THE CORPORATION

OF THE TOWN

OF NIAGARA-ON-THE-LAKE

BY-LAW NO. 5011-17

524 Regent Street & 535 King Street
Roll Nos.
2627-010-003-21900
2627-010-003-15700
2627-010-003-18400

A BY-LAW TO AUTHORIZE A SITE PLAN AGREEMENT BETWEEN THE CORPORATION OF THE TOWN OF NIAGARA-ON-THE-LAKE AND LHPH LIMITED (Conference Centre)

BE IT ENACTED AS A BY-LAW OF THE CORPORATION OF THE TOWN OF NIAGARA-ON-THE-LAKE as follows:

1. THAT the Agreement dated the 13th day of November, 2017 between The Corporation of the Town of Niagara-on-the-Lake and LHPH Limited, be and the same is hereby approved; and,
2. THAT the Lord Mayor and Town Clerk be authorized to affix their hands and the Corporate Seal; and,
3. THAT this by-law shall come into force and take effect immediately upon the passing thereof.

READ A FIRST, SECOND AND THIRD TIME AND PASSED THIS 13TH DAY OF NOVEMBER 2017

LORD MAYOR PAT DARTE

TOWN CLERK PETER TODD

THIS AGREEMENT made this 13th day of November, 2017.

BETWEEN:

THE CORPORATION OF THE TOWN
OF NIAGARA-ON-THE-LAKE
(Hereinafter called the 'Town')

OF THE FIRST PART

-and-

LHPH LIMITED
(Hereinafter called the 'Owner')

OF THE SECOND PART

WHEREAS the Owner represents that it is the registered Owner of the lands located in the Town of Niagara-on-the-Lake, in the Regional Municipality of Niagara, described in Schedule A attached hereto and hereinafter referred to as 'the lands';

AND WHEREAS the Town of Niagara-on-the-Lake is empowered by Section 41 of the Planning Act to require the Owner of the Lands to enter into one or more agreements with the municipality as a condition of site plan approval;

AND WHEREAS the Owner has now applied for a Site Plan Agreement to construct a conference centre, hospitality tents, outdoor event areas, landscaping, loading and parking areas in accordance with Schedules B-1 to B-2 (Site Plan), Schedules C-1 to C-10 (Landscape Plan), and Schedules D-1 to D-6 (Architectural Elevations) attached hereto, which shall comply with the Ontario Building Code, and with all Town building and zoning requirements;

AND WHEREAS the Town of Niagara-on-the-Lake is empowered by Section 129 of the Municipal Act to regulate with respect to noise;

AND WHEREAS the Council of the Town has approved this agreement and authorized its execution by The Corporation of the Town of Niagara-on-the-Lake on the 13th day of November, 2017;

AND WHEREAS the Town endorses the approval of this agreement subject to the terms and conditions as prescribed herein.

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the premises, and the sum of One Dollar ($1.00) of lawful money of Canada now paid by the Owner to the Town, the receipt of which monies is hereby acknowledged; the parties hereto do mutually covenant and agree as follows:

1. DEFINITIONS

1.1. 'Approved Plans' shall mean plans approved and signed by the Lord Mayor and Town Clerk of the Corporation of the Town of Niagara-on-the-Lake and Owner depicting the proposed development. Schedules B-1 to B-2 (Site Plan), Schedules C-1 to C-10 (Landscape Plan), and Schedules D-1 to D-6 (Architectural Elevations) of this agreement are reduced copies of the approved plans on file with the Community and Development Services Department of the Town of Niagara-on-the-Lake. 'Chief Building Official' shall mean the Chief Building Official of the Corporation of the Town of Niagara-on-the-Lake.

1.2. 'Council' shall mean the Council of the Corporation of the Town of Niagara-on-the-Lake.

1.3. 'Director of Community & Development Services' shall mean the Director of Community and Development Services of the Corporation of the Town of Niagara-on-the-Lake.

1.4. 'Director of Corporate Services' shall mean the Director of Corporate Services of the Corporation of the Town of Niagara-on-the-Lake.

1.5. 'Director of Operations' shall mean the Director of Operations of the Corporation of the Town of Niagara-on-the-Lake.

1.6. 'Fire Chief' shall mean the Fire Chief of the Corporation of the Town of Niagara-on-the-Lake.

1.7. 'On-Site Works' means all works to be constructed on the lands described in Schedule A to this agreement.

1.8. 'Preliminary Certificate of Completion of Primary Services' means the certificate issued by the Director of Operations upon satisfactory completion of all Primary Services prior to commencement of the maintenance period.

1.9. 'Preliminary Certificate of Completion of Secondary Services' means the certificate issued by the Director of Operations upon satisfactory completion of all Secondary Services prior to commencement of the maintenance period.

1.10. 'Primary Services' means all works to be constructed outside of the lands described in Schedule A to this agreement, which include road signs, hydro wiring, street lighting, watermains, sewers, both sanitary and storm, and any pumping station, catch basins or other appurtenances, the base road including base asphalt, curbs and gutters, emergency accesses, regulatory signs, community mail box pads, lot pre-grading including sodded swales, retaining walls, fencing and noise attenuation facilities.

1.11. 'Secondary Services' means all works to be constructed outside of the lands described in Schedule A to this agreement, which include all works to be installed, constructed or erected which are not defined as

Primary Services. Included as a Secondary Service is the cleaning of any storm water management pond and/or stormceptor, and top course asphalt. All Storm Ponds shall be cleaned out and silt removed to the original approved design elevations prior to the assumption by the Town.

1.12. 'The lands' shall mean the lands as described in Schedule A attached hereto.

1.13. 'Town' shall mean the Corporation of the Town of Niagara-on-the-Lake.

2. STORMWATER MANAGEMENT

2.1. Prior to the issuance of building permits, the Owner shall submit servicing plans for approval and, at its own expense, construct such works as may be required to collect and contain all stormwater on site and channel such stormwater to an approved outlet in accordance with specifications and plans approved by the Director of Operations and filed in the office of the Director of Operations. In this paragraph, stormwater shall include all surface water on the land including roof run-off, eavestroughs, surface catch basins and water from the foundation perimeter-weeping tile.

2.2. Any alteration or improvements to the existing services will be at the Owner's expense.

2.3. The Owner agrees, at its own expense, to undertake, to repair, forever maintain, and, where necessary, replace any stormwater system located on the lands identified in Schedule A hereto attached.

2.4. Where the stormwater system has not been maintained, the Director of Operations or designate may enter upon the lands after reasonable notice having been given to the Owner, and affect such repairs as are deemed necessary and that all such repairs shall be at the Owner's expense.

3. SANITARY SERVICES

3.1. Except as noted elsewhere in this agreement, any alteration or improvements to the existing service will be at the Owner's expense.

3.2. All underground servicing must be approved and inspected by the Town, or their designate.

3.3. Prior to the placement of the base course asphalt, the Owner shall have all sanitary sewer systems tested either by infiltration or by exfiltration and the method of testing shall be at the sole discretion of the Director of Operations, or his designated.

3.4. The Owner agrees to undertake, at its own expense, to repair, forever maintain, and, where necessary, replace any sanitary sewer system located on the lands identified in Schedule A hereto attached.

3.5. Where the sanitary sewer system has not been maintained the Director of Operations or designate may enter upon the lands after reasonable notice having been given to the Owner, and affect such repairs as are deemed necessary and that all such repairs shall be at the Owner's expense.

4. WATER SERVICES

4.1. The Owner shall install and forever maintain all necessary connections to existing internal water supply services necessary to serve the development, such construction to be in accordance with specifications and plans approved by the Director of Operations and the Fire Chief.

4.2. Except as noted elsewhere in this agreement, any alteration or improvements to the existing services will be at the Owner's expense and subject to approval of the Director of Operations.

4.3. The Owner agrees to install any required fire hydrants in accordance with the Ontario Building Code.

4.4. All fire hydrant protection identified in this agreement shall be in working order and capable of being utilized prior to commencement of above ground construction.

4.5. Where fire hydrants have been installed but are not yet functional or are out of service, the hydrant shall be clearly identified (bagged) as to be not in service.

4.6. Upon completion of the water supply services, the Owner shall have all watermains, swabbed, flushed, pressure tested, chlorinated and bacterial tested, in accordance with Town requirements and approved by the Director of Operations.

4.7. The Owner shall flow test all new fire hydrants and colour code in accordance with the requirements of NFPA 291

4.8. The Owner agrees, at its own expense, to undertake, to repair, forever maintain, and, where necessary, replace any water distribution system located on the lands identified in Schedule A hereto attached.

4.9. Where the water distribution system has not been maintained the Director of Operations or designate may enter upon the lands after reasonable notice having been given to the Owner, and affect such repairs as are deemed necessary and that all such repairs shall be at the Owner's expense.

5. PARKING AND ROADWAY

5.1. The Owner shall, at its own expense, and at all times maintain on the said lands, parking spaces in accordance with that shown on Schedules B-1 to B-2 attached, and to specifications and a design approved by the Director of Community and Development Services,

prior to the issuance of a building permit. The surface treatment of all parking areas shall be as indicated on Schedules B-1 to B-2 attached.

6. ROADS AND ENTRANCEWAYS

6.1. The final design of all access driveways and entranceways shall be subject to the approval of the Director of Operations.

6.2. All roads, entranceways and the emergency access route must conform to the requirements of the Fire Department and meet Ontario Building Code Standards.

6.3. The Owner agrees to maintain all access and interior driveways year round including removing snow to the satisfaction of the Fire Department.

7. LIGHTING/FLOODLIGHTING

7.1. Any changes to the approved site lighting or additional lighting of the building or site will require that the Owner submit a lighting plan for review and approval by the Director of Community and Development Services prior to undertaking any installations.

8. NOISE ATTENUATION

8.1. The Owner agrees that all external air conditioners, ventilation systems, exhaust fans or other similar mechanical equipment are directed away from abutting properties and screened from view or otherwise located on the subject lands so as to attenuate noise impact on neighbouring residential properties to the satisfaction of the Director of Community and Development Services.

9. NOISE MONITORING PROGRAM

9.1. Pursuant to Section 129 of the Municipal Act, whereby the Town is enabled to regulate with respect to noise, the Owner agrees as follows:

9.1.1. That outdoor amplification of sound shall only be permitted in the areas shown as "Hospitality Tent" and "Seasonal Hospitality Tent B" on Schedule B-1 to this agreement (hereinafter referred to as the "Hospitality Tents".

9.1.2. That the sound amplification system for the Hospitality Tents shall be designed and installed in accordance with the following documents attached as Schedules F and G to this agreement:

9.1.2.1. "Pavilions at the Gardens, Amplified Audio Noise Control Analysis and Report" prepared by Novita, dated July 2017 (Schedule F); and

9.1.2.2. "Predictive Noise Impact Study, The Gardens at Pillar and Post, Niagara-on-the-Lake, Ontario" prepared by

Howe Gastmeier Chapnik Limited, dated September 26, 2017 (hereinafter referred to as the "HGC Report") (Schedule G).

9.1.3. That all amplified sound shall cease by the time specified by Town By-law 4588-12 and its successor by-laws.

9.1.4. That the sound amplification system be operated to meet the peak sound level restrictions contained in "Table V" of the HGC Report.

9.1.5. If complaints are received with respect to crowd noise specifically, that crowd sizes shall be limited to those contained in "Table VI" of the HGC Report.

9.1.6. That a noise audit study shall be completed during the first year of operation and submitted to the Town. The noise audit study shall be to the satisfaction of the Town, and shall be completed in accordance with the following document, attached as Schedule H to this agreement:

9.1.6.1. "Peer Review of Noise Study for "The Gardens at Pillar & Post" Event Venue", prepared by Novus Environmental, dated October 3, 2017.

9.1.7. That the Owner shall make any changes recommended by the noise audit study promptly and without delay, and shall ensure that the operation of all future outdoor events on the lands, which shall include all events held in the Hospitality Tents, conform to the recommendations of the noise audit study.

9.1.8. That persistent complaints regarding noise may necessitate additional noise audit studies and additional changes to the operation of outdoor events on the lands, which shall include all events held in the Hospitality Tents.

10. GARBAGE DISPOSAL & STORAGE

10.1. The Owner shall, at all times, provide adequate facilities for the collection and disposal of garbage, sanitary refuse and commercial waste in accordance with Provincial legislation, Regional Policy and Municipal By-law, and in the event of its failing so to do, the Town or its agents shall have the right to enter upon the said lands and, at the expense of the Owner, undertake the collection and disposal and recover the costs thereof by action or in like manner as municipal taxes.

10.2. The storage, collection and disposal of refuse, garbage and waste in the development shall be so conducted as to create no health hazards,

rodent harbourage, insect breeding areas, accident, fire hazards or pollution. This responsibility will rest entirely on the Owner.

10.3. All refuse, garbage and waste must be stored in waterproof, vermin proof, and covered containers.

11. SIGNAGE

11.1. The Owner agrees that any signage located on the subject lands shall be in accordance with the approval of the Director of Community and Development Services and in compliance with the Town's Sign By-law and Ontario Building Code.

12. ENGINEERING, LEGAL AND INSPECTION COSTS

12.1. The Owner agrees to deposit with the Town, prior to any works commencing on site of off-site, and keep in full force and effect until completion of all on-site and off-site construction and services set out herein, an irrevocable letter of credit or security deposit in the amounts specified in Schedule E to this Agreement for Primary Services, Secondary Services, and On-Site Works, which include all servicing, parking treatment, landscaping, fencing, grading and similar elements as per the approved plans, to ensure that all terms of this agreement are fulfilled and that the site is left in a safe and tidy condition.

12.2. All works shall be designed and constructed in accordance with relevant Town policies and standards, and in accordance with all applicable Ministry of the Environment and Climate Change guidelines.

12.3. Upon completion of all works, the Owner shall ensure that all works are tested as deemed appropriate by the Town, at the Owner's sole expense, which may include but not be limited to the swabbing, flushing, pressure testing, chlorination, and bacterial testing of watermains, compaction testing, concrete strength testing, and any other tests as the Town, or its designate may deem appropriate.

12.4. The Owner's Engineer shall, as part of the submission of engineering plans, submit construction cost estimates, and number of working days for the construction of the following off-site and on-site services in writing, for the approval of the Director of Operations as applicable:

12.4.1. Sanitary and storm sewers and appurtenances

12.4.2. Water service and appurtenances

12.4.3. Pavements, including granular base, sidewalks and curbing (including off site servicing)

12.4.4. Stormwater management

12.4.5. Landscaping/Lighting

12.5. The Owner shall pay a cash deposit of $41,000.00, representing the actual cost of inspections for off-site Primary Services and Secondary

Services and prior to the issuance of a building permit, which is based on the following criteria:

12.5.1. The estimated cost of the inspection fees shall be based on the estimated number of working days and the daily inspection costs as established by the Department of Operations.

12.5.2. The actual inspection fees shall be based on the actual number of working days and the daily inspection cost as established by the Town.

12.6. The Owner shall be responsible for the provision and cost of full-time inspection of the construction of On-Site Works, to the satisfaction of the Town.

12.7. The Developer shall deposit $5,000.00 to ensure that during construction of the development the site will be kept in a reasonably tidy condition so that the raising of dirt and dust is kept to a minimum and further that all roads adjacent to and in the vicinity of the development are kept clean of mud and debris and that any standing water is eliminated.

12.8. The Developer shall deposit $5,000.00 against the cost of reparations to any off-site damages that may occur during construction, the actual cost of such reparations to be at the Owner's sole expense.

13. RELEASE OF SECURITIES – OFF-SITE WORKS

13.1. Upon completion of the Primary Services to the satisfaction of the Town, the Town will issue a Preliminary Certificate of Completion of Primary Services.

13.2. Upon completion of a one-year maintenance period following the issuance of the Preliminary Certificate of Completion of Primary Services, the Owner may submit a written request for release of securities for Primary Services.

13.3. Upon receipt of a written request for release of securities for Primary Services, and subject to the Town completing an inspection to confirm the services are to the Town's satisfaction, the Town will issue a full release of securities for Primary Services.

13.4. Upon completion of the Secondary Services to the satisfaction of the Town, the Town will issue a Preliminary Certificate of Completion of Secondary Services.

13.5. Upon completion of a one-year maintenance period following the issuance of the Preliminary Certificate of Completion of Secondary Services, the Owner may submit a written request for release of securities for Secondary Services.

13.6. Upon receipt of a written request for release of securities for Secondary Services, and subject to the Town completing an inspection to confirm the services are to the Town's satisfaction, the Town will issue a full release of securities for Secondary Services.

14. RELEASE OF SECURITIES – ON-SITE WORKS

14.1. Upon completion of the On-Site Works, the Owner shall provide the Town with written confirmation from the Owner's consulting engineer confirming that the On-Site Works have been constructed in conformance with the approved plans and designs.

14.2. Following the submission to the Town of the written confirmation prescribed in section 14.1 of this agreement, the Owner may submit a written request for full release of securities for On-Site Works.

14.3. Upon receipt of a written request for release of securities for On-Site Works, the Town will issue a full release of securities for On-Site Works.

15. DEVELOPMENT CHARGES

15.1. The Owner agrees to pay to the Corporation of the Town of Niagara-on-the-Lake, all applicable Development Charges in accordance with the current Town and Regional by-laws and policies, prior to the issuance of building permit.

16. GRADING

16.1. Prior to the issuance of a building permit, the owner shall submit a grading plan for approval by the Director of Operations. Specifications and design shall be approved by the Director of Operations and subsequent plans shall be filed in the office of the Chief Building Official prior to the commencement of any site work.

16.2. The Owner agrees to construct and grade the lands in accordance with the plans certified by and filed in the office of the Director of Operations.

16.3. The grading plans shall require grades to be established and maintained which will ensure proper drainage without interference with or flooding of adjacent properties and will retain all stormwater as required under Section 3, Stormwater Management, of this agreement. Any deviation from such grades shall constitute a violation of this agreement.

16.4. Any change to any grading plans certified and approved pursuant to this agreement will require the submission of revised drawings prepared by an Ontario Land Surveyor or Professional Engineer and approved by the Director of Operations.

16.5. The Owner agrees to submit 'as constructed' grading plans for any changes to the existing grades to be approved by the Town's

Operations Department and Community and Development Services Department.

16.6. Unless otherwise approved or required by the Director of Community and Development Services, the Owner agrees not to undertake any site alteration of the said lands until such time as a building permit is issued for the construction of the buildings contemplated herein on the said lands.

17. ARCHAEOLOGICAL

17.1. The Owner agrees to complete an archaeological assessment of the lands, at the Owner's expense, and that no grading or other soil disturbances shall take place on the lands prior to the Ontario Ministry of Tourism, Culture and Sport confirming to the Town that all archaeological resources concerns have met licensing and resource conservation requirements; and that a copy of the archaeological assessment report(s) are submitted to the Town.

17.2. Should deeply buried archaeological remains/resources be found on the property during construction activities, the Heritage Operations Unit of the Ontario Ministry of Tourism, Culture and Sport and the Owner's archaeology consultant shall be notified immediately. In the event that human remains are encountered during construction, the Owner shall immediately notify the police or coroner, the Registrar of Cemeteries of the Ministry of Small Business and Consumer Services, the Ministry of Tourism, Culture and Sport and the Owner's archaeology consultant.

18. GENERAL

18.1. The Owner and the Town agree to share costs in those percentages and amounts as are shown on the cost estimates included as Schedule I to this agreement. The actual amount of the Town's share of costs will be determined upon actual construction costs following the completion of the works.

18.2. The Owner agrees that during the construction of development, the site will be kept in a reasonable tidy condition so that the raising of dirt and dust is kept to a minimum and further that all roads adjacent to and in the vicinity of the development are kept clean or mud and debris. The Owner shall keep all roads clear of obstruction and storage of construction materials.

18.3. That if the extension of municipal sanitary sewers or storm sewers are proposed for the development, the owner shall submit the design drawings (with calculations) for any sanitary and storm drainage systems required to service this development and obtain Environmental Compliance Approval from the Ministry of the

Environment and Climate Change under the Transfer of Review Program to the satisfaction of the Niagara Region Planning and Development Services Department.

18.4. If required under the Ontario Building Code, the Owner shall provide land surveys by an Ontario Land Surveyor, and ensure that all construction shall be carried out under the direction of such architect or engineer. Evidence of this direction and control must be submitted to the Chief Building Official, prior to the issuance of a building permit.

18.5. The Owner shall not call into question directly or indirectly in any proceedings whatsoever in law or in equity or before any administrative tribunal the right of the Town to enter into this agreement and to enforce each and every term, covenant and condition herein contained and this agreement may be pleaded as an estoppel against the Owner in any such proceedings. Each of the terms of this agreement is independent of the other and in the event any term of this agreement is held to be invalid or unenforceable for any reason, then such invalidity or unenforceability shall affect that term only and the remainder of the agreement shall remain in full force and effect.

18.6. In the event of failure of the Owner to carry out any of the provisions of this agreement, then the municipality, its servants, or agents shall, on fifteen (15) days notice in writing of its intention so to do and forthwith in cases or emergency, have the right to enter on to the said lands and, at the expense of the Owner, do any work required hereby and further, shall have the right to recover the costs thereof by action or as municipal taxes, pursuant to the provisions of the Municipal Act, R.S.O. 2001.

18.7. The Owner agrees that if construction has not been seriously commenced within six (6) months of the date of removal of the holding (H) zoning provision on the property, but in no case later than two (2) years and six (6) months of the date of this agreement, or where construction is substantially suspended or discontinued for a period of more than one (1) year, the Chief Building Official may revoke the building permit issued heretofore and not issue a new permit until such time as a new agreement has been entered into. This clause is inserted to protect the municipality from any change in its standards of service or any change in the requirements for municipal services relating to the capacity of any service, to service this or any other project.

18.8. The Owner agrees that all work authorized by this agreement shall be completed within two (2) years of the date of removal of the holding (H) zoning provision on the property, but in no case later than four (4) years of the date of the execution of this agreement. If work has not been completed within two (2) years of the date of removal of the holding (H)

zoning provision on the property, but in no case later than four (4) years of the date of the execution of this agreement, the Town reserves the right to deem this agreement null and void.

18.9. This agreement shall enure to the benefit of and be binding upon the parties hereto and their heirs, executors, administrators, successors, mortgagees and assigns and all covenants, agreements, conditions and understandings herein contained on the part of the Owner shall run with the lands and it shall enure to the benefit of the lands of the Town and it shall be binding upon the Owner and its successors and assigns as Owners or occupiers of the lands from time to time.

18.10. The Owner herein agrees and consents to the registration of this agreement, at its own expense, against the title of the lands.

18.11. The Owner shall be subject to all by-laws of the Town and shall abide by them.

18.12. Where the property is mortgaged, and the mortgagee signs this agreement, then in the event that the mortgagee exercises any rights to sale, possession or foreclosure, or takes any other steps to enforce his security in the lands described herein, then the mortgagee shall be bound by and subject to all the terms, conditions, rights and obligations enjoyed by or borne by the Owner and this agreement shall be read as if the terms 'mortgagee' were substituted for the word 'Owner' wherever it appears in this agreement.

18.13. The Owner shall indemnify and save harmless the Town from and against all actions, causes of action, interest, claims, demands, costs, charges, damages, expenses and loss which the Town may at any time bear, incur, be liable for, sustain or be put unto for any reason or, on account of, or by reason of, or in the consequence of, related to the discharge of stormwater from the lands.

18.14. The Owner shall obtain a certificate from an Ontario Land Surveyor stating that all existing and new evidence is in place at the completion of the said development.

18.15. That if the site is to be serviced with natural gas, the Owner receive clearance from Enbridge Gas Distribution to service the site. Information related to installation and clearance requirements for service and metering facilities can be obtained from Enbridge. In the event that easements are required to service gas to the development, the Owner will provide such easements to Enbridge Gas Distribution at no cost.

18.16. The Owner covenants and agrees that any outstanding taxes will be paid prior to the registration of the final plan.

18.17. Prior to the release of any securities, the Owner agrees to pay any arrears of taxes outstanding against the lands.

18.18. The Owner agrees that there shall be no open burning of waste or construction materials unless specifically approved by the Fire Department.

18.19. The Owner shall enter into separate agreements for the provision of utilities to service the development, including; gas, telephone, hydro and cable, as required.

Any notice given hereunder shall be sufficiently given and addressed to:

LHPH LIMITED
48 John Street West, P.O. Box 1011
Niagara-on-the-Lake, ON
L0S 1J0

IN WITNESS WHEREOF the parties hereto have hereunto affixed their corporate seals under the hands of their officers duly authorized in that behalf.

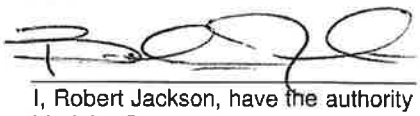
SIGNED, SEALED AND DELIVERED in the presence of:

THE CORPORATION OF THE TOWN OF NIAGARA-ON-THE-LAKE:
Per:

_____
LORD MAYOR PAT DARTE

_____
TOWN CLERK PETER TODD
We have the authority to bind the corporation.

LHPH LIMITED
Per:



I, Robert Jackson, have the authority to bind the Corporation

SCHEDULE A

TO BY-LAW xxxx-17

TO

SITE PLAN CONTROL AGREEMENT

PIN: 46400-0303 (LT)

Legal Description:

Regent Street TP Plan 86 Niagara Closed by RO493940 Part 1 30R-14774; S/T RO569999; Part Regent Street TP Plan 86 Niagara, Part 2 30R-14774; Lot 366 TP Plan 86 Niagara; Part Lot 327, 328 TP Plan 86 NIAGARA Part 1 30R-8861; and Lot 367, 368 TP Plan 86 Niagara; Part Lot 325, 326 TP Plan 86 Niagara Part 2, 30R-8861, S/T RO237910; TOWN OF NIAGARA-ON-THE-LAKE

Schedule B - 1

GARDEN PROPERTY		ft²	m²	%
TOTAL SITE AREA		178,103.53	16,546.35	
BUILDINGS (FLOOR AREAS)	*BUILDING A: MULTI-PURPOSE BUILDING (MAIN FLOOR)*	9,350.00	868.64	5.25%
	BUILDING A: BASEMENT	9,203.14	855.00	
	BUILDING A: SECOND FLOOR	1,345.49	125.00	
	BUILDING D: ACCESSORY BUILDING (WASHROOM / ICE RINK ST'G & MECHANICAL)	1,254.00	116.50	0.70%
GROSS FLOOR AREA (INCL. BASEMENT)	*(NOT INCLUDING ACCESSORY BUILDING)*	19,898.63	1,848.64	
EXTERNAL COVERED AREAS	*HOSPITALITY TENT*	4,000.00	371.61	2.25%
	BUILDING A:	2,050.00	190.45	1.15%
COVERAGE	TOTAL BUILDING COVERAGE	16,654.00	1,547.21	9.35%
ASPHALT	TOTAL ASPHALT COVERAGE	10,614.00	986.07	5.96%
LANDSCAPE	TOTAL LANDSCAPE COVERAGE *(EXCLUDING COVERED AREAS) (INCLUDING HARDSCAPING, PONDS, WINTER ICE RINK)*	150,835.53	14,013.07	84.69%

SEASONAL HOSPITALITY TENT B MAX SQUARE FOOTAGE = 228 SQ. M. (MAX 600 SQ. M. HOSPITALITY TENT PERMITTED ON SITE

FUTURE OFFICE PROPERTY (TEMPORARY PARKING)		ft²	m²	%
SITE	PARCEL A	20,502.42	1,904.74	23.63%
	PARCEL B	66,255.25	6,155.31	76.37%
	TOTAL SITE AREA	86,757.67	8,060.05	
BUILDINGS (FLOOR AREAS)	*BUILDING C: PORTION OF EXISTING WAREHOUSE BUILDING TO REMAIN*	9,245.00	858.89	10.66%
COVERAGE	TOTAL BUILDING COVERAGE	9,245.00	858.89	10.66%
GRAVEL COVERAGE	TOTAL GRAVEL COVERAGE	65,584.00	6,092.95	75.59%
LANDSCAPE	TOTAL LANDSCAPE COVERAGE	11,928.67	1,108.21	18.00%

PARKING CALCULATIONS	
GARDEN PROPERTY	10.00
OFFICE PROPERTY (TEMPORARY *PARKING GRAVEL SURFACE PARKING*)	208.00
TOTAL	218.00
BARRIER FREE SPACES REQUIRED = 7 PROVIDED =	7

* EXISTING 58 SPACES RELOCATED TO OFFICE PROPERTY

OWNER'S NAME

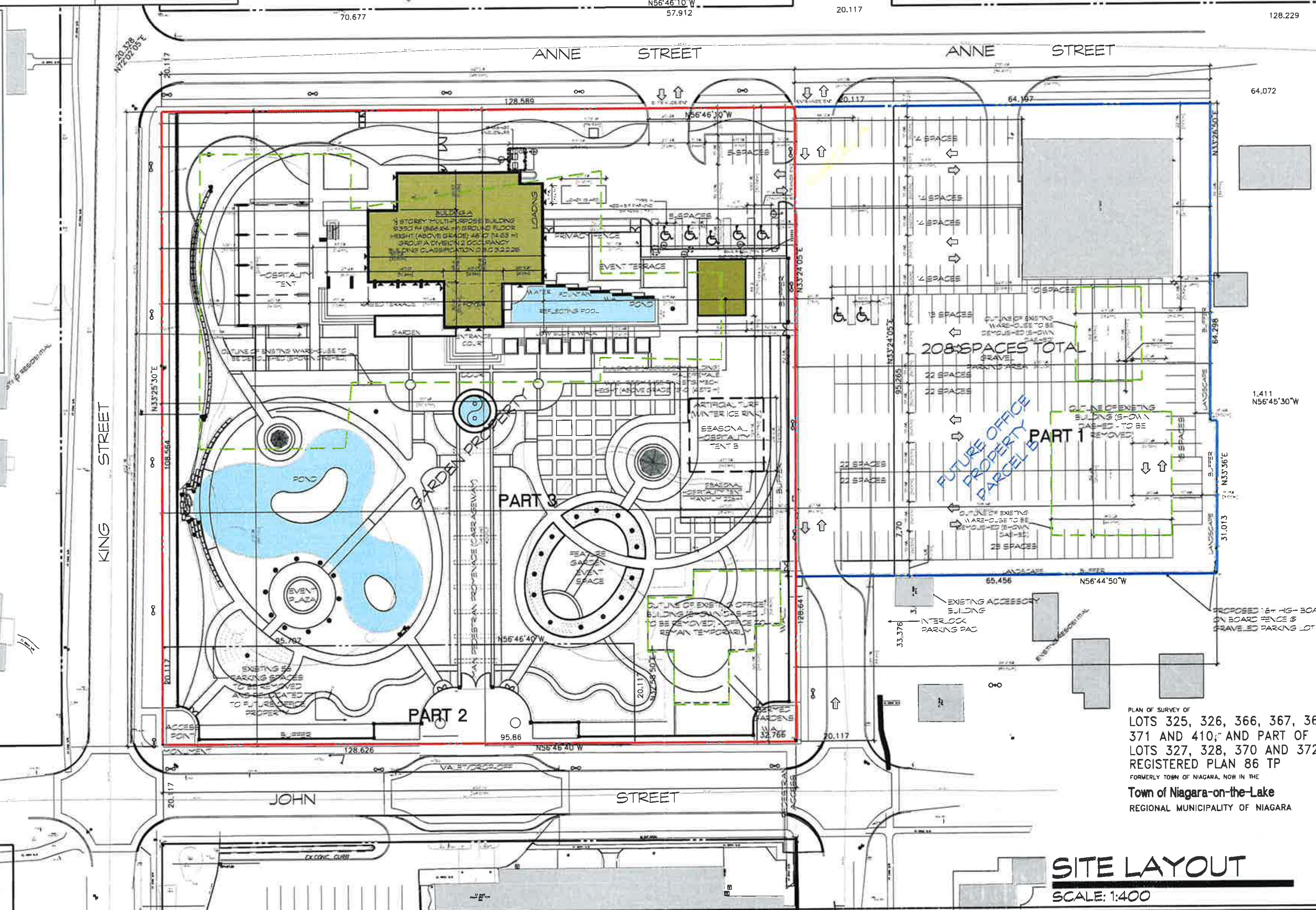
OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date



DRAWING LEGEND

- GARDEN PROPERTY LINES
- FUTURE OFFICE (TEMPORARY PARKING) PROPERTY LINES
- EXISTING BUILDINGS TO BE DEMOLISHED
- EXISTING BUILDINGS TO REMAIN
- PROPOSED BUILDINGS
- NEW WATER FEATURES
- NEW GRAVELLED PARKING AREA
- BUILDING ENTRANCE/EXIT

PLAN OF SURVEY OF
LOTS 325, 326, 366, 367, 368, 371 AND 410, AND PART OF LOTS 327, 328, 370 AND 372
REGISTERED PLAN 86 TP
FORMERLY TOWN OF NIAGARA, NOW IN THE
Town of Niagara-on-the-Lake
REGIONAL MUNICIPALITY OF NIAGARA

All contractors and/or trades shall verify all dimensions, notes, site and report any discrepancies prior to commencement of the work. This drawing not to be scaled. All drawings, prints and related documents are the property of the architect and must be returned upon request. Reproduction of drawings and related documents in part or in whole is strictly forbidden without written consent. Drawings to be for the purpose for which they are issued.

NO	DATE	REVISION
1	MAY 12/17	PRELIM. SPA SUBMISSION
2	JUNE 2/17	ISSUED FOR SPA
3	OCT 3/2017	FINAL SPA SUBMISSION

THE GARDENS AT PILLAR AND POST
PROPOSED:
MULTI-PURPOSE BUILDING,
OFFICE BUILDING &
HOSPITALITY TENTS
OWNER: LAIS HOTEL PROPERTIES LIMITED
John Street, Niagara-On-The-Lake, Ontario

ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
5295

NORTH

A | C | K
architects
www.ackarchitects.com

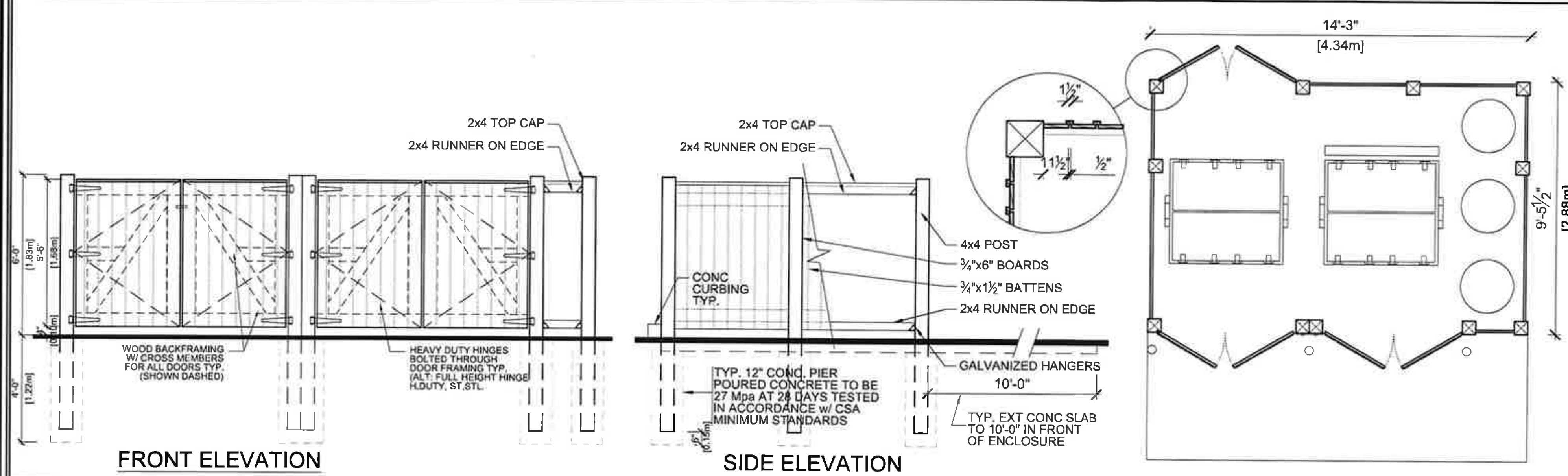
SHEET TITLE:

SITE LAYOUT

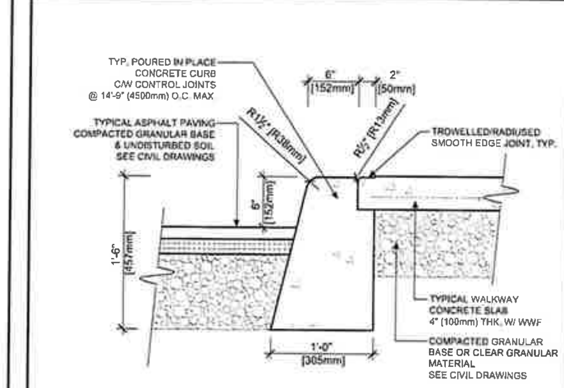
Issued for Re-Zoning
Issued for Site Plan Agreement
Issued for Permit
Issued for Tender
Issued for Construction

DRAWN BY:	KMK/JMR/MP	DWG No.
CHECKED BY:	KK/MDA	SP1
DATE:	February 2015	
SCALE:	As Shown	
PROJECT No.:	2014-78	

Schedule B -2



1 SP2 TYP. GARBAGE ENCLOSURE
SCALE: 1:30



2 SP2 TYP. CURB & SIDEWALK DETAIL
SCALE: 1:10

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

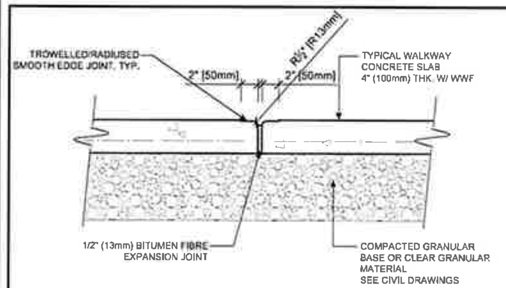
All contractors and/or trades shall verify all dimensions, notes, site and report any discrepancies prior to commencement of the work. This drawing not to be scaled, all drawings, prints and related documents are the property of the architect and must be returned upon request. Reproduction of drawings and related documents in part or in whole is strictly forbidden without written consent. Drawings to be for the purpose for which they are issued.

NO.	DATE:	REVISION:
1	MAY 12/17	PRELIM SPA SUBMISSION
2	JUNE 2/17	ISSUED FOR SPA
3	OCT 3/2017	FINAL SPA SUBMISSION

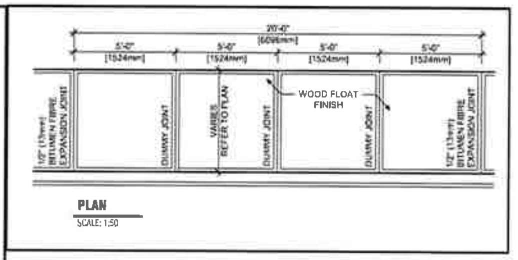
THE GARDENS AT PILLAR AND POST
PROPOSED:
MULTI-PURPOSE BUILDING, OFFICE BUILDING & HOSPITALITY TENTS
OWNER: LAIS HOTEL PROPERTIES LIMITED
John Street, Niagara-On-The-Lake, Ontario

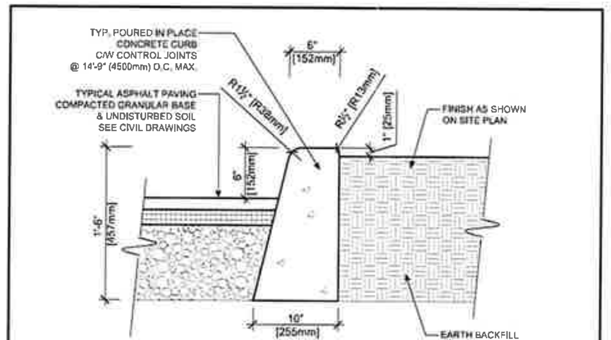
ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
5295

A | C | K
architects
www.ackarchitects.com

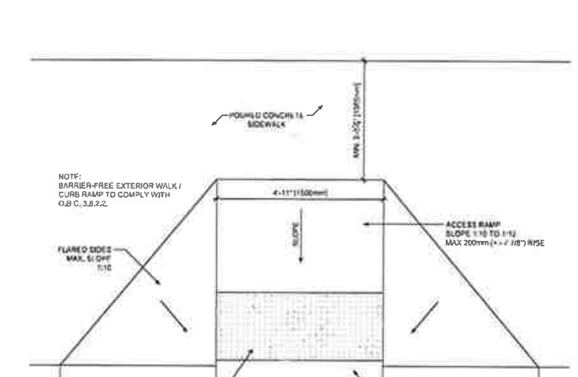


3 SP2 TYP. SIDEWALK JOINT
SCALE: 1:10

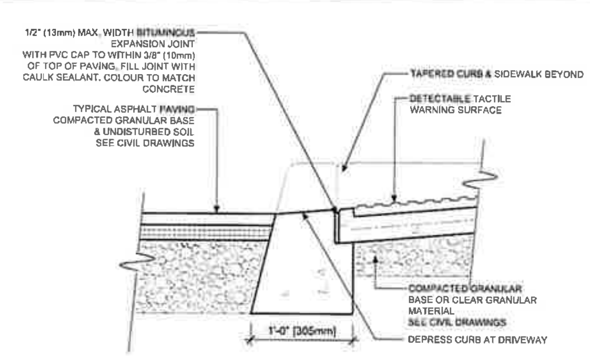




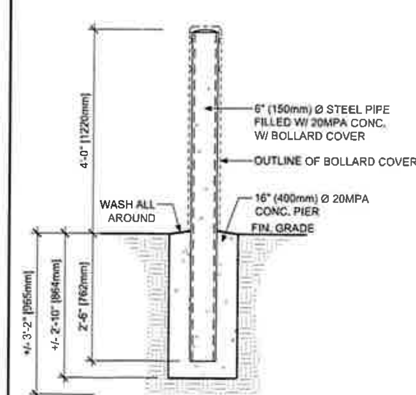
4 SP2 TYP. CURB DETAIL
SCALE: 1:10



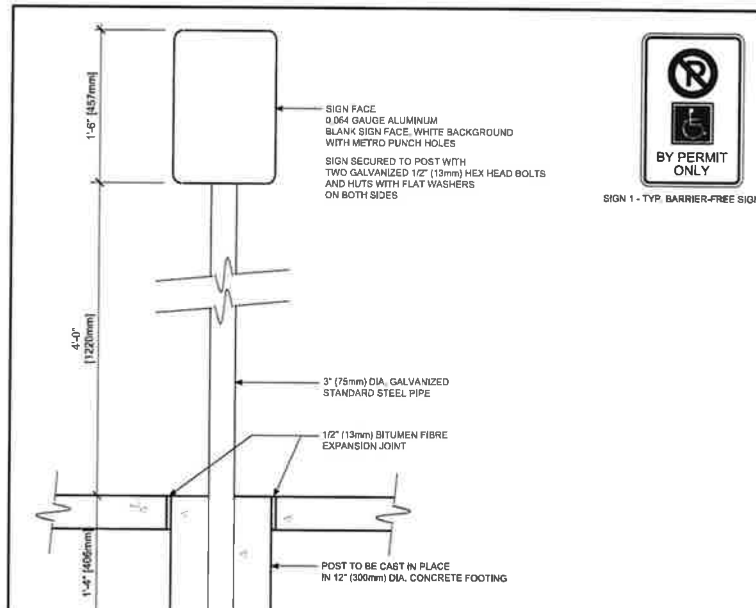
PLAN
SCALE: 1:30



5 SP2 TYP. B.F. CURB DETAIL
SCALE: 1:10



6 SP2 TYP. BOLLARD DETAIL
SCALE: 1:20



SIGNAGE NOTES:

ALL PARKING SPACES FOR BARRIER-FREE SHALL BE INDICATED WITH TYPICAL BARRIER FREE SIGNAGE CENTERED AT EACH PARKING SPACE - THESE SIGNS SHALL BE SUPPLIED & INSTALLED BY THE GENERAL CONTRACTOR. THE SIGN SHALL BE CENTERED WITHIN THE PARKING SPACE.

THE GENERAL CONTRACTOR SHALL SUPPLY ALL REQUIRED FIRE ROUTE SIGNS. THESE SIGNS SHALL BE POSTED IN COMPLIANCE WITH THE HIGHWAY TRAFFIC ACT AND OR THE ONTARIO TRAFFIC MANUAL; WITH A MAX. SPACING OF +/- 98'-0" (30m)

NOTE: ALL SIGNS MUST MEET REQUIREMENTS OF THE TOWN OF NOTL SIGN BY-LAW.

7 SP2 TYP. BARRIER FREE PARKING SPACE SIGNAGE DETAIL
SCALE: 1:10

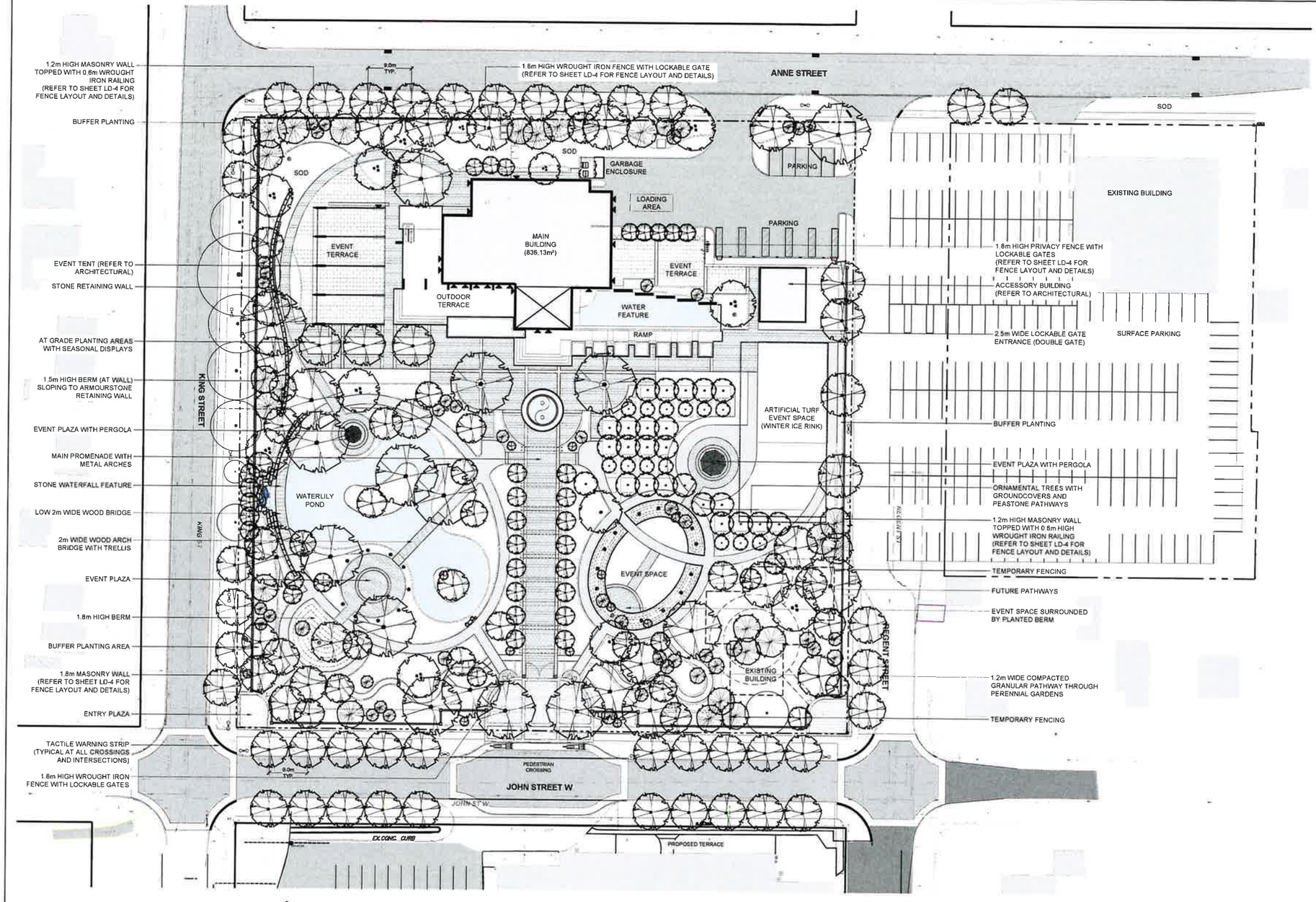
SHEET TITLE:

SITE PLAN DETAILS

Issued for Re-Zoning
Issued for Site Plan Agreement
Issued for Permit
Issued for Tender
Issued for Construction

DRAWN BY	KMK/JMR/MP	DWG No: SP2
CHECKED BY	KK/MDA	
DATE	February 2015	
SCALE	As Shown	
PROJECT No.	2014-78	

Schedule C - 1



LANDSCAPE PLAN

0 10 20m

SCALE 1:400

NOTE

1. REFER TO ARCHITECTURAL PLANS FOR ALL BUILDINGS, TENTS, AND ACCESSORY STRUCTURES.
2. REFER TO CIVIL ENGINEERING FOR SITE SERVICING AND GRADING.

GENERAL NOTES

1. CONTRACTOR IS NOT TO PROCEED IN UNCERTAINTY.
2. AS AN INSTRUMENT OF SERVICE, THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. THIS DRAWING MUST BE RETURNED UPON REQUEST, AND MAY NOT BE REPRODUCED WITHOUT WRITTEN CONSENT.
3. ALL DISCREPANCIES OR AMBIGUITY IN THE DRAWINGS, SPECIFICATIONS OR DETAILS IS TO BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
4. THIS DRAWING FORMS PART OF A SET AND MAY NOT BE SEPARATED. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS IN THE SET AND ALL SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS
5. CONTRACTOR IS TO TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING SITE FEATURES UNLESS IDENTIFIED FOR REMOVAL OR DEMOLITION, INCLUDING ALL SURVEY BARS, STAKES AND MONUMENTS. CONTRACTOR IS TO REPAIR DAMAGE.
6. CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH LIMITS OF CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK ON THE SITE. CONTRACTOR TO CONTACT LANDSCAPE ARCHITECT IN UNCERTAINTY.
7. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND STAKING OF ALL UTILITIES PRIOR TO WORK COMMENCING ON THE SITE. CONTRACTOR IS NOT TO PLANT DIRECTLY ABOVE UNDERGROUND UTILITIES.
8. CONTRACTOR TO VISIT THE SITE TO CONFIRM ALL SITE CONDITIONS PRIOR TO SUBMITTING BIDS. AMBIGUITY OR DISCREPANCY TO BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
9. DRAWINGS MAY NOT BE SCALED FOR APPROXIMATE LAYOUT. ALL MEASUREMENTS ARE METRIC. LAYOUT OF PLANT MATERIALS TO BE STAKED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANTING.
10. CONTRACTOR SHALL SUPPLY ALL MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE WORK SHOWN ON THESE DRAWINGS. ANY DISCREPANCIES BETWEEN QUANTITIES SHOWN AND THE PLANT LIST SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR DIRECTION.
11. AT THE END OF EACH WORK DAY, ALL DEBRIS, GARBAGE AND SURPLUS MATERIALS ARE TO BE REMOVED FROM THE SITE. THE SITE IS TO BE KEPT CLEAN AND USEABLE AT ALL TIMES.
12. UPON FINAL COMPLETION OF THE PROJECT, ALL WORKMANSHIP AND MATERIALS ARE TO BE GUARANTEED FOR TWO FULL YEARS.
13. AT THE TIME OF FINAL INSPECTION ALL SEEDED AREAS SHALL BE IN A HEALTHY, VIGOROUS GROWING CONDITION, IN FULL ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
14. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED AND SIGNED BY THE LANDSCAPE ARCHITECT.

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

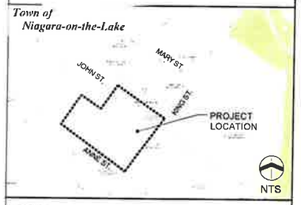
LORD MAYOR

TOWN CLERK

Date

KE

Town of Niagara-on-the-Lake



LEGEND

- PROPERTY LINE
- UNIT PAVING - TYPE 1
- UNIT PAVING - TYPE 2
- UNIT PAVING - TYPE 3
- UNIT PAVING - BANDING
- SOD
- MIXED SHRUB AND PERENNIAL PLANTING BEDS
- MIXED PERENNIAL PLANTING BEDS
- BUFFER PLANTING
- GROUNDCOVER PLANTING
- PROPOSED DECIDUOUS TREES
- PROPOSED CONIFEROUS TREES
- EXISTING TREES TO REMAIN

NO.	REVISIONS	DATE

NO	ISSUED	DATE
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:

A | C | K ARCHITECTS

443 EASTCHESTER AVE E, ST. CATHARINES, ON L2M 6G2
(905) 984 5345

OWNER:

LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:

THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian

SEFERIAN DESIGN GROUP
761 Plains Street, Suite 202
Burlington, ON | L7N 2Y4
905.630.3180 | seferiandesign.com

SHEET TITLE:

LANDSCAPE LAYOUT PLAN

DWG No: L-1	SCALE: 1:400
	PROJECT NO: 15-012
STAMP:	DRAWN BY: SLS
	DESIGN BY: SLS
	CHECKED BY: HS
	SHEET No: 1 OF X
	NORTH

PRINT DATE: Thursday, August 31, 2017

Y:\Projects-2\2015\15-012 - Pillar & Post, Niagara on the Lake\Current Dwg\AutoCAD\SPA\15-012_P&P_LandscapeSPA_2017 03 07.dwg

Schedule C-2

REFER TO PLANS BY INVIRO ENERGY FOR STREET LIGHTING LOCATIONS AND DETAILS

1.2m HIGH MASONRY WALL TOPPED WITH 0.6m HIGH WROUGHT IRON RAILING (REFER TO SHEET LD-4 FOR FENCE LAYOUT AND DETAILS)

TACTILE WARNING STRIP (TYPICAL AT ALL CROSSINGS AND INTERSECTIONS)

0.8mØ CONCRETE BASE FOR SCULPTURAL FEATURES

1.5m WIDE CONCRETE SIDEWALK AS PER OPSD 310.020

1.8m HIGH MASONRY WALL (REFER TO SHEET LD-4 FOR FENCE LAYOUT AND DETAILS)

SLOPED PLANTING AREA EXTENDING FROM TOP OF WALL; MIXED DECIDUOUS AND CONIFEROUS SHRUBS

EVENT TERRACE WITH UNIT PAVING (TYPE 3)

AT GRADE PLANTING AREA WITH SEASONAL DISPLAYS

SODDED BOULEVARD

0.8mØ CONCRETE BASE FOR SCULPTURAL FEATURES

EVENT SPACE WITH 3.5m WIDE X 3.0m HIGH WOOD PERGOLA; UNIT PAVING (TYPE 2) AND DECORATIVE BANDING

EMERGENCY ACCESS GATE

SOD

1.5m WIDE SIDEWALK

BUFFER PLANTING

1.8m HIGH WROUGHT IRON FENCE WITH LOCKABLE GATE (REFER TO SHEET LD-4 FOR FENCE LAYOUT AND DETAILS)

GARBAGE ENCLOSURE (REFER TO ARCHITECTURAL)

MAIN BUILDING

COVERED OUTDOOR TERRACE (REFER TO ARCHITECTURAL)

MIXED PERENNIAL PLANTING BEDS

RAMP

RAISED PLANTERS WITH BULBS AND ANNUAL PLANTING DISPLAYS

MIXED SHRUB AND PERENNIAL PLANTING BEDS

WATERLILY POND

0.65m HIGH RAISED WATER FEATURE WITH 0.3m WIDE CAP STONE

0.5m HIGH RAISED PLANTERS WITH BULBS AND ANNUAL PLANTING DISPLAYS

AT GRADE PLANTING AREA WITH SEASONAL DISPLAYS

3m SETBACK

MATCH TO SHEET L3

MATCH TO SHEET L4

NOTE

1. REFER TO ARCHITECTURAL PLANS FOR ALL BUILDINGS, TENTS, AND ACCESSORY STRUCTURES.
2. REFER TO CIVIL ENGINEERING FOR SITE SERVICING AND GRADING.

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

Niagara-on-the-Lake

JOHN ST. MARY ST. KING ST. ANNE ST.

PROJECT LOCATION

NTS

LEGEND:

- PROPERTY LINE
- UNIT PAVING - TYPE 1
- UNIT PAVING - TYPE 2
- UNIT PAVING - TYPE 3
- UNIT PAVING - BANDING
- SOD
- MIXED SHRUB AND PERENNIAL PLANTING BEDS
- MIXED PERENNIAL PLANTING BEDS
- BUFFER PLANTING
- GROUNDCOVER PLANTING
- PROPOSED DECIDUOUS TREES
- PROPOSED CONIFEROUS TREES
- EXISTING TREES TO REMAIN

NO.	REVISIONS	DATE

NO.	ISSUED	DATE
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:

A | C | K

443 EASTCHESTER AVE E. ST. CATHARINES, ON L2M 6S2 (905) 984 5345

OWNER:

LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:

THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian

SEFERIAN DESIGN GROUP
80 Main Street, Suite 202
Hamilton, ON L8P 1H6
905.655.3110 | seferian.ca

SHEET TITLE:

LANDSCAPE LAYOUT
SOUTH EAST

DWG No: L-2

SCALE: 1:150

PROJECT NO: 15-012

STAMP:

DRAWN BY: SLS
DESIGN BY: SLS
CHECKED BY: HS
SHEET No: 2 OF X

NORTH

LANDSCAPE PLAN
SOUTH EAST

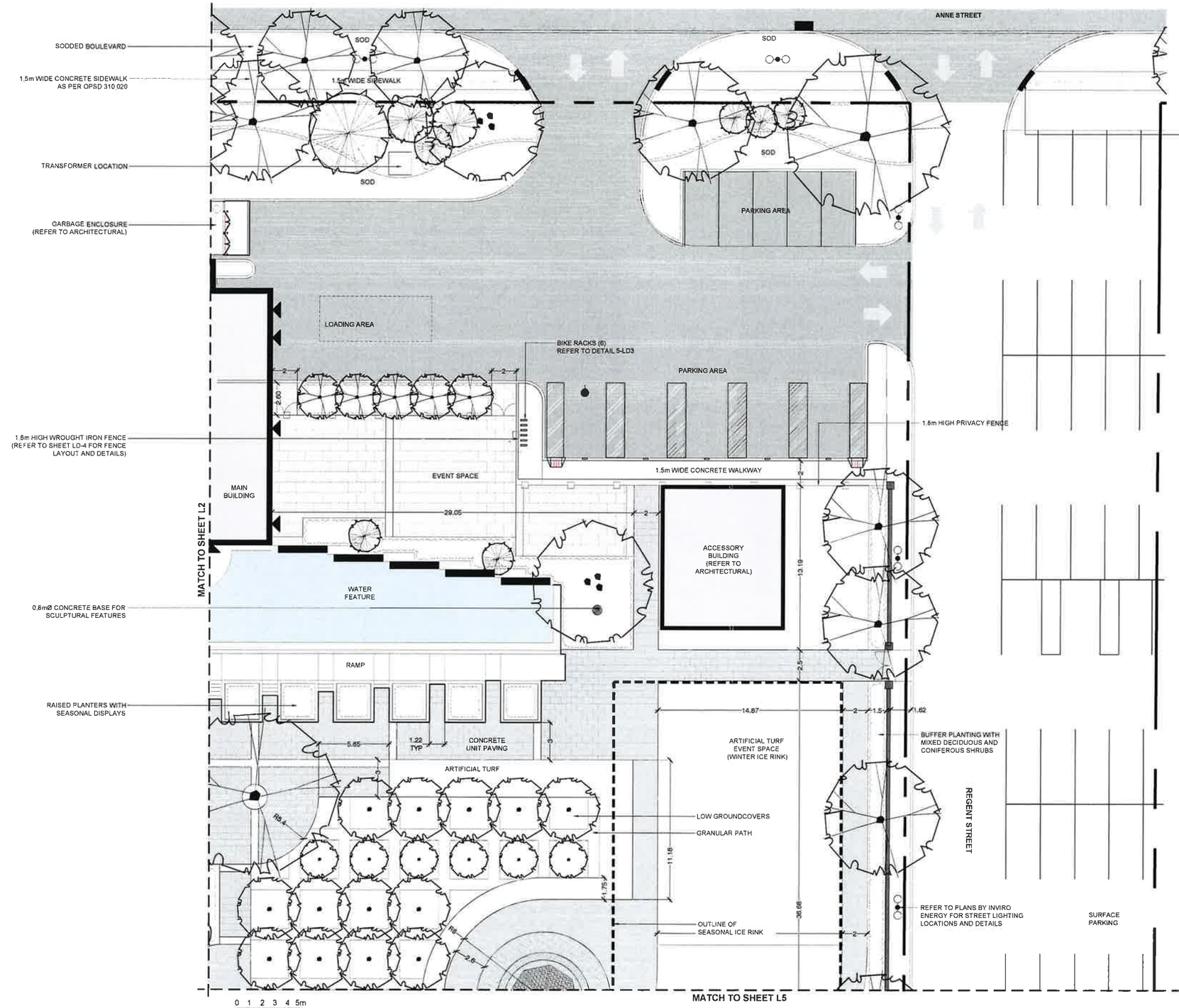
0 1 2 3 4 5m

SCALE 1:150

Y:\Projects-2\2015\15-012 - Pillar & Post, Niagara on the Lake\Current Dwg\AutoCAD\SPA\15-012_P&P_LandscapeSPA_2017.09.07.dwg

PRINT DATE: Thursday, August 31, 2017

Schedule C-3



LANDSCAPE PLAN
SOUTH WEST

NOTE

1. REFER TO ARCHITECTURAL PLANS FOR ALL BUILDINGS, TENTS, AND ACCESSORY STRUCTURES
2. REFER TO CIVIL ENGINEERING FOR SITE SERVICING AND GRADING

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

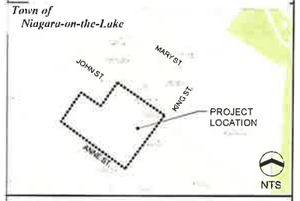
LORD MAYOR

TOWN CLERK

Date

K

Town of Niagara-on-the-Lake



LEGEND

- PROPERTY LINE
- UNIT PAVING - TYPE 1
- UNIT PAVING - TYPE 2
- UNIT PAVING - TYPE 3
- UNIT PAVING - BANDING
- SOD
- MIXED SHRUB AND PERENNIAL PLANTING BEDS
- MIXED PERENNIAL PLANTING BEDS
- BUFFER PLANTING
- GROUNDCOVER PLANTING
- PROPOSED DECIDUOUS TREES
- PROPOSED CONIFEROUS TREES
- EXISTING TREES TO REMAIN

NO.	REVISIONS	DATE:

NO.	ISSUED	DATE:
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:
A | C | K ARCHITECTS
443 EASTCHESTER AVE E, ST CATHARINES, ON L2M 6S2
(905) 984 5545

OWNER:
LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:
THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian
SEFERIAN DESIGN GROUP

SHEET TITLE:
LANDSCAPE LAYOUT
SOUTH WEST

DWG No: L-3

SCALE: 1:150
PROJECT NO: 15-012
DRAWN BY: SLS
DESIGN BY: SLS
CHECKED BY: HS
SHEET No: 3 OF X

STAMP:

NORTH

PRINT DATE: Thursday, August 31, 2017

Y:\Projects-2\2015\15-012 - Pillar & Post, Niagara on the Lake\Current Dwg\AutoCAD\SPA\15-012_P&P_LandscapeSPA_2017 09 07.dwg

Schedule C-4

MATCH TO SHEET L2

WATERFALL FEATURE TO BE BUILT INTO BERM WITH MAX HEIGHT OF 1.8m AT MASONRY WALL.

WOOD BRIDGE TO EXTEND ACROSS SHALLOW AREA OF POND.

WATERLILY POND (MAX. WATER DEPTH APPROX 1200mm)

WOODEN ARCH BRIDGE

EVENT PLAZA

1.5m WIDE SIDEWALK

SOD

3.0m SETBACK

WOOD BRIDGE

KING STREET

SLOPED PLANTING AREA EXTENDING FROM TOP OF WALL

SODDED BOULEVARD

1.5m WIDE CONCRETE SIDEWALK AS PER OPSD 310.010

1.8m HIGH DECORATIVE METAL OBELISK FOR CLIMBING VINES

1.8m HIGH MASONRY WALL (REFER TO SHEET LD-4 FOR FENCE LAYOUT AND DETAILS)

REFER TO PLANS BY INVIRO ENERGY FOR STREET LIGHTING LOCATIONS AND DETAILS

0.8mØ CONCRETE BASE FOR SCULPTURAL FEATURES

1.8m HIGH BERM WITH PERENNIALS AND SHRUBS

2m WIDE LOCKABLE METAL ENTRY GATES

ENTRY PLAZA AT INTERSECTION OF KING STREET AND JOHN STREET WEST. CONCRETE UNIT PAVING (TYPE 2) WITH DECORATIVE BANDING

TACTILE WARNING STRIP (TYPICAL AT ALL CROSSINGS AND INTERSECTIONS)

REFER TO PLANS BY INVIRO ENERGY FOR STREET LIGHTING LOCATIONS AND DETAILS

JOHN STREET W

JOHN ST W

1.2m WIDE COMPACTED GRANULAR PATHWAY THROUGH PERENNIAL GARDENS

MATCH TO SHEET L5

PLANTING AREA FOR ROSES AND PERENNIALS

3.2m HIGH DECORATIVE METAL ARCHES (REFER TO 1-LD3 FOR DETAIL)

7.4m WIDE MAIN PROMENADE WITH UNIT PAVING (TYPE 1) AND DECORATIVE BANDING

LOCKABLE METAL ENTRANCE GATES

1.8m HIGH WROUGHT IRON FENCE (REFER TO SHEET LD-4 FOR FENCE LAYOUT AND DETAILS)

TREES IN STRUCTURAL SOIL WITH DECORATIVE TREE GRATES

FORECOURT AREA WITH UNIT PAVING (TYPE 3) AND DECORATIVE BANDING

NOTE

1. REFER TO ARCHITECTURAL PLANS FOR ALL BUILDINGS, TENTS, AND ACCESSORY STRUCTURES.
2. REFER TO CIVIL ENGINEERING FOR SITE SERVICING AND GRADING.

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

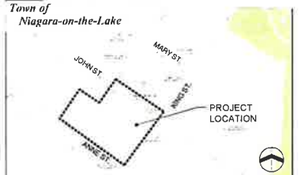
LORD MAYOR

TOWN CLERK

Date

KEY

Town of Niagara-on-the-Lake



LEGEND

- PROPERTY LINE
- UNIT PAVING - TYPE 1
- UNIT PAVING - TYPE 2
- UNIT PAVING - TYPE 3
- UNIT PAVING - BANDING
- SOD
- MIXED SHRUB AND PERENNIAL PLANTING BEDS
- MIXED PERENNIAL PLANTING BEDS
- BUFFER PLANTING
- GROUNDCOVER PLANTING
- PROPOSED DECIDUOUS TREES
- PROPOSED CONIFEROUS TREES
- EXISTING TREES TO REMAIN

NO.	REVISIONS	DATE:

NO.	ISSUED	DATE:
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:

A | C | K architects

443 EASTCHESTER AVE E. ST. CATHARINES, ON L2M 6S2 (905) 984 3343

OWNER:

LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:

THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian DESIGN GROUP
90 Broad Street, Suite 202
Kitchener, ON N2G 4X4
905 653 3110 | seferiandesign.com

SHEET TITLE:

LANDSCAPE LAYOUT
NORTH EAST

DWG No: L-4

SCALE: 1:150
PROJECT NO: 15-012
DRAWN BY: SLS
DESIGN BY: SLS
CHECKED BY: HS
SHEET No: 4 OF X

STAMP:

NORTH

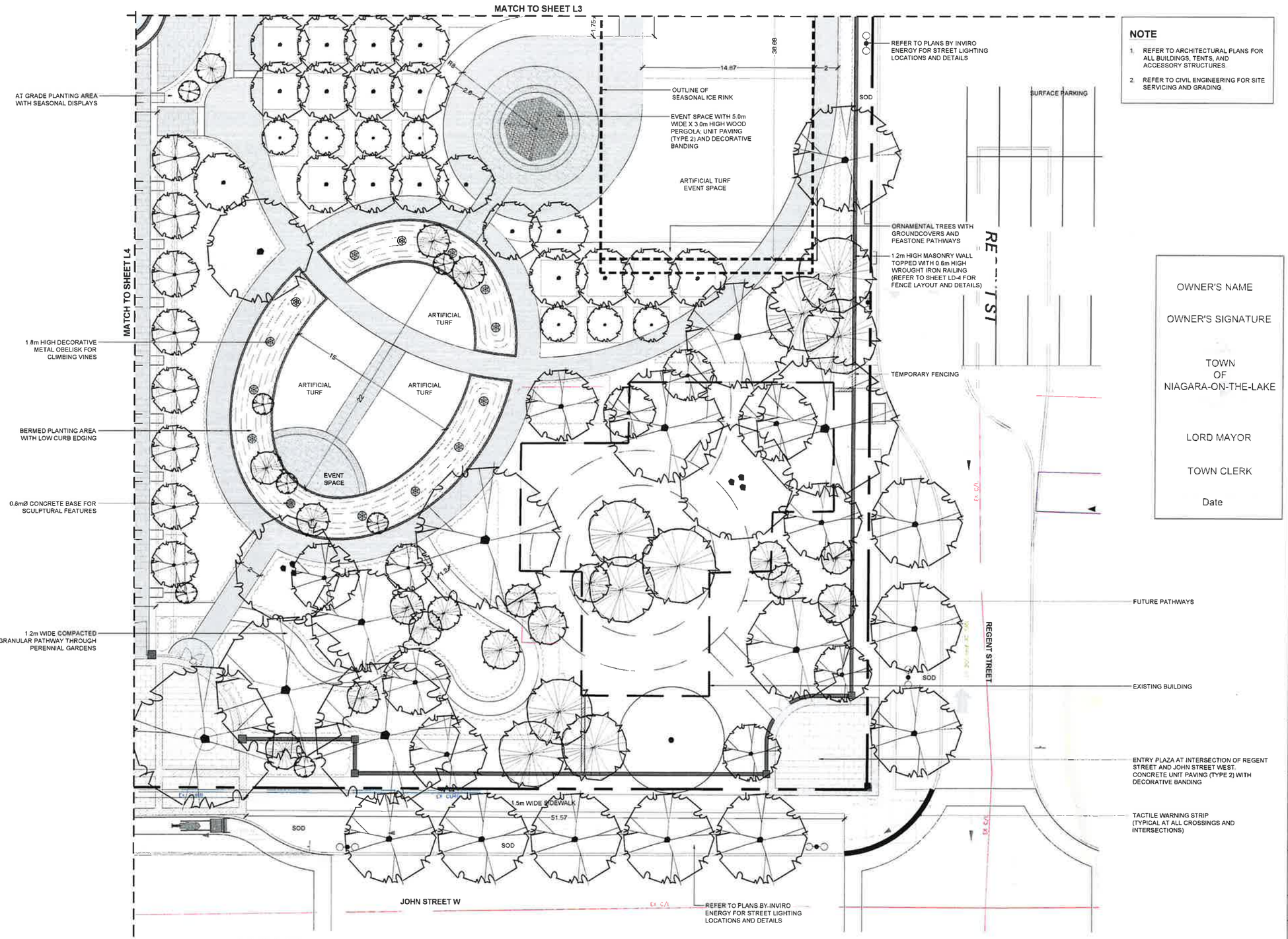
LANDSCAPE PLAN
NORTH EAST

0 1 2 3 4 5m
SCALE 1:150

Y:\Projects-2\2015\15-012 - Pillar & Post, Niagara on the Lake\Current Dwg\AutoCAD\SPA\15-012_P&P_LandscapeSPA_2017 09 07.dwg

PRINT DATE: Thursday, August 31, 2017

Schedule C- 5



LANDSCAPE PLAN
NORTH WEST

0 1 2 3 4 5m
SCALE 1:150

NOTE

1. REFER TO ARCHITECTURAL PLANS FOR ALL BUILDINGS, TENTS, AND ACCESSORY STRUCTURES.
2. REFER TO CIVIL ENGINEERING FOR SITE SERVICING AND GRADING.

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

LEGEND

- PROPERTY LINE
- UNIT PAVING - TYPE 1
- UNIT PAVING - TYPE 2
- UNIT PAVING - TYPE 3
- UNIT PAVING - BANDING
- SOD
- MIXED SHRUB AND PERENNIAL PLANTING BEDS
- MIXED PERENNIAL PLANTING BEDS
- BUFFER PLANTING
- GROUNDCOVER PLANTING
- PROPOSED DECIDUOUS TREES
- PROPOSED CONIFEROUS TREES
- EXISTING TREES TO REMAIN

NO.	REVISIONS	DATE

NO.	ISSUED	DATE
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:
A | C | K
443 EASTCHESTER AVE E, ST CATHARINES, ON L2M 6S2
(905) 984 5845

OWNER:
LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:
THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian
SEFERIAN DESIGN GROUP

SHEET TITLE:
LANDSCAPE LAYOUT
NORTH WEST

DWG No: L-5	SCALE 1:150
	PROJECT NO. 15-012
	DRAWN BY: SLS
	DESIGN BY: SLS
	CHECKED BY: HS
	SHEET No: 5 OF X

STAMP:

NORTH

PRINT DATE: Thursday, August 31, 2017

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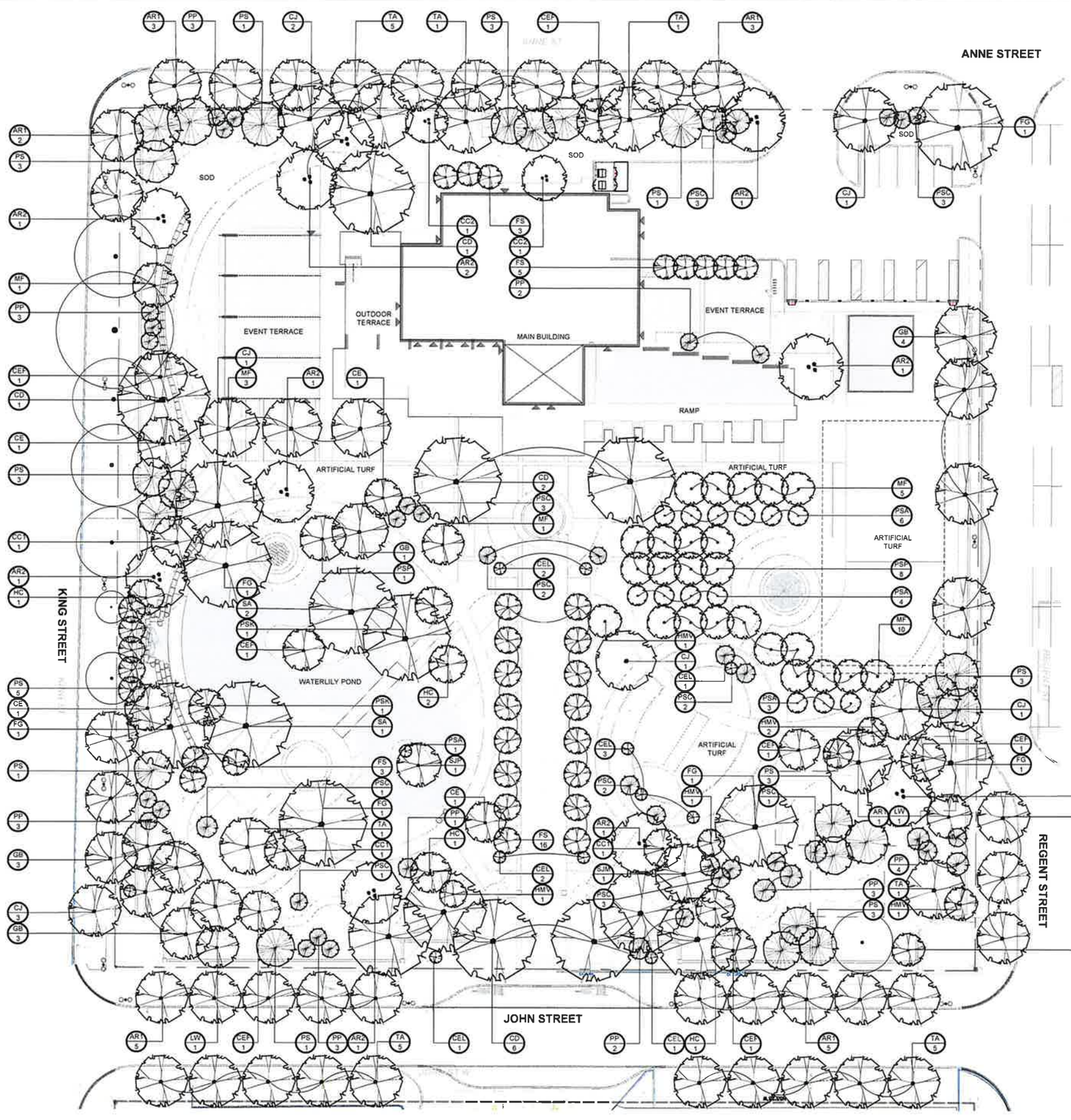
Schedule C- 6



PLANTING PLAN

0 2 4 6 8 10m

SCALE 1:300

NOTE

1. REFER TO SHEET LD-2 FOR MASTER PLANT LIST.
2. REFER TO ARCHITECTURAL PLANS FOR ALL BUILDINGS, TENTS, AND ACCESSORY STRUCTURES.
3. REFER TO CIVIL ENGINEERING FOR SITE SERVICING AND GRADING

OWNER'S NAME

OWNER'S SIGNATURE

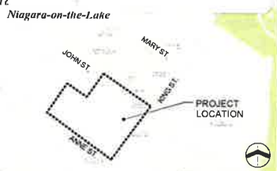
TOWN OF NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

Niagara-on-the-Lake



LEGEND

- PROPERTY LINE
- UNIT PAVING - TYPE 1
- UNIT PAVING - TYPE 2
- UNIT PAVING - TYPE 3
- UNIT PAVING - BANDING
- SOD
- MIXED SHRUB AND PERENNIAL PLANTING BEDS
- MIXED PERENNIAL PLANTING BEDS
- BUFFER PLANTING
- GROUNDCOVER PLANTING
- PROPOSED DECIDUOUS TREES
- PROPOSED CONIFEROUS TREES
- EXISTING TREES TO REMAIN

NO.	REVISIONS	DATE

NO.	ISSUED	DATE
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:

A C K

443 EASTCHESTER AVE E, ST. CATHARINES, ON L2M 6S2
(905) 984-5345

OWNER

LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:

THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian

SEFERIAN DESIGN GROUP

SHEET TITLE:

PLANTING PLAN

DWG No: L-6

SCALE: 1:300

PROJECT NO. 15-012

DRAWN BY: SLS

DESIGN BY: SLS

CHECKED BY: HS

SHEET No 6 OF X

NORTH

STAMP:

PRINT DATE: Thursday, August 31, 2017

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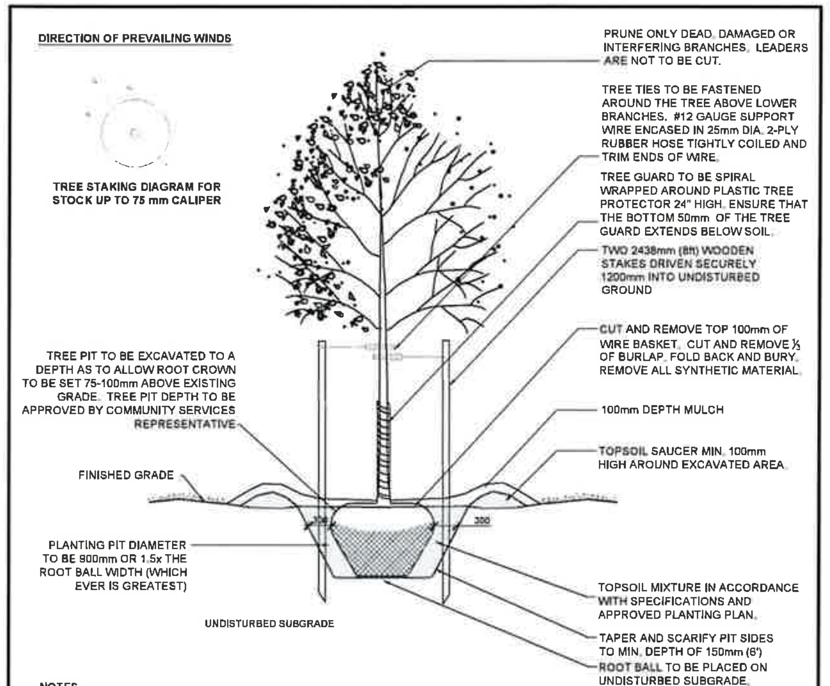
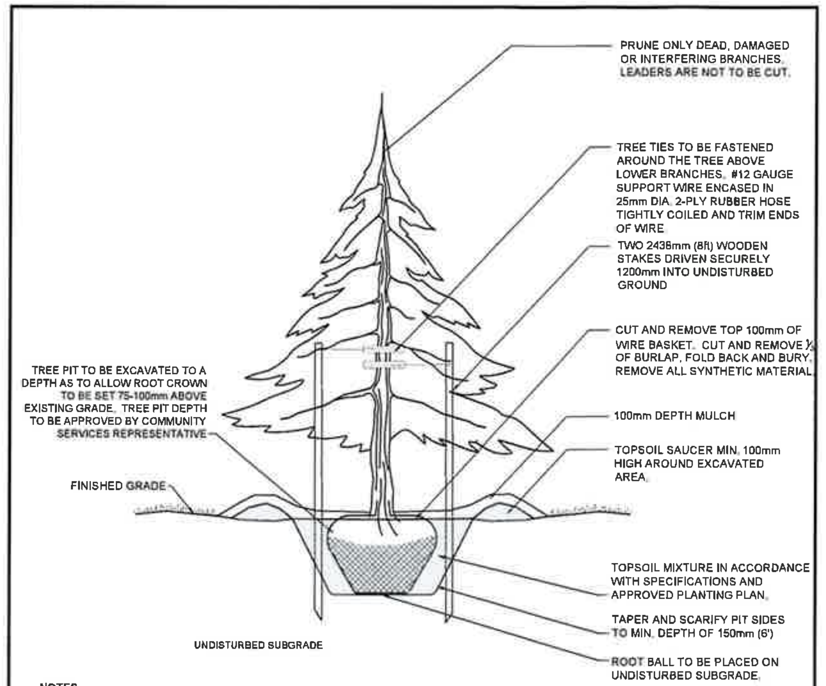
Schedule C-7



NOTES

1. 1. NO PLANT SUBSTITUTIONS WILL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT. PLANT IDENTIFICATION TAGS FOR ALL PLANT MATERIAL ARE TO REMAIN ON MATERIAL UNTIL INSPECTED. PRUNE OUT AND TREAT BROKEN, DISEASED, AND WEAK BRANCHES. RETAIN NORMAL SHAPE OF TREE.
2. TREES AND SHRUBS SHALL BEAR SAME RELATION TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE.
3. ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY OWNER'S REPRESENTATIVE.
4. ALL TREES TO BE SET PLUMB, LEVEL, AND TRUE TO LINE IN PLANTING PIT.
5. DO NOT DAMAGE ROOT BALL WHEN INSTALLING STAKES.
6. ALL TREES TO BE PLACED SO THAT ROOT COLLAR IS POSITIONED 75-100mm HIGHER THAN SURROUNDING GRADE.
7. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE SHOWN.

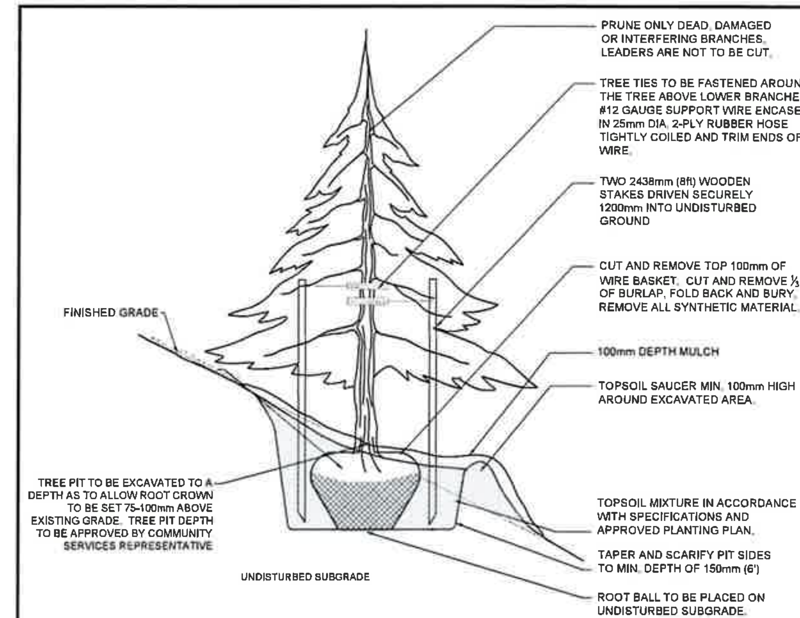
1-LD1 TYPICAL DECIDUOUS TREE PLANTING DETAIL
45mm TO 70mm CAL. - WIRE BASKET, BALLED AND BURLAPPED — NTS



NOTES

1. PRUNE OUT AND TREAT BROKEN, DISEASED, AND WEAK BRANCHES. RETAIN NORMAL SHAPE OF TREE.
2. ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY OWNER'S REPRESENTATIVE.
3. ALL TREES TO BE SET PLUMB, LEVEL, AND TRUE TO LINE IN PLANTING PIT.
4. DO NOT DAMAGE ROOT BALL WHEN INSTALLING STAKES.
5. ALL TREES TO BE PLACED SO THAT ROOT COLLAR IS POSITIONED 75-100mm HIGHER THAN SURROUNDING GRADE.
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE SHOWN.

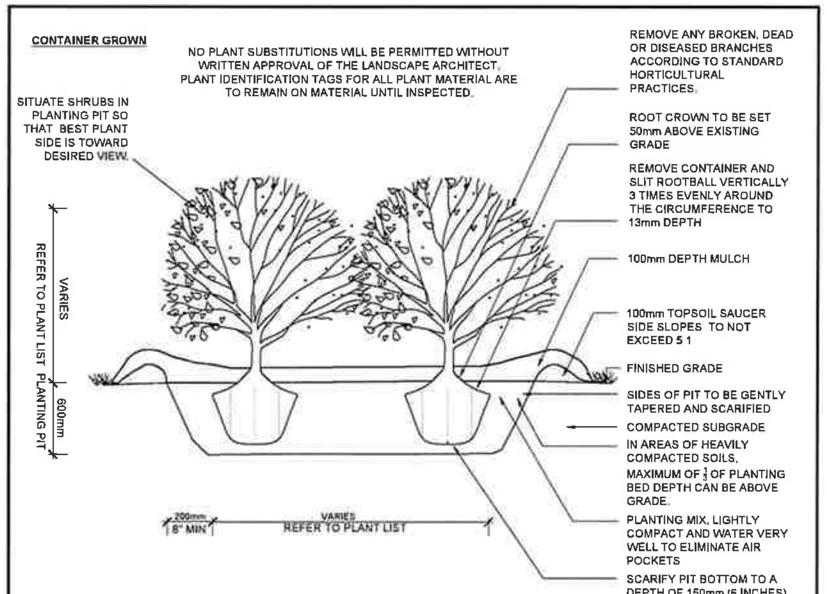
2-LD1 TYPICAL CONIFEROUS TREE PLANTING DETAIL
WIRE BASKET, BALLED AND BURLAPPED — NTS



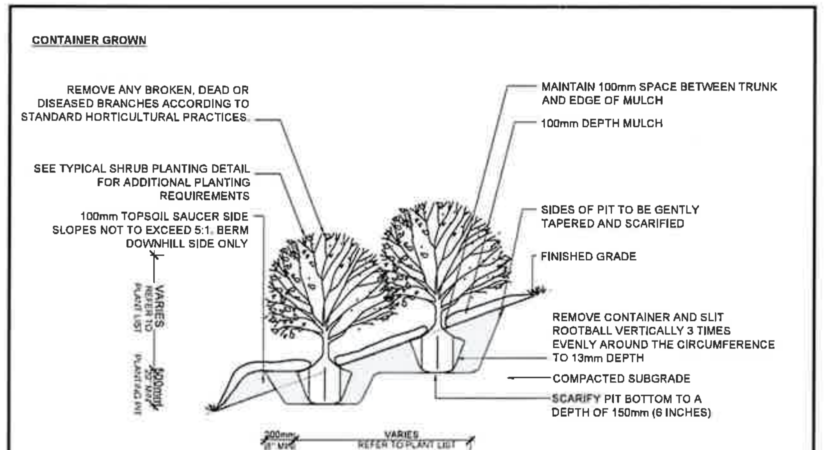
NOTES

1. PRUNE OUT AND TREAT BROKEN, DISEASED, AND WEAK BRANCHES. RETAIN NORMAL SHAPE OF TREE.
2. ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY OWNER'S REPRESENTATIVE.
3. ALL TREES TO BE SET PLUMB, LEVEL, AND TRUE TO LINE IN PLANTING PIT.
4. DO NOT DAMAGE ROOT BALL WHEN INSTALLING STAKES.
5. PIT SIZE DETERMINED BY SIZE OF MATERIAL BEING PLANTED.
6. MAXIMUM SLOPE ON WHICH PIT CAN BE EXCAVATED IS 2:1.
6. ALL TREES TO BE PLACED SO THAT ROOT COLLAR IS POSITIONED 75-100mm HIGHER THAN SURROUNDING GRADE.
7. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE SHOWN.

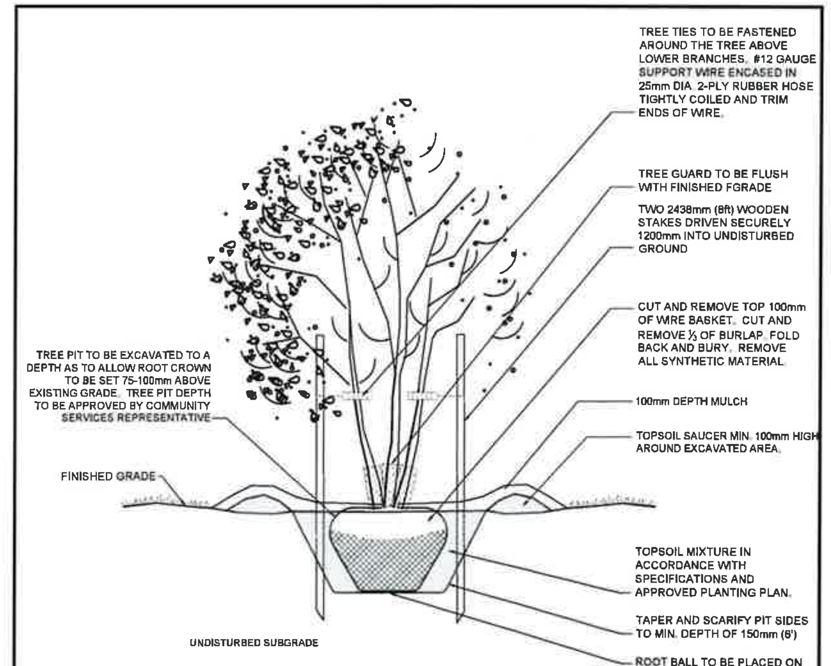
3-LD1 TYPICAL SLOPED TREE PLANTING DETAIL- ALL SPECIES AND SIZES - WIRE BASKET, BALLED AND BURLAPPED — NTS



4-LD1 TYPICAL SHRUB PLANTING DETAIL
ALL SPECIES AND SIZES — NTS



5-LD1 TYPICAL SHRUB PLANTING ON A SLOPE DETAIL
ALL SPECIES AND SIZES — NTS

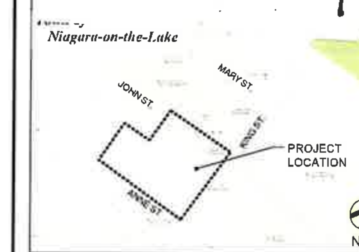


NOTES

1. PRUNE OUT AND TREAT BROKEN, DISEASED, AND WEAK BRANCHES. RETAIN NORMAL SHAPE OF TREE.
2. ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY OWNER'S REPRESENTATIVE.
3. ALL TREES TO BE SET PLUMB, LEVEL, AND TRUE TO LINE IN PLANTING PIT.
4. DO NOT DAMAGE ROOT BALL WHEN INSTALLING STAKES.
5. ALL TREES TO BE PLACED SO THAT ROOT COLLAR IS POSITIONED 75-100mm HIGHER THAN SURROUNDING GRADE.
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE SHOWN.

FOR SPA ONLY

6-LD1 TYPICAL DECIDUOUS MULTISTEM TREE PLANTING DETAIL- 45mm CAL. - WIRE BASKET, BALLED AND BURLAPPED — NTS



LEGEND:

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

NO.	REVISIONS	DATE:

NO.	ISSUED	DATE:
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT: A|C|K — 443 EASTCHESTER AVE E. ST. CATHARINES, ON L2M 6S2 (905) 684-5646

OWNER: LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE: THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian — SEFERIAN DESIGN GROUP

SHEET TITLE: PLANTING DETAILS

DWG No	LD-1	SCALE: AS SHOWN
		PROJECT NO: 15-012
STAMP:		DRAWN BY: SLS
		DESIGN BY: SLS
		CHECKED BY: HS
		SHEET No: 7 OF 18
		NORTH

PRINT DATE: Thursday, August 31, 2017

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Schedule C - 8

GENERAL PLANTING NOTES

1. IF DISCREPANCIES IN THE PLANT QUANTITIES EXIST, THEN THE **PLANTING PLANS SHALL OVER-RIDE THE PLANT LIST.**
2. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
3. THE CONTRACTOR IS TO BE AWARE OF ALL EXISTING AND PROPOSED SERVICES AND UTILITIES. THE CONTRACTOR SHALL HAVE ALL UNDERGROUND SERVICES AND UTILITY LINES STAKED BY EACH AGENCY HAVING JURISDICTION PRIOR TO COMMENCING WORK. PLANTING MAY BE ADJUSTED TO SUIT LOCATION OF UTILITY STRUCTURES.
4. ALL MATERIAL THAT CAN NOT BE PLANTED WITHIN 48 HOURS OF DELIVERY SHALL BE HEALED IN ON SITE AND BE KEPT PROPERLY PROTECTED FROM DESICCATION BY WIND OR SUN.
5. **THE CONTRACTOR IS TO STAKE OUT ALL TREE LOCATIONS AND SHRUB BED GROUPINGS FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING OPERATIONS.**

STOCK

1. ALL PLANT MATERIAL SHALL COMPLY WITH THE MOST CURRENT EDITION OF THE "CANADIAN STANDARDS FOR NURSERY STOCK". PLANT MATERIAL SHALL BE STRUCTURALLY SOUND, WELL FURNISHED WITH FOLIAGE, SHOWING VIGOROUS GROWTH AND FORMATION OF SHOOTS, AND BE FREE FROM BLIGHT AND DISEASE OF ANY DESCRIPTION. ANY SUBSTITUTIONS AS TO VARIETY OR SPECIES MUST BE ACCEPTED BY THE LANDSCAPE ARCHITECT.
2. THE CONTRACTOR UPON REQUEST SHALL PROVIDE DOCUMENTATION FOR ALL PLANT MATERIAL INDICATING THE SPECIES, SIZE, AND SUPPLIER. CONTAINER GROWN PLANT MATERIALS MUST BE GROWN IN THE SAME CONTAINER FOR A MINIMUM PERIOD OF 6 MONTHS.
3. COVER ANY LEAFED-OUT PLANT STOCK WHILE IN TRANSIT OR TEMPORARY STORAGE.
4. PLANT MATERIAL SHALL NOT BE COLLECTED OR DUG FROM NATIVE STANDS OR ESTABLISHED WOODLOTS.

SITE PREPARATION

1. SOILS SHALL BE FERTILE, FRIABLE, STONE-FREE AND NOT IN A FROZEN OR MUDDY CONDITION AT GRADING AND PLANTING.
2. THE CONTRACTOR SHALL FOLLOW THE SPACING AND OFFSETS FROM FIXED OBJECTS, AND ADHERE TO THE DESIGN INTENT WHEN LAYING OUT THE PLANT MATERIAL LOCATIONS.

PLANTING

1. ALL MATERIAL DELIVERED TO THE SITE SHALL BE EITHER WATERED IMMEDIATELY OR WITHIN 24 HOURS WARRANTED BY THE MOISTURE CONTENT OF THE ROOT BALLS/CONTAINERS.
2. ALL MATERIAL THAT CANNOT BE PLANTED WITHIN 48 HOURS OF DELIVERY SHALL BE HEALED IN ON SITE AND KEPT PROPERLY PROTECTED FROM DESICCATION BY WIND OR SUN.
3. NO PLANT SUBSTITUTIONS WILL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
4. CONTRACTOR IS TO APPLY IN WRITING REGARDING ANY CHANGES TO CONTRACT DOCUMENTS AND WILL PROVIDE THE LANDSCAPE ARCHITECT WITH DOCUMENTATION AND /OR DRAWINGS FOR THE PREPARATION OF AS-BUILT DRAWINGS.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN PLANT MATERIALS IN GOOD CONDITION FROM THE DATE OF DELIVERY TO THE END OF THE WARRANTY PERIOD.
6. DAMAGED MATERIAL WILL BE REJECTED. TREES WITHOUT LEADERS, TRUNK WOUNDS OR DAMAGED MAJOR LIMBS WILL BE REJECTED. SHRUBS WITH DAMAGED BRANCHES OR INSUFFICIENT ROOT MASS WILL BE REJECTED.
7. SOAK ROOT BALL WITH WATER PRIOR TO MOVING/SHIPPING. PLANT STOCK SHIPPED WHILE IN LEAF SHALL BE COVERED WHEN IN TRANSIT. BARE ROOT STOCK SHALL BE KEPT MOIST AT ALL TIMES. MATERIAL THAT SHOWS SIGNIFICANT WIND BURN, DESICCATION OR EXCESSIVELY DRY ROOT BALLS OR CONTAINERS WILL NOT BE ACCEPTED.
7. TREE PIT AND SAUCER AND PLANTING BEDS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING. TOP DRESS AREA IMMEDIATELY OVER ROOT MASS (SAUCER AREA) WITH BONE MEAL.
8. THE POTTED HERBACEOUS VEGETATION SHALL BE REMOVED FROM THE POT TOGETHER WITH THE POTTING SOIL AND PLACED FIRMLY INTO THE NATIVE SOIL AT THE LOCATION INDICATED ON THE PLAN. ROOT RHIZOME, OR TUBER SHALL BE BURIED TO THE SAME DEPTH AS THE NATURAL STATE OF THE PLANT. ALL POTS AND CONTAINERS SHALL BE REMOVED AND DISPOSED OF OFF SITE.
9. IN CASE OF FIBRE POTS, CUT 3 LONGITUDINAL SLITS DOWN SIDES OF POT. PLACE POTTED PLANT IN PLANTING PIT AND CAREFULLY REMOVE FIBRE POT.
10. THE PLANTING PIT SHALL BE BACKFILLED WITH NATIVE SOIL IN LAYERS 150MM DEEP, FIRMLY TAMPED INTO PLACE AND A SHALLOW SAUCER SHALL BE CREATED OVER THE PLANTING PIT AREA TO RETAIN WATER.
11. TREES AND SHRUBS SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE.
12. LIGHTLY TAMP SPECIFIED TOPSOIL WHEN BACKFILLING TO ELIMINATE AIR POCKETS AND PREVENT SETTLING.
13. PLANT MATERIAL SHALL BE THOROUGHLY WATERED AT THE TIME OF PLANTING TO THE FULL DEPTH OF THE ROOT BALL.
14. RODENT PROTECTION FOR ALL TREES. SPIRAL WRAPPED AROUND PLASTIC TREE PROTECTOR 24 INCHES HIGH. ENSURE THAT THE BOTTOM 50MM OF THE TREE GUARD EXTENDS BELOW SOIL TO PREVENT ENTRY BY RODENT.
15. RODENT PROTECTION FOR ALL SHRUBS: ALL SHRUBS TO BE TREATED WITH AN APPLICATION OF RODENT REPELLENT (SKOOT OR APPROVED SUBSTITUTE) PRIOR TO EACH WINTER SEASON THROUGH THE WARRANTY PERIOD.
16. SHRUBS ARE TO BE PLANTED AND ARRANGED SUCH THAT THEY FORM A TIGHTLY SPACED, NATURALISTIC APPEARANCE TO REDUCE WEED GROWTH. ALL SHRUBS TO BE PLANTED IN CONTINUOUS BEDS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
17. ALL MULCH TO BE SHREDDED PINE BARK MULCH. AVAILABLE FROM GRO-BARK (1-888-GRO-BARK) OR APPROVED EQUIVALENT. DEPTH TO BE 100MM. DO NOT PLACE MULCH IN DIRECT CONTACT WITH TRUNKS.
18. ALL PLANTINGS ARE TO BE LOCATED 3.0M MINIMUM FROM UTILITIES, AND 4.0M MINIMUM FROM DRAINAGE STRUCTURES, DITCHES AND SWALES, UNLESS OTHERWISE NOTED.
19. IT IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY WEED AND GRASS CONTROL IN THE PLANTING BED AREAS AS REQUIRED (NO PESTICIDES IN ACCORDANCE WITH MUNICIPAL BY-LAWS AND PROVINCIAL LEGISLATION).
20. ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY OWNER'S REPRESENTATIVE.
21. DO NOT REMOVE ALL NURSERY TAGS UNTIL FINAL INSPECTION.
22. AT THE END OF WARRANTY PERIOD IT IS RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND DISPOSE OF ALL STAKES AND GUY WIRES TO THE TREES.

TOPSOIL

SOURCE

1. ADVISE CONTRACT ADMINISTRATOR OF TOPSOIL SOURCE TO BE UTILIZED WITH SUFFICIENT LEAD TIME FOR TESTING.
2. TOPSOIL SHALL BE A SCREENED, FERTILE, FRIABLE, NATURAL LOAM CONTAINING NOT LESS THAN 4% ORGANIC MATTER FOR CLAY LOAMS AND NOT LESS THAN 2% ORGANIC MATTER FOR SANDY LOAMS TO A MAXIMUM OF 15%.
3. TOPSOIL SHALL BE CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, FREE OF SUBSOIL CONTAMINATION, ROOTS AND STONES OVER 30 MM IN DIAMETER AND WEEDS, WITH A PH RANGING FROM 6.5 TO 7.0.

QUALITY

4. TOPSOIL FOR SEEDED AREAS: MIXTURE OF PARTICULATES, MICRO ORGANISMS AND ORGANIC MATTER WHICH PROVIDES SUITABLE MEDIUM FOR SUPPORTING INTENDED PLANT GROWTH.
5. SOIL TEXTURE BASED ON THE CANADIAN SYSTEM OF SOIL CLASSIFICATION, TO CONSIST OF 20 TO 70% SAND, MINIMUM 7% CLAY, AND CONTAIN 2 TO 10% ORGANIC MATTER BY WEIGHT.
6. CONTAIN NO TOXIC ELEMENTS OR GROWTH INHIBITING MATERIALS.
7. FINISHED SURFACE TOTALLY FREE FROM STONES, ROOTS, DEBRIS, SUBSOIL, CLAY LUMPS, WEEDS, WEED SEEDS OR OTHER SOLID OR DELETERIOUS MATERIALS.
8. CONSISTENCY: FRIABLE WHEN MOIST.

PLANTING MIXTURE

1. PLANTING MIXTURE FOR CONTINUOUS PLANTING BEDS AND TREE PITS SHALL BE 6 PARTS TOPSOIL, 2 PART WELL-ROTTED MANURE, 1 PART PEAT MOSS, AND 0.75 KG SUPERPHOSPHATE.

SOIL AMENDMENTS

1. FERTILIZER:
   - CONFORM TO RECOMMENDATIONS FROM SOIL TESTING AGENCY WITH RESPECT TO IMPROVEMENTS FOR TESTED TOPSOIL AND APPLY AS SPECIFIED FOR EACH CONDITION.
   - INDUSTRY ACCEPTED STANDARD MEDIUM CONTAINING NITROGEN, PHOSPHOROUS, POTASSIUM AND OTHER MICRO_NUTRIENTS SUITABLE TO SPECIFIC PLANT SPECIES OR APPLICATION OR DEFINED BY SOIL TEST.
12. PEATMOSS:
   - DERIVED FROM PARTIALLY DECOMPOSED SPECIES OF SPHAGNUM MOSSES.
   - ELASTIC AND HOMOGENEOUS, BROWN IN COLOUR.
   - FREE OF WOOD AND DELETERIOUS MATERIAL WHICH COULD PROHIBIT GROWTH.
   - SHREDDED PARTICLE MINIMUM SIZE: 5 MM.
13. SAND: WASHED COARSE SILICA SAND, MEDIUM TO COURSE TEXTURED.
14. ORGANIC MATTER: COMPOST CATEGORY A IN ACCORDANCE WITH CURRENT CCME PN1340, UNPROCESSED ORGANIC MATTER, SUCH AS ROTTED MANURE, HAY, STRAW, BARK RESIDUE OR SAWDUST, MEETING THE ORGANIC MATTER, STABILITY AND CONTAMINANT REQUIREMENTS.
15. COMPOST:
   - MIXTURE OF SOIL AND DECOMPOSING ORGANIC MATTER USED AS FERTILIZER, MULCH, OR SOIL CONDITIONER.
   - COMPOST IS PROCESSED ORGANIC MATTER CONTAINING 40% OR MORE ORGANIC MATTER AS DETERMINED BY WALKLEY_BLACK OR LOSS ON IGNITION (LOI) TEST.
   - PRODUCT MUST BE SUFFICIENTLY DECOMPOSED (I.E. STABLE) SO THAT ANY FURTHER DECOMPOSITION DOES NOT ADVERSELY AFFECT PLANT GROWTH (C:N RATIO BELOW 25), AND CONTAIN NO TOXIC OR GROWTH INHIBITING CONTAMINATES.
   - COMPOSED BIO-SOLIDS TO: CCME GUIDELINES FOR COMPOST QUALITY, CATEGORY A.
16. USE COMPOSTS MEETING CATEGORY B REQUIREMENTS FOR LAND FILL RECLAMATION AND LARGE SCALE INDUSTRIAL APPLICATIONS.
17. LIMESTONE:
   - GROUND AGRICULTURAL LIMESTONE.
   - GRADATION REQUIREMENTS: PERCENTAGE PASSING BY WEIGHT, 90% PASSING 1.0 MM SIEVE, 50% PASSING 0.125 MM SIEVE.
17. SOURCE QUALITY CONTROL:
   - ADVISE CONSTRUCTION MANAGER OF SOURCES OF TOPSOIL AND/OR MANUFACTURED TOPSOIL TO BE UTILIZED WITH SUFFICIENT LEAD TIME FOR TESTING.
   - CONTRACTOR IS RESPONSIBLE FOR AMENDMENTS TO SUPPLY TOPSOIL AS SPECIFIED.
   - SOIL TESTING BY RECOGNIZED TESTING FACILITY FOR PH, P AND K, AND ORGANIC MATTER, SOLUBLE SALT CONTENTS, ATRAZINE AND PH VALUE IN ORDER TO DETERMINE THE AMOUNT AND TYPE OF FERTILIZER OR ADDITIVES TO BE APPLIED FOR SPECIFIC AREAS.
   - TESTING OF TOPSOIL WILL BE CARRIED OUT BY TESTING LABORATORY APPROVED BY CONTRACT ADMINISTRATOR
   - SOIL SAMPLING, TESTING AND ANALYSIS TO BE IN ACCORDANCE WITH PROVINCIAL STANDARDS.

SODDING NOTES

1. SOD SHALL BE NO. 1 CULTIVATED TURF GRASS SOD GROWN AND SOLD IN ACCORDANCE WITH THE CLASSIFICATIONS OF THE NURSERY SOD GROWERS ASSOCIATION OF ONTARIO. LATEST EDITION. COMPOSITION OF THE SOD SHALL BE 60-70% KENTUCKY BLUEGRASS AND 30-40% CREEPING RED FESCUE ON MINIMUM 100MM CLEAN TOPSOIL.
2. CONTRACTOR TO RESTORE ALL AREAS DISTURBED BY CONSTRUCTION WITH SOD UNLESS OTHERWISE INDICATED.

WARRANTY PERIOD

1. ALL WORKMANSHIP AND PLANT MATERIAL SHALL BE UNDER WARRANTY FOR A PERIOD OF **24 MONTHS** COMMENCING ON THE DATE OF ACCEPTANCE. SUBMIT A WRITTEN GUARANTEE TO THE EFFECT THAT ALL PLANTS ACCEPTED DURING THE PERIOD OF JANUARY 1ST TO JULY 15TH SHALL BE GUARANTEED UNTIL JULY 15TH OF THE FOLLOWING YEAR. PLANTS ACCEPTED DURING THE PERIOD OF JULY 15TH TO DECEMBER 31ST SHALL BE GUARANTEED FOR TWO YEARS FROM THE DATE OF ACCEPTANCE. THE GUARANTEE PERIODS LISTED ABOVE SHALL APPLY TO ALL 'NURSERY GROWN' PLANTS.
2. PLANTS WHICH HAVE DIED DURING THE PERIOD OF WARRANTY SHALL BE REPLACED AT NO COST TO THE OWNER AS SOON AS POSSIBLE CONSISTENT WITH THE ALLOWABLE PLANTING SEASON. DEAD PLANT MATERIAL REPLACED UNDER WARRANTY SHALL BE REMOVED FROM THE CONTRACT SITE AT THE CONTRACTOR'S EXPENSE. PLANT MATERIAL REPLACED UNDER WARRANTY SHALL CONFORM TO ALL SPECIFICATIONS OF THE ORIGINAL CONTRACT INCLUDING THE WARRANTY FROM THE DATE OF REPLACEMENT PLANTING.
3. THE CONTRACTOR SHALL PROVIDE MAINTENANCE IMMEDIATELY AFTER THE PLANTS ARE INSTALLED AND CONTINUE THROUGHOUT THE ENTIRE WARRANTY PERIOD. MAINTENANCE REQUIREMENTS SHALL INCLUDE ALL PROCEDURES CONSISTENT WITH PROPER HORTICULTURAL PRACTICES TO ENSURE NORMAL, VIGOROUS AND HEALTHY GROWTH OF ALL MATERIAL PLANTED INCLUDING SEEDING.
4. AT THE TIME OF FINAL WARRANTY ACCEPTANCE, ALL MATERIAL MUST BE IN A HEALTHY AND VIGOROUS CONDITION. PLANTING BEDS MUST BE FRESHLY CULTIVATED AND FREE OF WEEDS, RUBBISH AND DEBRIS.

MASTER PLANT LIST

SYM	Qty	Botanical Name	Common Name	Cal. (mm)	HT (cm)	Root	Spacing	Remarks
CONIFEROUS TREES:								
PP	24	*Picea pungens 'Baby Blue'*	Baby Blue Spruce		150	W.B.	As Shown	full vigorous specimen
PS	27	*Pinus strobus*	Eastern White Pine		150	W.B.	As Shown	full vigorous specimen
PSC	21	*Pinus strobus 'Contorta'*	Contorted Eastern White Pine		150	W.B.	As Shown	full vigorous specimen
DECIDUOUS TREES:								
AR1	19	*Acer Rubrum*	Red Maple	60		W.B.	As Shown	full vigorous specimen straight stem single leader
AR2	10	*Acer rubrum 'Clump'*	Red Maple Clump		80	7 gal	As Shown	full vigorous specimen minimum 3 stems
CC1	3	*Carpinus caroliniana*	Blue Beech	60		W.B.	As Shown	full vigorous specimen straight stem single leader
CC2	2	*Carpinus caroliniana 'Clump'*	Blue Beech Clump		175	W.B.	As Shown	full vigorous specimen minimum 3 stems
CD	10	*Castanea dentata*	American Chestnut		175	10 gal.	As Shown	full vigorous specimen straight stem single leader
CE	4	*Cercis canadensis*	Eastern Redbud		175	15 gal	As Shown	full vigorous specimen straight stem single leader
CEF	8	*Cercis canadensis 'Forest Pansy'*	Forest Pansy Redbud		200	15 gal.	As Shown	full vigorous specimen straight stem single leader
CEL	10	*Cercis canadensis 'Lavender Twist'*	Lavender Twist Redbud		150	15 gal.	As Shown	full vigorous specimen straight stem single leader
CJ	9	*Cercidiphyllum japonicum*	Katsura Tree	60		W.B.	As Shown	full vigorous specimen straight stem single leader
FG	6	*Fagus grandifolia*	American Beech	60		W.B.	As Shown	full vigorous specimen straight stem single leader
FS	27	*Fagus sylvatica 'Red Obelisk'*	Red Obelisk Beech	60		W.B.	As Shown	full vigorous specimen straight stem single leader
GB	11	*Ginkgo biloba*	Maidenhair Tree	60		W.B.	As Shown	full vigorous specimen straight stem single leader
HC	5	*Halesia carolina 'Arnold Pink'*	Arnold Pink Snowdrop Tree		200	10 gal.	As Shown	full vigorous specimen straight stem single leader
HMV	6	*Halesia monticola var. vestita*	Mountain Silverbell	60	200	15 gal.	As Shown	full vigorous specimen straight stem single leader
LW	2	*Laburnum x watereri 'Vossii'*	Vossii Golden Chain Tree		250	15 gal.	As Shown	full vigorous specimen straight stem single leader
MF	20	*Malus floribunda*	Japanese Crabapple	50		W.B.	As Shown	full vigorous specimen straight stem single leader
PSA	14	*Prunus serrulata 'Amanogawa'*	Japanese Flowering Cherry		250	15 gal.	As Shown	full vigorous specimen straight stem single leader
PSK	2	*Prunus serrulata 'Kiku-shidare-sakura'*	Cheal's Weeping Cherry	50		15 gal.	As Shown	full vigorous specimen straight stem single leader
PSP	9	*Prunus subhirtella 'Pendula'*	Weeping Higan Cherry	40		15 gal.	As Shown	full vigorous specimen straight stem single leader
SA	3	*Salix alba 'Tristis'*	Weeping Golden Willow	60		W.B.	As Shown	full vigorous specimen straight stem single leader
SJM	1	*Sophora japonica 'Milstone'*	Milstone Japanese Pagodatree		250	15 gal	As Shown	full vigorous specimen straight stem single leader
SJP	1	*Sophora Japonica 'Pendula'*	Weeping Japanese Pagoda Tree		250	15 gal.	As Shown	full vigorous specimen straight stem single leader
TA	22	*Tilia americana*	Basswood	60		W.B.	As Shown	full vigorous specimen straight stem single leader

LEGEND:

OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

NO.	REVISIONS	DATE:

NO.	ISSUED	DATE:
1	ISSUED FOR COORDINATION	MAR. 3 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12 2017
3	ISSUED FOR SPA	JUNE 2 2017
4	REISSUED FOR SPA	SEPT. 7 2017

CLIENT:

A | C | K — 443 EASTCHESTER AVE E, ST. CATHARINES, ON L2M 6S2 (905) 984-5545

OWNER:

LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:

THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian

SEFERIAN DESIGN GROUP
64 Prince Street, Suite 202
Kingston, ON K7L 1A8
905-531-8177 | seferian.design.ca

SHEET TITLE:

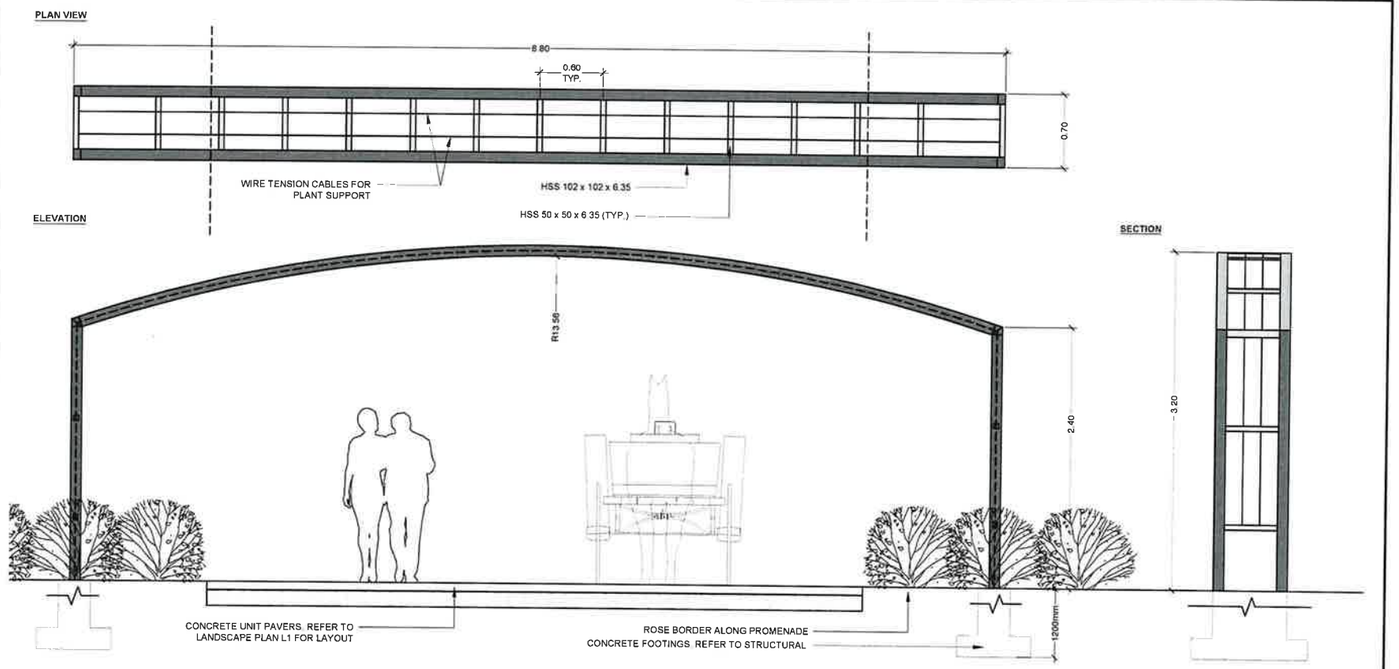
PLANTING NOTES

DWG No: LD-2	SCALE: AS SHOWN
	PROJECT NO. 15-012
STAMP	DRAWN BY: SLS
	DESIGN BY: SLS
	CHECKED BY: HS
	SHEET No. 8 OF 10
	NORTH

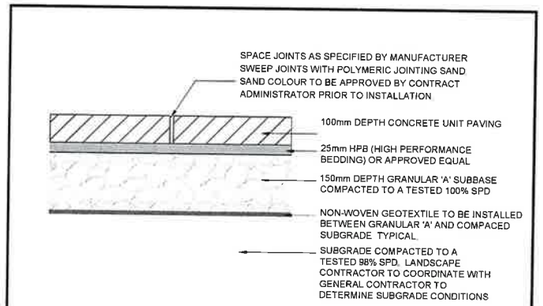
FOR SPA ONLY
NOT FOR CONSTRUCTION

Y:\Projects-2\2015\15-012 - Pillar & Post, Niagara on the Lake\Current Dwg\AutoCAD\SPA\15-012_P&P_LandscapeSPA_2017 09 07.dwg

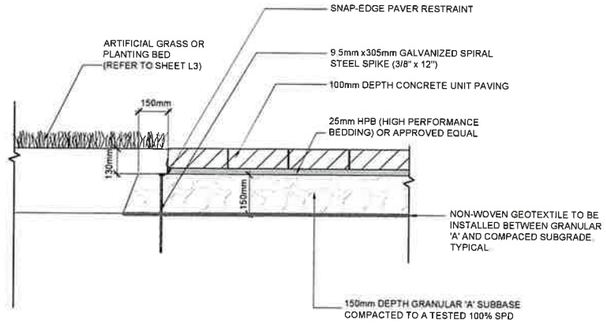
PRINT DATE: Thursday, August 31, 2017



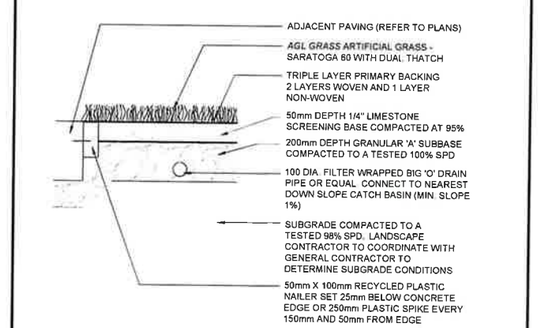
1-LD3 MAIN PROMENADE ARCHES — NTS



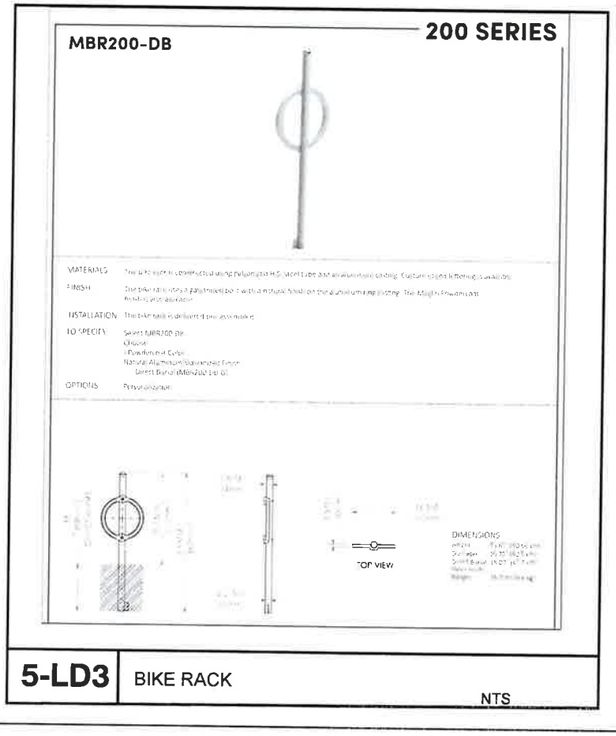
2-LD3 TYPICAL 100mm DEPTH CONCRETE UNIT PAVING DETAIL ON GRADE — NTS



3-LD3 TYPICAL 100mm DEPTH CONCRETE UNIT PAVING ABUTTING ARTIFICIAL GRASS AND/OR PLANTING BED — NTS



4-LD3 ARTIFICAL GRASS DETAIL — NTS



5-LD3 BIKE RACK — NTS

Schedule C-9

LEGEND

OWNER'S NAME

OWNER'S SIGNATURE

TOWN OF NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

NO.	REVISIONS	DATE:

NO.	ISSUED	DATE:
1	ISSUED FOR COORDINATION	MAR. 3, 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12, 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:

A | C | K

443 EASTCHESTER AVE E. ST. CATHARINES, ON L2M 6S2 (905) 984 5545

OWNER:

LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:

THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian

SEFERIAN DESIGN GROUP

SHEET TITLE:

LANDSCAPE DETAILS

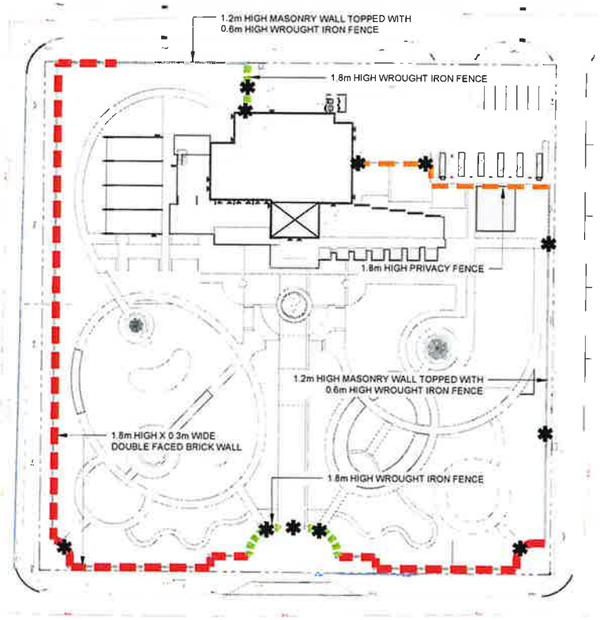
DWG No: LD-3

SCALE: AS SHOWN
PROJECT NO. 15-012
DRAWN BY: SLS
DESIGN BY: SLS
CHECKED BY: HG
SHEET No 9 OF X
NORTH

STAMP:

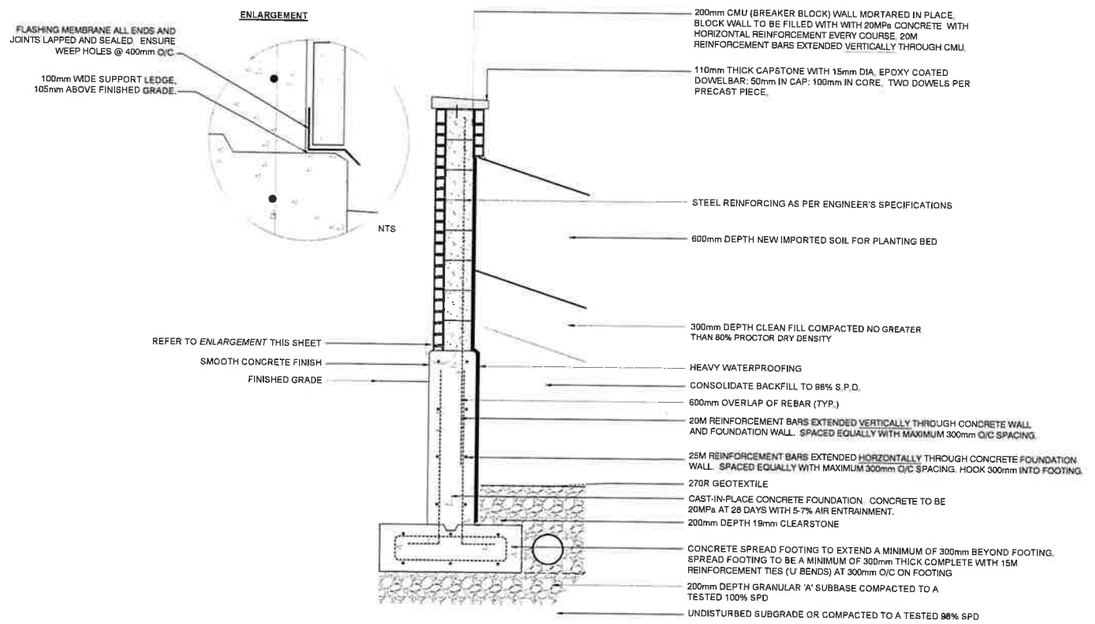
PRINT DATE: Thursday, August 31, 2017

Y:\Projects-2\2015\15-012 - Pillar & Post, Niagara on the Lake\Current Dwg\AutoCAD\SPA\15-012_P&P_LandscapeSPA_2017 09 07.dwg



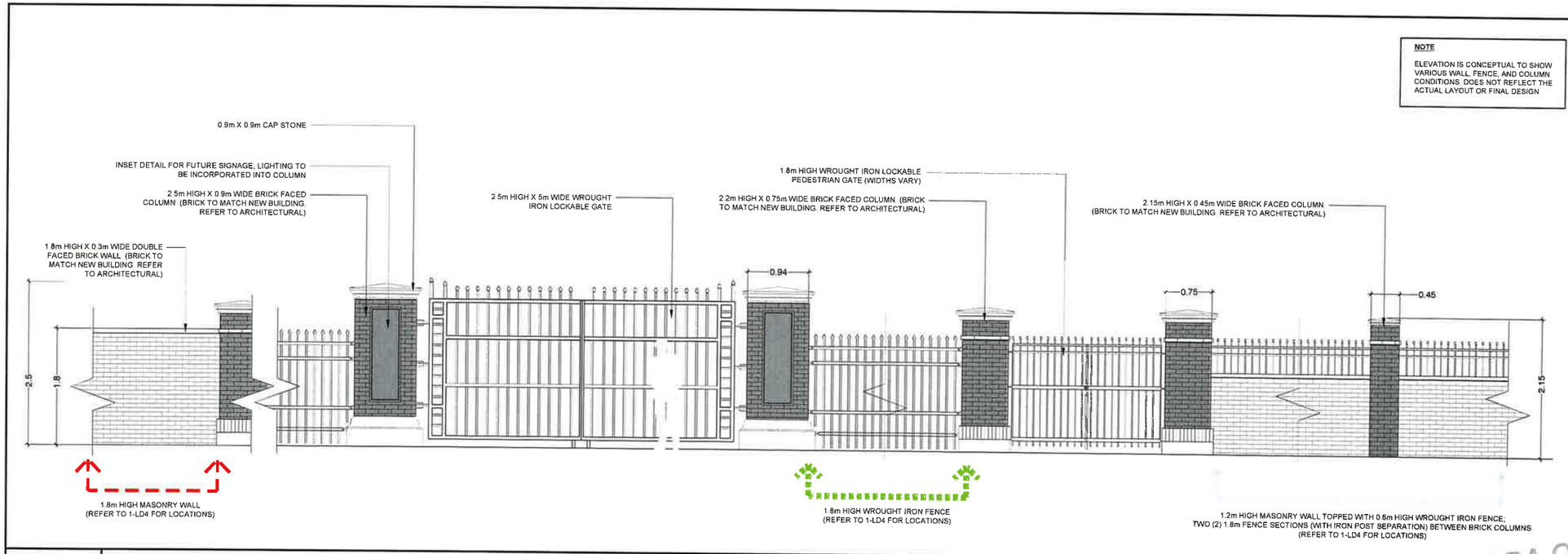
1-LD4 FENCE AND WALL LAYOUT PLAN

NTS



2-LD4 BRICK RETAINING WALL DETAIL
CONDITION ALONG KING STREET

NTS



3-LD4 FENCE AND WALL ELEVATIONS

NTS

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Schedule C-10

LEGEND

OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

NO.	REVISIONS	DATE

NO.	ISSUED	DATE:
1	ISSUED FOR COORDINATION	MAR. 3. 2017
2	PRELIMINARY SPA SUBMISSION	MAY 12. 2017
3	ISSUED FOR SPA	JUNE 2, 2017
4	REISSUED FOR SPA	SEPT. 7, 2017

CLIENT:

A | C | K

443 EASTCHESTER AVE E. ST. CATHARINES, ON L2M 6S2 (905) 984-5543

OWNER:

LAIS HOTEL PROPERTIES LIMITED

PROJECT TITLE:

THE GARDENS AT PILLAR AND POST
John Street
Niagara-On-The-Lake, Ontario

Seferian

SEFERIAN DESIGN GROUP

SHEET TITLE

FENCE AND WALL DETAILS

DWG No:	SCALE: AS SHOWN
LD-4	PROJECT NO 15-012
STAMP:	DRAWN BY: SLS
	DESIGN BY: SLS
	CHECKED BY: HS
	SHEET No 10 OF 10
	NORTH

PRINT DATE: Thursday, August 31, 2017

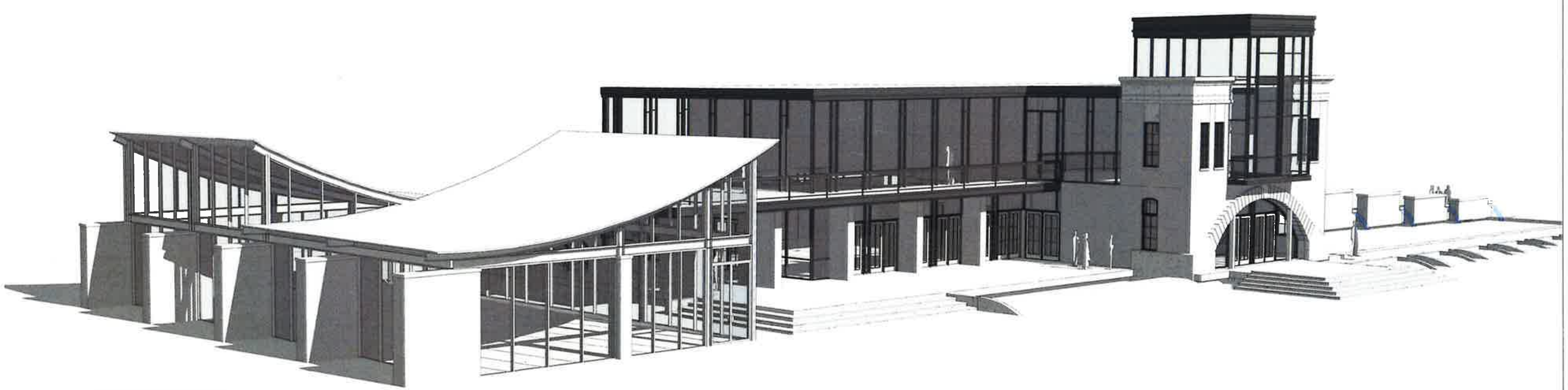
Y:\Projects-2\2015\15-012 - Pillar & Post, Niagara on the Lake\Current Dwg\AutoCAD\SPA\15-012_P&P_LandscapeSPA_2017 09 07.dwg

Schedule D - 1

FRONT (NORTH) ELEVATION

MATERIAL LEGEND

- BRICK VENEER
- GLAZING
- STANDING SEAM METAL ROOFING
- SMOOTH FACE MASONRY PRE-CAST SILLS/CAPS AND ACCENTS
- STUCCO (EIFS) FINISH
- METAL ACCENT PANELS, TRIMS, AND WINDOW FRAMES



FRONT PERSPECTIVE

OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

All contractors and/or trades shall verify all dimensions, notes, site and report any discrepancies prior to commencement of the work. This drawing not to be scaled, all drawings, prints and related documents are the property of the architect and must be returned upon request. Reproduction of drawings and related documents in part or in whole is strictly forbidden without written consent. Drawings to be for the purpose for which they are issued.

No.	Description	Date
1	[illegible]	[illegible]
2	ISSUED FOR S.P.A.	[illegible]
3	[illegible]	[illegible]

THE GARDENS AT PILLAR AND POST PROPOSED: MULTI-PURPOSE BUILDING, OFFICE BUILDING & HOSPITALITY TENTS

OWNER: LAIS HOTEL PROPERTIES LIMITED

ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
6295

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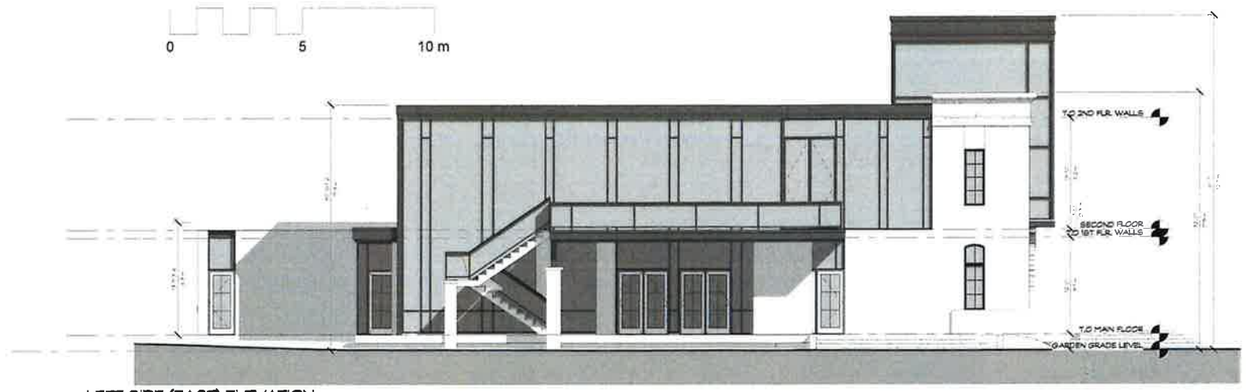
www.ackarchitects.com

FRONT ELEVATION AND PERSPECTIVE

A4

Schedule D -2



LEFT SIDE (EAST) ELEVATION

1:100

MATERIAL LEGEND

- BRICK VENEER
- GLAZING
- STANDING SEAM METAL ROOFING
- SMOOTH FACE MASONRY PRE-CAST SILLS/CAPS AND ACCENTS
- STUCCO (EIFS) FINISH
- METAL ACCENT PANELS, TRIMS, AND WINDOW FRAMES

LEFT SIDE PERSPECTIVE

OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

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No.	Description	Date
1	PRELIMINARY SITE PLAN SUBMISSION	MARCH 2017
2	ISSUED FOR S.P.A.	JUNE 2017
3	REVISED FOR S.P.A.	OCTOBER 3, 2017

THE GARDENS AT PILLAR AND POST
PROPOSED:
MULTI-PURPOSE BUILDING, OFFICE BUILDING & HOSPITALITY TENTS

OWNER: LAIS HOTEL PROPERTIES LIMITED
JOHN STREET, NIAGARA-ON-THE-LAKE, ONTARIO

ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
5295

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SHEET TITLE

ELEVATIONS AND PERSPECTIVES

PROJECT NUMBER	2014-15
DATE	APRIL 2017
DRAWN BY	JMC/MT/MH
CHECKED BY	MDA/AK
SCALE	AS SHOWN

A5

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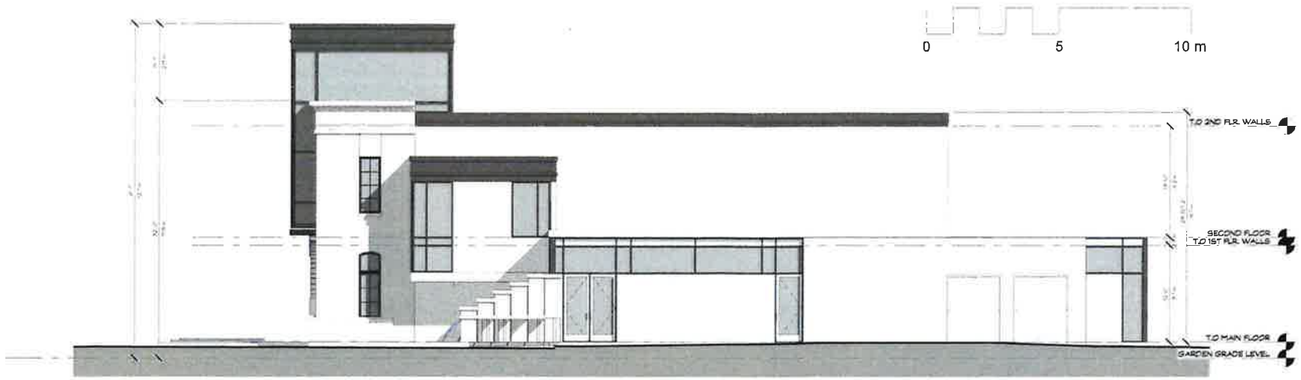
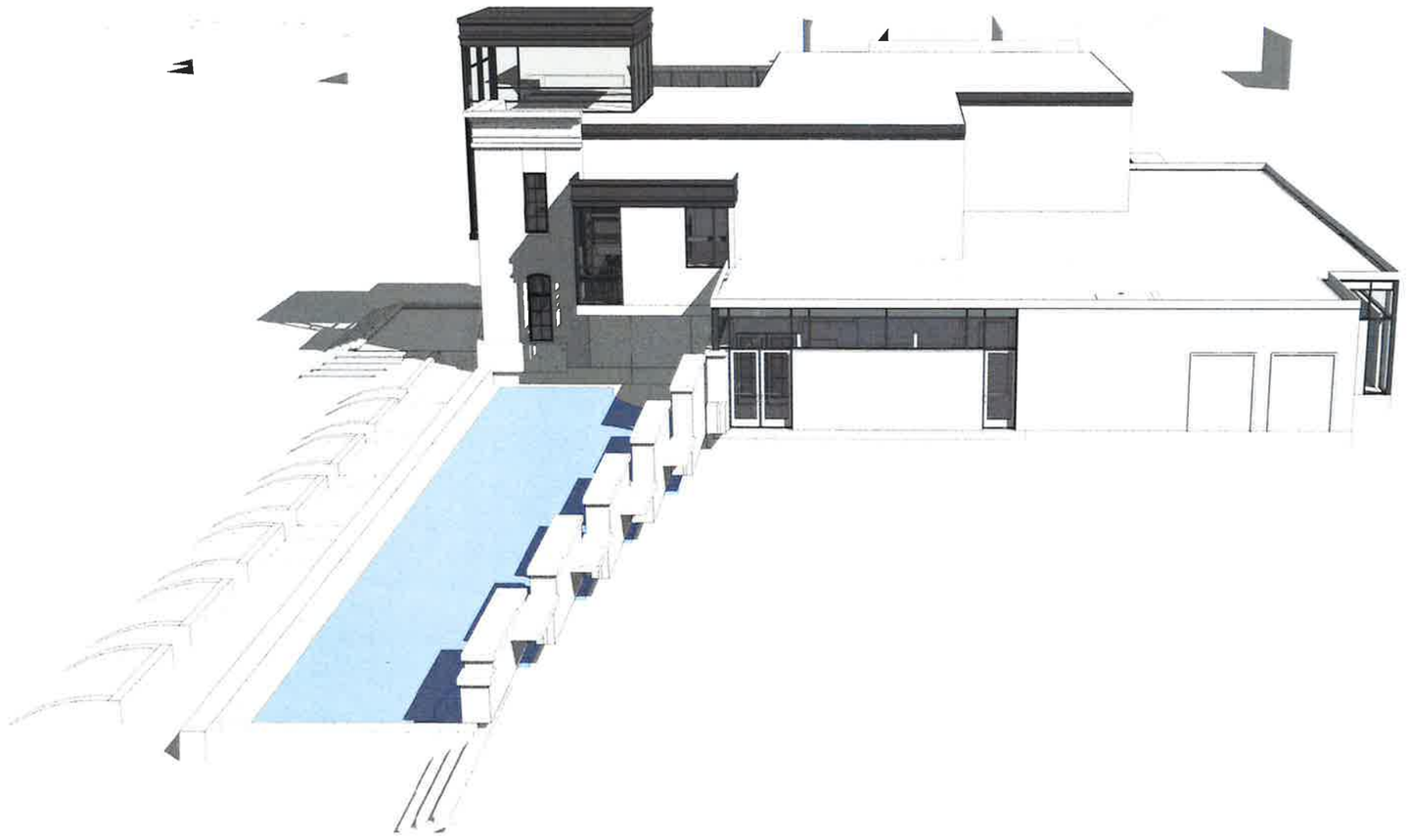
Schedule D-3



RIGHT SIDE (WEST) ELEVATION



MATERIAL LEGEND

- BRICK VENEER
- GLAZING
- STANDING SEAM METAL ROOFING
- SMOOTH FACE MASONRY PRE-CAST SILLS/CAPS AND ACCENTS
- STUCCO (EIFS) FINISH
- METAL ACCENT PANELS, TRIMS, AND WINDOW FRAMES

OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

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No.	Description	Date
1	[illegible]	[illegible]
2	ISSUED FOR S.P.A.	JUNE 1, 2017
3	FINAL ISSUED FOR S.P.A.	OCTOBER 3, 2017

THE GARDENS AT PILLAR AND POST
PROPOSED:
MULTI-PURPOSE BUILDING, OFFICE BUILDING & HOSPITALITY TENTS

OWNER: LAIS HOTEL PROPERTIES LIMITED
JOHN STREET, NIAGARA-ON-THE-LAKE, ONTARIO

ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
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ELEVATIONS & PERSPECTIVES

PROJECT NUMBER	2016-15
DATE	APRIL 2017
DRAWN BY	[illegible]
CHECKED BY	[illegible]
SCALE	AS SHOWN

A6

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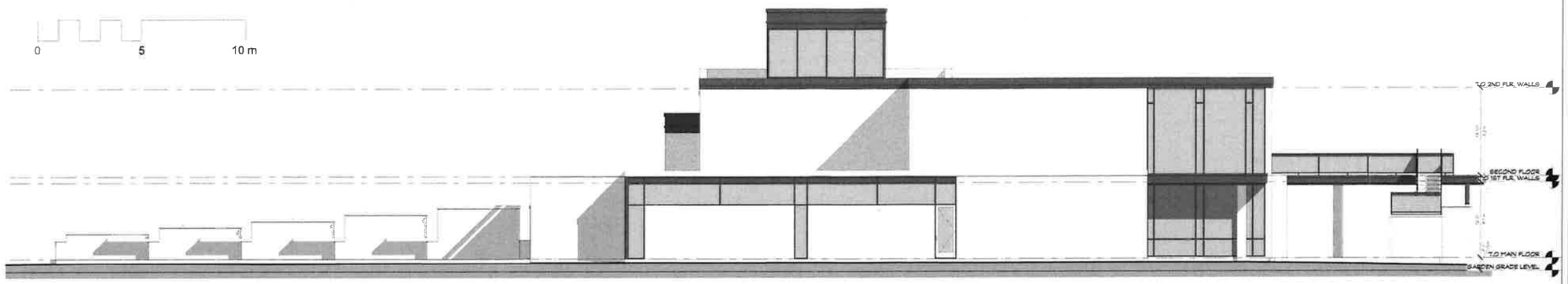
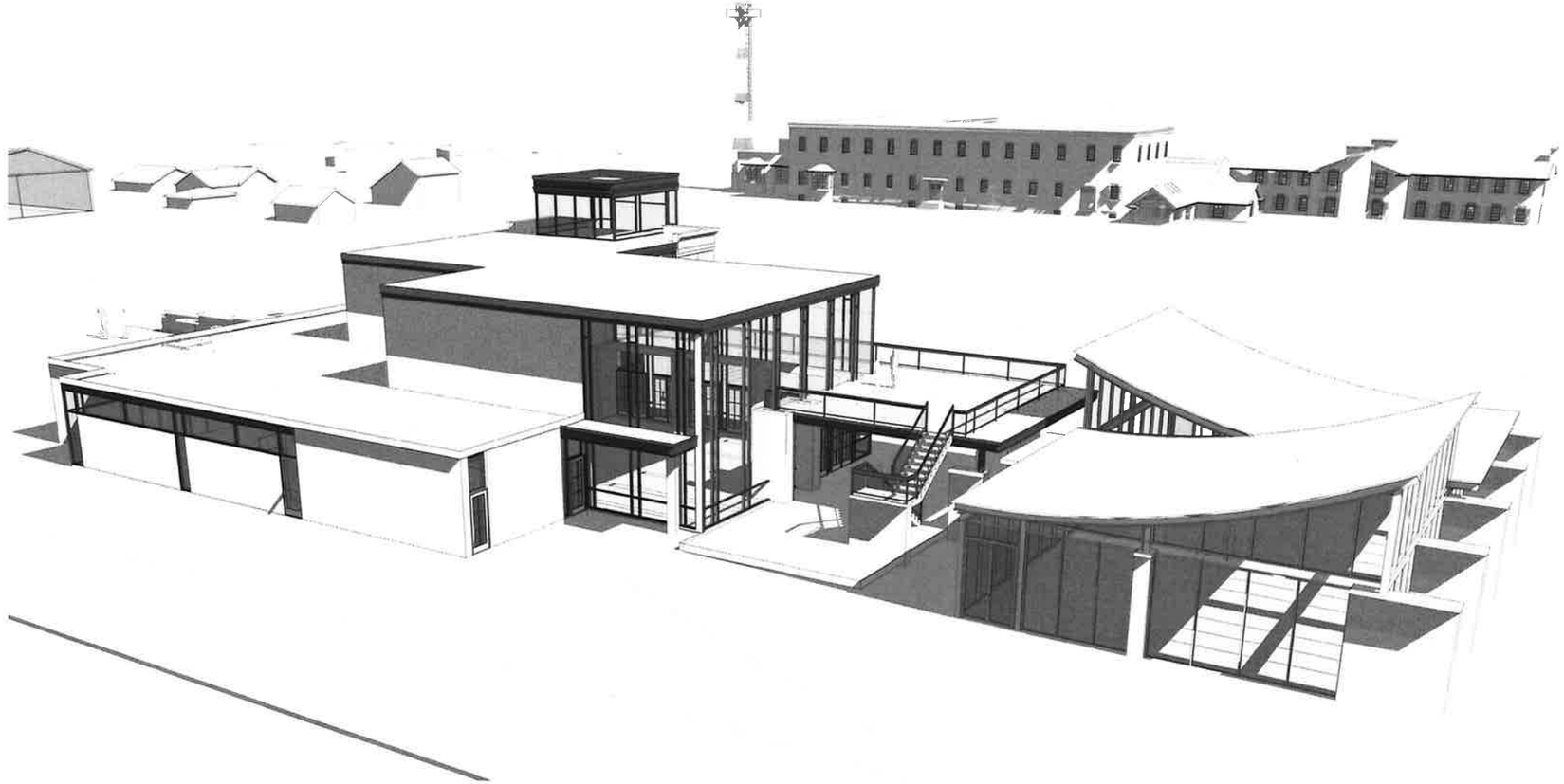
Schedule D – 4



REAR (SOUTH) ELEVATION
1:100

MATERIAL LEGEND

- BRICK VENEER
- GLAZING
- STANDING SEAM METAL ROOFING
- SMOOTH FACE MASONRY PRE-CAST SILLS/CAPS AND ACCENTS
- STUCCO (EIFS) FINISH
- METAL ACCENT PANELS, TRIMS, AND WINDOW FRAMES



OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

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No.	Description	Date
	PRELIMINARY SPA SUBMISSION	MAY 2, 2017
2	ISSUED FOR SPA	JUNE 1, 2017
3	REVISED FOR SPA	OCTOBER 2, 2017

THE GARDENS AT PILLAR AND POST
PROPOSED:
MULTI-PURPOSE BUILDING, OFFICE BUILDING & HOSPITALITY TENTS

OWNER: LAIS HOTEL PROPERTIES LIMITED
[illegible] STREET, NIAGARA-ON-THE-LAKE, ONTARIO

ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
5295

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SHEET TITLE

REAR ELEVATIONS AND PERSPECTIVES

PROJECT NUMBER	2017-015
DATE	APRIL, 2017
DRAWN BY	[illegible]
CHECKED BY	[illegible]
SCALE	AS SHOWN

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Schedule D – 5

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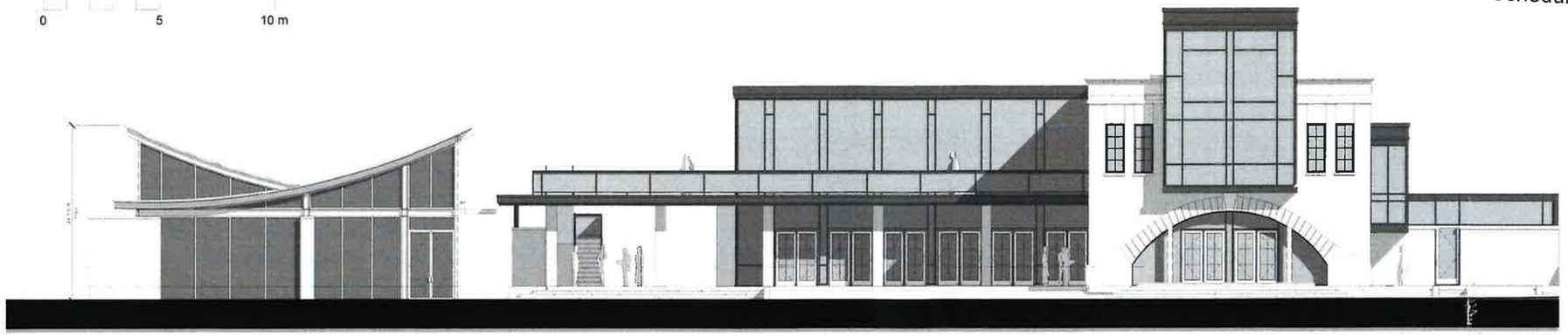
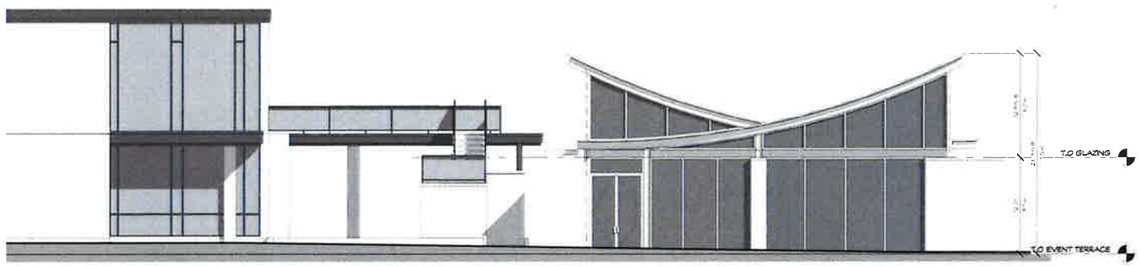


HOSPITALITY TENT ELEVATION

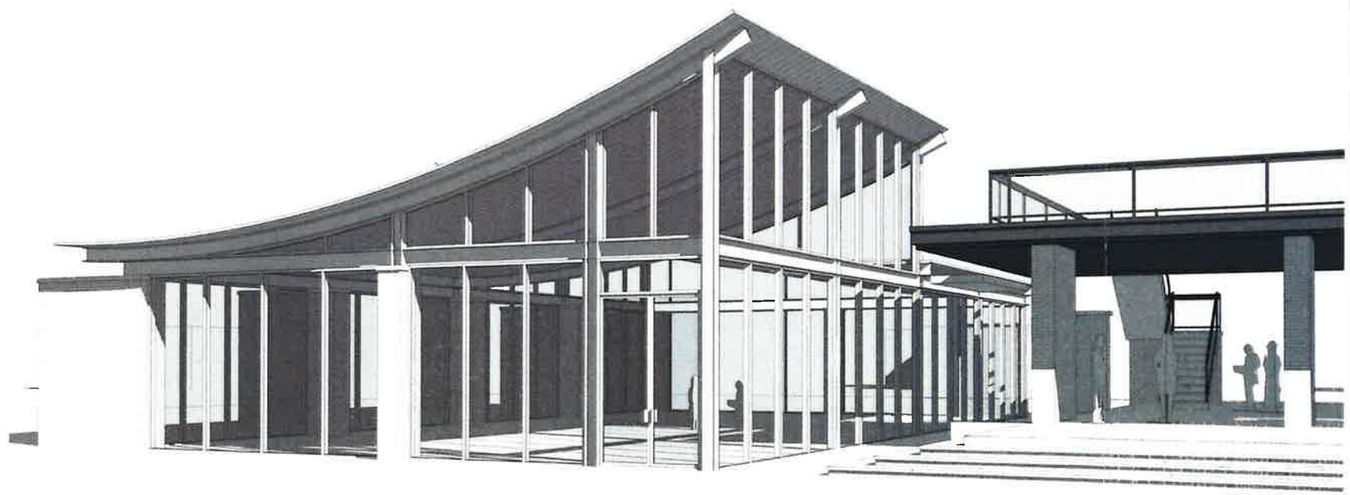
1:100

0 5 10 m



REAR (SOUTH) HOSPITALITY TENT ELEVATION

1:100



OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

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No.	Description	Date
	PRELIMINARY SITE PLAN REVIEW	MARCH 2017
2	ISSUED FOR S.P.A.	JUNE 1 2017
3	FINAL ISSUED FOR S.P.A.	OCTOBER 3 2017

THE GARDENS AT PILLAR AND POST
PROPOSED:
MULTI-PURPOSE BUILDING, OFFICE BUILDING & HOSPITALITY TENTS

OWNER: LAIS HOTEL PROPERTIES LIMITED
JOHN STREET, NIAGARA-ON-THE-LAKE, ONTARIO

ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
5295

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SHEET TITLE

HOSPITALITY TENT ELEVATIONS AND PERSPECTIVES

PROJECT NUMBER	2017-018
DATE	APRIL 2017
DRAWN BY	AM, MP, MA
CHECKED BY	MDA
SCALE	AS SHOWN

A9

2017-10-06 8:39:33 AM

Schedule D - 6

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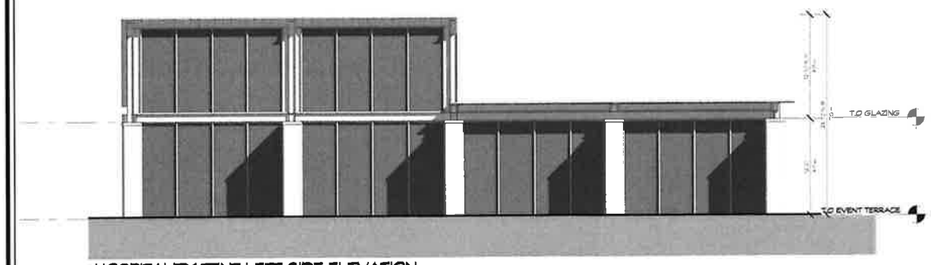
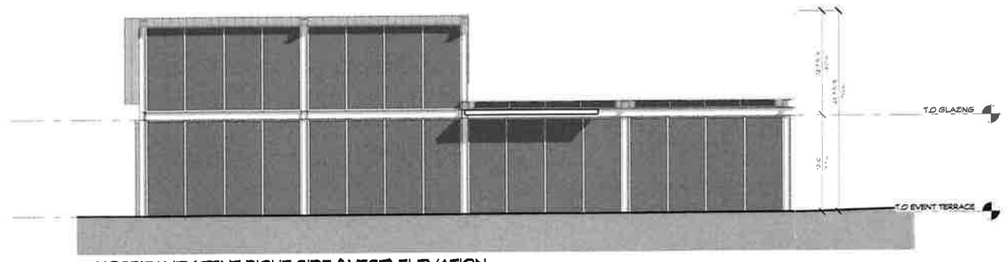


HOSPITALITY TENT LEFT SIDE ELEVATION

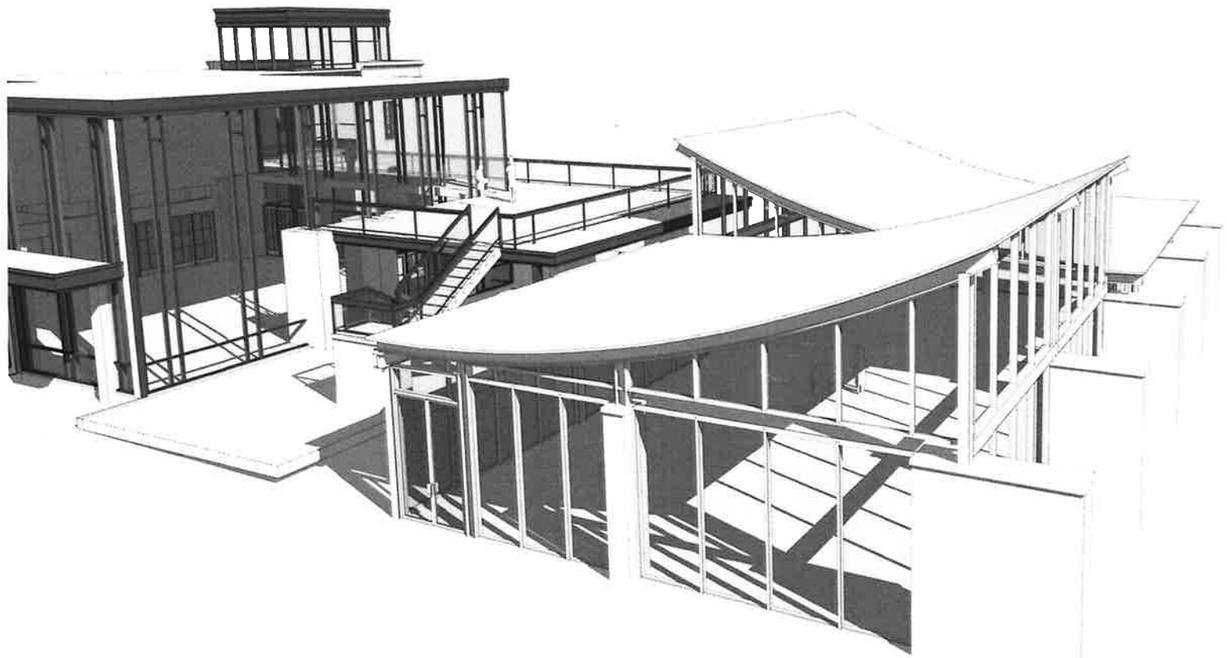
1:100

0 5 10 m



HOSPITALITY TENT RIGHT SIDE (WEST) ELEVATION

1:100



OWNER'S NAME

OWNER'S SIGNATURE

TOWN
OF
NIAGARA-ON-THE-LAKE

LORD MAYOR

TOWN CLERK

Date

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No.	Description	Date
1	[illegible]	[illegible]
2	[illegible]	[illegible]
3	[illegible]	[illegible]

THE GARDENS AT PILLAR AND POST
PROPOSED:
MULTI-PURPOSE BUILDING, OFFICE BUILDING & HOSPITALITY TENTS

OWNER: LAIS HOTEL PROPERTIES LIMITED
JOHN STREET, NIAGARA ON THE LAKE, ONTARIO

ONTARIO ASSOCIATION OF ARCHITECTS
MICHAEL D. ALLEN
LICENCE
6285

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www.ackarchitects.com

SHEET TITLE

HOSPITALITY TENT ELEVATIONS

PROJECT NUMBER	2017-08
DATE	APRIL 2017
DRAWN BY	MP, MT, MS
CHECKED BY	TEAM
SCALE	AS SHOWN

A10

2017-08 SKB.dwg A1

SCHEDULE E
SECURITY DEPOSITS AND REQUIRED PAYMENTS

Item	Reference	Subject	Est. Cost	L of C	Cash
Prior to Signature					
1.	18.16	Tax Arrears November 3, 2017			$0.00
2.	12.1	Securities for Primary Services Securities for Secondary Services Securities for On-Site Works (Greater of 20% or $10,000.00)	$1,242,679.68 $122,304.00 $755,331.21	$248,535.94 $24,460.80 $151,066.24	
3.	12.5	Inspection (Off-Site Works Only)			$41,000.00
4.	12.7	Road Cleaning			$5,000.00 (return all or any unused portion)
5.	12.8	Offsite Damages			$5,000.00 (return all or any unused portion)
Total			**$2,120,314.89**	**$424,062.98**	**$51,000.00**

NOTE:

- Separate Agreement with Niagara-on-the-Lake Hydro and other utilities (i.e. Canada Post) may be required.
- Inspection Deposit based on 60 working days

SCHEDULE F

Lais Hotel Properties Limited

Pavilions at The Gardens
Amplified Audio Noise Control Analysis and Report

July 2017

2171 Avenue Road, Suite 105
Toronto, Ontario
M5M 4B4
www.novita.ca

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1.0 CONSULTANTS' EXPERTISE

Novita Techne was retained by Lais Hotel Properties during the planning stages of this project for their expertise in Audio Visual Consulting and sound mitigation. With over 30 years' experience and as pioneers in electroacoustic noise control, Novita is recognized as a leading expert in this field.

Novita's completed projects include several studies for various municipalities across the province and hundreds of audio and video designs and facilities of similar projects to their credit.

Novita's credentials include membership in such industry associations as the Audio Engineering Society, American Society of Theatre Consultants, the Canadian and US Institutes of Theatre Technology, the Professional Lighting and Sound Association and the International Communications Industries Association.

2.0 EXECUTIVE SUMMARY

This report addresses concerns voiced by the Town of Niagara-on-the-Lake and its residents regarding the potential for amplified voice and music from the pavilions in the proposed "*The Gardens*" development intruding into adjacent neighbourhoods. Current technology is reviewed and the use of both passive and active solutions are presented in order to mitigate the intrusion of unwanted noise from the pavilions into the surrounding community.

3.0 PURPOSE OF REPORT

The purpose of this report is to identify the potential electroacoustic (i.e., amplified sound) and noise issues related to events planned in the pavilions at *The Gardens* at Niagara-on-the-Lake and to present both technological and strategic solutions for the users to help them to effectively stage their functions without disturbing neighbours and guests at the Pillar and Post hotel.

The Town of Niagara-on-the-Lake has enacted Noise Bylaw No. 4588-12 to ensure that residents can fully enjoy their properties without the intrusion of nuisance sounds:

> ...the people expect, and have a right to an environment free from unusual, unnecessary or excessive Sound or Vibration or which may degrade the quality and tranquility of their life or cause nuisance;

and

> ...it is in the public interest to reduce the noise level in the Town of Niagara-on-the-Lake (the "Town"), so as to preserve, protect, and promote ... the peace and quiet of the Inhabitants of the Town.

The Town further states in its Bylaw that:

> ...a recognized body of scientific and technological knowledge exists by which Sound and Vibration may be substantially controlled.

The objective of the developers of *The Gardens* project is to be responsible corporate neighbours and to comply with the intent of this Bylaw.

The authors of this report have drawn on their past experience with similar projects in other municipalities (e.g., City of Sudbury, City of Windsor, etc) having similar concerns about noise issues and their knowledge of currently available technologies and best practices to mitigate noise complaints due to amplified sounds.

4.0 BACKGROUND

4.1 Venue

Lais Hotel Properties Limited (LHPL), operators of Vintage Hotels, is proposing an 8,500 sq. ft. conference centre and two outdoor event pavilions in a garden setting on the old C&C boat fabrication site surrounded by King, Anne, Regent and John streets in the Town of Niagara-on-the-Lake. The site is opposite the Pillar and Post Spa and Hotel owned by LHPL.

The two pavilions, each designed to accommodate approximately 200 people, are intended to support the large events hosted in the conference centre as well as operate as "stand alone" outdoor event spaces.

LHPL does want to minimize the impact of any noise in the neighbourhood and in particular any disruptions to guests of the Pillar and Post.

Appendix A shows the subject area and renderings of the pavilions prepared by ACK Architects.

4.2 Events

The *Gardens* are being designed to be flexible in their ability to host both social and corporate events. Weddings and other social celebrations along with corporate meetings, product launches and receptions could all be held in these multi-functional spaces.

This is **not** a concert venue and live music performances are not anticipated to be hosted in *The Gardens* as the prime attraction.

5.0 ISSUES/CONCERNS

5.1 Mitigating Noise complaints: A Technical Discussion

Sound reinforcement for events such as those planned for similar venues are typically installed on a temporary basis for a particular event. A DJ may bring loudspeakers and amplifiers along with recorded music, or audio equipment may be supplied by a corporate AV rental house. In either case, the audio equipment is installed and controlled by the provider. Loudspeakers located on the stage have to be operated at a volume level that is much louder than actually needed because the amplified sound has to reach all the way back to the last rows of seats.

Management does not have direct control over the sound levels because it is not their equipment. In a desire by the audio equipment provider to please the client, the sound levels can spiral out of control until the end result is a noise complaint.

Certain genres of music and their typical fans generate more noise complaints than others. Low frequencies are very difficult to control. They do not respond to the same acoustical treatments as mid and high frequencies. The low frequencies have very long wavelengths and they diffract around barriers and pass right through absorbing materials that are otherwise very effective for the control higher frequencies. Electronic Dance Music (EDM), Reggae and heavy Rock and Roll are amongst the worst offenders for exaggerated bass content; the "thump...thump...thump" of the bass notes can carry for blocks.

In general, when a neighbourhood noise survey is conducted, it is generally impossible to capture these bass "beats" on a sound level meter as they are actually below the ambient or background sound levels caused by general traffic noise, wind noise and the rustling of leaves etc. Nevertheless, these low level beats are particularly annoying to residents because they are rhythmic in nature and have a unique sound that is foreign in a residential neighbourhood.

Even at a low level they are able to be heard distinctly over the more familiar normal background noises.

6.0 RECOMMENDATIONS: STEPS TO BE TAKEN TO MITIGATE NOISE COMPLAINTS

6.1 Programming Strategies – Management Controlled

- Advise clients of the maximum noise levels permitted and of the 11:00 p.m. amplified sound curfew as regulated by the by-law.

- Insist that clients only use the house provided sound reinforcement system with built in maximum sound levels. Portable systems that are brought in for temporary use should not be permitted.

- Screen DJ's and live entertainers to be certain that they understand the noise restrictions and are willing to comply. A list of acceptable DJ's and entertainers could be prepared in advance of requests for music.

6.2 Site Planning and Technical Strategies

- LHPL has retained the services of Bill Gastmeier, P.Eng of HGC Engineering as the acoustical engineer for this development; Novita Techne has previously collaborated with HGC on a number of noise abatement projects. Following their recommendations *The Gardens* have been designed to incorporate the use of earthen berms, solid fences, trees, hedges and other aspects of landscape architecture to either absorb sound energy or reflect it back into *The Gardens*.

- The East Pavilion is designed with partitions to close the pavilion space in if required.

- The use of water features such as fountains and pools have been incorporated in the design. The moving water creates white noise that is both soothing in nature and can mask unwanted sounds from activities within *The Gardens*.

- Install a custom audio reinforcement system that is owned and operated by the venue and insist that clients use it as required instead of other portable systems that are brought in on a temporary basis. An overhead distributed loudspeaker system

consisting of many small loudspeakers directed downwards towards the audience and operated at a low volume level is recommended. The sounds from the audio system will actually be absorbed to some degree by the audience.

- This is further enhanced by setting a maximum sound pressure level of 85 dBA in the listening area. Utilize the automatic features of electronic digital signal processing (DSP) to strongly limit audio content from exceeding this level. Any attempt to exceed the pre-established sound levels will result in the DSP automatically turning the level back down.

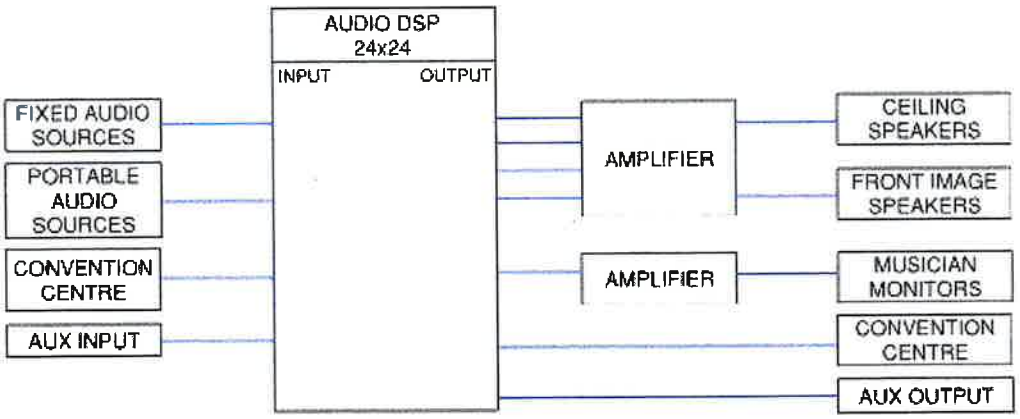
- Utilizing other automatic features of the DSP to mute all amplified sounds at the time of the 11:00 p.m. noise curfew.

- Utilize the DSP to gently roll off the bass frequencies starting at around 100 Hz and to automatically band-limit attempts to defeat this. Voice and music will still sound acceptable, but the offending very low frequency sounds will be suppressed.

- Further control can achieve through the use of glass partitions to contain the sound energy within the East Pavilion

- The desired effect of the combination of all of these measures is to reduce all sounds to a generally acceptable level of 50 dBA at the property line.

Below shows a conceptual audio system block functional diagram utilizing a DSP and ceiling loudspeakers.



Appendix B illustrates the difference in audio coverage between a typical stage mounted audio reinforcement system and an overhead distributed audio system.

7.0 CONCLUSIONS

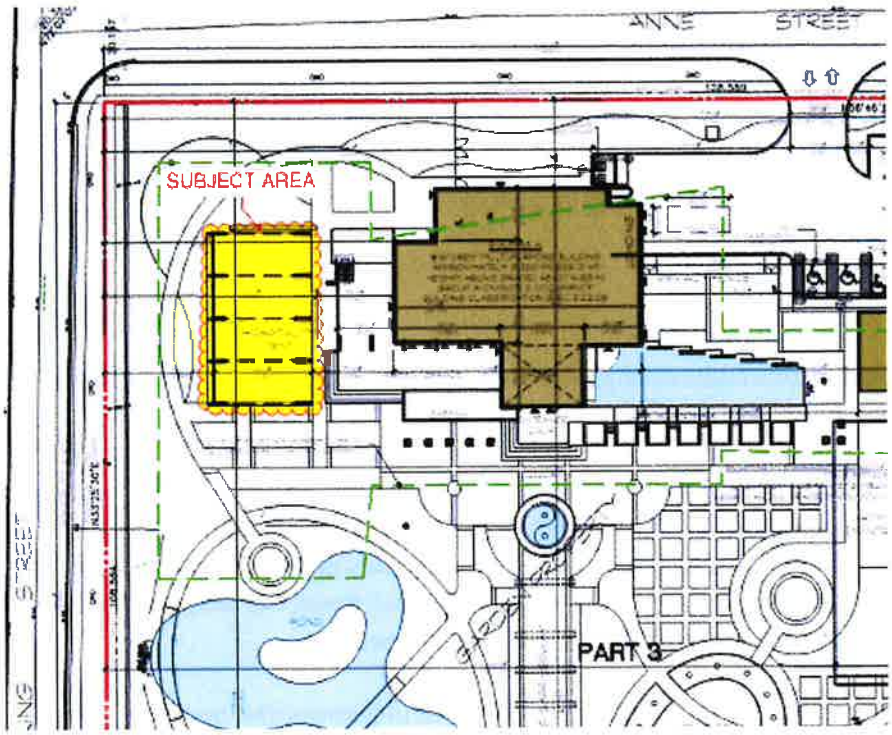
Implementing the combination of passive and active solutions as noted above will dramatically reduce noise pollution in the area.

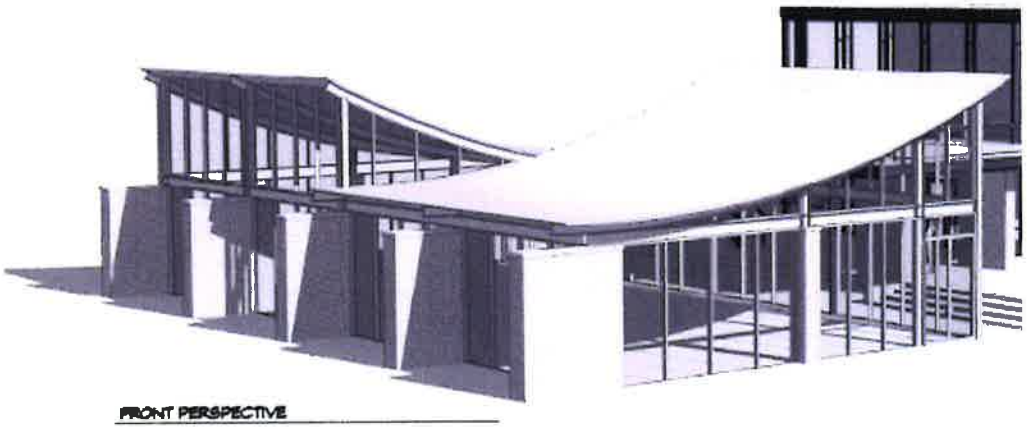
Installing a fixed DSP enabled house audio system using distributed ceiling loudspeakers and restricting the use of portable systems in the pavilions in combination with the berm, wall and landscape design, will significantly reduce the possibility of receiving a noise complaint before 11:00pm. Programming the DSP to automatically shut down the amplified system before the curfew will guarantee compliance with the local bylaw.

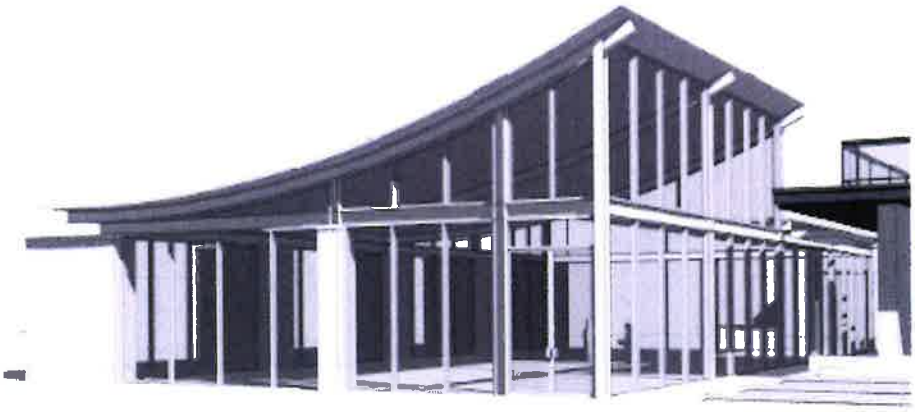
Finally, electronically controlling the amplified sound without the need for intervention by facilities staff will also eliminate any confrontations that may potentially arise if clients wish to either increase the volume of the audio system or extend their activities into the night.

Attached: Appendix A and B

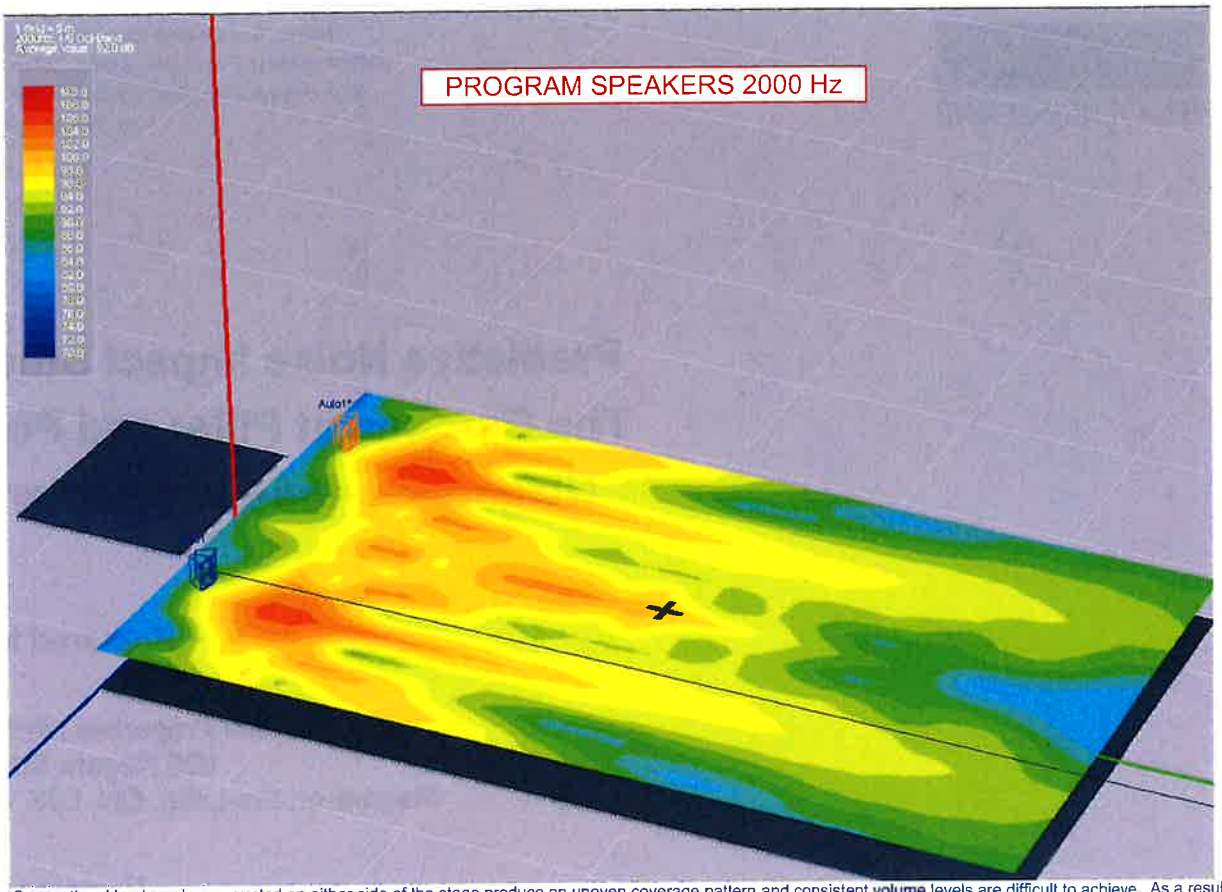
Appendix A - Rendering of Pavilions by ACK Architects





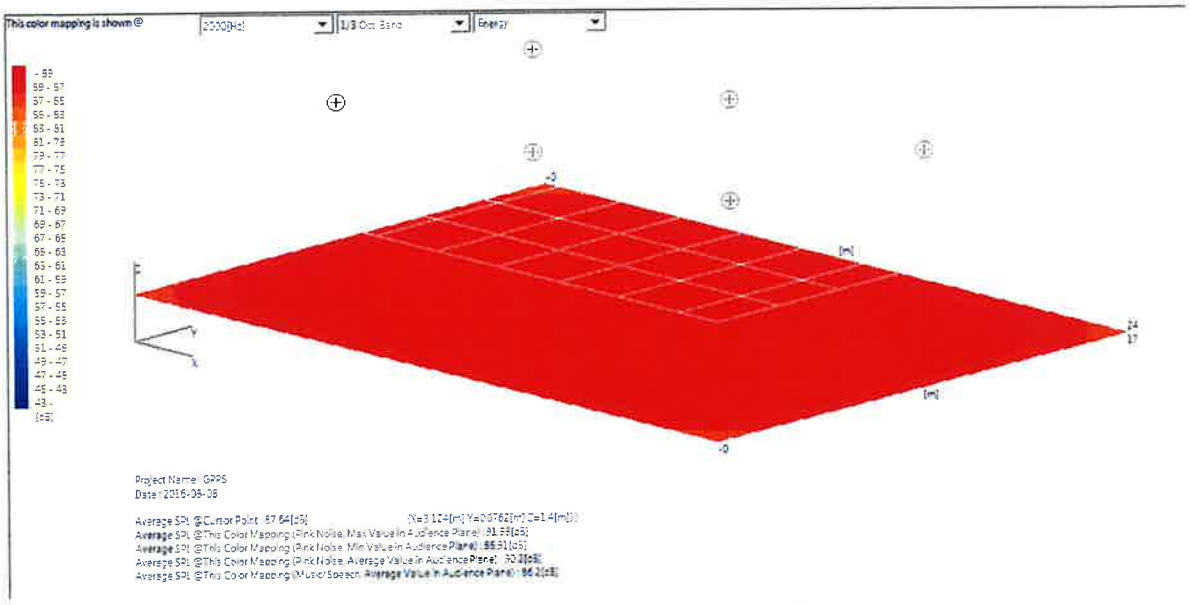


Appendix B



Conventional loudspeakers mounted on either side of the stage produce an uneven coverage pattern and consistent volume levels are difficult to achieve. As a result, attempts to increase intelligibility to all listeners often results in excessive volume levels.

CEILING SPEAKERS 2000 Hz



Ceiling mounted loudspeakers directed downward toward the listeners allow better coverage at lower volume levels.

HGC ENGINEERING

Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203
Mississauga, Ontario, Canada L5N 1P7
t: 905.826.4044

Predictive Noise Impact Study
The Gardens at Pillar and Post
Niagara-on-the-Lake, Ontario

Prepared for:

Lais Hotel Properties Limited
526 Regent Street
Niagara-on-the-Lake, ON, L0S 1J0

Prepared by:

Robert D. Stevens, MASc, PEng

Reviewed by:

Corey Kinart, PEng, MBA

September 26, 2017

HGC Engineering Project Number: 01700554

EXECUTIVE SUMMARY

Lais Hotel Properties Limited retained HGC Engineering to undertake a Noise Impact Study of the proposed *Gardens at Pillar and Post* event venue, in Niagara-on-the-Lake, Ontario. In addition to a multipurpose building and office building, the proposed facility will include hospitality tents and areas for outdoor gathering of guests. The study has been prepared at the request of the Town, as part of the site plan approval process.

The noise bylaw of the Town is qualitative in nature, and does not have specific, quantitative sound level limits. Through discussions with the Town and the Town's acoustical consultant, the sound level limits and assessment methods of the Ontario Ministry of the Environment and Climate Change ("MOECC") have been adopted as the basis for this study, including appropriate adjustments for the character of sound associated with an outdoor event venue – voices and music.

The proposed geometry of the site and the intended uses/activities were used to create a three-dimensional, computational acoustical model, including the noise control features that have been included in the site design and the proposed sound systems. The offsite sound levels were predicted using the acoustical model. With appropriate physical, electronic, and administrative controls, the sound levels of the facility were found to be within the applicable sound level limits.

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APPENDIX B – Details of Predictive Acoustical Modeling

1 INTRODUCTION & FACILITY DESCRIPTION

The proposed Gardens facility will occupy a parcel of land which is currently vacant, beside the existing Pillar and Post hotel. That parcel is bounded by John Street West to the north, King Street to the east, Anne Street to the south, and existing single family residences, fronting onto Victoria Street to the west. A site plan showing the facility and surrounding area, prepared by ACK Architects, is included as Figure 1.

The facility will include a multipurpose building midway near the south side of the site, which can host functions and banquets. To the east of that building will be the "Hospitality Tent" which will be a permanent canopy structure with glazed walls having operable sections, which can also host events, and will have the appearance and ambience of an open tent. There will also be a number of terraces, and fountains as well as an area labelled in Figure 1 as "Artificial Turf (Winter Ice Rink)" which may have a demountable bona fide tent erected during the warmer seasons, also to host outdoor events. The potential sources of sound include voices from groups of guests at the terraces and various gathering areas, and amplified voice and music during events, at the Hospitality Tent and Artificial Turf areas. There will be a 1.8 metre tall retaining wall and berm around much of the perimeter of the site, as shown in Figure 2, which will act as a beneficial noise wall for some activities.

The closest and most-potentially impacted noise-sensitive points of reception are neighbouring single-storey and two-storey homes on the east side of King Street, the south side of Anne Street, the east side of Victoria Street, and on John Street, at distances of 30 to 130 metres from the gathering areas within the Gardens facility.

The existing background sound in the vicinity is dominated by traffic on the surrounding roads, other man-made sounds and natural sounds.

2 SOUND SOURCE SUMMARY

Figure 2 shows the location and type of sound sources assessed in this study. As there are various areas throughout the site where groups of people could gather, sound from grouped conversational

voices has been assessed at the locations shown as V1 through V3 in Figure 2. At each of those locations, conversational voices from a group of up to 70 individuals has been assumed. V2 is actually comprised of two separate areas – a terrace at grade (assumed 35 occupants) and a second storey "viewing terrace" above (assumed 35 occupants).

Within the Hospitality Tent, shown as "S1" at the southeast quadrant of the site, three different types of sound producing activity have been considered: conversational voices from up to 70 individuals, amplified voices from announcements or speeches, and amplified music. Within the Artificial Turf area, shown as "S2" at the northwest quadrant of the site, conversational voices from up to 100 individuals has been considered, as well as amplified voice and music.

For the purposes of assessment, it has been assumed that activities at the facility could occur between the hours of 08:00 to 23:00, although typically no activities would take place before 12:00.

3 NOISE CONTROL MEASURES INCLUDED IN THE DESIGN

The physical layout of the site has been developed with noise management in mind, and a number of noise control features have been included in the design. The permanent structures on site, including the buildings and Hospitality Tent, will provide acoustical shielding, and their locations have been optimally chosen, in that respect. As well, a 1.8 metre tall masonry retaining wall with earthen berming on the interior side will surround the majority of the perimeter, as shown in Figure 2, to provide additional shielding. The Hospitality Tent will have a solid canopy roof and permanent glazed walls, with operable sections that can be open or closed, as needed to contain the sound of activities within.

With regard to the sound systems that will be used to reinforce speech and music, Lais Hotel Properties retained the services of Novita Techne, audio and sound system consultants, to develop design concepts that would minimize the sound emanating to offsite locations. Those recommendations were summarized in a report issued in July, 2017 [1], which recommended that:

- The only electronic sound systems should be permanent systems provided and controlled by the venue – clients or guests of the facility should not be permitted to bring outside sound

systems into the venue;

- The sound systems should be automatically programmed to shut down at 23:00 and should include electronic controls to limit the sound levels to a maximum of 85 dBA peak over the intended coverage area, and roll off the low frequencies at 6 dB per octave below 125 Hz;

- Rather than central loudspeaker clusters, the sound systems should consist of a distributed array of ceiling mounted speakers, aimed downward toward the guests.

As a starting point for the acoustic analysis, all of the noise control features listed above were taken into consideration.

4 SOUND LEVEL LIMITS

In Niagara-on-the-Lake, sound emissions are governed by the Town noise bylaw [2], which is applicable to the proposed Gardens Venue. Paragraph 3 of the bylaw stipulates, "No person shall make, cause or permit Sound or Vibration at any time, which is likely to disturb the quiet, peace, rest, enjoyment, comfort or convenience of the Inhabitants of the Town." This general prohibition, although typical of noise bylaws in Ontario, is purely qualitative in nature, and does not include any quantitative limits or guidance to form the basis of an engineering noise impact assessment. In that respect, Lais Hotel Properties and HGC Engineering sought input from the Town and its acoustical consultant. It was agreed that the noise assessment methods and sound level limits of the MOECC be used as a basis for this study, as set out in MOECC Publication NPC-300 [3]. Although the methods and limits in NPC-300 were originated for traffic noise (road, rail, and air traffic) and mechanical sources of noise, such as those associated with industrial and commercial facilities, the MOECC guidelines also include adjustments for sounds with distinctive qualities, which can be used in some cases to adapt the limits for broader use.

Within NPC-300, the limits most closely applicable to the Gardens facility are those for "stationary" (non-traffic) sources. Those limits are site specific, and are based on the characteristic acoustical environment in the vicinity (for which there are four "Classes"), and the existing levels of background sound. In essence, the sound from the stationary sources is evaluated against (i.e.

compared to) the typical background sound at any potentially impacted, sound-sensitive points of reception, such as residences. Background sound is defined to include road traffic and natural sounds, but to exclude the sound of the facility under assessment.

Because the acoustic environment surrounding the subject site is dominated by road traffic and other man made sounds, the vicinity is best categorized as a Class 1 Area.

Specifically, NPC-300 stipulates that the sound level limit in a Class 1 Area for a stationary source which could operate during daytime hours only is the greater of the minimum one-hour LEQ background sound level or the "exclusion limit" of 50 dBA. The guidelines also stipulate that the noise assessment shall consider a *predictable worst-case hour*, which is defined as an hour when typically full operation of the stationary sources under consideration could coincide with an hour of low background sound.

In order to quantify the background sound in the vicinity, HGC Engineering deployed two automated monitors – one at the west end of the site near the rear yards of the homes fronting onto Victoria Street, and one at the east end of the site, set back from the road by an amount similar to the homes fronting onto King Street – from August 11 to 16, 2017. The monitors consisted of a *Norsonic* model NOR140 Precision Sound Level Analyzer and a *Brüel & Kjær* model 2238 Precision Integrating Sound Level Meter. All instrumentation was within its annual laboratory calibration, and correct calibration was verified at the start and end of the monitoring period using a *Brüel & Kjær* model 4231 Acoustic Calibrator. The weather during the monitoring period was suitable for outdoor acoustical measurements. The monitors were configured to measure background sound levels continuously, and compile and store the results on an hourly basis. The minimum one-hour LEQ sound levels measured during the period were 42 dBA near the residences to the east and 49 dBA near the residences to the west. As these levels are slightly less than the exclusion limit, the applicable limit is 50 dBA.

Some types of sound have a distinctive character which may tend to increase their audibility and potential for disturbance or annoyance. For tonal sound or cyclically varying sound, MOECC Publication NPC-104 [4] stipulates that an adjustment of +5 dBA is to be added to the measured or

predicted sound level. Human voice and music generally exhibit tonal character, and music is cyclically varying. Accordingly, the +5 dBA adjustment has been applied to the sound levels predicted herein at the offsite locations neighbouring the Gardens facility.

5 ANALYSIS METHOD

Because the Gardens facility was proposed and not yet constructed at the time of this study, the noise impact analysis was necessarily predictive in nature. To that end, the geometry of the area, the layout of the buildings and structures, and the sound emission levels of the various activities were used to develop a 3-dimensional, computational acoustical model of the facility and surrounding vicinity (details provided in Appendix A).

With regard to sound emissions, the starting point was the information from the report by Novita, that the electronic sound systems will have integral electronic limiting to ensure sound levels not exceeding 85 dBA, peak, within the coverage area – i.e., inside the Hospitality Tent and the Artificial Turf area – along with a 6 dB per octave low frequency roll-off below 125 Hz. However, additional information about the future sound emission levels was necessary because the MOECC assessment methods are in terms of one-hour energy equivalent ("LEQ") sound levels, not peak (instantaneous) sound levels, and because accurate analysis requires not just an overall A-weighted sound level, but detailed sound level spectra in octave frequency bands. Also, the 85 dBA peak sound level limit applies only to the electronic sound systems, but offers no information about unamplified voices from guest conversation.

For that reason, HGC Engineering measured sound levels from unamplified voice, amplified voice and amplified music at an event (a wedding) elsewhere in the Niagara region, catered by Lais Hotel Properties, and similar to the type and size of events envisioned for the Gardens venue. The purpose of those measurements was to quantify the sound levels of conversational voice from a group of guests (approximately 120), quantify the ratio of peak to LEQ sound levels from amplified voice and music, and capture the frequency spectrum of amplified voice and music, at a representative event. These source emission levels were measured on August 11, 2017, using a *Larson Davis* model 831 Precision Integrating Sound Level Meter, calibrated in the same manner as described in Section 4,

above, for the automated monitors.

The measured sound levels for conversational voice from 120 guests, at a distance of 50 metres is listed in Table I, below.

Table I: Sound Levels at 50 m from Conversational Speech, 120 Guests

Octave Band Centre Frequency [Hz]	31	63	125	250	500	1k	2k	4k	8k	dBA
LEQ Sound Level [dBA]	60	64	56	52	51	53	50	45	43	57

In order to model the sound levels for different groupings of guests at the Gardens venue, the levels in Table I were adjusted on an energy basis for the number of guests in the group, according to:

$$L_{EQ}(N \text{ guests}) = L_{EQ}(120 \text{ guests}) + 10 \cdot log(N/120).$$

Because the overall sound emission levels for amplified voice and music at the Gardens facility is known (maximum 85 dBA, peak within the intended coverage area), the measured levels for these activities were analyzed to determine the spectral weightings for each octave frequency band, relative to the overall A-weighted sum, as listed in Table II, below.

Table II: Octave Band Spectra Relative to A-weighted Sound Level

Activity/Source	Octave Band Centre Frequency [Hz]									dBA
	31	63	125	250	500	1k	2k	4k	8k	
Amplified voice (male, female mixed)	-12	-6	0	-2	-6	-3	-8	-14	-18	--
Amplified dance music	-16	-10	-4	-5	-12	-4	-5	-9	-24	--

Note: the weightings in Table II include the recommended 6 dB low frequency roll-off below 125 Hz.

Also from the measurements, the difference between the peak sound levels and LEQ sound levels were found to be 15 dB for amplified voice and 9 dB for amplified dance music. These peak/LEQ factors, along with the 85 dBA peak limit recommended in the Novita report, and the measured spectral weighting and sound levels in Tables I and II were used as input to the computational acoustical model. As well, the spatial directivity patterns typical of the type of loudspeakers that will be used in the sound systems were applied (loudspeaker manufacturer's data is included in Appendix

B), and the speakers were assumed to be situated at 3.66 metres above ground, aimed downwards.

6 SOUND LEVELS WITH CURRENT DESIGN AND CONTROLS

The acoustical model discussed above (with details in Appendix A), was used to predict the offsite sound levels with the physical, administrative, and electronic noise controls already incorporated into the site design, at the time of this study. As a first step, the operable sections of the glazed walls at the Hospitality Tent were assumed to be substantially open, such that they would afford no acoustical shielding or containment. Table III, below, lists the range of predicted offsite LEQ sound levels (including the +5 dBA adjustment), for various activities and locations within the Gardens venue. The upper and lower bounding values in Table III represent the range of sound levels at the homes adjacent to the two ends of the site.

Table III: Predicted Sound Levels with Current Design and Controls, LEQ [dBA]

Source	Location	Homes to East/South	Homes to West/North	Limit	Excess Over Limit	
					East/South	West/North
Conversational Voices	V1	27 to 47	37 to 50	50	--	--
	V2	34 to 50	34 to 45		--	--
	V3	27 to 47	33 to 47		--	--
	S1	46 to 53	29 to 43		≤ 3	--
	S2	27 to 45	36 to 51		--	≤ 1
Amplified Voice	S1	51 to 55	36 to 46	50	≤ 5	--
	S2	38 to 50	46 to 58		--	≤ 8
Amplified Music	S1	56 to 61	42 to 51	50	≤ 11	≤ 1
	S2	40 to 56	52 to 63		≤ 6	≤ 13

The levels in Table III are within limits for most operating scenarios, but in some cases show minor excesses of up to 3 dBA from conversational voice, moderate excesses of 5 to 8 dBA from amplified voice and excesses of up to 13 dBA from amplified music.

With the current site design, it is also possible to close some or all of the operable sections of the glazed walls enveloping the Hospitality Tent. Table IV, below, shows the sound levels from conversational voices, amplified voice, and amplified music, assuming that all operable sections of the north, east, and south walls of the Hospitality Tent are closed, with the west side remaining open.

Table IV: Predicted Sound Levels from Hospitality Tent with North/East/South Walls Closed, L_{EQ} [dBA]

Source	Homes to East/South	Homes to West/North	Limit	Excess Over Limit	
				East/South	West/North
Conversational Voices	33 to 45	31 to 44	50	--	--
Amplified Voice	36 to 51	41 to 47	50	≤ 1	--
Amplified Music	41 to 56	45 to 52	50	≤ 6	≤ 2

As evident from Table IV, closing the operable sections of the north, east, and south walls of the Hospitality Tent will eliminate excesses associated with conversational voices of guests within, and eliminate or significantly reduce the excesses from amplified voice and music. However, some excesses remain.

7 ADDITIONAL RECOMMENDATIONS & DISCUSSION

Given the physical noise control measures that have already been incorporated into the site design, there is minimal benefit available from additional physical noise control measures – i.e., without creating unacceptably tall noise walls, or measures that interfere with the function of the venue such as replacing the demountable seasonal tent with a permanent structure, or keeping all operable wall sections of the Hospitality Tent closed. Therefore, additional restrictions to sound emission levels have been developed, to allow the facility to operate within the sound level limits.

In the case of amplified voice and music, it is possible simply to adhere to lower peak sound level restrictions, as listed in Table V, below.

For conversational (unamplified) voice, it is not possible to impose a simple sound emission specification. Instead, reductions can be achieved by limiting the maximum number of guests in certain areas, as listed in Table VI, below. Note, there were no excesses predicted from conversational voice in areas V1 through V3, so the occupancy in those areas can remain at 70 people, as can the Hospitality Tent when the north, east, and south operable wall sections are kept closed.

Table V: Maximum Peak Sound Level Restrictions for Sound Systems [dBA]

Source	Location	Maximum Peak Level
Hospitality Tent ("S1") N/E/S/ Walls Closed	Voice	84 dBA
	Music	79 dBA
Hospitality Tent ("S1") All Walls Open	Voice	80 dBA
	Music	74 dBA
Amplified Voice Amplified Music	Voice	77 dBA
	Music	72 dBA

Table VI: Predicted Occupancy Levels to Meet 50 dBA L_{EQ} Offsite

Source	Maximum Occupancy
V1	70
V2	70
V3	70
S1 with N/E/S Walls Closed	70
S1 with All Walls Open	35
S2	80

With the noise control measures in Tables V and VI, along with the previously incorporated measures discussed in Section 3, the sound levels from the activities at the Gardens facility are predicted to be equal to or less than 50 dBA at the residences neighbouring the facility.

It is important to note that the MOECC sound level limit of 50 dBA for daytime operations is a guideline, which has been adopted herein, in consultation with the Town and their acoustical consultant, as a basis for this noise study. During actual operation of the Gardens facility in future, it is possible that the sound levels not "likely to disturb" the neighbours could be slightly greater or less than this guideline. Moreover, the offsite sound levels cited in this report are predictions, particularly in the case of conversational voice, which can vary with the character and mood of the guests in a particular gathering. With regard to sound from conversational voice, it is worth noting that Lais Hotel Properties has hosted gatherings in the existing courtyard at the Pillar and Post hotel, with groups larger than those listed in Table VI, without incident or complaints from neighbouring residents. In that respect, the group sizes listed in Table VI can be considered a starting point or

guideline, the appropriateness of which can be best assessed on an ongoing basis during actual operations of the venue.

In light of the above discussions, it is recommended that Lais Hotel Properties establish and maintain an ongoing rapport with the neighbours as part of an ongoing noise management plan. On the basis of periodic input and feedback from the neighbouring residents, it may be possible or necessary to refine the sound emission levels, or operations to maintain acceptable offsite noise levels on a continuing basis.

REFERENCES

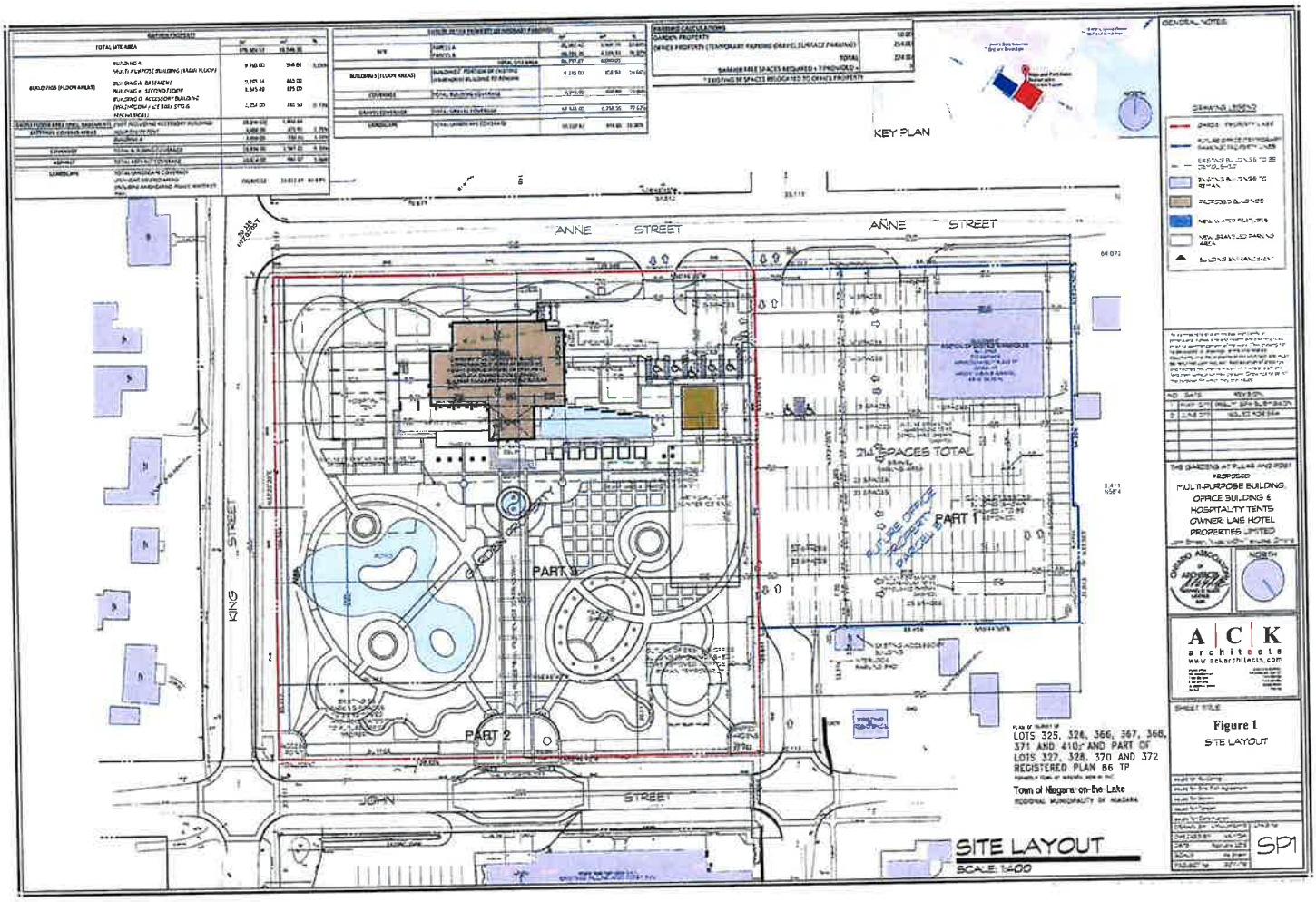
1. Novita Techne, "Lais Hotel Properties Limited – Pavilions at the Gardens – Amplified Audio Noise Control Analysis and Report," July, 2017.

2. The Corporation of the Town of Niagara-on-the-Lake, Bylaw No. 4588-12, "A Bylaw to Prohibit and Regulate Noise in the Town of Niagara-on-the-Lake," October, 2012.

3. Ontario Ministry of the Environment and Climate Change. "Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning – Publication NPC-300," August, 2013.

4. Ontario Ministry of the Environment Publication NPC-104, *Sound Level Adjustments*, August, 1978.

5. International Organization for Standardization, "Acoustics – Attenuation of Sound during Propagation Outdoors – Part 2: General Method of Calculation," ISO-9613-2, Switzerland, 1996


KEY PLAN
ANNE STREET
ANNE STREET
KING STREET
JOHN STREET
PART 1
PART 2
PART 3
214 SPACES TOTAL
FUTURE OFFICE BUILDING
SITE LAYOUT
SCALE: 1:400
LOTS 325, 324, 366, 367, 368, 371 AND 410; AND PART OF LOTS 327, 328, 370 AND 372 REGISTERED PLAN 86 TP
Town of Niagara-on-the-Lake
GENERAL NOTES
THE GARDENS AT PLUME AND ROSE
PROPOSED
MULTI-PURPOSE BUILDING,
OFFICE BUILDING &
HOSPITALITY TENTS
OWNER: LAKE HOTEL
PROPERTIES LIMITED
A C K
architects
www.ackarchitects.com
Figure 1
SITE LAYOUT
SP1

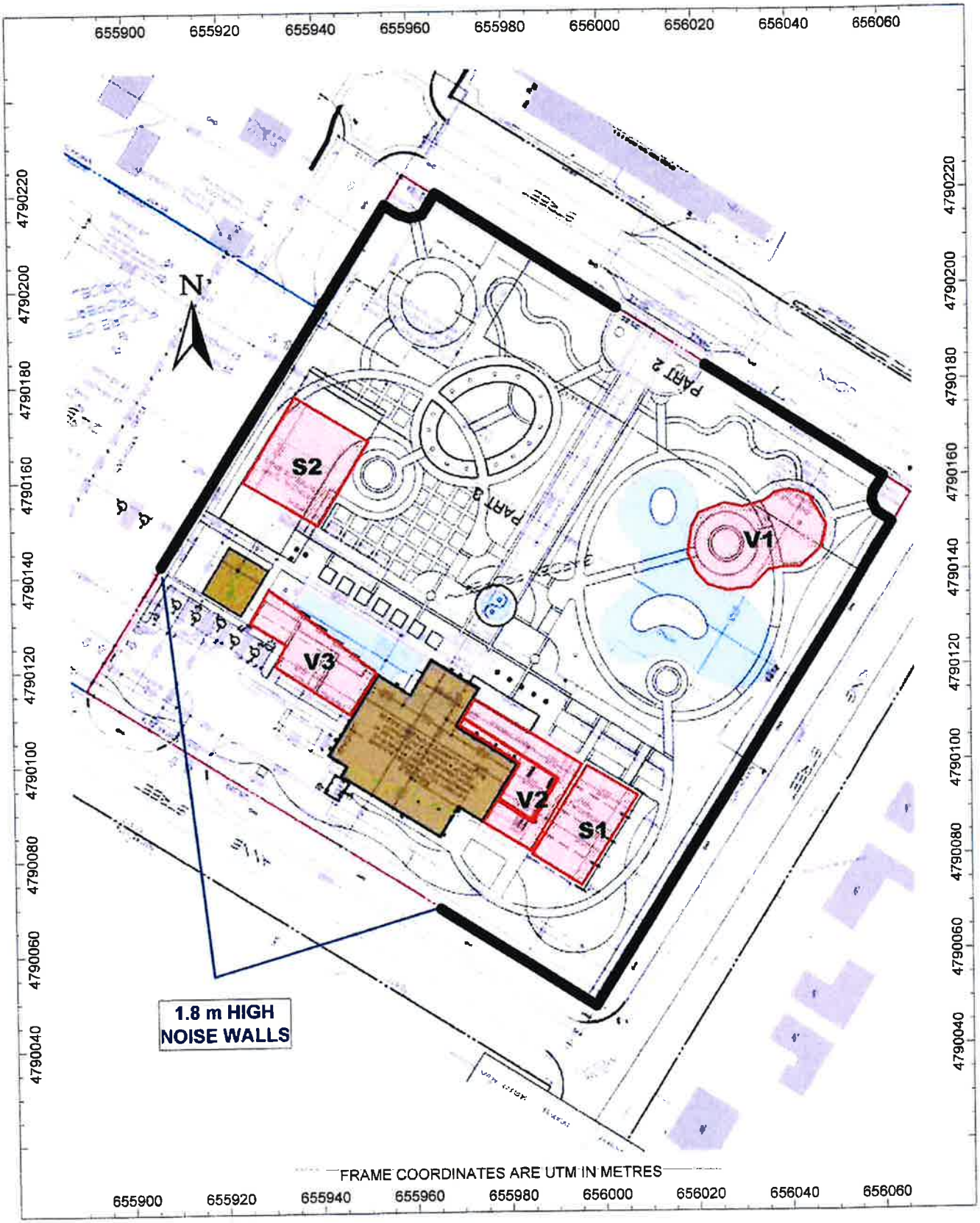


Figure 2: Sound Source Location Sketch

APPENDIX A

Details of Predictive Acoustical Modelling

The source sound emission levels were used as input to a predictive computer model (*Cadna-A version 2017*). The model is based on the methods from ISO Standard 9613-2.2 "Acoustics - Attenuation of Sound During Propagation Outdoors" [5], which accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures (or by topography and foliage where applicable). This modeling technique is widely accepted in Ontario and worldwide.

The site and surrounding area were conservatively modelled as flat grade. Ground attenuation was assumed to be spectral for all sources, with the ground factor (G) assumed to be 0.25 at the facility, representative of hard or paved ground, and 0.75 globally, representative of a mixture of grass pavement, and 1.0 in the "Artificial Turf" area on site. The temperature and relative humidity were assumed to be 10° C and 70%, respectively.

The predictive modelling considered reflections up to first order, the sufficiency of which was verified via an iterative convergence analysis considering increasing orders of reflection. Spectral absorptive characteristics were applied to each reflective structure as appropriate, typically with values representative of brick or glass. Points of reception were modeled at 1.5 metres above grade for outdoor locations and first storey windows and 4.5 metres above grade for second storey windows. The distributed array of sound system loudspeakers in the Hospitality Tent and the Artificial Turf areas were modeled as area sources of sound, as was conversation voice from groupings of guests.

Using the sound emission specifications for the sound reinforcement systems (85 dBA peak, maximum) and the measured data discussed in Section 5, the following sound power emission levels were used as input to the model.

Table A1: Source Sound Power Levels [dB re 10^{-12} Watt]

Activity/Source	Octave Band Centre Frequency [Hz]									dBA
	31	63	125	250	500	1k	2k	4k	8k	
Conversational voice, 70 guests	102	107	98	94	93	96	93	88	85	99
Conversational voice, 100 guests	104	109	100	96	95	97	94	89	87	101
Amplified voice, Hospitality Tent (S1)	90	96	102	100	96	99	94	88	84	102
Amplified music, Hospitality Tent (S1)	93	99	105	103	99	102	97	91	87	105
Amplified voice, Artificial Turf Area (S2)	93	99	105	104	97	105	104	100	85	109
Amplified music, Artificial Turf Area (S2)	96	102	108	107	100	108	107	103	88	112

APPENDIX B

Manufacturer's Data

product specification

RX699

6.5 inch Coaxial Loudspeaker

tq install™ SERIES

Overview

The RX699 is a high efficiency, high fidelity coaxial loudspeaker that provides output capability typical of a much larger loudspeaker. The transducer's high efficiency and horn-loaded HF compression driver give the RX699 a surprisingly high output-to-size ratio, and its broad 90° x 90° coverage is particularly effective in close quarters. The RX699's compact enclosure may be mounted close to walls or ceilings, under balconies, or along a stage front with minimal effect on sight lines. Its small size also allows it to be readily concealed within a venue's architecture when the loudspeaker must be hidden from view.

Fulcrum Acoustic's **TQ™** processing is an integral part of the RX699 design. Sound, innovative acoustical design combined with state of the art digital processing leads to exceptional clarity and precise transient response, even at very high sound pressure levels. The required digital signal processing can be provided by one of many supported platforms.

The RX699 is an excellent option any time moderately high SPLs are required but limited space is available. Spoken word sounds very natural, and the coaxial design assures that this remains so even off-axis. Low frequency extension to 87 Hz enables it to integrate well with subwoofers for full range music reproduction. The RX699 is a perfect choice for delay fill, background music, and speech reproduction systems, which makes it ideal for houses of worship, theaters, restaurants, nightclubs, museum kiosks, theme parks, and more.

Performance Specifications[1]

Operating Mode
Single-amplified w/ DSP

Operating Range[2]
87 Hz to 20 kHz

Nominal Beamwidth
90° x 90°

Transducers
HF/LF: Coaxial 1.0" diaphragm compression driver, neodymium magnet; 6.5" woofer, 2.0" voice coil, ceramic magnet

Power Handling @ Nominal Impedance[3]
53 V / 175 W @ 16 Ω

Nominal Sensitivity @ Input Voltage[4] (whole space)
100 dB @ 4.00 V

Nominal Maximum SPL (peak / continuous)
129 dB / 123 dB

Equalized Sensitivity @ Input Voltage[5]
89 dB @ 4.00 V

Equalized Maximum SPL[6] (peak / continuous)
118 dB / 112 dB

Recommended Power Amplifier
175 W to 350 W @ 16 Ω

Physical Specifications

Connections (RX699)
(2) Neutrik NL4 Speakon
Pin 1+/-: Full Range
Pin 2+/-: NC

Connections (RX699-WR)
Terminal strip input

Mounting / Suspension Points
(2) M6 yoke points,
(2) M6 nut plates for third-party pan/tilt mounts

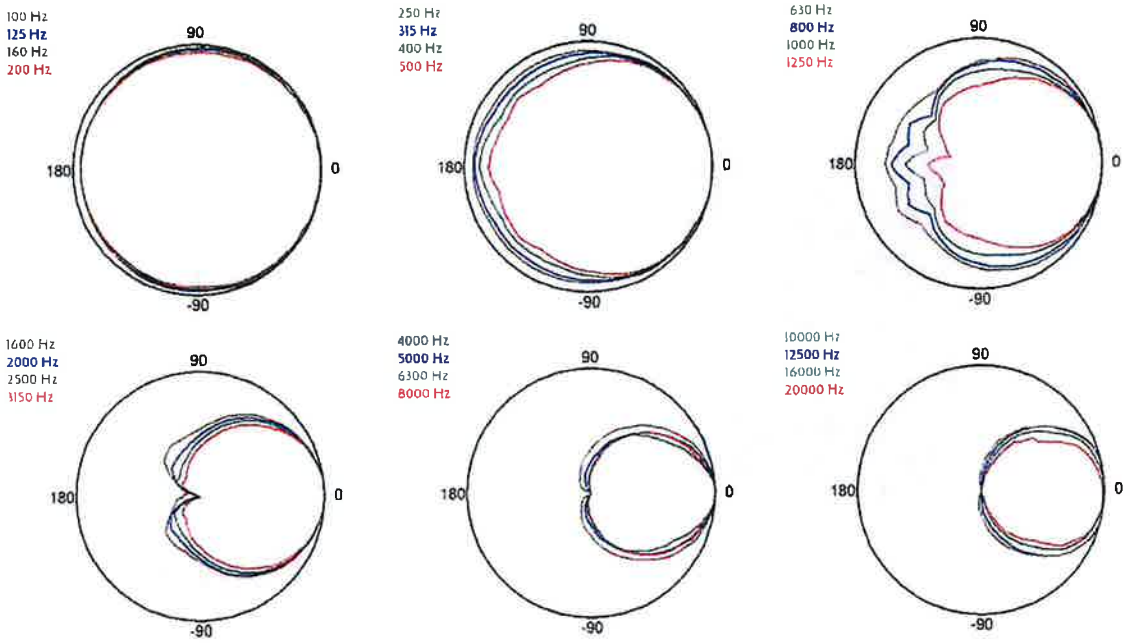
Dimensions / Weight
See page 5

Finish
Black painted enclosure w/ matte black grille, or
White painted enclosure w/ matte white grille

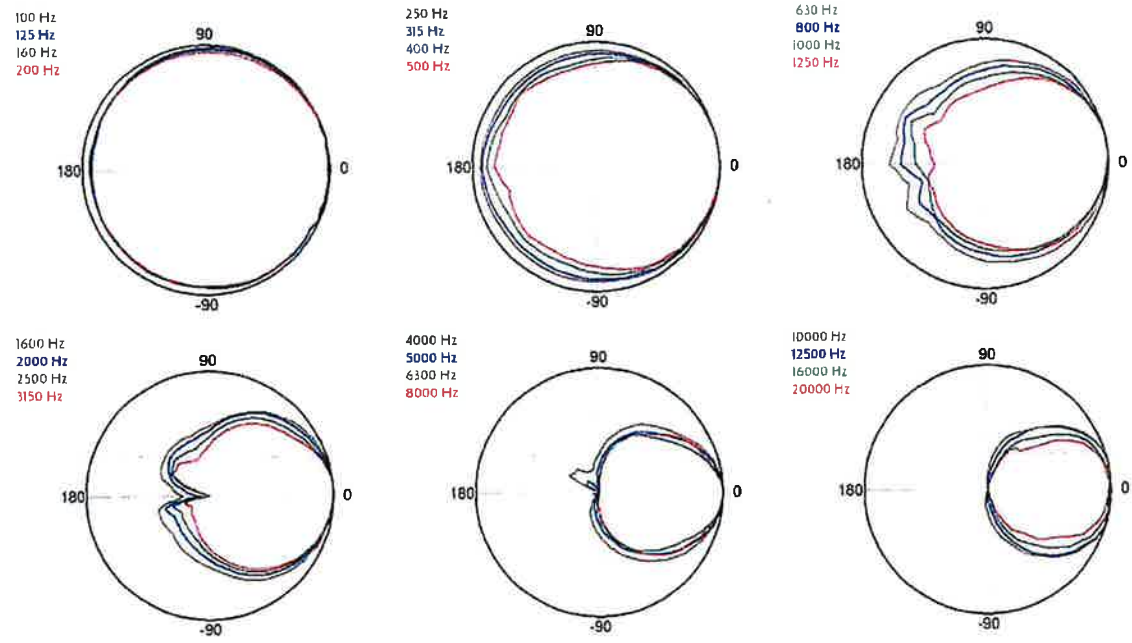
Options

RX699 U Bracket [YK1106], Terminal strip input, Custom color finish, Weather-resistant (WR) enclosure, 70 V multi-tap transformer (RX699-MT60)

Horizontal Polar Response (30 dB Scale, 6 dB per Major Division)



Vertical Polar Response (30 dB Scale, 6 dB per Major Division)



SCHEDULE H

novus
ENVIRONMENTAL

October 3, 2017

Town of Niagara-on-the-Lake
1593 Four Mile Creek Road
P.O. Box 100, Virgil, Ontario
L0S 1T0

Attn: Mr. Eric Withers

Re: Peer Review of Noise Study for "The Gardens at Pillar & Post" Event Venue
Novus File No. 17.0213

Dear Mr. Withers:

Novus Environmental Inc. (Novus) has competed our peer review of the noise assessments conducted for the "The Gardens At Pillar & Post" event venue ("the Event Venue"), to be located in Niagara-on-the-Lake, Ontario. This letter presents the results of our findings and recommendations.

The following documents/ information has been included in this review:

- The plans for the Event Venue, dated June 2017;
- The audio speaker system design report, "Pavilions at The Gardens, Amplified Audio Noise Control Analysis and Report", prepared by Novita Techne, dated July 2017 (the "Novita Report");
- The environmental noise study, "Predictive Noise Impact Study, the Gardens at Pillar and Post, Niagara-on-the-Lake, Ontario", prepared by HGC Ltd., dated September 26, 2017 (the "HGC Report");
- Personal conversations with Mr. Robert Stevens, P.Eng., of HGC; and
- The Niagara-on-the-Lake Noise By-law 4588-12 (the "Noise By-law").

1.0 The Project

From the HGC Report:

- The proposed Gardens facility will occupy a parcel of land which is currently vacant, beside the existing Pillar and Post hotel. That parcel is bounded by John Street West to the north, King Street to the east, Anne Street to the south, and existing single family residences, fronting onto Victoria Street to the west.

- The facility will include a multipurpose building midway near the south side of the site, which can host functions and banquets. To the east of that building will be the "Hospitality Tent" which will be a permanent canopy structure with glazed walls having operable sections, which can also host events, and will have the appearance and ambience of an open tent.

- There will also be a number of terraces, and fountains as well as an "Artificial Turf (Winter Ice Rink)" area which may have a demountable bona fide tent erected during the warmer seasons, also to host outdoor events.

- There will be a 1.8 m tall retaining wall and berm around much of the perimeter of the site, which will act as a beneficial noise wall for some activities.

2.0 The Noise By-law

The Noise By-law sets out the restrictions on sound and vibration which apply to operations at the Event Venue:

> 3. No person shall make, cause or permit Sound or Vibration at any time, which is likely to disturb the quiet, peace, rest, enjoyment, comfort or convenience of the Inhabitants of the Town.
>
> ...
>
> 5. No person shall emit, cause or permit the emission of a Sound resulting from any act listed in Schedule C - Prohibitions by Time and Place, if audible at a Point of Reception within the prohibited time shown.

Schedule C Prohibitions by Time and Place

ACT	TIME PROHIBITION
1. Operation of any auditory signalling device, including but not limited to the ringing of bells or gongs and the blowing of horns or sirens or whistles, or the production, reproduction or amplification of any similar Sounds.	11:00 pm - 7:00 am next day 11:00 pm - 9:00 am Sundays/ Statutory Holidays
2. Operation of any electronic device or group of connected electronic devices incorporating one or more loudspeakers or other electro mechanical transducers, and intended for the production, reproduction or amplification of Sound, including but not limited to a radio, television, amplifier, loud speaker, public address system, and other Sound equipment.	11:00 pm - 7:00 am next day 11:00 pm - 9:00 am Sundays/ Statutory Holidays
10. Yelling, shouting, hooting, whistling or singing	11:00pm - 7:00 am next day 11 :00pm - 9:00 am Sundays/ Statutory Holidays

We understand that the amplified music and voice from events will end by 11 pm; therefore, the requirements of Section 5 of the Noise By-law will be met. The purpose of the noise studies which have been undertaken are to ensure that the requirements of Section 3 are met, and that the noise from the Event Venue will not be "likely to disturb ... the Inhabitants of the Town."

3.0 The Novita Report

The Novita Report deals with the design of the audio system for the Event Venue. From the report, we understand that the following system design strategies have been followed:

- A custom audio system will be installed that is owned and operated by the Event Venue. Clients must use this system. No outside sound systems will be allowed.
- The system will include a distributed loudspeaker system consisting of many small loudspeakers directed downwards towards the audience and operated at a low volume level.
- Electronic digital signal processing (DSP) will be used to strongly limit audio content from exceeding this level. Any attempt to exceed the pre-established sound levels will result in the DSP automatically turning the level back down.
- The DSP will be set to mute all amplified sounds at the time of the 11:00 p.m. noise curfew.
- The DSP will be used to roll off the bass frequencies starting at around 100 Hz (at 6 dB per octave below 125 Hz from the HGC Report) and to automatically band-limit

attempts to defeat this. Voice and music will still sound acceptable, but the offending very low frequency sounds will be suppressed.

The general design of the system is appropriate for reducing the potential for off-site noise impacts. Key to this will be the setting of an appropriate sound levels for the speakers. This was investigated in the HGC Report.

4.0 The HGC Report

The HGC Report has adopted the Ministry of the Environment and Climate Change (MOECC) Publication NPC-300 "Stationary Source" noise guidelines for "Class 1" urban areas to help indicate what would generally be considered acceptable. A penalty of +5 dB has been applied to predicted noise levels to account for tonality and cyclic variation of sound.

HGC has then created a computerized noise model to account for the design of the speaker system, the layout of the Event Venue, the location and height of surrounding residences, and mitigation measures such as the perimeter berm, closed partitions, limits on noise production and limits on the numbers of patrons. Noise from three types of source were modelled:

- Amplified music (through the audio systems)
- Amplified voice (through the audio systems)
- Conversational voice (general noise from the crowds)

Potential noise impacts were considered with the glazed partitions of the Hospitality Tent open and closed, as a potential noise mitigation measures.

Novus agrees with the guidelines selected and the noise modelling approaches / analysis methods used in the HGC Report.

The HGC Report indicates:

- With the glazed wall partitions of the Hospitality Tent all fully open, the following excesses were predicted (HGS Report Table III):
    - Amplified Music – up to 11 dB for east/south residences, up to 13 dB for west/ north residences
    - Amplified Voice – up to 5 dB for east/south residences, up to 8 dB for west/ north residences
    - Conversational Voices – up to 3 dB for east/south residences, up to 1 dB for west/ north residences

- With the glazed wall partitions of the Hospitality Tent all closed on the north, east and south sides, the following excesses were predicted (HGS Report Table IV):
    - Amplified Music – up to 6 dB for east/south residences, up to 2 dB for west/ north residences
    - Amplified Voice – up to 1 dB for east/south residences
    - Conversational Voices – no excesses

Section 7 of the HGC Report investigates speaker sound level restrictions which would result in full compliance with the guidelines, as well as occupancy restrictions. The results are shown in Tables V and VI of the HGC Report.

5.0 Conclusions and Recommendations

We agree with HGC's conclusions that "the MOECC sound level limit of 50 dBA for daytime operations is a guideline …During actual operation of the Gardens facility in future, it is possible that the sound levels not "likely to disturb" the neighbours could be slightly greater or less than this guideline." Regardless, Novus believes that is appropriate to introduce operational restrictions from the start, specifically for the audio system, to avoid surrounding residents becoming sensitized, prior to evaluating if restrictions can be reduced.

We would recommend that the following approaches be taken:

- The Event Venue audio sound system should be designed, installed and operated in accordance with the recommendations in the Novita and HGC Reports.

- Amplified music and voice should end by 11 pm in accordance with the Noise By-law.

- The audio sound system be designed and operated to meet the peak sound level restrictions in Table V of the HGC Report (copied herein):

Table V: Maximum Peak Sound Level Restrictions for Sound Systems [dBA]

Source	Location	Maximum Peak Level
Hospitality Tent ("S1") N/E/S/ Walls Closed	Voice	84 dBA
	Music	79 dBA
Hospitality Tent ("S1") All Walls Open	Voice	80 dBA
	Music	74 dBA
Amplified Voice Amplified Music	Voice	77 dBA
	Music	72 dBA

- If complaints are received with respect to crowd noise specifically, then crowd sizes should be limited to those contained in Table VI of the HGC Report (copied herein):

Table VI: Predicted Occupancy Levels to Meet 50 dBA L_{EQ} Offsite

Source	Maximum Occupancy
V1	70
V2	70
V3	70
S1 with N/E/S Walls Closed	70
S1 with All Walls Open	35
S2	80

- A noise audit study should be conducted during the first year of operation, and the results made available to the Town. The audit would measure actual noise levels from an event. A summer or fall day representative of potential worst-case conditions should be chosen, with events in both the Hospitality Tent and in the Artificial Turf area temporary tent. The configuration of the facility (walls opened or closed) and an estimated number of patrons should be provided in the study report.

  Noise measurements should be conducted in accordance with MOECC NPC-103 and NPC-233 requirements, as applicable, which set out allowable equipment types, weather conditions, etc. Noise measurements would be conducted at locations on the north, east, west and south sides of the property, and at locations representative of impacts on local residences (i.e., a minimum of four locations, one per side). Where two-storey residences exist, measurements would be done at a 4.5 m receptor height.

  At each measurement location a minimum measurement duration of 20 minutes for amplified music should be used. A minimum measurement duration of 10 minutes for amplified voice and 10 minutes for crowd noise should be used, with 20 minutes for each being preferable (if feasible). The character of the sound will be described in the report, including but limited to:

  - Are bass sound from amplified music audible?
  - Are conversations from amplified voices and from crowd noise intelligible?
  - In the opinion of the reviewer, are levels such that they are likely or unlikely to disturb local residents?

  If complaints are made to the Town regarding noise from the facility, this information should be made available to the Event Venue, stripped of any data which might affect

the privacy of the complainant. For example, it could be noted that "## complaints occurred from residents to the north of the facility", rather than specific addresses.

The noise audit study report should then provide:

- A comparison of the measurements against the MOECC Publication NPC-300 Class 1 guideline limits, both with and without a +5 dB penalty (per NPC-104) being applied.
- A discussion of the measurement results versus the predictions in the HGC Report
- A discussion of the measurement results versus complaints received.
- A discussion of changes to be made to the facility for operations in subsequent years, based on the measurement results.

- There should be an understanding with Event Venue that persistent complaints regarding noise may necessitate additional noise audit studies and additional changes to their operations.

Should you have any questions or comments, please feel free to contact me.

Sincerely,
Novus Environmental Inc.

R. L. Scott Penton, P.Eng.
Principal / Specialist

SCHEDULE I

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
INTERNAL COST ESTIMATE

NOVEMBER 2, 2017

SUMMARY

SECTION A - SANITARY SYSTEM		$31,010.00
SECTION B - STORM SYSTEM		$230,167.50
SECTION C - WATER DISTRIBUTION		$31,375.00
SECTION D - INTERNAL SITE WORKS		$297,550.00
	SUBTOTAL	**$590,102.50**
	HST	$76,713.33
	PLUS 15% CONTINGENCY	$88,515.38
	PRIMARY SERVICING TOTAL	**$755,331.20**

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
INTERNAL COST ESTIMATE

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
SECTION A. SANITARY SYSTEM					
1.	Sanitary Main Sewer - PVC DR35 Granular 'A' bedding and cover, selected native material backfill except under existing roadway, full Granular 'A' backfill to 100% S.P.D.				
	a) STUB - MH C - 150mm diameter	9.9	m	$100.00	$990.00
	b) MH C - SEWER - 200mm diameter - Full granular 'A' backfill	16.3	m	$170.00	$2,771.00
	c) STUB - MH E - 200mm diameter	21.6	m	$120.00	$2,592.00
	d) STUB - MH E - 150mm diameter	18.5	m	$100.00	$1,850.00
	e) MH E - MH C - 200mm diameter	61.3	m	$120.00	$7,356.00
2.	Sanitary Manholes - Precast conc. per OPSD 701.010 complete including frame and cover, parging, benching, steps, Granular 'A' backfill, adjustments, drop structures, safety platforms where required and Kor-n-seal assemblies				
	a) MH C +/- 3.8m deep	1	ea	$6,650.00	$6,650.00
	b) MH E +/- 4.4m deep - To include drop structure per OPSD 1003.010	1	ea	$7,525.00	$7,525.00
3.	Flushing, T.V. inspection, air test and mandrel inspection immediately upon completion.	127.6	m	$10.00	$1,276.00
				TOTAL SECTION 'A' SANITARY SYSTEM	**$31,010.00**

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
SECTION B. STORM SYSTEM					
1.	Storm Sewers - Concrete pipe, and/or PVC Ribbed pipe with class 'B' bedding and cover, selected native material backfill except under existing road, full Granular 'A' backfill				
	a) MH 4 to OGS MH 24 - 375mm dia PVC Ribbed	16.3	m	$160.00	$2,608.00
	b) OGS MH 24 to CONTROL MH 25 - 200mm dia PVC Ribbed	12.9	m	$110.00	$1,419.00
	c) CONTROL MH 25 to CB 8 - 300mm dia PVC Ribbed	31.4	m	$140.00	$4,396.00
	d) CONTROL MH 25 to CBMH 11 - 600mm dia Concrete CL 65D	55.0	m	$540.00	$29,700.00
	e) CBMH 11 to CBMH 10 - 300mm dia PVC Ribbed	31.0	m	$140.00	$4,340.00
	f) CBMH 10 to STUB - 200mm dia PVC Ribbed	45.9	m	$105.00	$4,819.50
	g) CBMH 10 to MH 9 - 250mm dia PVC Ribbed	50.4	m	$120.00	$6,048.00
	h) SEWER to STUB - 150mm dia PVC Ribbed	9.5	m	$90.00	$855.00
	i) MH 9 to CB 1 - 250mm dia PVC Ribbed	50.5	m	$120.00	$6,060.00
	j) CBMH 11 to MH 12 - 450mm dia PVC Ribbed	46.0	m	$380.00	$17,480.00
	k) MH 12 to CB 3 - 375mm dia PVC Ribbed	64.0	m	$160.00	$10,240.00
	l) SEWER to STUB - 150mm dia PVC Ribbed	2.5	m	$90.00	$225.00
	m) CB 3 to CB 2 - 300mm dia PVC Ribbed	36.0	m	$140.00	$5,040.00
	n) MH 12 to DCB 4 - 450mm dia PVC Ribbed	90.0	m	$380.00	$34,200.00
	o) SEWER to CB 5 - 200mm dia PVC Ribbed	2.0	m	$105.00	$210.00
	p) SEWER to CB 9 - 200mm dia PVC Ribbed	4.0	m	$105.00	$420.00
	q) CBMH 11 to CB 7 - 200mm dia PVC Ribbed	19.7	m	$105.00	$2,068.50
	r) CB 7 to CB 6 - 200mm dia PVC Ribbed	35.0	m	$105.00	$3,675.00
	s) DI 12 to MH 3 - 200mm dia PVC Ribbed	43.5	m	$105.00	$4,567.50
	t) SEWER to STUB - 150mm dia PVC Ribbed	9.5	m	$90.00	$855.00

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
INTERNAL COST ESTIMATE

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
2.	Storm Maintenance Holes - Precast concrete, complete including frame and cover, adjustments, parging, concrete pipe support, benching, steps, Granular 'A' backfill				
	1200mm diameter (OPSD 701.010)				
	a) OGS MH 24 - +/- 2.2m approx. depth - Hydroworks HG4	1	ea	$35,000.00	$35,000.00
	b) CBMH 10 - +/- 1.7 approx. depth	1	ea	$4,500.00	$4,500.00
	c) MH 9 - +/- 1.5m approx. depth	1	ea	$4,500.00	$4,500.00
	d) MH 12 - +/- 2.4m approx. depth	1	ea	$5,500.00	$5,500.00
	1500mm diameter (OPSD 701.011)				
	a) CONTROL MH 25 - +/- 2.2m approx. depth	1	ea	$6,500.00	$6,500.00
	b) CBMH 11 - +/- 2.2 approx. depth	1	ea	$5,500.00	$5,500.00
3.	Catchbasin - precast conc. , including Granular 'A' backfill				
	a) Single per OPSD 705.010	8	ea	$1,850.00	$14,800.00
	a) Double per OPSD 705.040	1	ea	$2,550.00	$2,550.00
4.	Flush, TV and mandrel test PVC storm sewer.	645.6	m	$10.00	$6,456.00
5.	Excavation of rear yard swales - 3.0m wide including 100mm dia. perforated and wrapped subdrain and 20mm clear stone bedding and backfill.	115.0	m	$25.00	$2,875.00
6.	100mm topsoil and sod for swales	345.0	m	$8.00	$2,760.00
				TOTAL SECTION 'B' STORM SYSTEM	**$230,167.50**

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
SECTION C. WATER SYSTEM					
1.	Watermain - 150mm dia. PVC DR18 CL235 Granular 'A' bedding and cover selected native material backfill, except under existing roadway/driveways, full Granular 'A' backfill to 100% S.P.D. and asphalt restoration. Installation to include tracer wire, bends, tees, crosses, plugs, reducers, thrust blocks, sleeves, supports, and cathodic protection and connect to existing watermain.	25	m	$140.00	$3,500.00
2.	50mm diameter HDPE series 160 watermain to pond	65	m	$95.00	$6,175.00
3.	100mm diameter HDPE series 160 watermain to washroom	35	m	$120.00	$4,200.00
4.	Fire Hydrant complete with 150mm secondary valve and cathodic protection per OPSD 1105.010, Canada Valve, Century, McAvity	1	ea.	$5,000.00	$5,000.00
5.	200mm x 150mm diameter tapping sleeve and 150mm valve including full Granular 'A' backfill	2	ea.	$5,500.00	$11,000.00
6.	Water Commissioning Plan.	1	L.S.	$1,500.00	$1,500.00
				TOTAL SECTION 'C' WATER SYSTEM	**$31,375.00**

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
INTERNAL COST ESTIMATE

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
SECTION D - SITE WORKS					
1.	Removal and disposal of:				
	a) Existing asphalt all thickness	5,500	m^2	$6.00	$33,000.00
	b) Existing catchbasins	5	ea	$1,500.00	$7,500.00
	b) Existing manhole	1	ea	$2,500.00	$2,500.00
	c) Existing asphalt driveways	50	m^2	$20.00	$1,000.00
	e) Existing culverts all sizes	1	L.S.	$1,000.00	$1,000.00
	f) Existing trees all sizes .	1	L.S.	$1,000.00	$1,000.00
	g) Existing chain-link fence	1	L.S.	$2,500.00	$2,500.00
	h) Existing hydro poles	1	L.S.	$1,500.00	$1,500.00
	i) Existing storm lateral and plug catchbasin	1	L.S.	$2,000.00	$2,000.00
	j) Existing water service including capping of waqter valve and removal of valve box.	1	L.S.	$2,500.00	$2,500.00
2.	Excavation and fine grading for enterance and parking area base prior to asphalt installation.	1	L.S.	$25,000.00	$25,000.00
3.	Concrete curb and gutter as per OPSD 600.04 with 2-10mm rebar.	300	m	$65.00	$19,500.00
4.	Subdrain - 100mm diameter HDPE with filter cloth as per OPSD 216.021.	50	m	$18.00	$900.00
5.	Granular 'A' 300mm compacted thickness to 100% S.P.D. including stone parking area fine grading.	7,750	m^2	$19.00	$147,250.00
6.	Hot mix asphalt for Building 'A' parking area - Including preparation of Granular 'A' base				
	a) 50mm HL8 HS Base course compacted thickness	1,200	m^2	$21.00	$25,200.00
	b) 40mm HL3 HS Top course compacted thickness	1,200	m^2	$21.00	$25,200.00
				TOTAL SECTION 'D' SITE WORKS	**$297,550.00**

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
JOHN & REGENT STREET RECONSTRUCTION COST ESTIMATE
COST ESTIMATE & COST SHARING

NOVEMBER 2, 2017

SUMMARY

	TOTAL COST	VINTAGE INN COST	TOWN COST
SECTION A - SANITARY SYSTEM	$5,250.00	$5,250.00	$0.00
SECTION B - STORM SYSTEM	$75,417.50	$5,028.15	$70,389.35
SECTION C - WATER DISTRIBUTION	$37,900.00	$19,900.00	$18,000.00
SECTION D - JOHN STREET ROAD RECONSTRUCTION	$416,720.00	$411,398.00	$5,322.00
SUBTOTAL	**$535,287.50**	**$441,576.15**	**$93,711.35**
HST	$69,587.38	$57,404.90	$12,182.48
PLUS 15% CONTINGENCY	$80,293.13	$66,236.42	$14,056.70
PRIMARY SERVICING TOTAL	**$685,168.00**	**$565,217.47**	**$119,950.53**

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
JOHN & REGENT STREET RECONSTRUCTION COST ESTIMATE
COST ESTIMATE & COST SHARING

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
SECTION A. SANITARY SYSTEM									
1.	Sanitary Manholes - Precast conc. per OPSD 701.010 complete including frame and cover, parging, benching, steps, Granular 'A' backfill, adjustments, drop structures and Kor-n-seal assemblies								
	a) MH D +/- 3.0m deep	1	ea	$5,250.00	$5,250.00	100%	$5,250.00	0%	$0.00
	TOTAL SECTION 'A' SANITARY SYSTEM				**$5,250.00**		**$5,250.00**		**$0.00**

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
SECTION B. STORM SYSTEM									
1.	Storm Sewers - Concrete pipe, and/or PVC Ribbed pipe with class 'B' bedding and cover, full Granular 'A' backfill								
	a) EX MH to MH 4 - 450mm dia PVC Ribbed	13.5	m	$380.00	$5,130.00	50%	$2,565.00	50%	$2,565.00
	b) MH 4 to MH 5 - 375mm dia PVC Ribbed	90.0	m	$250.00	$22,500.00	0%	$0.00	100%	$22,500.00
	c) MH 5 to MH 6 - 300mm dia PVC Ribbed	38.6	m	$210.00	$8,106.00	0%	$0.00	100%	$8,106.00
2.	Storm Maintenance Holes - Precast concrete, complete including frame and cover, adjustments, parging, concrete pipe support, benching, steps, Granular 'A' backfill								
	1200mm diameter (OPSD 701.010)								
	a) MH 4 - +/- 2.1m approx. depth	1	ea	$4,500.00	$4,500.00	50%	$2,250.00	50%	$2,250.00
	b) MH 5 - +/- 1.6m approx. depth	1	ea	$3,500.00	$3,500.00	0%	$0.00	100%	$3,500.00
	c) MH 6 - +/- 1.8 approx. depth	1	ea	$4,000.00	$4,000.00	0%	$0.00	100%	$4,000.00
3.	Catchbasin - precast conc. per OPSD 705.010, including Granular 'A' backfill								
	a) Single roadway per OPSD 705.010	7	ea	$1,850.00	$12,950.00	0%	$0.00	100%	$12,950.00
	b) Double roadway per OPSD 705.020	2	ea	$2,550.00	$5,100.00	0%	$0.00	100%	$5,100.00
4.	Single Roadway catch basin lead - PVC Ribbed including Granular 'A' bedding and cover.								
	a) 200mm dia	50	m	$100.00	$5,000.00	0%	$0.00	100%	$5,000.00
	b) 250mm dia	25	m	$100.00	$2,500.00	0%	$0.00	100%	$2,500.00
5.	Flush, TV and mandrel test PVC storm sewer.	142.1	m	$15.00	$2,131.50	10%	$213.15	90%	$1,918.35
				TOTAL SECTION 'B' STORM SYSTEM	**$75,417.50**		**$5,028.15**		**$70,389.35**

JOHN & REGENT STREET RECONSTRUCTION COST ESTIMATE
COST ESTIMATE & COST SHARING

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
SECTION C. WATER SYSTEM									
1.	150mm diameter cut-in sleeve and 150mm valve including full Granular 'A' backfill	1	ea.	$3,500.00	$3,500.00	0%	$0.00	100%	$3,500.00
2.	Watermain - 150mm dia. PVC DR 18 CL 150, granular 'A' bedding, and cover as per OPSD 802.010, and selected native backfill material except under existing roads granular 'A' backfill, asphalt and boulevard restoration as per drawings. Installation to include tracer wire, all connections, bends, tees, crosses, plugs, reducers, thrust blocks, sleeves, supports and cathodic protection.	38	m	$150.00	$5,700.00	0%	$0.00	100%	$5,700.00
3.	King Street & Anne Street - Lowering of 17.5m of existing 250mm diameter watermain, to include full Granular 'A' backfill. Installation to include tracer wire, all connections, bends, tees, crosses, plugs, reducers, thrust blocks, sleeves, supports and cathodic protection.	1	L.S.	$10,000.00	$10,000.00	49%	$4,900.00	51%	$5,100.00
4.	King Street & John Street - Lowering of 5.0m of existing 250mm diameter watermain, to include full Granular 'A' backfill. Installation to include tracer wire, all connections, bends, tees, crosses, plugs, reducers, thrust blocks, sleeves, supports and cathodic protection.	1	L.S.	$15,000.00	$15,000.00	100%	$15,000.00	0%	$0.00
5.	50mm diameter blow-off per OPSD 1104.030 with 50mm dia. Stainless steel saddle	1	ea.	$2,500.00	$2,500.00	0%	$0.00	100%	$2,500.00
6.	Reconnection of existing water service.	1	ea.	$1,200.00	$1,200.00	0%	$0.00	100%	$1,200.00
				TOTAL SECTION 'C' WATER SYSTEM	**$37,900.00**		**$19,900.00**		**$18,000.00**

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
SECTION D - JOHN STREET ROAD RECONSTRUCTION									
1.	Construction Signage and Traffic Control Plan	1	L.S.	$5,000.00	$5,000.00	100%	$5,000.00	0%	$0.00
2.	Preconstruction Survey (John Street, Regent Street and King Street)	1	L.S.	$3,500.00	$3,500.00	100%	$3,500.00	0%	$0.00
3.	Removal and disposal of:								
	a) Existing asphalt roadway, parking and entrances all thickness to include all sawcutting	3,600	m^2	$6.00	$21,600.00	100%	$21,600.00	0%	$0.00
	b) Existing ditch inlet	1	ea	$750.00	$750.00	100%	$750.00	0%	$0.00
	c) Existing manholes and plug leads if necessary	2	ea	$850.00	$1,700.00	100%	$1,700.00	0%	$0.00
	d) Existing culverts all sizes	1	L.S.	$3,500.00	$3,500.00	100%	$3,500.00	0%	$0.00
	e) Existing trees all sizes for servicing and sidewalk installation.	1	L.S.	$1,000.00	$1,000.00	100%	$1,000.00	0%	$0.00
	f) Existing chain-link fence	1	L.S.	$1,500.00	$1,500.00	100%	$1,500.00	0%	$0.00
	g) Existing curb	70	m	$25.00	$1,750.00	100%	$1,750.00	0%	$0.00
	h) Existing concrete sidewalk	25	m^2	$15.00	$375.00	100%	$375.00	0%	$0.00
	i) Existing brick sidewalk	65	m^2	$25.00	$1,625.00	100%	$1,625.00	0%	$0.00
4.	Adjustment and/or relocation of existing infrastructure:								
	a) Existing manholes	6	ea	$500.00	$3,000.00	100%	$3,000.00	0%	$0.00
	b) Existing water valves	4	ea	$150.00	$600.00	100%	$600.00	0%	$0.00
	c) Existing signage	7	ea	$250.00	$1,750.00	100%	$1,750.00	0%	$0.00
	d) Existing catchbasin	1	ea	$250.00	$250.00	100%	$250.00	0%	$0.00
5.	Excavation of roadway to subgrade including filling of existing ditches to 95% SPD and grading of roadways, boulevards and swales less 100mm topsoil and sod to match existing property grade and backfilling of curbs. (Approx. area 4,500m^2)	1	L.S.	$25,000.00	$25,000.00	100%	$25,000.00	0%	$0.00
6.	Granular Base Course -								
	a) Granular 'A' 450mm compacted thickness to 100% S.P.D. including roadway fine grading.	3,500	m^2	$21.00	$73,500.00	100%	$73,500.00	0%	$0.00
	b) Granular 'M' shoulder restoration 150mm depth	20	m^2	$28.00	$560.00	100%	$560.00	0%	$0.00

JOHN & REGENT STREET RECONSTRUCTION COST ESTIMATE
COST ESTIMATE & COST SHARING

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
7.	Concrete curb and gutter with 2-10mm rebar.								
	a) as per OPSD 600.040	400	m	$65.00	$26,000.00	100%	$26,000.00	0%	$0.00
	b) as per OPSD 600.110	95	m	$65.00	$6,175.00	100%	$6,175.00	0%	$0.00
8.	Concrete curb taper as per OPSD 608.010	2	ea	$500.00	$1,000.00	100%	$1,000.00	0%	$0.00
9.	Subdrain - 100mm diameter HDPE with filter cloth as per OPSD 216.021.	495	m	$18.00	$8,910.00	100%	$8,910.00	0%	$0.00
10.	Hot mix asphalt - Including preparation of Granular 'A' base and sawcutting to match existing asphalt.								
	a) 50mm HL8 HS Base course compacted thickness	2,500	m^2	$21.00	$52,500.00	100%	$52,500.00	0%	$0.00
	b) 40mm HL3 HS Top course compacted thickness	2,500	m^2	$21.00	$52,500.00	100%	$52,500.00	0%	$0.00
11.	Mill existing asphalt 0.5m wide by 40mm depth	75	m^2	$30.00	$2,250.00	100%	$2,250.00	0%	$0.00
12.	Remove and reinstate existing interlock driveways to include fine grading and sand as required to match proposed curb and gutter and sidewalk	15	m^2	$65.00	$975.00	100%	$975.00	0%	$0.00
13.	Grade and reinstate existing boulevard and ditch area with 100mm topsoil and sod to include King Street reinstatement.	1,500	m^2	$25.00	$37,500.00	100%	$37,500.00	0%	$0.00
14.	Decorative Concrete sidewalk - 1.5m wide 200mm thickness, 100mm Granular 'A' base .	250	m^2	$100.00	$25,000.00	100%	$25,000.00	0%	$0.00
15.	Concrete sidewalk - 1.5m wide thickness varies (see plans), 100mm Granular 'A' base including wheelchair ramps.								
	a) West side of Regent Street	62	m^2	$75.00	$4,650.00	0%	$0.00	100%	$4,650.00
	b) John Street and Regent Street (Eastside)	548	m^2	$75.00	$41,100.00	100%	$41,100.00	0%	$0.00
16.	Tactile warning strips (0.60m x 0.60m)	32	ea	$350.00	$11,200.00	94%	$10,528.00	6%	$672.00
				TOTAL SECTION 'D'	**$416,720.00**		**$411,398.00**		**$5,322.00**

JOHN STREET RECONSTRUCTION

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
ANNE STREET RECONSTRUCTION COST ESTIMATE
COST ESTIMATE & COST SHARING

NOVEMBER 2, 2017

SUMMARY

	TOTAL COST	VINTAGE INN COST	TOWN COST
SECTION A - SANITARY SYSTEM	$72,106.00	$47,749.50	$24,356.50
SECTION B - STORM SYSTEM	$109,875.00	$40,709.55	$69,165.45
SECTION C - ANNE STREET ROAD RECONSTRUCTION	$349,125.00	$196,237.50	$152,887.50
SUBTOTAL	**$531,106.00**	**$284,696.55**	**$246,409.45**
HST	$69,043.78	$37,010.55	$32,033.23
PLUS 15% CONTINGENCY	$79,665.90	$42,704.48	$36,961.42
PRIMARY SERVICING TOTAL	**$679,815.68**	**$364,411.58**	**$315,404.10**

THE GARDENS AT PILLAR AND POST
PROJECT No: 1529
ANNE STREET RECONSTRUCTION COST ESTIMATE
COST ESTIMATE & COST SHARING

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
SECTION A. SANITARY SYSTEM									
1.	Sanitary Main Sewer - 200mm dia. PVC DR35 Granular 'A' bedding and cover, full Granular 'A' backfill to 100% S.P.D.								
	a) EX MH - MH F	61	m	$170.00	$10,370.00	90%	$9,333.00	10%	$1,037.00
	b) MH F - MH A	72	m	$170.00	$12,240.00	90%	$11,016.00	10%	$1,224.00
	c) MH A - MH B	60.5	m	$170.00	$10,285.00	90%	$9,256.50	10%	$1,028.50
	d) MH B - MH G	25.3	m	$170.00	$4,301.00	0%	$0.00	100%	$4,301.00
2.	Sanitary Manholes - Precast conc. per OPSD 701.010 complete including frame and cover, parging, benching, steps, Granular 'A' backfill, adjustments, drop structures and Kor-n-seal assemblies								
	a) MH A +/- 3.4m deep	1	ea	$6,300.00	$6,300.00	90%	$5,670.00	10%	$630.00
	b) MH B +/- 3.0m deep	1	ea	$5,425.00	$5,425.00	90%	$4,882.50	10%	$542.50
	c) MH F +/- 3.6m deep	1	ea	$6,500.00	$6,500.00	90%	$5,850.00	10%	$650.00
	d) MH G +/- 3.1m deep	1	ea	$5,750.00	$5,750.00	0%	$0.00	100%	$5,750.00
3.	Flushing, T.V. inspection, air test and mandrel inspection immediately upon completion.	194	m	$10.00	$1,935.00	90%	$1,741.50	10%	$193.50
4.	Sanitary Sewer Service (Laterals) - Green Pipe 100mm dia., PVC DR 28, granular 'A' bedding and cover as per OPSD 1006.02, selected native material backfill including connection to main sewer, tees, expandable plug and marker post and risers where required. Full granular backfill.	2	ea	$4,500.00	$9,000.00	0%	$0.00	100%	$9,000.00
		TOTAL SECTION 'A' SANITARY SYSTEM			**$72,106.00**		**$47,749.50**		**$24,356.50**

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
SECTION B. STORM SYSTEM									
1.	Storm Sewers - Concrete pipe, and/or PVC Ribbed pipe with class 'B' bedding and cover, full Granular 'A' backfill								
	a) EX MH to MH 1 - 450mm dia PVC Ribbed	90.0	m	$380.00	$34,200.00	50%	$17,100.00	50%	$17,100.00
	b) MH 1 to MH 2 - 450mm dia PVC Ribbed	90.0	m	$380.00	$34,200.00	41%	$14,022.00	59%	$20,178.00
	c) MH 2 to MH 3 - 375mm dia PVC Ribbed	39.0	m	$210.00	$8,190.00	41%	$3,357.90	59%	$4,832.10
2.	Storm Maintenance Holes - Precast concrete, complete including frame and cover, adjustments, parging, concrete pipe support, benching, steps, Granular 'A' backfill								
	1200mm diameter (OPSD 701.010)								
	a) MH 1 - +/- 1.9m approx. depth	1	ea	$3,500.00	$3,500.00	50%	$1,750.00	50%	$1,750.00
	b) MH 2 - +/- 1.6m approx. depth	1	ea	$3,500.00	$3,500.00	41%	$1,435.00	59%	$2,065.00
	c) MH 3 - +/- 1.4 approx. depth	1	ea	$3,500.00	$3,500.00	41%	$1,435.00	59%	$2,065.00
3.	Catchbasin - precast conc. per OPSD 705.010, including Granular 'A' backfill								
	Double roadway	6	ea	$2,650.00	$15,900.00	0%	$0.00	100%	$15,900.00
4.	Double Roadway catch basin lead - 250mm dia PVC Ribbed including Granular 'A' bedding and cover.	30	m	$120.00	$3,600.00	0%	$0.00	100%	$3,600.00
5.	Flush, TV and mandrel test PVC storm sewer.	219.0	m	$15.00	$3,285.00	49%	$1,609.65	51%	$1,675.35
				TOTAL SECTION 'B' STORM SYSTEM	**$109,875.00**		**$40,709.55**		**$69,165.45**

ANNE STREET RECONSTRUCTION COST ESTIMATE
COST ESTIMATE & COST SHARING

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
SECTION C - ANNE STREET ROAD RECONSTRUCTION									
1.	Construction Signage and Traffic Control Plan	1	L.S.	$5,000.00	$5,000.00	50%	$2,500.00	50%	$2,500.00
2.	Preconstruction Survey (Anne Street)	1	L.S.	$2,500.00	$2,500.00	50%	$1,250.00	50%	$1,250.00
3.	Removal and disposal of: a) Existing asphalt all thickness to include all sawcutting	1,800	m^2	$6.00	$10,800.00	50%	$5,400.00	50%	$5,400.00
	b) Existing catchbasins	4	ea	$750.00	$3,000.00	50%	$1,500.00	50%	$1,500.00
	c) Existing asphalt driveways including sawcutting	50	m^2	$20.00	$1,000.00	50%	$500.00	50%	$500.00
	d) Existing culverts all sizes	1	L.S.	$4,500.00	$4,500.00	50%	$2,250.00	50%	$2,250.00
	e) Existing trees all sizes for servicing and sidewalk installation.	1	L.S.	$1,000.00	$1,000.00	50%	$500.00	50%	$500.00
	f) Existing gravel driveways	1	L.S.	$500.00	$500.00	50%	$250.00	50%	$250.00
	g) Existing chain-link fence	1	L.S.	$1,500.00	$1,500.00	50%	$750.00	50%	$750.00
	h) Existing curb	50	m	$25.00	$1,250.00	50%	$625.00	50%	$625.00
	i) Existing manhole	1	ea	$2,500.00	$2,500.00	50%	$1,250.00	50%	$1,250.00
4.	Adjustment of existing infrastructure: a) Existing manholes	3	ea	$500.00	$1,500.00	50%	$750.00	50%	$750.00
	b) Existing water valves	2	L.S.	$500.00	$1,000.00	50%	$500.00	50%	$500.00
5.	Excavation of roadway to subgrade including filling of existing ditches to 95% SPD and grading of roadways, boulevards and swales less 100mm topsoil and sod to match existing property grade and backfilling of curbs. (Approx. area 4,500m^2)	1	L.S.	$25,000.00	$25,000.00	50%	$12,500.00	50%	$12,500.00
6.	Granular Base Course - a) Granular 'A' 450mm compacted thickness to 100% S.P.D. including roadway fine grading.	2,500	m^2	$21.00	$52,500.00	50%	$26,250.00	50%	$26,250.00
	b) Granular 'M' shoulder restoration 150mm depth	15	m^2	$28.00	$420.00	50%	$210.00	50%	$210.00
7.	Concrete curb and gutter as per OPSD 600.04 with 2-10mm rebar.	435	m	$65.00	$28,275.00	50%	$14,137.50	50%	$14,137.50
8.	Concrete curb taper as per OPSD 608.010	2	ea	$500.00	$1,000.00	50%	$500.00	50%	$500.00
9.	Subdrain - 100mm diameter HDPE with filter cloth as per OPSD 216.021.	435	m	$18.00	$7,830.00	50%	$3,915.00	50%	$3,915.00

NOVEMBER 2, 2017

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	VINTAGE INN PERCENT	VINTAGE INN COST	TOWN PERCENT	TOWN COST
10.	Hot mix asphalt - Including preparation of Granular 'A' base and sawcutting to match existing asphalt.								
	a) 50mm HL8 HS Base course compacted thickness	2,050	m^2	$21.00	$43,050.00	50%	$21,525.00	50%	$21,525.00
	b) 40mm HL3 HS Top course compacted thickness	2,050	m^2	$21.00	$43,050.00	50%	$21,525.00	50%	$21,525.00
11.	Mill existing asphalt 0.5m wide by 40mm depth	30	m^2	$30.00	$900.00	50%	$450.00	50%	$450.00
12.	Reinstate of existing asphalt driveways with 225mm of Granular 'A' 50mmHL 8 and 25mm HL3 Fine to match proposed road grade and sidewalk	60	m^2	$65.00	$3,900.00	50%	$1,950.00	50%	$1,950.00
13.	Reinstate of existing granular driveways with 300mm of Granular 'A' to match proposed road grade to property line.	45	m^2	$20.00	$900.00	50%	$450.00	50%	$450.00
14.	Grade and reinstate existing boulevard and ditch area with 100mm topsoil and sod to include King Street reinstatement.	2,500	m^2	$25.00	$62,500.00	50%	$31,250.00	50%	$31,250.00
15.	Concrete sidewalk - 1.5m wide 125mm thickness, 100mm Granular 'A' base including wheelchair ramps to include King Street frontage.	550	m^2	$75.00	$41,250.00	100%	$41,250.00	0%	$0.00
16.	Tactile warning strips (0.60m x 0.60m)	6	ea	$350.00	$2,100.00	100%	$2,100.00	0%	$0.00
17.	Sawcut, remove and disposal of existing curb and reinstate with curb depression for proposed sidewalk on King Street	2	m	$75.00	$150.00	50%	$75.00	50%	$75.00
18.	Adjust existing catchbasin to match proposed road grade.	1	L.S.	$250.00	$250.00	50%	$125.00	50%	$125.00
				TOTAL SECTION 'C'	**$349,125.00**		**$196,237.50**		**$152,887.50**

ANNE STREET RECONSTRUCTION