

SCHEDULE "A"

to

BY-LAW #366 (1976)

THE DRAINAGE ACT
R.S.O. 1970 CHAPTER 136
TOWN OF PELHAM
AMENDED REPORT AND ASSESSMENT ON
THE BIG CREEK DRAIN

SPECIFICATIONS FOR OPEN DITCHES

ON
BIG CREEK DRAIN
TOWNSHIP OF PELHAM 1975

1. Ditches are to be excavated to the depth, bottom width and sides slopes on the Profile. Due to the loamy nature of the soil throughout the course of these ditches, the Contractor on this work will be required by the Engineer to strictly adhere to the side slopes on the Profile.
2. The Contractor must carefully replace all fences doing as little damage as possible.
3. All grade stakes are to be carefully preserved as the Contractor will be required to pay the cost of resetting lost stakes.
4. The sections are to be completed in turn, commencing at the lower end of each drain.
5. The Contractor under these Specifications will be required to excavate under all culverts to the grade line as shown on the Profile.
6. The Contractor, throughout the course of this work will be responsible to see that cattle and horses owned by the different owners through whose land the ditch is run are not allowed to stray from the premises due to fences being out at the property line.
7. The Contractor under these Specifications will be required to carry out his operations with as little inconvenience as possible to the owner of the land on which he is operating.
8. Payment for the work will be made upon certificate of the Engineer as follows:

80% of the value of the work done will be paid upon completion of each section and the balance of the amount of the work will be paid after all the work is completed and the Engineer has had an opportunity to inspect the whole ditch.

cannot agree on the manner in which the excavated earth is to be deposited, then it shall be the Contractor's duty to immediately notify the Engineer, who will inspect and direct the depositing of the earth.

In cases where the owner does not occupy the lands upon which the ditch is located and cannot be interviewed by the Contractor, the Contractor will notify the Engineer at least two days in advance of moving on to the said owner's lands and no work shall be done on that owner's property until the Engineer has had an opportunity to inspect and direct the Contractor as to the disposal of material.

The excavated material is to be levelled by bulldozer, grader or other mechanical means to a uniform height of not more than 0 feet and 6 inches above the normal ground level. It shall be the Contractor's duty before commencing levelling operations on each owner's property to interview each owner and insofar as practicable in carrying out the levelling operations as specified above to a height of 0 feet and 6 inches to co-operate with and satisfy the owner's requirements.

In cases where the owner does not occupy his lands, the Contractor is not able to contact him, the Contractor will adhere to the 0 feet and 6 inches specification as outlined above.

In all cases, the surface of the excavated material is to be left in such condition that any form of farm cultivation machinery may be operated on the surface of the spoil bank.

In all cases where the owner occupies the land, it shall be the Contractor's duty, after completion of the levelling to obtain in writing the owner's signature that the banks are levelled to his satisfaction. Forms for the owner's signature will be supplied by the Engineer to the Contractor. The Contractor will then deliver or mail the said certificates to the Engineer.

In all cases notwithstanding the fact that the owner may or may not certify in writing that the banks are levelled to his satisfaction, the final approval of the levelling of the banks shall rest with the Engineer.

10. The price bid per cubic yard for earth excavation of drains is to include the following:

(3)

- (e) Salvage and replacement to grade of all existing culverts, excepting when the structure is a poured concrete culvert, if required.

All salvage culvert or crossing materials shall be:

- (a) Carefully piled clear of the site of the spoil banks for the original owner.
- (b) Removed from the site and stored in the Public Works Department Yard.
- (c) Removed from the site and re-used as required.
- (d) Removed from the site and disposed of by the Contractor, at the discretion of the Engineer.
- (f) Earth excavation is to include earth, shale, hardpan and boulders not over 10 cubic feet in volume.
- (g) Loading and trucking to any point designated by the Engineer within a radius of 6 miles of the site of the ditches of all rocks and boulders excavated having a cubic capacity of 3 cubic feet or more.
- (h) The price bid per cubic yard of earth excavation isto include the cost of clearing right-of-way as specified under Subsections (a) to (e) both inclusive of Section 13.
- (i) The complete supply, assembly and installation of all culverts (noted on the plans, profile or specifications and all other materials required for installation) unless otherwise specified.
- (j) All corrugated iron, tile or concrete pipes to be supplied by the Township shall be at the Public Works Department Yard. The Contractor shall transport them to the building site; however, the Contractor may make his own arrangements with the supplier for the delivery of the material to the building site.

11. The price bid per cubic yard for earth excavation is not to include the cost of moving telephone lines and hydro lines required to be moved for the operation of excavation machinery. The cost of moving all poles and telephone and hydro lines considered necessary by the Engineer will be borne by the Corporation of the Township of PELHAM.

12. Unless otherwise directed by the Engineer, all excavated material, shall be deposited adjacent to and parallel to Township Roads

(4)

- (a) the finished drain shall be disposed of at a point or points designated by the Engineer within a radius of 6 miles of the site of the drain.
 - (b) All trees having a diameter at the ground line of 4 inches or over which are situated on the area occupied by the specified finished spoil bank shall be cut at the ground line and placed well clear of said spoil bank.
 - (c) All trees cut in accordance with Clause (1) and (2) when removed clear of the spoil bank are to remain the property of the owner on whose lands they are cut.
 - (d) All underbrush and trees having a diameter less than 4 inches at the ground line which are situated on the area to be occupied by the finished ditch and spoil bank are to be cut at a height not to exceed 6 inches above the ground line, piled and burned.
 - (e) In lieu of cutting, piling and burning said underbrush and trees, the Contractor may at his option, remove same by bulldozer or other method and dispose of same by trucking to points designated by the Engineer within a radius of 6 miles of the site of the drains.
14. A marked cheque to the Treasurer of the Townships of Pelham for 10% of the value of the Tender is to be submitted with each Tender.
15. The successful Contractor will be required to post with the Townships Clerk an approved Surety Bond for the proper fulfillment of the contract as required by the Specifications in an amount equal to the full amount of his Tender price.

16. The Contractor shall be responsible for any and all damages or claims for damages for injuries or accidents done or caused by him or his employees or resulting from the prosecution of the works or any of his operations or caused by reason of the existence or location or condition of the works or of any material, plant or machinery used thereon or therein or which may happen by reason thereof, or arising from any failure, neglect or omission on his part or on the part of any of his employees, to do or perform any or all of the several acts or things required to be done by him or them under and by these conditions and covenants and agrees to hold the Purchaser harmless and indemnified for all such damages and claims for damages; and in case of the Contractor's failure, neglect or omission to observe the provisions of these conditions and strictly all the provisions of these

(5)

The Contractor shall at all times pay or cause to be paid any assessment or compensation required to be paid pursuant to the Workmen's Compensation Act and upon failure to do so, the Purchaser may pay such assessment or compensation to the Workmen's Compensation Board and deduct or collect such expenses from monies due the Contractor.

17. Should any discrepancy appear or difference of opinion or misunderstanding arise as to the meaning of the Contract or the general conditions, specifications or plans or as to any omissions therefrom, the same shall be determined by the Engineer and his decision shall be final and binding upon all parties concerned and from which there shall be no appeal.

Dated at Niagara Falls, Ontario, this 6th day of November 19 75.

 P. Eng.
~~Township Engineer~~
Consulting Engineer

SUPPLEMENTAL SPECIFICATIONS

1. The Big Creek Drain crosses the north parts of Lots Nos. 3 and 4, Concession No. 14, Township of Pelham, owned by the Highland Golf Course. Throughout the course of the drain across this property the Contractor is required to consult jointly with the owner and the Engineer with regard to disposal of earth taken from the Drain. Item 2 of our estimate of the cost of the work recommended herein deals with loading and trucking of excavated material in the amount of 3,400 cu. yds. The Contractor at his bid price for this item is required to load and truck to any point on the Highland Golf Course the estimated 3,400 cubic yards of earth or such greater or lesser quantity that is agreed upon by joint consultation referred to above between the owner, the Contractor and the Engineer. The Engineer shall be the final judge as to the amount of earth to be distributed on the Highland Golf Course.
2. All dams presently installed on the Highland Golf Course are to be removed by the Contractor if the crest of the dam is found by the Engineer to be above the bottom grade line of the drain as shown on the Profile.

TOWN OF PELHAM

REGIONAL MUNICIPALITY OF NIAGARA

REPORT OF ENGINEER PURSUANT TO THE PROVISIONS OF THE DRAINAGE ACT, BEING
R.S.O. 1970, CHAPTER 136, ON THE BIG CREEK MUNICIPAL DRAIN

TO:

The Mayor and Members of Council,
Town of Pelham

Gentlemen:

Our Report on the Big Creek Municipal Drain dated February 11th, 1974, was referred back to us pursuant to R.S.O. 1970, Chapter 136, Section 28. Copy of a letter dated February 20th, 1975, signed by Deputy Clerk G. Cherney we quote as follows:

"Council of the Town of Pelham at its February 10th, 1975, meeting passed the following resolution:

"That Council of the Town of Pelham on the recommendation of the Public Works and Utilities Committee of the Town wishes to go on record as intending to initiate the work on the Big Creek Drain as outlined in the Engineer's Report prepared by R. Blake Erwin on behalf of Wilfred J. Smith & Associates dated February 11th, 1974, and that staff be authorized to submit the report back to the Engineers for revision and further consideration of the number of bridges after which time it is to be returned to Council for perusal."

The following Resolution of your Council was passed on

November 22nd, 1971:

Moved:by: Mr. Brown

Seconded by: G. Shields

Big Creek as described above is the outlet for the following tributary Municipal Drains:

The Ridgeville Branch of the Big Creek Drain enter Big Creek in Lot No. 3, Concession No. 14, the Cyrus Nunn Drain in Lot No. 10, Concession No. 13, the James Swayze Drain in Lot No. 14, Concession No. 13, and the Disher Creek Drain in Lot No. 14, Concession No. 13. Each of these Drains bring down a substantial flow of water to the Big Creek Drain. My surveys, cross sections and profile of the Big Creek Drain clearly indicate that the said Drain requires a major work of maintenance, repair and improvement throughout its full length. The drainage area tributary to the Big Creek Drain has been subdivided extensively. Our surveys indicate that approximately 789 properties out of a total of approximately 1,206 properties in the drainage area have an area of 4.1 acres or less. It is our experience that the subdivision of land into a large number of small parcels substantially increases the run-off. Accordingly in recommending the size of the Drain as shown in detail on the profile, which accompanies this Report, we have allowed for the additional run-off from approximately 789 small parcels.

The subject of farm bridges as provided for by R.S.O. 1970, Chapter 136, Section 8, Subsection 5, has been given lengthy and serious consideration. It could be argued that a number of 10 acre parcels fronting on Webber Road (now Regional Road No. 29) will have little use for farm bridges. Consideration was given to the often used practice of allowing a sum of money to each owner to use to build his own bridge. Consideration was also given to making a cash allowance to each owner under the category of severance. The writer of this Report has been engaged in Drainage Engineering for 50 years and has dealt with this subject of farm bridges from many aspects. In many cases where in past years farmers have been given an

after which time it is to be returned to Council for perusal."

The writer of this Report did on May 7th, 1975, attend at the Office of Todgham and Case Ltd., Consulting Civil Engineers, Chatham, Ontario. Mr. H. H. Todgham is recognized as one of the outstanding authorities on Drainage Engineering under the Municipal Drainage Act. The writer sought Mr. Todgham's advice on the matter of farm bridges, a matter specifically brought to our attention in the latter part of Deputy Clerk Cherney's letter of February 20th, 1975.

A copy of Mr. Todgham's letter dated May 8th, 1975, and addressed to the writer of this report, is attached to, as part of this report. Mr. Todgham is in agreement with our method of providing farm bridges in our original report dated February 11th, 1974. We, therefore, make no change in this amended report on the subject of Farm Bridges. Report re disposal of material to be taken from drainage work, pursuant to R.S.O. 1970, Chapter 136, Section 8, Sub-section 1

Clause 9 of the Specifications sets out in detail the manner in which the excavated material to be taken from the drainage work is to be disposed of. Part of the first line of paragraph 1 of Clause 9 I quote as follows: "Excavated earth unless otherwise specified herein is to be deposited not less than 6 feet back from the top of the ditch slope. Excavated material is to be deposited on one or both sides of the drain". Lands owned and occupied by "The Highland Golf Course" in Lots 3 and 4, Concession No. 14, Pelham Township, require to be specially dealt with because of the nature of the use of the said lands. Clause 1 of "Supplementary Specifications" sets out in detail the method of excavating and disposing of earth excavated from the Big Creek Drain across the said Highland Golf Course.

Allowances under Subsection 1 of Section 8 of R.S.O. 1970, Chapter 136, (allowances for damage to lands and crops occasioned by disposal of material to be taken from the Big Creek Drain

H. Dyck - part Twp. Lot 2, Con. 14, Township of Pelham, now in Town of Pelham	16.50
Highland Golf Course - part Twp. Lot 3, Con. 14, Township of Pelham, now in the Town of Pelham	36.60
Highland Golf Course - part Twp. Lot 4, Con. 14, Township of Pelham, now in Town of Pelham	20.00
J. Pollack, part Twp. Lot 5, Con. 14, Township of Pelham now in Town of Pelham	43.40
H. Montovani - part Twp. Lot 6, Con. 14, Township of Pelham, now in Town of Pelham	52.10
J. S. Duliban - part Twp. Lot 7, Con. 14, Township of Pelham, now in Town of Pelham	14.90
G. Molnar - part Twp. Lot 7, Con. 14, Township of Pelham, now in Town of Pelham	9.90
C. Giammarco - part Twp. Lot 7, Con. 14, Township of Pelham, now in Town of Pelham	12.40
P. Gugliemi - part Twp. Lot 7, Con. 14, Township of Pelham, now in Town of Pelham	17.40
R. Hansen - part Twp. Lot 8, Con. 14, Township of Pelham, now in Town of Pelham	9.90
D. Panagabko - part Twp. Lot 8, Con. 14, Township of Pelham, now in Town of Pelham	17.40
G. Knezik - part Twp. Lot 8, Con. 14, Township of Pelham, now in Town of Pelham	17.40
S. Jevcak - part Twp. Lot 8, Con. 13, Township of Pelham, now in Town of Pelham	6.30
E. Ripper - part Twp. Lot 9, Con. 13, Township of Pelham, now in Town of Pelham	4.70
P. Rocca - part Twp. Lot 9, Con. 13, Township of Pelham, now in Town of Pelham	4.70

S. Gabor - part Twp. Lot 10, Con. 13, Township of Pelham, now in Town of Pelham	4.70
G. Fedor - part Twp. Lot 10, Con. 13, Township of Pelham, now in Town of Pelham	4.70
J. Vukanick - part Twp. Lot 10, Con. 13, Township of Pelham, now in Town of Pelham	4.10
W. Gabor - part Twp. Lot 10, Con. 13, Township of Pelham, now in Town of Pelham	3.80
D. J. Bossert - part Twp. Lot 11, Con. 13, Township of Pelham, now in Town of Pelham	20.30
Welland District Association for Retarded Children - part Twp. Lot 12, Con. 13, Township of Pelham, now in Town of Pelham	18.00
W. Fitkin and M. Millar - part Twp. Lot 12, Con. 13, Township of Pelham, now in Town of Pelham	7.82
R. T. Philips - part Twp. Lot 13, Con. 13, Township of Pelham now in Town of Pelham	25.00

Total Allowance for damage of lands and crops \$538.42

Bridges and Culverts on Roads pursuant to R.S.O. 1970, Chapter 136, Section 8,
Sub-Section 2

The cost of bridges or culverts throughout the course of the drainage works which may become necessary due to the widening and deepening of Big Creek and which may be rendered necessary by the Drainage works crossing any public road or part thereof are hereby apportioned to the Municipality having jurisdiction over roads within the drainage area. By-Law As To Assessments for Bridges and Culverts on roads, pursuant to R.S.O. 1970, Chapter 136, Section 8, Subsection 3

It is hereby recommended that a By-Law be passed by the Council pursuant to the above.

Highland Golf Course - The Highland Golf Course owners of part Lots 4 and 5, Concession 14, at the time of writing this report are in the process of rebuilding two farm bridges and are repairing one farm bridge.

Pursuant to Subsection (5) of Section 8, of R.S.O. 1970, Chapter 136, the cost of the work referred to above on the Highland Golf Course is hereby provided for at our estimate cost of \$8,920.00

Highland Golf Course - Parts Lots 4 and 5,
Concession 14 - Rebuild 4 wooden foot bridges @ \$1200.00 4,800.00

J. S. Bulikan - part Lot 7, Con. 14 - Twin culverts of 12 gauge 10'-2"x6'-6" corrugated multiplate pipe arch 20' long 3,960.00

G. Molnar - part Lot 7, Con. 14 - Twin culverts of 12 gauge 10'-2"x6'-6" corrugated multiplate pipe arch 20' long 3,960.00

C. Giammarco - Part Lot 7, Con. 14, Twin culverts of 12 gauge 10'-2"x6'-6" corrugated multiplate pipe arch 20' long 3,960.00

P. Rocca - Part Lot 9, Con. 13 - Twin culverts of 12 gauge 7'-4"x5'-4" corrugated multiplate pipe arch 20' long 3,120.00

A. Nemeth - Part Lot 9, Con. 13 - Twin culverts of 12 gauge 7'-4"x5'-4" corrugated multiplate pipe arch 20' long 3,120.00

S. Gabor - Part Lot 10, Con. 13 - Twin culverts of 12 gauge 7'-4"x5'-4" corrugated multiplate pipe arch 20' long 3,120.00

G. Fedor - Part Lot 10, Con. 13 - Twin culverts of 12 gauge 7'-4"x5'-4" corrugated multiplate pipe arch 20' long 3,120.00

J. Vukanics - Part Lot 10, Con. 13 - Twin culverts of 12 gauge 7'-4"x5'-4" corrugated multiplate pipe arch 20' long 3,120.00

W. Gabor - Part Lot 10, Con. 13 - Twin culverts of 12 gauge 7'-4"x5'-4" corrugated multiplate pipe arch - 20' long 3,120.00

Total for farm bridges \$48,280.00

Allowance for severance pursuant to R.S.O. 1970, Chapter 136, Section 8,

Allowance for right-of-way, etc. pursuant to R.S.O. 1970, Chapter 136, Section 8, Sub-Section 8

No allowance is recommended in this report pursuant to the above.

Allowance for damage due to insufficient outlet, pursuant to R.S.O. 1970, Chapter 136, Section 8, Sub-Section 9

No allowance is recommended in this Report pursuant to the above.

Our estimate of the cost of the work recommended herein is

as follows:

Excavation as per Plans, Profile and Specifications
46,560 cu. yds. @ \$1.00 \$46,560.00

Loading and trucking within the bounds of the Highland
Golf Course - 3,400 cu. yds. @ \$1.00 3,400.00

Allowance for damages to lands and crops occasioned by
disposal of material to be taken from Big Creek Drain -
(R.S.O. 1970, Chapter 136, Section 8, Subsection 1 538.42

Allowance for farm bridges (R.S.O. 1970, Chapter 136,
Section 8, Sub-Section 5) 48,280.00

Allowance for severance (R.S.O. 1970, Chapter 136,
Section 8, Subsection 6) 50.00

Estimate of Legal fees 500.00

Ontario Municipal Board Fees 20.00

Printing and mailing notices re reading of Report 360.00

Printing and mailing notices re by-law 360.00

Printing copies of plans to be mailed to owners 500.00

Contract administration and inspection 3,600.00

Engineering fees re original report dated February 11th, 1974 . 18,539.23

R. Blake Erwin, P.Eng. March 20th, 1975, to November 6th, 1975. Consultation with H. H. Todgham, P.Eng. re farm bridges, supervision of drafting and computing staff, preparation of formulae required to work out the Assessment Schedules of various categories of runoff indices, preparation of final estimate, re-write amended report - 199 hours @ \$25.00 \$4,975.00

J. Panaccia, Draughtsman - March 21st, 1975, to November 6th, 1975, replotting of working drawings from Registry Office searches, replot large scale working drawings of land plans in Fonhill and Ridgeville areas, consultation with Provincial Assessment Office, preparation of 39 detailed assessment sheets - 290 hours @ \$16.50 4,785.00

Computer and Computer Operator - Preparation of Schedule of Assessment on 1206 properties assessed on the Big Creek Drain - 56 hours @ \$25.00 1,400.00

Ontario Land Surveyor field party - Field Surveys in the Fenwick area where Registry Office instrument searches could not be located and plotted on the land plan - 2 days @ \$266.00 532.00

Clerk's Fees 1,000.00

Contingencies 1,200.00

\$145,267.73

Our Schedule of Assessment appended to this Report shows the manner in which, in our opinion, the various owners affected by this Report are assessable in accordance with the Assessment Provisions of the Drainage Act of Ontario.

In accordance with the provisions of Section 48 of the Drainage Act being R.S.O. 1970, Chapter 136 and amendments thereto, we recommend that the drainage work recommended for construction herein be maintained at the expense of all the lands assessed herein for construction on a pro-rata basis with the schedule of assessment which is part of this Report, or as

TODGHAM & CASE LIMITED

CONSULTING CIVIL ENGINEERS

2ND FLOOR, 1111 BAYVIEW AVE., SCARBOROUGH, ONTARIO
M1S 1B5

May 21st, 1975.

Mr. R. Blake Erwin, P. Eng., O.L.S.,
R. Blake Erwin & Associates,
Box 121,
Niagara Falls, Ontario.

Re: Big Creek Drain,
Town of Pelham.

Dear Blake:

It was a pleasure to meet with you yesterday and discuss this drainage project with which you are involved, in collaboration with Wilfred J. Smith & Associates Limited. The problem that you explained to me concerning the objections by some of the owners to installing farm culverts as part of the work is not an unusual one but does come up, from time to time, especially on those projects where the drain crosses a large number of small parcels.

Although I have not examined the drain or the properties through which it passes, I can, perhaps, give you a few comments that may be helpful.

Prior to 1962, the Municipal Drainage Act required the Engineer to make an allowance to each owner for the construction or enlargement of any farm bridge rendered necessary by the work. Unfortunately, it frequently happened that an owner would accept his allowance but would not spend it on his bridge. Instead, he would put it in his pocket and if he or a subsequent owner required a bridge, the municipality would be requested to provide it. It also frequently happened that the owner might spend part of the allowance on the installation of a small or inadequate structure which would soon collapse and form an obstruction in the drain. As a member of the committee that reviewed The Drainage Act and recommended

Mr. R. Blake Erwin, P. Eng., O.L.S.

May 8th, 1975.

you have no alternative but to provide for a bridge on each property if it appears that the owner either has now or will in the foreseeable future have need to cross from one side of the drain to the other. Certainly, this has been my practice since the revision of the Act in 1963.

Occasionally, it happens that an owner has several farm crossings, especially on larger pieces of property. If it appears that these crossings are all necessary for the owner to carry on his normal operation on the property, it seems clear that there is an obligation on the drain to ensure that he continues to have suitable crossings in the same locations. In the case of the Golf Course, then, it may well be necessary to provide for more than one bridge if the Golf Course now has more than one crossing of the channel in operation. In other words, each owner is entitled to be left at least as well off in the matter of farm crossings after the work has been completed as he was before.

I should perhaps direct your attention to Section 8 (6) of The Drainage Act which makes provision for allowance for severance. If the Engineer thinks it expedient to make an allowance for severance instead of providing for the construction of a bridge he may do so but I believe that this really has rather limited application and should normally only be used where the cost of constructing a proper crossing would exceed the value of the land severed by the work. It is also my understanding that where a channel is already in existence, the amount of the severance allowance is related to the increase in the severance rather than to the value of a completely new structure.

I trust that the foregoing comments adequately summarize our discussion but if there is further information that you require, please do not hesitate to give me a call.

Yours very truly,

TODGHAM AND CASE LIMITED