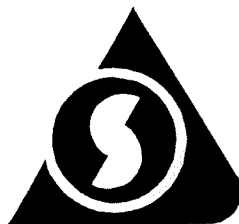


KEENAN DRAIN 1998

Town of Pelham



SPRIET ASSOCIATES

London, Ontario
April 30, 1998

KEENAN DRAIN 1998

Town of Pelham

To the Mayor and Council
of the Town of Pelham

Mayor and Council:

We are pleased to present our report on the reconstruction and extension of the Keenan Municipal Drain serving parts of Lots 12 to 20, Concession 7 to 9 in the Town of Pelham.

AUTHORIZATION

This report was prepared pursuant to Sections 4 and 78 of the Drainage Act in accordance with instructions received from your Administrator with respect to a motion of the Town Council.

The work on the existing tile portion was initiated by a request of the Municipality. The extension of the open portion downstream of the present end point was initiated by a petition signed by the next two landowners downstream.

DRAINAGE AREA

The total watershed areas as described above contains approximately 500 hectares. The area requiring drainage for the open drain extension is described as part of Lots 19 and 20, Concession 8 being property Roll No.'s 16-78 and 16-77.

HISTORY

The Keenan Drain was originally constructed pursuant to a report submitted by E.B. Erwin, O.L.S., Engineer dated June 12, 1947 and consisted of 2550 feet of open ditch and 4413 feet of 8" to 14" field tile. The open ditch started at the half lot line in Lot 19, Concession 8 and ended east of Maple Street in Lot 15, Concession 9.

Properties which were assessed for the original construction in 1947 are now shown on the enclosed up-dated map of the drainage area. Over the years, the original properties have been severed and subdivided, resulting in many more assessed properties within the original drainage area.

EXISTING DRAINAGE CONDITIONS AND DESIGN CONSIDERATIONS

A public meeting was held at the Pelham Town Hall in Ridgeville, on April 3, 1997 to discuss the condition of the Keenan Drain. All ratepayers abutting the drain were sent notices and several attended to provide input with respect to the existing tile and open ditch. At this meeting two downstream ratepayers expressed concern about flooding on the property because of runoff from the lands in the upper watershed. The result was a petition to Town Council requesting an extension of the municipal drain downstream. The petition was accepted by Council at the May 6, 1997 regular meeting.

A field survey was made along the course of the drain, starting in Lot 20, Concession 7 on the north side of Highway 20 and ending at the tile outlet, a distance of 2880 meters. This survey was done on May 13, 1997.

An on-site meeting in accordance with the Drainage Act, was held on June 17, 1997 at the point where the drain crosses Maple Street. All petitioners and abutting ratepayers were invited to attend and provide additional input with respect to their drainage needs. Also, on that day, the tile portion was surveyed starting at the open ditch and ending at Maple Street. A branch drain to serve the Burke property was also surveyed.

Upon completion of our surveys we note the following:

- the tile on the west side of Maple Street is filled with sand, as a result of quicksand soil conditions at tile depth. The existing tile is not working for several meters west of Maple Street.
- a concern was expressed by several ratepayers, that Canboro Road Properties Development, has silting in and reduced the capacity of the existing tile.
- the old concrete culvert under Maple Street has collapsed at both ends resulting in a traffic hazard and poor flow capacity.
- there is an in line pond on the tile at Sta.3 + 370 at which point the old clay tile is very shallow.
- it was pointed out that the old tile drain in property Roll No. 16-100 needs repairs in several places annually, because of cracked clay tile which results from frost penetration on this 50 year old drain.
- it was pointed out by a long time ratepayer that the tiles which were installed in 1947 were of poor quality.
- the outlet of the existing tile at Sta.2 + 883 is standing in water which has backed up in the open ditch.
- the existing open ditch has silted in thereby causing water to back up in the old tile.

EXISTING DRAINAGE CONDITIONS AND DESIGN CONSIDERATIONS (cont'd)

- there are large amounts of excavated material along the ditch banks that has not been levelled.
- downstream of the 1947 open ditch end point the existing waterway is very shallow to non-existent resulting in widespread flooding.
- the farm crossing in property Roll No. 16-78 is in poor condition.
- the old farm crossing in property Roll No. 16-77 no longer exists.

A public meeting to review our findings was called with all ratepayers on November 17, 1997. A second public meeting was held with abutting ratepayers on April 16, 1998 to further review our findings and consider any final request with respect to construction, costs, and preliminary assessments. As a result of these meetings, we hereby recommend the following:

- that the existing open drain be cleaned out and the drain be extended downstream from the old end point for approximately 2000 meters.
- that two new farm culvert crossings be installed as specified on the drawings.
- that the existing old spoil, as well as the new excavated ditch material, be properly levelled.
- that the existing 1947 municipal tile be abandoned and become a private drain.
- that a new municipal drain be constructed, as detailed on the plans, to replace the old drain.
- that a new pipe be installed across Maple Street at Sandra Drive to provide an outlet for the new storm drain on the east side of the road.
- that the new drain be located along the south lot line of property Roll No. 16-98, instead of the original location on property Roll No. 16-99-2.
- that a short stub drain be installed across the rear of property Roll No. 16-99-2 to provide an outlet to property Roll No. 15-156-10 as well.
- that a new Branch 'A' tile drain be constructed as detailed.
- that a new surface culvert be installed under Maple Street to replace the old concrete surface culvert.
- that surface inlets and catchbasins be installed at several locations to collect surface water flows.

EXISTING DRAINAGE CONDITIONS AND DESIGN CONSIDERATIONS (cont'd)

- that a feed line be installed to provide a source of water to the irrigation pond at Sta.3 + 370.
- that the new drain on Maple Street be installed in the south boulevard for a distance of 96 meters before crossing to the east under the street.

Due to the indications of poor soil conditions, our design includes the wrapping of tile joints with geotextile and a contingency allowance for crushed stone bedding where and if necessary.

The capacity of the proposed tile drain was designed using the Drainage Coefficient method contained in the "DRAINAGE GUIDE FOR ONTARIO", Publication 29 by the Ontario Ministry of Agriculture, Food and Rural Affairs. The Drainage Coefficient defines a depth of water that can be removed in a 24 hour period and is expressed in millimetres per 24 hours. The coefficient used for the tile design is 25mm.

The proposed work consists of approximately 2883 lineal meters of open ditch cleanout and construction including quarry stone rip-rap protection, bank seeding, construction of two farm culverts and approximately 1738 lineal meters of 100mm (4") to 525mm (21") concrete and plastic field tile and sewer pipe including related appurtenances.

All of the proposed work has been generally designed and shall be constructed in accordance with the DESIGN AND CONSTRUCTION GUIDELINES FOR WORK UNDER THE DRAINAGE ACT.

ENVIRONMENTAL DESIGN CONSIDERATIONS

We are recommending that the following erosion and sediment control measures be included as part of our reconstruction proposal to help mitigate any potential adverse impacts of the proposed drainage works on water quality and fishery habitat:

- timing of construction is to be only at times of low or no flow
- various sediment traps are to be constructed along the course of the drain at the locations specified on the plan and these basins are to be maintained during construction.
- a temporary flow check of straw bales or silt fencing is to be installed for the duration of the construction at the bottom end of the ditch construction.
- a 3 meter wide buffer strip of existing vegetation between the top of the bank and any cultivated lands on both sides is to be incorporated as part of the drain.

ENVIRONMENTAL DESIGN CONSIDERATIONS (cont'd)

- all work is to be completed from the west and south sides of the ditch where possible. Any natural vegetation, brush, trees, etc. that exist on the unaffected sides of the ditch, should be retained to provide shade and cover
- all new tile drain outlets are to be installed with quarry stone rip-rap protection

It is to be noted that both the existing and newly vegetated banks as well as the existing natural and newly created buffer strips along each side of the ditch are permanent parts of the Keenan Municipal Drain and shall not be disturbed or destroyed.

SCHEDULES

Four schedules are attached hereto and form part of this report, being Schedule 'A' - Allowances, Schedule 'B' - Cost Estimate, Schedule 'C' - Assessment for Construction and Schedule 'D' - Assessment for Maintenance.

Schedule 'A' - Allowances. In accordance with Sections 29 and 30 of the Drainage Act, allowances are provided for right-of-way and damages to lands and crops along the route of the drain as defined below. In accordance with Section 31 of the Drainage Act, a further allowance is provided for the value of the existing drains incorporated as part of this drainage works, to those lands on which the existing drains are located.

Schedule 'B' - Cost Estimate. This schedule provides for a detailed cost estimate of the proposed work which is in the amount of \$175,100.00. This estimate includes engineering and administrative costs associated with this project, including the net Goods and Services Tax.

Schedule 'C' - Assessment for Construction. This schedule outlines the distribution of the total estimated cost of construction over the roads and lands which are involved.

Schedule 'D' - Assessment for Maintenance. This schedule outlines the distribution of future repair and/or maintenance costs for portions of, or the entire drainage works.

Drawing No.'s 1,2 and 3, Job No. 96262 and specifications form part of this report. They show and describe in detail the location and extent of the work to be done and the lands which are affected.

ALLOWANCES

DAMAGES: Section 30 of the Drainage Act provides for the compensation to landowners along the drain for damages to lands and crops caused by the construction of the drain.

For those areas where there is limited disturbance of the soil such as tile drains, the amounts granted are based on \$1,250.00/ha. For those areas where the topsoil is to be stripped and releveled upon completion, or substantial disturbance of the soil (excluding areas used for grassed waterways), the amounts granted are based on \$1,500.00/ha. For those areas which have excavated material levelled on them, the amounts granted are based on \$2,250.00/ha. for those areas used for grassed waterways, the amounts are based on \$1,125.00/ha. These base rates are multiplied by the hectares derived from the working widths shown on the plans and the applicable lengths.

RIGHT-OF-WAY: Section 29 of the Drainage Act provides for an allowance to the owners whose land must be used for the construction, repair, or future maintenance of a drainage works.

For tile drains where the owners will be able to continue to use the land, the allowance provides for the right to enter upon such lands, and at various times for the purpose of inspecting such drain, removing obstructions, and making repairs. Also, the allowance provides for the restrictions imposed on those lands to protect the right-of-way from obstruction or derogation. The amounts granted for right-of-way on tile drains is based on 20% of value of the land designated for future maintenance. Therefore, the amounts granted are based on \$1,250.00/ha. and are multiplied by the hectares derived from the width granted for future maintenance and the applicable lengths.

For open ditches, the allowance provides for the loss of land due to the construction provided for in the report. The amounts granted are based on the value of the land, and the rate used was \$6,200.00/ha. An allowance was made for two 3 meter buffers on the new open ditch. For existing open ditches, the right-of-way to provide for the right to enter and restrictions imposed on those lands, is deemed to have already been granted.

ASSESSMENT DEFINITIONS

In accordance with the Drainage Act, lands that make use of a drainage works are liable for assessment for part of the cost of constructing and maintaining the system. These liabilities are known as benefit liability, outlet liability and special benefit liability as set out under Sections 22,23,24 and 26 of the Act.

GRANTS

In accordance with the provisions of Section 85 of the Drainage Act, a grant may be available for assessments against privately owned parcels of land which are used for agricultural purposes. Section 88 of the Drainage Act directs the Town to make application for this grant upon certification of completion of this drain. The Town will then deduct the grant from the assessments prior to collecting the final assessments.

MAINTENANCE

Upon completion of construction, all owners are hereby made aware of Sections 80, 82 and 83 of the Drainage Act which forbid the obstruction of, damage or injury to, and pollution of a municipal drain.

After completion, the entire Keenan Drain shall be maintained by the Town of Pelham at the expense of all upstream lands and roads assessed in Schedule 'D' - Assessment for Maintenance and in the same relative proportions, until such time as the assessment is changed under the Drainage Act.

Respectfully submitted,

SPRIET ASSOCIATES LONDON LIMITED

A handwritten signature in black ink, appearing to read "J. R. Spriet". The signature is fluid and cursive, with a large initial "J" and "R".

J. R. Spriet, P. Eng.

sjs

SCHEDULE 'A' - ALLOWANCES

KEENAN DRAIN 1998

Town of Pelham

In accordance with Sections 29, 30 and 31 of the Drainage Act, we determine the allowances payable to owners entitled hereto as follows:

| CON. | LOT | ROLL NUMBER (OWNER) | Section 29 Right-of-Way | Section 30 Damages | Allowance for Existing Drain | TOTALS |
|------------------------------------|---------|--------------------------------|----------------------------|-----------------------|---------------------------------|-------------|
| MAIN DRAIN - OPEN PORTION | | | | | | |
| 7 | Pt20 | 16-33(Wm. Duffin Holdings Ltd. | \$ 390.00 | \$ | \$ | \$ 390.00 |
| 7 | Pt20 | 16-32(J. Pirie, S. Carroll) | 225.00 | | | 225.00 |
| 7 | Pt20 | 16-29-1(C. Wszolek) | 870.00 | | | 870.00 |
| 7 | Pt20 | 16-31(403761 Ontario Ltd.) | 570.00 | | | 570.00 |
| 8 | Pt20 | 16-30-1(Region of Niagara) | 335.00 | | | 335.00 |
| 8 | Pt20 | 16-77(E. & B. Korzeniowski) | 3,150.00 | 650.00 | | 3,800.00 |
| 8 | Pt19&20 | 16-78(J. & T. Rusin) | 930.00 | 2,870.00 | 500.00 | 4,300.00 |
| 9 | Pt18&19 | 16-104(D. & T. Hargreaves) | | 440.00 | | 440.00 |
| 9 | Pt18 | 16-103(R. Wright) | | 970.00 | 500.00 | 1,470.00 |
| Total Allowances on Open Portion | | | \$6,470.00 | \$4,930.00 | \$1,000.00 | \$12,400.00 |
| MAIN DRAIN - CLOSED PORTION | | | | | | |
| 9 | Pt18 | 16-101(R. Wright) | \$ 285.00 | \$ 575.00 | \$ | \$ 860.00 |
| 9 | Pt17 | 16-100(A. & E. Stassen) | 530.00 | 1,060.00 | | 1,590.00 |
| 9 | Pt16 | 16-99-1(E. Ker) | 380.00 | 760.00 | | 1,140.00 |
| 9 | Pt16 | 16-98(B. & A. Ker) | 160.00 | 160.00 | | 320.00 |
| 9 | Pt15 | 15-178-1(G. & J. Popko) | 15.00 | 15.00 | | 30.00 |
| 9 | Pt15 | 15-178(R. Marshall) | 120.00 | 120.00 | | 240.00 |
| Total Allowances on Closed Portion | | | \$1,490.00 | \$2,690.00 | \$ | \$4,180.00 |

| | |
|--|-------------|
| Total Allowances under Sections 29,30 and 31 of the Drainage Act | \$17,560.00 |
|--|-------------|

SCHEDULE 'B' - COST ESTIMATE

KEENAN DRAIN 1998

Town of Pelham

We have made an estimate of the cost of the proposed work which is outlined in detail as follows:

MAIN DRAIN - OPEN PORTION

| | | |
|--|----|-----------|
| 2883 meters of open ditch excavation and construction (Approx. 7800m ³) | \$ | 11,800.00 |
| Haul away and dispose of excavated material Sta.0 + 000 to 0 + 086 | \$ | 500.00 |
| Levelling of excavated material | \$ | 2,900.00 |
| Levelling of old spoil | \$ | 900.00 |
| Seeding of ditch banks (Approx. 14000m ²) | \$ | 2,500.00 |
| Clearing and grubbing | \$ | 4,900.00 |
| Install rock chute in run from east Sta.2 + 100± | \$ | 300.00 |
| Two 10 meter length of 1600mm dia., 2.0mm thickness helical corrugated metal pipes with 125mm x 25mm corrugations Supply (with couplers) | \$ | 4,000.00 |
| Installation as new farm culverts including supply and installation of quarry stone rip-rap protection at each end of pipe, removal of existing culvert and installation of backfill materials (Approx. 12m ³ quarry stone required) | \$ | 3,000.00 |
| Clean through Highway No. 20 culvert | \$ | 1,200.00 |
| Contingencies | \$ | 900.00 |
| Allowances under Sections 29,30 and 31 of the Drainage Act | \$ | 12,400.00 |

MAIN DRAIN - CLOSED PORTION

One 6 meter length of 700mm dia., 1.6mm thickness riveted outlet pipe
with rodent gate

| | | |
|--|----|--------|
| Supply | \$ | 550.00 |
| Installation at tile outlet with quarry stone rip-rap protection around pipes (Approx. 6m ³ quarry stone required) | \$ | 900.00 |

Installation of the following tile and sewer pipe including wrapping of
concrete tile joints with geotextile:

| | | |
|---|----|----------|
| 261 meters of 525mm (21") concrete tile | \$ | 5,200.00 |
| 100 meters of 450mm (18") concrete tile | \$ | 1,800.00 |
| 305 meters of 400mm (16") concrete tile | \$ | 5,200.00 |
| 195 meters of 350mm (14") concrete tile | \$ | 3,000.00 |
| 125 meters of 300mm (12") concrete tile | \$ | 1,500.00 |
| 111 meters of 250mm (10") Boss Poly-Tite | \$ | 1,900.00 |
| 35 meters of 300mm (12") Boss Poly-Tite | \$ | 1,800.00 |
| 61 meters of 250mm (10") Boss Poly-Tite | \$ | 3,000.00 |
| 46 meters of 300mm (12") Filtered Plastic Tile | \$ | 550.00 |
| 68 meters of 250mm (10") Filtered Plastic Tile | \$ | 800.00 |
| 114 meters of 100mm (4") Filtered Plastic Tile | \$ | 200.00 |

| | | |
|--|----|-----------|
| Supply of the above listed tile and sewer pipe | \$ | 22,900.00 |
|--|----|-----------|

| | | |
|--|----|----------|
| Supply and install one 13 meter length of 250mm dia. (10") Boss Poly-Tite pipe under Maple Street at CBMH#1 including connections, bedding, backfill and restoration, complete | \$ | 2,700.00 |
|--|----|----------|

| | | |
|---|----|----------|
| Supply and install one 18 meter length of 250mm dia. (10") Boss Poly-Tite pipe under Maple Street including bedding, backfill, restoration, complete | \$ | 3,400.00 |
|---|----|----------|

| | | |
|---|----|----------|
| Supply and install one 12 meter length of 910mm span x 660mm rise, 2.0mm thickness c.s.p. pipe arch culvert under Maple Street including bedding, backfill, removal and disposal of old concrete culvert and restoration, complete | \$ | 4,500.00 |
|---|----|----------|

| | | |
|---|----|----------|
| Supply and install five 600mm x 600mm catchbasins and one 200mm surface inlet including grates, lead and berms | \$ | 4,300.00 |
|---|----|----------|

| | | |
|--|----|----------|
| Supply and install two 1200mm dia. catchbasin manholes | \$ | 3,800.00 |
|--|----|----------|

| | | |
|--|----|----------|
| Restoration of lanes, lawns and boulevards | \$ | 2,000.00 |
|--|----|----------|

MAIN DRAIN - CLOSED PORTION (cont'd)

| | | |
|---|----|----------|
| Allowance for installation of tile and pipe on stone bedding if required | \$ | 5,500.00 |
| Supply of geotextile wrap for concrete tile joints | \$ | 800.00 |
| Tile Connections and Contingencies | \$ | 1,000.00 |
| Supply and install 8 meters of 100mm PVC watermain with 100mm valve for feed line to pond Sta.3+370 | \$ | 700.00 |
| Allowances under Sections 29 and 30 of the Drainage Act | \$ | 4,180.00 |

BRANCH "A"

Installation of the following plastic field tile:

| | | |
|---|----|----------|
| 200 meters of 200mm (8") tile | \$ | 1,800.00 |
| Supply of the above listed filtered plastic tile | \$ | 1,800.00 |
| Locate and connect existing tile | \$ | 100.00 |
| Allowances under Sections 29 and 30 of the Drainage Act | \$ | 850.00 |

BRANCH "B"

Installation of the following plastic tile:

| | | |
|---|----|--------|
| 40 meters of 150mm (6") solid tile | \$ | 400.00 |
| 40 meters of 100mm (4") filtered plastic tile | \$ | 100.00 |
| Supply of the above tile | \$ | 220.00 |
| Supply and install one 150mm dia. surface inlet in stone pocket | \$ | 300.00 |
| Clearing and grubbing | \$ | 100.00 |
| Allowances under Sections 29 and 30 of the Drainage Act | \$ | 130.00 |

ADMINISTRATION

| | | |
|---|----|-------------|
| Interest and net Goods and Services Tax | \$ | 6,820.00 |
| Preliminary Investigation | \$ | 2,500.00 |
| Survey, Plan and Report | \$ | 27,070.00 |
| Assistance and Expenses | \$ | 2,430.00 |
| Supervision and Final Inspection | \$ | 3,000.00 |
| | | <hr/> |
| TOTAL ESTIMATED COST | \$ | 175,100.00 |
| | | <hr/> <hr/> |

SCHEDULE 'C' - ASSESSMENT FOR CONSTRUCTION

KEENAN DRAIN 1998

Town of Pelham

Job No. 96262

April 30, 1998

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|----------------------------------|-----|----------------------|------------------------------------|-----------|----------|-----------|
| <u>MAIN DRAIN - OPEN PORTION</u> | | | | | | |
| 7 | 20 | 0.97 | 16-32(J. Pirie, S. Carroll) | \$ 550.00 | \$ 10.00 | \$ 560.00 |
| 7 | 20 | 0.75 | 16-31(403761 Ontario Ltd.) | 1,370.00 | 30.00 | 1,400.00 |
| 7 | 20 | 0.28 | 16-31-1(J. & T. Lane) | 150.00 | 30.00 | 180.00 |
| 7 | 20 | 0.25 | 16-29(M. & C. Stevens) | | 30.00 | 30.00 |
| *7 | 20 | | 16-33(Wm. Duffin Holdings Inc.) | 800.00 | | 800.00 |
| 7 | 20 | 0.14 | 16-28(J. Ashford) | | 30.00 | 30.00 |
| *7 | 20 | 2.00 | 16-29-1(C. Wszolek) | 2,300.00 | 40.00 | 2,340.00 |
| 8 | 20 | 1.55 | 16-30-1(Regional Niagara) | 900.00 | 50.00 | 950.00 |
| 8 | 20 | 1.49 | 16-30(Regional Niagara) | | 50.00 | 50.00 |
| *8 | 20 | 17.90 | 16-77(E. & B. Korzeniowski) | 10,500.00 | 450.00 | 10,950.00 |
| 9 | 18 | 0.18 | 16-102(R. & M. Wright) | | 50.00 | 50.00 |
| *8 | 20 | 65.60 | 16-78(J. & T. Rusin) | 9,000.00 | 2,400.00 | 11,400.00 |
| 9 | 17 | 0.40 | 16-100-1(J. & J. Stassen) | | 50.00 | 50.00 |
| *9 | 20 | 13.30 | 16-114(D. & M. Heffner) | | 400.00 | 400.00 |
| 9 | 17 | 0.40 | 16-100-2(M. Stassen) | | 50.00 | 50.00 |
| *9 | 20 | 2.10 | 16-115(T. & L. Chu) | | 60.00 | 60.00 |
| 8 | 16 | 0.41 | 16-63(Margaret Pattison) | | 50.00 | 50.00 |
| *9 | 20 | 1.40 | 16-109-3(F. Kolosky) | | 50.00 | 50.00 |
| *9 | 16 | 2.30 | 16-92(Wimase Ltd.) | | 120.00 | 120.00 |
| *8 | 19 | 5.00 | 16-75(G. & E. Brady) | | 100.00 | 100.00 |
| 9 | 16 | 0.07 | 16-94(J. & J. Linzel) | | 50.00 | 50.00 |
| *9 | 19 | 29.00 | 16-109(H. & H. Fennema) | | 1,330.00 | 1,330.00 |
| 9 | 16 | 0.57 | 16-94-5(R. & K. Smart) | | 50.00 | 50.00 |
| *9 | 19 | 18.90 | 16-104(D. & T. Hargreaves) | 1,500.00 | 1,000.00 | 2,500.00 |
| 9 | 16 | 0.37 | 16-94-7(D. Lamb & F. Roversi) | | 50.00 | 50.00 |
| *9 | 18 | 18.60 | 16-103(R. Wright) | 2,900.00 | 1,080.00 | 3,980.00 |
| 9 | 16 | 0.38 | 16-94-9(K. & C. Suthons) | | 50.00 | 50.00 |
| *9 | 18 | 15.00 | 16-101(R. Wright) | | 900.00 | 900.00 |
| 9 | 16 | 0.29 | 16-95(J. Haverkamp) | | 50.00 | 50.00 |
| *8 | 17 | 19.60 | 16-68(Wimase Ltd.) | | 990.00 | 990.00 |
| 9 | 16 | 0.32 | 16-95-1(O. Atkins & R. Urbanowicz) | | 50.00 | 50.00 |
| *9 | 17 | 39.20 | 16-100(A. & E. Stassen) | | 2,350.00 | 2,350.00 |
| 9 | 16 | 0.18 | 16-96(R. & P. Hickman) | | 50.00 | 50.00 |
| *8 | 16 | 19.10 | 16-62(Wimase Ltd.) | | 950.00 | 950.00 |
| 9 | 16 | 0.26 | 16-97(R. & J. Taylor) | | 50.00 | 50.00 |
| *9 | 16 | 11.60 | 16-93(B. & B. Burke) | | 700.00 | 700.00 |
| 9 | 16 | 0.10 | 16-99(R. & M. Davis) | | 50.00 | 50.00 |
| *9 | 16 | 4.40 | 16-99-1(E. Ker) | | 260.00 | 260.00 |
| 9 | 16 | 0.85 | 16-98(B. & A. Ker) | | 50.00 | 50.00 |
| *9 | 16 | 9.70 | 15-75(L. & M. Devries) | | 580.00 | 580.00 |
| 9 | 16 | 0.40 | 16-99-2(B. & S. Guindon) | | 50.00 | 50.00 |
| 9 | 16 | 0.39 | 15-156-10(P. & W. Blackmore) | | 50.00 | 50.00 |

Schedule 'C' - Assessment for Construction (cont'd)

Keenan Drain 1998

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|---|-----|----------------------|---|---------|-----------|-------------|
| <u>MAIN DRAIN - OPEN PORTION</u> (cont'd) | | | | | | |
| *9 | 16 | 2.60 | 15-156(M. & C. Kazmir) | \$ | \$ 150.00 | \$ 150.00 ✓ |
| 9 | 16 | 0.10 | 15-154(E. & J. Slappendel) | | 50.00 | 50.00 |
| 9 | 16 | 0.10 | 15-155(R. & W. Acaster) | | 50.00 | 50.00 |
| 9 | 16 | 0.39 | 15-156-2(D. Kazmir) | | 50.00 | 50.00 |
| 9 | 16 | 0.40 | 15-156-1(D. Kazmir) | | 50.00 | 50.00 |
| 9 | 16 | 0.50 | 15-157(W. & W. Heykoop) | | 50.00 | 50.00 |
| 9 | 16 | 0.32 | 15-159(H. Ebert) | | 50.00 | 50.00 |
| 9 | 16 | 0.10 | 15-158(S. Farion) | | 50.00 | 50.00 |
| 9 | 16 | 0.20 | 15-77(J. & J. Laven) | | 50.00 | 50.00 |
| 9 | 16 | 0.10 | 15-76-1(A. & K. Lemieux) | | 50.00 | 50.00 |
| 9 | 16 | 0.06 | 15-76(T. & S. Goossen) | | 50.00 | 50.00 |
| 9 | 16 | 0.01 | 15-74-2(R. Pieterse) | | 50.00 | 50.00 |
| 8 | 14 | 0.31 | 16-41(C. McCarthy) | | 50.00 | 50.00 |
| *8 | 14 | 6.50 | 16-40(I. & I. McCarthy) | | 325.00 | 325.00 |
| 8 | 14 | 0.13 | 16-44(S. & S. Gabryelski) | | 50.00 | 50.00 |
| *8 | 14 | 2.02 | 16-42(L. & L. Daw) | | 100.00 | 100.00 |
| *8 | 14 | 4.56 | 16-45(R. & J. McGlashan) | | 230.00 | 230.00 |
| *8 | 14 | 3.50 | 16-43(R. & J. Bouwers) | | 175.00 | 175.00 |
| 8 | 14 | 0.14 | 16-46(G. & E. Neufeld) | | 50.00 | 50.00 |
| 8 | 14 | 0.52 | 16-47(S. & E. VanHoorn) | | 50.00 | 50.00 |
| 8 | 14 | 0.44 | 16-47-1(M. Calvert) | | 50.00 | 50.00 |
| 8 | 14 | 0.13 | 16-48(H. & F. Bauer) | | 50.00 | 50.00 |
| *8 | 15 | 10.90 | 16-50(A. & T. Vanderlee) | | 650.00 | 650.00 |
| 9 | 15 | 0.31 | 16-84(E. Simmonds) | | 50.00 | 50.00 |
| *8 | 15 | 8.09 | 16-49(K. & J. Hope) | | 400.00 | 400.00 |
| 9 | 15 | 0.21 | 16-85(D. & H. Johnson) | | 50.00 | 50.00 |
| *9 | 15 | 3.70 | 15-27(J. Hope) | | 220.00 | 220.00 |
| 9 | 15 | 0.20 | 16-86(J. & C. Houlden) | | 50.00 | 50.00 |
| 9 | 15 | 5.30 | 16-80(S. & E. Burke) | | 320.00 | 320.00 |
| 9 | 15 | 0.40 | 16-91(J. & K. Paksi) | | 50.00 | 50.00 |
| 9 | 15 | 2.50 | 15-16(Niagara South Board of Education) | | 150.00 | 150.00 |
| 9 | 15 | 0.20 | 16-88(A. & E. Finamore) | | 50.00 | 50.00 |
| 9 | 15 | 0.43 | 16-89(P. & J. Scott) | | 50.00 | 50.00 |
| 9 | 15 | 0.55 | 16-90(B. & E. Baty) | | 50.00 | 50.00 |
| 9 | 14 | 0.22 | 16-87(R. & J. Vahrmeyer) | | 50.00 | 50.00 |
| 9 | 14 | 0.51 | 15-1(E. & M. Crossley) | | 50.00 | 50.00 |
| 9 | 14 | 0.37 | 15-2(M. & C. Chase) | | 50.00 | 50.00 |
| 9 | 14 | 0.27 | 15-3(W. & I. Purchase) | | 50.00 | 50.00 |
| 9 | 14 | 0.20 | 15-3-1(B. Hargreaves) | | 50.00 | 50.00 |
| 9 | 14 | 0.28 | 15-4(H. & H. Fennema) | | 50.00 | 50.00 |
| 9 | 14 | 0.28 | 15-6(J. & J. Sandelli) | | 50.00 | 50.00 |
| *9 | 14 | 6.43 | 15-15(729 Camboro Rd. Prop. Inc.) | | 390.00 | 390.00 |
| 9 | 14 | 0.11 | 15-124(L. & B. Tunnacliffe) | | 50.00 | 50.00 |
| 9 | 14 | 0.13 | 15-125(J. McCartney) | | 50.00 | 50.00 |
| 9 | 14 | 0.38 | 15-125-1(T. & P. Bruinsma) | | 50.00 | 50.00 |
| 9 | 14 | 0.40 | 15-126(Wm. & P. McVetty) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-127(R. Kicul) | | 50.00 | 50.00 |
| 9 | 14 | 0.17 | 15-128(M. & W. Vahrmeyer) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-129(R. Crowe) | | 50.00 | 50.00 |

Schedule 'C' - Assessment for Construction (cont'd)

Keenan Drain 1998

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|---|-----|----------------------|---|---------|----------|----------|
| <u>MAIN DRAIN - OPEN PORTION</u> (cont'd) | | | | | | |
| 9 | 14 | 0.11 | 15-130(M. Austin) | \$ | \$ 50.00 | \$ 50.00 |
| 9 | 14 | 0.27 | 15-131(H. Wiggins) | | 50.00 | 50.00 |
| 9 | 14 | 0.48 | 15-132(F. & M. Bouwers) | | 50.00 | 50.00 |
| 9 | 14 | 0.23 | 15-133(A. & T. Bennink) | | 50.00 | 50.00 |
| 9 | 14 | 0.18 | 15-134(G. & M. Pihach) | | 50.00 | 50.00 |
| 9 | 14 | 0.18 | 15-141(672923 Ontario Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-89(R. & J. May) | | 50.00 | 50.00 |
| 9 | 15 | 0.56 | 16-110(M. McQuade & J. Rampersaud) | | 50.00 | 50.00 |
| 9 | 15 | 0.37 | 16-80-5(S. & P. Grewal) | | 50.00 | 50.00 |
| 9 | 15 | 0.38 | 16-80-04(S. & M. DeJonge) | | 50.00 | 50.00 |
| 9 | 15 | 1.33 | 1-15-179-30(Town of Pelham) | | 100.00 | 100.00 |
| 9 | 15 | 0.51 | 1-15-179-25(E. & A. Ker) | | 50.00 | 50.00 |
| 9 | 15 | 0.19 | 1-15-179-20(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.79 | 1-15-179-15(876951 Ontario Ltd.) | | 50.00 | 50.00 |
| 9 | 15 | 0.40 | 1-15-179-10(H. & L. Dam) | | 50.00 | 50.00 |
| 9 | 15 | 0.40 | 15-179(I. Adlam) | | 50.00 | 50.00 |
| 9 | 15 | 0.43 | 15-178-1(G. & J. Popko) | | 50.00 | 50.00 |
| 9 | 15 | 0.40 | 15-178(R. Marshall) | | 50.00 | 50.00 |
| 9 | 15 | 0.40 | 15-177(L. & P. Veerman) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-176(A. Gritter) | | 50.00 | 50.00 |
| 9 | 15 | 0.32 | 15-176-1(C. & J. Gritter) | | 50.00 | 50.00 |
| 9 | 15 | 0.23 | 15-175(J. & D. Simmonds) | | 50.00 | 50.00 |
| 9 | 15 | 0.35 | 15-174(R. Anthony) | | 50.00 | 50.00 |
| 9 | 15 | 0.11 | 15-173(R. & N. MacKay) | | 50.00 | 50.00 |
| 9 | 15 | 0.16 | 15-283(E. DesJardins) | | 50.00 | 50.00 |
| 9 | 15 | 0.10 | 15-216(J. & P. Kooter) | | 50.00 | 50.00 |
| 9 | 15 | 0.10 | 15-217(M. & O. Burns) | | 50.00 | 50.00 |
| 9 | 15 | 0.10 | 15-218(K. & P. Csikos) | | 50.00 | 50.00 |
| 9 | 15 | 0.10 | 15-219(D. & S. Hewitt) | | 50.00 | 50.00 |
| 9 | 15 | 0.17 | 15-220(D. Glassman & T. Grossi) | | 50.00 | 50.00 |
| 9 | 15 | 0.19 | 15-221(H. & S. Andrews) | | 50.00 | 50.00 |
| 9 | 15 | 0.15 | 15-222(D. & M. Klim) | | 50.00 | 50.00 |
| 9 | 15 | 0.10 | 15-223(J. & F. Mancino) | | 50.00 | 50.00 |
| 9 | 15 | 0.09 | 15-224(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-225(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-226(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-227(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-228(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-229(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-230(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-231(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-232(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-233(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-234(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-235(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-236(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.07 | 15-237(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-238(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-239(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-240(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |

Schedule 'C' - Assessment for Construction (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|---|-----|----------------------|------------------------------------|---------|----------|----------|
| <u>MAIN DRAIN - OPEN PORTION</u> (cont'd) | | | | | | |
| 9 | 14 | 0.08 | 15-241(729 Canboro Rd. Prop. Inc.) | \$ | \$ 50.00 | \$ 50.00 |
| 9 | 14 | 0.10 | 15-277(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-278(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-279(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-280(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-281(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-282(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-328(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-327(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-326(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-325(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-324(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-323(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-322(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-321(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-320(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-319(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-318(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.14 | 15-317(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.16 | 15-316(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.15 | 15-315(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.15 | 15-314(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.15 | 15-313(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-312(J. & C. Geremia) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-311(W. Wierenga) | | 50.00 | 50.00 |
| 9 | 14 | 0.16 | 15-14-2(L. & M. Sikkens) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-14(M. & A. Bedesky) | | 50.00 | 50.00 |
| 9 | 14 | 0.23 | 15-13(G. Hall) | | 50.00 | 50.00 |
| 9 | 14 | 0.15 | 15-12(S. W. Woon) | | 50.00 | 50.00 |
| 9 | 14 | 0.17 | 15-12-2(K. & C. Williams) | | 50.00 | 50.00 |
| 9 | 14 | 0.40 | 15-11(J. & J. Burger) | | 50.00 | 50.00 |
| 9 | 14 | 0.22 | 15-10(R. Watts) | | 50.00 | 50.00 |
| 9 | 14 | 0.16 | 15-9-1(J. & J. Morgan) | | 50.00 | 50.00 |
| 9 | 14 | 0.13 | 15-9(J. & M. Cockburn) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-8(C. & L. Crowe) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-14-08(I. & G. Eppendorf) | | 50.00 | 50.00 |
| 9 | 14 | 0.12 | 15-310(R. & L. Williams) | | 50.00 | 50.00 |
| 9 | 14 | 0.18 | 15-340(R. & H. Bell) | | 50.00 | 50.00 |
| 9 | 14 | 0.15 | 15-15-08(G. & B. Alsop) | | 50.00 | 50.00 |
| 9 | 14 | 0.14 | 15-339(K. & R. Maver) | | 50.00 | 50.00 |
| 9 | 14 | 0.14 | 15-338(S. & J. Bennett) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-337(D. & S. Christensen) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-336(W. & N. Terharmse) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-335(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-334(S. Bieda & J. Jenkins) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-333(J. & L. Durst) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-332(P. & R. Mueller) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-331(A. & B. Brezay) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-330(G. & J. Eyer) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-329(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |

Schedule 'C' - Assessment for Construction (cont'd)

Keenan Drain 1998

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|-----|-----|----------------------|------------------------|---------|--------|-------|
|-----|-----|----------------------|------------------------|---------|--------|-------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | | | |
|---|----|------|------------------------------------|----|----------|----------|
| 9 | 15 | 1.03 | 15-288(Town of Pelham) | \$ | \$ 60.00 | \$ 60.00 |
| 9 | 15 | 0.14 | 15-287(J. & C. Miller) | | 50.00 | 50.00 |
| 9 | 15 | 0.18 | 15-286(P. & C. Julian) | | 50.00 | 50.00 |
| 9 | 15 | 0.10 | 15-285(D. & T. Durham) | | 50.00 | 50.00 |
| 9 | 15 | 0.10 | 15-284(A. & C. Clist) | | 50.00 | 50.00 |
| 9 | 15 | 0.14 | 15-262(H. & L. Mooney) | | 50.00 | 50.00 |
| 9 | 15 | 0.22 | 15-263(H. Hinbest & M. Miller) | | 50.00 | 50.00 |
| 9 | 15 | 0.14 | 15-242(T. & D. Slack) | | 50.00 | 50.00 |
| 9 | 15 | 0.09 | 15-243(J. & A. Gibson) | | 50.00 | 50.00 |
| 9 | 15 | 0.15 | 15-244(S. & L. Marischuk) | | 50.00 | 50.00 |
| 9 | 15 | 0.11 | 15-264(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.09 | 15-265(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-266(L. & M. Leonard) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-267(B. & S. Campbell) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-268(N. Calabrese) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-269(H. & E. Doyle) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-270(J. & K. Hunter) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-271(J. & G. Pepper) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-272(A. & J. Bonsignore) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-273(M. & S. Sagloski) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-274(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-275(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.18 | 15-276(R. & J. Milan) | | 50.00 | 50.00 |
| 9 | 14 | 0.18 | 15-261(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.12 | 15-260(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.14 | 15-259(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.17 | 15-258(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-257(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-256(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-255(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-254(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-253(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-252(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-251(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-250(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-249(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-248(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-247(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-246(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 15 | 0.08 | 15-245(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-341(T. & J. Faulds) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-342(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.12 | 15-343(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-344(V. & L. Jesik) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-345(C. & L. Grace) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-346(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-347(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-348(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-349(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.13 | 15-289(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |

Schedule 'C' - Assessment for Construction (cont'd)

Keenan Drain 1998

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|---|-----|----------------------|---|---------|----------|----------|
| <u>MAIN DRAIN - OPEN PORTION</u> (cont'd) | | | | | | |
| 9 | 14 | 0.12 | 15-290(729 Canboro Rd. Prop. Inc.) | \$ | \$ 50.00 | \$ 50.00 |
| 9 | 14 | 0.10 | 15-291(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-292(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-293(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-294(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-295(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.13 | 15-296(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-297(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.13 | 15-298(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-299(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-300(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.12 | 15-301(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.07 | 15-302(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-303(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-304(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-305(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.08 | 15-306(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-307(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 15-308(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.10 | 15-309(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.11 | 1-15-15-09(J. & S. Breitenbach) | | 50.00 | 50.00 |
| 9 | 14 | 0.03 | 15-15(729 Canboro Rd. Prop. Inc.) | | 50.00 | 50.00 |
| 9 | 14 | 0.04 | 15-15-11(H. & H. Bellis) | | 50.00 | 50.00 |
| 9 | 14 | 0.12 | 15-17(J. & M. Pouli) | | 50.00 | 50.00 |
| 9 | 14 | 0.07 | 15-18(J. & A. VanLochem) | | 50.00 | 50.00 |
| 9 | 14 | 0.09 | 15-19(P. & D. Rose) | | 50.00 | 50.00 |
| 9 | 15 | 0.12 | 15-20(E. Rose) | | 50.00 | 50.00 |
| 9 | 15 | 0.16 | 15-21(A. & M. VanDriel) | | 50.00 | 50.00 |
| 9 | 15 | 0.19 | 15-22(S. & L. Racz) | | 50.00 | 50.00 |
| 9 | 15 | 0.05 | 15-23(M. & A. Palcso) | | 50.00 | 50.00 |
| 9 | 15 | 0.03 | 15-25(K. & J. Hope) | | 50.00 | 50.00 |
| 8 | 13 | 1.30 | 14-48(W. & E. Crowe) | | 50.00 | 50.00 |
| 8 | 13 | 0.32 | 14-49-2(W. & K. Boston) | | 50.00 | 50.00 |
| *8 | 12 | 4.40 | 14-44(B. & D. Rice) | | 220.00 | 220.00 |
| *8 | 12 | 1.30 | 14-43(L. & B. Johnson) | | 65.00 | 65.00 |
| 8 | 12 | 0.72 | 14-49-01(W. & P. Ivanko) | | 50.00 | 50.00 |
| 8 | 12 | 0.76 | 14-42(L. & C. Dayboll) | | 50.00 | 50.00 |
| 8 | 12 | 0.67 | 14-49(J. & A. Price) | | 50.00 | 50.00 |
| 8 | 12 | 0.30 | 14-40(D. & J. Koudys) | | 50.00 | 50.00 |
| 8 | 12 | 0.65 | 14-48-1(L. & M. York) | | 50.00 | 50.00 |
| *8 | 12 | 1.70 | 14-30(H. & D. Secord) | | 85.00 | 85.00 |
| 9 | 13 | 0.35 | 1-14-173-04(J. & A. Simo) | | 50.00 | 50.00 |
| 9 | 13 | 0.37 | 1-14-173-03(G. & D. Butler) | | 50.00 | 50.00 |
| 9 | 13 | 0.37 | 1-14-173-02(J. & B. Fowler) | | 50.00 | 50.00 |
| 9 | 13 | 0.37 | 1-14-173-01(D. & A. Mucciante) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-209(W. & E. Hillis) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-208(M. & A. Zorz) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-207(O. & G. Menge) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-206(J. & K. Torontali, J. & K. Palosh) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-205(F. & R. & C. Frattaroli) | | 50.00 | 50.00 |

Schedule 'C' - Assessment for Construction (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|---|-----|----------------------|--------------------------------------|---------|----------|----------|
| <u>MAIN DRAIN - OPEN PORTION</u> (cont'd) | | | | | | |
| 9 | 13 | 0.37 | 1-14-204(S. Lucescu) | \$ | \$ 50.00 | \$ 50.00 |
| 9 | 13 | 0.36 | 1-14-203(C. Chase & J. O'Neill) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-202(D. & M. Toner) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-201(R. & M. Lostracco) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-200(D. & J. Tripkovic) | | 50.00 | 50.00 |
| 9 | 13 | 0.38 | 1-14-170-01(P. & C. Dipietro) | | 50.00 | 50.00 |
| 9 | 13 | 0.34 | 1-14-172-01(L. Overbeeke) | | 50.00 | 50.00 |
| 9 | 13 | 0.10 | 1-14-171(J. & A. Mikolic) | | 50.00 | 50.00 |
| 9 | 13 | 0.14 | 1-14-172(A. Puharich & B. Dwyer) | | 50.00 | 50.00 |
| 9 | 13 | 0.34 | 1-14-172-02(R. & P. McCollum) | | 50.00 | 50.00 |
| 9 | 13 | 0.34 | 1-14-161-1(L. & J. Sztogryn) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-161(M. Dove) | | 50.00 | 50.00 |
| 9 | 13 | 0.07 | 1-14-160(R. Elliott) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-159(P. & O. Rosinski) | | 50.00 | 50.00 |
| 9 | 13 | 0.12 | 1-14-158(P. & O. Rosinski) | | 50.00 | 50.00 |
| 9 | 13 | 0.17 | 1-14-157(J. & F. Bush) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-156(R. & T. Cote) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-155(A. & J. Visgirda) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-154(J. & J. Calver) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-153(M. & S. Kicul) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-1521(J. & C. Bosse) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-152(J. & J. Zwier) | | 50.00 | 50.00 |
| 9 | 13 | 0.34 | 1-14-214(A. Mitchell & K. Smith) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-213(I. & P. Williams) | | 50.00 | 50.00 |
| 9 | 13 | 0.36 | 1-14-170-02(C. & C. Bos) | | 50.00 | 50.00 |
| 9 | 13 | 0.35 | 1-14-170-03(J. & K. Fraser) | | 50.00 | 50.00 |
| 9 | 13 | 0.38 | 1-14-212(G. & A. Huckalo) | | 50.00 | 50.00 |
| 9 | 13 | 0.35 | 1-14-210(E. & C. Wichmann) | | 50.00 | 50.00 |
| 9 | 13 | 0.38 | 1-14-211(M. & C. Grisnik) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-151(K. Robertson) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-151-01(J. & R. Van Teunenbroek) | | 50.00 | 50.00 |
| 9 | 13 | 0.23 | 1-14-150(A. & J. Wiley) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-149(R. & G. Bouwers) | | 50.00 | 50.00 |
| 9 | 13 | 0.10 | 1-14-148(J. & C. Gilmour) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-147(F. & B. DeJong) | | 50.00 | 50.00 |
| 9 | 13 | 0.13 | 1-14-146(K. & E. Rhora) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-145(A. & E. Young) | | 50.00 | 50.00 |
| 9 | 13 | 0.13 | 1-14-144(F. & D. Masotti) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-143(P. Speck, C. Norton) | | 50.00 | 50.00 |
| 9 | 13 | 0.11 | 1-14-142(P. & J. Broere) | | 50.00 | 50.00 |
| *9 | 12 | 2.50 | 1-14-137(F. Blanchard) | | 120.00 | 120.00 |
| *9 | 12 | 1.80 | 14-51-1(L. Johnson) | | 90.00 | 90.00 |
| Right-of-way | | 2.20 | C.P. Railway | | 70.00 | 70.00 |

Total Assessment on Lands

\$ 29,970.00 \$ 32,360.00 \$ 62,330.00

Schedule 'C' - Assessment for Construction (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|-----|-----|----------------------|------------------------|---------|--------|-------|
|-----|-----|----------------------|------------------------|---------|--------|-------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | | |
|------------------------------------|------|----------------------------|-------------|----------|-------------|
| Reg.Hwy.#20 | 1.40 | Region of Niagara | \$ 1,300.00 | \$ 80.00 | \$ 1,380.00 |
| Reg.Rd.24 | 3.60 | Region of Niagara | 800.00 | 220.00 | 1,020.00 |
| Rd.Allowance between Cons.8&9 | 2.80 | Town of Pelham | 100.00 | 140.00 | 240.00 |
| Rd.Allowance between Lots 17&18 | 3.20 | Town of Pelham | | 160.00 | 160.00 |
| Maple Street | 2.50 | Town of Pelham | | 300.00 | 300.00 |
| Memorial Dr. | 2.60 | Town of Pelham | | 300.00 | 300.00 |
| Sandra Dr. Cherry Ridge | 1.22 | 729 Canboro Rd. Prop. Inc. | | 150.00 | 150.00 |
| Blvd. | 1.20 | 729 Canboro Rd. Prop. Inc. | | 150.00 | 150.00 |
| Alsop Avenue | 0.50 | 729 Canboro Rd. Prop. Inc. | | 60.00 | 60.00 |
| Crescent Ave. | 1.10 | 729 Canboro Rd. Prop. Inc. | | 130.00 | 130.00 |
| Balfour Street | 2.00 | Town of Pelham | | 240.00 | 240.00 |
| Alder Cres. | 1.00 | Town of Pelham | | 120.00 | 120.00 |
| Sunset Drive | 0.90 | Town of Pelham | | 120.00 | 120.00 |
| Canboro Rd. | 0.80 | Town of Pelham | | 100.00 | 100.00 |

Total Assessment on Roads

\$ 2,200.00 \$ 2,270.00 \$ 4,470.00

Total Assessment on Main Drain - Open Portion

\$ 66,800.00

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Schedule 'C' - Assessment for Construction (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|------------------------------------|-----|----------------------|---|-----------|-----------|-----------|
| <u>MAIN DRAIN - CLOSED PORTION</u> | | | | | | |
| *9 | 18 | | 16-103(R. Wright) | \$ 300.00 | \$ 300.00 | |
| *9 | 18 | 1.70 | 16-101(R. Wright) | 6,800.00 | 340.00 | 7,140.00 |
| *9 | 17 | 15.00 | 16-100(A. & E. Stassen) | 11,400.00 | 4,500.00 | 15,900.00 |
| *9 | 16 | 6.80 | 16-93(B. & B. Burke) | | 2,700.00 | 2,700.00 |
| *9 | 16 | 4.40 | 16-99-1(E. Ker) | 5,400.00 | 2,860.00 | 8,260.00 |
| *9 | 16 | 7.60 | 15-75(L. & M. Devries) | | 3,300.00 | 3,300.00 |
| *9 | 16 | 2.60 | 15-156(M. & C. Kazmir) | | 2,080.00 | 2,080.00 |
| 9 | 16 | 0.10 | 16-97(R. & J. Taylor) | | 160.00 | 160.00 |
| 9 | 16 | 0.10 | 16-99(R. & M. Davis) | | 160.00 | 160.00 |
| 9 | 16 | 0.85 | 16-98(B. & A. Ker) | 900.00 | 550.00 | 1,450.00 |
| 9 | 16 | 0.40 | 16-99-2(B. & S. Guindon) | 500.00 | 360.00 | 860.00 |
| 9 | 16 | 0.39 | 15-156-10(P. & W. Blackmore) | 400.00 | 360.00 | 760.00 |
| 9 | 16 | 0.10 | 15-154(E. & J. Slappendel) | 500.00 | 180.00 | 680.00 |
| 9 | 16 | 0.10 | 15-155(R. & W. Acaster) | | 180.00 | 180.00 |
| 9 | 16 | 0.39 | 15-156-2(D. Kazmir) | | 360.00 | 360.00 |
| 9 | 16 | 0.40 | 15-156-1(D. Kazmir) | | 360.00 | 360.00 |
| 9 | 16 | 0.50 | 15-157(W. & W. Heykoop) | | 380.00 | 380.00 |
| 9 | 16 | 0.32 | 15-159(H. Ebert) | | 260.00 | 260.00 |
| 9 | 16 | 0.10 | 15-158(S. Farion) | | 160.00 | 160.00 |
| 9 | 15 | 0.79 | 1-15-197-15(876951 Ontario Ltd.) | | 530.00 | 530.00 |
| 9 | 15 | 0.19 | 1-15-197-20(729 Canboro Rd. Prop. Inc.) | | 280.00 | 280.00 |
| 9 | 15 | 0.40 | 15-179-10(H. & L. Dam) | 350.00 | 360.00 | 710.00 |
| 9 | 15 | 0.40 | 15-179(I. Adlam) | 350.00 | 360.00 | 710.00 |
| 9 | 15 | 0.43 | 15-178-1(G. & J. Popko) | 600.00 | 360.00 | 960.00 |
| 9 | 15 | 0.40 | 15-178(R. Marshall) | 1,200.00 | 360.00 | 1,560.00 |
| 9 | 15 | 0.40 | 15-177(L. & P. Veerman) | | 360.00 | 360.00 |
| 9 | 15 | 0.08 | 15-176(A. Gritter) | | 180.00 | 180.00 |
| 9 | 15 | 0.32 | 15-176-1(C. & J. Gritter) | | 290.00 | 290.00 |
| 9 | 15 | 0.23 | 15-175(J. & D. Simmonds) | | 210.00 | 210.00 |
| 9 | 15 | 0.35 | 15-174(R. Anthony) | | 320.00 | 320.00 |
| 9 | 15 | 0.11 | 15-173(R. & N. McKay) | | 180.00 | 180.00 |
| 9 | 15 | 0.16 | 15-283(E. DesJardins) | | 180.00 | 180.00 |
| 9 | 15 | 0.10 | 15-284(A. & C. Clist) | | 180.00 | 180.00 |
| 9 | 15 | 0.10 | 15-285(D. & T. Durham) | | 180.00 | 180.00 |
| *9 | 15 | 3.70 | 15-27(J. Hope) | 600.00 | 3,700.00 | 4,300.00 |
| 9 | 15 | 2.50 | 15-16(Niagara S. Board of Education) | | 2,500.00 | 2,500.00 |
| 9 | 14 | 0.08 | 15-337(D. & S. Christensen) | | 180.00 | 180.00 |
| 8 | 14 | 0.14 | 15-338(S. & J. Bennett) | | 180.00 | 180.00 |
| 9 | 14 | 0.14 | 15-339(K. & R. Maver) | | 180.00 | 180.00 |
| 9 | 14 | 0.15 | 15-15-08(G. & B. Alsop) | | 180.00 | 180.00 |
| 9 | 14 | 0.11 | 1-15-15-09(J. & S. Breitenbach) | | 180.00 | 180.00 |
| 9 | 15 | 0.03 | 15-15(729 Canboro Rd. Prop. Inc.) | | 180.00 | 180.00 |
| 9 | 15 | 0.04 | 15-15-11(H. & H. Bellis) | | 180.00 | 180.00 |
| 9 | 15 | 0.12 | 15-17(J. & M. Pouli) | | 180.00 | 180.00 |
| 9 | 15 | 0.07 | 15-18(J. & A. Van Luchem) | | 180.00 | 180.00 |
| 9 | 15 | 0.09 | 15-19(P. & D. Rose) | | 180.00 | 180.00 |
| 9 | 15 | 0.12 | 15-20(E. Rose) | | 180.00 | 180.00 |
| 9 | 15 | 0.16 | 15-21(A. & M. VanDreil) | | 180.00 | 180.00 |
| 9 | 15 | 0.19 | 15-22(S. & L. Racz) | | 180.00 | 180.00 |
| 9 | 15 | 0.05 | 15-23(M. & A. Palsco) | | 180.00 | 180.00 |
| 9 | 15 | 0.03 | 15-25(K. & J. Hope) | | 180.00 | 180.00 |

Total Assessment on Lands

\$ 29,300.00 \$ 32,480.00 \$ 61,780.00

Schedule 'C' - Assessment for Construction (cont'd)

Keenan Drain

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | BENEFIT | OUTLET | TOTAL |
|-----|-----|----------------------|------------------------|---------|--------|-------|
|-----|-----|----------------------|------------------------|---------|--------|-------|

MAIN DRAIN - CLOSED PORTION (cont'd)

| | | | | | |
|---------------------------|------|----------------------------|--------------|-------------|--------------|
| Maple Street | 0.70 | Town of Pelham | \$ 18,500.00 | \$ 1,890.00 | \$ 20,390.00 |
| Sandra Drive | 0.12 | 729 Canboro Rd. Prop. Inc. | | 330.00 | 330.00 |
| Lot 17 & 18 | | | | | |
| Rd. Allowance | 0.33 | Town of Pelham | 600.00 | 100.00 | 700.00 |
| Total Assessment on Roads | | | \$ 19,100.00 | \$ 2,320.00 | \$ 21,420.00 |

Special Assessment against the Town of Pelham for the cost of upsizing the tile drain from Maple Street to the outlet

\$ 7,800.00

Special Assessment against the Town of Pelham for the cost of installing a new surface culvert under Maple Street

\$ 5,400.00

Special Assessment against 729 Canboro Rd. Prop. Inc. for the cost of installing a new crossing and manhole at Maple and Sandra Streets

\$ 5,000.00

Total Assessment on Main Drain - Closed Portion

\$ 101,400.00

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BRANCH "A"

| | | | | | | |
|----|----|-----|-------------------------|-----------|-------------|-------------|
| *9 | 16 | 6.8 | 16-93(B. & B. Burke) | \$ 300.00 | \$ 2,450.00 | \$ 2,750.00 |
| *9 | 16 | 1.0 | 16-99-1(E. Ker) | 950.00 | 200.00 | 1,150.00 |
| *9 | 17 | 1.0 | 16-100(A. & E. Stassen) | 1,350.00 | 150.00 | 1,500.00 |

Total Assessment on Lands

\$ 2,600.00 \$ 2,800.00 \$ 5,400.00

Total Assessment on Branch "A"

\$ 5,400.00

=====

BRANCH "B"

| | | | | | | |
|---|----|------|------------------------------|-----------|-----------|-----------|
| 9 | 16 | 0.40 | 16-99-2(B. & S. Guindon) | \$ 600.00 | \$ 100.00 | \$ 700.00 |
| 9 | 16 | 0.39 | 15-156-10(P. & W. Blackmore) | 600.00 | 200.00 | 800.00 |

Total Assessment on Lands

\$ 1,200.00 \$ 300.00 \$ 1,500.00

Total Assessment on Branch "B"

\$ 1,500.00

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Total Assessment on Keenan Drain

\$ 175,100.00

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NOTE: All the above lands noted with an asterisk are classified as agricultural.

SCHEDULE 'D' - ASSESSMENT FOR MAINTENANCE

KEENAN DRAIN 1998

Town of Pelham

Job No. 96262

April 30, 1998

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION

| | | | | |
|----|----|-------|------------------------------------|-------|
| 7 | 20 | 0.97 | 16-32(J. Pirie, S. Carroll) | 0.55% |
| 7 | 20 | 0.75 | 16-31(403761 Ontario Ltd.) | 1.40 |
| 7 | 20 | 0.28 | 16-31-1(J. & T. Lane) | 0.21 |
| 7 | 20 | 0.25 | 16-29(M. & C. Stevens) | 0.06 |
| *7 | 20 | | 16-33(Wm. Dufferin Holdings Inc.) | 0.80 |
| 7 | 20 | 0.14 | 16-28(J. Ashford) | 0.06 |
| *7 | 20 | 2.00 | 16-29-1(C. Wszolek) | 2.30 |
| 8 | 20 | 1.55 | 16-30-1(Regional Niagara) | 1.90 |
| 8 | 20 | 1.49 | 16-30(Regional Niagara) | 0.10 |
| *8 | 20 | 17.90 | 16-77(E. & B. Korzeniowski) | 11.00 |
| 9 | 18 | 0.18 | 16-102(R. & M. Wright) | 0.10 |
| *8 | 20 | 65.60 | 16-78(J. & T. Rusin) | 12.51 |
| 9 | 17 | 0.40 | 16-100-1(J. & J. Stassen) | 0.10 |
| *9 | 20 | 13.30 | 16-114(D. & M. Heffner) | 0.80 |
| 9 | 17 | 0.40 | 16-100-2(M. Stassen) | 0.10 |
| *9 | 20 | 2.10 | 16-115(T. & L. Chu) | 0.10 |
| 8 | 16 | 0.41 | 16-63(Margaret Pattison) | 0.10 |
| *9 | 20 | 1.40 | 16-109-3(F. Kolosky) | 0.10 |
| *9 | 16 | 2.30 | 16-92(Wimase Ltd.) | 0.24 |
| *8 | 19 | 5.00 | 16-75(G. & E. Brady) | 0.20 |
| 9 | 16 | 0.07 | 16-94(J. & J. Linzel) | 0.10 |
| *9 | 19 | 29.00 | 16-109(H. & H. Fennema) | 2.62 |
| 9 | 16 | 0.57 | 16-94-5(R. & K. Smart) | 0.10 |
| *9 | 19 | 18.90 | 16-104(D. & T. Hargreaves) | 3.45 |
| 9 | 16 | 0.37 | 16-94-7(D. Lamb & F. Roversi) | 0.10 |
| *9 | 18 | 18.60 | 16-103(R. Wright) | 5.00 |
| 9 | 16 | 0.38 | 16-94-9(K. & C. Suthons) | 0.10 |
| *9 | 18 | 15.00 | 16-101(R. Wright) | 1.77 |
| 9 | 16 | 0.29 | 16-95(J. Haverkamp) | 0.10 |
| *8 | 17 | 19.60 | 16-68(Wimase Ltd.) | 1.95 |
| 9 | 16 | 0.32 | 16-95-1(O. Atkins & R. Urbanowicz) | 0.10 |
| *9 | 17 | 39.20 | 16-100(A. & E. Stassen) | 4.63 |
| 9 | 16 | 0.18 | 16-96(R. & P. Hickman) | 0.10 |
| *8 | 16 | 19.10 | 16-62(Wimase Ltd.) | 1.88 |
| 9 | 16 | 0.26 | 16-97(R. & J. Taylor) | 0.10 |
| *9 | 16 | 11.60 | 16-93(B. & B. Burke) | 1.38 |
| 9 | 16 | 0.10 | 16-99(R. & M. Davis) | 0.10 |
| *9 | 16 | 4.40 | 16-99-1(E. Ker) | 0.51 |
| 9 | 16 | 0.85 | 16-98(B. & A. Ker) | 0.10 |
| *9 | 16 | 9.70 | 15-75(L. & M. Devries) | 1.15 |
| 9 | 16 | 0.40 | 16-99-2(B. & S. Guindon) | 0.10 |
| 9 | 16 | 0.39 | 15-156-10(P. & W. Blackmore) | 0.10 |

Schedule 'D' - Assessment for Maintenance (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | |
|----|----|-------|---|-------|
| *9 | 16 | 2.60 | 15-156(M. & C. Kazmir) | 0.30% |
| 9 | 16 | 0.10 | 15-154(E. & J. Slappendel) | 0.10 |
| 9 | 16 | 0.10 | 15-155(R. & W. Acaster) | 0.10 |
| 9 | 16 | 0.39 | 15-156-2(D. Kazmir) | 0.10 |
| 9 | 16 | 0.40 | 15-156-1(D. Kazmir) | 0.10 |
| 9 | 16 | 0.50 | 15-157(W. & W. Heykoop) | 0.10 |
| 9 | 16 | 0.32 | 15-159(H. Ebert) | 0.10 |
| 9 | 16 | 0.10 | 15-158(S. Farion) | 0.10 |
| 9 | 16 | 0.20 | 15-77(J. & J. Laven) | 0.10 |
| 9 | 16 | 0.10 | 15-76-1(A. & K. Lemieux) | 0.10 |
| 9 | 16 | 0.06 | 15-76(T. & S. Goossen) | 0.10 |
| 9 | 16 | 0.01 | 15-74-2(R. Pieterse) | 0.10 |
| 8 | 14 | 0.31 | 16-41(C. McCarthy) | 0.10 |
| *8 | 14 | 6.50 | 16-40(I. & I. McCarthy) | 0.65 |
| 8 | 14 | 0.13 | 16-44(S. & S. Gabryelski) | 0.10 |
| *8 | 14 | 2.02 | 16-42(L. & L. Daw) | 0.20 |
| *8 | 14 | 4.56 | 16-45(R. & J. McGlashan) | 0.45 |
| *8 | 14 | 3.50 | 16-43(R. & J. Bouwers) | 0.35 |
| 8 | 14 | 0.14 | 16-46(G. & E. Neufeld) | 0.10 |
| 8 | 14 | 0.52 | 16-47(S. & E. VanHoorn) | 0.10 |
| 8 | 14 | 0.44 | 16-47-1(M. Calvert) | 0.10 |
| 8 | 14 | 0.13 | 16-48(H. & F. Bauer) | 0.10 |
| *8 | 15 | 10.90 | 16-50(A. & T. Vanderlee) | 1.30 |
| 9 | 15 | 0.31 | 16-84(E. Simmonds) | 0.10 |
| *8 | 15 | 8.09 | 16-49(K. & J. Hope) | 0.80 |
| 9 | 15 | 0.21 | 16-85(D. & H. Johnson) | 0.10 |
| *9 | 15 | 3.70 | 15-27(J. Hope) | 0.45 |
| 9 | 15 | 0.05 | 16-86(J. & C. Houlden) | 0.10 |
| 9 | 15 | 5.30 | 16-80(S. & E. Burke) | 0.65 |
| 9 | 15 | 0.05 | 16-91(J. & K. Paksi) | 0.10 |
| 9 | 15 | 2.50 | 15-16(Niagara South Board of Education) | 0.30 |
| 9 | 15 | 0.20 | 16-88(A. & E. Finamore) | 0.10 |
| 9 | 15 | 0.43 | 16-89(P. & J. Scott) | 0.10 |
| 9 | 15 | 0.55 | 16-90(B. & E. Baty) | 0.10 |
| 9 | 14 | 0.22 | 16-87(R. & J. Vahrmeyer) | 0.10 |
| 9 | 14 | 0.51 | 15-1(E. & M. Crossley) | 0.10 |
| 9 | 14 | 0.37 | 15-2(M. & C. Chase) | 0.10 |
| 9 | 14 | 0.27 | 15-3(W. & I. Purchase) | 0.10 |
| 9 | 14 | 0.20 | 15-3-1(B. Hargreaves) | 0.10 |
| 9 | 14 | 0.28 | 15-4(H. & H. Fennema) | 0.10 |
| 9 | 14 | 0.28 | 15-6(J. & J. Sandelli) | 0.10 |
| *9 | 14 | 6.43 | 15-15(729 Camboro Rd. Prop. Inc.) | 0.75 |
| 9 | 14 | 0.11 | 15-124(L. & B. Tunnacliffe) | 0.10 |
| 9 | 14 | 0.13 | 15-125(J. McCartney) | 0.10 |
| 9 | 14 | 0.38 | 15-125-1(T. & P. Bruinsma) | 0.10 |
| 9 | 14 | 0.40 | 15-126(Wm. & P. McVetty) | 0.10 |
| 9 | 14 | 0.10 | 15-127(R. Kicul) | 0.10 |
| 9 | 14 | 0.17 | 15-128(M. & W. Vahrmeyer) | 0.10 |
| 9 | 14 | 0.10 | 15-129(R. Crowe) | 0.10 |

Schedule 'D' - Assessment for Maintenance (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | |
|---|----|------|---|-------|
| 9 | 14 | 0.11 | 15-130(M. Austin) | 0.10% |
| 9 | 14 | 0.27 | 15-131(H. Wiggins) | 0.10 |
| 9 | 14 | 0.48 | 15-132(F. & M. Bouwers) | 0.10 |
| 9 | 14 | 0.23 | 15-133(A. & T. Bennink) | 0.10 |
| 9 | 14 | 0.18 | 15-134(G. & M. Pihach) | 0.10 |
| 9 | 14 | 0.18 | 15-141(672923 Ontario Inc.) | 0.10 |
| 9 | 14 | 0.11 | 15-89(R. & J. May) | 0.10 |
| 9 | 15 | 0.56 | 16-110(M. McQuade & J. Rampersaud) | 0.10 |
| 9 | 15 | 0.37 | 16-80-5(S. & P. Grewal) | 0.10 |
| 9 | 15 | 0.38 | 16-80-04(S. & M. DeJonge) | 0.10 |
| 9 | 15 | 1.33 | 1-15-179-30(Town of Pelham) | 0.20 |
| 9 | 15 | 0.51 | 1-15-179-25(E. & A. Ker) | 0.10 |
| 9 | 15 | 0.19 | 1-15-179-20(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.79 | 1-15-179-15(876951 Ontario Ltd.) | 0.10 |
| 9 | 15 | 0.40 | 1-15-179-10(H. & L. Dam) | 0.10 |
| 9 | 15 | 0.40 | 15-179(I. Adlam) | 0.10 |
| 9 | 15 | 0.43 | 15-178-1(G. & J. Popko) | 0.10 |
| 9 | 15 | 0.40 | 15-178(R. Marshall) | 0.10 |
| 9 | 15 | 0.40 | 15-177(L. & P. Veerman) | 0.10 |
| 9 | 15 | 0.08 | 15-176(A. Gritter) | 0.10 |
| 9 | 15 | 0.32 | 15-176-1(C. & J. Gritter) | 0.10 |
| 9 | 15 | 0.23 | 15-175(J. & D. Simmonds) | 0.10 |
| 9 | 15 | 0.35 | 15-174(R. Anthony) | 0.10 |
| 9 | 15 | 0.11 | 15-173(R. & N. MacKay) | 0.10 |
| 9 | 15 | 0.16 | 15-283(E. DesJardins) | 0.10 |
| 9 | 15 | 0.10 | 15-216(J. & P. Kooter) | 0.10 |
| 9 | 15 | 0.10 | 15-217(M. & O. Burns) | 0.10 |
| 9 | 15 | 0.10 | 15-218(K. & P. Csikos) | 0.10 |
| 9 | 15 | 0.10 | 15-219(D. & S. Hewitt) | 0.10 |
| 9 | 15 | 0.17 | 15-220(D. Glassman & T. Grossi) | 0.10 |
| 9 | 15 | 0.19 | 15-221(H. & S. Andrews) | 0.10 |
| 9 | 15 | 0.15 | 15-222(D. & M. Klim) | 0.10 |
| 9 | 15 | 0.10 | 15-223(J. & F. Mancino) | 0.10 |
| 9 | 15 | 0.09 | 15-224(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-225(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-226(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-227(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-228(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-229(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-230(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-231(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-232(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-233(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-234(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-235(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-236(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.07 | 15-237(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-238(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-239(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-240(729 Canboro Rd. Prop. Inc.) | 0.10 |

Schedule 'D' - Assessment for Maintenance (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | |
|---|----|------|------------------------------------|-------|
| 9 | 14 | 0.08 | 15-241(729 Canboro Rd. Prop. Inc.) | 0.10% |
| 9 | 14 | 0.10 | 15-277(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-278(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-279(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-280(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-281(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.10 | 15-282(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-328(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-327(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-326(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-325(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-324(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-323(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-322(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-321(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-320(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-319(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.10 | 15-318(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.14 | 15-317(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.16 | 15-316(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.15 | 15-315(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.15 | 15-314(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.15 | 15-313(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.10 | 15-312(J. & C. Geremia) | 0.10 |
| 9 | 14 | 0.10 | 15-311(W. Wierenga) | 0.10 |
| 9 | 14 | 0.16 | 15-14-2(L. & M. Sikkens) | 0.10 |
| 9 | 14 | 0.11 | 15-14(M. & A. Bedesky) | 0.10 |
| 9 | 14 | 0.23 | 15-13(G. Hall) | 0.10 |
| 9 | 14 | 0.15 | 15-12(S. W. Woon) | 0.10 |
| 9 | 14 | 0.17 | 15-12-2(K. & C. Williams) | 0.10 |
| 9 | 14 | 0.40 | 15-11(J. & J. Burger) | 0.10 |
| 9 | 14 | 0.22 | 15-10(R. Watts) | 0.10 |
| 9 | 14 | 0.16 | 15-9-1(J. & J. Morgan) | 0.10 |
| 9 | 14 | 0.13 | 15-9(J. & M. Cockburn) | 0.10 |
| 9 | 14 | 0.10 | 15-8(C. & L. Crowe) | 0.10 |
| 9 | 14 | 0.11 | 15-14-08(I. & G. Eppendorf) | 0.10 |
| 9 | 14 | 0.12 | 15-310(R. & L. Williams) | 0.10 |
| 9 | 14 | 0.18 | 15-340(R. & H. Bell) | 0.10 |
| 9 | 14 | 0.15 | 15-15-08(G. & B. Alsop) | 0.10 |
| 9 | 14 | 0.14 | 15-339(K. & R. Maver) | 0.10 |
| 9 | 14 | 0.14 | 15-338(S. & J. Bennett) | 0.10 |
| 9 | 14 | 0.08 | 15-337(D. & S. Christensen) | 0.10 |
| 9 | 14 | 0.08 | 15-336(W. & N. Terharmse) | 0.10 |
| 9 | 14 | 0.08 | 15-335(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-334(S. Bieda & J. Jenkins) | 0.10 |
| 9 | 14 | 0.08 | 15-333(J. & L. Durst) | 0.10 |
| 9 | 14 | 0.08 | 15-332(P. & R. Mueller) | 0.10 |
| 9 | 14 | 0.08 | 15-331(A. & B. Brezay) | 0.10 |
| 9 | 14 | 0.08 | 15-330(G. & J. Eyer) | 0.10 |
| 9 | 14 | 0.09 | 15-329(729 Canboro Rd. Prop. Inc.) | 0.10 |

Schedule 'D' - Assessment for Maintenance (cont'd)

Keenan Drain 1998

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | |
|---|----|------|------------------------------------|-------|
| 9 | 15 | 1.03 | 15-288(Town of Pelham) | 0.12% |
| 9 | 15 | 0.14 | 15-287(J. & C. Miller) | 0.10 |
| 9 | 15 | 0.18 | 15-286(P. & C. Julian) | 0.10 |
| 9 | 15 | 0.10 | 15-285(D. & T. Durham) | 0.10 |
| 9 | 15 | 0.10 | 15-284(A. & C. Clist) | 0.10 |
| 9 | 15 | 0.14 | 15-262(H. & L. Mooney) | 0.10 |
| 9 | 15 | 0.22 | 15-263(H. Hinbest & M. Miller) | 0.10 |
| 9 | 15 | 0.14 | 15-242(T. & D. Slack) | 0.10 |
| 9 | 15 | 0.09 | 15-243(J. & A. Gibson) | 0.10 |
| 9 | 15 | 0.15 | 15-244(S. & L. Marischuk) | 0.10 |
| 9 | 15 | 0.11 | 15-264(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.09 | 15-265(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-266(L. & M. Leonard) | 0.10 |
| 9 | 15 | 0.08 | 15-267(B. & S. Campbell) | 0.10 |
| 9 | 15 | 0.08 | 15-268(N. Calabrese) | 0.10 |
| 9 | 15 | 0.08 | 15-269(H. & E. Doyle) | 0.10 |
| 9 | 15 | 0.08 | 15-270(J. & K. Hunter) | 0.10 |
| 9 | 14 | 0.08 | 15-271(J. & G. Pepper) | 0.10 |
| 9 | 14 | 0.08 | 15-272(A. & J. Bonsignore) | 0.10 |
| 9 | 14 | 0.08 | 15-273(M. & S. Sagloski) | 0.10 |
| 9 | 14 | 0.08 | 15-274(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-275(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.18 | 15-276(R. & J. Milan) | 0.10 |
| 9 | 14 | 0.18 | 15-261(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.12 | 15-260(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.14 | 15-259(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.17 | 15-258(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.11 | 15-257(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-256(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-255(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-254(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-253(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-252(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-251(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-250(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-249(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-248(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-247(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-246(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 15 | 0.08 | 15-245(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-341(T. & J. Faulds) | 0.10 |
| 9 | 14 | 0.08 | 15-342(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.12 | 15-343(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-344(V. & L. Jesik) | 0.10 |
| 9 | 14 | 0.09 | 15-345(C. & L. Grace) | 0.10 |
| 9 | 14 | 0.08 | 15-346(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-347(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-348(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-349(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.13 | 15-289(729 Canboro Rd. Prop. Inc.) | 0.10 |

Schedule 'D' - Assessment for Maintenance (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | |
|----|----|------|---|-------|
| 9 | 14 | 0.12 | 15-290(729 Canboro Rd. Prop. Inc.) | 0.10% |
| 9 | 14 | 0.10 | 15-291(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-292(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-293(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-294(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.11 | 15-295(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.13 | 15-296(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.10 | 15-297(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.13 | 15-298(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.11 | 15-299(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-300(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.12 | 15-301(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.07 | 15-302(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.09 | 15-303(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-304(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-305(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.08 | 15-306(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.11 | 15-307(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.11 | 15-308(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.10 | 15-309(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.11 | 1-15-15-09(J. & S. Breitenbach) | 0.10 |
| 9 | 14 | 0.03 | 15-15(729 Canboro Rd. Prop. Inc.) | 0.10 |
| 9 | 14 | 0.04 | 15-15-11(H. & H. Bellis) | 0.10 |
| 9 | 14 | 0.12 | 15-17(J. & M. Pouli) | 0.10 |
| 9 | 14 | 0.07 | 15-18(J. & A. VanLochem) | 0.10 |
| 9 | 14 | 0.09 | 15-19(P. & D. Rose) | 0.10 |
| 9 | 15 | 0.12 | 15-20(E. Rose) | 0.10 |
| 9 | 15 | 0.16 | 15-21(A. & M. VanDriel) | 0.10 |
| 9 | 15 | 0.19 | 15-22(S. & L. Racz) | 0.10 |
| 9 | 15 | 0.05 | 15-23(M. & A. Palcso) | 0.10 |
| 9 | 15 | 0.03 | 15-25(K. & J. Hope) | 0.10 |
| 8 | 13 | 1.30 | 14-48(W. & E. Crowe) | 0.10 |
| 8 | 13 | 0.32 | 14-49-2(W. & K. Boston) | 0.10 |
| *8 | 12 | 4.40 | 14-44(B. & D. Rice) | 0.45 |
| *8 | 12 | 1.30 | 14-43(L. & B. Johnson) | 0.13 |
| 8 | 12 | 0.72 | 14-49-01(W. & P. Ivanko) | 0.10 |
| 8 | 12 | 0.76 | 14-42(L. & C. Dayboll) | 0.10 |
| 8 | 12 | 0.67 | 14-49(J. & A. Price) | 0.10 |
| 8 | 12 | 0.30 | 14-40(D. & J. Koudys) | 0.10 |
| 8 | 12 | 0.65 | 14-48-1(L. & M. York) | 0.10 |
| *8 | 12 | 1.70 | 14-30(H. & D. Secord) | 0.10 |
| 9 | 13 | 0.35 | 1-14-173-04(J. & A. Simo) | 0.10 |
| 9 | 13 | 0.37 | 1-14-173-03(G. & D. Butler) | 0.10 |
| 9 | 13 | 0.37 | 1-14-173-02(J. & B. Fowler) | 0.10 |
| 9 | 13 | 0.37 | 1-14-173-01(D. & A. Mucciante) | 0.10 |
| 9 | 13 | 0.36 | 1-14-209(W. & E. Hillis) | 0.10 |
| 9 | 13 | 0.36 | 1-14-208(M. & A. Zorz) | 0.10 |
| 9 | 13 | 0.36 | 1-14-207(O. & G. Menge) | 0.10 |
| 9 | 13 | 0.36 | 1-14-206(J. & K. Torontali, J. & K. Palosh) | 0.10 |
| 9 | 13 | 0.36 | 1-14-205(F. & R. & C. Frattaroli) | 0.10 |

Schedule 'D' - Assessment for Maintenance (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | | |
|--------------|----|------|--------------------------------------|-------|
| 9 | 13 | 0.37 | 1-14-204(S. Lucescu) | 0.10% |
| 9 | 13 | 0.36 | 1-14-203(C. Chase & J. O'Neill) | 0.10 |
| 9 | 13 | 0.36 | 1-14-202(D. & M. Toner) | 0.10 |
| 9 | 13 | 0.36 | 1-14-201(R. & M. Lostracco) | 0.10 |
| 9 | 13 | 0.36 | 1-14-200(D. & J. Tripkovic) | 0.10 |
| 9 | 13 | 0.38 | 1-14-170-01(P. & C. Di Pietro) | 0.10 |
| 9 | 13 | 0.34 | 1-14-172-01(L. Overbeeke) | 0.10 |
| 9 | 13 | 0.10 | 1-14-171(J. & A. Mikolic) | 0.10 |
| 9 | 13 | 0.14 | 1-14-172(A. Puharich & B. Dwyer) | 0.10 |
| 9 | 13 | 0.34 | 1-14-172-02(R. & P. McCollum) | 0.10 |
| 9 | 13 | 0.34 | 1-14-161-1(L. & J. Sztogryn) | 0.10 |
| 9 | 13 | 0.11 | 1-14-161(M. Dove) | 0.10 |
| 9 | 13 | 0.07 | 1-14-160(R. Elliott) | 0.10 |
| 9 | 13 | 0.11 | 1-14-159(P. & O. Rosinski) | 0.10 |
| 9 | 13 | 0.12 | 1-14-158(P. & O. Rosinski) | 0.10 |
| 9 | 13 | 0.17 | 1-14-157(J. & F. Bush) | 0.10 |
| 9 | 13 | 0.11 | 1-14-156(R. & T. Cote) | 0.10 |
| 9 | 13 | 0.11 | 1-14-155(A. & J. Visgirda) | 0.10 |
| 9 | 13 | 0.11 | 1-14-154(J. & J. Calver) | 0.10 |
| 9 | 13 | 0.11 | 1-14-153(M. & S. Kicul) | 0.10 |
| 9 | 13 | 0.11 | 1-14-1521(J. & C. Bosse) | 0.10 |
| 9 | 13 | 0.11 | 1-14-152(J. & J. Zwier) | 0.10 |
| 9 | 13 | 0.34 | 1-14-214(A. Mitchell & K. Smith) | 0.10 |
| 9 | 13 | 0.36 | 1-14-213(I. & P. Williams) | 0.10 |
| 9 | 13 | 0.36 | 1-14-170-02(C. & C. Bos) | 0.10 |
| 9 | 13 | 0.35 | 1-14-170-03(J. & K. Fraser) | 0.10 |
| 9 | 13 | 0.38 | 1-14-212(G. & A. Huckalo) | 0.10 |
| 9 | 13 | 0.35 | 1-14-210(E. & C. Wichmann) | 0.10 |
| 9 | 13 | 0.38 | 1-14-211(M. & C. Grisnik) | 0.10 |
| 9 | 13 | 0.11 | 1-14-151(K. Robertson) | 0.10 |
| 9 | 13 | 0.11 | 1-14-151-01(J. & R. Van Teunenbroek) | 0.10 |
| 9 | 13 | 0.23 | 1-14-150(A. & J. Wiley) | 0.10 |
| 9 | 13 | 0.11 | 1-14-149(R. & G. Bouwers) | 0.10 |
| 9 | 13 | 0.10 | 1-14-148(J. & C. Gilmour) | 0.10 |
| 9 | 13 | 0.11 | 1-14-147(F. & B. DeJong) | 0.10 |
| 9 | 13 | 0.13 | 1-14-146(K. & E. Rhora) | 0.10 |
| 9 | 13 | 0.11 | 1-14-145(A. & E. Young) | 0.10 |
| 9 | 13 | 0.13 | 1-14-144(F. & D. Masotti) | 0.10 |
| 9 | 13 | 0.11 | 1-14-143(P. Speck, C. Norton) | 0.10 |
| 9 | 13 | 0.11 | 1-14-142(P. & J. Broere) | 0.10 |
| *9 | 12 | 2.50 | 1-14-137(F. Blanchard) | 0.25 |
| *9 | 12 | 1.80 | 14-51-1(L. Johnson) | 0.18 |
| Right-of-Way | | 2.20 | C.P. Railway | 0.14 |

Total Assessment on Lands

93.34%

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Schedule 'D' - Assessment for Maintenance (cont'd)
 Keenan Drain 1998
 Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - OPEN PORTION (cont'd)

| | | | |
|------------------------------------|------|----------------------------|-------------|
| Reg.Hwy.#20 | 1.40 | Region of Niagara | 1.44% |
| Reg.Rd.24 | 3.60 | Region of Niagara | 1.22 |
| Rd.Allowance between Cons.8&9 | 2.80 | Town of Pelham | 0.37 |
| Rd.Allowance between Lots 17&18 | 3.20 | Town of Pelham | 0.32 |
| Maple Street | 2.50 | Town of Pelham | 0.59 |
| Memorial Dr. | 2.60 | Town of Pelham | 0.59 |
| Sandra Dr. | 1.22 | 729 Canboro Rd. Prop. Inc. | 0.30 |
| Cherry Ridge Blvd. | 1.20 | 729 Canboro Rd. Prop. Inc. | 0.30 |
| Alsop Avenue | 0.50 | 729 Canboro Rd. Prop. Inc. | 0.12 |
| Crescent Ave. | 1.10 | 729 Canboro Rd. Prop. Inc. | 0.25 |
| Balfour Street | 2.00 | Town of Pelham | 0.48 |
| Alder Cres. | 1.00 | Town of Pelham | 0.24 |
| Sunset Drive | 0.90 | Town of Pelham | 0.24 |
| Canboro Rd. | 0.80 | Town of Pelham | <u>0.20</u> |

| | |
|---------------------------|-------|
| Total Assessment on Roads | 6.66% |
| | == |

| | |
|---|---------|
| Total Assessment on Main Drain - Open Portion | 100.00% |
| | ==== |

Schedule 'D' - Assessment for Maintenance (cont'd)

Keenan Drain 1998

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - CLOSED PORTION

| | | | | |
|----|----|-------|---|-------|
| *9 | 18 | | 16-103(R. Wright) | 0.30% |
| *9 | 18 | 1.70 | 16-101(R. Wright) | 6.45 |
| *9 | 17 | 15.00 | 16-100(A. & E. Stassen) | 17.40 |
| *9 | 16 | 11.60 | 16-93(B. & B. Burke) | 4.66 |
| *9 | 16 | 4.40 | 16-99-1(E. Ker) | 9.40 |
| *9 | 16 | 7.60 | 15-75(L. & M. Devries) | 5.50 |
| *9 | 16 | 2.60 | 15-156(M. & C. Kazmir) | 3.55 |
| 9 | 16 | 0.10 | 16-97(R. & J. Taylor) | 0.25 |
| 9 | 16 | 0.10 | 16-99(R. & M. Davis) | 0.25 |
| 9 | 16 | 0.85 | 16-98(B. & A. Ker) | 1.69 |
| 9 | 16 | 0.40 | 16-99-2(B. & S. Guindon) | 1.05 |
| 9 | 16 | 0.39 | 15-156-10(P. & W. Blackmore) | 0.95 |
| 9 | 16 | 0.10 | 15-154(E. & J. Slappendel) | 0.70 |
| 9 | 16 | 0.10 | 15-155(R. & W. Acaster) | 0.30 |
| 9 | 16 | 0.39 | 15-156-2(D. Kazmir) | 0.60 |
| 9 | 16 | 0.40 | 15-156-1(D. Kazmir) | 0.60 |
| 9 | 16 | 0.50 | 15-157(W. & W. Heykoop) | 0.60 |
| 9 | 16 | 0.32 | 15-159(H. Ebert) | 0.45 |
| 9 | 16 | 0.10 | 15-158(S. Farion) | 0.25 |
| 9 | 15 | 0.79 | 1-15-197-15(876951 Ontario Ltd.) | 0.90 |
| 9 | 15 | 0.19 | 1-15-197-20(729 Canboro Rd. Prop. Inc.) | 0.45 |
| 9 | 15 | 0.40 | 15-179-10(H. & L. Dam) | 0.90 |
| 9 | 15 | 0.40 | 15-179(I. Adlam) | 0.90 |
| 9 | 15 | 0.43 | 15-178-1(G. & J. Popko) | 1.10 |
| 9 | 15 | 0.40 | 15-178(R. Marshall) | 1.65 |
| 9 | 15 | 0.40 | 15-177(L. & P. Veerman) | 0.60 |
| 9 | 15 | 0.08 | 15-176(A. Gritter) | 0.30 |
| 9 | 15 | 0.32 | 15-176-1(C. & J. Gritter) | 0.50 |
| 9 | 15 | 0.23 | 15-175(J. & D. Simmonds) | 0.35 |
| 9 | 15 | 0.35 | 15-174(R. Anthony) | 0.55 |
| 9 | 15 | 0.11 | 15-173(R. & N. McKay) | 0.30 |
| 9 | 15 | 0.16 | 15-283(E. DesJardins) | 0.30 |
| 9 | 15 | 0.10 | 15-284(A. & C. Clist) | 0.30 |
| 9 | 15 | 0.10 | 15-285(D. & T. Durham) | 0.30 |
| *9 | 15 | 3.70 | 15-27(J. Hope) | 6.80 |
| 9 | 15 | 2.50 | 15-16(Niagara S. Board of Education) | 4.25 |
| 9 | 14 | 0.08 | 15-337(D. & S. Christensen) | 0.30 |
| 8 | 14 | 0.14 | 15-338(S. & J. Bennett) | 0.30 |
| 9 | 14 | 0.14 | 15-339(K. & R. Maver) | 0.30 |
| 9 | 14 | 0.15 | 15-15-08(G. & B. Alsop) | 0.30 |
| 9 | 14 | 0.11 | 1-15-15-09(J. & S. Breitenbach) | 0.30 |
| 9 | 15 | 0.03 | 15-15(729 Canboro Rd. Prop. Inc.) | 0.30 |
| 9 | 15 | 0.04 | 15-15-11(H. & H. Bellis) | 0.30 |
| 9 | 15 | 0.12 | 15-17(J. & M. Pouli) | 0.30 |
| 9 | 15 | 0.07 | 15-18(J. & A. Van Luchem) | 0.30 |
| 9 | 15 | 0.09 | 15-19(P. & D. Rose) | 0.30 |
| 9 | 15 | 0.12 | 15-20(E. Rose) | 0.30 |
| 9 | 15 | 0.16 | 15-21(A. & M. VanDreil) | 0.30 |
| 9 | 15 | 0.19 | 15-22(S. & L. Raczy) | 0.30 |
| 9 | 15 | 0.05 | 15-23(M. & A. Palsco) | 0.30 |
| 9 | 15 | 0.03 | 15-25(K. & J. Hope) | 0.30 |

Total Assessment on Lands

79.90%

Schedule 'D' - Assessment for Maintenance (cont'd)

Keenan Drain

Town of Pelham

| CON | LOT | HECTARES AFFECTED | ROLL NUMBER (OWNER) | PERCENTAGE OF MAINTENANCE COSTS |
|-----|-----|----------------------|------------------------|------------------------------------|
|-----|-----|----------------------|------------------------|------------------------------------|

MAIN DRAIN - CLOSED PORTION (cont'd)

| | | | |
|---|------|----------------------------|-------------|
| Maple Street | 0.70 | Town of Pelham | 18.90% |
| Sandra Drive | 0.12 | 729 Canboro Rd. Prop. Inc. | 0.50 |
| Lot 17 & 18 | | | |
| Rd. Allowance | 0.33 | Town of Pelham | <u>0.70</u> |
| Total Assessment on Roads | | | 20.10% |
| Total Assessment on Main Drain - Closed Portion | | | 100.00% |
| | | | === |

BRANCH "A"

| | | | | |
|--------------------------------|----|-----|-------------------------|--------------|
| *9 | 16 | 6.8 | 16-93(B. & B. Burke) | 50.92% |
| *9 | 16 | 1.0 | 16-99-1(E. Ker) | 21.30 |
| *9 | 17 | 1.0 | 16-100(A. & E. Stassen) | <u>27.78</u> |
| Total Assessment on Lands | | | | 100.00% |
| Total Assessment on Branch "A" | | | | 100.00% |
| | | | | === |

BRANCH "B"

| | | | | |
|--------------------------------|----|------|------------------------------|--------------|
| 9 | 16 | 0.40 | 16-99-2(B. & S. Guindon) | 46.70% |
| 9 | 16 | 0.39 | 15-156-10(P. & W. Blackmore) | <u>53.30</u> |
| Total Assessment on Lands | | | | 100.00% |
| Total Assessment on Branch "B" | | | | 100.00% |
| | | | | === |

NOTE: All the lands noted with an asterisk are classified as agricultural.

SPECIFICATIONS FOR CONSTRUCTION OF MUNICIPAL DRAINAGE WORKS

GENERAL CONDITIONS

SCOPE

The work to be done under this specification consists of supplying all labour, materials and equipment to construct the work as outlined on the drawing(s). In some Municipalities, the Contractor shall supply all materials while in other Municipalities, he shall supply only certain materials. The Form of Tender and Agreement lists which materials are to be supplied by the Contractor.

EXAMINATION OF SITE, DRAWINGS AND SPECIFICATIONS

The tenderer must examine the premises and site to compare them with the drawings and specifications in order to satisfy himself of the existing conditions and the extent of the work to be done before submission of his tender. No allowance shall subsequently be made on behalf of the Contractor by reason of any error on his part.

Any estimates of quantities shown or indicated on the drawings or in the report are "neat" calculations and are provided for the convenience of the Tenderer. Any use made of these quantities by the tenderer in calculating his tender shall be done at his own risk. The Tenderer for his own protection, should check these quantities for accuracy.

The Contractor shall co-operate with all authorities to ensure that services and utilities are protected from damage during the performance of the work. The Contractor will be responsible for determining the exact location and elevation where necessary, of all utilities and services. The Contractor will be held liable for any damage to overhead and underground utilities and services caused by his operations.

The Tenderer must satisfy himself that he understands the meaning and intent of the drawings and specifications before submission of his tender. The standard specifications have been separated into sections for reference purposes only. They shall be considered complementary and, where a project is controlled under one of the sections, the remaining sections will still apply for miscellaneous works. In case of any inconsistency or conflict in the Tender Documents, the following order of precedence shall apply:

- Form of Tender and Agreement
- Drawings
- General Conditions
- Standard Specifications
- Standard Drawings
- Open Drain, Tile Drain, Boring, Specifications for Municipal Drains Crossing County Roads

TENDERERS

Tenders are to be submitted on a lump sum basis for the complete works or a portion thereof, as set out in the Form of Tender and Agreement. A deposit in the form of a certified cheque, payable to the Treasurer of the Municipality must accompany each tender as a guarantee of good faith and shall be in the amount specified on the Form of Tender and Agreement. This deposit shall be retained until the successful Tenderer furnishes a Performance Bond for 100% of the amount of the tender or other satisfactory security, if required by the Municipality. The Performance Bond shall ensure completion of the work and maintenance of the work for a period of one year after the date of the completion certificate. The cheque deposited by the unsuccessful Tenderers will be returned without delay.

COMMISSIONER

The word "Commissioner", as used hereinafter in these specifications, shall refer to a Drainage Commissioner or a Drainage Superintendent, appointed by the Municipality. The Commissioner will act as the Engineer's representative. The Commissioner shall have the power to direct the execution of the work and to make any necessary minor adjustments.

Any instructions given by the Commissioner, which changes considerably the proposed work or with which the Contractor does not agree, shall be referred to the Engineer for his decision.

PERMITS, NOTICES, LAWS AND RULES

The Contractor shall ensure that all necessary permits or licences required for the execution of the work have been obtained (but this shall not include permanent easements or rights of servitude). The Contractor shall give all necessary notices and pay all fees required by law and comply with all laws, ordinances, rules and regulations relating to the work and to the preservation of the public's health and safety and if the specifications and drawings are at variance therewith, any resulting additional expenses incurred by the Contractor shall constitute an addition to the contract price.

LIABILITY

The Contractor shall protect, indemnify and save harmless, the Municipality from all actions, suits, losses and costs by reason or on account of any failure or negligence of the Contractor. The Contractor will be held liable for any damages or expenses occasioned by his failure to prosecute the work satisfactorily, or for any claim directly or indirectly arising under the contract.

COMMENCEMENT AND COMPLETION OF WORK

The work must commence immediately after the Contractor is notified of the acceptance of his tender or at a later date, if set out as a condition of the tender, or if weather and ground conditions are unsuitable. The work must be proceeded with in such a manner as to ensure its completion at the earliest possible date consistent with first class workmanship and within the time limit set out in the tender or in the contract documents.

NOTICES RE COMMENCEMENT OF WORK

The Contractor shall give the Engineer and Commissioner a minimum of twenty-four (24) hours notice before commencement of work on any municipal drain. If the Contractor leaves the job site for a period of time after initiation of work, he shall give the Engineer and the Commissioner a minimum of twenty-four (24) hours notice prior to returning to the project.

RAILWAYS

A minimum of 48 hours notice in **writing** to the railway's Division Engineer, exclusive of Saturdays, Sundays and Holidays, is required by the Contractor prior to any work being performed on railway property and in the case of a pipe being installed under the tracks by open cutting, a minimum of 72 hours notice is required.

FLOODS OR CASUALTIES

The Contractor shall take all risks from floods or casualties of any kind.

LIMITATIONS OF OPERATIONS

Except for such work as may be required by the Engineer to maintain the works in a safe and satisfactory condition, the Contractor shall not carry on his operations under the contract on Sundays without permission in writing of the Municipality.

SUB-CONTRACTORS

The Contractor shall not sublet the whole or any part of the contract without the approval of the Engineer or Commissioner.

SUPERVISION

The Contractor shall give the work his constant supervision and shall keep a competent foreman in charge at the site.

WORKING AREA AND ACCESS

Unless otherwise specified on the drawings, the working area available to the Contractor to construct the drain and related works consists, of those lands immediately adjacent to the course of the drain and works and shall not exceed an average width of 15 meters.

All owners of property where the drain is to be constructed shall make an access route from the nearest open road allowance to the drain available to the Contractor. The average width of the route shall not exceed 8 meters. The Contractor shall confirm the actual location of the access route with each affected owner prior to entering onto private property.

Should the specified widths become inadequate due to unusual conditions, the Contractor shall notify the Engineer immediately in order that negotiations with the affected owners can take place.

Where a Contractor exceeds the specified widths due to the nature of his operations and without authorization he shall be held responsible for the costs of all additional damages and the amount shall be deducted from his contract price and paid to the affected owners by the Municipality.

FENCES

The Contractor shall provide each property owner with 2 days notice prior to removing any fences. The property owner shall endeavour to keep all livestock clear of the construction areas until further notified. Where necessary, the Contractor will be directed to erect temporary fences. The Contractor shall be held responsible for loss or injury to livestock or damage caused by livestock, where the injury or damage is caused by his failure to notify the property owner or through negligence or carelessness on the part of the Contractor.

No earth is to be placed against fences and all fences removed by the Contractor are to be replaced by him in as good condition as found. In general, the Contractor will not be allowed to cut existing fences but shall disconnect existing fences at the nearest anchor post or other such fixed joint and shall carefully roll it back out of the way. Where the distance to the closest anchor post or fixed joint exceeds 50 meters, the Contractor will be allowed to cut and splice in accordance with accepted methods and to the satisfaction of the owner and the Engineer, or Commissioner. Where existing fences are deteriorated to the extent that existing materials are not salvageable for replacement, the Contractor shall notify the Engineer or the Commissioner prior to dismantling. Where an open ditch cleanout takes place and the depth of material removed renders an existing fence through the ditch incapable of containing livestock, the Contractor shall install such additional posts, and strands of wire so as to make the fence secure. Fences damaged beyond salvaging by the Contractor's negligence shall be replaced with new materials, similar to those existing, at the Contractor's expense.

FENCES (cont'd)

The replacement of the fences shall be done to the satisfaction of the owner and the Engineer or Commissioner. The site examination should indicate to the Contractor such work, if any, and an allowance should be made in the tendered price.

The Contractor shall not leave any fence open when he is not at work in the immediate vicinity.

STANDING CROPS AND LIVESTOCK

The Contractor shall not be held responsible for damages to standing crops within the working area available and the access route provided as noted previously if he notifies the owner thereof in writing at least two (2) days prior to the commencement of the work on that portion. Similarly, the Contractor constructing a tile drain shall not be held responsible for damages or injury to livestock occasioned by leaving trenches open for inspection by the Engineer if he notifies the owner writing at least two (2) days prior to commencement of the work on that portion. The Contractor will be held liable for such damages or injury if the backfilling of such trenches is delayed more than 1 day after acceptance by the Engineer.

INSPECTION

Final inspection by the Engineer will be made within twenty days after he has received notice in writing from the Contractor that the work is complete.

Periodic inspections by the Engineer or Commissioner will be made during the performance of the work. These interim inspections are required to check such items as location of drainage course and structures, tile grades prior to backfilling, backfilling and miscellaneous work items.

ERRORS AND UNUSUAL CONDITIONS

The Contractor shall notify the Engineer immediately of any error or unusual condition which may be found. Any attempt by the Contractor to make changes because of the error or unusual condition on his own shall be done at his own risk. Any additional cost incurred by the Contractor to remedy a wrong decision on his part shall be borne by the Contractor.

The Engineer shall make the alteration necessary to correct errors or to adjust for unusual conditions during which time it will be the Contractor's responsibility to keep his men and equipment gainfully employed elsewhere on the project.

The contract amount shall be adjusted in accordance with a fair evaluation of the work added or deleted.

ALTERATIONS AND ADDITIONS

The Engineer shall have the power to make alterations in the work shown or described in the drawings or specifications and the Contractor shall proceed to make such changes without causing delay. In every such case, the price agreed to be paid for the work under the contract shall be increased or decreased as the case may require according to a fair and reasonable valuation of the work added or deleted. The valuation shall be determined as a result of negotiations between the Municipality, the Contractor, and the Engineer, but in all cases, the Engineer shall maintain the final responsibility for the decision. Such alterations and variations shall in no way render void the contract.

No claim for variations or alterations in the increased or decreased price shall be valid unless done in pursuance of an order from the Engineer and notice of such claims made in writing before commencement of such work. In no case shall the Contractor commence work which he considers to be extra work before receiving the Engineer's approval.

ROAD CROSSINGS

All road crossings may be made with an open cut unless otherwise noted. The exact location of the crossing shall be verified and approved by the Road Authority and the Engineer.

All surplus excavated material shall be levelled on the adjacent road allowance or disposed of, as noted on the drawings. The pipe shall be backfilled in accordance with the standard detailed drawing as noted on the Drawings. The Contractor shall be responsible for the settling of the backfill. Where possible it may be advisable to let the backfill settle for a few months, before replacing any surface treatment. All joints in surface treatment shall be neatly saw cut.

The Contractor should arrange with a local resident to keep the crossing in repair. A small load of gravel may be deposited at the side of the road in the event that any settlement does occur. All road crossings shall meet the approval of the Road Authority.

For County road crossings, see "Specifications for Municipal Drains Crossing County Roads".

LANEWAYS

All surface pipes under laneways shall be backfilled in accordance with the standard detailed drawing as noted on the drawings.

Where a tile drain is to be located under a laneway, that portion of the drain within the travelled portion of the lane shall be corrugated metal pipe of a size, type and length as noted on the drawings. The installation and backfilling shall be in accordance with the standard detailed drawing as noted on the drawings.

Any settling of the granular backfill shall be repaired by the Contractor as soon as required. Existing surface treatment shall be replaced to its original condition by the Contractor. All joints in surface treatment shall be neatly saw cut.

EXCESS TILE

If the tile is Supplied by the Municipality, the Contractor shall stockpile all excess tile in readily accessible locations for pickup by the Municipality upon the completion of the job.

TERMINATION OF CONTRACT BY THE MUNICIPALITY

If the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should refuse or fail to supply enough properly skilled workmen or proper materials after having received seven (7) days notice in writing from the Engineer to supply additional workmen or materials, or if he should fail to make prompt payment to subcontractors or for material or labour or persistently disregarding laws, ordinances, or the instruction of the engineer, or otherwise being guilty of a substantial violation of the provisions of the contract, then the Municipality, upon the certification of the Engineer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy, by giving the Contractor written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances, thereon, and complete the work by whatever method the Engineer may deem expedient, but without undue delay or expense. In such case, the Contractor shall not be entitled to receive any further payment until the work is completed. If the unpaid balance of the contract price will exceed the expense of completing the work, including compensation to the Engineer for his additional services, such expenses shall be paid to the Contractor. If such expense will exceed such unpaid balance, the Contractor shall pay the difference to the Municipality. The expense incurred by the Municipality, as herein provided, shall be certified by the Engineer. Where a Contractor fails to commence work within seven (7) days of his commencement date as indicated by him on his Tender Form, and such extension of

TERMINATION OF CONTRACT BY THE MUNICIPALITY (cont'd)

time as allowed due to poor weather or ground conditions, then the Municipality shall have the option, after providing the Contractor with seven (7) days notice of their intention to terminate the contract, award the contract to another Contractor at their discretion by retendering the project, inviting bids or by appointment. The additional costs of retendering, and all other administration costs shall be deducted from the Contractor's bid deposit and the balance, if any, returned to him.

PAYMENT

Progress payments equal to 80% of the value of the work done and materials incorporated in the work will be made to the Contractor on the written request of the Contractor to the Engineer. An additional $17 \pm \%$ will be paid 37 days after the final acceptance by the Engineer and $3 \pm \%$ of the contract price may be reserved by the Municipality for one year. After the completion of the work, any part of this reserve may be used to correct defects which may develop within that time from faulty workmanship or material or loose backfill, provided that notice shall first be given to the Contractor and that he may promptly make good such defects, if he desires.

MAINTENANCE

The Contractor shall repair and make good any damages or faults in the drain that may appear within one year after its completion (as evidenced by the final payment certificate) as the result of imperfect or defective work done or materials furnished by the Contractor. Nothing herein contained shall be construed as in any way restricting or limiting the liability of the Contractor under the laws of the Country, Province or Locality in which the work is being done.

OPEN DRAIN

STAKES

Stakes are set along the course of the drain at intervals of 50 meters. The Contractor shall ensure that the stakes are not disturbed unless approval is obtained from the Engineer. Any stakes removed by the Contractor without the authority of the Engineer, shall be replaced at the expense of the Contractor. Any stakes which are removed or disturbed by others or by livestock, shall be replaced at the expense of the drain.

PROFILE

The profile drawing shows the depth of cuts from the ground beside the stake to the final invert of the ditch in meters and decimals of a meter and also the approximate depth of cuts from the existing bottom of the ditch to the final invert of the ditch. These cuts are established for the convenience of the Contractor; however, bench marks will govern the final elevation of the drain. Bench marks have been established along the course of the drain and their locations and elevations are noted on the profile drawing. A uniform grade shall be maintained between stakes in accordance with the profile drawing.

ALIGNMENT

The drain shall be constructed in a straight line and shall follow the course of the present drain or water run unless otherwise noted on the drawings. Where it is necessary to straighten any bends or irregularities in alignment not noted on the drawings, the Contractor shall contact the Engineer or Commissioner before commencing the work. All curves shall be made with a minimum radius of 13 meters.

CLEARING AND GRUBBING

Prior to commencement of drain construction, all trees, scrub, fallen timber and debris shall be removed from the banks of the drain and for such a distance on each side so as to eliminate any interference with the construction of the drain or the spreading of the spoilbank. The banks shall be cleared whether or not they are affected directly by the excavation. With the exception of large stumps causing damage to the drain, the banks shall not be grubbed. All other cleared areas shall be grubbed and the stumps put into piles for disposal by the owner.

All trees or limbs 130mm (6") or greater in diameter necessarily removed will be considered logs and are to be properly cut, trimmed and left for the owner. All scrub, limbs, debris, etc. smaller than 150mm (6") in diameter shall be cut in 5m lengths and put in piles separate from the logs for disposal by the owner.

In wooded or heavily overgrown areas, the scrub, debris, etc. may be pushed into piles back out of the way but shall not be pushed against any standing trees. No windrowing will be permitted. The clearing and grubbing and construction of the drain are to be carried out in two separate operations and not simultaneously at the same location.

EXCAVATION

The bottom width and the side slopes of the ditch shall be those shown on the profile drawing. Side slopes are normally one and one-half meters horizontal to one meter vertical unless otherwise noted on the profile drawing. Bottom widths will vary with the size of the drain.

Unless otherwise specified on the drawings, only the existing ditch bottom is to be cleaned out and the banks are not to be disturbed. Where existing banks have collapsed, new banks are to be constructed with minimum 1 ½:1 side slopes and be hand seeded with an approved seed mixture. Where existing banks become unstable because of construction, the Contractor shall immediately contact the Engineer or Commissioner. Alternative methods of construction and/or methods of protection will then be determined, prior to continuing the work.

EXCAVATION (Cont'd)

Where an existing drain is being relocated or where a new drain is being constructed, the Contractor shall, unless otherwise specified, strip the topsoil from the full width of the drain, including the location of the spoil pile. Upon completion of levelling, the topsoil shall be spread to an even depth across the full width of the spoil.

ROADS

Where an open drain is being removed from a road allowance, it must be reconstructed wholly on the adjacent lands with a minimum buffer strip, 2.00 meters in width on the roadway side of the ditch, unless otherwise noted on the drawings. The excavated material shall be used to fill the existing open ditch and any excess excavated material shall be placed and levelled on the adjacent lands. Any work done on the road allowance, with respect to excavation, disposal of materials, installation of culverts, cleaning under bridges, etc., shall be to the satisfaction of the Road Authority and the Engineer.

BRIDGES AND CULVERT PIPES

The Contractor shall excavate the drain to the full specified depth and width under all bridges. Temporary bridges may be carefully removed and left on the bank of the drain but shall be replaced by the Contractor when the excavation is completed unless otherwise specified. Permanent bridges must be left intact. All necessary care and precautions shall be taken to protect the structure. The Contractor shall notify the Engineer or Commissioner if excavation may cause the structure to undermine or collapse.

Where specified on the drawings, the existing culvert shall be carefully removed, salvaged and either left at the site for the owner or reinstalled at a new grade or location. The value of any damage caused to the culvert due to the Contractor's negligence in salvage operation will be determined and deducted from the contract price.

All pipe culverts shall be installed in accordance with the standard detailed drawing as noted on the drawings.

EXCAVATED MATERIAL

Excavated material shall be deposited on either or both sides of the drain as indicated on the drawings or as directed by the Engineer or Commissioner. In general, the material shall be deposited on the low side of the drain or opposite trees and fences. A buffer strip not less than 2 meters in width shall be left along the top edges of the drain.

No excavated material shall be placed in tributary drains, depressions, or low areas which direct water into the ditch so that water will be trapped behind the spoilbank. Beyond the buffer strip, the excavated material shall be placed and levelled to a maximum depth of 300mm, unless instructed otherwise. The edge of the spoilbank away from the ditch shall be feathered down to the existing ground; the edge of the spoilbank nearest the ditch shall have a maximum slope of 2 to 1. The material shall be levelled such that it may be cultivated with ordinary farm equipment without causing undue hardship on machinery and personnel. No excavated material shall cover any logs, scrub, debris, etc. of any kind.

Where it is necessary to straighten any unnecessary bends or irregularities in the alignment of the ditch, the excavated material from the new cut shall be used for backfilling the original ditch. Regardless of the distance between the new ditch and the old ditch no extra compensation will be allowed for this work and must be included in the Contractor's lump sum price for the open work.

A written statement from the owners indicating their complete satisfaction with the levelling of the spoilbank is sufficient to comply with this specification. The final decision, with respect to levelling of the spoilbank, shall be made by the Engineer or Commissioner.

TRIBUTARY OUTLETS

The Contractor shall guard against damaging the outlets of tributary drains. Prior to commencement of excavation on each property the Contractor shall contact the owner and request that all known outlet pipes be marked by the owner. All outlets so marked or visible, and subsequently damaged by the Contractor's operations will be repaired by the Contractor at his cost. All unknown outlet pipes damaged by the operations will be repaired by the Contractor and the costs will be considered an addition to the contract price.

RIP-RAP PROTECTION

The extent and type of protection shall be as specified on the drawings and shall be installed in accordance with the section "Rip-Rap Protection" set out on Page 14 of the specifications and on the detailed drawings.

COMPLETION

At the time of completion and final inspection, all work in the contract shall have the full dimensions and cross-sections specified without any allowance for caving of the banks or sediment in the bottom. All newly constructed or disturbed banks shall be hand seeded daily with an approved seed mixture. The rate of application shall be 84 kg. per ha. unless otherwise specified.

TILE DRAIN

MATERIALS

A) Tile

All tile installed under these specifications shall be sound and of first quality and shall meet all A.S.T.M. Specifications current at the time of tendering as set out in Designation C4 and C498 for Clay Tile; C412 for concrete Tile; C14 for Concrete Sewer Pipe 450mm (18") diameter or less; and C76 for Concrete Sewer Pipe greater than 450mm (18") diameter. Where closed joints are specified, joints shall conform to the A.S.T.M. Specification C443. The Engineer shall have the right to order such tests as he deems necessary to be made upon the tile, including that of testing by an independent testing laboratory. The costs of all such tests shall be borne by the party supplying the tile.

B) Metal Pipe

Unless otherwise specified all metal pipe shall be corrugated, rivetted steel pipe with a minimum wall thickness of 1.6mm (16 gauge) and shall be fully galvanized.

STAKES

Stakes are set along the course of the drain at intervals of 50 meters. The Contractor will ensure that the stakes are not disturbed unless approval is obtained from the Engineer.

CLEARING AND GRUBBING

Prior to commencement of drain construction, all trees, scrub, fallen timber and debris shall be cleared and grubbed from the working area. Unless otherwise specified, the minimum width to be cleared and grubbed shall be 20 meters in all hardwood areas and 30 meters in all softwood areas (willow, poplar, etc.), the width being centred on the line of the drain.

All trees or limbs 150mm (6") or greater in diameter necessarily removed will be considered logs and are to be properly cut and trimmed and left for the owner. All scrub, limbs, debris, etc. smaller than 150mm (6") in diameter shall be cut in 5m lengths and put in piles separate from the logs for disposal by the owner.

In wooded or heavily overgrown areas, the scrub, debris, etc., may be pushed into piles back out of the way but shall not be pushed against any standing trees. No windrowing will be permitted. The clearing and grubbing and construction of the drain are to be carried out in two separate operations and not simultaneously at the same location.

SURFACE PREPARATION AND RESTORATION

Where the depths of cuts as shown on the profile exceed the capacity of the Contractor's tiling machine, he shall lower the surface grade in order that the machine may trench to the correct depth. Topsoil is to be stripped over a sufficient width that no subsoil will be deposited on top of topsoil. Subsoil will then be removed to the required depth and piled separately. Upon completion of backfilling the topsoil will then be replaced to an even depth over the disturbed area. The cost for this work shall be included in his tender price.

Where the Contractor's tiling machine does not have the capacity to dig to the depths required or to install the size of tile specified, he may, at his cost, after obtaining the approval of the Engineer, install the drain or portions thereof using a backhoe. Areas where the drain is installed by backhoe shall first be stripped of topsoil over a sufficient width that no subsoil will be deposited on top of topsoil. Upon completion of backfilling, the topsoil will then be replaced to an even depth over the disturbed area.

LINE

Prior to stringing the tile, the Contractor shall contact the Commissioner or the Engineer in order to establish the course of the drain.

The drain shall run in as straight a line as possible throughout its length, except that at intersections of other water courses or at sharp corners, it shall run on a curve of at least a 15 meter radius. The new tile drain shall be constructed at an offset from and generally parallel with any ditch or defined watercourse in order that fresh backfill in the trench will not be eroded by the flow of surface water. The Contractor shall exercise care not to disturb any existing tile drain or drains which parallel the course of the new drain, particularly where the new and the existing tile act together to provide the necessary capacity.

PROFILE

The profile drawing shows the depth of cuts from the ground beside the stake to the final invert of the drain in meters and decimals of a meter. These cuts are established for the convenience of the Contractor; however, bench marks will govern the final elevation of the drain. Bench marks have been established along the course of the drain and their locations and elevations are noted on the profile drawing.

GRADE

The Contractor shall provide and maintain in good working condition, an approved system of establishing a grade sight line to ensure the completed works conform to the profile drawing. In order to confirm the condition of his system and to eliminate the possibility of minor errors on the drawings, he shall ensure his grade sight line has been confirmed to be correct between a minimum of two control points (bench marks) and shall spot check the actual cuts and compare with the plan cuts prior to commencement of tile installation. He shall continue this procedure from control point to control point as construction of the drain progresses. When installing a drain towards a fixed point such as a bore pipe, he shall uncover the pipe and confirm the elevation, using the sight line, a sufficient distance away from the pipe in order to allow for any necessary minor grade adjustments to be made in order to conform to the as built elevation of the bore pipe. All tile improperly installed due to the Contractor not following these procedures shall be removed and replaced entirely at the Contractor's cost.

When following the procedures and a significant variation is found, the Contractor shall immediately cease operations and advise the Engineer.

EXCAVATION

Unless otherwise specified, all trenching shall be done with a recognized farm tiling machine approved by the Engineer or Commissioner. The machine shall be capable of shaping the bottom of the trench to receive the lower segment of the tile.

Where the use of a backhoe for excavation is either specified on the drawings, or approved by the Engineer upon request of the Contractor, the lower portion of the trench shall be shaped to receive the lower segment of the tile. In clay soils, all ridges in the trench bottom caused by the bucket teeth shall be removed and the lower portion of the trench shaped by hand. Alternatively, the Contractor may elect to overdig and then bring the trench bottom up to grade using granular material shaped to receive the tile. The maximum depth of granular material allowed under the tile without compaction shall be 150mm.

QUICKSAND AND ROCK

The Contractor shall immediately contact the Engineer or Commissioner if quicksand is encountered, or if boulders of sufficient size and number are encountered such that installation with a tiling machine is not possible. The Engineer shall, after consultation with the Commissioner and Contractor, determine the action necessary and a price for additions or deletions shall be agreed upon prior to further drain installation. Where directed by the Engineer, test holes are to be dug to determine the extent of the affected area. Cost of test holes shall be considered an addition to the contract price.

INSTALLATION

The tile is to be laid with close fitting joints and in regular grade and alignment in accordance with the plan and profile drawings. The tiles are to be bevelled, if necessary, to ensure close joints (in particular around curves). Where, in heavy clay soils, the width of a joint exceeds 10mm (3/8") the joint shall be wrapped with a 450mm (18") width of polyethylene. Where the width of a joint exceeds 20mm (3/4") the tile shall be removed and the joint bevelled to reduce the gap. Where a drain connects to catchbasin, ditch inlet or junction box structures, the Contractor shall include in his tender price for the supply and installation of a minimum length of 2 meters of metal pipe at each connection to the structure. The size of the metal pipe shall be such that the tile will fit inside it to provide a solid connection. The connections will then be grouted.

Where a tile drain passes through a bore pit, the Tile Contractor shall include in his tender price for the supply and placement of compacted granular bedding from the underside of the pipe down to undisturbed soil within the limits of the bore pit.

Where soil conditions warrant, the Engineer may require that each tile joint be wrapped around the full perimeter with a 450mm (18") width of synthetic filter cloth. Typical cloths meeting the requirements are TEXEL 7607 or TERRAFIX 270R or approved equal. Any such work shall be considered as an addition to the contract price unless specified on the drawings.

BACKFILLING

As the laying of the tile progresses, partial filling is to be made at the sides sufficient to hold the tile in place. After the laying operations have been approved by the Engineer or Commissioner, the tile shall be blinded manually with topsoil as much as practical to a depth of 150mm above the top of the tile and then the remainder of the excavated material shall be used to restore and maintain the natural surface of the ground. Upon completion a minimum cover of 600mm is required over all tile.

TRIBUTARY DRAINS

Any tributary tile encountered in the course of the drain is to be carefully taken up by the Contractor and placed clear of the excavated earth. If the tributary tile drains encountered are clean or reasonably clean, they shall be connected into the new drain using a slope not greater than 3 meters horizontal to 1 meter vertical. Where existing drains are full of sediment, or contain pollutants, the decision to connect those drains to the new drain shall be left to the Engineer or Commissioner. Each tributary tile connection made by the Contractor shall be located and marked with a stake and no backfilling shall take place until the connection has been approved by the Engineer or Commissioner. The connection at the new drain shall be securely grouted.

Where an open drain is being replaced by a tile drain, existing tile outlets entering the ditch from the side opposite the new drain shall be extended to the new drain. All existing metal outlet pipes shall be carefully removed, salvaged, and left for the owner. Where the grade of the connection passes through the newly placed backfill in the ditch, the backfill material below the connection shall be thoroughly compacted and metal pipe of a size compatible with the tile outlet shall be installed so that a minimum length of 2 meters at each end is extending into undisturbed soil.

TRIBUTARY DRAINS (cont'd)

Where locations of tiles are shown on the drawings the Contractor shall include in his tender price, all costs for connecting those tiles to the new drain regardless of length.

Where tiles not shown on the drawings are encountered in the course of the drain, and are to be connected to the new drain, the Contractor shall be paid for each connection at the rate outlined in the Form of Tender and Agreement. The length of connection in excess of 3 meters will be considered an addition to the contract price.

OUTLET PROTECTION

Corrugated metal pipe shall be used to protect the tile at its outlet. It shall have a hinged metal grate with a maximum spacing, between bars of 40mm. The corrugated metal pipe shall be bevelled at the end to generally conform to the slope of the ditch bank and shall be of sufficient size that the tile can be inserted into it to provide a solid connection. The connection will then be grouted.

The installation of the outlet pipe and the required rip-rap protection shall conform to the standard detailed drawing as noted on the drawing.

STANDARD CATCHBASINS AND DITCH INLET CATCHBASINS

Unless otherwise noted, catchbasins shall be constructed using a minimum 20 MPa concrete with inside dimensions 600mm square, walls and floors 150mm thick and the bottom 600mm below the invert of the lowest tile. The catchbasin top shall be a substantial iron grate, easily removable for cleaning.

Where a catchbasin is located on a road allowance, the type of catchbasin and grate to be used and its proposed location and elevation shall be approved by the Road Authority or the Engineer. The drawings shall designate whether the catchbasin is to be on the drain or offset. Catchbasins offset from the drain shall have metal pipe leads of 200mm diameter unless otherwise noted and the leads shall have a minimum of 600mm of cover. The leads shall be securely grouted at the structures and the drain.

Standard catchbasins and ditch inlet catchbasins located on Provincial Highways shall be in accordance with the current M.T.O. Standards for the size and type of structure, and for the grating.

All catchbasins shall be backfilled with granular backfill material placed to a minimum width of 300mm on all sides. The material shall be satisfactorily tamped.

Where the Contractor has over excavated or where ground conditions warrant, the structure shall be installed on a compacted granular base.

The Contractor shall include in his tender price for the construction of a berm behind all ditch inlet structures. The berm shall be constructed of earth and be seeded unless otherwise specified. The Contractor shall also include for regrading, shaping and seeding of ditches for a maximum of 10 meters each away from all ditch inlet structures and standard catchbasins.

JUNCTION BOXES

Junction boxes shall be constructed of 20 MPa concrete. The sides and bottom shall have a minimum thickness of 150mm and the top shall be designed to accept an H20 loading. The inside dimensions of the box shall be a minimum of 100mm larger than the outside diameter of the largest pipe being connected. The minimum cover over the junction box shall be 600mm. All connections shall be securely grouted.

BLIND INLET CATCHBASINS

Where specified on the drawings, blind inlet catchbasins shall be installed along the course of the drain. Blind inlet catchbasins shall be constructed to conform to the standard detailed drawing as noted on the drawings.

RIP-RAP PROTECTION

Prior to placement of protection the base shall be adequately compacted and shaped so that the finished surface of the rip-rap will be at the specified slope and flush with adjacent surfaces. The base shall be constructed such that; the lower limit of rip-rap is keyed into the toe of slope 300mm; the outside limits are situated on 600mm of undisturbed base and the upper limit is keyed into the top of the slope 300mm. The area to be protected shall be covered with approved synthetic filter material. Where the type of protection does not allow drainage to pass through, weep holes shall be provided at regular intervals. The weep holes shall consist of 37mm (1 1/2") diameter pipe and shall extend from the filter material through the protection. (See standard detailed drawings).

(a) Sacked Concrete

The bags shall be manufactured of burlap with nominal dimensions of 450mm x 400mm x 150mm when filled with concrete. The concrete shall have a minimum compressive strength of 15 MPa and shall be deposited into the bags in a homogenous state and may be either site mixed or supplied "readymixed". The bags shall be placed with the largest dimensions in a horizontal plane with each row set back to provide the specified slope. The bags shall be placed with staggered vertical joints.

(b) Field Stone or Quarry Scone

Stone shall consist of random size material with a minimum nominal size of .014m³ (1/2 ft.³) installed to a thickness of 300mm. Larger material shall be installed in the key way at the toe of slope and in the lower portion of the slope. The surface shall be chinked with smaller material to eliminate voids and where specified, shall be covered with wet concrete.

BORING

SCOPE OF WORK

Where boring is a requirement of the contract, the Contractor shall include in his lump sum price for the supply of all labour and equipment to complete the work as specified. The responsibility for supplying the bore pipe shall be as set out in the Form of Tender and Agreement and the Contractor is cautioned to ensure he is aware of who is to supply the material.

LOCATION

Specified notice shall be given to the Engineer and the owning authority so that the exact location of the bore can be established.

MATERIAL

The bore pipe shall consist of new, smooth wall steel pipe, meeting the requirements of H20 loading for road crossings and E-80 loading for railway crossings. The minimum size, wall thickness and length shall be as shown in the drawings. Where welding is required, the entire circumference of any joint shall be welded using currently accepted welding practices.

SITE PREPARATION AND EXCAVATION

Where necessary, fences shall be carefully taken down as Specified in the General Conditions.

Prior to any excavation taking place, all areas which will be disturbed shall be stripped of topsoil. The topsoil is to be stockpiled in locations away from the bore operation, off the line of future tile placement and out of existing water runs or ditches. The bore pit shall be located at the upstream end of the bore unless otherwise specified.

INSTALLATION

The pipe shall be installed in specified line and grade by a combination of boring and jacking.

Upon completion of the operations, both ends of the bore pipe shall be left uncovered until the elevation has been confirmed by the Engineer or Commissioner.

The ends of the bore pipe shall be securely blocked off and the location marked by means of a stake extending from the pipe invert to 300mm above the surrounding ground surface.

QUICKSAND OR ROCK

The Contractor shall contact the Engineer immediately should quicksand be encountered or if boulders of sufficient size and number to warrant concern are encountered. Any bore pipe partially installed shall be left in place until alternative methods or techniques are determined by the Engineer after consultation with the Contractor, the Commissioner and the owning authority.

TILE CONNECTIONS

Prior to commencement of backfilling, all tile encountered in excavations shall be reconnected using material of a size comparable to the existing material. Where the excavation is below the tile grade, a compacted granular base is to be placed prior to laying the tile. Payment for each connection will be made at the rate outlined in the Form of Tender and Agreement.

BACKFILL

Unless otherwise specified, all excavation shall be backfilled with on site material and left slightly higher than the surrounding ground. Surplus material from the boring operation shall be removed from the site at the Contractor's expense.

RESTORATION

The entire affected area shall be shaped and graded to original lines and grades, the topsoil replaced, and the area seeded down at the rate of 84 kg. per ha. unless otherwise specified.

Fences shall be restored to their original condition in accordance with the General Conditions.

Where a project includes the connection of a tile drain to or from the bore pipe, it shall be the Tile Contractor's responsibility to carry out the specified restoration over areas disturbed by the boring contractor and which coincide with his working areas.

SPECIFICATIONS FOR MUNICIPAL DRAINS CROSSING COUNTY ROADS

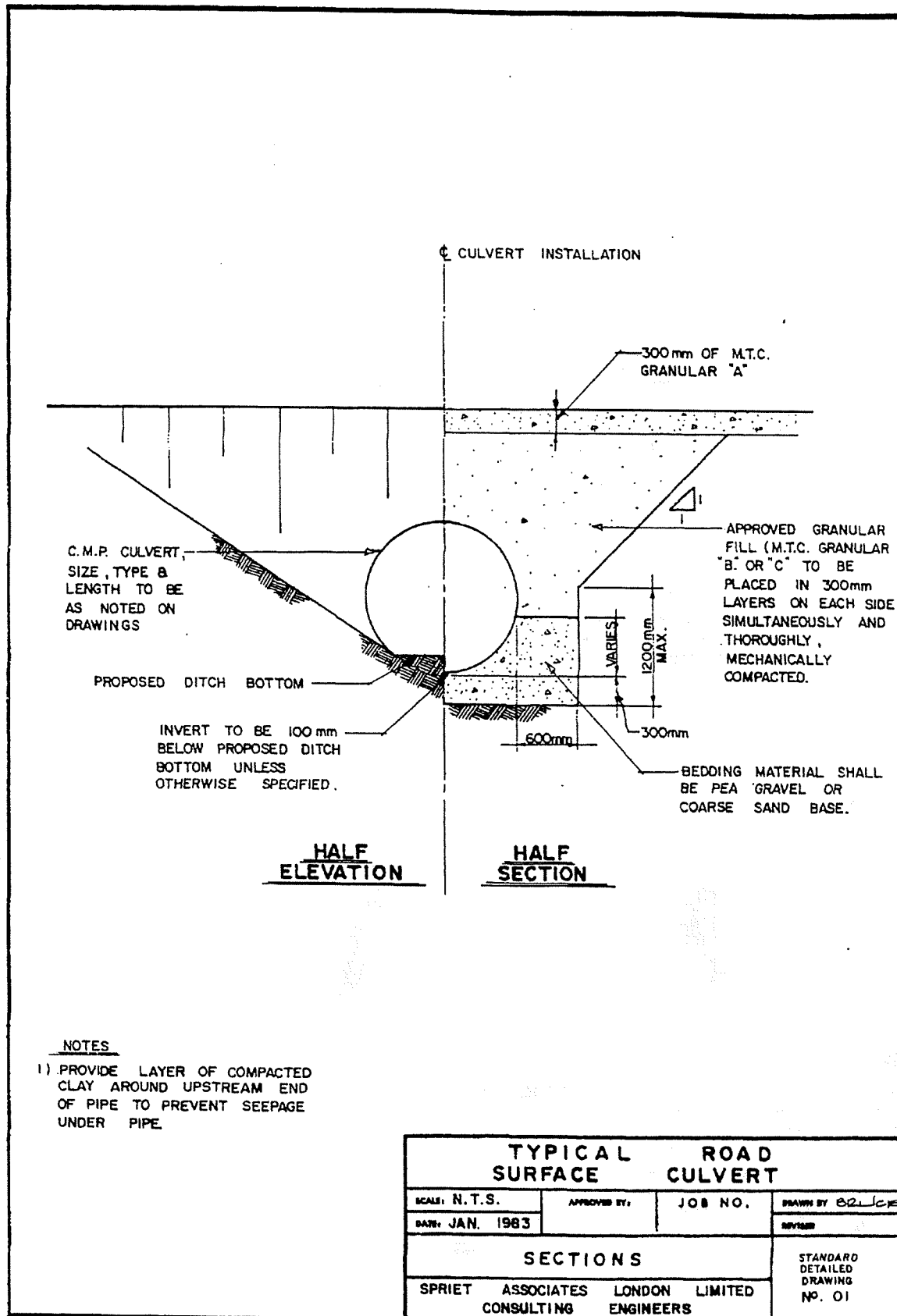
1. These specifications supplement the conditions outlined in the Specifications for the Construction of Municipal Drainage Works, but in no way limit the County's Specifications and Regulations governing the construction of drains on the County's Road Allowance.
2. The County will supply no labour, equipment or materials for the construction of the road crossing.
3. Before proceeding with any work on County Road property, the Contractor shall ensure a road crossing permit has been obtained and he shall notify the County Engineer and the Drainage Engineer or Commissioner, a minimum of 48 hours in advance (exclusive of Saturdays, Sundays and Holidays). A site meeting shall be held with the affected parties to review in detail the crossing and/or its related works. The County Inspector and the Drainage Engineer will inspect the work while in progress to ensure that the work is done in strict accordance with the specifications.
4. Unless otherwise specified, the Contractor shall keep the road open to traffic at all times. The Contractor shall provide suitable warning signs and/or flagmen to the satisfaction of the County Engineer to notify the motorists of work on the road ahead. Where the Contractor is permitted to close the road to through traffic, the Contractor shall provide for and adequately sign the detour route.
5. The drawings will specify the type of crossing which is to be constructed i.e. by boring or by open cut.
6. Boring shall be carried out in accordance with the section of the Specifications for the Construction of Municipal Drainage Works entitled "Boring" except that:
 - Bore pits shall be kept back at least 1 meter from the edge of pavement and where bore pits are made in any portion of the shoulder, the excavated material shall be disposed of off the road allowance and the pit backfilled with thoroughly compacted Granular "A" for its entire depth.
 - Bore pits and excavations outside of the shoulder area may be backfilled with native material compacted to a density of 95% Standard Proctor. All disturbed areas shall be neatly shaped, have the topsoil replaced and seeded with a good quality grass mixture.
7. Open Cut shall be carried out in accordance with the section of the Specifications for the Construction of Municipal Drainage Works entitled "General Conditions" sub-section "Road Crossings" except that:
 - the excavated material removed from the travelled portion of the road and the full width of the shoulder shall be removed and disposed of off the road allowance.
 - backfill material for the excavation on the travelled portion and shoulders shall be as follows:
 - a) from the bottom of the excavation to a level 300mm below the road grade, the material shall meet the requirements for M.T.O. Granular "B" or "C". The backfill shall be placed in lifts not exceeding 300mm in thickness and each lift shall be thoroughly compacted to produce a density of 100% Standard Proctor.
 - b) the top 300mm of backfill material shall meet the requirements for M.T.O. Granular "A" and shall be placed in lifts not exceeding 150mm in thickness and each lift shall be thoroughly compacted to produce a density of 100% Standard Proctor.

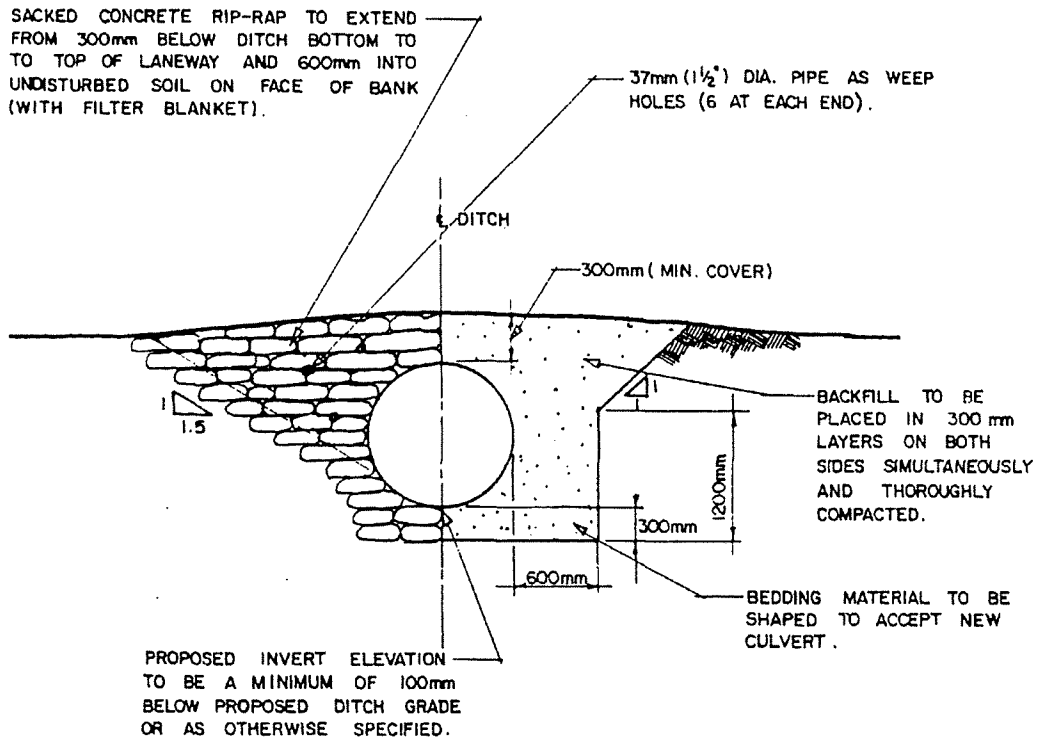
7. (cont'd)

- c) where the road surface is paved, the Contractor shall be responsible for placing an HL-4 Hot Mix Asphalt patch of the same thickness as the existing pavement. The asphalt patch shall be flush with the existing roadway on each side and not overlap. If the asphalt patch is not placed immediately over the backfill, the Granular "A" shall be brought up flush with the existing asphalt and a liberal amount of calcium chloride shall be spread on the gravel surface. The asphalt patch must be completed within 10 days of cutting the pavement.
 - d) the excavated material from the trench beyond a point 1.25 meters from the travelled portion or beyond the outside edge of the gravel shoulder, may be replaced in the trench in the case of covered drains. This material should be compacted in layers not exceeding 600mm. The finished work shall be left in a clean and orderly manner, flush with or slightly higher than the adjacent ground, topsoil replaced, and seeded with a good quality grass seed mixture to the requirements of the County Engineer.
8. The type, location on the right-of-way and the elevations of the catchbasins, inlets and junction boxes shall be as required by the County Engineer or the Drainage Engineer.

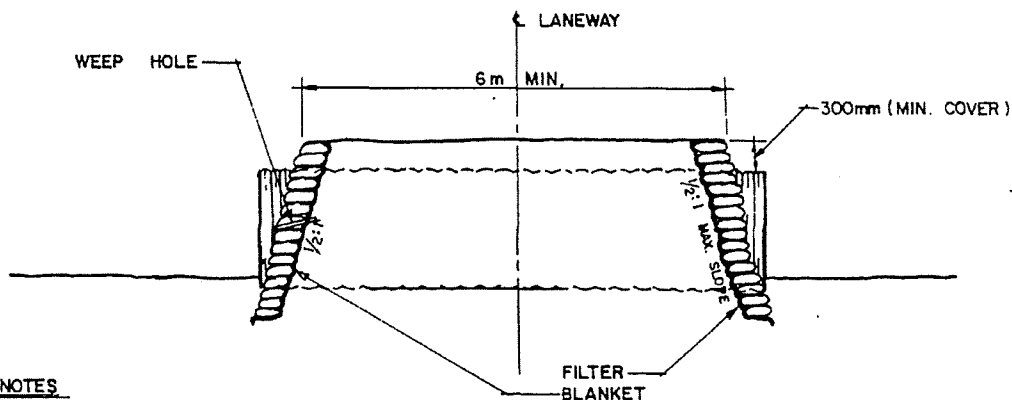
Catchbasins shall conform with the following: -

- unless otherwise specified on the drawings all catchbasins shall be of the ditch inlet type conforming to M.T.O. Standard DD-729 Type B or DD-730 Type A or as manufactured by an approved supplier. Catchbasin grates shall conform to M.T.O. Standard DD-710 or as manufactured by an approved supplier.
 - where standard type catchbasins are specified, they shall conform to M.T.O. Standard DD-702-A, or as manufactured by an approved supplier. Standard catchbasin grates shall conform to M.T.O. Standard DD-710 or as manufactured by an approved supplier.
9. The Contractor shall advise the County Road Department when work on the road allowance is completed so that the County may arrange for inspection.





SECTION



CROSS SECTION

NOTES

- 1) WHERE THE CULVERT IS TO BE INSTALLED UNDER A FARM ACCESS LANE, BEDDING & BACKFILL MATERIAL TO BE M.T.C. GRANULAR "B" AND THE TOP 150mm TO BE M.T.C. GRANULAR "A".
- 2) WHERE THE CULVERT IS TO BE INSTALLED UNDER A FIELD ENTRANCE, BEDDING & BACKFILL MATERIAL SHALL BE APPROVED ON "SITE" FILL.

TYPICAL FARM CULVERT

| | | | |
|------------------------------|--------------------------|---------|----------------------------------|
| SCALE: N.T.S. | APPROVED BY: | JOB NO. | DRAWN BY: <i>BJC</i> |
| DATE: JAN. 1983 | | | REVISED |
| SECTIONS | | | STANDARD DETAILED DRAWING No. 02 |
| SPRIET ASSOCIATES CONSULTING | LONDON LIMITED ENGINEERS | | |

