

Corporation of the Town of Amherstburg

By-Law No. 1998 - 28

A by-law to provide for the repair and improvement of the Beaudoin Drain and Branch in the Town of Amherstburg and for the borrowing on the credit of the sum of \$29,656.00 to complete the said works.

Whereas the Council of the Corporation of the Township of Anderdon has received a petition for repair and improvement of the Beaudoin Drain and Branch.

And Whereas the Council of the Township of Anderdon has procured a Report dated December 23rd, 1997 by Bruce D. Crozier Engineering Inc. for the repair and improvement of the Beaudoin Drain and Branch, a copy of the said Report and Addendum dated March 17, 1998 are attached herewith as Schedule "A" to this By-law.

And Whereas the estimated total cost of the drainage works project is \$30,330.00.

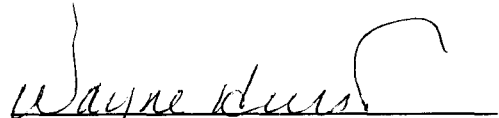
And Whereas Council is of the opinion that the repair and improvement of the drainage works is desirable.

Now therefore the Council of the Corporation of the Town of Amherstburg, pursuant to Section 76 of The Drainage Act, 1990 hereby enacts as follows:

1. **That** the Report of Bruce D. Crozier Engineering Inc. dated December 23, 1997, is hereby adopted and the drainage works therein shall be completed in accordance therewith.
2. **That** the Corporation of the Town of Amherstburg may borrow on the credit of the Town the sum of twenty-nine thousand six hundred & fifty-six (\$29,656.00) dollars provided that such sum shall be reduced by the amount of grants and commuted payments with respect to lands and roads assessed, and may issue debentures to the Corporation to that amount payable within five (5) years from the date of such debentures with interest at a rate not higher than that charged by the Ontario Municipal Improvements Corporation at the date of sale of such debentures.
3. **That** for paying the sum of twenty-nine thousand six hundred and fifty-six (\$29,656.00) dollars the amount charged against lands and for the covering the interest thereon for five (5) years at the rate of interest aforesaid, the following total special rates over and above all other rates shall be assessed, levied and collected (in the same manner and at the same time as other taxes are levied and collected) upon and from the undermentioned parcels of land and parts of parcels and roads, and one such part shall be assessed, levied and collected as aforesaid, in each year for five (5) years after the passing of this By-law during which the debentures have to run, provided that no greater amount shall be levied than is required after taking into account and crediting the amount of grants and commuted payment.

4. **That** pursuant to Subsection 3 of Section 61 of the Drainage Act, 1990, assessments under fifty (\$50.00) dollars shall be paid in the first year in which the assessment is imposed.
5. **That** the Schedule of Assessment is attached hereto.
6. **That** this By-law comes into force on the final passing thereof and may be cited as the Beaudoin Drain and Branch.

Read a first and second time and provisionally adopted this 23rd day of March, 1998.

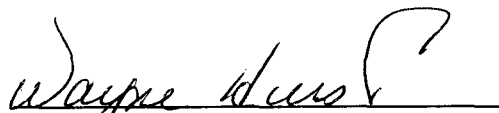


Mayor

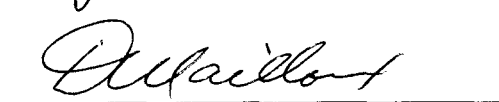


Clerk

Read a third time and finally passed this 22nd day of June, 1998.



Mayor



Clerk

DRAINAGE REPORT
BEAUDOIN DRAIN AND BRANCH
TOWNSHIP OF ANDERDON

BRUCE D. CROZIER ENGINEERING INC.

CONSULTING ENGINEERS

209 ERIE STREET SOUTH

LEAMINGTON, ONTARIO

N8H 3C1

PROJECT REFERENCE BC-96-113

December 23, 1997

*

Mayor and Municipal Council
Corporation of the Township of Anderdon
3400 Middle Sideroad
R. R. #4
Amherstburg, Ontario
N9V 2Y9

Mayor Tiefenbach and Councillors

SUBJECT: **Drainage Report**
Beaudoin Drain and Branch
Township of Anderdon
Our Project Reference BC-96-113

1.0 AUTHORIZATION

Pursuant to Section 78 of The Drainage Act, the Corporation of the Township of Anderdon accepted requests from Harvey Bezaire and Ena Beneteau to repair and improve the Beaudoin Drain and Branch. The Corporation of the Township of Anderdon, acting as the initiating municipality subsequently appointed the firm of Bruce D. Crozier Engineering Inc., to make an examination and to prepare a report under the provisions of "The Drainage Act, 1990".

As requested by Council, I have made a survey and examination of the Beaudoin Drain and Branch, situated within Lots 10 and 11 of Concessions 2 and 3, Township of Anderdon, and I report thereon as follows.

2.0 PURPOSE OF REPORT

The intent of this report is to provide for the repair and improvement of the Beaudoin Drain and Branch, being an existing municipal drain. The repair and improvement of the drain would be performed under Section 78 of The Drainage Act, in fulfilment of the Township's responsibility to maintain and repair the municipal drain under the provisions of "The Drainage Act, 1990."

This report further provides a schedule of assessment which divides the cost of the recommended work to all of the lands using the drain as an outlet or to those lands benefiting from the existence of the drain.

3.0 SITE MEETING

A meeting with the affected landowners and others was conducted on October 8, 1996. In attendance at that meeting were Lou Zarlenga, P.Eng., Dan Crump Drainage Superintendent for Anderdon Township, Barry Anderson, Anderdon Township Public Works, Tony DiCiocco representing the Essex Region Conservation Authority, Leo Bastien, Edward Parlette, Harvey Bezaire, John Szentmiklossy, Robert Beneteau, Paul Deslippe, Steve Kalas, John Beaudoin and Joseph Capaldi. The Engineer explained the reasons for having the site meeting and further explained the applicable sections of the Drainage Act relating to this project. The Engineer also indicated that should anyone have any questions after the site meeting he could be contacted at his office.

TRUCKED IN AND HE WILL SPREAD.

Harvey Bezaire indicated he had presented the request for repair and improvement to the Township. He indicated he was situated at the upper end of the drain and that the drain had accumulated sediment and considerable brush since the last cleaning. He further indicated an existing crock providing access, to the easterly portion of his lands, across the drain had deteriorated and should be replaced. Mr. Bezaire further asked that a catch basin be installed at the northerly end of the new access pipe as water from the northerly lands is continually flowing over his pipe access and this is causing erosion of the driveway.

Leo Bastien asked if the work could be completed this year.

Steve Kalas asked if anything was going to be done to the Branch Drain situated along the 3rd Concession Road. He further indicated his land is situated at the upstream end of the Branch Drain. The Engineer replied that minor cleaning may be performed if found to be necessary and one of the existing culverts was requested to be extended.

John Szentmiklossy described his lands as being situated at the outlet end of the drain. He asked if any excavation was going to be taking place in front of his property and further asked if anything could be done to the erosion taking place in the drain situated adjacent to his lands.

Paul Deslippe indicated he owned land situated on the 10 - 11 Sideroad east of the 3rd Concession Road and asked if the drain excavation would affect the headwalls of his access culvert. The engineer replied that very likely in that location only minor cleaning of the drain would be required and this would not affect the headwalls.

Edward Parlette indicated he had an area available that could be used as a dump site for a portion of the excavated material.

Upon completion of the site meeting the engineer attended the John Szentmiklossy lands together with Mr. Szentmiklossy and Mr. Dan Crump. The engineer noted that some erosion of the toe of slope was occurring on the drain adjacent to the Szentmiklossy lands and the owner was attempting to replace and pack in clay material in certain spots. The repairs attempted by the owner appeared to be working and the engineer suggested the owner continue this practice as the only other alternative was placing rock fill, which would not offer a pleasing appearance to his lawn area.

4.0 CURRENT DRAINAGE REPORT

The current drainage report on file for the Beaudoin Drain and Branch is one dated October 9, 1973 and prepared by C.G.R. Armstrong, P.Eng. This report provided for the cleaning of the entire Beaudoin Drain and Branch. This report also provided for the replacement of two existing access culverts on the Main Drain and the lowering of one existing access culvert on the Branch Drain.

5.0 SURVEY

I commenced my survey of the Beaudoin Drain at Station 0+000 being the outlet of the Beaudoin Drain into the Long Marsh Drain and further situated on the south side of the North Sideroad allowance. I proceeded easterly following the course of the Beaudoin Drain upstream to Station 0+573 where the drain turns to the north. I then proceeded northerly to Station 0+590 where the drain turns to the east. I then proceeded upstream and easterly along the north side of the North Sideroad to Station 1+261 where the drain turns to the north. I then continued northerly following the course of the drain situated upon privately owned lands to Station 1+380 where the drain turns to the east. I then generally proceeded northeasterly following the course of the drain to Station 1+902 being the upper end of the Beaudoin Drain.

I commenced my survey of the Branch Drain at Station 0+000 being the location where the Branch Drain enters into the Beaudoin Drain and further being situated at the northeast corner of the intersection of the 3rd Concession Road and North Sideroad. I then proceeded northerly following the upstream course of the drain along the east side of the 3rd Concession Road to Station 0+249 being the upper end of the Branch Drain.

6.0 EXISTING SITE CONDITIONS

As a result of my site survey and the examination of the existing drainage works I have found the following:

A) Beaudoin Drain

- 1) Considerable amounts of sediment have accumulated within the bottom of the drain to the extent that the proper flow of water within the drain is not provided.
- 2) Between Station 1+261 and Station 1+902 considerable amounts of brush and trees have been allowed to grow within the drain to the extent that the proper flow of water within the drain is restricted.
- 3) At Station 0+962 is situated an existing 900 mm diameter culvert providing access to the Paul Deslippe residential lands. Concrete block headwalls have been constructed at each end of this pipe and the west headwall is leaning outward. The pipe is in good condition and no work needs to be done to this access culvert at this time.

- 4) Portions of the drain bottom, situated along the north side of the North Sideroad, are narrow and not in conformance to current standards. Also within this described area and very near to the top of the north bank are situated coniferous hedges and miscellaneous hydro poles would not easily or economically allow widening of the drain. Within this same area a reduction of the standard drain bottom width from 0.90 metres to 0.60 metres would permit the hedges and poles to remain and the resulting drain cross section at this location would not adversely affect the flow capacity of the drain.
- 5) The owner of a recently severed residential land parcel situated on the north side of the North Sideroad and further situated between Stations 0+905 to 0+927 has requested the installation of a new access culvert to service said land parcel.
- 6) The existing 375 mm diameter farm bridge, situated on lands owned by Harvey Bezaire and requested to be replaced, is structurally inadequate and should be replaced with a new corrugated steel pipe.

B) Branch Drain

- 1) A considerable amount of sediment has accumulated within the bottom of the drain to the extent that the proper flow of water within the drain is not provided.
- 2) At Station 0+063 is situated a 600 mm diameter corrugated steel pipe culvert providing access to the residential lands owned by Joseph Renaud. The existing pipe has stacked concrete headwalls at each end of the pipe. The existing pipe is considerably below the drain gradeline and should be raised to proper grade. Portions of the existing headwalls are unstable and require restacking.
- 3) At Station 0+189 is situated the north end of a 600 mm diameter corrugated steel pipe culvert providing access to the agricultural lands owned by Ena Beneteau. The existing pipe is approximately 7.1 metres long and does not provide sufficient length to accommodate modern farm equipment and has been requested to be extended. We find it would be possible to extend this pipe in a northerly direction.

7.0 RECOMMENDATIONS

In order to correct the above noted deficiencies in the drain I would recommend that the following work be performed.

- 1) Any brush within the sideslopes of the Beaudoin Drain and Branch be cut and disposed of.
- 2) The accumulated sediment within the bottom of the Beaudoin Drain and Branch be excavated and disposed of as further specified herein.
- 3) Any excavated portions of the drain sideslopes be seeded with a grass seed mixture to promote erosion control of the sideslopes.
- 4) The normally specified drain bottom width of 0.90 be reduced to 0.60 metres wide from Station 0+927 to 1+261 in the Beaudoin Drain.
- 5) A new 900 mm diameter corrugated steel pipe access culvert be installed to service the recently severed residential lands owned by Joseph Capaldi. The new culvert shall be 7.9 metres long with concrete filled jute bag headwalls. The west end of the new pipe is to be situated approximately 2.0 metres to the east of the west property line.
- 6) The existing 375 mm diameter, 4.7 metre long farm bridge situated at Station 1+897 on the Beaudoin Drain and owned by Harvey Bezaire be removed and disposed of and a new 300 mm diameter corrugated steel pipe, 6.1 metres in length be installed. I would also recommend that a 450 mm diameter corrugated steel pipe catch basin be installed at the north end of the new farm culvert.

- 7) The existing 600 mm diameter, 7.2 metre long residential access bridge at Station 0+063 on the Branch Drain and owned by Joseph Renaud be removed, salvaged and replaced at a proper grade and that portions of the existing concrete rubble headwalls be restacked.
- 8) The existing 600 mm diameter, farm access bridge at Station 0+189 on the Branch Drain and owned by Ena Beneteau be extended to the north with a 6.1 metre length of 600 mm diameter corrugated steel pipe including quarried rock erosion protection at the north end of the new extension.

I would further recommend that all of the above recommended work be performed in accordance to this report, the accompanying plan and profile and the attached specifications and that this work be performed under the provisions of "The Drainage Act, 1990."

8.0 DRAWING AND SPECIFICATION

Attached to this report is drawing No. BC-96-113, Sheets 1, 2 and 3 which consists of a plan showing the location of the proposed work and the lands affected by the work, together with the profile and details of the recommended work. Specifications are included in this report which show the dimensions, grades, disposal of material, working areas for construction and future maintenance, and other particulars of the recommended work.

9.0 WORKING AREAS AND ACCESS

The areas available to the Contractor to be used for the purpose of constructing the recommended works of this particular report and for future maintenance as provided for under Section 63 of "The Drainage Act, 1990" are described within the specifications forming part of this report.

10.0 PROPOSED WORK

In general the proposed work would involve the excavation of accumulated sediment from the entire length of the open drain. Trimming of drain sideslopes in some areas would also be required in order to meet the minimum sideslope requirement of 1½ units horizontal to 1 unit vertical. The excavated material would be cast and levelled upon either side of the drain as specified in the report or would be disposed of where casting and spreading would not be possible.

The recommended work further includes the removal of any brush or trees found to be growing within the drain or within any areas to be used for the disposal of excavated material. If, however, any mature trees are situated within the drain bank and within 1 metre of the top of bank, the land owner may request these mature trees to remain and shall contact the Township Drainage Superintendent in this regard.

The recommended work would also provide for raising an existing culvert to proper grade, reconstructing an existing farm culvert and installing a new residential access bridge.

11.0 ALLOWANCES FOR LAND TAKEN AND DAMAGES

In accordance with the provisions of "The Drainage Act, 1990" allowances are provided to be paid to those landowners from which land is required to be used for the construction of a new drain or for the establishment of an easement for the construction and future maintenance of a drain or for land required to dispose of excavated material or for land required to obtain access to a Municipal Drainage System.

I therefore find that each of the following owners is entitled to and should receive the following amounts as compensation for damages to lands and crops, if any, namely:

1. Patrick D'Amore, Owner
Pt Lt 10, Concession 2, Roll No. 09-03600

Station 0+104 to 0+292 (Beaudoin Drain)
Land being approximately 188 metres long and 9.1 metres wide,
approximately 0.171 hectares (0.42 acres) for disposal, access and working room. \$ 210.00

2. Antonio & Maria & Dino Rosati, Owners
Pt Lt 11, Concession 3, Roll No. 12-00800
- Station 0+651 to 0+789 (Beaudoin Drain)
Land being approximately 138 metres long and 9.1 metres wide,
approximately 0.126 hectares (0.31 acres) for disposal, access and working room. \$ 155.00
3. Joseph & Virginia Capaldi, Owners
Pt Lt 11, Concession 3, Roll No. 12-00700
- Station 0+789 to 0+905 (Beaudoin Drain)
Land being approximately 116 metres long and 9.1 metres wide,
approximately 0.106 hectares (0.26 acres) for disposal, access and working room. \$ 130.00
4. Leo & Donna Bastien, Owners
Pt Lt 11, Concession 3, Roll No. 12-00300
- Station 1+261 to 1+717 (Beaudoin Drain)
Land being approximately 456 metres long and 9.1 metres wide,
approximately 0.415 hectares (1.00 acres) for disposal, access and working room. \$ 500.00
5. Harvey & Yvonne Bezaire, Owners
Pt Lt 11, Concession 3, Roll No. 12-01800
- Station 1+717 to 1+902 (Beaudoin Drain)
Land being approximately 185 metres long and 9.1 metres wide,
approximately 0.168 hectares (0.42 acres) for disposal, access and working room. \$ 210.00
6. Ena Beneteau, Owner
Pt Lt 11, Concession 3, Roll No. 12-01400
- Station 1+182 to 0+249 (Branch Drain)
Land being approximately 67 metres long and 9.1 metres wide,
approximately 0.061 hectares (0.15 acres) for access and working room. \$ 75.00

TOTAL FOR DAMAGES

=====
\$1,280.00
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I have provided for this in my estimate as is provided for under sub-section (b) of Section 29 of "The Drainage Act, 1990."

12.0 ESTIMATE OF COST

My estimate of the total cost of this work, including all incidental expenses, is the sum of Thirty Thousand, Three Hundred, Thirty dollars (\$ 30,330.00) made up as follows:

A) CONSTRUCTION FOR THE BEAUDOIN DRAIN

1. Removal and disposal of brush along both drain banks and at disposal areas as required.
- a) Station 0+000 to 1+261, generally consisting of minimal brushing.
- b) Station 1+261 to 1+902, generally consisting of medium to heavy brushing consisting of undergrowth and occasional small trees, being approximately 0.260 hectares (0.65 acres).

Complete at Lump Sum

\$ 1,800.00

2. Excavation from sideslopes and bottom of drain including casting and spreading or hauling and disposal of the excavated material as specified, and cleaning through culverts.
- a) Station 0+000 to 0+590, generally being situated along the south side of the North Sideroad and consisting of approximately 90 cubic metres of excavation.
 - b) Station 0+590 to 1+261, generally being situated along the north side of the North Sideroad and consisting of approximately 220 cubic metres of excavation.
 - c) Station 1+261 to 1+902, generally being situated on privately owned farm lands situated north of the North Sideroad and consisting of approximately 150 cubic metres of excavation.
- Complete at Lump Sum \$ 4,600.00
3. Supply and place seeding and mulching to all excavated portions of the drain slopes, from Station 0+000 to 1+902 and consisting of approximately 2,600 square metres.
- Complete at Lump Sum \$ 1,300.00
4. Supply and install a new residential access bridge for Joseph and Virginia Capaldi at Station 0+907 consisting of 900 mm (36") diameter corrugated steel pipe 7.9 metres (26 feet) long, with 2.0 mm thick walls, 68 mm x 13 mm corrugations, with Granular "B" bedding, 300 mm of Granular "A" surface topping and concrete filled jute bag headwalls.
- Complete at Lump Sum \$ 3,720.00
5. Supply and place quarried limestone erosion protection including excavation, geotextile filter fabric and 300 mm thick layer of 100 mm x 225 mm (4" x 9") quarried rock.
- a) Station 0+369, approximately 1.5 m x 2.0 m, for Patrick D'Amore.
 - b) Station 1+011, approximately 1.5 m x 2.0 m, for Edward Parlette.
 - c) Station 1+323, approximately 2.0 m x 2.0 m, for Leo Bastien.
 - d) Station 1+575, approximately 2.0 m x 3.0 m, for Leo Bastien.
 - e) Station 1+828, approximately 1.5 m x 2.0 m, for Harvey Bezaire.
- Approximately 19.0 square metres at Lump Sum \$ 570.00
6. Remove and dispose existing 375 mm diameter farm bridge, 4.7 metres long for Harvey Bezaire, situated at Station 1+897. Supply and install new 300 mm diameter C.S.P., 1.6 mm walls, 68 mm x 13 mm corrugations, 6.1 metres long, including native clay bedding and backfill and sloped quarried rock and filter fabric erosion protection at the south end. Also including supply and installation of a 450 mm diameter corrugated steel pipe catch basin and cast iron circular grate, connected to the north end of the new culvert pipe. \$ 630.00
- SUB-TOTAL FOR CONSTRUCTION (BEAUDOIN DRAIN) \$ 12,620.00**

B) CONSTRUCTION FOR BRANCH DRAIN

1.	Removal and disposal of brush along both drain banks and at disposal areas as required, from Station 0+000 to 0+249, generally consisting of minimal brushing.	
	Complete at Lump Sum	\$ 100.00
2.	Excavation from sideslopes and bottom of drain including casting and spreading or hauling and disposal of the excavated material as specified, and cleaning through culverts from Station 0+000 to 0+249, generally being situated along the east side of the 3rd Concession Road and consisting of approximately 70 cubic metres of excavation.	
	Complete at Lump Sum	\$ 650.00
3.	Supply and place seeding and mulching to all excavated portions of the drain slopes, from Station 0+000 to 0+249 and consisting of approximately 160 square metres.	
	Complete at Lump Sum	\$ 100.00
4.	Raise existing 600 mm diameter C.S.P. access culvert 7.2 metres long for Joseph Renaud, situated at Station 0+063 including removing and salvaging and replacing portions of the stacked concrete headwalls, removing and cleaning the existing pipe providing ¾" clear stone bedding and replacing the existing pipe to proper grade.	
	Complete at Lump Sum	\$ 300.00
5.	Supply and install new farm bridge extension for Ena Beneteau at Station 0+189 consisting of 600 mm (24") diameter corrugated steel pipe 6.1 metres (20 feet) long, with 1.6 mm thick walls, 68 mm x 13 mm corrugations, with Granular "B" bedding, 300 mm of Granular "A" surface topping and sloped quarried rock and filter fabric erosion protection at the north end of the pipe, including connecting to existing 600 mm diameter C.S.P. culvert.	\$ 1,350.00
		=====
	SUB-TOTAL FOR CONSTRUCTION (BRANCH DRAIN)	\$ 2,500.00
	SUB-TOTAL FOR CONSTRUCTION (BEAUDOIN DRAIN - brought forward)	\$ 12,620.00
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	SUB-TOTAL FOR CONSTRUCTION (BEAUDOIN & BRANCH DRAIN)	\$ 15,120.00
	G.S.T. PAYABLE (7% approximate)	\$ 1,060.00
		=====
	TOTAL FOR CONSTRUCTION (including G.S.T.)	\$ 16,180.00
		=====

INCIDENTALS

Survey, report, plans, estimates and specifications.	\$ 5,500.00
Assistants and expenses, typing report and preparing drawings.	\$ 3,400.00
O.M.B. Fee	\$ 125.00
Estimated cost of Tender Advertisement and Tender Documents (if required).	\$ 1,000.00
Preparing Progress Payment Certificates and Final Inspection of Construction.	\$ 600.00
Restaking Drain (if required).	\$ 700.00
Contingency Allowance (if required).	\$ 700.00
	=====
TOTAL FOR INCIDENTALS	\$ 12,025.00
G.S.T. ON INCIDENTALS (7% approximate)	\$ 845.00
TOTAL ALLOWANCE FOR DAMAGES (brought forward)	\$ 1,280.00
TOTAL FOR CONSTRUCTION (brought forward)	\$ 16,180.00
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TOTAL ESTIMATE	\$ 30,330.00
	=====

14.0 ASSESSMENT

I would recommend that the cost of this work be assessed against the lands and roads affected in accordance with the accompanying Schedules of Assessment.

I have determined the estimated cost to construct a new residential access bridge for the lands owned by Joseph Capaldi to be \$3,980.00 (including G.S.T.) for construction. I have assessed this entire amount as a Special Benefit to the Joseph Capaldi lands for the initial construction of the access bridge.

I have determined the estimated cost of providing quarried rock erosion protection to various lateral open ditches entering the drain to be \$609.00 (including G.S.T.) for construction. I have therefore assessed \$96.00 to the Patrick D'Amore lands and \$96.00 to the Edward Parlette lands and \$321.00 to the Leo Bastien lands and \$96.00 to the Harvey Bezaire lands as a Special Benefit for the value of this work performed on their respective lands.

I have determined the estimated cost to reconstruct the existing farm bridge on lands owned by Harvey Bezaire to be \$674.00 (including G.S.T.) for construction. The existing farm bridge is part of the Beaudoin Drain and the cost of replacing such a structure would normally be partly assessed to the affected upstream situated lands. In this case there are no additional affected upstream situated lands other than the lands owned by Harvey Bezaire. Accordingly, I have assessed the full amount of \$674.00 as a Special Benefit to the lands owned by Harvey Bezaire.

I have determined the estimated cost of adjusting to proper grade the existing residential access bridge for lands owned by Joseph Renaud to be \$321.00 (including G.S.T.) for construction. I have assessed the amount of \$161.00 (being approximately 50% of the total estimated cost) as a Special Benefit to the lands owned by Joseph Renaud. I have assessed the balance of \$160.00 to the affected upstream situated lands on the Branch Drain as a Special Benefit.

I have determined the estimated cost of extending the existing farm access bridge for lands owned by Ena Beneteau to be \$1,445.00 (including G.S.T.) for construction. I have assessed this entire amount as a Special Benefit to the lands owned by Ena Beneteau for the initial construction of the bridge extension.

15.0 MAINTENANCE

I would further recommend that this drainage work be kept up and maintained at the expense of the lands and roads herein assessed for its construction and in the proportions herein contained excluding any amounts assessed as Special Benefit or until otherwise determined under the provisions of "The Drainage Act, 1990."

I would further recommend that maintenance work required to be performed to the various bridges being part of the Beaudoin Drain and Branch be assessed at the proportion of 50% to the owner of the bridge and 50% to the affected upstream situated lands or until otherwise determined under the provisions of "The Drainage Act, 1990."

16.0 GRANTS

In accordance with the provisions of Sections 85, 86 and 87 of "The Drainage Act, 1990," a grant possibly in the amount of up to 33 1/3% of the assessment eligible for a grant, may be made in respect of the assessment made in this report, upon privately owned lands used for agricultural purposes. I would further recommend that an application be made by the Township upon completion of this project, to the Ministry of Agriculture and Food in accordance with Section 88 of "The Drainage Act, 1990," for this grant.

All of which is respectfully submitted.

**BRUCE D. CROZIER ENGINEERING INC.
CONSULTING ENGINEERS
209 ERIE STREET SOUTH
LEAMINGTON, ONTARIO
N8H 3C1**



Lou Zarlenga, P.Eng.



SCHEDULE OF ASSESSMENT
 BEAUDOIN DRAIN & BRANCH (MAIN DRAIN)
 TOWNSHIP OF ANDERDON
 PROJECT REFERENCE BC-96-113

Dec. 23, 1997

Entry No.	or Plan	Lot	Roll No.	Hectares Owned	Name of Owner	Hectares Affected	Value of Benefit	Value of Outlet	Special Benefit	Total
1	3	PT LT 11	12-01800	19.846	HARVEY & YVONNE BEZAIRE	* 8.094	\$926.76	\$2,214.76	\$770.00	\$3,911.52
2	3	PT LT 11	12-00300	20.149	LEO & DONNA BASTIEN	* 11.955	1,368.85	3,025.37	321.00	4,715.22
3	3	PT LT 11	12-00400	3.084	EDWARD & PATRICIA PARLETTE	* 3.084	353.12	685.11	96.00	1,134.23
4	3	PT LT 11	12-00500	0.405	DENNIS & JEAN CHAPLEAU	0.405	139.12	257.17	0.00	396.29
5	3	PT LT 11	12-00600	0.538	PAUL & ELIZABETH DESLIPPE	0.538	184.80	337.41	0.00	522.21
6	3	PT LT 11	B\19\96	0.265	JOSEPH & VIRGINIA CAPALDI	0.265	91.03	163.56	3,980.00	4,234.59
7	3	PT LT 11	12-00700	1.408	JOSEPH & VIRGINIA CAPALDI	* 1.408	161.22	218.08	0.00	379.30
8	3	PT LT 11	12-00800	1.671	ANTONIO & MARIA & DINO ROSATI	* 1.671	191.33	314.78	0.00	506.11
9	3	PT LT 11	12-01400	11.679	ENA BENETEAU	* 11.679	0.00	2,102.64	0.00	2,102.64
10	3	PT LT 11	12-01300	0.139	BRIAN RANKINE	0.139	0.00	75.09	0.00	75.09
11	3	PT LT 11	12-01200	0.139	THERESE BENETEAU	0.139	0.00	75.09	0.00	75.09
12	3	PT LT 11	12-01100	0.249	ALVIN & RUTH McCURDY	0.249	0.00	134.76	0.00	134.76
13	3	PT LT 11	12-01000	0.238	JOSEPH & LEEANN RENAUD	0.238	0.00	128.59	0.00	128.59
14	3	PT LT 11	12-00900	0.249	ROY & FLORENCE MONFORTON	0.249	85.53	134.76	0.00	220.29
15	3	PT LT 10	08-04300	30.675	WISMER BROTHERS LIMITED	* 2.023	231.63	364.16	0.00	595.79
16	2	PT LT 10	09-03300	0.334	ROY NASCIMENTO & LOIS TORTI	0.334	0.00	176.93	0.00	176.93
17	2	PT LT 10	09-03400	0.233	DONALD & SHANNON KENNEDY	0.233	0.00	123.44	0.00	123.44
18	2	PT LT 10	09-03500	0.405	ROBERT & CONSTANCE BONDY	0.405	139.12	210.88	0.00	350.00
19	2	PT LT 10	09-03600	11.048	PATRICK D'AMORE	* 0.809	92.63	125.50	96.00	314.13
20	2	PT LT 10	09-03700	1.182	J. SZENTMIKLOSSY & C. RIVARD	0.567	194.76	229.40	0.00	424.16
TOTAL ON LANDS							=====	=====	=====	=====
							\$4,159.90	\$11,097.48	\$5,263.00	\$20,520.38
							=====	=====	=====	=====
NORTH SIDEROAD				--	TOWNSHIP OF ANDERDON	2.375	\$1,632.38	\$2,639.61	\$0.00	\$4,271.99
3RD CONCESSION ROAD				--	TOWNSHIP OF ANDERDON	0.430	294.72	462.91	0.00	757.63
TOTAL ON ROADS							=====	=====	=====	=====
							\$1,927.10	\$3,102.52	\$0.00	\$5,029.62
							=====	=====	=====	=====
TOTAL ASSESSMENT FOR BEAUDOIN DRAIN							=====	=====	=====	=====
							\$6,087.00	\$14,200.00	\$5,263.00	\$25,550.00
							=====	=====	=====	=====

INDICATES LANDS USED FOR AGRICULTURAL PURPOSES



SCHEDULE OF ASSESSMENT
 BRANCH OF THE BEAUDOIN DRAIN
 TOWNSHIP OF ANDERDON
 PROJECT REFERENCE BC-96-113

Dec. 23, 1997

Entry No.	Con. or Plan	Lot	Roll No.	Hectares Owned	Name of Owner	Hectares Affected	Value of Benefit	Value of Outlet	Special Benefit	Total
1	3	PT LT 11	12-01400	11.679	ENA BENETEAU	* 11.679	\$607.54	\$1,451.42	\$1,563.00	\$3,621.96
2	3	PT LT 11	12-01300	0.139	BRIAN RANKINE	0.139	21.69	50.89	4.00	76.58
3	3	PT LT 11	12-01200	0.139	THERESE BENETEAU	0.139	21.69	49.91	4.00	75.60
4	3	PT LT 11	12-01100	0.249	ALVIN & RUTH McCURDY	0.249	38.86	88.08	8.00	134.94
5	3	PT LT 11	12-01000	0.238	JOSEPH & LEEANN RENAUD	0.238	37.14	82.21	168.00	287.35
6	3	PT LT 11	12-00900	0.249	ROY & FLORENCE MONFORTON	0.249	38.86	83.19	0.00	122.05
TOTAL ON LANDS							\$765.78	\$1,805.70	\$1,747.00	\$4,318.48
3RD CONCESSION ROAD -- TOWNSHIP OF ANDERDON						0.430	\$134.22	\$308.30	\$19.00	\$461.52
TOTAL ON ROADS							\$134.22	\$308.30	\$19.00	\$461.52
TOTAL ASSESSMENT FOR BRANCH DRAIN							\$900.00	\$2,114.00	\$1,766.00	\$4,780.00

* INDICATES LANDS USED FOR AGRICULTURAL PURPOSES

SUMMARY OF ASSESSMENTS

TOTAL ASSESSMENT FOR BEAUDOIN DRAIN	\$6,087.00	\$14,200.00	\$5,263.00	\$25,550.00
TOTAL ASSESSMENT FOR BRANCH DRAIN	900.00	2,114.00	1,766.00	4,780.00
TOTAL ESTIMATE	\$6,987.00	\$16,314.00	\$7,029.00	\$30,330.00

rate varies for outlet. more upstream than downstream.
 only those attached (fronting) on the drain.



SPECIFICATIONS

SP-1

SPECIAL PROVISIONS

BEAUDOIN DRAIN & BRANCH

TOWNSHIP OF ANDERDON

PROJECT REFERENCE BC-96-113



1.0 EXCAVATION

The drain shall follow in general the course of the present drain and shall be of the form, size, depth, etc. as shown on the accompanying plan and profile.

When completed the drain shall have a uniform bottom and in no case shall such bottom project above the grade line as shown on the accompanying drawing and as determined from the bench mark. The drain shall have sideslopes of 1½ metres horizontal to 1 metre vertical and the bottom width of the drain shall be 0.90 metres with the exception of the drain bottom width between Stations 0+927 to 1+261 on the Beaudoin Drain where the drain bottom shall be 0.60 metres wide.

2.0 BRUSHING AND GRUBBING

The Contractor shall cut and dispose of the brush on the Beaudoin Drain from Station 0+000 to Station 1+902 and on the Branch Drain from station 0+000 to station 0+249 in accordance with General Specification Item No. 5.0, page GS-1, and as amended herein.

Mature trees situated within 1.0 metres of the top of drain bank may be left standing if the landowner contacts the Township Drainage Superintendent and arranges for same prior to the start of construction. The Drainage Superintendent shall decide if it is feasible to allow any trees situated within the drain banks to remain.

3.0 SEEDING

The Contractor shall place seeding and mulching to all excavated portions of the sideslopes in accordance with General Specification Item No. 17.0, page GS-4.

4.0 LOCATION OF THE DRAIN

The location of the drain shall follow the course of the present watercourse.

5.0 DISPOSAL OF MATERIAL

The Contractor shall dispose of excavated material as follows: Where the material is specified to be disposed of the Contractor shall load and haul the surplus excavated material to a location to be determined by him and at his expense. Where excavated material is specified to be cast and spread the Contractor shall cast and spread the excavated material in accordance with the General Specifications or as amended below.

Edward Parlette, owner of lands situated on the north side of the North Sideroad and further situated between Stations 1+007 to 1+261, has indicated he would be willing to accept excavated material from the Drain onto his lands for fill purposes. Accordingly the Contractor shall contact the above noted owner to obtain written permission to utilize said lands for disposal purposes and shall also obtain a written release from the owner upon completion of the project. All work in regards to disposal of suitable excavated material on the Parlette lands shall be to the satisfaction of the owner and the Township Drainage Superintendent. Concrete rubble or culvert material is not to be disposed of on this site and landowner permission to utilize this site must be obtained prior to placing any excavated material on this site.

A) Beaudoin Drain

- Station 0+000 to Station 0+104 - The excavated material shall be loaded, hauled and disposed of.
- Station 0+104 to Station 0+292 - The excavated material shall be cast and spread onto the south side of the drain to a depth of 100 mm (4").
- Station 0+292 to Station 0+651 - The excavated material shall be loaded, hauled and disposed of.
- Station 0+651 to Station 0+905 - The excavated material shall be cast and spread onto the north side of the drain to a depth of 100 mm (4").
- Station 0+905 to Station 1+261 - The excavated material shall be loaded, hauled and disposed of.

- Station 1+261 to Station 1+380 - The excavated material shall be cast and spread onto the east side of the drain to a depth of 100 mm (4").
- Station 1+380 to Station 1+527 - The excavated material shall be cast and spread onto the north side of the drain to a depth of 100 mm (4").
- Station 1+527 to Station 1+717 - The excavated material shall be cast and spread onto the west side of the drain to a depth of 100 mm (4").
- Station 1+717 to Station 1+753 - The excavated material shall be cast and spread onto the north side of the drain to a depth of 100 mm (4").
- Station 1+753 to Station 1+902 - The excavated material shall be cast and spread onto the west side of the drain to a depth of 100 mm (4").

B) Branch Drain

- Station 0+000 to Station 0+182 - The excavated material shall be loaded, hauled and disposed of.
- Station 0+182 to Station 0+249 - The excavated material shall be cast and spread onto the east side of the drain to a depth of 100 mm (4").

6.0 WORKING AREA

For the purpose of constructing this drain and for future maintenance as provided for under Section 63 of "The Drainage Act, 1990," the Contractor shall be allowed to use the working area described below and for which the current private landowners have received an allowance for damages to construct the drain.

A) Beaudoin Drain

- Station 0+000 to Station 1+261 - The entire width of the road allowance for the North Sideroad.
- Station 0+104 to Station 0+292 - An area measuring 9.1 metres (30 feet) wide and adjacent to the south top of the drain shall be used for construction purposes. For future maintenance purposes the road allowance shall be used if residential development has occurred on the previously described working area.
- Station 0+651 to Station 0+905 - An area measuring 9.1 metres (30 feet) wide and adjacent to the north top of the drain shall be used for construction purposes. For future maintenance purposes the road allowance shall be used if residential development has occurred on the previously described working area.
- Station 1+261 to Station 1+380 - An area measuring 9.1 metres (30 feet) wide and adjacent to the east top of the drain shall be used.
- Station 1+380 to Station 1+527 - An area measuring 9.1 metres (30 feet) wide and adjacent to the north top of the drain shall be used.
- Station 1+527 to Station 1+717 - An area measuring 9.1 metres (30 feet) wide and adjacent to the west top of the drain shall be used.
- Station 1+717 to Station 1+753 - An area measuring 9.1 metres (30 feet) wide and adjacent to the north top of the drain shall be used.
- Station 1+753 to Station 1+902 - An area measuring 9.1 metres (30 feet) wide and adjacent to the west top of the drain shall be used.

B) Branch Drain

- Station 0+000 to Station 0+249 - The entire width of the road allowance for the 3rd Concession Road.
- Station 0+182 to Station 0+249 - An area measuring 9.1 metres (30 feet) wide and adjacent to the east top of the drain shall be used for construction purposes. For future maintenance purposes the road allowance shall be used if residential development has occurred on the previously described working area.

7.0 STAKES

Stakes have been placed at 25 metre intervals along the course of the drain, on the bank of the drain, numbered consecutively 0+000, 0+025, 0+050 etc. The depths to which the drain is to be dug, as shown on the profile, are measured in metres from the surface of the ground beside the stakes. The contractor will be held responsible during the progress of the work for the preservation of all stakes, bench marks and survey markers which fall within the limits of the work. The cost of replacing any bench mark or survey marker defaced or destroyed by the Contractor as a result of his work will be deducted from any money due the Contractor.

8.0 CULVERT WORK

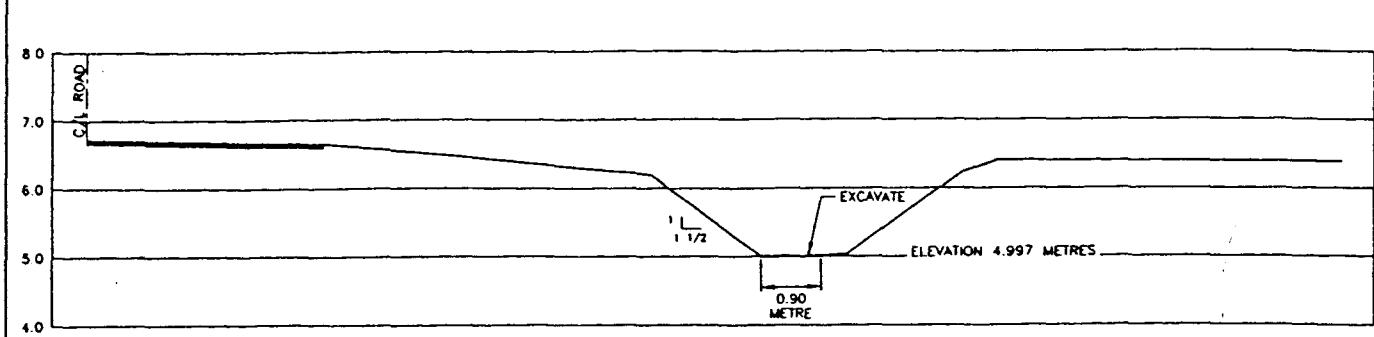
- a) At Station 0+907 on the Beaudoin Drain the Contractor shall supply and install a new residential access bridge with bagged concrete headwalls for Joseph Capaldi. The material for this access bridge shall be in accordance to the description provided in Tender Item No. A-4 and installation shall be in accordance to the General Specification.
- b) At Station 1+897, for Harvey Bezaire, on the Beaudoin Drain the Contractor shall remove and dispose of the existing 375 mm diameter concrete crock pipes and shall install a new farm bridge with sloped rock protection at the south end and with a 450 mm diameter corrugated steel pipe catch basin at the north end. The materials from this farm bridge shall be in accordance to the description provided in Tender Item No. A-6 and installation shall be in accordance to the General Specifications.
- c) At Station 0+063 on the Branch Drain the Contractor shall raise to grade the existing 600 mm diameter residential access culvert for Joseph Renaud. The Contractor shall carefully excavate, remove and clean the existing 600 mm diameter corrugated steel pipe and set to proper grade on a bed of ¾" clear stone. The Contractor shall utilize the existing backfill material and shall further salvage and carefully restack the existing concrete rubble headwalls at each end of the pipe. In the event the existing 600 mm diameter corrugated steel pipe is found to be structurally inadequate, then a new pipe of 750 mm diameter corrugated steel pipe with 2.0 mm wall thickness shall be supplied and installed by the Contractor.
- d) At Station 0+189 on the Branch Drain the Contractor shall extend the existing farm access bridge for Ena Beneteau. The Contractor shall connect the new pipe to the north end of the existing C.S.P. with a new coupler and shall install sloped quarried rock and filter fabric erosion protection to the north end of the new pipe. The materials for the new extension shall be in accordance to the description provided in Tender Item No. B-5 and installation shall be in accordance to the General Specifications.

9.0 QUARRIED ROCK PROTECTION

At the locations listed below on the Beaudoin Drain the Contractor shall install quarried rock protection as further specified under General Specifications Item No. 19.0.

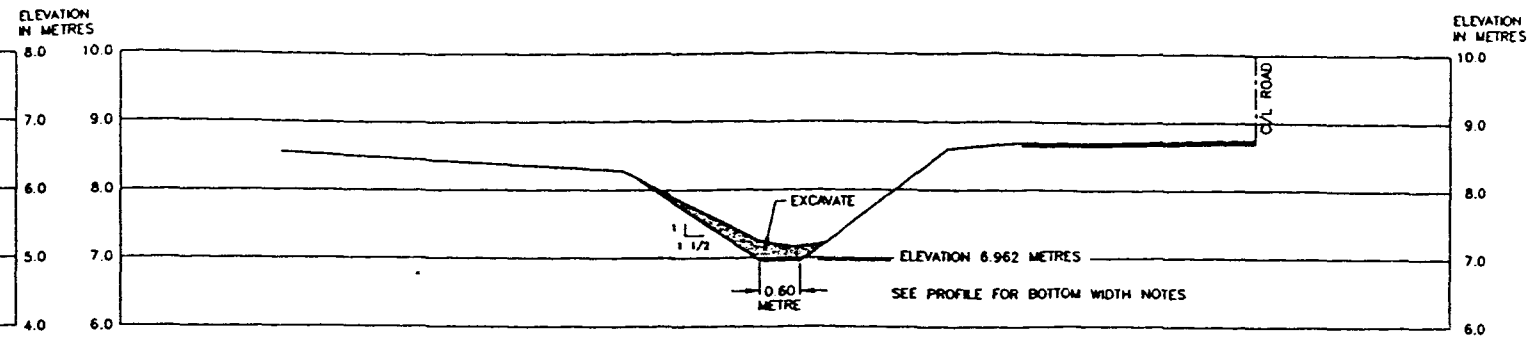
Station	Width (Metres)	Length (Metres)	Thickness (Metres)	Owner
0+369	1.5	2.0	0.3	Patrick D'Amore
1+011	1.5	2.0	0.3	Edward Parlette
1+323	2.0	2.0	0.3	Leo Bastien
1+575	2.0	3.0	0.3	Leo Bastien
1+828	1.5	2.0	0.3	Harvey Bezaire

NOTE: ALL EXCAVATED SIDESLOPES TO BE 1 1/2 TO 1 (TYPICAL).



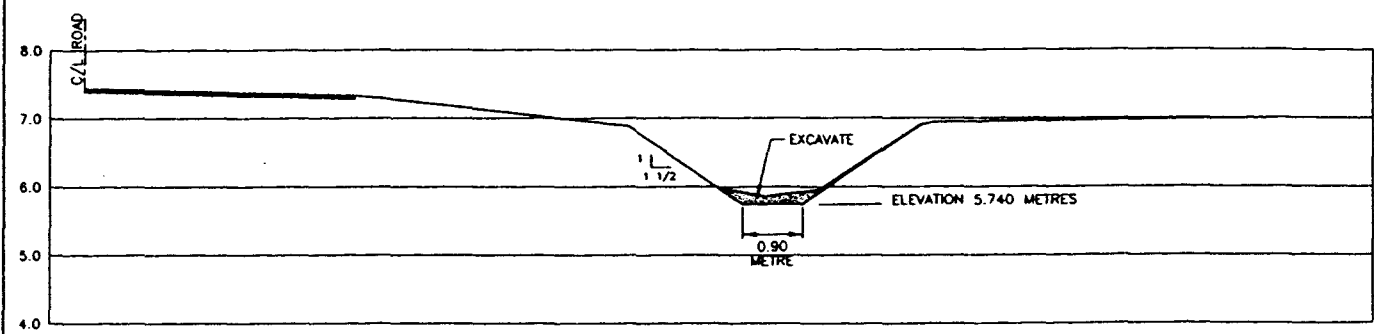
SECTION 0+175

SCALE: 1 : 50



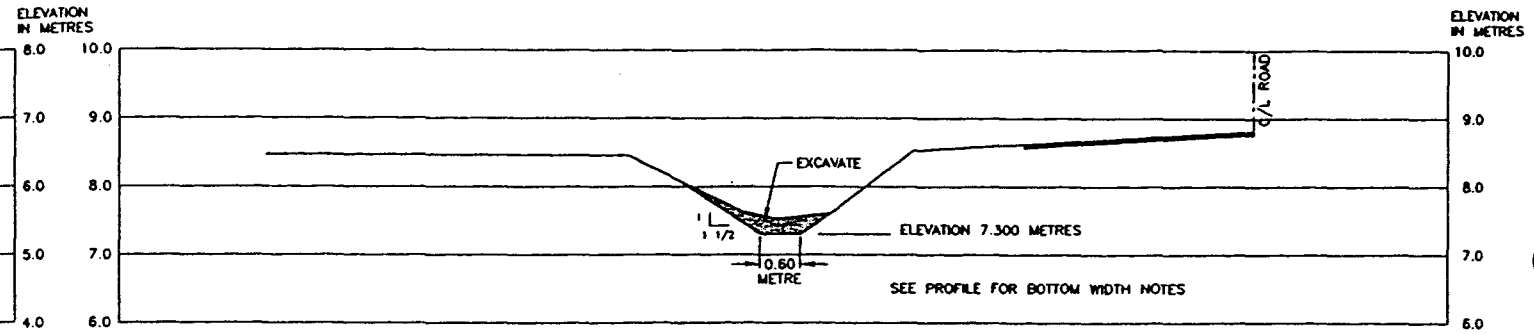
SECTION 0+975

SCALE: 1 : 50



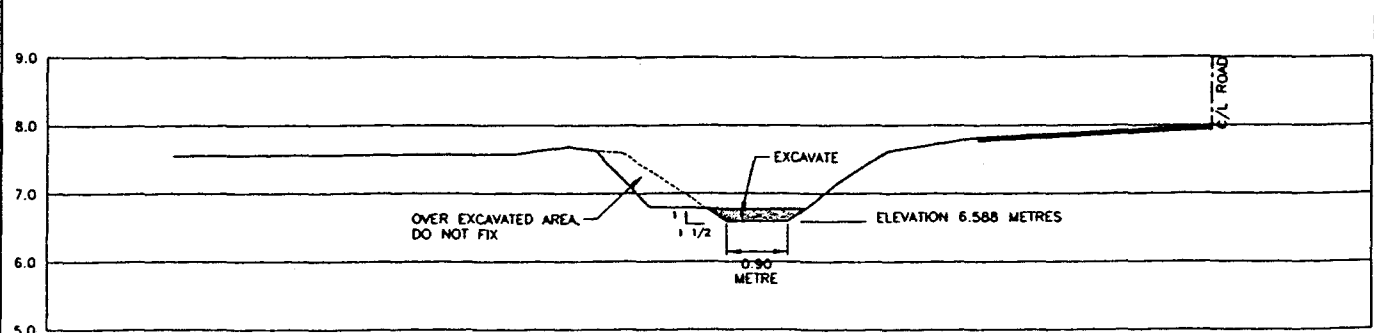
SECTION 0+400

SCALE: 1 : 50



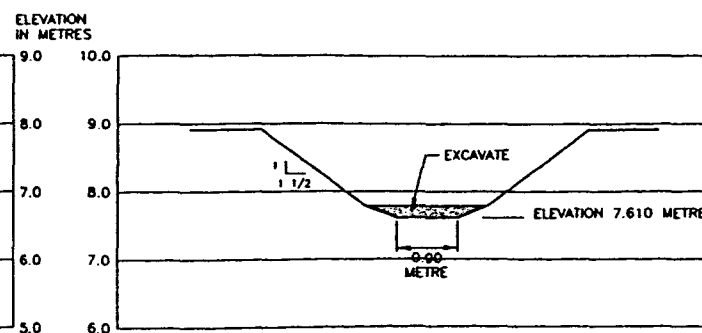
SECTION 1+200

SCALE: 1 : 50



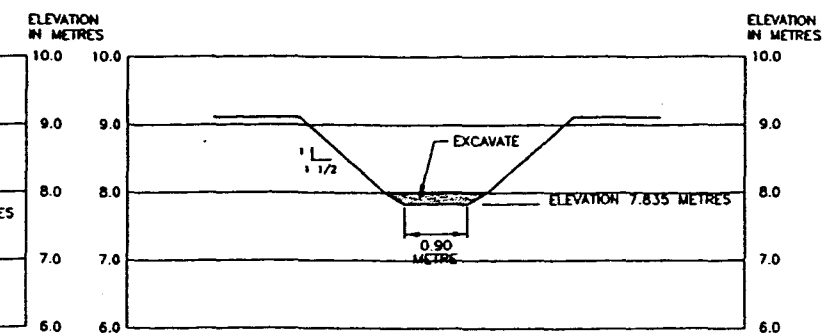
SECTION 0+725

SCALE: 1 : 50



SECTION 1+500

SCALE: 1 : 50



SECTION 1+725

SCALE: 1 : 50

	DATE: DECEMBER 23, 1997 L. Zarlenka LOU ZARLENKA, P.Eng	TOWNSHIP OF ANDERDON MAYOR: TONY TIEFENBACH ADMINISTRATOR: DAVID MAILLOUX DRAINAGE SUPERINTENDENT: TONY DICIOCCO	BRUCE D. CROZIER ENGINEERING INC. CONSULTING ENGINEERS 209 ONE STREET SOUTH LEAMINGTON, ONTARIO N0H 3C1	PROJECT TITLE: BEAUDOIN DRAIN AND BRANCH	DATE: DEC. 23/97 AS NOTED	PROJECT NO: BC-96-113
	BEAUDOIN DRAIN - CROSS-SECTIONS			DRAWN BY: M.L. CHECKED BY: L.Z.	SHEET NO: 3 of 3	

In order to accommodate the above described findings I would recommend the following:

TOOD ZAREWKA, P.Eng.

TOWNSHIP OF ANDERDON
 MAYOR: TONY TIEFENBACH
 ADMINISTRATOR: DAVID MAILLOUX
 DRAINAGE SUPERINTENDENT: TONY DICICCO

BRUCE D. CROZIER
 ENGINEERING INC.
 CONSULTING ENGINEERS
 209, DEE STREET SOUTH
 LAMBTON, ONTARIO
 N6C 2X1

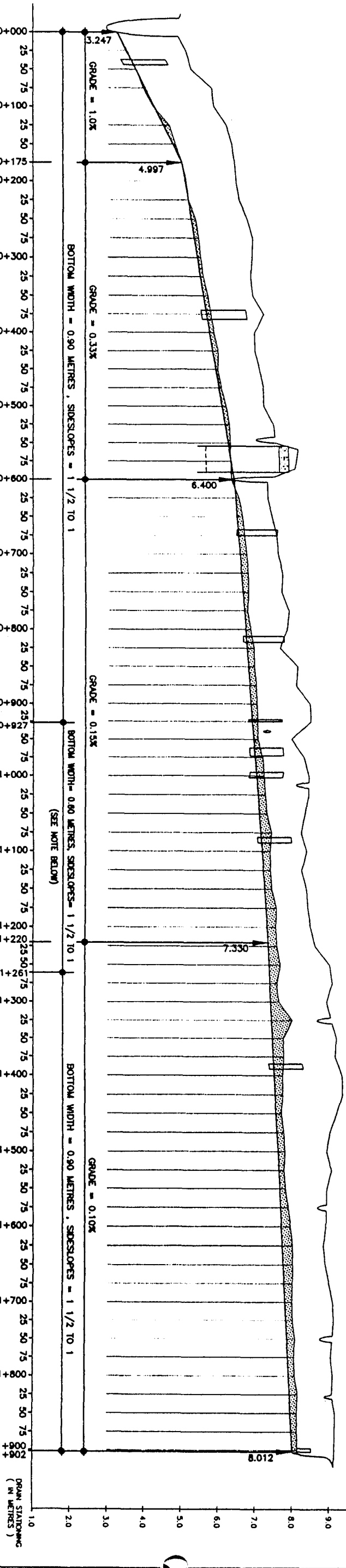
BEAUDOIN DRAIN AND BRANCH
 PLAN & PROFILE OF MAIN DRAIN
 DEC. 23/97
 AS NOTED
 BC-96-113
 2 of 3

PROFILE OF BEAUDOIN DRAIN

SCALE: Horizontal 1 : 2500 Vertical 1 : 50

NOTE: THE BOTTOM WIDTH SHALL BE 0.60 METRES FROM STATION 0+827 TO STATION 1+261, DUE TO THE EXISTENCE OF TREES ALONG THE NORTH TOP OF BANK.

STATION	CUT FROM EXISTING TOP OF BANK AT STAKE TO NEW GRADE (m)	GRADE (m)	EXISTING TOP OF BANK ELEVATION	EXISTING BOTTOM OF DRAIN ELEVATION
3.264	0.017	1.845		
3.486	-	1.600		
3.782	0.015	1.488		
3.954	-	1.790		
4.224	-	1.602		
4.659	0.162	1.687		
4.816	0.069	1.575		
5.003	0.006	1.402		
5.103	0.024	1.359		
5.169	0.007	1.359		
5.363	0.119	1.488		
5.444	0.117	1.557		
5.496	0.087	1.457		
5.573	0.081	1.348		
5.690	0.116	1.318		
-	-	1.528		
5.880	0.121	1.202		
5.966	0.147	1.131		
5.956	0.055	1.170		
6.052	0.065	1.193		
6.182	0.113	1.121		
6.267	0.115	1.280		
6.293	0.059	1.268		
-	-	-		
6.322	-	0.881		
6.524	0.067	0.855		
6.626	0.152	0.935		
6.656	0.144	1.015		
6.725	0.176	1.013		
6.771	0.184	1.087		
6.774	0.150	1.035		
6.741	0.079	1.182		
6.831	0.132	1.087		
6.826	0.189	0.875		
6.852	0.178	1.315		
6.984	0.172	1.238		
7.017	0.188	1.585		
7.036	0.152	1.574		
7.036	0.112	1.012		
7.170	0.208	1.311		
7.130	0.130	1.383		
7.230	0.193	1.343		
7.280	0.206	1.214		
7.400	0.288	1.078		
7.360	0.211	1.184		
7.381	0.184	1.018		
7.416	0.182	1.117		
7.537	0.275	1.115		
7.527	0.228	1.158		
7.567	0.232	1.232		
7.657	0.297	1.617		
7.566	0.184	1.664		
7.629	0.219	1.499		
7.986	0.584	1.214		
7.746	0.289	1.708		
7.769	0.284	1.684		
7.736	0.229	1.819		
7.736	0.204	1.804		
7.709	0.148	1.619		
7.766	0.184	1.400		
7.788	0.179	1.298		
7.788	0.134	1.404		
7.808	0.148	1.288		
7.888	0.204	0.884		
7.888	0.248	1.188		
8.018	0.284	1.104		
8.018	0.259	1.129		
8.013	0.228	1.208		
8.003	0.183	1.283		
8.013	0.178	1.278		
8.073	0.213	0.873		
8.053	0.168	1.158		
8.073	0.163	1.183		
8.148	0.213	1.133		
8.138	0.178	1.208		
8.138	0.153	1.173		
8.138	-	1.128		



- 0+000 - START OF BEAUDOIN DRAIN
- OUTLET INTO LONG MARSH DRAIN
- 0+037 - WEST END 1200mm DIA. C.S.P., 7.0m LONG, CULVERT APPROXIMATELY 230mm BELOW GRADE. DO NOT EXCAVATE
- 0+104 - LINE BETWEEN RIVARD AND D'AMORE
- 0+369 - SWALE FROM SOUTH
- PROVIDE 1.5m x 2.0m ROCK PROTECTION
- 0+370 - WEST END 1200mm DIA. C.S.P., 12.6m LONG, CULVERT APPROXIMATELY 120mm BELOW GRADE. DO NOT EXCAVATE
- 0+488 - LINE BETWEEN D'AMORE AND BONDY
- 0+528 - REMOVABLE FOOT BRIDGE ACROSS DRAIN
- 0+553 - ROADSIDE DRAIN FROM SOUTH
- 0+554 - WEST END 2.4m WIDE CONCRETE ROAD CULVERT, 35.7m LONG
- 0+561 - CENTRELINE OF 3rd CONCESSION ROAD
- 0+573 - GO NORTH
- 0+582 - CENTRELINE NORTH SIDEROAD
- 0+590 - GO EAST
- NORTH END OF CONCRETE ROAD CULVERT
- BRANCH DRAIN ENTERS FROM NORTH
- 0+651 - LINE BETWEEN MONFORTON AND ROSATI
- 0+667 - WEST END 1090mm DIA. C.S.P., 7.7m LONG, CULVERT APPROXIMATELY 40mm BELOW GRADE. DO NOT EXCAVATE
- 0+789 - LINE BETWEEN ROSATI AND CAPALDI
- 0+809 - WEST END 1090mm DIA. C.S.P., 7.9m LONG, CULVERT APPROXIMATELY 80mm BELOW GRADE. DO NOT EXCAVATE
- 0+905 - LINE BETWEEN CAPALDI AND CAPALDI
- 0+922 - WEST END 900mm DIA. C.S.P., 3.0m LONG, CULVERT APPROXIMATELY 90mm BELOW GRADE. DO NOT EXCAVATE
- 0+927 - LINE BETWEEN CAPALDI AND DESLIPPE
- 0+930 - 300mm DIA. C.P.P. FROM NORTH
- 0+962 - WEST END 900mm DIA. C.S.P., 11.0m LONG, CULVERT APPROXIMATELY 125mm BELOW GRADE. DO NOT EXCAVATE
- 0+973 - LINE BETWEEN DESLIPPE AND CHAPLEAU
- 0+995 - WEST END 900mm DIA. C.S.P., 7.3m LONG, CULVERT APPROXIMATELY 185mm BELOW GRADE. DO NOT EXCAVATE
- 1+007 - LINE BETWEEN CHAPLEAU AND PARLETTE
- 1+011 - SWALE FROM NORTH
- PROVIDE 1.5m x 2.0m ROCK PROTECTION
- 1+081 - WEST END 900mm DIA. C.S.P., 7.3m LONG, CULVERT APPROXIMATELY 100mm BELOW GRADE. DO NOT EXCAVATE
- 1+261 - GO NORTH
- 1+323 - SWALE FROM EAST
- PROVIDE 2.0m x 2.0m ROCK PROTECTION
- 1+380 - GO EAST
- 1+385 - WEST END 900mm DIA. C.S.P., 6.6m LONG, CULVERT APPROXIMATELY 125mm BELOW GRADE. DO NOT EXCAVATE
- 1+527 - GO NORTH
- 1+575 - RUN IN FROM EAST
- PROVIDE 2.0m x 3.0m ROCK PROTECTION
- 1+717 - GO EAST
- 1+753 - GO NORTH
- 1+828 - RUN IN FROM EAST
- PROVIDE 1.5m x 2.0m ROCK PROTECTION
- 1+897 - SOUTH END 375mm DIA. CONCRETE CROCK, APPROX 4.7m LONG
- 1+902 - END OF DRAIN

0+000 - START OF BRANCH DRAIN
 - OUTLET INTO BEAUDOIN DRAIN AND INTO THE NORTH END OF CONCRETE CULVERT UNDER NORTH SIDEROAD
 0+003 - LINE BETWEEN NORTH SIDEROAD AND MONFORTON

0+035 - SOUTH END 750mm DIA. C.S.P., 7.0m LONG, CULVERT APPROXIMATELY 115mm BELOW GRADE, DO NOT EXCAVATE
 0+044 - LINE BETWEEN MONFORTON AND RENAUD

0+083 - SOUTH END 600mm DIA. C.S.P., 7.2m LONG, CULVERT APPROXIMATELY 115mm BELOW GRADE, DO NOT EXCAVATE
 0+080 - LINE BETWEEN RENAUD AND McCURDY

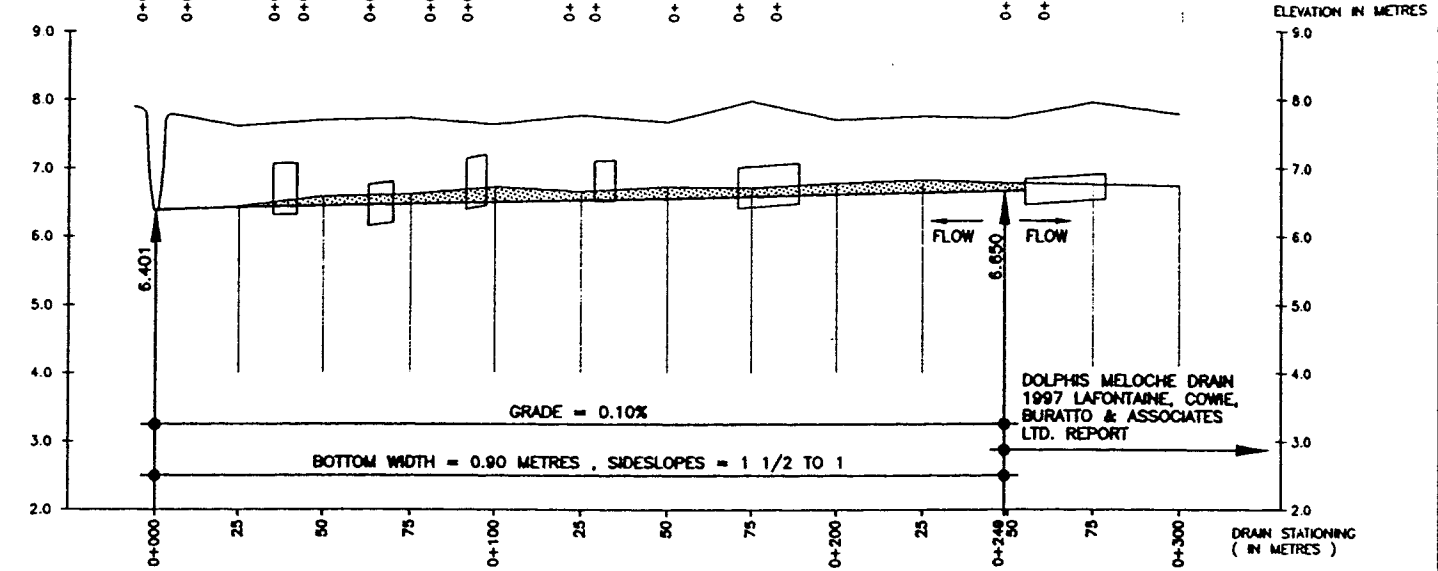
0+091 - SOUTH END 750mm DIA. C.S.P., 8.0m LONG, CULVERT APPROXIMATELY 70mm BELOW GRADE, DO NOT EXCAVATE

0+121 - LINE BETWEEN McCURDY AND BENETEAU
 0+129 - SOUTH END 600mm DIA. C.S.P., 8.1m LONG

0+152 - LINE BETWEEN BENETEAU AND RANKINE

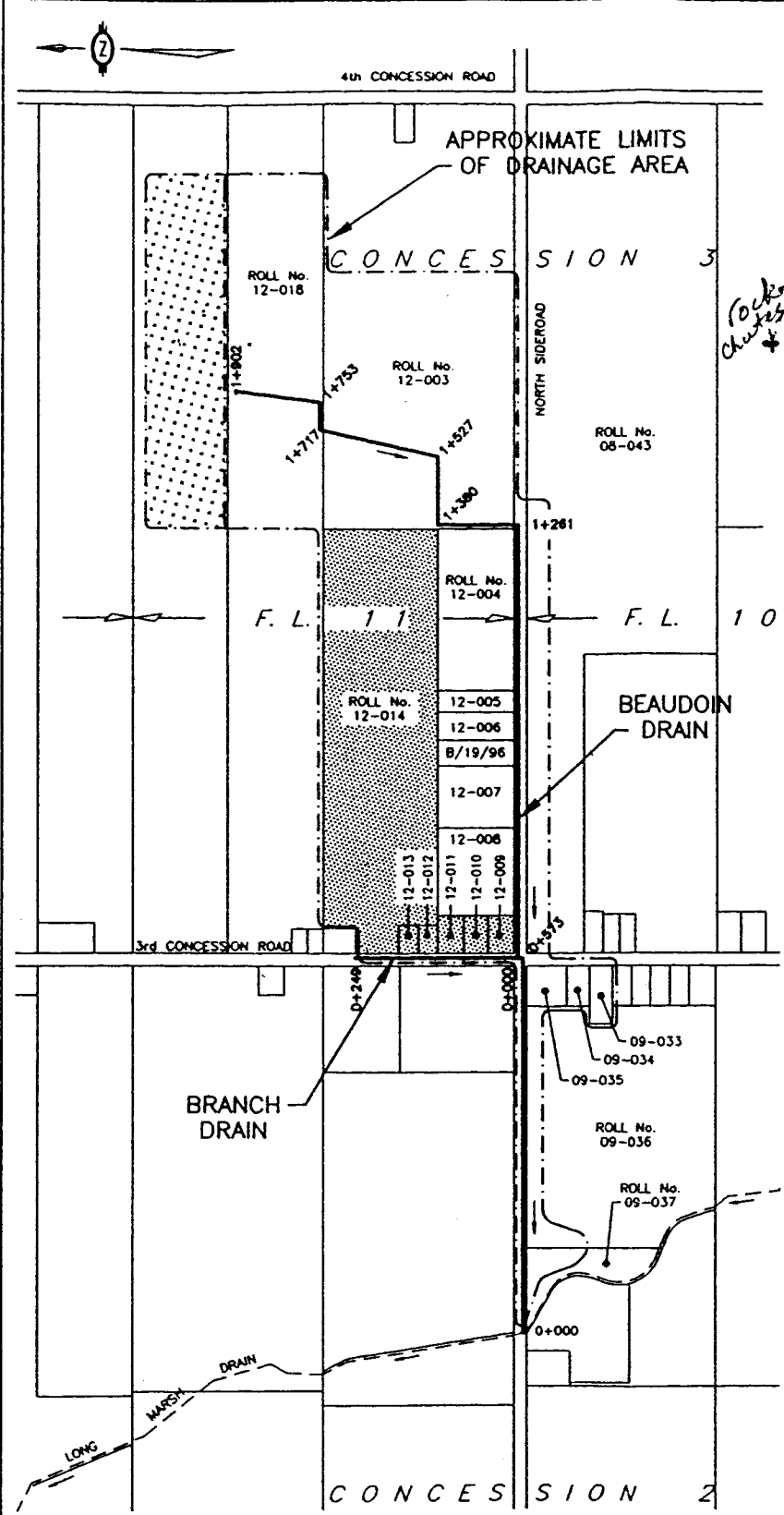
0+171 - SOUTH END 600mm DIA. C.S.P., 18.1m LONG, CULVERT APPROXIMATELY 135mm BELOW GRADE, DO NOT EXCAVATE
 0+182 - LINE BETWEEN RANKINE AND BENETEAU

0+249 - LINE NORTH SIDE BENETEAU
 - END OF BRANCH DRAIN
 0+255 - SOUTH END 375mm DIA. C.S.P., 23.6m LONG



1.442	1.189	1.254	1.259	1.144	1.243	1.128	1.403	1.098	1.123	1.098			CUT FROM EXISTING TOP OF BANK AT STAKE TO NEW GRADE (m)
-0.026	0.019	0.134	0.139	0.224	0.133	0.178	0.133	0.188	0.183	0.119			CUT FROM EXISTING BOTTOM TO NEW GRADE (m)
6.401	6.428	6.461	6.476	6.501	6.528	6.551	6.576	6.601	6.628	6.650			DRAIN GRADELINE ELEVATION
7.843	7.815	7.708	7.735	7.845	7.788	7.679	7.979	7.899	7.748	7.719	7.939	7.779	EXISTING TOP OF BANK ELEVATION
6.375	6.445	6.585	6.615	6.725	6.659	6.729	6.709	6.766	6.819	6.786		6.729	EXISTING BOTTOM OF DRAIN ELEVATION

PROFILE OF BRANCH DRAIN
 SCALE: Horizontal 1 : 1000, Vertical 1 : 50



PLAN
 SCALE: 1 : 5000 (APPROX.)

ROLL NO.	HECTARES OWNED	NAME OF OWNER
12-01800	19.846	HARVEY & YVONNE BEZAIRE
12-00300	20.149	LEO & DONNA BASTIEN
12-00400	3.084	EDWARD & PATRICIA PARLETTE
12-00500	0.405	DENNIS & JEAN CHAPLEAU
12-00600	0.538	PAUL & ELIZABETH DESLIPPE
B/19/96	0.265	JOSEPH & VIRGINIA CAPALDI
12-00700	1.408	JOSEPH & VIRGINIA CAPALDI
12-00800	1.671	ANTONIO & MARIA & DINO ROSATI
12-01400	11.679	EMA BENETEAU
12-01300	0.139	BRIAN RANKINE
12-01200	0.139	THERESE BENETEAU
12-01100	0.249	ALVIN & RUTH McCURDY
12-01000	0.238	JOSEPH & LEEANN RENAUD
12-00900	0.249	ROY & FLORENCE MONFORTON
08-04300	30.675	WISMER BROTHERS LIMITED
09-03300	0.334	ROY NASCIMENTO & LOIS TORTI
09-03400	0.233	DONALD & SHANNON KENNEDY
09-03500	0.405	ROBERT & CONSTANCE BONDY
09-03600	11.048	PATRICK D'AMORE
09-03700	1.182	JOHN SZENTMIKLÓS & CHERYL RIVARD

NOTE: RECENTLY SEVERED PROPERTIES THAT DO NOT HAVE ROLL NUMBERS ARE SHOWN WITH THEIR SEVERANCE NUMBER.

- BENCH MARKS**
- 1) TOP CENTRELINE OF SOUTH CONCRETE CURB OF HIGHWAY BRIDGE OVER THE LONG MARSH DRAIN, AT THE NORTH SIDEROAD. ELEVATION = 6.279 metres
 - 2) TOP OF NAIL IN HYDRO POLE AT MAIN DRAIN STATION 0+304. ELEVATION = 7.597 metres
 - 3) TOP NORTH END OF CONCRETE ROAD CULVERT UNDER NORTH SIDEROAD AT MAIN DRAIN STATION 0+590 AND AT BRANCH DRAIN STATION 0+000. ELEVATION = 7.839 metres
 - 4) TOP OF NAIL IN HYDRO POLE AT MAIN DRAIN STATION 1+078. ELEVATION = 8.630 metres
 - 5) NAIL IN WEST FACE OF 150mm x 150mm TIMBER FENCE POST, 0.45 metres ABOVE GROUND, APPROXIMATELY 80 metres EAST OF BEND AT MAIN DRAIN STATION 1+753. ELEVATION = 9.481 metres
 - 6) TOP OF NAIL IN EAST FACE OF HYDRO POLE ON WEST SIDE OF 3rd CONCESSION ROAD, 0.60 metres ABOVE GROUND AT BRANCH DRAIN STATION 0+210. ELEVATION = 8.054 metres

THIS PLAN HAS BEEN REDUCED IN SIZE FOR PRESENTATION PURPOSES AND THEREFORE IT IS NOT TO THE SCALES INDICATED. A FULL SIZE SET OF DRAWINGS IS AVAILABLE FOR REVIEW AT THE TOWNSHIP OFFICE.

- DESIGNATES LANDS AFFECTED BY THE BRANCH OF THE BEAUDOIN DRAIN
- AREA REMOVED FROM BEAUDOIN DRAINAGE AREA AND ADDED TO DOLPHIS MELOCHE DRAIN UNDER 1997 DOLPHIS MELOCHE DRAIN REPORT PREPARED BY LAFONTAINE, COWIE, BURATTO & ASSOCIATES LTD.

METRIC DIMENSIONS

	DATE: DECEMBER 23, 1997 L. Zarilenga, P.Eng.	TOWNSHIP OF ANDERDON MAYOR: TONY TIEFENBACH ADMINISTRATOR: DAVID MAILLOUX DRAINAGE SUPERINTENDENT: TONY DICIOCCO	BRUCE D. CROZIER ENGINEERING INC. CONSULTING ENGINEERS 209 ENE STREET SOUTH LEAMINGTON, ONTARIO N8M 3C1	PROJECT TITLE: BEAUDOIN DRAIN AND BRANCH DRAWN BY: M.L. CHECKED BY: L.Z.	DATE: DEC. 23/97 AS NOTED SHEET NO: 1 of 3
	PLAN & PROFILE			PROJECT NO: BC-96-113	

March 17, 1998

Mayor and Municipal Council
Corporation of the Town of Amherstburg
Formerly Township of Anderdon
3400 Middle Sideroad
R. R. #4
Amherstburg, Ontario
N9V 2Y9

Mayor Hurst and Councillors

**SUBJECT: Addendum Drainage Report
Beaudoin Drain and Branch**
in the Former Township of Anderdon
Our Project Reference BC-96-113

1.0 PREVIOUS REPORT AND BACKGROUND

On March 10, 1998 the Municipal Council considered and adopted a drainage report for the Beaudoin Drain and Branch, dated December 23, 1997 and prepared by the undersigned.

During the meeting to consider the report I explained that Harvey Bezaire had previously contacted the Municipality and indicated he no longer wished the reconstruction of his existing farm bridge situated in the Beaudoin Drain at Station 1+897. The reason for this being that lands situated to the north and adjacent to the Bezaire farm were recently removed from the Beaudoin Drainage Area. Consequently the cost of replacing the existing Bezaire farm bridge could not be assessed to any additional lands.

Accordingly, on March 13, 1998 I attended the above noted lands owned by Harvey Bezaire and I was accompanied by Mr. Tony DiCiocco, Drainage Superintendent for the former Township of Anderdon. The existing farm bridge in question is situated at the extreme top end of the open Beaudoin Drain. It was evident that elimination of the existing 375 mm diameter farm bridge would not adversely affect the Beaudoin Drain or existing access to the easterly portion of the Bezaire lands. It was further evident that some surface water, originating from the neighbouring northerly lands owned by Leo Bezaire, could still flow southerly over top of the Bezaire laneway at the location of the existing farm bridge.

I then met with Mr. Bezaire, at his residence, who acknowledged the potential for some continued surface flow from the adjacent northerly situated lands. Mr. Bezaire also indicated he wished to have the existing 375 mm diameter pipes crushed in place and to have backfill material placed to fill the resulting voids. I informed Mr. Bezaire the backfill material should be a granular material that could provide some measure of erosion protection to the laneway. Mr. Bezaire agreed with this suggestion and requested the above noted work be provided for.

2.0 FINDINGS

I find that the Bezaire farm bridge situated at Station 1+897 was previously estimated to cost \$674.00 in the December 23, 1997 report. This same amount was also totally assessed to lands owned by Harvey Bezaire. Elimination of this work will reduce the estimated cost of this project by a similar amount. I further find the assessment against the lands owned by Harvey Bezaire should be reduced by this same amount to account for elimination of the reconstruction of the Bezaire farm bridge.

3.0 RECOMMENDATIONS

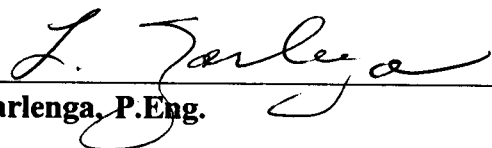
In order to accommodate the above described findings I would recommend the previous December 23, 1997 report be amended as follows:

- a) Delete reference for construction of the existing Bezaire farm bridge and installation of new corrugated catch basin at Station 1+897 from Section 7.0 of the report.
- b) Delete Item No. 6 for construction of the Bezaire bridge from Section 12.0 of the report.
- c) Revise the total estimate of cost from \$30,300.00 to \$29,656.00 in Section 12.0 of the report.

- d) Delete reference for reconstruction of the farm bridge to the Bezaire lands and description of assessment for same from Section 14.0 of the report.
- e) Delete reference to construction details for the reconstruction of the Bezaire farm bridge from Section 8.0 Part (b) of the Special Provisions of the Specifications.
- f) Amend the assessment to the Harvey Bezaire lands and as shown in the December 23, 1997 Schedule of Assessment in accordance to the assessment contained in the accompanying Schedule of Assessment dated March 17, 1998.
- g) The upper end of the Beaudoin Drain be situated at Station 1+897 and that the previous portion of the Beaudoin Drain situated between Stations 1+897 to 1+902 be abandoned in accordance to Section 19 of The Drainage Act.
- h) Further reference to the previous December 23, 1997 drainage report should include the additional description "and March 17, 1998 Addendum."

All of which is respectfully submitted.

**BRUCE D. CROZIER ENGINEERING INC.
CONSULTING ENGINEERS
209 ERIE STREET SOUTH
LEAMINGTON, ONTARIO
N8H 3C1**



Lou Zarlenga, P.Eng.



**SCHEDULE OF ASSESSMENT
BEAUDOIN DRAIN & BRANCH (MAIN DRAIN)
IN THE FORMER TOWNSHIP OF ANDERDON
PROJECT REFERENCE BC-96-113**

Con.											
Entry or				Hectares		Hectares	Value of	Value of	Special		
No.	Plan	Lot	Roll No.	Owned	Name of Owner	Affected	Benefit	Outlet	Benefit	Total	
1	3	PT LT 11	12-01800	19.846	HARVEY & YVONNE BEZAIRE	*	8.094	\$926.76	\$2,214.76	\$96.00	\$3,237.52
2	3	PT LT 11	12-00300	20.149	LEO & DONNA BASTIEN	*	11.955	1,368.85	3,025.37	321.00	4,715.22
3	3	PT LT 11	12-00400	3.084	EDWARD & PATRICIA PARLETTE	*	3.084	353.12	685.11	96.00	1,134.23
4	3	PT LT 11	12-00500	0.405	DENNIS & JEAN CHAPLEAU		0.405	139.12	257.17	0.00	396.29
5	3	PT LT 11	12-00600	0.538	PAUL & ELIZABETH DESLIPPE		0.538	184.80	337.41	0.00	522.21
6	3	PT LT 11	B\19\96	0.265	JOSEPH & VIRGINIA CAPALDI		0.265	91.03	163.56	3,980.00	4,234.59
7	3	PT LT 11	12-00700	1.408	JOSEPH & VIRGINIA CAPALDI	*	1.408	161.22	218.08	0.00	379.30
8	3	PT LT 11	12-00800	1.671	ANTONIO & MARIA & DINO ROSATI	*	1.671	191.33	314.78	0.00	506.11
9	3	PT LT 11	12-01400	11.679	ENA BENETEAU	*	11.679	0.00	2,102.64	0.00	2,102.64
10	3	PT LT 11	12-01300	0.139	BRIAN RANKINE		0.139	0.00	75.09	0.00	75.09
11	3	PT LT 11	12-01200	0.139	THERESE BENETEAU		0.139	0.00	75.09	0.00	75.09
12	3	PT LT 11	12-01100	0.249	ALVIN & RUTH McCURDY		0.249	0.00	134.76	0.00	134.76
13	3	PT LT 11	12-01000	0.238	JOSEPH & LEEANN RENAUD		0.238	0.00	128.59	0.00	128.59
14	3	PT LT 11	12-00900	0.249	ROY & FLORENCE MONFORTON		0.249	85.53	134.76	0.00	220.29
15	3	PT LT 10	08-04300	30.675	WISMER BROTHERS LIMITED	*	2.023	231.63	364.16	0.00	595.79
16	2	PT LT 10	09-03300	0.334	ROY NASCIMENTO & LOIS TORTI		0.334	0.00	176.93	0.00	176.93
17	2	PT LT 10	09-03400	0.233	DONALD & SHANNON KENNEDY		0.233	0.00	123.44	0.00	123.44
18	2	PT LT 10	09-03500	0.405	ROBERT & CONSTANCE BONDY		0.405	139.12	210.88	0.00	350.00
19	2	PT LT 10	09-03600	11.048	PATRICK D'AMORE	*	0.809	92.63	125.50	96.00	314.13
20	2	PT LT 10	09-03700	1.182	I. SZENTMIKLOSSY & C. RIVARD		0.567	194.76	229.40	0.00	424.16
							=====	=====	=====	=====	
TOTAL ON LANDS							\$4,159.90	\$11,097.48	\$4,589.00	\$19,846.38	
							=====	=====	=====	=====	
NORTH SIDEROAD				--	TOWNSHIP OF ANDERDON	2.375	\$1,632.38	\$2,639.61	\$0.00	\$4,271.99	
3RD CONCESSION ROAD				--	TOWNSHIP OF ANDERDON	0.430	294.72	462.91	0.00	757.63	
							=====	=====	=====	=====	
TOTAL ON ROADS							\$1,927.10	\$3,102.52	\$0.00	\$5,029.62	
							=====	=====	=====	=====	
TOTAL ASSESSMENT FOR BEAUDOIN DRAIN							\$6,087.00	\$14,200.00	\$4,589.00	\$24,876.00	
							=====	=====	=====	=====	

* INDICATES LANDS USED FOR AGRICULTURAL PURPOSES



**SCHEDULE OF ASSESSMENT
BRANCH OF THE BEAUDOIN DRAIN
IN THE FORMER TOWNSHIP OF ANDERDON
PROJECT REFERENCE BC-96-113**

Addendum Report
Mar.17, 1998



Entry or No.	Con. Plan	Lot	Roll No.	Hectares Owned	Name of Owner	Hectares Affected	Value of Benefit	Value of Outlet	Special Benefit	Total
1	3	PT LT 11	12-01400	11.679	ENA BENETEAU	* 11.679	\$607.54	\$1,451.42	\$1,563.00	\$3,621.96
2	3	PT LT 11	12-01300	0.139	BRIAN RANKINE	0.139	21.69	50.89	4.00	76.58
3	3	PT LT 11	12-01200	0.139	THERESE BENETEAU	0.139	21.69	49.91	4.00	75.60
4	3	PT LT 11	12-01100	0.249	ALVIN & RUTH McCURDY	0.249	38.86	88.08	8.00	134.94
5	3	PT LT 11	12-01000	0.238	JOSEPH & LEEANN RENAUD	0.238	37.14	82.21	168.00	287.35
6	3	PT LT 11	12-00900	0.249	ROY & FLORENCE MONFORTON	0.249	38.86	83.19	0.00	122.05
TOTAL ON LANDS							\$765.78	\$1,805.70	\$1,747.00	\$4,318.48
3RD CONCESSION ROAD				--	TOWNSHIP OF ANDERDON	0.430	\$134.22	\$308.30	\$19.00	\$461.52
TOTAL ON ROADS							\$134.22	\$308.30	\$19.00	\$461.52
TOTAL ASSESSMENT FOR BRANCH DRAIN							\$900.00	\$2,114.00	\$1,766.00	\$4,780.00

* INDICATES LANDS USED FOR AGRICULTURAL PURPOSES

SUMMARY OF ASSESSMENTS

TOTAL ASSESSMENT FOR BEAUDOIN DRAIN	\$6,087.00	\$14,200.00	\$4,589.00	\$24,876.00
TOTAL ASSESSMENT FOR BRANCH DRAIN	900.00	2,114.00	1,766.00	4,780.00
TOTAL ESTIMATE	\$6,987.00	\$16,314.00	\$6,355.00	\$29,656.00

