

Site Alteration Permit
(to be completed and issued by City staff)

Under City of Cambridge By-law 23-103, a Site Alteration Permit has been issued for the following site:

Municipal Address:	85 Sunset Blvd
Plan Reference:	
Subdivision Name (if applicable):	
Owner's Name:	Ronald Dallan, WRDSB
Applicant's Name:	David Colussi, Workshop
Emergency Contact Person:	Yar Taraky, Mantecon Partners Inc.

The permit is issued based on the following approved plans and documents:

Document	Date and Revision No.
Dwg C0.00 – General Notes	2025/04/17 – Rev #2
Dwg C3.00 – Sediment & Erosion Control Plan	2025/04/17 – Rev #2
Dwg TPP-1 – Tree Preservation Plan	2025/05/22 – Rev #2
Dwg TPP-2 – Tree Preservation Notes and Details	2025/05/22 – Rev #2
Dwg CP-1 - Compensation Planting Plan	2025/05/22 – Rev #2
Dwg CP-2 - Compensation Planting Plan	2025/05/22 – Rev #2

The permit is issued as of June 18, 2025 and will expire on December 15, 2025.

Conditions

- The Deputy City Manager may extend the Site Alteration Permit a maximum of two times at the applicable non-refundable extension fee. A new permit application and fee will be required if either the initial permit has previously been extended twice or if an extension request is not submitted to Development Engineering by December 5, 2025,

2. Prior to the commencement of any grading works and/or tree removals, an inspection of erosion and sediment controls and tree protection measures is required.
3. The granting of a Site Alteration permit under this by-law does not remove any of the Applicant's obligation to obtain all other approvals as may be required by other agencies or under any other regulations including the Conservation Authorities Act.
4. The Grand River Conservation Authority approval is to be obtained prior to the commencement of any grading works within Regulatory Flood Limits or the GRCA's regulated area.
5. Any change to the proposed work on site that may alter tree impacts or increase the area of land disturbance from the approved plans will require a new/amended Site Alteration Permit submission to City of Cambridge.

Permit Issued by:



Hardy Bromberg, Deputy City Manager Community Development

June 17, 2025

C0.00	GENERAL NOTES
C0.01	TYPICAL DETAILS
C1.00	SITE GRADING PLAN
C1.01	RETAINING WALL SECTION DETAILS
C2.00	SITE SERVICING PLAN
C3.00	SEDIMENT AND EROSION CONTROL PLAN

1. EXISTING UNDERGROUND SERVICE INFORMATION IS DERIVED FROM EXISTING DRAWINGS AND HAVE NOT BEEN LOCATED BY THE UTILITY COMPANIES. MANITOPOL PARTNERS ASSUME NO RESPONSIBILITY AS TO THE ACCURACY, CORRECTNESS AND COMPLETENESS OF THE UNDERGROUND SERVICE INFORMATION SHOWN ON THIS PLAN.
2. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL DAMAGED AND/OR DISTURBED PROPERTY WITHIN THE LIMIT OF MUNICIPAL RIGHT-OF-WAY TO CITY OF CAMBRIDGE STANDARDS.
3. ALL WORK AND MATERIALS SHALL BE IN COMPLIANCE WITH CITY OF CAMBRIDGE, LOCAL UTILITY, MINISTRY OF THE ENVIRONMENT, AND ONTARIO PROVINCIAL STANDARDS AND REGULATIONS, CURRENT CANADIAN BUILDING CODE, AS WELL AS ALL APPLICABLE HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
4. EXISTING ELEVATIONS AND LOCATION OF EXISTING SERVICES ARE NOT GUARANTEED. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES MINIMUM 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK. ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE FOR REFERENCE PURPOSES ONLY. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR UTILITY LOCATIONS, IF REQUESTED BY THE CITY, MINISTRY OF TRANSPORTATION AND/OR ENGINEER. THE CONTRACTOR TO EXPOSE EXISTING SERVICES TO VERIFY EXACT LOCATION, PRIOR TO STARTING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES DURING CONSTRUCTION, OR DUE TO ITS CONSTRUCTION ACTIVITIES.
6. DEWATERING, IF REQUIRED, SHALL BE THE RESPONSIBILITY AND SOLE EXPENSE OF THE CONTRACTOR. REFER TO THE GEOTECHNICAL REPORT EXISTING SITE CONDITIONS.
7. PERMITS REQUIRED FOR ROADWORK AND RIGHT-OF-WAYS SHALL BE OBTAINED FROM THE LOCAL GOVERNING MUNICIPALITIES PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN ANY CITY RIGHT-OF-WAYS. THE CONTRACTOR IS TO PAY AND COORDINATE ALL REQUIRED PERMITS FOR ROADWORK WITH THE CITY.
8. ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO WORKING WITHIN ANY CITY RIGHT-OF-WAY.
9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK ON SITE WITH OTHER CONTRACTORS TO PREVENT CONFLICTS.
10. ALL AREAS ON PLAN, INCLUDING EXISTING CONCRETE SIDEWALKS, WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER. GRASSED AREAS SHALL BE RESTORED WITH SOD ON MINIMUM 150mm OF TOPSOIL.
11. POSITIVE DRAINAGE SHALL BE PROVIDED THROUGHOUT THE SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
12. THE CONTRACTOR IS RESPONSIBLE FOR ALL REMOVALS AND SHALL ENSURE THEIR OFFSITE DISPOSAL.
13. THE GENERAL NOTES MUST BE READ IN CONJUNCTION WITH THE DESIGN DRAWINGS AND SPECIFICATIONS OF ENGINEERING AND ARCHITECTURAL DISCIPLINES WHICH FORM PART OF THIS CONTRACT. THIS INCLUDES DRAWING SPECIFICATIONS AND SKETCHES. SHOULD THERE BE CONTRACTORY INFORMATION BETWEEN DRAWINGS, SKETCHES AND/OR SPECIFICATIONS, THE MOST STRINGENT COVERS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN AS BUILT TOPOGRAPHIC SURVEY UPON COMPLETION OF THE CONSTRUCTION WORK TO VERIFY COMPLIANCE WITH THE DESIGN AND LOCAL REGULATIONS. THE TOPOGRAPHIC SURVEY SHALL BE CONDUCTED BY A PROFESSIONAL LAND SURVEYOR.
15. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

ITEMS	REQUIRED SUBMITTAL?	ENGINEER'S STAMP REQUIRED?	NOTES
CONCRETE MIX DESIGNS	YES		
ASPHALT MIX DESIGNS	YES		
AGGREGATE GRADATION	YES		
SEWER APPURTENANCES	YES		

1. NATIVE BACKFILL MATERIAL SHOULD BE COMPACTED TO 98% STANDARD PROCTOR DENSITY. GRANULAR BACKFILL MATERIAL SHALL BE PLACED IN LAYERS 150mm IN DEPTH AND COMPACTED TO 98% STANDARD PROCTOR DENSITY.
2. PAVEMENT SHALL BE AS FOLLOW:

<u>PAVEMENT COMPONENT</u>	<u>THICKNESS (mm)</u>
ASPHALT SURFACING -HL3	40mm
ASPHALT SURFACING -HL8	50mm
GRANULAR "A" BASE	175mm
GRANULAR "B" TYPE II SUBBASE	350mm

3. SUBMIT ASPHALT MIX DESIGN AND TRIAL MIX TEST RESULTS TO CONSULTANT FOR APPROVAL.
4. PROOF ROLLING OF SUBGRADE SHALL BE INSPECTED BY THE GEOTECHNICAL CONSULTANT.
5. PLACE GRANULAR BASE TO COMPACTED THICKNESS AS INDICATED. DO NOT PLACE FROZE MATERIAL.
6. ASPHALT MATERIALS SHALL BE ROLLED AND COMPACTED TO A MINIMUM OF 97% MRD.
7. PROOF ROLLING OF ASPHALT SHALL BE INSPECTED BY THE GEOTECHNICAL CONSULTANT.
8. IF PAVEMENT CONSTRUCTION OCCURS IN WET, INCLIMMATE WEATHER THE CONTRACTOR SHALL DISCUSS ADDITIONAL SUBGRADE SUPPORT WITH THE GEOTECHNICAL CONSULTANT AND PROVIDE ADDITIONAL GRANULAR SUB-BASE BASED ON THE GEOTECHNICAL CONSULTANT'S RECOMMENDATIONS.
9. BACKFILL MATERIAL AND COMPACTION SHOULD BE IN CONFORMANCE WITH THE GEOTECHNICAL REPORT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN AS BUILT TOPOGRAPHIC SURVEY UPON THE COMPLETION OF CONSTRUCTION WORK TO VERIFY COMPLIANCE WITH THE DESIGN AND LOCAL REGULATIONS. THE TOPOGRAPHIC SURVEY SHALL BE CONDUCTED BY A PROFESSIONAL LAND SURVEYOR.

1. ALL BARRIER CURB WITHIN SITE TO BE OPSD 600.110. ALL CURB DEPRESSIONS ACROSS ENTRANCE DRIVEWAYS TO BE AS PER CITY STANDARD DRAINAGE OR MUNICIPAL STANDARDS.
2. CURBS AT AND/OR PEDESTRIAN CONNECTIONS/CROSSING TO BE RECESSED CURBS, FLUSH WITH PAVEMENT SURFACE.
3. CONCRETE TO BE 35MPa COMPRESSIVE AT 28 DAYS WITH 5% TO 7% AIR ENTRAINMENT.
4. EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM 4.5m ON CENTRE AND WHERE CONCRETE MEETS OTHER HARD SURFACES AND STRUCTURES. (COORDINATE WITH LANDSCAPE/ARCHITECT DRAWINGS)
5. CONSTRUCTION JOINTS WITH DOUBLE EDGER IN FRESH CONCRETE THEN SAW CUT TO A DEPTH OF 30mm. JOINTS SHALL BE SPACED AT MAXIMUM 1.5 METRES ON CENTRE. (COORDINATE WITH LANDSCAPE DRAWINGS)
6. SLUMP OF CONCRETE SHALL BE 80mm.
7. CONCRETE CURB TO BE AS PER OPSD 600.110.

1. CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION, TESTING AND STANDARD PRACTICES FOR CONCRETE SHALL BE IN ACCORDANCE WITH CSA STANDARD A23.1/A23.2 (LATEST EDITION).
2. CONCRETE DESIGN SHALL BE IN THE DESIGN OF CONCRETE STRUCTURES CSA STANDARD A23.3 (LATEST EDITION).
3. SUPPLY AND PLACE CONCRETE IN ACCORDANCE TO TABLE 1:

LOCATION	MINIMUM COMPRESSIVE STRENGTH (f'c) AT 28 DAYS MPa (PSI)	SLUMP mm (in)	EXPOSURE CLASS	AIR CONTENT (%)
SIDEWALK/CURBS PAVING SLABS, EXTERIOR CONCRETE	35 (5000)	40 ± 20 (1-1/2 ± 3/4)	C-2	5-8

4. PAVEMENT SHALL BE:

<u>PAVEMENT COMPONENT</u>	<u>THICKNESS (mm)</u>
CONCRETE PAVERS	AS NOTED
CONCRETE SLAB	125 (UNLESS OTHERWISE NOTED)
GRANULAR "A" BASE	100
GRANULAR "B" BASE	200 (UNLESS OTHERWISE NOTED)

5. GRANULAR BASE LAYERS SHALL BE COMPACTED TO MIN. 98% STANDARD PROCTOR DENSITY.
6. THE COMPRESSIVE STRENGTH OF THE CONCRETE IS BASED ON THE FOLLOWING CONDITIONS:
 - a. TYPE GU NORMAL PORTLAND CEMENT UNLESS OTHERWISE NOTED OR APPROVED.
 - b. MAXIMUM SIZE OF AGGREGATE 20mm (3/4") WASHED IRREGULAR CUL CLEAR STONE, EXCEPT FOR CONCRETE TOPPING WHICH SHALL HAVE MAXIMUM SIZE OF AGGREGATE 10mm (3/8") WASHED IRREGULAR CUL CLEAR STONE.
 - c. SLUMP SHOWN ON THE TABLE IS SLUMP WITHOUT SLUMP AD MIXTURE. THE USE OF AN AD MIXTURE IS REFERRED TO INCREASE THE SLUMP. THE SUPERPLASTICIZED CONCRETE SLUMP MUST REMAIN BELOW THE POINT AT WHICH SEGREGATION WILL OCCUR.

1. THE FOLLOWING ITEMS REQUIRE TESTING OR INSPECTION BY A CERTIFIED INDEPENDENT TESTING OR INSPECTION AGENCY PAID BY OWNER. THE AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

ITEMS	REQUIRED?	COMMENTS
SOIL BEARING CAPACITY	YES	BY SOILS ENGINEER
SOIL COMPACTION	YES	BY SOILS ENGINEER
CONCRETE COMPRESSIVE TESTS	YES	MINIMUM 2 SETS PER EACH 50m ³
CONCRETE SLUMP	YES	

1. ALL BEDDING AND BACKFILL MATERIAL, ROAD SUB-GRADES AND GENERALLY ALL MATERIAL USED FOR LOT GRADING AND FILL SECTIONS, ETC., SHALL BE COMPACTED TO MIN. 95% SPD (UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER). ALL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm LIFTS.
2. ALL GRANULAR ROAD BASE MATERIALS SHALL BE COMPACTED TO 98% SPD.
3. FOR ALL SEWERS AND WATERMAINS IN FILL SECTIONS, THE COMPACTION SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO LAYING OF PIPE.

1. ALL SERVICES TO BE INSTALLED AS PER THE LATEST CITY STANDARDS AND SPECIFICATIONS MANUAL.
2. MINIMUM AND MAXIMUM DESIGN REQUIREMENT FOR VELOCITIES 0.80 TO 6.0m/s FOR STORM SERVICE.
3. MINIMUM BEDDING REQUIREMENTS FOR ALL SINGLE STORM AND SANITARY SEWER MAINS AND ALL RELATED CONNECTIONS SHALL BE CLASS "B" BEDDING AS PER THE REGION OF WATERLOO STANDARD DRAWING SSM5 E1-01.
4. THE TRENCH ABOVE THE SPECIFIED BEDDING SHALL BE BACKFILLED WITH APPROVED NATIVE MATERIAL EXCAVATED FROM THE TRENCH OR OBTAINED ELSEWHERE ON THE PROJECT, AND SHALL BE PLACED IN LAYERS NOT EXCEEDING 300 mm, AND SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.
5. ALL MANHOLE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL WITHIN 300mm OF THE STRUCTURE AND COMPACTED TO 98% STANDARD PROCTOR DENSITY.
6. SEWER BEDDING, COVER AND BACKFILL SHALL BE WITH GRANULAR A COMPACTED TO 100% SPMDD AND IN ACCORDANCE WITH THE REGION OF WATERLOO GUIDELINES.
7. STORM AND SANITARY TO BE INSTALLED WITH A MINIMUM 2.75m COVER AT THE PROPERTY LINE BELOW THE FINAL ROAD GRADE OR AT SUCH HIGHER ELEVATION ONLY AS MAY BE NECESSITATED BY THE LEVEL OF THE MAIN SEWER, ON PRIVATE PROPERTY, THE MINIMUM COVER IS NOT TO BE LESS THAN 1.2m.
8. CONNECTIONS TO MANHOLES SHALL BE IN ACCORDANCE WITH DPSS 407 CONSTRUCTION SPECIFICATION FOR NEW MAINTENANCE HOLES, CATCH BASIN, DITCH INLET, AND VALVE CHAMBER INSTALLATION - SECTION 407.07.13 INSTALLATION OF INLET AND OUTLET PIPES INTO CONCRETE STRUCTURES - C) RESILIENT CONNECTION
9. MAINTENANCE HOLE FRAMES AND LIDS SHALL BE ADJUSTED SO THAT WHEN TESTED WITH A 3m STRAIGHT EDGE IN ANY DIRECTION OF THE SURFACE, THE GAP SHALL NOT EXCEED 7mm BETWEEN THE BOTTOM OF THE STRAIGHT EDGE AND THE SURFACE OF THE ASPHALT OR FRAME AND APPURTENANCE.
10. ALL NEW MAINTENANCE HOLES SHALL BE FITTED WITH SELF-ADJUSTING MANHOLE FRAME AND COVER FROM EAST JORDAN IRON WORKS (PRODUCT NO. 00302201), BIBBY-STE-CROIX (AUTO STABLE C-30M-ON) OR STAR PIPE PRODUCTS (M2400), OR APPROVED EQUIVALENT ON REGION OF WATERLOO, ALL SELF-LEVERS TO BE SUPPLIED WITH RUBBER GASKETS.
11. FOR MAINTENANCE HOLE DEPTHS BETWEEN 5.0 AND 10.0 m, A SAFETY GRATE MUST BE INSTALLED AT THE MID-POINT. FOR MAINTENANCE HOLE DEPTHS BETWEEN 10.0 AND 15.0 m, A SAFETY GRATE MUST BE INSTALLED AT THE THIRD POINTS. REFER TO DPSS 404.02.
12. STORM SEWERS SHALL BE PVC, BEL SPIGOT JOINTS, RUBBER GASKET, LUBRICANT AND ALL OTHER NECESSARY APPURTENANCES SHALL BE MANUFACTURED IN CONFORMANCE WITH DPSS 1841 AND SHALL BE CERTIFIED TO CSA B182.2 FOR PVC SEWER PIPE AND FITTINGS OR CSA B182.4 FOR PROFILE PVC SEWER PIPE AND FITTINGS, PVC PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 320 KPA.
13. ALL PVC STORM PIPES TO BE SDR-35 FOR 200mm diameter AND OVER, AND SDR-35 FOR 150mm AND SMALLER TO CSA SPECIFICATIONS B182.2, PVC SANITARY PIPES TO BE SDR-35 FOR 200mm DIAMETER AND OVER, AND SDR-26 FOR 150mm AND SMALLER TO CSA SPECIFICATIONS B182.2.
14. WHERE SANITARY OR STORM CROSSING OCCURS WITH EXISTING OR PROPOSED WATERMAIN, THE WATERMAIN SHALL BE PROTECTED BY A MINIMUM 150mm OF 5mm VERTICAL SEPARATION BY INSTALLING A VERTICAL BEND IN WATERMAIN IF REQUIRED, WATERMAIN TO CROSS BELOW OTHER SERVICES AT BENDS TO BE PREVENTED, A MINIMUM SEPARATION OF 0.1m BETWEEN SANITARY AND STORM SEWER PIPES TO BE REQUIRED WHERE ONE SEWER PIPE CROSSES OVER THE OTHER.
15. ANY CHANGES IN GRADES AND CATCH BASINS REQUIRING THE APPROVAL OF THE DIRECTOR, DEVELOPMENT DIVISION, PLANNING AND DEVELOPMENT DEPARTMENT.
16. EXISTING SEWERS TO BE KEPT IN GOOD WORKING CONDITION AND OF ADEQUATE CAPACITY TO MEET THE REQUIREMENTS OF THE CITY OF WATERLOO. THE AFFRANCH/OWNER OF THE CONTRACTOR IS RESPONSIBLE FOR HAVING THE SEWER TO BE REUSED VIDEO INSPECTED WHILE THE CITY OF HAMILTON SEWER INSPECTOR IS PRESENT, CONTACT PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT, PLANNING AND DEVELOPMENT DIVISION, DEVELOPMENT ENGINEERING SECTION, 1000 BAYVIEW AVE. 10TH FLOOR, MISSISSAUGA, ONTARIO L4Y 1A7, TEL: 905.874.2424 EXT 3680 TO ARRANGE FOR AN INSPECTION.

1. ALL SILT FENCING TO BE INSTALLED PRIOR TO COMMENCEMENT OF ANY AREA GRADING, EXCAVATING, OR DEMOLITION.
2. PROTECT ALL EXPOSED SURFACES AND CONDUIT ALL RUNOFF DURING CONSTRUCTION.
3. PROTECT ALL MANHOLES, AND PIPE ENDS (EXISTING AND NEW) FROM SEDIMENT INTRUSION WITH GEOTEXTILE CLOTH (TERRAFRAX 270). ALL CATCHBASINS TO HAVE SILTSACKS AS PER THE ATTACHED DETAILS.
4. PREVENT WIND-BLOWN DUST.
5. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURES.
6. EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY BY CONTRACTOR AND ANY DAMAGE REPAIRED IMMEDIATELY. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF ONE THIRD (1/3) THE HEIGHT OF THE SILT FENCE.
7. SEDIMENT CONTROL FENCE TO BE AS PER OPSD 219.130
8. ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-ESTABLISHED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
9. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE MUNICIPAL ROADWAY AND SIDEWALKS AS REQUIRED TO SATISFY THE AUTHORITIES HAVING JURISDICTION AND AT THE END OF EACH WORK DAY.
10. MUD MATS OF 150MM RIP RAP, (15 METRES LONG, 7.5 METRES WIDE, 300MM DEEP) SHALL BE PROVIDED ON SITE CONSTRUCTION ENTRANCES. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE MUD MATS AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE ITS EFFECTIVENESS AT ALL TIMES. REFERENCE SHOULD BE DRAWN TO LOCATIONS ON DRAWING.
11. CONSULTANT TO MONITOR THE SITE DEVELOPMENT TO ENSURE ALL EROSION CONTROLS ARE INSTALLED AND MAINTAINED TO CITY REQUIREMENTS.

BLAIR ROAD PUBLIC SCHOOL

PROJECT:
BLAIR ROAD PUBLIC SCHOOL
PARKING LOT EXPANSION

85 SUNSET BLVD, CAMBRIDGE
ONTARIO, N1S 1A9

DRAWING TITLE:

GENERAL NOTES

DRAWN BY: A.A.	SCALE: AS NOTED
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CHECKED BY: Y.J.	DRAWING NUMBER:
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DATE: _____

2025 02

2023-02

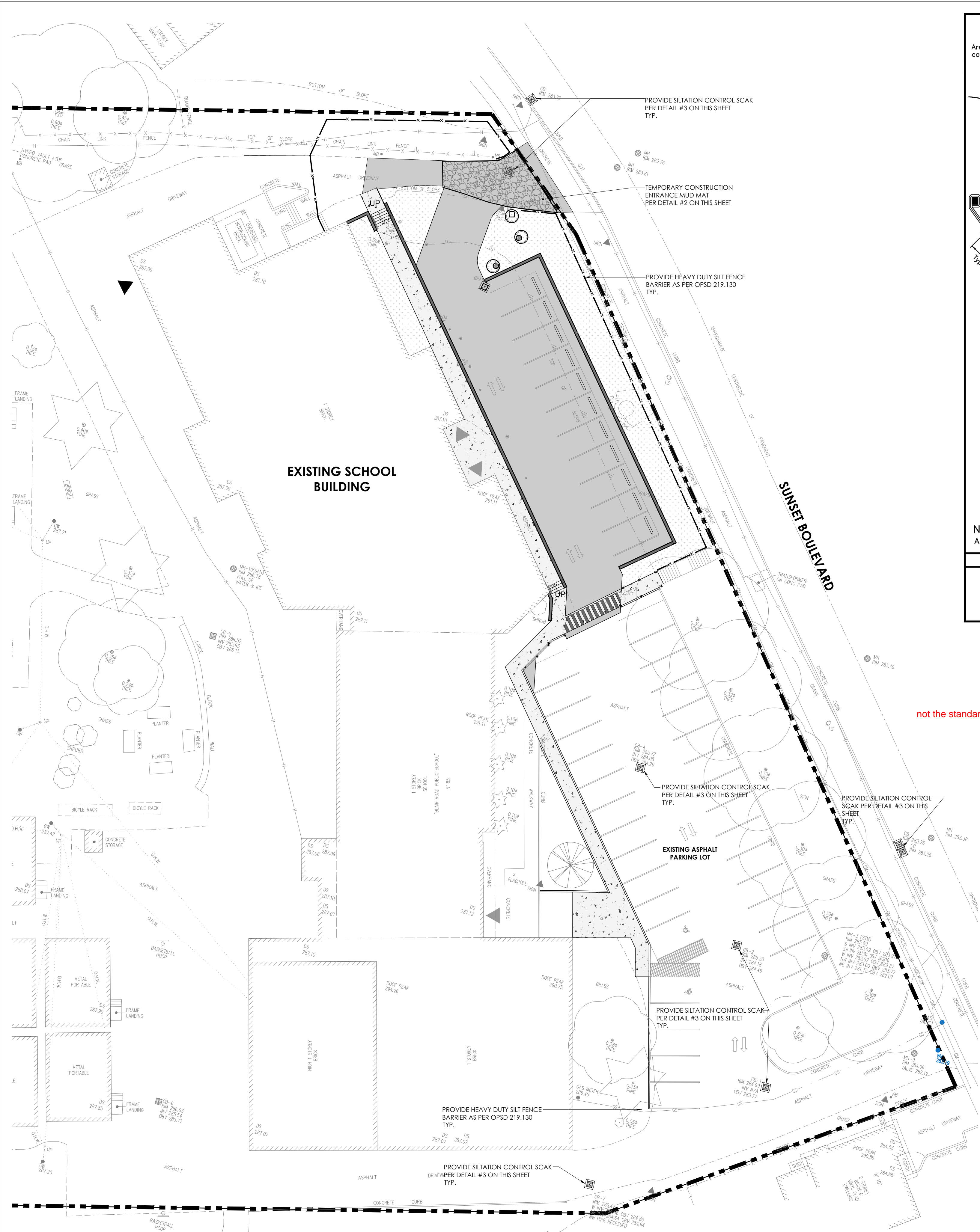
PROJECT NUMBER
25-013

SCALE:
AS NOTED

DRAWING NUMBER

C0.00

April 17, 2025 - 10:34am Plotted by: aabuwarda



1 SEDIMENT & EROSION CONTROL PLAN
SCALE: 1:250

Area under construction

Flow

End run

Barrier main run

Area under protection

Watercourse

PERSPECTIVE VIEW

Direction of flow

4m end-run

2m max

Main run 40m max

PLAN

Control measure support

Geotextile

300mm min of geotextile in trench

Trench shall be backfilled and compacted

Direction of flow

600mm min

200

400

900mm min

Stake

Original ground

SECTION A-A

JOINT DETAIL

NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2021

Rev 3

HEAVY-DUTY SILT FENCE BARRIER

OPSD 219.130

not the standard

HARD SURFACE PUBLIC ROAD

WASHRACK MAY BE REQUIRED. SIZING AND DESIGN AS PER MUNICIPAL SPECIFICATIONS. DRAIN TO A SEDIMENT TRAP/BASIN.

450mm MINIMUM THICK UNDERLAIN WITH GEOTEXTILE

20m OF 50mm CLEAR STONE

100mm OR FULL WIDTH OF ENTRANCE

NOTES

1. DIMENSIONS HAVE BEEN MODIFIED TO SUIT SITE CONDITIONS

2. ALL EROSION AND SILTATION CONTROL DEVICES SHOULD BE AS PER LOCAL AUTHORITY HAVING JURISDICTION.

2 TYP MUD MAD DETAIL
SCALE: N.T.S.

LEGEND - SITE GRADING

THIS LEGEND OF SYMBOLS REPRESENTS MANTECON PARTNERS INC. STANDARD/GENERIC LEGEND. ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.

REFER	DESCRIPTION
---	PROPERTY LINE
▨	EXISTING BUILDING
▨	PROPOSED ASPHALT
▨	PROPOSED CONCRETE
▨	PROPOSED SOD
+XXX.XX	EXISTING ELEVATION
+ [XXX.XX]	PROPOSED ELEVATION
CB	PROPOSED CATCH BASIN
CBMH	PROPOSED CATCH BASIN MANHOLE
STMMH	PROPOSED STORM MANHOLE

METRIC: DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

SITE PLAN

PLAN OF TOPOGRAPHICAL SURVEY OF BLAIR ROAD PUBLIC SCHOOL BEING HP 65 SUNSET BOULEVARD, CITY OF CAMBRIDGE REGIONAL MUNICIPALITY OF WATERLOO

INFORMATION ON THIS SITE PLAN TAKEN FROM SURVEY / TOPOGRAPHY PREPARED BY:

GENESIS LAND SURVEYING INC. 10 FOUR SEASONS PLACE 10TH FLOOR TORONTO, M9B 6H7 T 905-499-2956 - T 1800-262-9784

THE SURVEY WAS COMPLETED ON DECEMBER 30, 2024

BENCHMARK

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF CAMBRIDGE BENCHMARK N° 00119663308 WITH A PUBLISHED ELEVATION OF 300.480 METRES [CGVD-1928(POST-1978)].

UTILITY NOTE

THE LOCATION OF UNDERGROUND UTILITIES SHOWN HAS BEEN LOCATED BY MARK-IT LOCATES INC. ON JANUARY 6, 2025 AND IS FOR DESIGN PURPOSES ONLY. IT IS NOT TO BE USED AS A SUBSTITUTE FOR NEW LOCATES PRIOR TO EXCAVATION AND IS CERTIFIED BY MARK-IT LOCATES INC. ONLY. ANY DISCREPANCIES ARE TO BE REPORTED. READ WITH CORRESPONDING LOCATE REPORT.

SNOW NOTE

THE FIELDWORK WAS COMPLETED DURING HEAVY SNOW CONDITIONS AND EVERY ATTEMPT HAS BEEN MADE TO ACCURATELY CAPTURE ALL RELEVANT TOPOGRAPHIC DETAILS. ANY OMISSIONS SHOULD BE REPORTED TO THE UNDERSIGNED.

SIDE VIEW INSTALLED

EXPANSION RESTRAINT

INSTALLATION DETAIL

1" REBAR FOR BAG REMOVAL FROM INLET (REBAR NOT INCLUDED)

OPTIONAL OVERFLOW

SILTSACK

DUMP LOOPS (REBAR NOT INCLUDED)

GRATE

CURB OPENING

FOAM

DEPTH = D

WIDTH = W

LENGTH = L

3 TYP SILT TRAP DETAIL
SCALE: N.T.S.

TRUE NORTH

CONSTRUCTION NORTH

MANTECON PARTNERS

STRUCTURAL MECHANICAL ELECTRICAL CIVIL ENGINEERS

15 Foundry Street, Dundas, ON, L9H 2V6
Phone: (905) 648-0373
www.manteconpartners.com

SEAL

Y.M. TARAKY
100035303
2025-04-17
PROVINCE OF ONTARIO

REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR SHOP FABRICATION. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF "MANTECON PARTNERS" AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

NO.	ISSUED	DATE	BY
2.	ISSUED FOR PERMIT & TENDER	2025-04-17	Y.T.
1.	ISSUED FOR PROGRESS REVIEW	2025-03-28	A.A.

WORKSHOP

CLIENT:

BLAIR ROAD PUBLIC SCHOOL

PROJECT:

BLAIR ROAD PUBLIC SCHOOL PARKING LOT EXPANSION

85 SUNSET BLVD, CAMBRIDGE ONTARIO, N1S 1A9

DRAWING TITLE:

SEDIMENT & EROSION CONTROL PLAN

DRAWN BY: A.A.	SCALE: AS NOTED
CHECKED BY: Y.T.	DRAWING NUMBER: C3.00
DATE: 2025-02-25	DATE: 06/12/2025
PROJECT NUMBER: 25-013	

April 17, 2025 - 10:37am Plotted by: aabwarda

GENERAL TREE NOTES

1. All dimensions are in metres.
2. Contractor shall verify all conditions in the field and report any discrepancies to the Project Engineer prior to commencement of work.
3. Any soils and vegetation within tree protection zone damaged by the Contractor shall be restored to the satisfaction of the City of Cambridge by the Contractor at no additional cost to the City of Cambridge.
4. All arboricultural work performed on trees such as pruning of branches and roots shall be conducted by an ISA Certified Arborist.
5. Prune and mitigate limbs and roots damaged by construction work in accordance with ANSI A300 (Part 1) - 2008 Pruning and the Best Management Practices companion publication (revised 2008).
6. Tree Protection Fence to be erected prior to the commencement of any construction or grading, and maintained throughout the duration of the work.
7. Tree Protection Zone is delimited by Tree Protection Fence shown on the drawings.
8. No construction or activities including the following to occur within Tree Protection Zone: equipment parking or access, storage of supplies, topsoil or fill, and refueling.
9. Tree removals (if required) will be undertaken in compliance with the Migratory Birds Convention Act. Efforts will be made to remove vegetation outside the General Nesting period (April 1 - Aug 31) for regions C1 and C2 of Ontario. In the event vegetation must be removed within the General Nesting Period, a qualified avian biologist is to review the site prior to removal to ensure compliance with the Migratory Birds Convention Act.

CONSTRUCTION WITHIN MINIMUM TREE PROTECTION ZONE

1. An ISA Certified Arborist must be present on site during construction activities within MTPZ to confirm and/or modify mitigation measures for trees to be preserved.
2. Use trenchless methods (e.g. horizontal directional drilling) to install underground services (e.g. sanitary sewers and water lines) within Minimum Tree Protection Zones.

EXISTING UNDERGROUND SERVICES WITHIN TREE PROTECTION ZONES

1. Existing sanitary/storm sewers and watermain to be discontinued within tree protection zones will be filled (as needed) and abandoned.
2. Excavation and access for construction/removal of abandoned underground services will be conducted outside of tree protection zones.

FINISH GRADING WITHIN TREE PROTECTION ZONES

Where finish grading of cuts and fills, and including swales occurs within tree protection zones, the following steps are required.

Grade Cut:

1. Excavate by hand or Air-spade technology to a maximum depth of 100mm.
2. Roots encountered are to be assessed by the Project Arborist to determine the extent of roots to be pruned. Based on findings, other treatments may be required (e.g. crown reduction, tree removal), and which may require approval from the City.
3. Based on root findings, local, minor adjustments to grading within the tree protection zone may be required based on field consultation between the Project Arborist and Project Engineer.
4. No access by heavy equipment into tree protection zone is permitted. Fine grading to be carried out using light equipment and/or by hand.

Grade Fill:

5. Add topsoil to meet grade requirements to a maximum of 150mm.
6. No topsoil to be added onto trunk base or above-ground section of trunk base flare.
7. Maintain positive drainage away from trunk base.
8. Based on local conditions (e.g. surface drainage), local, minor adjustments to grading within the tree protection zone may be required based on field consultation between the Project Arborist and Project Engineer.

TREES OWNED BY OTHERS

1. Trees owned by others require permission (i.e. written consent) from the land owner(s) prior to activities that may damage or destroy trees. Trees owned by others are Offsite Trees and Shared Trees:
 - a. Offsite Trees - Trees on property adjacent to the subject property
 - b. Shared (Boundary) Trees - Trees whose trunk including the basal trunk flare growing on the boundary between the subject property and adjoining property (from *Ontario Forestry Act*).

The Provincial Forestry Act, R.S.O. 1990 (Section 10):

10. (2) Every tree whose trunk is growing on the boundary between adjoining lands is the common property of the owners of the adjoining lands. 1990, c. 18 Sched. I, s. 21.
(3) Every person who injures or destroys a tree growing on the boundary between adjoining lands without the consent of the land owners is guilty of an offence under this Act. 1998, c. 18, Sched. I, s. 21.

ROOT SENSITIVE EXCAVATION

A preliminary excavation at the limit of work is recommended to determine the potential magnitude of the impacts posed by the planned work. For excavation in turf or permeable surfaces, the final excavation limit should be marked in the field and arborist supervised excavation shall be performed using air-spade, dry-vac truck, hydro-vac truck or hand tools. For excavation of existing impermeable surfaces, the impermeable top layer may be broken up by machine to allow access to the permeable base layers. The permeable base layers may need to be excavated further to expose existing roots, in which case this excavation shall be performed using air-spade, dry-vac truck, hydro-vac truck or hand tools. All root sensitive excavation must be performed under the supervision of a qualified arborist. All roots exposed must be documented by the supervising arborist. Every effort should be made to preserve as many exposed roots as possible. Roots approved for pruning should be cleanly cut with a sharp, non-vibrating tool such as a handsaw, scuteaus, chainsaw at face of trench such that no further disturbance of the roots are to be expected once mechanical excavation begins. All root pruning is to be performed by the arborist only, as per guidelines below.

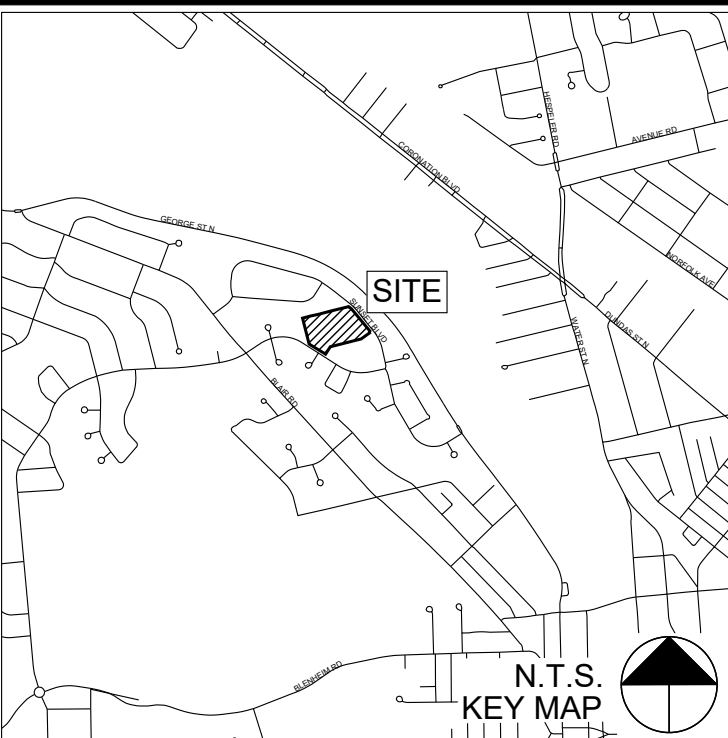
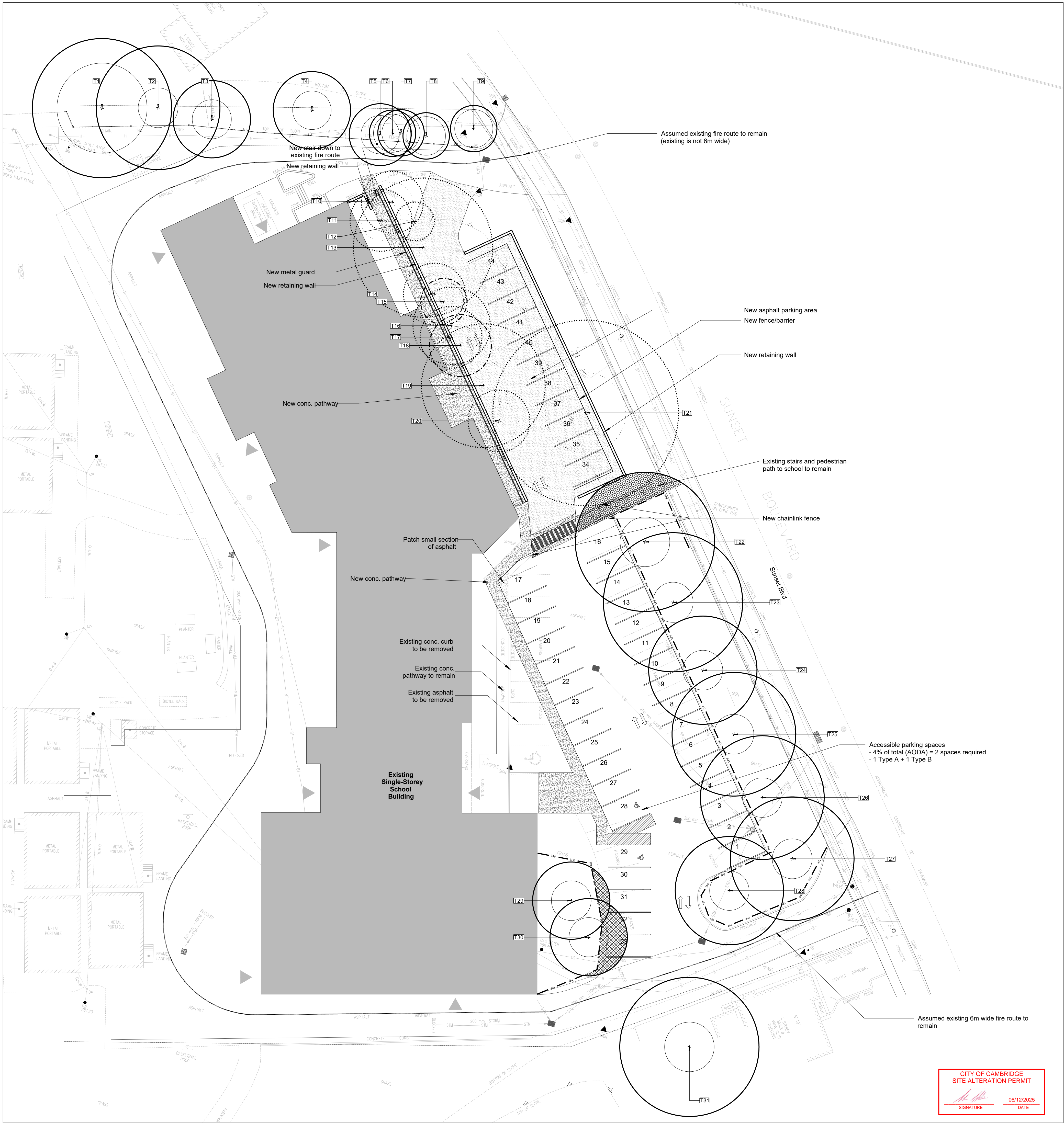
1. When root sensitive excavation is performed in regards to the installation of a deep site feature such as a foundation, roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the Tree Protection Zone (TPZ) of bylaw trees they should be preserved.
2. When root sensitive excavation is performed in regards to the installation of site features such as post holes, all roots exposed of under 5cm diameter may be cleanly cut at face of hole such that no further disturbance of the roots are to be expected once mechanical excavation begins for the lower portion of the holes (below hand dug area). If roots of 5cm diameter or greater are uncovered they should be preserved, the post holes filled in with viable soil and the hole moved at least 0.5 metre away to avoid significant roots.
3. When root sensitive excavation is performed in regards to the installation of site features such as driveways, walkways, curbs, etc. roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the TPZ of bylaw trees they should be preserved
4. When root sensitive excavation is performed in regards to the installation of utilities such as water lines or sewers, every effort should be made to preserve as many exposed roots as possible by installing the utilities underneath the roots without root pruning. If roots of 5cm diameter or greater are uncovered they should be preserved.

1 GENERAL TREE PROTECTION NOTES

TPP-1

SITE SPECIFIC PRE-CONSTRUCTION ROOT EXPLORATION NOTES

1. Demolition, excavation, and construction work within the dripline of Tree #22, 29 and 30 where tree roots have the potential to be impacted is to be performed under the observation of an ISA Certified Arborist retained by the Contractor
2. The ISA Certified Arborist will observe, document, and respond to Contractor requests for information related to trees, tree roots, and root pruning while the General Contractor and their subcontractor(s) use dry-vac excavation technology within the dripline of Tree #'s listed above. The ISA Certified Arborist will prepare a report documenting above and below grade conditions related to trees, recommended best management practices and next steps based on project requirements including site specific permit conditions, reports, drawings, and specifications.
3. If, during the dry-vac excavation procedure, the ISA Certified Arborist observes the potential for impacts to the roots of Tree #'s listed above that are such that root pruning will be detrimental to the health and structure of the tree, they will contact a City of Cambridge Forestry Division Staff Member for further review and recommendation. All demolition and excavation work is to stop and exposed tree roots are to be covered by General Contractor and their subcontractor(s) within 30 minutes with untreated burap or alternative material acceptable to ISA Certified Arborist, and wet with potable water, free of impurities that may harm trees/tree roots. Maintain moisture until such time that the recommendation to proceed is received in writing.



- LEGEND:
- EXISTING TREE
ID NUMBER / OUTER CIRCLE DENOTES APPROX. CROWN RESERVE, INNER CIRCLE DENOTES MINIMUM TREE PROTECTION ZONE (MTPZ)
 - PRESERVE TREE
TREE HAS MODERATE TO HIGH BIOLOGICAL HEALTH AND/OR STRUCTURAL CONDITION AND CAN BE INCORPORATED INTO THE PROPOSED DEVELOPMENT
 - REMOVE TREE
TREE IS IN CONFLICT WITH PROPOSED DEVELOPMENT
 - REMOVE TREE
TREE HAS LOW BIOLOGICAL HEALTH AND/OR STRUCTURAL CONDITION AND IS IN CONFLICT WITH PROPOSED DEVELOPMENT
 - TREE PROTECTION FENCE
 - ROOT SENSITIVE EXCAVATION
REFER TO NOTES ON THIS DRAWING

INFORMATION SOURCES

1. Topographic Survey dated January 15, 2025 from Genesis Land Surveyors Inc.
2. Site Plan dated March 18, 2025 from Workshop Architecture.
3. Site Grading and Servicing Plans received March 27, 2025 from Mantecon Partners Inc.
4. Tree locations collected by an About & Associates Inc. ISA Certified Arborist on March 24, 2025.

2	CITY COMMENTS	MGN	22 MAY-25
1	CITY COMMENTS	MGN	15 MAY-25
0	ISSUED FOR COORDINATION	MGN	28 MAR-25
No.	Description	By	Date

REVISIONS: All previous issues of this drawing are superseded

ABOUT & ASSOCIATES INC.
Consulting Arborists • Ecologists • Landscape Architects
3-6 Edinburgh Road South, Guelph, Ontario, N1H 5N8 • 519.822.6839 • aboutand.com

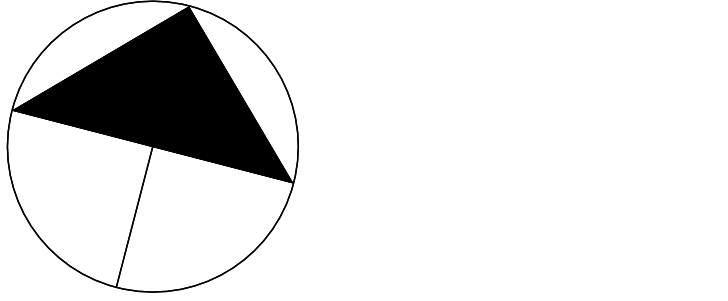
Title:

TREE PRESERVATION PLAN

Project:

WRDSB PARKING LOT
85 SUNSET BOULEVARD
CAMBRIDGE, ONTARIO

Date: MARCH 2025	Designer: NB
Project: AA25-067A	Drawn: NB
Scale: 1:250	Checked: JD/MGN



Drawing No: **TPP-1**

CITY OF CAMBRIDGE
SITE ALTERATION PERMIT
SIGNATURE 06/12/2025
DATE

1. DBH (Diameter at breast height): Measurement of tree stem diameter at 1.4 meters above ground.
2. || Denotes CBHs of Each Stem of Tree with Multiple Stems
3. Tree Protection Zones, Taken from Tree Protection Barrier Detail (TP-1) City of Cambridge, March, 2019.
Removal of trees owned by others (e.g. private off-site, municipal or shared/boundary trees) require approval from the owner.

1. Tree protection barrier and signage to be installed as prescribed in approved tree preservation plan prior to any construction activity, including demolition, removals or grading.
2. Tree protection barrier and signage to be maintained in good repair during construction and may not be removed without written authorization from the City of Cambridge Forestry Division.
3. The area within the boundary of the tree protection barrier is identified as the tree protection zone, maintain minimum tree protection zone dimensions required in this detail and as prescribed otherwise prescribed in approved Tree Inventory and Preservation Plan.
4. Construction activities are prohibited in the tree protection zone, including but not limited to:
 - i. operating, storing, parking, repairing or refueling any equipment or vehicles.
 - ii. temporary or permanent grade changes (cutting, filling or excavating).
 - iii. storing construction materials.
5. Protect tree protection zone from erosion and sediment as prescribed in the approved erosion and sediment control plan. When an erosion and sediment control plan does not exist, install and maintain, temporary erosion and sediment control measures in accordance with OFSP and as satisfied by the City of Cambridge Forestry Division.
6. Tree limb or root pruning, when required, to be performed under the supervision of an ISA certified arborist in compliance with ANSI A300.

Diagram illustrating the tree protection measures for an existing tree:

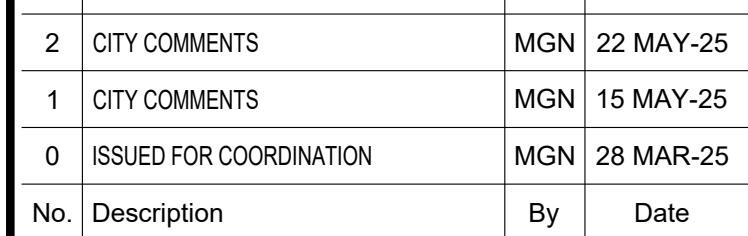
- 1.2 M (4') HIGH ORANGE PLASTIC WEB SNOW FENCING**: A protective barrier installed around the tree.
- MINIMUM TREE PROTECTION ZONE (MPZ) DISTANCE REQUIRED²**: The distance from the tree trunk to the start of the protection zone.
- 0.6 M (2')**: The distance from the tree trunk to the start of the protection zone.
- EXISTING TREE TO BE PRESERVED**: The tree being protected.
- CROWN DRIP LINE**: The line indicating the extent of the tree's canopy.
- P-2 TREE PROTECTION ZONE SIGN**: A sign indicating the tree protection zone.
- MAINTAIN EXISTING GRADE WITH THE TREE PROTECTION BARRIER UNLESS OTHERWISE INDICATED ON THE PLANS.**: A note indicating that the existing grade should be maintained unless otherwise specified.



For more information contact:
City of Cambridge **519-623-1340**

NOTES:

1. SIGN MUST BE CORRUGATED PLASTIC OF APPROVED ALTERNATIVE.
2. SIGN MUST BE SECURELY MOUNTED IN A VISIBLE LOCATION ON THE TREE PROTECTION BARRIER.
3. TP2 SIGN MUST BE MOUNTED ON EVERY TREE PROTECTION BARRIER AT A MINIMUM OF EVERY 15 METERS O.C.
4. SIGN MUST BE SECURELY MOUNTED ON TREE PROTECTION BARRIER PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS.
5. REFER TO CITY OF CALGARY DETAIL TP-1 FOR MORE DETAILS REGARDING THE TREE PROTECTION BARRIER.



REVISIONS: All previous issues of this drawing are superceded



Title: _____

Project:

WRDSB PARKING LOT
85 SUNSET BOULEVARD
CAMBRIDGE, ONTARIO

Date: MARCH 2025	Designer: NB
Project: AA25-067A	Drawn: NB
	Checked: JD/MGN

Drawing No: **TPP-2**

CLIENT: S.A.A. PROJECT: 2025-06-17 15:00:00 SITE: 85 SUNSET BLVD CAMBRIDGE, ONTARIO L4N 6P2 DATE: 2025-06-17 15:00:00 CITY: CAMBRIDGE, ONTARIO

- All dimensions are in metric unless otherwise noted.
- Do not scale drawings. Dimensions are to be verified on site by Contractor prior to commencement of the work.
- These plans shall be read in conjunction with all details, notes, reports, written specifications, general conditions, any supplemental conditions and agreement which form the contract documents.
- These drawings shall not be used for construction purposes unless noted as "Issued for Construction" and signed by the Landscape Architect or Professional Engineer.
- Contractor shall review all drawings and verify actual field conditions to determine the total scope of work and all required coordination prior to submission of bids and commencement of the work. Report any discrepancies to the Landscape Architect, for action to the satisfaction of the Owner.
- Contractor shall locate all underground, at grade and overhead utilities prior to commencement of the work. All utilities not necessarily shown on these drawings. Aboud & Associates assumes no responsibility for the accuracy of any utilities shown in these drawings.
- Contractor shall perform all work in accordance with the most current Ontario Building Code, Occupational Health and Safety Act and it's regulations, as well as local municipal codes, regulations, and By-laws.
- Contractor shall identify the location of all internal/external construction access routes, parking and storage of materials in conformance with project erosion and sediment control plans for acceptance by the Owner. Construction, maintenance and removal/restoration of access, parking and storage facilities shall be included in the Contractor's bid price.
- Contractor shall submit shop drawings where indicated in these drawings. Shop drawings shall be certified by a Professional Engineer licensed to practice in Ontario and reviewed by the contractor for dimensional correlation with the drawings and field conditions. Fabrication of elements on shop drawings shall not proceed until drawings have been reviewed and approved by a Professional Engineer and have been accepted for general design conformance by the Landscape Architect in writing. The cost of preparing shop drawings, as well as the services of a Professional Engineer, shall be included in the Contractor's bid price.
- Contractor proposed substitution of materials and products shall be submitted in writing for review by Landscape Architect and acceptance by Owner and Municipality.
- Material quantities on drawings shall take precedent over those in lists and schedules.
- Where traffic control is necessary, Contractor shall use the guideline of the Construction Safety Association of Ontario, municipal by-laws, the Highway Traffic Act and the Ontario Traffic Manual (Book 7). The cost of preparing, obtaining approvals and implementing traffic control plans shall be included in the Contractor's bid price, unless otherwise noted.
- Contractor shall erect temporary barriers, as required, to secure the work area. Contractor shall maintain temporary barriers in good repair and remove at the end of the work.
- Contractor shall provide layout and grade staking, for general review by Landscape Architect and acceptance by Owner.
- Contractor is responsible for protecting and/or reinstating site elements indicated in these drawings.
- Contractor is responsible for restoration of adjacent surfaces and existing site elements damaged by the Contractor in the performance of the work, including but not limited to roads, driveways, utilities, buildings, curbs, sidewalks, retaining walls, fencing, turf, flowers and woody vegetation. Restoration work shall be performed by the Contractor at no cost to the Owner and be completed in conformance with applicable Provincial, Municipal or Agency standards and requirements, to the satisfaction of the Owner/Agency of the damaged element.
- Where new paving or earthwork meets existing, smoothly blend line and grade of existing with new.
- Contractor or Owner to request in writing [email] Project Landscape Architect general review services at substantial performance of landscape work between May 1st and October 31st. Requests for review after October 31st will be carried out after May 1st the following spring.
- All work and materials are to be warranted by the Contractor for twenty-four (24) months from date of initial acceptance of all items by Municipal Staff and Project Landscape Architect.
 - After the initial maintenance period the Owner shall provide maintenance themselves or retain a separate Contractor to perform the maintenance as described in these drawings for all installed trees during the warranty period.
- Unless identified in warranty maintenance requirements, after substantial performance, it is the Owner's responsibility to inspect and maintain all safety devices, signs, guards, fences, handrails, surfaces, structures, and stormwater drainage system so they may function for their intended use and without harm for all users of the site.

1 GENERAL LANDSCAPE NOTES

- Perform following maintenance operations from time of planting trees, shrubs, and perennials to end of warranty period two (2) years following substantial performance of the work.
 - Water to maintain soil moisture conditions for optimum establishment, growth and health of plant material without causing erosion. In a typical loam soil, optimum soil moisture in planting beds at root depth is 65% of field capacity. Guidelines during a typical growing season are as follows:
 - Deep root water newly planted plants once per week for the first three weeks, such that the water penetrates to a minimum depth of 300mm.
 - Deep root or surface water trees and shrubs a minimum of every ten (10) days between May 15 and September 15.
 - Deep root or surface water trees and shrubs a minimum of every twenty-one (21) days between September 15 and freeze up.
 - Water evergreen plants thoroughly in late fall prior to freeze-up to saturate soil around root system.
 - Soil moisture to be monitored throughout the growing season:
 - Watering schedule to be increased when plant materials are reaching the permanent wilting point.
 - Watering schedule to be reduced when a sufficient volume of rainfall has penetrated the soil fully as required.
 - Replace or respread damaged, missing or disturbed mulch.
 - If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Consultant prior to application.
 - Control outbreaks of perennial weeds as directed by Consultant, and annual weeds by mechanical or chemical means utilizing acceptable integrated pest management practices to meet acceptance/success targets
 - If chemical means are used, comply with all municipal, provincial, and federal legislation and regulations.
 - Remove dead or broken branches from plant material using clean sharp horticultural tools using current arboricultural practices.
 - Keep trunk protection and guy wires in proper repair and adjustment.
 - Provide adequate protection from winter, wind and rodent damage.
 - Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings, unless otherwise directed by Consultant.
 - Remove trunk protection, tree supports and level watering saucers at end of warranty period, unless otherwise directed by Consultant.

2 GENERAL LANDSCAPE MAINTENANCE NOTES

- Plant Characteristics, Rootballs, Rootball Standards including minimum rootball diameters specified on these plans are to be in accordance with the Canadian Nursery Landscape Association Canadian Standards for Nursery Stock, current edition.
- Planting shall only be performed when weather and soil conditions are suitable for planting the materials specified in accordance with locally accepted practice. Install plant materials during the planting time as described below unless otherwise approved in writing by Landscape Architect. In the event that the Contractor request planting outside the dates of the planting season, approval of the request does not change the requirements of the warranty.
 - April 1 - June 30 and September 1 - October 31
- Transportation of plants should be restricted to closed vans or trucks covered with mesh tarpaulin or, similar material, to protect the leaves or needles from windburn or desiccation. This may be supplemented by spraying the foliage with an antidesiccant prior to shipping.
- Plant material shall at no time be dropped or handled roughly.
- Protect plant material from frost, excessive heat, wind and sun following delivery.
- Immediately store and protect plant material, which will not be installed within 1 hour after arrival at site in storage location, approved by the Landscape Architect.
- Protect stored plant material from frost, wind and sun and as follows: For pots and containers, maintain moisture level in containers.
- For balled and burlapped and wire basket root balls, place to protect branches from damage. Maintain moisture level in root zones.
- Topsoil or plantings shall not be placed or installed when in a frozen condition, under adverse field conditions such as high wind, frozen soil or soil covered with snow, ice, or standing water.
- The Landscape Architect and Municipal Staff has the right to reject any and all plant material that does not conform to the requirements of this specification at any time regardless of any previous approval.
- When a plant has been rejected, immediately remove it from the area of the Work and replace it with a plant of the required species, size and quality at the earliest planting period consistent with these specifications. Replacement plant material shall meet all the requirements of this specification. Rejected plants shall be replaced at no cost to the Owner.
- Acceptance shall not be given for the planting Work until all plants rejected during the course of the Work are replaced.
 - Any plant that has the following characteristics shall be cause for rejection:
 - Only nursery grown plants will be accepted.
 - Any plant that has a canopy with 25% or more dead or removed limbs.
 - Evidence of damage to plant material, which diminishes the aesthetic character/form, biological integrity, or structural integrity of the plant or group of plants.
 - Evidence of improper digging; inadequate protection following digging; carelessness while in transit; evidence of desiccation or wind-related damage; cold damage; improper handling or storage; root zones that have dried to the point of leaf wilt; cracked, loose, damaged or distorted root balls.
 - Plants with undersized root balls or containers, kinked or girdling roots, matted roots on the top, and edges of the container, excessive surface adventitious roots, root balls and containers with no structural roots in the top 75mm of the soil.
 - Plants balled with synthetic, treated or non-biodegradable fabrics.
 - Any tree that is of a species that characteristically has a dominant central leader, and if the leader is dead or removed, the tree will not have a form consistent with the species.
 - Any tree that has open wounds (not completely healed over) that penetrates the cambium into the wood on trunks or major limbs the removal of which would result in the loss of 25% or more of the structure and form of the tree
 - Topsoil shall be loose, friable, fertile loamy material that is free from subsoil, weeds, roots, vegetation and other deleterious material greater than 25mm diameter in the greatest dimension. The topsoil shall also be certified by an OMAFRA Accredited Soil Testing Laboratory in Ontario to meet the following requirements:
 - Topsoil texture shall be loam, sandy loam to wit:
 - Sand content between 20-75%
 - Silt content between 5-30%
 - Clay content between 5-30%
 - Herbicides - No detectable levels
 - Organic Matter content between 4-15%
 - Phosphorus 10-60 (ppm)
 - Potassium 80-259 (ppm)
 - Calcium 1000-4000 (ppm)
 - Magnesium 100-300 (ppm)
 - Chloride <100 (ppm)
 - Sodium <200 (ppm)
 - Sodium Adsorption Ratio <15
 - Shall not have contaminants that adversely affect plant growth.
 - The cost to amend existing on-site topsoil to be reused shall be paid for by the Owner.
 - The cost to amend imported topsoil supplied by the Contractor to meet Agronomist written recommendations shall be paid for by the Contractor.
 - Water shall not have contaminants or impurities that would adversely affect the germination and growth of vegetation. Proposed plants which come over or under any utility shall be relocated by the Contractor for review by the Landscape Architect, to the satisfaction of the utility provider.
 - Mulch shall be shredded hardwood or softwood as specified in the planting details. Free from roots, leaves, twigs, debris, stones, fungus, crabgrass rhizomes, or any material detrimental to plant growth. Material shall be mulching grade, uniform in size and foreign matter. Mulch that has become saturated with water and presents an anaerobic odor shall be rejected.
 - Anti-Desiccant (if used) shall be emulsion type, film-forming agent similar to Dowax by Dow Chemical Company, or Wilt-Pruf by Nursery Specialty Products, Inc., Croton Falls, New York, designed to permit transpiration but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and use in accordance with manufacturer's instructions. Submit manufacturers product data for approval.
 - Contractor to examine the surface grades and soil conditions for any circumstances that might be detrimental to plant growth, such as deposits of construction-related waste or soil contamination, storage of material or equipment, soil compaction or poor drainage. Contractor to examine the grading, verify all elevations, and notify the Landscape Architect in writing of any unsatisfactory conditions.
 - Contractor to inspect each plant after delivery and prior to installation for damage of other characteristics that may cause rejection of the plant.
 - Excavate pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify the Consultant before planting. Dispose of subsoil removed from planting excavations. Do not mix with planting soil or use as backfill. Plants to be planted in prepared planting soil may utilize the soil removed from the planting hole as backfill around the root ball.
 - Set edge of the root ball at the elevation of the proposed finish. Consult the grading plan and utilize a builder's level or transit to determine the grade at the tree grade. For trees on sloped surfaces, set the edge of the root ball at the average grade around the tree. Set the plant plumb and in the location indicated on the plan. The root flare and tree graft, if applicable, shall be visible at the top of the root ball, above the grade. Do not place soil on top of the root ball and remove soil pushed above root flare by mechanical potting/balled & burlapping process during transplantation by the nursery.
 - When set, brace root ball by tamping backfilled soil around the lower portion of the root ball. Place additional backfill around base and sides of ball in 150mm lifts. Work each lift to settle backfill and eliminate voids and air pockets. When excavation is approximately two-thirds full, water thoroughly before placing remainder of backfill. Ropes or strings on top of ball shall be cut and removed. Burlap or cloth wrapping shall be cut and removed from the top of the root ball. The top horizontal ring of support wire baskets shall be cut in four places and the top half of the wire basket folded down into the soil.
 - Where staking is required, caliper trees shall be supported by wooden stakes driven outside the ball in line with the direction of the prevailing wind. Tree tie type and installation method to be per planting detail. Stakes shall be 50mm x 50mm hardwood stakes free of knots and of lengths appropriate to the size plant required for to adequately support the plant.
 - Slow release watering bag type and installation per planting detail.
 - Maintain all trees and shrubs in a plumb position throughout the warranty period. Straighten all trees including those not staked. Plants to be straightened shall be excavated and the root ball moved to a plumb position, and then re-backfilled. Do not straighten plants by pulling the trunk with guys.
 - Do not apply any fertilizer to plantings during the first year after transplanting, unless soil tests determine that fertilizer or other chemical additives are required. If required, fertilizers shall be applied according to the manufacturer's instructions and standard horticultural practices.
 - Pruning shall be done with clean, sharp, rust-free tools. Cuts shall be made flush, leaving no stubs as per ANSI A 300 - current edition. No tree paint or sealants shall be used.
 - Dead wood, suckers, and broken and badly bruised branches shall be removed. Do not prune plant material that has been severely damaged due to transit or handling until viewed by the Landscape Architect.
 - Pruning of broken or dead branches shall be done after planting. Form-corrective pruning may occur when tree has hardened until bud-break in the spring. If corrective pruning dates fall outside the construction schedule, it shall remain a punch list (warranty) item. The Contractor shall be responsible for completing this off-season punch list (warranty) item.
 - Mulch top of root balls and planting beds, covering the entire planting bed area. Leaving a mulch free zone at stem/trunk as indicated in planting details.
 - Water each plant on the day of installation to saturate the soil around the roots and wash the soil into the root zone. After the soil has drained, reset any settled plants or grades around the plant, adding soil if required.

3 TREE, SHRUB, AND PERENNIAL INSTALLATION NOTES

