

## Regular Council Agenda AGENDA

Tuesday, February 27, 2018, 7:00 PM  
Tecumseh Town Hall  
www.tecumseh.ca

### Pages

1. Order
2. Moment of Silence
3. National Anthem
4. Roll Call
5. Disclosure of Pecuniary Interest
6. Minutes
  - a. Regular Council Meeting 4 - 12  
February 13, 2018
  - b. Special Council Meeting 13 - 15  
February 13, 2018
7. Supplementary Agenda Adoption
8. Communications for Information
  - a. Windsor Essex County 2018 Accessibility Awards 16 - 20  
Re: Call for Nominations
9. Communications Action Required
  - a. Town of Essex 21 - 22  
Re: Offering School Properties to Municipalities  
  
**That** the resolution from the Town of Essex regarding the sale of surplus school properties to municipalities for a dollar, **be supported.**
  - b. Essex Region Conservation Foundation 23 - 24  
Re: 30th Annual Golf Tournament  
  
**That** the Town's Essex Region Conservation Authority (ERCA) representatives [or alternate Members of Council should they be unable to attend] **be authorized** to attend the Essex Region Conservation Foundation's 30th Annual Golf Tournament, on July 12, 2018, subject to funding in the 2018 budget and the provisions of the Town's Travel and Professional Development Policies.
10. Committee Minutes
  - a. Youth Advisory Committee 25 - 27  
February 12, 2018

## 11. Reports

### a. Parks & Recreation Services

1. PRS-2018-01, Optimist Club's Victoria Day Weekend Fireworks 2018 28 - 32

### b. Planning & Building Services

1. PBS-2018-04, Encroachment Agreement, 1130 Lesperance Road 33 - 44
2. PBS-2018-05, Potential One-Year Moratorium on Commercial Development and Hotel Building Permit Fees 45 - 49
3. PBS-2018-06, 2017 Year End Permit Report 50 - 54
4. PBS 2018-07, D19 SANTA, Santarossa ZBA and Plan of Subdivision 55 - 69

### c. Public Works & Environmental Services

1. PWES-2018-07, Various 2018 Watermain Improvement Projects - Tender Award 70 - 76
2. PWES-2018-10, 2017 Tecumseh Distribution System - Inspection Report 2 77 - 105
3. PWES-2018-11, Source Protection Municipal Implementation Funding (SPMIF) Agreement Amendment No. 4 106 - 120
4. PWES-2018-12, Drinking Water Quality Management System Operational Plan Version 8 121 - 249

## 12. By-Laws

### a. By-Law 2018-13 250 - 303

Being a by-law to provide for the repair and improvements to the 7th Concession Drain

### b. By-Law 2018-14 304 - 310

Being a by-law to authorize the execution of an Agreement between The Corporation of the Town of Tecumseh and Farid Icho Youssouf

### c. By-Law 2018-15 311 - 315

Being a by-law to authorize the execution of an Amendment to the Grant Funding Agreement between The Corporation of the Town of Tecumseh and Her Majesty the Queen in Right of Ontario as represented by the Minister of the Environment and Climate Change (Source Protection Municipal Implementation Fund)

### d. By-Law 2018-16 316 - 317

Being a by-law to amend By-Law 85-18, the Town's Comprehensive Zoning By-law for those lands in the former Township of Sandwich South. CON 8, W PT LOT 12 (Santarossa Business Park)

## 13. Unfinished Business

### a. Unfinished Business Listing 318 - 319

February 27, 2018

## 14. New Business



15.

Motions
- a.

Confirmatory By-law
1.

By-Law 2018-17

320 - 320

Being a by-law to confirm the proceedings of the February 27, 2018 regular meeting of the Council of The Corporation of the Town of Tecumseh
16.

Notices of Motion
17.

Next Meeting

The next Regular Council meeting will be held at 7:00 pm on Tuesday, March 13, 2018.
18.

Adjournment

**MINUTES OF A REGULAR MEETING OF  
THE COUNCIL OF THE TOWN OF TECUMSEH**

Tecumseh Council meets in regular public session on Tuesday, February 13, 2018, in the Council Chambers, 917 Lesperance Road, Tecumseh, Ontario at 7:00 pm.

(RCM 2-1)

**ORDER**

The Mayor calls the meeting to order at 7:10 pm.

(RCM 2-2)

**MOMENT OF SILENCE**

The Members of Council and Administration observe a moment of silence.

(RCM 2-3)

**NATIONAL ANTHEM**

The Members of Council and Administration observe the National Anthem of O Canada.

(RCM 2-4)

**ROLL CALL**

Present:	Mayor	- Gary McNamara
	Deputy Mayor	- Joe Bachetti
	Councillor	- Bill Altenhof
	Councillor	- Andrew Dowie
	Councillor	- Brian Houston
	Councillor	- Tania Jobin
	Councillor	- Rita Ossington

Absent:

Also Present:	Chief Administrative Officer	- Tony Haddad
	Director Corporate Services & Clerk	- Laura Moy
	Director Fire Services & Fire Chief	- Doug Pitre
	Director Information & Communication Services	- Shaun Fuerth
	Director Planning & Building Services	- Brian Hillman
	Director Public Works & Environmental Services	- Dan Piescic
	Deputy Clerk & Manager Legislative Services	- Jennifer Alexander
	Deputy Treasurer & Tax Collector	- Tom Kitsos
	Manager Parks & Horticulture	- Casey Colthurst
	Manager Engineering Services	- Phil Bartnik
	Manager Planning Services	- Chad Jeffery
	Manager Strategic Initiatives	- Lesley Racicot

**DISCLOSURE OF PECUNIARY INTEREST**

There is no pecuniary interest declared by a Member of Council.

(RCM 2-5)

**MINUTES**

Motion: (RCM-29/18) Moved by Councillor Tania Jobin  
 Seconded by Councillor Brian Houston  
**That** the minutes of the January 30, 2018 Regular Meeting of Council, and the minutes from the January 30, 2018 Public Meeting of Council as were duplicated and delivered to the Members, are adopted.

Carried

(RCM 2-6)

**SUPPLEMENTARY AGENDA ADOPTION**

None.

(RCM 2-7)

**DELEGATIONS****Robert Charlton**

Mr. Charlton advises that a cheque was delivered to the Parks & Recreation Department to help restore the Lacasse playground equipment. The funds were raised in cooperation with A.V. Graham and St. Pius Schools.

The Mayor, on behalf of Council, commends Mr. Charlton, and all involved, for their support and thanked them for their efforts.

(RCM 2-8)

**COMMUNICATIONS****Communications – For Information**

None.

**Communications – Action Required**

A. Ontario Farmland Trust Re: 2018 Ontario Farmland Forum

Motion: (RCM-30/18) Moved by Councillor Tania Jobin  
 Seconded by Councillor Brian Houston  
**That** the Mayor and Members of Council be authorized to attend the 2018 Farmland Forum on April 5, 2018 in Prince Edward County, subject to the provisions of the Town's Professional Development and Travel Policy.

Carried

B. Association of Municipalities of Ontario Re: AMO Policy Update – Call to Action - Fire Medic Protection Needed for Municipal Governments

Motion: (RCM-31/18) Moved by Councillor Rita Ossington  
 Seconded by Deputy Mayor Joe Bachetti  
**Whereas** Bill 160, the Strengthening Quality and Accountability for Patients Act amended the Ambulance Act to permit the Ministry of Health and Long Term Care to enable two pilot projects hosted by willing municipal governments to allow fire fighters, certified as paramedics, to treat patients while on duty with a fire department; and  
**Whereas** the Government of Ontario is committed to proceeding with the pilots and enabling the fire-medic model despite the absence of objective evidence to show that it would improve patient outcomes or response times; and  
**Whereas** the current interest arbitration model, particularly in the fire services sector, allows arbitrators to impose awards on unwilling employers that directly impact the employer's ability to determine how it will deploy its workforce, as evidenced by the

experience of many municipalities in regards to the 24-hour shift;  
and

**Whereas** in the absence of legislative protection, unwilling municipalities may be forced to enter into a pilot or adopt a fire-medical model as a result of interest arbitration; and

**Whereas** the Association of Municipalities of Ontario and its municipal members have called on the Government of Ontario to introduce legislative amendments to the *Fire Protection and Prevention Act, 1997* and the *Ambulance Services Collective Bargaining Act* to preclude arbitrators from expanding the scope of work for fire fighters and paramedics respectively through interest arbitration awards; and

**Whereas** there is precedent for a restriction on the scope of jurisdiction of arbitrators in section 126 of the *Police Services Act* which precludes arbitrators from amending the core duties of police officers; and

**Whereas** the Government of Ontario has committed that no unwilling municipal government will have a fire-medical pilot or program imposed upon them.

**Now Therefore Be It Resolved:**

**That** the Town of Tecumseh calls on the Government of Ontario to act immediately so that legislative amendments, that will protect unwilling municipalities from being forced by arbitrators to have a fire medical pilot or program, are placed within the upcoming Budget Bill before the Ontario Legislature rises for the provincial election.

**That** a copy of this resolution be forwarded to Premier Kathleen Wynne, Office of the Premier; Hon. Dr. Eric Hoskins, Minister of Health and Long Term Care; Hon. Marie-France Lalonde, Minister of Community Safety and Correctional Services; Hon. Kevin Flynn, Minister of Labour, Hon. Bill Mauro, Minister of Municipal Affairs; [local members of provincial parliament]; and the Association of Municipalities of Ontario.

Carried

(RCM 2-9)

**COMMITTEE MINUTES**

Motion: (RCM-32/18)      Moved by      Councillor Bill Altenhof  
Seconded by      Councillor Andrew Dowie

**That** the January 25, 2018 minutes of the Senior Advisory Committee, as was duplicated and delivered to the Members of Council, are accepted.

Carried

(RCM 2-10)

**REPORTS**

CAO-2018-01 Accomplishments 2017

Motion: (RCM-33/18)      Moved by      Councillor Andrew Dowie  
Seconded by      Councillor Bill Altenhof

**That** the 2017 accomplishments by the various Town departments be acknowledged.

As recommended by the Chief Administrative Officer under Report No. CAO-2018-01.

Carried

## CAO-2018-03 Canada Post Addressing Initiative Tecumseh

Motion: (RCM-34/18) Moved by Councillor Bill Altenhof  
Seconded by Deputy Mayor Joe Bachetti  
**That** Council Report CAO-2018-03 Canada Post Addressing Initiative Tecumseh be received;  
**And that** a resolution of Council be sent to Canada Post requesting the Town of Tecumseh be placed in the Addressing Initiative Schedule for Tecumseh to be the single municipal name for postal mail purposes.  
As recommended by the Chief Administrative Officer under Report No. CAO-2018-03.

Carried

## CAO-2018-04 Chartwell St. Clair Beach Retirement Residence Lease Agreement

Motion: (RCM-35/18) Moved by Councillor Brian Houston  
Seconded by Councillor Bill Altenhof  
**That** the Mayor and the Clerk be authorized to execute an Agreement with Chartwell St. Clair Beach Retirement Residence for the lease of additional parking spaces at the municipal parking lot located at Lakewood Park.  
As recommended by the Chief Administrative Officer under Report No. CAO-2018-04.

Carried

## CS-2018-01 Committee and Board Honorariums

Motion: (RCM-36/18) Moved by Councillor Bill Altenhof  
Seconded by Councillor Rita Ossington  
**That** an increase from \$50 to \$100 in the Committee of Adjustment monthly honorarium be approved effective January 1, 2018 until the end of 2021;  
**And that** a review of the honorariums for Committees and Boards be carried out every two (2) years.  
As recommended by the Deputy Clerk & Manager Legislative Services under Report No. CS-2018-01.

Carried

## CS-2018-03 Civil Marriage Services and Officiants

Motion: (RCM-37/18) Moved by Deputy Mayor Joe Bachetti  
Seconded by Councillor Brian Houston  
**That** Bylaw No. 2018-09 being a by-law to authorize the service of Civil Marriage Ceremonies, be adopted;  
**And that** Civil Marriage Ceremonies Policy No. 94, be amended to include a rehearsal fee of \$50.00 per hour and mileage to be paid in accordance with Travel Policy No. 14.  
As recommended by the Deputy Clerk & Manager Legislative Services under Report No. CS-2018-03.

Carried

## CS-2018-04 Dog Pound Lease Agreement Renewal

Motion: (RCM-38/18) Moved by Councillor Bill Altenhof  
Seconded by Councillor Brian Houston  
**That** By-law No. 2018-10 being a by-law to authorize the Mayor and Clerk to execute a 20-year Lease Agreement with the County of Essex and the Towns of Essex, Lakeshore and LaSalle for the use of a portion of the property on part of the closed Landfill No. 3, located at 914 Puce Road in Lakeshore, for the Dog Pound Facility, be approved.  
As recommended by the Director Corporate Services & Clerk under Report No. CS-2018-04.

Carried

CS-2018-05 Restricted Acts of Council after Nomination Day Lane Duck Provisions

Motion: (RCM-39/18) Moved by Councillor Rita Ossington  
Seconded by Councillor Tania Jobin  
**That** Corporate Services & Clerk's Report No. CS-2018-05 regarding the restricted acts of Council after Nomination Day (Lane Duck Provisions), be received.  
As recommended by the Director Corporate Services & Clerk under Report No. CS-2018-05.

Carried

FS-2018-01 Taxes Receivable December 2017

Motion: (RCM-40/18) Moved by Deputy Mayor Joe Bachetti  
Seconded by Councillor Bill Altenhof  
**That** Financial Services Report No. 2018-01, Taxes Receivable December 2017 be received.  
As recommended by the Deputy Treasurer & Tax Collector under Report No. FS-2018-01.

Carried

FS-2018-02 Ontario Infrastructure and Lands Corporation (OILC) Borrowing 2018

Motion: (RCM-41/18) Moved by Councillor Brian Houston  
Seconded by Councillor Andrew Dowie  
**That** borrowing upon 2.82 percent (estimated) 5 year amortizing debenture in the Principal amount of \$99,200 for the financing of Pulleyblank/Crowder/Moro Sanitary Sewer construction costs for 2018, be approved.  
As recommended by the Director Financial Services & Treasurer under Report No. FS-2018-02.

Carried

FIRE-2018-01 Tecumseh Fire Services 2017 Year End Overview

Motion: (RCM-42/18) Moved by Councillor Brian Houston  
Seconded by Deputy Mayor Joe Bachetti  
**That** the Tecumseh Fire Services 2017 Year End Overview presented in the Fire & Emergency Services Department Report FIRE-2018-01, be received.  
As recommended by the Director Fire Services & Fire Chief, C.E.M.C. under Report No. FIRE-2018-01.

Carried

PBS-2018-02 Annual Status Report on the Tecumseh Transit Service for 2017 and Potential Changes to the Tecumseh Transit Service for 2018

The Manager Planning Services explains PBS-2018-2018-02 report and the recommendations contained therein.

Motion: (RCM-43/18) Moved by Councillor Rita Ossington  
Seconded by Councillor Bill Altenhof  
**That** Amy Martel be permitted to address Council on the Tecumseh Transit Service Report.

Carried

Amy Martel expresses support for the recommendation of a 50 percent reduction in the price of a monthly bus pass for riders on Ontario Works.

It is recommended that Administration look into a grant to further reduce the cost for Ontario Works riders.

Motion: (RCM-44/18) Moved by Councillor Rita Ossington  
 Seconded by Councillor Andrew Dowie  
**That** Planning and Building Services Department Report No. 02/18 be received;  
**And that** an Open House to obtain public input on the potential changes to the Tecumseh Transit Service for 2018, as noted in Planning and Building Services Department Report No. 02/18, be scheduled;  
**And further that** a 50 percent reduction in the price of a monthly bus pass for riders on Ontario Works be authorized and the administration investigate grant funding to further assist in reducing the cost for Ontario Works riders;  
**And further that** the implementation of June as “Seniors Ride the TTS for Free Month” be approved.

Carried

In response to a query, the Director Planning & Building Services advises that advertising on buses and transit stop shelters would not constitute a breach of the Sign By-law.

PBS-2018-03 Official Plan Amendment and Zoning By-Law Amendment 2593430 Ontario Limited (Petretta Construction) 14328 & 14346 Tecumseh Road (Former Pud's Marina)

Motion: (RCM-45/18) Moved by Councillor Brian Houston  
 Seconded by Councillor Bill Altenhof  
**That** the scheduling of a public meeting to be held on Tuesday, March 13, 2018 at 5:30 p.m., for the applications submitted by 2593430 Ontario Limited (Petretta Construction) to amend the St. Clair Beach Official Plan and Zoning By-law 2065 for a 1.4 hectare (3.6 acre) parcel of land located on the north side of Tecumseh Road, approximately 45 metres east of its intersection with Brighton Road (14328 & 14346 Tecumseh Road), from:

- I. the current Official Plan designation of “Commercial” to a “Medium Density Residential” designation with a site-specific policy that will establish a maximum density of 51 units per hectare, permit an accessory marina and a limited range of ground floor commercial uses; and
- II. the current “General Commercial Zone (C1-5)” to a site-specific “Residential Type Three Zone (R3-13)”

in order to permit the construction of a five-storey, 71-unit condominium apartment building, accessory marina and limited ground-floor commercial uses, be authorized.  
 As recommended by the Manager Planning Services under Report No. PBS-2018-03.

Carried

## PWES-2018-06 Rossi Drive Sanitary Sewer Extension – Tender Award

Motion: (RCM-46/18) Moved by Deputy Mayor Joe Bachetti  
Seconded by Councillor Bill Altenhof

**That** the tender for the Rossi Drive Sanitary Sewer Extension in the amount of \$1,364,200 excluding HST be awarded to Amico Infrastructures Inc.,

**And that** the Mayor and Clerk be authorized to execute an agreement, satisfactory in form to the Town's Solicitor, with Amico Infrastructures Inc.;

**And that** Project funding allocations, reflecting a \$532,800 decrease, be adjusted as follows:

- Road Lifecycle Reserve – decrease from \$1,152,500 to \$979,400
- Watermain Reserve Fund – decrease from \$60,000 to \$8,200
- Wastewater Sewers Reserve Fund – decrease from \$557,500 to \$401,400. \*Expected landowner recoveries for the Wastewater Sewers Reserve Fund are \$292,965
- Storm Sewer Lifecycle – decrease from \$475,800 to \$351,600
- Bridge Lifecycle Reserve – decrease from \$36,000 to \$8,400.

As recommended by the Manager Engineering Services under Report No. PWES-2018-06.

Carried

(RCM 2-11)

### BY-LAWS

Motion: (RCM-47/18) Moved by Councillor Rita Ossington  
Seconded by Councillor Tania Jobin

**That** By-Law 2018-09 being a by-law to authorize the service of Marriage Licences and Civil Marriage Services;

**And that** By-Law 2018-10 being a by-law authorizing the execution of a Lease between the Corporation of the County of Essex and The Corporations of the Towns of Essex, Lakeshore, Lasalle and Tecumseh;

**And further that** By-Law 2018-11 being a by-law to authorize the execution of an Agreement between The Corporation of the Town of Tecumseh and St. Clair Beach Retirement Community;

Be given first and second reading.

Carried

Motion: (RCM-48/18) Moved by Deputy Mayor Joe Bachetti  
Seconded by Councillor Rita Ossington

**That** By-Law 2018-09 being a by-law to authorize the service of Marriage Licences and Civil Marriage Services;

**And that** By-Law 2018-10 being a by-law authorizing the execution of a Lease between the Corporation of the County of Essex and The Corporations of the Towns of Essex, Lakeshore, Lasalle and Tecumseh;

**And further that** By-Law 2018-11 being a by-law to authorize the execution of an Agreement between The Corporation of the Town of Tecumseh and St. Clair Beach Retirement Community;

Be given third and final reading.

Carried

(RCM 2-12)

### UNFINISHED BUSINESS

The Members receive the Unfinished Business listing.



(RCM 2-13)

**NEW BUSINESS****Refuse Collection**

A request is made for discussion with the Essex Windsor Waste Authority for extended hours at the landfill to receive waste during the holiday season.

**Winter Control**

A request is made for public education on winter control in the rural area, in particular roadside mailboxes.

Appreciation is expressed for the efforts of the Public Works Department during the recent heavy snow fall. A reminder is given for the legislative requirements for not parking on the road during heavy snow events and the ability to tow cars that are parked during this time.

**St. Mary's School**

A request is made to determine whether County Road 34 in the area of St. Mary's School is designated as a Community Safety Zone.

Motion: (RCM 49/18) Moved by Councillor Brian Houston  
Seconded by Councillor Rita Ossington

**That** in accordance with Section 239(2)(e)(f) of the Municipal Act, 2001, which permits a meeting, or part of a meeting of Council, to convene in closed session when the subject matter to be considered is (e) litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board; and/or (f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose, the February 13, 2018 meeting of Council reconvene in closed session at 8:25 pm.

Carried

Motion: (RCM-50/18) Moved by Councillor Tania Jobin  
Seconded by Councillor Andrew Dowie

**That** the regular meeting of Council reconvenes in public session at 9:31 p.m.

Carried

Motion: (RCM-51/18) Moved by Councillor Bill Altenhof  
Seconded by Councillor Brian Houston

**That** the direction given to Legal Counsel at the closed meeting regarding an Ontario Municipal Board decision be confirmed.

Carried

(RCM 2-14)

**MOTIONS**

Motion: (RCM-52/18) Moved by Councillor Bill Altenhof  
Seconded by Councillor Rita Ossington

**That** By-law 2018-11 being a by-law to confirm the proceedings of the February 13, 2018, regular meeting of the Council of The Corporation of the Town of Tecumseh be given first, second, third and final reading.

Carried

(RCM 2-15)

**NOTICES OF MOTION**

None.

(RCM 2-16)

## NEXT MEETING

The next Public Council meeting will be held at 5:00 pm on Tuesday, February 27, 2018 regarding ZBA 12334 Arbour Street.

The next Public Council meeting will be held at 6:00 pm on Tuesday, February 27, 2018 regarding Reconsidered 7th Concession Drain Report

The next Regular Council meeting will be held at 7:00 pm on Tuesday, February 27, 2018.

(RCM 2-17)

## ADJOURNMENT

Motion: (RCM-53/18)      Moved by      Councillor Bill Altenhof  
Seconded by Councillor Brian Houston

**That** there being no further business the February 13, 2018 regular meeting of Council now adjourn at 9:37 pm.

Carried

Gary McNamara, Mayor

Laura Moy, Clerk

## **MINUTES OF A SPECIAL MEETING OF THE COUNCIL OF THE TOWN OF TECUMSEH**

Tecumseh Council meets in special session on Tuesday, February 13, 2018, in the Council Chambers, 917 Lesperance Road, Tecumseh, Ontario at 5:00 pm.

(SCM 1-1)

### **ORDER**

The Mayor calls the meeting to order at 5:20 pm.

(SCM 1-2)

### **ROLL CALL**

Present:	Mayor	- Gary McNamara
	Deputy Mayor	- Joe Bachetti
	Councillor	- Bill Altenhof
	Councillor	- Andrew Dowie
	Councillor	- Brian Houston
	Councillor	- Tania Jobin
	Councillor	- Rita Ossington
Also Present:	Chief Administrative Officer	- Tony Haddad
	Director Corporate Services & Clerk	- Laura Moy
	Director Fire Services & Fire Chief	- Doug Pitre
	Director Public Works & Environmental Services	- Dan Piescic
	Director Planning & Building Services	- Brian Hillman
	Deputy Treasurer & Tax Collector	- Tom Kitsos
	Deputy Clerk & Manager Legislative Services	- Jennifer Alexander
	Manager Engineering Services	- Phil Bartnik
	Manager Planning Services	- Chad Jeffery

(SCM 1-3)

### **DISCLOSURE OF PECUNIARY INTEREST**

There is no pecuniary interest declared by a Member of Council.

(SCM 1-4)

### **DELEGATIONS**

#### **Phil Bartnik, Manager Engineering Services**

The Manager Engineering Services gives a power point presentation outlining the broad policy basis of supporting wastewater servicing and the background. He explains the 8<sup>th</sup> Concession Study Area and the project costs. The concerns expressed at the November 1, 2017, Public Information Centre regarding this matter and proposed by-law are summarized. He notes that the concerns are also outlined in detail in the PWES-2018-01 8th Concession Road Sanitary Sewer Outlet Report (Report) together with responses to each.

The members are advised on the next step following tonight's meeting, subject to the direction of Council, a by-law will be presented at a future regular council meeting for Council's consideration for approval.

In response to a query, the Manager Engineering explains the project cost and funding as explained in the Report. He further advises that developers pay the cost of installation for new development infrastructure. The developer incurs the cost for servicing [ie: sidewalk, sanitary, streetlights...] which are ultimately recovered from property sales. The grants received for the North Talbot Road and 8<sup>th</sup> Concession through the City of Windsor, as a result of the Wastewater Agreement between the City and the Town, are also clarified.

**Frank Venuto, Resident**

Mr. Venuto thanks the members for the opportunity to address Council. In a power point presentation, he states this project is too costly for the residents now and will be even more so in the future. He explains who will benefit from this project and that the Ministry has told him there is no problem with residential wastewater. Residents were forced to install septic systems and will now be forced to decommission their systems. Mr. Venuto believes residents will benefit the least from this project and forcing property owners to pay extra sewer capacity to service this development. He also questions the cost for Windsor residents as compared to the costs assessed to Tecumseh landowners in the area. Mr. Venuto hopes that common sense prevails and that Council will place the cost burden of this project on the industry residing in the area.

The Mayor thanks Mr. Venuto for his presentation. The Manager Engineering Services addresses Mr. Venuto concerns and explains the financial research and clarifies the legislation requirements on the questions raised.

(SCM 1-5)

## COMMUNICATIONS

- A. Notice of Special Meeting of Council
- B. Neighbourhood Petition November 2017
- C. Petition by Electors January 2018

Motion: (SCM-01/18) Moved by Deputy Mayor Joe Bachetti  
Seconded by Councillor Andrew Dowie

**That** Communications – *for Information A through C* as listed on the February 13, 2018 Special Council Meeting Agenda are received.

Carried

(SCM 1-6)

## REPORTS

PWES-2018-01 8th Concession Road Sanitary Sewer Outlet

Motion: (SCM-02/17)      Moved by      Councillor Rita Ossington  
Seconded by      Councillor Brian Houston

**That** Public Works and Environmental Services Report No. 01/18 titled “8th Concession Road Sanitary Sewer Outlet, Main and Lateral Charges Cost Recovery Part XII By-Law” be received;

**And that** the cost of the sanitary sewer system for the “8th Concession Road Sanitary Sewer Outlet” area be assessed against the benefitting lands within that area based on Main and Lateral Charges in accordance with Part XII of the *Municipal Act*;

**And further that** the “8th Concession Road Sanitary Sewer Outlet Main and Lateral Charges By-Law” (By-Law) that outlines the charges to the benefitting lands for the construction of sanitary sewers within the 8th Concession Road Outlet Sanitary Sewer Area be considered:

As recommended by the Manager Engineering Services under Report No. PWES-2018-01.

Carried

(SCM 1-7)

## ADJOURNMENT

Motion: (SCM-03/17) Moved by Councillor Andrew Dowie  
Seconded by Councillor Rita Ossington  
**That** there being no further business the February 13, 2018 special meeting of Council now adjourn at 6:57 pm.

Carried

Gary McNamara, Mayor

Laura Moy, Clerk

# 2018 Accessibility Awards



**Windsor Essex County  
ACCESSIBILITY AWARDS  
Thursday, May 17, 2018  
ST. CLAIR CENTRE FOR THE ARTS**

ALSO along with our community supporters will be presenting the **Accessibility Awards on Global Accessibility Awareness Day Thursday May 17, 2018** to businesses, organizations and individuals who have gone above and beyond in making our community a better place to live for persons with disabilities.

**CALL FOR NOMINATIONS**

## CALL FOR NOMINATIONS

Please take a moment to nominate a friend, colleague, business or organization who has gone above and beyond in making the Windsor Essex County community a better place to live for persons with disabilities.

**SUBMIT YOUR NOMINATIONS TODAY!**  
**Deadline for submissions is Wednesday, March 28, 2018**

**Please submit your nominations**  
to Laura Kay by email [LauraKay@alsogroup.org](mailto:LauraKay@alsogroup.org)  
fax 519-969-0390 or mail 3141 Sandwich St, Windsor, ON N9C 1A7

# SPONSORSHIP

ALSO along with our community supporters will be presenting the Accessibility Awards on Global Accessibility Awareness Day Thursday May 17, 2018 to businesses, organizations and individuals who have gone above and beyond in making our community a better place to live for persons with disabilities.

We are seeking your support for the 3rd Annual Windsor Essex Accessibility Awards. Your sponsorship donation will be used to fund the costs associated with this event and assist in ALSO's fundraising initiatives. ALSO is a non-profit organization that provides adults with physical disabilities, brain injury survivors and the frail elderly populations the services needed to ensure they are able to live, work, and play in the community with choice, opportunity and the confidence of full citizenship.

# NOMINATION FORM



ALSO along with our community supporters will be presenting the Accessibility Awards on *Global Accessibility Awareness Day* Thursday May 17, 2018 to businesses, organizations and individuals who have gone above and beyond in making our community a better place to live for persons with disabilities.

We would like to hear from you about your experiences. You may wish to nominate a retailer, bank, health care facility, church, restaurant, service company, non-profit organization or individual who has surpassed your expectations.

PRESENTED BY:



## ACCESSIBILITY AWARD CATEGORIES

**DISTINGUISHED VOLUNTEER** – Thanking a valuable contributor for extraordinary efforts on behalf of people with disabilities

**INFLUENTIAL ADVOCATE** – Celebrating a dedicated leader for justice and enhanced participation of persons with disabilities

**OUTSTANDING INDIVIDUAL** – honouring an individual who is making an impact on improving the inclusion and awareness of accessibility issues for all people in our community

**BARRIER FREE ACCESS** – recognizing leadership in the removal of barriers for people with disabilities

**INNOVATION AND TECHNOLOGY** – recognizing innovation in the field of technology that enhances the lives of people with disabilities

**COMMUNITY PARTNER** – applauding those who contribute to increased community awareness and services through good deeds

**EDUCATION / EMPLOYMENT** – acknowledging those who work toward integration of persons with disabilities in education and employment

**SYDNEY MITCHELL MEMORIAL** – recognizing a support worker who is exemplary in their commitment and integrity towards the independent living philosophy





## NOMINATION FORM

### I WOULD LIKE TO NOMINATE:

NAME:	BUSINESS:
ADDRESS:	
PHONE:	EMAIL:
SOCIAL MEDIA LINKS (TWITTER, FACEBOOK, LINKEDIN) <i>OPTIONAL</i> :	

Please fill out the Nomination Form and include a summary (up to 100 words), why this company or individual is a candidate for a ***Windsor Essex County Accessibility Award***.

*Deadline for submissions is Wednesday, March 28, 2018*

Nominees selected from completed nomination forms by the Accessibility Awards Committee will move forward in the process and will be contacted to complete a more comprehensive questionnaire.

### Please Select Award Category:

- |  |   |
|--|---|
| <input type="checkbox"/> DISTINGUISHED VOLUNTEER AWARD | <input type="checkbox"/> INNOVATION AND TECHNOLOGY      |
| <input type="checkbox"/> INFLUENTIAL ADVOCATE          | <input type="checkbox"/> COMMUNITY PARTNER              |
| <input type="checkbox"/> OUTSTANDING INDIVIDUAL        | <input type="checkbox"/> EDUCATION / EMPLOYMENT         |
| <input type="checkbox"/> BARRIER FREE ACCESS           | <input type="checkbox"/> SYDNEY MITCHELL MEMORIAL AWARD |

### NOMINATION SUBMITTED BY:

NAME:	BUSINESS:
ADDRESS:	
PHONE:	EMAIL:

***Assisted Living Southwestern Ontario reserves the right to verify the information supplied on the nomination form and submission to conduct a background check of the nominee prior to being considered. Submissions are held in confidence and are the property of ALSO.***

The information provided on this form is, to the best of my knowledge, correct.

SIGNATURE:	DATE:
------------	-------

Please attach your 100 word summary with this form.

**Please submit your nominations by March 28, 2018**  
to Laura by email [LauraKay@alsogroup.org](mailto:LauraKay@alsogroup.org)

fax 519-969-0390 or mail 3141 Sandwich St, Windsor, ON N9C 1A7.



February 1, 2018

Association of Municipalities of Ontario (AMO)  
200 University Avenue, Suite 801  
Toronto, Ontario M5H 3C6  
Email: [amo@amo.on.ca](mailto:amo@amo.on.ca)

Rural Ontario Municipal Association  
200 University Avenue, Suite 800  
Toronto, Ontario M5H 3C6  
Email: [roma@roma.on.ca](mailto:roma@roma.on.ca)

Ontario Municipalities

Re: Offering School Property to Municipalities

Dear Sir/Madam,

At its regular council meeting of January 15, 2018, Essex Town Council discussed the ongoing issue of school closures throughout Ontario. These school closures in many cases result in properties that are left as vacant and unused for substantial periods of time and this often results in properties that not only become eyesores for the affected communities but as well often have further negative impacts on the social and economic development of that community and its municipality.

Many municipalities might be interested in purchasing these properties for development and sustainment as a hub in their community. However the feasibility of this certainly becomes more daunting and for some municipalities even impossible when municipalities that are interested in purchasing must first (pursuant to current regulations) purchase these properties at fair market value with taxpayer dollars and then may need to spend further taxpayer monies in order to retrofit and/or remediate the building (s) on these properties.

Given the fact that these properties were already originally purchased and developed into schools using taxpayer dollars we ask that consideration be given to the fact that the taxpayers should not again have to purchase these properties at fair market value if the intent



is for the particular Municipality to develop and/or sustain these properties for the betterment of its community.

As a result of the discussion the following resolution was passed by Essex Town Council at its January 15, 2018 regular meeting:

Moved by Councillor Bondy  
Seconded by Councillor Voakes

**(R18-01-013) That** the Town of Essex send a request to the Association of Municipalities of Ontario (AMO), ROMA and all other municipalities in Ontario requesting that when schools boards make decisions to close schools, that they have to offer the building to the local municipality for a dollar.

**Carried**

Council believes that providing the opportunity to purchase the buildings for a dollar would give municipalities a meaningful opportunity to ensure that these properties remain a key hub for social and economic development in their respective communities.

Should you have any questions or comments regarding this matter, please feel free to contact the undersigned.

Yours truly,

A handwritten signature in black ink, appearing to read "R. Auger", written over a white background.

Robert Auger, L.L.B.  
Clerk, Legal and Legislative Services  
Town of Essex  
Email: [rauger@essex.ca](mailto:rauger@essex.ca)

RA/Im

# 30<sup>th</sup> ANNUAL



## Essex Region Conservation Golf Tournament Fundraiser



Golf Package  
**\$175** ea.

Golf Only  
**\$120** ea.

Dinner Only  
**\$75** ea.

- 18 holes & carts
- Hole In One prizes
- Longest Drive Contest
- Closest to the Pin Contest
- Live & Silent Auctions
- Lunch at the turn
- Gifts for all golfers
- Gourmet dinner

\*Tax receipt available for a portion of ticket price

Thursday, July 12

12:30pm shotgun start

**Pointe West Golf Club**  
200 Golfwood Drive  
Amherstburg, Ontario

Registration opens 11:00am

519.776.5209 x367  
pbaldwin@erca.org

Online Registration  
& Sponsorship Info:  
**www.erca.org/golf**

### Register Online at [www.erca.org/golf](http://www.erca.org/golf)

Name

Company

Address

Email

Phone  Fax

#### Playing Partners (single registrants will be placed into a foursome)

1

Name

Address

Phone

Email

2

Name

Address

Phone

Email

3

Name

Address

Phone

Email

4

Name

Address

Phone

Email

☐ YES! I would like to donate a gift to help raise money at the auction

Gift Donation	Approx. Value
<input type="text"/>	<input type="text"/>

☐ YES! I would like to register me/my foursome in the tournament

Quantity	
<input type="text"/>	Golf Package (golf & dinner) \$175/person
<input type="text"/>	Golf Only \$120/person
<input type="text"/>	Dinner Only \$75/person

☐ YES! I would like to become a tournament sponsor

<input type="checkbox"/> Silver Sponsor - \$2500	<input type="checkbox"/> Lunch Sponsor - \$1000
<input type="checkbox"/> Bronze Sponsor - \$1250	<input type="checkbox"/> Hole Sponsor - \$250
<input type="checkbox"/> Golf Cart Sponsor - \$1500	

**Total Amount**

#### Payment Options

- ☐ Cheque enclosed (payable to: Essex Region Conservation Foundation)
- ☐ Please invoice
- ☐ Please call for credit card details
- ☐ Credit Card

First Name <input type="text"/>	Last Name <input type="text"/>
Card Number <input type="text"/>	Expiration Date (mm/yy) <input type="text"/>
Signature <input type="text"/>	

Please send completed forms by July 2, 2018 to Peter Baldwin  
**Mail:** Essex Region Conservation Foundation, 360 Fairview Ave. W, Suite 311, Essex ON, N8M 1Y6  
**Email:** pbaldwin@erca.org  
**Fax:** 519-776-8688

Gold Sponsor:



### Silver Sponsor - \$2500

- Logos of Silver Sponsors are included on all promotional posters and registrations forms
- Logos of Silver Sponsors are included on all advertisements
- Logos of Silver Sponsors are featured in Tournament Program
- Silver Sponsors are thanked in media releases
- 2 tickets to the Essex Region Conservation Golf Tournament (\$350 value)
- 'Thank You' signage will be erected at Pointe West Golf Club recognizing Silver Sponsors
- Recognition of Silver Sponsors on Golf Tournament page of ERCF website
- Other recognition opportunities as mutually agreed upon by the Essex Region Conservation Foundation
- Four 'Silver Sponsorships' available on a first come, first serve basis

### Bronze Sponsor - \$1250

- Logos of Bronze Sponsors are included on all promotional posters and registrations forms
- Logos of Bronze Sponsors are featured in Tournament Program
- Bronze Sponsors are thanked in media releases
- 1 ticket to the Essex Region Conservation Golf Tournament (\$175 value)
- 'Thank You' signage will be erected at Pointe West Golf Club recognizing Bronze Sponsors
- Recognition of Bronze Sponsors on Golf Tournament page of ERCF website
- Five 'Bronze Sponsorships' available on a first come, first serve basis

### Golf Cart Sponsor - \$1500

- Each golf cart will display the Golf Cart Sponsor signage
- Golf Cart Sponsor will receive recognition in the Tournament Program, on promotional posters, on [www.erca.org](http://www.erca.org) and will be thanked at the dinner, presented by the MC
- One 'Golf Cart Sponsorship' available on a first come, first serve basis

### Lunch Sponsor - \$1000

- Logos of Lunch Sponsor is included on promotional poster, registration form and in the Tournament Program
- Recognition of Lunch Sponsor on Golf Tournament page of ERCF website
- Recognition and thank you by the MC and Tournament Chair
- One 'Lunch Sponsorship' available on a first come, first serve basis

### Hole Sponsor - \$250

- Signage recognizing the Hole Sponsor will be erected at the sponsored hole
- All Hole Sponsors are recognized in the Tournament Program, on the ERCF website, and thanked at the dinner presentation by the MC

#### Essex Region Conservation Foundation

360 Fairview Ave. W, Suite 311  
Essex, Ontario  
N8M 1Y6

519.776.5209 x367  
[pbaldwin@erca.org](mailto:pbaldwin@erca.org)  
[www.erca.org/golf](http://www.erca.org/golf)

**MINUTES OF A MEETING OF THE YOUTH ADVISORY COMMITTEE FOR THE  
TOWN OF TECUMSEH**

A meeting of the Youth Advisory Committee (YAC) for the Town of Tecumseh was held on Monday, February 12, 2018, in the Council Chambers at Town Hall, 917 Lesperance Road, Tecumseh at the hour of 4:30 p.m.

(YAC 2-1)

**ORDER**

The Vice Chair calls the meeting to order at 4:34 p.m.

(YAC 2-2)

**ROLL CALL**

Members Present:	Secretary	- Ava Ruuth (4:38 p.m.)
	Treasurer	- Michael Altenhof
	Member	- Jacob Altenhof
	Vice Chair	- Maria Giorlando
	Member	- Brendan Froese
	Member	- Andre Ducharme

Also Present:	Manager Committee & Community Services	- Christina Hebert
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Absent:	Chair	- Kristi Koutros
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(YAC 2-3)

**DISCLOSURE OF PECUNIARY INTEREST**

None Reported.

(YAC 2-4)

**DELEGATIONS**

None.

(YAC 2-5)

**COMMUNICATIONS**

A. Youth Advisory Committee Minutes held January 15, 2018

Motion:	(YAC-08/18) Moved by	Member Brendan Froese
	Seconded by	Treasurer Michael Altenhof

**That** the Minutes of the Youth Advisory Committee meeting held January 15, 2018, be approved.

Carried

(YAC 2-6)

**REPORTS**

None.

(YAC 2-7)

**UNFINISHED BUSINESS**

**2018 Recreation Events and Sponsorship**

The Members confirm their participation for the Family Day Celebration on Monday, February 19 at the Tecumseh Arena. Treasurer Michael Altenhof and Member Jacob Altenhof advise they have recruited approximately 6-7 volunteers for the event.

A friendly reminder is provided to arrive at the Tecumseh Arena for 12:00 pm to assist with set-up.

A suggestion is made to have a rock painting station at the Earth Day Celebration on April 22. The decorative rocks could be placed near the planted trees. The Members will continue to brainstorm ideas for an activity.

The DJ quote for the Rock N Swim on Friday, June 29 is reviewed and the Members concur with sponsoring a DJ to enhance the event at Tecumseh Leisure Pool.

Motion: (YAC-09/18) Moved by Member Jacob Altenhof  
Seconded by Member Brendan Froese

**That** the Youth Advisory Committee sponsor a DJ, at a cost of \$350, to enhance the Rock N Swim to be held on June 29, 2018 at the Tecumseh Leisure Pool.

Carried

It is proposed that consideration be given to providing a 'giveaway', such as freezies, to participants who attend the Rock N Swim.

The Members express interest in sponsoring an Outdoor Family Movie Night, during the summer and request further information from the Parks & Recreation Department in relation to costs associated with organizing this event.

### **Youth Career Fair**

Vice Chair Maria Giorlando advises of the discussion held at the last meeting in respect of the Career Fair for the benefit of the Members who were unable to attend.

The Manager Committee & Community Services appraises the Members on the survey regarding the most relevant time of year to schedule the Career Fair for students. Area guidance counsellors suggested Fall as the best time to host the event.

A survey is being drafted to receive feedback from the participating vendors and to assist with coordinating this year's Career Fair.

(YAC 2-8)

### **NEW BUSINESS**

#### **Call for 2018 Committee Applications**

The Manager Committee & Community Services advises applications are being received from residents interested in serving on the Youth Advisory and Senior Advisory Committees. Applications are available on the Town's website and/or at Town Hall.

The Members are encouraged to share the information with persons who may be interested and help promote on the YAC social media.

#### **Presentation to Council**

In keeping with the annual presentation made to Council by the YAC and Senior Advisory Committee regarding the Committee's accomplishments from the prior year and initiatives for the current year, discussion is held respecting scheduling the presentation. The Committee suggests targeting an April Regular Meeting of Council.

#### **Optimist Family Fun Fair**

Vice Chair Maria Giorlando advises the Optimist Club of St. Clair Beach is seeking volunteers to assist with the children's activities and games at the Optimist Family Fun Fair on Saturday, September 22, 2018. Interested persons may contact Vice Chair Maria Giorlando for further information.



(YAC 2-9)

## NEXT MEETING

The next meeting of the Youth Advisory Committee will be held on Monday, March 19, 2018.

(YAC 2-10)

## ADJOURNMENT

Motion: (YAC-10/18) Moved by Member Brendan Freose

Seconded by      Member Jacob Altenhof

**That** there being no further business, the February 12, 2018, meeting of the Youth Advisory Committee be adjourned at 5:17 p.m.

Carried

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Maria Giorlando, Vice Chair

Christina Hebert, Manager  
Committee & Community Services



## The Corporation of the Town of Tecumseh

Parks & Recreation Services

**To:** Mayor and Members of Council

**From:** Kerri Rice, Manager Recreation Programs & Events

**Date to Council:** February 27, 2018

**Report Number:** PRS-2018-01

**Subject:** Optimist Club's Victoria Day Weekend Fireworks 2018

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### Recommendations

It is recommended:

1. **That** the rental fees associated with use of the Optimist Community Centre and Green Acres Park for the Optimist Club of St. Clair Beach's 2018 Victoria Day Fireworks Display, at a cost of \$197 be waived; and that
2. The fees associated with the fireworks permit as regulated under By-law Number 2013-50, a by-law to regulate the sale and use of fireworks, at a cost of \$50, be waived; and further that
3. The Ontario Provincial Police schedule officers to walk through the park the evening of the fireworks display.

### Background

This year marks the 41<sup>st</sup> annual Optimist Club of St. Clair Beach's [Optimist Club] Victoria Day Fireworks event. This event is free to the community and generates little to no revenue for the Optimist Club. Prior to amalgamation, the former village of St. Clair Beach assisted the Optimist Club with this community event to help minimize costs and the Town of Tecumseh has since continued to assist with the event by waiving permit fees. Events held in prior years have occurred without incident.

The Optimist Club has advised Administration that it plans to host its annual Victoria Day Weekend Fireworks on Sunday, May 20, 2018 with a rain-date scheduled for Monday, May 21, 2018. The Optimist Club has requested Council's continued support through the waiver of

fees associated with the use of the Optimist Community Centre, Green Acres Park pavilion and fireworks permit as well as arranging for the presence of Ontario Provincial Police [OPP] in the park to assist with the expected attendance and associated vehicles the evening of the event.

## **Comments**

### **OUTDOOR SPECIAL EVENTS POLICY:**

Administration has confirmed that the proposed Victoria Day Weekend Fireworks display event is in accordance with the Outdoor Special Events Policy # 85. As such, Facility Use Agreements have been prepared and will be forwarded to the Optimist Club.

### **FIREWORKS BY-LAW:**

According to By-law 2013-50, a by-law to regulate the sale and use of fireworks (Fireworks By-law):

- 4. (a) No person shall hold a Fireworks Display without first having obtained a permit approved and signed by the Fire Chief to do so.*
- 4. (b) The Fire Chief may issue a permit for a Fireworks Display to any responsible person provided that such Fireworks Display shall be held at the time and the place set out in the permit and under the direct supervision of the applicant therefor.*
- 4. (c) All Fireworks Displays shall be held at a safe distance from all streets, highways, buildings or other structures, and the person holding such a display shall take every reasonable precaution for the safety of the public and shall provide such firefighting equipment as may be directed by the Fire Chief.*
- 4. (d) A permit issued under this section may be revoked at any time by the Fire Chief in the event of non-compliance with the provision of this By-law.*
- 4. (e) The amount of the fee payable upon application for a permit under this section shall be \$50.00, or such amount as Council may determined from time to time by resolution.*

The Optimist Club has informed Administration that it has secured the services of K & H Distributing to coordinate and ignite the fireworks display. K & H Distributing will be required to submit a letter to the Fire Department confirming the fireworks display along with applicable insurance documentation. Any persons involved in the discharge and transportation of material for the display must be currently licensed by the Explosive Division, Energy, Mines and Resources Canada and all Regulations set out by the agency must be strictly adhered to.

### **NOISE BY-LAW:**

According to By-law No. 2002-07, a by-law respecting the emission of sounds (Noise By-law):

*Section 4: No person within the municipality shall emit or cause the emission of sound resulting from any act listed in Table 4-1, hereinafter set out, if clearly audible at a Point of Reception located in an area of the municipality within a prohibited time shown for such an area.*

	<i>Prohibitions Period of Time</i>		
	<i>Residential Area</i>	<i>Agricultural Area</i>	<i>Commercial Area</i>
<i>1. The detonation of fireworks or explosive devices not used in construction</i>	<i>At all times except for the celebrations of Victoria Day, the birthday of the reigning Sovereign, Canada Day (July 1<sup>st</sup>), the American Independence Day (July 4<sup>th</sup>) and New Year's Eve (December 31<sup>st</sup>)</i>		<i>At all times</i>

**PARK SECURITY:**

The Tecumseh OPP will be scheduling two (2) officers and four (4) auxiliary officers to work on the evening of the fireworks to provide security in the park. Typically, the event occurs without incident and any minor issues have been responded to immediately by the onsite OPP.

**Consultations**

Fire & Emergency Services  
Tecumseh OPP

**Financial Implications**

Traditionally, Council has waived the user fees associated with the community centre and park pavilion rental to assist the Optimist Club with the annual fireworks display event. The cost associated for the use of the community centre and park pavilion is \$197.

According to By-law Number 2013-50, a by-law to regulate the sale and use of fireworks, a \$50 fee payable upon application for permit is required. Traditionally, Council has waived the permit fee for the fireworks display to assist the Optimist Club with the annual fireworks display.

Tecumseh OPP will be scheduling two officers and four auxiliary officers walk through the park the evening of the fireworks display to address any issues or concerns that arise. This attributes to approximately \$700 in overtime costs. Typically, these costs are blended into the operating budget.

Tecumseh Fire & Emergency Services will be in attendance at the event as part of its Public Education campaign and as such no additional costs will be incurred.

The cost associated with the Victoria Day Fireworks events, including foregone revenues is approximately \$947.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input checked="" type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input checked="" type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☒

Website ☐

Social Media ☐

News Release ☐

Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Kerri Rice  
Manager Recreation Programs & Events

Reviewed by:

Paul Anthony, RRFA  
Director Parks & Recreation Services

Reviewed by:

Luc Gagnon, CPA, CA, BMath  
Director Parks & Recreation Services

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
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None	
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## The Corporation of the Town of Tecumseh

Planning & Building Services

**To:** Mayor and Members of Council

**From:** Chad Jeffery, Manager Planning Services

**Date to Council:** February 27, 2018

**Report Number:** PBS-2018-04

**Subject:** Encroachment Agreement  
Mr. Farid Youssouf  
1130 Lesperance Road (Amloze Pizza)  
OUR FILE: 1130 Lesperance Road Property File

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### Recommendations

It is recommended:

**That** a by-law authorizing the execution of an Encroachment Agreement with the Owner of 1130 Lesperance Road, as drafted by Mr. Edwin Hooker, Solicitor, which will permit the continued encroachment of a 4.8 square metre (52 square foot) portion of the existing one-storey commercial building located at 1130 Lesperance Road (Amloze Pizza), **be adopted**, in accordance with Condition 6 of Consent Application B-15/17, subject to the Owner executing the Encroachment Agreement prior to the Town's execution of the Agreement;

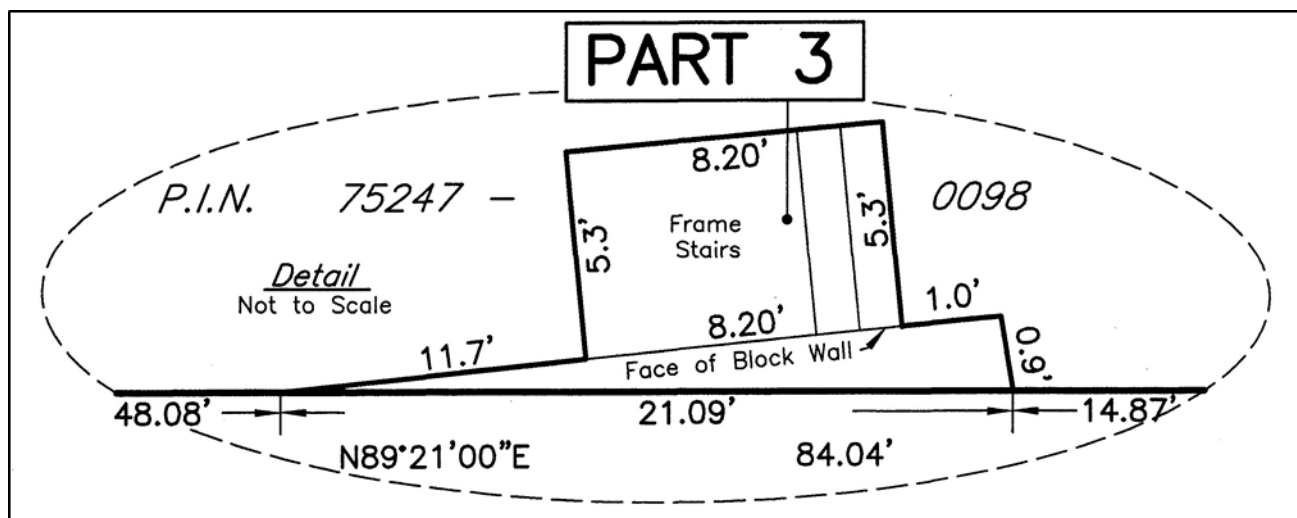
**And that** the Mayor and Clerk **be authorized** to execute the Encroachment Agreement, as attached hereto and/or in such modified version as may be approved by the Town's solicitor prior to execution, and such further documents as are called for by the encroachment agreement approved above including, but not limited to, the execution of the acknowledgement/direction required to register the Encroachment Agreement on title to the lands and such other acknowledgement/directions for any related transfers or real property registrations contemplated by the Encroachment Agreement.

## Background

In November 2017, Mr. Farid Youssouf ("the Owner") made application for consent to the Committee of Adjustment (Consent Application B-15/17) pertaining to a commercial property located on the southeast corner of the Lesperance Road/Lachance Court intersection. The purpose of the application was to sever a commercial parcel of land having a municipal address of 12315 Lachance Court and to retain the balance of the commercial lands having a municipal address of 1130 Lesperance Road. The proposed severed parcel, 12315 Lesperance Road, contained an existing two-storey building being used as a professional office while the proposed retained lands, 1130 Lesperance Road, contained an existing one-storey building being used as a take-out pizzeria restaurant. Both of these buildings have been in existence for several decades and their construction pre-dates any municipal records on file.

It is the Town's understanding that these two parcels were once separate but had legally merged through a previous land sale. The consent application sought to re-establish the former two lots (see Attachment 1). Both the proposed severed and retained lots comply with the Commercial Zone (C3) that applies to the lands.

Through the application review process, it was discovered that the north-easterly 4.8 square metres (52 square feet) of the existing building at 1130 Lesperance Road (Amloze Pizza), comprising an exterior staircase and a small portion of the block wall, encroached over the lot line and into the Lachance Road right-of-way. As noted, this encroachment has existed for several decades. It is identified as Part 3 on Reference Plan 12R-27258 (see Image below).



The Committee of Adjustment granted provisional Consent to Application B-15/17 at its October 16, 2017 meeting. As part of its approval, the Committee of Adjustment established conditions that would need to be met in order to finalize the application. Condition 6 of the decision required that the owner enter into an Encroachment Agreement with the Town with respect to the aforementioned encroaching portion of the building located at 1130 Lesperance Road.



## Comments

Based on the foregoing, an Encroachment Agreement has been drafted by the Town's Solicitor, Ed Hooker (see Attachment 2). The agreement establishes various requirements including, but not limited to, the following:

- i. the acknowledgement of the existing encroachment;
- ii. that the Owner agrees to maintain the encroachment in good repair at all times to the satisfaction of the Town's Chief Building Inspector;
- iii. the Owner will be required to pay for all costs associated with the preparation and registration of the agreement; and
- iv. the Owner will be required to maintain appropriate liability and property damage insurance in the amount of at least \$2 million.

The execution of the Encroachment Agreement will facilitate the finalization of Consent Application B-15/17. Town Administration has reviewed the agreement and has no concerns. Accordingly, Town Administration recommends that Council authorize the execution of the Encroachment Agreement, as prepared by the Town Solicitor.

## Consultations

Public Works & Environmental Services  
Edwin Hooker, Town Solicitor

## Financial Implications

None.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☒

Website ☐ Social Media ☐ News Release ☐ Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Enrico DeCecco, BA (Hons), MCIP, RPP  
Junior Planner

Reviewed by:

Chad Jeffery, MA, MCIP, RPP  
Manager Planning Services

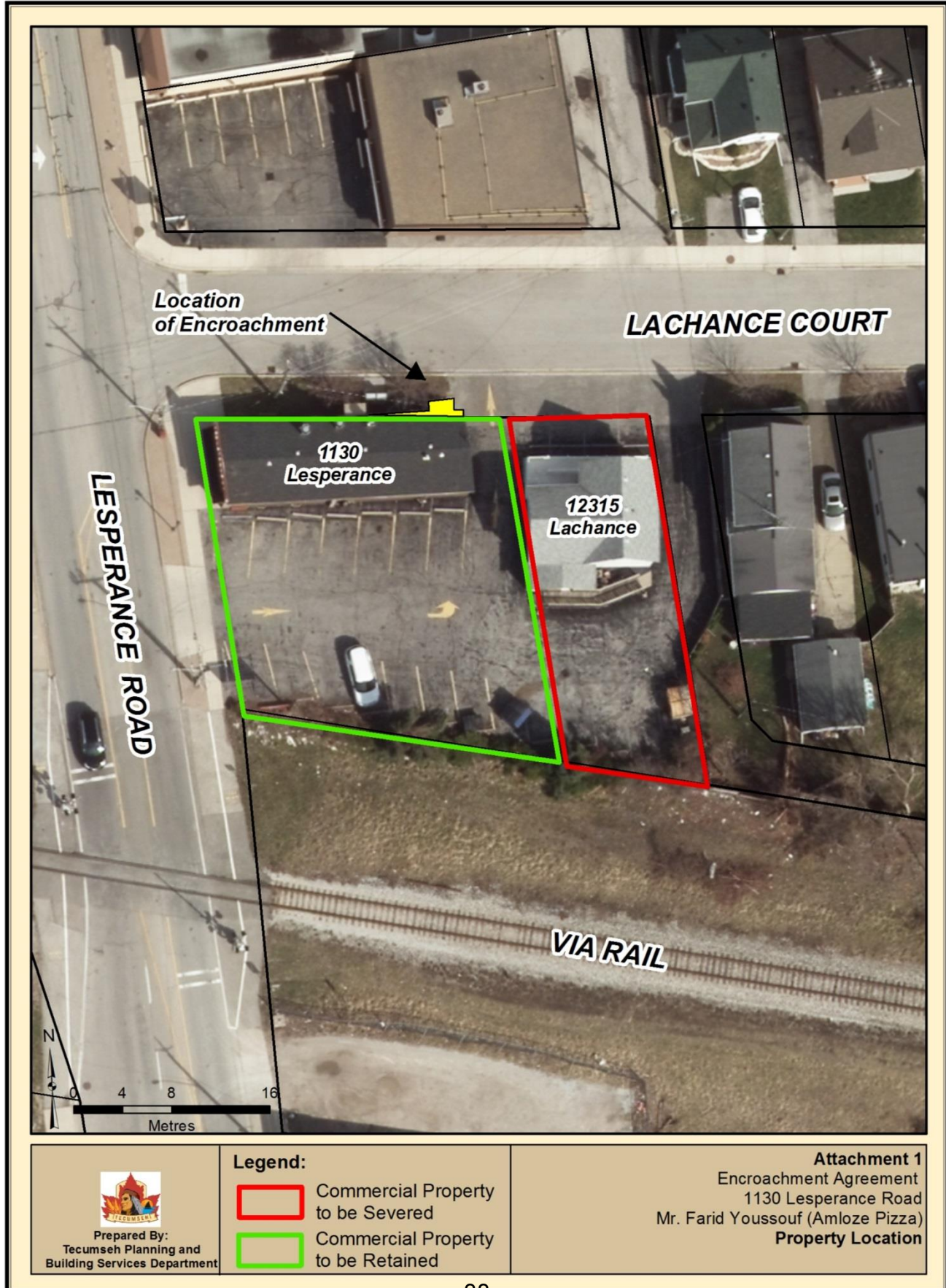
Reviewed by:

Brian Hillman, MA, MCIP, RPP  
Director Planning & Building Services

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
1	Property Location Map
2	Encroachment Agreement



**Attachment 2**  
**Encroachment Agreement – 1130 Lesperance Road**  
**Encroachment Agreement**

THIS AGREEMENT made in triplicate, this \_\_\_\_day of \_\_\_\_\_, 2018.

BETWEEN:

**THE CORPORATION OF THE TOWN OF TECUMSEH,**

Hereinafter called the TOWN of the FIRST PART

- and -

**FARID ICHO YOUSSEUF**

Hereinafter called the LICENSEE of the SECOND PART

**WHEREAS:**

1. the Licensee is the registered owner of certain lands and premises in the Town of Tecumseh, in the County of Essex and Province of Ontario, more particularly described in Schedule “A” annexed hereto and forming part of this agreement (the Licensee Lands”); and
2. the Licensee has applied to the Town for permission to continue the encroachment of the public highway known as Lachance Court, by the building municipally known as 1130 Lesperance Road at its North-East corner which encroachment is described as Part 3 on Plan 12R-27258 (the “Encroachment”).

**NOW THEREFORE THIS AGREEMENT WITNESSETH** that in consideration of the premises, and other good and valuable consideration, the parties hereto hereby agree as follows.

1. The Town permits the Licensee to occupy and use the said public highway for the purpose of the continuing Encroachment for a maximum term not exceeding the lifetime of the encroaching structure. In the event of any disagreement as to the estimated or actual lifetime of the encroaching structure, the opinion of the Town’s Chief Building Inspector shall prevail and be final and binding on the parties. Notwithstanding the foregoing, the term hereof shall automatically terminate and be at an end in the event that the portion of the public highway subject to the Encroachment, shall be closed or stopped up by the Town so as to no longer constitute a public highway.
2. The Licensee covenants and agrees to maintain the said encroachment in good repair at all times and to the satisfaction of the Town’s Chief Building Inspector.

3. The Licensee further covenants and agrees to obtain the necessary permits from all pertinent departments of the Town prior to any work on the Encroachment, and to comply with all federal, provincial and municipal legislation pertaining to the construction, maintenance, repair and existence of the Encroachment.

4. It is expressly agreed that upon destruction, removal or replacement of the encroaching structure, or upon partial destruction or damage to the encroaching structure from any cause including the voluntary act of the owner(s) thereof, to the extent of more than sixty percent (60%) of its assessed value, exclusive of its foundations, or upon breach by the Licensee of any of the provisions of this agreement which breach shall not have been corrected by Licensee within 30 days of demand or such sooner time noted in such demand if in the Town's opinion such breach may adversely affect the public interest, the permission hereby granted shall, without any further action or notice and at the sole option of the Town, be terminated and at an end and the Town may require the Licensee to forthwith remove the Encroachment and restore the lands encroached upon to the satisfaction of the Chief Building Inspector of the Town and upon failure so to do so the Town may itself do all things necessary for the removal of the Encroachment and for such purpose may enter upon the Licensee Lands and the expense of such removal, restoration and entry shall be paid by the Licensee forthwith upon demand and payment of such expenses may, in the discretion of the Town, be enforced in the same manner as property taxes payable in respect of the Licensee Lands.

5. The Licensee further covenants and agrees to pay to the Town, any additional property taxes or other rates and charges, if any, levied or imposed on or in respect of the said portion of the public highway encroached upon or over by the Encroachment.

6. The Licensee further covenants and agrees to assume the responsibility and to pay for any additional costs or charges which the Town, Essex Power Corporation, Essex Powerlines Corporation, Union Gas Limited, Cogeco Cable or Bell Canada, and their respective successors and assigns, may reasonably incur in the future installation or relocation of their services or utility plants by reason of the Encroachment and the payment of such costs may be enforced in the same manner as property taxes payable in respect of the Licensee Lands.

7. It is further understood and agreed by and between the parties that if due to any emergency so declared by the Town's Chief Building Inspector, vacant possession of the lands encroached upon is required by the Town (whether in its own behalf or at the request of the utility providers mentioned in this agreement) for the purpose of installing, repairing or maintaining watermains or pipes, wires, conduits, sewers or other services or utilities, the Town may give notice to the Licensee forthwith at any time to forthwith deliver vacant possession of the Encroachment to the Town and to therefrom remove all chattels, equipment, fixtures, parking areas, buildings and structures, as the case may be, installed or located therein or thereupon by the Licensee, and upon such notice having been given, the Licensee shall forthwith deliver clear

and vacant possession of the Encroachment to the Town, provided that if the Licensee fails so to do, the Licensee shall pay to the Town or any such service provider any costs or additional costs, expenses or damages incurred by the Town or any such service provider by reason of the Licensee's failure. A notice given under this section shall not constitute a termination of this agreement but shall be a suspension thereof which shall be in force and effect during the time the work aforesaid is being carried out, and following the completion of such work this agreement shall again come into and be in full force and effect subject to all the terms, covenants, conditions and provisos hereof.

8. It is further understood and agreed by and between the parties that if the portion of the public highway encroached upon is required by the Town for its purposes, the Licensee shall remove the said Encroachment and restore the said public highway to the condition of the surrounding area at its own expense on sixty (60) days written notice from the Town so to do; provided that if the Licensee fails to remove the Encroachment and restore as aforesaid, the Town may enter upon the Licensee Lands and remove the Encroachment and restore the lands encroached upon, and the expense of such removal and restoration shall be paid by the Licensee forthwith on demand, or at the option of the Town the payment of such expense may be enforced in the same manner as property taxes payable in respect of the Licensee Lands.

9. It is further understood and agreed by and between the parties hereto that if the Town at any time exercises its power or right to terminate this agreement or demand the removal of the Encroachment or suspend or revoke the permission granted herein, the Town shall not be liable to pay any compensation for any loss, costs or damages which may be incurred by the Licensee or any person claiming under the Licensee by reason of such termination, demand or revocation.

10. The Licensee further covenants and agrees to defend, indemnify and save harmless the Town of, from and against all loss, costs or damages which it may suffer or be put to and from and against all claims or actions which may be made or brought against the Town by reason of the Encroachment, its construction, existence, repair or maintenance or resulting therefrom in any way whatsoever, unless such loss, costs, damages, claims or actions arise due to the negligence of the Town, or the Town's officers, agents or employees.

11. The Licensee further covenants and agrees to provide and maintain public liability and property damage insurance in a form (containing endorsements naming the Town as an additional named insured and providing a cross-liability/separation of insureds clause) in the amount of at least TWO MILLION DOLLARS (\$2,000,000.00) and satisfactory in form and content (including policy limit) to the Chief Building Inspector of the Town, and a true copy of the said insurance policy shall be filed with the Clerk of the Town. Licensee acknowledges and agrees that the Town shall be entitled to require that such policy limit amount be increased from time to time during the term hereof to take into account inflationary pressures and relevant judicial awards.

12. It is further understood and agreed by and between the parties hereto that by the execution of these presents, the Licensee does hereby expressly and completely release the Town from any and all liabilities, suits, claims and demands (whether for property damage or for personal injury or death and whether founded in tort, contract or quasi-contract) which at any time might be exerted by the Licensee arising out of the existence of the Encroachment or out of any act or omission of the Town, unless the liability, suit, claim or demand arises due to the negligence of the Town or the Town's officers, agents or employees.

13. It is further understood and agreed by and between the parties hereto that if the Licensee agrees to sell the Licensee Lands, the Licensee shall give notice to the Town of such sale at least ten (10) days prior to the completion thereof.

14. It is further understood and agreed by and between the parties hereto that all notices, demands and requests which may be or are required to be given by the Town to the Licensee or by the Licensee to the Town under the provisions of this agreement shall be in writing and may be mailed or delivered and shall be addressed in the case of the Licensee to the Licensee at Licensee's address for service depicted on the document general attached hereto, and in the case of the Town, to the Clerk, Town Hall, 917 Lesperance Road, Tecumseh, Ontario, N8N 1W9, or to such other address as either party may from time to time designate by written notice to the other.

15. It is further understood and agreed by and between the parties hereto that notwithstanding anything hereinbefore or hereinafter contained and further notwithstanding the execution of this agreement, this agreement shall not go into force or have any effect unless and until this agreement has been registered by and at the expense of the Licensee at the Land Registry Office for Essex (No. 12) and a registered copy thereof delivered to the Clerk of the Town.

16. All professional fees and other expenses, costs and charges incurred by the Town in connection with the preparation and registration of this agreement shall be payable by the Licensee to the Town upon demand, and this agreement shall not have force or effect unless and until such fees, expenses, costs and other charges have been paid in full.

17. It is further understood and agreed between the parties hereto that this agreement shall be binding upon and enure to the benefit of the parties and their respective heirs, personal representatives, successors and permitted assigns, it being acknowledged that in the event of the Licensee selling, conveying, transferring or entering into an agreement for sale or of transfer of any title to or interest in part or all of the Licensee Lands to a purchaser or transferee not approved of in writing by the Town (which approval may not be unreasonably withheld by the Town, but may be made subject to conditions including a condition that such purchaser or transferee enter into a fresh encroachment agreement with the Town in the Town's then standard



or usual form), the Town may forthwith terminate this agreement or demand the immediate removal of the Encroachment or forthwith revoke the permission granted for the Encroachment, and may enter upon the Licensee Lands in whole or in part and remove the Encroachment and restore the lands encroached upon and the expense of such removal and restoration shall be paid by the Licensee or by such unapproved purchaser or transferee forthwith on demand or, at the Town’s option, the payment of such expense may be enforced in the same manner as property taxes payable in respect of the Licensee Lands; and the Town shall not be liable to pay any compensation for any loss, costs or damages which may be incurred by the Licensee or by such unapproved purchaser or transferee by reason of such termination, demand, revocation, entry, removal, or restoration.

**PROVIDED HOWEVER,** that notwithstanding the foregoing, the permission to encroach and this agreement shall be assignable to and assumable by a bona fide mortgagee or chargee of the Licensee Lands.

**THE PARTIES HERETO** have executed and delivered this agreement as of the day and year first hereinbefore written.

**THE CORPORATION OF THE TOWN OF TECUMSEH**

\_\_\_\_\_  
Gary McNamara, MAYOR

\_\_\_\_\_  
Laura Moy, CLERK  
“We have authority to bind the Corporation”

\_\_\_\_\_  
Farid Icho Youssouf

SCHEDULE “A”  
LICENSEE LANDS

Municipal Address: 1130 Lesperance Road, Tecumseh, ON

Legal Description: Part Lot 3 & 4 Plan 1312 now designated as Part 1 on Plan 12R-  
\_\_\_\_\_ ; Tecumseh

PART OF PIN: 75247-0097

The solicitor for the Town of Tecumseh is hereby authorized to insert the registered reference plan number upon completion of its registration.



## Comments

### General Observations

There are a number of general observations that warrant consideration as part of this discussion, as follows:

- The Town has consistently followed the principle (with the exception of the Tecumseh Road Main Street CIP Area) that “development pays for development”. The notion is that the general ratepayer should not subsidize the normal and true costs of developing and that those costs should be borne by each individual development;
- On the surface, the general expectation would be that lowering commercial building permit fees would increase construction activity, thus resulting in the municipality receiving an increase in property assessment and taxation. In fact, there has been little substantive research in this area to support this expectation.
- Consultation with area municipalities indicates that reductions or phasing-in of development charges shows no correlation to increased commercial activity. In specific cases, there was actually more commercial development in the final year of a “phase-in period” than in the earlier years of the “phase-in period”. This tends to align with the notion that commercial development typically is driven by greater market forces, including demand/market conditions, access to capital, population and demographics, spending power and the adequacy of supporting municipal infrastructure (particularly transportation infrastructure);
- Building permit fees generally represent between 1.0% and 1.5% of the cost to construct a typical commercial building. This would suggest there are likely much more significant factors affecting when commercial development occurs;
- Whatever date is selected for implementing a moratorium, developers currently planning to take out a building permit in the short term may delay doing so pending a decision on an exemption being considered. This may have the unintended consequence of providing an incentive to someone to delay development simply to take advantage of the moratorium and/or providing an incentive to a development that was going to happen in any case;
- The 10-year actual commercial construction activity in Tecumseh from 2007 to 2016 is illustrated in the following table. It tends to show that commercial development has been sporadic over the 10 year period, with no identifiable pattern or particular trend;
- Notwithstanding the foregoing, it is acknowledged that hotels do not develop as regularly as other commercial development and further that hotels do have different beneficial impacts from attracting others to a community for short-term stays that can have positive impacts on other businesses. Having said that, it is uncertain if a one year exemption would be enough of an incentive to alter where or when a hotel development will occur.

COMMERCIAL CONSTRUCTION (New & Additions)											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Averages
Construction Value	\$7,139,600	\$384,000	\$1,102,000	\$2,810,000	\$0	\$8,945,000	\$309,000	\$10,200,000	\$210,000	\$0	\$3,109,960
Building Area (sq. ft.)	63,329	3,482	20,589	18,060	0	60,392	4,692	56,623	2,614	0	22,978
Square Foot Cost	\$113	\$110	\$54	\$156	\$0	\$148	\$66	\$180	\$80	\$0	\$90.66

## Commercial Permit Fees

The current permit rate for new commercial buildings and additions is \$0.85 per gross square foot of building area. The proposed new rate justified in Planning and Building Services Report No. 38/17 ("P&B Report 38/17") is \$1.05. Commercial Buildings are generally retail stores, personal service shops, offices and small restaurants. Over a 10 year period, from 2007 until the end of 2016, approximately 229,781 square feet of this type of development have been built in Tecumseh. This results in a historical yearly average of 22,978 square feet of new commercial building and additions.

A one year moratorium on commercial permit fees would result in a loss of permit fee revenue of \$1.05 per gross square foot areas for commercial buildings and based on the historic 10 year average, this would result in a loss of approximately \$24,126 in permit fee revenue.

The preceding is a function of the 10 year average. If, for example, a commercial development were to proceed that includes a grocery store along with a commercial pad having a combined total floor area of 45,200 square feet, the loss in building permit fee revenue would be approximately \$47,460.

## Hotel Permit Fees

The current permit rate for hotels is \$0.90 per gross square foot of building area. The proposed new rate justified in P&B Report 38/17 is \$1.05. Based on our research, a typical 88,000 square foot/4 storey hotel would result in a loss of approximately \$92,400 in permit fee revenue assuming \$1.05 per gross square foot area of hotel floor area.

## Consultations

Financial Services

## Financial Implications

A one year moratorium on permit fees for commercial development and hotels could, based on the scenarios noted in this Report, result in a loss of approximately \$139,000 in building permit revenue. As a frame of reference, the 2018 Council approved Building Services Budget projected total revenue of \$356,800 from building permit fees.

Any shortfall in building permit revenue that occurs if Council supports a one-year moratorium on building permit fees for commercial development and hotels is recommended to be off-set by transfer from the Tax Rate Stabilization Reserve.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☒

Website ☐

Social Media ☐

News Release ☐

Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Mike Voegeli  
Manager Building Services & Chief Building Official

Reviewed by:

Brian Hillman, MA, MCIP, RPP  
Director Planning & Building Services

Reviewed by:

Luc Gagnon, CPA, CA, BMath  
Director Financial Services & Treasurer

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
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None	
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## The Corporation of the Town of Tecumseh

Planning & Building Services

**To:** Mayor and Members of Council

**From:** Mike Voegeli, Manager Building Services & Chief Building Official

**Date to Council:** February 27, 2018

**Report Number:** PBS-2018-06

**Subject:** 2017 Year End Permit Report

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### Recommendations

It is recommended:

1. **That** Planning and Building Services Report No. PBS-2018-06, "2017 Year End Permit Report," **be received.**

### Background

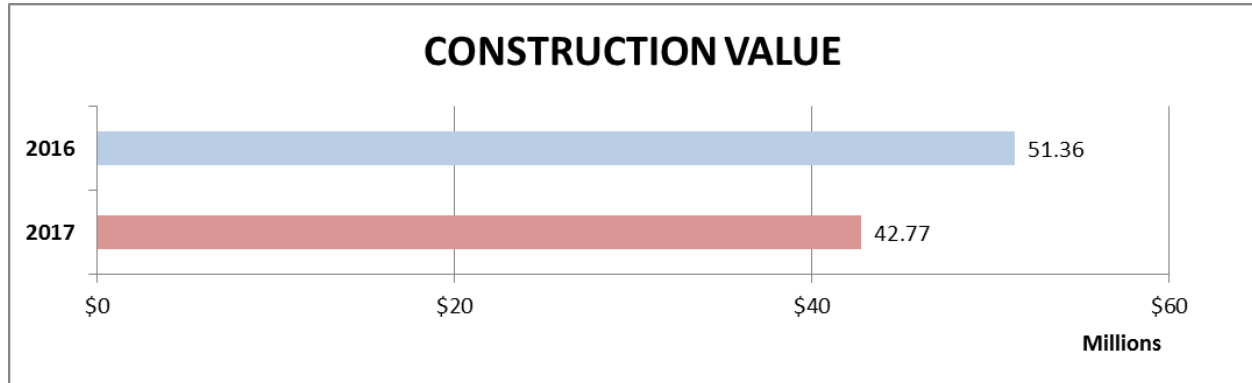
This Report summarizes the permits issued for the year of 2017 (January-December) and compares the values of the same period of the previous year.

### Comments

1. Construction Value:

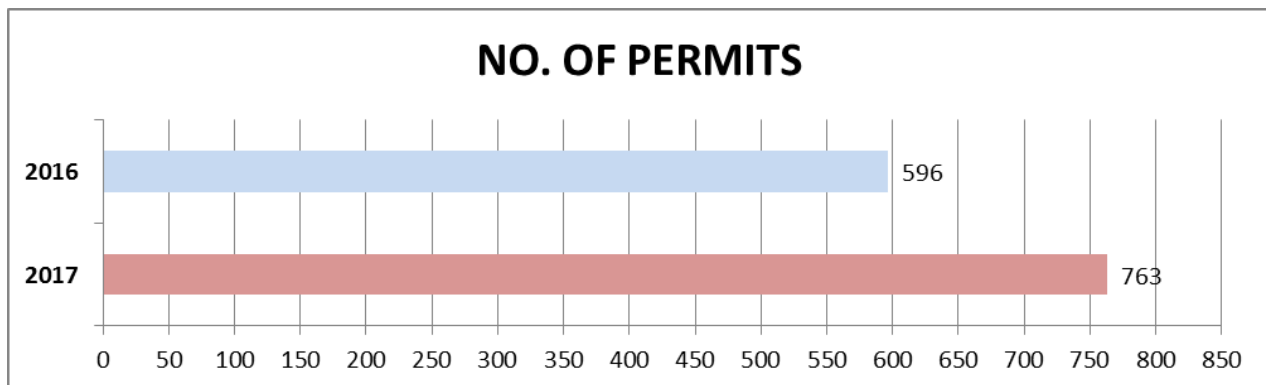
The following chart summarizes the reported construction value of permits for the period. Construction value is down by -\$8,591,736 or -16.7 percent over last year. This is due in part to a decrease in new residential construction over the previous year.





## 2. Number of Permits:

The following chart summarizes the number of permits issued for the period. The number of permits is up by 167. This is due in part to the issuance of 294 backwater valve permits for the period.



## 3. Permit Types:

The following chart summarizes the number of permits issued by type for the period. A total of 40 new dwelling unit permits were issued, which resulted in 50 new residential units. For the same period last year there were 106 new residential units.

Permit Activity		
Types of Permits	No of Permits	
	2016	2017
New Residential Buildings	50	38
New Multi-Residential Buildings	50 (56 Units)	2 (12 Units)
Residential Additions and Improvements	292	434
New Non-Residential Buildings	7	12
Non-Residential Additions and Improvements	51	79
Swimming Pools	41	60
Lot Grading	3	4
Fences	46	50
Signs	51	68
Demolitions	5	16
<b>Totals</b>	<b>596</b>	<b>763</b>

## Consultations

None

## Financial Implications

Total revenue for the period is \$423,033 which is \$104,033 or 32.6 percent higher than the budgeted amount of \$319,000.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☒

Website ☐

Social Media ☐

News Release ☐

Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Mike Voegeli  
Manager Building Services & Chief Building Official

Reviewed by:

Brian Hillman, MA, MCIP, RPP  
Director Planning & Building Services

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
None	None



## The Corporation of the Town of Tecumseh

Planning & Building Services

**To:** Mayor and Members of Council

**From:** Chad Jeffery, Manager Planning Services

**Date to Council:** February 27, 2018

**Report Number:** PBS-2018-07

**Subject:** Zoning By-Law Amendment &  
Draft Plan of Subdivision Approval (County Application: 37-T-17003)  
1061160 Ontario Inc. (Santarossa) Business Park  
North-East Corner of 8th Concession Rd/County Rd 46 Intersection  
Summary of Public Consultation and Planning Analysis  
OUR FILES: D19 SANTA and D12 SANTA

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### Recommendations

It is recommended:

1. **That** a by-law having the effect of amending the Sandwich South Zoning By-law 85-18 for a 7.7 hectare (19.2 acre) portion of a 29.0 hectare (71.6 acre) parcel of land situated at the north-east corner of the 8<sup>th</sup> Concession Road/County Road 42 intersection from “Holding – Business Park Zone (H)BP” to “Parks and Open Space Zone (P)” to zone the 7.7 hectare (19.2 acre) portion that is to be used for the stormwater management facility to be constructed in relation to the development of the lands for a business park subdivision and to zone the existing woodlot/natural area for its preservation, **be adopted**;
2. **And that** the granting of Draft Plan of Subdivision Approval by the County of Essex (the Approval Authority) for the application submitted by 1061160 Ontario Inc. (County Application: 37-T-17003, as revised on February 8, 2018) for a business park subdivision comprising five business park lots, a block containing an existing woodlot/natural area and associated buffer and a block containing a proposed stormwater management facility on a 29.0 hectare (71.6 acre) parcel of land situated at the north-east corner of the 8<sup>th</sup> Concession Road/County Road 42 intersection, subject to the inclusion of appropriate conditions as noted in Report PBS-2018-07, **be supported**;

3. **And further that** the County of Essex **be advised** of Council's support for County Application: 37-T-17003, as revised on February 8, 2018, along with the associated requested conditions of Draft Plan of Subdivision Approval, as noted in Report PBS-2018-07.

## Background

### Initial Planning Applications and Public Meeting

On November 14, 2017, Council held a public meeting in accordance with the provisions of *The Planning Act* to hear comments regarding a proposed Plan of Subdivision Approval application and a proposed amendment to the Sandwich South Zoning By-law 85-18 for a 29.0 hectare (71.6 acre) parcel of land situated on the north-east corner of the 8<sup>th</sup> Concession Road/County Road 46 intersection within Oldcastle Hamlet (see Attachment 1). Historically, these lands have been referred to as the "Santarossa lands". These applications were filed in order to facilitate the development of the lands for an industrial subdivision comprising nine industrial lots, a block containing an existing woodlot/natural area and associated buffer and a block containing a proposed stormwater management facility.

### Amended Planning Applications

As a result of the comments received at the public meeting, the Applicant has made the following revisions to its applications:

- Proposed Zoning By-law Amendment - removed the rezoning pertaining to the industrial lots thereby leaving them as they are currently zoned, being "Holding - Business Park Zone (H)BP"; and
- Proposed Plan of Subdivision – revised the number of business park lots from nine to five, ranging in size from 2.2 hectares (5.4 acres) to 5.86 hectares (14.5 acres), in order to create lots that meet the minimum lot area of 2.0 hectares (4.9 acre) established in the BP Zone.

The purpose of this Report is to summarize the nature of the comments received at the public meeting, in the context of the foregoing revisions, and recommend a course of action with respect to the proposed revised Draft Plan of Subdivision Approval Plan and revised Zoning By-law amendment applications.

## Comments

### Comments Received at the November 14, 2017 Public Meeting

Email correspondence was received from the public with respect to the proposed applications and verbal comments were presented directly to Council at the November 14, 2017 statutory public meeting.

Comments in support of the application were brought forward at the public meeting, which dealt with the strong demand for additional industrial lots and the desire of local businesses to remain and expand their operations in the Oldcastle area.

In addition, issues/concerns were raised by stakeholders regarding the applications. The primary issues raised are summarized below in italics and are followed by the Administrative response.

#### ***Issue No. 1 – Insufficient Public Consultation / Applications are Premature***

*There was insufficient public consultation of the proposed applications and the proposed Zoning By-law Amendment should be deemed premature until such time as a secondary plan is completed for the entire Oldcastle Hamlet in consultation with the residents of the Oldcastle Hamlet.*

#### **Response**

Public consultation for the proposed applications was held in accordance with the *Planning Act*. The public meeting held for the subject applications is the standard venue to obtain public comments on land development proposals. We do not agree with the assertion that a Secondary Plan is required prior to evaluating the proposed applications. Secondary Plans are generally undertaken for a collection of lands that lack specific policies and/or require more detailed direction on issues such as land use, infrastructure, the natural environment, transportation and urban design. Accordingly, Secondary Plans are commonly undertaken when there is multiple land ownership and there needs to be coordination of development and servicing between adjacent lands. The subject property has clear municipal servicing options available to it and is currently designated “Business Park” in the Sandwich South Official Plan. This designation provides clear land use policy and establishes permitted uses for the lands, to which the proposed applications conform. Based on the foregoing, the subject applications are not premature, there is no demonstrated need for a Secondary Plan and adequate opportunity for public consultation was provided via the public meeting.

### ***Issue No. 2 – Maintain Current Zoning***

*The current “Business Park (BP) Zone” should be maintained so that more potential commercial uses (i.e. restaurants) can locate within the Oldcastle Hamlet and provide commercial uses for the existing residents.*

#### **Response**

As noted earlier in this Report, the Applicant advised subsequent to the Public Meeting that it is revising its Zoning By-law amendment application by removing the portion that proposes to rezone lands to “Industrial Zone (M1)”. The Applicant has advised that although it intends to market and develop the lands primarily for industrial type uses, it can adequately accomplish this end in accordance with the existing “Business Park Zone (BP)” regulations that currently apply to the property.

Accordingly, the Zoning By-law amendment application has been amended to apply only to the 2.4 hectare (6.1 acre) block for a future stormwater management pond and the 5.3 hectare (13.1 acre) block which is occupied by an existing woodlot/natural area. The purpose of the proposed amended application is to rezone these two blocks to “Parks and Open Space Zone (P)”. The P zone will facilitate the long-term protection of the woodlot/natural area and facilitate the future stormwater management facility (which will ultimately be transferred to the Town) that will abut the aforementioned woodlot/natural area (which will have a conservation easement registered against it).

### ***Issue No. 3 – Preservation of Wildlife***

*Wildlife in the area (and, in particular, within the woodlot located on the property) will be affected negatively as a result of the increased traffic.*

#### **Response**

As noted above, the woodlot currently existing on the property will be maintained through the establishment of a conservation easement in collaboration with the Essex Region Conservation Authority (ERCA). In addition, the woodlot will be rezoned to prohibit any development from occurring within the woodlot and a 10-metre buffer will be established around the woodlot in order to provide additional environmental protection.



#### ***Issue No. 4 – Traffic and Resident Safety***

*The development of the property for industrial uses will exacerbate traffic problems within the immediate area.*

#### **Response**

As noted above, based on the comments received through the public consultation process, the Applicant has advised that the property will be developed in accordance with the existing “Business Park Zone (BP)” that applies to the property. The Applicant has completed a Traffic Impact Study (TIS) which demonstrates the adequacy of the road network, subject to a number of improvements that will need to be undertaken by the proponent.

The TIS has been reviewed by the Town, the Ministry of Transportation (MTO) and the County of Essex. The Town has no concerns and is in agreement with recommendations of the TIS. The MTO noted only one concern related to the lack of analysis regarding the impact of estimated traffic generated from the proposed Del Duca development on the PM peak. The MTO requested that the Applicant’s consultant address this concern. The County is also in agreement with the conclusions of the TIS but suggested wording to form part of the requisite development agreement.

Accordingly, while some issues still need to be addressed by the Applicant’s consultant, no significant concerns have been identified or are anticipated. Any transportation infrastructure improvements required will ultimately be included as a requirement in the requisite development agreement between the Town and the proponent.

In light of the foregoing, it is the opinion of Administration that traffic issues will be adequately addressed contemporaneously with the development of the lands.

#### **Planning Analysis**

A detailed planning analysis addressing the policies contained within the Provincial Policy Statement, the County of Essex Official Plan and the Sandwich South Official Plan was provided by way of Planning and Building Services Report 30/17. This Report was received and reviewed by Council at its October 10, 2017 Regular Council Meeting and at the subsequent Public Meeting on November 14, 2017. The analysis below has been revised to reflect the aforementioned changes to the Zoning By-law Amendment application:

##### **i) Provincial Policy Statement (PPS)**

Planning authorities shall promote economic development and competitiveness by providing for an appropriate mix and range of employment uses to meet long-term needs of a municipality. In addition, the PPS stipulates that municipalities should provide opportunities for a diversified economic base, including maintaining a range and choice of

suitable sites for employment uses which support a wide range of economic activities and ancillary uses, and take into account the needs of existing and future businesses.

The PPS contemplates the types of uses being proposed within identified urban areas, particularly those areas identified for employment land purposes (such as the subject property which is designated and zoned for Business Park uses), subject to establishing the suitability of the proposed uses for the area and satisfactorily addressing compatibility issues.

With respect to natural heritage features, a Scoped Environmental Impact Assessment was completed for the proposed industrial development of the lands as per the requirements of the Ministry of Natural Resources and Forestry (MNRF). MNRF have determined that the activities associated with the project will likely not contravene section 9 (species protection) and/or section 10 (habitat protection) of the *Endangered Species Act, 2007* (ESA 2007) for Species at Risk (SAR) and have issued a Letter of Authorization (LOA) to the Applicant. In addition, it is noted that the subject woodlot/natural area is identified as a natural heritage candidate site in the Natural Heritage Inventory that was completed by the Essex Region Conservation Authority, on behalf of the Town. Accordingly, it being zoned to prohibit its development as part of the development of the balance of the lands along with the registration of a conservation easement on this area ensure the long term protection of this natural heritage feature.

Accordingly, it is the opinion of Administration that the proposed development is consistent with the goals and policies of the PPS.

## **ii) County of Essex Official Plan**

Any amendment to a local official plan must be in conformity with the policy direction contained in the County of Essex Official Plan (COP). The subject lands are within an identified Primary Settlement Area of the COP. The goals and policies of the COP are very similar in nature to those found in the PPS insofar as they encourage a range of urban development within identified settlement areas, such as the Oldcastle Hamlet within the Town of Tecumseh.

The COP also specifically acknowledges the uniqueness of Oldcastle Hamlet as compared to other Primary Settlement Areas due to its role in the region as a significant regional employment district. The COP notes that the Oldcastle Hamlet has historically been the focus of manufacturing and establishes that it “shall be primarily developed with employment uses”. It further establishes that “the local Official Plan shall contain policies to ensure orderly and appropriate development”.

The woodlot/natural area within Block 10 of the Plan is identified as a Natural Heritage Overlay on Schedule “B2” of the COP. In the absence of the woodlot being transferred to a public body (i.e. ERCA or the Town), the Applicant will be required to provide a conservation easement over the lands to ensure their long-term protection.

Accordingly, it is the opinion of Administration that the proposed development conforms to the goals and policies of the County of Essex Official Plan.

### **iii) Sandwich South Official Plan**

The subject property is designated “Business Park” on Schedule “A-2” of the Sandwich South Official Plan. The policies for this designation encourage a variety of light industrial uses including manufacturing, assembling, processing, fabricating and warehousing that can be appropriately integrated with the existing and proposed development pattern. The policies also permit public and private sports facilities, exhibition halls, offices, financial institutions and retail uses that are space extensive and normally locate outside of conventional shopping centres and require easy access to the arterial road network. The proposed development conforms to the current designation and policies of the Official Plan.

Accordingly, it is the opinion of Administration that the uses proposed by the Zoning By-law Amendment application conform to the Sandwich South Official Plan.

### **Zoning By-law Amendment**

The property is currently designated “Business Park” in the Sandwich South Official Plan and zoned “Holding – Business Park Zone (H)BP” in the Sandwich South Zoning By-law 85-18. The current zoning permits various light-industrial and commercial type uses, contingent on the removal of the Holding symbol that has been placed on the land.

Through the revised zoning by-law amendment application, the Applicant proposes to maintain the (H)BP Zone but rezone the existing woodlot/natural area and the future stormwater management facility to a “Parks and Open Space Zone (P)” that would appropriately reflect the intended uses of these lands.

The Holding (H) symbol will remain on those portions of the lands identified for business park uses until such time as a subdivision agreement is executed with the Town and final approval of the Plan of Subdivision is obtained from the County of Essex.

### **Site Plan Control**

The subject property is currently subject to site plan control. This will enable the Town to use the site plan control process to adequately address all on-site servicing and site design issues (for each future individual lot) prior to any development occurring on the individual parcels.

## **Matters to Have Regard to Under The Planning Act - Plan of Subdivision**

Subsection 51(24) of the *Planning Act* establishes that regard shall be had to various matters when considering a draft plan of subdivision. These matters include, but are not limited to, the following:

- *The effect of the subdivision on matters of provincial interest;*
- *Whether the plan conforms to the Official Plan and adjacent plans of subdivision;*
- *Whether the proposed subdivision is premature or in the public interest;*
- *Whether the plan conforms to the official plan and adjacent plans of subdivision;*
- *The suitability of the land for the purposes for which it is to be subdivided;*
- *The number, width, location and adequacy of the roads within and in the vicinity of the proposed subdivision;*
- *The dimensions and shapes of lots;*
- *The restrictions or proposed restrictions (i.e. zoning) on the land proposed to be subdivided;*
- *Conservation of natural resources and flood control;*
- *The adequacy of municipal services;*
- *The adequacy of school sites;*
- *The area of land, if any, within the proposed subdivision that is to be conveyed for public purposes;*
- *The extent to which the plan's design optimizes the efficient use and conservation of energy; and*
- *The interrelationship between the design of the proposed plan and site plan control matters relating to any development on the land.*

The draft plan of subdivision has been developed and refined through meetings and discussions between Administration and the Applicant's consultant. In addition, the Draft Plan has been amended in order to comply with the minimum lot size requirement of 2.0 hectares established by the existing BP zoning that applies to the property. Administration is supportive of the proposed lotting pattern and street layout and is of the opinion that the proposed plan has had adequate regard to the matters noted in subsection 51(24) of the *Planning Act*.

It is noted that negotiations have commenced with the Applicant regarding details typically incorporated in a subdivision agreement setting the standards for the required municipal services, including the construction of waterlines, sanitary sewers, storm sewers, sidewalks, storm water management facility details, tree plantings and other amenities. Ultimately a subdivision agreement will be required to be executed between the Town and the Applicant as a condition of Draft Plan Approval. Once the terms of the subdivision agreement are negotiated, the document will be presented to Council in order to seek authorization for its execution and registration against the lands.

Based on the foregoing, Administration believes that adequate regard has been given to Section 51 (24) of the Planning Act and that the subdivision is of an acceptable design.

## Conditions of Draft Plan Approval

Based on Administration's review of the proposed Draft Plan of Subdivision, as revised on February 8, 2018 (see Attachment 3), it is recommended that Council support Draft Plan of Subdivision Approval of County File No. 37-T-14003 (as revised on February 8, 2018), subject to the County of Essex providing the following conditions:

- i) *That the Owner enter into a subdivision agreement with the Town of Tecumseh wherein the Owner agrees to satisfy all the requirements, design, engineering, financial and otherwise, of the Town concerning but not limited to the payment of development charges, provision of parkland, landscaping and planting of trees, fencing, provision of roads, installation of services, sanitary sewerage collection system, water distribution system, utilities and stormwater management facilities for the development of the lands, including those works required off-site;*
- ii) *That the Owner engage the services of a qualified engineer to complete a Stormwater Management Study to address stormwater quantity and quality to the satisfaction of the Town and the Essex Region Conservation Authority and that the subdivision agreement between the Owner and the Town, where required, contain a provision requiring the construction of the works by the Owner as identified in the Stormwater Management Study;*
- iii) *That prior to final approval by the Approval Authority, the Approval Authority is to be advised by the Town that this proposed subdivision conforms to the Zoning By-law in effect; and*
- iv) *That prior to final approval by the Approval Authority, the Approval Authority and the Town be advised that the Traffic Impact Study undertaken as part of the Draft Plan of Subdivision Approval process has been approved by the County of Essex and that adequate terms have been included in the subdivision agreement to ensure the construction of any works required by the Traffic Impact Study.*

In addition, the following note of Draft Plan approval is recommended:

*"That upon approval and registration of the Plan of Subdivision, two (2) copies and one (1) diskette of the Plan prepared by an Ontario Land Surveyor, on NAD-83 format, UTM Zone 17, which has been numbered, dated, signed and registered be submitted to the Town."*

## Conclusion

On the basis of the foregoing, it is the opinion of the writer that the proposed Zoning By-law Amendment, as amended, is consistent with the Provincial Policy Statement, conforms to the County of Essex Official Plan and Sandwich South Official Plan policies and will result in appropriate development based on sound land use planning principles. It is believed that the

concerns/issues raised by those in attendance at the public meeting and through written correspondence to the Town have been adequately addressed. Detailed site design issues will be addressed through the required Draft Plan of Subdivision approval process and the future subdivision and/or site plan control agreements that will be finalized and recommended for execution by Council at a future date.

Accordingly, Town Administration recommends that Council pass a by-law having the effect of amending the Sandwich South Zoning By-law 85-15 in order to rezone the 7.7 hectare (19.2 acre) portion (being the proposed stormwater management pond and the existing woodlot/natural area) of the 29.0 hectare (71.6 acre) parcel of land situated at the north-east corner of the 8<sup>th</sup> Concession Road/County Road 42 intersection from “Holding – Business Park Zone (H)BP” to “Parks and Open Space Zone (P)”, all of which shall be in accordance with the provisions of the *Planning Act*.

In addition, the proposed Draft Plan of Subdivision application, as revised on February 8, 2018, has adequate regard to Section 51 (24) of the Planning Act, is in conformity with the Business Park land use designation of the Official Plan, and will comply with all of the requirements of the existing BP zone and the P zone proposed for the subject property. Administration supports the layout and design of the subdivision and believes more detailed site design matters can be addressed through the required subdivision agreement that will be finalized and recommended for execution by Council at a future meeting.

Accordingly, Administration recommends that Council support the proposed Plan of Subdivision subject to the Town’s conditions of draft approval as noted in this Report and that the County be advised accordingly.

## **Consultations**

Public Works & Environmental Services

## **Financial Implications**

None.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input checked="" type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☒

Website ☐ Social Media ☐ News Release ☐ Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Chad Jeffery, MA, MCIP, RPP  
Manager Planning Services

Reviewed by:

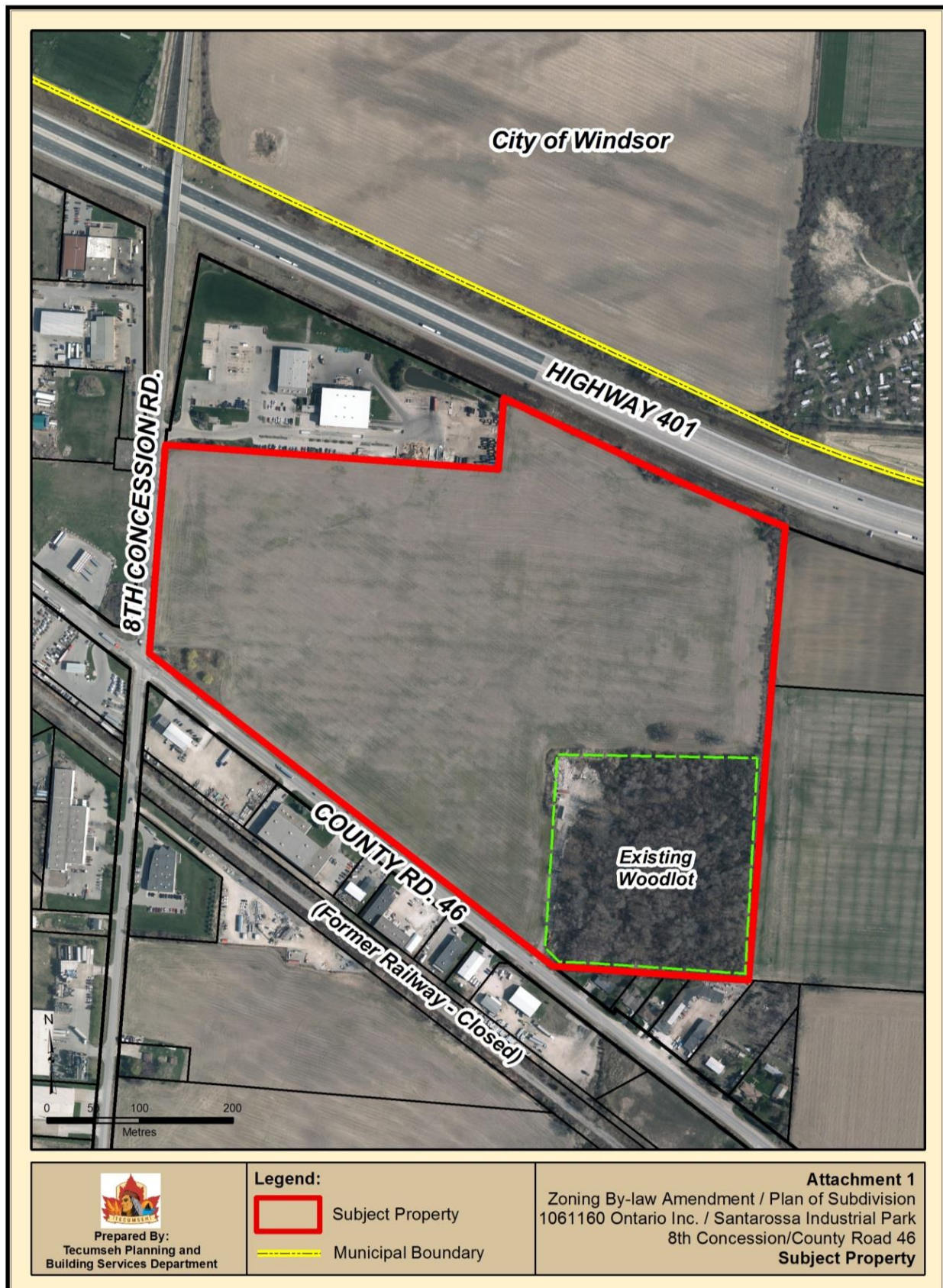
Brian Hillman, MA, MCIP, RPP  
Director Planning & Building Services

Recommended by:

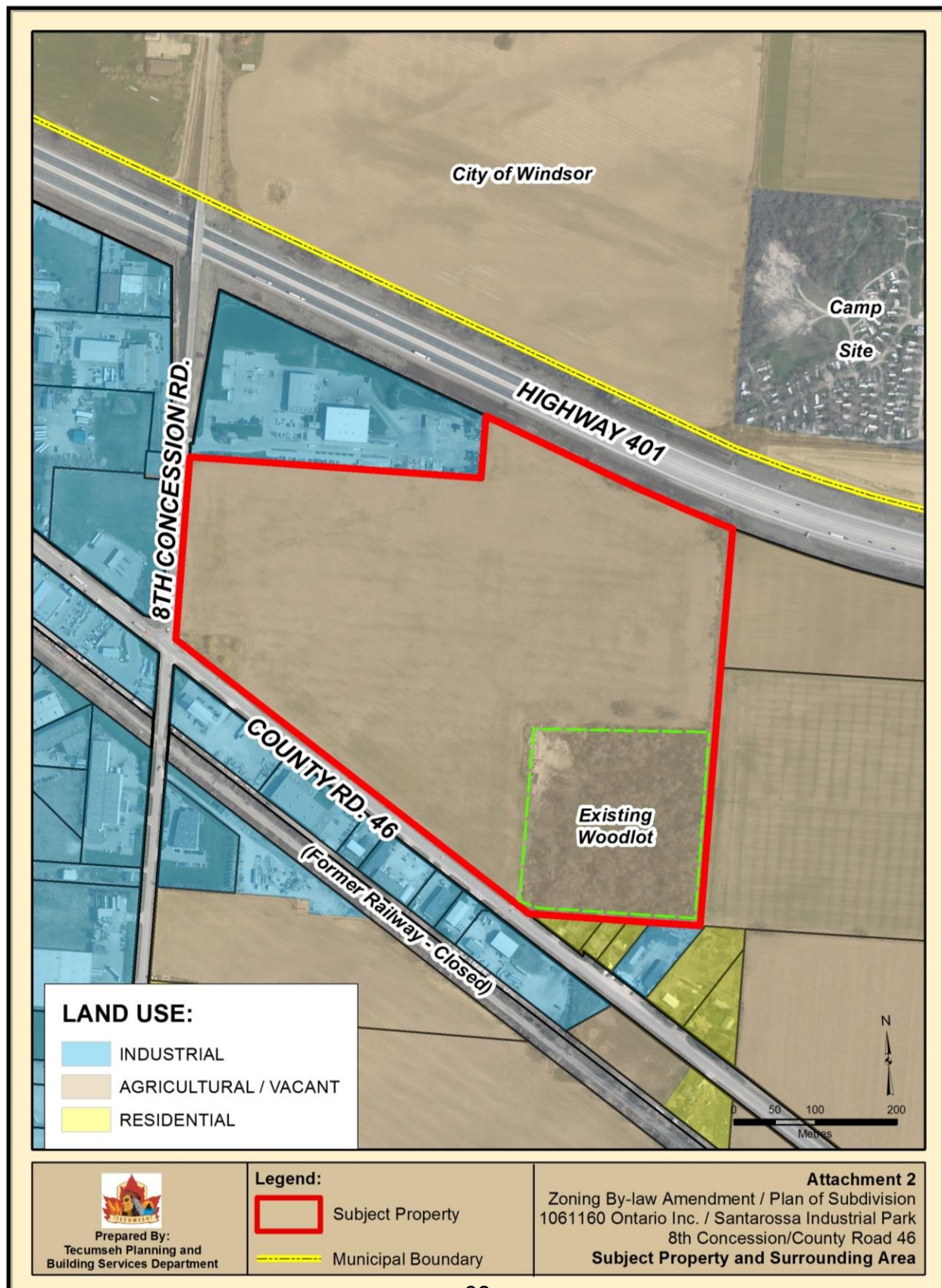
Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

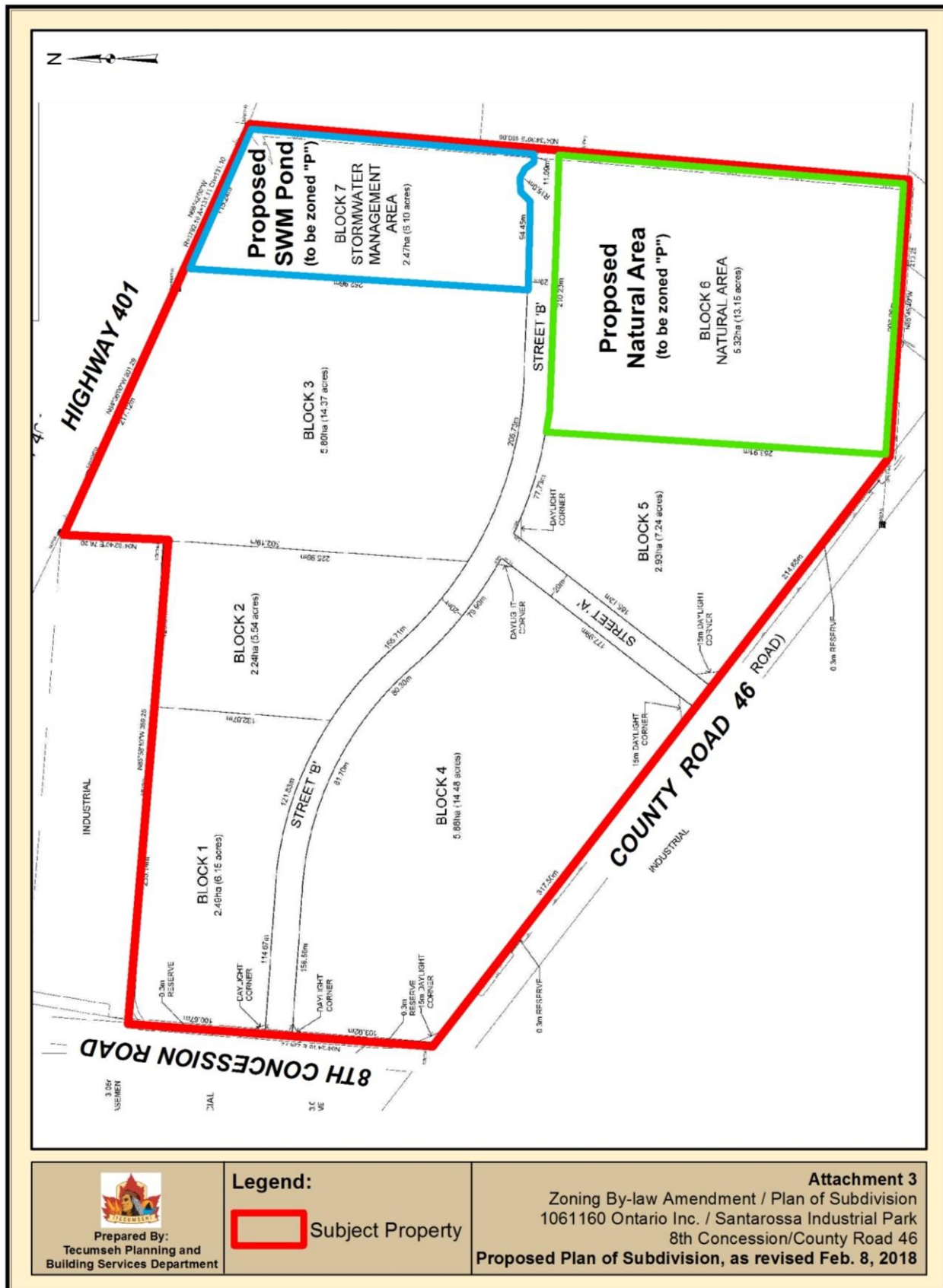
<b>Attachment Number</b>	<b>Attachment Name</b>
1	Subject Property Map
2	Subject Property and Surrounding Area Map
3	Proposed Plan of Subdivision, as revised Feb. 8, 2018













## The Corporation of the Town of Tecumseh

Public Works & Environmental Services

**To:** Mayor and Members of Council

**From:** Phil Bartnik, Manager Engineering Services

**Date to Council:** February 27, 2018

**Report Number:** PWES-2018-07

**Subject:** Various 2018 Watermain Improvement Projects – Tender Award

---

### Recommendations

It is recommended that:

1. The tender for the Various 2018 Watermain Improvement Projects in the amount of \$742,725 excluding HST **be awarded** to Sherway Contracting (Windsor) Ltd. and that the Mayor and Clerk **be authorized** to execute an agreement, satisfactory in form to the Town's Solicitor, with Sherway Contracting (Windsor) Ltd.; and that
2. Project funding allocations, reflecting a \$251,100 decrease, **be adjusted** as follows:  
Watermain Reserve Fund - decrease from \$1,196,900 to \$945,800

### Background

At the December 12, 2017 Regular Meeting of Council, Council approved the recommendations (Motion RCM-441/17) of PWES Report No. 57/17 titled "2018-2022 Public Works & Environmental Services Capital Works Plan" that authorized Administration to proceed with the 2018 capital works projects including the construction of the Various 2018 Watermain Improvement Projects.

This project consists of the watermain replacements on Mack Court, Lacasse Park, Alden Crescent and at Highway No.3/Roscon Industrial Drive, as well as abandonment of a section of watermain on Tecumseh Road.

### Comments

A Tender call for the Project was advertised in the Shoreline Week and on the Town's website on January 19, 2018, along with direct notification to the Windsor Construction Association.

Eight (8) tenders were received by the Purchasing Officer on February 8, 2018. The Tenders were opened publicly in Council Chambers in the presence of Administration.

The engineer's pre-tender estimate for this work was \$987,195 (excluding HST) which was based on historical prices for similar projects.

Stantec Consulting Limited (Stantec) has reviewed the tenders and provided the attached report. The tender results are summarized as follows:

<b>Tenderer</b>	<b>Total Tender Price (excluding HST)</b>
Sherway Contracting (Windsor) Ltd.	* \$ 742,725
Henry Heynik Construction	\$ 794,642
J & J Lepera Infrastructures Inc.	\$ 925,000
Shea Rock Construction Group Inc.	\$ 949,348
D'Amore Construction (2000) Ltd.	\$ 999,800
Major Construction (2010) Ltd.	\$ 1,015,070
SLR Contracting Group Inc.	\$ 1,099,615
Amico Infrastructures Inc.	\$ 1,195,099

*\*Denotes corrected total.*

There were no major inconsistencies, omissions, or unbalanced pricing found in any of the tenders.

A mathematical error was made in the tender of Sherway Contracting (Windsor) Ltd., which did not impact the order of the tenders. All Tenderers submitted the required Bid Bond.

Based on their low tender submission and subsequent discussions, Administration, in consultation with Stantec, recommends that Council award the tender for Various 2018 Watermain Improvement Projects in the amount of \$742,725 excluding HST to Sherway Contracting (Windsor) Ltd. and that the Mayor and Clerk be authorized to execute an agreement, satisfactory in form to the Town's Solicitor, with Sherway Contracting (Windsor) Ltd.

Sherway Contracting (Windsor) Ltd. has indicated that upon contract award they will commence construction with a tentative construction start date of early April 2018. The project is anticipated to be substantially performed by June 2018.

## Consultations

Financial Services  
Purchasing Officer  
Stantec Consulting Limited

## Financial Implications

PWES Report No. 57/17 provided an estimated project cost of \$1,196,880 and funding approval as follows:



## Various 2018 Watermain Improvement Projects (Watermain Reserve Fund):

• Mack Court Watermain Replacement	\$254,800
• Lacasse Park Watermain Replacement	\$365,200
• Tecumseh Road Watermain Abandonment	\$237,400
• Alden Crescent Watermain Replacement	\$169,100
• Hwy#3/Roscon Industrial Drive	<u>\$170,400</u>
Total	\$1,196,900

The tendered/projected costs are summarized below:

• Construction (tender)	\$742,725
• Engineering	\$150,000
• Topographic & Legal Survey	\$22,500
• Tender Advertisement	\$500
• Geotechnical Quality Assurance	<u>\$13,600</u>
	\$929,325
• Non-rebateable HST (1.76%)	<u>\$16,475</u>
Total	\$945,800

The total tendered/projected cost is under the \$1,196,900 budget by \$251,100, as detailed in the table below:

Various 2018 Watermain Improvements	Project Budget	Tendered / Projected	Change
Mack Court	\$254,800	\$200,600	-\$54,200
Lacasse Park	\$365,200	\$240,700	-\$124,500
Tecumseh Road	\$237,400	\$208,900	-\$28,500
Alden Crescent	\$169,100	\$176,800	\$7,700
Hwy#3/Roscon Industrial	\$170,400	\$118,800	-\$51,600
<b>Totals:</b>	<b>\$1,196,900</b>	<b>\$945,800</b>	<b>-\$251,100</b>

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☒

Website ☐      Social Media ☐      News Release ☐      Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Phil Bartnik, P.Eng.  
Manager Engineering Services

Reviewed by:

Luc Gagnon, CPA, CA, BMath  
Director Financial Services & Treasurer

Reviewed by:

Dan Piescic, P.Eng.  
Director Public Works & Environmental Services

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

**Attachment  
Number**

**Attachment  
Name**

1	Letter from Stantec Consulting Limited dated February 15, 2018
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Stantec Consulting Ltd.  
140 Ouellette Place, Suite 100  
Windsor, Ontario N8X 1L9  
Tel: (519) 966-2250  
Fax: (519) 966-5523

February 15, 2018  
File: 165620127

Town of Tecumseh  
917 Lesperance Road  
Tecumseh, Ontario  
N8N 1W9

**Attention: Mr. Phil Bartnik, P. Eng.**  
**Manager of Engineering Services**

Dear Sir,

**Reference: Tender Report**  
**2018 Watermain Replacement Program**

Tenders for the above referenced project were received at the Town of Tecumseh offices until 2:00 p.m. Thursday, February 8, 2018. A total of eight (8) tenders were submitted, with the tenders opened publicly at 2:05 p.m. on that date. The tender amounts are shown below.

<u>CONTRACTOR</u>	<u>TENDER PRICE (Not Including HST)</u>
1. Sherway Contracting (Windsor) Ltd.	\$742,725.00*
2. Henry Heynik Construction	\$794,652.00
3. J&J Lepera Infrastructures Inc.	\$925,000.00
4. SheaRock Construction Group Inc.	\$949,348.00
5. D'Amore Construction (2000) Ltd.	\$999,800.00
6. Major Construction	\$1,015,070.00
7. SLR Contracting Group Inc.	\$1,099,615.00
8. Amico Infrastructures Inc.	\$1,195,099.50

\* - Denotes Corrected Totals

No Addenda were issued during the tendering process as noted by all tenderers.

The tenders were checked for inconsistencies, omissions, unbalanced pricing and other items that would raise concerns. No major inconsistencies, omissions or unbalanced pricing were found in any of the tenders. Statements "A" to "D" were completed by all tenderers as required.



February 15, 2018  
Mr. Phil Bartnik, P. Eng.  
Manager of Engineering Services  
Page 2 of 2

**Reference: Tender Report  
2018 Watermain Replacement Program**

The tenders were checked for mathematical errors. The following errors were noted:

Sherway Contracting (Windsor) Ltd. had a multiplication error in Item B3a. The amount for this item was revised from \$440 to \$4,400. Due to the above adjustment and an addition error, the total for Section B has been changed from \$103,080 to \$120,540. This changes the total tender price (excluding HST) from \$725,265 to \$742,725. The HST amount and total tender price (including HST) would be adjusted accordingly. No other mathematical errors were noted.

A 10% bid bond was included with all tenders as required.

The engineer's Pre-Tender opinion of probable cost for this work was \$987,195 (plus HST) which was based on historical prices for similar projects.

Sherway Contracting (Windsor) Ltd. was the low bidder for this project. The tender price of \$742,725.00 excludes HST and includes a total contingency and cash allowance of \$95,150.00. Sherway Contracting (Windsor) Ltd.'s bid is approximately 24.8 % lower than the engineer's opinion of probable cost, approximately 6.5% lower than the second lowest tenderer and approximately 19.7% lower than the third lowest tenderer. Sherway Contracting (Windsor) Ltd.'s bid is also approximately 37.9 % lower than the highest tenderer, which is considered normal for this type of project. Since the Town was able to tender this project early in the season before other projects were tendered, they likely received very competitive bids as a result.

In our opinion, **Sherway Contracting (Windsor) Ltd.** and their list of proposed subcontractors have the resources and experience to successfully complete this project. We have worked with them on other projects and those projects were completed within budget and on schedule.

We recommend the project be awarded to Sherway Contracting (Windsor) Ltd. at the unit prices indicated in the tender.

Feel free to call if you have any questions or require additional information.

Regards,

**STANTEC CONSULTING LTD.**

Clarence Jubenville, P.Eng.  
Sr. Project Engineer  
Phone: (519) 966-2250 Ext. 241  
Fax: (519) 966-5523  
clarence.jubenville@stantec.com

c.



## The Corporation of the Town of Tecumseh

Public Works & Environmental Services

**To:** Mayor and Members of Council

**From:** Denis Berthiaume, Manager Water & Wastewater Services

**Date to Council:** February 27, 2018

**Report Number:** PWES-2018-10

**Subject:** 2017 Tecumseh Distribution System – Inspection Report

---

### Recommendations

It is recommended:

That the Ministry of the Environment and Climate Change inspection report for the Tecumseh Distribution System dated January 12, 2018, **be received**.

### Background

The Ministry of the Environment and Climate Change (MOECC) has a rigorous and comprehensive inspection program for Municipal Residential Drinking Water Systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the *Safe Drinking Water Act, 2002*, associated regulations and MOECC Certificates of Approval. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

The MOECC carried out a one day inspection of the Tecumseh (Windsor WTP) Distribution System on January 12, 2018. This announced focused inspection covers the period from January 1, 2017 to December 31, 2017. The previous inspection occurred January 20, 2017. The inspector reviewed the Town's records and procedures to ensure the Town met MOECC legislative requirements.

### Comments

#### Inspection Procedure

The purpose of the MOECC inspection is to confirm compliance with MOECC legislation and authorizing documents such as Orders and Certificates of Approval, as well as evaluating conformance with Ministry drinking water related policies and guidelines.

The MOECC inspector reviewed the Town's records and documented findings of its inspections for the following:

- 1) Distribution System
- 2) Operational Manuals
- 3) Logbooks
- 4) Contingency/Emergency Planning
- 5) Security
- 6) Consumer Relations
- 7) Certification and Training
- 8) Water Quality Monitoring
- 9) Water Quality Assessment
- 10) Report and Corrective Action

In addition, the inspector reviewed Water Services standard operating procedures and conducted interviews with Water staff. Based on the results of both the reviews and interviews, the MOECC inspector prepared his final inspection report that was received by the Town on February 7, 2018.

### **Results of Inspection Report**

The Town's distribution system did not have any non-compliance issues with regulatory requirements and did not have any best practice issues identified during the inspection period.

The Inspection Summary Rating Record (IRR), included in the appendix of the inspection report, provides the MOECC, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance.

**The Town's inspection risk rating is 0.00% and the final inspection rating is 100.00%. Those ratings represent the best possible rating achievable.**

Water Services staff is to be commended for their outstanding achievements.

Administration recommends that Council receive the Ministry of the Environment and Climate Change inspection report for the Tecumseh Distribution System dated January 12, 2018.

### **Consultations**

Ministry of the Environment and Climate Change

### **Financial Implications**

There are no financial implications arising from this report.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input checked="" type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☐

Website ☒      Social Media ☐      News Release ☐      Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Denis Berthiaume, ORO  
Manager Water & Wastewater Services

Reviewed by:

Dan Piescic, P.Eng.  
Director Public Works & Environmental Services

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
1	Ministry of the Environment and Climate Change – Tecumseh Distribution System Inspection Report, dated January 12, 2018

**Ministry of Environment  
and Climate Change**

Safe Drinking Water  
Branch

Windsor Area Office  
Unit 620 – 4510 Rhodes Dr  
Windsor ON N8W 5K5

**Ministère de l'Environnement et de  
l'Action en matière de changement climatique**

Direction du contrôle de la qualité de  
l'eau potable

Bureau du Secteur de Windsor  
No 620 – 4510 Ch Rhodes  
Windsor ON N8W 5K5



February 7, 2018

Town of Tecumseh  
917 Lesperance Road  
Tecumseh, Ontario  
N8N 1W9

Attention: Brad Dupuis, D.W.Q.M.S. Representative

**Re: Town of Tecumseh Distribution System Inspection Report**

Please find enclosed the Drinking Water System Inspection Report for the inspection that was conducted at the Tecumseh Distribution System (DWS#260004969) on January 12, 2018.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in “Taking Care of Your Drinking Water: A guide for members of municipal council” found under “Resources” on the Drinking Water Ontario website at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater).

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation & Enforcement (II&E) Secretariat and advice of internal/external risk experts. The Inspection Summary Rating Record (IRR), included as Appendix B of the inspection report, provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system’s annual inspection and regulated water quality testing performance. IRR ratings are published (for the previous inspection year) in the Ministry’s Chief Drinking Water Inspectors’ Annual Report.

If you have any questions or concerns regarding the rating, please contact Marc Bechard, Drinking Water Program Supervisor, at 519-383-3778. If you have any questions or concerns regarding this report, please call me at (519) 948-5079.

Yours truly,



Cara Salustro  
Provincial Officer  
Water Inspector  
Safe Drinking Water Branch, Windsor Area Office  
cara.salustro@ontario.ca

Enclosure

Ec:

Brad Dupuis, D.W.Q.M.S. Representative, Town of Tecumseh, bdupuis@tecumseh.ca  
Denis Berthiaume, Manager Water & Wastewater, Town of Tecumseh,  
dberthiaume@tecumseh.ca

Dr. Wajid Ahmed, Medical Officer of Health (A), Dr. Wajid Ahmed, Acting Medical  
Officer of Health, wahmed@wechealthunit.org

Theresa Marentette, Acting Chief Executive Officer/Director of Health Protection,  
tmarentette@wechu.org

Mike Tudor, Manager, Health Inspection Department, mtudor@wechealthunit.org

Phil Wong, Manager, Health Inspection Department, [pwong@wechealthunit.org](mailto:pwong@wechealthunit.org)

Marc Bechard, Water Compliance Supervisor, Ministry of Environment & Climate  
Change, marc.bechard@ontario.ca

File: SI-ES-TE 540





**Ministry of the Environment and Climate Change**

**TECUMSEH DISTRIBUTION SYSTEM  
Inspection Report**

<b>Site Number:</b>	260004969
<b>Inspection Number:</b>	1-F93JG
<b>Date of Inspection:</b>	Jan 12, 2018
<b>Inspected By:</b>	Cara Salustro

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## OWNER INFORMATION:

<b>Company Name:</b>	TECUMSEH, THE CORPORATION OF THE TOWN OF		
<b>Street Number:</b>	917	<b>Unit Identifier:</b>	
<b>Street Name:</b>	LESPERANCE Rd		
<b>City:</b>	TECUMSEH		
<b>Province:</b>	ON	<b>Postal Code:</b>	N8N 1W9

## CONTACT INFORMATION

<b>Type:</b>	Operator	<b>Name:</b>	Denis Berthiaume
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## INSPECTION DETAILS:

<b>Site Name:</b>	TECUMSEH DISTRIBUTION SYSTEM
<b>Site Address:</b>	1189 Lacasse Blvd. TECUMSEH ON N8N 2C7
<b>County/District:</b>	Tecumseh
<b>MOECC District/Area Office:</b>	Windsor Area Office
<b>Health Unit:</b>	WINDSOR-ESSEX COUNTY HEALTH UNIT
<b>Conservation Authority:</b>	Essex Region Conservation Authority
<b>MNR Office:</b>	Chatham Regional Office
<b>Category:</b>	Large Municipal Residential
<b>Site Number:</b>	260004969
<b>Inspection Type:</b>	Unannounced
<b>Inspection Number:</b>	1-F93JG
<b>Date of Inspection:</b>	Jan 12, 2018
<b>Date of Previous Inspection:</b>	

## COMPONENTS DESCRIPTION

**Site (Name):** Distribution System

**Type:**

**Comments:**

**Sub Type:**

The Tecumseh Distribution System is a standalone distribution system which supplies water to the area of the Town of Tecumseh in two discrete service zones. The zone north of Highway 401 is bounded by the Tecumseh municipal boundaries, south to Baseline Road. The zone south of Highway 401 is bounded by the Tecumseh municipal boundaries generally south of Essex County Road 46. Source water is from the City of Windsor water supply via the Windsor municipal distribution system. The City of Windsor water supply draws its source water from the Detroit River in the vicinity of Belle Isle. According to the drinking water system profile, a population of approximately 24,000

residents is served by the Tecumseh Distribution System. It therefore falls into the "large municipal residential" category under O. Regulation 170/03.

Water mains take treated water from the City of Windsor to the service area through 10 of 12 currently used boundary metered connections points with Tecumseh. The elevated storage tank in the community of Tecumseh maintains distribution system pressure. Secondary disinfection is provided by the A.H. Weeks water treatment plant.

The Tecumseh Distribution System 2015 annual report, prepared by the Town of Tecumseh, states that:

- Town of Tecumseh, City of Windsor and Windsor Utilities Commission (WUC) entered into a 50-year service agreement in November 2004 (By-law 2004-71). The service agreement was implemented on March 31, 2006.
- Prior to August 1, 2008, WUC provided water to 2400 residents in the former Township of Sandwich South, south of Highway 401 ("South Water Area"). The Town of Tecumseh assumed the responsibility for the operations and maintenance of the water distribution system from WUC in this South Water Area effective August 1, 2008.

**Site (Name):** MOE DWS Mapping  
**Type:** DWS Mapping Point

**Sub Type:**

## INSPECTION SUMMARY:

### Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on an inspection of a "stand alone connected distribution system". This type of system receives treated water from a separately owned "donor" system. This report contains elements required to assess key compliance and conformance issues associated with a "receiver" system. This report does not contain items associated with the inspection of the donor system, such as source waters, intakes/wells and treatment facilities.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

Specifically, this review includes an assessment of compliance/conformance in relation to the following:

- Drinking Water Systems Regulation (O. Reg. 170/03);
- Safe Drinking Water Act;
- The Procedure for Disinfection of Drinking Water in Ontario;
- Ontario Drinking Water Quality Standards based on available water quality data for this inspection period;
- MUNICIPAL DRINKING WATER LICENCE No.040-101, Issue Number: 3, dated December 6, 2016, issued to the Corporation of the Town of Tecumseh (Licence);
- DRINKING WATER WORKS PERMIT No: 040-201, Issue Number: 3, dated December 6, 2016, issued to the Corporation of the Town of Tecumseh (Permit).

This detailed inspection was conducted on an unannounced basis on January 12, 2018. The inspection period covers January 2017 to December 2017. The site visit consisted of sampling of water from the Tecumseh Distribution System (DWS No. 260004969), a visit to the systems water storage tower, and an interview with The Town of Tecumseh/Public Works and Environmental Services (Owner/Operating Authority).

### Treatment Processes

- The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.

There is no Schedule C in the Permit. Schedule A of the Permit contains the following physical components:

- 4,540 cubic meter water tower fed from the distribution system - 13000 Tecumseh
- Town of Tecumseh Water Infrastructure System

- The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.

Schedule B, Condition 3.0 of the Permit permits the drinking water system to be altered by adding, modifying, replacing or extending a watermain within the distribution system in accordance with and subject to the conditions detailed in the Condition and verifications recorded on Form 1.

### Treatment Processes

There were two activities during this inspection period that required the completion of a Form 1.

- **The owner had evidence indicating that all chemicals and materials that come in contact with water within the drinking water system met the AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA.**

Schedule B, Conditions 14.1 of the Licence includes a requirement that all chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/60, NSF/61 and NSF 372. Materials that are exempt from these requirements are detailed in Condition 14.3 of the Licence.

The Operating Authority stated that all chemicals and materials used meet standards, where applicable. The Operating Authority has prepared a document titled "Water Distribution System Standards & Material Specifications - dated December 3, 2013" that details water distribution system specifications including materials such as watermain pipe, fitting, and valves. The Operating Authority also has a SOP (SOP-019 Rev. B) in place that details procedures to ensure operators, contractors, and suppliers sign off verifying that materials used on a project meet specifications.

- **Up-to-date plans for the drinking-water system were kept in a place, or made available in such a manner, that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Schedule B, Condition 4.8 of the Permit requires that the owner update drawings maintained for the drinking water system to reflect the modification or replacement of the works, where applicable.

Schedule B, Condition 5.0 of the Licence details requirements for drawings and diagrams (constructed, process, instrumentation) of the treatment subsystem.

### Treatment Process Monitoring

- **The secondary disinfectant residual was measured as required for the distribution system.**

Schedule 7-2(3) of Ontario Regulation 170/03(3) requires that the owner of a large municipal residential system that provides secondary disinfection and the operating authority for the system ensure that at least seven distribution samples are taken each week in accordance with subsection (4) and are tested immediately for, (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or (b) combined chlorine residual, if the system provides chloramination.

(4) The following rules apply to the distribution samples referred to in subsection (3) unless at least one sample is taken on each day of the week:

1. At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week.
2. At least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the day referred to in paragraph 1.
3. When more than one sample is taken on the same day of the week under paragraph 1 or 2, each sample must be taken from a different location.

The Operating Authority monitors free chlorine residual in the distribution system greater than seven time per week. The Operating Authority measures and records free chlorine residuals at the same location as weekly microbiological samples at the beginning of a work week. The Operating Authority then measures weekly free chlorine residuals throughout the distribution system near the end of the same work week and records the results onto the "Water Analysis Report". Free chlorine residuals are measured at a minimum of 31 out of 50 locations in the distribution system on a weekly basis. The sampling schedule is rotated weekly to ensure all of the 50 locations

### Treatment Process Monitoring

are captured each month.

- **Samples for chlorine residual analysis were tested using an acceptable portable device.**

The Operating Authority uses a hand held HACH kit for chlorine residual analysis in the distribution system. These devices are calibrated on an annual basis.

### Distribution System

- **The owner had up-to-date documents describing the distribution components as required.**

Schedule B, Condition 3.5 of the Permit requires that the document or file referenced in Column 1 of Table 1 of Schedule A of the Permit that sets out watermain be retained by the owner and shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.

- **There is a backflow prevention program, policy and/or bylaw in place.**

The Town of Tecumseh has a Backflow Prevention By-law (No. 2001-68) in place that regulates the connections of water services supplied to the consumers of the municipal water system. The Chief Building Official/Building Inspector(s) administers the by-law. The building department addresses high hazard areas (industrial, commercial, institutional, agricultural) through the permitting process as well as inspections.

The Operating Authority has a Standard Operating Procedure (SOP-017 - Meter - Backflow Inspection) that provides details on the steps to take during an inspection of backflow preventors in municipal buildings/locations to evaluate if they are in good working condition to ensure there is no contamination of drinking water. The Operating Authority conducts annual inspection of back-flow preventors and completes any needed repairs as a result of these inspections.

- **The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system.**

Regular inspection and maintenance of the water tower is contracted to Landmark and scheduled for every 5 years. As a result of the last inspection the tower was painted two years ago. The Operating Authority reports that there are no outstanding recommendations to be completed from the last inspection.

- **Existing parts of the distribution system that are taken out of service for inspection, repair or other activities that may lead to contamination, and all new parts of the distribution system that come in contact with drinking water, were disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit, or an equivalent procedure (i.e. the Watermain Disinfection Procedure).**

Schedule B, Condition(s) 2.3 of the Permit requires that all parts of the drinking water system in contact with drinking water which are:

2.3.1 Added, modified, replaced, extended; or

2.3.2 Taken out of service for inspection, repair or other activities that may lead to contamination, shall be disinfected before being put into service in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:

- a) The ministry's Watermain Disinfection Procedure, effective June 5, 2017
- b) AWWA C652 – Standard for Disinfection of Water-Storage Facilities
- c) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
- d) AWWA C654 – Standard for Disinfection of Wells.

The Operating Authority has developed several Standard Operating Procedures (for example, SOP-009, SOP-010-Watermain Repair Category 1 & 2 and SOP-007 - Commissioning New Watermains) to ensure that all parts of the

### Distribution System

drinking water system which come into contact with drinking water, or that are taken out of service for inspection, repair or any other activities which could lead to contamination are disinfected before they are put back in service. The Operating Authority indicated that these procedures are in accordance with AWWA Standards and the ministry's Watermain Disinfection Procedure.

It is recommended that SOP-009 and SOP-010 should include numerical values for the disinfectant concentrations and secondary disinfectant restoration concentrations as detailed in the ministry "Watermain Disinfection Procedure". Where applicable, SOPs should reference the ministry's "Watermain Disinfection Procedure" as well as AWWA standards.

It is recommended that the Owner/Operating Authority review the ministry's Watermain Disinfection Procedure as well as any applicable AWWA standards to ensure the requirements are being met. If there are any deficiencies in meeting these objectives it is recommended that the Owner update the SOPs where necessary.

- **The owner had implemented a program for the flushing of watermain as per industry standards.**

The Operating Authority has developed a Standard Operating Procedure (SOP-002 - Hydrant Inspection and Flushing) that provides details on what steps to take when inspecting and flushing fire hydrants throughout the distribution system to ensure they are fully operational at all times. A hydrant flushing/leak detection program log sheet is used to record inspection/flushing activities.

With a view of continuous improvement, the Owner/Operating Authority should review Section 4.1.8 (see below) of the AWWA Management Standard "Distribution Systems Operation and Management" (ANSI/AWWA G200-15) to ensure the minimum requirements for a system flushing program are being met.

"The utility shall develop and implement a systematic flushing program that meets the needs of the utility, taking into consideration the condition of the system, hydraulic capability, treatment, water quality, and other site-specific criteria. At a minimum, the flushing program shall incorporate the following items:

1. The program addresses a preventative approach to the entire distribution system flushing at a frequency appropriate for the utility, including occasional spot flushing to address localized problems or customer concerns and routine flushing to avoid water quality concerns.
2. The utility shall perform system flushing at a velocity appropriate to address water quality concerns.
3. The utility has written procedures addressing all activities associated with system flushing - water quality and hydraulic monitoring, and frequency, location and duration of flushing as well as adherence to all regulatory requirements."

- **Records confirmed that disinfectant residuals were routinely checked at the extremities and "dead ends" of the distribution system.**

- **A program was in place for inspecting and exercising valves.**

The Operating Authority has developed a Standard Operating Procedure (SOP-004 - Valve Exercising Maintenance Program) that provides details on the steps to take when exercising hydrant and watermain distribution valve(s).

With a view of continuous improvement, the Owner/Operating Authority should review Section 4.2.5 (see below) of the AWWA Management Standard "Distribution Systems Operation and Management" (ANSI/AWWA G200-15) to ensure the minimum requirements for a valve exercising and replacement program are being met.

"The utility shall have a valve-exercising program. This program shall follow AWWA Manual M44 and the manufacturer's recommended procedures and include at least the following elements:

1. A goal for the number of transmission valves to be exercised annually based on the percentage of the total valves in the system.



### Distribution System

2. A goal for the number of distribution valves to be exercised annually.
3. Measures to verify that the goals are met and written procedures for action if the goals are not attained.
4. Critical valves in the distribution system shall be identified for exercising on a regular basis. Potential water quality and isolation concerns shall be recognized. The program shall track the annual results and set goals to reduce the percent of inoperable valves.
5. The valve-exercising program may be implemented in conjunction with the systematic flushing program (4.1.8).
6. A goal of replacing the inoperable valves identified during the operation and maintenance process shall be established as part of the exercising program."

- **There was a program in place for inspecting and operating hydrants.**

The Operating Authority has developed a Standard Operating Procedure (SOP-002 - Hydrant Inspection and Flushing) that provides details on what steps to take when inspecting and flushing fire hydrants throughout the distribution system to ensure they are fully operational at all times.

With a view of continuous improvement, the Owner/Operating Authority should review Section 4.2.6 (see below) of the AWWA Management Standard "Distribution Systems Operation and Management" (ANSI/AWWA G200-15) to ensure the minimum requirements for a fire hydrant maintenance and testing are being met.

"The utility shall have a hydrant maintenance and fire-flow testing program. Testing and maintenance shall comply with the requirement of AWWA Manual M14. This program shall include as a minimum the following elements:

1. A goal for the number of hydrants to be inspected and tested based on a percentage of the total hydrants in the system.
2. Procedures for operating and closing hydrants to minimize potential damage to the distribution system.
3. Fire-flow testing requirements.
4. The hydrant and maintenance program may be implemented in conjunction with the systematic flushing program (4.1.8).
5. A goal of replacing inoperable fire hydrants identified during the operation and maintenance effort shall be established as part of the process."

- **There was a by-law or policy in place limiting access to hydrants.**

The Town of Tecumseh Water-Use By-law (No. 2003-99), Parts 7.3 and 11 contain conditions with respect to the use and restriction of hydrants.

- **The owner was able to maintain proper pressures in the distribution system and pressure was monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate.**
- **The donor had provided an Annual Report to the receiver drinking water system.**

### Operations Manuals

- **Operators and maintenance personnel had ready access to operations and maintenance manuals.**

Section 28 of Ontario Regulation 128/04 requires that the owner or operating authority of a subsystem ensure that operators and maintenance personnel in the subsystem have ready access to the comprehensive operations and maintenance manuals that contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the subsystem.

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

### Operations Manuals

- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Schedule B, Condition 16 of the Licence requires that an up-to-date operations and maintenance manual or manuals be maintained and applicable parts of the manual or manuals shall be made available for reference by all persons responsible for all or part of the operation or maintenance of the drinking water system.

16.2 The operations and maintenance manual or manuals, shall include at a minimum:

16.2.1 The requirements of this licence and associated procedures;

16.2.2 The requirements of the drinking water works permit for the drinking water system;

16.2.3 A description of the processes used to maintain secondary disinfection within the drinking water system.

16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;

16.2.5 Procedures for the operation and maintenance of monitoring equipment;

16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;

16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;

The Owner/Operating Authority has several Standard Operating Procedures such as: water sampling, fire hydrant installation, valve exercising and maintenance, lead testing, water distribution flow testing, commissioning new water mains, watermain repairs, low chlorine residual, and adverse water quality. The Owner/Operating Authority also has a document titled "Drinking Water Quality Management System Water Services Operational Plan - Version 7" that includes information on sampling, testing and monitoring, equipment calibration and maintenance, emergency management, and infrastructure maintenance rehabilitation and renewal.

### Logbooks

- **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

Schedule 7-5(1) of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system ensure that every test required by this Schedule is conducted by a certified operator or a water quality analyst.

- **For every required operational test and every required sample, a record was made of the date, time, location, name of the person conducting the test and result of the test.**

Schedule 6-10(1) of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system ensure that, for every sample required by this Regulation or by an approval, municipal drinking water licence or order, including an OWRA order, a record is made of the following information:

1. The date and time the sample was taken, the location where the sample was taken and the name of the person who took the sample.

2. If the sample is taken under section 7 of this Regulation or Schedule 7, 8 or 9, the date and time the sample was tested, the name of the person who conducted the test, and the results of the test.

3. If the sample is taken from a drinking water system's distribution system under section 15.1-4 or 15.1-5 of Schedule 15.1, the addresses of all premises served by the plumbing from which samples were taken on the same day in accordance with subsection 15.1-6 (3).

4. If the sample is taken under section 15.1-7 of Schedule 15.1 and tested for pH,

i. the date and time of the test,

ii. the name of the person who conducted it, and

iii. the results of the test.

### Logbooks

(2) Subsection (1) does not apply to a sample tested by continuous monitoring equipment or microbiological in-line testing equipment.

The Operating Authority records the name of the person sampling, date, time and chlorine residual on the chain of custody forms completed for chemical and biological testing. However, weekly chlorine residuals taken in the distribution system and recorded on "Water Analysis Reports" (No.1, 2, 3 and 4) do not include the time of sampling. The Operating Authority is reminded of these requirements and must record all the required information (including time of sampling).

- **The operator-in-charge ensured that records were maintained of all adjustments made to the processes within his or her responsibility.**

Subsection 26(2)(c) of Ontario Regulation 128/04 requires that an operator-in-charge ensure that records are maintained of all adjustments made to the processes within his or her responsibility.

- **Logs or other record keeping mechanisms were available for at least five (5) years.**

Subsection 27(6) of Ontario Regulation 128/04 requires that the owner or operating authority ensure that logs and other record-keeping mechanisms are accessible at the subsystem,

(a) for at least five years after the last entry in it was made, in the case of a log or record-keeping mechanism that is kept in a book or document form or kept on a similarly fixed basis; or (b) for at least five years after each entry in it was made, in the case of a log or record-keeping mechanism that is kept on a loose-leaf or electronic basis or kept on a similarly continuous basis.

### Contingency/Emergency Planning

- **Spill containment was provided for process chemicals and/or standby power generator fuel.**
- **Clean-up equipment and materials were in place for the clean up of spills.**
- **Standby power generators were tested under normal load conditions.**

### Security

- **All storage facilities were completely covered and secure.**
- **Air vents and overflows associated with reservoirs and elevated storage structures were equipped with screens.**
- **The owner had provided security measures to protect components of the drinking water system.**

The water tower is fenced, locked, alarmed and monitored.

The Ten States Standards (2012 Edition) provides recommendations on the construction of water storage facilities. For example, these standards recommend that overflows and vents for elevated storage tanks be screened with a no. 4 mesh (5.16 mm) non-corrodible screen. The screen should be installed within the overflow pipe at a location least susceptible to damage by vandalism. The Owner/Operating Authority indicated that they will review these recommendations with the contractor that completes regular inspection and maintenance activities on the storage tank. Please see these standards for further recommendations.

### Consumer Relations

### **Consumer Relations**

- **The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system.**

The Owner/Operating Authority has taken various water conservation efforts including, public education/water conservation promotion, water line replacement, and fully metering customers.

### **Certification and Training**

- **The overall responsible operator had been designated for each subsystem.**

Subsection 23(1) of Ontario Regulation 128/04 requires that the owner or operating authority of a municipal residential subsystem designate as overall responsible operator of the subsystem an operator who holds a certificate for that type of subsystem and that is of the same class as or higher than the class of that subsystem. (For example, the overall responsible operator of a Class III water treatment subsystem must be an operator who holds a Class III or Class IV water treatment subsystem operator's certificate.)

- **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**

Subsection 25(1) of Ontario Regulation 128/04 states that the owner or operating authority of a subsystem or a person authorized by the owner or operating authority shall designate one or more operators as operators-in-charge of the subsystem.

- **All activities that were undertaken by uncertified persons in the DW subsystems were overseen by persons having the prescribed qualifications.**

- **All operators possessed the required certification.**

Section 22 of Ontario Regulation 128/03 requires that the owner or operating authority of a subsystem ensure that every operator employed in the subsystem holds,  
(a) a certificate applicable to that type of subsystem; or  
(b) a certificate applicable to that subsystem, in the case of an operator who holds a conditional certificate issued or renewed under section 10.

All operators identified by the Operating Authority to operate the works hold operator licences. The ORO holds a licence applicable to the Tecumseh Distribution System (Class II).

- **Only certified operators made adjustments to the treatment equipment.**

Schedule 1-2(2)(5) of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system ensure adjustments to the water treatment equipment are carried out only by certified operators.

### **Water Quality Monitoring**

- **All microbiological water quality monitoring requirements for distribution samples were being met.**

Schedule 10-2(1) of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system ensure that,  
(a) if the system serves 100,000 people or less, at least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken in each week; and  
(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for,  
(a) *Escherichia coli*; and  
(b) total coliforms.

### Water Quality Monitoring

(3) The owner of the drinking water system and the operating authority for the system shall ensure that at least 25 per cent of the samples required to be taken under subsection (1) are tested for general bacteria population expressed as colony counts on a heterotrophic plate count.

During this inspection period the Operating Authority sampled for E-coli and Total Coliforms 40-50 times per month which is above the requirement of 32 times per month. Samples for heterotrophic plate count were taken 12-15 times per month which is above the requirement of 8 times per month.

- **All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.**

Schedule 13-6.1(1) of Ontario Regulation 170/03 requires that the owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids.

During this inspection period the Operating Authority sampled for haloacetic acid once every three months as required. Sample results were below the maximum acceptable concentration for haloacetic acids of 80 ug/L prescribed by the standards. The running average ranged from 5.3-8.4 ug/L.

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**

Schedule 13-6(1) of Ontario Regulation 170/03 requires that the owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of trihalomethanes.

During this inspection period the Operating Authority sampled for trihalomethanes at least once every three months as required. Sample results were below the maximum acceptable concentration for trihalomethanes of 100 ug/L prescribed by the standards. Results ranged from 7.3-31.1 ug/L.

- **The owner ensured that water samples were taken at the prescribed location.**

Schedule 6-2 of Ontario Regulation 170/03 states that unless otherwise specified, a person who is required to ensure that samples are taken under this Regulation, or under an approval, municipal drinking water licence or order, including an OWRA order, shall ensure that they are taken from the point at which water enters the drinking water systems' distribution system or plumbing that is connected to the drinking water system.

- **All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.**

Subject to the results of previous sampling under the provisions of Schedule 15.1-5, the owner claimed an exemption from sampling of plumbing under sub-section 15.1-5 (9) of O. Regulation 170/03. Under this exemption, the owner was required to follow sampling as prescribed by sub-section 15.1-5 (10) of the regulation, consisting of alkalinity and pH samples taken from the distribution system with lead samples taken from the distribution system for two consecutive periods every third year.

A review of sample results for this inspection period indicates that lead sampling is being conducted annually which is greater than the legislative requirement for reduced distribution system sampling of once every third year.

Testing for pH and alkalinity is being completed at the same time lead samples are taken. - Sample results were below the maximum acceptable concentration for lead of 10 ug/L prescribed by the standards. Results ranged from 0.02-0.3 ug/L with alkalinity ranging between 83-103 mg/L.

### Water Quality Monitoring

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

Schedule 6-3(1) of Ontario Regulation 170/03 states that if this Regulation or an approval, municipal drinking water licence or order, including an OWRA order, requires a water sample to be taken and tested for a microbiological parameter, the owner of the drinking water system and the operating authority for the system shall ensure that another sample is taken at the same time from the same location and is tested immediately for,

(a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or  
(b) combined chlorine residual, if the system provides chloramination.

(2) Subsection (1) does not apply to water samples taken from the drinking water system's raw water or raw water supply.

(3) Subsection (1) does not apply to sampling and testing for a microbiological parameter that is conducted by microbiological in-line testing equipment.

- **The drinking water system owner submitted written notices to the Director that identified the laboratories that were conducting tests for parameters required by legislation, Order, Drinking Water Works Permit or Municipal Drinking Water Licence.**
- **The owner indicated that the required records are kept and will be kept for the required time period.**

Section 13 of Ontario Regulation 170/03 prescribes record keeping requirements. The Operating Authority keeps a record retention table.

### Water Quality Assessment

- **Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

### Reporting & Corrective Actions

- **Summary Reports for municipal council were completed on time, included the required content, and were distributed in accordance with the regulatory requirements.**
- **All changes to the system registration information were provided within ten (10) days of the change.**

Subsection 10.1(1) of Ontario Regulation 170/03 requires that the owner of a drinking water system that commences operation after this section comes into force give the Director a written notice containing information about the system within 30 days after the system commences operation. (3) If there is any change to the information given to the Director under subsection (1) or (2), the owner of the drinking water system shall give the Director written notice of the change within 10 days of the change.

## NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

Not Applicable

## **SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES**

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

**Not Applicable**



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**SIGNATURES**

Inspected By:

Cara Salustro

Signature: (Provincial Officer)



Reviewed &amp; Approved By:

Marc Bechard

Signature: (Supervisor)

Review &amp; Approval Date:

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.

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## APPENDIX A

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### Inspection Rating Report

**Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2017-2018)**

**DWS Name:** TECUMSEH DISTRIBUTION SYSTEM  
**DWS Number:** 260004969  
**DWS Owner:** Tecumseh, The Corporation Of The Town Of  
**Municipal Location:** Tecumseh

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Standalone  
**Inspection Date:** January 12, 2018  
**Ministry Office:** Windsor Area Office

**Maximum Question Rating:** 285

Inspection Module	Non-Compliance Rating
Treatment Processes	0 / 30
Distribution System	0 / 25
Operations Manuals	0 / 42
Logbooks	0 / 26
Certification and Training	0 / 50
Water Quality Monitoring	0 / 75
Reporting & Corrective Actions	0 / 8
Treatment Process Monitoring	0 / 29
<b>TOTAL</b>	<b>0 / 285</b>

<b>Inspection Risk Rating</b>	<b>0.00%</b>
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<b>FINAL INSPECTION RATING:</b>	<b>100.00%</b>
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Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2017-2018)

**DWS Name:** TECUMSEH DISTRIBUTION SYSTEM  
**DWS Number:** 260004969  
**DWS Owner:** Tecumseh, The Corporation Of The Town Of  
**Municipal Location:** Tecumseh

**Regulation:** O.REG 170/03

**Category:** Large Municipal Residential System

**Type Of Inspection:** Standalone

**Inspection Date:** January 12, 2018

**Ministry Office:** Windsor Area Office

**Maximum Question Rating:** 285

<b>Inspection Risk Rating</b>	<b>0.00%</b>
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<b>FINAL INSPECTION RATING:</b>	<b>100.00%</b>
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## APPENDIX B

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### Key Reference and Guidance Material

# Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or [picemail.moe@ontario.ca](mailto:picemail.moe@ontario.ca).

For more information on Ontario's drinking water visit [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater) and email [drinking.water@ontario.ca](mailto:drinking.water@ontario.ca) to subscribe to drinking water news.



PUBLICATION TITLE	PUBLICATION NUMBER
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	7889e01
FORMS: Drinking Water System Profile Information, Laboratory Services Notification, Adverse Test Result Notification Form	7419e, 5387e, 4444e
Procedure for Disinfection of Drinking Water in Ontario	4448e01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	7152e
Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)	8215e
Filtration Processes Technical Bulletin	7467
Ultraviolet Disinfection Technical Bulletin	7685
Guide for Applying for Drinking Water Works Permit Amendments, Licence Amendments, Licence Renewals and New System Applications	7014e01
Certification Guide for Operators and Water Quality Analysts	
Guide to Drinking Water Operator Training Requirements	9802e
Taking Samples for the Community Lead Testing Program	6560e01
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	7423e
Guide: Requesting Regulatory Relief from Lead Sampling Requirements	6610
Drinking Water System Contact List	7128e
Technical Support Document for Ontario Drinking Water Quality Standards	4449e01

[ontario.ca/drinkingwater](http://ontario.ca/drinkingwater)

# Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment.

Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le Centre d'information au public au 1 800 565-4923 ou au 416 325-4000, ou encore à [picemail.moe@ontario.ca](mailto:picemail.moe@ontario.ca) si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site [www.ontario.ca/eaupotable](http://www.ontario.ca/eaupotable) ou envoyez un courriel à [drinking.water@ontario.ca](mailto:drinking.water@ontario.ca) pour suivre l'information sur l'eau potable.

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Prendre soin de votre eau potable – Un guide destiné aux membres des conseils municipaux	7889f01
Renseignements sur le profil du réseau d'eau potable, Avis de demande de services de laboratoire, Formulaire de communication de résultats d'analyse insatisfaisants et du règlement des problèmes	7419f, 5387f, 4444f
Marche à suivre pour désinfecter l'eau potable en Ontario	4448f01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids (en anglais seulement)	7152e
Total Trihalomethane (TTHM) Reporting Requirements: Technical Bulletin (février 2011) (en anglais seulement)	8215e
Filtration Processes Technical Bulletin (en anglais seulement)	7467
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	7685
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable, de modification du permis de réseau municipal d'eau potable, de renouvellement du permis de réseau municipal d'eau potable et de permis pour un nouveau réseau	7014f01
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802f
Prélèvement d'échantillons dans le cadre du programme d'analyse de la teneur en plomb de l'eau dans les collectivités	6560f01
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	7423f
Guide: Requesting Regulatory Relief from Lead Sampling Requirements (en anglais seulement)	6610
Liste des personnes-ressources du réseau d'eau potable	7128f
Document d'aide technique pour les normes, directives et objectifs associés à la qualité de l'eau potable en Ontario	4449f01

[ontario.ca/eaupotable](http://ontario.ca/eaupotable)



## The Corporation of the Town of Tecumseh

Public Works & Environmental Services

**To:** Mayor and Members of Council

**From:** Denis Berthiaume, Manager Water & Wastewater Services

**Date to Council:** February 27, 2018

**Report Number:** PWES-2018-11

**Subject:** Source Protection Municipal Implementation Funding (SPMIF)  
Agreement Amendment No. 4

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### Recommendations

It is recommended:

**That** By-law No. 2018-15 be adopted **to authorize** the Mayor and Clerk to execute the Source Protection Municipal Implementation Fund (SPMIF) Amendment No.4 and any future SPMIF amendments.

### Background

Ontario is committed to protecting drinking water from source to tap. The *Clean Water Act*, 2006 enables communities to protect their drinking water sources through the preparation of collaborative, locally developed, science-based Source Protection Plans. Source Protection Plans (SPP) are to contain policies for the protection of Drinking Water Sources and implementers of the SPP policies were required to be ready for implementation of Plan policies by mid-2014.

On November 1, 2013 the Ministry of Environment and Climate Change (MOECC) launched Ontario's SPMIF, which will distribute \$13.5 million to 189 eligible municipalities over three years. A total of \$250,346 was announced for municipalities within the Essex Region Source Protection Area.



## Essex Region Source Protection Plan

The SPP for the Essex Region Source Protection Area was approved by the MOECC. This plan, effective October 1, 2015, sets out policies that will protect the water sources that supply our municipal drinking water systems.

The plan was developed by the Essex Region Source Protection Committee and its municipal and community partners. The plan is a requirement of Ontario's *Clean Water Act*, which was passed as a response to the Province's inquiry into the Walkerton drinking water tragedy. The SPP was developed over several years and is based on technical studies, collaborative policy development, and extensive public consultation. The process was guided by a Source Protection Committee made up of representatives from municipalities, business, industry, landowners, and other stakeholders.

"We are proud of the work of the Source Protection Committee in reaching this goal," said Tom Fuerth, Chair of the Source Protection Committee. "Collaboration with our local stakeholders, municipal partners and the Ministry resulted in policies designed to protect sources of municipal water supply. The science-based process will provide ongoing protection by recognizing and minimizing the risk to water supply sources from land use activities. We look forward to continuing with our partners into the future to enhance the protection of existing and future sources of drinking water."

Policies in the SPP include a variety of approaches to manage and prevent risks to municipal drinking water. These approaches include education and outreach, the development of risk management plans, land use planning, and monitoring. These policies will help to keep contaminants out of our rivers and lakes that are sources of municipal drinking water.

The source protection planning process is directed and funded by the MOECC in conjunction with municipalities. Local Conservation Authorities provide additional technical, communications and administrative support for the source protection planning process.

## Comments

The MOECC and the Town of Tecumseh (Town) entered into a transfer payment agreement under the SPMIF dated as of December 13, 2013 for the Municipality to build municipal capacity to implement SPP and support sustainable, local actions to protect drinking water (the "Agreement").

The MOECC and the Town then entered into Amendment No. 1 as of September 23, 2015 to extend the term of the Agreement, add an additional report and include new timelines.

On July 6, 2016, the MOECC and the Town entered into Amendment No. 2 to extend the term of the Agreement, add an additional report, include new timelines, and expand the scope of eligible activities.

As of March 3, 2017, Amendment No. 3 was effected to extend the term of the Agreement, add an additional report, and include new timelines.

The MOECC and the Town acknowledge, agree and undertake Amendment No. 4 of the Agreement as detailed in the attached Agreement.

Administration therefore recommends that Council authorize the Mayor and Clerk to execute the SPMIF Agreement Amendment No.4 and any future SPMIF funding amendments.

## Consultations

Corporate Services & Clerk

## Financial Implications

There are no financial implications arising from this report.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input checked="" type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input checked="" type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☒

Website ☐

Social Media ☐

News Release ☐

Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Denis Berthiaume, ORO  
Manager Water & Wastewater Services

Reviewed by:

Dan Piescic, P.Eng.

Director Public Works & Environmental  
Services

Reviewed by:

Laura Moy, Dipl. M.M., CMMIII HR Professional  
Director Corporate Services & Clerk

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
1	Source Protection Municipal Implementation Fund Agreement Amendment No. 4
2	Source Protection Municipal Implementation Fund Final Report December 2017

**AMENDMENT NO. 4**  
**to a Ontario Transfer Payment Agreement under the**  
**Source Protection Municipal Implementation Fund (SPMIF\_1314\_182)**

**THIS AMENDMENT NO. 4** made in duplicate, as of the 13<sup>th</sup> day of February 2018,

**B E T W E E N:**

**HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO**  
as represented by the Minister of the Environment and Climate Change

(the “**Province**”)

- and -

**The Corporation of the Town of Tecumseh**

(the “**Municipality**”)

**WHEREAS** the parties entered into a transfer payment agreement under the Source Protection Municipal Implementation Fund dated as of December 13, 2013 for the Municipality to build municipal capacity to implement source protection plans and support sustainable, local actions to protect drinking water (the “**Agreement**”);

**AND WHEREAS** the parties entered into Amendment No. 1 as of September 23, 2015 to extend the term of the Agreement, add an additional report and include new timelines; (remove if the municipality DID NOT request extension)

**AND WHEREAS** the parties entered into Amendment No. 2 as of July 6, 2016 to extend the term of the Agreement, add an additional report, include new timelines, and expand the scope of eligible activities;

**AND WHEREAS** the parties entered into Amendment No. 3 as of March 3, 2017 to extend the term of the Agreement, add an additional report, and include new timelines;

**AND WHEREAS** pursuant to Section 20.2 of the Agreement, the parties may amend the agreement in writing;

**NOW THEREFORE** in consideration of the contractual relationship between the Municipality and the Province referred to above and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by both parties, the Municipality and the Province hereby acknowledge, agree and undertake as follows:

1. Unless otherwise specified in this Amendment No. 4, capitalized words and phrases have their prescribed meaning as set out in the Agreement.

2. The Agreement is amended as follows:

2.1 Section 2.1 is deleted in its entirety and replaced with the following:

2.1 The term of the Agreement shall commence on the Effective Date and shall expire 90 days after the final report due date in Schedule “D” unless terminated earlier pursuant to Article 9. The Municipality shall, upon expiry or termination of the Agreement, return to the Province any Funds remaining in its possession or under its control.

2.2 The first paragraph in Section B.1 (Eligible Activities) as amended by Amendment No. 3 is again deleted and replaced with the following:

The Municipality may only spend the Funds on the following eligible activities that are undertaken by the Municipality, or that are undertaken on the Municipality’s behalf, between December 13, 2013 and December 31, 2018 that are directly related to the following:

2.3 The chart in Schedule “D” (Reports) as amended by Amendment No. 3 is again deleted in its entirety and replaced with the following:

Name of Report	Due Date
Collaboration Statement (if applicable)	December 12, 2014
Progress Report 1	December 12, 2014
Progress Report 2	December 11, 2015
Progress Report 3	August 26, 2016
Progress Report 4	August 25, 2017
Progress Report 5	December 8, 2017
Progress Report 6	October 31, 2018
Final Report	January 31, 2019
Other Reports as specified from time to time	On a date or dates specified by the Province.

3. This Amendment No. 4 shall be in force from December 13, 2013 and shall have the same expiry or termination date as the Agreement.
4. All other terms and conditions of the Agreement and Amendment No. 1, Amendment No. 2 and Amendment No. 3 shall remain in full force and effect unchanged and unmodified.
5. This Amendment No. 4 shall enure to the benefit of and be binding upon the Municipality and the Province and each of their administrators, permitted successors and permitted assigns, respectively.

6. This Amendment No. 4 may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. To evidence its execution of an original counterpart, a party may send a copy of its original signature on the execution page hereof to the other party by facsimile or other means of recorded electronic transmission (including in PDF) and such transmission with an acknowledgement of receipt shall constitute delivery of an executed copy of this Amendment.

**IN WITNESS WHEREOF** the parties have executed this Amendment No. 4 as of the date first written above.

**HER MAJESTY THE QUEEN in Right of Ontario**

as represented by the Minister of the Environment and Climate Change

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Name: Heather Malcolmson  
Title: Director  
Source Protection Programs Branch

Pursuant to delegated authority.

**The Corporation of the Town of Tecumseh**

---

Name: Gary McNamara  
Title: Mayor

---

Name: Laura Moy  
Title: Director, Staff Services/Clerk

We have authority to bind the Municipality.

## Source Protection Municipal Implementation Fund




Final Report (December 2017)

Municipality Legal Name:		
Agreement Ref #:	Contact (Name & Position):	Date Report Prepared:
SPMIF_1314_182	Denis Berthiaume	Dec 1, 2017
		Period Covered By Report: Dec. 13, 2013 to Dec. 4, 2017
Contact E-mail:	Contact Telephone:	Final Report Due Date:
dberthiaume@tecumseh.ca	519-818-9611	December 8, 2017

### Declaration

- ✓ I certify that the information provided in this Final Report is complete, accurate and in compliance with the terms and conditions of the Grant Funding Agreement between the Municipality and the Province.
- ✓ I attest that all funds were spent in accordance with Schedule B of the Grant Funding Agreement.

I have authority to bind the Municipality.

Name of Signatory:	Position:
Denis Berthiaume	Manager of Water & Wastewater
Signature: 	Date: December 1, 2017

### Instructions

1. The Recipient must use this template for their Final Report.
2. Please complete Part A, B, C, D and E. Part F is optional.
3. Please ensure that the declaration above is signed and dated.
4. Submit a scanned signed copy of the Final Report **AND** the Microsoft Word version to [SourceProtectionFunding@Ontario.ca](mailto:SourceProtectionFunding@Ontario.ca) by the Final Report Due Date of December 8, 2017.
5. Please use as much space as you need. **Attachments can also be appended to this report.**



## Source Protection Municipal Implementation Fund

### Part A: Eligible Activities and Related Expenditures

Describe the work completed by eligible activity in the table below, using one line per activity, per type of expenditure.

- In the **Eligible Activity** column, indicate the alphabetical letter (A-H set out below) that corresponds with each eligible activity the Municipality undertook, using one line per expenditure type, per activity type.
- In the **Source Protection Plan(s)** column, list the source protection plan(s) for which your municipality has the policy responsibility that the activities are directly related to, or are in support of.
- In the **Policy Reference #** column, list the policy reference # that the activities are directly related to, or are in support of.
- In the **Type of Expenditures** column, indicate the costs incurred (choose from: Salaries, Service Fees, Printing & Distribution Costs or Municipal Road Signs) using one line per expenditure type, per activity type.
- In the **Description of Milestones/Outcomes Achieved to Date** column, describe what was achieved with the funds for each applicable activity the Municipality undertook during the reporting period.
- In the **Amount (\$) of Grant Funding Spent to Date** column, indicate how much has been spent since December 13, 2013 on each eligible activity.

<b>Grant Value (not including collaboration incentive):</b>		<b>Confirmed collaboration incentive:</b>		<b>TOTAL MAXIMUM GRANT VALUE:</b>	
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<b>Eligible Activity (A-I)</b>	<b>Source Protection Plan(s)</b>	<b>Policy Reference #</b>	<b>Type of Expenditures</b> (Choose from: Salaries, Service Fees, Printing & Distribution Costs, Municipal Road Signs*)	<b>Description of Milestones/Outcomes Achieved as at Dec. 4, 2017</b> (If purchase of municipal road signs are included, specify # of signs purchased*)	<b>Amount (\$) of Grant Funding Spent as at Dec. 4, 2017</b> (cumulative 2013-2017)
A	Essex Region	All Part IV policies in the Essex Region	Service Fees	Program development: <ul style="list-style-type: none"> <li>• Creation of a database</li> <li>• Establishment of forms and templates for Section 59 applications and Risk Management Plans.</li> <li>• Written Direction provided to all municipalities to provide guidance on implementing Section 59 policies</li> <li>• Implementing Section 59 policies including establishment of RMPs as needed</li> <li>• Refining the number of existing threats</li> <li>• Establishing RMPs as necessary</li> </ul>	\$15,000
H	Essex Region	Part IV policies	Salaries	Municipal staff salaries and benefits for time spent	\$1,000

## Source Protection Municipal Implementation Fund

				working on SWP: <ul style="list-style-type: none"> <li>understanding and negotiating transfer agreement</li> </ul> Reviewing and implementing S.59 Written Direction	
H	Essex Region	#19 All123-transportcorridor-3	Salaries	Municipal staff salaries and benefits for time spent on: <ul style="list-style-type: none"> <li>Determining appropriate sign locations</li> </ul> Installation of road signs	\$0
H	Essex Region	#19 All123-transportcorridor-3	Print and distribution	Purchase and/or production costs of municipal road signs indicating IPZ/EBA	\$0

\* Purchase of signs is only permitted where an amendment is in place to allow this cost.

### Legend for Eligible Activities:

#### *Risk management*

- A. Establishing and enforcing risk management plans under Part IV of the Clean Water Act, 2006;  
 Communication with landowners affected by policies pertaining to Part IV of the Clean Water Act, 2006;  
 Refining the number of threats within your Municipality pertaining to Part IV of the Clean Water Act, 2006;

#### *Land use planning policies*

- B. Implementing your municipality's municipal land-use planning policies related to activities that are identified as significant drinking water threats;

#### *Education and outreach*

- C. Implementing education and outreach policies to address significant drinking water threats;  
 Installation of municipal road signs indicating areas of a wellhead protection area or an intake protection zone where significant threat policies apply;

#### *Other activities*

- D. Working with the local source protection authority and local source protection committee to understand your municipality's requirements under the source protection plan;  
 E. Developing and/or modifying your municipality's business processes in order to implement significant drinking water threat policies;  
 F. Establishing processes for information sharing among municipalities and source protection authorities;  
 G. Developing a reporting framework for your Municipality that aligns with the collection of data under Ontario Regulation 287/07, section 65 made under the Clean Water Act, 2006;  
 H. Other activities your Municipality undertakes to fulfill its requirements to implement significant drinking water threat policies; and  
 I. Activities identified in subsections B.1 (a) through (j) of Agreement, for another municipality with a current agreement under the SPMIF.

## Part B: Progress Towards Fulfilling Project Objectives

### Describe the progress the Municipality made during this reporting period, including how the Municipality met the Project Objectives

The objectives of the Project were for the Municipality to use the Funds toward fulfilling their responsibilities to implement one or more of the following significant drinking water threat policies in an approved or proposed source protection plan that was submitted for approval:

- Policies for the purpose of Part IV of the *Clean Water Act, 2006*;
- Policies that govern Planning Act decisions;
- Policies that establish education and outreach programs; or

## Source Protection Municipal Implementation Fund

Policies that specify other types of actions the Municipality is required to take.

### Part IV

The municipality delegated their authority for the implementation of Part IV policies to the Essex Region Conservation Authority for the term of Oct 1, 2105 to Sept 31, 2018. ERCA has established a Risk Management Office with trained RMO/I staff; developed a database to track the progress of implementation of Part IV polices; issued written direction to the municipality to aid in implementation of S.59 policies; conducted site visits to verify the existence of Significant Drinking Water Threats; communicated with landowners regarding requirements for Risk Management Plans; and has begun establishing RMPs as necessary. Future threats are being addressed through S.59 policies.

### Land Use Planning

(insert text where applicable - *Action/Progress*)

### Education & Outreach

(insert text where applicable - *Action/Progress* )

### Additional questions:

Part IV: who will be delivering the municipality's obligations under Part IV Risk Management Services going forward?

☐ The municipality

X ☒ Delegated to CA (please specify which CA: Essex Region Conservation Authority Until Sept 31, 2018. Transfer agreements to be renegotiated at that time.

☐ Delegated to another municipality (please specify which municipality: \_\_\_\_\_)

☐ Other (if other, please explain: \_\_\_\_\_)

☐ No Part IV responsibilities

Have you had the opportunity to use your Source Protection Authority as a resource to assist you with your implementation responsibilities in any of the following categories? (check all that apply)

X ☒ Part IV

☐ Land Use Planning

☐ Education and Outreach

☐ Other Mandatory Actions

Are there challenges that the Municipality anticipates facing in regards to on-going implementation of source protection plan policies?

☐ Yes X ☒ No

If yes, please *describe below*:

## Part C: Assessment of Readiness to Fulfil Responsibilities

## Source Protection Municipal Implementation Fund

The goals of the Source Protection Municipal Implementation Fund are to:

- Build municipal capacity to implement source protection plans and
- Support sustainable, pragmatic, local delivery approaches.

**In this regard, assess (on a scale of 1 to 5) your Municipality's readiness to implement source protection plan policies against the following milestones.**

(1 = have not started; 3 = in progress; 5 = substantially complete)

	<b>On Dec. 13, 2013 (from 1 - 5)</b>	<b>At Dec 4., 2017 (from 1 - 5)</b>	<b>Rationale for rating</b>
We have assigned/procured/retained the necessary staffing and/or expertise to fulfill our responsibilities under the <i>Clean Water Act, 2006</i> and source protection plans.	<b>3</b>	<b>5</b>	The Municipality has transferred the authority for Part IV implementation to ERCA, who has retained trained RMO/I staff. Representation for Water Source Protection from the Town of the Tecumseh is the Manager of water & Wastewater
We have reviewed and where necessary developed/revised our business processes and procedures necessary to incorporate source protection policy requirements into existing municipal processes.	<b>3</b>	<b>5</b>	<ul style="list-style-type: none"> <li>- The Municipality has incorporated the written direction for S.59 policies provided by the RMO/I</li> <li>- The Municipality has/or is considering the necessary inclusion of Source Protection information in our next OP update</li> <li>- The Municipality has installed new road signage and incorporated Source Protection mapping in our geodatabases</li> </ul>
We have a long-term strategy to support a locally sustainable model for on-going implementation of source protection plan policies.	<b>3</b>	<b>5</b>	<ul style="list-style-type: none"> <li>- The Municipality intends to either continue to retain ERCA for the implementation of Part IV policies or provide this service ourselves</li> <li>- The Municipality will ensure that appropriate staff are aware of our responsibilities for implementing policies in the Source Protection Plan</li> </ul>

## Source Protection Municipal Implementation Fund

### Part D: Collaboration Activities

Please answer the following questions pertaining to collaboration agreements with other municipalities to achieve readiness related to source protection.

1. Did you collaborate with the municipalities as listed in your collaboration statement?  
☒ Yes  
☐ No
2. What type of activities did you collaborate on (check all that apply):  
☒ Part IV  
☐ Land Use Planning  
☐ Education and Outreach  
☐ Other Mandatory Actions  
If other, please explain: \_\_\_\_\_
3. What is the expected duration of the collaboration arrangements?
  - a. Part IV  
☐ Only within the term of the SPMIF Grant Funding Agreement  
☐ Less than 5 years  
☒ Likely longer than 5 years – All municipalities who transferred Part IV authority to ERCA will continue to collaborate on Part IV implementation through consistent implementation of policies across the ERSPA
  - b. Land Use Planning  
☐ Only within the term of the SPMIF Grant Funding Agreement  
☐ Less than 5 years  
☒ Likely longer than 5 years
  - c. Education and Outreach  
☐ Only within the term of the SPMIF Grant Funding Agreement  
☐ Less than 5 years  
☒ Likely longer than 5 years
  - d. Other Mandatory Actions  
☐ Only within the term of the SPMIF Grant Funding Agreement  
☐ Less than 5 years  
☒ Likely longer than 5 years

### Part E: SPMIF Funding Program Status and Extension

Regardless if the municipality has not spent the total value of committed funds under the Grant Funding Agreement or not, this section must be completed and signed.

- ☐ We are fully spent and would not have use of any further funds
- ☐ We are fully spent and could use more funds should they become available and should the Ministry offer an extension to program timelines.
- ☐ Funds have not been fully expended, and the municipality will NOT be requesting an extension should the Ministry offer one to program timelines (Grant Funding Agreement will be closed out and all owing funds repaid to the Province). **Provide rationale in space provided below.**

## Source Protection Municipal Implementation Fund

☒ Funds have not been fully expended, however the municipality could substantially or fully spend its remaining funds, should the Ministry offer an extension to program timelines. **Provide rationale in space provided below**

Provide Rationale:

Insert text

**The Town of Tecumseh that would use unspent monies to cover expenses into the year of 2018 if the Ministry were to offer an extension to the program timelines.**

### Part F: Additional Project Details (*Optional*)

**Should the Municipality like to share more information about their accomplishments, challenges overcome and/or lessons learned, please use the space below.**

Insert text



## **The Corporation of the Town of Tecumseh**

Public Works & Environmental Services

**To:** Mayor and Members of Council

**From:** Denis Berthiaume, Manager Water & Wastewater Services

**Date to Council:** February 27, 2018

**Report Number:** PWES-2018-12

**Subject:** Drinking Water Quality Management System  
Operational Plan Version 8

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### **Recommendations**

It is recommended that:

The Drinking Water Quality Management System Operational Plan Version 8 **be endorsed and committed to.**

### **Background**

Following the results of the Walkerton Inquiry in 2002, a key recommendation by Justice O'Connor was for municipalities across Ontario to develop and implement a Drinking Water Quality Management Standard (DWQMS), similar to management systems from the International Standards Organizations (ISO). Council adopted its DWQMS Operational Plan Version 7 at its meeting held February 28, 2017 (Motion: RCM-59/17).

The Drinking Water Quality Management System Operational Plan Version 7 has been updated to Version 8 as mandated by O.Reg 188/07, which issues directions governing the preparation and content of operational plans for municipal drinking water systems.

### **Comments**

The adoption of quality management systems is not new to the drinking water community in Ontario; however, the requirement to implement the DWQMS is now mandated through the Safe Drinking Water Act, 2002 (SDWA) O. Reg. 188/07 – Licensing of Municipal Drinking - Water Systems.

The SDWA requires owners/operating authorities of municipal residential drinking water systems to have an accredited operating authority. In order to become accredited, an operating authority must establish and maintain a quality management system (QMS). Minimum requirements for the QMS are specified in the SDWA. Operating authorities must be accredited by a third-party accreditation body.

The DWQMS provides minimum requirements for an owners/operating authority to document a QMS in an operational plan for each system that it operates, which must be accepted by the Ministry of the Environment and Climate Change (MOECC). The Corporation of the Town of Tecumseh is responsible for the Water Distribution Subsystem Class 2 as designated by the MOECC.

The DWQMS is based on a PLAN, DO, CHECK and IMPROVE methodology which is similar to that found in some international standards. PLAN requirements of the standard typically specify policies and procedures that must be documented in the operational plans for the drinking water system, while DO requirements specify that the policies and procedures must be implemented. CHECK and IMPROVE requirements of the standard are reflected in the requirements to conduct internal audits and management reviews.

Version 8 of the Operational Plan was submitted to the DWQMS Committee and approved. Updates to the new Operational Plan reflect changes due to:

- Legislative and regulatory changes
- Management Review Committee recommendations as per internal audits
- Corrective Action Records (CAR's) issued by the NSF (Town's auditing firm)
- The Corporation of the Town of Tecumseh administrative and/or internal policy changes

It is therefore recommended that Council commit to and endorse the Drinking Water Quality Management System Operational Plan Version 8.

## **Consultations**

None.

## **Financial Implications**

There are no financial implications arising from this report.



## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input checked="" type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☐

Website ☒      Social Media ☐      News Release ☐      Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Denis Berthiaume, ORO  
Manager Water & Wastewater Services

Reviewed by:

Dan Piescic, P.Eng.  
Director Public Works & Environmental Services

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
1	Drinking Water Quality Management System Operational Plan Version 8
2	DWQMS – Management Review Meeting, February 15, 2018

## Quality Management Systems

A QMS is a system to:

- establish policy and objectives and achieve those objectives, and
- direct and control an organization with regard to quality.

Quality management for Ontario's municipal drinking water systems will occur through the development and implementation of a QMS for each system based upon the DWQMS.

# The Corporation of the Town of Tecumseh Public Works & Environmental Services



## Drinking Water Quality Management System Water Services Operational Plan

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## **1. Quality Management System**

This document is the Drinking Water Quality Management System Operational Plan for The Corporation of Town of Tecumseh Water Distribution System.

The Corporation of the Town of Tecumseh Water Distribution System is owned and operated by The Corporation of the Town of Tecumseh. The Drinking Water Quality Management System (DWQMS) for The Corporation of the Town of Tecumseh covers the transmission and distribution of potable drinking water to consumers within the Town of Tecumseh. Treated potable drinking water is purchased from the Windsor Utilities Treatment Plant, which is owned by the Windsor Utilities Commission (WUC) and is a separately held entity managed by ENWIN Utilities, which operates and manages the production and distribution of potable water. The potable water enters The Corporation of the Town of Tecumseh Water Distribution System through 11 locations bordering the City of Windsor, Town of LaSalle and the Town of Tecumseh. Each location is metered and monitored using a Supervisory Control and Data Acquisition system (SCADA). The Town of Tecumseh also has a 4,546m<sup>3</sup> water tower, which is also monitored by the SCADA system.

The Corporation of the Town of Tecumseh, in turn, supplies potable drinking water to the Town of Lakeshore at 4 locations all boarding Manning Road: Scott Side Rd; County Rd. 42; Little Baseline; and Amy Croft. The Corporation of the Town of Lakeshore owns and operates the production and distribution facilities of potable water within their boundary. The Corporation of the Town of Lakeshore is a fully owned local government and is represented by elected officials of the Town of Lakeshore.

The Corporation of the Town of Tecumseh is connected with the Town of LaSalle at one location boarding Howard Avenue. The Corporation of the Town of LaSalle owns and operates the distribution facilities of potable water within their boundary. Town of LaSalle's treated potable drinking water is purchased from the Windsor Utilities Treatment Plant, which is owned by the Windsor Utilities Commission (WUC) and is a separately held entity managed by ENWIN Utilities, which operates and manages the production and distribution of potable water. The Corporation of the Town of LaSalle is a fully owned local government and is represented by elected officials of the Town of LaSalle.

## **2. Quality Management System Policy**

The Corporation of the Town of Tecumseh is committed to supplying a safe, consistent, drinking water supply while maintaining strict adherence to all applicable legislative and regulatory requirements. The Corporation of the Town of Tecumseh will strive to achieve these goals through the implementation of a management system and staff competency to our customers.

The municipal owners, management and the employees of The Corporation of the Town of Tecumseh who are directly involved in the supply of drinking water, share in the responsibilities of implementing,

maintaining, and contributing to the continual improvement of the Drinking Water Quality Management System (DWQMS).

### 3. Commitments and Endorsement

This Operational Plan has been reviewed and approved by The Corporation of the Town of Tecumseh. The purpose of this document is for the planning, operation, and maintenance of The Corporation of the Town of Tecumseh Water Distribution System.

This document will be reviewed and approved by:

- **Municipal Owner/Operating Authority** – Mayor and Council
- **Top Management**- Chief Administrative Officer, Director of Public Works and Environmental Services and the Manager, Water & Wastewater ORO (*Overall Responsible Operator*)

The DWQMS Representative will keep the DWQMS document up to date and promote continual improvement. All recommended changes are to be approved by Municipal Owner/Operating Authority resolution. (*See Appendix 1- Commitments and Endorsement*)

### 4. Drinking Water Quality Management System Representative

The Corporation of the Town of Tecumseh has designated a DWQMS Representative and an alternate DWQMS Representative:

#### **DWQMS Representative:**

**Name:** Brad Dupuis

**Position:** Water Operator

#### **Alternate DWQMS Representative:**

**Name:** Denis Berthiaume

**Position:** Manager, Water & Wastewater/ORO

#### **The DWQMS Representative will be responsible for the following:**

- Ensures that processes and procedures needed for the DWQMS are established and maintained
- Reports to Top Management on the performance of the DWQMS and any need for improvement, as needed, or during the Management Review meetings
- Reviews DWQMS documentation and record control
- Promotes awareness of the DWQMS throughout the Water Services division and The Corporation of the Town of Tecumseh

## 5. Document and Record Control

This procedure is applicable to the following DWQMS documents:

- Operational Plan and associated procedures
- DWQMS Forms
- Equipment Manuals
- As Built Drawings
- Applicable drinking water regulations (O. Reg. 170/03 and O. Reg. 128/04)

### Creating New or Updating Existing Documents

The need for document changes or for new documents may be identified through audits, Management Reviews, DWQMS Committee or staff. The DWQMS Representative will delegate the task of creating the new documents to be approved if necessary by Manager, Water and Wastewater, Top Management and/or Municipal Owner/Operating Authority if necessary.

Any employee of the Water Services division may request a change to an existing DWQMS document. The request must be made in writing, dated and submitted to the DWQMS Representative.

The request must include the following information:

- Reason for the new or changed document (one of the following needs to apply):
  - Is it required by the DWQMS?
  - Will it enhance process control?
  - Can it reduce risk?
  - Will it support regulatory requirements?
  - Will it improve operational efficiency?
- A proposed document change or new document content when applicable to the Water Services division or the Operational Plan.

### Proposed Document Change or New Document Content

The requester shall develop the new/changed document and submit it to the DWQMS Representative for review.



The DWQMS Committee shall review the document, make any changes as required, and approve changes if applicable.

## Approving Documents

- DWQMS related documents may be approved by Municipal Owner/Operating Authority, Senior Management (CEO), Director of Environmental Services Manager, Water & Wastewater/ORO or the DWQMS Representative
- DWQMS documentation shall be stored at the Water Services division office or electronically on The Corporation of the Town of Tecumseh network servers
- Water Services staff has read-only access to the electronic version of the documentation. The Manager, Water & Wastewater/ORO, DWQMS Representative and Clerical Staff have access rights to manage and/or edit the electronic version of DWQMS related documents
- The DWQMS Representative is responsible to ensure that new or changed documents are communicated and /or distributed to the appropriate staff members
- Documents shall be collected, archived and stored as per legislated under the *Safe Drinking Water Act 2002* and The Corporation of the Town of Tecumseh municipal by-law.

## Reviewing Documents

The Operational Plan and procedures shall be reviewed by the DWQMS Committee for applicability and relevance.

## Document Availability

- The current copy of the Operational Plan, procedures and associated documents are retained the electronically on The Corporation of the Town of Tecumseh network servers and at the Water Services division office
- Original sets of equipment manuals / specifications and drinking water regulations are kept at the Water Services division office.
- Copies of As-Builts are stored at the Water Services division office and electronically on The Corporation of the Town of Tecumseh network servers

## DWQMS Record Control

This procedure is applicable to all records that demonstrate conformance to DWQMS requirements:

- All records that demonstrate compliance are covered by Ontario Regulations 170/03 and 128/04, as amended
- DWQMS records shall be filed at the Water Services division office and The Corporation of the Town of Tecumseh network servers

- Regulatory reports are filed at the Water Services division office and The Corporation of the Town of Tecumseh network servers
- Records that are greater than 3 years in age shall be filed and archived at the Water Services division office and The Corporation of the Town of Tecumseh Office and network servers
- DWQMS records shall be stored in such a manner as to prevent deterioration

## Records Management

Records are stored and protected to ensure that they are kept legible, readily identifiable, and are retrievable when they are required by personnel of the Town of Tecumseh Drinking Water System.

Paper records are maintained onsite in file folders, filing cabinets, binders, or by other means deemed acceptable by individual responsible for the records. Electronic records are stored on the organization's network, and within the Town of Tecumseh's Management System Software. Regular scheduled back-ups help protect electronic information from damage or loss.

All employees have access to the files appropriate to their roles and responsibilities. The Management System Software is also used to facilitate access to and retrieval of the required information.

Minimum record retention periods are determined according to appropriate legislative and regulatory requirements. Retention periods for records not governed by standards or legislation are established based the by-laws of the Town of Tecumseh. Records specific to the Town of Tecumseh Water Distribution System have been documented on a Record Retention Table. The records will be disposed of by either recycling, shredding, or in the case of electronic documentation archival and deletion.

## 6. Drinking –Water System

### System Overview

Under the terms and conditions of the 2004 Water Agreement executed among the Windsor Utilities Commission (WUC), City of Windsor and The Corporation of the Town of Tecumseh, the Tecumseh water distribution system (formerly north and south Tecumseh water distribution systems) is currently supplied by the Windsor Water System. The Town is responsible for its own distribution system within the boundaries of Tecumseh and is responsible for any new storage works that may be required to supply its fire flow of water. Storage for equalization and peak hour flow of water for Tecumseh is the responsibility of the WUC. The Town of Tecumseh also has a 4,546m<sup>3</sup> water tower, located in the North end of Tecumseh. The Town of Tecumseh water tower is monitored by Windsor Utilities Commission (WUC) and the Town of Tecumseh through SCADA (Supervisory Control and Data Acquisition system).

The north Tecumseh water service area (north of Highway 401) includes the urban settlement areas of Tecumseh, St. Clair Beach and Tecumseh Hamlet, and rural areas north of Highway 401; and is supplied from the Windsor Water System through metering facilities at the Town boundary on Dillon Drive, McNorton Street, Tecumseh Road, County Road 22, County Road 42 and, in the future, on Intersection Road.

The south Tecumseh water service area (south of Highway 401) includes urban settlement areas of Oldcastle Hamlet, and Maidstone Hamlet, and rural areas south of Highway 401; and is supplied from the Windsor Water System through existing supply connections at the Town boundary on Baseline Road, and at the Town boundary in Oldcastle Hamlet on the 8<sup>th</sup> Concession Road, County Road 46, Walker Road, North Talbot Road and Talbot Road (Highway 3).

## **Service Areas and Water Distribution System Components:**

### **North Tecumseh Water Service Area**

The distribution system in the north Tecumseh water service area is operated by The Corporation of the Town of Tecumseh and consisting of watermains ranging in size from 100 mm (4") to 600 mm (24") in diameter. ***(See Appendix 2- The north service area boundary is identified on Map #1)***

The feeder mains on Dillon Drive, McNorton Street and Tecumseh Road extend from the Town boundary through the centre of Tecumseh (Planning Area) to the elevated water tank on Tecumseh Road, and are interconnected through a new 300 mm feeder main on Lesperance Road and the existing 400 mm trunk watermain on Lacasse Boulevard. The 600 mm diameter feeder main on County Road 22 extends from the Town boundary to Manning Road (County Road 19) and is connected to the 400 mm diameter feeder main on Tecumseh Road. The 600 mm diameter feeder main on County Road 42 extends from the Town Boundary to Lesperance Road and is connected to the 300 mm diameter distribution mains on St. Alphonse Avenue and on Lesperance Road.

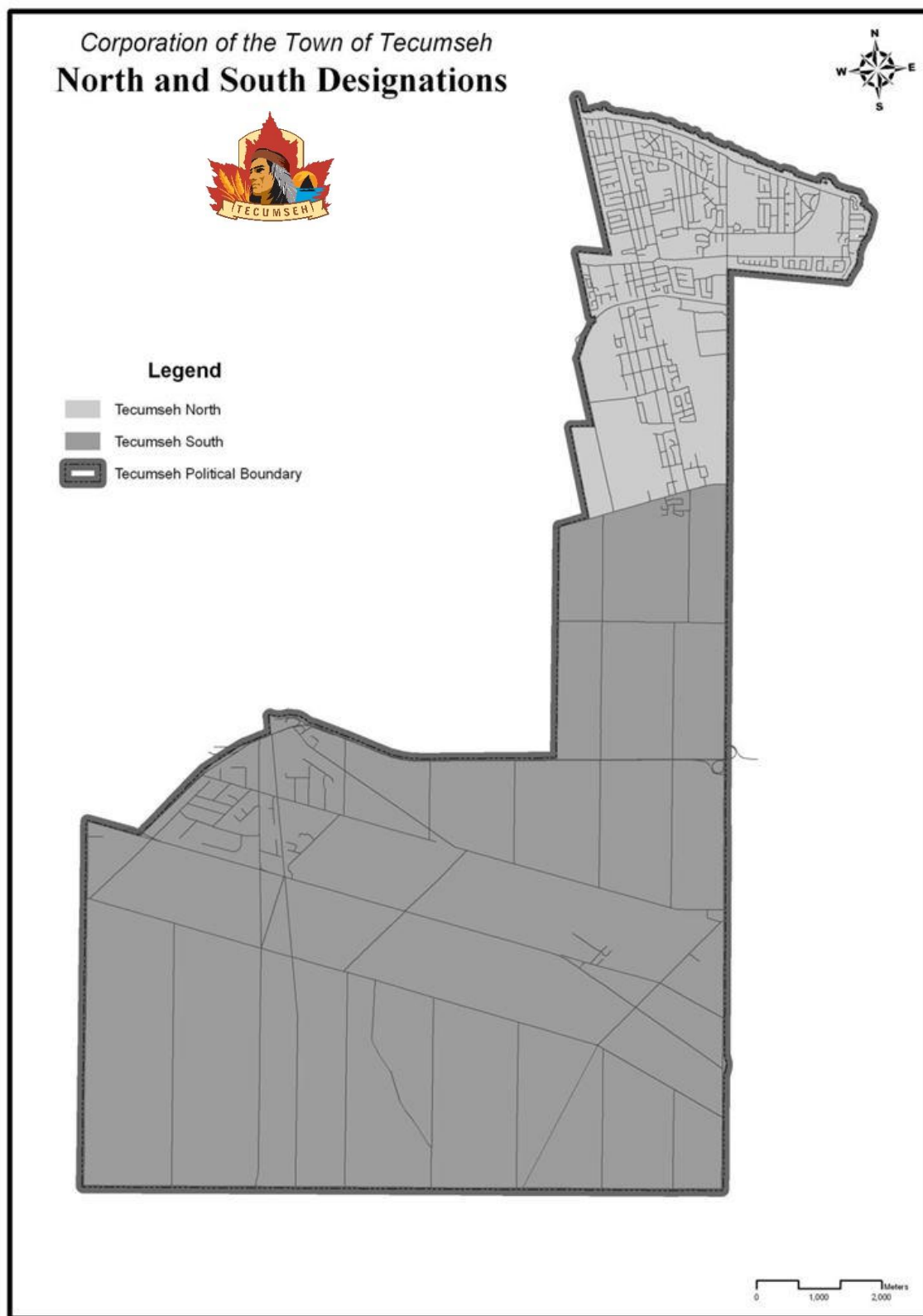
### **South Tecumseh Water Service Area**

The distribution system in the south Tecumseh water service area is operated by The Corporation of the Town of Tecumseh consisting of watermains ranging in size from 100 mm (4") to 600 mm (24") in diameter. ***(See Appendix 2 -The south service area boundary is identified on Map #2)***

The feeder mains on 8<sup>th</sup> Concession Road and County Road 46 supply the north east end of Oldcastle Hamlet. The 300 mm diameter feeder main on Walker Road and North Talbot Street connect to the 300 mm diameter trunk watermain on Talbot Road (Highway 3) which supplies Oldcastle Hamlet, the rural areas south of Highway 401, and Maidstone Hamlet.

## **Consolidated Water Distribution System**

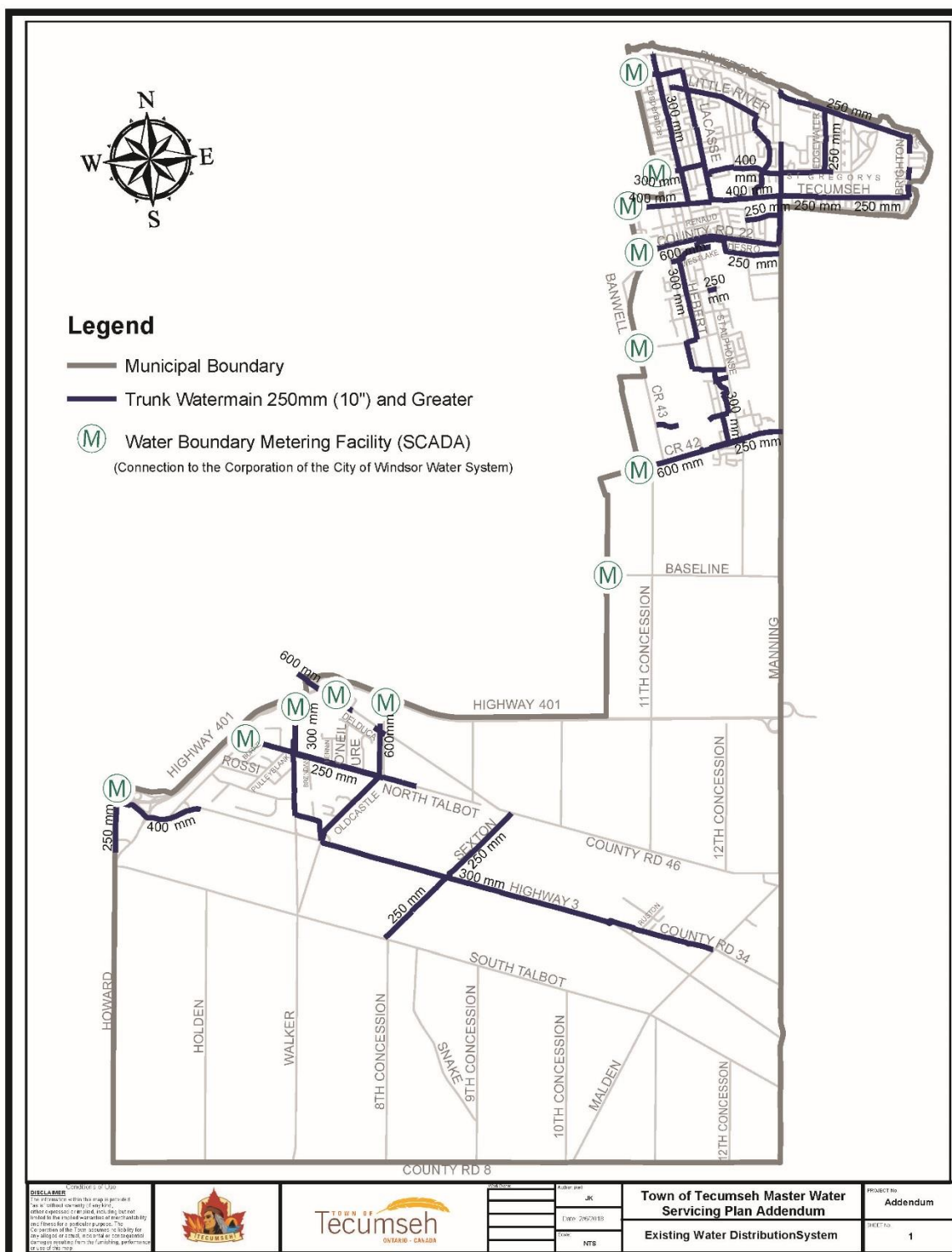
The existing water distribution system will be operated as a single distribution system with connections through the Windsor Supply System. In the future, the Town intends to extend trunk watermain from County Road 42 to connect to the south service area to improve system performance. A copy of the approved Water and Wastewater Master Plan can be viewed at the Water Services division office. ***(See Appendix 2 – Table # 1 Watermain Material Type and Length in Tecumseh Water Distribution System)***



# Drinking Water Quality Management System Water Services Operational Plan Version 8

The Corporation of the Town of Tecumseh

Water Services Emergency Response Plan



## 7. Risk Assessment

### **Risk Assessment Team**

The Risk Assessment Team shall be no less than a three-member forum and will be made up of The Manager, Water & Wastewater/ORO in conjunction with the Lead Water Operator and one other Water Operator.

The Risk Assessment Team shall meet once a calendar year to review the validity of the assumptions and the currency of the information used in the risk assessment. A comprehensive risk assessment will be redone every three years unless changing conditions indicate that it should be done more frequently.

The DWQMS Representative shall ensure that relevant information is circulated to all members of the Risk Assessment Team.

The Risk Assessment Team is to identify:

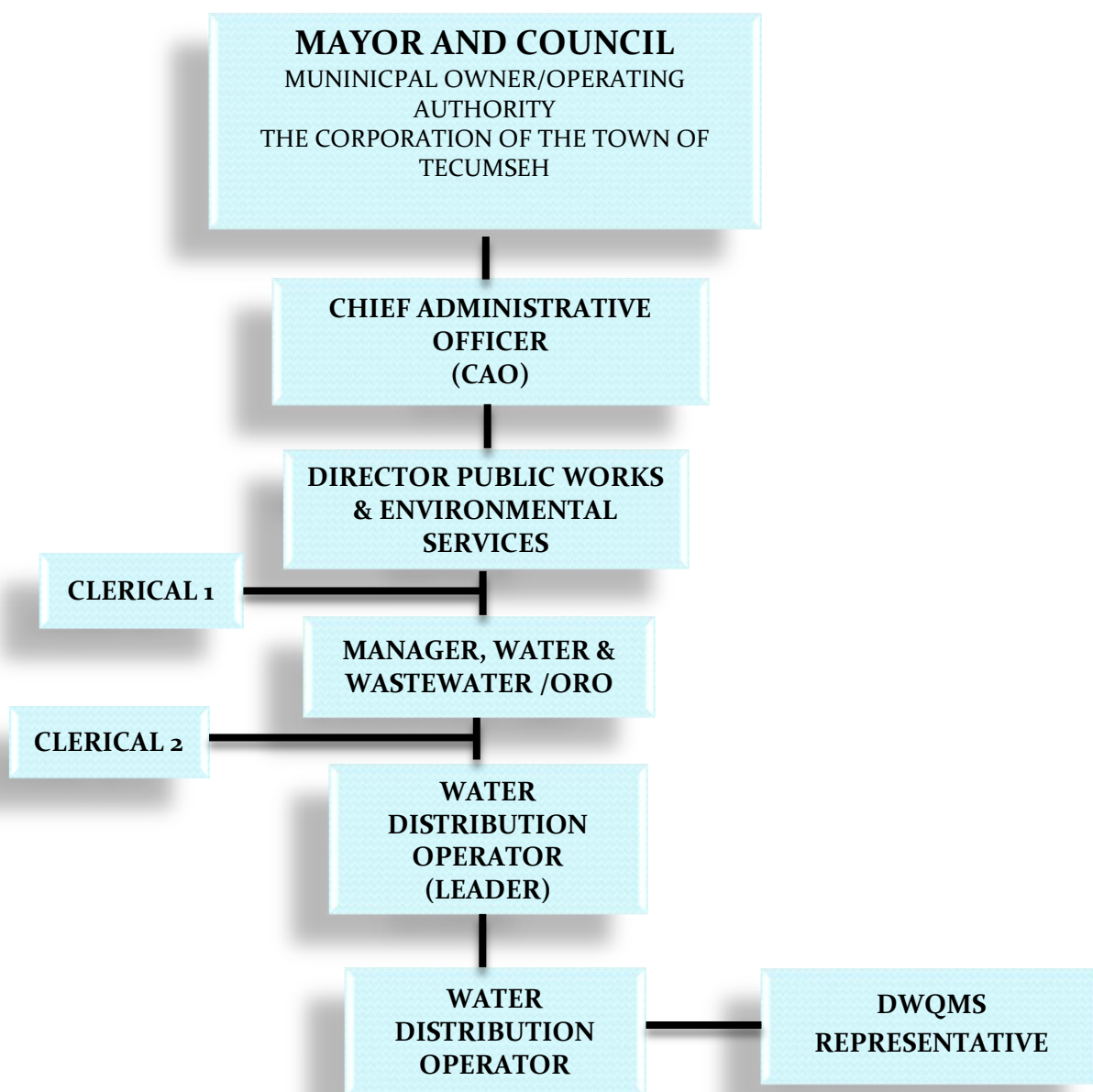
- The potential hazards and hazardous events which could affect the water system
- The control measures to address the hazards
- The Critical Control Points and control limits
- The associated methods of monitoring critical limits and responding to deviations

## 8. Risk Assessment Outcomes

The risk assessment will be facilitated by developing a Risk Assessment Table. As the Risk Assessment Team conducts this assessment, the Risk Assessment Team will need to document the results of each step and the risk assessment procedure. The risk assessment process is an ongoing activity. Once a year, the currency of the information and the validity of the information used in the risk assessment must be verified. The risk assessment must be redone every three years at a minimum, unless changing conditions indicate that it should be done more frequently.

- ***(See Appendix 3 - Risk Assessment Tables)***
- ***(See Appendix 4 - Hazard Analysis & Critical Control Point Work Sheet)***

## 9. Organizational Structure, Roles, Responsibilities and Authorities



### The Corporation of the Town of Tecumseh

#### Water Services - Organizational Chart



## Operational Roles, Responsibilities and Authorities:

### Municipal Owner/Operating Authority (Mayor and Council)

#### ***Responsibilities***

In addition to ensuring the provision of safe and reliable municipal water supply to the serviced areas of The Corporation of the Town of Tecumseh Council is also responsible for:

- Complete legal oversight of The Corporation of The Town of Tecumseh Water Distribution System and the DWQMS
- Ultimate responsibility for the provision of safe potable drinking water under the *Safe Drinking Water Act 2002*
- Ensures compliance with applicable legislation and regulations
- Participating in Council meetings and Council committee meetings and meetings of other bodies to which they are appointed by the Council
- Obtaining and giving due consideration to information about the operation or administration of the municipality from the Chief Administrative Officer, (CAO) and from other appropriate Town staff
- Evaluating the policies and programs of the municipality such as bylaw enforcement, taxation, property permits and inspections, planning, public works (roads, water, and sewer), parks and recreation, fire services, police services
- Endorsing the DWQMS and providing a representative to participate on the DWQMS Management Review Committee

#### ***Authorities***

- On behalf of the electorate of The Corporation of the Town of Tecumseh, and in accordance with the Municipal Act, Council is authorized to:
- Drinking water system and DWQMS improvements or changes
- To authorize resources to improve or change the drinking water system and DWQMS
- Approve and review policies for the management and operation of Town assets
- Review, revise, and approve proposed and existing bylaws, expenditures, user fees, taxation rates,
- Hire, evaluate, discipline, or terminate Town Management Staff and contracted service providers
- Financial, administrative authority related to the distribution of safe drinking water

## **Top Management**

Top Management is comprised of the following: Chief Administrative Officer; Director, Public Works & Environmental Services; and Manager, Water & Wastewater/Overall Responsible Operator (ORO)

### **Chief Administrative Officer (CAO)**

#### ***Responsibilities***

As the senior Town staff person reporting to Council, the Chief Administrative Officer (CAO) responsibilities include:

- Oversight of the operation and management of all Town departments
- Ensuring that the policies and direction from Council are effectively communicated to senior department managers
- Ensuring that policies and direction from Council is carried out by the appropriate Town departments
- Direct supervision of senior department directors and managers
- Endorsing the ongoing development of the DWQMS and participating on the DWQMS Management Review Committee

#### ***Authorities***

Authorities of the Chief Administrative Officer (CAO) include:

- Communicate information from senior managers directly to Council
- Request expenditure approval from Council and implement approved expenditures
- To convey and mandate council policy and direction to the department senior managers
- To hire, evaluate, discipline, or terminate utility management staff
- Staffing (within the guidelines of The Corporation of the Town of Tecumseh and any collective agreements)

## **Director, Public Works & Environmental Services**

### ***Responsibilities***

Reporting to the Chief Administrative Officer (CAO), the responsibilities of the Director of Environmental Services and Public Works responsibilities include:

- Ensuring the safe, reliable, and compliant management and operation of all of the Towns physical infrastructure as well as Water Distribution System
- Direct supervision of Environmental Services and Public Works department supervisors and administrative staff
- Coordinating budget preparation
- Preparation and presentation of Environmental Services Department Reports to Council
- Administration of the Collective Bargaining Agreement for department personnel
- Ensuring adequate and competent staffing
- Ensuring appropriate staff training
- Investigating and responding to public complaints and inquiries
- Participate and represent the Municipal Owner/Operating Authority (Mayor and Council) on the DWQMS Committee and Management Review Committee

### ***Authorities***

The Director of Environmental Services and Public Works is authorized to:

- Evaluate and prioritize long-term department needs
- Prepare, review, and approve design specifications
- Select contractors, and equipment
- Develop and implement departmental administrative and technical policy
- Recruit, hire, evaluate, discipline, or terminate Environmental Services Department staff in accordance with Town policies
- Within the scope of the Environmental Services Department and Public Works, communicate directly with regulatory agencies and the public on behalf of the Town Municipal Owner/Operating Authority
- When necessary, will appoint a temporary Over All Responsible Operator (ORO) position, in absence of the designated ORO

## **Manager, Water & Wastewater/Overall Responsible Operator (ORO)**

### ***Responsibilities***

Reporting to the Director of Environmental Services and Public Works, the responsibilities include:

- Ensuring the efficient, safe and compliant operation of the Towns Water Distribution System
- Providing supervision, technical direction and training to water distribution staff
- Maintaining provincial operator certification
- Assisting the Director of Environmental Services and Public Works with the water distribution budget preparation and long term planning
- Communicating with regulatory authorities to ensure compliance with applicable legislation
- Preparing and presenting Municipal distribution information to Council, Town staff, managers and the public
- Serving as an alternate DWQMS Representative and participating on the DWQMS Committee and Management Review Committee

### ***Authorities***

The Manager Water & Wastewater /ORO, Water System is authorized to:

- Act and is the Overall Responsible Operator (ORO) and therefore must be available to be contacted 24/7. The ORO will make arrangements with the Director of Environmental Services for a designated ORO in the event he/she is not available and cannot be contacted.
- Develop, approve and implement operations, maintenance and safety policies and procedures related to water distribution
- Supervise and inspect the work of contractors
- Evaluate and prioritize the long-term rehabilitation and upgrade to the Town's infrastructure(s)
- Participate in hiring, evaluation and discipline of unionized and non-unionized staff in accordance with Town Policies
- Communicate with Regulatory Agencies
- Order/purchase necessary supplies and services
- Apply various Town By-laws

## **DWQMS Representative**

### ***Responsibilities***

Reporting to the Town Municipal Owner/Operating Authority and Top Management, the responsibilities include:

- Promotes awareness of the DWQMS
- Reports DWQMS results to staff
- Ensures DWQMS documentation is prepared and maintained, as needed
- Provides all staff with technical and administrative consultation related to DWQMS document preparation and implementation, as needed
- Reviews and may approve DWQMS documentation
- Implements and oversees document control procedure
- Coordinates internal auditing acts as the external audit liaison
- Communicates DWQMS information to staff and facilitates training when needed
- May report DWQMS results to Municipal Owner/Operating Authority and Top Management, and any needs for improvement
- Assist Municipal Owner/Operating Authority and Top Management, that personnel who directly impact drinking water for The Corporation of the Town of Tecumseh are aware of all applicable legislative and regulatory requirements that pertain to their duties if reference to the DWQMS

### ***Authorities***

The DWQMS Representative is authorized to:

- The overall managing role, responsible for overseeing the development and implementation of the DWQMS system

### **Designated DWQMS Representative Alternate**

- Performs all roles of Designated DWQMS Representative

### **Water Distribution Certified Operator (Leader)**

#### ***Responsibilities***

Reporting to the Water & Wastewater/Overall Responsible Operator (ORO), the responsibilities include:

- Oversees day-to-day activities relating to maintenance of the water distribution system
- Communicates and liaises with the Manager, Water & Wastewater, Water Operators and Clerical Staff
- Works with the Manager, Water & Wastewater in completing the Water Operators' performance assessments
- Assists with developing procedures and processes for assuring water quality
- Has input into the development of procedures and processes for assuring water quality

#### ***Authorities***

The Water Distribution Certified Operator (Leader) is authorized to:

- Directs Operators in day-to-day operations of water distribution system
- Orders day-to-day supplies as needed
- Respond to public complaints as relayed from Manager, Water & Wastewater, Clerical Staff and/or after hours answering service

### **Water Distribution Certified Operator**

#### ***Responsibilities***

Reporting to the Water & Wastewater/Overall Responsible Operator (ORO) and the Water Distribution Certified Operator (Leader), the responsibilities include:

- Performs weekly testing of drinking water
- Performs regular maintenance of the water distribution system
- Reports any incidents of non-compliance
- Responds to repairs

#### ***Authorities***

The Water Distribution Certified Operator is authorized to:

- Monitors process and equipment of day-to-day operations of the water distribution system

- Respond to public complaints as relayed from Manager, Water & Wastewater, Clerical Staff , Water Operator Leader and/or after hours answering service

## **Clerical Staff**

### ***Responsibilities***

Reporting to the Director of Environmental Services and Public Works Water & Wastewater/Overall Responsible Operator (ORO), the responsibilities include:

- Communicates/liaises with the following: Director, Public Works & Environmental Services; Manager, Water & Wastewater; Water Operator (Leader); and Water Operators
- Responds to and documents public complaints. Example- drinking water quality complaints, broken watermain, hydrant hit by car etc.
- Inputs lab results
- Prepares reports as required by regulations and circulates to management
- Assists with DWQMS documentation and record control
- Assists with communication during emergency situations

### ***Authorities***

The Clerical Staff is authorized to:

- Updates and implements document changes as directed by applicable administration identified in the Water Services division Organizational Chart

## 10. Competencies

The Ministry of the Environment classified The Corporation of the Town of Tecumseh a “*Water Distribution Subsystem Class II*”. The following identifies the competencies required of staff whose performance may have a direct impact on drinking water quality.

### **Municipal Owners / Operating Authorities**

Municipal Owners/Operating Authorities who have complete legal oversight of The Corporation of The Town of Tecumseh Water Distribution System and the DWQMS are briefed on operating conditions and are provided updates by senior management to ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water, and shall maintain records of these activities. They may also attend relevant drinking water training courses, conferences, and seminars to assist in their overall knowledge pertaining to regulatory and legislative requirements.

### **Director of Public Works & Environmental Services**

The Director shall possess advanced theoretical and working knowledge of administrative skills expected of a senior level manager. In addition, the Director shall possess an intermediate theoretical and working knowledge of the *Safe Drinking Water Act* and applicable regulations and legislations, and The Corporation of the Town of Tecumseh drinking water distribution system. When necessary, will appoint a temporary Over All Responsible Operator (ORO) position, in absence of the designated ORO

### **Manager, Water & Wastewater and Overall Responsible Operator (ORO)**

Shall possess advanced theoretical and working knowledge of administrative skills. The Manager, Water and Wastewater and ORO shall also possess advanced theoretical and working knowledge of the *Safe Drinking Water Act* and applicable regulations and legislation. The Manager, Water and Wastewater and ORO should also have a good working knowledge of The Corporation of the Town of Tecumseh drinking water distribution system and its components. Is the Overall Responsible Operator (ORO) and therefore must be available to be contacted 24/7. The ORO will make arrangements with the Director of Environmental Services for a designated ORO in the event he/she is not available and cannot be contacted.

### **New Operators (OIT's)**

Must complete the OIT Water Distribution Prep Course and OIT exam as per Ministry of the Environment O.Reg.128/04 requirements.



### **Class I Water Distribution Operators**

The operator must successfully complete the Class I Water Distribution Exam to become a Class I Water Distribution Operator as per Ministry of the Environment O.Reg.128/04 requirements.

### **Class II Water Distribution Operators**

Class I level, the operator can advance to a Class II Water Distribution operator by successfully completing the Class II Water Distribution Exam as per Ministry of the Environment O.Reg.128/04 requirements.

### **Class III Water Distribution Operators**

Class II level, the operator can advance to a Class III Water Distribution operator by successfully completing the Class III Water Distribution Exam as per Ministry of the Environment O.Reg.128/04 requirements.

#### **Water Operator Competencies**

- Water Operators Shall possess a OIT or Class 1 Operating Certificate as per Ontario Regulation 128/04 requirements'
- The ORO shall have a minimum Class II Water Distribution Certificate as per Ontario Regulation 128/04 requirements'

#### **Water Operator Skills and Knowledge**

- The Water Operator performs a variety of skilled and semi-skilled tasks including: operates equipment used in the construction, repair and maintenance of the water distribution system and various public buildings and facilities; utilizes private contractors as authorized; oversees the contractors' work; and performs other related duties as required.
- The Water Operator will work with Town's Water Operators, other Town employees and / or contractors and provide direction to contractors as needed.
- The Water Operator will work with minimum supervision and shall comply with all safety rules and regulations and will work unsupervised if required.

### **Methods to Develop, Assess and Maintain Competencies**

The following methods develop, assess and maintain the required competencies for personnel performing duties directly affecting drinking water quality:

### **Identify Training Requirements**

The Manager, Water & Wastewater and Water Operators must meet the training requirements as per Ministry of the Environment O.Reg.128/04 requirements.

The required competencies include, but are not limited to the following:

- Class 1 Water Distribution Operator Certificate
- Understanding the Quality Management System
- Familiarity with the Town's water distribution system
- Knowledge of regulations and identifying, reporting and responding to adverse drinking water conditions as required by regulations.

### **Assess Competencies**

The Corporation of the Town of Tecumseh may administer certain tests, conduct interviews, verify references and/or request specific documentation as part of the hiring process in order to verify skills, experience and knowledge.

In order to meet the ongoing changes to technology, software, the requirements of O. Reg. 128/04 and the Water Services division processes, Water Operators shall receive training as required by O. Reg. 128/04, at a minimum. The training may be provided on or off site by qualified employees or contracted subject matter experts. Training effectiveness is evaluated when appropriate through testing, or a demonstration of knowledge gained.

Training records are maintained by the Manager, Water & Wastewater, stored in document control software and filed in hard copy in the Water Services division office as proof that the required training has been successfully completed. The Manager, Water & Wastewater is responsible for ensuring that all identified training is completed.

### **Maintain Competencies**

The Manager, Water & Wastewater will ensure that the Standard Operating Procedures and Quality Management System are reviewed every 12 months. These duties are included in the Annual Schedule of Duties maintained and tracked by the ORO. Furthermore, the Water Operators will meet or exceed the training hours required by Ministry of the Environment O.Reg.128/04 to maintain Water Distribution Water Distribution Operator Certificates. Training hours and courses completed by the Water Distribution Operators are logged and tracked by the Manager, Water & Wastewater and are documented in document control software.

## **11. Personnel Coverage**

Water Services division is staffed as per the Collective Agreement between the Corporation of the Town of Tecumseh and the Outside Bargaining workers represented by CUPE Local 702.1. The Manager, Water & Wastewater is the designated ORO. After hours calls are managed by the Water Operator (Leader) using an emergency call-out service with the staff seniority list for overtime as set out by the Collective Agreement.

### **Regular Hours Coverage**

- All work orders are generated through the Water Services division office during regular working hours
- Created work orders will have date and time of the call, location of the problem, details of the problem, name and contact information of person initiating service call.
- Work orders are distributed through the Manager, Water & Wastewater/ORO and the Water Operator (Leader)

### **After Hours Coverage**

- The Water Operator (Leader) receives a call from the answering service, assesses information and provides direction
- If the Lead Water Operator cannot be contacted, the call will bump to the next Water Operator according to seniority
- When necessary, staff is called in to do repairs , and or deal with public complaints
- All reports and forms are authorized by the Manager, Water & Wastewater/ORO
- Reports, forms and or work orders, will have date and time of the call, location of the problem, details of the problem, name and contact information of person initiating service call.
- If required, sub-contractors are approved by the Manager, Water & Wastewater/ORO and are used in digression of the Water Operator

### **Pandemic, Strikes and/or Lockouts**

- The provisions for personnel coverage during situations where staff may not be available to work include the following:

#### **Pandemic**

- Should a pandemic occur the Town will request from surrounding municipalities with qualified licensed operators as well as private contractors for assistance.
- If needed the Town will also contact the Ministry of the Environment to request advice or assistance should an emergency of this nature arise.

#### **Strikes and/or Lockouts**

- The Manager, Water & Wastewater is designated as the Overall Responsible Operator (ORO) for the distribution system and has the appropriate Water Distribution Operators License. In the event of a union strike and/or lockout, the ORO is qualified to maintain the water distribution system.
- In the event the ORO is not available or if additional staff is required to maintain the distribution system, Town will request from surrounding municipalities with qualified licensed operators as well as private contractors for assistance.
- If needed the Town will also contact the Ministry of the Environment to request advice or assistance should an emergency of this nature arise.

## 12. Communications

The DWQMS Representative shall ensure the Municipal Owner/Operating Authority and Top Management is provided with a current copy of the Operational Plan. The DWQMS Representative shall keep the Municipal Owner/Operating Authority and Top Management informed of any changes to the DWQMS as a result of Management Review and other DWQMS issues when necessary.

A current version of the Operational Plan is available to staff at the Water Services division office. A hard copy DWQMS Operational Plan will be kept at the Water Services division office and an electronic copy can be obtained using the document control software. Personnel will be informed of DWQMS changes or updates through regular staff meetings with the DWQMS Representative or the Manager, Water & Wastewater.

Any suggested revisions or recommendations to the DWQMS Operational Plan submitted by staff will be documented and provided to the DWQMS Representative.

The DWQMS Committee will meet to review and update the Operational Plan and review any staff recommendations.

Town of Tecumseh Water Services will utilize a web based survey/questionnaire to allow the public and essential suppliers to have input and communication with all levels of the town's Water Services and Management. The Manager, Water and Wastewater/ORO will collect and analyze all data communicated to the town. The Manager, Water and Wastewater/ORO will then make changes if necessary/ or may make recommendations to the Municipal Owners/ Operating Authority any changes or improvements identified

Essential suppliers and service providers shall receive information regarding the DWQMS from the purchaser, if and when necessary.

Notification is provided to The Corporation of the Town of Tecumseh suppliers and service providers that a copy of the current Water Distribution System Standards and Material Specifications is available on the Town's website or in hardcopy from the Water Services division.

The DWQMS Policy is available to the consumers of The Corporation of the Town of Tecumseh water distribution system at the Water Services division office, Town Hall and can be viewed on the Town's website [www.tecumseh.ca](http://www.tecumseh.ca).

### **13. Essential Supplies and Services**

Where applicable, supplies must meet AWWA and NSF/ANSI standards. Supplies are verified against the order requisition when received. *(See Appendix 5 - Essential Supplies and Service List)*

### **14. Review and Provision of Infrastructure**

Infrastructure for The Corporation of the Town of Tecumseh consists of a water distribution system, water tower and monitoring equipment at the boundary meters. The Corporation of the Town of Tecumseh has in place a Water & Wastewater Master Plan, which has been accepted and adopted by the Municipal Owners/Operating Authority.

Rehabilitation and renewal of the water distribution system is performed on a needs schedule in association with the Water & Wastewater Master Plan. Capital and operational money is allocated each year for improvements to the system. The Director, Public Works & Environmental Services, under the advisement of the Manager, Water & Wastewater and Manager, Engineering Services, will identify areas needed for rehabilitation and renewal.

A report detailing the maintenance programs, any requirements for infrastructure, rehabilitation and renewal is prepared annually by the Director, Public Works & Environmental Services and Director, Financial Services/Treasurer. The capital requirements are then submitted to Top Management and Municipal Owner/Operating Authority for budgetary approval.

### **15. Infrastructure Maintenance, Rehabilitation and Renewal**

The Manager, Water and Wastewater will annually review the planned and unplanned maintenance reports and programs. A summary will be prepared and communicated to the Director, Public Works & Environmental Services under advisement of the Manager, Engineering Services and will identify areas that may need rehabilitation and renewal planning. *See Appendix 6: ("Public Works & Environmental Services Capital Works Plan")*

#### **Planned Maintenance**

All planned maintenance is scheduled and communicated to staff by the Manager, Water & Wastewater. All records are retained at the Water Services division office.

- Annual valve exercising programs
- Annual flushing programs
- Annual hydrant inspection, maintenance and painting

Planned maintenance is scheduled on an electronic spreadsheet stored on the central office computer server. Server files are backed up daily. Planned rehabilitation and renewal programs will be reviewed on an annual basis as capital works are planned for each calendar year by the Manager, Water & Wastewater with the following: Director, Public Works & Environmental Services; Director, Financial Services/Treasurer; Manager, Engineering Services; and Manager, Roads & Fleet.

Scheduled tasks are typically defined by manufacturer's literature when available and revised as needed according to operator experience/observations. Planned maintenance tasks are communicated to the person responsible by issuance of work orders from the Manager, Water & Wastewater ORO or the Water Operator (Leader). Completed work orders are reviewed and signed by the Manager, Water & Wastewater ORO or DWQMS Representative.

If feasible, rehabilitation or replacement of water distribution piping is coordinated with the Town's scheduled wastewater and road resurfacing projects.

### **Unplanned Maintenance**

Unplanned maintenance is conducted as required. All unplanned maintenance activities are authorized by the Manager, Water & Wastewater.

- Service leaks
- Meter repairs
- Emergency hydrant repairs
- Water quality complaints
- General customers inquiries

## **16. Sampling, Testing and Monitoring**

Sampling, testing and monitoring of the treated water produced at the Windsor Utilities Commission (WUC) Water Treatment Plant is conducted by Windsor Utilities Commission Water Operators as required by Ontario Regulation 170/03.

A competent certified Water Operator for the Town performs all in house sampling. Results are recorded on a weekly log sheet and monitored by Water Operators. Detailed procedures for all tests performed on-site are provided in Standard Operating Procedures (SOP's).

The operators ensure that the water supplied to The Corporation of the Town of Tecumseh Water Distribution System meets the *Safe Drinking Water Act, 2002*. Sampling and testing for The Corporation of the Town of Tecumseh Water Distribution System is limited to the distribution system only as required by Ontario Regulation 170/03.

The results at all boundary meters and the water tower are displayed and recorded on the SCADA system and monitored by the Manager, Water & Wastewater and Water Operators.

Free chlorine will be done in-house. All other regulatory testing is contracted out and performed by an accredited lab chosen by The Corporation of the Town of Tecumseh. Records and logs are kept at the Water Services division office.

Sampling and monitoring Standard Operating Procedures (SOP) are established for operating the water distribution system. Provisions have been made when sampling and monitoring under abnormal circumstances.

#### **Adverse Water Quality Sample**

- If the accredited laboratory discovers adverse water quality in a sample, they are obligated to notify Water Services division within 24 hours. All adverse water results prescribed by Schedule 16 of O.Reg.170/03 must be immediately reported by Water Services division to the Medical Officer of Health, Spill Action Centre and the Ministry of the Environment.
- During adverse water quality incidents, maps and drawings are provided to the local health authority whereby direction is given to the Town as to the locations of sampling and monitoring upstream and downstream of the location from which the adverse sample was found.

#### **Power/Communication Loss**

- Water Services staff is alerted via telephone in the event of a power/communication loss that affects the SCADA system (refer to Element 11 for call-out procedure during working hours and after working hours)
- The SCADA system is programmed to continue calling the emergency contact list until the alarm is acknowledged

#### **Inclement Weather**

- Additional staff and/or equipment will be provided for as needed

## **17. Measurement and Recording Equipment Calibration and Maintenance**

The portable chlorine analyzers and flow meters are calibrated by contractors according to the manufacturers' specifications or as mandated by legislation. All calibrations are recorded and filed at the Water Services division office.

Contractors used for performing calibrations are identified in the "Essential Supplies and Services List". (*See appendix 5 - Essential Supplies and Services List*)

## **18. Emergency Management**

The Corporation of the Town of Tecumseh's Water Operators have emergency training and are aware of the location of written procedures to deal with emergencies in the water distribution system. Specific instructions for responding to emergencies, including emergency situations that have the potential to result in acute drinking water health risks, are included in hardcopy in the Water Services division office and electronically in the document control software. Once a year, a training exercise will be conducted to test selected emergency procedures. If present methods should change, or if new employees are brought into the system, semi-annual training will occur on dealing with emergencies. Senior employees or direct supervisors would provide this training. All training is documented and placed in employee training files.

Water Operators are on twenty-four hour call to ensure that a qualified staff member will attend and assess any water emergency.

### **Emergencies**

- Adverse Water Quality
- Water distribution cannot supply fire protection or safe drinking water
- Situations in the water distribution system that has the potential to result in acute drinking water health risks

In the event of an identified emergency the Manager, Water & Wastewater shall be contacted immediately. The Manager, Water & Wastewater is designated to be responsible for overall management, decision-making, and communications at the entail level of emergency.

In the event the Manager, Water & Wastewater ORO is unavailable, the Director of Public Works and Environmental Services shall be contacted and will appoint a temporary ORO.

The Manager, Water & Wastewater will then report all incidents and corrective actions to the Director, Public Works and Environmental Services or designate.



The Director, Public Works and Environmental Services, in collaboration with the Manager, Water & Wastewater, will advise the Municipal Owners/Operating Authorities of the system.

The Mayor and CAO of The Corporation of the Town of Tecumseh shall only be notified in the event that water cannot be supplied to the Town in sufficient amounts for fire protection, or that water quality poses an acute health risk to customers and a boil water advisory or drinking water advisory must be issued.

The Water Services Emergency Response Plan is an emergency plan consisting of a set of guidelines assembled to assist water staff in emergency response procedures and is intended to facilitate a systematic and coordinated response to a variety of water emergencies or major incidents. The Water Services Emergency Response Plan has been formulated to assign emergency response roles and responsibilities, and to guide immediate and long-term response to incidents adversely affecting the water operations.

In the event of a problem occurring greater than a water emergency the Corporation of the Town of Tecumseh Emergency Response Plan will be implemented. A hardcopy is stored in the Water Services division office and electronically in the document control software.

An extensive emergency contact list is provided within the Water Services Emergency Response Plan. There is a procedure in place to review and update the Water Services Emergency Response Plan on an annual basis.

## **19. Internal Audits**

Internal audits will be performed in entirety at least every 12 months as legislated, to ensure the DWQMS conforms to the requirements of the DWQMS Operational Plan. These requirements include ensuring that the DWQMS has been effectively implemented and properly maintained.

The Corporation of the Town of Tecumseh will conduct internal audits by trained auditors internally or by a contracted trained auditor chosen by The Corporation of the Town of Tecumseh.

### **Internal Audits Conducted by Town of Tecumseh Auditors**

- The assignment of auditor's and schedules will be the responsibility of the DWQMS Representative
- Internal audits will be conducted by a person who has successfully completed a recognized Internal Auditor workshop
- Internal audits will be scheduled based on the availability and schedules of the participants.
- DWQMS will be audited as per the legislative requirements
- The auditor shall review all related DWQMS documentation
- The auditor shall observe activities, review records, review previous internal and external audit results, and interview personnel as necessary to ensure that the status of the audited Elements of the DWQMS has been effectively covered
- The auditor shall submit completed reports to the DWQMS Representative and the Manager, Water & Wastewater
- The report shall include any corrective actions requests required to address discrepancies
- Responses to corrective action request shall be designated to the responsible individual by the DWQMS Management Review Committee

## **20. Management Review**

Management Review (Also referred to as the DWQMS Committee) ensures and evaluates the continuing suitability, adequacy and effectiveness of the DWQMS. This process reviews the effectiveness of the DWQMS by the Management Review Committee

### **Review Participants**

Management Reviews shall be conducted during a meeting of the Management Review Committee that is comprised of the following:

- Chief Administrative Officer (CAO)
- The Director of Public Works & Environmental Services
- The Manager, Water and Wastewater /ORO
- The meeting is chaired by DWQMS Representative

The DWQMS Rep will communicate the meeting minutes to all management Review Committee members.

### **Review Frequency**

Management Reviews shall be conducted after the internal audit has been completed and submitted to the DWQMS Representative by the Internal Auditor. The Management Review shall be with in a 12 month frequency.

### **Review Input**

The DWQMS Representative and/or Manager, Water & Wastewater shall provide information and data concerning the following categories for the review if requested:

- Incidents of regulatory non-compliance
- Incidents of adverse drinking water tests
- Deviations from Critical Control Point limits and response actions
- The efficiency of the risk assessment process
- Results of internal and 3rd party audits
- Results of relevant emergency response testing
- Operational performance and water quality trends
- Follow-up on action items from previous Management Reviews
- Status of management action items (if any) identified between reviews
- Changes in resource requirements, infrastructure, process, personnel, the DWQMS or regulations that could affect the DWQMS
- Consumer feedback
- The resources needed to maintain the DWQMS

- The results of the infrastructure review
- Operational Plan, content, updates and staff suggestions

### **Review Process**

The Management Review Committee shall review and discuss all information presented.

The Committee shall make recommendations and initiate an action plan, including the person(s) responsible for delivering the action items and the proposed timelines, to improve the content and implementation of the Operational Plan and related procedures, and to ensure the provision of adequate resources.

The DWQMS Representative shall be responsible for communication and implementation of the Management Review findings.


## **21. Continual *Improvements***

The Corporation of the Town of Tecumseh shall strive to continually improve the effectiveness of its DWQMS with corrective actions from the annual audits, staff suggestions and management reviews.

# Appendices

## Appendix 1 - Commitment and Endorsement

*The endorsement of the Water Services Operational Plan by Municipal Owner/Operating Authority (The Corporation of the Town of Tecumseh, Municipal Council) report, submitted by Manager, Water & Wastewater /ORO will be added to this Appendix 1 when formerly approved.*

  
**The Corporation of the  
Town of Tecumseh**  
Public Works & Environmental Services

<b>To:</b>	Mayor and Members of Council
<b>From:</b>	Denis Berthiaume, Manager Water & Wastewater Services
<b>Date to Council:</b>	February 27, 2018
<b>Report Number:</b>	PWES-2018-12
<b>Subject:</b>	Drinking Water Quality Management System Operational Plan Version 8

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**Recommendations**

It is recommended that:

The Drinking Water Quality Management System Operational Plan Version 8 **be endorsed** and committed to.

**Background**

Following the results of the Walkerton Inquiry in 2002, a key recommendation by Justice O'Connor was for municipalities across Ontario to develop and implement a Drinking Water Quality Management Standard (DWQMS), similar to management systems from the International Standards Organizations (ISO). Council adopted its DWQMS Operational Plan Version 7 at its meeting held February 28, 2017 (Motion: RCM-59/17).

The Drinking Water Quality Management System Operational Plan Version 7 has been updated to Version 8 as mandated by O.Reg 188/07, which issues directions governing the preparation and content of operational plans for municipal drinking water systems.

**Comments**

The adoption of quality management systems is not new to the drinking water community in Ontario; however, the requirement to implement the DWQMS is now mandated through the Safe Drinking Water Act, 2002 (SDWA) O. Reg. 188/07 – Licensing of Municipal Drinking - Water Systems.

Council Report-Master (Rev 2019-01-29)

The SDWA requires owners/operating authorities of municipal residential drinking water systems to have an accredited operating authority. In order to become accredited, an operating authority must establish and maintain a quality management system (QMS). Minimum requirements for the QMS are specified in the SDWA. Operating authorities must be accredited by a third-party accreditation body.

The DWQMS provides minimum requirements for an owners/operating authority to document a QMS in an operational plan for each system that it operates, which must be accepted by the Ministry of the Environment and Climate Change (MOECC). The Corporation of the Town of Tecumseh is responsible for the Water Distribution Subsystem Class 2 as designated by the MOECC.

The DWQMS is based on a PLAN, DO, CHECK and IMPROVE methodology which is similar to that found in some international standards. PLAN requirements of the standard typically specify policies and procedures that must be documented in the operational plans for the drinking water system, while DO requirements specify that the policies and procedures must be implemented. CHECK and IMPROVE requirements of the standard are reflected in the requirements to conduct internal audits and management reviews.

Version 7 of the Operational Plan was submitted to the DWQMS Committee and approved. Updates to the new Operational Plan reflect changes due to:

- Legislative and regulatory changes
- Management Review Committee recommendations as per internal audits
- Corrective Action Records (CAR's) issued by the NSF (Town's auditing firm)
- The Corporation of the Town of Tecumseh administrative and/or internal policy changes

It is therefore recommended that Council commit to and endorse the Drinking Water Quality Management System Operational Plan Version 8.

### **Consultations**

None.

### **Financial Implications**

There are no financial implications arising from this report.

## Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input checked="" type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

## Communications

Not applicable ☐

Website ☒ Social Media ☐ News Release ☐ Local Newspaper ☐

Report No: PWES-2018-12  
Drinking Water Quality Management System  
Operational Plan Version 8

Page 4 of 4

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Denis Berthiaume, ORO  
Manager Water & Wastewater Services

Reviewed by:

Dan Piescic, P.Eng.  
Director Public Works & Environmental Services

Recommended by:

Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

**Attachment  
Number**

**Attachment  
Name**

1

Drinking Water Quality Management System Operational Plan  
Version 8



## Appendix 2 – Drinking Water System

**Table # 1:**

### Watermain Material Type and Length in Tecumseh Water Distribution System

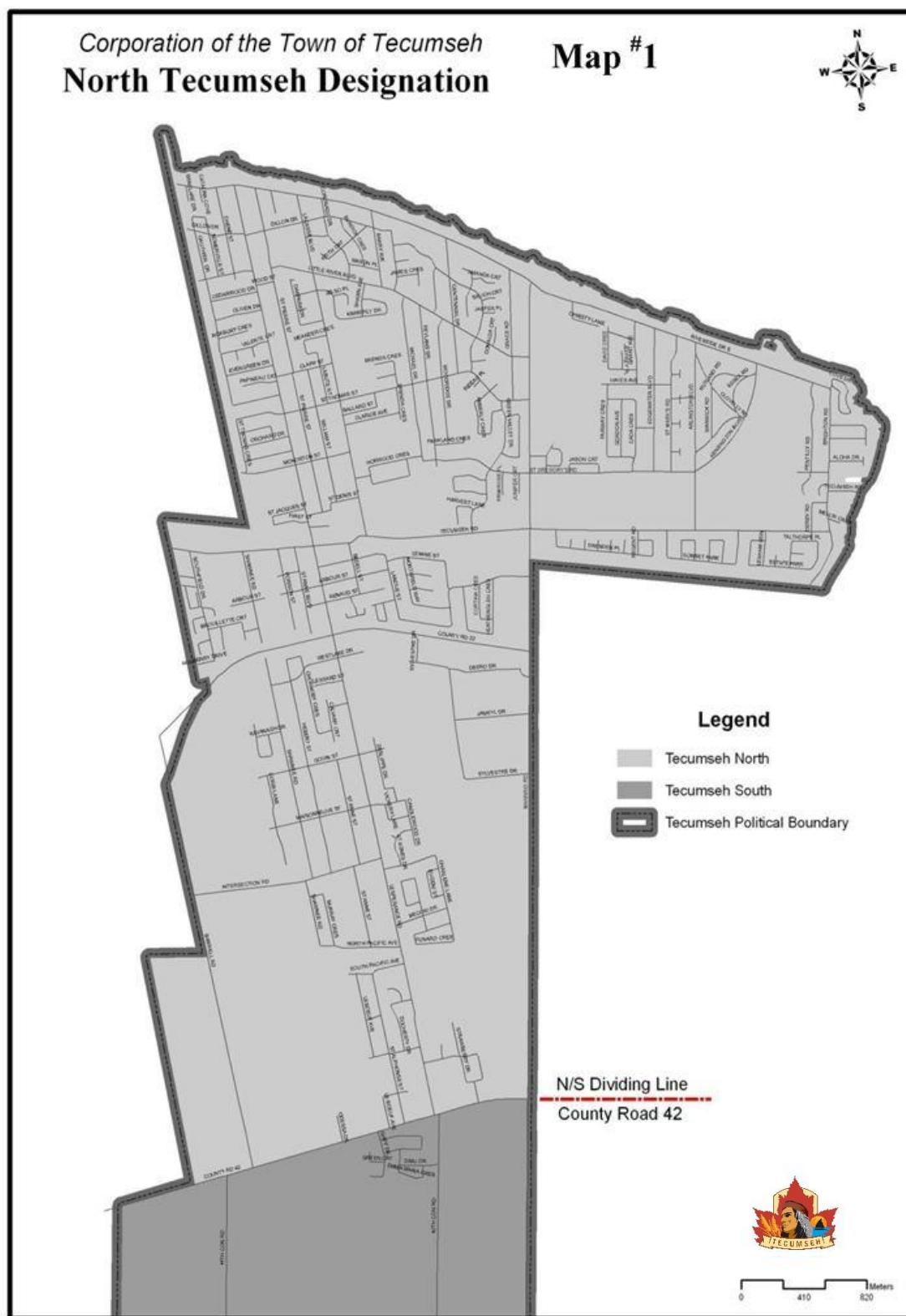
<b>Watermain Material, Size &amp; Length in Meters</b>	
<b><i>Cast Iron Watermain – 19,629 Meters</i></b>	
<ul style="list-style-type: none"> <li>• 100mm Pipe = 151 Meters</li> <li>• 150mm Pipe = 18,500 Meters</li> <li>• 200mm Pipe = 106 Meters</li> </ul>	<ul style="list-style-type: none"> <li>• 250mm Pipe = 506 Meters</li> <li>• 400mm Pipe = 366 Meters</li> </ul>
<b><i>Concrete Watermain - 2,524.00 Meters</i></b>	
<ul style="list-style-type: none"> <li>• 250mm Pipe = 2.0 Meters</li> <li>• 400mm Pipe = 2522 Meters</li> </ul>	
<b><i>Ductile Iron Watermain - 27,640.00 Meters</i></b>	
<ul style="list-style-type: none"> <li>• 150mm Pipe = 9260 Meters</li> <li>• 200mm Pipe = 12,994 Meters</li> <li>• 250mm Pipe = 1160 Meters</li> </ul>	<ul style="list-style-type: none"> <li>• 300mm Pipe = 1662 Meters</li> <li>• 400mm Pipe = 2,064 Meters</li> <li>• 600mm Pipe = 500 Meters</li> </ul>
<b><i>PolyVinylChloride (PVC) Watermain -173,791 Meters</i></b>	
<ul style="list-style-type: none"> <li>• 50mm Pipe = 456 Meters</li> <li>• 100mm Pipe = 1,560 Meters</li> <li>• 150mm Pipe = 59,918 Meters</li> <li>• 200mm Pipe = 66,708 Meters</li> </ul>	<ul style="list-style-type: none"> <li>• 250mm Pipe = 15,270 Meters</li> <li>• 300mm Pipe = 18,432 Meters</li> <li>• 400mm Pipe = 8525 Meters</li> <li>• 600mm Pipe = 2,922 Meters</li> </ul>
<b><i>Polyethylene Watermain - 251.00 Meters</i></b>	
<ul style="list-style-type: none"> <li>• 50mm Pipe = 7 Meters</li> <li>• 150mm Pipe = 244 Meters</li> </ul>	
<b>Total Length of Watermain - 223,835 Meters</b>	

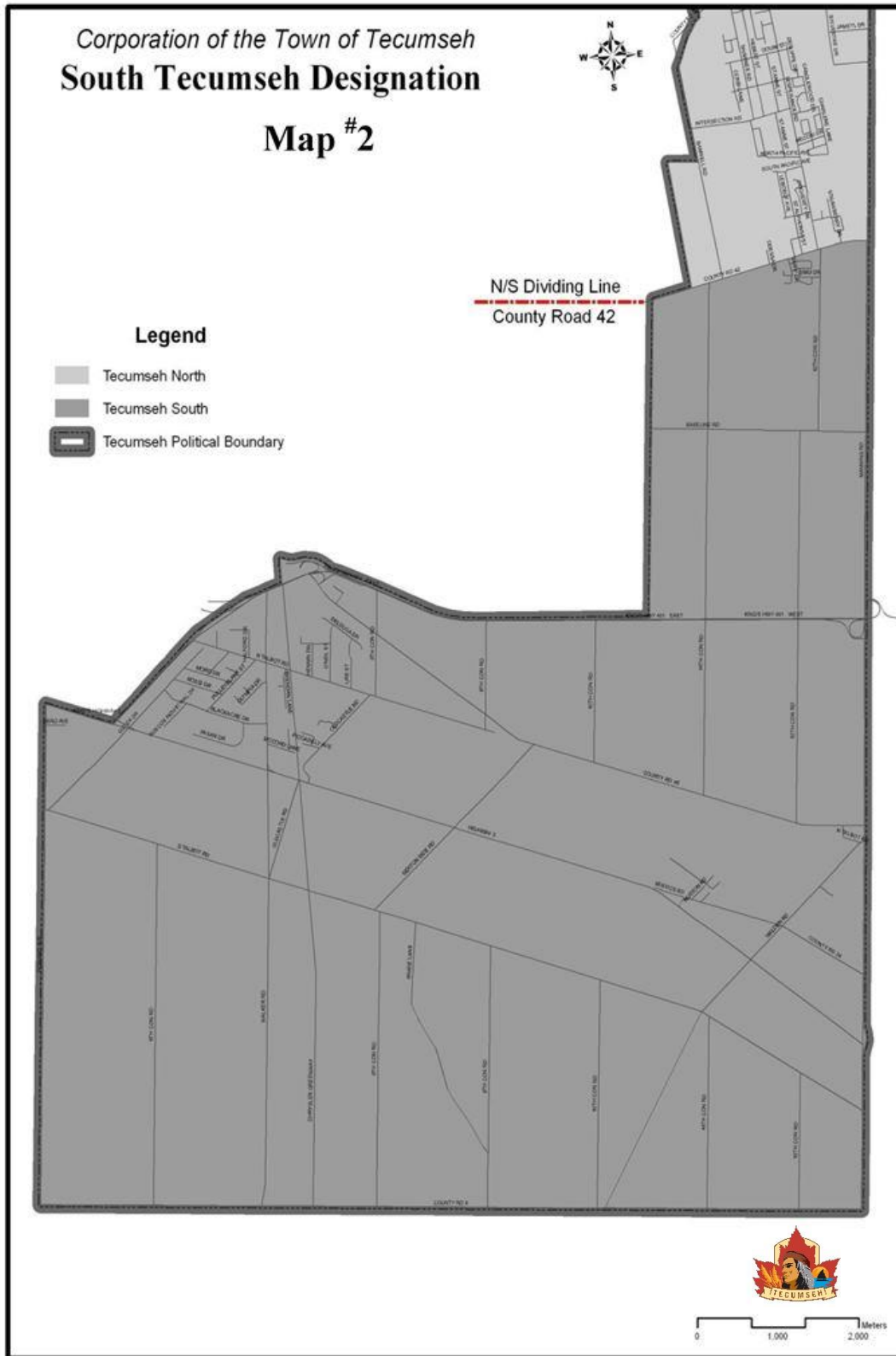
The north distribution system is currently supplied from the Windsor Water System through the following metering connection:

- 400 mm diameter feedermain on Dillon Drive
- 300 mm diameter feedermain on McNorton Street
- 400 mm diameter feedermain on Tecumseh Road
- 600 mm diameter feedermain on County Road 22
- 600 mm diameter feedermain on County Road 42
- (future) 600 mm diameter feedermain on Intersection Road

The south distribution system is currently supplied from the Windsor Water System through the following connections:

- 200 mm diameter feedermain on Baseline Road
- 200 mm diameter feedermain on 8<sup>th</sup> Concession Road
- 600 mm diameter feedermain on County Road 46
- 300 mm diameter feedermain on Walker Road
- 300 mm diameter feedermain on North Talbot Road
- 200 mm diameter feedermain on Talbot Road





## Completing the Hazard Analysis and Critical Control Worksheet Procedure:

### **Appendix 3 – Risk Assessment** (Comprehensive Risk Assessment done February 17, 2017)

The DWQMS Representative shall ensure that relevant information is circulated to all members of the Risk Assessment Team.

The Risk Assessment Team is to identify:

- The potential hazards and hazardous events which could affect the water system
- The control measures to address the hazards
- The Critical Control Points and control limits
- The associated methods of monitoring critical limits and responding to deviations

The Hazard Analysis & Critical Control Point (CCP) Work Sheet is used to record the results of the risk assessment.

- Getting Started:** Start by using the distribution infrastructure maps and follow the flow and process of receiving and delivering of clean drinking water to the customer
- Activity or Process Step:** This column refers to specific areas within a particular process step (pumps, tower, distribution system, etc.)
- Description of Hazard:** This column refers to an incident or situation that can lead to the presence of a hazard. Hazards and Hazardous events can result from natural or technological causes, or from human activities
- Potential Result of Hazard:** This column refers to the source of danger or a property that may cause drinking water to be unsafe for human consumption. *Biological, Chemical, Physical and Radiological*. A description of each hazard is outline in (Table 1)
- Comments:** This column refers to any additional information that will help in the description of the hazard or identification
- Available Monitoring & Control Measures:** This column refers to any monitoring and control measures in place or need to be identified as a need to be put in place. Control measures must be addressed for all potential hazards and hazardous events, regardless of whether they are CCP's or not. This may include monitoring, preventive measures, regular inspection, back-up equipment, written standard operating procedures etc.

- G. **Emergency Procedures or Contingency Plan:** This column identifies any emergency procedure or contingency plan in place to deal with the hazards identified
- H. **Likelihood, Consequence, Detectability and Total:** These columns refer to the ranking criteria identified in (Tables 2, 3, 4, 5.)
- I. **Critical Control Point (CCP):** Identifies if the total value of the columns, and determines if the value are above or below the set threshold
- J. **Control Procedure:** This column is where you apply some sort of control, to prevent or eliminate a drinking water health hazard or to reduce the health hazard to an acceptable level
- Hazards identified as CCP's or Recommended Minimum CCP's require controlled measures, which are documented in procedures or work instructions.

**Controlled Measures include:**

- Work Instructions
- Monitoring, reporting and recording requirements
- Support information
- Response for a deviation from critical control point
- Recovery procedures if necessary
- Equipment reliability and redundancies

**Determining the Level of Risk for each Hazard**

- A. Using the Ranking criteria set out at the bottom of each work sheet estimate the level of risk for each hazard
- B. Using the criteria set out at the bottom of the work sheet assign a value to each ***Likelihood, Consequence and Detectability***
- C. Once the value for each is assigned, add the three values together ***A+B+C=Total***
- D. The ***Total*** will be ranked as per the criteria in the "***Total Analysis***" table found at the bottom of the work sheet
- E. If the Total is in the High or Very High range as a hazard, it will require a Critical Control Point procedure

**Table 1- Hazards**

<b>Biological Hazards</b>	Biological pathogens are usually considered the most significant drinking water health risk because the effects are acute; Waterborne biological hazards include bacterial, viral and parasitic organisms. These organisms are commonly associated with faecal wastes from humans and other animals, and some can occur naturally in the environment.
<b>Chemical Hazards</b>	Chemical hazards in drinking water may come from a source or occur in the treatment and distribution system. They include but are not limited to: toxic spills, naturally occurring minerals, heavy metals, dissolved gases (e.g. radon), pesticides, fertilizers, endocrine disruptors, personal care products and pharmaceutical residuals, cyanotoxins, flocculants, coagulants, lubricants, copper, iron, zinc, and lead from pipes and fittings.
<b>Physical Hazards</b>	Sediments are the most common physical hazard associated with drinking water and are of concern as they may carry with them microbiological hazards and interfere with disinfection system efficiency. Other physical hazards include biofilms, pipe materials etc.
<b>Radiological Hazards</b>	Radiological hazards may arise from man-made or natural sources, with naturally occurring chemicals (uranium, radon, etc.) most frequently found in groundwater.

**Table 2 – Likelihood**

Description	Likelihood of Hazardous Event Occurring	Rating
<b>Rare</b>	May occur in exceptional circumstances, and has not occurred in past.	<b>1</b>
<b>Unlikely</b>	Could occur at some time, historically has occurred less than once every five or 10 years.	<b>2</b>
<b>Possible</b>	Has occurred or may occur once or more per year.	<b>3</b>
<b>Likely</b>	Has occurred or may occur on a monthly to quarterly basis.	<b>4</b>
<b>Very Likely</b>	One or more occurrences on a monthly or more frequent basis.	<b>5</b>

**Table 3- Consequence**

Description	Consequence of Hazardous Event Occurring	Rating
<b>Insignificant</b>	Insignificant impact, little public exposure, little or no health risk.	<b>1</b>
<b>Minor</b>	Limited public exposure, minor health risk.	<b>2</b>
<b>Moderate</b>	Minor public exposure, health impact on small part of the population.	<b>3</b>
<b>Major</b>	Large part of population at risk.	<b>4</b>
<b>Catastrophic</b>	Major impact for large part of the population, complete failure of systems.	<b>5</b>



**Table 4 – Detectability**

Description	Detectability of Hazardous Event	Rating
<b>Very Detectable</b>	Easy to detect, on-line monitoring through SCADA.	<b>1</b>
<b>Moderately Detectable</b>	Moderately detectable, alarm present but not in SCADA, may require operator to walk by and notice alarm; problem is indicated promptly by in-house lab test results.	<b>2</b>
<b>Normally Detectable</b>	Normally detectable, visually detectable on rounds or through regular maintenance.	<b>3</b>
<b>Unlikely Detectable</b>	Unlikely detectable, visually detectable but not inspected on a regular basis; not normally detected before problem becomes evident; lab tests are not done on a regular basis (e.g. quarterly).	<b>4</b>
<b>Undetectable</b>	Cannot be detected.	<b>5</b>

**Table 5- Risk Analysis (Total)**

Likelihood + Consequence+ Detectability	(Total) Risk Category
3 to 5	Low
6 to 7	Moderate
8 to 11	High
12 to 15	Very High

## **Appendix 4 –Risk Assessment Outcomes**

The control points generally meet the characteristics of an ideal critical control point as they typically are:

- Able to prevent, eliminate or reduce hazards,
- Monitored, preferably in real time,
- Able to have determined control limits, and,
- Essential to ensure the safety of the drinking-water

These control points also provide important barriers in the multiple barrier process to ensure that pathogens that could be present in the water are effectively inactivated and/or removed, and that secondary disinfection is maintained in the distribution system.

### **Definitions of the abbreviations found in the Hazard Analysis & Critical Control Point Work Sheet:**

- **SOP**- Standard Operating Procedures
- **CCP** – Critical Control Point
- **MOE**- Ministry of Environment
- **MOH**- Medical Officer of Health
- **SAC**- Spills Action Centre (*a division of MOE Emergency Management*)
- **WUCTP**- Windsor Utilities Commission Water Treatment Plant
- **Cl<sub>2</sub>**– Chlorine
- **SCADA**- Supervisory Control and Data Acquisition

## **Risk Assessment - Hazard Analysis & Critical Control Points**

<b>Work Sheet No # 1-</b> Contamination of Source Water.....	page 49
<b>Work Sheet No # 2-</b> Vandalism / Tampering of water tower.....	page 50
<b>Work Sheet No # 3-</b> Biofilm and Sediment buildup.....	page 51
<b>Work Sheet No # 4-</b> Terrorism.....	page 52
<b>Work Sheet No # 5-</b> CN freight trains on VIA tracks.....	page 53
<b>Work Sheet No # 6-</b> Power failure.....	page 54
<b>Work Sheet No # 7-</b> Loss of Communication / Control.....	page 55
<b>Work Sheet No # 8-</b> Watermain breaks within the distribution system.....	page 56
<b>Work Sheet No # 9-</b> Loss of chlorine residual (secondary disinfection).....	page 57
<b>Work Sheet No # 10-</b> Commissioning new water mains causing contamination.....	page 58
<b>Work Sheet No # 11-</b> Loss of pressure do to watermain break.....	page 59
<b>Work Sheet No # 12-</b> Bacteriological test failure.....	page 60
<b>Work Sheet No # 13-</b> Failure of Backflow Prevention Device.....	page 61
<b>Work Sheet No # 14-</b> Adverse drinking water lead results.....	page 62
<b>Work Sheet No # 15-</b> Strike / Lock-out.....	page 63
<b>Work Sheet No # 16-</b> Loss of pressure do to major fire.....	page 64
<b>Work Sheet No # 17-</b> Loss of system pressure.....	page 65
<b>Work Sheet No # 18-</b> Staff shortage due to illness / pandemic.....	page 66

## Hazard Analysis & Critical Control Points

### Work Sheet No# 1

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Source Water (Windsor Utilities Commission)</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Contamination of Source Water</li> </ul>																						
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Physical</li> <li>Biological</li> <li>Chemical</li> </ul>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>No Control</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Weekly sampling throughout distribution system as per mandatory under O.Reg.170/03</li> <li>On-line monitoring at (WUCTP)</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Procedure for contamination of water mains SOP</li> <li>Contacting MOE, MOH &amp; SAC</li> <li>Communication with the (WUCTP)</li> <li>Conducting all sampling and testing as necessary or directed at points in the distribution system under the direction of the MOH</li> </ul>																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e1f5fe;"> <th colspan="2" style="text-align: center;">Risk Analysis Ranking</th> <th style="text-align: center;">RISK ANALYSIS</th> <th style="text-align: center;">RANKING</th> </tr> </thead> <tbody> <tr> <td style="width: 25%; vertical-align: top;"> [A] LIKELIHOOD 1 to 5  [B] CONSEQUENCE 1 to 5  [C] DETECTABILITY 1 to 5  [A] + [B] + [C] = Total </td> <td style="width: 25%; vertical-align: top;"> 3 to 5 = LOW  6 to 8 = MODERATE  9 to 11 = HIGH  12 to 15 = VERY HIGH </td> <td style="text-align: center;">Likelihood</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Consequence</td> <td style="text-align: center;">4</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Detectability</td> <td style="text-align: center;">2</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">(High Risk CCP Threshold = 8)</td> <td style="text-align: center;">Total = 7 (CCP = No)</td> </tr> </tbody> </table>			Risk Analysis Ranking		RISK ANALYSIS	RANKING	[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	Likelihood	1			Consequence	4			Detectability	2			(High Risk CCP Threshold = 8)	Total = 7 (CCP = No)
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		Consequence	4																			
		Detectability	2																			
		(High Risk CCP Threshold = 8)	Total = 7 (CCP = No)																			
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less than the CCP threshold</li> </ul>																						

## Work Sheet No# 2

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Water Tower/ Storage</li> </ul>												
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Vandalism/ Tampering</li> </ul>												
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Biological</li> <li>Chemical</li> </ul> <ul style="list-style-type: none"> <li>Damage to equipment</li> </ul>												
<b>Comments:</b> <ul style="list-style-type: none"> <li>None</li> </ul>												
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Security fence locked and gated</li> <li>Alarm system with SCADA</li> <li>Security Cameras</li> </ul>												
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Contact Emergency Services, MOH, MOE &amp; SAC</li> <li>Communicate drinking water advisory issued by MOH</li> <li>Sample water quality and take tower offline until two consecutive sample are negative within 48hrs</li> <li>Conduct sampling microbiological &amp; Cl<sub>2</sub> residual</li> <li>Contact WUCTP about closer of water tower</li> </ul>												
<b>Risk Analysis Ranking</b>												
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 <b>[A] + [B] + [C] = Total</b>	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #b0c4de;"> <th style="text-align: center; padding: 5px;"><i>RISK ANALYSIS</i></th> <th style="text-align: center; padding: 5px;"><i>RANKING</i></th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;"><b>Likelihood</b></td> <td style="text-align: center; padding: 5px;">1</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>Consequence</b></td> <td style="text-align: center; padding: 5px;">4</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>Detectability</b></td> <td style="text-align: center; padding: 5px;">1</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>(High Risk CCP Threshold = 8)</b></td> <td style="text-align: center; padding: 5px;"><b>Total= 6 (CCP = No)</b></td> </tr> </tbody> </table>	<i>RISK ANALYSIS</i>	<i>RANKING</i>	<b>Likelihood</b>	1	<b>Consequence</b>	4	<b>Detectability</b>	1	<b>(High Risk CCP Threshold = 8)</b>	<b>Total= 6 (CCP = No)</b>
<i>RISK ANALYSIS</i>	<i>RANKING</i>											
<b>Likelihood</b>	1											
<b>Consequence</b>	4											
<b>Detectability</b>	1											
<b>(High Risk CCP Threshold = 8)</b>	<b>Total= 6 (CCP = No)</b>											
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less the CCP threshold</li> </ul>												

### Work Sheet No# 3

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Water Tower/ Storage</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Biofilm and sediment buildup</li> </ul>																						
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Biological</li> <li>Contamination</li> </ul>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>None</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Inspection of tower 5 years as prescribed AWWA standards or per legislation</li> <li>Monitoring water levels</li> <li>Sampling testing of chlorine residuals weekly</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Cleaning tower using a qualified contractor</li> </ul>																						
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Risk Analysis Ranking		RISK ANALYSIS	RANKING																			
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	Likelihood	1																			
		Consequence	3																			
		Detectability	1																			
		(High Risk CCP Threshold = 8)	Total= 5 (CCP = No)																			
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less than the CCP threshold</li> </ul>																						

## Work Sheet No# 4

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Water Tower/ Storage</li> </ul>			
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Terrorism</li> </ul>			
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Biological</li> <li>Chemical</li> </ul> <ul style="list-style-type: none"> <li>Damage to equipment</li> </ul>			
<b>Comments:</b> <ul style="list-style-type: none"> <li>None</li> </ul>			
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Security fence locked and gated</li> <li>Alarm system with SCADA</li> <li>Security Cameras</li> </ul>			
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Contact Emergency Services, MOH, MOE &amp; SAC</li> <li>Communicate drinking water advisory issued by MOH</li> <li>Sample water quality and take tower offline until two consecutive sample are negative within 48hrs)</li> <li>Conduct sampling microbiological &amp; Cl<sub>2</sub> residual</li> <li>Contact WUCTP about closer of water tower</li> </ul>			
<b>Risk Analysis Ranking</b>		<i>RISK ANALYSIS</i>	<i>RANKING</i>
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b>	1
		<b>Consequence</b>	5
		<b>Detectability</b>	2
		(High Risk CCP Threshold = 8)	<b>Total= 8</b> (CCP = Yes)
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is a need for control procedures because the Risk Analysis Ranking value is equal to the CCP threshold                             <ul style="list-style-type: none"> <li>✓ Town of Tecumseh Water Services Emergency Response Plan procedures</li> </ul> </li> </ul>			

## Work Sheet No# 5

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Water Tower/ Storage</li> </ul>														
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>CN is now running freight trains on VIA tracks.</li> </ul>														
<b>Potential Results of Hazard:</b> <div style="display: flex; justify-content: space-between; margin-left: 20px;"> <ul style="list-style-type: none"> <li>Physical</li> <li>Chemical</li> </ul> <ul style="list-style-type: none"> <li>Biological</li> <li>Contamination</li> </ul> </div>														
<b>Comments:</b> <ul style="list-style-type: none"> <li>No Control</li> </ul>														
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Alarm system with SCADA</li> <li>On-line monitoring at (WUCTP)</li> <li>Security Cameras</li> <li>Passenger &amp; Freight trains limited to max speed of 50mph zone</li> </ul>														
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Contact Emergency Services, MOH, MOE &amp; SAC</li> <li>Communicate drinking water advisory issued by MOH</li> <li>Sample water quality and take tower offline until two consecutive sample are negative within 48hrs</li> <li>Conduct sampling microbiological &amp; Cl<sub>2</sub> residual</li> <li>Contact WUCTP about closer of water tower</li> </ul>														
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Risk Analysis Ranking		RISK ANALYSIS	RANKING											
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		<i>(High Risk CCP Threshold = 8)</i>	<b>Total= 5</b> <b>(CCP = No)</b>											
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less the CCP threshold</li> </ul>														



## Work Sheet No# 6

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Control Systems</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Power failure</li> </ul>																						
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Loss of SCADA network</li> </ul>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>None</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>UPS battery backup at monitoring stations</li> <li>UPS battery backup on server</li> <li>System alarmed</li> <li>Backup generator for server</li> <li>Regular scheduled working days SCADA system checks</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Data is backup daily onto main server</li> </ul>																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Risk Analysis Ranking</th> <th style="text-align: center;">RISK ANALYSIS</th> <th style="text-align: center;">RANKING</th> </tr> </thead> <tbody> <tr> <td style="width: 25%; vertical-align: top;"> [A] LIKELIHOOD 1 to 5  [B] CONSEQUENCE 1 to 5  [C] DETECTABILITY 1 to 5  [A] + [B] + [C] = Total </td> <td style="width: 25%; vertical-align: top;"> 3 to 5 = LOW  6 to 8 = MODERATE  9 to 11 = HIGH  12 to 15 = VERY HIGH </td> <td style="text-align: center;">Likelihood</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Consequence</td> <td style="text-align: center;">2</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Detectability</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">(High Risk CCP Threshold = 8)</td> <td style="text-align: center;">Total= 4 (CCP = No)</td> </tr> </tbody> </table>			Risk Analysis Ranking		RISK ANALYSIS	RANKING	[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	Likelihood	1			Consequence	2			Detectability	1			(High Risk CCP Threshold = 8)	Total= 4 (CCP = No)
Risk Analysis Ranking		RISK ANALYSIS	RANKING																			
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	Likelihood	1																			
		Consequence	2																			
		Detectability	1																			
		(High Risk CCP Threshold = 8)	Total= 4 (CCP = No)																			
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less than the CCP threshold</li> </ul>																						

## Work Sheet No# 7

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Control of System</li> </ul>			
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Loss of Communications/Control</li> </ul>			
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Failure of business telephone lines</li> <li>Failure of local telephone provider's circuit connections, radio signals, and Ethernet connections</li> </ul> <ul style="list-style-type: none"> <li>Failure of cellular telephones</li> </ul>			
<b>Comments:</b> <ul style="list-style-type: none"> <li>Refer to the Failure of Control Systems section of The Corporation of the Town of Tecumseh Water Services Emergency Response Plan</li> </ul>			
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>The response procedure for long-term failure of control systems and communication networks is detailed in the Failure of Control Systems section of The Corporation of the Town of Tecumseh Water Services Emergency Response Plan</li> </ul>			
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Follow the response procedure for long-term failure of control systems and communication networks in The Corporation of the Town of Tecumseh Water Services Emergency Response Plan</li> </ul>			
<b>Risk Analysis Ranking</b>		<i>RISK ANALYSIS</i>	<i>RANKING</i>
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	Likelihood	2
		Consequence	5
		Detectability	1
		(High Risk CCP Threshold = 8)	Total= 8 (CCP = Yes)
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is a need for control procedures because the Risk Analysis Ranking value is equal to the CCP threshold                         <ul style="list-style-type: none"> <li>✓ Town of Tecumseh Water Services Emergency Response Plan procedures</li> </ul> </li> </ul>			

## Work Sheet No# 8

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>												
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Water main breaks within the distribution system</li> </ul>												
<b>Potential Results of Hazard:</b> <div style="display: flex; justify-content: space-between; margin-left: 20px;"> <ul style="list-style-type: none"> <li>Physical</li> <li>Biological</li> <li>Chemical</li> </ul> <ul style="list-style-type: none"> <li>Quantity</li> <li>Quality</li> </ul> </div>												
<b>Comments:</b> <ul style="list-style-type: none"> <li>No elevated distribution system; Tecumseh tower and continuously pumping from WUCTP needed</li> </ul>												
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Customer complaints; low pressure or visual inspection</li> <li>General inspection of distribution system</li> <li>Controlling valves, looping and replacing water main</li> <li>SCADA alarm system</li> </ul>												
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Customer complaints; low pressure or visual inspection</li> <li>General inspection of distribution system</li> <li>Controlling valves, looping and replacing water main</li> </ul>												
<b>Risk Analysis Ranking</b>												
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5  [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; padding: 2px;">RISK ANALYSIS</th> <th style="text-align: left; padding: 2px;">RANKING</th> </tr> <tr> <td style="padding: 2px;"><b>Likelihood</b></td> <td style="text-align: center; padding: 2px;">4</td> </tr> <tr> <td style="padding: 2px;"><b>Consequence</b></td> <td style="text-align: center; padding: 2px;">2</td> </tr> <tr> <td style="padding: 2px;"><b>Detectability</b></td> <td style="text-align: center; padding: 2px;">3</td> </tr> <tr> <td style="padding: 2px;">(High Risk CCP Threshold = 8)</td> <td style="text-align: center; padding: 2px;">Total= 9 (CCP = Yes)</td> </tr> </table>	RISK ANALYSIS	RANKING	<b>Likelihood</b>	4	<b>Consequence</b>	2	<b>Detectability</b>	3	(High Risk CCP Threshold = 8)	Total= 9 (CCP = Yes)
RISK ANALYSIS	RANKING											
<b>Likelihood</b>	4											
<b>Consequence</b>	2											
<b>Detectability</b>	3											
(High Risk CCP Threshold = 8)	Total= 9 (CCP = Yes)											
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is a need for control procedures because the Risk Analysis Ranking value is greater the CCP threshold. <ul style="list-style-type: none"> <li>✓ Watermain repair and disinfection procedures</li> <li>✓ SOP Categories' 1-2 for watermain repair</li> </ul> </li> </ul>												

## Work Sheet No# 9

<b>Activity or Process Step:</b>			
<ul style="list-style-type: none"> <li>Distribution</li> </ul>			
<b>Description of Hazard:</b>			
<ul style="list-style-type: none"> <li>Loss of chlorine residual (secondary disinfection)</li> </ul>			
<b>Potential Results of Hazard:</b>			
<ul style="list-style-type: none"> <li>Biological</li> </ul>			
<b>Comments:</b>			
<ul style="list-style-type: none"> <li>Legislated under O.Reg. 170/03</li> </ul>			
<b>Available Monitoring &amp; Control Measures:</b>			
<ul style="list-style-type: none"> <li>Weekly monitoring chlorine residuals throughout the distribution system</li> </ul>			
<b>Emergency Procedure or Contingency Plan:</b>			
<ul style="list-style-type: none"> <li>Flush effected area to increase Cl<sub>2</sub> residual</li> <li>Follow corrective actions required by O.Reg. 170/03.</li> <li>Resample and follow corrective action as per SOP</li> </ul>			
<b>Risk Analysis Ranking</b>		<i>RISK ANALYSIS</i>	<i>RANKING</i>
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b>	2
		<b>Consequence</b>	3
		<b>Detectability</b>	3
		<i>(High Risk CCP Threshold = 8)</i>	<b>Total= 8</b> <b>(CCP = Yes)</b>
<b>Control Procedure</b>			
<ul style="list-style-type: none"> <li>There is a need for control procedures because the Risk Analysis Ranking value is greater the CCP threshold. <ul style="list-style-type: none"> <li>✓ Requirements for corrective action under O.Reg.170/03</li> <li>✓ Follow SOP for low chlorine residual</li> </ul> </li> </ul>			

## Work Sheet No# 10

<b>Activity or Process Step:</b>			
<ul style="list-style-type: none"> <li>Distribution</li> </ul>			
<b>Description of Hazard:</b>			
<ul style="list-style-type: none"> <li>Commissioning new water mains causing contamination</li> </ul>			
<b>Potential Results of Hazard:</b>			
<ul style="list-style-type: none"> <li>Biological</li> <li>Chemical</li> </ul>			
<b>Comments:</b>			
<ul style="list-style-type: none"> <li>None</li> </ul>			
<b>Available Monitoring &amp; Control Measures:</b>			
<ul style="list-style-type: none"> <li>Follow SOP's as per commissioning new watermain</li> <li>Check Cl<sub>2</sub> residuals</li> <li>Take microbiological testing</li> </ul>			
<b>Emergency Procedure or Contingency Plan:</b>			
<ul style="list-style-type: none"> <li>Follow corrective action as per O.Reg.170/03</li> <li>If necessary communicate issuance of boil water after consultation with MOH</li> </ul>			
<b>Risk Analysis Ranking</b>		<i>RISK ANALYSIS</i>	<i>RANKING</i>
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b>	1
		<b>Consequence</b>	2
		<b>Detectability</b>	1
		(High Risk CCP Threshold = 8)	Total= 4 (CCP = No)
<b>Control Procedure</b>			
<ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less than the CCP threshold</li> </ul>			

## Work Sheet No# 11

<b>Activity or Process Step:</b>			
<ul style="list-style-type: none"> <li>Distribution</li> </ul>			
<b>Description of Hazard:</b>			
<ul style="list-style-type: none"> <li>Loss of pressure do to water main break</li> </ul>			
<b>Potential Results of Hazard:</b>			
<ul style="list-style-type: none"> <li>Biological</li> <li>Chemical</li> </ul>		<ul style="list-style-type: none"> <li>Physical</li> <li>Low pressure back-siphoning</li> </ul>	
<b>Comments:</b>			
<ul style="list-style-type: none"> <li>None</li> </ul>			
<b>Available Monitoring &amp; Control Measures:</b>			
<ul style="list-style-type: none"> <li>Consumer complaints</li> <li>Pressure gauges on boundary meters and tower monitored and alarmed by SCADA</li> <li>Backflow prevention</li> </ul>			
<b>Emergency Procedure or Contingency Plan:</b>			
<ul style="list-style-type: none"> <li>Check pressures in effected area If necessary discuss with MOH and MOE/SAC</li> <li>If necessary issue boil water advisory with consultation of MOH as per SOP</li> <li>Restore pressure and chlorine residuals and conduct testing and sampling in effected area</li> <li>Notify (WUCTP) of low pressure alarms</li> </ul>			
<b>Risk Analysis Ranking</b>		<i>RISK ANALYSIS</i>	<i>RANKING</i>
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] +[C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b>	3
		<b>Consequence</b>	2
		<b>Detectability</b>	1
		<i>(High Risk CCP Threshold = 8)</i>	<b>Total= 6 (CCP = No)</b>
<b>Control Procedure</b>			
<ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking valve is less the CCP threshold</li> </ul>			

## Work Sheet No# 12

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Bacteriological test failure</li> </ul>																						
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Biological</li> </ul>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>Legislated under O.Reg. 170/03</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Weekly monitoring bacteriological testing throughout the distribution system</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Contact MOH, MOE &amp; SAC</li> <li>Communicate drinking water advisory issued by MOH</li> <li>Sample water quality and take tower offline until two consecutive sample are negative within 48hrs</li> <li>Flush effected area to increase Cl<sub>2</sub> residual</li> <li>Follow corrective actions required by O.Reg. 170/03.</li> <li>Resample and follow corrective action as per SOP</li> </ul>																						
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Risk Analysis Ranking		RISK ANALYSIS	RANKING																			
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	Likelihood	3																			
		Consequence	3																			
		Detectability	2																			
		(High Risk CCP Threshold = 8)	Total= 8 (CCP = Yes)																			
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is a need for control procedures because the Risk Analysis Ranking value is greater the CCP threshold <ul style="list-style-type: none"> <li>✓ Requirements for corrective action under O.Reg.170/03</li> </ul> </li> </ul>																						

## Work Sheet No# 13

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Failure of Backflow Prevention Device</li> </ul>																						
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Biological</li> <li>Chemical</li> </ul>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>Backflow preventers on all connections of concern</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Visual on- site inspection</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>If backflow is suspected, report to MOH and MOE, SAC</li> <li>Isolate area. Flush the system and sample as needed. Re-pressurize system</li> </ul>																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e1f5fe;"> <th colspan="2" style="text-align: center;">Risk Analysis Ranking</th> <th style="text-align: center;">RISK ANALYSIS</th> <th style="text-align: center;">RANKING</th> </tr> </thead> <tbody> <tr> <td style="width: 30%; vertical-align: top;"> [A] LIKELIHOOD 1 to 5  [B] CONSEQUENCE 1 to 5  [C] DETECTABILITY 1 to 5  [A] + [B] + [C] = Total </td> <td style="width: 30%; vertical-align: top;"> 3 to 5 = LOW  6 to 8 = MODERATE  9 to 11= HIGH  12 to 15 = VERY HIGH </td> <td style="text-align: center;">Likelihood</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Consequence</td> <td style="text-align: center;">4</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Detectability</td> <td style="text-align: center;">2</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">(High Risk CCP Threshold = 8)</td> <td style="text-align: center;">Total= 7 (CCP = No)</td> </tr> </tbody> </table>			Risk Analysis Ranking		RISK ANALYSIS	RANKING	[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	Likelihood	1			Consequence	4			Detectability	2			(High Risk CCP Threshold = 8)	Total= 7 (CCP = No)
Risk Analysis Ranking		RISK ANALYSIS	RANKING																			
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	Likelihood	1																			
		Consequence	4																			
		Detectability	2																			
		(High Risk CCP Threshold = 8)	Total= 7 (CCP = No)																			
<b>Control Procedure</b> There is no need for control procedures because the Risk Analysis Ranking value is less the CCP threshold																						



## Work Sheet No# 14

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Adverse drinking water lead results</li> </ul>																						
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Biological</li> <li>Chemical</li> <li>Positive lead sample from testing</li> </ul>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>Will follow legislations and Regulations as mandated by the MOE</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Lead Testing Procedure, SOP-005</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>O.Reg. 170/03 mandating every water system in Ontario to test for lead in the drinking water</li> </ul>																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Risk Analysis Ranking</th> <th style="text-align: center;">RISK ANALYSIS</th> <th style="text-align: center;">RANKING</th> </tr> </thead> <tbody> <tr> <td style="width: 30%; vertical-align: top;"> [A] LIKELIHOOD 1 to 5  [B] CONSEQUENCE 1 to 5  [C] DETECTABILITY 1 to 5  [A] + [B] + [C] = Total </td> <td style="width: 30%; vertical-align: top;"> 3 to 5 = LOW  6 to 8 = MODERATE  9 to 11 = HIGH  12 to 15 = VERY HIGH </td> <td style="text-align: center;">Likelihood</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Consequence</td> <td style="text-align: center;">2</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Detectability</td> <td style="text-align: center;">2</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">(High Risk CCP Threshold = 8)</td> <td style="text-align: center;">Total= 5 (CCP = No)</td> </tr> </tbody> </table>			Risk Analysis Ranking		RISK ANALYSIS	RANKING	[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	Likelihood	1			Consequence	2			Detectability	2			(High Risk CCP Threshold = 8)	Total= 5 (CCP = No)
Risk Analysis Ranking		RISK ANALYSIS	RANKING																			
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	Likelihood	1																			
		Consequence	2																			
		Detectability	2																			
		(High Risk CCP Threshold = 8)	Total= 5 (CCP = No)																			
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less than the CCP threshold</li> </ul>																						

## Work Sheet No# 15

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>		
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Strike/Lock-out</li> </ul>		
<b>Potential Results of Hazard:</b> <ul style="list-style-type: none"> <li>Delay in Daily Water Operator Activities</li> <li>Maintain fire protection</li> <li>Maintain reliable and safe drinking water to customers</li> </ul>		
<b>Comments:</b> <ul style="list-style-type: none"> <li>None</li> </ul>		
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Collective Agreements for both outside and inside workers</li> </ul>		
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>The ORO has a Class III Water Distribution Operators License</li> <li>The ORO has the required competencies to maintain the water distribution system</li> <li>Contact other companies with license water operators to assist</li> </ul>		
<b>Risk Analysis Ranking</b>		<b>RISK ANALYSIS</b>
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b> 1
		<b>Consequence</b> 1
		<b>Detectability</b> 1
		<b>Total= 3</b> <b>(CCP = No)</b>
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less than the CCP threshold</li> </ul>		<b>(High Risk CCP Threshold = 8)</b>

## Work Sheet No# 16

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Loss of pressure do to major fire</li> </ul>																						
<b>Potential Results of Hazard:</b> <div style="display: flex; justify-content: space-between; margin-left: 20px;"> <ul style="list-style-type: none"> <li>Physical</li> <li>Chemical</li> </ul> <ul style="list-style-type: none"> <li>Low pressure back-siphoning</li> <li>Biological</li> </ul> </div>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>None</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Notification from the fire department</li> <li>Consumer complaints</li> <li>Pressure gauges on boundary meters and tower monitored and alarmed by SCADA</li> <li>Backflow prevention</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Check pressures in effected area If necessary discuss with MOH and MOE/SAC</li> <li>If necessary issue boil water advisory with consultation of MOH as per SOP</li> <li>Restore pressure and chlorine residuals and conduct testing and sampling in effected area</li> <li>Notify (WUCTP) of low pressure alarms</li> </ul>																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e1f5fe;"> <th colspan="2" style="text-align: center;">Risk Analysis Ranking</th> <th style="text-align: center;">RISK ANALYSIS</th> <th style="text-align: center;">RANKING</th> </tr> </thead> <tbody> <tr> <td style="width: 25%; vertical-align: top;"> [A] LIKELIHOOD 1 to 5  [B] CONSEQUENCE 1 to 5  [C] DETECTABILITY 1 to 5  [A] + [B] +[C] = Total </td> <td style="width: 25%; vertical-align: top;"> 3 to 5 = LOW  6 to 8 = MODERATE  9 to 11= HIGH  12 to 15 = VERY HIGH </td> <td style="text-align: center;"><b>Likelihood</b></td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><b>Consequence</b></td> <td style="text-align: center;">2</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><b>Detectability</b></td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">(High Risk CCP Threshold = 8)</td> <td style="text-align: center;">Total= 4 (CCP = No)</td> </tr> </tbody> </table>			Risk Analysis Ranking		RISK ANALYSIS	RANKING	[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] +[C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b>	1			<b>Consequence</b>	2			<b>Detectability</b>	1			(High Risk CCP Threshold = 8)	Total= 4 (CCP = No)
Risk Analysis Ranking		RISK ANALYSIS	RANKING																			
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] +[C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b>	1																			
		<b>Consequence</b>	2																			
		<b>Detectability</b>	1																			
		(High Risk CCP Threshold = 8)	Total= 4 (CCP = No)																			
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less the CCP threshold</li> </ul>																						

## Work Sheet No# 17

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>		
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Loss of system pressure</li> </ul>		
<b>Potential Results of Hazard:</b> <div style="display: flex; justify-content: space-between; margin-left: 20px;"> <ul style="list-style-type: none"> <li>Physical</li> <li>Chemical</li> </ul> <ul style="list-style-type: none"> <li>Low pressure back-siphoning</li> <li>Biological</li> </ul> </div>		
<b>Comments:</b> <ul style="list-style-type: none"> <li>None</li> </ul>		
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Consumer complaints</li> <li>Pressure gauges on boundary meters and tower monitored and alarmed by SCADA</li> <li>Backflow prevention</li> </ul>		
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Check pressures in effected area If necessary discuss with MOH and MOE/SAC</li> <li>If necessary issue boil water advisory with consultation of MOH as per SOP</li> <li>Restore pressure and chlorine residuals and conduct testing and sampling in effected area</li> <li>Notify (WUCTP) of low pressure alarms</li> </ul>		
<b>Risk Analysis Ranking</b>		<b>RISK ANALYSIS</b>
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] + [C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11 = HIGH 12 to 15 = VERY HIGH	<b>Likelihood</b> 1
		<b>Consequence</b> 2
		<b>Detectability</b> 1
		<b>Total= 4</b> <b>(CCP = No)</b>
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less the CCP threshold</li> </ul>		<b>(High Risk CCP Threshold = 8)</b>

## Work Sheet No# 18

<b>Activity or Process Step:</b> <ul style="list-style-type: none"> <li>Distribution</li> </ul>																						
<b>Description of Hazard:</b> <ul style="list-style-type: none"> <li>Staff shortage due to Illness /Pandemic</li> </ul>																						
<b>Potential Results of Hazard:</b> <div style="display: flex; justify-content: space-between; margin-left: 20px;"> <ul style="list-style-type: none"> <li>Physical</li> <li>Chemical</li> </ul> <ul style="list-style-type: none"> <li>Low pressure back-siphoning</li> <li>Biological</li> </ul> </div>																						
<b>Comments:</b> <ul style="list-style-type: none"> <li>No Control</li> </ul>																						
<b>Available Monitoring &amp; Control Measures:</b> <ul style="list-style-type: none"> <li>Attendance/medical records</li> <li>MOH health advisory's</li> <li>Town's Wellness Committee</li> </ul>																						
<b>Emergency Procedure or Contingency Plan:</b> <ul style="list-style-type: none"> <li>Having the proper amount of Water Operators</li> <li>The ORO has a Class III Water Distribution Operators License</li> <li>The ORO has the required competencies to maintain the water distribution system.</li> <li>Town of Tecumseh Water Services Emergency Response Plan</li> <li>Will contract outside license water operators to assist the ORO if necessary</li> </ul>																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Risk Analysis Ranking</th> <th style="text-align: center;">RISK ANALYSIS</th> <th style="text-align: center;">RANKING</th> </tr> </thead> <tbody> <tr> <td style="width: 25%; vertical-align: top;"> [A] LIKELIHOOD 1 to 5  [B] CONSEQUENCE 1 to 5  [C] DETECTABILITY 1 to 5  [A] + [B] +[C] = Total </td> <td style="width: 25%; vertical-align: top;"> 3 to 5 = LOW  6 to 8 = MODERATE  9 to 11= HIGH  12 to 15 = VERY HIGH </td> <td style="text-align: center;">Likelihood</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Consequence</td> <td style="text-align: center;">4</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Detectability</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">(High Risk CCP Threshold = 8)</td> <td style="text-align: center;">Total= 6 (CCP = No)</td> </tr> </tbody> </table>			Risk Analysis Ranking		RISK ANALYSIS	RANKING	[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] +[C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	Likelihood	1			Consequence	4			Detectability	1			(High Risk CCP Threshold = 8)	Total= 6 (CCP = No)
Risk Analysis Ranking		RISK ANALYSIS	RANKING																			
[A] LIKELIHOOD 1 to 5 [B] CONSEQUENCE 1 to 5 [C] DETECTABILITY 1 to 5 [A] + [B] +[C] = Total	3 to 5 = LOW 6 to 8 = MODERATE 9 to 11= HIGH 12 to 15 = VERY HIGH	Likelihood	1																			
		Consequence	4																			
		Detectability	1																			
		(High Risk CCP Threshold = 8)	Total= 6 (CCP = No)																			
<b>Control Procedure</b> <ul style="list-style-type: none"> <li>There is no need for control procedures because the Risk Analysis Ranking value is less the CCP threshold</li> </ul>																						

## **Appendix 5 – Essential Supplies and Services**

A list of supplies and services has been developed and is provided below. The list includes suppliers / service providers for each essential supply and service. A secondary source is also listed for each supply and service to ensure supplies and services are available as needed. This list is reviewed by the Manager, Water and Wastewater to ensure that it is current and up-to-date.

All supplies and services shall meet AWWA and NSF/ANSI standards; these purchases must be in accordance with the Town of Tecumseh By-Law 2017-63, a by-law to govern procurement and procedures.

<b>Essential Supplies and Service List</b>		
<b>Product/Service</b>	<b>Primary Source</b>	<b>Secondary Source</b>
Treated Drinking Water Supply	Windsor Utilities Commission P.O. Box 1625, Station A 4545 Rhodes Drive Windsor, ON N8W 5T1 Tel: 519-251-7300 Fax: 519-251-7329 www.wuc.on.ca	Refer to the Water Services Emergency Response Plan Section 2, Sub-Section 2.16 “Establishing Potable Water Filling Stations”
Accredited Laboratory Services	Caduceon Environmental Laboratories 3201 Marentette Ave. Windsor, ON N8X 4G3 Tel: 519-966-9541 Fax: 519-966-9567 contactwindsor@caduceonlabs.com	SGS Environmental Services 657 Consortium Crt. London, ON N6E 2S8 Tel: 519-672-4500 Fax: 519-672-0361 emily.crowey@sgs.com
Instrumentation Calibration	Flowmetrix Technical Services Inc. 212 Terrence Avenue Dorchester, ON N0L 1G3 Tel: 519-870-3569 Fax: 519-268-3459 service@flowmetrix.ca	ACI Instrumentation Limited 1230 Pontiac Court, Unit 18 Sarnia, ON N7S 4T9 Tel: 519-488-1753 Fax: 519-336-7989 bhadresa@aciltd.ca
Meter Supply & Service	Evans Utility and Municipal Products Supply Limited 338 Neptune Crescent London, ON N6M 1A1 Tel: 519-453-6515 Fax: 519-453-7756 www.evansupply.com	Emco Waterworks 2740 Temple Drive Windsor, ON Tel: 519-948-8131 Fax: 519-948-9362 www.emcoltd.com

AMR/ERT Supply & Service	Emco Waterworks 2740 Temple Drive Windsor, ON Tel: 519-948-8131 Fax: 519-948-9362 <a href="http://www.emcoltd.com">www.emcoltd.com</a>	Itron Canada Inc. 2624 Dunwin Drive, Unit 4 Mississauga, ON L5L 3T6 Tel: 905-593-1707 Fax: 519-812-7929 <a href="mailto:sheila.kee@itron.com">sheila.kee@itron.com</a>
Health & Safety Supplies	Great Lakes Safety Supply 3303 Walker Rd. Windsor, ON N8W 3R9 Tel: 519-972-6605 Fax: 519-972-6620 <a href="mailto:glspi@wincom.net">glspi@wincom.net</a>	Acklands-Grainger Inc. 3350 North Talbot Rd. Tecumseh, ON Tel: 519-737-7771 Fax: 519-737-1109 <a href="mailto:greenwoodmi@agi.ca">greenwoodmi@agi.ca</a>
SCADA & Instrumentation	Summa Engineering Limited 6423 Northam Drive Mississauga, ON L4V 1J2 Tel: 905-678-3388 Fax: 905-678-0444 <a href="http://www.summaeng.com">www.summaeng.com</a>	ACI Instrumentation Limited 1230 Pontiac Court, Unit 18 Sarnia, ON N7S 4T9 Tel: 519-488-1753 Fax: 519-336-7989 <a href="mailto:bhadresa@aciltd.ca">bhadresa@aciltd.ca</a>
Construction Contracting Services	Coco Paving Inc. 6725 South Service Road East Windsor, ON N8N 2M1 Tel: 519-948-7133 Fax: 519-948-7469 <a href="http://www.cocogroup.com">www.cocogroup.com</a>	Amico Contracting and Engineering 2155 Fasan Drive Tecumseh, ON N04 1L0 Tel: 519-737-1577 Fax: 519-737-1929 <a href="mailto:sdraper@triamico.com">sdraper@triamico.com</a>
Distribution Parts	Emco Waterworks 2740 Temple Drive Windsor, ON Tel: 519-948-8131 Fax: 519-948-9362 <a href="http://www.emcoltd.com">www.emcoltd.com</a>	Underground Specialties 5340 Walker Road Tecumseh, ON N0R 1L0 Tel: 519737-1263 Fax: 519-737-1712 <a href="mailto:info@undergroundspecialties.ca">info@undergroundspecialties.ca</a>
Disinfectant (Sodium Hypochlorite)	Emco Waterworks 2740 Temple Drive Windsor, ON Tel: 519-948-8131 Fax: 519-948-9362 <a href="http://www.emcoltd.com">www.emcoltd.com</a>	Underground Specialties 5340 Walker Road Tecumseh, ON N0R 1L0 Tel: 519737-1263 Fax: 519-737-1712 <a href="mailto:info@undergroundspecialties.ca">info@undergroundspecialties.ca</a>

Water Testing Supplies	Flowmetrix Technical Services Inc. 212 Terrence Avenue Dorchester, ON N0L 1G3 Tel: 519-870-3569 Fax: 519-268-3459 service@flowmetrix.ca	Hach Canada 400 Britannia Road East, Unit 1 Mississauga, ON L4Z 1X9 Tel: 800-665-7635 Fax: 866-259-0984 <a href="http://www.hach.com/canada">www.hach.com/canada</a>
Locators	Ontario One Call 335 Laird Road, Unit 8 Guelph, ON N1G 4P7 Tel: 800-400-2255 solutions@accu-link.ca	G-Tel Engineering 1150 Frances Street London, ON N5W 5N5 Tel: 866-692-0208 Fax: 866-692-0809 bgowan@gtel.ca
Communications Supplies	Information Services Corporation of the Town of Tecumseh 917 Lesperance Road Tecumseh, ON N8N 1W9 Tel: 519-735-2184 sfuerth@tecumseh.ca	Kelcom 363 Eugenie St. E. Windsor, ON N8X 2Y2 Tel: 519-250-5050 www.kelcom.com
Computer Systems Supplies	Information Services Corporation of the Town of Tecumseh 917 Lesperance Road Tecumseh, ON N8N 1W9 Tel: 519-735-2184 sfuerth@tecumseh.ca	Summa Engineering Limited 6423 Northam Drive Mississauga, ON L4V 1J2 Tel: 905-678-3388 Fax: 905-678-0444 <a href="http://www.summaeng.com">www.summaeng.com</a>  ACI 1230 Pontiac Court, Unit 18 Sarnia, ON N7S 4T9 Tel: 519-488-1753 Fax: 519-336-7989
Answering Service	Environmental Services Corporation of the Town of Tecumseh 917 Lesperance Road Tecumseh, ON N8N 1W9 Tel: 519-735-2184	After hour call Kelcom answering service 363 Eugenie Street East Windsor, ON N8X 2Y2 Tel: 519-971-2866



## Appendix 6- Public Works & Environmental Services Capital Works Plan:



### THE CORPORATION OF THE TOWN OF TECUMSEH

Public Works & Environmental Services  
Report No. 57/17

**TO:** Mayor and Members of Council  
**FROM:** Phil Bartnik, P. Eng. – Manager Engineering Services  
**DATE OF REPORT:** November 20, 2017  
**DATE TO COUNCIL:** December 12, 2017  
**SUBJECT:** 2018-2022 Public Works & Environmental Services Capital Works Plan

### RECOMMENDATIONS

It is recommended that:

1. The following Public Works and Environmental Services Projects for the 2018 year, and the Capital Project List 2018-2022, **be approved:**

	Previously Approved	Requested for 2018	Future Costs	Total Costs
<b>Road Projects</b>				
1. Road Paving - Tar & Chip	\$ -	\$ 250,000	\$ -	\$ 250,000
2. Road Paving - Asphaltting	\$ -	\$ 1,450,000	\$ -	\$ 1,450,000
3. Road Paving - Crack Sealing	\$ -	\$ 75,000	\$ -	\$ 75,000
4. Lesperance Road Bike Lane Pavement Markings	\$ -	\$ 110,000	\$ -	\$ 110,000
5. Tecumseh Rd/Lacasse Blvd Intersection Improvements	\$ -	\$ 40,000	\$ 439,000	\$ 479,000
6. Tecumseh Road CIP - Streetscape Plan & Final Design	\$ 812,850	\$ 609,790	\$ 27,908,927	\$ 29,331,567
7. Rossi Drive Sanitary Sewer Extension	\$ 77,500	\$ 1,075,000	\$ -	\$ 1,152,500
8. Sylvestre Drive Sanitary Sewer Extension	\$ -	\$ 74,000	\$ 1,155,500	\$ 1,229,500
Sub-Total:	\$ 890,350	\$ 3,683,790	\$ 29,503,427	\$ 34,077,567
Grants:	\$ -	\$ -	\$ -	\$ -
Recoveries:	\$ -	\$ -	\$ 885,000	\$ 885,000
<b>Road Lifecycle Reserve:</b>	<b>\$ 890,350</b>	<b>\$ 3,683,790</b>	<b>\$ 28,618,427</b>	<b>\$ 33,192,567</b>
<b>Sidewalk Projects</b>				
1. Sidewalk Repair Program - Various Locations	----	\$ 69,000	----	\$ 69,000
Sub-Total:	\$ -	\$ 69,000	\$ -	\$ 69,000
Grants:	\$ -	\$ -	\$ -	\$ -
Recoveries:	\$ -	\$ -	\$ -	\$ -
<b>Sidewalk Lifecycle Reserve:</b>	<b>\$ -</b>	<b>\$ 69,000</b>	<b>\$ -</b>	<b>\$ 69,000</b>

Drinking Water Quality Management System  
Water Services Operational Plan Version 8

Report No. 57/17  
2018-2022 Public Works & Environmental Services Capital Works Plan  
December 12, 2017

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	Previously Approved	Requested for 2018	Future Costs	Total Costs
<b>New Infrastructure</b>				
1. Riverside Drive Trail	\$ 68,000	\$ 782,000	\$ -	\$ 850,000
2. CR11: Hwy401 to NTR (CWATS Multi-Use Trail)	\$ 5,650	\$ 136,000	\$ 232,650	\$ 374,300
Sub-Total:	\$ 73,650	\$ 918,000	\$ 232,650	\$ 1,224,300
Grants:	\$ -	\$ -	\$ -	\$ -
Recoveries:	\$ -	\$ -	\$ 150,000	\$ 150,000
<b>Infrastructure Reserve:</b>	\$ 73,650	\$ 918,000	\$ 82,650	\$ 1,074,300
<b>Bridge Projects</b>				
1. Bridge & Culvert Needs Study (Spans >3m)	\$ -	\$ 32,000	\$ -	\$ 32,000
2. Culvert #35 - Rossi Drive	\$ -	\$ 36,000	\$ -	\$ 36,000
3. Bridge #1004 - Sullivan Creek at 12th Concession	\$ -	\$ 43,000	\$ 284,000	\$ 327,000
4. Bridge #1013 - Merrick Creek at 8th Concession	\$ -	\$ 43,000	\$ 283,500	\$ 326,500
5. Bridge #1014 - Townline Road Drain at 6th Concession	\$ -	\$ 43,000	\$ 304,500	\$ 347,500
Sub-Total:	\$ -	\$ 197,000	\$ 872,000	\$ 1,069,000
Grants:	\$ -	\$ -	\$ -	\$ -
Recoveries:	\$ -	\$ -	\$ -	\$ -
<b>Bridge Lifecycle Reserve:</b>	\$ -	\$ 197,000	\$ 872,000	\$ 1,069,000
<b>Water Projects</b>				
1. Water & Wastewater Master Plan Update	\$ 100,000	\$ -	\$ -	\$ 100,000
2. Tecumseh Road CIP - Streetscape Plan & Final Design	\$ 50,250	\$ -	\$ 1,292,686	\$ 1,342,936
3. Mack Court Watermain Replacement	\$ 70,000	\$ 184,790	\$ -	\$ 254,790
4. Lacasse Park Watermain Replacement	\$ 110,000	\$ 255,190	\$ -	\$ 365,190
5. Tecumseh Road Watermain Abandonment	\$ 72,000	\$ 165,360	\$ -	\$ 237,360
6. Alden Crescent Watermain Replacement	\$ 15,000	\$ 154,120	\$ -	\$ 169,120
7. Hwy#3/Roscon Industrial Drive Watermain	\$ 15,000	\$ 155,430	\$ -	\$ 170,430
8. Rossi Drive Sanitary Sewer Extension	\$ 25,000	\$ 35,000	\$ -	\$ 60,000
9. CR11 (North) Sanitary Sewer Extension	\$ 6,000	\$ -	\$ -	\$ 6,000
10. Hwy#3/County Road 11 Watermain Replacement	\$ -	\$ 134,600	\$ 1,809,400	\$ 1,944,000
11. Anode Protection Program (2018)	\$ -	\$ 375,000	\$ -	\$ 375,000
Sub-Total:	\$ 463,250	\$ 1,459,490	\$ 3,102,086	\$ 5,024,826
Grants:	\$ -	\$ -	\$ -	\$ -
Recoveries:	\$ -	\$ -	\$ -	\$ -
<b>Watermain Reserve Fund:</b>	\$ 463,250	\$ 1,459,490	\$ 3,102,086	\$ 5,024,826
<b>Water Facility Projects</b>				
1. SCADA Software/Server/Nodes Update (2018)	\$ -	\$ 73,500	\$ -	\$ 73,500
2. Water Meter Reading System Update (2018)	\$ -	\$ 15,000	\$ -	\$ 15,000
Sub-Total:	\$ -	\$ 88,500	\$ -	\$ 88,500
Grants:	\$ -	\$ -	\$ -	\$ -
Recoveries:	\$ -	\$ -	\$ -	\$ -
<b>Water Facilities Reserve Fund:</b>	\$ -	\$ 88,500	\$ -	\$ 88,500

Report No. 57/17

2018-2022 Public Works & Environmental Services Capital Works Plan  
December 12, 2017

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	Previously Approved	Requested for 2018	Future Costs	Total Costs
<b>Wastewater Projects</b>				
1. Tecumseh Road CIP - Streetscape Plan & Final Design	\$ 63,500	\$ -	\$ 1,246,436	\$ 1,309,936
2. Rossi Drive Sanitary Sewer Extension	\$ 42,500	\$ 515,000	\$ -	\$ 557,500
3. CR11 (North) Sanitary Sewer Extension	\$ 125,000	\$ 75,000	\$ 952,000	\$ 1,152,000
4. Sanitary Sewer Rehabilitation (I&I Removal)	\$ 3,637,824	\$ -	\$ -	\$ 3,637,824
5. Sylvestre Drive Sanitary Sewer Extension	\$ -	\$ 109,200	\$ 682,200	\$ 791,400
Sub-Total:	\$ 3,868,824	\$ 699,200	\$ 2,880,636	\$ 7,448,660
Grants:	\$ 2,978,459	\$ -	\$ -	\$ 2,978,459
Recoveries:	\$ -	\$ 292,965	\$ 1,901,580	\$ 2,194,545
<b>Wastewater Sewers Reserve Fund:</b>	<b>\$ 890,365</b>	<b>\$ 406,235</b>	<b>\$ 979,056</b>	<b>\$ 2,275,656</b>
<b>Wastewater Facility Projects</b>				
1. Pump Station Emergency Response Plan	\$ -	\$ 35,000	\$ -	\$ 35,000
2. SCADA Software/Server/Nodes Update (2018)	\$ -	\$ 26,250	\$ -	\$ 26,250
Sub-Total:	\$ -	\$ 61,250	\$ -	\$ 61,250
Grants:	\$ -	\$ -	\$ -	\$ -
Recoveries:	\$ -	\$ -	\$ -	\$ -
<b>Wastewater Facilities Reserve Fund:</b>	<b>\$ -</b>	<b>\$ 61,250</b>	<b>\$ -</b>	<b>\$ 61,250</b>
<b>Stormwater Projects</b>				
1. Tecumseh Road CIP - Streetscape Plan & Final Design	\$ 40,900	\$ 27,410	\$ 701,690	\$ 770,000
2. Storm Drainage Master Plan	\$ 600,000	\$ -	\$ -	\$ 600,000
3. Oldcastle Storm Drainage Master Plan	\$ -	\$ 120,000	\$ 230,000	\$ 350,000
4. Rossi Drive Sanitary Sewer Extension	\$ 35,000	\$ 440,800	\$ -	\$ 475,800
5. Sylvestre Drive Sanitary Sewer Extension	\$ -	\$ 4,200	\$ 74,050	\$ 78,250
6. Lesperance Road Storm PS - Repairs	\$ -	\$ 100,000	\$ -	\$ 100,000
7. Pump Station Emergency Response Plan	\$ -	\$ 35,000	\$ -	\$ 35,000
8. SCADA Software/Server/Nodes Update (2018)	\$ -	\$ 5,250	\$ -	\$ 5,250
Sub-Total:	\$ 675,900	\$ 732,660	\$ 1,005,740	\$ 2,414,300
Grants:	\$ 175,000	\$ -	\$ -	\$ 175,000
Recoveries:	\$ -	\$ -	\$ -	\$ -
<b>Storm Sewer Lifecycle Reserve:</b>	<b>\$ 500,900</b>	<b>\$ 732,660</b>	<b>\$ 1,005,740</b>	<b>\$ 2,239,300</b>

## **BACKGROUND**

The above noted projects are intended to upgrade existing infrastructure while also providing for future development. The objective of the 2018 - 2022 Public Works & Environmental Services (PWES) Capital Works Plan is to maintain a consistently high level of service and strive to improve the Town's infrastructure components through these improvements.

The Town adopted an Asset Management Plan in December 2013 which serves as a guide as to what, and when, capital projects should be undertaken. The attached PWES Capital Project List 2018 – 2022 summarizes PWES projects proposed to be undertaken over the 2018 – 2022 period. Recommendations will be made requesting Council approve specific projects which begin in 2018 while adopting the five year capital plan; this gives authorization to proceed with the 2018 projects while 2019 to 2022 projects will come back to Council in subsequent years for approval to proceed.

## **COMMENTS**

This section provides detailed information for all 2018 projects i.e. both those previously approved and those newly proposed for 2018. Comments are provided by **ROAD, SIDEWALKS & PATHWAYS, BRIDGE, WATER, WASTEWATER, STORM SEWER** and **MUNICIPAL DRAIN** categories. Generally projects will contain expenditures related to all categories; for expediency purposes we have included project discussion on the main driver requiring the project be undertaken.

We have also included a section entitled **2019 to 2022 PROJECTS** which provides a higher level discussion on projects being proposed for future years.

The attached Public Works & Environmental Services (PWES) Capital Project List 2018 – 2022 ***has been prepared assuming adequate funding is available in all lifecycle categories.*** Discussion on those categories that are deficient can be found in the Financial Implications Section.

Certain projects have been proposed to be phased in over a two year period. Generally this occurs because either the project scope is generally too large or costly to be completed in one construction season or would be too disruptive over too large of an area and too long a period of time to the adjacent properties. Projects being phased would be tendered as two separate tender calls.

## **ROAD PROJECTS**

Public Works staff reviews roads for inclusion in the annual paving program. The Town's Road Needs Study has been used for reference in conjunction with Public Works input and suggestions from Council and residents to form the basis for the recommended annual paving projects. Public Works & Environmental Services investigates and categorizes the needs based on the condition of the roads in comparison with other roads of similar traffic volumes.

The list of roads proposed for tar and chip are based on Public Works staff review of observed conditions of the roads and maintenance needs in conjunction with Pavement Condition Index (PCI) ratings from the Road Needs Study. Public Works has recently undertaken rebuilding the tar and chip roads rather than just placing surface treatment over existing roads. The process recycles all existing road materials and results in a new pavement structure with no loss of materials. This program has received positive reviews from the public and Public Works in reviewing roads that were completed through last year's program. It is Public Works intentions to place a final surface course of tar and chip on roads completed in the last few years. This process results in a road that will last longer and as such require less remedial maintenance in the future. Public Works would also suggest earmarking an amount for remedial tar and chip repairs on roads other than those planned for. Every spring Public Works finds areas that require some repair from winter plowing activities, and this would be used to address those concerns.

Administration recommends that as part of the annual paving program, an amount be set aside for crack sealing of Town roads to extend the lifespan of the pavement before more substantial repairs or replacement are required. It is recommended that \$75,000 be set aside for crack sealing.

**RD 1. Tar & Chip, Asphaltting, and Crack Sealing**

<b><u>Tar &amp; Chip - \$250,000</u></b>	<b><u>Asphaltting - \$1,450,000</u></b>	<b><u>Crack Sealing - \$75,000</u></b>
Malden Road (South Talbot Road to County Road 8)	Baseline Road (12 <sup>th</sup> Concession to CR19)	Various Locations (TBD)
	Oldcastle Road (North Talbot Road to Hwy#3)	
	Fasan Drive (Full length)	
	Mack Court (Full Length)	
	Alden Crescent (Full length)	
	Dresden Place (Full length)	
	Oakfield Court (Full length)	
	Cambridge Court (Full length)	
	Cumberland Court (Full length)	
	Birkdale Court (Full length)	
	Rostrevor Court (Full length)	
	Regent Road (Full length)	
	Oakpark Drive (Full length)	
	Regal Court (Full length)	
	Dube Drive (Full length)	

Inspection and project administration will be carried out by Public Works & Environmental staff upon award of the Contract by Council. Quality control of the materials will be carried out by a Consulting Geotechnical Engineer.

Funding to be provided from:

- Road Lifecycle Reserve \$1,775,000

**RD 2. Lesperance Road Bike Lane Pavement Markings**

Lesperance Road Bike Lane Pavement Markings - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$110,000	\$0	\$110,000

Lesperance Road, a Minor Arterial Road, is a key north-south spine in the transportation network for all modes of travel and the only continuous north-south road under the control of the Town of Tecumseh. Consideration has been given in the TMP to modify the existing cross-section of Lesperance Road to remove the existing two-way left turn lane (TWLTL) between McNorton Street and Riverside Drive to permit the creation of on-road cycling lanes, 1.5 meters in width. The travel portion of Lesperance Road would be 3.5 meters in width. Therefore, the removal of the TWLTL would not significantly affect intersection capacity or road safety.

At the June 27, 2017 Regular Meeting of Council, Council received the PWES Report No. 32/17 titled "Dedicated Bike Lane Pavement Markings on Lesperance Road", and passed the following motion: *(Motion RCM-225/17) That the pavement marking painting (removal and reapplication) on Lesperance Road from Riverside Drive to McNorton Street, to create dedicated bike lanes, be approved, and included in the 2018 Public Works & Environmental Services Capital Works Plan.*

The County has approved the Town's application seeking 50% funding for this project from the CWATS Municipal Partnership Program.

Administration recommends that Dillon Consulting Limited be retained to assist Administration in

the creation of pavement marking drawings as they have completed some preliminary works on this project to date.

Funding to be provided from:

- Road Lifecycle Reserve \$110,000

**RD 3. Tecumseh Road / Lacasse Boulevard Intersection Improvements**

Tecumseh Road / Lacasse Boulevard Intersection Improvements - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$40,000	\$439,000	\$479,000

Administration is recommending the review and analysis of reconfiguring the existing lanes of Tecumseh Road east of Lacasse Boulevard. There currently exists one westbound lane and 2 eastbound lanes, but there is an opportunity to reconfigure the lanes to two westbound (straight and right turn) lanes, and 1 eastbound lane, which may alleviate the queue lengths and times for westbound traffic at that intersection. Once the traffic analysis and preliminary design is completed (in 2018) Administration will report back to Council with the findings, a refined project estimate and a recommendation on whether to proceed.

Administration recommends that Dillon Consulting Limited be retained to complete this project based on their experience with completing the Transportation Master Plan and their current works on the Tecumseh Road CIP Streetscape Plan & Design.

Funding to be provided from:

- Road Lifecycle Reserve \$40,000

**RD 4. Tecumseh Road Community Improvement Plan (CIP) – Streetscape Plan & Design**

Tecumseh Road CIP Streetscape Plan & Final Design - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$967,500	\$637,200	\$31,149,740	\$32,754,440

At the May 10, 2016 Special Meeting of Council, Council approved the recommendations (Motion SCM-01/16) of Planning & Building Services Report No.10/16 titled "Tecumseh Road Main Street CIP, Streetscape Plan and Detail Design and Utility Lines" that selected the preferred streetscape design that calls for the removal of above-ground hydro poles, hydro wires and utility wires placing them underground.

At the July 12, 2016 Regular Meeting of Council, Council approved the recommendations (Motion RCM-257/16) of PWES Report No. 35/16 titled "Streetscape Plan and Design, Revised Scope & Budget Update, July 2016" that included a revised scope of a 30% Schematic Design for the full project limits, a 100% Tender Drawings and Specifications for Phase 1, and 90% Design Drawings and Specifications for Phase 2.

At the March 29, 2017 Public Meeting of Council, Council received (Motion PCM-09/17) the PWES Report No. 19/17 titled "Tecumseh Road Main Street CIP – Streetscape Plan and Design Project Update, March 2017".

The tentative phasing and associated project costs are broken up into the five following phases:

- Phase 1: \$14,611,300 - Tecumseh Road (St. Annes to VIA) & Lesperance (St. Denis to Arbour)
- Phase 2: \$7,716,180 - Tecumseh Road (St. Annes to Shawnee)
- Phase 3: \$4,053,262 - Tecumseh Road (Shawnee to Southfield)

- Phase 4: \$4,187,530 - Tecumseh/Southfield intersection
- Phase 5: \$2,186,168 - Lesperance (McNorton to St. Denis)

Expected recoveries from the County of Essex are anticipated to be \$885,000 for a portion of the Tecumseh Road reconstruction (under the Connecting Link Agreement). Administration is still exploring recovery opportunities with some of the Utility companies.

The additional costs required for 2018 are needed to finalize the components of the project, specifically the 100% Tender Drawings and Specifications for Phase 1, and the 90% Design Drawings and Specifications for Phase 2.

The revision to the budget is a reflection of updated (2017) construction costs for similar type projects, extensive consultation with the property owners and stakeholders within Phase 1, review and analysis of driveway consolidations and associated private side works (i.e. laneways, cross-access agreements, etc.), property and easement requirements, and continued coordination with the various utility companies.

Funding to be provided from:

- Road Lifecycle Reserve \$609,790
- Storm Sewer Lifecycle Reserve \$27,410

## SIDEWALKS & PATHWAYS PROJECTS

### SW 1. Sidewalk Repair Projects

Sidewalk Repair Projects - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
---	\$69,000	---	\$69,000

The 2018 sidewalk program will be based on sidewalk conditions determined through the comprehensive sidewalk inspection conducted annually. Currently this inspection is completed by Public Works staff and along with input from Council and residents is used in conjunction with these findings to develop the annual program. This information will also be used to recommend sidewalk repair and replacements. Should this inspection generate large amounts of sidewalk replacement a Request for Quotation (RFQ) will be issued.

Trip hazards identified throughout the Town will be addressed to keep the Town in compliance with minimum maintenance standards. Currently, a detailed list of sidewalks to be repaired/replaced has not been generated. The funding requested is for an upset limit to carry out the work. A detailed list of recommended sidewalk replacements will be circulated to Council for their information prior to issuing the RFQ. Inspection and project administration will be carried out by PWES Staff upon award of the Contract.

Funding to be provided from:

- Sidewalk Lifecycle Reserve \$69,000

### SW 2. Riverside Drive Trail

Riverside Drive Trail - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$68,000	\$782,000	\$0	\$850,000

At the October 25, 2016 Regular Meeting of Council, Council approved the recommendations (Motion RCM-372/16) of Planning & Building Services Report No. 32/16 titled "County Wide Active Transportation Study Plan, Town of Tecumseh 2017 Project, Trail on Riverside Drive from Tecumseh/Windsor Municipal Boundary to Manning Road" that endorsed in principle the construction of a 2.4m wide trail having a length of approximately 2.4km as a 2017 CWATS Project, subject to the resolution of a suitable design.

At the December 13, 2016 Regular Council Meeting, Council approved the recommendations (Motion RCM-442/16) of PWES Report No. 54/16 titled "2017-2021 Public Works & Environmental Services Capital Works Plan" that authorized Administration to proceed with the 2017 capital works projects including the design of the Riverside Drive Trail.

Administration recommends construction of the Riverside Drive Trail. As Bezaire & Associates completed the engineering design, Administration recommends continuing with them to complete the contract administration and inspection during construction in 2018.

Funding to be provided from:

- Infrastructure Reserve \$782,000

## BRIDGE PROJECTS

### BR 1. Bridges (with Spans > 3.0m) – Bridges No. 1004, 1013 & 1014

Bridges (with Spans > 3.0m) – Bridges No. 1004, 1013 & 1014 - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$129,000	\$872,000	\$1,001,000

At the November 8, 2016 Regular Meeting of Council, Council approved the recommendations (Motion RCM-386/16) of PWES Report No. 48/16 titled "2016 Bridge and Culvert Needs Study (Structures with Spans > 3.0m)" that authorized Administration to use the recommendations contained within the report to form the basis of the annual PWES Capital Works Plan.

The 2016 Bridge and Culvert Needs Study (Structures with Spans > 3.0m) had identified three structures to be rehabilitated within a 1-5 year time frame. It is proposed to combine the projects listed below into a single tendering package by carrying out the engineering in 2018 and proceeding with construction in 2019.

- Bridge No.1004 (Pike Creek at 12<sup>th</sup> Concession Road): Total Cost of \$327,000
- Bridge No.1013 (Merrick Creek at 8<sup>th</sup> Concession Road): Total Cost of \$326,500
- Bridge No.1014 (Colchester Townline Drain at 6<sup>th</sup> Concession Road): Total Cost of \$347,500

Administration recommends Dillon Consulting Limited complete the design work for Bridges No. 1004, 1013, and 1014 based on their experience of various bridge rehabilitation and replacement projects throughout the Town, and their completion of the previous Bridge & Culvert Needs Studies (Structures with Spans > 3.0m).

Funding to be provided from:

- Bridge Lifecycle Reserve \$129,000



## **BR 2. Bridge & Culvert Needs Study (Structures with Spans >3.0m)**

Bridge & Culvert Needs Study (Structures with Spans > 3.0m) - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$32,000	\$0	\$32,000

There are a total of sixteen (16) existing bridges and culverts with a span greater than 3.0 metres that were inspected as part of the Bridge and Culvert Needs Study in 2016. Inspections of the sixteen structures within the Town were completed in accordance with the latest version of the Ontario Structure Inspection Manual (OSIM) published by the Ministry of Transportation of Ontario (MTO).

Inspections of the bridges and culverts are to take place every two years as legislated by Section 2(3) of The Public Transportation and Highway Act: *"The structural integrity, safety and condition of every bridge shall be determined through the performance of at least one inspection in every second calendar year under the direction of a professional engineer and in accordance with the Ontario Structure Inspection Manual"*. It is now necessary to carry out a new Bridge and Culvert Needs Study in 2018 to comply with the legislation.

Administration recommends retaining Dillon Consulting Limited to provide engineering services on this project based on their past completion of the 2003, 2008, 2014, and 2016 Bridge and Culvert Needs Studies.

Funding to be provided from:

- Bridge Lifecycle Reserve \$32,000

## **WATER & WASTEWATER PROJECTS**

Water and wastewater projects are intended to upgrade existing infrastructure while also providing for future development.

The methodology used to provide Council with recommendations for yearly capital projects are:

- a review of the Town of Tecumseh Water & Wastewater Master Plan
- a review of lifecycle dollars available and possible government funding.
- a review of the Ministry of Environment regulations/guidelines
- a review of other planned capital projects
- a review of possible opportunities to improve/upgrade the existing infrastructure.

## **WATER PROJECTS**

### **WA 1. Water and Wastewater Master Plan Update (2016)**

Water and Wastewater Master Plan Update (2016) - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$100,000	\$0	\$0	\$100,000

Since the completion of the 2008 Water and Wastewater Master Plan Update, further planning studies and discussion papers related to the preparation of a new Official Plan have been completed. In order to ensure that the Town implements the most cost effective infrastructure servicing strategies required to support new growth and maintain a high level of service into the future, an update to the current Master Plan is being planned in accordance with the Class Environmental Assessment (EA) process for water and wastewater projects. The purpose of the

Master Plan Update is to re-examine water and wastewater infrastructure timing and costing requirements for the existing settlement areas in the Town of Tecumseh.

This study was commenced in 2016 and it is expected to continue until the end of 2018.

Previous approved funding provided from:

- Watermain Reserve Fund \$50,000
- Wastewater Sewers Reserve Fund \$50,000

#### **WA 2. Mack Court Watermain Replacement**

Mack Court Watermain Replacement - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$70,000	\$184,790	\$0	\$254,790

At the June 27, 2017 Regular Meeting of Council, Council approved the recommendations (Motion RCM-224/17) of PWES Report No. 29/17 titled "Amendment to the 2017-2021 PWES Capital Works Plan, Various Watermain Improvement Projects" that approved the completion of the engineering design of five smaller watermain projects in 2017, including the Mack Court Watermain Replacement project.

The Mack Court Watermain Replacement project is to be combined with the other four watermain projects identified in PWES Report No. 29/17 into a single tender to benefit from the efficiencies of completing the engineering, tendering, and construction in one package.

As Stantec Consulting Limited completed the engineering design, Administration recommends continuing with them to complete the contract administration and inspection during construction in 2018.

Funding to be provided from:

- Watermain Reserve Fund \$184,790

#### **WA 3. Lacasse Park Watermain Replacement**

Lacasse Park Watermain Replacement - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$110,000	\$255,190	\$0	\$365,190

At the June 27, 2017 Regular Meeting of Council, Council approved the recommendations (Motion RCM-224/17) of PWES Report No. 29/17 titled "Amendment to the 2017-2021 PWES Capital Works Plan, Various Watermain Improvement Projects" that approved the completion of the engineering design of five smaller watermain projects in 2017, including the Lacasse Park Watermain Replacement project.

The Lacasse Park Watermain Replacement project is to be combined with the other four watermain projects identified in PWES Report No. 29/17 into a single tender to benefit from the efficiencies of completing the engineering, tendering, and construction in one package.

As Stantec Consulting Limited completed the engineering design, Administration recommends continuing with them to complete the contract administration and inspection during construction in 2018.

Funding to be provided from:

- Watermain Reserve Fund \$255,190

**WA 4. Tecumseh Road Watermain Abandonment**

Tecumseh Road Watermain Abandonment - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$72,000	\$165,360	\$0	\$237,360

At the June 27, 2017 Regular Meeting of Council, Council approved the recommendations (Motion RCM-224/17) of PWES Report No. 29/17 titled "Amendment to the 2017-2021 PWES Capital Works Plan, Various Watermain Improvement Projects" that approved the completion of the engineering design of five smaller watermain projects in 2017, including the Tecumseh Road Watermain Abandonment project.

The Tecumseh Road Watermain Abandonment project is to be combined with the other four watermain projects identified in PWES Report No. 29/17 into a single tender to benefit from the efficiencies of completing the engineering, tendering, and construction in one package.

As Stantec Consulting Limited completed the engineering design, Administration recommends continuing with them to complete the contract administration and inspection during construction in 2018.

Funding to be provided from:

- Watermain Reserve Fund \$165,360

**WA 5. Alden Crescent Watermain Replacement**

Tecumseh Road Watermain Abandonment - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$15,000	\$154,120	\$0	\$169,120

At the June 27, 2017 Regular Meeting of Council, Council approved the recommendations (Motion RCM-224/17) of PWES Report No. 29/17 titled "Amendment to the 2017-2021 PWES Capital Works Plan, Various Watermain Improvement Projects" that approved the completion of the engineering design of five smaller watermain projects in 2017, including the Alden Crescent Watermain Replacement project.

The Alden Crescent Watermain Replacement project is to be combined with the other four watermain projects identified in PWES Report No. 29/17 into a single tender to benefit from the efficiencies of completing the engineering, tendering, and construction in one package.

As Stantec Consulting Limited completed the engineering design, Administration recommends continuing with them to complete the contract administration and inspection during construction in 2018.

Funding to be provided from:

- Watermain Reserve Fund \$154,120

**WA 6. Highway No.3 / Roscon Industrial Drive Watermain Interconnection**

Hwy#3 / Roscon Industrial Drive Watermain Interconnection - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$15,0000	\$155,430	\$0	\$170,430

At the June 27, 2017 Regular Meeting of Council, Council approved the recommendations (Motion RCM-224/17) of PWES Report No. 29/17 titled "Amendment to the 2017-2021 PWES Capital Works Plan, Various Watermain Improvement Projects" that approved the completion of the engineering design of five smaller watermain projects in 2017, including the Highway No.3 / Roscon Industrial Drive Watermain Interconnection project.

The Highway No.3 / Roscon Industrial Drive Watermain Interconnection project is to be combined with the other four watermain projects identified in PWES Report No. 29/17 into a single tender to benefit from the efficiencies of completing the engineering, tendering, and construction in one package.

As Stantec Consulting Limited completed the engineering design, Administration recommends continuing with them to complete the contract administration and inspection during construction in 2018.

Funding to be provided from:

- Watermain Reserve Fund \$155,430

**WA 7. Highway No.3 / County Road 11 Watermain Replacement**

Highway No.3 / County Road 11 Watermain Replacement - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$134,600	\$1,809,400	\$1,944,000

The Water Division is recommending replacement of the existing 200mm diameter ductile iron watermain at the Highway No.3 / County Road 11 intersection. In recent years the 200mm diameter ductile iron watermain has been failing due to the age and material of the pipe. It is proposed to carry out the engineering in 2018 and proceed with construction in 2019.

The recommended works consist of the following:

- Replacement of approximately 410m of 200mm ductile iron watermain on Highway No.3 from County Road 11 westerly with a new 300mm diameter PVC;
- Replacement of approximately 345m of 200mm ductile iron watermain on County Road 11 from McCord Lane to just south of Highway No.3 with a new 300mm diameter PVC;
- The installation of approximately 430m of 300mm diameter PVC watermain on Highway No.3 from County Road 11 to Oldcastle Road.

Administration is recommending that Stantec Consulting Limited be retained to complete the design based on their experience with other Town projects and water standards, and their experience with numerous watermain replacement projects locally within Essex County.

Funding to be provided from:

- Watermain Reserve Fund \$134,600

**WA 8. Anode Protection Program (2018)**

Anode Protection Program (2018) - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$375,000	\$0	\$375,000

Ductile and cast iron pipe make up approximately 20% of the total amount of watermain in the Town's watermain distribution system. Due to the continual corrosion problems and high failure rates associated with ductile and cast iron pipe, the Town of Tecumseh Water Division is recommending the second installment of the anode protection program in 2018. Anodes (Cathodic Protection) are a scientifically proven method of corrosion control. It minimizes the effects of external corrosion on existing ductile and cast iron water mains, thus reducing watermain breaks and extending the watermain's useful life. If the water mains are left unprotected and continue to corrode at the rate being experienced, total replacement of the mains would be necessary sooner at a large capital cost.

Administration recommends that Blackrock Consulting Limited be retained to assist Administration in the creation of any tender documents and drawings required for the project.

Funding to be provided from:

- Watermain Reserve Fund \$375,000

**WA 9. SCADA Software/Server/Nodes Update (2018)**

SCADA Software/Server Update (2018) - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$105,000	\$0	\$105,000

The Town has used Supervisory Control and Data Acquisition (SCADA) to monitor water flows, water pressures, the water tower and to measure the flows in water and wastewater (sanitary) as well as monitor pump stations in storm and wastewater since 2005.

The main SCADA server and software are in need of upgrading. The old system is outdated and in the event of failure important data and information may be lost. A new SCADA server will be much more powerful and the hardware will serve as a Virtual Machine host. It will also provide emergency call outs/texts/emails in the event there are issues with the monitored infrastructure.

There are 16 remote areas that communicate data to the SCADA server, the communication Nodes at these locations are in need of upgrading. The old systems are outdated and in the event of failure important data and information may be lost.

Funding to be provided from:

- Water Facilities Reserve Fund \$73,500
- Wastewater Facilities Reserve Fund \$26,250
- Storm Sewer Lifecycle Reserve \$5,250

**WA 10. Water Meter Reading System Update (2018)**

Water Meter Reading System Update (2018) - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$15,000	\$0	\$15,000

In 2011 the Town of Tecumseh began to replace all Town water meters and upgraded the water reading equipment to a drive by reading system. This program is over 95% completed and has provided many benefits such as easy reads to hard-to-access meters, (thus eliminating estimated bills and maximizing meter reading success rates). There have been unfortunate incidents caused by individuals posing illegally as utility employees to gain entry into a home, automatic meter reading remedies this concern, which in turn improves customer service. The reading equipment and software provided by Itron is in need of updating.

Funding to be provided from:

- Water Facilities Reserve Fund \$15,000

## WASTEWATER PROJECTS

### WW 1. Rossi Drive Sanitary Sewer Extension

Rossi Drive Sanitary Sewer Extension - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$180,000	<b>\$2,101,800</b>	\$0	\$2,281,800

At the December 13, 2016 Regular Council Meeting, Council approved the recommendations (Motion RCM-442/16) of PWES Report No. 54/16 titled "2017-2021 Public Works & Environmental Services Capital Works Plan" that authorized Administration to proceed with the completion of the engineering design of the Rossi Drive Sanitary Sewer Extension in 2017.

This project considered under the North Talbot Road sanitary sewer service area is the extension of a sanitary sewer along Rossi Drive from Pulleyblank Street to Outer Drive.

Expected recoveries from landowners for the sanitary sewer would be \$292,965. The total project cost of \$2,281,800 includes \$557,500 for sanitary sewers, \$1,152,500 for road reconstruction, \$475,800 for storm sewers, \$60,000 for watermain replacement, and \$36,000 for the replacement of Culvert No.35.

As Stantec Consulting Limited has completed the engineering design, Administration recommends continuing with Stantec Consulting Limited to complete the contract administration and inspection for the Rossi Drive Sanitary Sewer Extension project in 2018.

Funding to be provided from:

- Road Lifecycle Reserve \$1,075,000
- Watermain Reserve Fund \$35,000
- Wastewater Sewers Reserve Fund \$515,000
- Storm Sewer Lifecycle Reserve \$440,800
- Bridge Lifecycle Reserve \$36,000

### WW 2. County Road 11 (North) Sanitary Sewer Extension

County Road 11 (North) Sanitary Sewer Extension - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$136,650	<b>\$211,000</b>	\$1,184,650	\$1,532,300

The next project considered under the North Talbot Road sanitary sewer service area is the extension of a sanitary sewer along County Road 11 from North Talbot Road to Highway 401. The

engineering design was carried out in 2017, and it is proposed to carry out utility relocations in 2018, and proceed with construction in 2019. The proposed CWATS project of a 3.0m wide trail along the east side of County Road 11 from North Talbot Road to Highway 401 will be incorporated as part of the sanitary sewer extension project.

As recommended under Planning & Building Services Report No. 23/13 dated July 3, 2013, Council approved (Motion: RCM-218/13) a 3.0m wide trail along the east side of Walker Road from Highway 401 to North Talbot Road. This trail is identified as Trail Segment Tec-3 in the CWATS Master Plan.

Expected recoveries from landowners for the sanitary sewer would be \$1,110,180. Expected recoveries from the County of Essex for the CWATS trail would be \$150,000 (40% of trail costs including design work in 2018). The project cost of \$1,532,300 includes \$1,152,000 for sanitary sewers, \$6,000 for water mains, and \$374,300 for the installation of the 3.0m wide asphalt trail.

As Dillon Consulting Limited has completed the engineering design, Administration recommends continuing with Dillon Consulting Limited to complete the coordination of the utility relocations for the County Road 11 (North) Sanitary Sewer Extension project in 2018.

Funding to be provided from:

- Wastewater Sewers Reserve Fund \$75,000
- New Infrastructure Levy \$136,000

### **WW 3. Sylvestre Drive Sanitary Sewer Extension**

Sylvestre Drive Sanitary Sewer Extension - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$187,400	\$1,911,750	\$2,099,150

This project consists of the extension of a sanitary sewer on Sylvestre Drive from Sylvestre Drive to County Road 19 (approximately 410-metres), as well as adjacent to the County Road 19 right-of-way through a future easement (approximately 215-metres). It is also proposed to reconstruct Sylvestre Drive from Jamsyl Drive to County Road 19 (approximately 760-metres).

As part of this project, a Schedule B Environmental Assessment is required to be undertaken due to the extension of a sanitary sewer through a future easement.

Expected recoveries from landowners for the sanitary sewers would be \$791,400. Assessments to be calculated by Administration and invoiced back to the landowners by means of a Part XII by-law (*Municipal Act*, s.391). The project cost of \$2,099,150 includes \$1,229,500 for road reconstruction, \$791,400 for sanitary sewers, and \$78,250 for storm sewers.

Administration recommends Dillon Consulting Limited complete the design work for the Sylvestre Drive Sanitary Sewer Extension project in 2018, based on their experience with wastewater projects throughout the Town, their ability to complete the required Environmental Assessment, and their experience with the Town in the creation of a cost recovery Part XII by-law.

Funding to be provided from:

- Road Lifecycle Reserve \$74,000
- Wastewater Sewers Reserve Fund \$109,200
- Storm Sewer Lifecycle Reserve \$4,200



#### **WW 4. Pump Station Emergency Response Plan**

Pump Station Emergency Response Plan - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$70,000	\$0	\$70,000

In 2016, the Town conducted an assessment on the eight (8) storm pumping stations and four (4) sanitary pumping stations to understand the condition and to effectively prioritize rehabilitation and replacement work in the future.

In addition to that study, Administration is recommending the completion of a Pump Station Emergency Response Plan. This plan will contain information on the key components for each pump station, contacts for pump suppliers and manufacturers, engineers and contractors, adjacent municipalities, regulatory authorities (i.e. ERCA), as well as situational emergencies (mechanical failures) and the required response. It will be structured similar to the Water Services Emergency Response Plan which is legislated by the Ministry of the Environment.

It is anticipated that the emergency response plan would be completed internally; however Administration is recommending allocating funds in the event an outside consultant or contractor is retained to assist in the completion of the plan.

Funding to be provided from:

- Wastewater Facilities Reserve Fund \$35,000
- Storm Sewer Lifecycle Reserve \$35,000

#### **WW 5. Sanitary Sewer Rehabilitation (Inflow & Infiltration Removal)**

Sanitary Sewer Rehabilitation (Inflow & Infiltration Removal) - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$3,637,824	\$0	\$0	\$3,637,824

At the December 13, 2016 Regular Council Meeting, Council approved the recommendations (Motion RCM-442/16) of PWES Report No. 54/16 titled "2017-2021 Public Works & Environmental Services Capital Works Plan" that authorized Administration to proceed with the Sanitary Sewer Rehabilitation (Inflow and Infiltration Removal) project components should the Town be successful in obtaining grant funding from upper levels of government.

This project involves the renewal and rehabilitation of approximately 30,000 linear metres of sanitary sewer pipe, 500 manholes and the rehabilitation of approximately 500 sanitary sewer service connections. The work generally consists of:

- Camera inspections of the sewer pipes to identify: pipe condition; pipe defects; and sources of inflow and infiltration using trenchless technology.
- Flushing and cleaning debris from the sanitary sewer pipes and service connections to facilitate leak testing and repair using trenchless technology
- Pressure testing and sealing of: mainline joints, cracked or otherwise leaking pipes, tee connections, clean outs, risers and sanitary service connections using innovative trenchless technology
- Structural repairs of sanitary sewer pipes where required using innovative trenchless technology.
- Sealing leaks in manholes using rain shields, chemical sealants and latest technology.



The Town was successful in receiving two grants, the Ontario Community Infrastructure Fund (OCIF) and the Canada Water Wastewater Fund (CWWF). Components of this work began in September 2017 and are expected to continue throughout 2018.

The project costs and expected recoveries are as follows:

**Part A: Ontario Community Infrastructure Fund (OCIF)**

• Provincial Formula-Based Funding	\$ 493,942
• Provincial Top-Up Funding	\$ 806,149
• Municipal Contribution	<u>\$ 99,909</u>
Sub-Total Part A	\$1,400,000

**Part B: Canada Water Wastewater Fund (CWWF)**

• Federal Contribution	\$1,118,912
• Provincial Contribution	\$ 559,456
• Municipal Contribution	<u>\$ 559,456</u>
Sub-Total Part B	\$2,237,824

**Summary of Project Costs**

• Municipal Contribution	\$ 659,365
• Provincial Contribution	\$1,859,547
• Federal Contribution	<u>\$1,118,912</u>
Total	\$3,637,824

## STORM SEWER PROJECTS

### ST 1. Storm Drainage Master Plan

Storm Drainage Master Plan - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$600,000	\$0	\$0	\$600,000

At the December 13, 2016 Regular Council Meeting, Council approved the recommendations (Motion RCM-442/16) of PWES Report No. 54/16 titled "2017-2021 Public Works & Environmental Services Capital Works Plan" that authorized Administration to proceed with the Storm Drainage Master Plan in 2017 and 2018.

The Town's stormwater infrastructure network is supported through eight stormwater pumping stations, which are primarily located near the shore of Lake St. Clair due to the topography of the area within Wards 1, 2, and 3. The proposed Stormwater Master Plan will focus on an analysis of the storm infrastructure within the eight (8) storm pumping station service areas.

This analysis will review how Town's stormwater infrastructure functions during minor rainfall events (what can be contained within the storm sewer network), and major rainfall events (which would follow overland flood routes). The storm pumping stations will also be reviewed to determine if any modifications or improvements are required based on any of the recommended storm sewer network improvements (i.e. capacity upgrades).

The Master Plan will also look for efficiencies in the storm sewer network, and whether a consolidation of storm pumping stations is feasible. The Master Plan will follow the Municipal Class Environmental Assessment (EA) process, and is equivalent to the same steps that a Schedule 'B' EA would follow. This will provide the Town the necessary analysis/study under the

Municipal Class EA process to complete future improvements, reconstruct and/or decommission storm pumping stations without having to complete a separate Schedule 'B' EA at a later date.

This study was commenced in early 2017 and it is expected to continue until the end of 2018.

In 2017 the Town was successful in receiving approval from the Federation of Canadian Municipalities (FCM) for funding in the amount of up to \$175,000 under the Municipalities for Climate Innovation Program (MCIP) for the Town's Storm Drainage Master Plan feasibility study.

Previous approved funding provided from:

- Storm Sewer Lifecycle Reserve \$600,000

#### **ST 2. Storm Pump Stations, 2018 Repairs**

Storm Pump Stations, 2018 Repairs - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$100,000	\$0	\$100,000

At the December 13, 2016 Regular Meeting of Council, PWES Report No. 51/16 titled "2016 Pump & Metering Station Condition Assessment" will recommend to use the recommendations contained within the report to form the basis of the annual PWES Capital Works Plan.

The Town owns and operates eight (8) storm pump stations. The 2016 Pump & Metering Station Condition Assessment had identified 'Immediate Repairs' and '10 Year Repairs' for the storm pump stations. The proposed (2018) works consist of repairs at the Lesperance Road Storm Pump Station.

Funding to be provided from:

- Storm Sewer Lifecycle Reserve \$100,000

#### **ST 3. Oldcastle Storm Drainage Master Plan**

Oldcastle Storm Drainage Master Plan - Project Costs Summary			
Previously Approved	Requested for 2018	Future Costs	Total Project Costs
\$0	\$350,000	\$0	\$350,000

The stormwater infrastructure network located within the Oldcastle Hamlet area is comprised of a combination of roadside ditches, Municipal Drains, storm sewers, swales/sub-drains, as well as County and Provincial storm infrastructure. There are three (3) distinct watershed areas within the Oldcastle Hamlet which include Little River (8 outlets), Turkey Creek (1 outlet), and River Canard (3 outlets).

The proposed Oldcastle Storm Drainage Master Plan will focus on an analysis of the storm infrastructure within these watersheds and will set the framework for how stormwater is addressed for new and re-developments.

This analysis will review how the storm infrastructure functions during minor rainfall events (what can be contained within the ditches, drains, and sewers), and major rainfall events (which would follow overland flood routes). The Master Plan will follow the Municipal Class Environmental Assessment (EA) process, and is equivalent to the same steps that a Schedule 'B' EA would follow.

Administration recommends Stantec Consulting Limited be retained to complete the Oldcastle Storm Drainage Master Plan based on their experience with assisting the Town on reviewing stormwater management reports for individual sites as well as proposed developments within the Oldcastle Hamlet area. Stantec has also recently completed the Upper Little River Watershed Master Plan.

Funding to be provided from:

- Storm Sewer Lifecycle Reserve \$350,000

### MUNICIPAL DRAIN PROJECTS

Town of Tecumseh is obligated to manage, repair, maintain and improve the 120 Municipal Drains (totaling 221km) in accordance with the Drainage Act, including assessing costs to the benefitting upstream landowners according to the most current by-law. Municipal Drains are not municipal infrastructure, and only the Town's assessment is actually funded from the general tax rate.

There are currently over 40 active drainage projects that the Town is undertaking, all of which are at various stages of design or construction. The Drainage Superintendent receives requests for maintenance or repair and improvements for Municipal Drains, and determines which section of the Drainage Act is most suitable to proceed with the request. These drainage requests, and subsequent works, are addressed as they occur and brought before Council for their approval on a project by project basis.

Funding for the Town's assessment for Municipal Drains will generally come from the Drains Lifecycle Reserves.

### 2019 TO 2022 PROJECTS

This section provides a higher level discussion on projects being proposed for 2019 to 2022.

- **2017 – 2019: South Talbot Road Reconstruction** (Cost of \$2,330,500, excluding Culvert No.46 &47)

The section of South Talbot Road between County Road 9 (Howard Avenue) and County Road 11 (Walker Road) consists of a paved two-lane rural cross-section road. Over the last number of years, portions of this section have been rehabilitated: (i) A 1,030m section west of County Road 11 was milled and paved approximately eight years ago, and is still in relatively good shape, (ii) A 250m section east of County Road 9 was reconstructed approximately five years ago by the MTO as part of the realignment into the Laurier Parkway. The remaining section of South Talbot Road, a 1,590m length (250m east of County Road 9 to 400m east of Holden Road) is in need of repairs.

It was Administration's intent to include this section of South Talbot Road as part of the annual asphaltting program in 2017. However, a geotechnical investigation of the existing road structure confirmed that there is insufficient granular base and organic material within the subbase, and that a full road reconstruction is recommended over a mill/pave operation.

The South Talbot Road Reconstruction project is to be combined with the replacement of Culverts No.46 and No.47 into a single tender to benefit from the efficiencies of completing the engineering, tendering, and construction in one package.

➤ **2017 – 2020: Manning Road Improvement Project, Phases 2&3** (Cost of \$10,248,070)

The Town completed a Class Environmental Assessment (EA) in April 2010 for improvements to the East Townline Drain (Manning Road) Storm Pump Station. The proposed upgrades to the pump station and drain enclosure along Manning Road provided an opportunity to improve this portion of Manning Road by constructing an urban cross-section that accommodates pedestrians, cyclists and urban design features to create an aesthetically pleasing gateway into Lakewood Park. The limits of the Class EA included Manning Road from Riverside Drive to St. Gregory's Road.

The Town actively pursued senior government funding and on July 8, 2011, the Ontario Minister of Finance announced a grant for financial assistance to the Town in the amount of \$6,183,333, which represented a one-third share of the total project cost of \$18.55M. The Town was able to amend the funding agreement with the Ontario Government so that the \$6.1M grant could be utilized in Phase 1, being the construction of the storm pump station and associated facilities, and the reconstruction of a section of Riverside Drive (Manning Road to Christy Lane), including the roundabout at the Manning Road/Riverside Drive intersection. Construction of Phase 1 was completed in 2014.

At the December 13, 2016 Regular Council Meeting, Council approved the recommendations (Motion RCM-442/16) of PWES Report No. 54/16 titled "2017-2021 Public Works & Environmental Services Capital Works Plan" that authorized Administration to proceed with finalizing the engineering design for Manning Road Improvement Project, Phases 2 & 3 in 2017, and proceed with construction in 2019 and 2020 respectively.

The total project cost of \$10,248,070 includes \$5,143,110 for Phase 2 and \$5,104,960 for Phase 3. Expected recoveries from the County of Essex are anticipated to be \$120,000 for a portion of the Bike Lanes (under CWATS), and 450,000 for a portion of Manning Road reconstruction (under the Connecting Link Agreement).

➤ **2019+: Culvert Works (Structures with Spans < 3.0m)**

The 2016 Culvert Needs Study (Structures with Spans < 3.0m) had identified two (2) structures to be replaced immediately; 10 structures to be rehabilitated or replaced within a 1-5 year timeframe; and three (3) structures to be rehabilitated or replaced within a 6-10 year timeframe. The recommended culvert works are as follows:

- 2017/2019 – Culvert No.46, South Talbot Road (cost of \$410,500)
- 2017/2019 – Culvert No.47, South Talbot Road (Cost of \$195,410)
- 2019/2020 – Culvert No.54, Snake Lane Road (cost of \$449,000)
- 2019/2020 – Culvert No.53, Snake Lane Road (cost of \$458,000)
- 2019/2020 – Culvert No.42, Snake Lane Road (cost of \$501,000)
- 2021/2022 – Culvert No.51, 8<sup>th</sup> Concession Road (cost of \$130,000)
- 2021/2022 – Culvert No.70, 12<sup>th</sup> Concession Road (cost of \$144,000)
- 2023/2024 – Culvert No. 48, Holden Road (cost of \$550,000)

➤ **2019: Roads Needs Study** (Cost of \$90,000)

The purpose of the Roads Needs Study is to assess the existing road system in the Town of Tecumseh and to prepare a comprehensive plan for improving and maintaining the road system over the next 5 year period. Road reconstruction is closely coordinated with other infrastructure replacements such as sewer and water in order to achieve a level of cost saving. Initiatives such as these help to increase the customers level of service as well as reduce frequency of

large scale construction activities. This is a key factor to achieving improvements while achieving overall benefits to the customer through the use of sound planning.

➤ **2019: Storm Pump Station Repairs (2019)** (Cost of \$268,000)

The Town owns and operates eight (8) storm pump stations. The 2016 Pump & Metering Station Condition Assessment had identified 'Immediate Repairs' and '10 Year Repairs' for the storm pump stations. The proposed (2019) works consist of repairs at (i) West St. Louis Storm Pump Station, (ii) Lesperance Road Storm Pump Station, and (iii) (East St. Louis Storm Pump Station.

➤ **2019: Sanitary Pump Station Improvements (2019)** (Cost of \$30,000)

The Town owns and operates four (4) sanitary pump stations. The 2016 Pump & Metering Station Condition Assessment had identified 'Immediate Repairs' and '10 Year Repairs' for the sanitary pump stations. The proposed (2019) works consist of improvements at the Sylvestre Sanitary Pump Station, where the pump and structural supports will be replaced.

➤ **2019 – 2020: Lesperance Road Trail** (Cost of \$864,500)

As part of the Tecumseh Transportation Master Plan (TMP), a network of key Active Transportation facilities was developed to ensure connectivity in the larger network. This network has been coordinated with plans and recommendations from the County Wide Active Transportation Study (CWATS) and the City of Windsor Bicycle Use Master Plan (BUMP). The expansion of the Active Transportation Network is a municipal focus for several reasons, including: it promotes Environmental Sustainability, it promotes personal Health, and it promotes Equity is transportation service.

The Lesperance Road segment from County Road 22 to County Road 42 has been identified to have both On-Road and Off-Road facilities. The Off-Road facility will consist of a 2.4-metre wide asphalt trail with an approximate length of 3,075-metres.

➤ **2019 – 2020: County Road 46 Sanitary Sewer & Laval Extension** (Cost of \$3,072,275, landowner recoveries \$1,732,412)

The next project considered under the 8<sup>th</sup> Concession Road sanitary service area is the extension of a sanitary sewer along County Road 46 from 8<sup>th</sup> Concession Road to Webster Drive, as well as on Webster Drive (entire length), and the extension of a sanitary sewer through an easement just south of Highway 401. It is proposed to carry out the engineering in 2019, and proceed with construction in 2020. This project will be coordinated with the County's planned road rehabilitation for County Road 46.

Estimated recoveries from landowners for the sanitary sewer would be \$1,732,412, and will be refined once the By-Law for the 8<sup>th</sup> Concession Road sanitary service area is completed in early 2018. Expected recoveries from the County of Essex for the CWATS paved shoulder would be \$119,600 (40% of paved shoulder costs). The project cost of \$3,072,275 includes \$455,000 for road reconstruction, \$232,025 for storm sewers, \$1,336,250 for sanitary sewers, \$750,000 for watermain, and \$299,000 for paved shoulders.

➤ **2019+: County of Essex (Initiated) Projects** (Town cost of \$3,986,000)

The County of Essex has a number of planned projects in the upcoming years, where the Town is obligated to meet financial contributions through cost sharing arrangements. The Town is

also planning on a number of infrastructure improvements as part of these projects. As the projects are more clearly defined in the years to come, Administration will continue to communicate and negotiate with the County as to the Town's exact contribution. These projects consist of the following:

- **County Road 11/South Talbot Road (2019, possible Town cost of \$426,000)**  
The County is currently completing the design of a roundabout at the County Road 11/South Talbot Road intersection. Town's cost share to be negotiated.
- **County Road 42 & County Road 43 (2019-2024+, Town cost of \$2,906,500)**  
As part of the County's 25-year capacity program, County Road 42 and County Road 43 road widenings have been identified to be completed within the next couple of years. The Town's costs consist of a cost share of traffic signal infrastructure and bike lanes, and the installation of sidewalks, multi-use trails, watermains, and sanitary sewers.
- **Westlake Drive Extension (2019, cost of \$439,000)**  
The extension of Westlake Drive is a component of the County's planned advance construction works at the County Road 22/Lesperance Road intersection, the design details which continue to be the subject of discussion with the County. The Town will be seeking to install full municipal services (storm, sanitary, watermain), for which those costs will be full recovery from the lands within the Manning Road Secondary Plan Area.
- **County Road 19 (2021, Town cost of \$214,500)**  
The County is proposing advance construction works at the intersections of County Road 19/County Road 46 intersection and the County Road 19/County Road 34 intersection. The Town's costs are attributed to the replacement of the existing watermains.

➤ **2019+: Scully & St. Mark's Storm Pump Station & Riverside Drive Storm Sewers** (Cost of \$8,329,900)

In 2016 a review of the St. Mark's Storm Pump Station, the Scully (Edgewater) Storm Pump Station and the existing storm sewer infrastructure within the contributing drainage area was conducted. The results indicated that the pump stations cannot accommodate the future projected flows from the drainage areas once some of the existing streets are reconstructed to an urban cross section. These results were discussed and included in PWES Report No. 52/16 titled "Arlington Boulevard Improvements – Project Update, December 2016", which was brought to Council at the December 13, 2016 Regular Meeting of Council.

As part of the Storm Drainage Master Plan (currently underway), a further detailed analysis will be conducted on the stormwater infrastructure (including pump stations) to determine if any modifications, improvements or pump station consolidations are required. The Master Plan will also identify prioritization of recommended works based on various factors, such as their location within the system, and their existing condition.

The project cost of \$8,329,900 includes \$7,579,900 for storm sewers and pumping stations and \$750,000 for road reconstruction.

Although the Storm Drainage Master Plan has not yet been completed, Administration felt it was important to identify this project within the 5-year capital works plan as it will have an effect on the annual allocation to the storm sewer reserve fund. There is also benefit in having project in a 'shovel ready' state in the event grant funding becomes available from upper levels of government. The timing of design and construction is contingent on the final recommendations

and prioritization in the Storm Drainage Master Plan, the availability of funding, and Council approval.

- **2019 – 2021: Delduca Drive Sanitary Sewer Extension** (Cost of \$2,187,000, landowner recoveries \$1,021,375)

The next project considered under the 8<sup>th</sup> Concession Road sanitary service area is the extension of a sanitary sewer along Delduca Drive. It is proposed to carry out the engineering in 2019, obtain the required easements in 2020, and proceed with construction in 2021.

Estimated recoveries from landowners for the sanitary sewer would be \$1,021,375, and will be refined once the By-Law for the 8<sup>th</sup> Concession Road sanitary service area is completed in early 2018. The project cost of \$2,187,000 includes \$760,000 for road reconstruction, \$468,000 for storm sewers, and \$959,000 for sanitary sewers.

- **2020: Bridge Signage & Roadside Safety Improvements** (Cost of \$379,000)

A number of recent studies and condition assessments on the Town's bridges and culverts have identified areas of improvement for roadside safety. A total of two (2) bridge structures (Bridge Nos. 1010 and 2001), and five (5) culvert structures (Culvert Nos. 39, 57, 63, 64, and 69) will be addressed in one tender package for all of the works.

- **2020+: West Tecumseh Trunk Sewer & Watermain from County Road 22 to CP Railway (WW-1A & W-1A) & Diversion Sewer South of CP Railway (WW-2)** (Cost of \$5,436,000)

The West Tecumseh Trunk Sewer (WW-1A) is proposed to provide direct servicing for new development lands within the Tecumseh Hamlet West Planning Area (north of the CP Railway), and will provide an outlet for existing and new growth south of CP Railway. Based on preliminary design, a 1200mm diameter sewer is required. In order to comply with the Wastewater Agreement between the City of Windsor and the Town of Tecumseh, a flow measurement facility will be required on this trunk sewer prior to discharging to the outlet sewer on County Road 22.

In order to alleviate system surcharges in the Lesperance Road trunk sewer between CP Railway and County Road 22, a new diversion sewer (WW-2) will be constructed through the Hydro corridor south of CP Railway from the West Tecumseh Trunk Sewer to the trunk sewer on St. Alphonse Avenue. All flows from the St. Alphonse sewer will be diverted to the new outlet.

Total project cost estimate is \$5,436,000 with \$2,970,000 for WW-1A, \$1,553,000 for W-1A and \$913,000 for WW-2. It is proposed to complete the engineering in 2020, construction of WW-1A, W-1A and WW-2 to follow in subsequent years as funding becomes available.

- **2021 – 2022: Ure Street Sanitary Sewer Extension** (Cost of \$1,587,000, landowner recoveries \$905,515)

The next project considered under the 8<sup>th</sup> Concession Road sanitary service area is the extension of a sanitary sewer along Ure Street from Delduca Drive to North Talbot Road. It is proposed to carry out the engineering in 2021 and proceed with construction in 2022.

Estimated recoveries from landowners for the sanitary sewer would be \$905,515, and will be refined once the By-Law for the 8<sup>th</sup> Concession Road sanitary service area is completed in early



2018. The project cost of \$1,587,000 includes \$509,000 for sanitary sewers, \$667,000 for road reconstruction, and \$411,000 for storm sewers.

➤ **2021+: Peter Cecile (Kensington) Storm Pump Station & Riverside Drive Sanitary Trunk Storage** (Cost of \$8,061,750)

In 2016 a review of the Peter Cecile (Kensington) Storm Pump Station and existing storm sewer infrastructure within the contributing drainage area was conducted. The results indicated that the pump station cannot accommodate the future projected flows from the drainage area once some of the existing streets are reconstructed to an urban (or semi-urban) cross section.

As part of the Storm Drainage Master Plan (currently underway), a further detailed analysis will be conducted on the stormwater infrastructure (including pump stations) to determine if any modifications or improvements are required. The Master Plan will also identify prioritization of recommended works based on various factors, such as their location within the system, and their existing condition.

In 2013 the Town completed a Class Environmental Assessment (EA) on the Sanitary Sewage Collection System in Wards 1 and 2. As part of the EA, there were a number of various solutions to address the problem of basement flooding and the lack of capacity in the sanitary sewage system to accommodate future growth. Two of the recommended solutions had already been implemented, that being the construction of the Lakewood Sanitary Pump Station, and the installation of the Lakewood Park Trunk Sewer. The next stage would be to replace the existing sanitary sewer on Riverside Drive (Kensington to Pentilly) with a large diameter storage pipe.

The project cost of \$8,061,750 includes \$5,938,000 for storm sewers and pump stations, \$1,375,000 for sanitary sewers, and \$748,750 for road reconstruction.

Although the Storm Drainage Master Plan has not yet been completed, Administration felt it was important to identify this project within the 5-year capital works plan as it will have an effect on the annual allocation to the storm sewer reserve fund. There is also benefit in having project in a 'shovel ready' state in the event grant funding becomes available from upper levels of government. The timing of design and construction is contingent on the final recommendations and prioritization in the Storm Drainage Master Plan, the availability of funding, and Council approval.

➤ **2022 – 2023: O'Neil Street Sanitary Sewer Extension** (Cost of \$1,794,000, landowner recoveries \$739,285)

The next project considered under the 8<sup>th</sup> Concession Road sanitary service area is the extension of a sanitary sewer along O'Neil Street from Delduca Drive to North Talbot Road. It is proposed to carry out the engineering in 2022 and proceed with construction in 2023.

Estimated recoveries from landowners for the sanitary sewer would be \$739,285, and will be refined once the By-Law for the 8<sup>th</sup> Concession Road sanitary service area is completed in early 2018. The project cost of \$1,794,000 includes \$566,000 for sanitary sewers, \$772,000 for road reconstruction, and \$456,000 for storm sewers.

**CONSULTATIONS**

Director Financial Services & Treasurer  
Director Planning & Building Services



## **FINANCIAL IMPLICATIONS**

The total capital expenditures proposed for 2018 totals just over \$11.3M with an additional \$47.1M projected over the remaining four years of the five-year capital works plan. Details of expenditures by project and year are included in the tables.

Generally speaking funding for most projects is covered through lifecycle, grants and rates however the following categories are projected to be in deficit positions:

### **Bridges Lifecycle Reserve**

The 2016 Culvert Needs Study (Structures with Spans < 3.0M) conducted a condition assessment of the culverts and prepared a comprehensive plan for improving and maintaining these structures. The study details a program including immediate, 1-5 Years and 6-10 Years requirements totalling \$5.9M in expenditures. The 2017 budget included doubling the annual bridge lifecycle contribution from \$270,000 to \$540,000 over the 2017 to 2019 budget years. The new allocation will likely be sufficient on a long term basis but is not enough to fund the existing back log of works required over the next ten years. Based on current allocations the Bridges LC will be in a deficit of over \$1.7M by the end of 2022. Administration will consider options to offset the deficit including reallocating funds from the Road LC, borrowing, grants, increasing the annual allocation and stretching out the works over a longer period of time.

### **Storm Sewer Lifecycle Reserve**

The reserve is expected to be in a deficit position by the end of 2018 with the funding of the Stormwater Master Plan and Rossi Drive projects. By 2019, the deficit is expected to be \$2.6M largely as a result of the \$1.7M required for Manning Road/ETLD Drain Relocation – Phase 2 project.

A major contributor to the deficit is that the Town has significantly enhanced storm infrastructure with funding coming from Storm Sewer LC whereas a portion of the funds should come from new infrastructure funds. Examples include Brighton and Manning Roads pump stations being enhanced, over what was previously in place, along with certain road projects in the St. Clair Beach and Oldcastle areas where the storm system is being enhanced. Deficits have been manageable using grants and additional funding provided by the Roads LC.

The Stormwater Master Plan will provide additional information on what is required on a go forward basis. The Plan will provide assistance in determining the proper annual allocation for replacing existing storm sewers as well as an allocation for new enhanced storm works that may be required.

The Scully & St. Mark's Storm Pump Station and Riverside Storm Sewers project has been identified in the five-year capital works plan. The project cost of \$7.6 million would put the reserve in a significant deficit position. It was felt that there would be benefit to having the project in a "shovel ready" state in the event of grant availability. The timing of design and construction is contingent on the final recommendations of the Master Plan, the availability of funding, and Council approval.

### **Wastewater Sewers Reserve Fund**

The reserve fund continues to be in a deficit position. Lack of sustained growth has meant the Town has had to fund infrastructure for longer than originally anticipated. This is anticipated to continue

for a number of years and will get worse as the 8<sup>th</sup> Concession Road sanitary service area build out continues; the Town will prepay the works and recover funding over time.

In addition water usage continues to decline on a per household basis which has placed an increased strain on fund requirements.

Administration will look at debt funding in order to address the cash flow issues facing the wastewater infrastructure system.

For purposes of putting together this PWES Capital Plan, Administration has assumed that new sidewalk and CWATS projects would be funded by the Infrastructure Reserve. Neither the Sidewalk LC nor the Trail LC annual allocations of \$74,000 and \$50,000 respectively allow for any significant new infrastructure. Administration continues to work at refining estimates for new infrastructure requirements to be funded from the Infrastructure LC as well as other methods of financing. Additional analysis will be brought before Council as these works continue.

Projected Lifecycle Reserve and Reserve Fund balances are provided in attached schedules.

#### **LINK TO STRATEGIC PRIORITIES**

No.	2015-16 Strategic Priorities	Applicable
1.	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.	✓
2.	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.	✓
3.	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.	
4.	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.	✓
5.	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.	

#### **COMMUNICATIONS**

Not applicable ☒

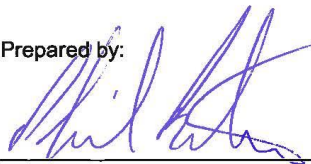
Website ☐ Social Media ☐ News Release ☐ Local Newspaper ☐

Report No. 57/17  
2018-2022 Public Works & Environmental Services Capital Works Plan  
December 12, 2017

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This report has been reviewed by senior Administration as indicated below and recommended for submission by the CAO.

Prepared by:



Phil Bartnik, P.Eng.  
Manager Engineering Services

Reviewed by:



Brian Hillman, MA, MCIP, RPP  
Director Planning and Building Services

Reviewed by:



Dan Plescioc, P.Eng.  
Director Public Works & Environmental  
Services

Reviewed by:



Luc Gagnon, CPA, CA, BMath  
Director Financial Services & Treasurer

Recommended by:



Tony Haddad, MSA, CMO, CPFA  
Chief Administrative Officer

Attachment(s):

1. 2018-2022 Public Works & Environmental Services Capital Works Plan
2. Road Lifecycle Funding Summary – November 27, 2017
3. Bridges Lifecycle Funding Summary – November 27, 2017
4. Sidewalk Lifecycle Funding Summary – November 27, 2017
5. Storm Sewer Lifecycle Funding Summary – November 27, 2017
6. Wastewater Sewers Reserve Fund Summary – November 29, 2017
7. Wastewater Facilities Reserve Fund Summary – November 25, 2017
8. Watermain Reserve Fund Summary – November 27, 2017
9. Water Facilities Reserve Fund Summary – November 27, 2017
10. Infrastructure Reserve Funding Summary – November 29, 2017

PB

Attachment No. 1

TOWN OF TECUMSEH Public Works and Environmental Services 2018 - 2022 Public Works & Environmental Services Capital Works Plan											
	Construction	Engineering	Contingency	Total	2017	2018	2019	2020	2021	2022	2023
<b>Roads</b>											
Paving	\$ 7,935,000	\$ -	\$ -	\$ 7,935,000	\$ 1,160,000	\$ 1,775,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Traffic Signal Upgrades/Maintenance	\$ 83,000	\$ 12,450	\$ 8,300	\$ 103,750				\$ 62,500			
Traffic Signal Reconstruction (Riverside/Lesperance)	\$ 105,000	\$ 30,000	\$ 5,300	\$ 140,300	\$ 140,300						
Traffic Signal Reconstruction (Lesperance/McNorton)	\$ 140,250	\$ 24,750	\$ -	\$ 165,000				\$ 165,000			
Tecumseh Road CIP - Phase 1	\$ 10,131,900	\$ 1,665,360	\$ 946,000	\$ 12,743,260	\$ 93,100	\$ 521,492					
Tecumseh Road CIP - Phase 2	\$ 5,579,980	\$ 846,540	\$ 538,020	\$ 6,964,540	\$ 47,000	\$ 88,298					
Tecumseh Road CIP - Phase 3	\$ 2,930,130	\$ 445,078	\$ 282,870	\$ 3,658,078							
Tecumseh Road CIP - Phase 4	\$ 3,027,950	\$ 459,522	\$ 292,050	\$ 3,779,522							
Tecumseh Road CIP - Phase 5	\$ 1,742,250	\$ 271,418	\$ 172,500	\$ 2,186,168							
Pulleyblank-Crowder-Moro Sanitary Sewer	\$ 1,293,000	\$ 210,900	\$ 64,700	\$ 1,568,600	\$ 1,480,600						
8th Concession Trunk Sanitary & Watermain Ph1	\$ 1,160,000	\$ 164,440	\$ 58,000	\$ 1,382,440	\$ 1,337,300						
Manning Road/ETLD Drain Relocation - Phase 2	\$ 617,500	\$ 96,555	\$ 18,525	\$ 732,580			\$ 682,580				
Manning Road Reconstruction - Phase 3	\$ 4,047,500	\$ 600,235	\$ 121,425	\$ 4,769,160	\$ 180,000			\$ 4,589,160			
South Talbot Road Reconstruction	\$ 2,039,500	\$ 189,000	\$ 102,000	\$ 2,330,500	\$ 90,000		\$ 2,240,500				
Roseli Drive Sanitary Sewer	\$ 950,000	\$ 155,000	\$ 47,500	\$ 1,152,500	\$ 77,500	\$ 1,075,000					
Sylvestre Drive Sanitary Sewer Extension	\$ 1,030,000	\$ 148,000	\$ 51,500	\$ 1,229,500		\$ 74,000	\$ 1,155,500				
Lesperance Road Bike Lanes	\$ 100,000	\$ 10,000	\$ -	\$ 110,000		\$ 110,000					
Tecumseh/Lacasse Intersection Improvements	\$ 365,000	\$ 77,000	\$ 36,500	\$ 478,500		\$ 40,000	\$ 439,000				
County Road 11 / South Talbot Roundabout	\$ 100,000	\$ -	\$ -	\$ 100,000			\$ 100,000				
Roads Needs Study	\$ -	\$ 90,000	\$ -	\$ 90,000			\$ 90,000				
Scully & St Mark's Storm PS/Riverside Drive *	\$ 600,000	\$ 90,000	\$ 60,000	\$ 750,000			\$ 45,000		\$ 705,000		
CR46/Webster/Laval Sanitary Sewer Extension	\$ 350,000	\$ 52,500	\$ 52,500	\$ 455,000		\$ 227,500	\$ 227,500				
Deiduca Drive Sanitary Sewer (LRPCP)	\$ 608,000	\$ 91,200	\$ 60,800	\$ 760,000		\$ 45,800		\$ 714,400			
Kensington Storm PS/Riverside Drive Sanitary *	\$ 575,000	\$ 118,250	\$ 57,500	\$ 748,750				\$ 58,125			\$ 690,625
Ure Street Sanitary Sewer (LRPCP)	\$ 533,900	\$ 80,100	\$ 53,400	\$ 667,000				\$ 40,000	\$ 627,000		
CR42: CR43 to Lesperance	\$ 50,000	\$ -	\$ -	\$ 50,000				\$ 50,000			
CR42: Lesperance to CR19	\$ 50,000	\$ -	\$ -	\$ 50,000					\$ 50,000		
O'Neil Street Sanitary Sewer (LRPCP)	\$ 617,500	\$ 92,600	\$ 61,800	\$ 772,000					\$ 46,300	\$ 725,700	
Moynahan-Henin-Regal Sanitary Sewer	\$ 755,300	\$ 113,300	\$ 75,500	\$ 944,000						\$ 56,850	\$ 887,150
	\$ 47,517,860	\$ 6,132,198	\$ 3,166,890	\$ 56,816,948	\$ 4,655,800	\$ 3,683,760	\$ 6,025,680	\$ 6,044,160	\$ 2,567,525	\$ 1,723,300	\$ 2,472,975
<b>Sidewalks/Pathways</b>											
Sidewalk Repair Program	\$ 345,000	\$ -	\$ -	\$ 345,000	\$ 69,000	\$ 69,000	\$ 69,000	\$ 69,000	\$ 69,000	\$ 69,000	\$ 69,000
Riverside Drive Trail	\$ 680,000	\$ 102,000	\$ 68,000	\$ 850,000	\$ 68,000	\$ 782,000					
Lesperance Road Trail (CR22 to CR42)	\$ 665,000	\$ 99,750	\$ 99,750	\$ 864,500			\$ 49,900	\$ 814,600			
CR42 / CR19 Roundabout (Sidewalks)	\$ 16,500	\$ -	\$ 2,500	\$ 19,000				\$ 19,000			
CR42: CR43 to Lesperance (Sidewalks)	\$ 352,000	\$ -	\$ 10,000	\$ 362,000					\$ 362,000		
CR42: Lesperance to CR19 (Sidewalks)	\$ 50,000	\$ -	\$ 7,500	\$ 57,500						\$ 57,500	
CR42: City Limits to CR43 (Sidewalks)	\$ 91,000	\$ -	\$ 13,700	\$ 104,700							\$ 104,700
	\$ 2,199,500	\$ 201,750	\$ 201,450	\$ 2,602,700	\$ 137,000	\$ 851,000	\$ 118,900	\$ 902,600	\$ 491,000	\$ 126,500	\$ 173,700
<b>CWATS Projects</b>											
CR11: Hwy 401 to NTR (Multi-Use Trail)	\$ 293,000	\$ 52,000	\$ 29,300	\$ 374,300	\$ 5,650	\$ 136,000	\$ 232,650				
CR42 / CR19 Roundabout (Bike Lanes)	\$ 1,000	\$ -	\$ -	\$ 1,000				\$ 1,000			
CR46: Hwy 401 to 9th Concession (Paved Shoulder)	\$ 260,000	\$ -	\$ 39,000	\$ 299,000				\$ 299,000			
CR42: CR43 to Lesperance (Bike Lanes)	\$ 13,300	\$ -	\$ -	\$ 13,300					\$ 13,300		
CR43: Barwell Diversion (Multi-Use Trail)	\$ 285,000	\$ -	\$ 57,000	\$ 342,000					\$ 342,000		
CR42: Lesperance to CR19 (Bike Lanes)	\$ 4,200	\$ -	\$ -	\$ 4,200						\$ 4,200	
CR42: City Limits to CR43 (Bike Lanes)	\$ 2,000	\$ -	\$ 1,000	\$ 3,000							\$ 3,000
	\$ 858,500	\$ 52,000	\$ 126,300	\$ 1,036,800	\$ 5,650	\$ 136,000	\$ 232,650	\$ 300,000	\$ 355,300	\$ 4,200	\$ 3,000

**TOWN OF TECUMSEH**  
**Public Works and Environmental Services**  
**2018 - 2022 Public Works & Environmental Services Capital Works Plan**

	Construction	Engineering	Contingency	Total	2017	2018	2019	2020	2021	2022	2023
<b>Bridges</b>											
Bridge & Culvert Condition Assessment (<3m Span)	\$ -	\$ 75,000	\$ -	\$ 75,000						\$ 75,000	
Bridge & Culvert Needs Study (>3m Span)	\$ -	\$ 108,000	\$ -	\$ 108,000		\$ 32,000		\$ 36,000		\$ 40,000	
Culvert #1: Riverside Drive	\$ 10,000	\$ -	\$ 2,000	\$ 12,000	\$ 12,000						
Culvert #58: 10th Concession Road	\$ 20,000	\$ 3,000	\$ 3,000	\$ 26,000	\$ 26,000						
Culvert #60: 10th Concession Road	\$ 20,000	\$ 3,000	\$ 3,000	\$ 26,000	\$ 26,000						
Culvert #62: 10th Concession Road	\$ 20,000	\$ 3,000	\$ 3,000	\$ 26,000	\$ 26,000						
Culvert #67: 11th Concession Road	\$ 15,000	\$ 3,000	\$ 2,000	\$ 20,000	\$ 20,000						
Culvert #46: South Talbot Road	\$ 290,500	\$ 90,000	\$ 30,000	\$ 410,500	\$ 40,000		\$ 370,500				
Culvert #47: South Talbot Road	\$ 131,410	\$ 50,000	\$ 14,000	\$ 195,410	\$ 20,000		\$ 175,410				
Culvert #35: Rossi Drive	\$ 30,000	\$ 4,500	\$ 1,500	\$ 36,000		\$ 36,000					
Sullivan Creek at 12th Concession (1004)	\$ 230,000	\$ 85,000	\$ 11,500	\$ 327,000		\$ 43,000	\$ 294,000				
Townline Road Drain at 8th Concession Road (1014)	\$ 250,000	\$ 85,000	\$ 12,500	\$ 347,500		\$ 43,000	\$ 304,500				
Merrick Creek at 8th Concession Road (1013)	\$ 230,000	\$ 85,000	\$ 11,500	\$ 326,500		\$ 43,000	\$ 283,500				
Culvert #45: South Talbot Road (CR11/STR Works)	\$ 250,000	\$ 38,000	\$ 38,000	\$ 326,000			\$ 326,000				
Culvert #42: Snake Lane Road	\$ 385,000	\$ 58,000	\$ 58,000	\$ 501,000			\$ 29,000	\$ 472,000			
Culvert #53: Snake Lane Road	\$ 352,000	\$ 53,000	\$ 53,000	\$ 458,000			\$ 26,500	\$ 431,500			
Culvert #54: Snake Lane Road	\$ 345,000	\$ 52,000	\$ 52,000	\$ 449,000			\$ 26,000	\$ 423,000			
Roadside Safety Improvements - Bridge #1010	\$ 50,000	\$ 10,000	\$ 8,000	\$ 68,000				\$ 68,000			
Roadside Safety Improvements - Bridge #2001	\$ 30,000	\$ 6,000	\$ 5,000	\$ 41,000				\$ 41,000			
Roadside Safety Improvements - Culvert #69	\$ 40,000	\$ 8,000	\$ 6,000	\$ 54,000				\$ 54,000			
Roadside Safety Improvements - Culvert #64	\$ 40,000	\$ 8,000	\$ 6,000	\$ 54,000				\$ 54,000			
Roadside Safety Improvements - Culvert #63	\$ 40,000	\$ 8,000	\$ 6,000	\$ 54,000				\$ 54,000			
Roadside Safety Improvements - Culvert #39	\$ 40,000	\$ 8,000	\$ 6,000	\$ 54,000				\$ 54,000			
Roadside Safety Improvements - Culvert #57	\$ 40,000	\$ 8,000	\$ 6,000	\$ 54,000				\$ 54,000			
Culvert #51: 8th Concession Road	\$ 100,000	\$ 15,000	\$ 15,000	\$ 130,000					\$ 7,500	\$ 122,500	
Culvert #70: 12th Concession Road	\$ 110,000	\$ 17,000	\$ 17,000	\$ 144,000					\$ 8,500	\$ 135,500	
Culvert #48: Holden Road	\$ 422,000	\$ 64,000	\$ 64,000	\$ 550,000							\$ 32,000
	\$ 3,480,910	\$ 947,500	\$ 434,000	\$ 4,862,910	\$ 170,000	\$ 197,000	\$ 1,825,410	\$ 1,741,500	\$ 16,000	\$ 373,000	\$ 32,000
<b>Watermains</b>											
Water & Wastewater Master Plan Update (2016)	\$ -	\$ 50,000	\$ -	\$ 50,000		\$ 50,000					
Tecumseh Road CIP - Phase 1	\$ 430,000	\$ 92,520	\$ 43,000	\$ 565,520	\$ 28,000						
Tecumseh Road CIP - Phase 2	\$ 298,900	\$ 47,030	\$ 29,890	\$ 375,820	\$ 16,000						
Tecumseh Road CIP - Phase 3	\$ 157,150	\$ 24,727	\$ 15,715	\$ 197,592							
Tecumseh Road CIP - Phase 4	\$ 162,250	\$ 25,529	\$ 16,225	\$ 204,004							
Tecumseh Road CIP - Phase 5	\$ -	\$ -	\$ -	\$ -							
Pulleyblank-Crowder-Moro Sanitary Sewer	\$ 440,000	\$ 63,900	\$ 22,000	\$ 525,900	\$ 491,600						
8th Concession Trunk Sanitary & Watermain Ph1	\$ 900,000	\$ 148,315	\$ 45,000	\$ 1,093,315	\$ 1,037,500						
Water Metering Facilities Repairs	\$ 85,000	\$ -	\$ -	\$ 85,000	\$ 85,000						
Mack Court Watermain Replacement	\$ 200,645	\$ 44,105	\$ 10,035	\$ 254,790	\$ 15,000	\$ 239,790					
Lacasse Park Watermain Replacement	\$ 290,820	\$ 59,830	\$ 14,540	\$ 365,190	\$ 15,000	\$ 350,190					
Tecumseh Road Watermain Abandonment	\$ 183,520	\$ 44,665	\$ 9,175	\$ 237,360	\$ 15,000	\$ 222,360					
Alden Crescent Watermain Replacement	\$ 130,835	\$ 31,735	\$ 6,545	\$ 169,120	\$ 15,000	\$ 154,120					
Hwy#3/Roscon Watermain Interconnection	\$ 131,100	\$ 32,775	\$ 6,565	\$ 170,430	\$ 15,000	\$ 155,430					
Rossi Drive Sanitary Sewer	\$ 35,000	\$ 25,000	\$ -	\$ 60,000	\$ 25,000	\$ 35,000					
Manning Road/ETLD Drain Relocation - Phase 2	\$ 373,000	\$ 58,325	\$ 11,190	\$ 442,520	\$ 25,000	\$ 417,520					
County Road 11 (North) Sanitary Sewer	\$ -	\$ 6,000	\$ -	\$ 6,000	\$ 6,000						
Hwy#3/Walker Rd Watermain Replacement	\$ 1,595,000	\$ 269,250	\$ 79,750	\$ 1,944,000		\$ 134,600	\$ 1,809,400				
Anode Protection Program	\$ 375,000	\$ -	\$ -	\$ 375,000		\$ 375,000					

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TOWN OF TECUMSEH Public Works and Environmental Services 2018 - 2022 Public Works & Environmental Services Capital Works Plan											
	Construction	Engineering	Contingency	Total	2017	2018	2019	2020	2021	2022	2023
SCADA Software/Server/Nodes Update	\$ 73,500	\$ -	\$ -	\$ 73,500		\$ 73,500					
Water Meter Reader System Update	\$ 15,000			\$ 15,000		\$ 15,000					
Westlake Drive - San, Str, Water	\$ 85,000	\$ 12,750	\$ 12,750	\$ 110,500			\$ 111,000				
CR46/Weber/Laval Sanitary Sewer Extension	\$ 600,000	\$ 90,000	\$ 60,000	\$ 750,000			\$ 45,000	\$ 705,000			
CR42 / CR19 Roundabout - Water & Sanitary	\$ 225,000	\$ 33,750	\$ 22,500	\$ 281,250				\$ 281,000			
West Tecumseh Trunk Watermain (W-1A)	\$ 1,150,000	\$ 230,000	\$ 172,500	\$ 1,552,500				\$ 115,000			
CR19 @ CR46 Advanced Construction	\$ 125,000	\$ 18,750	\$ 18,750	\$ 162,500				\$ 162,500			
CR19 @ CR34 Advanced Construction	\$ 40,000	\$ 6,000	\$ 6,000	\$ 52,000					\$ 52,000		
CR42: Lesperance to CR19 - Watermain	\$ 320,000	\$ 48,000	\$ 32,000	\$ 400,000						\$ 400,000	
	\$ 8,421,720	\$ 1,462,856	\$ 634,120	\$ 10,518,696	\$ 1,789,100	\$ 1,804,390	\$ 2,382,920	\$ 1,263,500	\$ 52,000	\$ 400,000	\$ -
<b>Wastewater Projects</b>											
Water & Wastewater Master Plan Update (2016)	\$ -	\$ 50,000	\$ -	\$ 50,000		\$ 50,000					
Tecumseh Road CIP - Phase 1	\$ 400,000	\$ 92,520	\$ 40,000	\$ 532,520	\$ 5,400						
Tecumseh Road CIP - Phase 2	\$ 298,900	\$ 47,030	\$ 29,890	\$ 375,820	\$ 3,000						
Tecumseh Road CIP - Phase 3	\$ 157,150	\$ 24,727	\$ 15,715	\$ 197,592							
Tecumseh Road CIP - Phase 4	\$ 162,250	\$ 25,529	\$ 16,225	\$ 204,004							
Tecumseh Road CIP - Phase 5	\$ -	\$ -	\$ -	\$ -							
Pulleyblank-Crowder-Moro Sanitary Sewer	\$ 780,000	\$ 111,000	\$ 39,000	\$ 930,000	\$ 87,450						
8th Concession Trunk Sanitary & Watermain Ph1	\$ 1,880,000	\$ 272,650	\$ 94,000	\$ 2,246,650	\$ 2,187,200						
Sanitary Sewer Rehabilitation (8th Removal)	\$ 3,637,824	\$ -	\$ -	\$ 3,637,824	\$ 810,500						
Cedarwood Sanitary PS - Repairs	\$ 70,000	\$ -	\$ -	\$ 70,000	\$ 70,000						
Sylvester Sanitary PS - Repairs	\$ 13,000	\$ -	\$ 2,000	\$ 15,000	\$ 15,000						
St Alphonse Sanitary PS - Repairs	\$ 2,000	\$ -	\$ 1,000	\$ 3,000	\$ 3,000						
Cedarwood Sanitary, Meter #1 - Repairs	\$ 4,000	\$ -	\$ 1,000	\$ 5,000	\$ 5,000						
NTR Sanitary Flume, Meter #4 - Repairs	\$ 6,000	\$ -	\$ 500	\$ 6,500	\$ 6,500						
8th Concession Flume, Meter #5 - Repairs	\$ 4,000	\$ -	\$ 500	\$ 4,500	\$ 4,500						
Manning Road/ETLD Drain Relocation - Phase 2	\$ 94,300	\$ 14,750	\$ 2,830	\$ 111,880	\$ 20,000		\$ 91,880				
Ross Drive Sanitary Sewer	\$ 450,000	\$ 85,000	\$ 22,500	\$ 557,500	\$ 42,500	\$ 515,000					
County Road 11 (North) Sanitary Sewer	\$ 875,000	\$ 172,000	\$ 105,000	\$ 1,152,000	\$ 125,000	\$ 75,000	\$ 952,000				
Sylvester Drive Sanitary Sewer Extension	\$ 615,000	\$ 145,600	\$ 30,800	\$ 791,400		\$ 109,200	\$ 682,200				
Pump Station Emergency Response Plan	\$ -	\$ 35,000	\$ -	\$ 35,000		\$ 35,000					
SCADA Software/Server/Nodes Update	\$ 26,250	\$ -	\$ -	\$ 26,250		\$ 26,250					
Sylvester Drive Sanitary PS Improvements	\$ 30,000	\$ -	\$ -	\$ 30,000		\$ 30,000					
Westlake Drive - San, Str, Water	\$ 132,000	\$ 20,000	\$ 20,000	\$ 172,000		\$ 172,000					
CR46/Weber/Laval Sanitary Sewer Extension	\$ 1,069,000	\$ 160,350	\$ 106,800	\$ 1,336,150		\$ 80,175	\$ 1,256,075				
CR42 / CR19 Roundabout - Water & Sanitary	\$ 15,000	\$ 2,300	\$ 1,500	\$ 18,800				\$ 18,800			
West Tecumseh Trunk Sanitary (WW-1A)	\$ 2,200,000	\$ 440,000	\$ 330,000	\$ 2,970,000				\$ 220,000			
Division San Sewers (Intersection Rd)	\$ 676,000	\$ 135,200	\$ 101,400	\$ 912,600				\$ 67,600			
Deiduca Drive Sanitary Sewer (LRPCP)	\$ 727,500	\$ 159,100	\$ 72,800	\$ 959,400			\$ 79,550	\$ 75,000			
CR42: CR43 to Lesperance - Sanitary	\$ 920,000	\$ 138,000	\$ 92,000	\$ 1,150,000					\$ 604,450		
Kensington Storm PS/Riverside Drive Sanitary *	\$ 1,100,000	\$ 185,000	\$ 110,000	\$ 1,395,000					\$ 82,500		
Ure Street Sanitary Sewer (LRPCP)	\$ 407,500	\$ 61,100	\$ 40,800	\$ 509,400					\$ 31,000	\$ 476,000	
CR42: Lesperance to CR19 - Sanitary	\$ 40,000	\$ 6,000	\$ 4,000	\$ 50,000						\$ 50,000	
O'Neil Street Sanitary Sewer (LRPCP)	\$ 471,300	\$ 70,700	\$ 23,600	\$ 565,600						\$ 35,350	\$ 530,650
Moynahan-Herlin-Regal Sanitary Sewer (LRPCP)	\$ 576,400	\$ 86,500	\$ 28,800	\$ 691,700							\$ 43,250
	\$ 17,840,374	\$ 2,595,056	\$ 1,332,760	\$ 21,768,190	\$ 4,152,100	\$ 3,637,774	\$ 2,087,805	\$ 1,637,475	\$ 2,067,950	\$ 563,350	\$ 1,886,400
<b>Storm Sewers</b>											
Tecumseh Road CIP - Phase 1	\$ 700,000	\$ -	\$ 70,000	\$ 770,000	\$ 10,000	\$ 27,410					
Tecumseh Road CIP - Phase 2	\$ -	\$ -	\$ -	\$ -	\$ 10,000						



**TOWN OF TECUMSEH**  
**Public Works and Environmental Services**  
**2018 - 2022 Public Works & Environmental Services Capital Works Plan**

	Construction	Engineering	Contingency	Total	2017	2018	2019	2020	2021	2022	2023
Tecumseh Road CIP - Phase 3	\$ -	\$ -	\$ -	\$ -							
Tecumseh Road CIP - Phase 4	\$ -	\$ -	\$ -	\$ -							
Tecumseh Road CIP - Phase 5	\$ -	\$ -	\$ -	\$ -							
Pulleyblank-Crowder-Moro Sanitary Sewer	\$ 685,000	\$ 92,500	\$ 33,300	\$ 791,000	\$ 748,500						
Storm Drainage Master Plan	\$ -	\$ 600,000	\$ -	\$ 600,000	\$ 300,000	\$ 300,000					
Rossi Drive Sanitary Sewer	\$ 386,500	\$ 70,000	\$ 19,300	\$ 475,800	\$ 35,000	\$ 440,800					
Manning Road/ETLD Drain Relocation - Phase 2	\$ 1,428,600	\$ 257,353	\$ 42,850	\$ 1,728,803	\$ 60,000		\$ 1,668,830				
Manning Road Reconstruction - Phase 3	\$ 285,000	\$ 42,300	\$ 8,500	\$ 335,800				\$ 335,800			
Sylvester Drive Sanitary Sewer Extension	\$ 66,500	\$ 8,400	\$ 3,350	\$ 78,250		\$ 4,200	\$ 74,050				
Pump Station Emergency Response Plan	\$ -	\$ 35,000	\$ -	\$ 35,000		\$ 35,000					
SCADA Software/Server/Nodes Update	\$ 5,250	\$ -	\$ -	\$ 5,250		\$ 5,250					
West St. Louis Storm PS - Repairs	\$ 51,000	\$ 7,850	\$ 7,850	\$ 66,300			\$ 66,300				
Lesperance Road Storm PS - Repairs	\$ 181,000	\$ 18,100	\$ 18,100	\$ 217,200		\$ 100,000	\$ 117,200				
(East) St. Louis Storm PS - Repairs	\$ 65,000	\$ 9,750	\$ 9,750	\$ 84,500			\$ 84,500				
Westlake Drive - San, Stm, Water	\$ 120,000	\$ 18,000	\$ 18,000	\$ 156,000			\$ 156,000				
Oldcastle Storm Drainage Master Plan	\$ -	\$ 350,000	\$ -	\$ 350,000		\$ 120,000	\$ 230,000				
CR46/Webster/Laval Sanitary Sewer Extension	\$ 178,425	\$ 26,800	\$ 26,800	\$ 232,025			\$ 13,400	\$ 218,625			
Souly & St. Mark's Storm PS/Riverside Drive *	\$ 6,035,900	\$ 940,400	\$ 603,600	\$ 7,579,900			\$ 470,200		\$ 7,109,700		
Delduca Drive Sanitary Sewer (LRPCP)	\$ 374,400	\$ 56,200	\$ 37,400	\$ 468,000			\$ 28,100		\$ 439,900		
Kensington Storm PS/Riverside Drive Sanitary *	\$ 4,750,000	\$ 712,500	\$ 475,000	\$ 5,938,000					\$ 356,250		\$ 5,581,750
Ure Street Sanitary Sewer (LRPCP)	\$ 328,800	\$ 49,300	\$ 32,900	\$ 411,000					\$ 25,000	\$ 386,000	
O'Neil Street Sanitary Sewer (LRPCP)	\$ 380,300	\$ 57,000	\$ 19,000	\$ 456,000					\$ 28,500	\$ 427,500	
Moynahan-Henin-Regal Sanitary Sewer (LRPCP)	\$ 465,100	\$ 69,800	\$ 23,300	\$ 558,000						\$ 34,900	
	\$ 16,466,775	\$ 3,421,083	\$ 1,448,800	\$ 21,336,658	\$ 1,163,900	\$ 1,032,650	\$ 2,908,580	\$ 554,425	\$ 7,930,850	\$ 414,500	\$ 6,044,150

**Municipal Drains**

Manning Road/ETLD Drain Relocation - Phase 2	\$ 1,735,000	\$ 340,300	\$ 52,000	\$ 2,127,300	\$ 105,000		\$ 2,022,300				
	\$ 1,735,000	\$ 340,300	\$ 52,000	\$ 2,127,300	\$ 105,000		\$ 2,022,300				

<b>TOTAL</b>	<b>\$ 96,530,439</b>	<b>\$ 15,152,843</b>	<b>\$ 7,389,120</b>	<b>\$ 121,061,364</b>	<b>\$ 12,178,550</b>	<b>\$ 11,343,214</b>	<b>\$ 17,604,245</b>	<b>\$ 12,443,660</b>	<b>\$ 13,420,625</b>	<b>\$ 3,604,850</b>	<b>\$ 10,592,225</b>
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\* Subject to final recommendations and prioritization in the Storm Drainage Master Plan, available funding, and council approval

**MAJOR PROJECTS SUMMARY**

**Oldcastle - North Talbot - Sanitary Area**

Pulleyblank-Crowder-Moro Sanitary Sewer	\$ 3,178,000	\$ 478,300	\$ 159,000	\$ 3,815,600	\$ 3,595,800	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rossi Drive Sanitary Sewer	\$ 1,851,500	\$ 339,500	\$ 90,800	\$ 2,281,800	\$ 180,000	\$ 2,101,800	\$ -	\$ -	\$ -	\$ -	\$ -
County Road 11 (North) Sanitary Sewer	\$ 1,168,000	\$ 230,000	\$ 134,300	\$ 1,532,300	\$ 136,850	\$ 211,000	\$ 1,184,650	\$ -	\$ -	\$ -	\$ -
Olympia-Astor-Solar Sanitary Sewer	\$ 1,883,400	\$ 282,500	\$ 188,400	\$ 2,354,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
County Road 11 (South) Sanitary Sewer	\$ 300,000	\$ 45,000	\$ 30,000	\$ 375,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**Oldcastle - 8th Concession - Sanitary Area**

8th Concession Trunk Sanitary & Watermain Ph1	\$ 3,940,000	\$ 585,405	\$ 197,000	\$ 4,722,405	\$ 4,542,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CR46/Webster/Laval Sanitary Sewer Extension	\$ 2,457,425	\$ 329,850	\$ 285,200	\$ 3,072,275	\$ -	\$ 366,075	\$ 2,706,200	\$ -	\$ -	\$ -	\$ -
Delduca Drive Sanitary Sewer (LRPCP)	\$ 1,709,900	\$ 306,500	\$ 171,000	\$ 2,187,000	\$ -	\$ 153,250	\$ 75,000	\$ 1,958,750	\$ -	\$ -	\$ -
Ure Street Sanitary Sewer (LRPCP)	\$ 1,270,200	\$ 190,500	\$ 127,100	\$ 1,587,000	\$ -	\$ -	\$ -	\$ 98,000	\$ 1,491,000	\$ -	\$ -
O'Neil Street Sanitary Sewer (LRPCP)	\$ 1,469,100	\$ 220,300	\$ 104,400	\$ 1,794,000	\$ -	\$ -	\$ -	\$ -	\$ 110,150	\$ 1,683,850	\$ -
Moynahan-Henin-Regal Sanitary Sewer (LRPCP)	\$ 1,796,800	\$ 269,600	\$ 127,600	\$ 2,194,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 134,800	\$ -

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TOWN OF TECUMSEH Public Works and Environmental Services 2018 - 2022 Public Works & Environmental Services Capital Works Plan											
	Construction	Engineering	Contingency	Total	2017	2018	2019	2020	2021	2022	2023
<b>County of Essex (Initiated) Projects</b>											
CR11: Hwy 401 to NTR (Multi-Use Trail)	\$ 293,000	\$ 52,000	\$ 29,300	\$ 374,300	\$ 5,650	\$ 136,000	\$ 232,650	\$ -	\$ -	\$ -	\$ -
County Road 11/South Talbot Roundabout	\$ 100,000	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -
Culvert #45 - South Talbot Road (CR11/STR Works)	\$ 250,000	\$ 38,000	\$ 38,000	\$ 326,000	\$ -	\$ -	\$ 326,000	\$ -	\$ -	\$ -	\$ -
Westlake Drive - San, Str, Water	\$ 337,000	\$ 50,750	\$ 50,750	\$ 438,500	\$ -	\$ -	\$ 438,500	\$ -	\$ -	\$ -	\$ -
CR42 / CR19 Roundabout	\$ 257,500	\$ 36,050	\$ 26,500	\$ 319,800	\$ -	\$ -	\$ -	\$ 319,800	\$ -	\$ -	\$ -
CR19 @ CR46 Advanced Construction	\$ 125,000	\$ 18,750	\$ 18,750	\$ 162,500	\$ -	\$ -	\$ -	\$ -	\$ 162,500	\$ -	\$ -
CR42: CR43 to Lesperance	\$ 1,335,300	\$ 138,000	\$ 102,000	\$ 1,575,300	\$ -	\$ -	\$ -	\$ -	\$ 1,575,300	\$ -	\$ -
CR19 @ CR34 Advanced Construction	\$ 40,000	\$ 6,000	\$ 6,000	\$ 52,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 52,000	\$ -
CR43: Barwell Diversion (Multi-Use Trail)	\$ 285,000	\$ -	\$ 57,000	\$ 342,000	\$ -	\$ -	\$ -	\$ -	\$ 342,000	\$ -	\$ -
CR42: Lesperance to CR19	\$ 464,200	\$ 54,000	\$ 43,500	\$ 561,700	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 561,700	\$ -
CR42: City Limits to CR43	\$ 93,000	\$ -	\$ 14,700	\$ 107,700	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 104,700
<b>Other</b>											
Water & Wastewater Master Plan Update (2016)	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -
Manning Road/ETLD Drain Relocation - Phase 2	\$ 4,246,400	\$ 767,313	\$ 127,395	\$ 5,141,110	\$ 280,000	\$ -	\$ 4,863,110	\$ -	\$ -	\$ -	\$ -
Manning Road - Road Reconstruction - Phase 3	\$ 4,332,500	\$ 642,535	\$ 129,825	\$ 5,104,860	\$ 180,000	\$ -	\$ -	\$ 4,924,860	\$ -	\$ -	\$ -
Tecumseh Road CIP - Phase 1	\$ 11,661,900	\$ 1,650,400	\$ 1,099,000	\$ 14,611,300	\$ 136,500	\$ 548,902	\$ -	\$ -	\$ -	\$ -	\$ -
Tecumseh Road CIP - Phase 2	\$ 6,177,780	\$ 940,600	\$ 697,800	\$ 7,716,180	\$ 76,000	\$ 88,298	\$ -	\$ -	\$ -	\$ -	\$ -
Tecumseh Road CIP - Phase 3	\$ 3,244,430	\$ 494,532	\$ 314,300	\$ 4,053,262	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tecumseh Road CIP - Phase 4	\$ 3,352,450	\$ 510,580	\$ 324,500	\$ 4,187,530	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tecumseh Road CIP - Phase 5	\$ 1,742,250	\$ 271,418	\$ 172,500	\$ 2,186,168	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Riverside Drive Trail	\$ 680,000	\$ 102,000	\$ 68,000	\$ 850,000	\$ 68,000	\$ 782,000	\$ -	\$ -	\$ -	\$ -	\$ -
Lesperance Road Trail (CR22 to CR42)	\$ 665,000	\$ 99,750	\$ 99,750	\$ 864,500	\$ -	\$ -	\$ 49,900	\$ 814,600	\$ -	\$ -	\$ -
Sanitary Sewer Rehabilitation (I&I Removal)	\$ 3,637,824	\$ -	\$ -	\$ 3,637,824	\$ 810,500	\$ 2,827,324	\$ -	\$ -	\$ -	\$ -	\$ -
Storm Drainage Master Plan	\$ -	\$ 600,000	\$ -	\$ 600,000	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
South Talbot Road Reconstruction & Culverts	\$ 2,461,410	\$ 329,000	\$ 146,000	\$ 2,936,410	\$ 150,000	\$ -	\$ 2,786,410	\$ -	\$ -	\$ -	\$ -
Tecumseh/Lacasse Intersection Improvements	\$ 365,000	\$ 77,000	\$ 36,500	\$ 478,500	\$ -	\$ 40,000	\$ 438,500	\$ -	\$ -	\$ -	\$ -
Mack Court Watermain Replacement	\$ 200,645	\$ 44,105	\$ 10,035	\$ 254,790	\$ 15,000	\$ 239,790	\$ -	\$ -	\$ -	\$ -	\$ -
Lacasse Park Watermain Replacement	\$ 280,820	\$ 59,830	\$ 14,540	\$ 355,190	\$ 15,000	\$ 350,190	\$ -	\$ -	\$ -	\$ -	\$ -
Tecumseh Road Watermain Abandonment	\$ 183,520	\$ 44,665	\$ 9,175	\$ 237,360	\$ 15,000	\$ 222,360	\$ -	\$ -	\$ -	\$ -	\$ -
Aldan Crescent Watermain Replacement	\$ 130,835	\$ 31,735	\$ 6,545	\$ 169,120	\$ 15,000	\$ 154,120	\$ -	\$ -	\$ -	\$ -	\$ -
Hwy#3/Roscoe Watermain Interconnection	\$ 131,100	\$ 32,775	\$ 6,555	\$ 170,430	\$ 15,000	\$ 155,430	\$ -	\$ -	\$ -	\$ -	\$ -
Hwy#3/Walker Rd Watermain Replacement	\$ 1,596,000	\$ 269,250	\$ 79,750	\$ 1,944,000	\$ -	\$ 134,600	\$ 1,809,400	\$ -	\$ -	\$ -	\$ -
Anode Protection Program	\$ 375,000	\$ -	\$ -	\$ 375,000	\$ -	\$ 375,000	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA Software/Server/Nodes Update	\$ 105,000	\$ -	\$ -	\$ 105,000	\$ 105,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sylvestre Drive Sanitary Sewer Extension	\$ 1,711,500	\$ 302,000	\$ 85,850	\$ 2,099,350	\$ -	\$ 187,400	\$ 1,911,750	\$ -	\$ -	\$ -	\$ -
West St. Louis Storm PS - Repairs	\$ 51,000	\$ 7,650	\$ 7,650	\$ 66,300	\$ -	\$ -	\$ 66,300	\$ -	\$ -	\$ -	\$ -
Lesperance Road Storm PS - Repairs	\$ 181,000	\$ 18,100	\$ 18,100	\$ 217,200	\$ -	\$ 100,000	\$ 117,200	\$ -	\$ -	\$ -	\$ -
(East) St. Louis Storm PS - Repairs	\$ 65,000	\$ 9,750	\$ 9,750	\$ 84,500	\$ -	\$ -	\$ 84,500	\$ -	\$ -	\$ -	\$ -
Oldcastle Storm Drainage Master Plan	\$ -	\$ 350,000	\$ -	\$ 350,000	\$ -	\$ 120,000	\$ 230,000	\$ -	\$ -	\$ -	\$ -
Scully & St. Mark's Storm PS/Riverside Drive *	\$ 6,635,900	\$ 1,030,400	\$ 663,600	\$ 8,329,900	\$ -	\$ -	\$ 515,200	\$ -	\$ 7,814,700	\$ -	\$ -
West Tecumseh Trunk Watermain (WV-1A)	\$ 1,150,000	\$ 230,000	\$ 172,500	\$ 1,553,000	\$ -	\$ -	\$ -	\$ 115,000	\$ -	\$ -	\$ -
West Tecumseh Trunk Sanitary (WW-1A)	\$ 2,200,000	\$ 440,000	\$ 330,000	\$ 2,970,000	\$ -	\$ -	\$ -	\$ 220,000	\$ -	\$ -	\$ -
Diversion San Sewers (Intersection Rd) (WW-2)	\$ 676,000	\$ 135,200	\$ 101,400	\$ 913,000	\$ -	\$ -	\$ -	\$ 67,600	\$ -	\$ -	\$ -
Kensington Storm PS/Riverside Drive Sanitary *	\$ 6,425,000	\$ 993,750	\$ 642,500	\$ 8,061,750	\$ -	\$ -	\$ -	\$ -	\$ 496,875	\$ -	\$ 7,564,875



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## Attachment No. 2

### Road Lifecycle (1500) Funding Summary - November 27, 2017

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	\$7,334,000	\$7,351,610	\$5,459,130	\$4,117,670	\$5,682,345
Budget Allocation	\$4,160,000	\$4,160,000	\$4,160,000	\$4,160,000	\$4,160,000
CWATS			\$120,000		
County Connecting Link Agreement			\$450,000		
<b>Funds Available</b>	<b>\$11,494,000</b>	<b>\$11,511,610</b>	<b>\$10,189,130</b>	<b>\$8,277,670</b>	<b>\$9,842,345</b>
<b>Committed</b>					
IT GIS Tech % share	\$26,300	\$26,800	\$27,300	\$27,800	\$27,800
<b>Balance Committed</b>	<b>\$26,300</b>	<b>\$26,800</b>	<b>\$27,300</b>	<b>\$27,800</b>	<b>\$27,800</b>
<b>Balance Uncommitted</b>	<b>\$11,467,700</b>	<b>\$11,484,810</b>	<b>\$10,161,830</b>	<b>\$8,249,870</b>	<b>\$9,814,545</b>
<b>Proposed</b>					
Road Paving - Asphaltting	1) \$1,775,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Traffic Signal Reconstruct (Riverside/Lesperance)	\$140,300				
Traffic Signal Upgrades/Maintenance			\$62,500		
Traffic Signal Reconstruct (Lesperance/McNorton)			\$165,000		
Tecumseh Road CIP Ph 1	\$521,492				
Tecumseh Road CIP Phase 2	\$88,298				
Pulleyblank-Crowder-Moro (Sanitary Sewer)	\$120,000				
8th Concession Sanitary Trunk & Watermain	\$75,000				
Manning Road - Phase 2 - Drain Relocation	\$17,000	\$682,580			
Manning Road - Phase 3 - Road Reconstruction	\$80,000		\$4,589,160		
Rossi Drive (Sanitary Sewer)	\$1,075,000				
Lesperance Road Bike Lanes	\$110,000				
Sylvestre Drive (Sanitary Sewer)	\$74,000	\$1,155,500			
Tecumseh/Lacasse Intersection Improvements	\$40,000	\$439,000			
South Talbot Road Reconstruction		\$2,240,500			
County Road #11/South Talbot Roundabout		\$100,000			
Roads Needs Study		\$90,000			
Scully & St. Mark's Storm PS/Riverside Drive		\$45,000		\$705,000	
CR #46 Sanitary Sewer Extension (LRPCP)		\$227,500	\$227,500		
Delduca Drive (Sanitary Sewer LRPCP)		\$45,600		\$714,400	
Kensington Storm PS/Riverside Drive Sanitary				\$58,125	
Ure Street (Sanitary Sewer LRPCP)				\$40,000	\$627,000
CR42: CR43 to Lesperance				\$50,000	
CR42: Lesperance to CR19					\$50,000
O'Neil Street Sanitary Sewer (LRPCP)					\$46,300
<b>Balance Proposed</b>	<b>\$4,116,090</b>	<b>\$6,025,680</b>	<b>\$6,044,160</b>	<b>\$2,567,525</b>	<b>\$1,723,300</b>
<b>Balance Available</b>	<b>\$7,351,610</b>	<b>\$5,459,130</b>	<b>\$4,117,670</b>	<b>\$5,682,345</b>	<b>\$8,091,245</b>

**Notes:**

1) General allowance for asphaltting

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### Attachment No. 3

#### Bridges Lifecycle (1660) Funding Summary - November 27, 2017

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	\$ 504,000	\$ 671,000	\$ (764,410)	\$ (2,115,910)	\$ (1,741,910)
Budget Allocation	\$ 390,000	\$ 390,000	\$ 390,000	\$ 390,000	\$ 390,000
<b>Funds Available</b>	<b>\$ 894,000</b>	<b>\$ 1,061,000</b>	<b>\$ (374,410)</b>	<b>\$ (1,725,910)</b>	<b>\$ (1,351,910)</b>
<b>Committed</b>					
Culvert #58: 10 <sup>th</sup> Concession	\$ 26,000				
<b>Balance Committed</b>	<b>\$ 26,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Balance Uncommitted</b>	<b>\$ 868,000</b>	<b>\$ 1,061,000</b>	<b>\$ (374,410)</b>	<b>\$ (1,725,910)</b>	<b>\$ (1,351,910)</b>
<b>Proposed</b>					
Culvert Condition Assessment (<3m Span)					\$ 75,000
Bridge/Culvert Needs Study (>3m)	\$ 32,000		\$ 36,000		\$ 40,000
Culvert #35: Rossi Drive	\$ 36,000				
Sullivan Creek at 12th Concession (1004)	\$ 43,000	\$ 284,000			
Townline Road Drain at 6th Conc Rd (1014)	\$ 43,000	\$ 304,500			
Merrick Creek at 8th Concession (1013)	\$ 43,000	\$ 283,500			
Culvert #46: South Talbot Road		\$ 370,500			
Culvert #47: South Talbot Road		\$ 175,410			
Culvert #45: South Talbot (CR11/STR Works)		\$ 326,000			
Culvert #42: Snake Lane Road		\$ 29,000	\$ 472,000		
Culvert #53: Snake Lane		\$ 26,500	\$ 431,500		
Culvert #54: Snake Lane		\$ 26,000	\$ 423,000		
Roadside Safety Improvements - Bridge #1010			\$ 68,000		
Roadside Safety Improvements - Bridge #2001			\$ 41,000		
Roadside Safety Improvements - Culvert #69			\$ 54,000		
Roadside Safety Improvements - Culvert #64			\$ 54,000		
Roadside Safety Improvements - Culvert #63			\$ 54,000		
Roadside Safety Improvements - Culvert #39			\$ 54,000		
Roadside Safety Improvements - Culvert #57			\$ 54,000		
Culvert #51: 8th Concession				\$ 7,500	\$ 122,500
Culvert #70: 12th Concession				\$ 8,500	\$ 135,500
<b>Balance Proposed</b>	<b>\$ 197,000</b>	<b>\$ 1,825,410</b>	<b>\$ 1,741,500</b>	<b>\$ 16,000</b>	<b>\$ 373,000</b>
<b>Balance Available</b>	<b>\$ 671,000</b>	<b>\$ (764,410)</b>	<b>\$ (2,115,910)</b>	<b>\$ (1,741,910)</b>	<b>\$ (1,724,910)</b>

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#### Attachment No. 4

##### Sidewalk Lifecycle (1550) Funding Summary - November 27, 2017

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	\$206,000	\$211,000	\$216,000	\$221,000	\$226,000
Budget Allocation	\$74,000	\$74,000	\$74,000	\$74,000	\$74,000
<b>Funds Available</b>	<b>\$280,000</b>	<b>\$285,000</b>	<b>\$290,000</b>	<b>\$295,000</b>	<b>\$300,000</b>
<b>Committed</b>					
<b>Balance Committed</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance Uncommitted</b>	<b>\$280,000</b>	<b>\$285,000</b>	<b>\$290,000</b>	<b>\$295,000</b>	<b>\$300,000</b>
<b>Proposed</b>					
Sidewalk repair program general allowance	\$69,000	\$69,000	\$69,000	\$69,000	\$69,000
<b>Balance Proposed</b>	<b>\$69,000</b>	<b>\$69,000</b>	<b>\$69,000</b>	<b>\$69,000</b>	<b>\$69,000</b>
<b>Balance Available</b>	<b>\$211,000</b>	<b>\$216,000</b>	<b>\$221,000</b>	<b>\$226,000</b>	<b>\$231,000</b>

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### Attachment No. 5

#### Storm Sewer Lifecycle (1650) Funding Summary - November 27, 2017

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	(\$184,000)	(\$556,960)	(\$2,590,840)	(\$2,260,565)	(\$9,306,715)
Budget Allocation	\$864,700	\$874,700	\$884,700	\$884,700	\$884,700
Electricity Sale to Grid	\$10,000				
<b>Funds Available</b>	<b>\$690,700</b>	<b>\$317,740</b>	<b>(\$1,706,140)</b>	<b>(\$1,375,865)</b>	<b>(\$8,422,015)</b>
<b>Committed</b>					
Gouin St. Storm Sewer	\$200,000				
Stormwater Master Plan	\$300,000				
Manning Road/ETLD Drain Relocation - Phase 2	\$15,000				
<b>Balance Committed</b>	<b>\$515,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance Uncommitted</b>	<b>\$175,700</b>	<b>\$317,740</b>	<b>(\$1,706,140)</b>	<b>(\$1,375,865)</b>	<b>(\$8,422,015)</b>
<b>Proposed</b>					
Tecumseh Road CIP Phase 1	\$27,410				
Rossi Drive	\$440,800				
Sylvestre Drive Sanitary Sewer Extension	\$4,200	\$74,050			
Pump Station Emergency Response Plan	\$35,000				
SCADA Software/Server/Nodes Update	\$5,250				
Manning Road/ETLD Drain Relocation - Phase 2		\$1,668,830			
Manning Road Reconstruction - Phase 3			\$335,800		
Lesperance Road Storm PS Repairs	\$100,000	\$117,200			
Oldcastle Storm Drainage Master Plan	\$120,000	\$230,000			
West St. Louis Storm PS Repairs		\$66,300			
East St. Louis Storm PS Repairs		\$84,500			
Westlake Drive - Sanitary/Storm/Water		\$156,000			
County /Road 46 Sanitary Extension (LRPCP)		\$13,400	\$218,625		
Scully & St. Mark's Storm PS/Riverside Drive		\$470,200		\$7,109,700	
Delduca Drive (LRPCP)		\$28,100		\$439,900	
Kensington Storm PS/Riverside Drive Sanitary				\$356,250	
Ure Street (Sanitary LRPCP)				\$25,000	\$386,000
O'Neil Street Sanitary Sewer (LRPCP)					\$28,500
<b>Balance Proposed</b>	<b>\$732,660</b>	<b>\$2,908,580</b>	<b>\$554,425</b>	<b>\$7,930,850</b>	<b>\$414,500</b>
<b>Balance Available</b>	<b>(\$556,960)</b>	<b>(\$2,590,840)</b>	<b>(\$2,260,565)</b>	<b>(\$9,306,715)</b>	<b>(\$8,836,515)</b>

### Attachment No. 6

#### Wastewater Sewers Reserve Fund (2550) Funding Summary - November 29, 2017

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	(\$2,662,349)	(\$3,306,787)	(\$2,731,963)	(\$1,410,705)	(\$694,066)
Estimated Allocation	\$1,426,206	\$1,527,833	\$1,630,775	\$1,780,614	\$1,912,670
Estimated Interest	(\$60,000)	(\$74,000)	(\$61,000)	(\$32,000)	(\$16,000)
Development Charges	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Capital Sewer Charges	\$292,965	\$1,901,580	\$1,732,412	\$1,021,375	\$905,515
Ontario Community Infrastructure Fund	\$1,049,047				
Canada Water Wastewater Fund	\$1,118,912				
Transfer from Wastewater Facilities RF	\$0	\$0	\$0		\$0
<b>Funds Available</b>	<b>\$1,284,781</b>	<b>\$148,626</b>	<b>\$670,224</b>	<b>\$1,459,284</b>	<b>\$2,208,119</b>
<b>Committed</b>					
Debt payments - Lakewood Pump Station	\$200,000	\$200,000	\$100,000	\$0	\$0
Debt payments - 2012 Non-DC debt	\$57,600	\$57,600	\$57,600	\$57,600	\$57,600
Debt payments - DC Debt	\$704,144	\$538,384	\$258,554	\$0	\$0
IT GIS Tech % share	\$26,300	\$26,800	\$27,300	\$27,800	\$28,400
Sanitary Sewer Rehabilitation (I&I Removal)	\$2,827,324				
Manning Rd/ETLD Relocation - Phase 2	\$7,000				
<b>Balance Committed</b>	<b>\$3,822,368</b>	<b>\$822,784</b>	<b>\$443,454</b>	<b>\$85,400</b>	<b>\$86,000</b>
<b>Balance Uncommitted</b>	<b>(\$2,557,587)</b>	<b>(\$674,158)</b>	<b>\$226,770</b>	<b>\$1,373,884</b>	<b>\$2,122,119</b>
<b>Proposed</b>					
Water/Wastewater Master Plan Update	\$50,000				
Manning Rd/ETLD Relocation - Phase 2		\$91,880			
Rossi Drive	\$515,000				
County Road 11 (Walker Road)	\$75,000	\$952,000			
Sylvestre Drive Sanitary Extension	\$109,200	\$682,200			
Westlake Drive - Sanitary, Storm, Water		\$172,000			
CR46 Sanitary Sewer Extension (LRPCP)		\$80,175	\$1,256,075		
CR42/CR19 Roundabout - Sanitary			\$18,800		
West Tecumseh Trunk (WW-1A)			\$220,000		
Diversion Sewers Intersection Road (WW-2)			\$67,600		
Delduca Drive (LPCP)		\$79,550	\$75,000	\$804,450	
CR42: CR43 to Lesperance - Sanitary				\$1,150,000	
Riverside Drive Sanitary Trunk Storage				\$82,500	
Ure Street (LRPCP)				\$31,000	\$478,000
CR42: Lesperance to CR19 - Sanitary					\$50,000
O'Neil Street Sanitary Sewer (LRPCP)					\$35,350
<b>Total Proposed</b>	<b>\$749,200</b>	<b>\$2,057,805</b>	<b>\$1,637,475</b>	<b>\$2,067,950</b>	<b>\$563,350</b>
<b>Balance Available</b>	<b>(\$3,306,787)</b>	<b>(\$2,731,963)</b>	<b>(\$1,410,705)</b>	<b>(\$694,066)</b>	<b>\$1,558,769</b>

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**Attachment No. 7**

**Wastewater Facilities (2560) Funding Summary - November 25, 2017**

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	\$1,054,159	\$1,337,909	\$1,737,909	\$2,176,909	\$2,625,909
Estimated Allocation	\$350,000	\$400,000	\$400,000	\$400,000	\$450,000
Estimated Interest	\$24,000	\$30,000	\$39,000	\$49,000	\$59,000
Reallocate to Wastewater Sewers RF	\$0	\$0	\$0	\$0	\$0
<b>Funds Available</b>	<b>\$1,428,159</b>	<b>\$1,767,909</b>	<b>\$2,176,909</b>	<b>\$2,625,909</b>	<b>\$3,134,909</b>
<b>Committed</b>					
<b>Balance Committed</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance Uncommitted</b>	<b>\$1,428,159</b>	<b>\$1,767,909</b>	<b>\$2,176,909</b>	<b>\$2,625,909</b>	<b>\$3,134,909</b>
<b>Proposed</b>					
Sylvestre Sanitary PS Repairs/Improvements	\$15,000	\$30,000			
St. Alphonse Sanitary PS Repairs	\$3,000				
NTR Sanitary Flume, Meter # 4 Repairs	\$6,500				
8th Concession Flume, Meter # 5 Repairs	\$4,500				
Pump Station Emergency Response Plan	\$35,000				
SCADA Software Update	\$26,250				
<b>Total Proposed</b>	<b>\$90,250</b>	<b>\$30,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance Available</b>	<b>\$1,337,909</b>	<b>\$1,737,909</b>	<b>\$2,176,909</b>	<b>\$2,625,909</b>	<b>\$3,134,909</b>

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2018-2022 Public Works & Environmental Services Capital Works Plan  
December 12, 2017

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### Attachment No. 8

#### Watermain Reserve Fund (2520) Funding Summary - November 27, 2017

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	\$2,695,000	\$2,587,280	\$1,934,637	\$2,421,717	\$4,428,190
Estimated Allocation	\$1,634,470	\$1,706,977	\$1,742,480	\$2,041,773	\$2,158,237
Estimated Interest	\$66,000	\$58,000	\$44,000	\$54,000	\$100,000
Development Charges	\$48,600	\$30,000	\$30,000	\$30,000	\$30,000
Transfer from Water Facilities RF	\$0	\$0	\$0	\$0	\$0
<b>Funds Available</b>	<b>\$4,444,070</b>	<b>\$4,382,257</b>	<b>\$3,751,117</b>	<b>\$4,547,490</b>	<b>\$6,716,427</b>
<b>Committed</b>					
Tools	\$10,000	\$27,100	\$27,600	\$28,200	\$28,700
Meters	\$95,000	\$10,800	\$11,000	\$11,300	\$11,500
IT GIS Tech % share	\$26,300	\$26,800	\$27,300	\$27,800	\$28,400
Manning Road/ETLD Drain Relocation - 2	\$9,000				
<b>Balance Committed</b>	<b>\$140,300</b>	<b>\$64,700</b>	<b>\$65,900</b>	<b>\$67,300</b>	<b>\$68,600</b>
<b>Balance Uncommitted</b>	<b>\$4,303,770</b>	<b>\$4,317,557</b>	<b>\$3,685,217</b>	<b>\$4,480,190</b>	<b>\$6,647,827</b>
<b>Proposed</b>					
Master Plan Update	\$50,000				
Mack Court Watermain replace	\$239,790				
Lacasse Park Watermain replace	\$350,190				
Tecumseh Rd Watermain abandonment	\$222,360				
Alden Crescent Watermain replace	\$154,120				
Hwy#3/Roscon	\$155,430				
Rossi Drive	\$35,000				
Anode Protection Program	\$375,000				
Manning Road/ETLD Drain Relocation - 2		\$417,520			
Hwy # 3 Watermain Replacement	\$134,600	\$1,809,400			
Westlake Drive - San, Storm, Water		\$111,000			
CR46/Webster/Laval Sanitary Sewer Ext		\$45,000	\$705,000		
CR42/CR19 Roundabout- Water & Sanitary			\$281,000		
West Tecumseh Trunk Watermain (W-1A)			\$115,000		
CR19@CR46 Advanced Construction			\$162,500		
CR19@CR34 Advanced Construction				\$52,000	
CR42: Lesperance to CR19					\$400,000
<b>Total Proposed</b>	<b>\$1,716,490</b>	<b>\$2,382,920</b>	<b>\$1,263,500</b>	<b>\$52,000</b>	<b>\$400,000</b>
<b>Balance Available</b>	<b>\$2,587,280</b>	<b>\$1,934,637</b>	<b>\$2,421,717</b>	<b>\$4,428,190</b>	<b>\$6,247,827</b>

Report No. 57/17  
2018-2022 Public Works & Environmental Services Capital Works Plan  
December 12, 2017

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### Attachment No. 9

#### Water Facilities Reserve Fund (2530) Funding Summary - November 27, 2017

	2018	2019	2020	2020	2021
Reserve Balance Start of Year	\$7,031,000	\$7,130,300	\$7,446,100	\$7,793,400	\$8,171,200
Estimated Allocation	\$107,000	\$129,000	\$152,000	\$175,000	\$199,000
Estimated Interest	\$172,300	\$186,800	\$195,300	\$202,800	\$212,400
Transfer to Watermain RF	\$0	\$0	\$0	\$0	\$0
<b>Funds Available</b>	<b>\$7,310,300</b>	<b>\$7,446,100</b>	<b>\$7,793,400</b>	<b>\$8,171,200</b>	<b>\$8,582,600</b>
<b>Committed</b>					
Water Metering Facilities Repairs	\$85,000				
<b>Balance Committed</b>	<b>\$85,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance Uncommitted</b>	<b>\$7,225,300</b>	<b>\$7,446,100</b>	<b>\$7,793,400</b>	<b>\$8,171,200</b>	<b>\$8,582,600</b>
<b>Proposed</b>					
Water Meter Reader System Update	\$15,000				
SCADA Update	\$73,500				
Environmental Building Windows	\$6,500				
<b>Total Proposed</b>	<b>\$95,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance Available</b>	<b>\$7,130,300</b>	<b>\$7,446,100</b>	<b>\$7,793,400</b>	<b>\$8,171,200</b>	<b>\$8,582,600</b>



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2018-2022 Public Works & Environmental Services Capital Works Plan  
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### Attachment No. 10

#### Infrastructure Reserve (1085) Funding Summary - November 29, 2017

	2018	2019	2020	2021	2022
Reserve Balance Start of Year	\$3,032,000	\$3,159,200	\$4,410,150	\$4,729,650	\$5,145,850
Budget Allocation - New Infrastructure Levy	\$1,200,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000
Budget Allocation - NIL Sportsplex		\$50,000	\$200,000	\$100,000	\$100,000
DC - repayments	\$76,000	\$60,000	\$60,000	\$60,000	\$60,000
Tecumseh Baseball re scoreboard	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500
GenSet Revenues	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
CWATS		\$150,000	\$119,600		
<b>Funds Available</b>	<b>\$4,331,500</b>	<b>\$4,742,700</b>	<b>\$6,113,250</b>	<b>\$6,213,150</b>	<b>\$6,629,350</b>
<b>Committed</b>					
Official Plan	\$22,500				
Tecumseh Hamlet Secondary Plan	\$37,000				
Sportsplex - Further Development of Plan	\$44,800				
Sportsplex - Capital Funding allocation		\$50,000	\$250,000	\$350,000	\$450,000
CWATS: CR11 - Hwy 401 to NTR (Multi-Use Trail)	\$136,000	\$232,650			
Riverside Dr. Trail	\$782,000				
<b>Balance Committed</b>	<b>\$1,022,300</b>	<b>\$282,650</b>	<b>\$250,000</b>	<b>\$350,000</b>	<b>\$450,000</b>
<b>Balance Uncommitted</b>	<b>\$3,309,200</b>	<b>\$4,460,050</b>	<b>\$5,863,250</b>	<b>\$5,863,150</b>	<b>\$6,179,350</b>
<b>Proposed</b>					
Cultural & Resource Centre - Fire Hall #2	\$150,000				
Lesperance Road Trail (CR22 to CR42)		\$49,900	\$814,600		
Sidewalks CR42/CR19 Roundabout			\$19,000		
Sidewalks CR42: CR43 to Lesperance				\$362,000	
Sidewalks CR42: Lesperance to CR19					\$57,500
CWATS: CR42/CR19 Roundabout (Bike Lanes)			\$1,000		
CWATS: CR46 - Hwy 401 to 9th C (Paved Shoulder)			\$299,000		
CWATS: CR42 - CR43 to Lesperance (Bike Lanes)				\$13,300	
CWATS: CR43 - Banwell Diversions (Multi-Use Lanes)				\$342,000	
CWATS: Lesperance to CR19 (Bike Lanes)					\$4,200
<b>Balance Proposed</b>	<b>\$150,000</b>	<b>\$49,900</b>	<b>\$1,133,600</b>	<b>\$717,300</b>	<b>\$61,700</b>
<b>Balance Available</b>	<b>\$3,159,200</b>	<b>\$4,410,150</b>	<b>\$4,729,650</b>	<b>\$5,145,850</b>	<b>\$6,117,650</b>

## Appendix 7- Schedule C – Director's Directions for Operational Plans

**Ontario**

Ministry of the Environment  
and Climate Change

**Schedule C – Director's Directions for  
Operational Plans (Subject System  
Description Form)**  
Municipal Residential Drinking Water System

Fields marked with an asterisk (\*) are mandatory.

Owner of Municipal Residential Drinking Water System \*  
The Corporation of the Town of Tecumseh

Name of Municipal Residential Drinking Water System \*  
Tecumseh Distribution System

**Subject Systems**

☐ Check here if the Municipal Residential Drinking Water System is operated by one operating authority. Enter the name of the operating authority in the below table.

	Name of Operational Subsystems (If Applicable)	Name of Operating Authority *	DWS Number(s) *
1		The Corporation of the Town of Tecumseh	260004969

Provide the information outlined in the 'Contact Information' section for each Operational Subsystem.

**Contact Information**

Last Name *	First Name *	Middle Initial
Dupuis	Brad	
Title *	Phone Number *	
DWQMS Representative	519 791-6509	
Email Address *		
bdupuis@tecumseh.ca		

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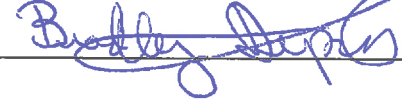
Page 1 of 1



**SIGN-IN SHEET**

**PURPOSE:** TOWN OF TECUMSEH DWQMS MANAGEMENT REVIEW MEETING

**DATE:** Feb 15, 2018

NAME (PRINT)	POSITION	SIGNATURE
TONY HADDAD	CHIEF ADMINISTRATIVE OFFICER	
DAN PIESCIC	DIRECTOR, PUBLIC WORKS & ENVIRONMENTAL SERVICES	
DENIS BERTHIAUME	MANAGER, WATER & WASTEWATER	
BRAD DUPUIS	WATER OPERATOR/DWQMS REPRESENTATIVE	



### Management Review Commitment and Endorsement Statement

This statement is intended to capture the commitment and endorsement of top management through the management review committee. Below are the definitions of commitment and endorsement represented within the context of the management review minutes referenced within this statement.

#### Commitment


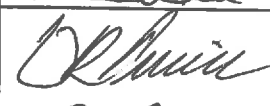


- 1) To represent that the committee has been given access to participated and/or reviewed the inputs covered within the minutes
- 2) That the content of the minutes meet the input requirements of the Town of Tecumseh DWQMS management review program.
- 3) That the committee is aware of the actions assigned to appropriate resources as a result of the management review meeting.
- 4) To provide objective evidence of top management's participation and commitment to the management review program.

#### Endorsement

- 1) That the management review committee endorses the commitments made within the associated management review minutes including:
  - a. Resources allocated to action items
  - b. Within the timelines committed to in the meeting
- 2) Approval to empower the DWQMS representative to ensure that commitments are followed through with the authority of the management review committee.
- 3) Where timelines cannot be met or where previous actions have not been verified by the management review committee as complete, a corrective action will be required.

#### Commitment and Endorsement Record

Minutes Referenced: September 12<sup>th</sup>, 2017

Name/ Delegate Name	Title	Signature	Date
TONY HADDAD	Chief Administrative Officer (CAO)		2/15/18
DAN PIESCIC	Director of Public Works & Environmental Services		02/15/18
DENIS BERTHIAUME	Manager, Water and Wastewater		02/15/18
Brod Dupuis	DWQMS Representative		02/15/18

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15

Prepared By: Brad Dupuis

## Meeting Minutes

**Meeting Type:** Management Review Meeting – DWQMS

**Date:** February 15, 2018

**Called by:** Town of Tecumseh

**Attendees:**  
Tony Haddad  
Dan Piescic  
Denis Berthiaume  
Brad Dupuis

**Location:** Town of Tecumseh Offices - 1189 Lacasse Blvd.

### Agenda/Minutes:

Item Code: AI=Action Item, DM=Decision Made, IS=Information Sharing, MRC=Management Review Committee

Item	Item Description	Notes	Who Responsible / Code	Timing / Status
A	Meeting Agenda			
1	Previous Management Review Meeting Action Items	<p>Review the Water &amp; Wastewater Master Plan to ensure that it maintains its accuracy for the town's infrastructure needs.</p> <p>CIMA is currently completing the updated version to be presented to administration in the near future</p>	AI	Denis Berthiaume, Dan Piescic, and the manager of engineering to meet with CIMA to review final draft
		<p>DWQMS Rep. included the town's purchasing policy in the essential supplies and service list found in the Operational Plan Version 8</p> <p>Action item was a OFI-3 (opportunity for improvement) from past internal audit (Sep 03, 2017)</p>	IS	No Actions Required

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15

Prepared By: Brad Dupuis

		<p>DWQMS Rep. created a standard management review report for the use of every managers meeting</p> <p>Action item was OFI-5 (opportunity for improvement) from past internal audit (Sep 03, 2017)</p>	IS	No Actions Required
		<p>DWQMS Rep. included Schedule C form to the operational plan Version 8</p> <p>Action item was OFI-6 (opportunity for improvement) from past internal audit (Sep 03, 2017)</p>	IS	No Actions Required
		<p>DWQMS Rep. completed 2<sup>nd</sup> check of survey monkey</p> <p>The results are detailed in Item 4 of this report</p>	IS	No Actions Required
		<p>DWQMS Rep. and Denis to work on DWQMS 2.0</p> <p>The results are detailed in Item 7 of this report</p>	IS	No Actions Required
		<p>Denis working with town's engineer for areas to be targeted for the 2<sup>nd</sup> round of the Anode Program.</p> <p>The results are detailed in Item 8 of this report</p>	IS	No Actions Required
		<p>DWQMS Rep. will present Version 8 to council and once accepted will review with operators in 2018</p> <p>The results are detailed in Item 9 of this report</p>	IS	No Actions Required
2	Incidents of Adverse Drinking Water Tests	<p>There have been (0) Adverse Drinking Water Results since the last managers meeting (September 12, 2017)</p>	IS	No Actions Required
3	Results of Internal Audits	<p>The previous (2017) internal audit was reviewed and dispensed in the previous <i>managers review meeting- DWQMS</i></p>	AI	DWQMS Rep. and Denis to schedule a date

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15  
Prepared By: Brad Dupuis

		The upcoming Internal Audit shall be completed before September 12, 2018		to complete the internal audit with an accredited third party.
4	Consumer Feedback	<p>(2) customer complaints were related to the Town of Tecumseh water quality since the last Manager's Review Meeting (2017-09-12)</p> <p>(1) Sept 26, 2017 (12306 Meconi)-</p> <ul style="list-style-type: none"> <li>Moisture— customer stated moisture found in the house causing mold and red residue. Operator showed up and found that customer concerns were only from of hot water. No red residue showing at time operators were present. Took a chlorine residual of 0.99ppm.</li> </ul> <p>(2) Oct 30, 2017 (2080 Fasan)-</p> <ul style="list-style-type: none"> <li>Taste- Customer stated stale taste found in water. Operator found a filtration system; which customer was unaware of when the filter was last changed. Operator told customer to follow manufacture recommendations for filter system maintenance. Took a chlorine residual of 1.03ppm.</li> </ul>	IS	No Action Required
		<p>An email was sent out to the town <i>Essential Water Services Suppliers</i> to complete the survey. (8) Surveys have been completed to date. All coming back 100% satisfied</p> <p>DWQMS Rep. has reviewed the Survey Monkey results from past managers meeting (Sept 12, 2017 to today (Feb 15, 2018)</p> <p>Survey Monkey Data to be reviewed twice per year to ensure that possible issues are not</p>	AI	Brad Dupuis to complete 1st check of Survey Monkey results prior to next managers meeting



# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15  
Prepared By: Brad Dupuis

		<p>missed when reported</p> <p>(0) questionnaires were completed for <i>Water Services Customer Survey</i> stating any issue or concern.</p> <p>Results are shown below for <i>Water Services Customer Survey</i>.</p>		
		1) Billing Concern- 0 Individuals	IS	No Action Required
		2) Request for Locate- 0 Individuals	IS	No Action Required
		3) Water Leak- 0 Individuals	IS	No Action Required
		4) Water Quality- 0 Individuals	IS	No Action Required
		5) Water Meter Issue- 0 Individuals	IS	No Action Required
		6) Connection / Disconnection of Water Service- 0 Individuals	IS	No Action Required
		7) Other (Please specify)- 0 Individuals	IS	No Action Required
5	Operational Performance	<p>Brad Dupuis is still the current DWQMS Rep</p> <p>Denis Berthiaume is the alternate</p>	IS	No Action Required
		<p>Annual surveillance audit is to be completed this fall by NSF. Brad and Denis shall contact NSF in the spring to set a date for the 2018 desktop audit</p> <p>Audit shall take place before November 27, 2018</p>	AI	Brad to follow up with NSF for available dates

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15  
Prepared By: Brad Dupuis

		to stay within the 12 month scheduling period		
		<p>The <i>hydrant flushing program</i> was completed July 26, 2017. Every hydrant in Tecumseh has been inspected and operated</p> <p>Documentation stored in shared hard drives.</p>	IS	No Action Required
		<p>The <i>hydrant winterizing program</i> was completed November, 2017</p> <p>Three different checks were completed</p> <p>Documentation stored in shared hard drives.</p>	IS	No Action Required
		<p>The <i>valve turning program</i> is underway.</p> <p>Working with IT department running a new program that's live so all personnel can see the most current information.</p> <p>There are 2524 valves in the system</p> <p>534 valves were exercised In 2017</p> <p>Program beginning in the north end of town, working west to east.</p>	IS	No Action Required
		<p>The <i>meter change program</i> is still underway. 90% of the town has been complete</p> <p>Customers have disregarded the letters to upgrade their water meter. A new letter has been created with stronger wording and is currently being mailed out to those who have not upgraded</p>	IS	No Action Required
		<p>Brad and Denis met with different manufactures and other municipal operators to see what station would be the best suit Tecumseh for the life cycle of the sampling stations.</p> <p>Brad and Denis decided to continue going with the eclipse #88 stainless steel models.</p>	IS	No Action Required

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15

Prepared By: Brad Dupuis

		<p><i>Winter Lead Testing</i> was completed December 19, 2017</p> <p>All (4) samples taken in the distribution system found to be well below the threshold</p>	IS	No Action Required
6	Incidents of Non-Compliance with Applicable Regulations	<p>Annually a desktop DWQMS Verification Audit to be completed by an accredited third party.</p> <p>Every three years an <i>On-Site</i> DWQMS Verification Audit must be completed by an accredited third party.</p> <p>On-site Inspection was completed November 27, 2017 by NSF for our DWQMS Verification Audit.</p> <p>The results of the verification audit are summarized as <b>(0) Non-Conformances (NC)</b> and <b>(1) Opportunities for Improvements (OFI)</b></p>	IS	No Action Required
		<p><b>OFI-1- An opportunity exists to better utilize appendices within the Emergency Response Plan so that the whole document does not have to be reprinted every time a minor change is made</b></p> <p>It was discussed and found that the <i>emergency response plan</i> shall continue to be printed as a complete document as the changes do not occur often and this insures that the old one was completely removed and replace with the most current one</p>	IS	No Action Required
7	Changes to Services, Activities, Regulations, etc. that could affect DWQMS	<p>There have been changes in the services and/or activities performed by the Town of Tecumseh since the last management review meeting.</p> <p>There is still the new DWQMS called <b>DWQMS 2.0</b>. Each municipality has 2 years to make changes. Once changes have been made, the municipality will need to identify to the auditor(s) they are working under DWQMS 2.0</p>	AI	Brad and Denis will work on DWQMS 2.0

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15  
Prepared By: Brad Dupuis

		Town's Current Schedule to Water Rates By-Law No.2017-82 has changed from 2017, whereas base charges increase of \$0.81 per month. Water rates increased by \$0.01 per cubic meter	IS	No Actions Required
		Town of Tecumseh water standards Version 15 is in the final stages. IT department working on diagrams to reference within the document. Once completed, Version 15 will be put on the website, and emailed to all suppliers	AI	Brad and Denis email version 15 to suppliers once completed
8	Infrastructure Review Results	CIMA is currently completing the updated Water and Wastewater Master Plan to be presented to administration in the near future	IS	No Actions Required
		A capital works plan is created each year and is submitted to council for approval. (Dec 12, 2017)		
		An asset management plan has been created for all linear assets. As a result of that review, a schedule for the replacement of watermains have been created		
		All reports mentioned above are available on the shared drive for the Town of Tecumseh.		
		Currently (2) major infrastructure jobs underway	IS	No Actions Required
		(1) Amico Construction submitted the successful tender for Rossi Dr. However no watermain work is to be completed as the watermain is already PVC and in good condition	IS	No Actions Required
		(2) Sherway Construction submitted the successful tender for various watermain improvement projects. The areas are: <ul style="list-style-type: none"> <li>Lacasse park- replacing 6" Cast Iron</li> </ul>	IS	No Actions Required

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15  
Prepared By: Brad Dupuis

		<p>watermain with 6" PVC, also looping the system so Lacasse park will be connected at Lacasse Blvd and Brenda Court.</p> <ul style="list-style-type: none"> <li>• Tecumseh Rd- abandoning 6" cast Iron watermain and transferring services to an existing 10" PVC watermain</li> <li>• Mack Court- replacing 6" cast iron watermain with 6" PVC</li> <li>• Alden Court- replacing 6" cast iron with 6" PVC also along with services to property line</li> </ul>		
		<p>Second round of the Anode Program is in the planning stage.</p> <p>Denis and Brad have been working with Blackrock Consulting (Mike Jones- Principal) to have tender out in March. Roughly another 6,200m of watermain shall be protected with this contract</p> <p>First round - completed May 2015. Area targeted was St. Clair Beach in Town. Approximately 6,238m of watermain has been protected by anodes.</p>	AI	Denis and Brad to continue working with Mike Jones
9	Currency of Operational Plan	<p>The necessary changes to address the Non-conformances identified in the NSF Audit as well as the Internal Audit were reviewed during the meeting.</p> <p>Additional changes made to the operational plan to address changes to business processes were also reviewed.</p> <p>The results of risk assessment have been added to the operational plan (version 8)</p> <p>Version 8 of the Operational Plan to address all</p>	AI	Brad Dupuis shall present Version 8 to council and once accepted will review with operators in 2018

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15  
Prepared By: Brad Dupuis

		of these matters will be brought to council February 27, 2018		
10	Deviations from CCP Limits	<p>The SCADA system has been configured to have a low alarm and a high alarm. The Low alarm is considered an initial warning while the High alarm is considered the Critical Control Point (CCP).</p> <p>Documentation of these alarms can be found on the Town's SCADA system.</p>	IS	No Actions Required
11	Effectiveness of Risk Assessment Process	<p>(2017-02-17) A full comprehensive review of the risk assessments at the Town of Tecumseh was completed. Every three years a full comprehensive review shall be completed</p> <p>Version 8 of the Operational Plan will be brought to council February 27, 2018</p> <p>Risk Assessment review will be completed with all operators during the review for the Operational Plan Version 8.</p>	IS	No Actions Required
12	Results of Internal / External Audits	<p>MOE Inspection Report was completed January 12, 2018 and received a Final Inspection Rating of 100%. Will be presented to council Feb 20, 2018</p> <p>The results of the NSF Audit (November 27, 2017) and the Internal Audit (September 03, 2017) that were conducted in 2017 were reviewed by all operators.</p> <p>Attendance records available</p>	IS	Brad Dupuis
13	Emergency Preparedness	Emergency Response Plan Version 10 is to be reviewed with operators and 2 mock exercises shall be completed Spring 2018	AI	Brad and Denis to review Emergency Response Plan

# Meeting Minutes / Report

(Attachment 3)

Last Revised: 2018-02-15  
Prepared By: Brad Dupuis

		Attendance records shall be available once completed		Version 10 with operators along with two mock exercises
14	Trends in Quality of Raw Water & Drinking-Water Supply	<p>The Town of Tecumseh receives an annual report from the Windsor Utilities Commission with regard to the water that is supplied to the Town.</p> <p>The Town of Tecumseh receives an annual report from the Town of Lakeshore with regard to the water that is supplied to the Town.</p> <p>The Town of Tecumseh is connected to Town of LaSalle through Meter Chamber 12 (MC-12). The valve remains off until an agreement has been made between Windsor and LaSalle.</p> <p>Every annual report is kept on the Town's shared drive.</p> <p>The Town of Tecumseh report has been given to Windsor Utilities Commission, The Town of Lakeshore, by Denis Berthiaume.</p>	IS	No Actions Required
15	Resources needs for DWQMS Maintenance	Nothing is needed at this time	IS	No Action Required
16	Town website	Brad reviewed the town website insuring the water information is current	IS	No Action Required
17	Retention Table	Brad Dupuis and Denis Berthiaume have reviewed the retention table along with the documents pertaining to it	IS	No Action Required
18	Comments / Suggestions made by Personnel	No suggestions or feedback was given	IS	No Actions Required

# THE CORPORATION OF THE TOWN OF TECUMSEH

## BY-LAW NUMBER 2018-13

Being a by-law to provide for the repair and improvements to the 7th Concession Drain

**Whereas** the Council of The Corporation of the Town of Tecumseh [Town] has been requested to provide for the repair and improvement of the 7th Concession Drain;

**And Whereas** the Town procured a Drainage Report for the 7th Concession Drain and specifications from the consulting engineering firm of Baird AE, dated February 7, 2017 (Drainage Report);

**And Whereas** notice of a Public Meeting to hear comments from the affected property owners was given on February 13, 2017;

**And Whereas** a Public Meeting of Council was held on Tuesday, March 14, 2017, at 6:00 p.m. to hear from any affected property owners on the Drainage Report;

**And Whereas** the Drainage Report was sent back to the Engineer for reconsideration, by Council on Tuesday April 11, 2017 at the Court of Revision;

**And Whereas** the Engineer provided a Reconsidered Drainage Report for the 7th Concession Drain and specifications from the consulting engineering firm of Baird AE, dated August 8, 2017 [Reconsidered Drainage Report];

**And Whereas** notice of a Public Meeting to hear comments from the affected property owners on the Reconsidered Drainage Report was given on August 25, 2017;

**And Whereas** a Public Meeting of Council was held on Tuesday, September 12, 2017, at 6:00 p.m. to hear from any affected property owners on the Reconsidered Drainage Report and at the meeting the Reconsidered Drainage Report was referred back to the Drainage Engineer;

**And Whereas** the Engineer provided a Second Reconsidered Drainage Report for the 7<sup>th</sup> Concession Drain and specifications from the consulting engineering firm of Baird AE, dated November 23, 2017 [2<sup>nd</sup> Reconsidered Drainage Report];

**And Whereas** a Public Meeting of Council has been scheduled to be held on Tuesday, February 27, 2018 at 6:00 pm to hear from any affected property owners on the 2<sup>nd</sup> Reconsidered Drainage Report and notice of the meeting was sent to the affect landowners on January 30, 2018;

**And Whereas** the Council of The Corporation of the Town of Tecumseh is of the opinion that the repair and improvement of the 7th Concession Drain is desirable;

**Now Therefore** the Council of The Corporation of the Town of Tecumseh, pursuant to *The Drainage Act, R.S.O. 1990* (Act), hereby enacts as follows:

1. **That** the 2<sup>nd</sup> Reconsidered Drainage Report providing for the repair and improvement of the 7th Concession Drain, dated November 23, 2018, as prepared by the consulting engineering firm Baird AE and attached hereto as Schedule "A" to this by-law, is hereby adopted and the drainage works as therein indicated and set forth is hereby approved and shall be completed in accordance therewith.
2. **That** the Treasurer, subject to the approval of Council, may agree with any bank or person for temporary advances of money to meet the costs of construction pending the completion of the drain and grants and computed payments are received.
3. **That** the Town may issue debentures for the amount borrowed and the amount of such debentures shall be reduced to the total amount of:  
(a) Grants received under Section 85 of the said Act;



- (b) Commuted payments made in respect of land and roads assessed.
4. **That** such debentures shall be made payable within five (5) years from the date of the debenture and shall bear interest at a rate as approved by resolution of Council.
5. **That** the specifications and General Specifications as established are adopted as set out in the Drainage Report which forms part of this by-law.
6. **That** the Mayor and Clerk are authorized to cause a contract for the construction of the works to be made and entered into with some person or persons, firm or corporations, subject to the approval of the Council to be declared by resolution.
7. **That** Provisional By-law No. 2017-15 is hereby repealed.
8. **That** this by-law shall come into force upon and after the final passing thereof.

**Read** a first and second time this 27<sup>th</sup> day of February, 2018.

\_\_\_\_\_  
Gary McNamara, Mayor

\_\_\_\_\_  
Laura Moy, Clerk

**Read** a third and final time, and finally passed this \_\_\_\_day of \_\_\_\_\_, 2018.

\_\_\_\_\_  
Gary McNamara, Mayor

\_\_\_\_\_  
Laura Moy, Clerk



# Repair and Improvement to the 7th Concession Drain

Town of Tecumseh

Report Date: November 23, 2017

PIC - September 14, 2016

Consideration Meeting - March 14, 2017

First Sitting of the Court of Revision - April 11, 2017

Re-Consideration Meeting - September 12, 2017

2nd Reconsideration Meeting - February 27, 2018

Project No. 14-105

February 7, 2017  
 Reconsidered November 23, 2017

Mayor and Municipal Council  
 The Corporation of the Town of Tecumseh  
 917 Lesperance Road  
 Tecumseh, Ontario  
 N8N 1W9

Mayor McNamara and Councillors

Subject: Repair and Improvement  
 To the 7th Concession Drain  
 In the Town of Tecumseh  
 Our File Reference 14-105

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## **1.0 Reconsidered Report**

At the Meeting to Consider the report on September 12, 2017 the owner of lands with Roll No. 550-07900 requested that Culvert No. 9 be removed from the report as it was no longer required. Subsequent to that meeting, the parcel was sold. Through correspondence with the new landowner, it was determined that the owner wished to have a concrete culvert at this location. The report and plans have been revised accordingly.

## **2.0 Authorization**

Pursuant to Section 78 of The Drainage Act, 1990 (the Act), the Corporation of the Town of Tecumseh received a request for the repair and improvement of the 7th Concession Drain. The firm of Crozier Baird, now known as Baird AE, was subsequently appointed to prepare a report as provided for under the provisions of the Act.

As requested by Council, we have made an examination of the 7th Concession Drain located along the north side of North Talbot Road commencing approximately 14 metres east of Walker Road. The drainage area encompasses land between County Road 46 to the north and North Talbot Road to the south; Walker Road to the west and Ure Street to the east.

## **3.0 Drainage Act Process**

The following is the general order of procedure that is followed to repair and improve a municipal drainage system pursuant to Section 78 of the Drainage Act:

- a) Council determines that repair and improvements are required.
- b) Council appoints an Engineer.
- c) Engineer conducts an onsite meeting.
- d) Engineer conducts a survey of the drain.
- e) Need for preparation of a Preliminary Report is decided.
- f) Engineer completes and provides a Preliminary Report, if required.
- g) Council considers Preliminary Report, if required, with affected landowners and decides on an option(s) with which to proceed.

- h) A Draft Report is provided to the Municipality.
- i) A Public Information Centre (PIC) is held with affected landowners to discuss the report prior presenting the final report to Council.
- j) Engineer prepares Final Drainage Report and provides copy to the Municipality.
- k) Meeting to Consider the report held in front of Council with affected landowners.
- l) At the Meeting to Consider, the Municipal Council may adopt the Drainage Report. If adopted, the Municipal Clerk prepares a provisional by-law for the recommended work and sends copies of the by-law to affected parties and arranges a second meeting of Council for the Court of Revision, within thirty days of adopting the provisional by-law.
- m) The Court of Revision is typically held within 30 days at a subsequent meeting with affected landowners to discuss any disputes regarding assessment of cost to lands and roads.
- n) Council passes by-law for construction of the work after statutory appeal period expires. Typically, the appeal period is a minimum of 40 days from the date of the provisional by-law.
- o) Tenders are received by the Municipality to perform the recommended work and construction is carried out. Inspection of the construction work may be provided by the Town Drainage Superintendent or by an inspector from the engineering office.
- p) Upon completion of construction, the Municipal Clerk will finalize all applicable costs and submit grant applications to the Ministry of Agriculture and Food, if applicable. The clerk will then send a final net assessment to the affected landowners. Only lands listed by the Municipal Property Assessment Corporation as having Farm Class Tax Rate are eligible for a 1/3 grant.

#### 4.0 Current Drainage Report and Drain History

Work has been completed on the 7<sup>th</sup> Concession Drain under various Engineers' reports. Previous works and reports are as follows:

**Report dated November 18, 2008 prepared by Tim Oliver, P.Eng. (Dillon Consulting):** recommended repairs, realignment, deepening of the downstream section of the 7<sup>th</sup> Concession Drain from the 7<sup>th</sup> Street Drain Outlet Diversion southerly approximately 1,321 metres to the former railway. The drain was widened and deepened by approximately 1 metre. As part of this report, the first 444 metres were cleaned and the remainder was constructed to the design grades by MTO as part of the Highway 401 improvements. (It should be noted that MTO construction only went to Provincial Road (Station 1+138).)

**Report dated July 8, 1991 prepared by Lou Zarlenga, P.Eng.:** recommended repair and improvements entailed enclosing the open portion of the drain adjacent to and along the north side of North Talbot Road; removing accumulated brush and sediment from the open drain; deepening and widening and providing additional outlet to that portion of the drain situated north of Moynahan Street to just south of Highway No. 401.

**Report dated June 9, 1978 prepared by Maurice Armstrong, P.Eng.:** recommended that the extension of the 7<sup>th</sup> Concession Drain be established as a municipal drain. The extension commenced 14 metres east of Walker Road and continued easterly along the north side of North Talbot Road to the point where the drain turns north. The report further recommended that the 7<sup>th</sup> Concession Drain be cleaned from the north side of North Talbot Road to the drain's outlet. Repair and improvement of various culvert pipes was recommended as well.

A review of the current report indicates that the existing drainage area is approximately 57.83 ha (143.01 acres) in size.

## 5.0 Purpose of Report

The purpose of this report is to provide for the repair and improvement of the drain from Station 1+321 just north of the former railway to the upper end at Walker Road. Affected landowners have raised issue with the functioning of the drain particularly in the area near Del Duca Drive.

This report provides a description and estimated cost of the proposed work. In addition, the report provides a recommendation for distribution of the construction and incidental costs related to the work. This report further provides for the distribution of future maintenance costs. The assessments provided in this report are based upon the estimated cost of the work; these assessments would be pro-rated to the actual cost of the project upon completion of the works.

We would further recommend that this report incorporate the 7<sup>th</sup> Concession Drain Extension into the 7<sup>th</sup> Concession Drain and the entirety of the drain be known as the **7<sup>th</sup> Concession Drain**.

## 6.0 Site Meeting

On Wednesday, August 27, 2014 at 9:00am, a meeting was held on Del Duca Drive to discuss the project. The following people attended the site meeting:

<b>Landowners Present</b>	<b>Affiliation</b>
Greg Scott	Tregaskiss
Ray Little	Calframax
Joel Fillion	Morton Wholesale
Anna Godo, P.Eng.	City of Windsor
Sam Paglia, E.I.	Town of Tecumseh
Ryan Langlois, EI	Baird AE
Halliday Pearson, P.Eng.	Baird AE

A written record of this meeting is contained in Appendix A of this report.

A Public Information Centre (PIC) was held on September 14, 2016 at 5:00 pm at the Tecumseh Municipal office. This meeting was held to receive comments from property owners with respect to the draft report dated August 16, 2016.

<b>Landowners Present</b>	<b>Affiliation</b>
Loris Collavino	PSI
Ryan Lawson	Expressway Trucks
Gregg Strong	Expressway Trucks
Sam Paglia, P.Eng.	Town of Tecumseh
Cheryl Curran	Town of Tecumseh
Don Joudrey, P.Eng.	Baird AE
Halliday Pearson, P.Eng.	Baird AE

Mr. Collavino indicated his property being assessed to the 7<sup>th</sup> Concession Drain has no direct outlet to the 7<sup>th</sup> Concession Drain and most of the water drains onto neighbouring properties.

It was stated that the property was assessed to the 7<sup>th</sup> Concession Drain in the previous report. The property will be investigated further to determine where the water actually goes. If some of the property actually drains to the 7<sup>th</sup> Street Drain, the properties could be included in the other drain but would have to be done through another report. A survey would have to be done to confirm how much property is to be redirected. Alternatively, the parcel may remain in the 7<sup>th</sup> Concession Drain until such time as neighbours express concerns. A subsequent site visit showed that part of the

property does drain to the 7<sup>th</sup> Concession Drain by way of a swale across the adjacent property to the east.

Mr. Strong indicated he has water ponding in his property because of work to County Road 46. He wanted to know if he could redirect the water to the 7<sup>th</sup> Concession Drain. He was told he would have to submit a petition for drainage to the Town. Alternatively, the County would have to be contacted to repair the drainage.

Mr. Strong also indicated he had a second drain at the back of his property into the 7<sup>th</sup> Concession Drain that has not been identified. This will be added to the report.

No further comments were received.

## **7.0 Topographic Survey**

We commenced our survey at the upstream end of the 7<sup>th</sup> Concession Drain Extension, being the enclosed portion of the drain at Walker Road. Our survey continued easterly for approximately 467 metres before turning north where the drain becomes an open drain. The open drain flows north for approximately 350 metres before crossing Moynahan Street where it continues easterly for approximately 217 metres. The open drain continues north for approximately 447 metres before crossing the former railway. The survey finished approximately 230 metres downstream of the former railway line.

## **8.0 Existing Conditions**

We find that the 7<sup>th</sup> Concession Drain is in need of repair and requires cleaning pursuant to Section 78 of the Act.

As a result of the survey, we have found the following:

The existing enclosed portion of the drain between Station 2+386.6 and Station 2+848.8 ranges in size from 450mm diameter CSP to 825mm diameter CSP. The Tregaskiss representative present at the onsite meeting noted that their parking lot experiences flooding. It is the Engineer's opinion that the parking lot is designed to flood to act as the stormwater management system. Cleaning of the enclosed and open drain will most likely reduce the time that the parking lot experiences flooding but will not eliminate the flooding due to the stormwater management design.

Considerable sediment has accumulated in the bottom of the drain preventing the proper flow of water, particularly between Station 1+321 and 1+825 and between 1+920 and 2+200. Considerable vegetation is present along the length of the drain between Station 1+350 and Station 1+820. Mature trees outside of the drain bank limit shall remain undisturbed except where necessary to facilitate the proposed works.

We further noted that additional work is required north of the railway to take advantage of the deepened downstream drain. This work shall be carried out separately by the Town as maintenance.

We further found that many of the culverts within the drain are out of vertical alignment but would not significantly impede flows, however most are undersized and will have to be replaced with larger culverts.

The stationing of the upper sections of the drain have been adjusted from previous reports to reflect the stationing laid out in the 2008-83 By-Law. We have continued with the stationing from the

Provincial Road Culvert (south end is located at Station 1+150). The upper end at Walker Road is now Station 2+848.8.

There is currently one road crossing on the 7<sup>th</sup> Concession Drain as described below:

Culvert No. 7– Moynahan Street, Town of Tecumseh

Station 2+054

The existing 900mm diameter corrugated steel pipe is in good condition; however, hydraulic calculations indicate that the pipe is undersized. Concrete pieces and rocks form the end of pipe protection at the downstream end of the crossing. End of pipe protection is absent from the upstream end of the crossing. This structure is currently identified as part of the 7<sup>th</sup> Concession Drain under the current by-law.

There are currently six culverts within the 7<sup>th</sup> Concession Drain as described below:

Culvert No. 1 and 2 – Detroit River Tunnel Company, Roll No. 590-01000

Station 1+379

There are currently two pipes under the former railway. The existing 15.55m 1200mm diameter ductile iron pipe (Culvert No. 2) is in good condition; however, the invert elevation of the pipe is approximately 150mm above the bottom of the existing drain. A 600mm diameter 18.30m welded steel casing pipe (Culvert No. 1) was installed under the 1991 Zarlenga report beside the existing 1200mm diameter pipe. The invert of this pipe matches the existing grade at this location. The limited capacity of the 600mm diameter pipe and the improper elevation of the 1200mm diameter pipe together prevent the proper flow of water within the drain. End of pipe protection was not found for either structure. These pipes are in place to allow the flow of water northerly under the former railroad tracks and are currently identified as part of the 7<sup>th</sup> Concession Drain under the current by-law.

It should be noted the railway is not currently in use and now ends at 8<sup>th</sup> Concession Road approximately 800 metres east of the existing railway culverts.

Culvert No. 3 – SGM Real Estate Holdings ULC, Roll No. 550-01500

Station 1+854

The existing 900mm diameter corrugated steel pipe is in good condition; however, hydraulic calculations indicate the pipe is undersized. Poured concrete headwalls are in good condition. This structure provides access to commercial lands and is identified as part of the 7<sup>th</sup> Concession Drain under the current by-law.

At the landowner's request, the length and location of the culvert has been modified to that described in Section 8.0 Recommendations and shown on the attached plans.

Culvert No. 4 – Adine Builders Ltd., Roll No. 550-01600

Station 1+909

The existing 900mm diameter corrugated steel pipe is in good condition; however, hydraulic calculations indicate that the pipe is undersized. Poured concrete headwalls are in satisfactory condition although cracking was noted on the upstream headwall. The elevation of the culvert does not correspond to the design grade of the drain bottom. This structure provides access to commercial lands and is identified as part of 7<sup>th</sup> Concession Drain under the current by-law.

Culvert No. 5 – Gail and Pamela Rodzik, Roll No. 550-02000

Station 1+957

The existing 900mm diameter corrugated steel pipe is in good condition; however, hydraulic calculations indicate that the pipe is undersized. Concrete jute bag headwalls are in good condition. The elevation of the culvert does not correspond to the design grade of the drain bottom. This

structure provides access to industrial lands and is not identified as part of the 7<sup>th</sup> Concession Drain under the current by-law.

We would further recommend this culvert be incorporated into the 7<sup>th</sup> Concession Drain under this report.

Culvert No. 6 – Gail and Pamela Rodzik, Roll No. 550-02100

Station 2+034

The existing 900mm diameter corrugated steel pipe is in good condition; however, hydraulic calculations indicate that the pipe is undersized. Concrete jute bag headwalls are in poor condition. The top layers of the jute bag headwalls have collapsed. The elevation of the culvert does not correspond to the design grade of the drain bottom. This culvert provides access to industrial lands and is identified as part of the 7<sup>th</sup> Concession Drain under the current by-law.

Based on the existing conditions and a review of the theoretical drain profile provided in the 1991 Zarlenga report and the existing downstream drain elevations set out in the 2008 Dillon Report, we have determined that cleaning of the enclosed portion of the drain between Station 2+386.6 and 2+848.8; brushing, grubbing and excavating the open drain sections; cleaning existing road crossings and driveway culverts; deepening and widening the drain from Station 1+320 to Station 1+813 including the installation of a new 1800mm diameter aluminized CSP across the former railway to match the drain depths in the Dillon Report will improve drain function.

We have found that additional catch basins have been installed on lands near the intersection of Hennin Drive and North Talbot Road. These catch basins direct flow to a municipal drain on the south side of North Talbot Road thereby altering the watershed from that identified in the 1991 Zarlenga report.

In addition, it was discovered that at the time of the MTO works in 2008, the portion of the 7<sup>th</sup> Concession Drain draining the property with Roll No. 550-18800 was not properly graded towards the relocated portion of the drain. As such, it is causing drainage issues to the property. This section of drain must be lowered below the outlet of the drainage system for Expressway Trucks (905364 Ontario Ltd) and graded southerly to the 7<sup>th</sup> Concession Drain. We would recommend that this section of drain be incorporated into the 7<sup>th</sup> Concession Drain under this report.

Since this work on Roll No. 550-18800 has been identified as an issue well before the works in this report can be carried out, repairs will be initiated by the Town as maintenance work through the existing 2008 report.

## 9.0 Recommendations

We would recommend the following works be performed in order to overcome the above noted deficiencies:

- a) Excavation work shall be undertaken to remove accumulated sediment and vegetation within the drain:
  - i. Excavation to theoretical drain bottom shall be undertaken between Station 1+825 and Station 2+386.6;
  - ii. The section of drain between Station 1+321 and Station 1+825 shall be lowered by approximately 400 to 500 mm, to match the grades from the 2008 Dillon Report as shown on Sheet 3 of the drawings, to provide a deeper outlet for adjacent properties.
- b) New culverts and end of pipe protection shall be installed:
  - i. The existing 600mm diameter CSP welded steel casing pipe and 1200mm diameter



- ductile iron pipe at Station 1+379 (crossing the former railway line) shall be removed from the drain and disposed of offsite. Culvert No. 1 and 2 shall be replaced with 16.0m of new 1800mm aluminized corrugated steel pipe with sloped gabion stone end of pipe protection and be known as Culvert No. 8. The new culvert will be installed by open cut.
- ii. Culvert No. 9 at Station 1+544: A new culvert, at the end of Del Duca Drive, shall be constructed of 20.0m of new 1500mm diameter class 65-D concrete pipe with sloped gabion stone end of pipe protection.
- c) Existing culverts and end of pipe protection shall be removed and replaced:
- i. Culvert No. 3 at Station 1+854: The existing 24.69 metres 900mm pipe shall be removed and replaced with 22.0 metres of 1200mm diameter CSP with concrete block headwalls;
  - ii. Culvert No. 4 at Station 1+909: The existing 12.51 metres of 900mm pipe shall be removed and replaced with 12.5 metres of 1200mm diameter C.S.P. with concrete block headwalls;
  - iii. Culvert No. 5 at Station 1+957: The existing 11.79 metres of 900mm pipe shall be removed and replaced with 11.8 metres of 1200mm diameter C.S.P. with concrete block headwalls;
  - iv. Culvert No. 6 at Station 2+034: The existing 12.21 metres of 900mm pipe shall be removed and replaced with 12.2 metres of 1200mm diameter C.S.P. with concrete block headwalls;
  - v. Culvert No. 7 at Station 2+054: The existing 12.47 metres of 900mm pipe shall be removed and replaced with 12.5 metres of 1050mm diameter class 65-D concrete pipe with concrete block headwalls;
- d) Existing enclosed pipe network to be cleaned:
- i. The existing enclosed portion of the drain between Station 2+386.6 and Station 2+848.8 shall be cleaned;
- e) Seeding and mulching shall be undertaken on all excavated portions of the drain side slopes to prevent erosion;

For the enclosed drain between Station 2+386.6 and Station 2+848.8, we would recommend that these pipes, manholes and catch basins remain in place, however, when the pipes and structures degrade to the point of replacement, we would recommend that the pipes be replaced under this by-law as an act of maintenance and assessed in accordance with proportions set out in the maintenance clauses of this report and any apportionment agreements in place at the time of replacement.

In a previous version of this report, we had recommended that Culvert No. 9 be constructed of corrugated steel pipe as this crossing was intended to be used privately. However, the parcel was recently sold and the new owner has requested that the culvert be constructed using concrete pipe as they are anticipating future development of the site.

The owner of lands with Roll No. 550-07900 and 550-07950 owned by Wannabe Radical Inc., has brought to our attention the desire to continue to utilize the 7<sup>th</sup> Concession Drain as an outlet for existing drainage on these properties. Should future development occur, we would recommend that it be subject to a storm water management report to ensure all Ministry of Environment requirements for stormwater management are satisfied. We would further recommend implantation of a water management plan to restrict the rate at which water is discharged from the property to pre-development flows. Pre-development flows were used when hydraulically calculating the diameter of Culvert No. 9. We would further recommend the supply and placement of gabion stone at the

outlet to prevent bank slope erosion.

## 10.0 Fisheries Issues

The 7<sup>th</sup> Concession Drain is a Type 'F' drain. A Type 'F' drain is considered to have intermittent or ephemeral flow. A drain with ephemeral flow is typically dry for more than two consecutive months.

The upper portion of the 7<sup>th</sup> Concession Drain, formerly the 7<sup>th</sup> Concession Drain Extension, between Station 2+386.6 and Station 2+848.8 is an enclosed drain that cannot support fish habitat.

We would recommend the following measures be utilized to mitigate damage to the drain during construction:

- No work shall be undertaken between March 15 and June 30
- All work shall be completed in the dry
- Culverts shall be installed with a minimum of 10.0% embedment
- All disturbed soils shall be stabilized upon completion of the work
- Silt fence sediment control shall be implemented during construction
- Contractor shall prevent entry of petroleum products, debris and deleterious substances into the water.

A review of the Sensitive Areas Maps for the Town of Tecumseh indicates that no endangered species, as listed under the Endangered Species Act, are expected to be encountered at the site of the proposed works.

A Fisheries and Oceans Canada (DFO) Self-Assessment was completed by Baird AE to determine if a DFO review was required for this project. Correspondence received from DFO states that Fisheries Act authorization is not required. Serious harm to fish can be avoided by following standard measures. A permit is not required under the Species at Risk Act as there are no Species at Risk at or near the site. The works described in this report are not considered to need an authorization under the Fisheries Act to proceed.

## 11.0 Drawings and Specifications

Attached to this report is Drawing No. 14-105 Sheets 1 to 7. The drawings illustrate the location of the proposed drainage works and the land affected by the work, together with the detail and cross sections of the recommended work. Specifications are included in this report showing the dimensions, grades, disposal of material, working areas for construction and future maintenance, and other particulars of the recommended work.

## 12.0 Working Area

The areas available to the Contractor to be used for the purpose of constructing the recommended works of this report and for construction and future maintenance as provided for under Section 63 of the Act are described as follows:

Between Station 0+000 and Station 0+028: The Contractor shall utilize an area measuring approximately 9.0 metres wide along the west side of the drain.

Between Station 1+321 and Station 1+825: The Contractor shall utilize an area measuring approximately 9.0 metres wide along the west side of the drain.

Between Station 1+825 and Station 2+042: The Contractor shall utilize the Moynahan Street right-of-way.

Between Station 2+042 and Station 2+386.61: The Contractor shall utilize an area measuring 9.0 metres wide along the west side of the drain.

Between Station 2+386.61 and Station 2+848.8: The Contractor shall utilize the North Talbot Road right-of-way.

### 13.0 Allowances for Lands Taken and Damages

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

We find that no land is required to be used for the construction of a new drain or for the establishment of an easement for the construction and future maintenance of a drain or for land required to obtain access to a Municipal Drainage System, therefore, we have not provided any allowance for lands taken in our estimate as is otherwise normally provided for under sub-section (a) of Section 29 of the Act.

We further find that each of the following owners is entitled to and should receive the following amounts as compensation for the damages to lands and crops, if any. We have used a rate of \$3,700 per hectare to determine the compensation paid, if any:

Owner	Roll No.	Lands Taken	Damages	Total
Detroit River Tunnel Company	590-01000	---	\$123	\$123
Wannabe Radical Inc.	550-07900	---	\$962	\$962
1147048 Ontario Ltd.	550-02300	---	\$481	\$481
Morbella Holdings Ltd.	550-02902	---	\$592	\$592
SGM Real Estate Holdings ULC	550-01500	---	\$444	\$444
				\$2,602

We have provided for this in our estimate as is provided for under sub-section (b) of Section 29 of the Act.

## 14.0 Estimate of Cost

Our estimate of the total cost of this work, including all incidental expenses and HST, is the sum of THREE HUNDRED AND TEN THOUSAND, SIX HUNDRED AND FIVE-----dollars (\$310,605.00), and made up as follows:

### CONSTRUCTION

- |    |       |  |                     |
|----|-------|--|---------------------|
| 1) | L.S.  | Brushing and grubbing between Station 1+321 and Station 2+386.6 complete at \$ <u>10,000</u> Lump Sum.   | \$ <u>10,000.00</u> |
| 2) | 462   | Metres of existing 450mm to 825mm diameter corrugated steel pipe to be cleaned between Station 2+386 and Station 2+848.8 including all inline manholes and catch basins at \$ <u>10.00</u> per metre   | \$ <u>4,620.00</u>  |
| 3) | 1,830 | Cubic metres of excavation to be undertaken along the length of the drain as described in the attached specifications and below:   |                     |
|    |       | i) Spread and levelled adjacent to the drain to a maximum depth of 300mm.  |                     |
|    | 1,275 | - Station 1+321 to 1+750 at \$ <u>20.00</u> per cubic metre  | \$ <u>25,500.00</u> |
|    | 165   | - Station 2+054 to 2+386.6 at \$ <u>20.00</u> per cubic metre  | \$ <u>3,300.00</u>  |
|    |       | ii) Excavated and trucked to sites noted in i). Material to be spread and levelled to a maximum depth of 300mm.  |                     |
|    | 245   | - Station 1+750 to 1+825 at \$ <u>30.00</u> per cubic metre  | \$ <u>7,350.00</u>  |
|    | 145   | - Station 1+825 to 2+054 at \$ <u>30.00</u> per cubic metre  | \$ <u>4,350.00</u>  |
|    |       | Total for Excavation   | \$ <u>40,500.00</u> |
| 4) |       | Proposed culvert at Station 1+379 for the Detroit River Tunnel Company (Culvert No. 8):  |                     |
|    |       | i) Remove and dispose of existing 600mm welded steel casing pipe (Culvert 1) and 1200mm ductile iron pipe (Culvert 2) crossing under the former railway at station 1+359. To be open cut (rails not replaced) at \$ <u>3,000.00</u> Lump Sum | \$ <u>3,000.00</u>  |
|    |       | ii) Supply and set approximately 16 metres of 1800 mm diameter aluminized corrugated steel pipe, 2.8mm thick with 125 x 25 mm corrugations complete at \$ <u>500.00</u> per metre  | \$ <u>8,000.00</u>  |
|    |       | iii) Supply, place and compact approximately 20 tonnes of Granular 'A', as per OPSS 1010, as bedding material and to reconstruct railway bed to original cross-section at \$ <u>35.00</u> per tonne  | \$ <u>700.00</u>    |

iv) Supply, place and compact approximately 110 tonnes of Granular 'B', as per OPSS 1010, as backfill material at \$ <u>20.00</u> per tonne	\$ <u>2,200.00</u>
v) Supply and place 70.0 square metres of 100 – 230mm diameter gabion stone erosion protection (300mm thick) laid on Terrafix 270R Filter Fabric complete at \$ <u>65.00</u> per square metre	\$ <u>4,550.00</u>
vi) Supply, install and maintain silt fence erosion protection at downstream end of culvert complete at \$ <u>300.00</u> Lump Sum	\$ <u>300.00</u>
Total to install Culvert No. 8	\$ <u>18,750.00</u>

5) Proposed culvert at Station 1+544 at west end of Del Duca Drive for Wannabe Radical Inc. (Culvert No. 9):

i) Supply and set approximately 20 metres of 1500mm diameter class 65-D concrete pipe \$ <u>1,000.00</u> per metre	\$ <u>20,000.00</u>
ii) Supply, place and compact approximately 60 tonnes of Granular 'A', as per OPSS 1010, as bedding and cover material at \$ <u>35.00</u> per tonne	\$ <u>2,100.00</u>
vii) Supply, place and compact approximately 170 tonnes of Granular 'B', as per OPSS 1010, as backfill material at \$ <u>20.00</u> per tonne	\$ <u>3,400.00</u>
iii) Supply and place 30.0 square metres of 100 – 230mm diameter gabion stone erosion protection (300mm thick) laid on Terrafix 270R Filter Fabric complete at \$ <u>65.00</u> per square metre	\$ <u>1,950.00</u>
iv) Supply, install and maintain silt fence erosion protection at downstream end of culvert complete at \$ <u>300.00</u> Lump Sum	\$ <u>300.00</u>
Total to construct Culvert No. 9	\$ <u>27,750.00</u>

- 6) Existing culvert to be replaced at Station 1+854 for SGM Real Estate Holdings ULC. (Culvert No. 3):
- i) Remove 24.7 metres of existing 900 mm diameter corrugated steel pipe and granular material and dispose of offsite complete at \$ 1,500.00 Lump Sum \$ 1,500.00
  - ii) Supply and set approximately 22.0 metres of 1200 mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations complete at \$ 400.00 per metre \$ 8,800.00
  - iii) Supply, place and compact approximately 50 tonnes of Granular 'A', as per OPSS 1010, as bedding and cover material and to construct driveway at \$ 35.00 per tonne \$ 1,750.00
  - viii) Supply, place and compact approximately 175 tonnes of Granular 'B', as per OPSS 1010, as backfill material at \$ 20.00 per tonne \$ 3,500.00
  - iv) Supply, place and compact approximately 15 tonnes of asphalt at \$ 120.00 per tonne \$ 1,800.00
  - v) Supply and place 2 concrete block headwalls using plain concrete blocks complete as specified at \$ 4,500 each. \$ 9,000.00
  - vi) Supply, install and maintain silt fence erosion protection at downstream end of culvert complete at \$ 300.00 Lump Sum \$ 300.00
- Total to replace Culvert No. 3 \$ 26,650.00
- 7) Existing culvert to be replaced at Station 1+909 for Adine Builders Ltd. (Culvert No. 4):
- i) Remove 12.5 metres of existing 900 mm diameter corrugated steel pipe and granular material and dispose of offsite complete at \$ 1,250.00 Lump Sum \$ 1,250.00
  - ii) Supply and set approximately 12.5 metres of 1200 mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations complete at \$ 400.00 per metre \$ 5,000.00

- iii) Supply, place and compact approximately 40.0 tonnes of Granular 'A', as per OPSS 1010, as bedding material and to construct driveway at \$ 35.00 per tonne \$ 1,400.00
- iv) Supply, place and compact approximately 100 tonnes of Granular 'B', as per OPSS 1010, as backfill material at \$ 20.00 per tonne \$ 2,000.00
- v) Supply, place and compact approximately 10 tonnes of asphalt at \$ 120.00 per tonne \$ 1,200.00
- vi) Supply and place 2 concrete block headwalls using plain concrete blocks complete as specified at \$ 4,500.00 each. \$ 9,000.00
- vii) Supply, install and maintain silt fence erosion protection at downstream end of culvert complete at \$ 300.00 Lump Sum \$ 300.00

Total to replace Culvert No. 4

\$ 20,150.00

8) Existing culvert to be replaced at Station 1+957 for Gail and Pamela Rodzik (Culvert No. 5):

- i) Remove 11.80 metres of existing 900 mm diameter corrugated steel pipe and granular material and dispose of offsite complete at \$ 1,250.00 Lump Sum \$ 1,250.00
- ii) Supply and set approximately 11.8 metres of 1200 mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations complete at \$ 400.00 per metre \$ 4,720.00
- iii) Supply, place and compact approximately 40.0 tonnes of Granular 'A', as per OPSS 1010, as bedding material and to construct driveway at \$ 35.00 per tonne \$ 1,400.00
- iv) Supply, place and compact approximately 100 tonnes of Granular 'B', as per OPSS 1010, as backfill material at \$ 20.00 per tonne \$ 2,000.00
- v) Supply, place and compact approximately 10 tonnes of asphalt at \$ 120.00 per tonne \$ 1,200.00

vi) Supply and place 2 concrete block headwalls using plain concrete blocks complete as specified at \$ 4,500 each. \$ 9,000.00

vii) Supply, install and maintain silt fence erosion protection at downstream end of culvert complete at \$ 300.00 Lump Sum \$ 300.00

Total to replace Culvert No. 5 \$ 19,870.00

9) Existing culvert to be replaced at Station 2+034 for Gail and Pamela Rodzik (Culvert No. 6):

i) Remove 12.21 metres of existing 900 mm diameter corrugated steel pipe and granular material and dispose of offsite complete at \$ 1,250.00 Lump Sum \$ 1,250.00

ii) Supply and set approximately 12.2 metres of 1200 mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations complete at \$ 400.00 per metre \$ 4,880.00

iii) Supply, place and compact approximately 40.0 tonnes of Granular 'A', as per OPSS 1010, as bedding material and to construct driveway at \$ 35.00 per tonne \$ 1,400.00

iv) Supply, place and compact approximately 100 tonnes of Granular 'B', as per OPSS 1010, as backfill material at \$ 20.00 per tonne \$ 2,000.00

v) Supply, place and compact approximately 10 tonnes of asphalt at \$ 120.00 per tonne \$ 1,200.00

vi) Supply and place 2 concrete block headwalls using plain concrete blocks complete as specified at \$ 4,500 each. \$ 9,000.00

vii) Supply, install and maintain silt fence erosion protection at downstream end of culvert complete at \$ 300.00 Lump Sum \$ 300.00

Total to replace Culvert No. 6 \$ 20,030.00



- 10) Existing culvert to be replaced at Station 2+054 for Town of Tecumseh (Culvert No. 7):
- i) Remove 12.47 metres of existing 900 mm diameter corrugated steel pipe and granular material and dispose of offsite complete at \$ 1,250.00 Lump Sum \$ 1,250.00
  - ii) Supply and set approximately 12.5 metres of 1050 mm diameter class 65-D concrete pipe complete at \$ 600.00 per metre \$ 7,500.00
  - iii) Supply, place and compact approximately 40.0 tonnes of Granular 'A', as per OPSS 1010, as bedding material and to construct driveway at \$ 35.00 per tonne \$ 1,400.00
  - iv) Supply, place and compact approximately 100 tonnes of Granular 'B', as per OPSS 1010, as backfill material at \$ 20.00 per tonne \$ 2,000.00
  - v) Supply, place and compact approximately 15 tonnes of asphalt at \$ 120.00 per tonne \$ 1,800.00
  - vi) Supply and place 12.0 square metres of 100 – 230mm diameter gabion stone erosion protection (300mm thick) laid on Terrafix 270R Filter Fabric complete at \$ 65.00 per square metre \$ 780.00
  - vii) Supply, install and maintain silt fence erosion protection at downstream end of culvert complete at \$ 300.00 Lump Sum \$ 300.00
- Total to replace Culvert No. 7 \$ 15,030.00
- 11) L.S. Supply and spreading of good quality grass seed and mulch on all portions of excavated sideslopes complete at \$ 10,000.00 Lump Sum. \$ 10,000.00
- 12) L.S. The Contractor shall provide a traffic control plan to the Town of Tecumseh and the County of Essex for approval before construction commences. The Contractor shall supply, install and maintain the necessary signage during the construction period according to the latest revision of the Ontario Traffic Manual Book 7, Temporary Conditions, complete at \$ 5,000.00 Lump Sum. \$ 5,000.00

13) 65.0	Square metres of 100 – 230mm diameter gabion stone (300 mm thick) erosion protection laid on Terrafix 270R Filter Fabric to be placed as required to prevent bank slope erosion due to outlet tiles, drains or swales along length of drain complete at \$ <u>65.00</u> per square metre.	\$ <u>4,225.00</u>
14) L.S.	Previously completed excavation of 30 cubic metres between Station 0+000 and Station 0+028 for lands with Roll No. 550-18800 complete at \$ <u>600.00</u> Lump Sum. This was completed as maintenance and will not form part of the proposed construction.	\$ <u>600.00</u>
15) L.S.	Contingency Allowance to be used only upon approval of Drainage Superintendent and/ or Engineer	\$ <u>11,500.00</u>
<b>SUB TOTAL FOR CONSTRUCTION</b>		<b>\$ <u>234,675.00</u></b>

#### INCIDENTALS

Attendance at site meeting, survey	\$ 5,000.00
Report, estimate and specifications	\$ 29,750.00
Assistants and expenses, drawing preparation	\$ 17,000.00
Attendance at Public Meetings and Council Meetings	\$ 6,000.00
Tender documents	\$ 1,200.00
ERCA Permit Application Fee	\$ 800.00
Construction Inspection and Final Inspection (15 days at \$550.00/day)	\$ 8,250.00
	=====
Sub Total for Incidentals	\$ 68,000.00
Sub Total for Construction (brought forward)	\$ 234,675.00
	=====
Sub Total for Construction and Incidentals	\$ 302,675.00
HST Payable (1.76% Non-Recoverable)	\$ 5,328.00
Total for Allowances (brought forward)	\$ 2,602.00
	=====
<b>TOTAL ESTIMATE</b>	<b>\$ 310,605.00</b>
	=====

## 15.0 Assessment

Assessments to lands are provided in the attached Schedule of Assessment in three separate columns being Special Benefit, Benefit and Outlet. Section 1 of the Act provides the following definitions:

**“Special Benefit”** means any additional work or feature included in the construction, repair or improvement of a drainage works that has no effect on the functioning of the drainage works. A breakdown of how the Special Benefits assessments were calculated is provided on Page 4 of 4 of the Schedule of Assessment.

**“Benefit”** means the advantages to any lands, roads, buildings or other structures from the construction, improvement, repair or maintenance of a drainage works such as will result in a high market value or increased crop production or improved appearance or better control of surface or subsurface water, or any other advantages relating to the betterment of lands, roads, buildings or other structures.

**“Outlet Liability”** means the part of the cost of the construction, improvement or maintenance of a drainage works that is required to provide such outlet or improved outlet.

We would recommend that construction and incidental costs be assessed to the affected properties in accordance with the accompanying Schedule of Assessment.

We would recommend that the cost to remove and replace access culverts and crossings currently identified as part of the drain be shared between the owner and the upstream lands and roads in accordance with the clauses below and the percentages listed in Table 1. The percentages listed in Table 1 were derived based on the culvert’s approximate location within the drain.

Culvert No. 5 is not currently identified as part of the 7<sup>th</sup> Concession Drain. Therefore, 100% of the cost to construct the culvert shall be assessed to the lands with Roll No. 550-01500.

Culvert No. 9 is a new culvert. Therefore, 100% of the cost to construct the new culvert shall be assessed to the lands with Roll No. 550-07900.

Table 1. Cost Sharing for Access Culverts and Crossings over the 7th Concession Drain

Culvert No.	Station	Roll Number	Owner	% To Owner	% To Upstream Lands
8	1+379.45	590-01000	Detroit River Tunnel Company	48%	52%
9	1+544.07	550-07900	Wannabe Radical Inc.	100%	0%
3	1+854.00	550-01500	SGM Real Estate Holdings ULC	65%	35%
4	1+909.53	550-01600	Adine Builders Ltd.	67%	33%
5	1+957.37	550-02000	Gail Rodzik and Pamela Rodzik	100%	0%
6	2+034.01	550-02100	Gail Rodzik and Pamela Rodzik	71%	29%
7	2+054.59	---	Town of Tecumseh	100%	0%

The cost to supply and install gabion stone erosion protection to prevent drain bank erosion shall be assessed 100% as Special Benefit to the adjacent lands.

Item No. 14 described in the Section 13.0 Estimate of Cost was completed prior to adoption of this report to alleviate flooding issues on the lands with Roll No. 550-18800; however, it was not assessed. We would recommend that 100% of the cost of Item No. 14 including incidental fees be assessed to the lands with Roll No. 550-18800 as Special Benefit.

Should any portion of the enclosed drain between Station 2+386.6 and Station 2+848.8 fail during cleaning, the cost to repair or replace the deficient section shall be assessed to the upstream lands and roads as Outlet.

## 16.0 Maintenance

We would recommend that the areas described in Section 11.0 of this report, and as listed below, be used to access the drain during works of maintenance:

Between Station 0+000 and Station 0+028: The Contractor shall utilize an area measuring approximately 9.0 metres wide along the west side of the drain.

Between Station 1+321 and Station 1+825: The Contractor shall utilize an area measuring approximately 9.0 metres wide along the west side of the drain.

Between Station 1+825 and Station 2+042: The Contractor shall utilize the Moynahan Street right-of-way.

Between Station 2+042 and Station 2+386.61: The Contractor shall utilize an area measuring 9.0 metres wide along the west side of the drain.

Between Station 2+386.61 and Station 2+848.8: The Contractor shall utilize the North Talbot Road right-of-way.

We would recommend that future maintenance costs be assessed to the affected properties in accordance with the following provisions and accompanying Maintenance Schedule of Assessment.

The Maintenance Schedule of Assessment has been developed based on an assumed maintenance cost of \$10,000. This amount is arbitrary and does not represent the actual costs to be assessed. Actual costs for future maintenance works, including all engineering and incidental costs, shall be assessed against the affected lands and roads in the same proportions as those shown in the attached Maintenance Schedule of Assessment.

Should an existing access culvert require replacement, we would recommend that the cost to replace the culvert be assessed to the benefitting landowner and the upstream lands and roads in accordance with the percentages listed in Table 2. Maintenance Cost Sharing for Access Culverts and Crossings over the 7th Concession Drain, below. The percentage to be shared with the upstream lands and roads shall be assessed as outlet against those lands.

Table 2. Maintenance Cost Sharing for Access Culverts and Crossings over the 7th Concession Drain

Culvert No.	Station	Roll Number	Owner	% To Owner	% To Upstream Lands
8	1+379.45	590-01000	Detroit River Tunnel Company	48%	52%
9	1+544.07	550-07900	Wannabe Radical Inc.	54%	46%
3	1+854.00	550-01500	SGM Real Estate Holdings ULC	65%	35%
4	1+909.53	550-01600	Adine Builders Ltd.	67%	33%
5	1+957.37	550-02000	Gail Rodzik and Pamela Rodzik	69%	31%
6	2+034.01	550-02100	Gail Rodzik and Pamela Rodzik	71%	29%
7	2+054.59	---	Town of Tecumseh	100%	0%

The cost to supply and install gabion stone erosion protection to prevent drain bank erosion shall be assessed 100% as Special Benefit to the adjacent lands.

All future maintenance works between Station 0+000 and Station 0+028 shall be assessed 100% to the lands with Roll No. 550-18800.

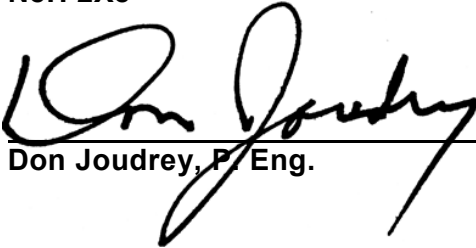
Should any portion of the enclosed drain between Station 2+386.6 and Station 2+848.8 fail, the cost to repair or replace the deficient section shall be assessed to the upstream lands and roads as Outlet.

## 17.0 Grant

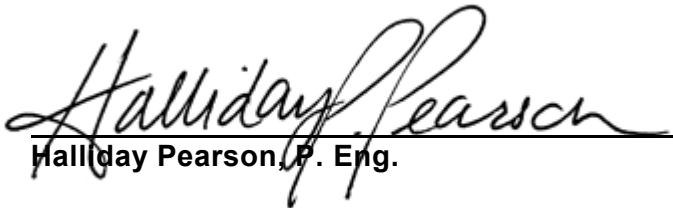
In accordance with the Agricultural Drainage Infrastructure Program (ADIP) and the provisions of Sections 85, 86 and 87 of the Act, a 33-1/3% grant is not available for the proposed works, as the Municipal Property Assessment Corporation identifies no assessed lands as having Farm Property Tax Class Rate.

All of which is respectfully submitted by:

**BAIRD AE**  
**27 PRINCESS STREET, UNIT 102**  
**LEAMINGTON, ONTARIO**  
**N8H 2X8**

  
 Don Joudrey, P. Eng.



  
 Halliday Pearson, P. Eng.



**APPENDIX A**  
**RECORD OF SITE MEETING**

**7<sup>TH</sup> CONCESSION DRAIN AND EXTENSION**  
**SUMMARY OF ENGINEERING ON-SITE MEETING**

August 27, 2014 @ 9:00 am  
 NORTH OF 3525 DEL DUCA DRIVE

<b>ATTENDEES</b>	<b>Description</b>
Greg Scott	Tregaskiss
Ray Little	Calframax Technologies Inc.
Joel Fillion	Morton's Wholesale
Sam Paglia, EI	Drainage Superintendent, Town of Tecumseh
Anna Godo, P.Eng.	Drainage Superintendent, City of Windsor
Halliday Pearson, P.Eng	Crozier Baird Engineers
Ryan Langlois, EI	Crozier Baird Engineers

Sam Paglia - Introduced Engineers and explained issues observed with the drain by Town employees and businesses within the area.

Halliday Pearson– Explained that drain would be surveyed from the upper end near Walker Road to the 401. Survey data will be used to analyze the function of the drain and to determine the works required to return the drain to its original design and to improve function. A draft report will be prepared describing the proposed works, cost estimate of those works and a schedule of assessment. The schedule of assessment will describe the estimated assessments to be levied against the lands that use the drain. A Pre-Consideration Meeting will be held at Tecumseh Town Hall so that affected landowners may ask questions of the Engineer and the Drainage Superintendent. All affected landowners are encouraged to attend. The report will be finalized based on comments received at the Pre-Consideration Meeting then sent to all affected landowners along with an invitation to attend the Consideration Meeting held before Council. Technical aspects of the report are discussed at the Consideration Meeting. Should Council provisionally adopt the report, a Court of Revision would be scheduled within 30 days. Concerns or questions regarding assessments will be addressed at this meeting. Upon final adoption of the by-law, the project will be tendered and construction undertaken. Construction will likely begin in early fall of 2015.

Halliday Pearson – Please describe any issues related to the drain that you have experience.

Ray Little – Our parking lot floods. A pond was filled in on the west side of the drain – would that have anything to do with our flooding?

Halliday Pearson – The pond may, however, it is not identified as part of the Municipal Drain. By cleaning the drain (excavating sediment, brushing and grubbing vegetation), the drain will better convey water from the site. The intent is to alleviate flooding issues by restoring the drain to its original design.

Anna Godo – A portion of the 7<sup>th</sup> Concession Drain at the 401 was lowered under a previous report. Will you take advantage of the lowering of the drain?

Halliday Pearson – As part of our survey and design, we will consider lowering the drain if that would be advantageous and provide improved drainage for the affected lands.

Sam Paglia – Landowners have brought to my attention drainage issues along County Road 46. It may be necessary to establish a branch of the 7<sup>th</sup> Concession Drain and Extension to solve their drainage issues. We can discuss this as the design proceeds.

Greg Scott – We have an issue with drainage in our parking lot along North Talbot Road. The catchbasins were recently cleaned of sediment.

Sam Paglia – This parking lot may have been designed to contain the water and direct it to onsite catchbasins as part of the stormwater management design. After cleaning of the drain, the water may still sit onsite but it will drain away faster – water may sit for one day instead of two.

Greg Scott – Will North Talbot Road be dug up again as part of these works?

Sam Paglia – The working area will be specified in the report. Typically, only dump trucks and an excavator are used for drainage works. Accesses may be obstructed temporarily but major delays are not expected.

Greg Scott – How are assessments determined?

Sam Paglia – Assessments are determined based on the volume and rate of flow entering the drain from each parcel. A parcel's location on the drain also affected their assessment.

Joel Fillion – Morton Wholesale's parcel does not experience flooding.

Sam Paglia – It was noted that the drain has been enclosed along North Talbot Road. Our records do not reflect this change – the current drainage report shows an open drain in this area. The Engineer will examine the pipe to determine if they have been sized appropriately and will incorporate this enclosure into the report.

The meeting was adjourned at 9:40am.



**CONSTRUCTION SCHEDULE OF ASSESSMENT  
7TH CONCESSION DRAIN  
TOWN OF TECUMSEH  
PROJECT REFERENCE 14-105**

February 7, 2017  
Reconsidered November 23, 2017  
Page 1 of 4

**COUNTY LANDS:**

Description	Area Owned (Acres)	Area Owned (Ha.)	Area Affected (Acres)	Area Affected (Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
Walker Road	---	---	0.02	0.01	The County of Essex	\$ -	\$ -	\$ 35.00	\$ 35.00
Total on Municipal Lands						=====	=====	=====	=====
						\$ -	\$ -	\$ 35.00	\$ 35.00

**MUNICIPAL LANDS:**

Description	Area Owned (Acres)	Area Owned (Ha.)	Area Affected (Acres)	Area Affected (Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
North Talbot Road	---	---	1.14	0.46	The Town of Tecumseh	\$ -	\$ 945.00	\$ 1,545.00	\$ 2,490.00
Henin Street	---	---	1.25	0.51	The Town of Tecumseh	\$ -	\$ -	\$ 1,230.00	\$ 1,230.00
Moynahan Street	---	---	1.78	0.72	The Town of Tecumseh	\$ 19,805.00	\$ 1,485.00	\$ 1,335.00	\$ 22,625.00
Regal Drive	---	---	0.35	0.14	The Town of Tecumseh	\$ -	\$ -	\$ 435.00	\$ 435.00
DelDuca Drive	---	---	0.40	0.16	The Town of Tecumseh	\$ -	\$ -	\$ 175.00	\$ 175.00
O'Neil Drive	---	---	1.61	0.65	The Town of Tecumseh	\$ -	\$ -	\$ 770.00	\$ 770.00
590-01200 7 N PT LT 12	3.56	1.44	1.16	0.47	Town of Tecumseh	\$ -	\$ 805.00	\$ 270.00	\$ 1,075.00
Total on Municipal Lands						=====	=====	=====	=====
						\$ 19,805.00	\$ 3,235.00	\$ 5,760.00	\$ 28,800.00

**PRIVATELY OWNED NON-AGRICULTURAL LANDS:**
**Page 2 of 4**

Roll No.	Con.	Description	Area Owned (Acres)	Area Affected (Ha.)	Area Owned (Acres)	Area Affected (Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
550-03200	7	N PT LT 11	2.45	0.99	2.45	0.99	Morton Wholesale Ltd. (Corporation)	\$ -	\$ 1,700.00	\$ 3,105.00	\$ 4,805.00
550-03102	7	PT LTS 11	4.89	1.98	4.89	1.98	ITW Canada Management Company	\$ -	\$ 3,400.00	\$ 4,225.00	\$ 7,625.00
550-03101	7	PT LT 11	1.67	0.68	1.67	0.68	Generation Development Contractors Inc.	\$ -	\$ 1,160.00	\$ 2,230.00	\$ 3,390.00
550-03100	7	GORE 11	3.12	1.26	3.12	1.26	Daniela Calsavara	\$ -	\$ 2,170.00	\$ 3,800.00	\$ 5,970.00
550-02902	7	PT LT 11	3.32	1.35	3.32	1.35	Morbella Holdings Ltd.	\$ -	\$ 2,310.00	\$ 3,965.00	\$ 6,275.00
550-02900	7	PT LT 11	0.77	0.31	0.77	0.31	Bolzano Tool & Die Company Ltd.	\$ -	\$ 530.00	\$ 925.00	\$ 1,455.00
550-02700	7	W PT LT 11	2.35	0.95	2.35	0.95	Fraven Management Ltd.	\$ -	\$ 1,630.00	\$ 2,520.00	\$ 4,150.00
550-02600	7	PT LT 11	0.59	0.24	0.59	0.24	Fraven Management Ltd.	\$ -	\$ 410.00	\$ 630.00	\$ 1,040.00
550-02500	7	PT LT 12	0.73	0.30	0.73	0.30	ARC Boiler Repair (1983) Ltd.	\$ -	\$ 505.00	\$ 765.00	\$ 1,270.00
550-02401	7	PT LT 12	1.39	0.56	1.39	0.56	T.C.T.T. Investment Corporation	\$ -	\$ 965.00	\$ 1,470.00	\$ 2,435.00
550-02400	7	PT LT 12	1.40	0.57	1.40	0.57	Grande Line Estates Ltd.	\$ -	\$ 970.00	\$ 1,470.00	\$ 2,440.00
550-02300	7	PT LT 12	13.62	5.51	13.73	5.51	1147048 Ontario Ltd.	\$ -	\$ 9,470.00	\$ 14,620.00	\$ 24,090.00
550-02100	7	PT LT 12	1.95	0.79	1.95	0.79	Gail Rodzik and Pamela Rodzik	\$ 18,740.00	\$ 1,360.00	\$ 2,030.00	\$ 22,130.00
550-02000	7	PT LT 12	1.95	0.79	1.95	0.79	Gail Rodzik and Pamela Rodzik	\$ 26,180.00	\$ 1,355.00	\$ 1,770.00	\$ 29,305.00
550-01600	7	PT LT 12	1.47	0.59	1.47	0.59	Adine Builders Ltd.	\$ 17,790.00	\$ 1,020.00	\$ 1,210.00	\$ 20,020.00
550-01500	7	PT LT 12	2.47	1.00	2.47	1.00	SGM Real Estate Holdings ULC	\$ 22,825.00	\$ 1,720.00	\$ 1,205.00	\$ 25,750.00
550-01400	7	PT LT 12	1.15	0.46	1.15	0.46	Electra-Tech Manufacturing Inc.	\$ -	\$ -	\$ 745.00	\$ 745.00
550-01300	7	PT LT 12	1.15	0.47	1.15	0.47	1061175 Ontario Ltd.	\$ -	\$ -	\$ 750.00	\$ 750.00
550-01200	7	PT LT 12	1.14	0.46	1.14	0.46	Sernacon Holdings Inc.	\$ -	\$ -	\$ 750.00	\$ 750.00
550-01101	7	PT LT 11	0.74	0.30	0.74	0.30	Peter Macera	\$ -	\$ -	\$ 480.00	\$ 480.00
550-01100	7	PT LT 11	0.96	0.39	0.96	0.39	TJ Watson Land Development Inc.	\$ -	\$ -	\$ 625.00	\$ 625.00
550-01000	7	PT LT 11	0.97	0.39	0.97	0.39	Fraven Management Ltd.	\$ -	\$ -	\$ 635.00	\$ 635.00
550-00900	7	PT LT 11	1.90	0.77	1.90	0.77	Generation Development Contractors Inc.	\$ -	\$ -	\$ 760.00	\$ 760.00
550-00320	7	PT LT 12	2.17	0.88	2.17	0.88	Timothy Capital Corp.	\$ -	\$ -	\$ 870.00	\$ 870.00
550-00318	7	PT LT 12	2.26	0.91	2.26	0.91	Linda Jahn and Cheryl Jahn	\$ -	\$ -	\$ 905.00	\$ 905.00
550-00314	7	PT LT 12	4.22	1.71	4.22	1.71	Hero's Fountain Ltd.	\$ -	\$ 2,935.00	\$ 1,640.00	\$ 4,575.00
550-20188	7	PT LT 12	1.54	0.62	1.54	0.62	Hero's Fountain Ltd.	\$ -	\$ -	\$ 560.00	\$ 560.00
550-20186	7	PT LT 4 & 5	1.11	0.45	1.11	0.45	2376238 Ontario Ltd.	\$ -	\$ 775.00	\$ 405.00	\$ 1,180.00
550-07900	7	N PT LT 12	32.75	13.26	32.75	13.26	Wannabe Radical Inc.	\$ 39,620.00	\$ 22,770.00	\$ 11,900.00	\$ 74,290.00
550-07950	7	PT LT 13	15.05	6.09	15.05	6.09	Wannabe Radical Inc.	\$ -	\$ -	\$ 4,970.00	\$ 4,970.00
550-20025	7	PT LT 12	1.67	0.68	1.67	0.68	Paul Cesidio DiGiovanni	\$ -	\$ 1,165.00	\$ 590.00	\$ 1,755.00
550-20023	7	PT LT 12	1.09	0.44	1.09	0.44	Paul Cesidio DiGiovanni	\$ -	\$ -	\$ 380.00	\$ 380.00

**PRIVATELY OWNED NON-AGRICULTURAL LANDS:**

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Roll No.	Con.	Description	Area Owned (Acres)	Area Affected (Ha.)	Area Owned (Acres)	Area Affected (Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
550-20022	7	PT LT 12	1.00	0.40	1.00	0.40	Paul Cesidio DiGiovanni	\$ -	\$ -	\$ 350.00	\$ 350.00
550-20021	7	PT LT 12	1.00	0.40	1.00	0.40	Calframax Holdings Inc.	\$ -	\$ -	\$ 350.00	\$ 350.00
550-18800	7	S PT LT 13	2.47	1.00	2.47	1.00	905364 Ontario Ltd.	\$ 775.00	\$ 1,720.00	\$ 570.00	\$ 3,065.00
550-18900	7	N PT LT 12	2.01	0.81	2.01	0.81	401 Mack Ltd.	\$ -	\$ -	\$ 465.00	\$ 465.00
550-00309	7	PT LT 12	1.08	0.44	1.08	0.44	Filippo Liburdi	\$ -	\$ -	\$ 430.00	\$ 430.00
550-00308	7	PT LT 12	1.15	0.47	1.15	0.47	K.F.J. Holdings Ltd.	\$ -	\$ -	\$ 465.00	\$ 465.00
550-00307	7	PT LT 12	1.15	0.47	1.15	0.47	Linda Jahn and Cheryl Jahn	\$ -	\$ -	\$ 465.00	\$ 465.00
550-00306	7	PT LT 12	1.15	0.47	1.15	0.47	997103 Ontario Ltd.	\$ -	\$ -	\$ 465.00	\$ 465.00
550-00305	7	PT LT 12	1.15	0.47	1.15	0.47	KBC Tools Inc.	\$ -	\$ -	\$ 465.00	\$ 465.00
550-00304	7	PT LT 12	0.98	0.40	0.98	0.40	Greycliffe Consultants	\$ -	\$ -	\$ 395.00	\$ 395.00
550-07975	7	PT LT 12 & 13	2.87	1.16	2.87	1.16	1233831 Ontario Inc.	\$ -	\$ -	\$ 1,520.00	\$ 1,520.00
590-01000	7	PT LT 10-12	---	---	5.16	2.09	Detroit River Tunnel Company	\$ 11,860.00	\$ 3,590.00	\$ 1,505.00	\$ 16,955.00
Total on Privately Owned Non-Agricultural Lands-----								\$ 137,790.00	\$ 63,630.00	\$ 80,350.00	\$ 281,770.00
<b>TOTAL ASSESSMENT</b> -----								\$ 157,595.00	\$ 66,865.00	\$ 86,145.00	\$ 310,605.00
Total Area Assessed								143.01 acres			
								57.83 hectares			

**SPECIAL BENEFIT ASSESSMENTS  
7TH CONCESSION DRAIN  
TOWN OF TECUMSEH  
PROJECT REFERENCE 14-105**

February 7, 2017  
Reconsidered November 23, 2017

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**MUNICIPAL LANDS:**

Description	Area Owned (Acres)	Area Owned (Ha.)	Area Affected (Acres)	Area Affected (Ha.)	Owner	Culverts	Road Crossings	Total Assessment
Moynahan Street	---	---	1.78	0.72	The Town of Tecumseh	\$ -	\$ 19,805.00	\$ 19,805.00
Total on Municipal Lands						\$ -	\$ 19,805.00	\$ 19,805.00

**PRIVATELY OWNED NON-AGRICULTURAL LANDS:**

Roll No.	Con	Description	Area Owned (Acres)	Area Owned (Ha.)	Area Affected (Acres)	Area Affected (Ha.)	Owner	Culverts	Excavation	Total Assessment
550-02100	7	PT LT 12	1.95	0.79	1.95	0.79	Gail Rodzik & Pamela Rodzik	\$ 18,740.00	\$ -	\$ 18,740.00
550-02000	7	PT LT 12	1.95	0.79	1.95	0.79	Gail Rodzik & Pamela Rodzik	\$ 26,180.00	\$ -	\$ 26,180.00
550-01600	7	PT LT 12	1.47	0.59	1.47	0.59	Adine Builders Ltd.	\$ 17,790.00	\$ -	\$ 17,790.00
550-01500	7	PT LT 12	2.47	1.00	2.47	1.00	SGM Real Estate Holdings ULC	\$ 22,825.00	\$ -	\$ 22,825.00
550-18800	7	S PT LT 13	2.47	1.00	2.47	1.00	905364 Ontario Ltd.	\$ -	\$ 775.00	\$ 775.00
550-07900	7	N PT LT 12	32.75	13.26	32.75	13.26	Wannabe Radical Inc.	\$ 39,620.00	\$ -	\$ 39,620.00
590-01000	7	PT LT 10-12	---	---	5.16	2.09	Detroit River Tunnel Company	\$ 11,860.00	\$ -	\$ 11,860.00
Total on Privately Owned Non-Agricultural Lands								\$ 137,015.00	\$ 775.00	\$ 137,790.00
<b>TOTAL ASSESSMENT</b>								\$ 137,015.00	\$ 20,580.00	\$ 157,595.00



**MAINTENANCE SCHEDULE OF ASSESSMENT  
7TH CONCESSION DRAIN  
TOWN OF TECUMSEH  
PROJECT REFERENCE 14-105**

**February 7, 2017  
Reconsidered November 23, 2017  
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**COUNTY LANDS:**

Description	Area Owned (Acres)	Area Owned (Ha.)	Area Affected (Acres)	Area Affected (Ha.)	Owner	Benefit	Outlet	Total Assessment
Walker Road	---	---	0.02	0.01	The County of Essex	\$ -	\$ 5.00	\$ 5.00
						=====	=====	=====
Total on Municipal Lands	-----					\$ -	\$ 5.00	\$ 5.00

**MUNICIPAL LANDS:**

Description	Area Owned (Acres)	Area Owned (Ha.)	Area Affected (Acres)	Area Affected (Ha.)	Owner	Benefit	Outlet	Total Assessment
North Talbot Road	---	---	1.14	0.46	The Town of Tecumseh	\$ 85.00	\$ 50.00	\$ 135.00
Henin Street	---	---	1.25	0.51	The Town of Tecumseh	\$ -	\$ 40.00	\$ 40.00
Moynahan Street	---	---	1.78	0.72	The Town of Tecumseh	\$ 140.00	\$ 60.00	\$ 200.00
Regal Drive	---	---	0.35	0.14	The Town of Tecumseh	\$ -	\$ 10.00	\$ 10.00
DeIDuca Drive	---	---	0.40	0.16	The Town of Tecumseh	\$ -	\$ 10.00	\$ 10.00
O'Neil Drive	---	---	1.61	0.65	The Town of Tecumseh	\$ -	\$ 50.00	\$ 50.00
590-01200 7 N PT LT 12	3.56	1.44	1.16	0.47	Town of Tecumseh	\$ 70.00	\$ 25.00	\$ 95.00
						=====	=====	=====
Total on Municipal Lands	-----					\$ 295.00	\$ 245.00	\$ 540.00

**PRIVATELY OWNED NON-AGRICULTURAL LANDS:**
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Roll No.	Con.	Description	Area Owned (Acres)	Area Affected (Ha.)	Area Owned (Acres)	Area Affected (Ha.)	Owner	Benefit	Outlet	Total Assessment
550-03200	7	N PT LT 11	2.45	0.99	2.45	0.99	Morton Wholesale Ltd. (Corporation)	\$ 155.00	\$ 100.00	\$ 255.00
550-03102	7	PT LTS 11	4.89	1.98	4.89	1.98	ITW Canada Management Company	\$ 305.00	\$ 195.00	\$ 500.00
550-03101	7	PT LT 11	1.67	0.68	1.67	0.68	Generation Development Contractors Inc.	\$ 105.00	\$ 65.00	\$ 170.00
550-03100	7	GORE 11	3.12	1.26	3.12	1.26	Daniela Calsavara	\$ 195.00	\$ 120.00	\$ 315.00
550-02902	7	PT LT 11	3.32	1.35	3.32	1.35	Morbella Holdings Ltd.	\$ 205.00	\$ 120.00	\$ 325.00
550-02900	7	PT LT 11	0.77	0.31	0.77	0.31	Bolzano Tool & Die Company Ltd.	\$ 50.00	\$ 25.00	\$ 75.00
550-02700	7	W PT LT 11	2.35	0.95	2.35	0.95	Fraven Management Ltd.	\$ 145.00	\$ 80.00	\$ 225.00
550-02600	7	PT LT 11	0.59	0.24	0.59	0.24	Fraven Management Ltd.	\$ 35.00	\$ 20.00	\$ 55.00
550-02500	7	PT LT 12	0.73	0.30	0.73	0.30	ARC Boiler Repair (1983) Ltd.	\$ 45.00	\$ 25.00	\$ 70.00
550-02401	7	PT LT 12	1.39	0.56	1.39	0.56	T.C.T.T. Investment Corp	\$ 85.00	\$ 45.00	\$ 130.00
550-02400	7	PT LT 12	1.40	0.57	1.40	0.57	Grande Line Estates Ltd.	\$ 85.00	\$ 45.00	\$ 130.00
550-02300	7	PT LT 12	13.62	5.51	13.73	5.51	1147048 Ontario Ltd.	\$ 850.00	\$ 455.00	\$ 1,305.00
550-02100	7	PT LT 12	1.95	0.79	1.95	0.79	Gail Rodzik and Pamela Rodzik	\$ 120.00	\$ 60.00	\$ 180.00
550-02000	7	PT LT 12	1.95	0.79	1.95	0.79	Gail Rodzik and Pamela Rodzik	\$ 120.00	\$ 60.00	\$ 180.00
550-01600	7	PT LT 12	1.47	0.59	1.47	0.59	Adine Builders Ltd.	\$ 90.00	\$ 45.00	\$ 135.00
550-01500	7	PT LT 12	2.47	1.00	2.47	1.00	SGM Real Estate Holdings ULC	\$ 155.00	\$ 70.00	\$ 225.00
550-01400	7	PT LT 12	1.15	0.46	1.15	0.46	Electra-Tech Manufacturing Inc.	\$ -	\$ 35.00	\$ 35.00
550-01300	7	PT LT 12	1.15	0.47	1.15	0.47	1061175 Ontario Ltd.	\$ -	\$ 35.00	\$ 35.00
550-01200	7	PT LT 12	1.14	0.46	1.14	0.46	Sernacon Holdings Inc.	\$ -	\$ 35.00	\$ 35.00
550-01101	7	PT LT 11	0.74	0.30	0.74	0.30	Peter Macera	\$ -	\$ 20.00	\$ 20.00
550-01100	7	PT LT 11	0.96	0.39	0.96	0.39	TJ Watson Land Development Inc.	\$ -	\$ 30.00	\$ 30.00
550-01000	7	PT LT 11	0.97	0.39	0.97	0.39	Fraven Management Ltd.	\$ -	\$ 30.00	\$ 30.00
550-00900	7	PT LT 11	1.90	0.77	1.90	0.77	Generation Development Contractors Inc.	\$ -	\$ 55.00	\$ 55.00
550-00320	7	PT LT 12	2.17	0.88	2.17	0.88	Timothy Capital Corp.	\$ -	\$ 60.00	\$ 60.00
550-00318	7	PT LT 12	2.26	0.91	2.26	0.91	Linda Jahn and Cheryl Jahn	\$ -	\$ 60.00	\$ 60.00
550-00314	7	PT LT 12	4.22	1.71	4.22	1.71	Hero's Fountain Ltd.	\$ 265.00	\$ 110.00	\$ 375.00
550-20188	7	PT LT 12	1.54	0.62	1.54	0.62	Hero's Fountain Ltd.	\$ -	\$ 40.00	\$ 40.00
550-20186	7	PT LT 4 & 5	1.11	0.45	1.11	0.45	2376238 Ontario Ltd.	\$ 70.00	\$ 25.00	\$ 95.00
550-07900	7	N PT LT 12	32.75	13.26	32.75	13.26	Wannabe Radical Inc.	\$2,045.00	\$ 775.00	\$ 2,820.00

**PRIVATELY OWNED NON-AGRICULTURAL LANDS:**

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Roll No.	Con.	Description	Area Owned (Acres)	Area Owned (Ha.)	Area Affected (Acres)	Area Affected (Ha.)	Owner	Benefit	Outlet	Total Assessment
550-07950	7 PT LT 13		15.05	6.09	15.05	6.09	Wannabe Radical Inc.	\$ -	\$ 310.00	\$ 310.00
550-20025	7 PT LT 12		1.67	0.68	1.67	0.68	Paul Cesidio DiGiovanni	\$ 105.00	\$ 40.00	\$ 145.00
550-20023	7 PT LT 12		1.09	0.44	1.09	0.44	Paul Cesidio DiGiovanni	\$ -	\$ 25.00	\$ 25.00
550-20022	7 PT LT 12		1.00	0.40	1.00	0.40	Paul Cesidio DiGiovanni	\$ -	\$ 25.00	\$ 25.00
550-20021	7 PT LT 12		1.00	0.40	1.00	0.40	Calframax Holdings Inc.	\$ -	\$ 25.00	\$ 25.00
550-18800	7 S PT LT 13		2.47	1.00	2.47	1.00	905364 Ontario Ltd.	\$ 155.00	\$ 50.00	\$ 205.00
550-18900	7 N PT LT 12		2.01	0.81	2.01	0.81	401 Mack Ltd.	\$ -	\$ 40.00	\$ 40.00
550-00309	7 PT LT 12		1.08	0.44	1.08	0.44	Filippo Liburdi Construction	\$ -	\$ 30.00	\$ 30.00
550-00308	7 PT LT 12		1.15	0.47	1.15	0.47	K.F.J. Holdings Ltd.	\$ -	\$ 30.00	\$ 30.00
550-00307	7 PT LT 12		1.15	0.47	1.15	0.47	Linda Jahn and Cheryl Jahn	\$ -	\$ 30.00	\$ 30.00
550-00306	7 PT LT 12		1.15	0.47	1.15	0.47	997103 Ontario Ltd.	\$ -	\$ 30.00	\$ 30.00
550-00305	7 PT LT 12		1.15	0.47	1.15	0.47	KBC Tools Inc.	\$ -	\$ 30.00	\$ 30.00
550-00304	7 PT LT 12		0.98	0.40	0.98	0.40	Greycliffe Consultants	\$ -	\$ 25.00	\$ 25.00
550-07975	7 PT LT 12 & 13		2.87	1.16	2.87	1.16	1233831 Ontario Inc.	\$ -	\$ 110.00	\$ 110.00
590-01000	7 PT LT 10-12		---	---	5.16	2.09	Detroit River Tunnel Company	\$ 320.00	\$ 110.00	\$ 430.00
Total on Privately Owned Non-Agricultural Lands-----								\$5,705.00	\$ 3,750.00	\$ 9,455.00
<b>TOTAL ASSESSMENT</b> -----								\$6,000.00	\$ 4,000.00	\$ 10,000.00

Total Area Assessed      143.01 acres  
    57.83 hectares



SPECIFICATIONS  
REPLACEMENT ACCESS CULVERTS  
OVER THE 7TH CONCESSION DRAIN  
TOWN OF TECUMSEH  
PROJECT NO. 14-105

## 1.0 PIPE MATERIAL

The Contractor shall supply and install or clean the following:

### Access Culverts and Crossings:

- a. Culvert No. 8 at Station 1+379: 16.0 metres of 1800mm diameter aluminized corrugated steel pipe, 2.8mm thick with 125 x 25mm corrugations and sloped gabion stone end of pipe protection;
- b. Culvert No. 9 at Station 1+544: 20.0 metres of new 1500mm diameter class 65-D concrete pipe with sloped gabion stone end of pipe protection;
- c. Culvert No. 3 at Station 1+854: 22.0 metres of new 1200mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations and concrete block headwalls;
- d. Culvert No. 4 at Station 1+909: 12.5 metres of new 1200mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations with concrete block headwalls;
- e. Culvert No. 5 at Station 1+957: 11.8 metres of new 1200mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations with concrete block headwalls;
- f. Culvert No. 6 at Station 2+034: 12.2 metres of new 1200mm diameter aluminized corrugated steel pipe, 2.8mm thick with 68 x 13mm corrugations with concrete block headwalls;
- g. Culvert No. 7 at Station 2+054: 12.5 metres of 1050mm diameter class 65-D concrete pipe with concrete block headwalls.

### Existing enclosed pipe network to be cleaned:

- a. Station 2+386.6 to Station 2+848.8: Clean existing 450mm to 825mm diameter corrugated steel pipes including all inline manholes and catch basins.

## 2.0 WORKING AREA

The areas available to the Contractor to be used for the purpose of constructing the recommended works of this report and for construction and future maintenance as provided for under Section 63 of the Act are described follows:

Between Station 0+000 and Station 0+028: The Contractor shall utilize an area measuring approximately 9.0 metres wide along the west side of the drain.

Between Station 1+321 and Station 1+825: The Contractor shall utilize an area measuring 9.0 metres wide along the west side of the drain.

Between Station 1+825 and Station 2+042: The Contractor shall utilize the Moynahan Street right-of-way.

Between Station 2+042 and Station 2+386.61: The Contractor shall utilize an area measuring 9.0 metres wide along the west side of the drain.

Between Station 2+386.61 and Station 2+848.8: The Contractor shall utilize the North Talbot Road right-of-way.



### 3.0 DISPOSAL OF EXCAVATED MATERIAL

The Contractor shall dispose of excavated material as described below:

The Contractor shall spread and level excavate adjacent to the drain to a maximum depth of 300mm between:

Station 1+321 and Station 1+750  
Station 2+054 and Station 2+386.6

The Contractor shall load, haul, spread and level excavate on lands adjacent to Station 1+404 and Station 1+750 and Station 2+069 and Station 2+386.61 between:

Station 1+750 and Station 1+825  
Station 1+825 and Station 2+054.

### 4.0 LOCATION AND ELEVATION OF CULVERT

The location and elevations of the new culvert shall be according to the drawings, 14-105 Sheet 1 to Sheet 7.

### 5.0 PLACEMENT OF CULVERT

- a) The Contractor shall excavate all vegetation, topsoil and existing granular material from the bank slopes and bottom of the existing drain complete along with hauling materials off site.

The required work includes:

- i. The supply and installation of new pipe as described in Section 1.0 Pipe Material;
- b) The Contractor shall perform the excavation, placement of the pipe and backfill in a dry condition and shall provide all required pumps and/or equipment to enable the work to proceed in the dry.
- c) Supply and place sloped gabion stone end of pipe protection or concrete block headwalls, as required.

### 6.0 PIPE BACKFILL

After the pipe has been set, the Contractor shall backfill the culvert with granular "B" material, O.P.S.S. Spec 1010 according to the attached plan. The backfill material shall be carefully placed so damage to or movement of the culvert is avoided and backfill materials shall be placed in layers not exceeding 300 mm in thickness, loose measurement. Each layer shall be thoroughly compacted in place to a Standard Proctor Density of 98% by means of mechanical compactors. The equipment and method of compacting the backfill material shall be to the full satisfaction of the Commissioner in charge.

### 7.0 QUARRIED ROCK END PROTECTION

Where specified and after the corrugated plastic pipe has been set and backfilled the Contractor shall install quarried rock erosion protection at each end of the pipe.

The backfill over the ends of the corrugated plastic pipe shall be set on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the corrugated plastic pipe to the top of each side slope and between both side slopes.

## 7.0 QUARRIED ROCK END PROTECTION - Continued

The top 300 mm in thickness of the backfill over the ends of the corrugated plastic pipe shall be quarried rock. The quarried rock shall be placed on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the corrugated plastic pipe to the top of each side slope of the drain and between both side slopes. The quarried rock shall have a minimum dimension of 100 mm and a maximum dimension of 225 mm. Prior to placing quarried rock end protection over the granular material, the Contractor shall lay a non woven geotextile filter fabric equal to a "Terrafix 270R" or approved equal. The geotextile filter fabric shall extend from the bottom of the corrugated plastic pipe to the top of each side slope of the drain and between both side slopes of the drain. The Contractor shall take extreme care not to damage the geotextile filter fabric when placing the quarried rock on top of the filter fabric. The geotextile filter fabric and quarried rock shall be placed to the complete satisfaction of the Municipality's Drainage Superintendent.

## 7.0 CONCRETE BLOCK HEADWALLS

Where specified and after the Contractor has set in place the new culvert, he shall completely backfill the same and install new concrete block headwalls at the locations indicated on the drawing. The Contractor shall completely backfill in behind the new concrete block headwalls with granular material, Granular "A" and "B" per O.P.S.S. 1010 and as additionally specified under Special Provisions Item No. 11.0 and the granular material shall be compacted in place with a standard proctor density of 100%. The granular backfill shall be placed and compacted in lifts not to exceed 300 mm (12 inches) in thickness.

Upon completion of the concrete block headwall the Contractor shall cap the top row of concrete blocks with a prefabricated concrete cap. The Contractor shall fill all voids between the concrete blocks and the corrugated steel pipe with concrete, particular care being taken underneath the pipe haunches to fill all voids.

## 8.0 ALIGNMENT

The alignment of the enclosure throughout shall be to the full satisfaction of the Commissioner in charge. The whole of the work shall be done in a neat, thorough and workmanlike manner to the full satisfaction of the Commissioner in charge.

## 9.0 LOCATION OF STRUCTURES, ETC.

The Contractor shall satisfy himself as to the exact location, nature and extent of any existing structure, utility or other object that he may encounter during the course of the work. The Contractor shall indemnify and save harmless, the Town and the Engineer for any damages which he may cause or sustain during the progress of the work. He shall not hold the Town or the Engineer liable for any legal action arising out of any claims brought about by such damage caused by him.

Numerous catchbasins were noted in the front portion of numerous properties along the length of the drain. The Contractor shall take care to not damage any catchbasin or connection into the drain. Should a catchbasin or connection be damaged, it shall be replaced by the Contractor at his cost.

## 10.0 DAMAGE TO TRAVELLED PORTION OF MUNICIPAL ROAD

The Contractor will be responsible for any damage caused by him to any portion of the municipal road system, especially to the travelled portion. When excavation work is being carried out and the excavation equipment is placed on the travelled portion of a road, the travelled portion shall be protected by having the excavation equipment placed on satisfactory timber planks or timber pads. If any parts of the travelled portion of the road is damaged by the Contractor, the Municipality shall

#### 10.0 DAMAGE TO TRAVELLED PORTION OF MUNICIPAL ROAD- Continued

have the right to have the necessary repair work done by its employees and the cost of all labour and materials used to carry out the repair work shall be deducted from the Contractor's contract and credited to the Municipality.

#### 11.0 CONSTRUCTION SAFETY

The Contractor shall comply with all the requirements of the Occupational Health and Safety Act, 1990 and the regulations passed in connection therewith, as administered by the Ontario Ministry of Labour and all subsequent amendments of the said Act.

The Contractor shall exercise all possible precaution against injury to persons or property resulting from his work. The Contractor shall leave no trenches, pits, holes or excavations uncovered, without providing sufficient protection at all times. The Contractor shall install, erect and provide barricades, signs, traffic cones, flashers, lights, plates, warning and other devices, materials and personnel as may be required and at his own expense in order to provide for the safe passage and control of traffic and to ensure public safety. All traffic control shall be in accordance with the latest standards of the Ministry of Transportation.

#### 12.0 CERTIFICATE OF CLEARANCE

The Contractor will be required to submit to the Municipality a Certificate of Good Standing from the Workplace Safety & Insurance Board prior to the commencement of the work and the Contractor will be required to submit to the Municipality, a Certificate of Clearance for the project from the Workplace Safety & Insurance Board before final payment is made to the Contractor.

#### 13.0 PROGRESS ORDERS

Monthly progress orders for payment shall be furnished to the Contractor by the Commissioner in charge; said orders shall not be for more than 90% of the value of the work done and the materials furnished on the site. The paying of the full 90% does not imply that any portion of the work has been accepted. The remaining 10% will be paid 45 days after the final acceptance and completion of the work.

#### 14.0 CLEANING UP

The Contractor shall leave the whole of the site of the work in a neat, thorough and workmanlike appearance to the full satisfaction of the Commissioner. He shall haul away any excess earth from the site. He shall haul to the site, sufficient earth to fill any depressions caused by his work at his own expense. The site shall be left as close as possible in the same condition as it was prior to the commencement of the work.

#### 15.0 MEASUREMENT AND PAYMENT

Payment for the work shall be on a unit price basis unless otherwise indicated and shall include all the work shown on the accompanying drawings and specifications.

## 16.0 MAINTAINING FLOW

The Contractor shall maintain the flow of any drainage works encountered in the progress of the work and at no expense to the Owner. The Contractor shall obtain written approval from the Commissioner in charge to stop up any drain and if necessary provide pumping equipment, build necessary by-passes, etc. at no expense to the Owner.

## 17.0 COMMISSIONER

Where the work "Commissioner" is used in this specification, it shall mean the person or persons appointed by the Council of the Municipality having jurisdiction, to superintend the work.

The Commissioner will be permitted to make minor variations in the work so long as these variations will result in a more satisfactory project or a more economical one. These variations, however, must not be such as to change the intent of the work performed nor are they to reduce the standard of quality.

## 18.0 NOTIFICATION OF WORK

Prior to commencing any work of installing the extension of the culvert or removing any existing structures, the Contractor shall inform the Municipality's Drainage Superintendent of his intent to commence work at least 48 hours prior to commencing any work. The Owner or Contractor shall endeavour to install and complete the new structure without delay once he has commenced the work. If for any reason the work does not proceed continuously then the Owner or Contractor shall notify the Drainage Superintendent in advance of any backfilling operation or headwall construction so that he may schedule inspection of same. The completed work must be done to the satisfaction of the Municipality's Drainage Superintendent and be approved by him.

## 19.0 MAINTENANCE

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

## 20.0 PROPERTY BARS

The Contractor shall note the presence of numerous iron property bars along the course of the work. The Contractor shall make every effort to protect all property bars. The cost of replacing any property bar destroyed by the Contractor will be paid by the Contractor.

## 21.0 PROVISIONAL ITEMS

Items of work included in the Form of Tender noted as "Provisional" may be deleted from the Contract at any time at the discretion of the Owner. If any Provisional Item, or part thereof, is deleted from the requirements of the Contract, the Contractor will have no claim against the Owner for so doing and the Contractor must take this requirement into consideration when determining his unit prices and his Total Tender Price.

Provisional prices tendered shall be in effect until issuance of the final payment certificate.

SPECIFICATIONS  
ENVIRONMENTAL PROTECTION SPECIAL PROVISIONS  
FOR THE  
7TH CONCESSION DRAIN  
TOWN OF TECUMSEH  
PROJECT NO. 14-105

1.0 GENERAL

These Environmental Protection Special Provisions shall apply and form part of this Contract. All costs associated to conforming with these Special Provisions shall be included in the Tender prices bid.

2.0 FIRES

Fires and burning of rubbish on site will be permitted only with special approval from the Municipality.

3.0 DISPOSAL OF WASTES

The Contractor shall not bury rubbish and waste materials on site unless approved by the Engineer and all applicable approving authorities. The site shall be maintained free of accumulated waste and rubbish. All waste materials should be disposed of in a legal manner at a site approved by all local approving authorities and the Engineer.

The Contractor shall not allow deleterious substances, waste or volatile materials such as mineral spirits, or paint thinner, to enter into waterways, storm or sanitary sewers.

The disposal of dredge material where applicable shall be in accordance with the above.

4.0 POLLUTION CONTROL

The Contractor shall maintain under this Contract temporary erosion, sediment and pollution control features installed. The Contractor shall control emissions from equipment and plant to local authorities emission requirements. The Contractor shall not cause excessive turbidity when performing in-water work. The Contractor shall not allow any debris, fill or other foreign matter to enter into the waterway. The Contractor shall remove from the waterway, all extraneous materials resulting from in-water work.

The Contractor shall abide by local noise By-Laws for the duration of the Contract.

Spills of deleterious substances into waterways and on land shall be immediately contained by the Contractor and the Contractor shall cleanup in accordance with Provincial regulatory requirements. All spills shall be reported to the Ontario Spills Action Centre (1-800-268-6060), local authorities having jurisdiction and the Engineer. To reduce the risk of fuel entering the waterway, refuelling of machinery must take place a safe distance from the waterway. The Contractor shall note that the Engineer or the Owner takes no responsibility for spills, this shall be the sole responsibility of the Contractor.

## 5.0 WHMIS

The Contractor shall comply with the requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials and regarding labelling and the provision of material safety data sheets acceptable to Labour Canada.

## 6.0 DRAINAGE

The Contractor shall not pump water containing suspended materials into waterways, sewers or drainage systems. The Contractor shall be solely responsible for the control, disposal or runoff of water containing suspended materials or other harmful substances in accordance with these specifications, and local authority requirements. The Contractor shall provide temporary drainage and pumping as necessary to keep excavations and site free from water.

The Contractor shall install and maintain sediment control devices as indicated on the Contract Drawing and as directed by the Engineer.

## 7.0 PROTECTION OF VEGETATION

The Contractor shall exercise the utmost caution to ensure that existing trees and plants on-site and on adjacent properties are not damaged or disturbed unless noted otherwise in the Removals Special Provisions of this Contract. The Contractor shall restrict tree removal to areas indicated on the Contract Drawings and/or designated on-site. No trees or shrubs shall be removed without the approval of the Engineer and/or Drainage Superintendent. Mature trees outside of the drain bank limit shall remain undisturbed except where necessary to facilitate the proposed works.

## 8.0 DUST CONTROL

The Contractor will be solely responsible for controlling dust nuisance resulting from his operations, both on the site and within adjacent right-of-ways.

Water and calcium chloride shall be applied to areas on or adjacent to the site as authorized by the Engineer as being necessary and unavoidable for the prevention of dust nuisance or hazard to the public. No payment will be made for dust control unless otherwise specified in the Special Provisions.

## 9.0 RESTRICTIONS FOR IN-WATER WORKS

The Contractor shall only perform in-water works during times when conditions permit reasonable production rates to be achieved. The Contractor shall be required to adopt good housekeeping practices that minimize disturbance to the site and the adjacent waterway.

The Contractor shall note that this Project is subject to approval from the Essex Region Conservation Authority and as such, any possible turbidity caused by the construction of the shore protection works is of key importance.

The Contractor shall minimize the turbidity (sedimentation) produced by any in-water works construction or operations. The Contractor will be ordered to cease operations if, in the opinion of the Engineer or authorities having jurisdiction, the in-water work is producing unacceptable amounts of turbidity in the waterway. Based on this, the Contractor shall either adjust his operation(s) to produce lower turbidity levels, wait for more favourable conditions before

#### 9.0 RESTRICTIONS FOR IN-WATER WORKS - Continued

operations will be allowed to continue, or undertake approved mitigating measures (e.g. sediment control, etc.). All costs associated with the above will be the sole responsibility of the Contractor, and no claims for extras or delays will be considered.

#### 10.0 FISH HABITAT

No work shall be undertaken when there is likelihood of adverse effects on fish spawning or fish habitat in downstream waters.

GENERAL SPECIFICATIONS  
FOR CONSTRUCTION OF OPEN DRAINS  
FOR THE  
7TH CONCESSION DRAIN  
TOWN OF TECUMSEH  
PROJECT NO. 14-105

1.0 EXAMINATION OF SITE, PLANS AND SPECIFICATIONS

Each tenderer must visit the site and review the plans and specifications before submitting his tender and must satisfy himself as to the extent of the work and local conditions to be met during the construction period. He is not to claim at any time after submission of his tender that there was any misunderstanding of the terms and conditions of the contract relating to site conditions. The quantities shown as indicated on the drawings or in the report are estimates only and are for the sole purpose of indicating to the tenderers the general magnitude of the work. The tenderer is responsible for checking quantities for accuracy prior to submitting his tender.

2.0 SUPPLY OF MATERIALS

The Contractor shall supply all labour, equipment and materials necessary for the proper completion of the project.

3.0 PROFILE

The excavation of the drain must be at least to the depth intended by the grade line as shown on the profile, which grade line is governed by the bench marks. The profile shows, for the convenience of the Contractors and others, the approximate depth of cut from the surface of the ground at the points where the numbered stakes are set to the final invert of the channel and also the approximate depth of cut from the bottom of the existing channel to the final invert of the channel. Bench marks which have been established along the course of the drain, shall govern the final elevation of the drain. The location and elevation of the bench marks are shown on the profile.

4.0 ALIGNMENT

The alignment of the drain throughout shall be to the full satisfaction of the Commissioner in charge. The whole of the work shall be done in a neat, thorough and workmanlike manner to the full satisfaction of the Commissioner in charge. The bottom widths and side slopes of the various sections of the finished drain are to be true to line and grade as shown on the profile. When completed the drain shall have a uniform and even bottom and in no case shall such bottom project above the grade line as shown on the accompanying drawing, and as determined from the bench mark.

5.0 BRUSHING AND GRUBBING

Brush or rubbish shall be grubbed out and close cut on the bank of the working side of the drain including the strip of land between where the earth is to be cast and spread and the top of the drain. The brush or rubbish shall be loaded, hauled and disposed of offsite at a location determined by the Contractor and at his expense. All mature trees along the top of the bank of the working side of the drain shall be selectively left standing.



## 5.0 BRUSHING AND GRUBBING - Continued

Existing select hardwood trees greater than 200 mm (8") in diameter situated in the drain bank within 1.0 metre from the top of the bank may be selectively left standing if the Drainage Superintendent considers the trees will not adversely affect the flow of water within the drain. Prior to removing any trees the Contractor shall meet at the site with the Drainage Superintendent to review if any vegetation or select trees are environmentally significant for preservation.

## 6.0 DISPOSAL OF MATERIAL

The Contractor shall dispose of excavated material as follows: All excavated material shall be loaded, hauled and disposed of offsite at a location to be determined by him and at his expense.

## 7.0 SPREADING EXCAVATED EARTH

All excavated material shall be loaded, hauled and disposed of offsite at a location to be determined by him and at his expense. No material shall be cast and spread on the adjacent industrial lands.

## 7.0 FENCING

Where it is necessary to take down any fence in order to proceed with the work, the same shall be done by the Contractor across or along that portion of the work where such fence is. The Contractor will be required to exercise extreme care in the removal of any fence so as to cause a minimum of damage to the same. The Contractor will be required to replace any fence that is taken down in order to proceed with the work and the fence shall be replaced in a neat and workmanlike manner. The Contractor will not be required to procure any new materials for rebuilding the fence provided he has used reasonable care in the removing and replacing of the same. Where any fence is removed by the Contractor and the Owner thereof deems it advisable and procures new material for replacing the fence so removed, the Contractor shall replace the fence using the new materials and the materials from the present fence shall remain the property of the Owner. The Contractor is not to leave any fences open when he is not at work in the immediate vicinity.

## 8.0 LOCATION OF STRUCTURES AND UTILITIES

The Contractor shall satisfy himself as to the exact location, nature and extent of any existing structure, utility or other object which he may encounter during the course of the work. The Contractor shall indemnify and save harmless, the Municipality and the Engineer for any damages which he may cause or sustain during the progress of the work. He shall not hold the Municipality or the Engineer liable for any legal action arising out of any claims brought about by such damage caused by him.

## 9.0 ACCESS CULVERTS AND CROSSINGS

Culverts and crossings shall be cleaned or removed and replaced as described as follows:

Between Station 2+386.6 and Station 2+848.8: All pipes and structures shall be cleaned; all excess material shall be disposed of offsite at a location determined by the contractor at his expense.

Culvert No. 8 at Station 1+379: Culvert shall be removed and replaced as described in

## 9.0 ACCESS CULVERTS AND CROSSINGS - Continued

Section 1.0 Pipe Material of Specifications – Replacement Access Culverts over the 7<sup>th</sup> Concession Drain.

Culvert No. 9 at Station 1+544: Culvert shall be constructed as described in Section 1.0 Pipe Material of Specifications – Replacement Access Culverts over the 7<sup>th</sup> Concession Drain.

Culvert No. 3 at Station 1+854: Culvert shall be removed and replaced as described in Section 1.0 Pipe Material of Specifications – Replacement Access Culverts over the 7<sup>th</sup> Concession Drain.

Culvert No. 4 at Station 1+909: Culvert shall be removed and replaced as described in Section 1.0 Pipe Material of Specifications – Replacement Access Culverts over the 7<sup>th</sup> Concession Drain.

Culvert No. 5 at Station 1+957: Culvert shall be removed and replaced as described in Section 1.0 Pipe Material of Specifications – Replacement Access Culverts over the 7<sup>th</sup> Concession Drain.

Culvert No. 6 at Station 2+034: Culvert shall be removed and replaced as described in Section 1.0 Pipe Material of Specifications – Replacement Access Culverts over the 7<sup>th</sup> Concession Drain.

Culvert No. 7 at Station 2+054: Culvert shall be removed and replaced as described in Section 1.0 Pipe Material of Specifications – Replacement Access Culverts over the 7<sup>th</sup> Concession Drain.

## 10.0 BACKFILL FOR CULVERTS

Where specified and after the corrugated plastic pipe has been set, the Contractor shall backfill the culvert with granular "B" material, O.P.S.S. Spec. 1010. The granular backfill shall be compacted in place to a Standard Proctor Density of 100% by means of mechanical compactors. The equipment and method of compacting the backfill material shall be to the full satisfaction of the Drainage Superintendent or Engineer.

## 11.0 ROCK PROTECTION FOR CULVERTS

The backfill over the ends of the pipe shall be set on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the pipe to the top of each side slope and between both side slopes. The top 30 cm in thickness of the backfill over the ends of the pipe shall be quarried rock. The quarried rock shall be placed on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the pipe to the top of each side slope of the drain and between both side slopes. The quarried rock shall have a minimum dimension of 100 mm and a maximum dimension of 225 mm. Prior to placing quarried rock end protection over the granular material, the Contractor shall lay a non woven geotextile filter fabric equal to a "Terrafix 270R" or approved equal. The geotextile filter fabric shall extend from the bottom of the pipe to the top of each side slope of the drain and between both side slopes of the drain. The Contractor shall take extreme care not to damage the geotextile filter fabric when placing the quarried rock on top of the filter fabric.

## 12.0 PLACING OF CULVERT PIPE

When specified the Contractor shall install all culvert bridges in the location directed by the Engineer. The excavation for placing the culvert, the type and class of bedding and backfill and culvert end treatment shall be carried out to the width, depth and alignment as specified herein. The surface on which the culvert is to be laid shall be true to grade and alignment and shaped to accept the materials to be placed. The pipe shall be laid to the alignment and grade shown in the report but may not be placed on a bed containing frozen materials. The Contractor shall carefully place the bedding and backfill material so damage to or movement of the pipe is avoided. Backfill and cover materials shall be placed in layers not exceeding 250 mm in thickness, loose measurement. Each layer shall be thoroughly compacted before the next layer is placed. Backfill on each side of the pipe shall be placed simultaneously and at no time shall the levels on each side of the pipe differ by more than 250 mm. Where native backfill is approved to be used the material shall not contain boulders larger than 150 mm or other deleterious material. The Contractor will be required to fully restore all paved driveways with materials of similar type and depths. The Contractor shall neatly saw cut all paved driveways at a distance of 300 mm beyond the edge of the excavated trench and this shall be done immediately prior to final restoration of the paved driveway.

When an access culvert or bridge does not have to be lowered or replaced, the Contractor shall clean it to its full cross sectional area using care to avoid causing damage to it in the process. Where a pipe culvert is to be reset to a new grade, the Contractor shall carefully remove it, clean it to its full cross sectional area and replace it in the drain as specified herein. Where a culvert is to be replaced, the Contractor shall carefully remove the existing pipe from the drain, clean it to its full cross sectional area and leave it on the drain bank unless otherwise specified. Should either the property owner or the Commissioner in charge not require the salvaged pipe then the Contractor shall dispose of the pipe at the Contractors expense.

The Contractor if using a batter board system for establishing the grade of the culvert pipe, shall utilize a minimum of three batter board stakes for each culvert. The Contractor shall ensure that the batter board stakes placed on the grade stakes shall line up, this being done prior to any excavation taking place for the proposed culvert.

Where pipes are scheduled to be moved or replaced the Contractor shall confirm the new location of the culvert pipe with the owner prior to installation. Where the Contractor has excavated a culvert pipe which has been scheduled to be cleaned and reinstalled and it is found that the condition of the existing culvert pipe is not satisfactory to be reused, the Contractor shall immediately notify the Commissioner in charge who will verify the condition of the existing pipe and may instruct the Contractor to supply a new length of corrugated plastic pipe.

Where pipes are scheduled to be cleaned and flushed only, the material which is removed from the culvert pipe is to be loaded and hauled away. Over digging of the drain at the downstream end of the culvert to accommodate material flushed from a culvert pipe will not be allowed.

## 13.0 CUTS

The cuts as shown on the accompanying drawing are to be taken from the ground beside the stakes to the bottom of the finished drain, unless otherwise noted on the drawing.

#### 14.0 DAMAGE TO TRAVELLED PORTION OF MUNICIPAL ROAD

The Contractor will be responsible for any damage caused by him to any portion of the municipal road system, especially to the travelled portion. When excavation work is being carried out and the excavation equipment is placed on the travelled portion of a road, the travelled portion shall be protected by having the excavation equipment placed on satisfactory timber planks or timber pads. If any parts of the travelled portion of the road is damaged by the Contractor, the Municipality shall have the right to have the necessary repair work done by its employees and the cost of all labour and materials used to carry out the repair work shall be deducted from the Contractor's contract and credited to the Municipality.

## 15.0 SEEDING AND MULCHING

The Contractor will be fully responsible for the restoration of all areas disturbed by his operations in the carrying out this work. The Contractor shall excavated and set aside sufficient topsoil from the trench excavation or supply additional topsoil so that he can place a minimum of 100mm in depth of topsoil over the backfilled trench as detailed on the drawings. Any depressions in any lawn caused by equipment or due to the movement of materials shall be backfilled with topsoil and satisfactorily levelled and raked in place on all lawn areas to be restored.

The Contractor shall fine grade the finished surfaces and shall apply hydroseeding and mulch. The seeding and mulching operation shall be carried out according to O.P.S.S. Spec. 572 or as amended herein and the operation shall include the supplying and placing of the following:

- |    |              |  |       |
|----|--------------|--|-------|
| A) | Seed Mixture | - Creeping Red Fescue  | - 50% |
|    |              | - Red Top  | - 20% |
|    |              | - Canada Blue Grass  | - 15% |
|    |              | - Kentucky Blue Grass  | - 15% |
| B) | Nurse Crop   | - Oats if seeding and mulching is performed during May or June.              |       |
|    |              | - Annual Rye Grass if seeding and mulching is performed during Sept. or Oct. |       |
| C) | Fertilizer   | - 5-20-10 mixture  |       |
| D) | Mulch        | - Wood Cellulose Fibre or Straw  |       |
| E) | Adhesive     | - Asphalt Emulsion if straw mulch used                                       |       |
|    |              | - Liquid Polyvinyl Acetate if wood fibre mulch used                          |       |

The application rates shall be as follows:

- A) Grass Seed Mixture - 90 lbs./acre
- B) Fertilizer - 350 lbs./acre
- C) Nurse Crop Seed - 55 lbs./acre
- D) Mulch - 1300 lbs./acre if wood fibre used  
- 1" to 2" depth if straw used
- E) Adhesive - 200 imp.gal/acre for Asphalt Emulsion  
- 205 lbs./acre for Liquid Polyvinyl Acetate

The seeding and mulching operation shall be only carried out as weather conditions permit during the months of May and June in the Spring, and September and October in the Fall. If the excavation work is carried out during the months of May and June, or September or October, the Contractor has the option of contacting the Drainage Superintendent and if the Contractor receives his written permission, the seed mixture as above specified, may be placed on the excavated side slopes by the Contractor by hand, daily, at the completion of his daily excavation operation. If the Contractor has been given written permission by the Drainage Superintendent

#### 15.0 SEEDING AND MULCHING - Continued

to place the seeding mixture by hand daily, at the completion of his daily excavation operation, the Contractor shall be responsible to give the side slopes a rough, harrowed texture prior to placing the seed mixture.

#### 16.0 QUARRIED ROCK

The Contractor shall place quarried rock protection at the areas indicated on the accompanying plans or as directed by the Engineer. The quarried rock shall be graded in size from a minimum size of 100 mm to a maximum size of 230 mm. The quarried rock shall be placed 300 mm in thickness on a layer of geotextile filter fabric placed on the bottom of the excavation. The filter fabric shall be "Terrafix 270-R" or equal. The Contractor shall excavate for the quarried rock so that the top of the completed quarried rock protection is level with the adjacent ground.

The Contractor shall remove all trees, brush and debris from the area on which the quarried rock is to be placed. The quarried rock shall be carefully placed by the Contractor at the locations and to the dimensions as shown on the accompanying specifications. The specified filter cloth shall be hand laid and have an overlap of 600 mm and all quarried rock that is to be placed over the filter cloth shall be carefully hand or machine placed so that it does not damage the filter cloth. The filter cloth shall extend up the sides of the trench excavated to accept the quarried rock and the quarried rock shall extend 300 mm above the top of the surface inlet pipe where applicable.

#### 17.0 MAINTAINING FLOW AND EXISTING SEWERS

The Contractor shall support and maintain the flow and existing sewers and house connections and any other drainage works encountered in the progress of the work and at no expense to the owner. The Contractor shall obtain written approval from the engineer to stop up any drain, and if necessary, provide pumping equipment, build necessary by-passes, etc. at no expense to the owner.

#### 18.0 SPECIAL PROVISIONS

The part of the Specifications headed "Special Provisions" which is attached hereto forms part of this Specification and is to be read with it. Where there is any difference between the requirements of this General Specification and those of the Special Provisions, the Special Provisions shall govern.

#### 19.0 REMOVAL OF TREES

The Contractor shall reference General Specification No. 5 prior to removing any vegetation near or within the drain. Whenever practical, existing trees not scheduled for removal will be preserved. The Contractor shall exercise the utmost caution to ensure that the trees are not damaged or disturbed. All mature trees along the top of the bank of the working side of the drain shall be selectively left standing.

#### 20.0 HIGH-PRESSURE GAS MAIN

Further to Section 8.0 Location of Structures and Utilities, a high-pressure gas main is aligned parallel to the south side of the former railway right-of-way. There is sufficient depth of cover; however, third party observation by a Union Gas representative will be required during construction when digging within 1.5 metres of the utility due to the size and pressure of the

## 20.0 HIGH-PRESSURE GAS MAIN - Continued

main. The Contractor shall provide notice three business days prior to the start of excavation at 1-855-228-6535.

Should abandoned infrastructure be found within the working area, the following shall be noted and performed:

- Assume any excavated pipe is live;
- If during the course of any project, a pipe is found that is not on the locate sheet and is in conflict with the work, the Contractor shall call the Union Gas emergency number (1-877-969-0999) to speak with a Union Gas representative to determine if the utility is live or dead;
- A Union Gas representative will respond to the live or dead call within 1-4 hours so the Contractor must plan accordingly.

ATTENTION:

ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS, REVISED STATUTES OF ONTARIO, 1990 CHAPTER 0.1 AS AMENDED, ONTARIO REGULATION 213/91, R.R.O. 1990 REG. 834 AS ADMINISTERED BY THE ONTARIO MINISTRY OF LABOUR AND ALL SUBSEQUENT AMENDMENTS OF SAID ACT.

CAUTION:

THE LOCATION OF THE UNDERGROUND UTILITIES AS SHOWN ON THE DRAWING ARE APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES DURING THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR AGREES TO INDEMNIFY THE OWNER AND CROZIER BAIRD ENGINEERS AGAINST ANY CLAIMS WHICH ARISE FROM HIS ACTIONS.

SHEET SET INDEX:

SHEET NO.	SHEET TITLE
1	TITLE PAGE
2	DRAINAGE AREA
3	PROFILE 1+146 TO 1+900
4	PROFILE 1+900 TO 2+656
5	PROFILE 2+656 TO 2+848
6	CROSS SECTIONS
7	CROSS SECTIONS

NOTE:

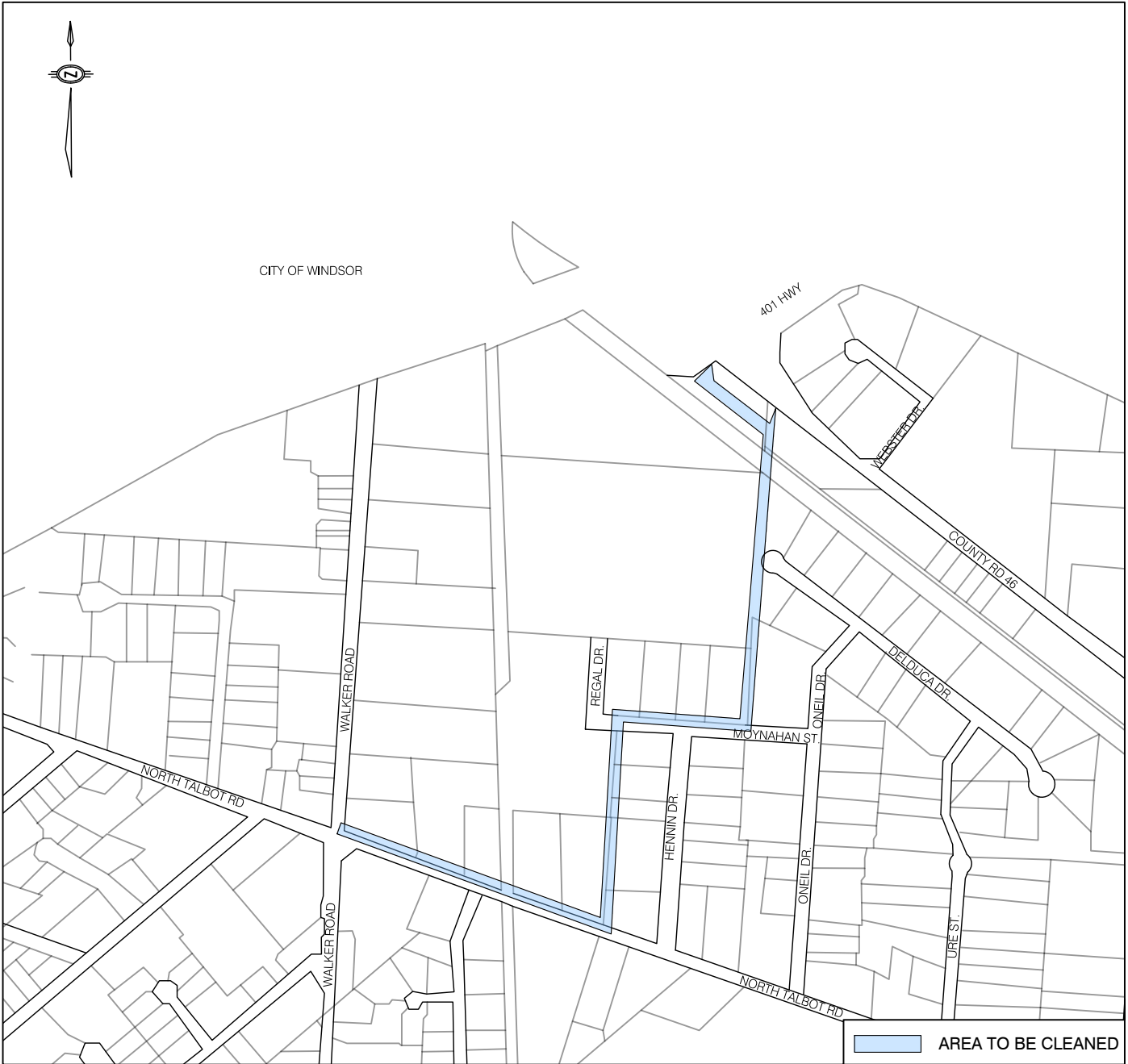
THE PROPERTY LINES AND DIMENSIONS SHOWN ARE BASED ON SURVEY BARS FOUND ON THE SITE AND ARE NOT BASED ON A SURVEY DRAWING PRODUCED BY AN ONTARIO LAND SURVEYOR. THE PROPERTY LINES SHOULD BE CONSIDERED AS APPROXIMATELY ONLY AND NOT A LEGAL PLAN OF SURVEY

NOTE:

CONFIRM PRESENCE OF BURIED PIPELINE PARALLEL TO NORTH RAIL BURIED 4-5' DEEP

BENCHMARK

- No. 1 STA: 2+714: TOP NUT OF FIRE HYDRANT EAST OF WALKER ROAD AND NORTH TALBOT ROAD INTERSECTION  
GPS ELEVATION 191.665 METRES.
- No. 2 STA: 2+463: TOP NUT OF FIRE HYDRANT EAST OF BRENDAN LINE AND NORTH TALBOT ROAD INTERSECTION  
GPS ELEVATION 191.740 METRES.
- No. 3 STA: 2+485: TOP NUT OF FIRE HYDRANT EAST OF BRENDAN LINE AND NORTH TALBOT ROAD INTERSECTION  
GPS ELEVATION 191.967 METRES.
- No. 5 STA: 2+065: TOP NUT OF FIRE HYDRANT WEST OF MOYNAHAN ST. AND HENININ DR.  
GPS ELEVATION 191.466 METRES.
- No. 6 STA: 1+563 TOP NUT OF FIRE HYDRANT NEAR THE WEST END OF DELDUCA DR.  
GPS ELEVATION 191.117 METRES.



KEY PLAN  
SCALE: N.T.S



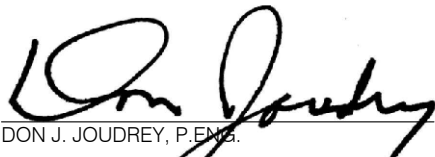
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N8H 2X8

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N9A 4K4.

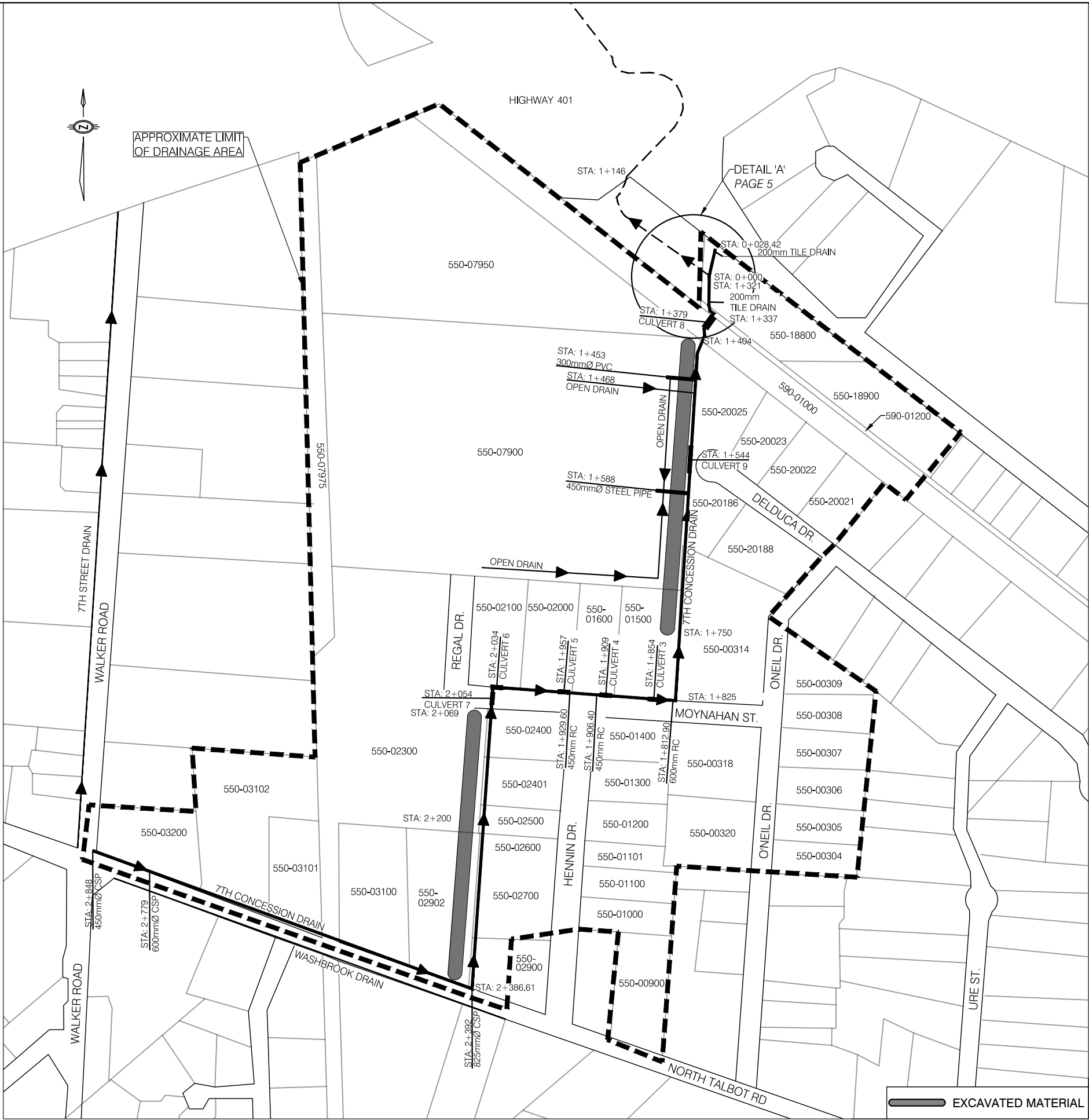
PROJECT TITLE:  
REPAIR AND IMPROVEMENT TO THE 7TH CONCESSION DRAIN  
TOWN OF TECUMSEH

PAGE TITLE:  
TITLE PAGE



  
DON J. JOUDREY, P.ENG.

DRAWN BY: D.B.	SCALE: AS NOTED	DATE: FEB. 07, 2017 RECONSIDERED NOV. 23, 2017
CHKD BY: D.A.J./H.P.P.	SHEET No. : 1 OF 8	PROJECT No. : 14-105



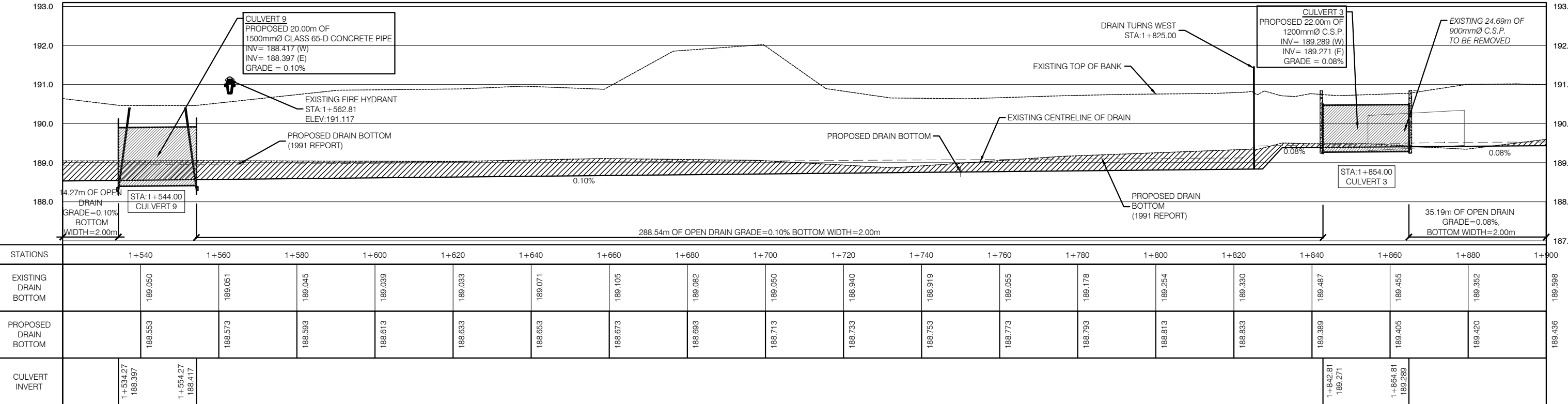
DRAINAGE AREA PLAN  
SCALE: N.T.S.

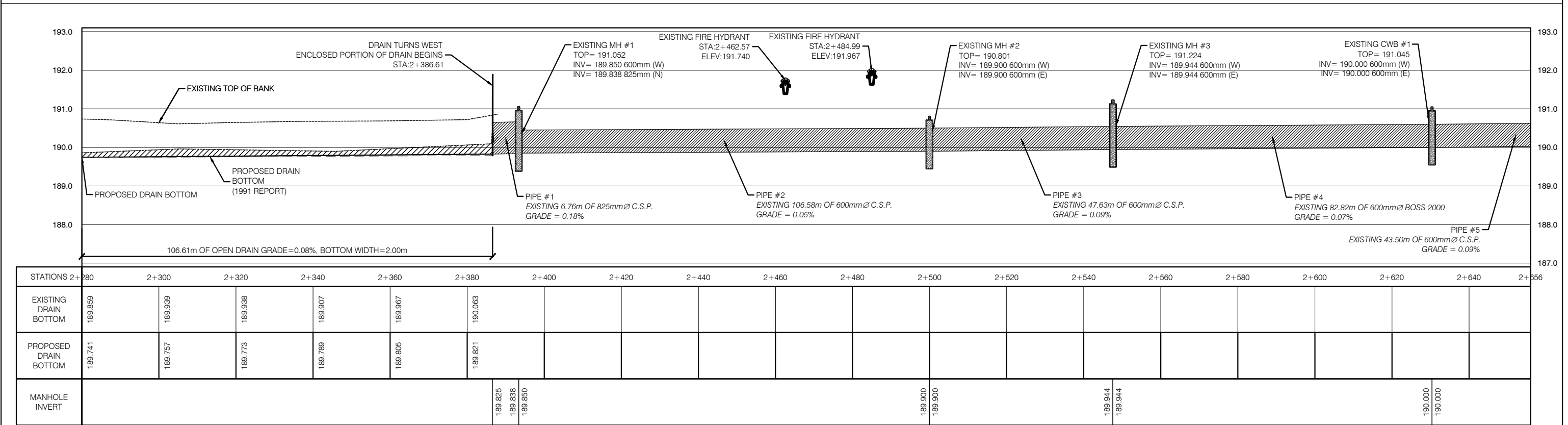
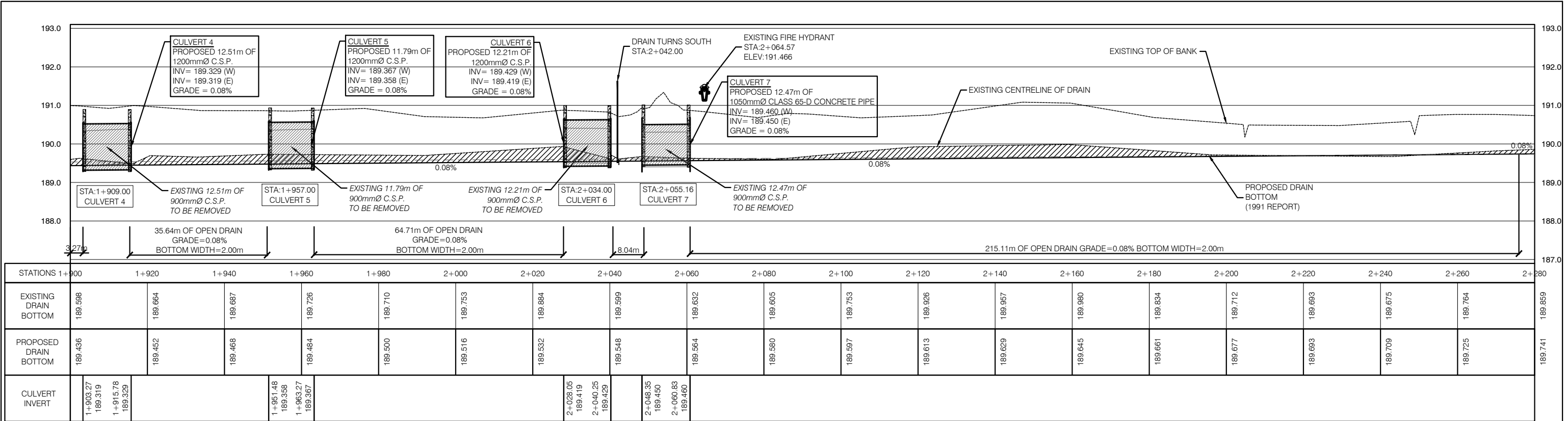
Roll No.	Owner
550-00304	Greycliffe Consultants
550-00305	KBC Tools Inc.
550-00306	997103 Ontario Ltd.
550-00307	Linda Jahn and Cheryl Jahn
550-00308	KFJ Holdings Ltd.
550-00309	Filippo Liburdi
550-00314	Hero's Fountain Ltd.
550-00318	Linda Jahn and Cheryl Jahn
550-00320	Timothy Capital Corp.
550-00900	Generation Development Contractors Inc.
550-01000	Fraven Management Ltd.
550-01100	TJ Watson Land Development Inc.
550-01101	Peter Macera
550-01200	Sernacon Holdings Inc.
550-01300	1061175 Ontario Ltd.
550-01400	Electra-Tech Manufacturing Inc.
550-01500	SGM Real Estate Holdings ULC
550-01600	Adine Builders Ltd.
550-02000	Gail Rodzik and Pamela Rodzik
550-02100	Gail Rodzik and Pamela Rodzik
550-02300	1147048 Ontario Ltd.
550-02400	Grande Line Estates Ltd.
550-02401	T.C.T.T. Investment Group
550-02500	ARC Boiler Repair Ltd.
550-02600	Fraven Management Ltd.
550-02700	Fraven Management Ltd.
550-02900	Bolzano Tool and Die Company Ltd.
550-02902	Morbella Holdings Ltd.
550-03100	Daniela Calsavara
550-03101	Generation Development Contractors Inc.
550-03102	ITW Canada Management Company
550-03200	Morton Wholesale Ltd. (Corporation)
550-07900	Wannabe Radical Inc.
550-07950	Wannabe Radical Inc.
550-07975	1233831 Ontario Ltd.
550-18800	905364 Ontario Ltd.
550-18900	401 Mack Ltd.
550-20021	Calframax Holdings Inc.
550-20022	Paul Cesidio DiGiovanni
550-20023	Paul Cesidio DiGiovanni
550-20025	Paul Cesidio DiGiovanni
550-20186	2376238 Ontario Ltd.
550-20188	Hero's Fountain Ltd.
590-01000	Detroit River Tunnel Company
590-01200	Town of Tecumseh

PARCEL INFORMATION

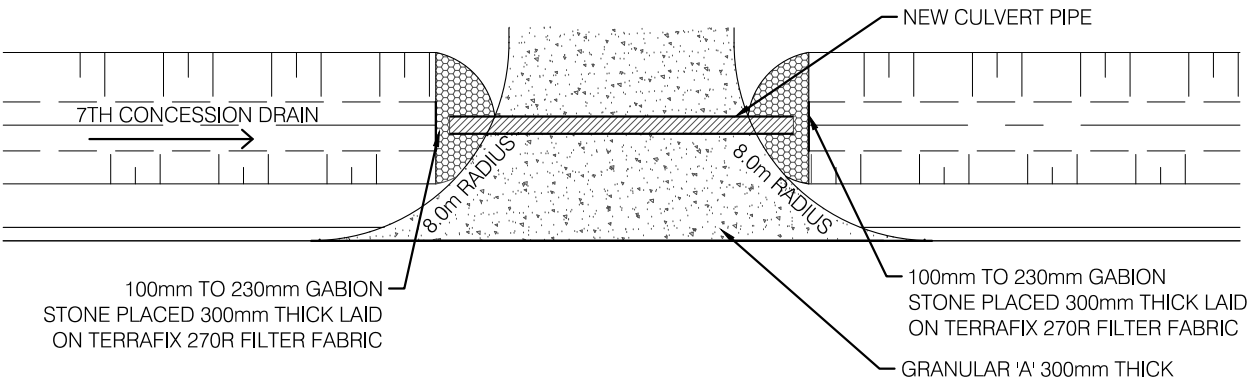
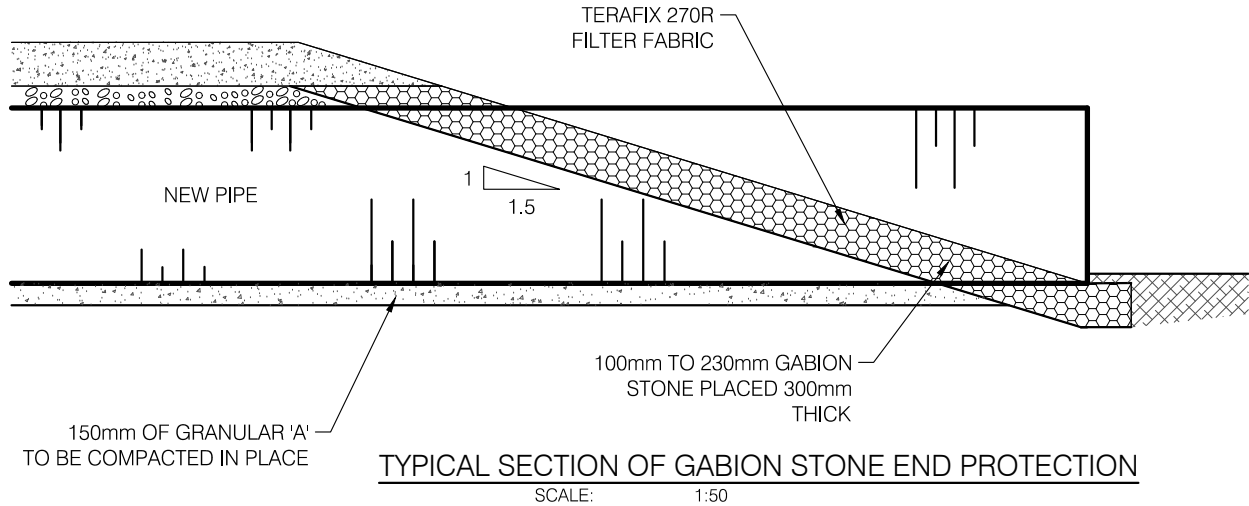
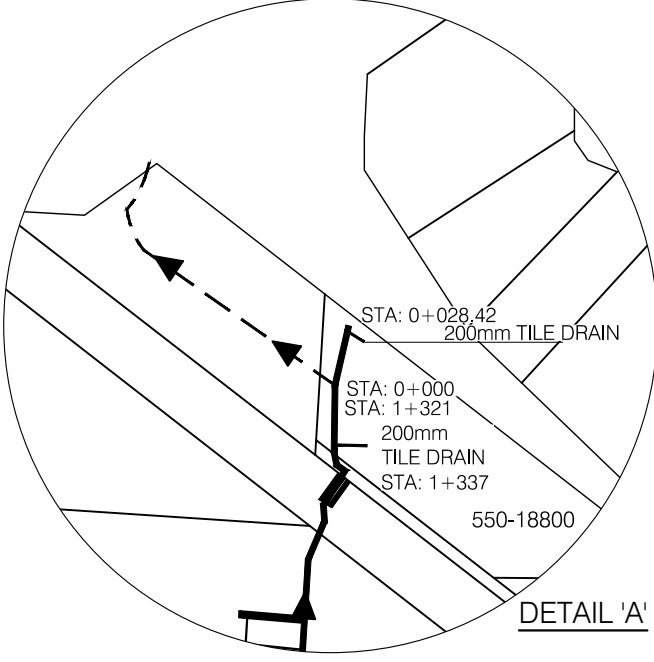
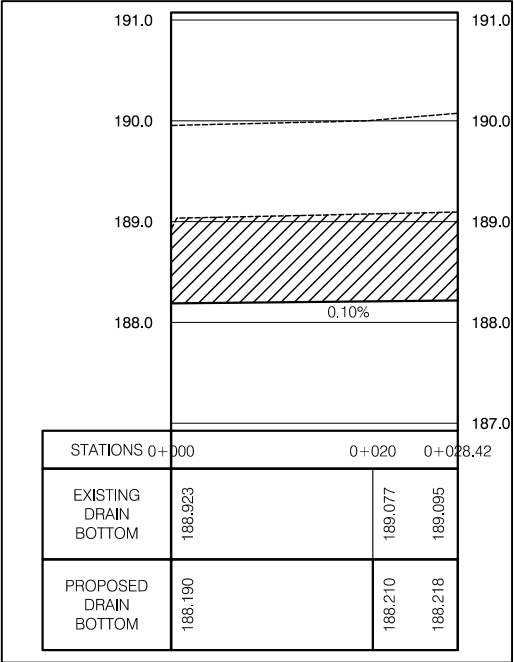
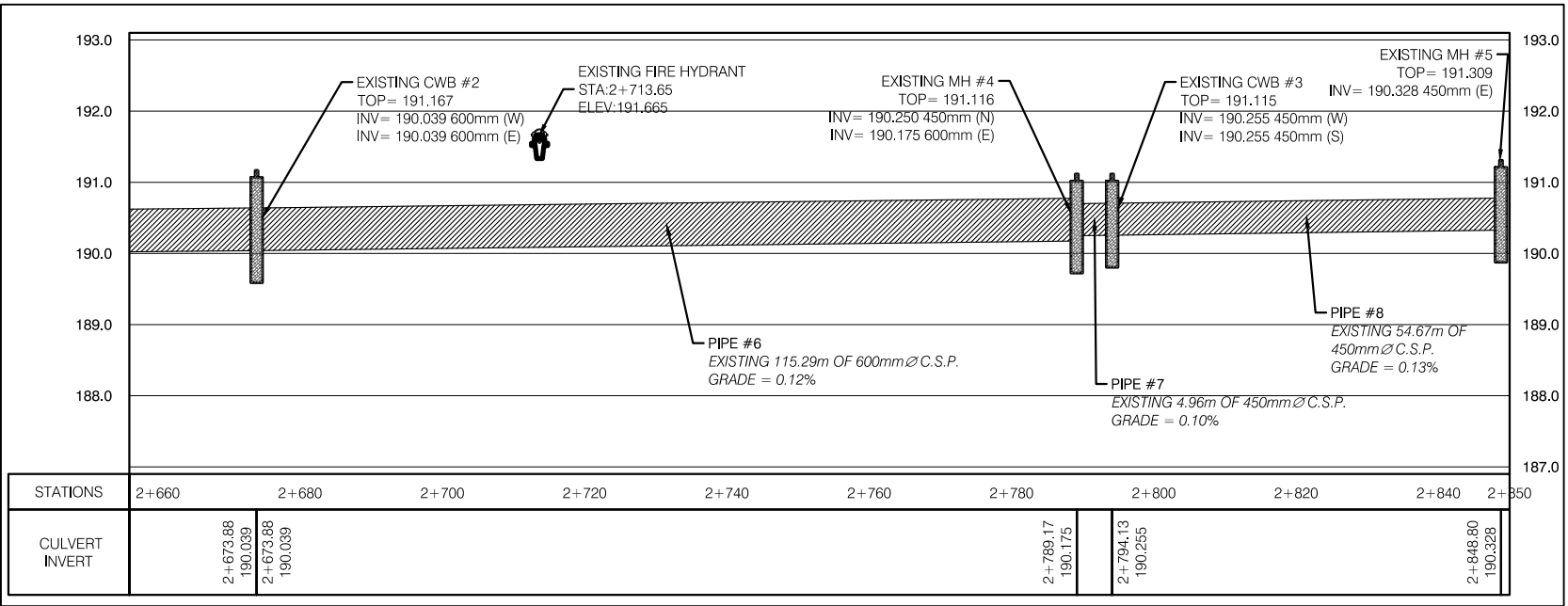
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TOWN OF TECUMSEH			
SHEET TITLE:  DRAINAGE AREA	DRAWN BY: D.B.	SCALE: AS NOTED	DATE: FEB. 07, 2017 RECONSIDERED NOV. 23, 2017
	CHK'D BY: D.A.J./H.P.P.	SHEET No. : 2 OF 8	PROJECT No. : 14-105



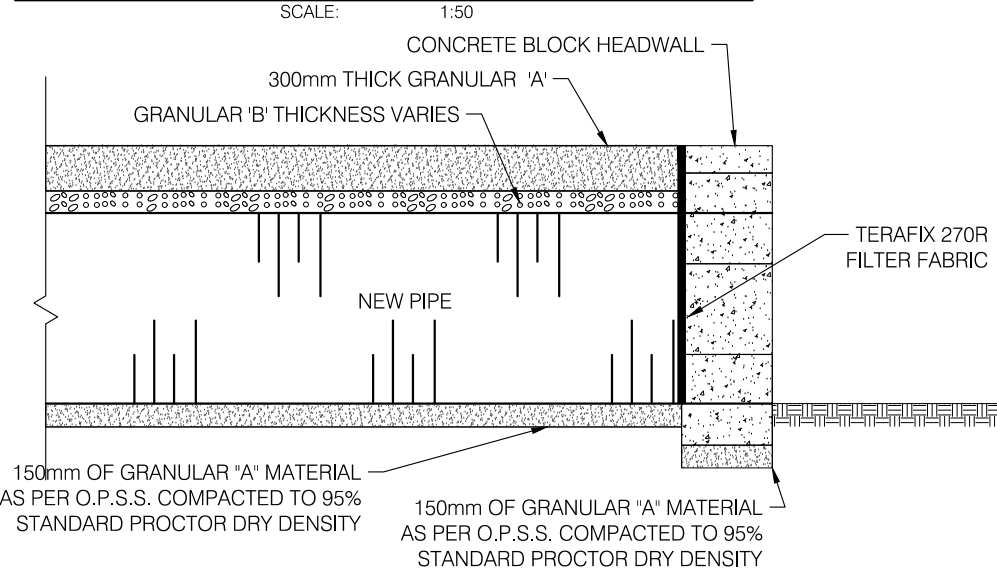




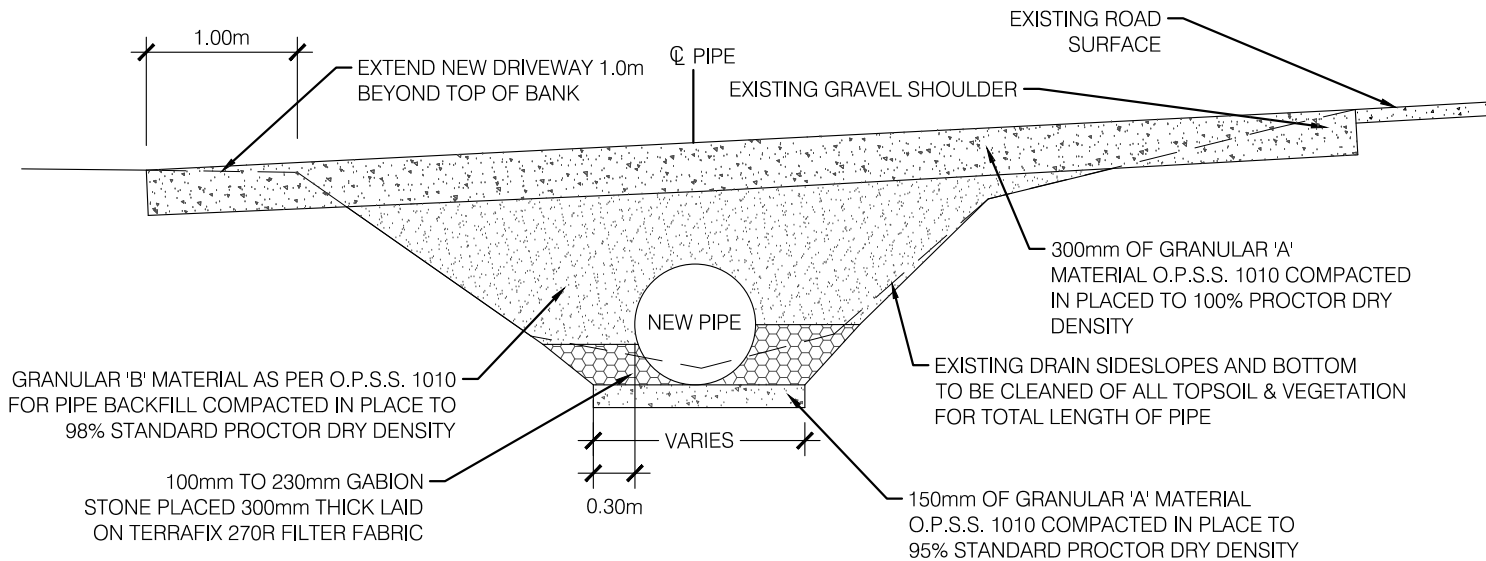
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TOWN OF TECUMSEH			
SHEET TITLE:  PROFILE 1+900 TO 2+656	DRAWN BY: D.B.	SCALE: HOR: 1:1000 VER: 1:100	DATE: FEB. 07, 2017 RECONSIDERED NOV. 23, 2017
	CHK'D BY: D.A.J./H.P.P.	SHEET No. : 4 OF 7	PROJECT No. : 14-105



TYPICAL GABION STONE END PROTECTION PLAN VIEW



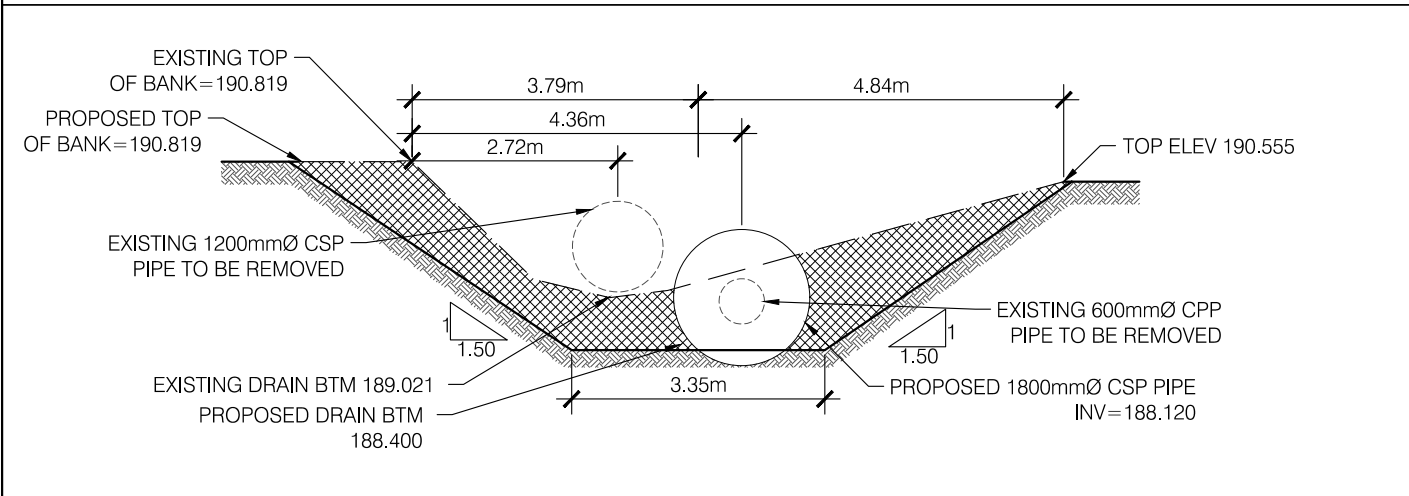
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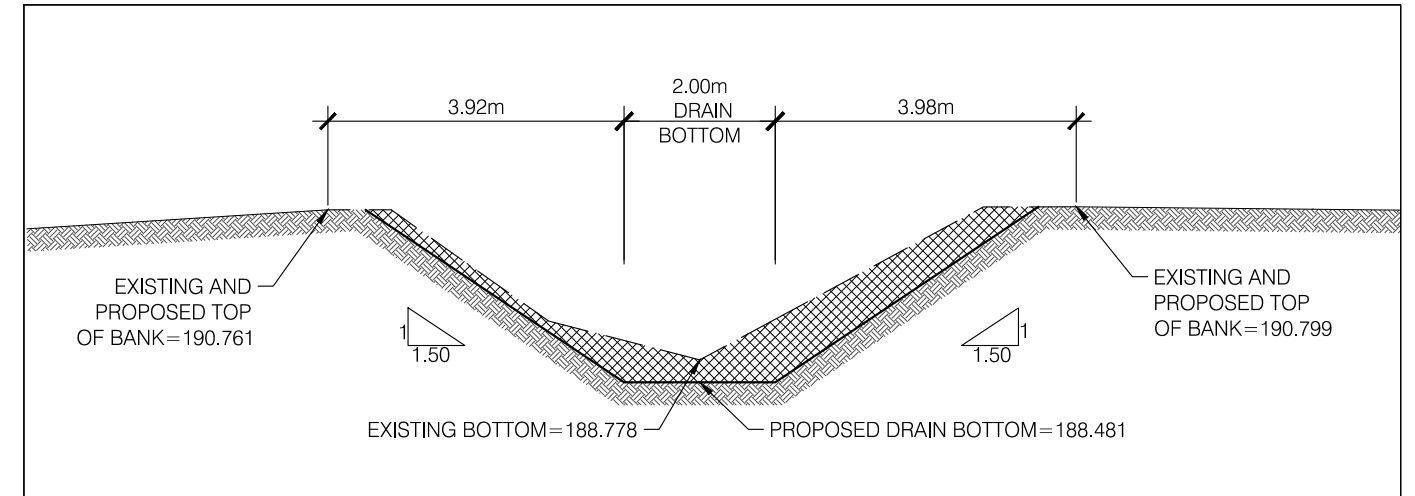
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REPAIR AND IMPROVEMENT TO THE 7TH CONCESSION DRAIN

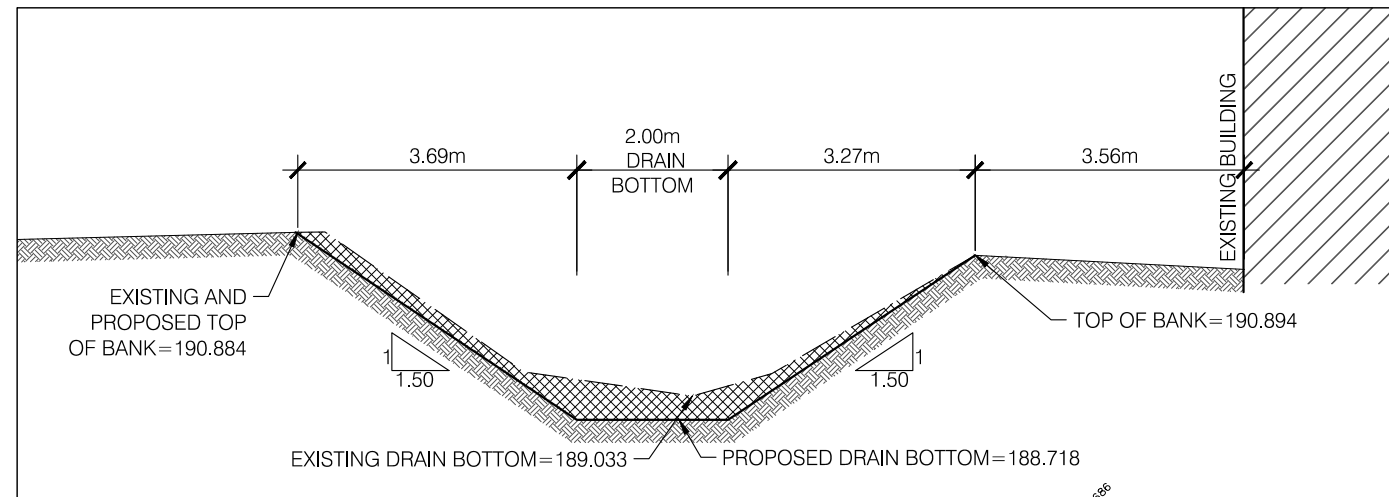
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SHEET TITLE: PROFILE 2+656 TO 2+848 PROFILE 0+000 TO 0+028	CHK'D BY: D.A.J./H.P.P.	SHEET No. : 5 OF 7	PROJECT No. : 14-105



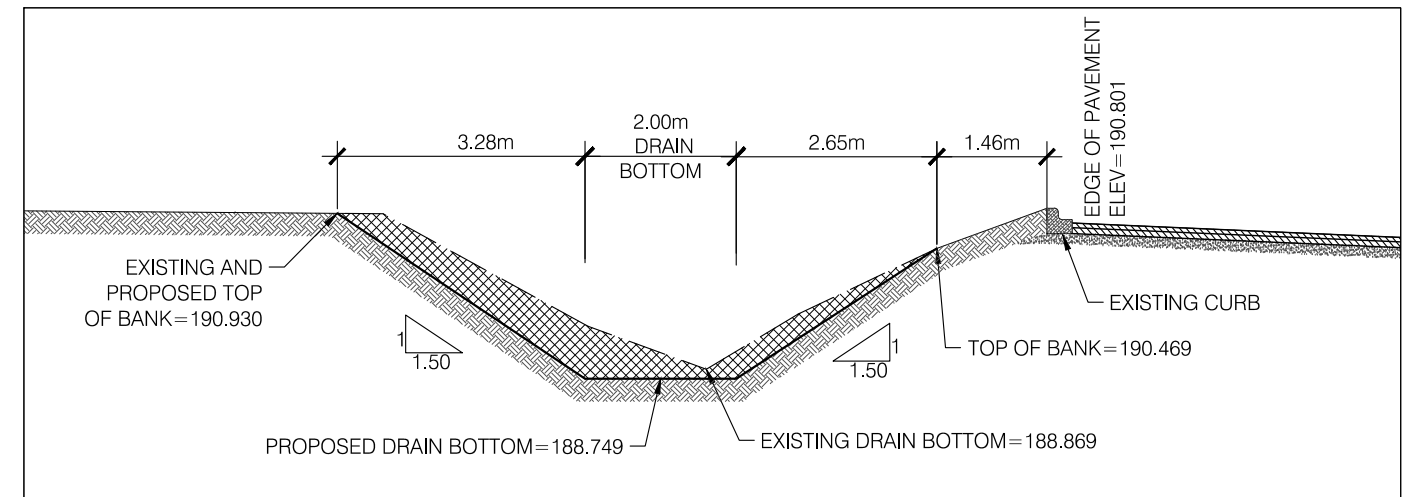
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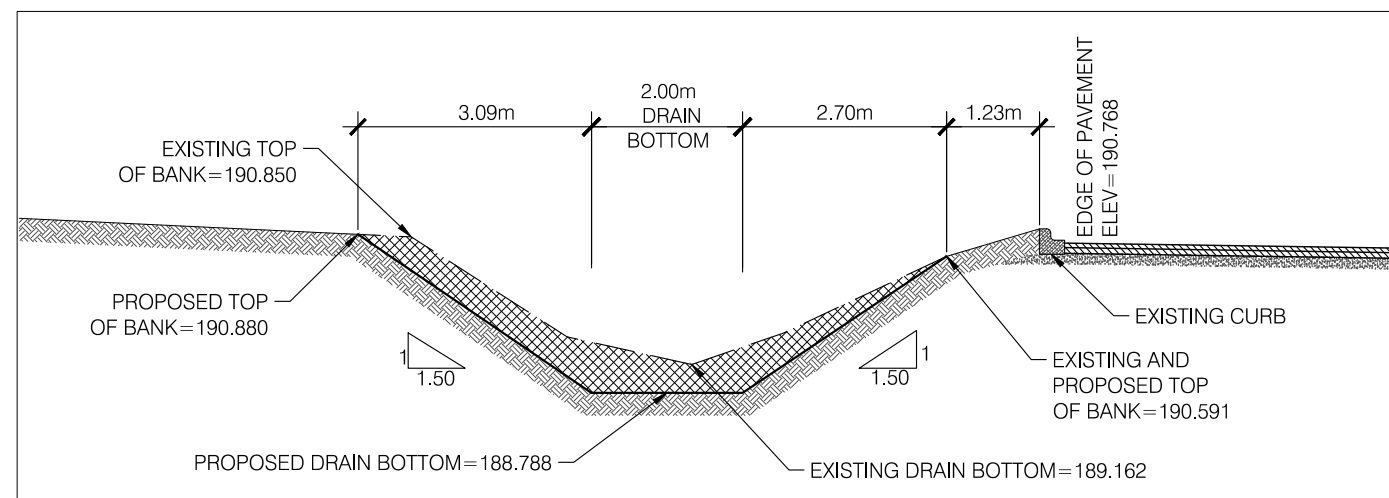
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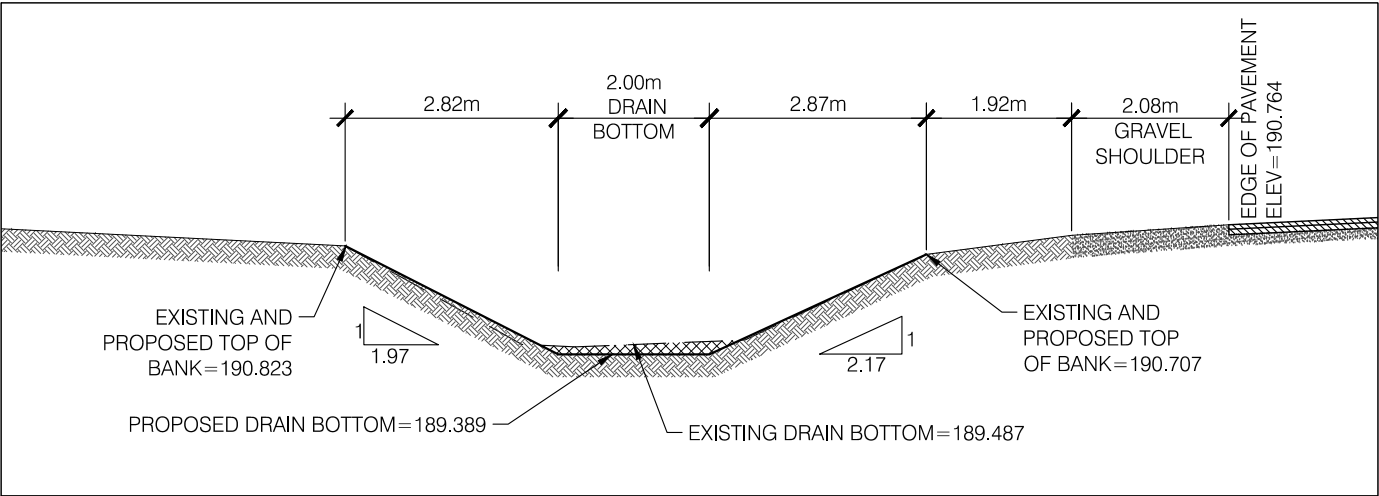


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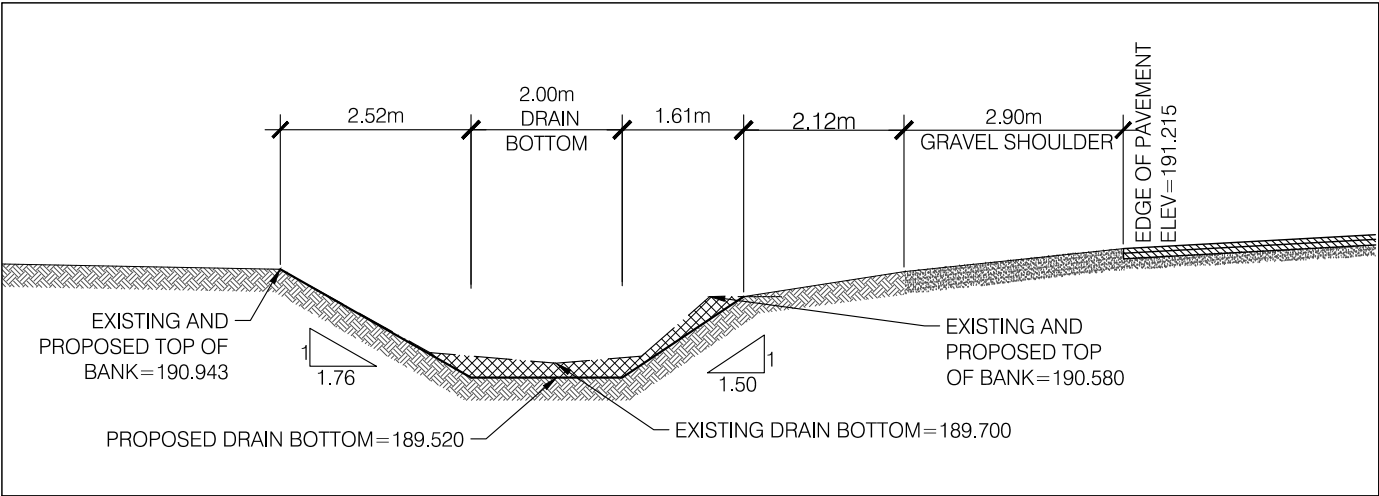


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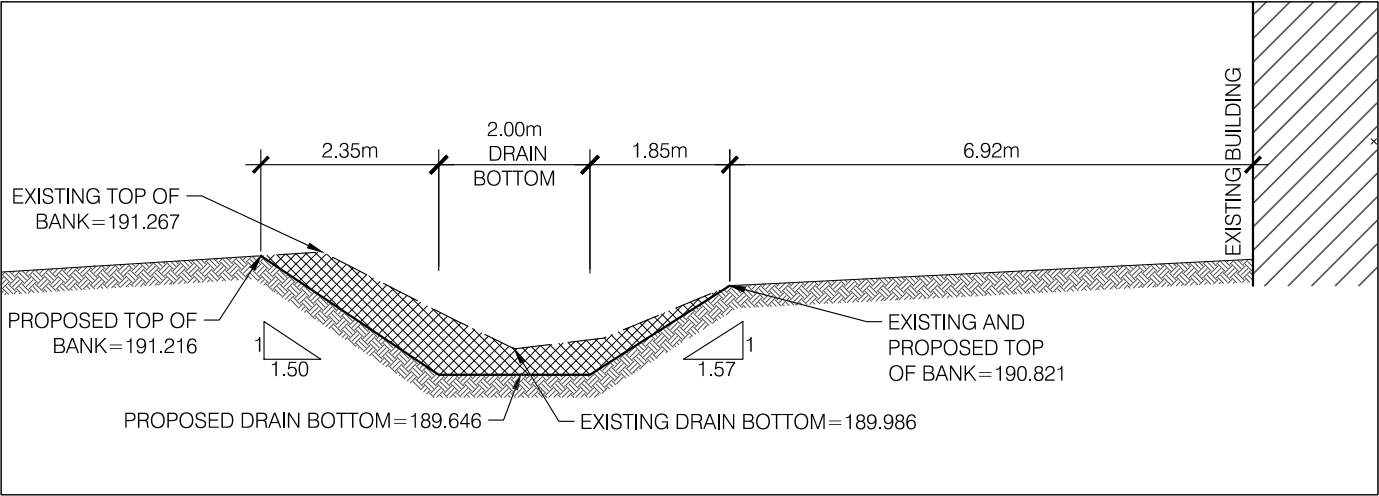
PROJECT TITLE: REPAIR AND IMPROVEMENT TO THE 7TH CONCESSION DRAIN			
TOWN OF TECUMSEH			
CROSS SECTIONS	DRAWN BY: D.B.	SCALE: AS NOTED	DATE: FEB. 07, 2017 RECONSIDERED NOV. 23, 2017
	CHK'D BY: D.A.J./H.P.P.	SHEET No. : 6 OF 7	PROJECT No. : 14-105



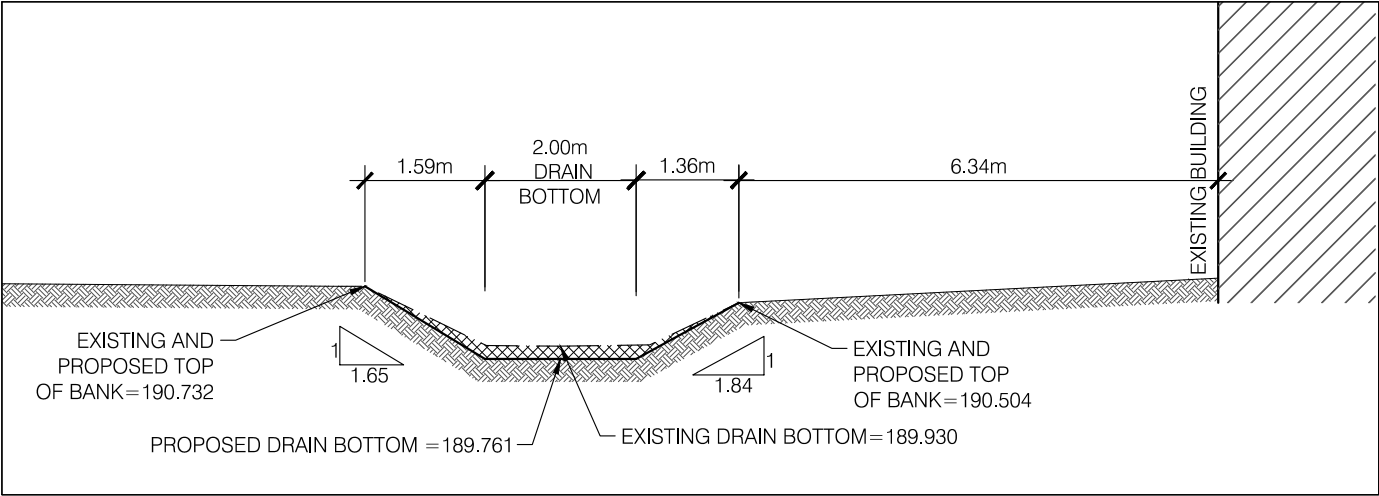
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PROJECT TITLE: REPAIR AND IMPROVEMENT TO THE 7TH CONCESSION DRAIN			
TOWN OF TECUMSEH			
CROSS SECTIONS	DRAWN BY: D.B.	SCALE: AS NOTED	DATE: FEB. 07, 2017 RECONSIDERED NOV. 23, 2017
	CHK'D BY: D.A.J./H.P.P.	SHEET No. : 7 OF 7	PROJECT No. : 14-105

# **The Corporation of the Town of Tecumseh**

## **By-Law Number 2018-14**

Being a by-law to authorize the execution of an Agreement between  
The Corporation of the Town of Tecumseh and Farid Icho Youssef

**Whereas** Farid Icho Youssef (Licensee) is the registered owner of certain lands and premises in The Corporation of the Town of Tecumseh (Town), in the County of Essex and Province of Ontario;

**And Whereas** the Licensee has applied to the Town for permission to continue the encroachment of the public highway known as Lachance Court, by the building municipally known as 1130 Lesperance Road at its North-East corner which encroachment is described as Part 3 on Plan 12R-27258;

**And Whereas** pursuant to the *Municipal Act*, S.O. 2001, c.25 s.5(3), the powers of a municipality shall be exercised by by-law.

**Now Therefore the Council of The Corporation of The Town of Tecumseh Enacts as follows:**

1. **That** the Mayor and the Clerk be and they are hereby authorized and empowered on behalf of The Corporation of the Town of Tecumseh, to execute an Agreement dated the 27th day of February, 2018, between The Corporation of the Town of Tecumseh and Farid Icho Youssef, a copy of which Agreement is attached hereto and forms part of this by-law, and to do such further and other acts which may be necessary to implement the said Agreement.
2. **That** this by-law shall come into full force and take effect on the date of the third and final reading thereof.

**Read** a first, second and third time and finally passed this 27th day of February, 2018.

---

Gary McNamara, Mayor

---

Laura Moy, Clerk

THIS AGREEMENT made in triplicate, this \_\_\_\_ day of \_\_\_\_\_, 2018.

BETWEEN:

**THE CORPORATION OF THE TOWN OF TECUMSEH,**

Hereinafter called the TOWN of the FIRST PART

- and -

**FARID ICHO YOUSSEUF**

Hereinafter called the LICENSEE of the SECOND PART

**WHEREAS:**

1. the Licensee is the registered owner of certain lands and premises in the Town of Tecumseh, in the County of Essex and Province of Ontario, more particularly described in Schedule “A” annexed hereto and forming part of this agreement (the Licensee Lands”); and
2. the Licensee has applied to the Town for permission to continue the encroachment of the public highway known as Lachance Court, by the building municipally known as 1130 Lesperance Road at its North-East corner which encroachment is described as Part 3 on Plan 12R-27258 (the “Encroachment”).

**NOW THEREFORE THIS AGREEMENT WITNESSETH** that in consideration of the premises, and other good and valuable consideration, the parties hereto hereby agree as follows.

1. The Town permits the Licensee to occupy and use the said public highway for the purpose of the continuing Encroachment for a maximum term not exceeding the lifetime of the encroaching structure. In the event of any disagreement as to the estimated or actual lifetime of the encroaching structure, the opinion of the Town’s Chief Building Inspector shall prevail and be final and binding on the parties. Notwithstanding the foregoing, the term hereof shall automatically terminate and be at an end in the event that the portion of the public highway subject to the Encroachment, shall be closed or stopped up by the Town so as to no longer constitute a public highway.
2. The Licensee covenants and agrees to maintain the said encroachment in good repair at all times and to the satisfaction of the Town’s Chief Building Inspector.

3. The Licensee further covenants and agrees to obtain the necessary permits from all pertinent departments of the Town prior to any work on the Encroachment, and to comply with all federal, provincial and municipal legislation pertaining to the construction, maintenance, repair and existence of the Encroachment.

4. It is expressly agreed that upon destruction, removal or replacement of the encroaching structure, or upon partial destruction or damage to the encroaching structure from any cause including the voluntary act of the owner(s) thereof, to the extent of more than sixty percent (60%) of its assessed value, exclusive of its foundations, or upon breach by the Licensee of any of the provisions of this agreement which breach shall not have been corrected by Licensee within 30 days of demand or such sooner time noted in such demand if in the Town's opinion such breach may adversely affect the public interest, the permission hereby granted shall, without any further action or notice and at the sole option of the Town, be terminated and at an end and the Town may require the Licensee to forthwith remove the Encroachment and restore the lands encroached upon to the satisfaction of the Chief Building Inspector of the Town and upon failure so to do so the Town may itself do all things necessary for the removal of the Encroachment and for such purpose may enter upon the Licensee Lands and the expense of such removal, restoration and entry shall be paid by the Licensee forthwith upon demand and payment of such expenses may, in the discretion of the Town, be enforced in the same manner as property taxes payable in respect of the Licensee Lands.

5. The Licensee further covenants and agrees to pay to the Town, any additional property taxes or other rates and charges, if any, levied or imposed on or in respect of the said portion of the public highway encroached upon or over by the Encroachment.

6. The Licensee further covenants and agrees to assume the responsibility and to pay for any additional costs or charges which the Town, Essex Power Corporation, Essex Powerlines Corporation, Union Gas Limited, Cogeco Cable or Bell Canada, and their respective successors and assigns, may reasonably incur in the future installation or relocation of their services or utility plants by reason of the Encroachment and the payment of such costs may be enforced in the same manner as property taxes payable in respect of the Licensee Lands.

7. It is further understood and agreed by and between the parties that if due to any emergency so declared by the Town's Chief Building Inspector, vacant possession of the lands encroached upon is required by the Town (whether in its own behalf or at the request of the utility providers mentioned in this agreement) for the purpose of installing, repairing or maintaining watermains or pipes, wires, conduits, sewers or other services or utilities, the Town may give notice to the Licensee forthwith at any time to forthwith deliver vacant possession of the Encroachment to the Town and to therefrom remove all chattels, equipment, fixtures, parking areas, buildings and structures, as the case may be, installed or located therein or thereupon by the Licensee, and upon such notice having been given, the Licensee shall forthwith deliver clear



and vacant possession of the Encroachment to the Town, provided that if the Licensee fails so to do, the Licensee shall pay to the Town or any such service provider any costs or additional costs, expenses or damages incurred by the Town or any such service provider by reason of the Licensee's failure. A notice given under this section shall not constitute a termination of this agreement but shall be a suspension thereof which shall be in force and effect during the time the work aforesaid is being carried out, and following the completion of such work this agreement shall again come into and be in full force and effect subject to all the terms, covenants, conditions and provisos hereof.

8. It is further understood and agreed by and between the parties that if the portion of the public highway encroached upon is required by the Town for its purposes, the Licensee shall remove the said Encroachment and restore the said public highway to the condition of the surrounding area at its own expense on sixty (60) days written notice from the Town so to do; provided that if the Licensee fails to remove the Encroachment and restore as aforesaid, the Town may enter upon the Licensee Lands and remove the Encroachment and restore the lands encroached upon, and the expense of such removal and restoration shall be paid by the Licensee forthwith on demand, or at the option of the Town the payment of such expense may be enforced in the same manner as property taxes payable in respect of the Licensee Lands.

9. It is further understood and agreed by and between the parties hereto that if the Town at any time exercises its power or right to terminate this agreement or demand the removal of the Encroachment or suspend or revoke the permission granted herein, the Town shall not be liable to pay any compensation for any loss, costs or damages which may be incurred by the Licensee or any person claiming under the Licensee by reason of such termination, demand or revocation.

10. The Licensee further covenants and agrees to defend, indemnify and save harmless the Town of, from and against all loss, costs or damages which it may suffer or be put to and from and against all claims or actions which may be made or brought against the Town by reason of the Encroachment, its construction, existence, repair or maintenance or resulting therefrom in any way whatsoever, unless such loss, costs, damages, claims or actions arise due to the negligence of the Town, or the Town's officers, agents or employees.

11. The Licensee further covenants and agrees to provide and maintain public liability and property damage insurance in a form (containing endorsements naming the Town as an additional named insured and providing a cross-liability/separation of insureds clause) in the amount of at least TWO MILLION DOLLARS (\$2,000,000.00) and satisfactory in form and content (including policy limit) to the Chief Building Inspector of the Town, and a true copy of the said insurance policy shall be filed with the Clerk of the Town. Licensee acknowledges and agrees that the Town shall be entitled to require that such policy limit amount be increased from time to time during the term hereof to take into account inflationary pressures and relevant judicial awards.

12. It is further understood and agreed by and between the parties hereto that by the execution of these presents, the Licensee does hereby expressly and completely release the Town from any and all liabilities, suits, claims and demands (whether for property damage or for personal injury or death and whether founded in tort, contract or quasi-contract) which at any time might be exerted by the Licensee arising out of the existence of the Encroachment or out of any act or omission of the Town, unless the liability, suit, claim or demand arises due to the negligence of the Town or the Town's officers, agents or employees.

13. It is further understood and agreed by and between the parties hereto that if the Licensee agrees to sell the Licensee Lands, the Licensee shall give notice to the Town of such sale at least ten (10) days prior to the completion thereof.

14. It is further understood and agreed by and between the parties hereto that all notices, demands and requests which may be or are required to be given by the Town to the Licensee or by the Licensee to the Town under the provisions of this agreement shall be in writing and may be mailed or delivered and shall be addressed in the case of the Licensee to the Licensee at Licensee's address for service depicted on the document general attached hereto, and in the case of the Town, to the Clerk, Town Hall, 917 Lesperance Road, Tecumseh, Ontario, N8N 1W9, or to such other address as either party may from time to time designate by written notice to the other.

15. It is further understood and agreed by and between the parties hereto that notwithstanding anything hereinbefore or hereinafter contained and further notwithstanding the execution of this agreement, this agreement shall not go into force or have any effect unless and until this agreement has been registered by and at the expense of the Licensee at the Land Registry Office for Essex (No. 12) and a registered copy thereof delivered to the Clerk of the Town.

16. All professional fees and other expenses, costs and charges incurred by the Town in connection with the preparation and registration of this agreement shall be payable by the Licensee to the Town upon demand, and this agreement shall not have force or effect unless and until such fees, expenses, costs and other charges have been paid in full.

17. It is further understood and agreed between the parties hereto that this agreement shall be binding upon and enure to the benefit of the parties and their respective heirs, personal representatives, successors and permitted assigns, it being acknowledged that in the event of the Licensee selling, conveying, transferring or entering into an agreement for sale or of transfer of any title to or interest in part or all of the Licensee Lands to a purchaser or transferee not approved of in writing by the Town (which approval may not be unreasonably withheld by the Town, but may be made subject to conditions including a condition that such purchaser or transferee enter into a fresh encroachment agreement with the Town in the Town's then standard

or usual form), the Town may forthwith terminate this agreement or demand the immediate removal of the Encroachment or forthwith revoke the permission granted for the Encroachment, and may enter upon the Licensee Lands in whole or in part and remove the Encroachment and restore the lands encroached upon and the expense of such removal and restoration shall be paid by the Licensee or by such unapproved purchaser or transferee forthwith on demand or, at the Town’s option, the payment of such expense may be enforced in the same manner as property taxes payable in respect of the Licensee Lands; and the Town shall not be liable to pay any compensation for any loss, costs or damages which may be incurred by the Licensee or by such unapproved purchaser or transferee by reason of such termination, demand, revocation, entry, removal, or restoration.

**PROVIDED HOWEVER,** that notwithstanding the foregoing, the permission to encroach and this agreement shall be assignable to and assumable by a bona fide mortgagee or chargee of the Licensee Lands.

**THE PARTIES HERETO** have executed and delivered this agreement as of the day and year first hereinbefore written.

**THE CORPORATION OF THE TOWN OF TECUMSEH**

\_\_\_\_\_  
Gary McNamara, MAYOR

\_\_\_\_\_  
Laura Moy, CLERK  
“We have authority to bind the Corporation”

\_\_\_\_\_  
Farid Icho Youssouf

SCHEDULE “A”  
LICENSEE LANDS

Municipal Address: 1130 Lesperance Road, Tecumseh, ON

Legal Description: Part Lot 3 & 4 Plan 1312 now designated as Part 1 on Plan 12R-  
\_\_\_\_\_ ; Tecumseh

PART OF PIN: 75247-0097

The solicitor for the Town of Tecumseh is hereby authorized to insert the registered reference plan number upon completion of its registration.

# **The Corporation of the Town of Tecumseh**

## **By-Law Number 2018-15**

Being a by-law to authorize the execution of an Amendment to the Grant Funding Agreement between The Corporation of the Town of Tecumseh and Her Majesty the Queen in Right of Ontario as represented by the Minister of the Environment and Climate Change (Source Protection Municipal Implementation Fund)

**Whereas** the parties entered into a grant funding agreement under the Source Protection Municipal Implementation Fund, dated as of December 13, 2013, for the Municipality to build municipal capacity to implement source protection plans and support sustainable local actions to protect drinking water;

**And Whereas** the parties entered into Amendment No. 1 as of September 23, 2015, to extend the term of the Agreement, add an additional report and include new timelines;

**And Whereas** the parties entered into Amendment No. 2 as of July 6, 2016, to extend the term of the Agreement, add an additional report, include new timelines, and expand the scope of eligible activities;

**And Whereas** the parties entered into Amendment No. 3 as of March 3, 2017 to extend the term of the Agreement, add an additional report, and include new timelines;

**And Whereas** pursuant to Section 20.2 of the Agreement, the parties may amend the agreement in writing and the parties are so desirous;

**And Whereas** under Section 5 of the *Municipal Act 2001*, S.O. 2001 c.25, the powers of a municipality shall be exercised by its Council by by-law;

**Now Therefore the Council of The Corporation of The Town of Tecumseh Enacts as follows:**

1. **That** the Mayor and the Clerk be and they are hereby authorized and empowered on behalf of The Corporation of the Town of Tecumseh, to execute a fourth Amending Grant Funding Agreement between The Corporation of the Town of Tecumseh and Her Majesty the Queen in Right of Ontario as represented by the Minister of the Environment and Climate Change, dated the 27th day of February, 2018, a copy of which Amending Grant Funding Agreement is attached hereto and forms part of this by-law and to do such further and other acts which may be necessary to implement the said Grant Funding Agreement, and such further and other amendments that may be offered.
2. **That** this by-law shall come into full force and take effect on the date of the third and final reading thereof.

**Read** a first, second and third time and finally passed this 27th day of February, 2018.

---

Gary McNamara, Mayor

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Laura Moy, Clerk

**AMENDMENT NO. 4**  
**to a Ontario Transfer Payment Agreement under the**  
**Source Protection Municipal Implementation Fund (SPMIF\_1314\_182)**

**THIS AMENDMENT NO. 4** made in duplicate, as of the 13<sup>th</sup> day of February 2018,

**B E T W E E N:**

**HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO**  
as represented by the Minister of the Environment and Climate Change

(the “**Province**”)

- and -

**The Corporation of the Town of Tecumseh**

(the “**Municipality**”)

**WHEREAS** the parties entered into a transfer payment agreement under the Source Protection Municipal Implementation Fund dated as of December 13, 2013 for the Municipality to build municipal capacity to implement source protection plans and support sustainable, local actions to protect drinking water (the “**Agreement**”);

**AND WHEREAS** the parties entered into Amendment No. 1 as of September 23, 2015 to extend the term of the Agreement, add an additional report and include new timelines; (remove if the municipality DID NOT request extension)

**AND WHEREAS** the parties entered into Amendment No. 2 as of July 6, 2016 to extend the term of the Agreement, add an additional report, include new timelines, and expand the scope of eligible activities;

**AND WHEREAS** the parties entered into Amendment No. 3 as of March 3, 2017 to extend the term of the Agreement, add an additional report, and include new timelines;

**AND WHEREAS** pursuant to Section 20.2 of the Agreement, the parties may amend the agreement in writing;

**NOW THEREFORE** in consideration of the contractual relationship between the Municipality and the Province referred to above and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by both parties, the Municipality and the Province hereby acknowledge, agree and undertake as follows:

1. Unless otherwise specified in this Amendment No. 4, capitalized words and phrases have their prescribed meaning as set out in the Agreement.

2. The Agreement is amended as follows:

2.1 Section 2.1 is deleted in its entirety and replaced with the following:

2.1 The term of the Agreement shall commence on the Effective Date and shall expire 90 days after the final report due date in Schedule “D” unless terminated earlier pursuant to Article 9. The Municipality shall, upon expiry or termination of the Agreement, return to the Province any Funds remaining in its possession or under its control.

2.2 The first paragraph in Section B.1 (Eligible Activities) as amended by Amendment No. 3 is again deleted and replaced with the following:

The Municipality may only spend the Funds on the following eligible activities that are undertaken by the Municipality, or that are undertaken on the Municipality’s behalf, between December 13, 2013 and December 31, 2018 that are directly related to the following:

2.3 The chart in Schedule “D” (Reports) as amended by Amendment No. 3 is again deleted in its entirety and replaced with the following:

Name of Report	Due Date
Collaboration Statement (if applicable)	December 12, 2014
Progress Report 1	December 12, 2014
Progress Report 2	December 11, 2015
Progress Report 3	August 26, 2016
Progress Report 4	August 25, 2017
Progress Report 5	December 8, 2017
Progress Report 6	October 31, 2018
Final Report	January 31, 2019
Other Reports as specified from time to time	On a date or dates specified by the Province.

3. This Amendment No. 4 shall be in force from December 13, 2013 and shall have the same expiry or termination date as the Agreement.
4. All other terms and conditions of the Agreement and Amendment No. 1, Amendment No. 2 and Amendment No. 3 shall remain in full force and effect unchanged and unmodified.
5. This Amendment No. 4 shall enure to the benefit of and be binding upon the Municipality and the Province and each of their administrators, permitted successors and permitted assigns, respectively.



6. This Amendment No. 4 may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. To evidence its execution of an original counterpart, a party may send a copy of its original signature on the execution page hereof to the other party by facsimile or other means of recorded electronic transmission (including in PDF) and such transmission with an acknowledgement of receipt shall constitute delivery of an executed copy of this Amendment.

**IN WITNESS WHEREOF** the parties have executed this Amendment No. 4 as of the date first written above.

**HER MAJESTY THE QUEEN in Right of Ontario**

as represented by the Minister of the Environment and Climate Change

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Name: Heather Malcolmson  
Title: Director  
Source Protection Programs Branch

Pursuant to delegated authority.

**The Corporation of the Town of Tecumseh**

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Name: Gary McNamara  
Title: Mayor

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Name: Laura Moy  
Title: Director, Staff Services/Clerk

We have authority to bind the Municipality.

**The Corporation of the Town of Tecumseh**

**By-Law Number 2018-16**

Being a by-law to amend By-law 85-18, the Town’s Comprehensive Zoning By-law for those lands in the former Township of Sandwich South. CON 8, W PT LOT 12 (Santarossa Business Park)

**Whereas** By-law No. 85-18 is the Town’s comprehensive zoning by-law regulating the use of lands and the character, location and use of buildings and structures within the Town of Tecumseh, for lands situated within the former Township of Sandwich South;

**And Whereas** the Council of the Corporation of the Town of Tecumseh deems it necessary and in the best interest of proper planning to further amend By-law No. 85-18;

**And Whereas** this By-law conforms to the Sandwich South Official Plan in effect for the Town of Tecumseh for lands in the former Township of Sandwich South, as amended;

**Now Therefore The Council Of The Corporation Of The Town Of Tecumseh Enacts As Follows:**

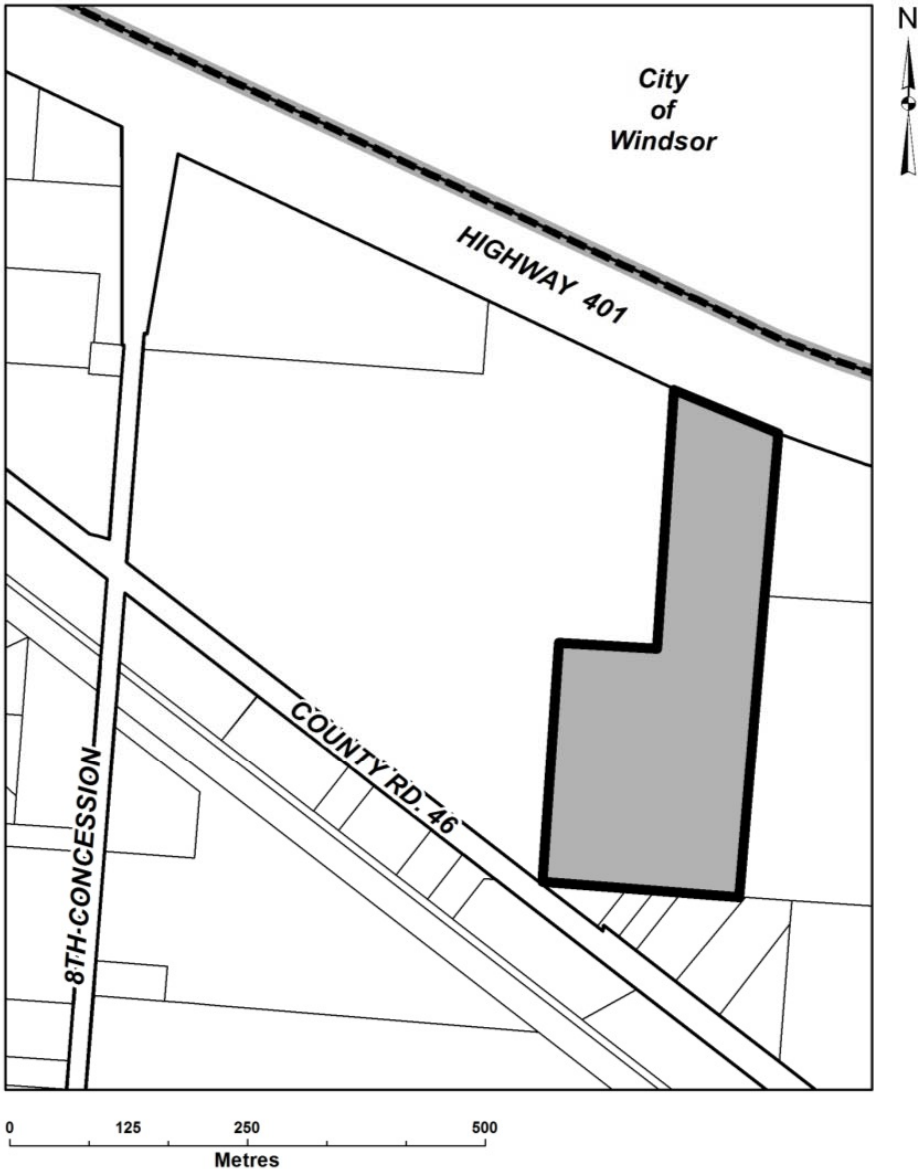
- 1. **That** Schedule “A”, Map 7, to By-law 85-18, as amended, is hereby further amended by changing the zoning classification for those lands as depicted on Schedule “A” attached hereto and forming part of this by-law from “Holding Business Park Zone (H)BP” to “Parks and Open Space Zone (P)”.
- 2. **That** this By-law shall take effect from the date of passage by Council and shall come into force in accordance with Sections 34 of the *Planning Act*, R.S.O. 1990.


**Read** a first, second and third time and finally passed this 27th day of February, 2018.

\_\_\_\_\_  
Gary McNamara, Mayor

\_\_\_\_\_  
Laura Moy, Clerk

SCHEDULE "A"  
CON 8, W PT LOT 12  
TOWN OF TECUMSEH



 Change from "(H) BP" to "P"

This is Schedule "A" to By-law No. 2018-16.  
Passed the 27th day of February, 2018.

Signed

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

## UNFINISHED REGULAR COUNCIL BUSINESS

	Meeting Date	Resolution	Subject	Action/Direction	Depart.	Status/Action Taken
20/14	Dec 9, 2014  Feb 14, 2017		County Rd 34 Hamlet	Administration is asked to look into property ownership and to work with the owners on opportunities for alternate service arrangements.  Administration is asked to provide an update to the affected property owners.	PWES/ Clerks	Update provided by legal on March 14, 2017
3/17	Mar 14, 2017		Alley Closing Policy	An alley closing policy is requested to establish a uniformed process for closing alleys.	Clerks	Next Policies & Priorities Committee
4/17	Mar 28, 2017		Oldcastle Hamlet	The presentation and requests made by FOOD is referred to Administration for a report and recommendation.	Planning	
13/17	May 23, 2017		Signage on Manning Road	Administration is requested to approach the Town of Lakeshore and the County of Essex in regards to establishing a gateway policy with a common standard for regulating urbanized areas and signs for Manning Road.	CAO	Tecumseh and Lakeshore Administration have met and a response is pending from Lakeshore.
18/17	July 25, 2017		Urban Chickens	Zoning Order issued to Dan Beaulieu relating to the keeping of chickens at 2380 Lesperance Road, be deferred pending further discussion and decision-making by Council on the matter of the keeping of urban chickens based on further research and reporting by Administration.	Clerks/ Planning	
24/17	October 28, 2017		Riverside Drive Trail	Administration is asked to provide a report with a quantitative analysis on the location of the Riverside Drive Trail to be on the north or south side of the street.	PWES	
25/17	November 14, 2017		Tenanted Farm Tax Class	Administration is requested to provide comments regarding the tenanted farm tax properties being reclassified as a residential tax class (for non-tilled land), and not implementing this change. How this could action financially impact municipalities and property owners.	Finance	
26/17	December 12, 2017		Hill at Green Acres Optimist Park	A request for a report on the environmental history of the hill located at Green Acres Optimist Park. The report should include an option to remove the hill to accommodate a soccer field or other sports related field	Parks	
27/17	December 12, 2017		OMB Hearing Costs	A request is made for the financial costs of the OMB Ward Boundary hearing, in addition to the Del Duca and Maidstone Hamlet OMB Hearings.	Finance	

	Meeting Date	Resolution	Subject	Action/Direction	Depart.	Status/Action Taken
1/18	January 30, 2018		Video Surveillance	Administration to follow up on video surveillance and potential grant funding for acquiring a system.	ICS	
2/18	January 30, 2018		PIC on Wildlife Control	An educational workshop (PIC) on pesticides and wildlife control.	Clerks	
3/18	January 30, 2018		Moratorium on commercial building fees	That Administration provide a report on an incentive program, such as a one-year moratorium of the commercial building fees, including hotel development, to help encourage and attract new commerce; and further that the report contain potential financial implications.	PBS	
5/18	February 13, 2018		Winter Control	A request is made for public education on winter control in the rural area, in particular roadside mailboxes.	PWES/ICS	

**The Corporation of the Town of Tecumseh**  
**By-Law Number 2018 -17**

Being a by-law to confirm the proceedings of the **February 27, 2018**  
regular meeting of the Council of The Corporation of the Town of  
Tecumseh

**Whereas** pursuant to Section 5(1) of the *Municipal Act, 2001*, S.O. 2001, c.25 as amended, the powers of a municipality shall be exercised by its Council; and

**Whereas** pursuant to Section 5(3) of the *Municipal Act, 2001*, S.O. 2001, c.25 as amended, a municipal power, including a municipality's capacity, rights, powers and privileges under Section 8 of the *Municipal Act, 2001*, S.O. 2001, c.25 as amended, shall be exercised by by-law unless the municipality is specifically authorized to do otherwise; and

**Whereas** it is deemed expedient that the proceedings of the Council of The Corporation of the Town of Tecumseh at this Session be confirmed and adopted by by-law.

**Now Therefore the Council of The Corporation of The Town of Tecumseh Enacts as follows:**

1. **That** the actions of the Council of The Corporation of the Town of Tecumseh in respect of all recommendations in reports and minutes of committees, all motions and resolutions and all other action passed and taken by the Council of The Corporation of the Town of Tecumseh, documents and transactions entered into during the **February 27, 2018, 2018**, meeting of Council, are hereby adopted and confirmed, as if the same were expressly embodied in this By-law.
2. **That** the Mayor and proper officials of The Corporation of the Town of Tecumseh are hereby authorized and directed to do all the things necessary to give effect to the action of the Council of The Corporation of the Town of Tecumseh during the said **February 27, 2018**, meeting referred to in paragraph 1 of this By-law.
3. **That** the Mayor and the Clerk are hereby authorized and directed to execute all documents necessary to the action taken by this Council as described in Section 1 of this By-law and to affix the Corporate Seal of The Corporation of the Town of Tecumseh to all documents referred to in said paragraph 1.

**Read** a first, second and third time and finally passed this 27th day of February, 2018.

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Gary McNamara, Mayor

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Laura Moy, Clerk