



**ROADS SUB-COMMITTEE MEETING AGENDA
WEDNESDAY, MARCH 11, 2020 - 1:30 P.M.
MEETING HELD IN THE COUNCIL CHAMBERS**

1. Call to Order
2. Additions/Deletions/Approval of Agenda
3. Declaration of Pecuniary Interest or Conflict of Interest
4. Approval of Draft Minutes - February 12, 2020
5. Business Arising from Minutes
6. Correspondence Items
7. General Business
 1. Monthly Update from Public Works Superintendent
 2. NWN Scientific - Road Impact Memo
 3. Other/Additions
 4. Unfinished Business
 1. 5 Sideroad Structure - Update (if any)
 2. Winter Operations Plan
 3. Significant Weather Event Policy
 4. Bonnefield/Wallace - Drain Road Crossings
8. Delegations

2:05 p.m. Chris Knechtel; RJ Burnside & Associates - Structure 2013 Replacement - Open Tenders
9. Recommendations to Council
10. Public Question Period
11. Confirmation Motion
12. Adjournment and Date of Next Meeting

Kaitlin Chessell

From: Denise Holmes
Sent: Tuesday, March 3, 2020 2:34 PM
To: Kaitlin Chessell
Subject: FW: Roads Impact Memo - Clause 34 of SPA Agreement
Attachments: Roads Impact Memo - February 28, 2020.pdf

For next Roads Sub-committee meeting.

Denise B. Holmes, AMCT
CAO/Clerk, Township of Melancthon
519-925-5525 Ext. 101

From: Humphrey, Jeremy <Jeremy.Humphrey@wsp.com>
Sent: Friday, February 28, 2020 4:49 PM
To: Denise Holmes <dholmes@melancthontownship.ca>
Cc: Chris Jones <Chris_MPlanningServices@rogers.com>; cgogan (cgogan@devcapinternational.com) <cgogan@devcapinternational.com>; Joshua Van Eyk <jvaneyk@ellisdon.com>
Subject: Roads Impact Memo - Clause 34 of SPA Agreement

Good evening,

Please find attached the completed memo as mandated within the SPA Agreement.

Please let me know if you have any issues accessing the document.

Thank you for your time,

Jeremy Humphrey
Planner
Planning, Landscape Architecture and Urban Design



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2020-02-28

Denise Holmes, CAO/Clerk
Township of Melancthon
157101 Highway 10
Melancthon, ON L9V 2E6

Subject: Roads Impact Memo - Clause No. 34 of the Site Plan Control Agreement

Dear Denise:

In accordance with the obligations of the Site Plan Control Agreement, the enclosed Road's Impact Memo has been provided to the Township for consideration and review.

This memo summarizes information received from Ellis Don and 2690044 Ontario Inc., in order to depict construction and operational traffic demands, and presents the best available information as of February 28, 2020.

Should you have any questions about the enclosed contents, please let me know.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'J. Humphrey'.

Jeremy Humphrey
Planner
Planning, Landscape Architecture, Urban Design

cc: Conor Gogan, JSG Consulting
Joshua Van Eyk, Ellis Don

WSP ref.: 19M-00524-00

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117287 2ND LINE SW – ROADS IMPACT MEMO

INTRODUCTION

This memo responds to the concerns regarding the damage to Township roads raised by members of Council during the January 16, 2020 Council meeting, as well as the February 12, 2020 Road's Sub-Committee meeting. The Site Plan Control Agreement (the Agreement) between the Township of Melancthon and 2690044 Ontario Inc, stipulated that by March 2, 2020, a memo was to be submitted by the applicant to provide further details related to the construction activities and operational impacts on Township roads resulting from the Cannabis Facility at 117287 2nd Line SW (Clause No. 34).

The Township's Road's Management Plan (the Plan), dated October 2019, prepared by RJ Burnside and Associates Ltd., details an analysis of the Township's road assets, and recommended maintenance to be undertaken by the Township. It is understood that this latter aspect of the Plan is the genesis for the concerns raised by Council, particularly with regard to the financial obligations associated with maintaining 2nd Line SW in accordance with the recommendations of the Plan.

The construction of the Cannabis Facility will have due regard for Township By-laws regulating the access and use of Township roadways, more particularly referenced as By-law 49-2015, being a by-law for reduced load periods, and By-law 27-2012, being a by-law to restrict heavy trucks operating on Township roads.

The half-loads restriction will be observed in accordance with Section 2 of By-law 49-2015. Section 2.2 of By-law No. 27-2012 exempts heavy trucks where a situation exists that access to a site cannot reasonably be attained by any other means, and stipulates that these vehicles only travel on Township roads as long as is necessary to reach the intended destination. The haul route to be used to access the property both during construction and operation of the Cannabis Facility is as follows:

- County Road 124 → County Road 17 → 2nd Line SW → 117287 2nd Line SW, and vice-versa for vehicles leaving the Facility.

This haul route minimizes the impact to Township roads, resulting in trucks and delivery vehicles using 2nd Line SW from County Road 17 to approximately 800 metres north of 280 Sideroad. The total duration that these vehicles will be using 2nd Line SW is approximately 2.8 kilometres (per direction).

A review of the appendices of the Plan, identifies the two Township road segments that construction vehicles and delivery vehicles will be using along 2nd Line SW – Asset Id's 1278 and 117 (only a portion of Asset Id 117 will be used). The financial obligations are detailed within a Memorandum dated January 6, 2020 by RJ Burnside and Associates Ltd., which identifies the following commitments within a 10-year maintenance forecast:

- Preventative and routine maintenance in 2020: \$63,213
- Resurfacing in 2026: \$382,855

This memo incorporates information from the construction management company – Ellis Don – as well the applicant - 2690044 Ontario Inc, - to inform the Township of the anticipated volume of truck traffic related to the construction and operation of the Facility. This information represents best estimates available as of February 28, 2020. As communicated through Clause 34 of the Agreement, and as discussed during the February 12, 2020 Road's Sub-Committee meeting, this memo is to be reviewed by RJ Burnside and Associates Ltd., which will provide recommendations to Township Council. These recommendations are to be incorporated to the Agreement through an Amendment no later than April 16, 2020.



1.0 PROJECT SUMMARY

On May 2, 2019, following a delegation by 2690044 Ontario Inc., Township Council adopted a resolution allowing the outdoor cultivation and accessory freezing of Cannabis plants within the General Agricultural (A1) zone. On August 8, 2019, 2690044 Ontario Inc., submitted a Site Plan Control Application for a Cannabis Facility located at 117287 2nd Line SW. This submission followed a preconsultation telephone meeting that occurred on July 5, 2019.

The application was presented to Council at the September 5, 2019 meeting, and a public Open House was held on October 16, 2019, to allow the public the opportunity to engage with the project team and find out more about the development. A revised Site Plan Control application was submitted on November 5, 2019, followed by a building permit submission on November 26, 2019. Subsequent submissions of landscape plans, and attendance at a Road’s Sub-Committee meeting in January culminated in Township Council approving the Site Plan Control application at the January 16, 2020 meeting.

The development consists of four buildings that will form a campus style development once complete. The four buildings include a Machine Storage building, Freezer, Nursery, and Extraction & Processing facility. The first building permit submission was for the Machine Storage building, which will temporarily function in part as a Cannabis Facility during the first season of planting in 2020. This first building will also allow 2690044 Ontario Inc., to secure the required licenses from Health Canada.

Section 3 of the memo outlines a tentative construction schedule and forecasts the anticipated gravel and concrete truck loads. All buildings are proposed to be steel construction, though the exact specifications and suppliers of the remaining campus buildings are not known at this time, and the details of those structures are not included in this memo.

2.0 CONSTRUCTION ACTIVITIES DURING 2020

The first building to be completed by spring 2020 is the Machine Storage / Cannabis Facility. At the time of writing, the Building Permit application is under review by Dufferin County Building Services, with Municipal Approval having been secured on February 21, 2020. During this first phase of construction, approximately 30% of the campus road network will be installed to facilitate access and parking on site.

The following assumptions will be consistent throughout the memo: Each concrete truck is assumed to have a load of 9m³ of concrete, and each gravel truck has a weight of 22 tonnes. Both classes of vehicles are assumed to have full loads.

BUILDING	CONSTRUCTION AREA	CONCRETE TRUCKS	GRAVEL TRUCKS	YEAR
Machine Storage	1870 m ²	67	51	2020

The approximate 30% road & parking construction to be complete during this time yields a further 103 gravel trucks.

The intended completion date of the Machine Storage/Cannabis Facility is by May 2020 to secure the issuance of the federal licenses and facilitate the first 50-acre crop planting. The total construction time is anticipated to be up to 5 months (site work began in January).

3.0 ANTICIPATED CAMPUS CONSTRUCTION TRUCK VOLUME

The Machine Storage building will house a temporary Cannabis Facility until the Nursery building can be completed. The Nursery is anticipated to start construction in the Spring of 2021, and construction is expected to last approximately 9 months.

BUILDING	CONSTRUCTION AREA	CONCRETE TRUCKS	GRAVEL TRUCKS	YEAR
Nursery	4174 m ²	122	112	2021



The Freezer building will begin construction in Fall 2021, and is expected to last approximately 6 months through the winter into early 2022.

BUILDING	CONSTRUCTION AREA	CONCRETE TRUCKS	GRAVEL TRUCKS	YEAR
Freezer	4118 m2	127	111	2021

The Extraction & Processing building is the last campus building that will be constructed. Construction is expected to begin in the Spring of 2022, and last approximately 9 months.

BUILDING	CONSTRUCTION AREA	CONCRETE TRUCKS	GRAVEL TRUCKS	YEAR
Extraction & Processing	1412 m2	54	38	2022

The remaining 70% of the roads and parking area are to be constructed in 2021, resulting in an addition of 241 gravel trucks.

4.0 OPERATIONAL TRUCK VOLUMES

The Extraction & Processing building is to allow frozen crops to be processed on site. Until this structure is completed in 2022, the operational requirement will be to have frozen crops transported off-site. The forecasted frequency at this time is for trucks to operate weekly. The vehicle to be used is a 13,000 lb, 26-foot long truck. The loads of these trucks will vary depending on the number of harvested crops. The frequency of trucks may ultimately increase, but will be heavily dependent upon crop yield and operational planting areas at a given time.

5.0 SUMMARY

The preceding facts and figures represents best estimates available as of February 28, 2020. Construction activities on the property commenced in early 2020, and are anticipated to be completed by late 2022. The presence of gravel and concrete trucks are expected to have the most significant impact on the Township's road assets, though the occurrence of these vehicles is to be at the initiation of construction activities, and will not last throughout the duration of the proposed construction timelines provided above for each of the structures described. There is likely to be a high frequency of these vehicles over a short timespan, followed by periods of no traffic. The exact duration and frequency of this traffic will be largely dictated by site conditions at the time of construction.

The haul-route to be used makes minimal use of Township roads in accordance with By-law 27-2012. The half-loads restriction described in By-law 49-2015 will be observed, and will result in no heavy truck traffic during the timeframe described in Section 2 of the by-law.

This information is respectfully submitted to the Township and their consultants for consideration, and to satisfy the provision of Clause No. 34 of the Agreement.

Jeremy Humphrey
Planner,
Planning, Landscape Architecture, Urban Design
WSP Canada Group Limited.

Kaitlin Chessell

From: David Thwaites
Sent: Wednesday, February 19, 2020 10:01 AM
To: Kaitlin Chessell; Denise Holmes
Subject: Winter Operations Plan - Roads Committee

Kaitlin and Denise:

I have reviewed the draft Plan. Comments/questions are as follow:

- Purpose, para 3 - insert "the Council of the Corporation"
- Section 4.2.1 - in each of the sections dealing with Snow and Ice there is reference to a "weather emergency" but no where is this defined. Are we intending this to be " a significant weather event" or does it mean something different?
If the events are one and the same then we should adopt the same wording. This would also be the place a provision that incorporates the procedure for managing such an event as we discussed at the Roads meeting.
If the events differ then we need to define and address.
- Section 4.6.13 - the second sub paragraph declares that it is "vital" to record Is there a prescribed form/ manner to record and maintain such (back of a napkin?), timing, location, manner of measuring/ observation?

David Thwaites

Sent from my iPad



The Corporation of

THE TOWNSHIP OF MELANCTHON

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CORPORATION OF THE TOWNSHIP OF MELANCTHON

MEMORANDUM

TO: CHAIR BESLEY AND MEMBERS OF THE ROADS SUB-COMMITTEE

FROM: DENISE HOLMES, CAO/CLERK

SUBJECT: SIGNIFICANT WEATHER EVENT POLICY

DATE: FEBRUARY 14, 2020

The Draft Significant Weather Event Policy was first presented to the Roads Sub-Committee at its meeting held on February 12, 2020.

At that meeting, Staff were directed to forward the Draft Policy to Frank Cowan and Company for review and comment.

The Draft Policy was sent to Brian Anderson, Road Specialist with Frank Cowan and Company and he was very helpful and reviewed the document and followed up with some revisions to the document. A definition section was added and amendments to wording to comply with the Minimum Maintenance Standards legislation.

I am recommending to the Roads Sub-Committee that the Draft Significant Weather Event Policy be sent to Council for approval.



SIGNIFICANT WEATHER EVENT POLICY

Purpose

The purpose of this policy is to establish a protocol for the Declaration of a "Significant Weather Event" as defined in the Minimum Maintenance Standards for Municipal Highways (the "Maintenance Standards") from Ontario Regulation 239/02 under the *Municipal Act, 2001*, S.O. 2001, c. 25. Declaring a Significant Weather Event deems all roadways, or the portion of the road network impacted by the Significant Weather Event, in the Township of Melancthon in a state of repair with respect to snow accumulation and/or ice conditions such that it may take longer for the Public Works Department to achieve the Maintenance Standards. The Township of Melancthon will maintain the roadways as per the levels of service identified in the Maintenance Standards with respect to snow accumulation and/or ice conditions once the Significant Weather Event has ended.

Definitions

"Significant Weather Event" - means an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a municipality.

"Weather Hazard" - means the weather hazards determined by Environment Canada as meeting the criteria for the issuance of an alert under its Public Weather Alerting Program.

Authority

Section 4.1 of Ontario Regulation 239/02 under the *Municipal Act, 2001*, S.O. 2001 c. 25, provides the authority for the Township of Melancthon to declare a Significant Weather Event. A Significant Weather Event may be declared at the discretion of the Public Works Superintendent or the Chief Administrative Officer or his/her designate (the "Authorized Staff").

Policy Statement

Public safety is the utmost importance to the Council and Staff of the Township of Melancthon and for various reasons, it may be necessary to declare a Significant Weather Event to assist the Township in meeting its obligations under the Minimum Maintenance Standards.

Procedures for the Significant Weather Event

A Significant Weather Event may be declared by authorized Staff in response to an alert issued by Environment Canada under its Public Weather Alerting Program for an approaching or occurring weather hazard or in response to one of the following conditions:

- Significant snow accumulation on roadways during a twenty-four (24) hour period
- Ice formations on roadways that occurs with little or no warning
- Extreme cold temperature when de-icing operations will not be effective
- Declaration of a Significant Weather Event by the County of Dufferin

- A Significant Weather Event may otherwise be declared as a result of any other factor deemed relevant by Authorized Staff

If a Significant Weather Event is declared, the Township of Melancthon will continue to monitor the weather and will declare the end of the Significant Weather Event as soon as practicable after the relevant weather conditions have ceased.

The Declaration of the beginning of a Significant Weather Event shall be made public through one or more of the following:

- By posting a notice on the Township's Website
- By making an announcement on Twitter or other social media platform
- Sending a notice out via the Township's MailChimp
- Notification of Police and Emergency Services

Snow Accumulation - Roadways

If a Significant Weather Event is declared relating to snow accumulation, the standard for addressing snow accumulation on roadways until the declaration of the end of the Significant Weather Event is:

- To monitor the weather in accordance with the Maintenance Standards; and
- If deemed practicable by Authorized Staff, to deploy resources to address snow accumulation on roadways, starting from the time that the Authorized Staff deems it appropriate to do so.

If a Significant Weather Event is declared, all roadways or the portion of the road network impacted by the Significant Weather Event within the Township are deemed to be in a state of repair with respect to snow accumulation, until the applicable time in the *Snow Accumulation on Roadways Table* to Section 4 (attached as Schedule 1) expires following the declaration of the end of the significant weather event.

Following the end of the weather hazard in respect of which a Significant Weather Event was declared, the Authorized Staff shall,

- Declare the end of the Significant Weather Event when it is appropriate to do so, and
- Address snow accumulation on roadways in accordance with the Maintenance Standards

Ice Conditions - Roadways

If a Significant Weather Event is declared relating to ice conditions, the standard for addressing ice conditions on roadways until the declaration of the end of the Significant Weather Event is:

- To monitor the weather in accordance with the Minimum Maintenance Standards; and
- If deemed practicable by Authorized Staff, to deploy resources to address ice conditions on roadways, starting from the time that the Authorized Staff deems it appropriate to do so.

If a Significant Weather Event is declared, all roadways or the portion of the road network impacted by the Significant Weather Event within the Township are deemed to be in a state of repair with respect to ice conditions until the applicable time in the *Treatment of Icy Roadways Table 2* to Section 5 (attached as Schedule 1) expires following the declaration of the end of the significant weather event.

Following the end of the weather hazard in respect of which a Significant Weather Event was declared, the Authorized Staff shall,

- Declare the end of the Significant Weather Event when it is appropriate to do so, and
- Address snow accumulation on roadways in accordance with the Minimum Maintenance Standards

Approved by Council on: _____

***Significant Weather Event Policy
Schedule 1***

Snow Accumulation - Roadways Table

<i>Class of Highway</i>	<i>Depth</i>	<i>Time</i>
<i>1</i>	<i>2.5 cm</i>	<i>4 hours</i>
<i>2</i>	<i>5 cm</i>	<i>6 hours</i>
<i>3</i>	<i>8 cm</i>	<i>12 hours</i>
<i>4</i>	<i>8 cm</i>	<i>16 hours</i>
<i>5</i>	<i>10 cm</i>	<i>24 hours</i>

Treatment of Icy Roadways Table 2

<i>Class of Highway</i>	<i>Time</i>
<i>1</i>	<i>3 hours</i>
<i>2</i>	<i>4 hours</i>
<i>3</i>	<i>8 hours</i>
<i>4</i>	<i>12 hours</i>
<i>5</i>	<i>16 hours</i>

Bonnefield/Wallace Drainage Works
February 2020

9.0 Estimate of the Cost of the Work

The estimate of the cost of all labour, equipment and material required to construct this project is as follows:

Item	Description	Approx. Quantity	Cost Estimate
Work on Private Lands			
1.0	Supply and place straw bale sediment check dam, removal and disposal after the completion of the work including clean-out of any accumulated sediment as needed (Sta. A650).	1 ea	\$250.00
2.0	Excavate open drain (25 cu.m) including spreading and levelling of excavated material and seeding all disturbed areas including levelled spoil and sideslopes (Sta. A650 to Sta. A697).	47 lin.m	\$1,000.00
A Drain-Work on Sideroad 15			
✓ 3.0	Excavate open drain (50 cu.m) including stripping and salvaging topsoil, hauling and disposal of excavated material and seeding of sideslopes (Sta. A697 to Sta. A702 and A724 to Sta. A729).	10 lin.m	\$500.00
✓ 4.0	Remove and dispose of existing 600 mm dia. CSP, supply and install 22 m, 1600 mm dia. CSP, 3.5 mm Th., 125 x 25 mm Corrugations at 200 mm below grade in accordance with OPSD 802.010 including stripping and replacing topsoil, removal and disposal of any excess material, supply, placement and compaction of all granular materials and seeding of all disturbed areas (Sta. A702 to Sta. A724).	22 lin.m	\$16,250.00
✓ 5.0	Supply and place quarry stone rip-rap (500 mm thickness) on geotextile underlay as CSP inlet and outlet protection (Sta. A702 and Sta. A724).	40 sq.m	\$2,000.00
✓ 6.0	Excavate open drain (275 cu.m) including spreading and levelling of excavated material and seeding all disturbed areas including levelled spoil and sideslopes (Sta. A729 to Sta. A768).	39 lin.m	\$1,250.00

Item	Description	Approx. Quantity	Cost Estimate
A Drain-Work on Private Lands (Cont'd)			
7.0	Excavate open drain (1,850 cu.m) including stripping and salvaging topsoil, filling and grading abandoned open drain, spreading and levelling salvaged topsoil, hauling and disposal of any excess material and seeding of all disturbed areas including levelled topsoil and sideslopes (Sta. A768 to Sta. A990).	222 lin.m	\$12,500.00
A Drain-Work on Sideroad 15			
✓8.0	Excavate open drain (100 cu.m) including stripping and salvaging topsoil, hauling and disposal of excavated material and seeding of sideslopes (Sta. A990 to Sta. A997 and Sta. A1017 to Sta. A1020).	10 lin.m	\$1,000.00
✓9.0	Remove and dispose of existing 600 mm dia. CSP, supply and install 20 m, 1600 mm dia. CSP, 3.5 mm Th., 125 x 25 mm Corrugations at 200 mm below grade in accordance with OPSD 802.010 including stripping and replacing topsoil, removal and disposal of any excess material, supply, placement and compaction of all granular materials and seeding of all disturbed areas (Sta. A997 to Sta. A1017).	20 lin.m	\$18,250.00
✓10.0	Supply and place quarry stone rip-rap (500 mm thickness) on geotextile underlay as CSP inlet and outlet protection (Sta. A997 and Sta. A1017).	40 sq.m	\$2,000.00
Work on Private Lands (Cont'd)			
11.0	Excavate open drain (3,850 cu.m) including clearing, spreading and levelling of excavated material and seeding all disturbed areas including levelled spoil and sideslopes (Sta. A1020 to Sta. A1415).	395 lin.m	\$16,000.00
12.0	Supply and place quarry stone rip-rap (500 mm thickness) on geotextile underlay as bank protection (Sta. A1165 to Sta. A1175 and Sta. A1395 to Sta. A1405).	80 sq.m	\$6,000.00

Bonnefield/Wallace Drainage Works
February 2020

Item	Description	Approx. Quantity	Cost Estimate
13.0	Supply and install 15 m, 1400 mm dia. CSP, 2.8 mm Th., 125 x 25 mm Corrugations at 150 mm below grade including excavating open drain, placement and compaction of approved native backfill, spreading and levelling of excess excavated material and seeding of all disturbed areas (Sta. A1415 to Sta. A1430)	15 lin.m	\$9,000.00
14.0	Supply and place quarry stone rip-rap (500 mm thickness) on geotextile underlay as CSP inlet and outlet protection (Sta. A1415 and Sta. A1430).	40 sq.m	\$3,000.00
15.0	Excavate open drain (3,650 cu.m) including clearing, spreading and levelling of excavated material and seeding all disturbed areas including levelled spoil and sideslopes (Sta. A1430 to Sta. A1762).	332 lin.m	\$19,500.00
16.0	Supply and install 750 mm dia. bell and gasket HDPE with insert rodent grate including clear stone bedding and stripping, stockpiling and releveling of topsoil (Sta. A1762 to Sta. A1775).	13 lin.m	\$4,000.00
17.0	Supply and place quarry stone rip-rap (500 mm thickness) on geotextile underlay as splash pad, embankment, tile outlet protection and surface culvert spillway (Sta. A1762).	80 sq.m	\$5,250.00
A Drain-Work on 5th Line			
✓ 18.0	Saw cut and remove and dispose of existing asphalt through road crossing. (Sta. A1788 to Sta. A1799)	75 sq.m	\$500.00
✓ 19.0	Supply and install 750 mm dia. bell and gasket HDPE pipe in accordance with OPSD 802.010 including stripping and replacing topsoil, removal and disposal of any excess material, supply, placement and compaction of all granular materials and seeding of all disturbed areas (Sta. A1775 to Sta. A1813).	38 lin.m	\$20,250.00
✓ 20.0	Restoration of asphalt through road crossing as detailed. (Sta. A1788 to Sta. A1799)	75 sq.m	\$1,750.00

Bonnefield/Wallace Drainage Works
February 2020

Item	Description	Approx. Quantity	Cost Estimate
A Drain-Work on Private Lands (Cont'd)			
21.0	Supply and install 750 mm dia. bell and gasket HDPE pipe including clear stone bedding and stripping, stockpiling and releveling of topsoil (Sta. A1813 to Sta. A1816).	3 lin.m	\$1,000.00
22.0	Supply and install 900 mm x 1200 mm pre-benched concrete junction box (Sta. A1816).	1 ea.	\$2,000.00
23.0	Supply and install 600 mm dia. bell and gasket HDPE pipe including clear stone bedding and stripping, stockpiling and releveling of topsoil (Sta. A1816 to Sta. A1930).	114 lin.m	\$26,750.00
A Drain-Work on 4th Line NE			
✓24.0	Supply and install 600 mm dia. bell and gasket HDPE pipe including clear stone bedding and stripping, stockpiling and releveling of topsoil (Sta. A1930 to Sta. A1934).	4 lin.m	\$1,000.00
✓25.0	Supply and install 600 mm x 600 mm x 300 mm pre-fabricated belled HDPE tee with gaskets (Sta. A1934).	1 ea.	\$750.00
✓26.0	Supply and install 900 mm x 1200 mm offset concrete ditch inlet catchbasin with bird cage style grate including connection with 18 m of 300 mm dia. bell and gasket HDPE pipe and quarry stone rip-rap inlet apron (Sta. A1934).	1 ea.	\$3,500.00
✓27.0	Saw cut and remove and dispose of existing asphalt through road crossing (Sta. A1942 to Sta. A1950)	50 sq.m	\$500.00
✓28.0	Supply and install 600 mm dia. bell and gasket HDPE pipe in accordance with OPSD 802.010 including stripping and replacing topsoil, removal and disposal of any excess material, supply, placement and compaction of all granular materials and seeding of all disturbed areas (Sta. A1934 to Sta. A1960).	26 lin.m	\$14,250.00
✓29.0	Restoration of asphalt through road crossing as detailed (Sta. A1942 to Sta. A1950).	50 sq.m	\$1,250.00

Item	Description	Approx. Quantity	Cost Estimate
A Drain-Work on Private Lands (Cont'd)			
30.0	Supply and install 600 mm dia. bell and gasket HDPE pipe including clear stone bedding and stripping, stockpiling and releveling of topsoil (Sta. A1960 to Sta. A1965).	5 lin.m	\$1,000.00
31.0	Supply and install 900 mm x 1200 mm pre-benched concrete junction box (Sta. A1965).	1 ea.	\$2,000.00
32.0	Supply and install 250 mm dia. perforated HDPE pipe with geotextile filter sock including clear stone bedding and stripping, stockpiling and releveling of topsoil (Sta. A1965 to Sta. A2086).	121 lin.m	\$9,250.00
33.0	Supply and install 900 mm x 1200 mm on-line concrete catchbasin with bird cage style grate and quarry stone rip-rap inlet apron (Sta. A2086).	1 ea.	\$2,500.00
B Drain-Work on Private Lands			
34.0	Supply and install 450 mm dia. bell and gasket HDPE pipe including clear stone bedding and stripping, stockpiling and releveling of topsoil (Sta. B000 to Sta. B110).	110 lin.m	\$17,500.00
35.0	Supply and install 900 mm x 1200 mm on-line concrete catchbasin with bird cage style grate and quarry stone rip-rap inlet apron (Sta. B110).	1 ea.	\$2,750.00
36.0	Contingency for unforeseen conditions including regrading slumped sideslopes, additional clear stone bedding in areas of soil instability, etc.		\$18,750.00
Total Estimated Cost for the Construction of the Bonnefield/Wallace Drainage Works			\$245,000.00

Allowances to Owners

Land Used (Section 29)

Damage to Lands, Crops, etc. (Section 30)

Insufficient Outlet/Compensation (Section 32)

Loss of Access/Land Value (Section 33)

\$

Preparation of Report

Site Meeting,

Investigations and Field Survey,

Information Meeting,

Watershed Plan, Design and Profiles,

Report Preparation including Allowances,

Construction Assessment Schedule

and Maintenance Assessment Schedules.

\$

Meetings and Procedure

Preparation of Report Copies for Distribution,

Preparation and Attendance at the

Consideration of the Report

and Assistance on Procedure.

\$

Tendering and Construction Inspection

Preparation and Distribution of Tender,

Inspections During Construction,

Payment Certificates and Related Appurtenances

and Project Finalization and Grant Application.

\$

Administration and Financing

Administrative Costs,

Net HST (Construction and Engineering)

and Interest Charges Incurred by the

Municipality until the Cost is Levied.

\$

Total Estimated Cost**Bonfield/Wallace Drainage Works**

\$

PRELIMINARY

NOTE: The above summary contains cost estimates only. It is emphasized that these estimates do NOT include costs to defend the drainage report and procedures should appeals be filed with the Court of Revision, Ontario Drainage Tribunal and/or the Ontario Drainage Referee. Unless otherwise directed, additional costs to defend the report are typically distributed in a pro-rata fashion over the assessments contained in the Construction Assessment Schedule, excluding any Special Assessments.

Also, in addition to the work included in the above estimate, should repairs, replacements, underpinning or other alterations be required for existing bridges, culverts, overflow culverts or any other structure necessary to conduct overflow water, or water in open channels under or across a road allowance, as affected by this drainage work, the work and cost thereof, including any necessary expenses incidental thereto, and if not determined otherwise, shall be the responsibility of and shall be assessed against the authority having control of such road or road allowance.

PRELIMINARY**10.0 Special Assessments**

Pursuant to Section 26 of the Drainage Act the following Special Assessments are made:

Work on Sideroad 15 – Sta. A697 to Sta. A768

The Special Assessment for this portion of the work is the increased cost to the drainage works due to the presence and operation of the road and is calculated as follows:

Construction Costs	- Equivalent Drain	+ Engineering/ Administration	= Special Assessment
Consisting of Items Item 3.0, Item 4.0, Item 5.0 and Item 6.0 in the estimate of the cost of the work plus net HST.	Consisting of 71 m of open drain excavation, spreading and levelling of excavated material plus net HST.	Consisting of Survey, design, determination of special assessment, construction layout, inspection and determination of final costs plus net HST.	
\$20,352.00	- \$2,418.00	+ \$3,816.00	= \$21,750.00

Whether or not the Township of Melancthon elects to do the above work on Sideroad 15, they shall be assessed or pay the actual cost of the work (estimated as \$20,352.00) minus the actual cost of an equivalent drain (estimated as \$2,418.00) plus engineering/administration (estimated as \$3,816.00) as a Special Assessment.

Work on Sideroad 15 – Sta. A990 to Sta. A1020

The Special Assessment for this portion of the work is the increased cost to the drainage works due to the presence and operation of the road and is calculated as follows:

Construction Costs	- Equivalent Drain	+ Engineering/ Administration	= Special Assessment
Consisting of Items Item 8.0, Item 9.0 and Item 10.0 in the estimate of the cost of the work plus net HST.	Consisting of 30 m of open drain excavation, spreading and levelling of excavated material plus net HST.	Consisting of Survey, design, determination of special assessment, construction layout, inspection and determination of final costs plus net HST.	
\$21,624.00	- \$1,190.00	+ \$3,816.00	= \$24,250.00

Whether or not the Township of Melancthon elects to do the above work on Sideroad 15, they shall be assessed or pay the actual cost of the work (estimated as \$21,624.00) minus the actual cost of an equivalent drain (estimated as \$1,190.00) plus engineering/administration (estimated as \$3,816.00) as a Special Assessment.

Bonnefield/Wallace Drainage Works
February 2020

PRELIMINARY

Work on 5th Line – Sta. A1775 to Sta. A1813

The Special Assessment for this portion of the work is the increased cost to the drainage works due to the presence and operation of the road and is calculated as follows:

Construction Costs	- Equivalent Drain	+ Engineering/ Administration	= Special Assessment
Consisting of Items Item 18.0, Item 19.0 and Item 20.0 in the estimate of the cost of the work plus net HST.	Consisting of Supply, installation and backfilling of 38 m of 750 mm dia. HDPE plus net HST.	Consisting of Survey, design, determination of special assessment, construction layout, inspection and determination of final costs plus net HST.	
\$22,896.00	- \$11,712.00	+ \$3,816.00	= \$15,000.00

Whether or not the Township of Melancthon elects to do the above work on the 5th Line, they shall be assessed or pay the actual cost of the work (estimated as \$22,896.00) minus the actual cost of an equivalent drain (estimated as \$11,712.00) plus engineering/administration (estimated as \$3,816.00) as a Special Assessment.

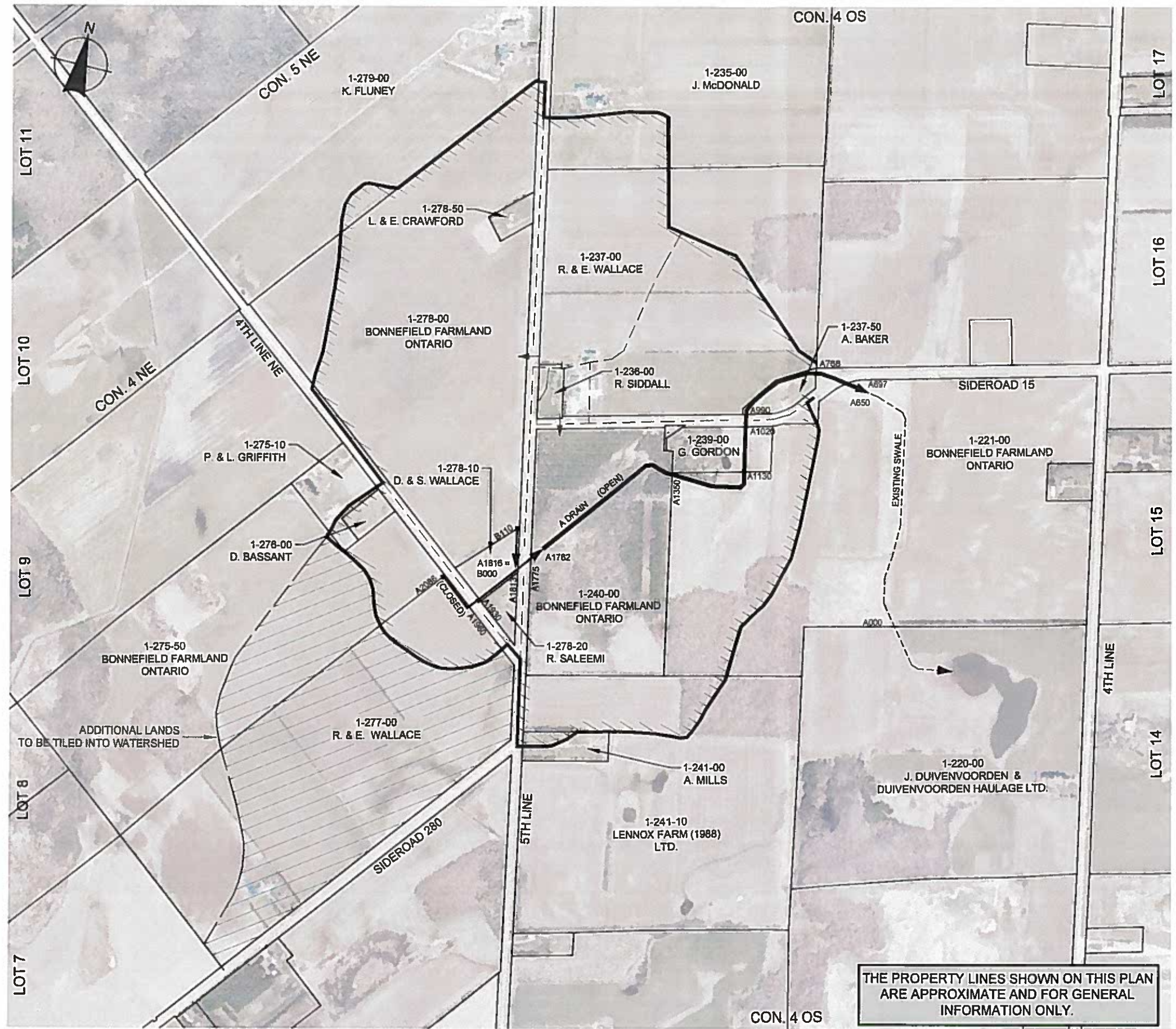
Work on 4th Line NE – Sta. A1930 to Sta. A1960

The Special Assessment for this portion of the work is the increased cost to the drainage works due to the presence and operation of the road and is calculated as follows:

Construction Costs	- Equivalent Drain	+ Engineering/ Administration	= Special Assessment
Consisting of Items Item 24.0, Item 25.0, Item 26.0, Item 27.0, Item 28.0 and Item 29.0 in the estimate of the cost of the work plus net HST.	Consisting of Supply, installation and backfilling of 30 m of 600 mm dia. HDPE plus net HST.	Consisting of Survey, design, determination of special assessment, construction layout, inspection and determination of final costs plus net HST.	
\$21,624.00	- \$7,190.00	+ \$3,816.00	= \$18,250.00

Whether or not the Township of Melancthon elects to do the above work on the 4th Line NE, they shall be assessed or pay the actual cost of the work (estimated as \$21,624.00) minus the actual cost of an equivalent drain (estimated as \$7,190.00) plus engineering/administration (estimated as \$3,816.00) as a Special Assessment.

In accordance with Section 69 of the Drainage Act, the Road Authority may elect to construct any or all of the works located on its road allowance.

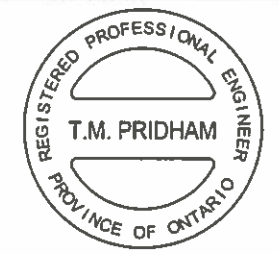


THE PROPERTY LINES SHOWN ON THIS PLAN ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.



- LEGEND**
- APPROXIMATE WATERSHED LIMITS
 - APPROXIMATE INTERIOR WATERSHED
 - DRAIN ROUTE (OPEN DRAIN)
 - DRAIN ROUTE (CLOSED DRAIN)
 - STATION
 - ASSESSMENT ROLL NO.
 - PROPOSED CATCHBASIN

- Notes**
1. This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
 2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
 3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.



T. M. Pridham, P. Eng.

No.	Issue / Revision	Date	Auth.
PRELIMINARY			



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 web www.rjburnside.com

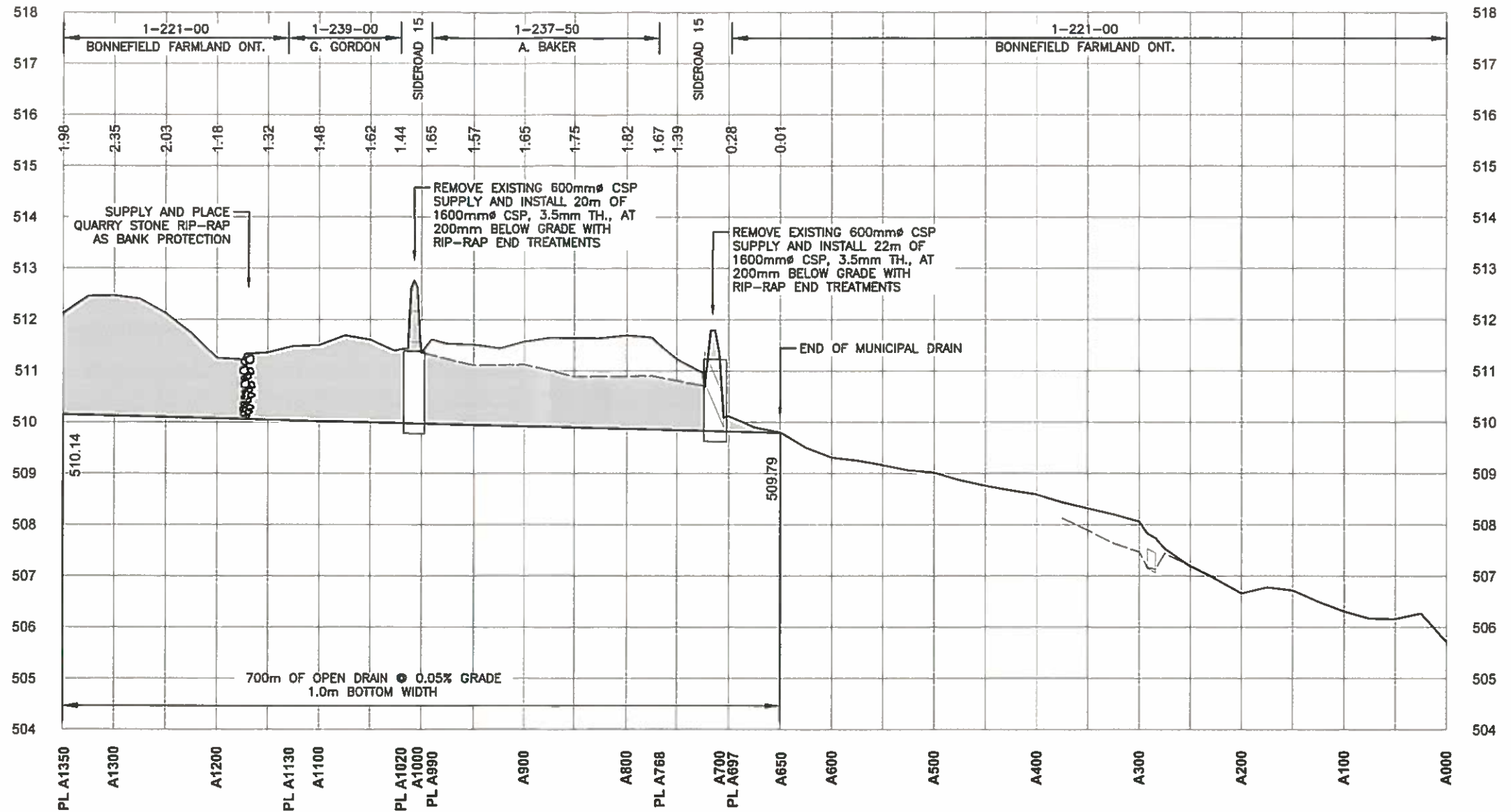
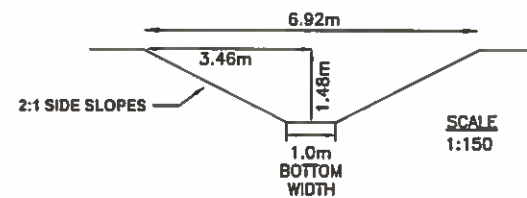
Client
TOWNSHIP OF MELANCTHON
 157101 HIGHWAY 10
 MELANCTHON, ON
 L9V 2E6

Drawing Title
**BONNEFIELD / WALLACE
 DRAINAGE WORKS
 WATERSHED PLAN**

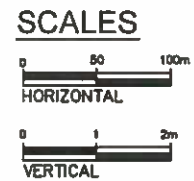
Drawn GGB	Checked TMP	Date 2020/02/25	Drawing No. P1
Scale AS SHOWN	Project No. 300043360.0000		

OPEN DRAIN:
 BOTTOM WIDTH: 1.0m
 SIDE SLOPES: 2:1 (H:V)

TYPICAL CROSS SECTION (STA. A1100)



A DRAIN



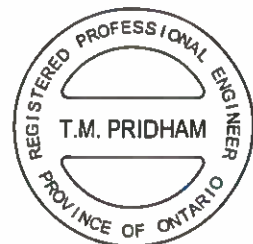
BENCHMARKS:

- STA. A000 NAIL IN NORTH FACE OF 400mmØ SPRUCE TREE 30m EAST ELEV. 507.31
- STA. A720 NAIL IN SOUTH FACE OF HYDRO POLE 25m EAST ELEV. 511.38
- STA. A980 NAIL IN SOUTH FACE OF HYDRO POLE 10m WEST ELEV. 512.34

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No.	Issue / Revision	Date	Auth.

PRELIMINARY



T. M. Pridham, P. Eng.

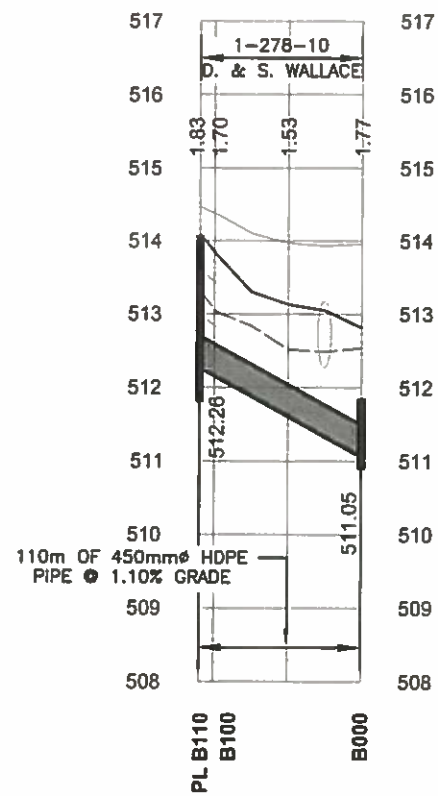


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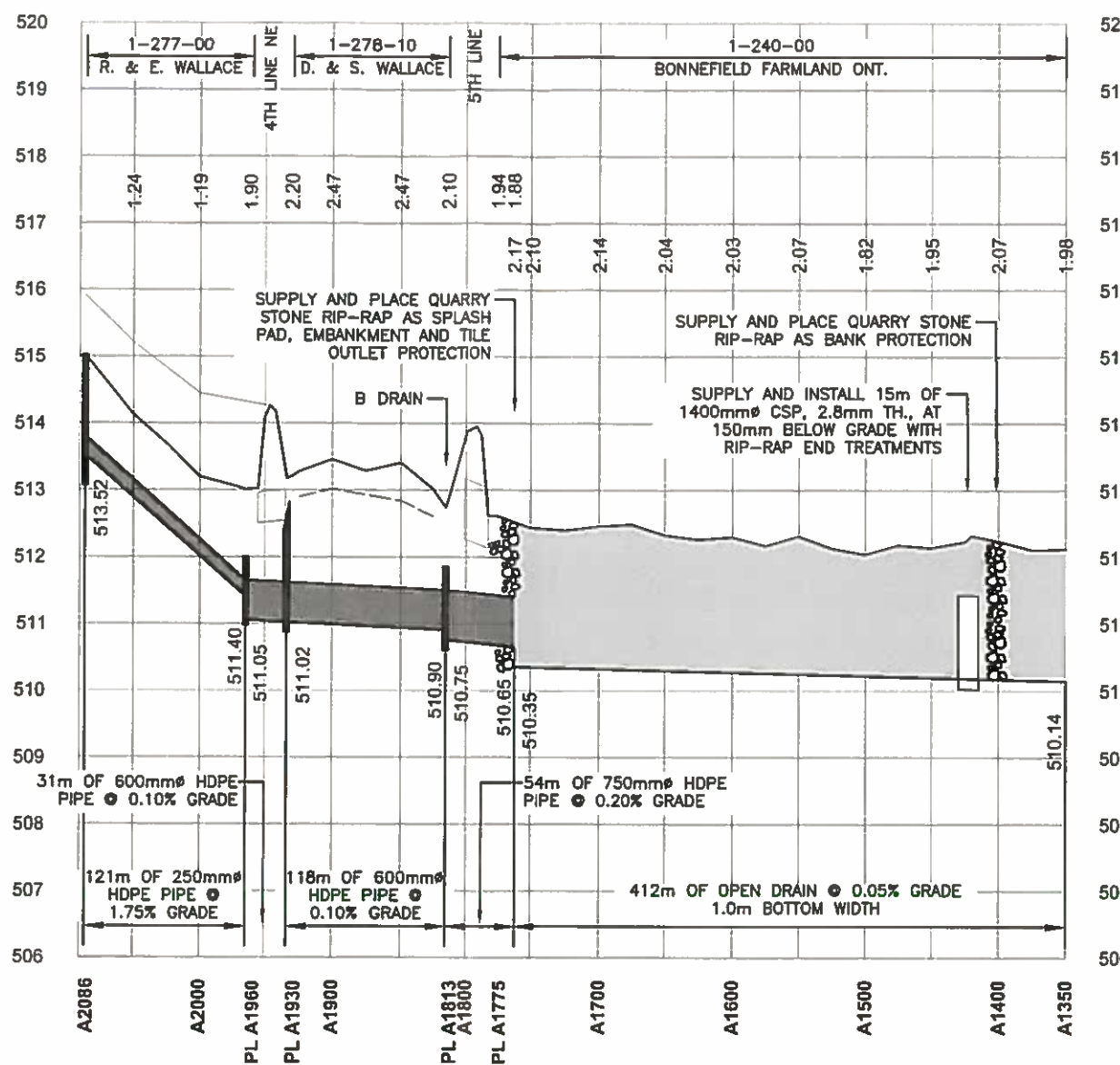
Client
TOWNSHIP OF MELANCTHON
 157101 HIGHWAY 10
 MELANCTHON, ON
 L9V 2E6

Drawing Title
**BONNEFIELD / WALLACE
 DRAINAGE WORKS
 PROFILES**

Drawn GGB	Checked TMP	Date 2020/02/25	Drawing No. P2
Scale AS SHOWN	Project No. 300043360.0000		



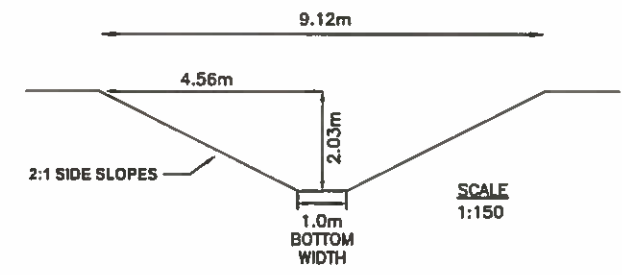
B DRAIN



A DRAIN

OPEN DRAIN:
 BOTTOM WIDTH: 1.0m
 SIDE SLOPES: 2:1 (H:V)

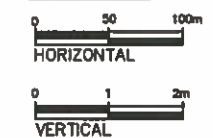
TYPICAL CROSS SECTION (STA. A1600)



BENCHMARKS:

- STA. A1800 WEST OBVERT OF 900mmØ CSP 25m NORTH ELEV. 513.21
- STA. A1975 NAIL IN EAST FACE OF HYDRO POLE 7m EAST ELEV. 513.38
- STA. A2086 NAIL IN WEST FACE OF HYDRO POLE 30m NORTH ELEV. 516.00

SCALES



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No.	Issue / Revision	Date	Auth.

PRELIMINARY



T. M. Pridham, P. Eng.



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Client
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 L9V 2E6

Drawing Title
**BONNEFIELD / WALLACE
 DRAINAGE WORKS
 PROFILES**

Drawn GGB	Checked TMP	Date 2020/02/25	Drawing No. P3
Scale AS SHOWN	Project No. 300043360.0000		