



**THE CORPORATION OF THE TOWN OF PETROLIA**

**in the**

**COUNTY OF LAMBTON**

**SUBDIVISION AGREEMENT**

**BETWEEN:**

**"BUILDER"**

**- AND -**

**THE CORPORATION OF THE TOWN OF PETROLIA**

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**TOWN OF PETROLIA**  
**DEVELOPMENT AGREEMENT**

**THIS AGREEMENT made in quadruplicate this 31st day of January, 2011.**

**BETWEEN:**

**"BUILDER"**  
**(herein after called the "Owner")**

**OF THE FIRST PART,**

**-and-**

**THE CORPORATION OF THE TOWN OF PETROLIA**  
**(herein after called the "Town"),**

**OF THE SECOND PART,**

**WHEREAS** the lands affected by this Agreement are in the Town of Petrolia and described in Schedule "G" hereto;

**AND WHEREAS** the Owner purports to be the Owner of the above described lands and has applied to the County of Lambton, hereinafter called the "County", for approval of a Plan of Subdivision, hereinafter referred to as the "Plan", of the said lands for the purpose of registering the same;

**AND WHEREAS** the Town has recommended to the County that the Owner shall be required to construct and install certain public services to serve such Plan; to undertake to make such financial arrangements with the Town for the installation and construction of the said services and to make financial arrangements for the provision of such other services as are herein set forth; to grant certain lands to the Town for drainage purposes or other Municipal purposes and to enter into certain supplementary agreements, all of which is hereinafter more particularly referred to, and to enter into this Agreement with the Town before obtaining the approval of the said Plan by the County;

**NOW THEREFORE THIS AGREEMENT WITNESSETH** that in consideration of good and valuable consideration and the sum of Two Dollars (\$2.00) of lawful money of Canada now paid by the Town to the Owner (the receipt whereof is hereby acknowledged) the Owner hereby **COVENANTS** and **AGREES** with the Town as follows:

## **SECTION A - MUNICIPAL SERVICES**

### **A.1 GENERAL:**

- A.1.1.** To present six (6) white prints of the final plan to the Town for examination before the Town's letter of release is given and present same for re-examination before registration if any changes are made thereafter.
- A.1.2.** To indemnify the Town, its servants and agents against any legal liability for losses, damages, claims, actions, demands, suits and costs directly or indirectly from anything done by the Owner or any servant, contractor or agent of the Owner other than the Town in connection with the subdivision whether or not in performance of this Agreement, and to provide proof of public liability and property damage insurance for this purpose in a form approved by the Town in the amount of Two Million Dollars (\$2,000,000.00), before this agreement is signed said insurance to remain in effect until such time as the Owner has received from the Town the Performance Acceptance Certificate described under Section A.6.2.
- A.1.3.** To give the Town thirty (30) days written notice to prepare the Town's clearance letter to the County.
- A.1.4.** To lodge a mylar copy of the Plan together with six (6) prints, as registered, and one (1) digital copy in Auto Cad drawing format, with the Town Clerk immediately after registration.
- A.1.5.** Following the final approval of the Plan by the County and the registration of the Plan in the Registry Office for the County of Lambton to construct and install public services on all the streets, lanes and lands laid out in the Plan and on streets, lanes and land adjacent thereto as shown on the plans attached hereto as Schedule "L", "M", and "N".
- A.1.6.** Unless specifically provided free and clear of all encumbrances of any kind and otherwise in this Agreement, to provide all monies required for the provision of all services to the extent that the Town shall not be required to pay any portion of the costs thereof.
- A.1.7.** To provide free and clear of all encumbrances of any kind and at no cost to the Town all lands, easements and rights-of-way necessary for the installation and construction of services required for this Plan. The lands and easements identified in Schedule "G" shall be conveyed to the Town of Petrolia in a form pre-approved by the Town's Lawyer upon the registration of the Plan.

### **A.2 DESIGN AND CONSTRUCTION:**

- A.2.1.** All services shall be designed and the installation supervised by a firm of Professional Engineers licensed by the Professional Engineers of Ontario which is satisfactory to the Town's Manager of Operations. This firm of Professional Engineers herein referred to as the Engineer shall engage a firm of independent Soil Consultants, accredited by the Standards Council of Canada to submit soil tests on the stability of the soil and its suitability to support the below ground and above ground municipal services. The Town's Manager of Operations shall be provided with certified copies of the tests thereof and any soil reports for examination prior to approval of any design drawings. All design drawings shall be approved by the Town's Manager of Operations before any agreement is entered into for the construction of the said municipal services. All design drawings shall carry the seal of the Professional Engineer who is responsible for the engineering designs and shall be signed by it.
- A.2.2.** Prior to making, awarding, or letting any contract for the installation of any of the municipal services herein, to file with the Town's Manager of Operations a list of the contractors and sub-contractors or persons to be engaged in the installation of such services, and obtain the written approval for the said Contractor from the Town's Manager of Operations, prior to the commencement of any work, which approval shall not be unreasonably withheld. In addition the Owner shall file with the Town's Manager of Operations satisfactory evidence that the said contractors and sub-contractors have adequate liability insurance coverage, a Certificate from the Workplace Safety Insurance Board that each one is in good standing and that they have the qualifications and experience to complete the work.

**A.2.3.** To construct the municipal services in accordance with the approved design drawings and test construction materials as required by the Town's Manager of Operations. At the request of the Professional Engineer or the Town's Manager of Operations, the Owner shall, at the Owner's expense, have an independent, accredited testing laboratory perform all compaction tests, sieve analysis, concrete, and asphalt tests etc. as required to ensure that all underground and above ground municipal services are constructed in accordance with the contract drawings and specifications and the Town standards.

**A.2.5.** To file copies of all contracts and work orders with the Town's Manager of Operations and provide work schedules for approval of the Town's Manager of Operations before any work commences. All work shall be carried out in accordance with the approved drawings, specifications, contracts, work orders and work schedules.

**A.3**        **APPROVAL TO CONSTRUCT:**

**A.3.1**        That no work shall be commenced without the approval of the Town's Manager of Operations. Work which requires approval from the Ministry of the Environment, Ministry of Natural Resources or other approval agencies shall not be commenced until such approvals are obtained.

**A.3.2.**        To procure the approvals of all applicable statutory bodies.

**A.3.3.**        That the Owner shall not connect any water main or sewer to existing Town systems without specific approval by the Town's Manager of Operations. All connections to the Town services shall be under the supervision of the Town's Manager of Operations or the Owner's designate, and at least 48 hours written notice shall be given before work commences.

**A.3.4.**        That any work undertaken prior to the registration of the Plan, shall not be accepted as a municipal service until such time as the Town's Manager of Operations is advised in writing by the Owner's Professional Engineer that such work has been carried out in accordance with Town specifications and requirements. The Owner shall provide all information required by the Town's Manager of Operations and shall expose or re-construct any municipal service requested by the Town's Manager of Operations.

**A.3.5.**        To notify the Town's Manager of Operations at least 48 hours before any work is to be commenced or resumed.

**A.4**        **TOWN'S RIGHT TO CORRECT:**

**A.4.1.**        In the event that the Owner fails to install services covered by this Agreement as and when required by the Town's Manager of Operations or having commenced to install the aforesaid services, fails or neglects to proceed with reasonable speed, or in the event that the aforesaid services are not being installed according to the specifications and requirements of this Agreement, in addition to any other remedy the Town may have, and upon the Town's Manager of Operations giving seven days written notice by prepaid registered mail to the Owner, the Town's Manager of Operations may, without further notice, enter upon the lands of the Development and proceed to supply all materials and to do all necessary works in connection with the said services, including the repair or reconstruction of faulty work and the replacement of materials not in accordance with the specifications, and to charge the cost thereof, together with an engineering fee of 12% of the cost of such materials and works, to the Owner who shall forthwith pay the same upon demand by the Town. Such entry by the Town shall be as agent for the Owner and shall not be deemed, for any purpose whatsoever, as an acceptance of the said services by the Town.

**A.4.2.**        Work not performed in accordance with the approved work schedule as provided to the Town's Manager of Operations by the Owner shall be considered as "failing to proceed with reasonable speed".

**A.4.3.** To complete all works applicable to this Agreement within the time approved by the Town's Manager of Operations for each phase of development, as identified in Schedule "H", from the date approval is received from the Town for each phase. Failure to comply with this requirement shall cause loss and forfeiture of all securities or deposits held by the Town for the purposes of securing completion of the terms of this Agreement. Notwithstanding the above, this Agreement shall be reviewed and renewed within a maximum of five (5) years from the date of execution of this Agreement.

**A.4.4.** If, after the Owner has commenced development of the Plan, but before the services have been assumed by the Town, any of the services provided by the Owner do not function properly and, in the opinion of the Town's Manager of Operations, repairs are necessary to be made immediately to prevent damage or hardship to any persons or any property, the Town shall make whatever repairs may be deemed necessary and the Owner shall pay to the Town immediately upon receipt of a written demand, any expense incurred in making the said repairs.

**A.5** **AS CONSTRUCTED DRAWINGS:**

**A.5.1** To provide to the Town, a complete set of engineering drawings showing the final plan and profile locations of all services (as constructed) including building connections, the accuracy of which shall be certified by the Professional Engineer supervising the construction. The said drawings shall be in the form of electronic CAD files and plastic transparencies and in a condition acceptable to the Town's Manager of Operations. In addition, three copies of white paper prints of the "as constructed" drawings shall be provided to the Town's Manager of Operations for Town files and records.

**A.6** **PERFORMANCE ACCEPTANCE:**

**A.6.1.** To deliver to the Town a Certificate from the Owner's Professional Engineer certifying that all municipal services have been constructed and installed in accordance with the Drawings and Specifications approved by the Town's Manager of Operations.

**A.6.2.** After receipt of the certificate described in Section A.6.1 the Town's Manager of Operations shall perform a verification inspection of all services to ensure that they conform to all Town requirements. Should this inspection indicate that the municipal services do not meet the Town requirements; the Owner shall rectify immediately upon notification by the Town any substandard work. All subsequent inspections made by the Town staff shall be at the Owner's expense. The Town's Manager of Operations shall submit a written report to the Council that all the services have been constructed or installed to Town specifications and are in the required condition for performance acceptance for the required maintenance period. The Town's Manager of Operations may at the Owner's discretion cause one internal television inspection of the sewer mains provided for in this Agreement to be made at any time before the expiration of the maintenance period, and in addition, the Town's Manager of Operations may cause to be made additional internal television inspections of the said sewer mains if any difficulties or problems arise with respect to the said sewer mains and the costs of any such inspections shall be paid by the Owner. The Town Treasurer shall submit a written report to Council that all financial requirements have been met. Upon acceptance of the above reports by Council, a resolution for performance acceptance for a two (2) year maintenance period may be passed.

**A.6.3.** Upon a resolution for Performance Acceptance being passed as therein provided, the Owner shall indemnify and save harmless the Town from all actions, causes of actions, suits, claims, including third party claims and demands whatsoever which may arise either directly or indirectly be reason of the installation of any works required under this Agreement for the maintenance period. The Owner further agrees to supply to the Town's Manager of Operations such evidence as the Manager of Operations may require as satisfactory proof that all accounts for labour, work and materials have been paid by the Owner prior to the acceptance of the completed services by the municipality.

**A.7        ASSUMPTION OF SERVICES:**

- A.7.1.** All survey bars as shown on the registered plan that have been damaged or removed shall be replaced and all bars certified by an Ontario Land Surveyor at the Owner's expense before assumption of the completed services in a phase.
- A.7.2.** Immediately prior to the expiry of the maintenance period, and after receipt of a certificate from the Professional Engineer as to the satisfactory performance of the municipal services, the Town's Manager of Operations shall perform a verification inspection and inspect all municipal services to ensure that they conform to all Town requirements. Should this inspection indicate that the municipal services do not meet the Town requirements; the Owner shall repair or correct all deficiencies and request a re-inspection. All subsequent inspections made by the Town staff shall be at the Owner's expense. The Town's Manager of Operations shall submit a written report to Council that all of the services have been constructed or installed to Town specifications and are in the required condition for assumption by the Town. The Town Treasurer shall submit a written report to Council that all financial requirements have been met.
- A.7.3.** As heretofore provided any additional inspections required by Town staff shall be charged to the Owner at actual payroll costs plus 100% overhead.
- A.7.4.** Upon acceptance of the reports outlined in A.7.2., Council shall, by by-law, assume the completed services, as applicable, vesting Ownership of said service in the Town, and the Owner shall have no claims or rights thereto, other than those accruing to it as an Owner of the land abutting on streets on which the services were installed.

**A.8        ADJACENT LANDS:**

- A.8.1.** Unless allowed earlier by Council or the Town's Manager of Operations, municipal services of adjoining developing lands may be connected to the services covered by this Agreement upon an assumption by-law as contemplated in A.7.4 being passed.

**A.9        CONVEYANCE OF LANDS FOR DRAINAGE PURPOSES:**

- A.9.1.** That all required lands for drainage purposes within the lands covered by this Agreement shall be conveyed to the Town free and clear of all encumbrances of any kind at no cost to the Town.

**A.10      BUILDING PERMITS:**

- A.10.1** No building permit for any building on the lands within the Plan shall be issued and no construction of any building shall commence on the lands within the Plan until the this Agreement has been adopted by by-law by the Council and after all underground services (and for the purposes of this paragraph, "underground services" include, without limiting the generality thereof, water mains and appurtenances, sanitary sewers, storm sewers, catch basins, granular base courses, base course asphalt on streets, curb and gutters, sidewalks and underground power and communications lines) provided for in this Agreement have been constructed and completed to the satisfaction of the Town's Manager of Operations.
- A.10.2** Notwithstanding the provisions of Clause A.10.1., where the Owner or any purchaser of a parcel of land on the said Development desires to obtain a building permit or permits, notwithstanding that the first coat of asphalt is not installed due to adverse temperature conditions, the Town subject to all other requirements and at the discretion of the Town's Chief Building Official, may issue a permit or permits on the following conditions:
- i) The Owner shall submit a Letter of Credit according to the requirements of Section E.1.2.
  - ii) The Owner shall order and direct its Professional Engineer / Ontario Land Surveyor to provide the builders of the buildings the grades to which the footings of any building to be erected are to be set,



which grades shall be in accordance with Schedule "N" attached hereto and to conduct an inspection at the time footings are set, and to supply the Town with an affidavit prior to the occupancy of any building, which said affidavit shall verify that the footings, as actually set in the ground, are in accordance with the grades as set out in Schedule "N" attached to this Agreement.

- iii) On those parcels of land on which permits have been granted, where asphalt has not been installed, the right shall be reserved to the Town's Manager of Operations to designate points of access and egress to any or all of the said parcels, it being the intention that access and egress shall be permitted only on roads, the surface of which is easily cleaned, and the Owner herein agrees to continue to be responsible for the cleaning of the said roads. Any road base installed prior to the installation of asphalt shall be deemed to be a temporary road base only and shall not be deemed to form part of the final road base.
- iv) If, in the opinion of the Town's Manager of Operations, it shall be necessary to erect barricades across any of the roads on the said Plan that such barricades may be erected by the Town's Manager of Operations and the cost of the said barricades shall be a charge against the Owner, payable on invoice.
- v) If the Town's Manager of Operations deems it possible to install asphalt, having regard to weather conditions, he may furnish a written notice to the Owner pursuant to the terms of this Agreement and the Owner shall install the asphalt in accordance with and subject to the provisions of this Agreement.

**A.11 ROADWAYS:**

- A.11.1.** All roads shall be asphalt or concrete surfaced with concrete curb and gutter, subdrainage and catch basins drained by storm sewers in accordance with the requirements of the Town's Manager of Operations.
- A.11.2.** To maintain all roadways for vehicular traffic during all phases of construction until they have been assumed by the Town.
- A.11.3.** The Town shall carry out repairs to roadways at the Owner's expense if such repairs are not carried out within 48 hours of notice to the Owner or the Owner's Consulting Engineer.
- A.11.4.** The Town may carry out winter maintenance on paved subdivision roadways, if connected by pavement to assumed roadways and if manholes and catch basins are ramped on base course asphalt. The Owner agrees that such winter maintenance shall not constitute assumption or dedication and absolves the Town from any and all liability of every nature and kind whatsoever and agrees to save the Town harmless from any and all actions, claims or damages as a result of such winter maintenance.
- A.11.5.** To keep paved roadway surfaces, catch basins, storm sewers, sanitary sewers and driveways clear of all mud, dust, refuse, rubbish and other litter of all types until the assumption by-law is passed. The Town shall carry out such cleanup work at the Owner's expense if the work is not performed within 48 hours of notice to the Owner or the Owner's Consulting Engineer.
- A.11.6.** The granular base shall be laid first prior to curbs being constructed. Sub-drainage shall be provided beneath curbs as required by the Town. Any granular material deposited prior to curb construction shall be considered temporary and shall not form part of the final road base.
- A.11.7.** The granular bases shall be individually inspected and approved by the Professional Engineer before the base course of asphalt is laid.
- A.11.8.** To keep in good and usable condition all roads and streets used for access to and from the Development, at the Owner's expense, having regard to the condition of the particular road or street at the time of development, during the construction of services and all buildings within the Development prior to performance acceptance. The Town shall carry out such maintenance at the Owner's expense if maintenance is not carried out within 48 hours of notice to the Owner or the Owner's Consulting Engineer.

**A.11.9.** The Town reserves the right to designate points of access and egress to the Development during the period of construction of services and buildings. Permanent type barricades shall be erected at locations designated by the Town's Manager of Operations and maintained during the period of construction at the Owner's expense.

**A.11.10.** All trees located within the road allowance, as shown on the Plan, shall be removed. All trees adjacent to these road allowances that have been damaged during construction shall be trimmed or removed as directed by the Town's Manager of Operations.

**A.12**      **WATERMAINS:**

**A.12.1.** To install a complete system of water mains and appurtenances to service the lands covered by this Agreement in accordance with the requirements of the Town's Manager of Operations.

**A.12.2.** To adjust the grade of any or all water service boxes, valve chambers, valve boxes and hydrants as may be required by the Town's Manager of Operations. Hydrants shall be painted to Town specifications.

**A.12.3.** To maintain all watermains, services and appurtenances until assumption by the Town. Repairs to hydrants shall be carried out by the Town at the Owner's expense without notice to the Owner or the Owner's Professional Engineer.

**A.12.4.** The use of water, watermains, valves, water services and hydrants and all appurtenances shall be subject to Town specifications and under approval of the Town's Manager of Operations.

**A.13.**      **SIDEWALKS AND DRIVEWAYS:**

**A.13.1.** To construct either asphalt or concrete driveways between the curb and the front lot line.

**A.14.**      **GRADING AND DRAINAGE:**

**A.14.1.** To carry out all grading as shown on the grading plans prepared by the Owner's Ontario Land Surveyor, approved by the Town's Manager of Operations and included in this Agreement as Schedule "N".

**A.14.2.** To design and construct all drainage works necessary to accommodate run-off from the drainage area as built-up.

**A.14.3.** To design and construct, at the Owner's expense, any temporary or permanent drainage works that may be necessary to eliminate ponding or erosion conditions. The decision of the Town's Manager of Operations shall be final.

**A.14.4.** To spread a minimum of 100mm of topsoil on all land affected by this Agreement not covered by roads, sidewalks, buildings, driveways, etc., at the request and to the satisfaction of the Town's Manager of Operations, at the Owner (s) /Developer's expense.

**A.14.5.** With the exception of Park lands, as referred to in Section C.4, all open space on lands covered by this Agreement shall be seeded or sodded on a minimum of 100mm of topsoil by the Owner, at the Owner's expense, to the satisfaction of the Town's Manager of Operations. Specifically, the Owner shall be required:

The storm water management pond area (Block 32) is to be restored with topsoil and seed after completion. Block 26 is the site of the sanitary pump station and Block 28 is the emergency access. These areas will be restored with topsoil and seed after construction is complete. The boulevards will be graded after the original contract. The topsoil and seed will be placed after the constuction of the residences by the builder.

**A.14.6.** All front yards and side yards of private property etc. shall be sodded or seeded by the Owner to the satisfaction of the Town's Building Inspector.

**A.14.7.** Deleted

**A.14.8.** No debris, junk, refuse, rocks, stumps, trees or fill of any kind shall be deposited on public or private property and the Owner agrees to remove such material at the Owner's expense within 7 days of being notified by the Town's Manager of Operations to do so.

**A.14.9.** Catch basins are required to be installed in the rear yard of all lots. Grading of the lots shall be directed to the rear yard catch basins.

**A.14.10** The Owner shall retain for itself, the Owner's successors and assigns, the right to enter upon all lots and blocks in the Plan in order to correct any drainage or grading problem to the satisfaction of the Town's Manager of Operations until expiry of the maintenance period, or final acceptance by the Town of any outstanding deficiencies.

**A.14.11** The Owner shall include, or cause to be included the following Clause within all Offers of Purchase and Sale:

"The Purchaser is hereby advised that the rear yard drainage is directed to private rear yard catchbasins which provide an outlet to the municipal storm sewer. Maintenance of the catchbasin and drain is wholly the responsibility of the Purchaser, and will not be undertaken by the Town of Petrolia."

**A.15. SANITARY AND STORM SEWERS:**

**A.15.1.** To design and install a complete system of sanitary and storm sewers and appurtenances to service the lands covered by this Agreement in accordance with the requirements of the Town's Manager of Operations. Cost to over size any sanitary sewers to accommodate future development shall be the responsibility of the Developer.

**A.15.2.** To connect and drain sanitary and storm sewers only to outlets approved by the Town's Manager of Operations in accordance with Certificate of Approval.

**A.15.3.** Sewage pumping stations will normally be approved by the Town's Manager of Operations only on the basis of a temporary facility. The construction of any pumping station, the installation of any force main, the estimated operation cost for the lifetime of the station, the estimated cost for the dismantling and removal of the pumping station, and the estimated cost of construction of any permanent sanitary sewer, including any land costs to replace the pumping station, shall be at the expense of the Owner. Permanent pumping stations must be approved by the Town's Manager of Operations prior to the signing of this Agreement.

**A.15.4.** The pumping station and force main shall be constructed and installed by the Owner. All other costs shall be in the form of cash payment by the Owner to the Town, on the basis of the aforementioned estimated costs.

**A.15.5.** To plug, cap and seal all sanitary sewer laterals at the street line to prevent entrance of ground water. These operations are to be done to the satisfaction of the Town's Manager of Operations. A written statement that all caps and seals are in place, signed by the Owner's engineer shall be given to the Town marked by a 2" x 4" stake to grade.

**A.16. SEWER AND WATER CONNECTIONS FOR BUILDINGS:**

**A.16.1.** To install all sewer and water connections in accordance with Town specifications and design standards.

**A.16.2.** The Owner shall maintain all sewer and water connections installed by the Owner until assumed by the Town.

**A.17. STREET AND TRAFFIC SIGNS AND TRAFFIC CONTROL DEVICES:**

**A.17.1.** The Owner shall install and maintain temporary traffic signs (stop signs, street name signs, etc.) until the Performance Acceptance certificate is issued by the Town.

**A.17.2.** The Town shall install permanent traffic signs (stop signs, street name signs, etc.) after all works are complete and the Performance Acceptance Certificate is issued. The cost of this work shall be assessed to the Owner and shall be paid prior to assumption of the roads and services.

**SECTION B - OTHER UTILITIES**

**B.1. ELECTRICAL POWER SUPPLY:**

**B.1.1.** To enter into a Supplementary Agreement (OFFER TO CONNECT) with Bluewater Power Distribution Corporation for the provision of electrical services within the development. The executed Agreement shall be delivered along with all financial requirements to Bluewater Power Distribution Corporation prior to the representative thereof issuing a certificate acknowledging that Bluewater Power Distribution Corporation's Conditions of Development have been satisfied.

**B.1.2.** To install or cause to be installed at the Owner's expense all electrical power supply equipment in accordance with the specifications and standards of Bluewater Power Distribution Corporation including necessary street lighting.

**B.1.3.** That all residential and commercial lands shall be serviced by an underground distribution system. The Owner shall pay to Bluewater Power Distribution Corporation the estimated cost to install the said services.

**B.1.4.** To sell and convey the lands free and clear of encumbrances of any kind required by Hydro One and Bluewater Power Distribution Corporation Distribution Corporation for hydro use; and to convey without charge, free and clear of encumbrance, the easements required for hydro use. The deeds and grants of easement in a form satisfactory for registration are to be approved by the Solicitor for Bluewater Power Distribution Corporation and deposited with the said Solicitor by the Owner, with the registered plan number left blank in the description of the deeds, such blanks to be filled in when the said plan is registered and a plan number is assigned.

**B.2. TELEPHONE AND COMMUNICATIONS UTILITIES**

**B.2.1.** Where electrical services are to be installed underground, the Owner shall arrange with Bell Canada or similar Utility for the installation of underground services to and throughout the Development, and for the conveyance of lands or easements with respect to such installations, in accordance with terms, conditions, standards and specifications set out by the respective utility. A certificate signed by a representative of the respective utility company acknowledging that the company's requirements have been met shall be supplied to the Town's Manager of Operations.

**B.3. NATURAL GAS SUPPLY**

**B.3.1.** To arrange with Union Gas Ltd. for the scheduling of installation of underground services to and throughout the Development, and for the conveyance of lands or easements with respect to such installations, in accordance with terms, conditions, standards and specifications set out by the utility company. A certificate signed by a representative of the company acknowledging that the company's requirements have been met shall be supplied to the Town's Manager of Operations.

## **SECTION C - PARKS AND RECREATION SERVICES**

### **C.1. PARKLANDS:**

To be Determined

### **C.2. NOTIFICATION OF FUTURE USE OF PARKLANDS:**

To ensure that builders and purchasers of properties adjacent to park lands, being conveyed to the municipality, shall be advised of the intended use of such park lands.

### **C.3. FENCING**

No fencing required for this Phase of the development.

### **C.4. SEEDING OF PARK LANDS WITHIN THE PLAN:**

No park lands are in this Phase of the Development.

### **C.5. PRESERVATION AND REMOVAL OF TREES:**

Such precaution as may be consistent with Development plans shall be taken to ensure the preservation of existing trees on the land. Damaged, diseased and dead trees located on the lands covered by the proposed Plan shall be cut down and removed. The decision of the Town's Building Inspector shall be final as to the designation of such trees as damaged, diseased or dead and as to the manner of disposal of such trees and in accordance with the County of Lambton wood lot specifications.

### **C.6. SERVICING OF PARK LANDS:**

To supply grading, subsurface drainage, hydro services, sewer connections and water connections to all park lands as approved by the Town's Manager of Operations and Towns Building Inspector.

### **C.7. TREE AND SHRUB PLANTING:**

C.7.1. No tree or shrub planting is required in this Phase of the Development.

### **C.8. CASH PAYMENTS IN LIEU OF PARK LANDS:**

C.8.1. To be determined

## **SECTION D - BUILDING**

### **D.1. BUILDING PERMITS:**

D.1.1. The approval by the Town to the registration of the Plan and the execution of this Agreement by the Town shall not be deemed to give assurance that building permits, when applied for, shall be issued on any of the lots or blocks as shown on this Plan.

D.1.2. The Owner shall submit to the Town with every application for a building permit, a site plan indicating the location of the proposed building and driveway on the site and indicating that the proposed building and lot, as finally constructed and graded will comply with the said Grading Control Plan. The said site plan will also indicate the elevation of the top of the foundation wall of the proposed building, which elevation shall conform to the Grading Control Plan. No building permits will be issued until the said Site Plan has been approved by the Town's Manager of Operations.

**D.2. SOIL TESTS:**

**D.2.1.** When required by the Chief Building Official, the Owner will submit soil tests by an independent accredited testing laboratory on the stability of the soil and its ability to sustain superimposed loads from building and filling operations and to furnish, at no cost to the Town, certified copies of the results thereon for examination by the Chief Building Official, prior to the issuance of building permits.

**D.3. BUILDING STREET NUMBERS:**

**D.3.1.** All building street numbers for lands on the Plan of Subdivision shall be coordinated with the County of Lambton 911 Emergency System, Chief Building Official and the Fire Chief of the Town. The Owner shall be responsible for coordinating this work.

**D.3.2.** The Owner's Professional Engineer/ Ontario Land Surveyor shall prepare an electronic CAD drawing showing lot numbers and Municipal Street Addresses and provide the Building Inspector with the CAD file, on Mylar and six prints for distribution.

**D.3.3.** To advise any subsequent purchaser of the correct building street number as allocated by the Lambton 9-1-1 Technician, Planning Department, County of Lambton

**D.4. ISSUANCE OF BUILDING PERMITS:**

**D.4.1.** No application shall be made for building permits and no building permits shall be issued until the following materials have been received by the Building Inspector:

- i) A copy of the Registered Plan.
- ii) All engineered drawings that have been approved by the Town's Manager of Operations.
- iii) A copy of the Development Agreement executed by the Owner and the Town.
- iv) Certification from the affected Utility Companies that the Owner has fully complied with the requirements and conditions of Clauses B.1 to B.3 of this Agreement.
- v) Certification from the Town Clerk that all additional easements have been received subsequent to the registration of the Development Agreement.
- iv) Confirmation that the conditions of Clauses A.10.1., A.13.1, A.15.5., E.4.2. and E.5.1. have been met.

**D.5. SERVICES WITHIN EASEMENTS:**

**D.5.1.** It is further understood that building permits shall not be applied for or issued for lots or blocks on which easements have been imposed, or for lots or blocks immediately adjacent to such easements until such time as the Town's Manager of Operations has certified to the Building Inspector that the required service or services have been installed within the limits of the said easements granted to the Town or that the easement descriptions have been adjusted in accordance with the location of the services as actually installed. No buildings, structures, trees, shrubs, etc. shall be planted or situated within any right of ways and/or easements.

**D.6. ZONING BY-LAW:**

**D.6.1.** Notwithstanding any other requirements of this Agreement, the lands shown on this Plan of Subdivision shall be developed in accordance with the provisions of the Town's Zoning By-law and amendments thereto.

**D.7.        LOT GRADING CERTIFICATE:**

- D.7.2.**        After the foundation has been constructed but before it is backfilled, the Owner shall submit a certificate to the Town's Manager of Operations prepared by an Ontario Land Surveyor or the Consulting Engineer, which certificate shall evidence that the top of foundation elevation, as constructed, is within reasonable tolerance of the design elevation and that the lot can be graded in accordance with the approved grading plan and sound engineering principles.
- D.7.3.**        Prior to the final building inspection, the Owner shall submit a Lot Grading Certificate prepared by the Owner's Consulting Engineer/ Ontario Land Surveyor to the Town's Chief Building Official. The Professional Engineer will certify that the finished lot grading conforms to the approved grading plan within reasonable tolerance and the finished grading will provide adequate drainage.
- D.7.4.**        Upon receipt of the Lot Grading Certificate described in Section A.15.3 above, the Town's Chief Building Official and/or the Town's Manager of Operations shall perform a verification inspection. Should any deficiencies be found, the Town shall notify the Owner in writing and the Owner shall immediately rectify the problems and arrange for a re-inspection. All costs for subsequent inspections shall be paid by the Owner. Once the Town is satisfied with the final grading of a lot, the Town shall issue a final Grading Certificate.

**SECTION E - FINANCE**

**E.1.        CASH REQUIREMENTS:**

- E.1.1.**        When the requirements of this Agreement have been substantially completed in a phase and the Town's Manager of Operations has given the Town's Council the Owner's certificate of substantial completion for that phase, the Town may release or reduce the money or securities upon receipt, in replacement of such money or securities, of such money or securities as the Town may require. In case of dispute as to the meaning of "substantially completed" the meaning shall be as determined by the Town's Manager of Operations. In the event that the works are done in phases, the preceding shall apply mutatis mutandis.
- E.1.2.**        Upon proper completion of all the works required by this Agreement in a phase, the Town's Manager of Operations shall issue to the Town's Council a report as contemplated in A.6.2. that in the Owner's opinion the said works have been constructed and installed according to Town requirements.
- E.1.3.**        The Town shall cause one internal television inspection of the sewer mains provided for in this Agreement to be made at any time before the expiration of the maintenance period and, in addition, the Town may cause additional internal television inspections of the said sewer mains if any difficulties or problems with respect to the said sewer mains arise, and the costs of any such inspection shall be paid by the Owner.
- E.1.4.**        The Treasurer of the Town may release to the Owner any money or securities which the Town has to which the Owner is entitled under this Agreement after the said two (2) years guarantee period has expired and all difficulties and problems with respect to the said works have been rectified.

**E.2.        CONSTRUCTION LIENS:**

- E.2.1.**        To indemnify and save harmless the Town from all claims, demands, losses, costs, expenses, causes of action or suits of whatsoever nature arising out of services, labour and materials furnished by the Owner or its contractors or subcontractors under this Agreement and shall promptly cause to be discharged any liens registered against any Town interest in any lands or any charge against any Town money.
- E.2.2.**        The decision of the Town's Manager of Operations as to the cost of completing all the works of each phase provided for in the Agreement shall be final.

**E.3. TAXES:**

**E.3.1.** To pay in full all taxes in arrears and current taxes for which a bill has been issued at the time of execution of the Agreement by the Town.

**E.3.2.** That all taxes levied or to be levied, on the said lands, shall be paid on the basis and in accordance with assessment and Collector's roll entries appearing from time to time.

**E.4. LOCAL IMPROVEMENTS:**

**E.4.1.** To prepay all local improvements chargeable on the land covered by the proposed Development before execution of the Agreement by the Town.

**E.4.2.** To commute and pay for any local improvements necessary due to circumstances arising or coming to light after execution of this Agreement before conveying any lot or applying for building permits.

**E.5. DEVELOPMENT CHARGES:**

**E.5.1.** At the time of preparation of this Development Agreement, there was no Development Charge By-law in force. It is the intent of the Town to pass a Development Charge By-law in the near future in accordance with the Development Charges Act.

**E.6. WATER FLUSHING AND METER CHARGES:**

**E.6.1.** To pay to the Town Treasurer, upon execution of this Agreement, fees for water used in the Development for construction, flushing and testing purposes. The fees shall be as defined in Schedule "K".

**E.6.2.** To pay to the Town Treasurer, sum defined in Schedule "K" toward the cost of a water meter for each unit in a phase. The meters shall be supplied by the Town on the issuance of building permits and shall be installed in accordance with the Town specifications, by qualified personnel.

**SECTION F - PHASING OF DEVELOPMENT**

**F.1. PHASES:**

**F.1.1.** The Owner hereby agrees to stage the development in a manner satisfactory to the Town.

**F.1.2.** The lands shown on Schedule "L" hereto shall be developed in phases as outlined in Schedule "H". Changes to the proposed phasing shall not be made without the approval of the Town's Manager of Operations.

**F.1.3.** Each subsequent phase shall receive approval of the Town prior to development.

**F.1.4.** The Owner shall develop such phases in succession and all payments, deposits and bonding requirements shall be paid, deposited or filed at the time of the execution of this Agreement and refer to Phase I only, as set out in Schedule "J" and "K" hereto. The terms and conditions of this Agreement shall apply mutatis mutandis to each phase of development.

**F.2. DEVELOPMENT OF SUBSEQUENT PHASES:**

No sale shall be made nor any subdivision take place on any of the lands in any subsequent phase until such time as the previous phase has been approved, by resolution for performance acceptance, by Council, and the approval of the design of engineering services, completion of all financial arrangements and the execution of any necessary Agreements for such subsequent phase have been completed.



**F.3. ASSUMPTION OF SERVICES:**

Upon the completion of an individual phase and expiry of the maintenance period, the Town may assume the services therein, in accordance with the provisions of this Agreement. Such assumption shall not release the Owner from any of the requirements of this Agreement unless otherwise specified herein.

**SECTION G - OVERSIZED AND EXTERNAL SERVICES**

**G.1. OVERSIZED AND EXTERNAL SERVICES TO BE INSTALLED:**

The prorated cost of installing oversized or external services shall be paid for in full by the Owner and upon completion of such services the Town agrees, on behalf of the Owner, to endeavour to collect a proportional share of such costs from the benefiting land Owners prior to executing any Development Agreement or issuing final approval for any proposed Plan of Subdivision of such lands and to pay over such sums to the Owner. These charges shall include all material, labour and engineering charges as supplied by the Owner and approved by the Town's Manager of Operations, whose decision shall be final, together with simple interest thereon at a rate of 10% per annum on same, such interest to be calculated from the 1st day of January next following completion of said services.

(See Schedule "I")

**G.2. OVERSIZED AND EXTERNAL SERVICES ALREADY INSTALLED:**

The costs of oversized or external services already installed by the Town or another developer, which service the lands covered by this Agreement, shall be paid to the Town plus accrued interest upon execution of this Agreement.

(See Schedule "I")

**SECTION H - GENERAL**

**H.1. 300 mm RESERVES:**

To convey to the Town of Petrolia the 0.30m (1') reserves defined in Schedule "G".

**H.2. NOTIFICATION:**

If any notice is required to be given by the Town to the Owner with respect to this Agreement, such notice shall be mailed or delivered to:

Attention: "Builder"  
Builders Address

or such other address as the Owner has supplied to the Town Clerk, in writing, and any such notice mailed or delivered shall be deemed good and sufficient notice under the terms of this Agreement.

In case of notice to be given by the Owner to the Town, such notice shall be mailed or delivered to:

Manager of Operations  
Corporation of the Town of Petrolia  
411 Greenfield Street  
Petrolia, Ontario  
N0N 1R0

Receipt shall be deemed to have occurred upon personal delivery or three (3) business days after deposit in the mail service in Canada provided such service is not interrupted by strike or other irregularity.

**H.3. NOTIFICATION OF SERVICES:**

To notify, or cause to be notified, each and every purchaser of land within the said Development that all the aforesaid services set out in paragraphs A.11, A.12, A.13, A.14, A.15, A.16, A.17, B.1, B.2, B.3, D.7, and E.6 are the obligation of the Developer and cause such information to be fully recorded in any offer or agreement to purchase the said land entered into by any such purchaser.

**H.4. REGISTRATION AND LEGAL FEES:**

This Agreement and the Schedule hereto or any part or parts thereof may be registered upon the title of the land within the said Plan of Subdivision. Such registration shall be at the instance of the Town and at its sole discretion but at the cost of the Owner. In addition, the Owner consents to the Town registering an inhibiting order which will remain in place pending the Owner fully complying with sections (to be completed) herein. The cost of registration and removal shall be paid for by the Owner.

**H.5. NO TOWN LIABILITY:**

**H.5.1.** This Agreement and the provisions thereof do not give to the Owner or any person acquiring any interest in the said lands (all hereinafter in this paragraph called "such persons"), any rights against the Town or the Town's Manager of Operations with respect to the failure of any such persons to perform or fully perform any obligations under this Agreement or the failure of the Town to force any such persons to perform or fully perform any obligations under this Agreement or any negligence of any such persons in the performance of the said obligations.

**H.5.2.** The only duty and responsibility of the Town's Manager of Operations arising out of this Agreement is to the Town. This Agreement, and any work or service done or performed by the Town's Manager of Operations under this Agreement, does not in any way create any liability on the part of the Town's Manager of Operations to the Owner or any person acquiring any interest in the said lands.

**H.6. POSTPONEMENT OF MORTGAGE:**

The Owner covenants and agrees to have every Mortgagee or other person having an interest in the lands postpone their interest in the said lands to the interest of the Town to the extent that this Agreement shall take effect and have priority as if it had been executed and registered before the execution of the document or documents giving to the Mortgagee or other person their interest in the said lands. The Owner shall register the postponement(s) on title with prior approval for it by the Town at the cost of the Owner.

**H.7. INCONTESTABILITY:**

The Owner shall not call into question directly or indirectly in any proceeding whatsoever in law or in equity or before any administrative or other tribunal the right of the Town to enter into this Agreement and to enforce each and every term, covenant and condition thereof and this provision may be pleaded by the Town in any such action or proceeding as a complete and conclusive estoppel against the Owner.

**H.8. EXISTING WELLS OR SEPTIC TANKS:**

To fill in or otherwise remove any existing wells or septic tanks on this Development to the satisfaction of the Sarnia-Lambton Health Unit, the St. Clair Region Conservation Authority and the Town.

The Owner agrees at its own expense, to plug any oil or gas well or dispose of any storage tanks, located within the Lands as described in Schedule "A" in accordance with the requirements of the Ministry of the Environment and the Ministry of Natural Resources. The Owner agrees to cease all construction work in the area in which an unplugged gas or oil well or storage tank is located and shall immediately report the existence of any such well or storage tank to the Manager of Operations, the Department of Natural Resources and the Ministry of the Environment, and any other regulating agency concerned with unplugged oil/uncapped or gas wells or storage tanks. The Owner agrees to carry out

all the requirements of any regulatory agency in the plugging of any oil or gas well or disposal of any storage tanks and pay all associated costs accordingly. All work shall be completed in accordance with the Environmental Protection Act – Ontario Reg 153/04. The Owner is released from the responsibilities of this section only after the following:

- a) Regarding property intended for use of residential dwellings and private Ownership, the consent in writing from the Clerk has been obtained indicating to a bona-fide purchaser that the lot mentioned is able to be released.
- b) Regarding land conveyed to the municipality for roadways, easements and parkland, at the completion of the two year maintenance period.

**H.9. COUNTY'S CONDITIONS:**

To fulfil the conditions of the County as set out in Schedule "A".

**H.10. LOT RELEASES:**

A certificate, under seal of the Town and signed by the Clerk, shall be conclusive evidence to a bona-fide purchaser for valuable consideration without notice to the contrary that the lot or lots mentioned therein is or are released from the charge for costs and expenses and the burdens related to Public Lands and Services imposed by this Agreement. Any such certificate shall not release the purchaser from any obligations related to the lot being purchased.

Said certificate shall not be issued by the Town until the Town is in receipt of a Lot Grading Certificate, which shall also show the location of all buildings within the lot or lots as described in Section D.7.3., and the Town's Manager of Operations or Chief Building Official has conducted a verification inspection.

**H.11. SEPARATE SCHEDULES**

Schedule "A" to "K" both inclusive, attached hereto shall form an integral part of this Agreement.

Schedules "L" to "N" are not attached hereto but are a part of this Agreement and are incorporated herein by reference and are filed with the Clerk of the Town and identified by the signatures of the signing officers of all parties hereto.

**H.12. ASSIGNMENT**

The Owner shall not assign the benefits of this Agreement or any interest therein without receiving prior written approval of the Town, which approval shall not be unreasonably withheld.

**H.13. SEVERABILITY**

If any term of this Agreement shall be found to be ultra vires of the Town, or otherwise unlawful, such terms shall conclusively be deemed severable and the remainder of this Agreement mutatis mutandis shall be and remain in full force and effect.

**H.14. DEDICATION OF ROAD ALLOWANCES**

Upon registration of the Plan in the Land Registry Office in and for the County of Lambton, all road allowances as shown on the Plan shall be deemed to have been dedicated to the Town.

**H.15. DEVELOPMENT CHARGES**

It is declared and agreed that any charge related to development imposed by this Agreement is not in contravention of the Development Charges Act, 1989.

**H.16. OWNER, SUCCESSORS AND ASSIGNS:**

**H.16.1** "Owner", where used in this Agreement, and in addition to its accepted meaning, shall mean and include an individual, an association, a partnership, or an incorporated company, and wherever the singular is used herein it shall be construed as including the plural and wherever the masculine is used, it shall be construed as including the feminine.

**H.16.2** Before execution of this Agreement by the Town, the Owner may be required to provide satisfactory evidence of the principals and partners associated with any numbered or other Company.

**H.16.3** It is hereby agreed that this Agreement and the covenants, provisions and conditions contained herein shall ensure to the benefit of and be binding upon the respective heirs, executors, administrators, successors and assigns of the parties hereto.

**H.16.4** Nothing herein shall relieve the Owner from complying with all applicable municipal by-laws, provincial and federal statutes and regulations applicable thereto.

**H.16.5** The Owner agrees that at its expense and prior to the execution of this agreement, it will provide the Town with an opinion from its lawyer who is a member of and in good standing with the Law Society of Upper Canada confirming that Owner has good and valid title to the lands described in Schedule "G" listing all other legal interests therein which opinion shall be in a form satisfactory to the Town's lawyer.

**IN WITNESS WHEREOF the parties hereto have hereunto caused to be affixed their respective corporate seals under the hands of their respective proper officers duly authorized in that behalf.**

**"BUILDER"**  
\_\_\_\_\_  
Owner

DATE: \_\_\_\_\_

\_\_\_\_\_  
**PER: said person**  
I have authority to bind the Company

**THE CORPORATION OF THE TOWN OF PETROLIA**

DATE: \_\_\_\_\_

\_\_\_\_\_  
**MAYOR**

\_\_\_\_\_  
**CAO/Deputy Clerk**

**TOWN OF PETROLIA**

**SCHEDULE "A"**

**COUNTY'S CONDITIONS**

The County's conditions and amendments applying to the approval of the final plan for registration of the subject Subdivision are as follows:

*(Note: This agreement applies to Stage 3, Phase 1, comprised of 24 lots, and 2 lots in Plan 25M-9. Separate agreements and final plans of subdivision will be required for other phases)*

1.	That this approval dated October 3rd, 2007, applies to the draft plan of subdivision, prepared by R.A. MacKenzie, Ontario Land Surveyor, dated February 6, 2007, which shows a total of 183 residential lots and 5 blocks.
2.	That the road allowance included in this draft plan shall be shown and dedicated as a public highway and that the name for the proposed roads are consistent with the 911 protocol
3.	That the Owners obtain necessary amendments to the Town's Official Plan and Zoning By-law as required.
4.	That the Owners provide a parkland dedication as shown in Block 187 to the Town of Petrolia.
5.	That the Owner convey to the Town of Petrolia easements over Block 189 for storm water infrastructure.
6.	That the Owner convey to the Town of Petrolia easements for sanitary sewage works, including pumping station
7.	That the Owners enter into a Subdivision Agreement with the Town of Petrolia which is to be registered on title of the lands once the plan of subdivision is registered and which shall satisfy all the concerns of the Town, financially and otherwise, and shall include but not be limited to: <ul style="list-style-type: none"> <li>a) Provision of a municipal sanitary sewer and connection, storm sewer and water distribution services, subject to the satisfaction of the Town Engineer and in keeping with the Ministry of Environment standards.</li> <li>b) Satisfying the Town with respect to drainage and storm water management.</li> <li>c) As per Town of Petrolia standards, rear yard catch basins will be utilized throughout the development and the discharge of roof drains and sump pumps will be directed to rear yards and will not be directed to storm sewers.</li> <li>d) Provisions requiring the submission of a plan for sediment and erosion control for the construction phase of this subdivision.</li> <li>e) Installation of a fire hydrant system to the satisfaction of the fire department.</li> <li>f) The proposed water main be designed to provide the required domestic consumption and fire flow requirements of the development.</li> <li>g) The construction of all underground services shall be carried out to the Town of Petrolia standards and Ontario Standard Specifications and Drawings.</li> <li>h) Provision of any items or restrictions related to the recommendations of the "Tree Saving Plan" is to be compliance with the County of Lambton and Town of Petrolia Official Plan Policies. Recommendations of the Ministry of Natural Resources and/or the Conservation Authority are to be incorporated where possible and upon review of the Plan. The Tree Saving Plan will be implemented through the Subdivision Agreement.</li> <li>i) The Owner agrees at its own expense, to plug any oil or gas well or dispose of any storage tanks, located within the subject lands in accordance with the Ministry of the Environment and Ministry of Natural Resources. The Owner agrees to cease all construction work in the area in which an unplugged gas or oil well or storage tank is located and shall immediately report the existence of any such well or storage tank to the Commissioner, the Department of Natural Resources and the Ministry of Environment, and any other regulating agency concerned with unplugged oil or gas wells or storage tanks. The Owner agrees to carry out all the requirements of any regulatory agency in the plugging of any oil or gas well or storage tanks and pay all associated costs accordingly.</li> </ul>
8.	That the Subdivision Agreement between the Owner and the Town of Petrolia may contain phasing arrangements to the satisfaction of the Town.
9.	That the Owners obtain reserve sewage capacity from the Town for the proposed development
10.	That the Town of Petrolia Public Works Department be presented the details of the proposed municipal entrances onto Joe Street, Valentina Street and Country View Drive and be satisfied with the Geometry, grade, drainage, signage and any other relevant matters prior to the development of the lands.

11.	<p>a) That the Owners submit a Tree Environmental Impact Study (TEIS), completed by a qualified professional. The TEIS will: a) contain an inventory of existing trees; b) indicate the impacts of development on the existing trees; c) indicate measures to reduce the impact of development; d) indicate the trees to be removed and ensure the preservation of the remaining trees; e) indicate a plan for replacement of lost trees; and f) be included in the development agreement to be registered on title.</p> <p>b) That the Owner enters into a Tree Saving Plan with the Town of Petrolia to implement the recommendations of the TEIS. The Tree Saving Plan shall first be reviewed by the St. Clair Region Conservation Authority. The Owner shall be responsible for any review fees charged by the Conservation Authority.</p> <p>c) That the Subdivision Agreement contains provisions requiring that the Owner cover the cost of producing an “environmental brochure” in co-operation with the St. Clair Region Conservation Authority. The brochure will be distributed to new residents of the subdivision and outline the attributes of the woodlot reserve as described in the TEIS.</p>
12.	That erosion control measures and storm water management plan be prepared in consultation with and subject to the approval of the St. Clair Region Conservation Authority and their permitting requirements under Ontario Regulation 171/06.
13.	That the Owner obtain approval from the Ministry of Environment for the final servicing plans, and submit copies of the Certificates of Approval, issued by the Ministry of Environment, to the County of Lambton and the Town of Petrolia. The provisions of the approved servicing plans must be incorporated into the Subdivision Agreement with the Town.
14.	That the Owner shall carry out an archaeological assessment of the subject property and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. No grading or other soil disturbances shall take place on the subject property prior to the Ministry of Culture confirming that all archaeological resource concerns have met licensing and resource conservation requirements.
15.	That the Owner satisfy Bluewater Power Distribution Corporation with respect to servicing capacity for the proposed development or, if necessary, that final approval of the plan be phased in accordance with the availability of electrical servicing.
16.	That the Owner satisfy Union Gas with respect to servicing capacity for the proposed development.
17.	That prior to final approval by the Secretary-Treasurer of the Land Division Committee, the County is advised in writing by the Town of Petrolia how Conditions 2 through 10 has been satisfied.
18.	That prior to final approval by the Secretary-Treasurer of the Land Division Committee, the County is advised in writing by the St. Clair Conservation Authority as to how Conditions 10 and 11, if applicable, have been satisfied.
19.	That prior to final approval by the Secretary-Treasurer of the Land Division Committee, the County is advised in writing by the Ministry of Environment how Condition 12 has been satisfied.
20.	That prior to final approval by the Secretary-Treasurer of the Land Division Committee, the County is advised in writing by the Ministry of Culture as to how Condition 13 has been satisfied.
21.	That prior to final approval by the Secretary-Treasurer of the Land Division Committee, the County is advised in writing by Bluewater Power Distribution Corporation as to how Condition 15 has been satisfied.
22.	That prior to final approval by the Secretary-Treasurer of the Land Division Committee, the County is advised in writing by Union Gas as to how Condition 16 has been satisfied.
23.	<p>That prior to signing the Final Plan, the Owners shall submit:</p> <ul style="list-style-type: none"> <li>• one (1) original plan;</li> <li>• four (4) transparent duplicates;</li> <li>• six (6) CDs containing the draft plan properly geo- referenced to the NAD83 UTM Zone 17 Co-ordinate System; and</li> <li>• three (3) copies of the Subdivision Agreement executed with the Town of Petrolia.</li> </ul>
24.	That this Draft Approval shall lapse on October 3, 2013 if Final Plan Approval or an extension of Draft Plan Approval is not obtained.

**TOWN OF PETROLIA**

**SCHEDULE "B"**

**CONSERVATION AUTHORITY CONDITIONS**

**TOWN OF PETROLIA**

**SCHEDULE "C"**

**OTHER CONDITIONS**

Ontario Regulation 153/04 made under the Environmental Protection Act



## TOWN OF PETROLIA

### SCHEDULE "D"

#### DEVELOPMENT SERVICING REQUIREMENTS

This standard provides the minimum requirements for the development and servicing of property within the Town of Petrolia.

#### General

1. Construction or installation of services shall not commence until the Developer has received written approval of the necessary engineering drawings and complied with all requirements as outlined in this standard and any accompanying Development Agreements.
2. All developments shall be serviced with:
  - a) Roads
  - b) Storm Drainage Facilities, as required to meet MOE / MNR / Town requirements
  - c) Sanitary Sewage Facilities
  - d) Watermains and Fire Hydrants
  - e) Street lighting
  - f) Natural Gas, Electricity, Cable TV and Telephone where available.
  - g) Canada Post Facilities
3. All contract documents shall be consistent with the requirements of this standard and any accompanying development agreements.
4. Only contractors recognized and approved by the Town's Manager of Operations may undertake work on service installations.
5. The Town's Manager of Operations shall be notified at least three (3) working days in advance of commencement of construction in order to arrange for Municipal inspection.
6. All work shall be carried out to the satisfaction of the Town's Manager of Operations or the Owner's representative.
7. Any existing road or property disturbed by construction activities shall be fully restored in accordance with Ontario Provincial Standards to the satisfaction of the Town's Manager of Operations.
8. No blasting or tunnelling shall take place without written approval from the Town's Manager of Operations.
9. Traffic shall not be interrupted without previous written authority of the Town's Manager of Operations.
10. All work shall be done in accordance with the applicable by-laws of the Town.
11. The developer / contractor shall be responsible for dust control throughout the development period.
12. Contracts for construction shall be approved by the Town's Manager of Operations.
13. All servicing shall be designed in accordance with Ontario Provincial Standard Specifications and Drawings (OPSS and OPSD) subject to any amendments made herein. Copies of OPSS and OPSD may be obtained from the Ministry of Transportation, Highway Standards Section, 1201 Wilson Avenue, Downsview, Ontario, N3M 1J8.

## REGISTERED PLAN

### 1. General

The proposed Draft Plan shall be submitted to the Town's Manager of Operations for comment prior to submission to the Ministry of Housing.

The boundaries of the plan shall be referenced to the 6<sup>o</sup> Universal Transverse Mercator Grid.

Upon completion and registration of the Plan, it shall be provided in the following formats:

- a) one set of Mylars
- b) three sets of Prints
- c) one set of "dgn" (Micro Station) or "DXF" (Auto Cad) format drawings on 3.5", 1.44 Mb floppy disk.

#### Survey Monuments

- (1) Before commencement of any clearing, ditching or grading work, an operator must:
  - a) ascertain from the Manager of Operations the location of survey monuments in the vicinity of the proposed work,
  - b) mark conspicuously the location of each monument by a flag attached to the top of a pole at least 2 metres from the ground, and
  - c) take precautions as necessary to ensure that no monument is defaced, altered, disturbed or damaged during the course of the work.
- (2) If an operator finds a monument in a damaged or disturbed condition the operator must report this immediately to the Manager of Operations.
- (3) An operator who has destroyed, moved or damaged a monument must:
  - a) make a full report immediately to the Manager of Operations,
  - b) ensure that the monument is restored by a Ontario Land Surveyor, and
  - c) bear the full costs of the restoration.

#### Reference Datum

- the Ontario Coordinate System is referenced to the North American Datum of 1983 (NAD83)
- every user of the Ontario Coordinate System must specify the reference datum, adjustment epoch and map projection utilized.

#### Coordinates

- Coordinates can be expressed as Geographic values, in a Universal Transverse Mercator map projection or Modified Transverse Mercator map projection.

#### The Coordinates of a point are expressed in these terms.

- a) The first term being the Easting or Longitude coordinate, and
- b) The second term being the Northing or Latitude coordinate.

#### Distances On The Plan

- (1) All distances on a plan shall be shown either in imperial unit or in metric units.
- (2) A note in bold printing shall be included in a conspicuous position on every plan that indicates either that the distances and  
Coordinates, if applicable shown on the plan
  - a) are in metres and can be converted to feet by dividing by 0.3048, if distances on the plan are shown in metric units; or
  - b) are in feet and can be converted to metres by multiplying by 0.3048, if distance on the plan are shown in imperial units.

#### Integration

- If a survey has been integrated with a coordinate system, notes shall be included on the plan of survey to Indicate:
  - a) that the distances shown on the plan are adjusted ground and can be used to compute grid distances by multiplying the distances by the stated combined scale factor;
  - b) the stated projection, zone, datum, and adjustment epoch;
  - c) the accuracy and confidence level to which the points have been integrated to the coordinate system;
  - d) the survey method used to integrate the survey; and
  - e) the known central points or observed reference points used to integrate the survey.

### 2. Layout

Lots shall be established in accordance with the requirements of the Official Plan and Restricted Area By-Law.

All road intersections shall be perpendicular. Curves shall be designed for the traffic volumes and speeds anticipated.

Cul-de-sacs shall be established in accordance with Town Standard R-7 Type B - Without Island. The projection of side lot lines shall meet the following requirements on cul-de-sacs:

<u>Location</u>	<u>Minimum Radius</u>	<u>Minimum Arc.</u>
Property Line	15 m	10 m
Curb	9 m	8 m

### 3. Road Allowance

Road allowances shall be established in accordance with the following table:

<u>Street Classification</u>	<u>Minimum Width (m)</u>	<u>Projected AADT (vpd)</u>
Local L2.1	20	<1,000
Collector C2.120	20	1,000 - 8,000
Arterial A2.1	26	8,000 - 20,000
Collector C2.2	26	1,000 - 8,000
Arterial A2.2	30	8,000 - 20,000
Arterial A4.0	30	8,000 - 20,000

### SUBMISSION OF DRAWINGS

All plans shall be submitted on five hundred ninety four millimetre (594 mm) by eight hundred forty one millimetre (841 mm) sheets with a Town of Petrolia Title Block, a Professional Engineer's Title Block and a revision table.

The original drawings shall be on mylar or other transparent material as may be approved by the Town.

The plans and documents shall be submitted directly to the Town's Manager of Operations.

Prior to the second and third submissions, all changes as requested by the Town's Manager of Operations shall be incorporated in the plans.

#### General Plans:

A. All General Plans shall:

- 1) Be drawn at a scale of 1:1000;
- 2) Show a Key Plan;
- 3) Show a north arrow;
- 4) Show all existing and proposed lot numbers and blocks;
- 5) Show all existing services and utilities and abutting property limits in broken lines.

B. General Plans showing Above Ground Services shall:

- 1) Show all existing and proposed curbs, road allowances, road widths, street names, catch basins, manholes, hydrants, street lights and road grades.

C. General Plans showing below ground services shall:

- 1) Show all existing and proposed sewer lengths, sizes, types, grades (to two decimal points), direction of flow, catch basins and manholes;
- 2) Show all existing and proposed watermain sizes along with valves and hydrants;
- 3) Show all house connections, including sanitary, storm and water.

D. General Plans showing drainage shall:

- 1) Show storm drainage areas, including the area outside the subdivision, acreage and runoff coefficients;
- 2) Show catchbasins, both on street and rear lot;
- 3) Show sanitary sewer drainage areas including the areas outside the subdivision, acreage and populations.

Plans and Profiles:

1. All plans and profiles shall be drawn at scales of:  
1:500 horizontal  
1:50 vertical
2. Show the north arrow in each plan view.
3. Show a Town of Petrolia Title Block with a revision table above.
4. The sewer and watermain profiles shall be drawn so that each street and easement may be filed separately.
5. Refer all datum to a geodetic benchmark.
6. Show all existing and proposed lot numbers and blocks.
7. Show all existing and proposed curbs and gutters, road allowances and street names.
8. Show all existing and proposed watermain sizes, valves, hydrants, and other utilities.
9. Show all existing and proposed sewer lengths, sizes, types, grades (to two decimal points), direction of flow, catch basins and manholes.
10. Show all house connections: water, sanitary and storm
11. Show all manholes with the proper symbols.
12. Show the type and Class of all sewer and watermain pipe, and type of bedding.
13. Road stations shall be shown in plan view at a maximum spacing of 50.0 m.

Grading Plans:

1. Proper grading prevents wet cellars, eroding banks, ponding yards, and costly corrective work at a later date. Lot grading should be carefully planned to avoid water drainage onto adjacent properties creating drainage problems.
2. Lot Grading Control Plans shall:
  - a) Show a title block, table of revisions and north arrow on plan.
  - b) Indicate centreline road elevations opposite the centre line of each lot.
  - c) Show existing and proposed elevations at each corner of each lot and block.
  - d) Show existing contours.
  - e) Show proposed ground elevations
  - f) Show proposed elevations where sudden changes in grade occur. In the case of terraces or retaining walls, top and bottom are required.
  - g) Show swales, storm drains, storm water management facilities and easements where required.
  - h) Show drainage pattern by means of arrows.
  - i) Show detail of sodded swale.
  - j) Reference the controlling benchmark.

Lot Grading Requirements:

The following table should be used as a guide in planning the grading of a subdivision:

Driveways Optimum gradient	4%
Maximum cross slope	5%
Minimum cross slope (where gradient less than 2%)	2%
Maximum gradient	8%
Sidewalks Maximum gradient and cross slope	5%
Minimum cross slope (where gradient less than 2%)	2%
Paved Utility Optimum Slope	1%
Area Maximum Slope	6%
Minimum Slope	0.5%
Elsewhere on Optimum Slope	4%
the Site Minimum Slope	2%

Swales shall not be over fifty (50) metres in length without catchbasin and drain.

### FIRST SUBMISSION

The following plans and documents are required for the first submission:

- A. Two (2) complete sets of the following drawings:
  - 1. Title Page
  - 2. General Plan showing all above Ground Services
  - 3. General Plan showing all below Ground Services
  - 4. Grading Control Plan
  - 5. Plan and Profile of all proposed roads and streets
  - 6. Plans showing miscellaneous details, if any
  - 7. Proposed standard plans
  - 8. Brownfield Legislation requirements
  - 9. Attach all requirements in accordance with Ontario Regulation 153/04 made under the Environmental Protection Act.
  
- B. One (1) complete set of the following schedules:
  - 1. Schedule A- giving a list of all drawings to be included in the Subdivision Agreement.
  - 2. Schedule B- giving a list of all easements to be granted and all property to be conveyed to the Town.
  - 3. Schedule C- giving a list of all lots unsuitable for building purposes.
  - 4. Schedule D- giving a complete detailed cost estimate of all municipal services to be provided.
  
- C. Two (2) copies of the following:
  - 1. A storm sewer drainage plan including the whole area to be drained
  - 2. Design sheets for storm sewers and storm water management brief
  - 3. A sanitary sewer drainage plan including the whole area to be drained
  - 4. Design sheets for sanitary sewers
  - 5. Design sheets for pipe strength and bedding design for both storm and sanitary sewers
  - 6. Design sheets for all water lines and services

### SECOND SUBMISSION

The following plans and documents are required for the second submission:

- A. Two (2) complete sets of drawings as listed for the First Submission, Item A.,
- B. One (1) complete set of the Schedules listed for the First Submission, Item B.,
- C. Two (2) complete sets of the drawings and sheets listed for the First Submission, Item C, if unsatisfactory in the First Submission.

### THIRD SUBMISSION (if necessary)

The same as for the Second Submission, Items A, B, and C.

### FINAL SUBMISSION

After the Town has approved the above submissions, the following is required:

Two complete sets of the Contract Drawings and one set of the awarded contract documents including Tender form and Specifications.

AS CONSTRUCTED SUBMISSION

When all work is accepted for maintenance by the Town, plans showing "As Constructed" Details shall be submitted to the Town’s Manager of Operations for the Owner’s approval. These plans shall be submitted within three (3) months of the works being accepted.

**ROADWAYS AND SIDEWALKS**

**1. General**

Road allowances shall be cleared of all trees and other obstructions for the full width of the right-of-way. Topsoil shall be stripped for the complete width of the right-of-way. Sub-grade shall be rough-graded and properly shaped and compacted prior to the application of any granular base course materials. All finished roads and Sidewalks shall be constructed to provide a minimum grade of 0.5%.

**2. Structural Components**

Soil test borings shall be placed at intervals not exceeding 150 m to a depth of not less than 4.0 m below the proposed pavement elevations. Soil classifications, moisture content, etc., shall be recorded and noted on the plans and profiles submitted.

Road structural design shall be recommended by a competent Geotechnical Engineer, but in no case shall the road structure be less than the depths specified below:

<b>Local Roads</b>	<b>Collector Roads</b>		<b>Arterial Roads</b>
<b>Granular Base</b>	<b>Res.</b>	<b>Comm/Ind</b>	
Hot Mix (mm)	100	100	150
Gran A (mm)	150	150	150
Gran B (mm)	300	300	300

Road base shall include continuous subdrainage in accordance with OPSS 405 and as shown in R-1. Subdrains shall be perforated polyethylene, 100 mm diameter with geotextile sock and shall be connected directly to the catch basins at each end.

**3. Concrete Curb and Gutter**

Curb and Gutter for local roads shall conform to OPSS / OPSD standards and specifications.

Transverse joints shall have a uniform spacing not exceeding 4 metres.

Concrete curb and gutter conforming to R-8, shall normally be installed without curb cuts except where required for sidewalk ramps and Canada Post facilities. Curb cuts may be allowed if the Developer proposes to build housing units forthwith and will utilize the curb cuts as constructed. Any deviation from constructed curb cuts shall require complete removal and reconstruction of the curb and gutter affected.

**Driveways:** Normal curb cuts shall be made in accordance with the provisions of the current zoning by-law for the Town of Petrolia. On cul-de-sacs curb cuts shall not exceed 50% of the length of curb between the side lot lines when projected to intersect the curb line. Curb cuts shall be kept a minimum of 2 metres from catch basin, hydrant and streetlight locations.

**4. Pavement Width**

Pavement width measured from face of curb to face of curb shall not be less than the following:

<b><u>Street Classification</u></b>	<b><u>Pavement Width</u></b>
Local L2.1	8.5 m
Collector C2.1	9.0 m
Arterial A2.1	10.0 m
Collector C2.2	11.0 m
Arterial A2.2	14.0 m
Arterial A4.0	12.5 m

**5. Sidewalks**

Sidewalks not required in this Phase of the Development.

**CANADA POST FACILITIES**

The Developer shall make arrangements with the Post Master General for the installation of Canada Post Facilities.

Locations of all temporary and permanent facilities shall be subject to the approval of the Town's Manager of Operations and shall be shown on a key plan of the development and on the detailed plans affected.

If necessary, curb cuts shall be provided where permanent facilities are to be located.

**STORM DRAINAGE AND GRADING**

**1. General**

Storm sewers shall be located in boulevards in accordance with the approved cross-section.

Outlets for storm drainage shall be analyzed for acceptable capacity.

A storm water management plan shall be prepared in accordance with the recommendations of the Storm water Management Practices Planning and Design Manual (MOEE 1994) and the policies of the Conservation Authority to the satisfaction of the Town's Manager of Operations and the Conservation Authority. The report shall identify the practices proposed on the development that will:

- a) maintain current infiltration rates and maintain base flow;
- b) ensure that there is no increase in erosion potential or flood risk to the storm outlet;
- c) implement storm water management practices relating to storm water quality control;
- d) control erosion and sedimentation throughout all phases of construction.

A Grading Plan prepared by the Developer's Engineer shall be submitted to the Town's Manager of Operations for approval prior to any work commencing on the affected lands. An approved grading plan shall clearly indicate the following:

- a) a geodetic bench mark;
- b) spot elevations of existing ground throughout the subdivision;
- c) existing and proposed elevations along the centre line of roads;
- d) existing and proposed elevations at the four corners of each lot;
- e) proposed minimum ground elevation around the house for each lot;
- f) proposed elevation of each rear lot catch basin cover;
- g) drainage arrows indicating proposed flow direction.

**2. Ditches**

Where drainage by ditches are proposed by the Developer and approved by the Town's Manager of Operations ditches shall be constructed to a minimum depth of 500 mm below the finished gravel centre line road grade and shall be shaped with 3 to 1 side slopes.

All drainage ditches shall be designed in accordance with the above criteria and shall include perforated pipe sub-drains. Drainage ditches and storm sewer outlets shall be designed to avoid potential erosion.

### 3. **STORM SEWERS**

Storm sewers shall be located in accordance with the approved cross-section.

#### 3.1 **Design Requirements**

The minimum pipe diameter for sewer mains and double catchbasin connections shall be 250 mm, and for single catchbasins shall be 200 mm.

Storm sewers shall be designed using the Rational Method and the following requirements:

**DESIGN STORM:**            1:2 year frequency for sewers  
    1:10 year for major drainage structures

**VELOCITY:**                Minimum 0.8 m/s  
    Maximum 3.5 m/s

**RUNOFF COEFFICIENT:**    Residential -Single Family            0.40  
    Semi Detached0                        0.50  
    Townhouses                                0.70  
    Apartments                                 0.75  
    Commercial/Industrial                 0.90

**INLET TIME:**                Residential                                 15 minutes  
    Commercial/Industrial                 15 minutes

Pipe strength and bedding design shall be based on the use of the Marston Formula and on transition width for trenches. Class of pipe and bedding shall be shown on all profiles.

#### 3.2 **Pipe Material Acceptable for Storm Sewers**

##### Type of Pipe Diameter Requirements

<u>Material</u>	<u>Acceptable Standard</u>	<u>Class</u>	<u>Comment</u>
Concrete	CSA A257.1	Extra Strength	300mm and 375mm
	A257.2	As noted	300mm and up
PVC	ASTM - D3034, CSA B182.1	DR35	600mm and smaller MH Adapters required
	ASTM – D3034, CSA B182.1	DR28	100mm to 150mm - Services laterals only
	ASTM – D3034, CSA B 182.4		300 mm to 600mm – storm sewer only, MH adapters required

Manholes shall be precast concrete conforming to OPSS / OPSD. Manholes shall be located not more than 125 m apart.

Manhole and catch basin adjustments shall be made with pre-cast concrete adjustment rings with an interlocking design. Brick adjustments will not be permitted.

Catchbasins shall be required on the upstream side of all intersections. Catchbasins shall not be more than 90 m a part on each side of the road, and at all low points. Double catchbasins shall be used at all low points.

Rear lot catchbasins are required in all rear yards. Rear lot catchbasin connections shall be located in accordance with an approved lot grading plan.



### **3.3 Connections**

150 mm diameter storm sewer connections shall be provided for each dwelling in a residential subdivision. All service connections shall be located 1.5 m from the side lot line and provided with a minimum of 1.2 m cover. In general, the storm sewer connection should be shown running perpendicular from the main to the property line. The minimum gradient permitted for a storm sewer service connection is 2.0%. Double lot connections will not be permitted.

All storm sewer connections shall be accepted at the same time as the sidewalks (or boulevards where there are no sidewalks), are accepted.

### **3.4 Construction**

Construction of storm sewers and appurtenances shall be carried out in accordance with the OPSS / OPSD standard drawings and specifications. Materials shall be as specified in the Standard Specifications.

All manholes and catchbasins shall be constructed with 100 mm perforated PVC subdrains complete with a geotextile fabric sock in accordance with the Town of Petrolia standards.

All storm sewer manholes shall be benched in accordance with OPSS / OPSD. The channel shall be benched to the elevation of the crown of the upstream sewer.

All manholes located in boulevards shall be constructed to finished grade. All manholes located in the roadway shall be constructed initially to base asphalt elevation. The manhole frame and cover must be adjusted prior to placement of the surface asphalt course.

All catchbasin frames and grates shall be constructed initially to base asphalt elevation. The curb shall be omitted behind the catchbasin. The frame and grate shall be adjusted to surface asphalt elevation and the curb completed prior to placing the surface asphalt course.

The end of each service shall be marked with a 50 mm by 100 mm wood stake extending 600 mm above finished grade, painted green.

### **3.5 Easements**

The subdivider shall provide easements/R.O.W.'s free and clear of all encumbrances as may be required for the installation and maintenance of storm sewer mains, storm outlets, and rear yard catchbasins and connections.

The minimum width of easement for a single pipe is 5.0 m. For more than one pipe, the width of the easement shall be determined by the Town's Manager of Operations.

### **3.6 Lot Grading and Drainage**

Individual lots shall be graded in accordance with the Grading Plan approved by the Town's Manager of Operations.

Each lot shall be graded to conduct surface water away from the building. Rear yards shall be drained by individual rear yard catch basins for that lot.

## **4. SANITARY SEWERS**

### **4.1 Design**

Sanitary sewers shall be designed in accordance with MOE guidelines and Ontario Provincial Standards except as amended herein.

The minimum pipe size shall be 200 mm. Design calculations shall be completed on MOEE design forms.

The design flow for sanitary sewers shall be based on the following:

- a) Residential Flows  $0.35 \text{ m}^3/\text{c/d}$  or  $0.004 \text{ l/s/c}$
- b) Commercial  $0.6 \text{ l/s/ha}$  unless higher design flows are warranted.
- c) Institutional  $1.0 \text{ l/s/ha}$

Use the Harmon Formula to determine the peaking factor for residential flows. Use a peaking factor of 2.5 for Commercial and Institutional flows.

A peak infiltration allowance of  $0.15 \text{ l/s/ha}$  shall be included in the design flow calculation.

Pipe capacity shall be determined using Manning's formula. The value of "n" shall be 0.013 for all pipe material.

The minimum gradient for sanitary sewers shall be 0.5% unless approved otherwise by the Town's Manager of Operations. The minimum velocity allowed for sanitary sewer mains is 0.8 m/s and the maximum velocity permitted is 3.0 m/s.

**4.2 Pipe Material Acceptable for Sanitary Sewers**

Type of Pipe Diameter Requirements

<u>Material</u>	<u>Applicable Standard</u>	<u>Class</u>	<u>Comment</u>
Concrete	CSA A 257.2	As noted	300mm and up. Resilient MH adapters (Kor-N-Seal or approved equal) required at all MH structures
PVC	ASTM - D3034, CSA B 182.1	DR 35	600mm and smaller, Resilient MH adapters (Kor-N-Seal or approved equal) required at all MH structures
	ASTM - D3034, CSA B 182.1	DR28	100mm, service laterals only

Manholes shall be precast concrete conforming to Town Drawings. Manholes shall be located not more than 125 m apart. Blind connections shall not be permitted.

**4.3 Connections**

Single sanitary sewer connections are required for each dwelling in a residential subdivision. All service connections shall be located 0.6 m left from the centre line of the lot frontage and provided with a minimum of 2.2 m cover. In general, the sanitary sewer connection should be shown running perpendicular from the main to the property line. The minimum gradient permitted for a sanitary sewer service connection is 2.0%.

All sanitary sewer connections shall be accepted at the same time as the sidewalks (or boulevards where there are no sidewalks), are accepted.

**4.4 Construction**

Construction of sanitary sewers and appurtenances shall be carried out in accordance with the OPSS / OPSD standard drawings and specifications. Materials shall be as specified in the Standard Specifications.

All sanitary sewer manholes shall be benched in accordance with OPSS / OPSD. The channel shall be benched to the elevation of the crown of the upstream sewer.

All manholes located in the roadway shall be constructed initially to base asphalt elevation. The manhole frame and cover must be adjusted prior to placement of the surface asphalt course.

Manhole and catch basin adjustments shall be made with precast concrete adjustment rings with an interlocking design. Brick adjustments will not be permitted.

Roof drainage downspouts and foundation drains shall not be connected to the sanitary sewer.  
Roof drainage downspouts and foundation drains shall not be connected to the storm sewer.

Each sanitary sewer service lateral shall be 100 mm diameter and shall have a clean-out complete with riser at the property line. The top of the riser shall be adjusted to be level with finished grade. Riser caps shall be of a metal to which conventional metal detectors will respond. Double lot connection will not be permitted.

The end of each service shall be marked with a 50 mm by 100 mm wood stake extending 600 mm above finished grade, painted red.

All commercial and industrial services shall include an inspection chamber at the property line. The inspection chamber shall be a minimum of 600 mm square and shall be approved by the Town's Manager of Operations prior to issuance of a permit. The inspection chamber shall have a proper manhole frame and grate and shall be properly benched to provide a smooth channel for the flow of sewage. The chamber and cover shall be designed and situated so as to prevent the flow of surface water into the chamber. The chamber shall be accessible at all times.

## 5. WATERMAINS AND FIRE PROTECTION

### 5.1 Design

The watermain and hydrant system shall be designed in accordance with MOE guidelines, Fire Underwriters recommendations and Ontario Provincial Standards except as amended herein. Design fire flows for single family residential developments shall not be less than 5,000 L/m. Fire flows for schools, institutional, commercial and industrial development shall meet the Fire Underwriters recommendations.

Minimum cover for all pipe shall be 1.524 m.

Valves are required on each leg of an intersection. ie: Tee intersections require 3 valves and cross intersections require 4 valves. Valves shall normally be placed in line with the intersecting street lines. Slight adjustments should be made to avoid placement in curbs, gutters or pavement at corners.

Hydrants shall normally be placed at road intersections and midway between intersections if spacing of intersections exceeds 150 m. Spacing of hydrants shall not exceed 150 m. Hydrants shall be placed opposite lot lines, but not less than 2 m from any driveway.

All hydrants shall be valved. Valves shall be located 1 metre from the hydrant.

Each serviced lot shall have an independent water service of minimum 19 mm diameter, Type K Copper with corporation stop, curb stop, box and back flow prevention devices.

### 5.2 Materials

Pipe Watermain pipe up to and including 300 mm diameter shall be PVC Class 150 DR-18 conforming to AWWA C900 and CSA B137.3 with ductile iron O.D. dimensions. Watermain pipe 350 mm to 600 mm diameter shall be PVC conforming to AWWA C905 with ductile iron O.D. dimensions conforming to the latest revision of AWWA C907 and CSA certified to B137.2.

Fittings Fittings for PVC watermains shall be cement lined Grey Iron or Ductile Iron conforming to AWWA C110/A21.10, latest revision; or, PVC injected moulded fittings, Class 150, manufactured to AWWA C907 and CSA certified to B137.2.

Service Polyethylene conforming to AWWA C901 and must be clearly marked with the designation Series 160 Potable O.D. Pipe PE 2406 CSA Certified. Stainless steel inserts shall be used for all PE compression connections.

Saddles Services saddles for PVC pipe shall conform to AWWA C-900 and be the full circumference wide band with stainless steel band, nuts, bolts and outlet. Band shall be type 304 stainless steel of minimum #18 gauge thickness.

Valves Valves shall be iron body, bronze mounted double disk parallel seat gate valves with mechanical joint fittings manufactured to AWWA C-500 with inside screw non-rising spindle and 50 mm operating nut.

Valves shall turn counter-clockwise to open. Valve boxes shall be 130 mm cast iron screw type valve boxes with separate base.

Valves shall be restrained in accordance with the OPSS / OPSD standard drawings and specifications

Approved Valves-Mueller No. 55

Valve Boxes-Canada Valve VB 3100, Bibby Code 7135

Hydrants All hydrants shall conform to AWWA C502 for dry barrel hydrants and shall be cast iron body, fully bronze mounted for 1035 Kpa service pressure with two (2) 65 mm bronze nozzles at 180 degrees and parallel to the street, and one (1) 100 mm pumper nozzle with a Storz Type connection to face travelled portion of road.

Hydrants shall be flanged at the ground line with the bottom flange between 100 mm and 150 mm above the ground elevation. All bolts and nuts supplied for flange to flange connections shall be stainless steel. If an extension is required to adjust the length of the barrel, it shall be placed between the upper and lower section of the barrel and not the top of the barrel.

Hydrants shall be the self draining type with a break off feature on the barrel and rod and the base shall be mechanical joint. Hydrants shall be open to the left (counter clockwise) and have standard Province of Ontario hose threads and operating nuts.

Approved hydrants are: Canada Valve Century

Main Shall be bronze or brass with inlet AWWA threads and compression outlet equal to Stops Mueller H-15008, Cambridge Brass Series 102, EMCO 17070, Ford F1000, EMCO 17200.

Curb Shall be bronze or brass with compression inlet and outlet with no drain equal to Mueller Stops H-15209, EMCO Successor 17010, Ford B-44-444.

Boxes Service Shall be cast iron extension type for 1.85 m cover equal to Mueller A726 with Mueller A800 lids. Length shall be adjustable between 1.7 and 2.0 metres to suit depth of service.

### 5.3 Cathodic Protection

- a) Anodes shall be installed on PVC watermain at all metallic fittings, valves, hydrants, service connection saddles and curb stops. Electrical continuity among all anodes and piping and/or fittings shall be maintained by installing a continuous tracer wire.
- b) On non-metallic piping, a 2.0 mm (14 gauge) TWH solid copper light coloured plastic coated tracer wire shall be installed and shall be fastened to the watermain or service piping at five (5) meter centres and the tracing wire shall be attached to every valve, hydrant and metallic fitting using a termite weld (Caldwell). All thermite weld connections to be coated with Roybond Primer and Royston "Handy Cap" or approved equal. The tracer wire will be brought to the surface at each mainline valve to facilitate connection to a "locator". The tracer wire will be tested for continuity prior to performance acceptance.
- c) All sacrificial anodes shall be packaged zinc anodes conforming to ASTM B-418-73 type 11 and shall be Z-24-48, 10.9 kg and shall be supplied with 3 metres of # 10/7 STR copper cable having TWH orange insulation.
- d) One 10.9 kg anode shall be provided for each valve or hydrant.

### 5.4 Construction

The Developer shall purchase from the Town the necessary water meters for installation prior to issuance of an occupancy permit.

All service connections shall be constructed to 0.6 m offset from the centre of the lot frontage, on the opposite side as the sanitary service connection. The end of each service shall be marked with a 50 mm by 100 mm wood stake extending 750 mm above finished grade, painted blue.

Connections to the existing Municipal Water System shall not be undertaken without the approval of the Town's Manager of Operations. Valves and hydrants shall only be operated under direct supervision of the Town Water Department's representative.

Hydrants shall be installed with the flange 100 to 150 mm above finished grade.

Hydrants shall be flow tested and colour coded in accordance with section 6 of the Ontario Fire Code and section 2 of the National Fire Protection Association Uniform Marking of Fire Hydrants.

Hydrant barrels shall be painted chrome yellow. Caps on Pumper nozzles equipped with Stortz connectors shall be painted black.

All valve and hydrant stems shall be plumb and centred on the valve box. Valve boxes shall be adjusted to be level with finished grade.

All new watermains shall be swabbed a minimum of two times according to the following procedure:

#### Swab Size

Length = 1.5 x swab diameter  
Diameter = (diameter of pipe) + 50 mm  
Density = 1.5 lb/board ft. (should be high memory foam)

Flow Rate: 2.5 to 3 ft/sec or 0.76 to 0.91 m/sec (flow regulator valve required) (to keep particles in suspension)

#### Minimum No. of Swabs

For a New System: 2 (after 2<sup>nd</sup> swab, the water should be clear, if not, additional swabbing is required at the contractors expense).

### Suggested Sequence

- a) Contractor to charge watermain, using backflow preventer
- b) Swab (minimum 2 swabs)
- c) Pressure Test
- d) Hydrostatic Leakage Test
- e) Chlorination
- f) Dechlorination (bacteria testing)
  - Contractor should test water source prior to swabbing new water distribution system, i.e. bacteria, fecal, etc.
  - water quality test should be taken from a service
  - flame the end of copper service, do not touch bottle to pipe, and do not touch mouth of the bottle.
  - water becomes "dead" after six weeks
  - swabs should always be clean
  - swab through gate valves
  - pre-survey must verify the operation of all in line valves
  - additional appurtenances (sacrificial tees, flush hydrants) are beneficial to the swabbing operation and shall be installed by the Contractor at no extra cost.

Urban / Rural -discharge water must be dechlorinated and tested prior to dumping into ditch/watercourse

### **6. Inspection and Testing**

The following testing and inspections are required during and after construction of services:

- i. Sewer mains
  - a) Gradation Analysis of bedding and cover material to verify conformity with specified material.
  - b) Compaction tests to verify compaction of bedding and cover material, and trench backfill.
  - c) Deflection testing of all flexible sewer mains.
  - d) Infiltration/exfiltration testing to ensure that all pipe joints and manholes are properly sealed.
  - e) Video inspection report to assure no defects exist in the lines.
  - f) Physical inspection of the work in progress of construction with noted defects to be immediately corrected and not repeated.

- ii. Water mains

All testing shall be in accordance with ANSI/AWWA – C -651 (latest edition) standards and shall be repeated until the test is satisfactory to the Overall Responsible Operator for the Town of Petrolia.

- a) Pressure test shall be performed as specified in OPSS 441.
- b) A separate leakage test is required and is to be performed in accordance with the requirements of OPSS 441.
- c) Physical inspection of the work in progress and shall include the inspection and operation of all mainline and hydrant valves, and hydrants by the Town's Water Department representative at the beginning of the maintenance period, and the inspection and operation of all mainline and hydrant valves, hydrants and curb stops by the Town's Water Department representative at the end of the maintenance period.
- d) Continuity test of the tracer wire prior to the beginning of the maintenance period.

- iii. Roads

- a) Sieve Analysis shall be performed to assure that the granular base and sub base materials meet current Town specifications. (Representative samples are to be obtained by the Consultant prior to and during the road construction operation.)
- b) Compaction tests are required to verify conformity with the design specification.
- c) Asphalt tests are required to assure that the base and surface course asphalt meets the current Town specification.
- d) Concrete tests are required to assure that the concrete meets the current Town specification.

**ACCEPTANCE PROCEDURE USED BY THE TOWN OF PETROLIA FOR ACCEPTANCE OF MUNICIPAL STREET SERVICES IN A NEW SUBDIVISION**

**A. UNDERGROUND SERVICES**

All underground services in the entire Phase or Stage as approved by the Town shall be accepted at one time.

This involves the following services:

- a) sanitary sewer mains and their respective appurtenances including sanitary service connections.
- b) watermains and their respective appurtenances including water service connections.
- c) storm sewer mains and their respective appurtenances including storm service connections.

**B. ABOVE GROUND SERVICES**

The above ground services are accepted on a street by street, item by item basis, as follows:

- Item 1 Roadway up to and including Granular A Base.
- Item 2 Binder Asphalt.
- Item 3 Surface Asphalt.
- Item 4 Curb and Gutter.
- Item 5 Sidewalk and sewer connections, where sidewalk is required on the street.
- Item 6 Driveway Ramps.
- Item 7 Boulevard landscaping and sewer connections, where sidewalk is not required on the street.
- Item 8 Street trees.
- Item 9 Street Lights and Electrical Power

The Developer shall maintain or cause to be maintained, the works and every part thereof for a period not less than two (2) years from the date of Maintenance Period Acceptance, as issued by the Town's Manager of Operations.

**Repairs**

The developer shall make good in a permanent manner satisfactory to the Town, any and all damage or injury to the work both during their construction and during their period of maintenance.

Should the developer fail to carry out the repairs as ordered by the Town, the Town may, after 48 hours written notice of intention to do so, cause the required repairs to be carried out and charge the whole cost together with expenses incurred, to the developer.

Any and all repairs shall be corrected prior to any request for final acceptance by the Town.

**Final Acceptance**

Prior to the Town accepting any services, the developer must:

- i. Provide deeds for all lands and easements required by the Town for Park, Recreation and/or School purposes, for drainage systems and sewer outlets.
- ii. Submit all servicing plans revised to show "As Constructed" details. These plans shall be submitted as follows:
  - a) One complete reproducible set on mylar;
  - b) One complete set in digital format;
  - c) Three print copies.
- iii. Furnish a Certificate from an Ontario Land Surveyor certifying that he certifies their correct position and/or replaced all iron bars and higher documentation shown on the Registered Plan.

- iv. Furnish a declaration that the Developer has paid all accounts that are payable in connection with the installation and maintenance of the said works and that there are no outstanding claims relating to the work.
- v. Have all services checked and approved by the Town's Manager of Operations or the Owner's representative.

## **OTHER UTILITIES**

### **1. General**

The Developer shall enter into an agreement with the appropriate utility company to provide the necessary electrical, gas and telephone services to each lot within the proposed development.

Copies of the proposed agreements are to be submitted to the Town's Manager of Operations for approval prior to execution by the Developer and the appropriate utility company.

## **SIGNS AND TRAFFIC CONTROL DEVICES**

### **1. General**

Traffic control signs and street name signs of a design approved by the Town's Manager of Operations shall be erected at all street intersections and other locations within or without the subdivision as required by the Town's Manager of Operations. Locations shall be approved by the General Works Superintendent prior to installation.

### **2. Traffic Control Signs and Devices**

Signs shall be of standard colours and shapes conforming to the requirements of the Manual of Uniform Traffic Control Devices for Ontario. In accordance with accepted standards, signs for day and night use shall be reflectorized with a high quality reflective material to provide long range visibility and brightness under adverse weather conditions.

Where traffic patterns or volumes warrant, necessary traffic control devices (eg. flashing lights, traffic lights) shall be designed and installed to the satisfaction of the Town's Manager of Operations.

### **3. Street Names/ Signs**

Street names will be submitted for review and acceptance by Council. Municipal Addressing shall be provided and approved by the County of Lambton – 911 Division.

Signs shall be of extruded aluminium, 16 cm high. Street names shall be reflectorized, white lettering on a green background. Lettering shall be 10 cm high. Standard abbreviations may be used.

### **4. Posts and Hardware**

Traffic control signs shall be mounted on standard U-flange posts. Posts shall be a minimum of 8 gauge galvanized steel 63 mm wide x 32 mm deep channel and 3.65 m in length.

Street name signs shall be mounted on 60 mm O.D. round galvanized steel posts, 3.35 m in length. Mounting brackets shall be well constructed, vandal resistant, cast aluminium.

### **5. Design Standards – Street Lighting Guide**

The Developer shall provide all labour, equipment, material and supervision necessary to complete street lighting in all respects as shown on the drawings and in accordance with the Town of Petrolia Design Standards. Final Acceptance of the work shall be to the satisfaction of Bluewater Power Distribution Corporation Distribution Corp.

#### **1.0 Overview**

The purpose of these guidelines is to establish the design standards which will apply to all new construction and upgrades to the street lighting infrastructure on public road allowances within the Town of Petrolia. It is understood that the illumination levels set out in these guidelines will be continually applied to new roadway construction and upgrades to existing roadways that have been designated for other rehabilitation work where application of the new lighting criteria would be justified and warranted. Lighting standards for other applications such as public pathways shall be considered on a case by-case basis. Contact the Town of Petrolia to discuss any unique or special situations.

## 2.0 **Design Requirements**

### 2.1 **Roadways to be Illuminated**

All roadways within the urban and sub-urban residential areas shall be illuminated to the standards defined in this document. This includes local streets, collectors, and arterial roads.

### 2.2 **Environmental Management**

Lamps shall be long life (20,000+ hours of burn time) bulbs to reduce the waste generated and the frequency of replacement. The bulbs shall be environmentally friendly (minimum mercury content) and energy efficient. All street lighting systems shall be constructed to the latest technical specifications identified by the Town of Petrolia in the current Subdivision Development Guidelines and Technical Standards - Town of Petrolia and Bluewater Power Distribution Corporation Distribution Corporation.

### 2.3 **Light Source**

High pressure sodium is the approved light source at this time.

### 2.4 **Quality of Light**

Light fixtures used shall minimize light trespass onto private property by focusing the light toward the ground. Full cut off luminaires shall be used to reduce "sky glow."

## 3.0 **Light Levels**

### 3.1 **Illumination Levels**

Illumination levels shall meet those criteria set out by the Illuminating Engineering Society (IES), RP-8-latest version.

### **Definitions (from IES)**

Arterial:

The part of the roadway system that serves as the principal network for through traffic flow. The routes connect areas of principal traffic generation and important rural highways entering the municipality.

Collector:

The roadways serving traffic between arterials and local roadways. These are roadways used mainly for traffic movements within residential, commercial and industrial areas.

Local:

Roadways used primarily for direct access to residential, commercial and industrial areas. They do not include roadways carrying through traffic. Long local roadways will generally be divided into short sections by a system of collector roadway systems.

### 3.2 **Special Considerations**

Average maintained illuminance shall be increased by 50% through intersections, railway crossings, school areas, and bridges. The lighting of tunnels is to be designed as per the IES recommendations for tunnel lighting.

## 4.0 **Other Design Standards**

4.1 All installations are to conform to the requirements of the Ontario Electrical Safety Code -current edition.

4.2 All components shall be CSA approved and in conformance with the Electric Distribution Association (EDA) and NEMA standards.

4.3 Streetlight poles shall be located in accordance with Town of Petrolia standards or as otherwise approved by the Town of Petrolia. On existing rights-of-way in developed areas, poles shall be located having regard for existing utilities and adjacent land use and topographical features.

4.4 Streetlights shall be located at all urban intersections and all major rural intersections.

4.5 Roadway lighting systems shall be unmetered.

4.6 The electrical supply shall be provided by the Supply Authority at the closest feasible supply point. The supply point is to be coordinated with the Supply Authority.

4.7 Power supply shall be 120 V AC for all residential roadways or 240 V AC as approved by the Town of Petrolia.

4.8 Wiring shall be sized to suit load and voltage drop. Maximum voltage drop at the end of the circuit shall not exceed 5 % of the supply voltage.

4.9 Typically, all new street lighting shall be serviced with underground wiring direct buried, between poles. Road crossings shall be in direct burial conduit to Municipal standards.

4.10 Underground wiring shall be a minimum #6 NMWU.

4.11 Frangible bases are to be utilized wherever necessary.

4.12 Where overhead primary and secondary wiring already exists, streetlight poles shall be serviced overhead. All overhead wiring is to consist of in-line fuse enclosed in a weatherproof fuse holder and minimum #4 triplex.



- 4.13 For overhead installations alternating circuits must be maintained from pole to pole to ensure 50% illumination upon loss of one circuit feeder for all arterial and collector areas of commercial and intermediate roadways.
- 4.14 All lamps are to be mogul base.
- 4.15 Each separate streetlight circuit shall be wired through a Supply Control Panel enclosure for the purpose of isolating it from the main supply transformer. For Subdivision installations refer to the current Technical Standards – Blue Water Power for the pedestal specifications and locations of pedestals in relation to transformers and other infrastructure items.
- 4.16 All ballasts will be dual-tap, CWI type.
- 4.17 Each pole shall house a fuse holder, which shall also be the pole disconnect. Riser wires are to be a minimum #12 RW90 or TWH.
- 4.18 Fuses shall be 600 Volt rated amperage to suit lamp size complete with insulated boot fuse holder with breakaway feature. Fuses to be Little Fuse type KLK while holder to be Cooper Bussman type HEB AA.
- 4.19 All photocells are to be twist on. Button photocells are unacceptable.
- 4.20 All street light connections will be made with copper split bolts sized appropriately for the size and number of conductors or compression connectors.

## 5.0 **Equipment**

### 5.1 **Cobra Head Luminaries**

Standard features include:

- die-cast aluminum housing with latched swing down cover with gasket;
- clear, tempered, flat glass lens;
- dual-tap high power factor ballast for starting down to -40°C;
- Type III light distribution pattern;
- photoelectric cell receptacle complete with shorting cap;
- permanent tape marking (yellow background for HPS, white background for metal halide) of lamp wattage on underside of luminaire housing;
- 100W high-pressure sodium lamp as required to meet illumination levels (Residential-sub divisions)
- 150W high-pressure sodium lamp as required to meet illumination levels (Collector Roads)
- 250W high-pressure sodium lamp as required to meet illumination levels (Arterial Roads)

Poles to be one of the following:

Direct buried, spun aluminum.

- 9.1 metre on local roads;
- 10.7 metre high on collector roads;
- 12.5 metre high on arterial roads;
- 1.2 metre aluminum, tapered, elliptical bracket (complete with decorative support if proposed) on local roads to be sufficiently long to align the luminaire over the edge of pavement;
- 2.4 metre aluminum, tapered, elliptical bracket (complete with decorative support if proposed) on collector and arterial roads to be sufficiently long to align the luminaire over the edge of pavement.

## 6.0 **Design Requirements**

The street lighting design shall be completed by a qualified lighting consultant, (i.e., P.Eng), utilizing the Municipal/Bluewater Power Distribution Corporation Distribution Corporation standards and guidelines. The design and supporting documentation shall be submitted to the Town of Petrolia for approval. Submission requirements include:

- luminaries type and wattage;
- Manufacturer name(s);
- Catalogue numbers and supplier contacts for proposed equipment;
- Photometric files used in calculations;
- Light loss factor utilized;
- Copy of design calculations and computer printout using one of the three (3) computer Programs: a) Lithonia's Visual; b) Canlyte's Genesys; c) AGI32;
- Pole types and heights;
- Drawings indicating existing streetlight poles as well as new pole locations, as illustrated within the composite utility plan;
- Proposed power supplies, circuiting, estimated demand load, conductor and duct sizes, and ground rod locations.

## 7.0 **Completion of Project**

Street lighting installed on behalf of a developer, under a plan of subdivision, shall be constructed in accordance with the approved plans, Town standards, and the terms of the Subdivision Agreement. All other street lighting works shall be constructed in accordance with the approved plans, Town standards, and the terms established in the contract document between the Town of Petrolia and the Contractor. Developer/Contractor shall warrant all equipment for a period not less than two (2) years against all defects and shall guarantee all work for a period of one (1) year.

### 8.0 **Attachments To Poles**

No signs, banners, advertisements, or attachments of any kind may be attached to any poles without the written authority of the Town Engineer. Any party wishing to install such attachments must provide dead and live load calculations, prepared by a licensed engineer, to confirm the attachment(s) will not impact on the structural integrity of the poles.

### 9.0 **Ownership, Operation, And Maintenance**

The Town of Petrolia owns the street lighting and related appurtenances located within the public road allowances owned by the Town. Bluewater Power Distribution Corporation as the Town's agent, is responsible for the operation and maintenance of the street lighting infrastructure.

## 6. **Permits, Fees and Inspection**

The Developer shall comply with all applicable codes and all Local, Municipal, Provincial and Federal By-laws, Rules and Regulations. He shall obtain all permits required and pay permit fees.

The Developer shall arrange for inspection of work by the Inspection Authority having jurisdiction over the work and on completion of the work present to the Town's Manager of Operations the final unconditional certificate of approval. The Developer shall pay for all inspection fees.

## 7. **Grounding**

The grounding of the luminaire shall be #4 copper connected to the luminaire, the standard and then to the underground neutral of the supply conductor which shall be tied in at the transformer grounding system by the supply authority.

### **FENCING**

**No Fencing required for this Phase of the Development.**

## **ENGINEERING REQUIREMENTS**

### 1. **General**

The Developer shall retain a Professional Engineer, licensed to practice in the Province of Ontario, to complete the design and full time inspection of all services to be installed in the proposed development.

The Developer's Engineer shall provide to the General Works Superintendent prior to construction commencing the name and emergency phone number of the Inspector, who will be conducting the full time inspection of the installation of the works within the proposed subdivision.

All designs shall conform to the applicable Federal, Provincial and Municipal Laws, regulations and standards.

All proposed drawings, specifications and contracts shall be submitted to the Town's Manager of Operations for approval prior to issuance for outside approvals or tendering.

All drawings, design calculations and specifications shall be prepared using System International (SI) metric units.

Ontario Provincial Standard Specifications and Drawings shall be utilized, if available, and as amended in this standard.

### 2. **Drawings**

Geodetic bench marks shall be indicated on each drawing sheet. Detail Plans and Profiles shall have at least one (1) bench mark. Key Plans shall have at least one (1) bench mark for every fifty (50) lots. Bench marks shall be uniformly distributed throughout the development.

Universal Transverse Mercator (6°) grid co-ordinates shall be indicated on all drawing sheets. Detail Plans and Profiles shall have at least two (2) co-ordinate positions indicated. Key Plans shall have at least one UTM co-ordinate for every fifty (50) lots, uniformly distributed throughout the development.

For Municipal approvals two (2) sets of prints shall be provided with each submission. One (1) set shall be returned after review and the other set retained by the municipality.

Upon completion of each phase of development the following as constructed drawings shall be provided:

- a) one set of Mylars
- b) three sets of Prints
- c) one set of "dgn" ( Micro station) or "DXF (Auto Cad) format drawings on 3 1/2", 1.44 Mb floppy disks.

As constructed drawings shall include the following information:

- a) chainages and geodetic elevations for all services, structures and appurtenances relating to all underground and aboveground services constructed
- b) locations and elevations of all service laterals at the property line
- c) all changes or deviations made after design approval and during construction
- d) notes regarding any unforeseen or changed field conditions (e.g. variations in soils, excavation, bedding, road base)

## 2. **Testing and Records**

All testing necessary to ensure compliance with the plans and specifications shall be carried out by the Developer's Engineer and an approved testing firm if required.

Testing shall be carried out in accordance with the appropriate OPS Specification and shall be conducted in the presence of the Town's Manager of Operations or Inspector.

Copies of all test results shall be certified by the Developer's Engineer and provided to the Town's Manager of Operations.

The Developer's Engineer shall provide to the Town's Manager of Operations certification that all utilities have been installed in the appropriate locations to meet the Town of Petrolia's standard specification for utility locations.

The following records and data shall be provided to the Town's Manager of Operations with the as constructed drawings:

- a) completed service connection sheets for each individual lot
- b) Roads Needs Appraisal data for each road section
- c) Hydrant data sheets and flow test records

**TOWN OF PETROLIA**  
**SCHEDULE "E"**  
**LETTER OF CREDIT**  
**(Bank letterhead or form)**

**Date:**

THE CORPORATION OF THE TOWN OF PETROLIA

Pursuant to the request of our customer ("Builder"Petrolia Limited) we the undersigned, (Financial Institution) hereby establish an irrevocable Letter of Credit in your favour in the total amount of \$ as per Schedule "K" which may be drawn on by you in the extent required for the proper completion of all works, services and improvements and payment of all amounts payable by our customer to you in accordance with the terms of the Development Agreement between our customer ("Builder"Petrolia Limited) and The Corporation of the Town of Petrolia respecting the Development known as (name of subdivision) being a subdivision of (subdivision description) in the Town of Petrolia. Drawings under this Letter of Credit shall be in the form of a written demand for payment made by The Corporation of the Town of Petrolia to the Petrolia branch of the (Bank of Nova Scotia) at Petrolia, Ontario.

The amount of this credit shall be reduced from time to time as advised by notice in writing given to the undersigned from time to time by The Corporation of the Town of Petrolia.

It is understood that this obligation is between the (Financial Institution) and The Corporation of the Town of Petrolia, and any notice referred to in the preceding paragraph shall not be used for any other purpose than herein set forth.

This Credit shall continue for a period of 1 (one) year and shall expire at 23:59 your local time on \_\_\_\_\_. If this credit is not renewed at least 14 days before the expiry date for a further period of one year upon identical terms and if alternate securities satisfactory to The Corporation of the Town of Petrolia are not deposited with The Corporation of the Town of Petrolia by our customer at least seven (7) days before the expiry date of this credit, then we (Financial Institution) shall promptly forward to The Corporation of the Town of Petrolia before expiry date of the Letter of Credit the total principal amount indicated in such Letter of Credit less any amounts previously drawn upon by The Corporation of the Town of Petrolia whether or not the installation of services has actually been completed.

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The undersigned has the authority to bind Financial Institution

**TOWN OF PETROLIA**  
**SCHEDULE "F"**  
**LIST OF DOCUMENTS TO BE REGISTERED**

1. Development Agreement (Sections A-H, schedules A-I)
2. Easements for municipal purposes as outlined in Schedule "G"
3. Reserves as outlined in Schedule "G"

**TOWN OF PETROLIA**

**SCHEDULE "G"**

**LEGAL DESCRIPTION AND PARCELS TO BE CONVEYED**

**DESCRIPTION**

That certain parcel or tract of lands situated in the Town of Petrolia in the County of Lambton and Province of Ontario and being composed of:

DESCRIPTION HERE

**PARCELS TO BE CONVEYED TO THE TOWN OF PETROLIA**

DESCRIPTION HERE

for future development/future road purposes

DESCRIPTION HERE

for sanitary drainage purposes

DESCRIPTION HERE

for 0.30 m Reserves

DESCRIPTION HERE

for emergency/secondary access purposes

DESCRIPTION HERE

for storm water management purposes

**EASEMENTS TO BE GRANTED TO THE TOWN OF PETROLIA**

DESCRIPTION HERE

for storm drainage purposes

**TOWN OF PETROLIA**  
**SCHEDULE "H"**  
**PHASING AND SPECIAL PROVISIONS**

**PHASING** (a) Phase\_\_\_\_\_ shall be comprised of:  
(i) DESCRIPTION HERE

**Special Provisions**

DESCRIPTION HERE

**TOWN OF PETROLIA**  
**SCHEDULE "I"**  
**OVER-SIZING AND EXTERNAL SERVICES**

**EXTERNAL SERVICES**

DESCRIPTION HERE

.

**OVER-SIZING SERVICES**

DESCRIPTION HERE



**TOWN OF PETROLIA**

**SCHEDULE "J"**

**COST ESTIMATE OF SERVICES TO BE CONSTRUCTED BY Owner**

- 1. Sanitary sewers, appurtenances and connections \$ \_\_\_\_\_
  
- 2. Storm sewers, appurtenances and connections \$ \_\_\_\_\_
  
- 3. Watermains, appurtenances and connections \$ \_\_\_\_\_
  
- 4. Road base, under-drainage, curbs and gutters, paving,  
and sidewalks \$ \_\_\_\_\_
  
- 5. Fencing, grading, filling, topsoil, seeding, sodding,  
Street lighting, underground electrical transformers,  
miscellaneous \$ \_\_\_\_\_
  
- 6. Engineering \$ \_\_\_\_\_

**Total Construction Cost Estimate \$ \_\_\_\_\_**

**(A NEW SCHEDULE "J" IS REQUIRED FOR EACH PHASE)  
TOWN OF PETROLIA**

**SCHEDULE "K"**

**SUMMARY OF FINANCIAL REQUIREMENTS**

<b><u>CASH REQUIREMENTS</u></b>	<b><u>AMOUNT</u></b>	<b><u>TIME OF PAYMENT</u></b>
1. Taxes	\$Current	On Signing Agreement
2. Local Improvement Charges	\$Current	On Signing Agreement
3. Development Charges:		
Units @ \$ (entire Plan of Subdivision)	\$Nil	Paid prior to execution of Agreement
Units @ \$ (Phase ____ only)	\$Nil	On Signing Agreement
Units @ \$ (Phase ____ only)	\$Nil	On Issue of Building Permits
4. Engineering, Inspection and Administration Fees:	To be billed on an "as needed" basis	
5. Water Flushing Charges		
@ \$0.20 cents per lineal metre of sewer mains	\$ 181.00	On Signing Agreement
@ \$0.20 cents per lineal metre of watermains	\$ 128.00	On Signing Agreement
6. Water Meter Charges:		
__ Units @ \$_____ per meter	\$Nil	On Signing Agreement
7. Cash in lieu of Park lands (____ ha)	\$Nil	On Signing Agreement
i) Fencing @ \$_____ per equiv. Ha	\$Nil	On Signing Agreement
ii) Seeding and topsoil @ \$_____ per equiv.	\$Nil	On Signing Agreement
iii) Tree planting @ \$_____ per equiv. Ha	\$Nil	On Signing Agreement
iv) Cash in lieu of municipal services.	\$Nil	On Signing Agreement
8. Registration and Legal Fees	On Invoice	
9. Development Agreement Fee	\$ 2000.00	On Signing Agreement
10. Oversizing and External Services already installed	\$Nil	On Signing Agreement
11. Outstanding Work Letter of Credit	To be established at Prior to issuance of First Building Permit, and to be based on 100% of the estimated Cost of Outstanding Work as approved by the Manager of Operations	Prior to Building Permits
12. Maintenance Letter of Credit 50% of value	\$ see #11 above.	Prior to passing By-law for acceptance of Phase I
13. Construction Lien Letter of Credit 10% of all services (\$_____) As per Schedule "J" for Phase I Construction	\$ Not required	
14. Drain Assessment Letter of Credit	\$ see #11 above	

**(A NEW SCHEDULE "K" IS REQUIRED FOR EACH PHASE)**

**TOWN OF PETROLIA**  
**SCHEDULE "L"**  
**SURVEYOR'S PLAN OF SUBDIVISION**

Plan of Subdivision prepared by \_\_\_\_\_ Ontario Land Surveyors dated \_\_\_\_\_ and registered in the Land Registry Office in and for the County of Lambton as Plan of Subdivision No. \_\_\_\_\_

**NOT ATTACHED**  
**DOCUMENTATION ON FILE WITH THE CLERK OF THE TOWN,**  
**411 Greenfield Street Box 1270**  
**PETROLIA, ONTARIO**  
**N0N 1R0**

**TOWN OF PETROLIA**  
**SCHEDULE "M" ( 1-15 )**  
**ENGINEER'S KEY PLANS**

The following drawings were prepared by the consulting firm on behalf of the Owner:

KEY PLANS:

1. Road and sidewalk layout and specifications
2. Overall grading Plan
3. Plan & Profile - \_\_\_\_\_
4. Plan & Profile - \_\_\_\_\_
5. Plan & Profile - \_\_\_\_\_
6. Plan & Profile - Storm Outlet and Watermain tie-in at \_\_\_\_\_
7. SWMF plan
8. SWMF sections
9. Sanitary Pumping Station details
10. Sanitary Valve Chamber details
11. SWMF Landscape Plan
12. Sanitary overall
13. Overall electrical distribution and streetlight layout
14. Erosion and sediment control plan
15. Overflow profiles

**NOT ATTACHED**  
**DOCUMENTATION ON FILE WITH THE CLERK OF THE TOWN,**  
**411 Greenfield Street Box 1270**  
**PETROLIA, ONTARIO**  
**N0N 1R0**

**TOWN OF PETROLIA  
SCHEDULE "N"  
GRADING PLANS**

The following grading plans were prepared by the consulting firm on behalf of the Owner:

1. General Grading Plan
2. Detail Grading Plans

**NOT ATTACHED  
DOCUMENTATION ON FILE WITH THE CLERK OF THE TOWN,  
411 Greenfield Street Box 1270  
PETROLIA, ONTARIO  
N0N 1R0**