOLE
- PROPOSED WATERMAIN
- WV — PROPOSED WATER VALVE
- FH — PROPOSED FIRE HYDRANT
- PROPERTY LINE
- KNOCKDOWN BOLLARD
- 20 — UNIT NUMBER
- PROPOSED SINGLE CAR DRIVEWAY
- PROPOSED BUILDING

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Stamp

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project Title

PEACH BARN ESTATES

10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title: SERVICING PLAN

Designed by : CJC	Drawn By : CJC
Checked by : JTI	Date Started : JUNE 2024
Drawing Scale : 1:400	Drawing No. C102
Project No. 21-008	

DATE LAST PLOTTED : January 29, 2025
FILE PATH: H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Drawings\Civil\03-Production Drawings\C102 Servicing Plan.dwg

Section 2 Planning Act – Provincial Interest - Compliance Table

This appendix demonstrates how the proposed application is consistent with Section 2 of the Planning Act.

Matter	Comments	
a) the protection of ecological systems, including natural areas, features and functions;	There are no ecological systems impacted.	✓
b) the protection of the agricultural resources of the Province;	The lands are not designated for agricultural purposes.	✓
c) the conservation and management of natural resources and the mineral resource base;	Not applicable to this development application.	✓
d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest;	Not applicable to this development application.	✓
e) the supply, efficient use and conservation of energy and water;	This will be considered during the detailed design of the project.	✓
f) the adequate provision and efficient use of communication, transportation, sewage and water services and waste management systems;	Yes. Existing services and systems will be utilized were available.	✓
g) the minimization of waste;	Noted.	✓
h) the orderly development of safe and healthy communities; (h.1) the accessibility for persons with disabilities to all facilities, services and matters to which this Act applies;	Yes. The development is an infilling development in an established area. The form and function of the development is bungalow style which considers matters of physical abilities future condominium owners.	✓ ✓
i) the adequate provision and distribution of educational, health, social, cultural and recreational facilities;	Not applicable.	✓
j) the adequate provision of a full range of housing, including affordable housing;	Yes. This development adds to the range of housing types available in the area.	✓
k) the adequate provision of employment opportunities;	Not applicable.	✓

l) the protection of the financial and economic well-being of the Province and its municipalities;	The development will add to the tax base and utilizes existing infrastructure.	✓
m) the co-ordination of planning activities of public bodies;	The applications are subject to the public process.	✓
n) the resolution of planning conflicts involving public and private interests;	The applications are subject to the public process.	✓
o) the protection of public health and safety;	Supporting studies confirm the safety elements of the development in the form of a traffic impact analysis.	✓
p) the appropriate location of growth and development;	Urban infilling is encouraged.	✓
q) the promotion of development that is designed to be sustainable, to support public transit and to be oriented to pedestrians;	The lands are located near public transit and encourage active transportation.	✓
r) the promotion of built form that, (i) is well-designed, (ii) encourages a sense of place, and (iii) provides for public spaces that are of high quality, safe, accessible, attractive and vibrant;	The development is well designed and encourages a sense of place through the form of condominium development. There are public spaces within walking distance and in close proximity to the subject property.	✓
s) the mitigation of greenhouse gas emissions and adaptation to a changing climate.	This will be considered during the detailed design of the project.	✓

Provincial Planning Statement 2024 – Policy Compliance Table

This appendix demonstrates the application is consistent with the applicable policies of the Provincial Planning Statement.

Section	Policy	Comments	
Chapter 2: Building Homes, Sustainable Strong and Competitive Communities			
2.1	**Planning for People and Homes** **Summary:** Section 2.1 outlines the planning framework for population and employment growth in Ontario, emphasizing that municipalities must base forecasts on provincial projections while ensuring adequate land availability for diverse housing and land use needs over a 20- to 30-year horizon. It promotes the creation of complete communities by supporting varied land uses, improving accessibility, and enhancing social equity to meet the needs of all residents.		
2.1.4	To provide for an appropriate range and mix of housing options and densities required to meet projected requirements of current and future residents of the regional market area, planning authorities shall:		
a)	maintain at all times the ability to accommodate residential growth for a minimum of 15 years	The application proposes the re-development of lands for increased residential units geared towards people with fixed incomes and attainability.	✓
b)	Maintain at all times where new development is to occur, land with servicing capacity sufficient to provide at least a three-year supply	The proposed development is supported by existing infrastructure. To be verified by County consultants modelling. No issues are anticipated.	✓
2.1.6	Planning authorities should support the achievement of complete communities by:		
a)	accommodating an appropriate range and mix of land uses, housing options, transportation options with multimodal access, employment, public service facilities and other institutional uses	The application proposes the re-development of lands for increased residential ownership, near access to public transit (6 minute walk) and employment opportunities.	✓
b)	improving accessibility for people of all ages and abilities by addressing land use barriers which restrict their full participation in society; and	The development will be designed to meet building code requirements and improve accessibility.	✓
c)	improving social equity and overall quality of life for people of all ages, abilities, and incomes, including equity-deserving groups.	It is intended that attainable accommodations be provided to help people in their current abilities and incomes afford a place to live.	✓

Section	Policy	Comments	
Chapter 2: Building Homes, Sustainable Strong and Competitive Communities			
2.2	**Housing** **Summary:** Section 2.2 outlines guidelines for planning authorities to ensure a diverse range of housing options and densities that meet the projected needs of current and future residents. This includes setting minimum targets for affordable housing, facilitating various housing types to support community well-being, promoting land-efficient densities, and prioritizing transit-oriented development near transit corridors and stations.		
2.2.1	Planning authorities shall provide for an appropriate range and mix of housing options and densities to meet projected needs of current and future residents of the regional market area by:		
a)	establishing and implementing minimum targets for the provision of housing that is affordable to low and moderate income households	The application proposes to intensify and redevelop the lands to provide much needed housing accommodations.	✓
b)	permitting and facilitating: 1. all housing options required to meet the social, health, economic and wellbeing requirements of current and future residents 2. all types of residential intensification, including the development and redevelopment of underutilized commercial and institutional sites (e.g., shopping malls and plazas) for residential use, development and introduction of new housing options within previously developed areas, and redevelopment, which results in a net increase in residential units in accordance with policy 2.3.1.3;	Housing accommodations to be provided. Represents redevelopment of underutilized lands for intensified residential use within an established area.	✓
c)	promoting densities for new housing which efficiently use land, resources, infrastructure	The application will facilitate redevelopment that will efficiently use land, infrastructure and encourage active transportation which opportunities exist in close proximity to the subject lands.	✓

	and public service facilities, and support the use of active transportation; and		
d)	requiring transit-supportive development and prioritizing intensification	The lands are near a public transportation route.	✓

Section	Policy	Comments	
Chapter 2: Building Homes, Sustainable Strong and Competitive Communities			
2.3 **2.3.1**	**Settlement Areas and Settlement Area Boundary Expansions** **General Policies for Settlement Areas** **Summary**: Section 2.3 outlines that settlement areas should be the primary focus for growth and development, particularly in strategic areas like major transit stations. It emphasizes land use patterns that optimize resources and infrastructure while supporting active and transit-oriented transportation. Planning authorities must encourage intensification and redevelopment, establish minimum and density targets for growth areas, and implement phasing policies to ensure orderly development aligned with infrastructure needs.		
2.3.1.1	Settlement areas shall be the focus of growth and development. Within settlement areas, growth should be focused in, where applicable, strategic growth areas, including major transit station areas.	The lands are within a settlement area.	✓
2.3.1.2	Land use patterns within settlement areas should be based on densities and a mix of land uses which:		
a)	Efficiently use land and resources	This is an efficiently designed infill development on a unique parcel of land due to its frontage, configuration and access configurations.	✓
b)	Optimize existing and planned infrastructure and public service facilities;	The development will utilize existing services and are located near available public service facilities such as baseball diamonds, area, post office, information booth and a museum.	✓
c)	Support active transportation	The lands are located near existing sidewalk connections into the heart of Delhi.	✓
d)	Are transit-supportive	The area is supported by public transit. A bus stop is located within 600m of the subject property.	✓

e)	Are freight supportive	The area is located south and west of an industrial area. The road network is designed to accommodate freight. Highway 59 and Highway 3.	✓
2.3.1.3	Planning authorities shall support general intensification and redevelopment to support the achievement of complete communities	The proposed application represents intensification of under utilized lands.	✓
2.3.1.4	Planning authorities shall establish and implement minimum targets for intensification and redevelopment within built-up areas, based on local conditions.	The County encourages that 25 percent of all development be through intensification, infill and redevelopment.	✓
2.3.1.5	Planning authorities are encouraged to establish density targets for designated growth areas, based on local conditions. Large and fast-growing municipalities are encouraged to plan for a target of 50 residents and jobs per gross hectare in designated growth areas.	Not applicable.	
2.3.1.6	Planning authorities should establish and implement phasing policies, where appropriate	Not applicable.	

Section	Policy	Comments	
Chapter 2: Building Homes, Sustainable Strong and Competitive Communities			
2.8 **2.8.2**	**Employment** **Employment Areas** **Summary**: Section 2.8.2 requires planning authorities to protect and preserve employment areas for current and future needs. They must safeguard locations near major goods movement facilities for appropriate uses, designate long-term employment areas in settlements, and prohibit unrelated residential and commercial uses. Compatibility with sensitive land uses is essential, and any removal of lands from these areas must show no negative impact on viability or access to goods movement, while ensuring adequate land for projected employment growth.		

2.8.2.1	Planning authorities shall plan for, protect and preserve employment areas for current and future uses	The area is primarily made up of mix of residential, commercial, industrial and parkland type uses. The Land Use Compatibility analysis prepared by Sonair confirms the development is compatible with surrounding industrial land uses, and does not impact the industrial lands to the west.	✓
2.8.2.2	Planning authorities shall protect employment areas that are located in proximity to major goods movement facilities and corridors	There is existing residential development in the area. The proposed residential infill development does not impact the ability to move goods along Highway 59 and Highway 3.	✓
2.8.2.3	Planning authorities shall designate, protect and plan for all employment areas in settlement areas by:		
a)	Planning for employment area uses over the long-term that require those locations including manufacturing, research and development in connection with manufacturing, warehousing and goods movement, and associated retail and office uses and ancillary facilities;	The Land Use Compatibility analysis prepared by Sonair confirms the development is compatible with surrounding industrial land uses and the proposed development will not further impact the employment area and its ability to develop.	✓
b)	prohibiting residential uses, commercial uses, public service facilities and other institutional uses;	The Land Use Compatibility analysis prepared by Sonair confirms the development is compatible with surrounding industrial land uses.	✓
c)	prohibiting retail and office uses that are not associated with the primary employment use;	Not applicable.	✓
d)	prohibiting other sensitive land uses that are not ancillary to uses permitted in the employment area; and	Not applicable.	✓
e)	including an appropriate transition to adjacent non-employment areas to ensure land use compatibility and economic viability.	There is physical separation between the employment and other residential areas to the east including the subject lands. Therefore, the area is already in a state of transition dictated by the existing established residential lands uses	✓

		in closer proximity to the industrial lands. The Land Use Compatibility analysis prepared by Sonair confirms the development is compatible with surrounding industrial land uses.	
2.8.2.4	Planning authorities shall assess and update employment areas identified in official plans to ensure that this designation is appropriate to the planned function of employment areas. In planning for employment areas, planning authorities shall maintain land use compatibility between sensitive land uses and employment areas in accordance with policy 3.5 to maintain the long-term operational and economic viability of the planned uses and function of these areas.	This policy directs municipalities when planning for employment functions. The area in which the proposed application pertains is already established.	✓
2.8.2.5	Planning authorities may remove lands from employment areas only where it has been demonstrated that:	Lands are not being removed from employment areas.	✓
a)	there is an identified need for the removal and the land is not required for employment area uses over the long term;	Lands are not being removed from employment areas.	✓
b)	the proposed uses would not negatively impact the overall viability of the employment area by: 1. avoiding, or where avoidance is not possible, minimizing and mitigating potential impacts to existing or planned employment area uses in accordance with policy 3.5;	Lands are not being removed from employment areas.	✓

	2. maintaining access to major goods movement facilities and corridors; existing or planned infrastructure and public service facilities are available to accommodate the proposed uses; and		✓
c)	existing or planned infrastructure and public service facilities are available to accommodate the proposed uses; and	Lands are not being removed from employment areas.	✓
d)	the municipality has sufficient employment lands to accommodate projected employment growth to the horizon of the approved official plan.	Lands are not being removed from employment areas.	✓

Section	Policy	Comments	
Chapter 2: Building Homes, Sustainable Strong and Competitive Communities			
2.9	**Energy Conservation, Air Quality and Climate Change** **Summary**: Section 2.9 emphasizes the role of planning authorities in reducing greenhouse gas emissions and adapting to climate change. It advocates for the development of compact, transit-supportive communities, incorporates climate considerations into infrastructure planning, and promotes energy conservation, green infrastructure, and active transportation. The section also encourages additional measures to enhance community resilience and improve air quality.		
2.9.1	Planning authorities shall plan to reduce greenhouse gas emissions and prepare for the impacts of a changing climate through approaches that:		
a)	support the achievement of compact, transit-supportive, and complete communities;	The proposed development is a compact infill development achieving 20 units per hectare. The lands are located within 600 metres to a public transit stop and are accessible by a sidewalk located on the south side of Highway 3.	✓

b)	incorporate climate change considerations in planning for and the development of infrastructure, including stormwater management systems, and public service facilities;	The proposed development is supported by local infrastructure, local public services in Delhi, and stormwater can be managed appropriately.	✓
c)	support energy conservation and efficiency;	At a minimum, those requirements of the Ontario Building Code will be achieved.	✓
d)	promote green infrastructure, low impact development, and active transportation, protect the environment and improve air quality; and	Active transportation is encouraged by virtue of the local sidewalk and road network linking the lands to near by commercial, institutional and open space opportunities. The local grocery store is within a 15 minute walk or a 2 minute drive. The proximity to a main supporting commercial destination reduces air quality impacts by reducing the distance and reliance on gasoline fueled vehicles.	✓
e)	take into consideration any additional approaches that help reduce greenhouse gas emissions and build community resilience to the impacts of a changing climate.	Noted.	✓

Section	Policy	Comments	
Chapter 3: Infrastructure and Facilities			
3.5	**Land Use Compatibility** **Summary**: Section 3.5 emphasizes the need for careful planning to ensure compatibility between major facilities and sensitive land uses. Authorities must aim to avoid or mitigate adverse effects from odour, noise, and contaminants while protecting public health and safety and the viability of major facilities. When avoidance is not possible, the planning and development of adjacent sensitive land uses can only proceed if potential negative impacts on both the sensitive uses and the major facilities are minimized and mitigated according to provincial guidelines.		

3.5.1	Major facilities and sensitive land uses shall be planned and developed to avoid, or minimize and mitigate any potential adverse effects from odour, noise, risk to public health and safety, and to ensure the long-term operational and economic viability	The Land Use Compatibility analysis prepared by Sonair confirms the development is compatible with surrounding industrial land uses.	✓
3.5.2	Where avoidance is not possible in accordance with policy 3.5.1, planning authorities shall protect the long-term viability of existing or planned industrial, manufacturing or other major facilities that are vulnerable to encroachment	The Land Use Compatibility analysis prepared by Sonair does not identify any requirements for mitigation measures in accordance with the D Series analysis.	✓

Section	Policy	Comments	
Chapter 3: Infrastructure and Facilities			
3.6	**Sewage, Water, and Stormwater** **Summary**: Section 3.6 outlines planning requirements for sewage, water, and stormwater services. It prioritizes timely growth accommodation and optimization of existing municipal services, with municipal systems favored for settlement areas. Private communal services are alternatives when municipal options are unavailable, while individual on-site services are permitted under suitable conditions. Partial services may be allowed to address specific failures. For stormwater management, planning must minimize volumes and contaminants, promote green infrastructure, and align with comprehensive municipal plans.		
3.6.1	Planning for sewage and water services shall:		
a)	accommodate forecasted growth in a timely manner that promotes the efficient use and optimization of existing municipal services	The proposed application intends to connect to existing municipal services thereby improving the efficiency and optimization of these services.	✓
b)	ensure that these services are provided in a manner that:		

	1. can be sustained by the water resources upon which such services rely; 2. is feasible and financially viable over their life cycle; 3. protects human health and safety, and the natural environment, including the quality and quantity of water; and 4. aligns with comprehensive municipal planning for these services, where applicable.	1. Water modelling demonstrates there is water available to service the proposed development. 2. Not applicable to the proposed development. 3. Municipal water supplied. Quality and quantity is ensured by municipal systems. 4. This is an infill development that takes advantage of previous municipal service planning.	✓
c)	Promote water and energy conservation and efficiency;	Dwellings will be constructed in accordance with the Ontario Building Code.	✓
d)	Integrate servicing and land use considerations	The proposed application facilitates infill development.	✓
e)	consider opportunities to allocate the unused system capacity of municipal water services and municipal sewage services	Modeling will be conducted to ensure that the development can be sustained by municipal services.	✓
f)	be in accordance with the servicing options outlined through policies 3.6.2, 3.6.3, 3.6.4 and 3.6.5.	Complies with the hierarchy of servicing.	✓
3.6.2	Municipal sewage services and municipal water services are the preferred form of servicing for settlement areas	This level of the servicing hierarchy is achieved.	✓
3.6.3	Where municipal services are not available, planned or feasible, private communal sewage services and private communal water services are the preferred form of servicing for multi-unit/lot development	Not applicable.	

3.6.4	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 onsite sewage services and individual on-site water services may be used At the time of the official plan review or update, planning authorities should assess the long-term impacts of individual on-site sewage services and individual on-site water services	Not applicable.	
3.6.5	Partial services shall only be permitted in the following circumstances:	Section 3.6.5 is not applicable.	
a)	where they are necessary to address failed individual on-site sewage services and individual on-site water services in existing development		
b)	within settlement areas, to allow for infilling and minor rounding out of existing development on partial services provided that site conditions are suitable for the long term provision		
c)	within rural settlement areas where new development will be serviced by individual on-site water services in combination with municipal sewage services or private communal sewage services.		
3.6.6	In rural areas, where partial services have been provided to address failed services in	Section 3.6.6 is not applicable.	

	accordance with policy 3.6.5.a), infilling on existing lots of record may be permitted where this would represent a logical and financially viable connection to the existing partial service		
3.6.7	Planning authorities may allow lot creation where there is confirmation of sufficient reserve sewage system capacity and reserve water system capacity.	Section 3.6.7 is not applicable.	
3.6.8	Planning for stormwater management shall:		
a)	be integrated with planning for sewage and water services and ensure that systems are optimized, retrofitted as appropriate, feasible and financially viable over their full life cycle;	The functional servicing report support the proposed development. Modelling will be conducted. No issues are anticipated.	✓
b)	minimize, or, where possible, prevent or reduce increases in stormwater volumes and contaminant loads;	The property will be designed to manage stormwater volumes both quantify and quality.	✓
c)	minimize erosion and changes in water balance through the use of green infrastructure;	All open spaces will be planted with grass and landscaping where not required for hard surfaces.	✓
d)	Mitigate risks to human health, safety, property and the environment	The development is designed to be safe including avoidance of placing structures within site triangles. The lands are vacant. Environmental challenges are not anticipated.	✓
e)	Maximize the extent and function of vegetative and pervious surfaces	Landscaping will be maximized and pervious surfaces proposed where necessary.	✓
f)	promote best practices, including stormwater attenuation and re-use, water conservation and efficiency, and low impact development; and	Underground stormwater management quantity and quality treatment are proposed, which will promote infiltration to the highly permeable subsurface soil.	✓

g)	align with any comprehensive municipal plans for stormwater management	The County will review and then confirm the acceptability of the stormwater management plan. No issues are anticipated.	✓

Section	Policy	Comments	
Chapter 3: Infrastructure and Facilities			
3.9	**Public Spaces, Recreation, Parks, Trails and Open Space** **Summary**: Section 3.9 promotes the development of healthy, active, and inclusive communities by ensuring public streets and spaces are safe and accessible for all ages and abilities. It emphasizes the need for a diverse range of publicly accessible recreational settings, including parks, trails, and water-based resources, while encouraging public access to shorelines. The section also highlights the importance of recognizing and protecting provincial parks and conservation reserves from negative impacts.		
3.9.1	Healthy, active, and inclusive communities should be promoted by:		
a)	planning public streets, spaces and facilities to be safe, meet the needs of persons of all ages and abilities, including pedestrians, foster social interaction and facilitate active transportation and community connectivity;	This is an infill development on a condominium road. This policy does not apply. However, the sidewalk and road network facilitate the opportunity for active transportation and the design of the development facilitates social interaction.	✓
b)	planning and providing for the needs of persons of all ages and abilities in the distribution of a full range of publicly-accessible built and natural settings for recreation, including facilities, parklands, public spaces, open space areas, trails and linkages, and, where practical, water-based resources;	There are open space lands including baseball diamonds, public swimming and passive parkland in close proximity to the subject property.	✓

c)	Providing opportunities for public access to shorelines; and	Not applicable to this development.	
d)	Recognizing provincial parks, conservation reserves, and other protected areas, and minimizing negative impacts on these areas	Not applicable to this development.	

Norfolk County Official Plan – Policy Analysis Table

This appendix demonstrates how the proposed application is consistent with applicable policies of the Norfolk County Official Plan.

Section	Policy	Comments	
Section 2.2 Goals & Objectives			
2.2	Goals and Objectives This section of the Official Plan sets out six "Goals and Objectives" to which the following four are applicable to the proposed residential development:		
2.2.1	Strong and Diversified Economy	The proposed application is not subject to Section 2.2.1	**n/a**
2.2.2	Protecting and Enhancing the Natural Environment	The proposed application is not subject to Section 2.2.2	**n/a**
2.2.3	Maintaining and Enhancing the Rural and Small Town Character	This application proposes to permit additional housing supply to the existing neighbourhood, in a compact and efficient form. The development will utilize a vacant parcel of land with well designed buildings that will compliment and add diversity of housing choices the area.	✓
2.2.4	Maintaining a High Quality of Life	The proposed development implements the objectives of this policy by providing housing options to people through an infilling opportunity on vacant lands. The lands are designed to ensure resident safety in an aesthetically appropriate manner. The lands are located in close proximity to a grocery store where healthy food options are available. The dwellings will be designed to accommodate people with potential physical challenges as they are geared towards seniors living.	✓
2.2.5	Upgrading and Expanding Infrastructure	The proposed development will connect to the existing municipal water, waste water and storm water systems. The lands are near a public transportation route and 600 metres from a local bus stop. Various retail services are located in Dehli and within 1 kilometre of the subject property.	✓
2.2.6	A Well Governed, Well Planned and Sustainable County	The proposed application is subject to a public process to gain information from the neighbourhood in addition to commenting agencies. The lands are urban and are efficiently designed in a compact form, adding to the mix of residential units and types in Simcoe.	✓

Section	Policy	Comments	
Section 5.3 Housing			
5.3	The provision of housing is an essential part of planning in Norfolk County. It is desirable to have close cooperation between all levels of government and the private sector in order to provide for sufficient and affordable housing, and a stable residential housing market. The County shall ensure that a full range of housing types and densities are provided to meet the anticipated demand and demographic change. All forms of housing required to meet the social, health and well-being of current and future residents, including those with special needs shall be encouraged.		
c)	The provision of housing that is affordable and accessible to low and moderate income households shall be a priority. The County shall encourage the provision of affordable housing through:		
	i) supporting increased residential densities in appropriate locations and a full range of housing types, adequate land supply, redevelopment and residential intensification, where practical;	The development includes bungalow style dwellings for people with fixed incomes in the form of a condominium. This allows the density to achieve approximately 20 units per hectare.	✓
	ii) the timely provision of infrastructure in the Urban Areas;	Municipal services already exists.	✓

Section	Policy	Comments	
Section 5.3.1 Residential Intensification			
5.3.1	The intensification of urban residential development reduces the need to use vacant designated land on the periphery of the Urban Areas. It also reduces the need for urban expansions encroaching into the Agricultural Area. Urban residential intensification, infilling and redevelopment of existing areas allows for the efficient provision of urban services thereby helping to minimize the costs of providing services while meeting an important component of the County's housing needs.		
a)	The following shall be the policy of the County:		
	ii) infill development and residential development of vacant land or underutilized land in existing neighbourhoods; and/or	The development is on vacant underutilized urban lands adjacent to an existing neighbourhood.	✓
b)	The County shall target that a minimum 25 percent of its annual residential growth be accommodated through infill, intensification and redevelopment within the existing built-up areas in the Urban Areas with full municipal services.	The development will help achieve the County's target for infill and intensification.	✓
d)	On lands designated Urban Residential and located outside of the Built-Up areas of Simcoe, Port Dover, Delhi, Waterford and Port Rowan, the minimum overall density of residential development shall be 15 units per hectare of developable land area. Developable land shall not include Hazard Lands, Provincially Significant Wetlands and Significant Natural Areas.	The proposed density is approximately 20 units per hectare.	✓
f)	The County shall consider applications for infill development, intensification and redevelopment of sites and buildings through intensification based on the following criteria:		
	i. the development proposal is within an Urban Area, and is appropriately located in the context of the residential intensification study;	Yes. The lands are located in the urban area. We are not aware if the County has conducted an intensification study.	✓
	ii. the existing water and sanitary sewer services can accommodate the additional development;	Yes. This is supported by a Functional Servicing Report. The County modelling will confirm. No issues anticipated.	✓

	iii. the road network can accommodate the traffic generated;	Yes. The traffic study demonstrates the road network can accommodate the proposed development.	✓
	iv. the proposed development is compatible with the existing development and physical character of the adjacent properties and surrounding neighbourhood; and	Yes. The proposed development is a continuation of housing adjacent to an existing neighbourhood. It does not conflict with surrounding commercial and industrial land uses.	✓
	v. the proposed development is consistent with the policies of the appropriate Land Use Designation associated with the land.	Yes. The lands are intended for residential development in accordance with the Official Plan.	✓
g)	The County shall monitor intensification activity and, through the development approvals and building permitting process, ensure that such proposals can be satisfactorily integrated with the physical characteristics of residential and commercial areas and proper health and safety standards are maintained. Land use compatibility and urban design assessments may be required as a component of the planning rationale report accompanying development applications, as outlined under Section 9.6.1 (Official Plan Amendments) of this Plan.	Yes. A land use compatibility study has been prepared and demonstrates that the proposed development is compatible with the surrounding land uses. The study also confirms that the proposed development will not further inhibit the ability of new industrial uses to develop on lands designated for such purposes.	✓
h)	Small scale intensification shall be permitted in all areas designated for urban residential use, except where infrastructure is inadequate or there are significant physical constraints	The development can be supported by existing infrastructure.	✓

Section	Policy	Comments	
Section 5.4 Community Design			
5.4	Safe and attractive neighbourhoods contribute to the overall community health of the County. Excellence in community design is essential to creating a physical environment where people have the appropriate places to interact, live, work, recreate and learn. The following policies relate to the physical design of communities, including new applications within the County for development, such as plans of subdivision, infill development proposals, and site plans. The following shall be the policy of the County:		
a)	Through implementation of this Plan, the County shall seek to maintain and improve the physical design characteristics of the Urban Areas in the context of new and existing development and stress a generally high quality of settlement design throughout the County.	The proposed development is well designed and will add to the character of the urban area including a landscaping schema to interface with the road frontage where appropriate.	✓
b)	Through the review of development applications, including plans of subdivision, site plans and other development proposals, the County:		
	i. shall ensure that new development is designed in keeping with the traditional character of the Urban Areas, in a manner that both preserves the traditional image of the Urban Areas and enhances the sense of place within the County while maintaining the community image of existing settlement areas;	The proposed development will be designed to be in keeping with the character of the general area.	✓
	ii. shall promote efficient and cost-effective development design patterns that minimize land consumption;	This is an infill lot that maximizes the use of the lands for the particular type of dwelling unit intended for people with fixed incomes.	✓
	iii. shall promote the improvement of the physical character, appearance and safety of streetscapes, civic spaces, and parks;	This will be considered during site plan control.	✓
	iv. shall encourage tree retention and tree replacement;	There are no trees on the property. However, trees will be planted.	✓

	v. shall ensure that design is sympathetic to the heritage character of an area, including the area's cultural heritage resources;	The adjacent neighbourhood is not of cultural heritage significance.	✓
	vi. shall strongly encourage design that considers and, wherever possible, continues existing and traditional street patterns and neighbourhood structure; and	This is a condominium, thus the street pattern is separate from the existing road network.	✓
	vii. may require, at the County's sole discretion, that proponents submit design guidelines with development applications, establishing how the policies of this Section have been considered and addressed. Such guidelines may also be required to address related issues of residential streetscaping, landscaping, setbacks, sidewalks, signage, garage placement, and architectural treatment.	Not applicable.	✓
c)	Adequate measures shall be taken to ensure that the permitted uses have no adverse effects on adjacent land uses. Adequate buffering shall be provided between any uses where land use conflicts might be expected, and such buffering may include provisions for grass strips and appropriate planting of trees and shrubs, berms or fence screening, and other means as appropriate. Modifications to building orientation may also be appropriate buffering measures, but not in replacement of appropriate plantings.	No impacts are anticipated. The development is subject to site plan control.	✓
d)	Development design that establishes reverse lotting on Provincial Highways and County Roads will not be permitted. Development design that requires features such as noise	Not applicable.	✓

	attenuation or privacy fencing will be discouraged. Wherever possible, new development will be oriented toward streets or parks.		
e)	The County shall require compatibly scaled and designed infill developments within areas designated as Downtown, which enhance the traditional character and economic viability of such centres.	Not applicable.	✓
f)	A high quality of architecture and site design for institutional uses such as schools, places of worship, libraries and other public service buildings is encouraged.	Not applicable.	✓
g)	Streetscaping that reflects the intended character of settlement areas is encouraged. In particular, traditional streetscaping in the Downtown Designations of the Urban Areas will be encouraged.	Not applicable.	✓
h)	A high quality of park and open space design is strongly encouraged. The land for parkland dedication shall be carefully selected to facilitate their use as a central focal point for new or existing neighbourhoods.	Cash in lieu of parkland will be required.	✓
i)	Public art in the County shall generally be encouraged to incorporate themes supporting and promoting local history, civic pride, businesses and technology. The provision of public art in the Downtown Designations shall be encouraged. The County may consider granting increases in height or density for a particular development proposal in exchange for the provision of public art, in accordance with Section 37 of the Planning Act.	Not applicable.	✓

j)	The County may require the provision of certain pedestrian, cycling and trail linkages through the development approvals process.	Not applicable.	✓
k)	The County, in consultation with a development proponent(s) and the Norfolk Heritage Committee, shall define a style of street furnishing that should include shared and accessible bicycle racks, garbage receptacles, benches and street lamps to be used in a new development.	Not applicable.	✓
l)	l) The County may undertake the preparation of urban design guidelines to achieve the policies of this Section for all or parts of the County.	Not applicable.	✓
m)	The County shall encourage development design considering the principles of Crime Prevention Through Environmental Design (CPTED). Specifically, the County shall encourage proponents of new development to use appropriate lighting to deter crime and to situate buildings on lots to maximize natural surveillance.	The lands are intended for a condominium where homes are located closer together, thereby increasing safety. The type of lighting will be determined through site plan control	✓
n)	To promote environmental sustainable development, the County shall encourage the design of sustainable neighbourhoods in keeping with Leadership in Energy and Environmental Design – Neighbourhood Development (LEED ND) design principles in accordance with the policies under Section 11.8.2.1 Sustainable Neighbourhood Design of the Lakeshore Special Policy Area Secondary Plan.	Noted.	✓
o)	The County shall review site plans and drawings submitted in accordance with Section 41 of the Planning Act and Section	The development is not currently subject to site plan control, but it is anticipated that through the zoning by-law amendment, the site plan control process will become a recommended condition.	✓

	9.6.5 (Site Plan Control of this Plan) regarding accessibility for persons with disabilities including but not limited to areas of accessible parking, exterior paths of travel, lighting, ramps, entrances and street furniture.		

Section	Policy	Comments	
Section 6.4 Urban Areas			
6.4	The six Urban Areas within the County have historically functioned as the focal points for growth and development activity, as well as public and private sector investment. This role will continue in the future. The Urban Areas will accommodate the greatest amount of the targeted growth throughout the planning period, and will be the focus of residential, commercial, employment, government, institutional, office, entertainment, cultural, and health and social service activities The following shall be the policy of the County:		
b)	It is the policy of this Plan that the Urban Areas will incorporate the following:		
	i. a full range of housing types, including affordable and special needs housing;	The proposed application adds to the type of housing available in the urban area.	✓
h)	Intensification, infill and redevelopment of designated and underutilized sites, and areas in transition in the Urban Areas will be encouraged. The intensification, infill and redevelopment of designated and underutilized sites that are contaminated, or suspected of contamination, shall be subject to the policies of Section 5.7 (Potentially Contaminated Sites). The County shall target 25 percent of its growth in the Urban Areas to be accommodated through infill, intensification and redevelopment.	The proposed application contributes to the County target of encouraging 25 percent of its growth in the Urban Areas through infill and intensification.	✓

Section	Policy	Comments	
Section 6.5.3 Delhi Urban Area			
6.5.3	The County will support and promote the continued development of Delhi as the third largest Urban Area in the County. The Delhi Urban Area is recognized as an important urban community, employment, cultural and agricultural support centre in the County. The following shall be the policy of the County:		
a)	The County shall support the development of a full range of housing types in the Delhi Urban Area, including affordable and special needs housing.	The development introduces additional housing types to the urban area.	✓

Section	Policy	Comments	
Section 7.7 Urban Residential Designation			
7.7	The Urban Residential Designation applies to the Urban Areas of the County. The Urban Areas are expected to continue to accommodate attractive neighbourhoods which will provide for a variety of residential forms as well as neighbourhood facilities such as elementary schools, parks, places of worship and convenience commercial uses integral to and supportive of a residential environment. A variety of housing types are needed to meet the needs of a diverse population. Opportunities to provide housing for individuals or groups with special needs including the elderly and those with special physical, social or economic needs within the County will be encouraged.		
7.7.1	Subject to the other policies of this Plan, the following policies shall apply in determining uses permitted on land designated Urban Residential on Schedule "B".		
a)	The predominant use of land shall be a variety of urban dwelling types, including single detached dwellings, semi-detached dwellings, duplex dwellings and similar low-profile residential buildings not exceeding 2 dwelling units per lot.	The development consists of single detached dwellings in a condominium.	✓
b)	Medium density residential uses shall be permitted including triplex dwellings, fourplex dwellings, row or block townhouse dwellings, converted dwellings containing more than two dwelling units, walk-up apartments and similar medium profile residential buildings, subject to the policies of Section 7.7.2 (b) (Urban Residential Designation – Land Use Policies).	Not applicable.	✓
c)	High density residential uses in development forms greater than those described in Subsections (a) and (b) shall be permitted subject to the policies of Section 7.7.2 (c) (Urban Residential Designation – Land Use Policies), save and except for in the Courtland Urban Area where high density residential uses shall not be permitted.	Not applicable.	✓

7.7.2	**Land Use Policies**		
a)	Single, semi-detached and duplex housing forms shall generally have an average net density of 15 units per hectare (uph), save and except for land designated Urban Residential in the Courtland Urban Area, where private servicing limitations shall determine the density of development.	The proposed density is approximately 20 units per hectare.	✓

ACC
ARCHAEOLOGICAL
CONSULTANTS CANADA

Stage 1 & 2 Archaeological Assessment

Proposed Development

10 Norfolk County Highway 59, Part of Lot 187, North Side of Talbot Road East, Delhi, Geographic Township of Middleton, County of Norfolk, Ontario

Original Report

Prepared for:

Ontario Ministry of Citizenship and Multiculturalism

Prepared by:

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PIF #: P066-0387-2024
Project No. 270-12-24
November 1, 2024

EXECUTIVE SUMMARY

Archaeological Consultants Canada (ACC) was contracted by the Proponent to conduct a Stage 1 & 2 archaeological assessment, including background research and property survey, for a proposed development. An archaeological assessment was conducted during the pre-approval process and was required under the *Planning Act, R.S.O 1990*. The assessed area, or the "subject property", is located at municipal address 10 Norfolk County Highway 59, on Part of Lot 187, North Side of Talbot Road East, in the unincorporated community of Delhi, Geographic Township of Middleton, Norfolk, Ontario (Figure 1). The subject property measures 1.31 hectares (ha) in size. The Ontario Ministry of Citizenship and Multiculturalism (MCM) assigned Project Information Form (PIF) number P066-0387-2024 to this project. The licensee of ACC received permission from the Proponent to access the property and to conduct all required archaeological fieldwork activities including the removal of artifacts, as necessary. The property was accessed on October 2, 2024.

Stage 1 background research indicated that the subject property has general archaeological potential due to the following factors:

- The subject property is largely comprised of well-drained land that is suitable for human habitation and agriculture
- The subject property is adjacent to Norfolk County Highway 59, and Highway 3 (Talbot Road), two early historical transportation routes.
- Historical mapping indicates that the subject property was adjacent to the road allowance for Hawtrey Road in the 19th century (Tremaine, 1856; H.R. Page & Co., 1877).
- Big Creek, a primary water source, is located 290 m to the east of the subject property.

The subject property measures 1.31 ha. Stage 1 visual property inspection determined that 0.19 ha of the subject property has been previously disturbed by modern construction activities and had low to no archaeological potential

1.12 ha of the subject property retained archaeological potential and was recommended for Stage 2 assessment. The property consisted of manicured greenspace in an urban area and was assessed by test pit survey at 5 m intervals. No artifacts or other archaeological resources were identified during the Stage 1 & 2 archaeological assessment.

The following recommendation is provided for consideration by the Proponent and by the MCM:

1. No artifacts or other archaeological resources were identified during the Stage 1 & 2 archaeological assessment. The subject property has now been fully assessed according to the Ontario Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists*. No further archaeological assessment of the property is required.

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LIST OF ABBREVIATIONS

The following is a list of abbreviations and acronyms used throughout this report.

ACC	Archaeological Consultants Canada
CHVI	Cultural Heritage Value or Interest
cm	centimetre
ha	hectares
km	kilometre
m	metre
MCM	Ministry of Citizenship and Multiculturalism
NDA	New Directions Archaeology Ltd.
OASD	Ontario Archaeological Sites Database
PIF	Project Information Form
%	percent

PROJECT PERSONNEL

Project Manager:	Matthew Muttart, M.A., P1208
Professional License:	Kristy O'Neal, M.A., P066
Field Director:	Kristy O'Neal, M.A., P066
Field Technician:	Donny Vongphakdy
Report Preparation:	Jessie Rae, B.A. Brianne McDonald, B.A.
Graphics:	Zack Cousineau, B.A.

Stage 1 & 2 Archaeological Assessment

Proposed Development

10 Norfolk County Highway 59, Part of Lot 187, North Side of Talbot Road East, Delhi, Geographic Township of Middleton, Norfolk County, Ontario

1.0 PROJECT CONTEXT

1.1 Development Context

Archaeological Consultants Canada (ACC) was contracted by the Proponent to conduct a Stage 1 & 2 archaeological assessment, including background research and property survey, for a proposed development. An archaeological assessment was conducted during the pre-approval process and was required under the *Planning Act, R.S.O 1990*. The assessed area, or the "subject property", is located at municipal address 10 Norfolk County Highway 59, on Part of Lot 187, North Side of Talbot Road East, in the unincorporated community of Delhi, Geographic Township of Middleton, Norfolk, Ontario (Figure 1). The subject property measures 1.31 hectares (ha) in size.

The objective of a Stage 1 background study is to provide information about the subject property's geography, history, previous archaeological fieldwork, and current land conditions. A Stage 1 study evaluates the subject property's archaeological potential in order to recommend appropriate strategies for the Stage 2 survey.

The objective of a Stage 2 property assessment is to document all archaeological resources present on the property and to make a determination about whether these resources, if present, have Cultural Heritage Value or Interest (CHVI). Archaeological resources consist of artifacts (Indigenous stone tools, pottery and subsistence remains as well as Euro-Canadian objects), subsurface settlement patterns and cultural features (post moulds, trash pits, privies, and wells), and sites (temporary camps and special purpose activity areas, plus more permanent settlements such as villages, homesteads, grist mills and industrial structures). If any archaeological resources are present that exhibit CHVI, a Stage 2 survey will determine whether these resources require further assessment and, if necessary, recommend appropriate Stage 3 strategies for identified archaeological sites.

The Stage 1 & 2 assessment was conducted under Professional Archaeological License P066, held by Kristy O'Neal, who also conducted the fieldwork. The Ontario Ministry of Citizenship and Multiculturalism (MCM) assigned Project Information Form (PIF) number P066-0387-2024 to this project. The licensee of ACC received permission from the Proponent to access the property and to conduct all required archaeological fieldwork activities including the removal of artifacts, as necessary. The property was accessed on October 2, 2024.

All fieldwork and reporting were completed using MCM's 2011 *Standards and Guidelines for Consultant Archaeologists.* This report documents the research, the field methods and results, and the conclusions and recommendations based on the Stage 1 & 2 archaeological assessment. All documents and records related to this project will be curated at the offices of ACC, in accordance with subsection 66(1) of the *Ontario Heritage Act* (OHA).

1.2 Historical Context

1.2.1 Background Research

Stage 1 background research was conducted to determine the potential for finding and identifying archaeological resources including sites within the current subject property and to determine the necessity of conducting a Stage 2 survey. This is done by reviewing geographic, archaeological, and historical data for the property and the surrounding area. The background research was conducted to:

- amass all the readily available information on any previous archaeological surveys in the area.
- determine the locations of any registered and unregistered sites within and around the subject property.
- develop an historical framework for assigning levels of potential significance to any new sites discovered during fieldwork.

1.2.2 A Cultural Chronology for Southern Ontario

Over their thousands of years of occupation in the general region, Indigenous peoples have left behind, to a greater or lesser degree, physical evidence of their lifeway activities and settlements at many locations. Based upon a published synthesis of Indigenous cultural occupations (Wright, 1968). Table 1 is a general outline of the cultural history of southern Ontario that is applicable to the subject property. Ellis and Ferris (1990) provide greater detail of the distinctive characteristics of each time period and cultural group.

It is likely that Ontario was occupied soon after the retreat of the Ice Age glaciers. The earliest known human occupation in the area was during the Paleoindian period (between 12,000 and 9,500 years ago) wherein small groups of nomadic peoples hunted big game such as caribou in a cool sub-arctic climate. Sites are typically found near glacial features such as the shorelines of glacial lakes or kettle ponds which would have allowed access to the low-lying environments that were favoured by caribou and other wildlife. These people were few and their small, temporary campsites are relatively rare. Paleoindian sites are recognized by the presence of distinctive artifacts such as fluted projectile points, beaked scrapers, and gravers and by the preference for light colored chert, such as Collingwood chert. The Paleoindian Period is divided into two sub-periods, Early Paleoindian, and Late Paleoindian.

People during the Archaic period (*circa* 10,000 to 2,800 years ago) were still primarily nomadic hunters, but they adapted to a more temperate climate. Groups were dispersed during winter

months and converged around watercourses from the spring to fall in large fishing campsites. The Archaic period is characterized by the appearance of ground stone tools, notched, or stemmed projectile points. The Archaic Period is divided into three sub-periods, Early, Middle, and Late Archaic. During the Archaic Period, groups began to establish territorial settlements and introduce burial ceremonialism. There is a marked increase in the number and size of sites, especially during the Late Archaic period.

Table 1: General Cultural Chronology for Southern Ontario

PERIOD	SUBDIVISION I	SUBDIVISION II	YEARS BEFORE PRESENT	COMMENTS
PALEOINDIAN	Early Paleoindian	Fluted Point Horizon	12,000-10,500	big game hunters
	Late Paleoindian	Holcombe & Hi-Lo Horizons	10,500-9,500	small nomadic groups
ARCHAIC	Early Archaic	Side Notched Horizon	10,000-9,700	nomadic hunters and gatherers
		Corner-Notched Horizon	9,700-8,900	
		Bifurcate Horizon	8,900-8,000	
	Middle Archaic	Middle Archaic I/Stemmed Horizon	8,000-5,500	territorial settlements
		Middle Archaic II	5,500-4,500	polished ground stone tools
	Late Archaic	Narrow Point Horizon	4,500-3,500	
		Broad Point Horizon	4,000-3,500	
		Small Point Horizon (including Haldimand and Glacial Kame Complexes)	3,500-2,800	burial ceremonialism
WOODLAND	Early Woodland	Meadowood Complex	2,900-2,400	introduction of pottery
		Middlesex Complex	2,500-2,000	
	Middle Woodland	SW Ontario: Saugeen	2,300-1,500	long distance trade networks
		Western Basin: Couture	2,300-1,500	
	Transitional Woodland	SW Ontario:		
		Princess Point	1,500/1,400-1,200	incipient agriculture
		Western Basin:		
		Riviere au Vase	1500/1400-1200/1100	
	Late Woodland: Ontario Iroquois Tradition	Early: Glen Meyer	1200/100-750/700	transition to village life
		Middle I: Uren	720/700-710/670	large villages with palisades
		Middle II: Middleport	710/670-670/600	wide distribution of ceramic styles
		Late: Neutral	600-450	
	Late Woodland: Western Basin Tradition	Younge Phase	1200/1100-800	
		Springwells Phase	800-600	
		Wolf Phase	600-450	
HISTORIC	SW Ontario Iroquois	Historic Neutral	450-350	tribal warfare
	European Contact	Initial Contact	380-300	tribal displacement
		European Settlement	200 >	European settlement
		First Nations Resettlement	200 >	

(Compiled from Adams, 1994, Ellis *et al.*, 1990, Wright, 1968)

The Woodland period is distinguished by the introduction of pottery vessels for storage and cooking. Sites of the Woodland period (*circa* 3000 to 400 years ago) are usually the most numerous because the population levels in southern Ontario had significantly increased, especially along the shores of Lakes Erie and Ontario. The Woodland Period is also marked by the establishment of complex long distance trading networks. The Woodland Period is divided into three sub-periods, Early, Middle and Late Woodland. During the Late Woodland Period, there is increasing sedentarism and the establishment of horticulture, a reliance on tribal warfare, and the introduction of semi-permanent villages with large protective palisades. The Late Woodland period also envelops the emergence of Iroquoian tribes and confederacies.

The historic period (from A.D. 1650 to 1900) begins with the arrival of Euro-Canadian groups. Sites of this period document European exploration, trade, and the displacement and devastation of native groups caused by warfare and infectious disease. The most common sites of this period include Euro-Canadian homesteads, industries, churches, schools, and cemeteries.

While North America had been visited by Europeans on an increasing scale since the end of the 15th century, the first European to venture into what would become southern Ontario was Étienne Brûlé. Brûlé was sent by Samuel de Champlain in the summer of 1610 to consolidate an emerging friendship between the French and the First Nations, and to learn their languages and customs. Other Europeans would subsequently be sent by the French to train as interpreters. These men played an essential role in communications with the First Nations (Gervais and Rothe, 2004:182).

The late 17th and early 18th centuries saw the growth and spread of the fur trade, with the establishment and maintenance of trading posts along the Great Lakes. In 1754, hostilities over trade and the territorial ambitions of the French and the British led to the Seven Years' War, which ended when the French surrendered in 1760 (Smith, 1987:22). In addition to cementing British control over the Province of Quebec, the British victory over the French also proved pivotal in catalyzing the Euro-Canadian settlement process.

During pre-contact and early contact times, the vicinity of the subject property would have contained a mixture of deciduous trees, coniferous trees, and open areas. In the early 19th century, Euro-Canadian settlers arrived via easily accessible colonization routes and began to clear the forests for agricultural purposes. In the 19th and early 20th centuries, the subject property and surrounding land were primarily used for agricultural purposes, Mixed farming was common, with wheat crops and beef cattle dominating the landscape (Chapman and Putnam, 1984:177).

The subject property was historically located on Part of Lot 187, North Side of Talbot Road East, Geographic Township of Middleton, Norfolk County, Ontario. In 1791, the provinces of Lower Canada and Upper Canada were created from the former province of Quebec by a British parliamentary act. Colonel John Graves Simcoe was appointed as the Lieutenant Governor of Upper Canada and was tasked with governing and directing its settlement, as well as establishing a constitutional government based on Britain's model (Coyne et al, 1895:33).

Norfolk County was first settled in 1789 by United Empire Loyalists emigrating from the United States after the American Revolutionary War (Carter, 1984). The county itself was created in 1792 by Lieutenant Governor John Graves Simcoe, who named it after Norfolk County, England (Mika & Mika, 1983). The population of Norfolk County was 9,626 in 1841. Early settlers in the county were primarily of Dutch, British and German descent. The early settlers in the county took advantage of the rich soils (Mutrie, 2004). By 1844, a total of 56,899 acres were being cultivated, and there were 50 sawmills and 10 grist mills in operation (Smith, 1846:186).

Middleton Township was open to settlers in 1792, it was named after the Baron of Syndey, Thomas Townshend (Middleton, 1927). Settlement of the area increased near the end of the War of 1812, by individuals such as Frederick Sovereen, Henry Sovereen, Joseph Lawson, and the Brown family. Many of the earliest surveyed properties were lots along Talbot Street which became open to traffic in 1824 (Carter, 1984). Middleton Township is known for its three historic waterways; Little Otter Creek, Big Creek, and Venison Creek which were used in the construction of many mills.

The nearest historic community is Delhi, formerly named Fredericksburg and Middleton. Delhi is located on the town line between the townships of Middleton and Windham (Smith, 1846). Fredrick Sovereen, the first settler, laid out the town in 1828 calling it Fredericksburg. The name was already in use elsewhere, so when the post office was opened in 1831 the name was changed to Middleton. The name was changed again in 1853 to the current name of Delhi (Carter, 1984).

Historical records and mapping were examined for evidence of early Euro-Canadian occupation within and near the subject property in the mid- to late 19th century. Tremaine's 1856 *Map of Norfolk County, Canada West* indicates the owner for the west half of Lot 187 as Henry Sovereen (Figure 2). Henry Sovereen was one of the original settlers to the area. 1861 census records list Sovereen as a 74-year-old gentleman, and a Baptist from the United States, living with his wife Margaret, a 70-year-old also from the United States, in a single-storey frame house (Library and Archives Canada, 1861). No structures are illustrated on or near the subject property. The historic limits of the community of Fredericksburg are shown approximately 500 metres (m) east of the subject property. Talbot Road runs along the south of the property, while two early concession roads run along the west edge of the subject property.

H.R. Page & Co.'s 1877 map of Middleton Township in the *Illustrated historical Atlas of the County of Norfolk* indicated that Henry Sovereen was still the owner of the subject property lands (Figure 3). No structures are illustrated within the subject property and the three historical roads are shown in the same position. The limits of the nearby community have expanded southward and the name has been changed to Delhi.

While there are no structures illustrated within the subject property on the historical atlas mapping, this does not necessarily mean that one or more additional structures were not present at that time, earlier or later. Not all features of interest were mapped systematically on the Ontario series of historical maps and atlases, given that they were financed by subscription, and subscribers were given preference regarding the level of detail provided on the maps (Caston, 1977:100). Given that the subject property fronts three historic roads there is the potential for 19th century buildings to be present, depending on the level of disturbance.

1.3 Archaeological Context

1.3.1 Natural Environment

The subject property is located within the Norfolk Sand Plain physiographic region. This wedge-shaped area has a curved base along the coast of Lake Erie and tapers to a point at Brantford. The region is made up of sand deposited from meltwater of the Grand River that formed a delta of glacial Lakes Whittlesey and Warren. It is made up of light textured soils left behind by retreating glaciers that is best used for tobacco crops. The dominant physiographic landform within the subject property is sand plain (Ministry of Northern Development and Mines, 2007).

The Soils of the Regional Municipality of Haldimand-Norfolk (Presant and Acton, 1984) indicates that there is one dominant surface soil type, Fox sandy loam, within the subject property (Figure 4). Fox sandy loam soil is a mainly lacustrine sand and loamy sand with rapid to well drainage and irregular to smooth basin to level topography.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Primary water sources include, among others, lakes, rivers, creeks, and streams. Secondary water sources include intermittent streams, creeks, springs, marshes, and swamps. Past water sources, such as raised beach ridges, relic water channels, and glacial shorelines are also considered to have archaeological potential. Swamps and marshes are also important as resource extraction areas, and any resource areas are considered to have archaeological potential. The nearest water source is the Big Creek, located 290 m to the east of the subject property.

1.3.2 Current Land Use

Figure 5 provides the current land use of the subject property. The subject property is an irregularly shaped and consists of manicured greenspace with a gravel parking area located centrally within the property. There is a group of outbuildings associated with a hotel located on the property to the south located in the southwest corner of the subject property. The subject property is bordered to the north by a residential subdivision, to the west by Highway 59, to the south by commercial properties including a motel, and to the east by an agricultural field. The subject property is located within residential and commercial area of the community of Delhi.

Fieldwork for the project was conducted on October 2, 2024.

1.3.3 Previous Archaeological Investigations

1.3.3.1 Registered Archaeological Sites

Previously registered archaeological sites can be used to indicate archaeological potential. To determine if any previous assessments have yielded archaeological sites, either within or surrounding the current subject property, two main sources were consulted. These include the *Ontario Archaeological Sites Database* (OASD) and the *Public Register of Archaeological Reports*, both of which are maintained by MCM.

The OASD contains archaeological sites registered within the Borden system (Borden, 1952). The Borden system divides Canada into 13 kilometre (km) by 18.5 km blocks based on longitude and latitude. Each Borden block is designated with a four-letter label and sites identified within the block are numbered sequentially as they are registered. The subject property is located within the *AfHd* Borden block.

According to the OASD, no archaeological sites have been registered within 1 km of the subject property (MCM, 2024a). The absence of registered sites may not necessarily be an accurate indication of cultural occupation, but rather it may reflect the lack of systematic archaeological surveys in the area.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information Act.* The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

1.3.3.2 Previous Archaeological Reports

A review of archaeological reports within the *Public Register of Archaeological Reports* indicated that there are no archaeological reports detailing previous archaeological fieldwork within the subject property that have been entered into MCM's register at the time this report was written (MCM, 2024b). There are two reports detailing previous fieldwork within 50 m of the subject property within the register. Reports were searched based on registered site information, historic lots and concessions, and nearby streets.

> ***Stage 1 & 2 Archaeological Assessment for the Highway 3 Rehabilitation from Tillsonburg to the West Limit of Delhi (Mill St.), Norfolk Project (Assignments # 3015-E-004 (10) and # 3015—E-0004 (10A)), on Part of Lots 161 and 186, North Site of Talbot Road East in the Geographic Township of Middleton, Norfolk County*.** **New Directions Archaeology Ltd. Report dated August 1, 2017. PIF P018-0876-2017.**

New Directions Archaeology Ltd. (NDA) conducted a Stage 1 & 2 archaeological assessment for the intersection improvements along Highway 3, one of which included a grassed area at the junction of Highway 59 and Highway 3. NDA's project area was to within 5 m to the west of the current subject property, although not directly adjacent. Stage 1 property inspection determined that the area within 50 m of the current subject property had been previously disturbed during road construction (NDA, 2017: Map 6). No archaeological resources were found during the assessment and no further fieldwork was recommended (NDA, 2017:9).

> ***Stage 1-2 Archaeological Assessment, Highway3 and Norfolk Road 59 North G. W. P. 3026-18-00, 3017-E-0006-01, Ministry of Transportation West Region. Part of Lots 186-188, North and South Side of Talbot Road East, Geographic Township of Middleton, Norfolk County, Province of Ontario.*** **WSP. Report dated November 11, 2019. PIF P1078-0064-2019.**

WSP conducted a Stage 1 & 2 archaeological assessment for the intersection improvements to Highway 3 and Highway 59. WSP's project area was to within 5 m to the west of the current subject property and directly to the south of the current subject property. The lands to the west were noted by WSP to have been previously assessed by NDA and WSP confirmed disturbance to that area during their subsequent assessment. The lands along Highway 3, directly to the south of the current subject property were found to be disturbed by road construction (WSP, 2019: Figure 7). As the entirety of WSP's project area was found to be disturbed through either visual inspection or test pit survey, and no archaeological resources were identified, no further fieldwork was recommended (WSP, 2019:10).

2.0 FIELD METHODS

The subject property measures 1.31 ha. The Stage 1 & 2 assessment was conducted on October 2, 2024, with advance permission to enter the subject property obtained from the Proponent. Weather conditions during the assessment were excellent, with a few passing clouds and a maximum daily high temperature of 26 degrees Celsius.

The Stage 1 assessment of the subject property began with an on-site property inspection to gain first-hand knowledge of the geography, topography, and current condition of the property. The entirety of the subject property was accessible and was inspected. Appropriate photographic documentation was taken during the visual inspection. Coverage of the property was sufficient to identify the presence or absence of features of archaeological potential, meeting the requirements of Section 1.2 Standard 1 of the *Standards and Guidelines for Consultant Archaeologists*.

Areas of low to no archaeological potential include lands that have been previously disturbed, lands that have steeply sloping topography, and lands that are low-lying and permanently wet. No low lying and permanently wet areas or areas of steeply sloping topography were observed. 0.19 ha, 14 percent (%) of the subject property, has been previously disturbed by intensive and extensive modern soil alterations for the construction of buildings and gravel parking lot.

The remainder of the subject property, totaling 1.12 ha, 86%, was determined to retain archaeological potential and require Stage 2 archaeological assessment. The entirety of the subject property consisted of manicured greenspace in an urban area with existing infrastructure. As these lands could not be ploughed, Stage 2 archaeological assessment was conducted by test pit survey at 5 m intervals in accordance with Section 2.1.2d of the *Standards and Guidelines for Consultant Archaeologists.* Each test pit was dug by hand and was 30 centimetres (cm) in diameter and was dug to at least five cm into the subsoil. Test pits were examined for stratigraphy, cultural features, or evidence of fill. Test pits were dug to within one m of all disturbances and other areas of low archaeological potential. All soil was screened through 6-millimetre mesh to maximize the potential for artifact recovery. Appropriate photographic documentation was taken, and all test pits were backfilled upon completion. As no artifacts were observed during the test pit assessment no intensified survey was conducted.

There were no weather, ground, or lighting conditions detrimental to the recovery of artifacts. As such, it is confirmed that the assessment met Section 2.1 Standard 3 of the *Standards and Guidelines for Consultant Archaeologists* regarding weather and lighting.

The entirety of the subject property was assessed. The results of the Stage 1 & 2 assessment are shown in Figure 6. Images of the assessment are provided in Section 8.0.

3.0 RECORD OF FINDS

3.1 Soils

Test pits contained approximately 20 to 30 cm of medium brown sandy loam topsoil above light brown sandy loam subsoil. No soil disturbance was observed.

3.2 Archaeological Resources

No artifacts or other archaeological resources were observed during the Stage 1 & 2 assessment of the subject property.

3.3 Documentary Record

All fieldwork-related activities were documented and kept, including field notes and observations and detailed maps. Appropriate photographic records were kept of the assessment and all image descriptions were recorded in a photo log.

A detailed list of field records is presented in Table 2. All digital items have been duplicated and all paper items have been scanned and stored as digital documents. All items are housed in the corporate offices of ACC.

Under Section 6 of Regulation 881 of the OHA, ACC will keep in safekeeping all objects of archaeological significance that are found under the authority of the license and all field records that are made in the course of the work authorized by the license, except where the objects and records are donated to His Majesty the King in right of Ontario or are directed to be deposited in a public institution under subsection 66 (1) of the Act.

Table 2: Inventory of Documentary and Material Records

PROJECT INFORMATION		
ACC project number	270-12-24	
Licensee	Kristy O'Neal	
MCM PIF numbers	P066-0387-2024	
DOCUMENT/MATERIAL	NUMBER	DESCRIPTION
field notes & photo logs	1	pages (paper, with digital copies)
maps	1	aerial imagery of subject property
photographs	6	digital colour photographs

4.0 ANALYSIS AND CONCLUSIONS

4.1 Potential for Archaeological Resources

Archaeological potential is defined as the likelihood of finding archaeological sites within a subject area. For planning purposes, determining archaeological potential provides a preliminary indication that significant sites might be found within the subject area, and consequently, that it may be necessary to allocate time and resources for archaeological survey and mitigation.

The framework for assigning levels of potential archaeological significance is drawn from provincial guidelines found in the *Standards and Guidelines for Consultant Archaeologists* (MCM, 2011: Sections 1.3.1 and 1.3.2). The following are features or characteristics that can indicate archaeological potential:

- previously identified archaeological sites
- water sources (It is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees.).
    - primary water sources (e.g., lakes, rivers, streams, creeks)
    - secondary water sources (e.g., intermittent streams and creeks, springs, marshes, swamps)
    - features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches)
    - accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh)
- elevated topography (e.g., eskers, drumlins, large knolls, plateaus)
- pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground
- distinctive land formation that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.
- resource areas, including:
    - food or medicinal plants (e.g., migratory routes, spawning areas, prairie)
    - scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)
    - early Euro-Canadian industry (e.g., fur trade, logging, prospecting, mining)

- areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and cemeteries. There may be commemorative markers of their history, such as local provincial, or federal monuments or heritage parks
- early historical transportation routes (e.g., trails, passes, roads, railways, portages)
- property listed on a municipal register or designated under the OHA or that is in a federal, provincial, or municipal historic landmark site
- property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations

Archaeological potential can be determined not to be present for either the entire property or parts of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as "disturbed" or "disturbance" and may include:

- quarrying
- major landscaping involving grading below topsoil
- building footprints
- sewage and infrastructure development
- activities such as agricultural cultivation, gardening, minor grading, and landscaping do not necessarily affect archaeological potential.

4.2 Discussion

Section 1.3.1 of the *Standards and Guidelines for Consultant Archaeologists* (MCM, 2011) lists criteria indicative of archaeological potential. Stage 1 background research indicated that the subject property has general archaeological potential due to the following factors:

- The subject property is largely comprised of well-drained land that is suitable for human habitation and agriculture
- The subject property is adjacent to Norfolk County Highway 59, and Highwya 3 (Talbot Road), two early historical transportation routes.
- Historical mapping indicates that the subject property was adjacent to the road allowance for Hawtrey Road in the 19th century (Tremaine, 1856; H.R. Page & Co., 1877).
- Big Creek, a primary water source, is located 290 m to the east of the subject property.

Given the above criteria, background and archival research indicates that the subject property exhibits general archaeological potential for the discovery of both pre/post-contact Indigenous and Euro-Canadian archaeological resources therefore, a Stage 2 archaeological assessment was required.

The subject property measures 1.31 ha. Stage 1 visual property inspection determined that 0.19 ha of the subject property has been previously disturbed by modern construction activities and had low to no archaeological potential

1.12 ha of the subject property retained archaeological potential and was recommended for Stage 2 assessment. The property consisted of manicured greenspace in an urban area and was assessed by test pit survey at 5 m intervals.

No artifacts or other archaeological resources were identified during the Stage 1 & 2 archaeological assessment.

5.0 RECOMMENDATIONS

Subject to acceptance of the results and approval of the recommendations, MCM is requested to deem this report compliant with ministry requirements for archaeological fieldwork and reporting and to issue a letter accepting this report into the *Ontario Public Register of Archaeological Reports.*

The following recommendation is provided for consideration by the Proponent and by the MCM:

1. No artifacts or other archaeological resources were identified during the Stage 1 & 2 archaeological assessment. The subject property has now been fully assessed according to the Ontario Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists*. No further archaeological assessment of the property is required.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

The following advice on compliance with current legislation is provided for consideration:

a. This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part IV of the *Ontario Heritage Act*, R.S.O. 2005, c O.18. The report is reviewed to ensure that it complies with the standards and guidelines 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 Citizenship and Multiculturalism, 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. It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed 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 a 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 filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

c. 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 licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

d. The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the local police or coroner and the Registrar, Burials Unit, at the Ministry of Public and Business Service Delivery.

7.0 BIBLIOGRAPHY AND SOURCES

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8.0 IMAGES

Image 1: Subject property, facing southeast.

Image 2: Subject property, facing northeast.

Image 3: Gravel parking lot, facing northwest.

Image 4: Subject property, facing northwest.

Image 5: Subject property, facing southwest

Image 6: Typical test pit.

9.0 FIGURES

See the following pages for detailed assessment mapping and figures.

Figure 1: Location of the Subject Property on a 1:50,000 Scale Topographic Map

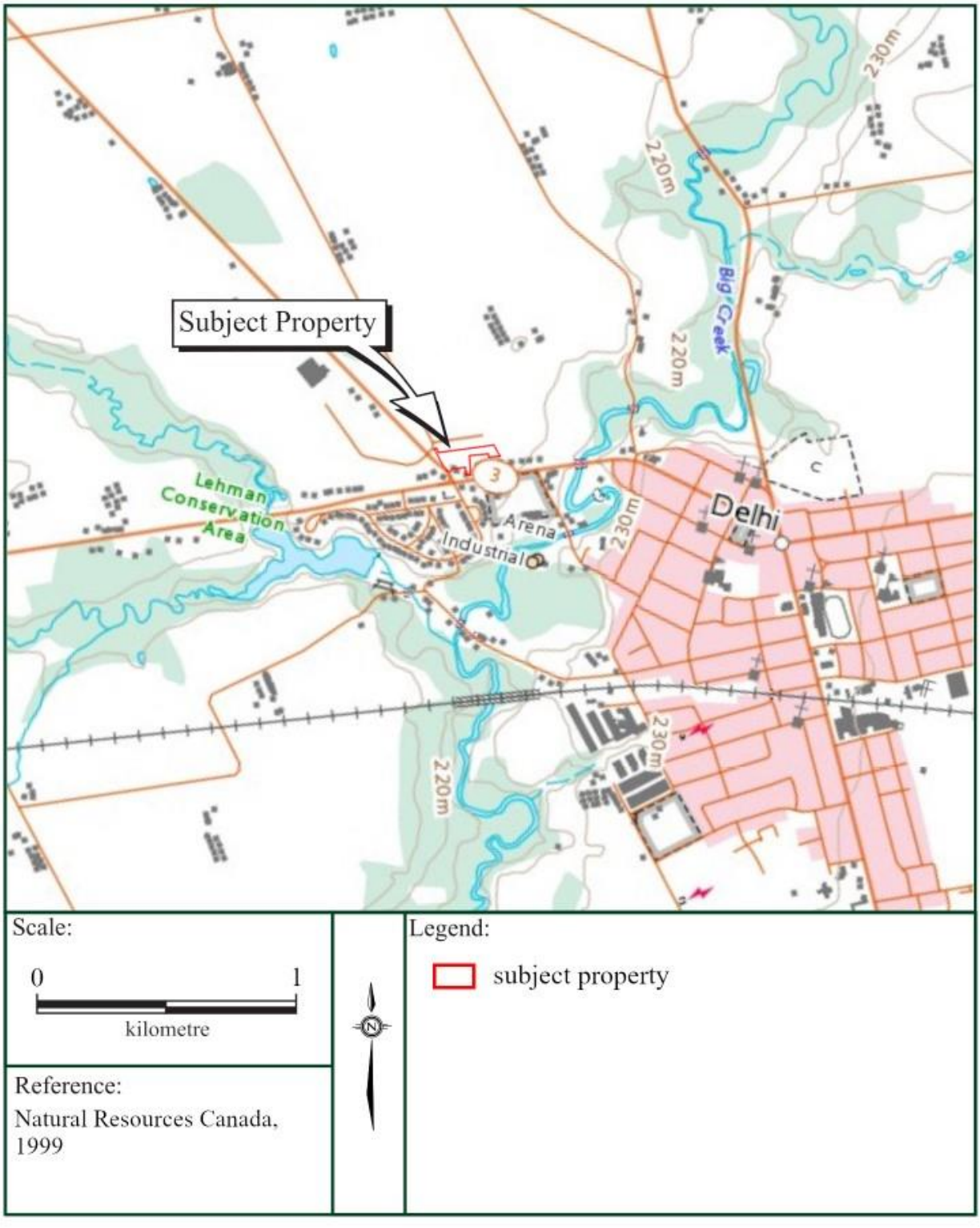


Figure 2: Location of the Subject Property on Tremaine's 1856 Historical Map of Norfolk County, Canada West

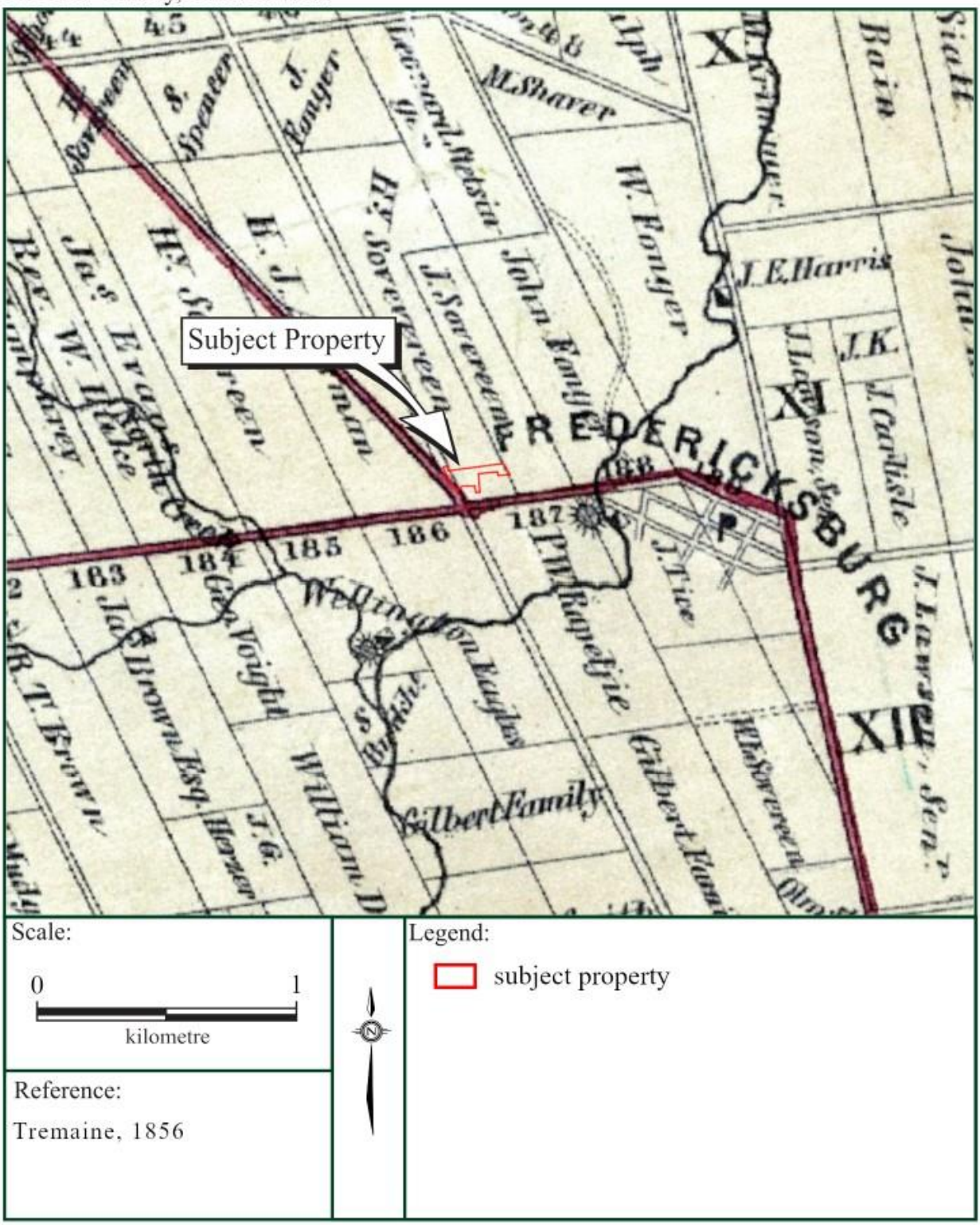


Figure 3: Location of the Subject Property on H.R. Page & Co.'s 1877 Historical Atlas Map of Middleton Township, Norfolk County

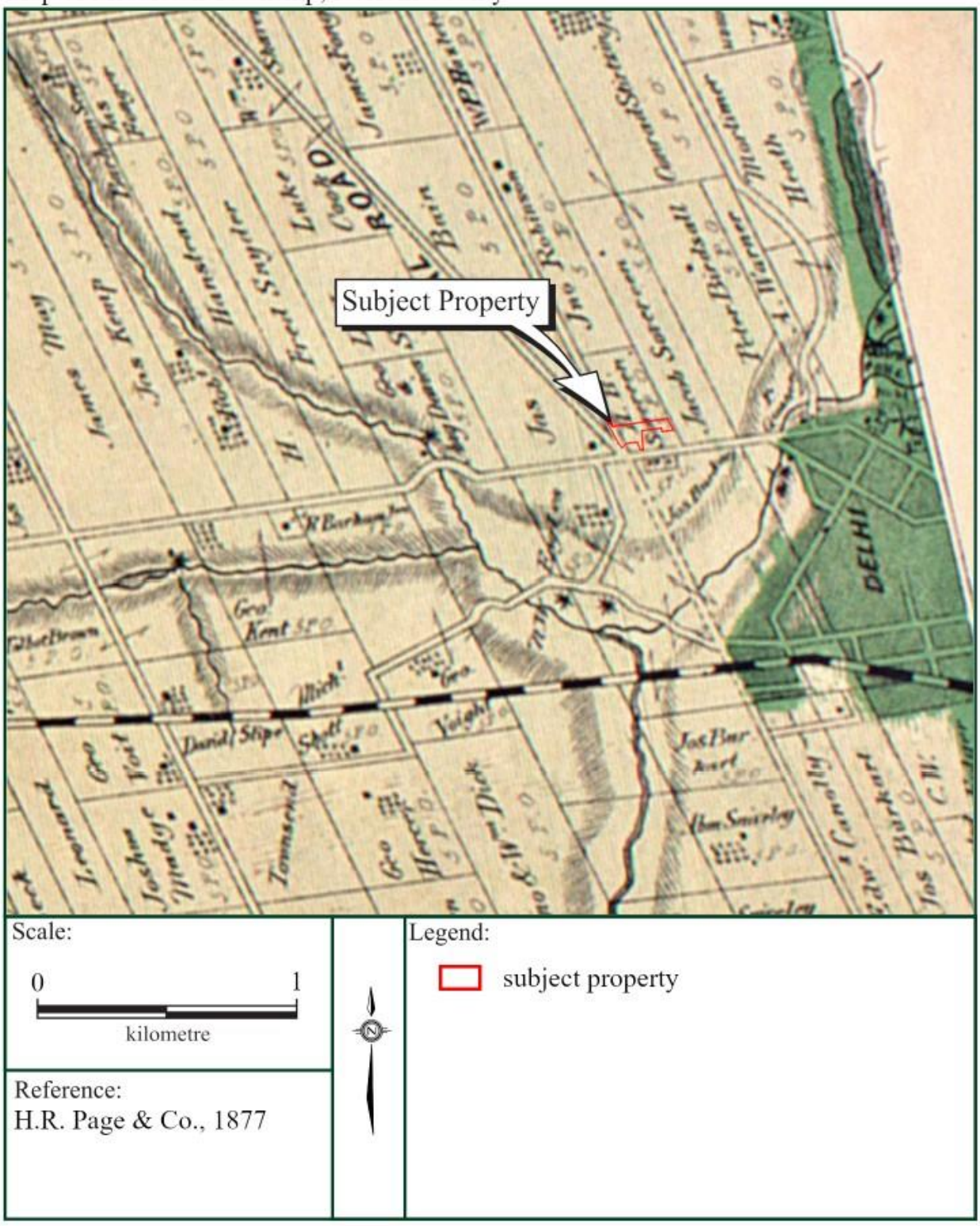


Figure 4: Location of the Subject Property on a Map of the Soils of Haldimand-Norfolk Municipality

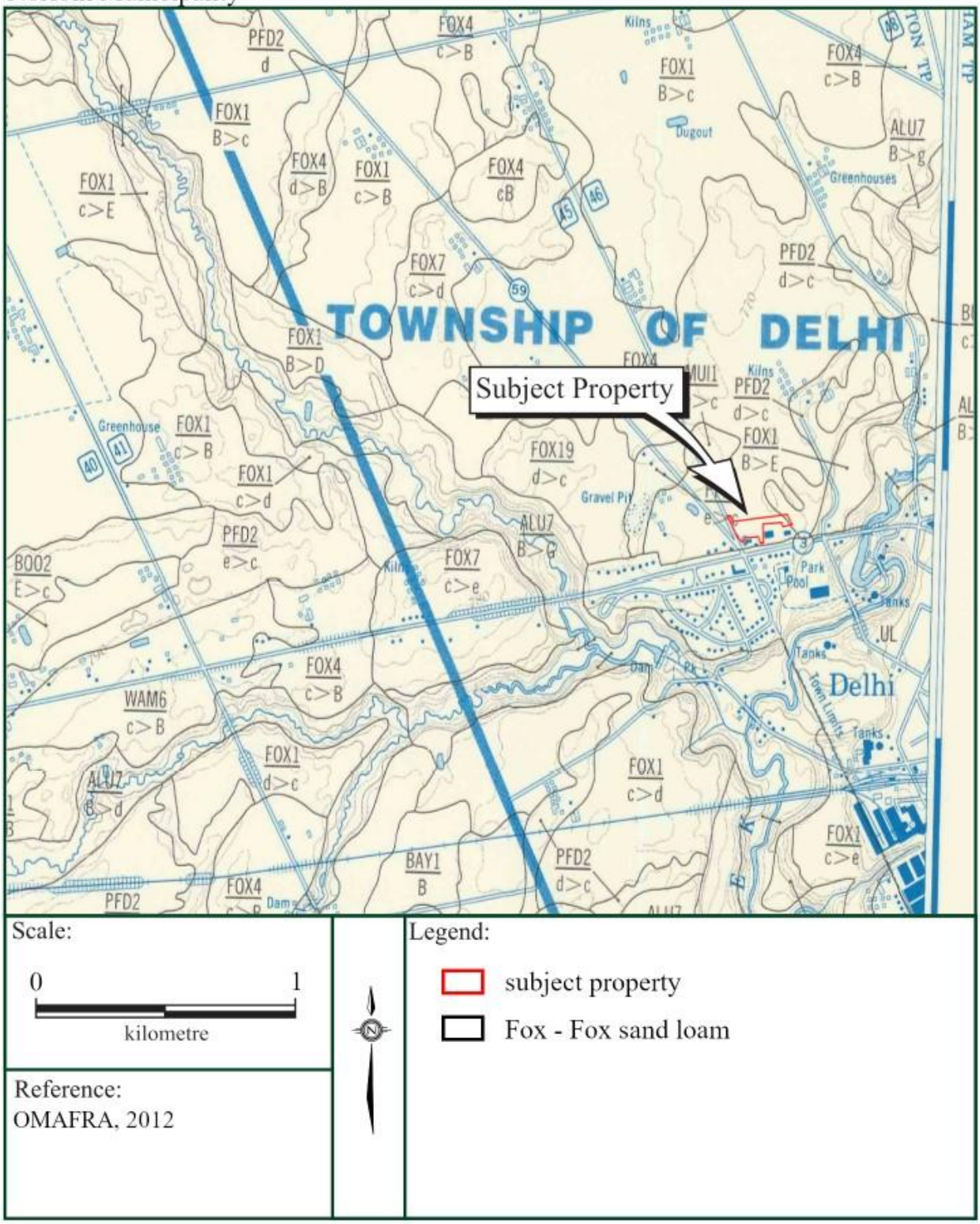
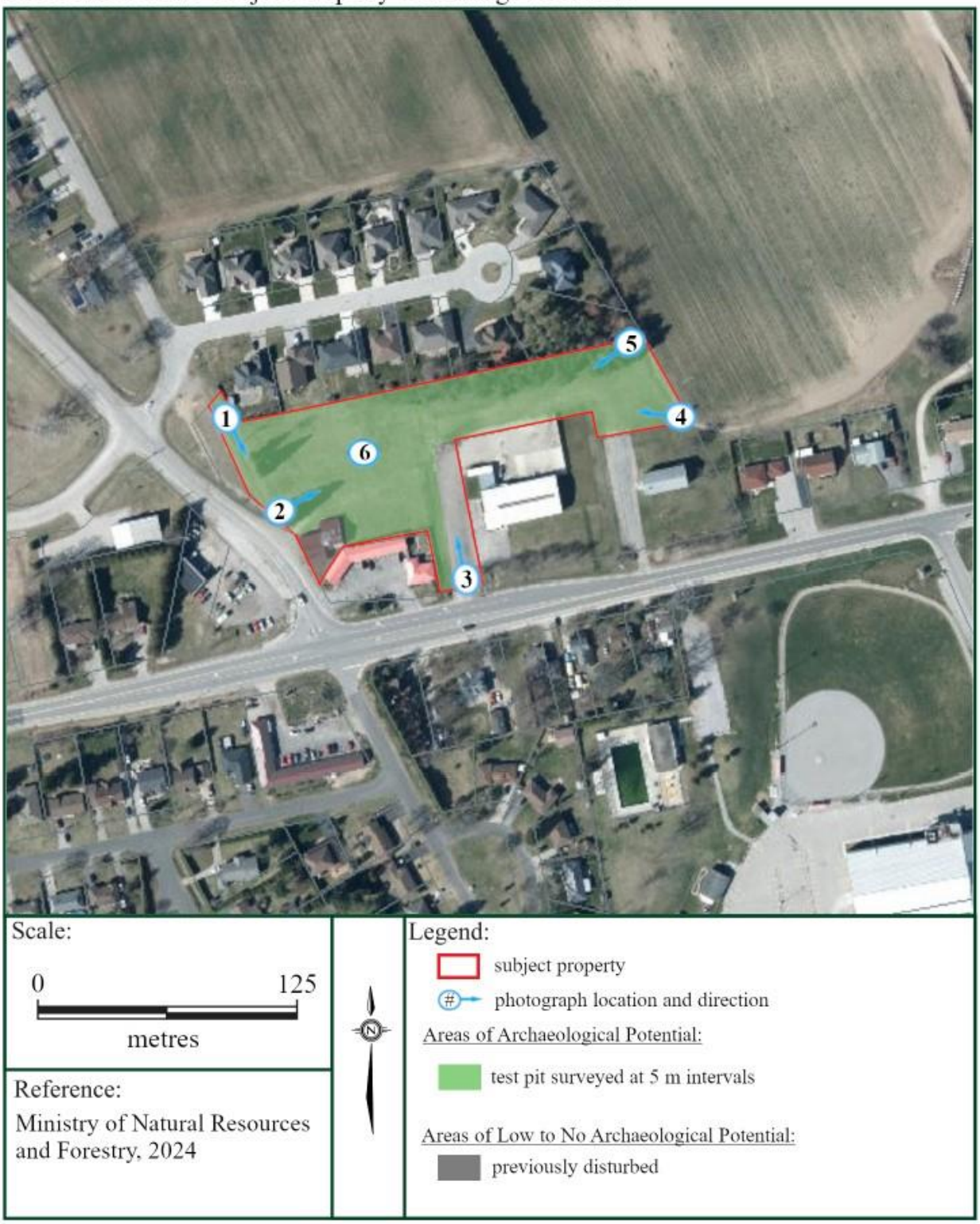
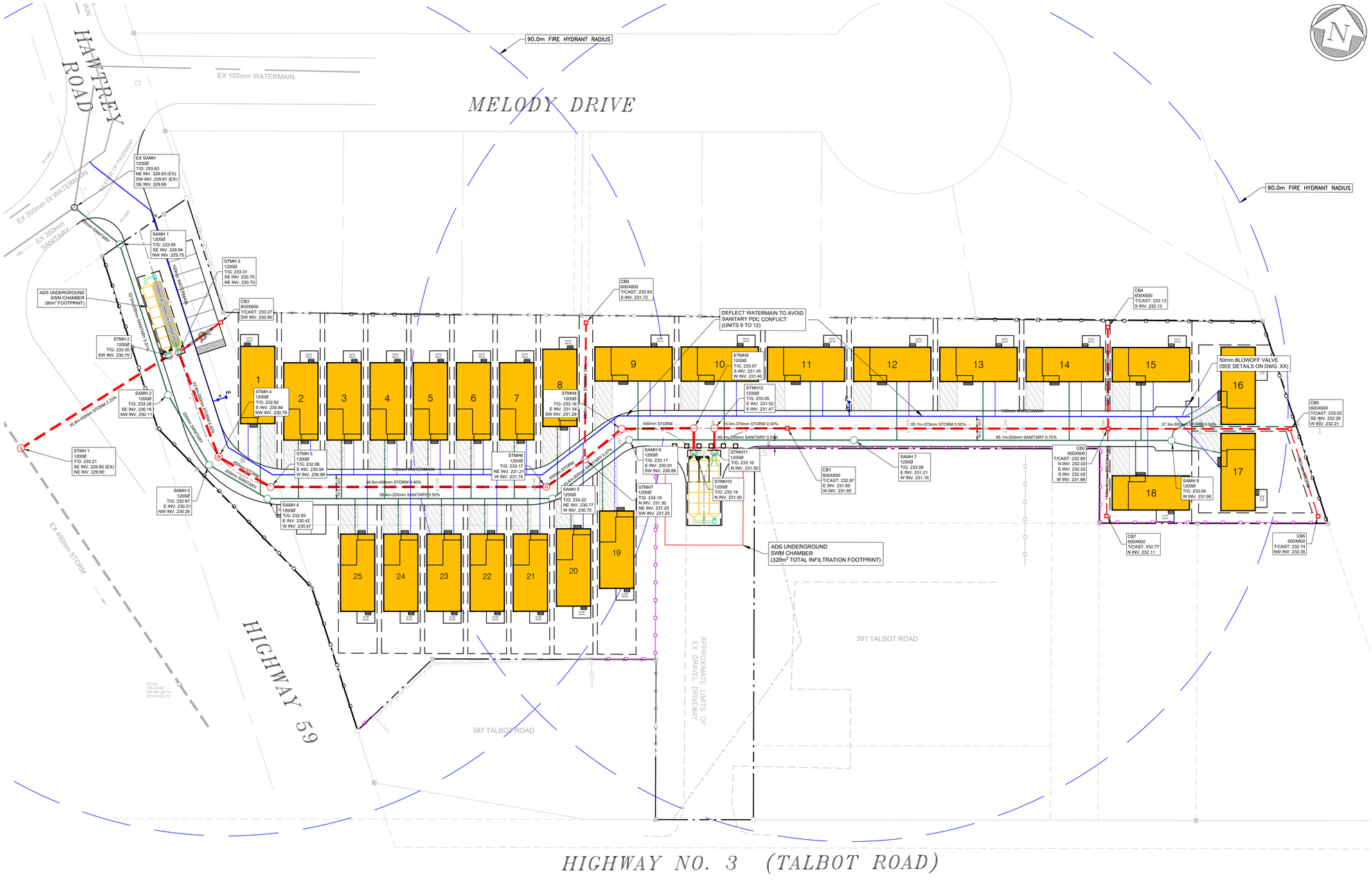


Figure 5: Current Land Use of the Subject Property

Figure 6: Aerial Photograph Showing the Results of the Stage 1 & 2 Archaeological Assessment of the Subject Property with Image Locations





REV. No.	DATE	REVISION
0	01/29/2025	ISSUED FOR ZBA APPLICATION

NOTE:
THE CONTRACTOR IS CAUTIONED THAT ALL OF THE EXISTING UTILITIES ARE NOT INDICATED ON THIS DRAWING. THE CONTRACTOR MUST ARRANGE FOR LOCATES FROM EACH AREA UTILITY COMPANY PRIOR TO ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES INCLUDING THOSE NOT INDICATED ON THIS DRAWING. G. DOUGLAS VALLEE LTD. CANNOT ACCEPT RESPONSIBILITY FOR DAMAGE TO ANY EXISTING UTILITY WHICH MAY OR MAY NOT BE INDICATED ON THIS DRAWING.

ALL WORK, MATERIALS AND PROCESSES TO CONFORM TO NORFOLK COUNTY STANDARDS AND SPECIFICATIONS

SURVEY INFORMATION

LEGAL DESCRIPTION: PART OF ROAD ALLOWANCE BETWEEN LOTS 45 AND 46 AND PART OF LOT 187, CONCESSION NORTH OF TALBOT ROAD (GEOGRAPHIC TOWNSHIP OF MIDDLETOWN), NORFOLK COUNTY, 37R-11418

TOPOGRAPHIC SURVEY: COMPLETED BY G. DOUGLAS VALLEE LTD., JANUARY 29, 2021

OWNER INFORMATION

ALDERSHOT HOMES LTD.
GABRIEL GASBARRINI, PRESIDENT
519-752-0557
33 MEMORIAL DRIVE, SUITE 101, BRANTFORD, ON, N3R 5R8

SCALE:
5 10 15 20
HORIZONTAL: 1:400

GENERAL NOTES:

1. ALL WATERMAINS SHALL HAVE A MINIMUM 1.70M DEPTH OF COVER, MEASURED FROM THE TOP OF THE PIPE TO FINISHED GRADE.
2. ALL WATERMAINS SHALL BE INSTALLED AS PER NORFOLK COUNTY 'STANDARDIZATION OF SERVICE LOCATIONS' AND SHALL CONFORM TO THE MINISTRY OF THE ENVIRONMENT'S PROCEDURE F-6-1 – PROCEDURES TO GOVERN SEPARATION OF SEWERS AND WATERMAINS.
3. ALL PIPE AND APPURTENANCES SHALL CONFORM TO THE LATEST REVISED APPLICABLE SPECIFICATIONS OF THE AMERICAN WATERWORKS ASSOCIATION (AWWA) AND MUST BE APPROVED FOR USE BY NORFOLK COUNTY
4. VALVES SHALL BE PLACED AT THE LIMITS OF EVERY INTERSECTION AND UNDER NORMAL CIRCUMSTANCES, THREE VALVES SHALL BE PROVIDED AT TEE INTERSECTIONS, AND FOUR VALVES AT CROSS INTERSECTIONS. MAIN LINE VALVES AT INTERSECTIONS SHALL BE SET IN LINE WITH THE PROPERTY LINE OF THE INTERSECTING STREET.
5. ALL WATER SERVICES SHALL BE INSTALLED AT RIGHT ANGLES TO THE WATERMAIN. NEW CONNECTIONS SHALL BE 3.0M FROM THE SIDE PROPERTY LINE OR AS APPROVED BY THE MANAGER OF ENVIRONMENTAL SERVICES OR DESIGNATE.
6. SERVICE CONNECTIONS TO PVC MAINS SHALL BE CONNECTED BY USING PVC MOULDED / FABRICATED TEE. NO SADDLES WILL BE PERMITTED WITHIN A NEW SUBDIVISION. PERMISSION FOR USE OF STAINLESS STEEL SADDLES WILL BE GRANTED FOR CONNECTION TO AN EXISTING MAIN
7. ALL SERVICE PIPES FOR 19MM, 25MM, 38MM AND 50MM SERVICES SHALL BE OF SOFT COPPER TYPE K, THIRD PARTY CERTIFIED WITH WARNOCK-HERSEY STAMP. KINKED, CRUSHED OR DISTORTED TUBING OR SOLDER TYPE FITTINGS WILL NOT BE PERMITTED.
8. A PACKAGED ANODE SHALL BE INSTALLED ON ALL METALLIC BENDS, TEES, CROSSES, VALVES, REDUCERS, ETC. AND AT EACH WATER SERVICE CONNECTION. THE PACKAGED ANODE SHALL BE PLACED AT THE SAME ELEVATION AS THE BASE OF THE FITTING OR PIPE. THE ANODE SHALL BE LOCATED AT LEAST 1.0M HORIZONTALLY AWAY FROM THE FITTING, PIPE OR WATER SERVICES AND AT LEAST 1.5M HORIZONTALLY AWAY FROM THE CURB STOP.
9. PIPE BEDDING SHALL BE CLASS B BEDDING WITH 150MM GRANULAR A BEDDING AND 300MM GRANULAR A COVER, COMPACTED TO 95% PROCTOR DENSITY.
10. BACKFILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 300MM IN DEPTH FOR THE FULL TRENCH WIDTH. EACH LAYER SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DRY DENSITY. CARE SHALL BE EXERCISED DURING BACKFILL OPERATIONS SO THAT THE WATERMAIN IS NOT DAMAGED OR DISPLACED.

LEGEND

- STMHS — PROPOSED STORM MANHOLE
- SAMHS — PROPOSED SANITARY MANHOLE
- PROPOSED WATERMAIN
- WV — PROPOSED WATER VALVE
- FH — PROPOSED FIRE HYDRANT
- PROPERTY LINE
- KNOCKDOWN BOLLARD
- 20 — UNIT NUMBER
- PROPOSED SINGLE CAR DRIVEWAY
- PROPOSED BUILDING

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Consulting Engineers, Architects & Planners
G. DOUGLAS VALLEE LIMITED
2 TALBOT STREET NORTH
SIMCOE, ONTARIO N3Y 3W4
(519) 426-6270

Stamp

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project Title
PEACH BARN ESTATES
10 HIGHWAY 59
DELHI - NORFOLK COUNTY

Drawing Title
SERVICING PLAN

Designed by : CJC	Drawn By : CJC
Checked by : JTI	Date Started : JUNE 2024
Drawing Scale : 1:400	Drawing No. C102
Project No. 21-008	

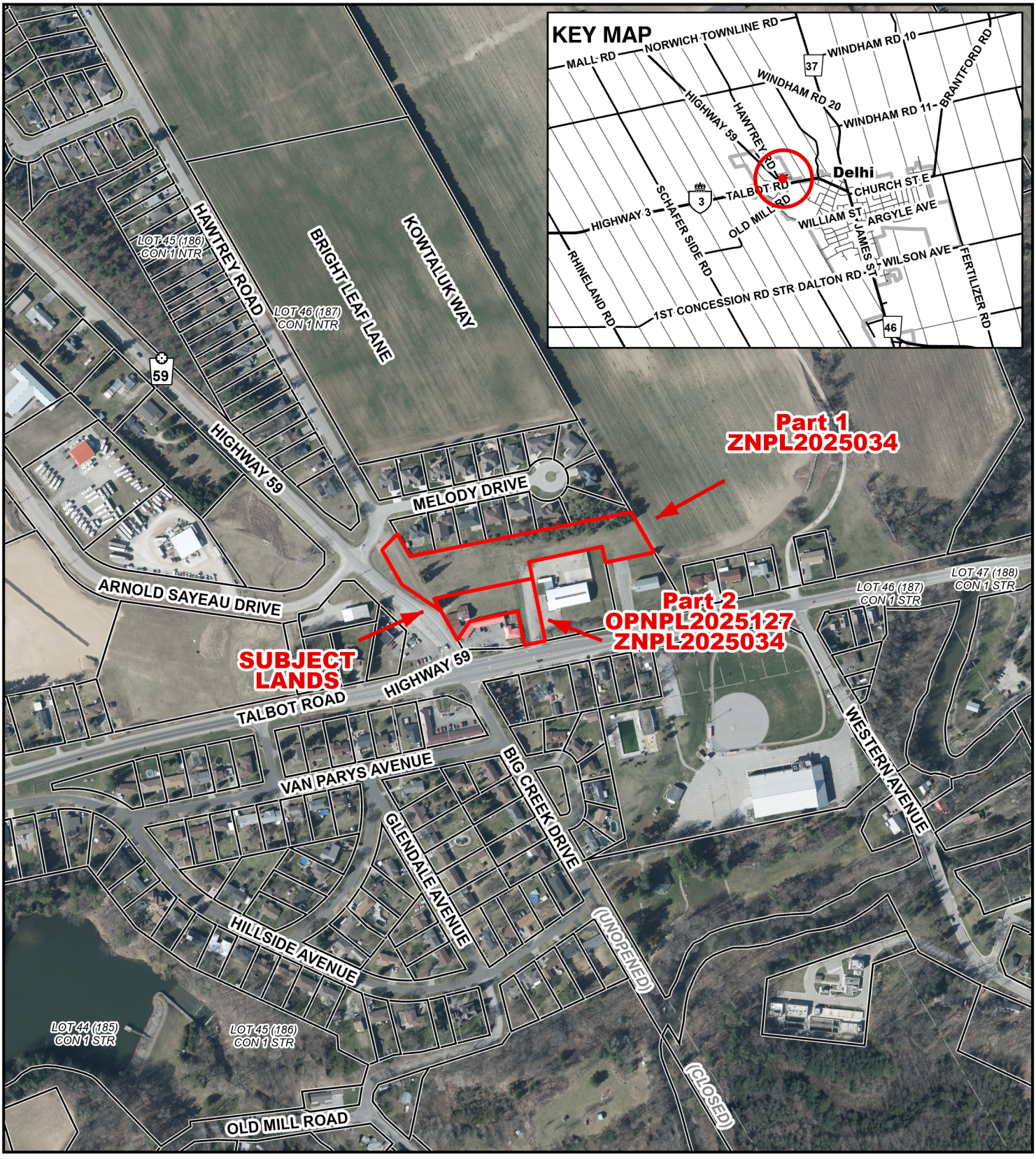
DATE LAST PLOTTED : January 29, 2025
FILE PATH: H:\Projects\2021\21-008 Hawtrey Road Condo Investigation\Drawings\Civil\03-Production Drawings\C102 Servicing Plan.dwg

MAP A

CONTEXT MAP

Geographic Township of MIDDLETON

OPNPL2025127
ZNPL2025034



Legend

Subject Lands

2020 Air Photo

5/16/2025

N

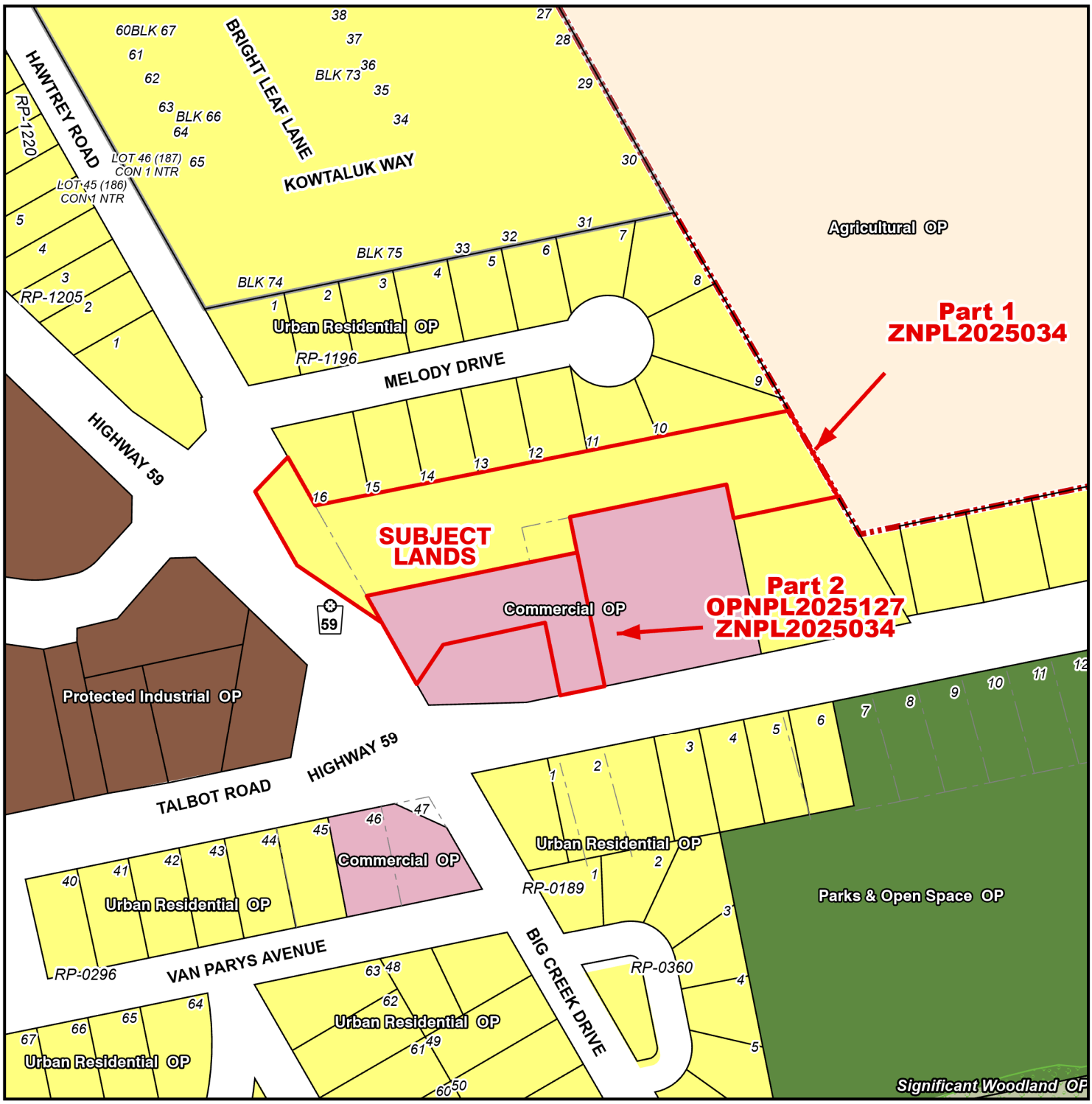
30 15 0 30 60 90 120 Meters

MAP B

PROPOSED OFFICIAL PLAN AMENDMENT MAP

Geographic Township of MIDDLETON

OPNPL2025127
ZNPL2025034



Legend

Subject Lands

Official Plan Designations

- Agricultural
- Hazard Lands
- Urban Residential
- Commercial
- Protected Industrial
- Parks & Open Space
- Urban Area Boundary
- Significant Woodland

5/16/2025

N

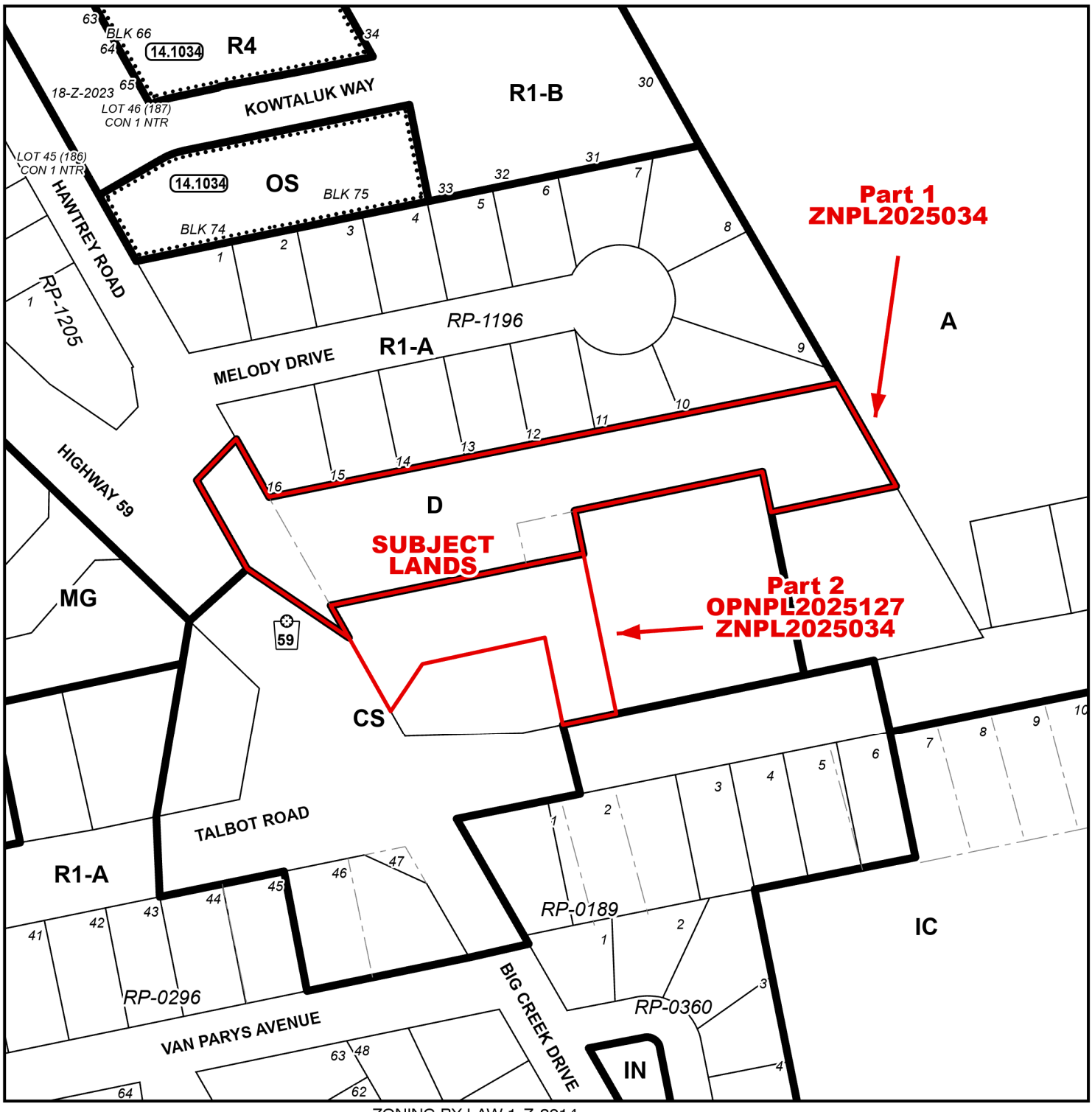
105 0 10 20 30 40 Meters

MAP C

PROPOSED ZONING BY-LAW AMENDMENT MAP

Geographic Township of MIDDLETON

OPNPL2025127
ZNPL2025034



LEGEND

Subject Lands

ZONING BY-LAW 1-Z-2014

- (H) - Holding
- A - Agricultural Zone
- CS - Service Commercial Zone
- IC - Community Institutional Zone
- D - Development Zone
- MG - General Industrial Zone
- IN - Neighbourhood Institutional Zone
- OS - Open Space Zone
- R1-A - Residential R1-A Zone
- R1-B - Residential R1-B Zone
- R4 - Residential R4 Zone

Part 1:
From: D
To: R4 with Special Provision

Part 2:
From: CS
To: R4 with Special Provision

5/16/2025

N

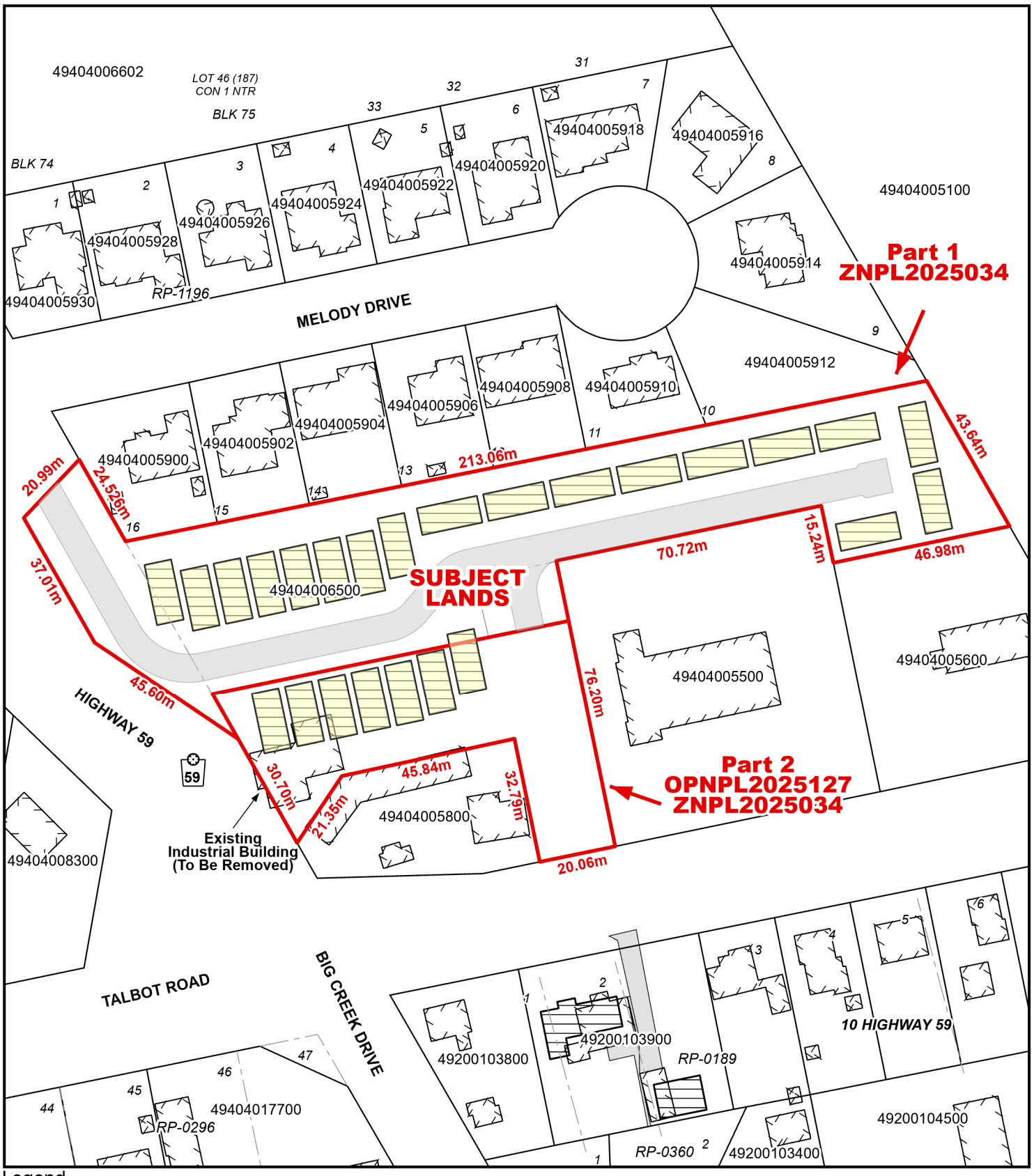
10 5 0 10 20 30 40 Meters

MAP D

CONCEPTUAL PLAN

Geographic Township of MIDDLETON

OPNPL2025127
ZNPL2025034



Legend

- Subject Lands
- Proposed Lots By Type
  - Proposed Lot
  - Single Family Dwelling
  - Multi Family Dwellings
  - Park
  - Storm Water Pond
  - Other

5/16/2025

N

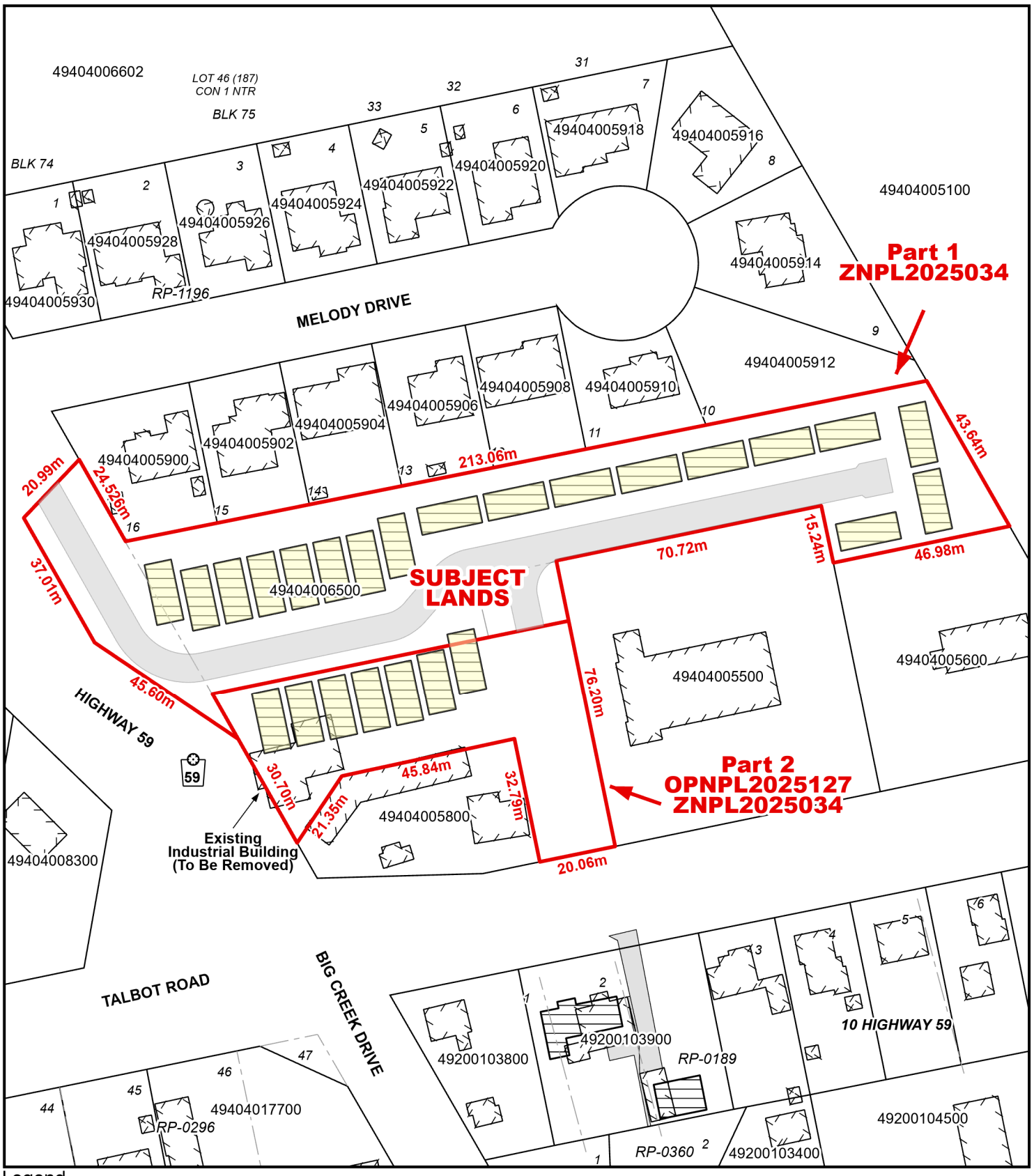
10 5 0 10 20 30 40 Meters

LOCATION OF LANDS AFFECTED

CONCEPTUAL PLAN

Geographic Township of MIDDLETON

OPNPL2025127
ZNPL2025034



Legend

- Subject Lands
- Proposed Lots By Type
  - Proposed Lot
  - Single Family Dwelling
- Multi Family Dwellings
- Park
- Storm Water Pond
- Other

5/16/2025

N

10 5 0 10 20 30 40 Meters