THE CORPORATION OF THE TOWN OF AMHERSTBURG

BY-LAW NO. 2003-20

A by-law to authorize the signing of a Development Agreement.

WHEREAS1461689 Ontario Ltd. has proposed the development of property at Sandwich and Fort Streets for use as a supermarket;

AND WHEREAS the Council of the Town of Amherstburg passed By-law 2003-05 on January 27, 2003 entering into a Development Agreement with 1461689 Ontario Ltd.:

AND WHEREAS the Council of the Town of Amherstburg deems it necessary to repeal By-law 2003-05 and authorize the execution of a Development Agreement in the form annexed hereto;

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

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE **TOWN OF AMHERSTBURG HEREBY ENACTS AS FOLLOWS:**

- 1. That the Mayor and Clerk be and they are hereby authorized to execute the original and copies of a Development Agreement in the form annexed hereto and affix the Corporate Seal thereto.
- 2. By-law 2003-05 is hereby repealed.
- 3. This By-law shall come into force and effect on the date of final passage hereof.

Read a first, second and third time and finally passed this 10th day of March, 2003.

Tony D. Douted Mayor Quilaillani

Certified to be a true copy of By-law No. 2003-20 passed by the Amherstburg Municipal Council on March 10, 2003.

• Of Ontario	Do Process S Form 4 — Land Registration Reform Act	Software Ltd. • (416) 322-6111
	(1) Registry Land Titles (2) Page	ge 1 of 2/ pages
	(3) Property Identifier(s) Block Property	Additional: See
X	$\begin{array}{c c} 70J\overline{5}\overline{5} & 0\end{array}$ (4) Nature of Document	Schedule Schedule
	Application to Register Notice of Develop	nent Agreement
CEIP'	(5) Consideration	
EUSE ONLY COF RECEIPT TISSE WINDSOR $CO \frac{2}{C4}$	(6) Description	Dollars \$
	Part Lots 10, 11, 12, 13, 14, and 15 Plan 6 Part of Lot 2, Plan 240 designted as Part 1	AS = 1 (133) (13
	Town of Amherstburg, County of Essex	UN 1211 14470
ERTIFICATE RECEP ESSEX (12)		
New Property Contifiers		
Additional		edule for:
See Schedule		cription Parties Other X
(8) This Document provides as follows: The Corporation of the Town of Amherstburg	has an unregistered estate, right, interest or equity in	a the above land of which 1461689
Ontario Ltd. is the registered owner and hereb Corporation of the Town of Amherstbur	apply to have Development Agreement dated March and 1461689 Ontario Ltd., entered on the Parc	10th, 2003, made between the The cel Register.
		Continued on Schedule
(9) This Document relates to instrument number(s)		
(10) Party(ies) (Set out Status or Interest)	Signatura(c)	Date of Signature
Name(s) THE CORPORATION OF THE TOWN	Signature(s)	Date of Signature Y M D 2003 04 07
AMHERSTBURG (Applicant) by its soli		2003 04 07
(11) Address	500-251 Goyeau St., Windsor, Ontario N9A 6V	/)
for Service (12) Party(ies) (Set out Status or Interest)		
Name(s)	Signature(s)	Date of Signature
1461689 ONTARIO EFF . (owner)		
		•
(13) Addross		
(13) Address for Service		
	15) Document Prepared by:	Fees and Tax
vace land	$ _{}$	- / /
U ,	PRINCE,LLP	
	VINDSOR,ONTARIO	
	Document prepared using Form"L"Ware LandForms	Total 7000

nt prepared using Form'L'N

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DEVELOPMENT AGREEMENT

Registered	, 20	03	
THIS AGREEMENT made	de in quintuplicate this $\underline{10}$ day of		
march,	2003.		
BETWEEN:	1461689 ONTARIO 199 イルフィアレン		
	hereinafter called the "OWNER" OF THE FIRST PART		
	- and -		
	THE CORPORATION OF THE AMHERSTBURG	TOWN	OF
	hereinafter called the "CORPORATION"		

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

AND WHEREAS the Owner warrants it is the registered owner of the said lands;

OF THE SECOND PART

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 as a Site Plan Control area;

AND WHEREAS the Owner intends to develop or redevelop the said lands for a supermarket, 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 or redevelopment of the said lands requires the Owner to enter into a Development Agreement:

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of other goods and valuable consideration and 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 of which is hereby acknowledged), the Owner hereby covenants and agrees with the Corporation as follows:

1. The following Schedules, which are identified by the signatures of the parties to this Agreement, and which are attached hereto, are hereby made a part of this Agreement as fully and to all intents and purposes as though recited in full herein:

SCHEDULE "A"	-	Legal Description of the said lands
SCHEDULE "B"	-	Site Plan
SCHEDULE "C"	-	Landscaping Plan
SCHEDULE "D"	-	Paving and Grading Plan
SCHEDULE "E"	-	Site Servicing Plan
SCHEDULE "F"	-	Stormwater Detention Calculations

- 2. Schedule "A" hereto describes the lands affected by this Agreement.
- 3. Schedule "B" hereto shows:
 - (a) The location of all buildings and structures to be erected:
 - (b) The location and provision of off-street vehicular loading and parking facilities and access driveways including driveways for emergency vehicles;
 - (c) Walkways and all other means of pedestrian access;
 - (d) The location and provision for the collection and storage of garbage and other waste material.
- 4. Schedule "C" hereto shows:
 - (a) Landscaping plan and plant list.
- 5. Schedule "D" hereto shows:
 - (a) Paving and grading plan.
- 6. Schedule "E" hereto shows:
 - (a) Site servicing drawings.
- 7. Schedule "F" hereto shows:
 - (a) Stormwater detention calculations.
- 8. The Owner shall be responsible for consulting with and obtaining any necessary approvals from Essex Power Lines Corporation regarding any matters that relate to services provided by Essex Power Lines. The Owner shall also be responsible for conveying any required easements for the existing hydro overhead lines or new easements around the property if hydro lines need to be relocated.
- 9. The Owner shall be responsible for consulting with and obtaining any necessary approval from the Ministry of the Environment or the Essex Region Conservation Authority.
- 10. All of the exterior walls of the building shall be faced with decorative block, brick, stone, stucco, structural glass, tile, baked enamel on steel or similar finished material.
- 11. All parking or loading areas and lanes and driveways shall be paved with asphalt or a concrete portland cement or other material capable of permitting accessibility under all climatic conditions, as shown on Schedule "B" and together with crushed stone, slag, gravel, crushed brick, tile, cinders or like material, having a combined depth of at least 15.2 cm. and with provisions for drainage facilities. The area shown on Schedule "B" located on the north side of the structure which is shown with a granular "A" finish shall be maintained and provided with dust control.
- 12. The Owner shall maintain a minimum of parking spaces, as designated on Schedule "B".

- 13. All walkways on the said lands, where so designated on Schedule "B", shall be constructed of either concrete or interlocking paving stone by the Owner to the satisfaction of the Corporation.
- 14. 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.
- 15. Snow removal from the parking or loading areas and lanes, driveways and walkways shall be the responsibility of the Owner.
- 16. The Owner shall install and maintain a system for the disposal of storm and surface water as indicated on Schedule "E" and Schedule "F" so that no such water will flow along the surface from the said lands onto any adjoining lands. All storm and surface water disposal systems shall be to the satisfaction of the Corporation's Engineer, and separated from the sanitary sewer.
- 17. 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.
- 18. Any and all lighting shall be installed and maintained 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.
- 19. The Owner shall landscape and maintain in plants and ground cover acceptable to the Corporation those lands so indicated on Schedule "C". 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.
- 20. A solid wood fence, stained or treated and maintained, with a minimum of 1.83 metres high, shall be constructed and maintained along the limits of the property if shown on Schedule "B".
- 21. All driveways for emergency vehicles shall:
 - 1. Be connected with a public thorough fare;
 - 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.
- 22. 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.

- 23. 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 premises of the Owner to inspect:
 - 1. The progress of development;
 - 2. The state of maintenance as provided for in this Agreement.
- 24. In the event of any servant, officer or agent of the Corporation determining upon inspection the development is not proceeding in strict accord with the plans and specifications filed, such servant, officer or agent shall forthwith place a notice requiring all work to be stopped upon the premises and 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.
- 25. 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.
- 26. In the event that an Owner should disagree with the opinion of the servant, officer or agent of the Corporation as to the state of maintenance, such Owner shall appear before Council of the Corporation, which after hearing the Owner, shall express its opinion as to whether the maintenance is satisfactory by resolution, which shall constitute a final determination of the matter.
- 27. In the event that an owner should fail to obey a stop work order issued under Section 24 hereof, the Owner recognizes the right of the Corporation to apply to the Courts for a restraining order.
- 28. In the event that an Owner should fail to correct a deviation or deficiency after notice pursuant to Section 25 or after notice of an opinion, which Council of the Corporation determines is correct under Section 26, 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.
- 29. 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.

- 30. 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.
- 31. In the event that no construction on the said lands has commenced within one (1) year from the date of registration of this Agreement, the Corporation may, at its option, on one month's notice to the Owner, declare this Agreement to be subject to re-negotiation, whereupon the Owner agrees that it will not undertake any construction on the said lands until this Agreement has been re-negotiated.
- 32. 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 469 of The Municipal Act shall apply.
- 33. A financial guarantee (Performance Bond, Letter of Credit or other security acceptable to the Corporation) for 100% of the cost of on-site improvements (other than buildings or structures) is required as part of the site plan agreement. The said amount to be approved by the Corporation's Manager of Public Services. A one (1) year maintenance security is also a requirement of this agreement with the option of reducing the security to 15% of the cost of the site improvements during the one (1) year maintenance period after the Town has inspected and initially approved same.
- 34. 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 land.

IN WITNESS WHEREOF the Owner executed this Agreement.

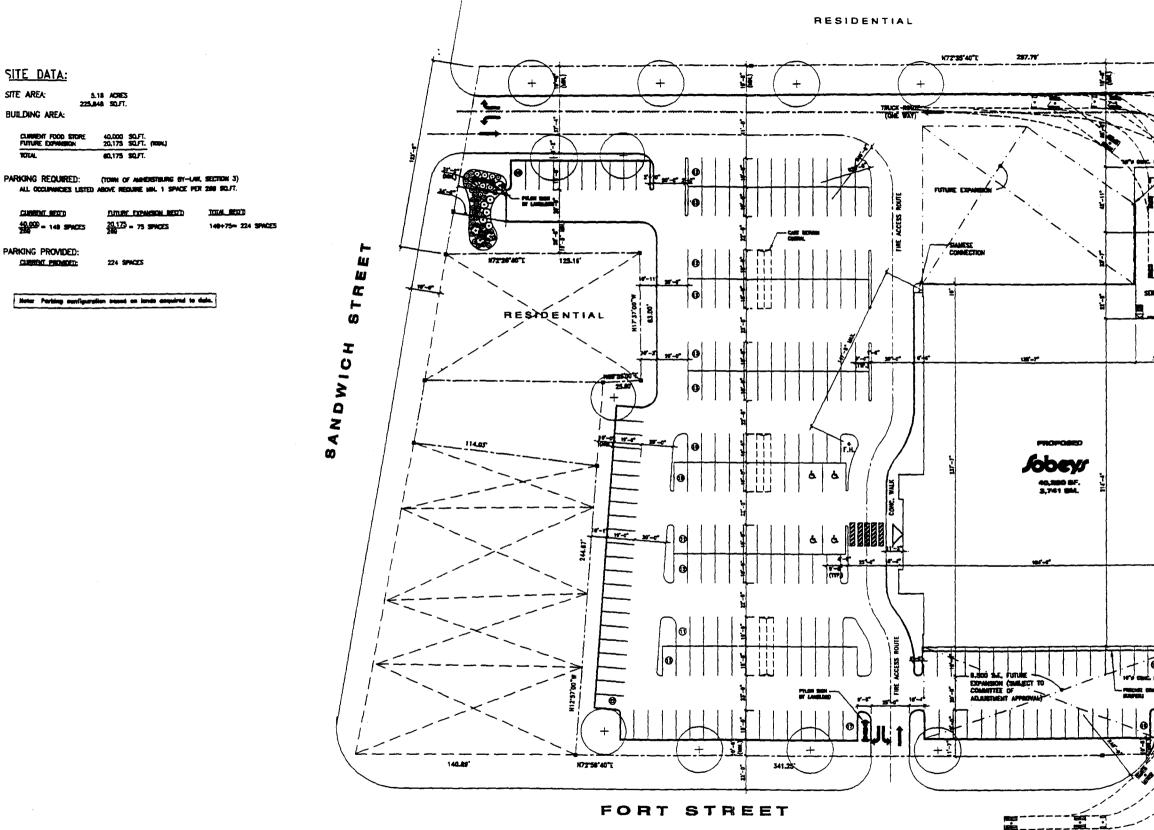
1461689 ONTARIO ETD. LIM ITED OWNER: Joseph Mikhail - President Lou Mikhail - Secretary TO GIND THE CONFORATION THE CORPORATION OF THE TOWN OF AMAERSTBURG Mayor Major

Authorized and approved by By-law No. 2003-20 enacted the 10th day of March, 2003. 6

SCHEDULE "A"

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

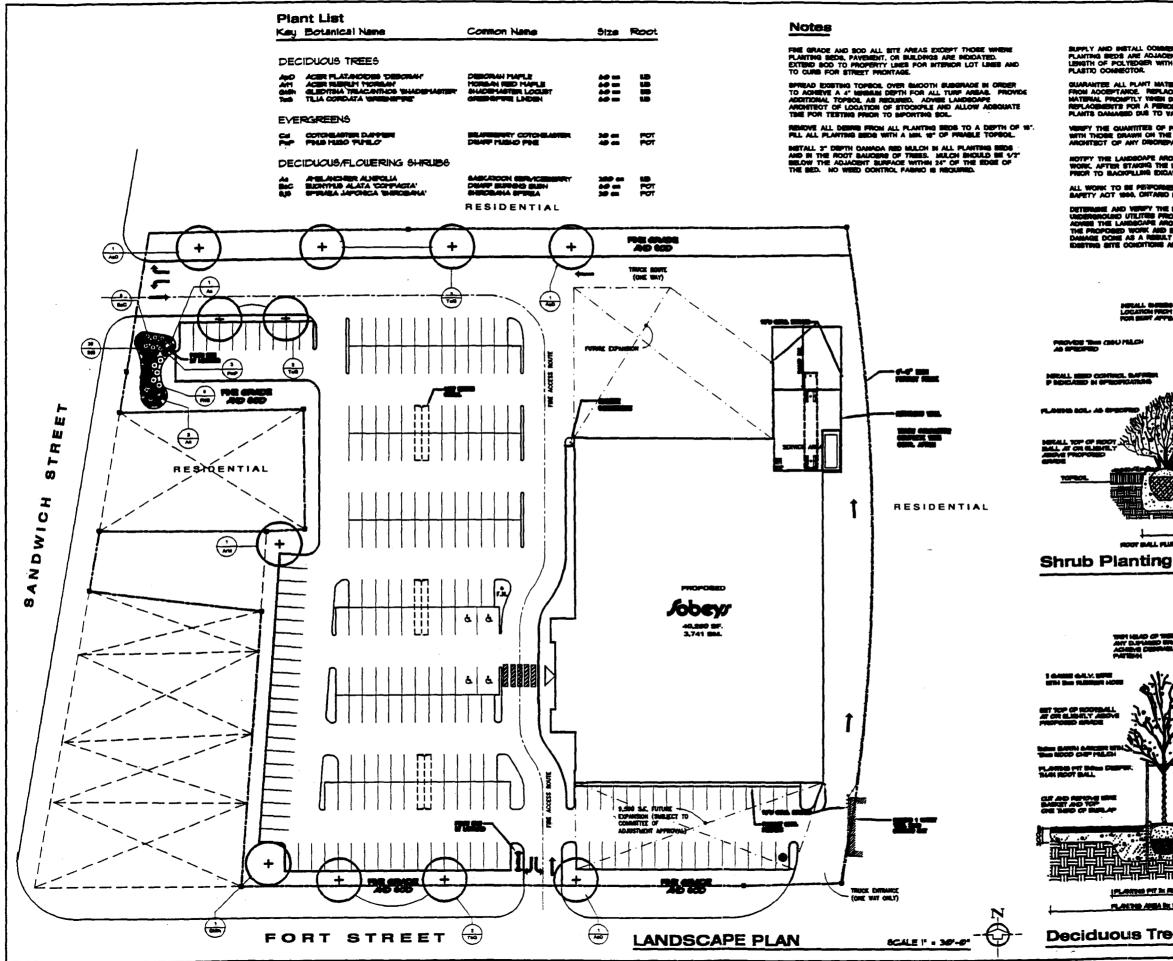
Part Lots 10, 11, 12, 13, 14 and 15, Registered Plan 6 Part Lot 12, Registered Plan 6 Part of Lot 2, Plan 240 designated as Part 1 on 12R-14490 Part Lot 14, Registered Plan 6 Part Lot 15, Registered Plan 6



TOTAL

SITE PLAN SITE PLAN AS PER THE DESIGN OF LAKESHORE OROUP.

SCHEDULE "B" TO BY-LAW 2003-20 1461689 ONTARIO LTD. 8 Joseph Mikhail - President Lou Mikhail - Secretary The second secon Mayor - Tony DiBartolomeo balall Clerk - David Mailloux 5'-0" HIGH MINACY FEDICE H The states and all is still by manufacture STANDAR WALL H H - TRASH COMPACTOR COMPLETE WITH CONC. APRON SEIMCE AND H RESIDENTIAL 99° - 7 MAR. 10/03 SITE PLAN APPR ij. DEC.23/02 SITE PLAN APPE NOV.07/02 SITE PLAN APPR NOV.05/02 SITE PLAN APPR OCT.25/02 SITE PLAN APPR Date: I takend For: A A DETAL NUMBER B C C DETAIL SHEET Annale of some states and some 5 ADRISH 1552.65", ARCH 453.53" Project AMHERSTBURG SHOPPING PLAZA 6 AMPLERSTELING, ONATHO Drawing Title: SITE PLAN TRUCK ENTRANCE (OHE WAY ONLY) 171-17-10 46-50 Date: MARCH, 2003 Secie: AS SHOWN Drown By: /H.B. Checked By: Project No.: 01-1853 Drawing No.: SPL-1



SUPPLY AND INSTALL COMMERCIAL GRADE POLY EDGING WHERE PLANTING BEDS ARE ADJACENT TO TURE, SECURE EACH 20" LENGTH OF POLYEDGER WITH & STEEL PEGS AND JON WITH

GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. REPLACE ALL DEAD OR WEAK PLANT MATERIAL PROMPTLY WHEN SPECTED BY OWNER. GUARANTEE REPLACEMENTS FOR A PERIOD OF ONE YEAR PROM PLANTS DAMAGED DUE TO VANDALIEM ARE NOT GUARANTEED.

VERFY THE QUANTITIES OF PLANTS BOICATED IN THE PLANT KEYS WITH THOSE DRAWN ON THE PLANT BOTTEY THE LANDSCAPE ANOMISET OF ANY DISCREPANCIES FROM TO TENDERING.

NOTEY THE LANDSCAPE ANDINEDT PHOR TO COMMINDE WORK, AFTER STACKS THE LOCATIONS OF PROPOSED WORK, AND PHOR TO BACKPLING EXCAVATIONS.

ALL WORK TO BE PETFORMED IN COPLIANCE WITH THE HEALTH AND RAFETY ACT 1990, CHITAND Rug, 215/91, 714/82 LATEST REVENDENS.

DETENSING AND VERY THE LOGATION AND EDETANDE OF ALL UNDERSINGHED UTLITES FROM TO COMMENCING CONSTRUCTION. ADVERT THE LANDSAME AND TOTO OF ANY COMPLOT BETWEEN THE PROPOSED WORK AND DETTING UTLITES. REPAR ANY DAMAGE COME AS A REBAR OF COMMENTATION. VERY THAT ALL ENSTING SITE CONDITIONS AND AS ENSURE ON THE FLAM.

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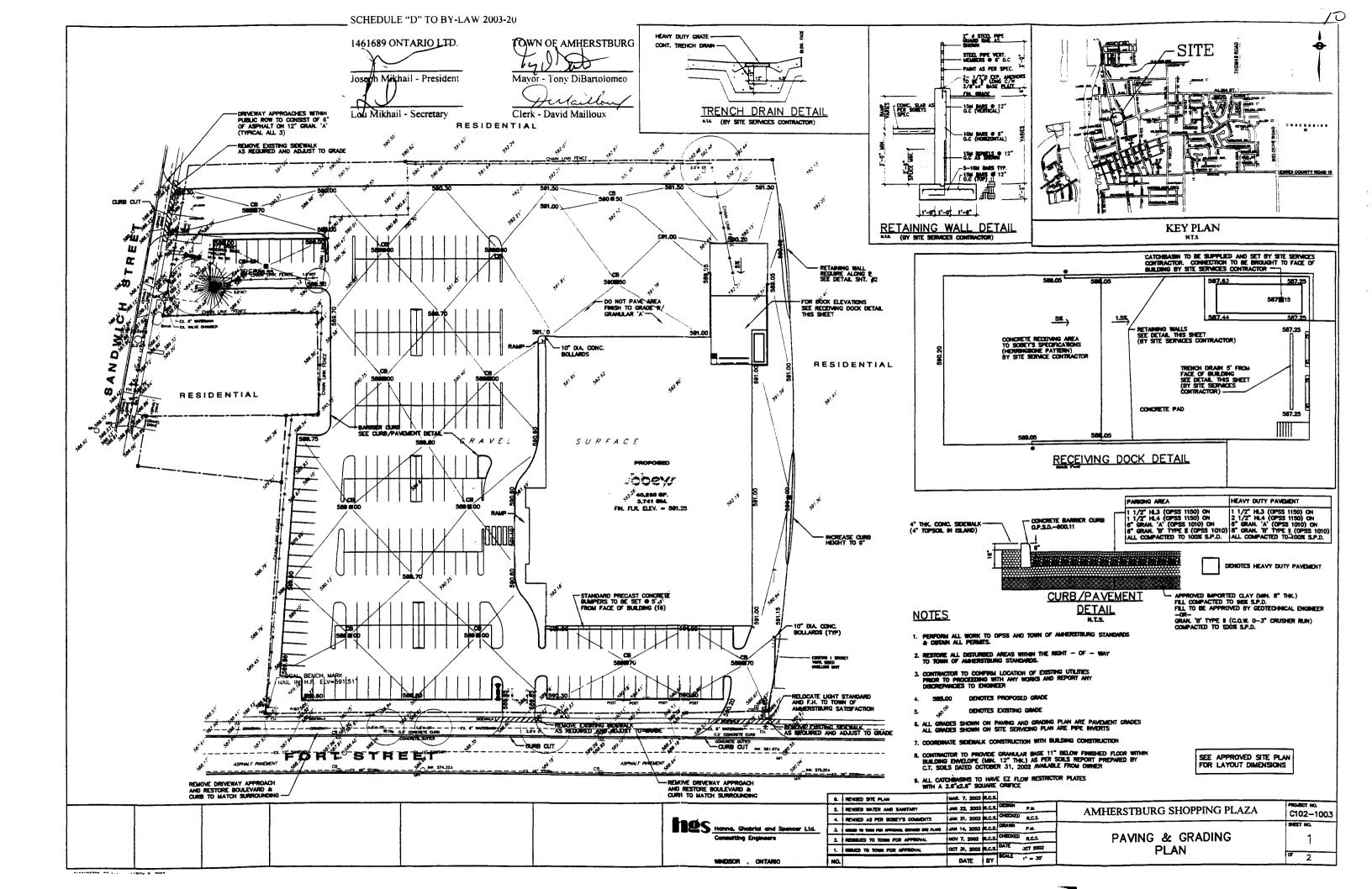
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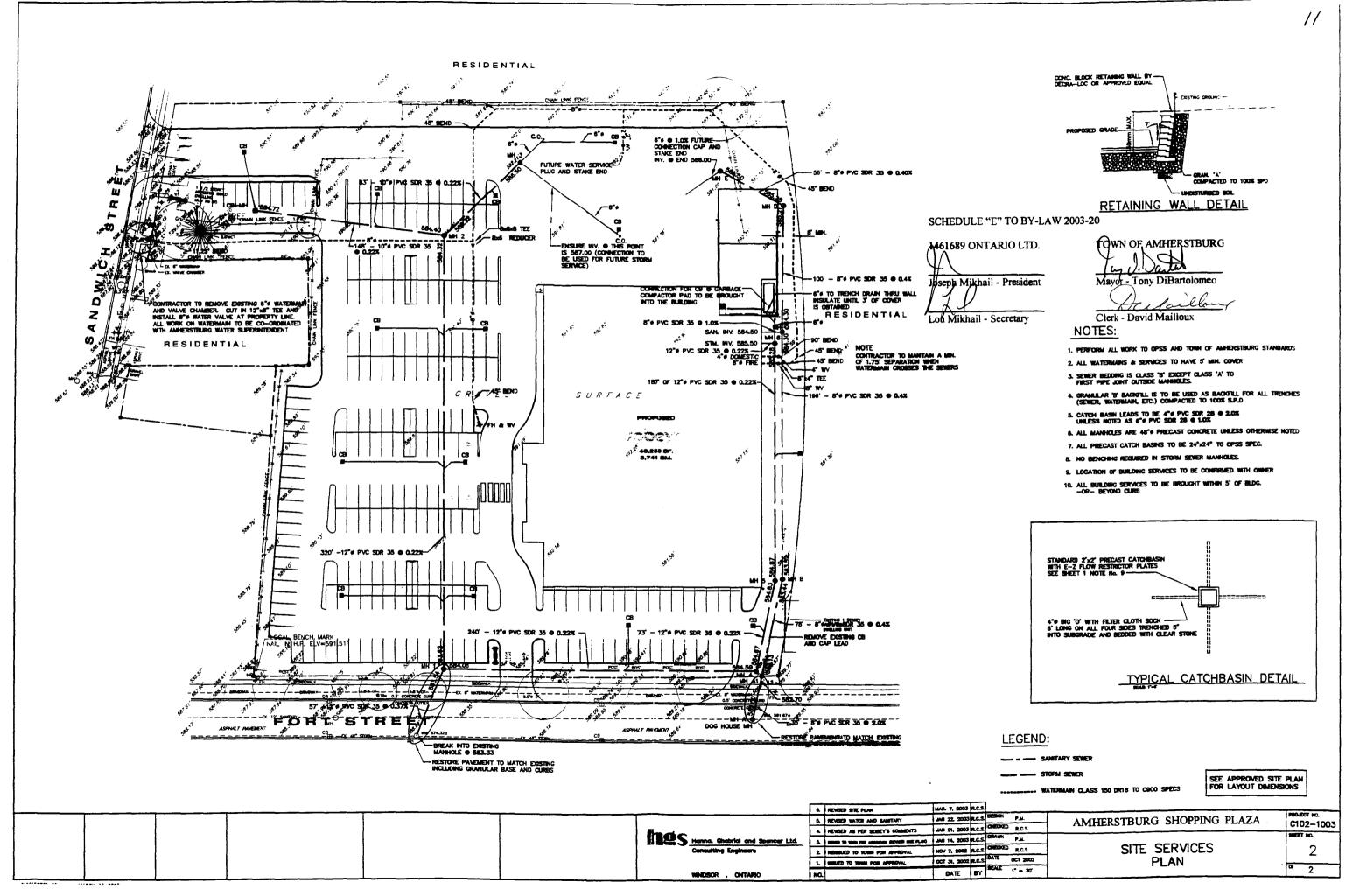
165

108 BCL

an i -BALL. ----------8487348 855, 1449780 10 77624847 6271,18784 IFLANNS PT & ROOT BALL DUE PLANNA ANDA BE REPT BALL DIA. Deciduous Tree Planting ...

 \mathcal{O} Bezaire & Associates And the second second SCHEDULE "C" TO BY-LAW 2003-20 146/1689 ONTARIO LTD. Joseph Mikhail - President Lou Mikhail - Secretary fown of amherstburg Santa pì Mayor - Tony DiBartolomeo Dulaille Clerk - David Mailloux -----STATISTICS. 1. C & x 3 1 PROJECT AMHERSTBURG SHOPPING PLAZA (SOBEYS) AT STATEMENTS CHEAR ALITT BRIDE LANDSCAPE PLAN AND DETAILS SCALE. As Noted DININ SY. CHECKED BT FLB ATTROVED BT. 10.10.02 SAMPLE NO. **LA-1** MET. FILE NO. SHI





An herstburg Shapping Plaza
File: CLOZ - 1003
File: CLOZ - 1003
File: CLOZ - 1003
Area = 4.58 acres
Existing Conditions:
$$C=0.2$$

 $t_c=20 \text{ min} =)$ $i=2.373 \text{ m/hr}.$
 $Q_{Ex} = 4.58 (0.2)(2.373) = 2.17 \text{ C.f.s.}$
Proposed Conditions:
area Uda. = 0.92 acres =) $C=0.95$
area Uda. = 0.92 acres =) $C=0.95$
area bare. = 3.02 acres =) $C=0.2$
ACTOTAL = 0.92(0.95) + 0.9(3.02) + 0.2(0.64) = 3.72
QLEW = 3.72(2.373) = 8.83 c.f.s.
QLEW >> Q_{Ex} Storm Detention Required
 \therefore Storage Required = 8,462 cubic feet = 5 Rg/dz

SCHEDULE "F" TO BY-LAW 2003-20

1461689 ONTARIO LTD. Ĺ ()Joseph Mikhafl - President 1 Lou Mikhail - Secretary

FOWN OF AMHERSTBURG Mayor - Tony DiBartolomeo

STORM WATER DETENTION CALCULATIONS (2 YEAR)

PROJECT:	Amherstburg Shopping Plaza
LOCATION:	Amherstburg
DATE:	January 10, 2003
FILE:	C102-1003

EXISTING CONDITIONS

AREA (acres)	4.58
COEFFICIENT	0.2
INTENSITY	2.373

Q_{EX} =ACl =4.58(0.2)(2.373)= 2.17 cfs

PROPOSED CONDITIONS

AREA (acres)	4.58
COEFFICIENT	0.81
INTENSITY	2.373

Q_{NEW} =AC1 =4.58(0.81)(2.373) = 8.83 cfs

DESIGN CRITERIA

STORM FREQUENCY:	1:2 YEARS
TOTAL AREA:	4.58 acres
RELEASE Q:	2.17 cfs
TIME (Tc):	20 min.
PEAK Q:	8.83 cfs
CA:	3.72

TIME (Tc)	INTENSITY	PEAK Q	VOLUME	RELEASE VOLUME	STORAGE
(min)	(in/hr)	(cfs)	(cf)	(cf)	(cf)
5	5.701	5. 302	1590.55	651	940
10	3.678	6. 84 1	4104.84	1302	2 80 3
15	2.846	7.942	7147.49	1953	5 194
20	2.373	8. 828	10593.63	2604	7990
25	2.061	7.666	11499.75	3255	8245
30	1.837	6.832	12297.34	3906	8391
35	1.666	6.197	13014.70	4557	8458
40	1.531	5. 696	13669.84	5208	8462
45	1.421	5. 287	14275.04	5859	8416
50	1.330	4.946	14839.08	6510	8329
55	1.252	4.657	15368.49	7161	8207
60	1.185	4.408	15868.28	7812	8056

THEREFORE, MAXIMUM STORAGE REQUIRED IS 8,462 CUBIC FEET

Storage Available (Z Year)
Building Storage (Z, 175 Cubic feet
(see attached cale's)
restrict roof drains to 0.437 c.f.s.
aug. water depth = Z175 = 0.05'
$$\approx$$
 0.65"
Ground Storage (6" of water c CB's)
6540 cubic feet

:. Storage Available =
$$6540 + 2175 = 8715 \text{H}^2$$

= 5Avail_2

Restrictor Plate Orifice Calculation

15

13 CB'_{5} $Z.17/13 = 0.167 \ c.f.s.$ $0.167 = 0.6 \ A \ \int Z(32.17)(0.5)^{7}$ $A = 0.049 \ ft^{2}$ $A = x^{2}$ $\chi = 0.721' \ \approx 2.6''$

i. E-Z Flow Restrictor Plates to be Installed @ all CB's w/2.6"x2.6" Square orifice.

Amherstburg Shapping Plaza ID January 2003
File: ChOZ-1003
Storm Detertion Calculations (11/00 Year)
area = 4.58 acres
Existing Conditions: C=0.2

$$t_e = 20 \min =$$
) $i = 5.568 in/hr.$
 $Q_{EX} = 0.2(4.58)(5.568) = 5.10 \text{ c.f.s.}$
Proposed Conditions:
 $AC_{TOTAL} = 3.72$
 $Q_{NEW} = 3.72(5.568) = 20.71 \text{ c.f.s.}$
 $Q_{NEW} >) Q_{EX}$ Storm Detertion Required.

STORM WATER DETENTION CALCULATIONS (100 YEAR)

PROJECT:	Amherstburg Shopping Plaza
LOCATION:	Amherstburg
DATE:	January 10, 2003
FILE:	C102-1003

EXISTING CONDITIONS

•

AREA (acres)	4.58
COEFFICIENT	0.2
INTENSITY	5.568

 $Q_{EX} = ACI = 4.58(0.2)(5.568) = 5.10 \text{ cfs}$

PROPOSED CONDITIONS

AREA (acres)	4.58
COEFFICIENT	0.81
INTENSITY	5. 568

Q_{NEW} =ACI =4.58(0.81)(5.568) = 20.71 cfs

DESIGN CRITERIA

STORM FREQUENCY:	1:100 YEARS
TOTAL AREA:	4.58 acres
RELEASE Q:	2.17 cfs
TIME (Tc):	20 min.
PEAK Q:	20.71 cfs
CA:	3.72

			1	RELEASE	
TIME (Tc)	INTENSITY	PEAK Q	VOLUME	VOLUME	STORAGE
<u>(min)</u>	(i n/hr)	(cfs)	(cf)	(cf)	(cf)
5	10.026	9.324	2797.34	651	2146
10	7.873	14.643	8786.02	1302	7484
15	6.511	18.166	16349.24	1953	14396
20	5. 568	20.714	24857.11	2604	22253
25	4.875	18.135	27202.90	3255	2 394 8
30	4.343	16.155	29078.58	3 90 6	25173
35	3.920	14.584	30625.50	4557	26068
40	3.577	13.305	31932.14	5208	26724
45	3.291	12.243	33056.98	5 859	27198
50	3.050	11.347	34040.36	6510	27530
55	2.844	10.579	34911.11	7161	27750
6 0	2.665	9. 914	35690.42	7812	27878
65	2.509	9.332	36394.29	8463	27931
70	2.370	8.818	37035.02	9114	27921

THEREFORE, MAXIMUM STORAGE REQUIRED IS 27,931 CUBIC FEET

.

Storage Acillable (100 Year)
Building Storage (6873 cubic feet
(see attached calc's)
restrict roof drains to
$$0.437 \text{ c.f.s.}$$

aug. water depth = $6873 = 0.17' \approx 2.06''$
Ground Storage (12" of water @ CR's)
6540 + 39225 (0.5) = 26153 cubic feet

18

: Storage Auxillable = Studil = 33,026 ft3

i. SAvail 100 >> Steget 100

STORM WATER DETENTION CALCULATIONS (Building 2 YEAR)

PROJECT:	Amherstburg Shopping Plaza
LOCATION:	Amherstburg
DATE:	October 22, 2002
FILE:	C102-1003

EXISTING CONDITIONS

AREA (acres)	0.92
COEFFICIENT	0.2
INTENSITY	2.373

 $Q_{EX} = ACI = 0.92(0.2)(2.373) = 0.437 \text{ cfs}$

PROPOSED CONDITIONS

AREA (acres)	0.92
COEFFICIENT	0.95
INTENSITY	2.373

Q_{NEW} =ACI =0.92(0.95)(2.373) = 2.07 cfs

DESIGN CRITERIA

STORM FREQUENCY:	1:2 YEARS
TOTAL AREA:	0.92 acres
RELEASE Q:	0.437 cfs
TIME (Tc):	20 min.
PEAK Q:	2.07 cfs
CA:	0.874

				RELEASE	
TIME (Tc)	INTENSITY	PEAK Q	VOLUME	VOLUME	STORAGE
(min)	(i n/hr)	(cfs)	(cf)	(cf)	(cf)
5	5.701	1.246	373.69	131.1	243
10	3.678	1.607	964.42	2 62. 2	702
15	2.846	1.866	1679.28	3 93 .3	1286
20	2.373	2.074	2488.93	5 24 .4	1965
25	2.061	1.801	2701.82	6 55. 5	2 046
30	1.837	1.605	2889.21	78 6. 6	2103
35	1.666	1.456	3 057 .75	9 17 .7	2140
40	1.531	1.338	3211.68	1048.8	2163
45	1.421	1.242	3353.87	1179.9	2174
50	1.330	1.162	3486.39	1 311	2175
5 5	1.252	1.094	3610.77	1442.1	2169
6 0	1. 185	1.036	3 728 .19	1573.2	2155

THEREFORE, MAXIMUM STORAGE REQUIRED IS 2,175 CUBIC FEET

STORM WATER DETENTION CALCULATIONS (Building 100 YEAR)

PROJECT:	Amherstburg Shopping Plaza
LOCATION:	Amherstburg
DATE:	October 22, 2002
FILE:	C102-1003

EXISTING CONDITIONS

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AREA (acres)	0. 92
COEFFICIENT	0.2
INTENSITY	5 .56 8

Q_{EX} =ACI =0.92(0.2)(5.568) = 1.02 cfs

PROPOSED CONDITIONS

AREA (acres)	0.92
COEFFICIENT	0.95
INTENSITY	5 .568

Q_{NEW} =ACI =0.92(0.95)(5.568) = 4.87 cfs

DESIGN CRITERIA

STORM FREQUENCY:	1:100 YEARS
TOTAL AREA:	0.92 acres
RELEASE Q:	0.437 cfs
TIME (Tc):	20 min.
PEAK Q:	4.87 cfs
CA:	0.874

STORM WATER DETENTION CALCULATIONS (Building 100 YEAR) -Cont'd.

TIME (Tc)	INTENSITY	PEAK Q	VOLUME	RELEASE VOLUME	STORAGE
(min)	(i n/hr)	(cfs)	(cf)	(cf)	(cf)
	1				
5	10.026	2.191	657.23	131.1	526
10	7.873	3.440	2064.24	2 62 .2	1802
15	6.511	4.268	3841.19	3 93 .3	3448
20	5. 568	4.867	5840.08	524.4	5316
25	4.875	4.261	6391.22	655.5	5736
30	4.343	3.796	6831.90	786.6	6045
35	3.920	3.426	7195.35	917.7	6278
40	3.577	3.126	7502.34	1048.8	6 45 4
45	3.291	2.877	7766.61	1179.9	6587
50	3.050	2.666	7997.65	1311	6 687
5 5	2.844	2.486	8202.23	1442.1	6 76 0
60	2.665	2.329	8385.33	1573.2	6 81 2
65	2.509	2.192	8550.70	1704.3	6 846
70	2.370	2.072	8701.24	1835.4	6 86 6
75	2.247	1.964	8839.20	19 66 .5	6873
80	2.137	1.868	8966.40	2097.6	6 86 9
85	2.038	1.781	9084.30	2 228 .7	6 85 6
90	1.948	1.703	9194.07	2 359 .8	6834

THEREFORE, MAXIMUM STORAGE REQUIRED IS 6,873 CUBIC FEET