

**THE CORPORATION OF THE TOWN OF AMHERSTBURG
BY-LAW NO. 2018-64**

**By-law to authorize the execution of a Development Agreement
between Lumed Management Inc. and
the Corporation of the Town of Amherstburg
33 Concession 3 N, Amherstburg**

WHEREAS under Section 8 of the Municipal Act 2001, S.O., 2001, c. 25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS under Section 9. (1) (a) and (b) of the Municipal Act 2001, S.O., 2001, c. 25, as amended, Section 8 shall be interpreted broadly so as to confer broad authority on municipalities to enable them to govern their affairs as they consider appropriate and to enhance their ability to respond to municipal issues;

AND WHEREAS the Corporation of the Town of Amherstburg and the Owner have agreed to the site plan and site details in the Development Agreement;

AND WHEREAS the Corporation of the Town of Amherstburg and owners of said property have agreed to the terms and conditions of a Development Agreement in the form annexed hereto;

NOW THEREFORE the Corporation of the Town of Amherstburg enacts as follows:

1. THAT the Mayor and Clerk be hereby authorized to enter into a Development Agreement between Lumed Management Inc. and the Corporation of the Town of Amherstburg for the development of 33 Concession 3 N for a prefabricated steel structure storage unit facility, said agreement affixed hereto;
2. THAT this By-law shall come into force and take effect immediately upon the final passing thereof at which time all by-laws that are inconsistent with the provisions of this by-law and the same are hereby amended insofar as it is necessary to give effect to the provisions of this by-law.

Read a first, second and third time and finally passed this 11th day of June, 2018.



MAYOR – ALDO DICARLO



CLERK – PAULA PARKER

DEVELOPMENT AGREEMENT

THIS AGREEMENT made in quadruplicate this 11th day of June, 2018.

BETWEEN:

LUMED MANAGEMENT INC.
(Hereinafter collectively called "**Owner**")

OF THE FIRST PART;

- and -

THE CORPORATION OF THE TOWN OF AMHERSTBURG
(Hereinafter called the "**Corporation**")

OF THE SECOND PART;

Hereinafter collectively referred to as the "**Parties**"

WHEREAS the lands affected by this Agreement are described in Schedule "A" attached hereto, and are hereinafter referred to as the "**Lands**";

AND WHEREAS Lumed Management Inc. warrants it is the registered owner of the Lands outlined in Schedule "A";

AND WHEREAS, in this Agreement the "**Owner**" includes an individual, an association, a partnership or corporation and, wherever the singular is used therein, it shall be construed as including the plural;

AND WHEREAS the Official Plan in effect in Amherstburg designated parts of the area covered by the Official Plan, including the Lands, as a Site Plan Control area;

AND WHEREAS the Owner intends to develop the Lands for the purpose of prefabricated steel structure storage unit facility in accordance with the Site Plan attached hereto as Schedule "B", and hereinafter referred to as the "Site Plan";

AND WHEREAS the Corporation as a condition of development of the Lands requires the Owner to enter into a Development Agreement;

WHEREAS the lands affected by this Agreement are described in Schedule "A" attached hereto, and are hereinafter referred to as the "said lands";

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the premises, along with the sum of FIVE (\$5.00) DOLLARS of lawful money of Canada, now paid by each of the Parties hereto to each of the other parties hereto, the receipt and sufficiency of which are hereby acknowledged, the Owner hereby covenants and agrees with the Corporation as follows:

1. The following Schedules attached hereto, are hereby made a part of this Agreement as fully and to all intents and purposes as though recited in full herein:
2. Schedule "A" hereto describes the Lands.
3. Schedule "B" (the "Site Plan") hereto shows:
 - (a) The location of all buildings and structures;
 - (b) Site Drainage Plan
 - (c) Outlet Control Pipe Detail

4. Schedule "C" hereto shows:
 - (a) Site Details
5. Schedule "D" hereto shows:
 - (a) Storm Water Management Plan
6. The Owner shall be responsible for consulting with and obtaining any necessary approvals from Essex Power regarding any matters that relate to services for the Development Lands to be provided by Essex Power. In addition, the Owner shall be responsible for any costs associated with the reconstruction, relocation or changes to the hydro system resulting from this development.
7. The Owner shall be responsible for consulting with and obtaining any necessary approvals from Union Gas and Bell Canada regarding any matters that relate to services to be provided by Union Gas and Bell Canada. In addition, the Owner shall be responsible for any costs associated with the reconstruction, relocation or changes to these services resulting from this development.
8. The Owner shall be responsible for consulting with and obtaining any necessary approval or permits from the Ministry of the Environment and Climate Change, the County of Essex and/or the Essex Region Conservation Authority (E.R.C.A.).
9. If any curbs, sidewalks, boulevards or highway surfaces of the Corporation are damaged during the development by the Owner, such damage shall be repaired or replaced by the Owner.
10. Snow removal from the parking or loading areas and lanes, driveways and walkways shall be the responsibility of the Owner.
11. The Owner shall install and maintain a system for the disposal of storm and surface water as indicated on Schedule "B" so that no such water will flow along the surface from the said lands onto any adjoining lands.
12. Any garbage or refuse that is stored outside shall be stored in a non-combustible container and maintained so that the garbage or refuse does not blow or fall out of the container.
13. Any and all lighting shall be installed and maintained in accordance with the standards set out in the Town's Development Manual, and, so as to not, in the opinion of the Corporation, interfere with the use or enjoyment of adjacent properties or with the safe flow of traffic on abutting or adjacent streets.
14. The Town will monitor any increased noise resulting from the approval of the elevations and site plan as proposed by this development. The developer shall comply with all provisions of the Town's Noise By-law 2001-43, as amended from time to time. The Town reserves the right to engage the developer to make improvements and modifications to the satisfaction of the Town necessary to relieve noise emissions which are found to be in contravention of MOECC Noise Guidelines and/or the Town's Noise By-law, when measured from the subject lands to neighbouring sensitive land uses. The Town may impose reasonable timelines for the rectification of excessive noise emissions before the remedies contained elsewhere in this Agreement are sought. The Town will work with the developer in the spirit of cooperation to achieve a positive result.
15. The Owner agrees that any Municipal property, including without limiting the generality of the foregoing, curbs, gutters, pavements, sidewalks, or landscaped areas on the public highway and any property belonging to a third party, which are damaged during construction or otherwise, shall be restored to the satisfaction of the Town. The Owner shall keep the subject lands in a state of

good repair (including the cutting of weeds) and upon written notice from the Town shall correct deficiencies in the state of repair within ten (10) days thereof.

16. The Owner agrees that the site will be inspected on an annual basis and any deficiencies will require immediate correction in accordance with the approved site plan. The Owner agrees that all prefabricated steel structures will be kept in a good state of maintenance in accordance with the Town's Property Standards By-law. The Town reserves the right to engage the Developer to make improvements and maintenance to the satisfaction of the Town, such that the visual appearance of the steel structures are not peeling or rusting. The Town may impose timelines for the rectification of the appearance of the structures before the remedies contained elsewhere in this Agreement are sought.
17. All driveways for emergency vehicles shall:
 - (1) Be connected with a public thoroughfare;
 - (2) Be designed and constructed to support expected loads imposed by firefighting equipment;
 - (3) Be surfaced with concrete, asphalt or other material capable of permitting accessibility under all climatic conditions;
 - (4) Have a clear width of 3 metres at all times;
 - (5) Be located not less than 3 metres and not more than 15.2 metres measured horizontally and at right angles from the face of the building;
 - (6) Have an overhead clearance not less than 4.5 metres;
 - (7) Have a change in gradient of not more than 1 in 12.5 over a minimum distance of 15.2 metres; and
 - (8) Have approved signs displayed to indicate the emergency route.
18. If the Ontario Building Code requires that an architect or professional engineer or both shall be responsible for the field review of any new building or extension provided for in this Agreement, the Owner shall not occupy or use or permit to be occupied or used any said new building or extension until after an architect or professional engineer has given to the Corporation a letter addressed to the Corporation and signed by him certifying that all services on or in the said lands, required for this development or redevelopment, newly installed by the Owner in connection with this development or redevelopment and not contained within a building, have been installed and completed in a manner satisfactory to the architect or professional engineer.
19. The Corporation through its servants, officers and agents including its building inspector, plumbing inspector, fire chief, public works head and municipal engineer may from time to time and at any time enter on the Lands to inspect:
 - (1) The progress of development;
 - (2) The state of maintenance as provided for in this Agreement.
20. In the event of any servant, officer or agent of the Corporation determining upon inspection that the development is not proceeding in strict accord with the plans and specifications filed with the Corporation, such servant, officer or agent shall forthwith place a notice requiring all work to be stopped upon the Lands, and shall forward a copy by registered mail to the Owner at his last address as shown by the revised assessment rolls, and the Owner shall forthwith correct the deficiency or deviation or appeal to Council of the Corporation as hereinafter provided.
21. In the event of any servant, officer or agent of the Corporation upon inspection being of the opinion that the state of maintenance is not satisfactory, such servant, officer or agent shall forthwith forward notice of such opinion to the Owner by registered mail at his last address as shown from the revised assessment rolls, and the Owner shall forthwith correct the deficiency or appeal to Council of the Corporation as hereinafter provided.

22. In the event that an Owner should disagree with the opinion of the servant, officer or agent of the Corporation as to the progress of the development or as to the state of maintenance, such Owner shall appear before Council of the Corporation, which after hearing the Owner, shall be permitted to express its position as to whether such progress or maintenance is satisfactory, following which Council of the Corporation shall make a decision, by resolution, as to whether to lift or sustain the prior decision of the Corporation's servant, officer or agent, which shall constitute a final determination of the matter.
23. In the event that an Owner should fail to obey a stop work order issued under Section 21 hereof, in addition to any other remedy, the Owner recognizes the right of the Corporation to apply to the Court for an Order granting injunctive relief, both interlocutory and permanent. The Owner acknowledges and admits that its failure to obey a stop work order constitutes irreparable harm to the Corporation and that the balance of convenience favours granting such injunctive relief without further proof thereof by the Corporation. The Owner shall be liable to the Corporation for all costs in relation to obtaining such an Order, including all legal costs. The costs shall be deemed to be municipal taxes and to be recoverable in accordance with Section 32 of this Agreement.
24. In the event that an Owner should fail to correct a deviation or deficiency after notice pursuant to Sections 21 or 21 or after notice of an opinion, which Council of the Corporation determines is correct under Section 22, the Council of the Corporation may by law direct or default of the matter or thing being done by the Owner, after two (2) weeks notice to it by registered mail at the last shown address of the Owner pursuant to the revised assessment rolls of passage of such by-law, that such matter or thing be done by the Corporation at the expense of the Owner, which expense may be recovered by action or like manner as municipal taxes and to be recoverable in accordance with Section 31 of this Agreement.
25. In the event of an Owner wishing to change at any time any of the buildings, structures or facilities described in the plans annexed or referred to in Section 3 hereof, it shall make application to Council of the Corporation for approval and shall not proceed with such change until approval is given by such Council, or in default by the Ontario Municipal Board, under the procedure set out in Section 41 of the Planning Act, R.S.O. 1990 herebefore referred to.
26. This Agreement and the provisions thereof do not give to the Owner or any person acquiring any interest in the said lands any rights against the Corporation with respect to the failure of the Owner to perform or fully perform any of its obligations under this Agreement or any negligence of the Owner in its performance of the said obligations or any act or omission of the Corporation under this Agreement.
27. In the event that no construction on the Lands has commenced on or before the expiry of one (1) year from the date of registration of this Agreement, the Corporation may subsequently, at its option, on one month's written notice to the Owner, terminate this Agreement, whereupon the Owner acknowledges that agrees that it will not be able to undertake any development construction on the Lands (or any further development or construction) on the Lands.
28. All facilities and matters required by this Agreement shall be provided and maintained by the Owner at its sole risk and expense to the satisfaction of the Corporation and in accordance with the standards determined by the Corporation and in default thereof and without limiting other remedies available to the Corporation, the provisions of Section 446 of the Municipal Act shall apply.
29. A financial guarantee (certified cheque or irrevocable letter of credit – self renewing without burden of proof) for FIFTY PERCENT (50%) of the value of on-site improvements of this development, exclusive of buildings and structures, is required to be paid and/or posted with the Corporation, in addition to further

financial security in the amount of ONE HUNDRED PERCENT (100%) for all off-site works required as part of this development.

The Owner's engineer is required to provide a certified estimate of the cost of the on-site and off-site work for consideration by the Town's Director of Engineering and Infrastructure for his/her approval, with any decision by the Town's Director of Engineering and Infrastructure in this regard to be final and binding upon the Owner. Once the Town has inspected and approved the construction of the on-site and off-site works, the Owner will be required to provide security for a ONE (1) year maintenance period in the amount of FIFTEEN PERCENT (15%) of the cost of on-site and off-site improvements.

30. This Agreement shall be registered against the land to which it applies, at the expense of the Owner, and the Corporation shall be entitled, subject to the provisions of the Registry Act and the Land Titles Act, to enforce its provisions against the Owner named herein and any and all subsequent owners of the lands.
31. This Agreement shall ensure to the benefit of and be binding upon the Parties hereto and their respective heirs, executors, administrators, successors and permitted assigns.
32. This Agreement shall be governed by, and interpreted according to, the laws of the Province of Ontario and the laws of Canada applicable therein, and shall be treated in all respects as an Ontario Contract.
33. If any provision or part thereof of this Agreement be illegal or unenforceable, it or they shall be considered separate and severable from the Agreement, and the remaining provisions of the Agreement shall remain in force and effect and shall be binding upon the Parties hereto as though the said provision or part thereof had never been including in this Agreement; provided that the severance of the provision or part does not fundamentally impair the rights of the Corporation in which case the Corporation may declare, without the consent of the Owner, this Agreement void, and all development and construction shall cease pending the execution of a new Agreement by the parties.
34. The division of this Agreement into Articles, sections and subsections and the insertion of headings are for convenience of reference only and shall not effect the construction or interpretation hereof.
35. This Agreement may be executed in several counterparts, each of which when so executed shall be deemed to be an original, and such counterparts together shall constitute one and the same instrument and shall be effective as of the date set out above.
36. Words importing the singular number include the plural and vice versa; words importing the masculine gender include the feminine and neutral genders.
37. Schedules and other documents attached or referred to in this Agreement are an integral part of this Agreement, and are hereby incorporated into this Agreement by reference.
38. This Agreement constitutes the entire agreement among the Parties and except as herein stated and in the instruments and documents to be executed and delivered pursuant hereto, contains all of the representations and warranties of the respective Parties. There are no oral representations or warranties among the Parties of any kind. This Agreement may not be amended or modified in any respect except by written instrument signed by both Parties.

IN WITNESS WHEREOF the Owner and the Corporation (the latter under the hands and seals of its officers duly authorized in this regard), have executed this Agreement as of the date first above written.

OWNER: LUMED MANAGEMENT INC.



Per Luigi DiPierdomenico
I have authority to bind the Corporation

**THE CORPORATION OF THE
TOWN OF AMHERSTBURG**



Per Aldo DiCarlo, Mayor



Per Paula Parker, Clerk

We have authority to bind the Corporation

Authorized and approved by By-law No. 2018-64
enacted the 11th day of June, 2018.

SCHEDULE "A"

The following is a description of the land to which this instrument applies:

PT SW PT OF LT 1, CON 3, ANDERDON,
PT 3 & 4, 12R-22651; S/T R1545506; T/W R1546082
in the Town of Amherstburg,
County of Essex,
Province of Ontario
(PIN 01543-0605)

Properties

PIN 01543 - 0605 LT
Description PT SW PT OF LT 1 CON 3 ANDERDON PT 3 & 4, 12R22651; S/T R1545506; T/W R1546082; TOWN OF AMHERSTBURG
Address FOX ROAD
 AMHERSTBURG

Consideration

Consideration \$1.00

Applicant(s)

The notice is based on or affects a valid and existing estate, right, interest or equity in land

Name THE CORPORATION OF THE TOWN OF AMHERSTBURG
Address for Service
 This document is not authorized under Power of Attorney by this party.
 This document is being authorized by a municipal corporation REBECCA BELANGER, MCIP, RPP, Manager of Planning Services from the Corporation of the Town of Amherstburg..

Party To(s)**Capacity****Share**

Name LUMED MANAGEMENT INC.
Address for Service 131 Gore Street
 Amherstburg, ON N9V 1K8

This document is being authorized by a municipal corporation REBECCA BELANGER, MCIP, RPP, Manager of Planning Services for the Corporation of the Town of Amherstburg..
 This document is not authorized under Power of Attorney by this party.

Statements

This notice is pursuant to Section 71 of the Land Titles Act.
 This notice is for an indeterminate period
 Schedule: See Schedules

Signed By

Thomas Robert Porter 500-251 Goyeau Street acting for Signed 2018 07 05
 Windsor Applicant(s)
 N9A 6V2
 Tel 519-258-0615
 Fax 519-258-6833
 I have the authority to sign and register the document on behalf of the Applicant(s).

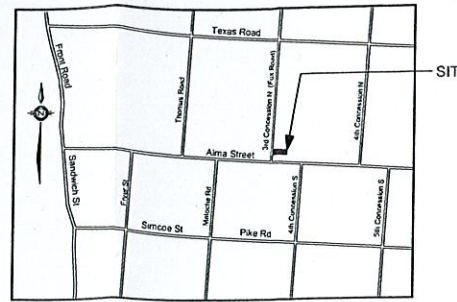
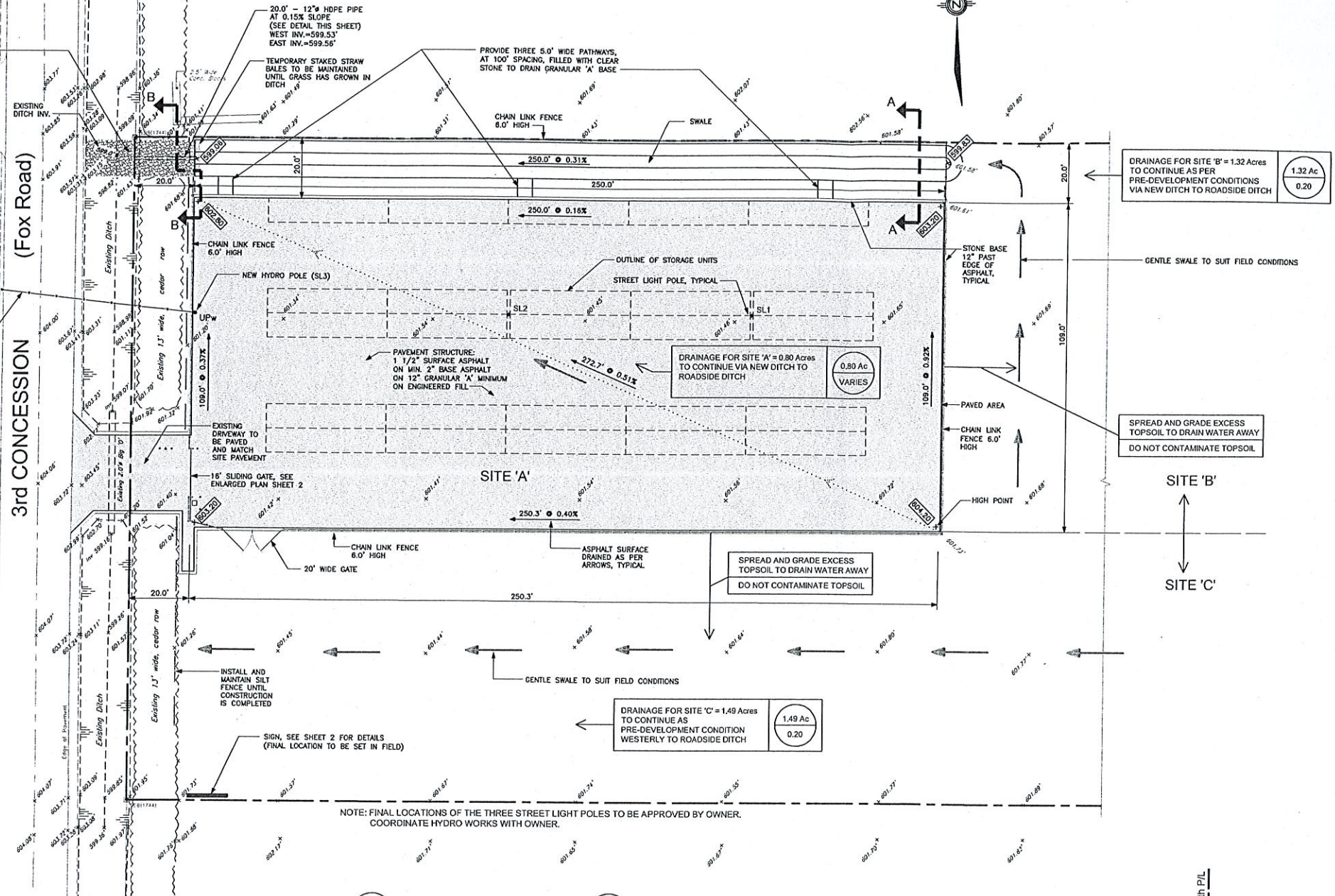
Submitted By

MOUSSEAU DELUCA MCPHERSON PRINCE 500-251 Goyeau Street 2018 07 05
 Windsor
 N9A 6V2
 Tel 519-258-0615
 Fax 519-258-6833

Fees/Taxes/Payment

Statutory Registration Fee \$63.65
Total Paid \$63.65

PROVIDE 4-8" STONE RIP-RAP ON BOTTOM AND BANKS OF DITCH FOR ABOUT 12' x 36' AREA, ON FILTER CLOTH



LOCATION MAP
SCALE: N.T.S.

GENERAL NOTES:

- TOPOGRAPHICAL FEATURES AND EXISTING UTILITIES LOCATIONS ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY SITE CONDITIONS.
- EXAMINE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AFFECTING WORK.
- PROVIDE ADEQUATE PROTECTION FOR ADJACENT PROPERTY, STREET, UTILITIES, ETC. AND MAKE GOOD WITHOUT EXPENSE TO THE OWNER AND TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION, ANY DAMAGE RESULTING FROM EXECUTION OF THE WORK.
- KEEP SITE AND STREETS FREE OF DIRT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITY.
- CHECK LOCATIONS OF ALL EXISTING UNDERGROUND SERVICES PRIOR TO EXCAVATING AND DO NOT DAMAGE.
- CONTRACTOR TO CARRY OUT ALL REMOVALS NECESSARY TO COMPLETE THE WORK. REMOVE ALL DELETERIOUS AND EXCESS MATERIALS FROM THE SITE. WHERE REQUIRED, ARRANGE AND PAY FOR MUNICIPALITY OR UTILITY TO DO WORK.
- CARRY OUT ALL WORK IN ACCORDANCE WITH MUNICIPALITIES STANDARDS, PUBLIC UTILITIES COMMISSION SPECIFICATIONS, ONTARIO PLUMBING CODE, ONTARIO BUILDING CODE AND ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS.
- ALL WORK TO BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT, LATEST REVISION AND OWNER'S GUIDELINES AND POLICIES.
- ALL PERMITS BY CONTRACTOR.
- ALL BOULEVARD AND NEW DITCH AREAS, SHALL HAVE SPECIFIED GRADES AND/OR POSITIVE DRAINAGE. REGRADE DISTURBED AREAS AND PLACE 4" (100mm) TOPSOIL AND SEED AS A MINIMUM.
- COORDINATE ALL WORK WITH OWNER.
- REFER TO LANDSCAPING PLANS AND ELECTRICAL DRAWINGS FOR FULL COORDINATION, IF ANY.
- LANDSCAPED AREAS DESIGN TO BE DONE AS SEPARATE DRAWING AND BE TO SATISFACTION OF MUNICIPALITY, IF ANY.
- DRIVEWAYS TO BE SURFACED WITH ASPHALT AND SLOPED FOR POSITIVE DRAINAGE. SAME PAVEMENT STRUCTURE AS SITE.
- CONFIRM AND COORDINATE WITH OWNER FOR PARKING CONTROL SYSTEM AND SIGNAGE.
- LEGAL DESCRIPTION:
PART 4, PLAN 12R-22851,
BEING PART OF LOT 1
CONCESSION 3
(Geographic Township of Anderton)
Now in the
TOWN OF AMHERSTBURG,
COUNTY OF ESSEX,
ONTARIO
- ILLUMINATION DESIGN BY OTHERS. PROVIDE POLE BASES AND DUCTS UNDER THIS CONTRACT AS PER ELECTRICAL DESIGN, AS AN EXTRA COST. IF AND WHEN REQUESTED BY OWNER.
- EXISTING ELEVATION (APPROXIMATE)
PROPOSED ELEVATION ON FINAL ASPHALT SURFACE
- ALL EXISTING TREES ARE TO REMAIN AND MUST BE PROTECTED DURING CONSTRUCTION. FENCE OFF AT DRIP LINE AND DO NOT PLACE ANY MATERIAL INSIDE FENCE.
- FIELD VERIFY ALL EXISTING ELEVATIONS AND CONDITIONS AND REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO START OF CONSTRUCTION.
- THE DESIGN OF THE SIGN, INCLUDING FOUNDATIONS AND STRUCTURE, IS TO BE BY THE SIGN SUPPLIER.
- DRIVEWAY AND PAVING NOTES:
22. ALL ELEVATIONS ARE FINAL SURFACE ASPHALT ELEVATIONS.
23. PAVEMENT STRUCTURE TO CONSIST OF 1 1/2" SURFACE ASPHALT ON 2" OF BASE ASPHALT ON 12" OF GRANULAR 'A' MINIMUM.
24. ALL SLEEVES TO BE 100mm PVC SDR18 PLACED BELOW SUBGRADE LEVEL, UNLESS OTHERWISE NOTED. CONDUITS AS PER ELECTRICAL PLANS, AS AN EXTRA COST.
25. CONTRACTOR TO MAKE FINAL FIELD ADJUSTMENTS TO ELEVATIONS TO ENSURE POSITIVE DRAINAGE EVERYWHERE.
26. CONTRACTOR TO RETAIN GEO-TECHNICAL ENGINEER TO INSPECT AND APPROVE IN WRITING ALL SUB-GRADE AREAS BELOW GRANULAR 'A' BASE AND VERIFY ALL COMPACTIONS FOR GRANULAR 'A' AND ASPHALT.
27. THE ENGINEERED FILL MAY CONSIST OF CLAY OR RECYCLED MATERIAL OR 0-2" STONE, IN EVERY CASE COMPACTED TO 98%.
- CHAIN LINK FENCE AND GATE AS PER OWNER'S SPECIFICATIONS.

SCHEDULE "B" TO BY-LAW 2018-64

LUMED MANAGEMENT INC.

Luigi DiPierdomenico

TOWN OF AMHERSTBURG

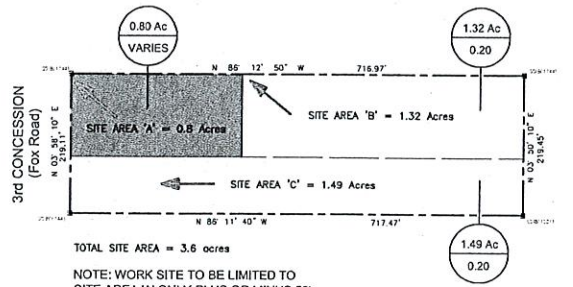
Mayor-Aldo DiCarlo

Clerk Paula Parker

PARTIAL SITE PLAN

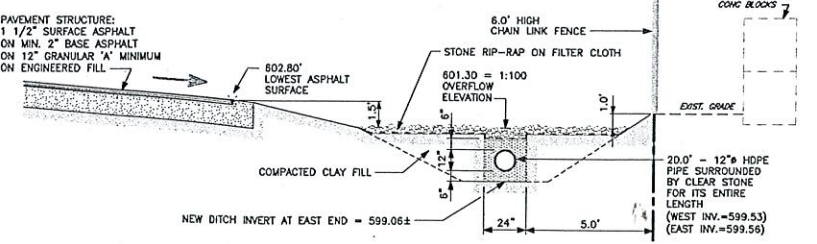
SCALE: 1"=20'
(SEE SHEET 2 FOR DETAILS)

SITE STATISTICS	
LOT AREA	= 157,240 sq.ft. (3.6 Acres)
AREA OF SITE WORK	= 35,806 sq.ft. (0.8 Acres)
PAVED AREA (INCL. STORAGE UNITS)	= 27,837 sq.ft.
TOTAL LENGTH OF FENCE	= 759 ft.



KEY PLAN / DRAINAGE

SCALE: Not to Scale
NOTE: = DRAINAGE FLOW



SECTION B-B: OUTLET CONTROL PIPE

SCALE: 1/4" = 1'-0"
(SEE THIS SHEET FOR SECTION LOCATION)

STORM WATER MANAGEMENT DATA:

- STORAGE VOLUME REQUIRED = 3,230 cu.ft. FOR 1:100 YEAR STORM
- STORAGE VOLUME PROVIDED IN DITCH = 3,716 cu.ft.
- OUTLET CONTROL PIPE SIZED TO DISCHARGE ONLY 1.5 YEAR WINDSOR STORM FLOW RATE (PRE-DEVELOPMENT) FROM SITE 'A' AND SITE 'B'.
- SITE 'C' CONTINUES TO DRAIN UNCHANGED.

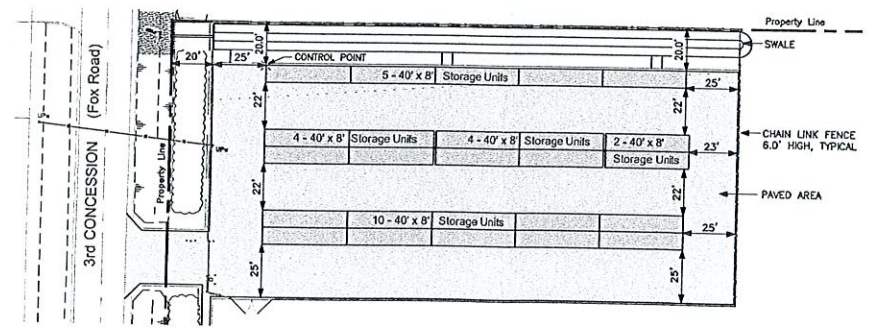
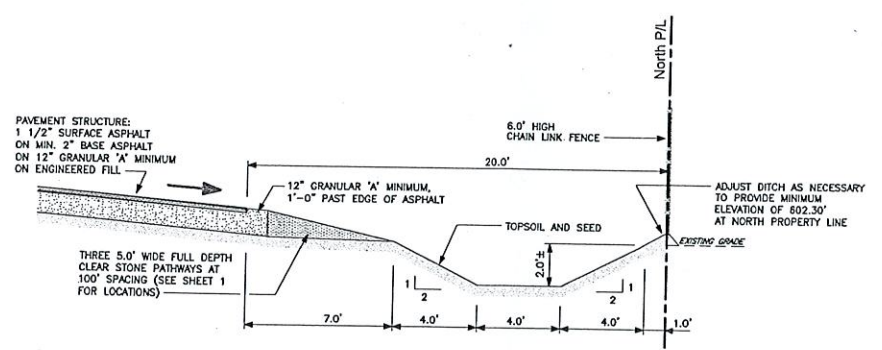
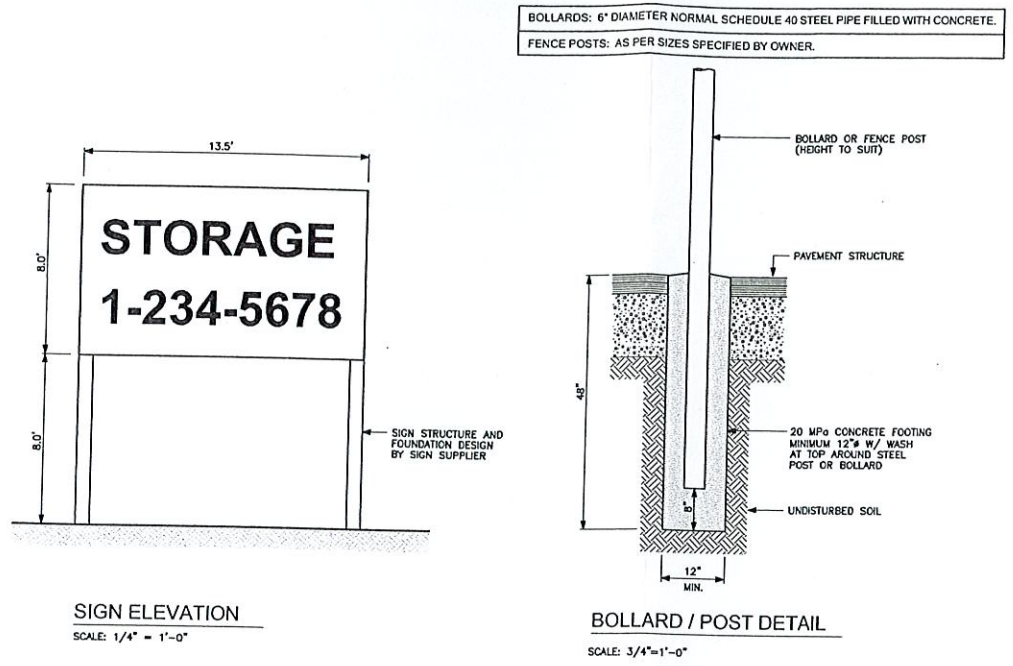
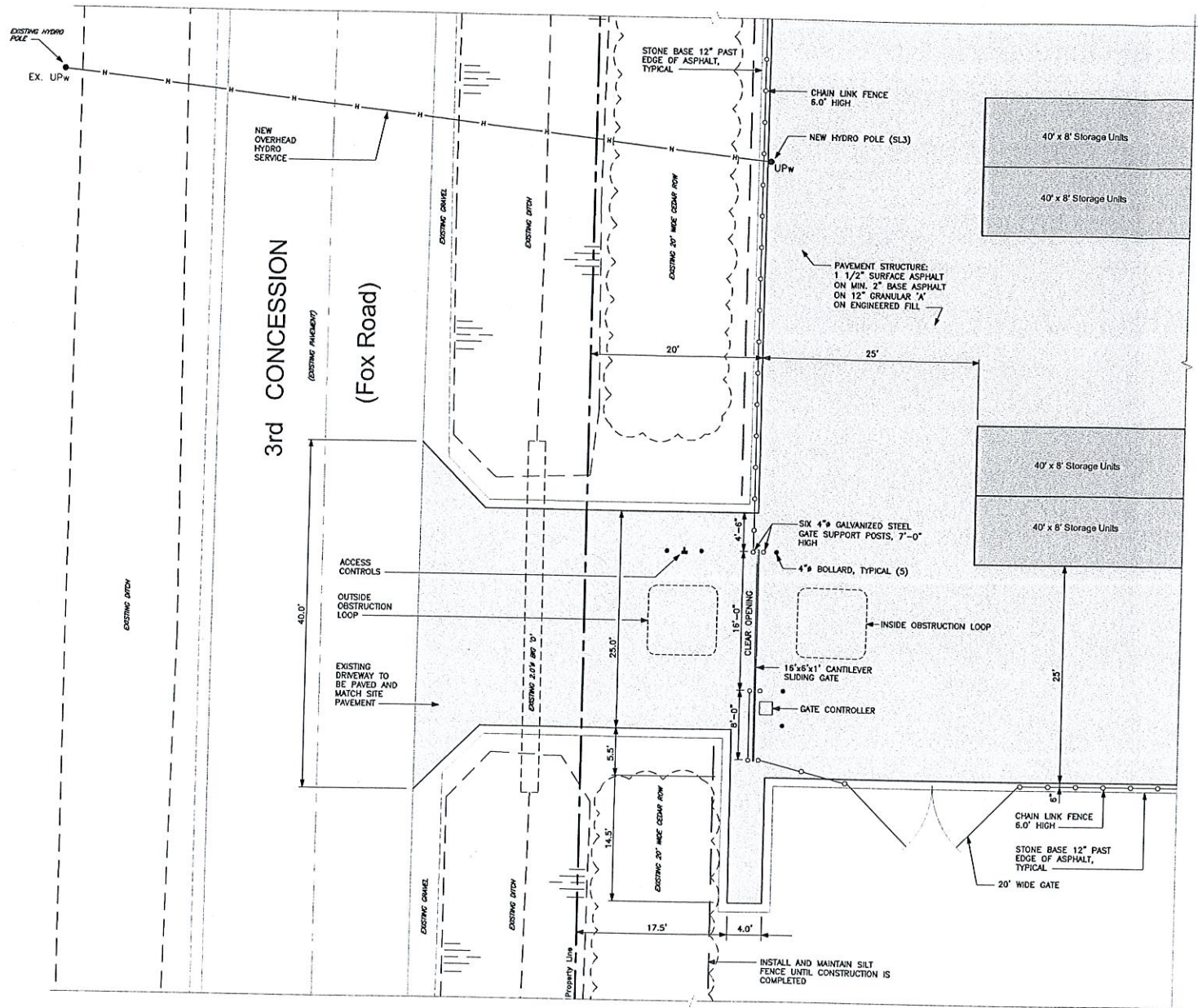


DESIGNED BY:	R.M.			
CHECKED BY:				
DRAWN BY:	I.A.Z.			
DATE:	26 MAR 2018			
PROJECT No.:	4722			
ISSUED FOR:	PEPMIT			
DATE:	26 MAR 2018			
APPROVED:				
REVISIONS:				
DATE:				
APPROVED:				

MEO & ASSOCIATES INC.
Architectural & Engineering Consultants
3800 Seven Lakes Drive, Suite 200, LaSalle, Ontario, N8H 0E5, Canada
TEL: (519) 250-8088 FAX: (519) 250-8070
WEB SITE: www.meogroup.net
EMAIL: rmo@meoassociates.com

STORAGE UNIT LAYOUT
3rd CONCESSION (FOX ROAD), AMHERSTBURG, ONTARIO

PROJECT: AS NOTED
AUTOCAD REF.: 4722-1- Site Plan Rev 1
DATE: MARCH 26, 2018
PROJECT No.: **4722**
SHEET No.: **1**
OF



STORAGE UNIT STATISTICS	
TOTAL 40' x 8' STORAGE UNITS =	25
MAY BE PHASED	

SCHEDULE "C" TO BY-LAW 2018-64

LUMED MANAGEMENT INC.

Luigi DiPierdomenico

TOWN OF AMHERSTBURG

Mayor- Aldo DiCarlo

Clerk- Paula Parker



DESIGNED BY: R.M.
CHECKED BY:
DRAWN BY: I.A.Z.

No.	REVISION	ISSUED FOR	DATE	APPROVED	No.	REVISIONS	DATE	APPROVED
1	PERMIT		26 MAR 2018		1	STORM WATER MANAGEMENT ADDED	23 APR 2018	

MEO & ASSOCIATES INC.
Architectural & Engineering Consultants
3600 Seven Lakes Drive, Suite 200, LaSalle, Ontario, N8H 0E5, Canada
TEL: (519) 250-8088 FAX: (519) 250-8070
WEB SITE: www.meoassoc.com
EMAIL: meo@meoassociates.com

STORAGE UNIT LAYOUT
3rd CONCESSION (FOX ROAD), AMHERSTBURG, ONTARIO

SITE DETAILS

PROJECT: 4722
SHEET TITLE: 4722
DATE: MARCH 26, 2018
SHEET No.: 2 OF 2

LUMED MANAGEMENT INC.

Luigi DiPierdomenico

TOWN OF AMHERSTBURG

Mayor- Aldo DiCarlo

Clerk- Paula Parker

MEO & ASSOCIATES INC.
Architectural & Engineering Consultants · Project Managers



3600 Seven Lakes Drive, Suite 200 | LaSalle, ON, Canada N9H 0E5 | tel 519-250-8088 | fax 519-250-8070
web www.meogroup.net | e-mail rmeo@meoassociates.com

**RE: Lumed Storage Facility, Third Concession Road, Amherstburg
STORM WATER MANAGEMENT PLAN**

Todd Hewitt,
Manager of Engineering and Operations
Town of Amherstburg

2018-04-10

4722 Storm Water Mgt Plan

DELIVERED via email only

Todd, we make this submission for your review and record, to satisfy the requirements for storm water management (quantity and quality) for the proposed Lumed Storage Facility on Third Concession Road, Amherstburg.

The subject site is 3.60 in size. We have broken it up in three parts: Site A (0.80 acres) is the one being developed. Site B (1.32 acres) is immediately to the east of Site A; it is not being developed, but its drainage will combine with Site A. Site C (1.49 acres) will remain undeveloped and its drainage patterns unchanged.

This letter deals only with Site A and Site B combined, since they are the only ones affected. Site C will see no changes.

The following are attached and form part of this report:

- Table A – 1:5 Year calculations
- Table B – 1:100 Year calculations
- Sheets 1 and 2, being Site Plan and Site Details respectively

1. PRE-DEVELOPMENT CONDITIONS

The site currently has surface and farm furrows drainage to the municipal ditch on the east side of Third Concession Road. This will continue to be the outlet after development.

The pre-development flow rate for the 1:5 Year storm has been calculated as 37.9 l/s. For the 1:100 Year event, it is 54.4 l/s.

2. POST-DEVELOPMENT CONDITIONS

The proposed development is estimated to increase the 1:5 Year runoff to 79.2 l/s and the 1:100 Year to 113.7 l/s.

3. STORM WATER RUNOFF MANAGEMENT PLAN

The runoff will be directed to a new ditch along the north side of the Site A, which will also serve as a linear retention pond.

The outflow from this ditch to the municipal ditch is restricted by using a 300mm pipe (12") at a slope of 0.15%, having a capacity of 37.5 l/s (which is less than the 1:5 Year pre-development flow rate of 37.9 l/s).

The storage volume required has been calculated based on an allowable discharge rate of 37.9 l/s (the 1:5 Year pre-developed flow rate), which is very conservative. For the 1:5 Year event, the storage volume required is 49.6 cubic metres (1,750 cubic feet) and for the 1:100 Year event it is 91.5 cubic metres (3,230 cubic feet).

The storage volume provided in the new ditch is 105.2 cubic metres (3,716 cubic feet) which exceed the requirement for the 1:100 Year event.

4. OVERFLOW

The maximum water level in the proposed ditch is expected to be 601.30' (183.276m); this is also the 1:100 Year water surface elevation. An rip-rap lined channel is provided at this elevation, to allow for overflows in case a storm in excess of 1:100 Year frequency occurs.

5. QUALITY CONSIDERATIONS

The following will provide assistance with the quality of the runoff:

- a) Before any construction starts, a silt fence will be installed just to the east of the existing row of trees, to intercept sediment from the site before it reaches the existing municipal ditch.
- b) After the new ditch along the north limit of Site A is dug, it will be seeded and grass maintained permanently.
- c) Straw bales will be placed across the new ditch, at its west end, to filter sediment before it reaches the municipal ditch.
- d) The outlet pipe from the new ditch will be installed 6" (150mm) above the bottom of the ditch, to trap the first flush of water and settle sediment out.
- e) The storage facility is paved with asphalt to prevent erosion. Vehicular traffic will be minimal, since patrons are expected to enter the site only sporadically.

6. CONCLUSIONS AND RECOMMENDATIONS

Based on the above comparison of the pre-development and post-development conditions, and considering the storage available at the location mentioned above, it is our conclusion that storm water management issues have been satisfied.

We recommend that this submission, and the project itself, be approved.

Yours Truly,

MEO & ASSOCIATES INC.

A handwritten signature in black ink, appearing to read 'R. Meo', written over a horizontal line.

PER: Raffaele Meo, P.Eng., P.E.

Enclosures:

- 4722 – Site Plan
- 4722 – Site Details
- Table A
- Table B

PROJECT NAME: FOX RD. STORAGE FACILITY (LUMED MANAGEMENT), AMHERSTBURG
 PROJECT NO.: 4722 THIRD CONCESSION ROAD, AMHERSTBURG, ONTARIO
 BY: RM
 DATE: April 4, 2018
 FILENAME: 4722 Stormwater Detention Calcs

TABLE 'A'

**BASED ON AFFECTED SITE AREA A IN NORTH-WEST CORNER = 0.80 ACRES) +
 SITE B = 1.32 ACRES FARMLAND TO THE EAST**

WINDSOR 1:5 YEAR ON-SITE STORM WATER DETENTION CALCULATIONS (1:2 AES storm equiv.)

EXISTING (PRE-DEVELOPED) SITE CONDITIONS:

Site Area =	8579.5 m ² =	0.858 Ha =	2.120 Ac	100.0%
Building =	0.0 m ² =	0.000 Ha =	0.000 Ac	0.0%
grass =	8579.5 m ² =	0.858 Ha =	2.120 Ac	100.0%
gravel =	0.0 m ² =	0.000 Ha =	0.000 Ac	0.0%
asphalt/concrete =	0.0 m ² =	0.000 Ha =	0.000 Ac	0.0%

PROPOSED (DEVELOPED) SITE CONDITIONS:

Site Area =	8579.5 m ² =	0.858 Ha =	2.120 Ac	100.0%
Building =	743.2 m ² =	0.074 Ha =	0.184 Ac	8.7%
Landscaping =	5925.3 m ² =	0.593 Ha =	1.464 Ac	69.1%
Gravel =	68.0 m ² =	0.007 Ha =	0.017 Ac	0.8%
Asphalt / Concrete =	1843.0 m ² =	0.184 Ha =	0.455 Ac	21.5%

C. RUNOFF COEFFICIENTS:

PROPOSED:

Roof =	0.95
Asphalt / Concrete =	0.90
Landscaped Area =	0.20
Gravel Area =	0.55

D. ALLOWABLE DISCHARGE:

Average Runoff Coefficient, C = (0.0% * 0.95 + 100.0% * 0.20 + 0.0% * 0.55 + 0.0% * 0.90) / 100%

C = 0.20

Time of Concentration = 20.0 minutes

Intensity, i = 79 mm/hr

Where Intensity, i = 125*25.4 / (Tc + 20), for CITY OF WINDSOR 1:5 year frequency storm

Since, Qp = 2.78 C i A

= 2.78 * 0.20 * 79 * 0.327

= 0.48 * i

Therefore, Qp = 37.9 L/s

**USE THIS 1:5 YR STORM AS ALLOWABLE
 DISCHARGE FOR 1:100 YR EVENT**

E. DEVELOPED DISCHARGE:

Average Runoff Coefficient, C = (8.7% * 0.95 + 69.1% * 0.20 + 0.8% * 0.55 + 21.5% * 0.90) / 100%

C = 0.42

Time of Concentration = 20.0 minutes

Intensity, i = 79 mm/hr

Where Intensity, i = 125*25.4 / (Tc + 20), for CITY OF WINDSOR 1:5 year frequency storm

Since, Qd = 2.78 C i A

= 2.78 * 0.42 * 79 * 0.327

= 1.00 * i

Therefore, Qd = 79.2 L/s

F. STORM VOLUME CALCULATIONS:

Duration (min)	Intensity* (mm/hr)	Qd = 2.78 C i A Qd = 3.29 i (L/s)	Storm Volume (m ³) V1=Qd t 60/1000	Relief Volume** (m ³) V2=Qp t 60/1000	Storage (m ³) V1 - V2
t	i				
0.0	159	158.3	0.0	0.0	0.0
5.0	127	126.6	38.0	11.4	26.6
10.0	106	105.5	63.3	22.7	40.6
15.0	91	90.5	81.4	34.1	47.3
20.0	79	79.2	95.0	45.4	49.6
25.0	71	70.4	105.5	56.8	48.7
30.0	64	63.3	114.0	68.2	45.8
35.0	58	57.6	120.9	79.5	41.4
40.0	53	52.8	126.6	90.9	35.8
45.0	49	48.7	131.5	102.2	29.3
50.0	45	45.2	135.7	113.6	22.1

* Where Intensity, i = 125*25.4 / (T + 20) for CITY OF WINDSOR 1:5 YEAR FREQUENCY STORM

** Qp = 37.9 L/s

*** Maximum volume to be stored = 49.6 m³ 1,750 Cu. Ft.

Therefore, 49.6 m³ of stormwater storage is required

TABLE 'B'

PROJECT NAME: FOX RD. STORAGE FACILITY (LUMED MANAGEMENT), AMHERSTBURG
 PROJECT NO.: 4722 THIRD CONCESSION ROAD, AMHERSTBURG, ONTARIO
 BY: RM
 DATE: April 4, 2018
 FILENAME: 4722 Stormwater Detention Calcs

**BASED ON AFFECTED SITE AREA A IN NORTH-WEST CORNER = 0.80 ACRES +
 SITE B = 1.32 ACRES FARMLAND TO THE EAST**

1:00 YEAR ON-SITE STORM WATER DETENTION CALCULATIONS

A. EXISTING (PRE-DEVELOPED) SITE CONDITIONS:

Site Area =	8579.5 m ² =	0.858 Ha =	2.120 Ac	100.0%
building =	0.0 m ² =	0.000 Ha =	0.000 Ac	0.0%
grass =	8579.5 m ² =	0.858 Ha =	2.120 Ac	100.0%
gravel =	0.0 m ² =	0.000 Ha =	0.000 Ac	0.0%
asphalt/concrete =	0.0 m ² =	0.000 Ha =	0.000 Ac	0.0%

B. PROPOSED (DEVELOPED) SITE CONDITIONS:

Site Area =	8579.5 m ² =	0.858 Ha =	2.120 Ac	100.0%
Building =	743.2 m ² =	0.074 Ha =	0.184 Ac	8.7%
Landscaping =	5925.3 m ² =	0.593 Ha =	1.464 Ac	69.1%
Gravel =	68.0 m ² =	0.007 Ha =	0.017 Ac	0.8%
Asphalt / Concrete =	1843.0 m ² =	0.184 Ha =	0.455 Ac	21.5%

C. RUNOFF COEFFICIENTS:

PROPOSED:

Roof =	0.95
Asphalt / Concrete =	0.90
Landscaped Area =	0.20
Gravel Area =	0.55

D. ALLOWABLE DISCHARGE:

Average Runoff Coefficient, C = (0.0% * 0.95 + 100.0% * 0.20 + 0.0% * 0.55 + 0.0% * 0.90) / 100%
 C = 0.20

Time of Concentration = 20.0 minutes
 Intensity, i = 114 mm/hr

Where Intensity, i = 52.2xT(hr)^{-0.711}, for 1:100 year frequency storm

Since, Qp = 2.78 C i A
 = 2.78 * 0.55 * 114 * 0.327
 = 0.48 * i

Therefore, Qp = 54.4 L/s for 1:100 yr storm

HOWEVER, USE Qp = 37.9 L/s for 1:5 yr storm PRE-DEVELOPMENT

E. DEVELOPED DISCHARGE:

Average Runoff Coefficient, C = (8.7% * 0.95 + 69.1% * 0.20 + 0.8% * 0.55 + 21.5% * 0.90) / 100%
 = 0.42

Time of Concentration = 20.0 minutes
 Intensity, i = 114 mm/hr

Where Intensity, i = 52.2xT(hr)^{-0.711}, for 1:100 year frequency storm

Since, Qd = 2.78 C i A
 = 2.78 * 0.42 * 114 * 0.327
 = 1.00 * i

Therefore, Qd = 113.7 L/s FOR 1:100 YR STORM

F. STORM VOLUME CALCULATIONS:

Duration (min) t	Intensity* (mm/hr) i	Qd = 2.78 C i A Qd = 3.29 i (L/s)	Storm Volume (m ³) V1=Qd t 60/1000	Relief Volume** (m ³) V2=Qp t 60/1000	Storage (m ³) V1 - V2
0.0		0.0	0.0	0.0	0.0
5.0	305	304.6	91.4	11.4	80.0
10.0	187	186.1	111.7	22.7	88.9
15.0	140	139.5	125.5	34.1	91.5
20.0	114	113.7	136.4	45.4	91.0
25.0	97	97.0	145.5	56.8	88.7
30.0	85	85.2	153.4	68.2	85.2
35.0	77	76.4	160.4	79.5	80.9
40.0	70	69.5	166.7	90.9	75.8
45.0	64	63.9	172.5	102.2	70.2
50.0	59	59.3	177.8	113.6	64.2

Where Intensity, i = 52.2xT(hr)^{-0.711}, for 1:100 year frequency storm

** Qp = 37.9 L/s FOR 1:5 YR STORM PRE-DEVELOPMENT

*** Maximum volume to be stored = 91.5 m³ 3,230 Cu. Ft.

Therefore, 91.5 m³ of stormwater storage is required