Town of Shelburne RFP 01-2024

Walter's Creek Park – Landscape Works

680 Cedar Street, Shelburne, ON

Issued: January 26, 2024
Deadline for Submissions: February 23, 2024

Prepared for:

Town of Shelburne
203 Main Street East
Shelburne, ON, L9V 3K7

Prepared by:

GSP Group Inc.
72-201 Victoria Street South
Kitchener, ON, N2G 4Y9

SECTION NO. TITLE NO. OF PAGES

INTRODUCTORY INFORMATION, BIDDING AND CONTRACTING REQUIREMENTS

TECHNICAL SPECIFICATIONS

DRAWING LIST

1 General

1.1 Project Overview

.1 The project shall be designated for official record purposes as:

Walter's Creek Park Landscape Works

.2 The owner shall be interchangeably referred to as:

Town of Shelburne

.3 RFP Submission Deadline:

Friday February 23, 2024 at 3:00pm.

1.2 Description of Work:

To supply all labour, equipment, and materials for the installation of concrete sidewalk, playground concrete curbing, concrete playground ramp, excavation and drainage of playground area, installation of new swings, fine grading, and seed.

1.3 Owner:

Town of Shelburne
203 Main Street East
Shelburne, ON.
L9V 3K7

Consultant:

GSP Group Inc.
72 Victoria Street S.
Suite 201
Kitchener, ON.
N2G 4Y9

1.4 Contract Documents

.1 Instructions to Bidders.

.2 Bid Form.

.3 Unit Price Form.

.4 General Conditions.

.5 Technical Specifications

.6 Drawings;

L1.0	**Hardscape Plan**
L1.1	**Layout Plan**
L1.2	**Details**
L1.3	**Details**

1.5 Examination of Site

.1 It is recommended that bidders visit the site for the purpose of reviewing existing site conditions prior to submitting their bids.

1.6 Examination of Documents

.1 Examine the bid documents thoroughly. Report to the Consultant, all conflicts, ambiguities, discrepancies, errors, and omissions.

.2 In submitting a bid, the Contractor shall not be obligated to take into account any verbal instructions given by the Consultant, other than those issued for general clarification of the bid documents.

.3 Modifications to the bid documents will be made by the Owner/Consultant, and only by written addendum.

1.7 Addenda

.1 It is the responsibility of all subtrades to obtain all addenda from a Construction Association or from a General Contractor who has the Bid Documents. The Owner will not forward addenda to subtrades.

1.8 Questions

.1 Should a Bidder find discrepancies in, or omissions from the specifications, drawings, or other documentation, or should the Bidder be in doubt as to their meaning, the Bidder should notify the Owner in writing.

.2 All inquiries regarding this Contract shall be made directly to the Town contact, Will Thomson, via email, wthomson@shelburne.ca or office phone, 519 925 2600 ext 258.

.3 Should any discrepancies or omissions go unreported to the Owner by the closing date, the proper interpretation shall be at the discretion of the Consultant.

1.9 Permits and Fees

The contractor is responsible for all permits and fees associated with the scope of work defined in the RFP documents.

1.10 Taxes & Duties

Include all Sales Tax and Customs Duty on all materials quoted in the Stipulated Sum (but excluding) Harmonized Sales Tax (H.S.T.)

1.11 Delays in Commencement of Construction Date

.1 Commencement of construction is subject to the approvals being received from the necessary Governmental and Municipal Agencies as well the condition of the site. The Owner will consider no claims by the successful bidder for compensation for any losses resulting from a delay in construction start date.

1.12 Bidder Qualification

.1 The acceptance or rejection of a bidders proposal, on the basis of past performance remains the prerogative of the Owner without cause for explanation.

1.13 Construction Schedule

.1 Bidders shall indicate the anticipated duration of construction of each part to substantial completion.

.2 Preferred completion date for the work covered in this document is by the end of May, 2024.

.3 The successful bidder will be required to coordinate construction start-up with the contractor awarded completion of the site works.

1.14 Withdrawal of Proposals

.1 Once submitted, a proposal is irrevocable and may be withdrawn or altered only before the time indicated for delivery of proposals.

1.15 Submittals

.1 Proposals are to be addressed by email to Carey Holmes, Treasurer at treasurer@shelburne.ca with the subject line clearly stating RFP 01-2024 Submission. Proposal submissions must include:

- Completed Bid Form - Unit Price and Unit Price Form.
- Company Profile including Certifications and Accreditations along with relevant experience.
- References of similar projects from previous/existing Vendors.
- Copy of Contractor's current Insurance Certificates and WSIB Clearance Certificate.

1.16 Evaluation

.1 Proposals will be assessed on the information provided in the proposal. Evaluation will be based upon the following items:

- Price - 30%
- Conformity to Specification - 20%
- Experience of Personnel - 30%
- References - 10%
- Value added features or Options - 10%

Note: Lowest or Any Proposal not necessarily accepted.

END OF SECTION

TERMS AND CONDITIONS

ADDENDUM

If an addendum is found to be necessary, it will be released to all companies that have requested a copy of the RFP, or already submitted a proposal for the RFP. If the Town revises this RFP, any revisions will be included on this Addendum. The Addendum shall advise any changes to the Proposal submission date if more time is allowed for all Proponents to revise their proposals. It will be the responsibility of all Proponents to download from Town website or Merx.com.

CONFIDENTIALITY

In accordance with the Municipal Freedom of Information and Protection of Privacy Act. R.S.O. 1990, as amended, Proponents are advised that all correspondence provided by a Proponent responding to this RFP as hereby collected under the authority of the Municipal Act, 2001 and will be used exclusively in the RFP process. The Town will treat all proposals as confidential within the boundaries of the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA) but may be released pursuant to the Act.

All public reports approved by the Town of Shelburne will become public information. Notwithstanding the foregoing, Proponents recognize and agree that the Town will not be liable in any way for any losses that the Proponent may suffer from the disclosure of information to third parties.

CONFLICT OF INTEREST

The Proponent must disclose to the Town any potential conflict of interest that might compromise the project. In the case where there might be a conflict of interest, the Town may refuse to consider the proponent. The proponent must fully disclose any potential conflict of interest with a Town employer, board member or commission that may have a financial gain with the awarding of the contract and state the nature of that interest.

FAILURE OR DEFAULT OF PROPONENT

If the Proponent, for any reason, fails or defaults in respect of any matter or thing which is an obligation of the Proponent under the terms of the RFP, the Town may disqualify the Proponent from the RFP and/or from competing for future bid opportunities (RFTs/RFQs/RFPs/etc.) issued by the Town. In addition, the Town may at its option either: 1. Consider that the Proponent has withdrawn any offer made, or abandoned the Agreement if the offer has been accepted, whereupon the acceptance, if any, of the Town shall be null and void; or 2. Require the Proponent to pay the Town the difference between its Proposal and any other Proposal which the Town accepts, if the latter is for a greater amount and, in addition, pay the Town any cost which the Town may have incurred, by reason of the Proponent's failure or default, and further, the Proponent will indemnify and save harmless the Town its officers, employees and agents from all loss, damage, liability, cost, charge and expense whatever, which it, they or any of them may suffer, incur due to the failure of the proponent.

INDEMNIFICATION

The Proponent shall indemnify and save harmless the Corporation of the Town of Shelburne, it's elected officials, officers, employees and agents from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgements of every nature and description made, brought or recovered against the Town by reason of any act or omission of the Proponent, his agents or employees, in the execution of his work. This indemnity shall be in addition to and not in lieu of any insurance to be provided by the successful proponent in accordance with the RFP.

INSURANCE

The party to whom this Contract is awarded shall supply the Town with proof of insurance and a copy of the policy, prior to signing of the Proponent by Town officials, and provide coverage throughout the term of the Proposal in the amounts outlined below.

Comprehensive General Liability Insurance with a minimum limit of liability of $5,000,000.00 inclusive of any one occurrence. Comprehensive General Liability Insurance shall cover all operations and liability assumed under the Contract with the Town. The Comprehensive General Liability Insurance shall include premises and operations liability, Proponent's contingency liability with respect to the operations of Sub-contractors completed operations liability and automobile liability (owned, non- owned or hired units).

All premiums and expense incurred with this insurance shall be paid for by the Contractor. Failure to maintain adequate insurance, the Proponent shall be totally responsible for all claims for damage.

LIMITS AND LAWS/CONFORMITY TO LEGISLATION

The Proponent shall obtain, and pay for all required permits from Federal, Provincial and Municipal Authorities having jurisdiction over the work. The Proponent shall comply with all applicable laws, ordinances, rules and regulations including but not limited to, Occupational Health and Safety Act, the Labour Act, Environmental Protection Act and Highway Traffic Act.

NON-COLLUSION

A Proponent is prohibited from any communication, directly or indirectly, with any other Proponent/ Agent or representative of the Proposal. If a breach is discovered, the Town reserves the right to disqualify the Proposal.

PROCUREMENT POLICY

Contract Award and Execution shall be in accordance with the Town's Municipal Procurement Policy 2019-05. A copy of the Procurement Policy is available on the Town's website: https:// www.shelburne.ca/en/town-hall/resources/Documents/AMENDED-Municipal-Procurement-Policy-2019-05.pdf.

TOWN'S RIGHT TO ACCEPT OR REJECT

The Town of Shelburne reserves the right to accept any proposal or proposals or any portion of any proposal that the Town determines is in the Town's best interests, even if that proposal is not the lowest in dollar amounts. Such decisions of the Town are final and binding.

The Town of Shelburne reserves the right to reject any proposal, even if that proposal is the lowest in dollar amounts and may award the contract to the Proponent that the evaluation team finds the most appropriate. The Town will not be liable for any incurred costs that may arise from submitting the proposal.

It is not the intention of the Town to award this RFP to any Supplier who does not furnish satisfactory evidence that he/she has the ability and experience in this class of work, and that he has sufficient capital and plant to enable him to prosecute and complete the same successfully, and to complete it in the time stated in this Proposal. It will be the Supplier's responsibility to clarify any details in questions before submitting a proposal.

The Town of Shelburne will not bear any fault for any oral communications. The Town reserves the right to re-tender the Project or potentially negotiate a contract with a suitable Proponent.

Proponents are required to disclose their legal status as to whether they are a Federal, Provincial or Foreign Corporation, a partnership or an individual and to state the names and addresses of the responsible officers or partners as the case may be.

TOWN'S AUTHORITY

The Director of Development & Operations shall be the Contract Administrator as identified in Ontario Provincial Standards (O.P.S.) Section GC 3.01 of the General Conditions. It is mutually agreed between the parties of this Contract that the Town's Director of Development & Operations or designated representative, shall supervise, direct and approve all work included herein, and in all cases shall decide every question which may arise relative to the execution of the work to be performed under this Contract as per Section GC 7.0 – Contractor's Responsibilities and Control of the work.

WORKPLACE SAFETY AND INSURANCE BOARD

A Certificate of Clearance from the Workplace Safety and Insurance Board (WSIB) must be provided prior to the commencement of the project, providing adequate proof that all payment by the Proponent have been made.

The Proponent clearly understands and agrees that they are not, nor is anyone hired by the Proponent, covered by the Corporation of the Town of Shelburne under the Workplace Safety & Insurance Board Act, The Unemployment Act, or any other Act, whether Provincial or Dominion, in respect of the Proponent, their employees and operations, and shall upon request furnish the Town with such satisfactory evidence that the Proponent has complied with the provisions of any such Acts.

The Town of Shelburne is not to be deemed the employer of the supplier or their personnel under any circumstances whatsoever.

Walter's Creek Park
Landscape Works RFP 01-2024
Project No.: GSP 15017.220

TIMELINE

January 26, 2024	Request for Proposal Issued
February 16, 2024 (4:30pm) *(questions & addendums (if any))*	Deadline for electronic questions to Municipality wthomson@shelburne.ca from Interested Suppliers; Replies will be circulated to all Suppliers: Addendums (if necessary) will be the responsibility of the bidder to download from the Town website at shelburne.ca or merx.com
February 23, 2024 (3:00 pm)	Closing date for Proposal Submissions
February 28, 2024	The Municipality will award the Request for Proposal and notify the successful Proponent

SUBMITTED TO: **Town of Shelburne**
203 Main Street East
Shelburne, Ontario
L9V 3K7

Attn: Carey Holmes

UNIT BID PRICE

We,

_____

(Registered Company Name)

of, _____

(Registered Address and Postal Code)

Business: Phone Number _____

Fax Number _____

Bid Contact Name _____

Email Address _____

Website _____

having visited the Place of the Work and carefully examined the Bidding Requirements, Contract Forms and Conditions of the Contract, along with Specifications, Drawings and Addenda No's_____to_____inclusive for:

WALTER'S CREEK PARK
680 Cedar Street
Shelburne, Ontario

We hereby offer to enter into a Contract to perform the Work required by the Bid Documents of the Project for the stipulated sum of:

_____

($_____) In Canadian Dollars

which amount includes the specified cash and contingency Allowance, Itemized Prices,

application taxes and duties in force at this date, and taxes known to be applicable during the construction period. Value Added Taxes, such as the Federal Government's Goods and Services Tax are included in the Bid Price.

Interest: Should either party fail to make payments as they become due under the terms of the Contract or in an award by arbitration or court, interest at two percent *(2%)* per annum above the bank rate on such unpaid amounts shall also become due and payable until payment. Such interest shall be compounded on a monthly basis. The bank rate shall be the rate established by the Bank of Canada as the minimum rate at which the Bank of Canada makes short term advances to the chartered banks.

**** BRING FORWARD SUBTOTAL FROM SECTION 00 43 22 UNIT PRICES FORM**

Form of Tender Summary

TOTAL NOT INCLUDING HST $ _____

APPLICABLE (HST) TAX
(13% of Total Above)

GRAND TOTAL TENDER PRICE $ _____

(CARRY THIS GRAND TOTAL TENDER PRICE FORWARD TO PAGE 1)

DECLARATIONS

We hereby declare that:

1. This Bid along with the Bid Form Supplements are irrevocable and open to acceptance for a period of Sixty (60) days from the date of Bid closing.

2. We agree to perform the work in compliance with the required completion date stated in the Bid Documents.

SIGNATURES

Signed, sealed and submitted for and on behalf of:

Registered Company Name	*Witness*
Signature	*Witness*
Name	*Name*
Title	

DATED AT_____this _____

day of_____, 20_____.

(Affix Company Seal Hereto).

1 SCHEDULE OF UNIT PRICES

The Items listed below shall be in full compensation for the specific work described herein and as included in the drawings and specifications. These prices shall include all labour, equipment and material necessary or incidental to the item, all applicable taxes (excluding HST) necessary to complete the specified work. These prices shall include all overhead and profit.

This Schedule must be completed in its entirety. The Contractor may add to it at their discretion. All quantities provided are for information only. It shall be the responsibility of the contractor to verify all quantities and notify the landscape architect or owner of any discrepancies prior to submitting their tender.

UNIT PRICES

ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL COST
1.00	**SITE WORKS**				
1.01	Mobilization and Site Preparation, including Bonds and Insurance, Construction Fencing, Temporary Signage, Access Gates, Mud Mat and Tree Protection Fencing		L.S.	$	$
1.02	Excavation to required depth for playground area.		L.S.	$	$
1.03	Supply and install 100mm diameter perforated drain tile wrapped in non-woven geotextile, including daylight to ditch. Daylight to capped with rodent grate.	70	Lin.m.	$	$
1.04	Supply and install clear stone base for play equipment area as per drawings, details, and specifications.	50	m^3	$	$
1.05	Fine grade and hydro seed around areas disturbed due to excavation and construction.		L.S.	$	$
2.00	**HARDSCAPE**				
2.01	Supply and place 125mm thick concrete paving with broom finish, including granular 'A' at 150mm depth.	35	m^2	$	$
2.02	Supply and install 150mm thick concrete access ramp at playground surfacing, including granular 'A' at 150mm depth.	1	L.S.	$	$
2.03	Supply and install 200mm wide concrete curb, including granular 'A' at 150mm depth.	65	Lin.m.	$	$
2.04	Supply and install sonotube footings for swing set. To be installed as per manufacturers specifications and installation requirements.	1	L.S.	$	$
	SUBTOTAL			**$**	**$**

1 GENERAL

1.1 PRE-CONSTRUCTION PHOTOGRAPHS

.1 The Contractor is encouraged to procure video footage and still photographs of the existing site conditions prior to the start of construction. Photos should be retained for future reference should it be required.

1.2 INCIDENTAL ITEMS

.1 The following is a partial list of items, the costs of which are to be included in the unit prices of the tender items unless a specific payment item is included in the Unit Price Worksheet. No additional payment will be made for the following:

- .1 Cost of permits and fees.
- .2 Cost of attendance at site meetings and other emergency meetings that may be necessary over the course of the project to effect proper coordination, dealings with property and business operators/owners, dealing with emergency situations, and other related meeting activities necessary.
- .3 Cost of removing and/or relocating to a temporary or final location, when required by the Engineer, small signs, fences, mailboxes, waste containers, or other minor obstructions interfering with the construction.
- .4 Cost of coordination of all work with utility companies who may be affected by the project or who may be required to perform work simultaneously with the work of the Contractor, except as specified elsewhere in these Contract documents.
- .5 Cost of supporting and protecting all existing utilities and coordinating this work with utility representatives as noted elsewhere.
- .6 Cost of normal roadway maintenance on existing roads and streets which may be affected by the Contractor's operations for the duration of the Contract.
- .7 Cost of providing temporary signage and closure of trails during construction.

.2 The Client, at its sole discretion, may limit the type and/or size of any equipment used in order to protect the environment, public safety and / or the integrity of the work and / or adjacent facilities during the project. No claims by the Contractor for compensation for any losses resulting from a delay in construction will be considered.

1.3 TESTING FEES AND INSPECTION

.1 The following tests, unless otherwise specified in the Special Provisions, which may be called for by the Town, will be paid for, independent of this Contract, by the Town. The Town will pay for the first test or the first round of testing (watermains) of a given section of work or material sample. Where a re-test is called for or necessitated by failure to meet tolerances or inconclusiveness of testing, the Town will pay only for "passed" testing. Payments for any additional tests of the same material which has failed to meet the required tolerances will be the full responsibility of the Contractor.

- .1 Air entrainment tests during concrete work.
- .2 Slump testing during concrete work.
- .3 Casting and compression testing of concrete cylinders.
- .4 Compaction testing.
- .5 Analysis of aggregates for asphalt and pavement testing.
- .6 Other tests as deemed necessary by the Owner(s).

.2 The Contractor shall cooperate at all times with individuals who may be on-site to carry out the above testing. The Town may require documentary evidence, from time to time, to the effect that materials supplied by the Contractor comply with the Contract Documents. The Contractor shall comply at all times with such requests.

1.4 SPECIALIZED EQUIPMENT

.1 The Contractor shall utilize appropriate types and sizes of equipment so as to not increase the risk of damage to existing sewers, watermains, utilities, trees or any other existing feature not mentioned that will be encountered over the course of the project.

1.5 TRESPASS

.1 The Contractor shall be responsible using its own forces, during all stages of the work, for protecting excavations, trenches, stockpiles and abutting lands from trespass, and shall erect snow fencing, without charge, where and when required by the Engineer to ensure same. The Contractor shall not dispute or contest direction from the Engineer, if in the opinion of the aforementioned protection and fencing is required to mitigate safety risks. All private property restorations not specifically called for in an item in the Schedule of Unit Prices shall be rectified to existing or better condition at the Contractor's expense.

1.6 REPLACEMENT OF PRIVATE DRIVEWAYS BY REQUEST OF HOME OWNER

.1 Replacement of any private driveway at the request of the property owner / homeowner that was not damaged due to works of this Contractor is not part of this Contract and is not to be undertaken by the Contractor during project normal working hours. Payment for these works shall be the sole responsibility of the property owner / homeowner except that the Town will pay for that portion of the driveway that was removed for the road/sewer reconstruction as noted on the contract drawings. The Town will not accept any claims as a result of extra work undertaken by the Contractor on behalf of the property owner / homeowner.

1.7 COOPERATION WITH OTHER UTILITIES, LOCATES, AND PROTECTION

.1 Cooperation

.1 It may be necessary for utility providers such as Hydro One, Bell, Rogers, Union Gas, or other third-party service providers to carry out relocation, upgrades or maintenance of their overhead or underground services. The Contractor shall be required to facilitate such relocation, upgrades or maintenance conducted by utility providers and to cooperate with their scheduling to the greatest extent possible.

.2 Locates

.1 The approximate locations of existing services may be shown on the drawings to assist the Contractor. Such information is provided as a general indication of what may be present and is not necessarily accurate or complete. The Contractor must satisfy himself as to the existence and location of all utilities.

.3 Before commencing excavation in any area, the Contractor shall have the location of all utility services and associated infrastructure properly located by a representative of each utility owner, and shall not proceed with the excavation until the exact location is known, and then only after adequate precautions have been taken to protect the utilities and services that may be present. It shall be the responsibility of the Contractor to request all utility locates and then ensure all utilities are accurately staked out in the field. Proof of locates must be maintained onsite and be made available to Town inspectors upon request.

1.8 PROTECTION

.1 During the course of this project, the Contractor shall assume full responsibility for the protection of all underground and above ground utilities such as water, sewer, natural gas, telecommunications, hydro, street light, telephone and pedestrian light poles, wires and conduits, fibre optic cables, valves, switches, etc. and any other subsurface or above ground structures, foundations or infrastructure that may present hazards. The Contractor will be fully responsible for obtaining all necessary locates and clearances, prior to construction, to determine the location of utilities including but not limited to water, sewer, natural gas, telecommunications, hydro, street light, telephone and pedestrian light poles, wires and conduits, fibre optic cables, valves, switches, etc. and any other subsurface or above ground structures, foundations or infrastructure.

.2 If damage to any structure, utility or service occurs by reason of the Contractor's operation, even though precautions have been employed, the Contractor shall be entirely responsible for such damage whether such operations and the work resulting there from have received the proper approval of the Engineer or not, and all such damage shall be satisfactorily rectified at the Contractor's expense.

.3 Utilities that could potentially be undermined by excavation work shall be adequately supported using appropriate measures acceptable to the utility owner and in compliance with the *Occupational Health and Safety Act, R.S.O., 1990* and associated regulations, as amended. The cost of all utility support and protection shall be deemed to be included in the Contractor's Total Bid Price.

1.9 OPERATION OF WATER VALVES

.1 The Contractor is advised that the operation of any water valves in the Town of Shelburne is restricted to Town of Shelburne personnel only. At no time during the duration of this project shall the Contractor or any of their employees operate a water valve. If it is necessary to operate a water valve, the Contractor is advised to arrange for Town personnel to operate the valve for them. The Town will consider no claims by the Contractor for compensation for any losses resulting from a delay in construction.

1.10 MAINTENANCE OF STORM DRAINAGE

.1 During the whole of the Contract performance period, the Contractor shall be responsible for the protection and maintenance of adequate drainage in and through the site, providing adequate drainage facilities and/or flow controls so that flows from existing watercourses, storm sewers, natural drainage channels or other facilities shall not be impeded.

.2 The Contractor shall be responsible for all temporary ditching, culverts, siltation structures, etc., and other work thereby required through the whole of the working area whether ordered or approved by the Engineer. The Contractor shall further be responsible for the maintenance of all such temporary ditching, culverts and other works, and for rectification or restitution required as the result of erosion or other flood or water damage.

.3 The Contractor must backfill all exposed trenches at the end of each and every workday. No claims by the Contractor for compensation to backfill trenches, expose work the following day or any resulting delay in construction will be considered by the Town.

1.11 MAINTENANCE OF FLOW

.1 Sewage flow shall be maintained at all times by the Contractor and pumped between maintenance holes while working on that section.

1.12 PROTECTION OF DOWNSTREAM SEWERS

.1 Until completion and acceptance of the Contract work, or unless otherwise directed by the Engineer, the Contractor shall supply all materials and construct temporary concrete weir structures inside maintenance holes and maintain at all times as required to control silty material from entering sanitary and storm sewers as a result of construction activity upstream. The Contractor shall be responsible for cleaning silt and debris deposits from the structure as required, at no cost to the Town. All costs for this work are to be included in the appropriate unit prices.

1.13 MAINTENANCE OF EXISTING ROADS

.1 The Contractor shall be responsible for keeping roadways adjacent to the site free and clean from mud, dirt and other debris originating from the work site. All dirt and debris deposited by construction traffic on existing Town streets shall be cleaned up by the Contractor at his own expense on a daily basis, or as directed by the Engineer.

1.14 VEHICLE AND EQUIPMENT ACCESS

.1 The rehabilitation street may be closed to through traffic when the Contractor is working on the street, however, whenever possible, the Contractor shall reinstate local residential vehicular access, particularly during off hours. The Contractor will be responsible for all signing, barricading, etc., in accordance with the Ontario Traffic Manual ("OTM"), adjacent to the actual work area; however, the Town will establish alternative parking, subject to the Contractor's written notice to commence construction. All signing beyond the immediate project limits will be installed and maintained by the Town of Shelburne.

1.15 PEDESTRIAN ACCESS

.1 The Contractor shall, at all times, ensure that reasonable pedestrian access is maintained throughout the work site for the duration of the project. All existing sidewalk is to remain in place except where it conflicts with service installation, until such a time that the construction schedule necessitates sidewalk replacement. The Town will make provisions for local residents to park vehicles on adjacent streets for the duration of the Contract.

1.16 PRIVATE DRIVEWAY ACCESS

.1 The Contractor shall provide full access to private driveways at all times except as follows:

.1 for the 72 hours immediately following the installation of concrete curb and gutters
.2 for the 72 hours immediately following the installation of concrete sidewalks
.3 for the 72 hours immediately following the installation of concrete driveway aprons

1.17 GARBAGE PICKUP

.1 The Contractor is advised that the work of this contract may impede normal garbage collection and recycling operations within the neighbourhoods where work is being conducted. Regional Waste Management staff will not drive a vehicle on a gravel roadway, nor will they back up a vehicle. As a result, the Contractor may have to, at times during construction, deliver all garbage and recyclables, at his own expense, to the closest intersection, by 7:00 a.m. on the morning and after pickup, return the emptied containers to their respective owners on garbage day. The owners will be asked to put their addresses on their containers.

.2 This work is incidental to the contract and there will be no specific payment for this item, the cost of same is deemed to be included in the contract unit prices.

1.18 SIGNS

.1 Signs (other than traffic control signs), which must be removed in order to carry out work under this Contract, shall be delivered to the Town of Shelburne Operations Centre. The Contractor must advise the Engineer where the signs have been removed from so that the Town may replace them at a later date.

.2 At no time shall the Contractor remove traffic controls signs.

1.19 SCALE TICKETS

.1 Contractor must supply all scale tickets for imported granulars, asphalt etc. to the Contract Administrator for verifications of quantities notwithstanding the method of payment for the work. If scale tickets are not supplied within an acceptable period, the Engineer, at his sole discretion, may require that the material thickness be confirmed by core or test dig. The Contractor will be responsible for the cost of these investigations as well as the resulting restoration.

1.20 FRESH CONCRETE

.1 The Contractor is responsible for protecting all freshly poured concrete from inclement weather and vandals. All markings or imprints must be removed at the Contractor's expense and to the satisfaction of the Engineer.

.2 All concrete used for the construction of curb and gutter, sidewalks, and aprons shall have a minimum compressive strength of 32 MPa @ 28 days.

1.21 COMPLETION DATE – LIQUIDATED DAMAGES

.1 The Contractor shall complete this Contract in its entirety by **May 31, 2024**.

.2 If this limit above specified is not sufficient to permit completion of the work by the Contractor working a normal number of hours each day or week on a single day-light shift basis, it is expected that additional and/or augmented day-light shifts will be required throughout the life of the Contract to the extent deemed necessary by the Contractor to ensure that the work will be completed within the time limit specified. Any additional costs occasioned by compliance with these provisions will be considered to be included in the prices bid for the various items of work and no additional compensation will be allowed therefore.

.3 If the Contractor is delayed in the completion of the work,

.1 by reason of changes or alterations made under Section 3.10 of the General Conditions;
.2 by reason of any breach of contract or prevention by the Town, or other Contractor of the Town or any employee of any one of them;
.3 by reason of delay by the Town in issuing instructions or information or in delivering materials;
.4 by any other act or neglect of the Town or any other Contractor of the Town or any employee of any one of them;
.5 for any cause beyond reasonable control of the Contractor; OR,
.6 by Acts of God, or of the Public Enemy including Terrorist Acts, Acts of the Province or any Foreign State, Fire, Floods, Epidemics, Quarantine Restrictions, Embargoes or delays of Sub-Contractors due to such causes;

.4 The time of completion shall be extended in writing at any time on such terms or for such period as shall be determined by the Engineer, and notwithstanding such extensions, time shall continue to be deemed of the essence of this Contract.

.5 An application by the Contractor for an extension of time as herein provided shall be made to the Town in writing on the form prescribed at least 15 days prior to the date of completion fixed by the Contract. All bonds or other surety furnished to the Town by the Contractor shall be amended where necessary at the expense of the Contractor to provide coverage beyond the date of any extension of time granted, and the Contractor shall furnish the Town with evidence of such amendment of the bonds or other surety.

.6 Any extension of time that may be granted to the Contractor shall be so granted and accepted without prejudice to any rights of the Town whatsoever under this Contract, and all of such rights shall continue in full force and effect after the time limited in this Contract for the completion of the work.

.7 It is agreed by the parties to the Contract that in case all the work called for under the Contract is not finished or completed within the date of completion specified previously, damage will be sustained by the Town, and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which the Town will sustain in the event of and by reason of such delay and the parties hereto agree that the Contractor will pay to the Town the sum of **ONE THOUSAND ($1,000.00) DOLLARS** per day for liquidated damages for each and every calendar day's delay in finishing the work beyond the date of completion prescribed and it is agreed that this amount is an estimate of actual damage to the Town which will accrue during the period in excess of the prescribed date of completion.

.8 The Town may deduct any amount under this paragraph from any monies that may be due or payable to the Contractor on any account whatsoever. The Liquidated Damages payable under this paragraph are in addition to and without prejudice to any other remedy, action or other alternative that may be available to the Town.

1.22 EXTENSION AND ESCALATION

.1 The Contractor agrees that the contract unit prices shall remain firm up to and including **May 31, 2024.**

.2 The unit prices for work required to be done thereafter shall be adjusted by mutual agreement between the Town and Contractor, in accordance with the procedures of GC 3.10.01 of the OPSS General Conditions of Contract.

1.23 CONSTRUCTION SCHEDULE

.1 The Contractor shall submit a detailed construction schedule, for approval by the engineer, seven (7) days in advance of commencement of construction, showing the timing of the Contract.

.2 A preconstruction meeting will be held as soon as practical after Council approval of the award of tender with representatives from the Town, the General Contractor and the Engineer (if applicable) to discuss the following:

.1 Review the contractor's schedule with respect to construction methodology and estimated completion dates for the various portions of the work.
.2 Review safety procedures and operational constraints to establish strict guidelines for work areas, delineation of haul routes, etc., to ensure safe and practical grading and servicing operations.

.3 Review coordination procedures regarding traffic control, protection of the environment and the public.

.3 The Town and the Contractor agree that for this Contract, in the event the work is ordered to commence earlier or later than the commencement date, the completion date will be adjusted by the same number of Working Days.

.4 The Engineer reserves the right to request of the Contractor to work on Saturdays, and/or later hours in order to complete the work within the scheduled time periods. There will be no additional compensation for overtime hours worked.

.5 Should the Contractor, through his own fault (or neglect of this Contract and Specifications) fail to meet the schedules or working day periods allowed above, the Liquidated Damages may be assessed after careful consideration of the facts by the Engineer. The amount assessed as 'Liquidated Damages' on this Contract is defined further in Item 20 above.

1.24 WORKPLACE SAFETY AND INSURANCE BOARD

.1 The Contractor shall at all times pay, or cause to be paid, any assessment or compensation required to be paid pursuant to the Workplace Safety and Insurance Act and upon failure to do so, the Town may pay such assessment or compensation to the Workplace Safety and Insurance Board, and the Contractor shall forthwith reimburse the Town. The Town may at its option deduct such expenses from any monies owed to the Contractor. The Contractor shall, prior to issuance of a purchase order by the Town, provide a certificate of good standing from the Workplace Safety and Insurance Board. The Contractor shall continue to provide a certificate of good standing from the Workplace Safety and Insurance Board, every sixty (60) days during construction, and one at the completion of construction.

1.25 THE OCCUPATIONAL HEALTH AND SAFETY ACT AND TECHNICAL STANDARDS AND SAFETY ACT

.1 The Contractor shall conduct the work such as excavation, trenching, and shoring in accordance with the *Occupational Health and Safety Act, R.S.O. 1990, as amended*. The Contractor must advise the local Ministry of Labour Office of the contract prior to the commencement of any work.

.2 The Contractor shall submit the following information to the Town of Shelburne prior to the start of construction:

.1 A list of the Contractor's first aid certificate holders.
.2 A list of the Contractor's Health and Safety representatives.
.3 A copy of the Contractor's Health and Safety policy.
.4 A list of the Contractor's emergency telephone numbers.
.5 A written emergency plan, which includes a process for addressing a critical injury, accident or incident as defined by the *Occupational Health and Safety Act* and include an emergency contact list and procedure. This plan must be readily available and posted on site prior to work commencement. All subcontractors or persons working on site must be informed of the emergency plan and where it can be accessed.

.3 The Contractor shall provide appropriate first aid facilities, eye wash stations and any measures for emergency uses as identified in the plan.

.4 The Town Representative must be immediately notified verbally, and by a follow up written report of the following incidents/accidents:

.1 ones that required:
  .1 emergency services,
  .2 emergency health care,
  .3 contact/visit with/by the Ministry of Labour, Ministry of Environment;
  .4 contact with a utility.
  .5 when damage occurred to an adjacent structure or private property.

.5 Written notification can be done by a separate report, or by a detailed description in the daily report. Any other health and safety related incidents must be discussed at the next, regularly scheduled, construction site meeting.

.6 The Contractor must also maintain compliance with the *Technical Standards and Safety Act, S.O. 2000*, as amended, and applicable regulations such as O.Reg. 210 concerning Oil and Gas Pipeline Systems. When working around natural gas mains and services, and any utility lines, the Contractor shall adhere to the "Guideline for Excavation in the Vicinity of Utilities Lines, December 2008," published by the Electrical Safety Authority and the Technical Standards and Safety Authority.

1.26 TREES & SHRUBS

.1 Trees and shrubs, if destroyed during construction, will be replaced using first quality nursery stock (deciduous trees shall be replaced with the same or similar species specimens 2.5 m to 3.0 m in height, coniferous trees are replaced with the same or similar species specimens 1.2 m to 1.5 m in height).

END OF SECTION

TECHNICAL SPECIFICATIONS

1 GENERAL

1.1 INSTRUCTIONS

.1 Comply with the Instructions to Bidders, the General Conditions of the Contract, the Supplementary Conditions and the General Requirements.

.2 Report in writing to the Project Manager any defects of surfaces or work prepared by others which affect the quality or dimensions of the work of this Section. Commencement of work implies complete acceptance of existing conditions and previous work performed by others.

1.2 INTENT

.1 Provide all articles, labour, materials, equipment, transportation, hoisting and incidentals noted, specified or required to complete the work of this Section.

1.3 SECTION INCLUDES

.1 Provide all concrete forms and accessories for concrete.

1.4 WORK EXCLUDED

.1 This Contractor shall not be responsible for the formwork necessary to construct the following:

.1 Light standard bases.

.2 Concrete encasement for electrical duct banks.

.3 Precast concrete items.

.4 All below frost footings and foundations.

.5 All decorative above grade exposed concrete

1.5 MATERIALS INSTALLED IN THIS SECTION BUT FURNISHED BY OTHERS

.1 Build into the concrete forms, all required items furnished by others, including, but not limited to:

.1 Concrete inserts, hangers, anchors, sleeves, bolts, etc.

.2 Drain openings.

.3 Leveller pit frames and conduits.

.4 Rough opening frames and bucks occurring in the concrete work.

.5 Flashing in concrete work.

.6 Grate sinkages, angle frames, nosings, curb channels, etc.

1.6 RELATED SECTIONS

.1 Section 03 20 00 – Concrete Reinforcing.

.2 Section 03 30 00 – Cast-in-Place Concrete.

.3 Section 03 35 00 – Concrete Finishing.

1.7 REFERENCES

.1 CSA A23.1-04: Concrete Materials and Methods of Concrete Construction.

.2 .CSA O121-M1978 (R2003): Douglas Fir Plywood.

.3 CSA S269.1-1975 (R2003): Falsework for Construction Purposes.

.4 CAN/CSA-S269.2-M87 (R2003): Access Scaffolding for Construction Purposes.

.5 CSA S269.3-M92 (R2003): Concrete Formwork.

.6 CGSB 41-GP-35M: Polyvinyl Chloride Waterstop.

2 PRODUCTS

2.1 MATERIALS

.1 Plywood: Douglas Fir species, to CSA O121; Sheathing Grade.

.2 Lumber: SPF species, NLGA Light Framing Grade Category, Utility Grade; with grade stamp clearly visible.

.3 Steel Forms: steel sheet, well matched, tight fitting, and adequately stiffened to support weight of concrete without deflection.

.4 Fibre Glass Reinforced Resin Forms: matched, tight fitting, and adequately stiffened to support weight of concrete without deflection.

.5 Pan Forms: Removable; of sizes and profiles required.

.6 Tubular Column Type Forms: spirally wound, adhesive laminated fibre paper tube forms, coated with hot wax; diameters as required; Handiform or Permaform by Perma Tubes Ltd. or Sonotube by Sonoco Limited.

2.2 ACCESSORIES

.1 Form Ties: removable or snap-off metal type of fixed and adjustable length, with cones and neoprene plugs when used for exposed conditions; to CSA S269.3.

.2 Form Release Agent: colourless mineral oil that will not stain concrete.

.3 Fillets for Chamfered Corners: Rigid formed plastic type; 13 x 13 mm size UNO.

.4 Formed Construction Joints: Premoulded asphaltic board; tongue and groove profile; 6 mm thick; complete with anchorage.

.5 Waterstops: Purpose made polyvinyl chloride, to CGSB 41-GP-35M, Type II; or flexible expanding sodium bentonite based for concrete construction joints.

.6 Dovetail Anchor Slots: Minimum 0.65mm thick galvanized steel; foam-filled; release tape sealed slots; bend tab anchors.

.7 Flashing Reglets: Rigid PVC; longest possible lengths; alignments splines for joints.

.8 Void Forms: Moisture resistant treated paper faces; biodegradable; initial set; 100 mm thick.

.9 Wood Texture Mats: Classic Wood texture mat, 207cm x 55.2cm, product ID FM-8700-S/O by Brickform or approved equal.

3 EXECUTION

3.1 ERECTION

.1 Construct formwork, shoring and bracing in accordance with CSA S269.3 to meet design and code requirements.

.2 Align joints and make watertight. Keep form joints to a minimum.

.3 When using earth forms, hand trim sides and bottoms, and remove loose dirt prior to placing concrete.

.4 Provide bracing to ensure stability of formwork. Shore or strengthen previously constructed formwork liable to be over stressed by construction loads.

.5 Provide chamfer strips on all external corners.

.6 Apply form release agent prior to placing reinforcing steel, anchoring devices, and embedded items. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are affected by agent.

.7 Provide formed openings where required for pipes, conduits, sleeves, and other work to be embedded in and passing through concrete members.

.8 Place items which will be cast directly into concrete.

.9 Coordinate work of other sections involved in forming and setting openings, slots, chases, sleeves, bolts, anchors, and other inserts.

.10 Install waterstops continuous without displacing reinforcement. Heat seal joints watertight.

.11 Place formed construction joints in pattern pouring sequence. Set top screed to required elevations.

.12 Install void forms in accordance with manufacturer's recommendations.

3.2 FORMWORK CLEANING

.1 Clean forms as erection proceeds, to remove foreign matter.

.2 During cold weather, remove ice and snow from within forms. Do not use calcium chloride or other salt-based de-icing compounds.

3.3 FORM REMOVAL

.1 Do not remove forms, shores and bracing until concrete has gained sufficient strength to carry its own weight, and construction and design load which are liable to be imposed upon it.

.2 Remove formwork progressively and in accordance with code requirements.

.3 Store removed forms, for exposed architectural concrete, in manner that surfaces to be in contact with fresh concrete will not be damaged.

.4 Restore structural support members where required due to design requirements or construction conditions and as required to permit progressive construction.

.5 Remove forms not directly supporting weight of concrete as soon as stripping operations will not damage concrete.

END OF SECTION

1 GENERAL

INSTRUCTIONS

.1 Comply with the Instructions to Bidders, the General Conditions of the Contract and Supplementary Conditions.

.2 Report in writing to the Project Manager any defects of surfaces or work prepared by others which affect the quality or dimensions of the work of this Section. Commencement of work implies complete acceptance of existing conditions and work by others.

INTENT

.3 Provide all articles, labour, materials, equipment, transportation, hoisting and incidentals noted, specified or required to complete the work of this Section.

SECTION INCLUDES

.4 Provide concrete required to complete the Work in accordance with the Contract Documents, including, but not limited to:

.1 Footings under columns, signage and walls;

.2 Sidewalks and curbs;

.3 Control joints and construction joints;

.4 Expansion joints;

.5 Admixtures;

.6 Crushed stone under slabs, and

.7 Granular 'A' fill under slabs.

.5 The summarized breakdown of the above-mentioned work does not set out all the work under this Section of the Contract, but rather outlines the essentials. Any concrete work indicated on the drawings or hereinafter specified, whether enumerated above or not, shall be carried out under this Section of work.

WORK EXCLUDED

.6 Any work in future phases.

RELATED SECTIONS

.7 03 10 00 – Concrete Forming.

REFERENCES

.8 ACI 544.3R-93: Guide for Specifying, Mixing, Placing and Finishing Steel Fibre Reinforced Concrete.

.9 ASTM C1059-99: Standard Specification for Latex Agents for Bonding Fresh To Hardened Concrete.

.10 CSA A23.1-04: Concrete Materials and Methods of Concrete Construction.

.11 CSA A23.2-04: Methods of Test and Standard Practices for Concrete.

.12 CSA A23.3-04: Design of Concrete Structures.

SUBMITTALS

.13 All test reports as requested.

RECORD DOCUMENTS

.14 Submit record documents as per the General Requirements.

.15 Record Documents: A set of drawings and specifications shall be kept at the Place of the Work, upon which the Contractor shall record the progress of the concrete installation, giving the time and date of each pour, the date of form removal and a daily record of the environmental conditions.

DELIVERY, STORAGE AND HANDLING

.16 Store Products to CSA A23.1.

.17 Store cement and aggregates in a manner to prevent deterioration or intrusion of foreign matter.

.18 Protect liquid mixtures from freezing and from settling out of solution.

.19 Do not use deteriorated or damaged Products for concrete.

ENVIRONMENTAL REQUIREMENTS

.20 Cold Weather Requirements

.1 When the air temperature is at or below 5°C, or when in the opinion of the Consultant there is a probability of its falling below 5°C within 24 hours of placing, protection for the concrete shall be required for the duration of the curing period by means of heated enclosures, coverings, insulation, or a suitable combination of these methods.

.2 Unvented salamanders or other heaters which produce carbon dioxide as a by-product shall not be permitted in the building during the casting operations or for the following 7 days. Properly vented heaters shall be placed in the building prior to concreting and used to maintain the temperature above 10°C during placing and finishing operations.

.3 When cold weather protection is required for slabs, a thermometer, accurate to plus or minus 2°C, shall be placed on top of the slab near a corner of the pour under the curing blanket to measure the temperature. If the temperature at this position falls below 10°C additional insulating materials and/or heaters shall be used to maintain the temperature above 10°C.

.4 If heaters are used, precautions shall be taken to prevent drying of the slab. During concrete placing, maintain the relative humidity of the atmosphere as high as possible.

.5 No dependence shall be placed on salt or other chemicals for the prevention of freezing.

.6 All reinforcement, forms, and ground with which the concrete is to come in contact shall be free from snow and ice. Concrete shall not be placed on, or against, any surface that will lower the temperature of the concrete in contact with the surface below 10°C.

.7 To avoid a sudden temperature change near the end of the curing period, the protection shall not be completely removed until the concrete has cooled to a temperature differential not greater than 17°C.

.21 Hot Weather Requirements

.1 When the air temperature is at or above 27°C, or when in the opinion of the Consultant there is the probability of it rising above 27°C within 24 hours of placing, facilities shall be provided for the protection of the concrete from the effects of hot and/or drying weather conditions.

.2 The temperature of the concrete when deposited shall not exceed 30°C.

.3 When the rate of evaporation exceeds the limits specified in CSA A23.1/A23.2-non-combined. Provide sufficient measures to prevent rapid loss of moisture from the surface of the concrete.

2 PRODUCTS

MATERIALS

.1 Portland Cement: to CAN/CSA-A3001, Type GU.

.2 Blended Hydraulic Cement: to Can/CSA-A3001, Type GUb.

.3 Integral Colour Admixture: Chamois 0.5%.

.4 Aggregate: Coarse and fine aggregates to CSA A23.1 and to the concrete mix designs given in this Section.

.5 Water: potable, to CSA A23.1.

ACCESSORIES

.6 Concrete Reinforcement: as specified in Section 03 20 00.

.7 Curing Compound: Meeting ASTM C309, water-based emulsion, and be approved by colour additive manufacturer for use with coloured concrete.

.8 Form release agent: As acceptable to concrete colorant manufacturer, non-staining, dissipative type.

.9 Grout: Masterflow 928 by Degussa or Sealtight V-3 Non-Metallic Grout by W. R. Meadows of Canada Limited.

ADMIXTURES

.10 Air entrainment: chemical and super plasticizing admixtures, to CSA A23.1.

.11 Integral Coloring Admixture: Integral Mix, synthetic oxide pigment, meeting ASTM C979 and C494, type A, cement dispersing/water reducing, in:

.1 Colour: U49 - Deep Charcoal

.1 Available from Butterfield Color, or approved alternate.

GRANULAR BASE AND SUB-BASE COURSES

.12 Granular Blanket: to OPSS 1010, Granular A; free of organic and other deleterious matter; maximum particle size of 20 mm and no more than 15% passing the No. 200 sieve; moisture content within plus or minus 2% of the Moisture Density Relations of Soils to ASTM D698.

.13 Crushed Stone: 12 to 38 mm size, well graded.

.14 Granular Fill: to OPSS 1010, Granular B, Type 1 or 2; moisture content within plus or minus 2% of the Moisture Density Relations of Soils to ASTM D698.

SEALANTS

.15 Normal Temperature Areas: eg. Loadflex by Sika Canada Inc.

.16 Refrigerated and Freezer Areas: eg. Chemtron 2035 by Chemtron Polymer Inc.

.17 Construction and Expansion Joints in Concrete Walls: Tremco Dymeric or Dow Corning 790 Silicone.

3 EXECUTION

GENERAL

.1 Relation to Other Sections:

.1 Review drawings and specifications for other Sections which will affect the placement of concrete.

.2 Form openings and build in anchors, rolled steel sections, sleeves, inserts, subframes or finished work supplied by other Sections as indicated in the Contract Documents and on Shop Drawings and as required for the proper completion of the Work and Project. These locations are the responsibility of the Trade for whom the sleeve, etc. has been placed.

.3 The Consultant's approval shall be obtained for the size and location of holes which are required in beams for the passage of pipe or ducts but which are not noted on the Drawings.

.4 Provide grout for setting column and beam bearing plates and co-operate with other Sections in placing thereof. Grout shall be installed in a manner that will ensure positive bearing of the full area of the steel plate on top of the bearing surface.

.5 At the junction of block walls with concrete walls or columns. Provide a continuous vertical dovetail anchor slot in the concrete on the centerline of the wall for its full height.

.6 Housekeeping Pads and Curbs: 100 mm thick, unless otherwise noted, with pad reinforcing of 10M at 300 mm on centres each way and curb reinforcing of 2-15M bars. Dowel pads and curbs to the floor or roof slab with 10M at 300 mm OC each way.

.2 Construction Joints, Control Joints, and Saw Cuts

.1 Provide construction joints, control joints and saw cuts as shown on the Drawings or in consultation with the Consultant.

.2 All saw cuts shall be made on the day of the finishing operations using "soft-cut" saws. Where saw cuts are not shown on the drawings, maximum grid spacing shall be 5 metres.

.3 At least 5-6 days after placing slab on grade, prior to occupancy, clean all dust and debris from the saw cuts and immediate area and fill the saw cuts with the specified joint filler.

.4 Clean construction joints of dirt and laitance. Saturate joint with water before placing adjacent concrete.

.5 Where shown, at construction joints and control joints in all walls retaining grade, a PVC waterstop shall be provided for the full length of the joint, wired to reinforcing to ensure proper alignment in the concrete and heat welded at all laps and splices in accordance with manufacturer's recommendations. Coordinate placement with Section 03 10 00.

.6 Granular Blanket: Provide a 150 mm layer of Granular 'A' below slab on fill and compact to 98% Standard Proctor maximum dry density.

CONCRETE

.3 Concrete Proportioning

.1 Proportion concrete to CSA A23.1; Alternative Number 1 of Table 11 as follows:

.1 Proportion normal density concrete to meet the following criteria for concrete in all exterior slabs on grade, and sidewalks.

Cement:	Type GUL
Supplementary Cementing Materials:	None
Minimum 56 Day Compressive Strength:	32 MPa
Minimum Cementitious Content:	as required
Nominal Size of Coarse Aggregate:	28 mm
Slump Range at Point of Discharge:	50 to 100 mm
Air content:	5 to 8%
Water/Cementing Materials Ratio:	0.45
Exposure Class:	C-2

.2 Proportion normal density concrete to meet the following criteria for concrete in all exterior heavy-duty concrete pavement slabs & curbs.

Cement:	Type GUL
Supplementary Cementing Materials:	None
Minimum 56 Day Compressive Strength:	35 MPa
Minimum Cementitious Content:	335 kg/m3
Nominal Size of Coarse Aggregate:	28 mm
Slump Range at Point of Discharge:	50 to 100 mm
Air content:	5 to 8%
Water/Cementing Materials Ratio:	0.45

.3 Submit mix designs to the Consultant for review. Number each design to conform to the design requirement numbering above. Where the use of supplementary cementing materials is permitted, specify which materials and what quantities are proposed.

.4 The use of supplementary cementing materials, where permitted by the mix design, shall conform to CAN/CSA-A3001.

.5 Where a high range water reducing admixture (superplasticizer) is used, the slump shall not exceed 240 mm.

.6 Mix design for concrete placed by pump shall take into consideration the pump equipment and shall not exceed the specified water/cementing materials ratio.

.4 Admixtures

.1 An approved water reducing admixture may be used in all concrete if compatible with all other specified admixtures. The use of a high range water reducing admixture (superplasticizer) is required for steel fibre reinforced concrete.

.2 Entrained air in non-air entrained concrete shall be less than 3%.

.3 An air entraining agent shall be used in all concrete which will be exposed to freeze-thaw conditions and for the action of road salt to CSA A23.1.

.4 All admixtures shall be used according to the manufacturer's recommendations and shall be identified in the submitted mix design.

.5 Preparation of Equipment and Place of Deposit

.1 A slump cone shall be made available at the delivery point and slump tests taken whenever requested. No concrete shall be poured unless a slump cone is on the site.

.2 Equipment for the mixing and transportation of concrete and the place of deposition shall be cleaned of all debris and ice. Masonry that will be in contact with concrete shall be well drenched (except in freezing weather). The reinforcement shall be thoroughly cleaned of ice, dirt, oil, scale or the coatings that tend to reduce the bond.

.3 Water shall be removed from place of deposit before concrete is placed unless otherwise permitted by the Consultant. All laitance and other unsound material shall be removed from hardened concrete before additional concrete is added.

.4 Prepare concrete slabs designated to receive bonded topping slabs to CSA A23.1.

.6 Mixing: Mix and deliver ready-mixed concrete to CSA A23.1.

.7 Conveying: Convey concrete to CSA A23.1

.1 Convey concrete from the mixer to the place of final deposit by methods that will prevent separation or loss of materials.

.2 Equipment for chuting, pumping and pneumatically conveying concrete shall be such size and design as to ensure a practically continuous flow of concrete at the delivery end without separation of materials.

.3 When conveying concrete by pump, the slump, as measured at delivery to the pump, shall not be increased by more than 25 mm above the maximum slump given. Maintain specified water-to-cement ratio.

.8 Placing

.1 Placing concrete to CSA A23.1.

.2 Place bonded topping slabs to CSA A23.1.

.3 Notify Consultant at least 24 hours in advance of the proposed time of commencement of concreting.

.4 Conform to ACI 544.3R-93 for placing and finishing steel fibre reinforced concrete.

.5 Deposit concrete as nearly as practicable in its final position to avoid segregation due to re-handling or flowing. The placing of concrete shall be carried on at such a rate that concrete is at all times plastic and flows readily into the spaces between the bars. No concrete that has been contaminated by foreign material shall be used, nor shall retempered concrete be used unless approved by the Consultant.

.6 Once placing has started, it shall be carried on as a continuous operation until placement of the panel or section is completed. Construct construction joints as indicated on Drawings.

.7 Thoroughly consolidate concrete by vibration or suitable means during placement. It shall be thoroughly worked around reinforcement and embedded fixtures and into the corners of the forms. Vibrators shall not be used to move concrete horizontally.

.8 Beams and girders, column capitals and haunches shall be placed monolithically without horizontal joints in their depths unless specifically indicated otherwise on the drawings.

.9 After suitable bulkheads, screeds and, if specified, jointing materials have been positioned, the concrete shall be placed continuously between construction joints, beginning at a bulkhead, edge form or corner. Each batch shall be placed into the edge of the previously placed concrete to avoid stone pockets and segregation. If there is a delay in casting, the concrete placed after the delay shall be thoroughly spaded and consolidated at the edge of the previously placed to avoid cold joints. Concrete shall be distributed by shovels and consolidated by vibration or other suitable means. The concrete shall then be brought to correct level with a straight-edge and struck off. Bullfloats or darbies shall be used to smooth the surface leaving it free of bumps or hollows.

.9 Curing

.1 Cure concrete to CSA A23.1.

.2 Refer to Section 03 35 00 for curing horizontal concrete surfaces.

.3 Curing exposed surfaces shall commence as soon as the concrete has hardened sufficiently to prevent surface damage. Curing of concrete surfaces shall be achieved using one or more of the following methods:

.1 ponding or continuous sprinkling;
.2 absorptive mat or fabric kept continuously wet;
.3 4 mil polyethylene plastic film;
.4 forms in contact with concrete surface; or
.5 other moisture-retaining methods as approved by the Consultant.

.4 Film forming curing compound is not an acceptable substitute for the methods noted above.

.5 All concrete surfaces shall be moist cured for a basic curing period of either three days at a minimum temperature of 10 °C or for the time necessary to attain 35% of the specified 28-day compressive strength of the concrete.

.6 Cure air-entrained concrete an additional four consecutive days (for a total of seven days) at a minimum temperature of 10°C or for the time necessary to attain 70% of the specified 28-day compressive strength of the concrete.

.7 The basic curing time shall be extended on all structural concrete until the concrete has achieved sufficient strength for structural safety. (70% of the specified 28-day compressive strength of the concrete unless otherwise directed by the Consultant.)

.8 When the air temperature is above 27°C, cure concrete to CSA A23.1.

.9 During freezing weather, water curing of concrete shall be terminated 12 hours before the end of the protection period.

CLEANING

.10 Concrete which is to be covered by other material shall have all wires and large fins cut off, projecting metal ties cut back 25 mm behind the surface. Void holes and cavities shall be filled with mortar, honeycomb shall be cut out and spaced filled with concrete. Serious honeycomb shall be inspected by the Consultant and the method of rectifying the condition approved before it is repaired. The surface shall be left reasonably smooth and even.

.11 The surface of all exposed concrete walls, columns, and beams (interior and exterior) shall be treated as specified above. In addition, immediately after the forms have been removed, grind the surface using only carborundum brick and cement slurry to take out marks and other irregularities. Leave the surface in a condition equivalent to a finish coat of cement plaster.

PROTECTION

.12 Protect freshly cast concrete from surrounding environment, and from future construction operations, to CSA A23.1.

.13 Provide necessary protection to maintain concrete temperature above 10°C for the curing period.

.14 During extremes in weather, floors shall not be placed unless the slab is protected by a roof and other suitable protective measures can be taken.

FIELD QUALITY CONTROL

.15 Routine testing of materials, of proposed mix designs and of resulting concrete for compliance with technical requirements of the Specifications will be carried out by the Inspection and Testing Company appointed by the Consultant.

.16 If instructed by the Consultant, the Inspection Company shall secure production samples of materials at the plant or stock piles during the course of the work and test for compliance with the Contract Documents.

GENERAL

.17 Sample and test concrete to CSA A23.2.

.18 Do not add water after the initial introduction of the mixing water for the batch, except at the start of discharge, when the measured slump of the concrete is less than that specified and no more than 60 minutes have elapsed from the time of batching to the start of discharge. In this case, an amount not exceeding 16 L/m or 10% of the mix design water may be added. The drum or blades shall then be turned an additional 30 revolutions or more if necessary, at mixing speed. Water shall not be added to the batch at any later time.

.19 Do not add water to concrete in agitators that are not equipped as mixers.

.20 Concrete may be used as long as it is of such slump that, in the opinion of the Consultant, it can be placed and properly consolidated without the addition of water to the batch, but in no case shall the time between batching and complete discharge exceed 120 min.

.21 The Inspection and Testing Company shall report the details of each occurrence to the Consultant whenever concrete that does not meet the Contract Documents is placed.

.22 Concrete that is rejected by the Inspection and Testing Company that has not had water added or which had water added by the concrete Supplier shall be at the expense of the Supplier. Concrete that is rejected after water is added at the Contractor's insistence shall be at the Contractor's expense.

CONCRETE COMPRESSIVE STRENGTH TESTS

.23 A technician shall make at least three (3) compression-test specimens for each day's concrete placement but not less than three (3) cylinders for each 100 cu.m. of individual placement. There shall be no less than one set of three cylinders for each concrete mix design placed on any one day. One cylinder shall be tested at seven (7) days and one at twenty-eight (28) days. Additional test specimens may be taken at the discretion of the Consultant.

.24 If either of the two (2) of the 28-day tests do not meet specified requirements, then the third cylinder should be tested at 56 days.

.25 Additional cylinders may be cast at the expense of the Contractor if the Contractor requests them. The timing of tests on these extra cylinders shall be as required by the Contractor.

.26 The results of the tests shall conform to strength requirements outlined in Clause 17.5 of CSA A23.1 and if they fail to do so the Consultant may require one or more of the procedures outlined in Clause 17.5.8 of the same standard.

CONCRETE SLUMP TESTS

.27 A technician shall make standard slump tests as directed by the Consultant. A slump test shall be made with every strength test.

.28 Water may be added to any concrete whose slump is less than the specified slump, however, the Inspection and Testing Company shall reject any concrete that has, after the addition of water, a slump greater than the specified slump.

.29 Any concrete to which water has been added shall have its slump checked and the water quantity and slump shall be recorded by the Inspection and Testing Company.

.30 Any concrete with a slump greater than that specified shall have a set of three cylinders cast and the exact location of the concrete in the structure recorded by the Inspection and Testing Company.

.31 Any concrete failing to meet the specified slump requirements shall be rejected by the Inspection and Testing Company.

ENTRAINED AIR TESTS

.32 Air content measurements of air-entrained concrete shall be made for each load of air entrained concrete deposited.

.33 Concrete subject to exposure classifications F-1 and C-1 when exposed to freezing and thawing and C-2 of Tables 7 and 8 of CSA A23.1 shall be retested for conformance to air content requirements when more than 90 minutes have elapsed since batching.

CONCRETE SLAB QUALITY CONTROL

.34 The Inspection and Testing Company shall be on-site full time during the pouring of all slabs to ensure the quality of the concrete being installed. In addition to the requirements of Clause 3.3.2 - Concrete Strength Tests, a slump test shall be made for each truck.

.35 For slabs on grade containing steel fibres, the Inspection and Testing Company shall monitor on site, to ensure that the amount of fibres added meets the specification.

.36 For concrete to which a high range water reducing admixture (superplasticizer) is to be added, the Inspection and Testing Company shall take a slump test on a sample obtained before the superplasticizer is added. Should the slump be outside the specified range, the Supplier has the following options:

.1 If the slump is less than the specified range;

.1 water may be added to increase the slump to the lower slump range value after which the superplasticizer is added, or
.2 additional superplasticizer alone may be added to bring the concrete up to the desired consistency.

.2 If the slump is greater than the specified range;

.1 the batch can be allowed to dry in the truck if sufficient time remains from the batch time and weather conditions are conducive, after which another slump test shall be taken, or
.2 the supplier may elect to discharge to a container (loader bucket, etc.) or waste the first 10% of the load after which another sample shall be taken and slump test performed.

.3 Failure of the option 2(b) slump test does not prevent subsequently utilizing option 2(a), however, any cost of clean-up of the discharged concrete shall be borne by the supplier.

.37 For the first loads deposited that contain steel fibres, a sample shall be taken from the first quarter of the load and the steel fibres, washed out, collected and weighed to ensure proper distribution of the fibres throughout the concrete.

.38 Should the steel fibre density fall outside 10% of the required value, adjustments shall be made to the method of addition, to the duration of mixing or as required to achieve proper distribution.

.39 Adjustments and samples shall be taken from each load until two successive loads are mixed within the specified tolerance.

END OF SECTION

1 GENERAL

1.1 DESCRIPTION

.1 This section specifies the supply and installation of play area subsurface drainage.

1.2 DELIVERY AND STORAGE OF MATERIAL

.1 Coarse and fine aggregates shall be stored separately in free draining stockpiles and in such manner as to prevent contamination and segregation.

1.3 INSPECTION

.1 The contractor shall notify the Project Manager prior to placing drainage layer materials to inspect slope of subgrade and installation of drain pipes.
.2 Do not place drainage layer stone until subgrade and drain pipes have been approved.

2 PRODUCTS

2.1 FILTER FABRIC

.1 Non-woven geotextile. Please refer to the Construction and Material Specification Manual (latest edition) for the Approved Products List, Section 5 – Parks Construction Products.

2.2 DRAINAGE PIPE

.1 Perforated Polyethylene drain pipe shall be in accordance with OPSS.MUNI 405 as amended by the Construction and Materials Specifications Manual (latest edition), this specification, and the Contract Documents.
.2 Perforated Polyethylene Drainage Tile: 100mm (4") diameter rigid perforated poly drain pipe (Big "O") in continuous filter sock.

2.3 DRAINAGE STONE

.1 19mm dia. clear natural stone.

3 EXECUTION

3.1 SITE PREPARATION

.1 Stake out all play areas and proposed drainage pipe locations to the Project Manager's approval.
.2 Excavate to the minimum specified depth, after compaction with minimum 1% sloped subgrades to weeping tiles as detailed.
.3 Remove all excavated material from the site and dispose of it, unless approved for backfilling.
.4 Compact subgrade uniformly to a minimum 95% Standard Proctor Density.

3.2 SUBSURFACE DRAINAGE

.1 Identify where play equipment footings will be installed. Locate drainage tile to avoid play equipment footings. Install drainage tiles and related 19mm diameter clear crushed stone encasement, as detailed. Ensure drain tiles slope to drain towards a catch basin at minimum 1%, unless shown otherwise on the drawings.
.2 Discharge drainage pipe as shown on drawings. Drainage pipe to be connected to nearest catch basin.
.3 Install clear stone drainage course as detailed.
.4 Cover entire drainage course with filter fabric.

3.3 EXCAVATION AND BACKFILLING

.1 Excavate all trenches to the depth specified on the drawings, allowing for the placement of the bedding material, so as to provide a uniform and continuous bearing and support for the pipe.
.2 Erect warning signs and protective barriers in accordance with local municipal and provincial regulations and as directed by the Project Manager.
.3 Where trenches run under soft landscaped areas, backfill trenches above the pipe bedding with native material in 300mm layers. Compact each layer with approved vibratory compaction machinery to 95% Standard Proctor Density.
.4 Where trenches run under sidewalks or other hard surfaces, backfill trenches above the pipe bedding entirely with Granular "A" material in 300mm layers. Compact each layer to 95% Standard Proctor Density and top layer to 98% S.P.D.

3.4 DRAIN PIPE INSTALLATION

.1 Install drain pipe in accordance with manufacturer's instructions.
.2 Lay pipe straight and in true alignment to the slopes and elevations indicated on the Drawings and fully supported by the bedding material.
.3 Lay all lines with a uniform grade between given elevations and draining to the outfall ditch as indicated on the drawings. Ensure pipe slopes a minimum of 1% (1cm/100cm) unless shown otherwise.
.4 Install each pipe length as soon as the preceding section has been properly jointed, embedded and secured in place. Protect exposed ends of pipe to prevent earth and other debris from entering pipe. Keep pipe interior clean. Install pipe carefully to avoid damage.
.5 Install 100mm dia. perforated drainage tile on compacted sub-grade and connect to rigid pipe as shown on drawing.
.6 Install rigid pipe on compacted sub-grade and have discharge end of pipe connected to Flowell and soak-away pit as detailed.
.7 Have completed pipe installation inspected by the Project Manager.

3.5 MAINTENANCE AND GUARANTEE

.1 Protect and maintain all work of this section from time of installation until acceptance of all works.
.2 At the completion of the contract, and prior to acceptance of the work by the Project Manager, clean and flush the drain pipe.
.3 Keep the backfill in repair at all times, correct settlement and erosion, to the satisfaction of the Project Manager.

.4 Guarantee all workmanship and materials for a period of one (1) year, commencing on the date of Substantial Performance of all Works.

3.6 RESTORATION

.1 Restore all disturbed areas to original state of finish and to the satisfaction of the Project Manager.

END OF SECTION

1 GENERAL

1.1 GENERAL REQUIREMENTS

.1 The OPSS 572 shall serve as the minimum specification for the Hydraulic Seeding portion of this work.

1.2 INSTRUCTIONS

.1 Comply with the Instructions to Bidders, the General Conditions of the Contract, the Supplementary Conditions, and the General Requirements.

.2 Report in writing to the Project Manager any defects of surfaces or work prepared by others which affect the quality or dimensions of the work of this Section. Commencement of work implies complete acceptance of existing conditions and previous work performed by others.

.3 All Seeding to be mechanically applied unless specified differently.

1.3 INTENT

.1 Provide all articles, labour, materials, equipment, transportation and incidentals noted, specified or required to complete the work of this Section.

1.4 RELATED SECTIONS

.1 Section 32 91 13 – Soil Preparation

1.5 ACCEPTANCE

.1 Seeded areas will be accepted by the Consultant at the end of the maintenance period provided that:

.1 Seeded areas are properly established.

.2 Free of excessive weed growth with no greater than 10% bare and dead spots.

.3 No surface soil is visible when grass has been cut to a height of 150 mm.

.4 Turf areas have been cut no less than twice, the last cut being carried out within 72 hours prior to the acceptance inspection.

.2 Areas seeded in the fall will be accepted in the following spring, one month after the start of the growing season provided that the conditions of section 1.3.1 are fulfilled.

1.6 DELIVERY AND STORAGE

.1 Deliver grass and meadow seed mixes in original containers showing:

.1 Analysis of seed mixture
.2 Percentage of pure seed.
.3 Year of production.
.4 Net weight.
.5 Date when tagged and location.

2 PRODUCTS

2.1 MATERIALS

.1 Grass seed: to Federal and Provincial seed laws having a minimum germination of 75% and minimum purity of 97%.

.2 Organic Pre-Emergent Weed Control: Turf Maize 98% Corn Gluten Meal as supplied by Sheridan Nurseries, 100 Elmsdale Drive, Kitchener, ON N2E 1H6; Tel:519-743-3178; Fax: 519-743-1839, or approved equal.

.3 Fertilizer: organic fertilizer as required by soil tests.

.4 Seed Mix:

Name		% of Mix
Festuca rubra	Creeping Red Fescue	20%
Festuca ovina	Sheep's Fescue	20%
Festuca trachyphlla	Hard Fescue	20%
Lolium perenne	Perennial Rye	40%

Broadcast Rate 5lbs/1000 sq.ft.

.5 Hydraulic Mulch: Type A, as per OPSS 572.

.6 Dry Mulch: Chopped Straw Mulch, as per OPSS 572

.7 Erosion Control Blanket: Type S, as per OPSS 572.9

3 EXECUTION

3.1 WORKMANSHIP

.1 Keep site well drained. Keep excavations dry

.2 Clean up immediately any soil or debris spilled onto pavement. Dispose of deleterious

material off the site.

3.2 PREPARATION OF SURFACES

.1 For standard seed beds, provide a minimum 50mm of loose soil on the surface of area to be seeded.

.2 For well-prepared seed beds, surface must be free of all deleterious material and fine grade must be free of humps and hallows. Surface must be chain-harrowed to provide a fine, clump-free seed bed just prior to seeding.

.3 Wildflower seed beds must receive an organic, pre-emergent herbicide application of Turf Maize, 98% Corn Gluten Meal, pre-emergent weed control per manufacturer's recommendations and at least 2 weeks prior to the final cultivation before seeding. Refer to drawings for site preparation notes and seeding rates.

3.3 AREA

.1 The area to be sown is the entire area as shown on the drawings or disturbed by construction other than areas to be sodded, paved, planting beds and/or specified as a different surface material.

3.4 SEEDING

.1 Hydro-seed on standard seed bed during the periods of Spring Start-up to May 31 and August 1 to September 15.

.2 Sow one half of the required amount of seed in one direction and follow by sowing the other half at right angles to it. The last sow shall be on right angles to the slope.

.3 In the case of late fall seeding, sufficiently protect all seeded areas from damage by water erosion, pedestrians, and vehicles.

3.5 MULCHING

.1 Apply Hydraulic mulch evenly and uniformly and at such a rate to meet the coverage specified in OPSS 572.

3.6 EROSION CONTROL

.1 Erosion Control Mat: Install according to manufacturer's recommendations, as required.

3.7 MAINTENANCE

.1 Maintain seeded areas until the acceptance of the seeded areas or 60 days, whichever

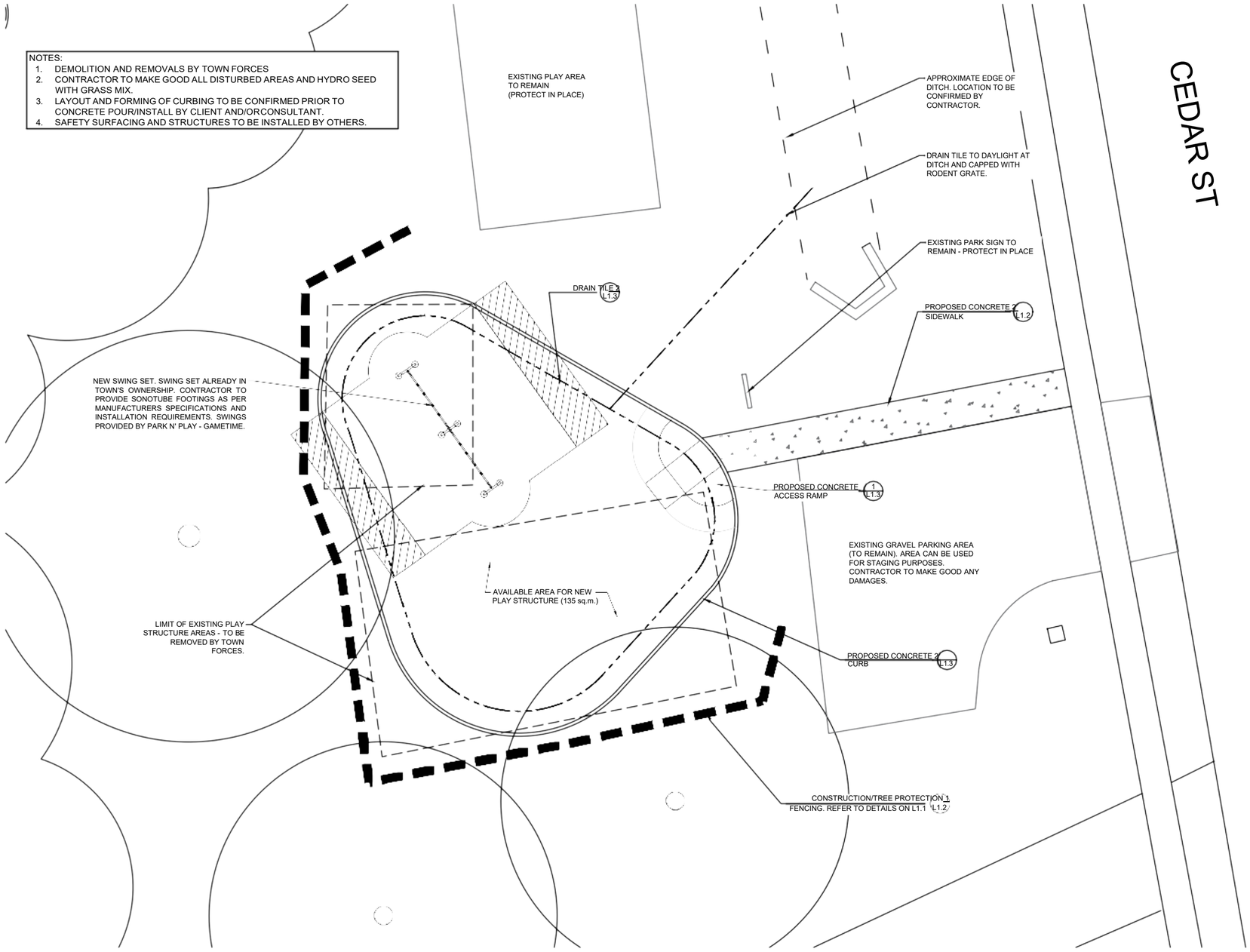
occurs first.

.2 Keep soil moist during the germination period and water as required during the maintenance period.

.3 Fertilize turf areas one month after seeding with 16-8-8 fertilizer. Spread evenly at a rate of 3.9Kg/100 m2 and water in well. Postpone fertilizing until the following spring if application falls within a four-week period prior to the expected end of the growing season in the site locality.

END OF SECTION

NOTES:
1. DEMOLITION AND REMOVALS BY TOWN FORCES
2. CONTRACTOR TO MAKE GOOD ALL DISTURBED AREAS AND HYDRO SEED WITH GRASS MIX.
3. LAYOUT AND FORMING OF CURBING TO BE CONFIRMED PRIOR TO CONCRETE POUR/INSTALL BY CLIENT AND/ORCONSULTANT.
4. SAFETY SURFACING AND STRUCTURES TO BE INSTALLED BY OTHERS.



SEEDING NOTES

1. SEEDING SHALL BE PERFORMED BETWEEN MID-MAY AND MID-SEPTEMBER. OBTAIN CONSULTANT'S APPROVAL FOR ANY SEEDING OUTSIDE OF THE ABOVE PREFERRED WINDOW.

2. APPLY HYDRAULIC MIXTURE EVENLY AND UNIFORMLY AND AT SUCH A RATE TO MEET THE COVERAGE SPECIFIED IN OPSS 572.

3. STRAW SHOULD JUST COVER THE SOIL SURFACE, BUT NOT BURY IT. SOME SOIL SHOULD BE VISIBLE THROUGH THE STRAW - TO A MAXIMUM OF 10%.

4. ALL SEEDING TO BE APPLIED THROUGH HYDRAULIC METHOD EXCEPT AREAS WHERE CONDITIONS WILL ONLY PERMIT MECHANICAL SEEDING. CONTRACTOR TOOBTAIN CONSULTANT'S APPROVAL FOR ALL ALTERNATE SEEDING METHODS.

SEED MIX -- LAWN MIX

LATIN NAMES	COMMON NAMES	% IN MIX
Festuca rubra	Creeping Red Fescue	20
Festuca ovina	Sheep's Fescue	20
Festuca trachyphilla	Hard Fescue	20
Lolium perenne	Perennial Rye Grass	40

1 0 1 2 4
1:100 (m)

KEY PLAN
N.T.S.

Legend

EXISTING TREES

CONCRETE PAVING

GENERAL NOTES:

1. DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT

2. CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND SITE CONDITIONS PRIOR TO COMMENCEMENT OF THE WORK

3. ALL UTILITY LOCATES ARE THE RESPONSIBILITY OF THE CONTRACTOR. HAND DIG WITHIN THE LIMITS RECOMMENDED BY THE SERVICE UTILITY. UTILITY CONFLICTS WITH PROPOSED TREE LOCATIONS MUST BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT

4. BASE DRAWING PROVIDED BY GSP GROUP INC.

7. LANDSCAPE DRAWINGS SHOW ENGINEERING INFORMATION FOR DESIGN PURPOSES ONLY. DO NOT CONSTRUCT ENGINEERING WORKS FROM THESE DRAWINGS.

HARDSCAPE PLAN

WALTERS CREEK PLAYGROUND
608 CEDAR ST. SHELBURNE, ON

ISSUED FOR BIDDING. NOT FOR CONSTRUCTION.

DATE	ISSUE	BY
11 OCT 2023	Issued for Bidding - Draft Review	JH

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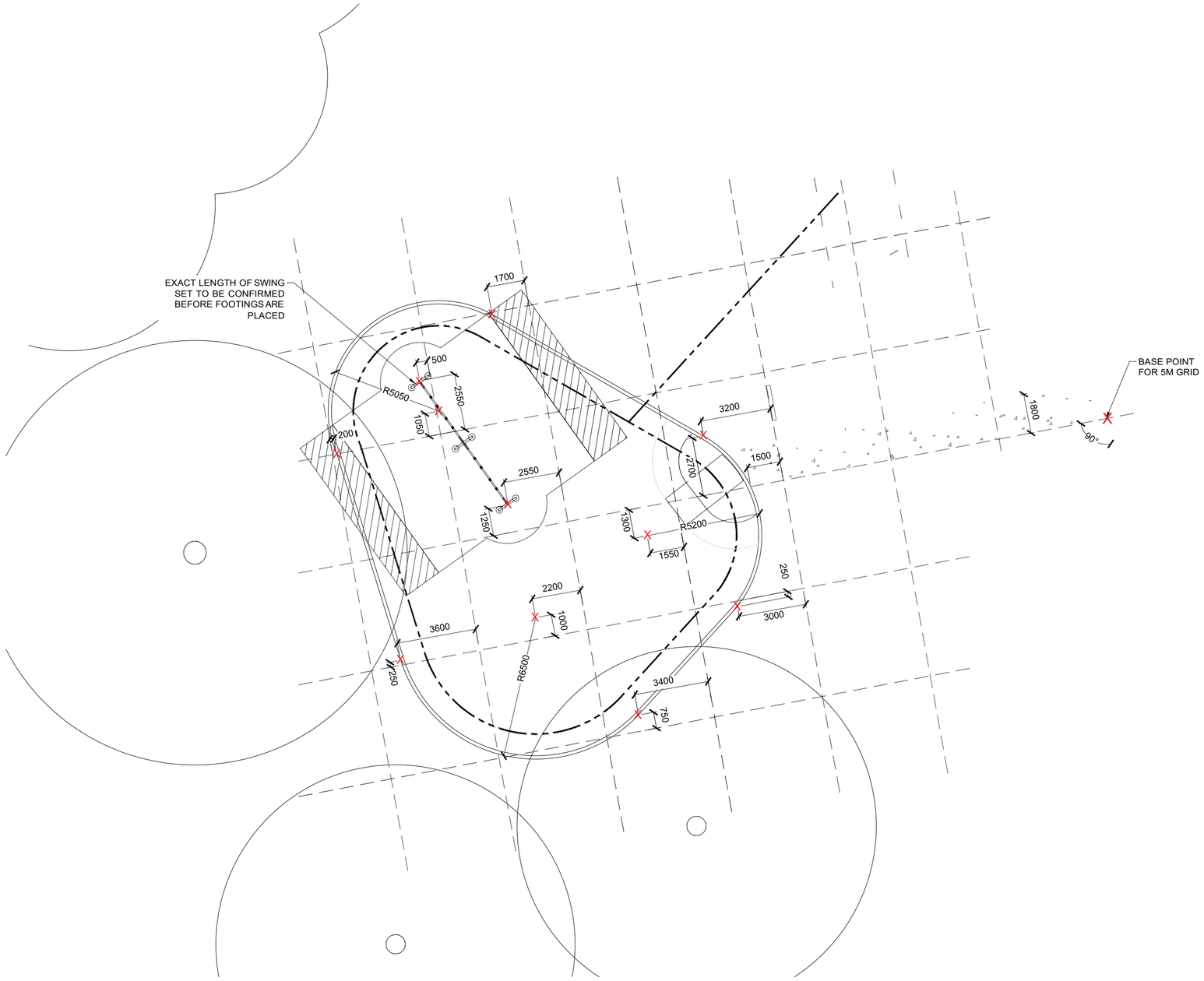
Date: 08.30.23
Drawn By: Olivia Solbetta
Scale: 1:???
Project No.: 15017.220

L1.0



KEY PLAN

N.T.S.

Legend

- EXISTING TREES
- CONCRETE PAVING

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LAYOUT PLAN

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1:100 (m)

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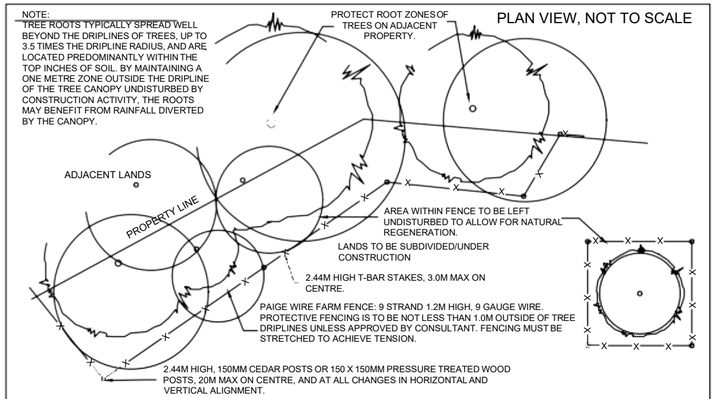
Date: 08.30.23 | Drawn By: Olivia Scibetta

Scale: 1:??? | Project No.: 15017.220

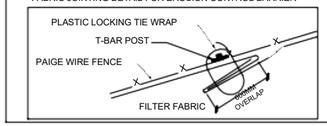
L1.1

NOTE:
TREE ROOTS TYPICALLY SPREAD WELL BEYOND THE DRIPLINES OF TREES, UP TO 3.5 TIMES THE DRIPLINE RADIUS, AND ARE LOCATED PREDOMINANTLY WITHIN THE TOP INCHES OF SOIL. BY MAINTAINING A ONE METRE ZONE OUTSIDE THE DRIPLINE OF THE TREE CANOPY UNDISTURBED BY CONSTRUCTION ACTIVITY, THE ROOTS MAY BENEFIT FROM RAINFALL DIVERTED BY THE CANOPY.

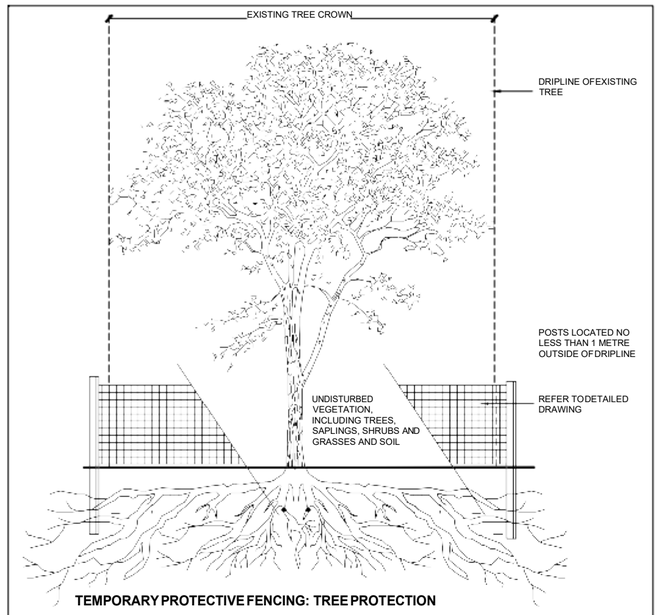
PLAN VIEW, NOT TO SCALE



FABRIC JOINTING DETAIL FOR EROSION CONTROL BARRIER



TEMPORARY PROTECTIVE FENCING: TREE PROTECTION

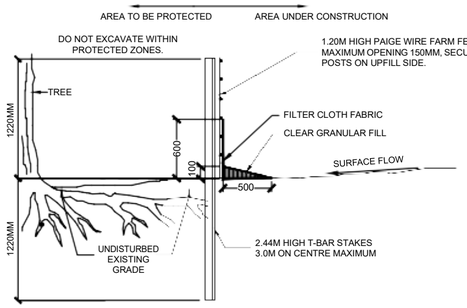


TEMPORARY PROTECTIVE FENCING: TREE PROTECTION

NOTE:
1. THE AREA WITHIN THE DRIPLINE OF ALL EXISTING TREES SHALL BE PROPERLY PROTECTED WITH TEMPORARY FENCING.
2. THE AREA WITHIN THE PROTECTIVE FENCING SHALL REMAIN UNDISTURBED AND SHALL NOT BE USED FOR THE STORAGE OF BUILDING MATERIALS OR EQUIPMENT ACCESS AND STORAGE OR PROJECT RELATED GARBAGE.
3. TREE PROTECTION MEASURES SHALL REMAIN UNTIL THE COMPLETION OF FINE GRADING AND SODDING OR SEEDING.

1 TREE PROTECTION FENCING
N.T.S.

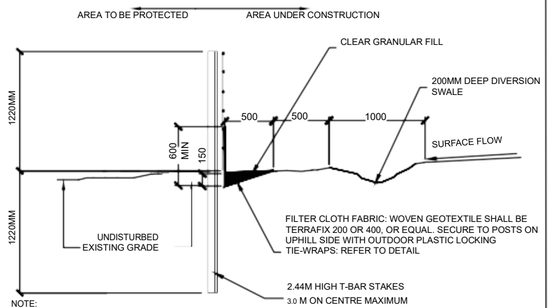
TREE ROOT ZONES
TEMPORARY PROTECTIVE FENCING AND EROSION CONTROL



NOTE:
1. SEDIMENT ACCUMULATIONS TO BE REMOVED BY SUBDIVIDER/BUILDER WHEN SEDIMENT DEPOSITS REACH TO WITHIN 150MM OF TOP OF FILTER FABRIC BARRIER.
2. FENCE TO BE INSPECTED ON A REGULAR BASIS AND MAINTAINED BY SUBDIVIDER/BUILDER IN PROPER CONDITION.

SECTIONAL ELEVATION N.T.S.

NON-TREE ROOT ZONES



NOTE:
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2. FENCE TO BE INSPECTED ON A REGULAR BASIS AND MAINTAINED BY SUBDIVIDER/BUILDER IN PROPER CONDITION.

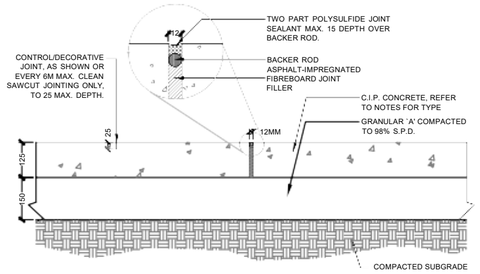
SECTIONAL ELEVATION N.T.S.

TREE MANAGEMENT NOTES - GENERAL

1. NO SERVICING, GRADING OR OTHER CONSTRUCTION ACTIVITY IS TO BEGIN UNTIL THE INSTALLATION OF THE TREE PROTECTION FENCING AND ANY OTHER PROTECTION MEASURES HAVE BEEN CERTIFIED BY THE LANDSCAPE ARCHITECT/CLIENT. PROTECTION FENCING SHALL NOT BE ALTERED OR RELOCATED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THEY ARE AWARE OF ALL MEASURES BEING TAKEN TO PROTECT ALL TREES IDENTIFIED.
3. ALL DAMAGE TO TREES WILL BE REPORTED TO THE CONSULTANT IMMEDIATELY BY THE CONTRACTOR'S FOREPERSON. .

NOTES:
1. EXPANSION JOINT - AS SHOWN OR AT ALL COLD JOINTS OR PERIMETER BOUNDARIES WITH OTHER STRUCTURES OF PAVING.
2. 32MPa CONCRETE AT 28 DAYS.

FIELD PAVING
- NATURAL COLOUR
- BROOM FINISH



2 CONCRETE PAVING
N.T.S.

DETAILS

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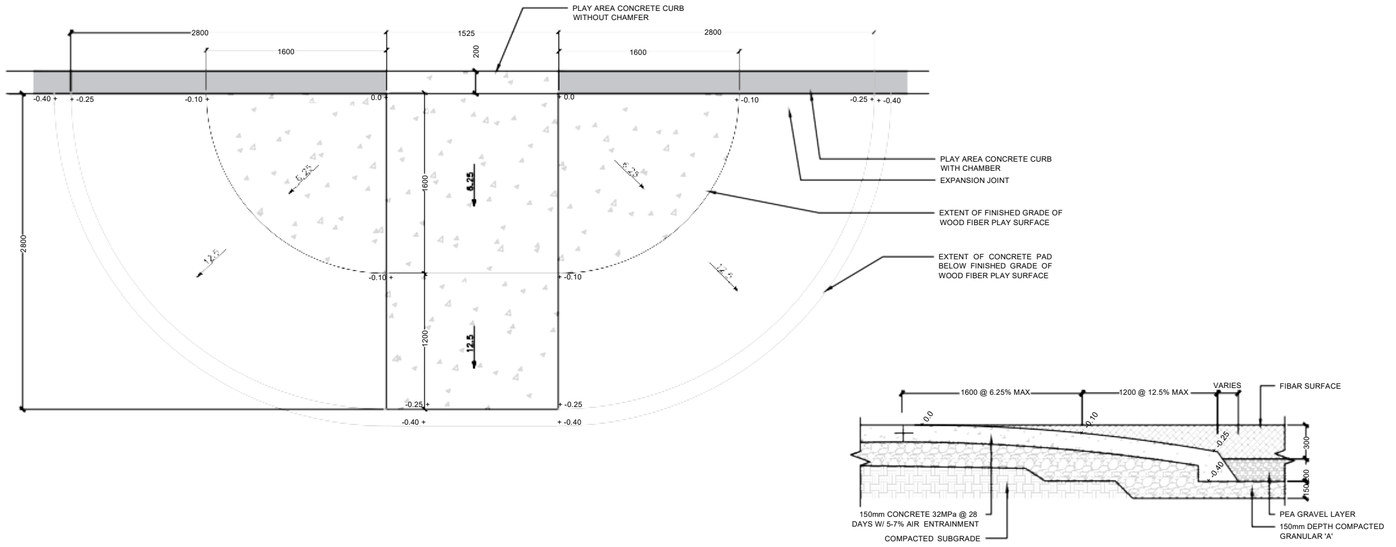
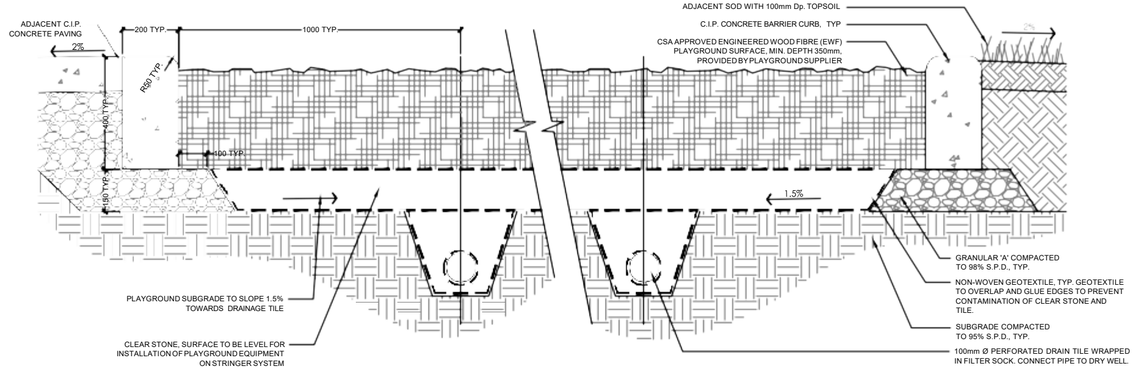
L1.2

Date: 04 OCTOBER 2023
Drawn By: JH
Scale: AS SHOWN
Project No.: 15017.220



1 CONCRETE ACCESS RAMP AT PLAY SURFACING
N.T.S.

NOTES:
1. ALL WORK TO BE CARRIED OUT TO CURRENT APPLICABLE CHILDREN PLAY SPACES AND EQUIPMENT NATIONAL STANDARDS OF CANADA (CAN/CSA-Z614-03).
2. COORDINATE WORK WITH PLAY STRUCTURE MANUFACTURER PRIOR TO CONSTRUCTION.
3. ALL PLAY STRUCTURE FOOTINGS & SLEEPERS TO BE INSTALLED BY PLAYGROUND STRUCTURE MANUFACTURER.
4. CONCRETE BARRIER CURB TO BE 32 MPa C.I.P. CONCRETE WITH BROOM FINISH. CONTINUOUS SAW CUT JOINTS SPACED 3650mm O.C.. ADJACENT SURFACE TO BE FLUSH WITH TOP OF CURB.



2 PLAYGROUND CURB & SAFETY SURFACING
N.T.S.

DETAILS

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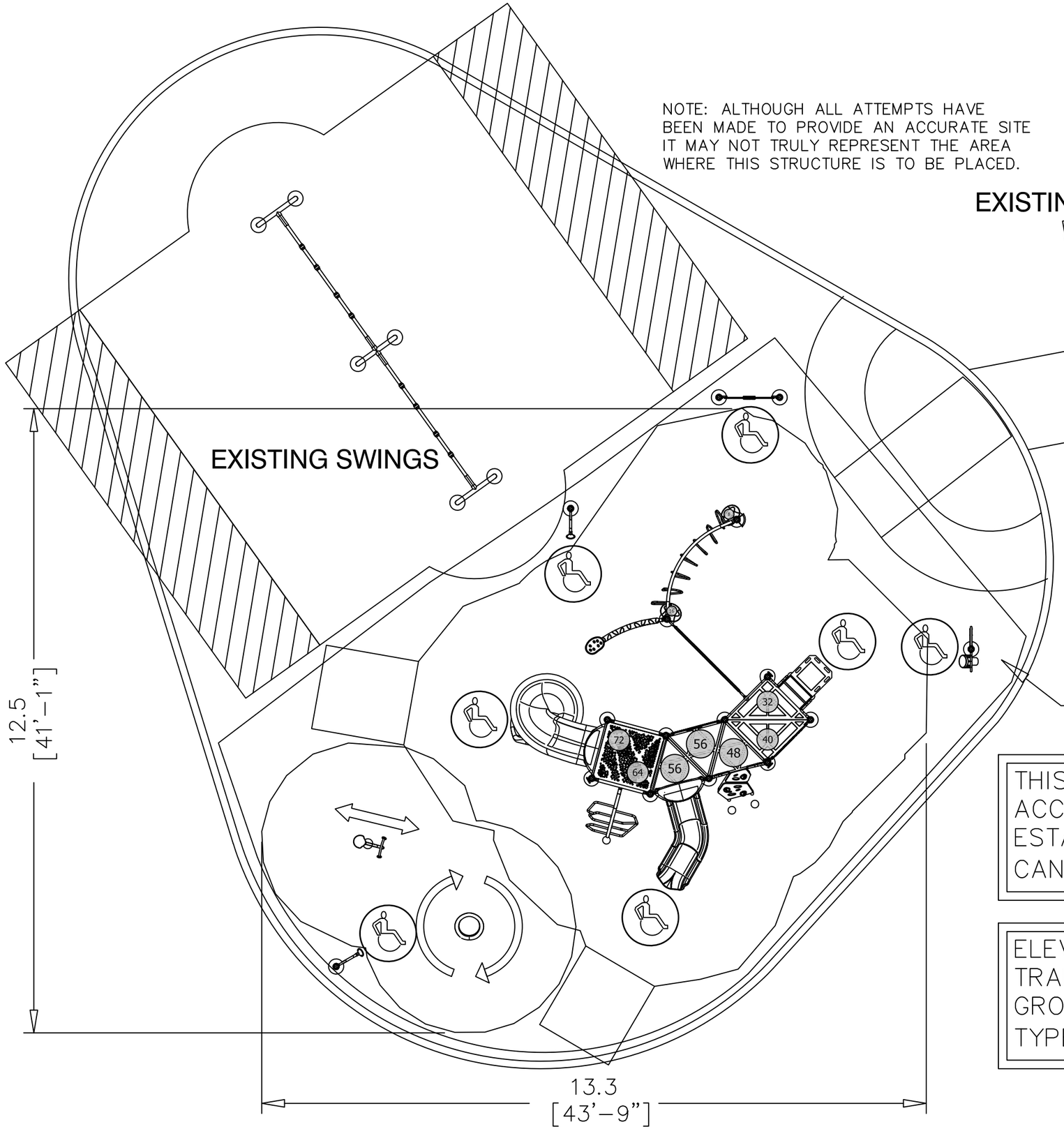
Date: 04 OCTOBER 2023 | Drawn By: JH
Scale: AS SHOWN | Project No.: 15017.220

L1.3

NOTE: ALTHOUGH ALL ATTEMPTS HAVE
BEEN MADE TO PROVIDE AN ACCURATE SITE
IT MAY NOT TRULY REPRESENT THE AREA
WHERE THIS STRUCTURE IS TO BE PLACED.

EXISTING SIGN

EXISTING SWINGS



SCALE IN METERS
0 2.0 4.0

NEW AREA: 134.3 SQ. M. (1445 SQ. FT.)
FULL SITE: 273.6 SQ. M. (2945 SQ. FT.)

THIS DESIGN MEETS
ACCESSIBILITY REQUIREMENTS
ESTABLISHED BY AODA AND
CAN/CSA–Z614 ANNEX H

ELEVATED EVENTS: 9
TRANSFER ACCESSIBLE EVENTS: 9
GROUND–LEVEL EVENTS: 13
TYPES OF GROUND–LEVEL EVENTS: 9

Burke

Intensity, Nucleus, Burke Basics

Hunter Mielke

BCI Burke Company, LLC PO Box 549 Fond du Lac, Wisconsin 54936-0549 Telephone 920-921-9220

Walter's Creek Park
680 Cedar St.
Shelburne, ON L9V

Park N Water LTD
148-175307-1

October 17, 2023