

**PROJECT  
TITLE:** **ST. MICHAEL'S CATHOLIC SCHOOL  
PARKING LOT EXPANSION  
BRIGHT'S GROVE ONTARIO**

**PROJECT  
LOCATION:** **1930 WILDWOOD DRIVE  
BRIGHT'S GROVE ONTARIO**

**OWNER:** **ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD**  
420 Creek Street  
Wallaceburg Ontario N8A 4C4  
Phone: 519 627 6762 Fax: 519 627 8283

**ARCHITECTURAL  
CONSULTANT:** **CORNERSTONE ARCHITECTURE INCORPORATED**  
110-700 Richmond Street  
London Ontario N6A 5C7  
Phone: 519 432 6644 Fax: 519 432 6737

**SITE SERVICES  
CONSULTANT** **MIG CONSULTING ENGINEERS**  
453 Christina Street North  
Sarnia Ontario N7T 5W3  
Phone: 519 337 8000 Fax: 519 337 8001

**DATE:** **29 JUNE 2016**

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## 1. INTRODUCTION

St. Clair Catholic District School Board (the “**Owner**”) is soliciting Bids from invited contractors to carry out the work described in the Bid Documents at **1930 Wildwood Drive, Bright’s Grove ON** (the “**Place of the Work**”). Bids must be submitted on **July 14, 2016** (the “**Closing Date**”) and before the time specified in Article 14. Bids must be irrevocable for a period of sixty (60) days starting from the day after the Closing Date (the “**Irrevocability Period**”).

## 2. THE BID CONTRACT

The bidders and the Owner acknowledge that it is their intention to create a process contract (the “**Bid Contract**”) between the Owner and any bidder whose Bid meets the mandatory requirements set out in paragraph 18.3 and substantially complies with the other requirements of the Bid Documents. The bidders and the Owner further acknowledge that, if a Bid Contract is created between the Owner and one or more of the bidders, the terms of the Bid Contract are represented by the Bid Documents.

## 3. DEFINITIONS

“**Additional Information**” has the meaning set out in paragraph 16

“**Bid**” means the Bid Form and all other documents submitted by a bidder in accordance with these Instructions to Bidders.

“**Bid Contract**” means the process contract described in paragraph 2. for the evaluation of Bids and the execution of the Contract, if any

“**Bid Documents**” has the meaning set out in paragraph 4

“**Board**” means the Board of Trustees of the St. Clair Catholic District School Board

“**Closing Date**” has the meaning set out in paragraph 1

“**Consultant**” means Cornerstone Architecture

“**Data**” has the meaning set out in paragraph 5

“**Irrevocability Period**” has the meaning set out in paragraph 1

“**Local Time**” means the time measured by the Owner’s clock at the location identified in paragraph 15

“**Place of the Work**” has the meaning set out in paragraph 1

“**Reports**” has the meaning set out in paragraph 5

## 4. BID DOCUMENTS

The following are the Bid Documents:

- Instructions to Bidders.
  - Bid Form.
  - Specifications (as per table of contents).
  - Drawings (as per list of Drawings).
  - Addenda issued prior to the Closing Date.
- .1 Check Bid Documents for completeness upon receipt. Inform Consultant immediately should any documents be missing or incomplete and/or upon finding any discrepancies or omissions.
  - .2 One (1) set of Drawings/ Specifications and one (1) CD will be issued to invited Contractors.



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- .3 Addenda will be issued to invited Contractors and whose name and address is on file with the Consultant.
- .4 The Bid Documents are made available only for the purpose of submitting Bids for the Project. Availability and/or use of the Bid Documents does not confer a licence or grant for any other purpose.

## **5. SITE INVESTIGATION**

### **.1 Geo-Technical Investigation**

- .a NOT APPLICABLE.

### **.2 Site Information**

- .a Where the Work involves existing facilities or equipment, any reports, data or as-built drawings concerning such facilities or equipment (collectively the “**Data**”) are available from the Consultant. The Data is provided for general information and guidance purposes only. Neither the Owner nor the Consultant guarantees the accuracy or completeness of the Data, nor does either assume any responsibility for any interpretations or conclusions that bidders may make or draw from the Data.

Each bidder is solely responsible, at its own cost and expense, to carry out its own independent research, due diligence or to perform any other investigations considered necessary by the bidder to satisfy itself as to all existing conditions, circumstances and limitations affecting the Work, including the existence and/or locations of utilities and underground services. The bidders' obligations set out in this paragraph apply irrespective of any Reports, Data or any information contained in the Bid Documents.

No allowances will be made for additional costs and no claims will be entertained in connection with conditions which could reasonably have been ascertained by investigation or other due diligence undertaken prior to the Closing Date, and/or in connection with Work which is required and which is reasonably inferable from the Reports and/or Data as being necessary.

## **6. DESIGNATED SUBSTANCES**

NOT APPLICABLE.

## **7. BIDDERS' QUESTIONS AND AMENDMENTS TO BID DOCUMENTS**

Direct questions arising during the bidding period to Brad Beharrell, [bbeharell@cornerstonearchitecture.ca](mailto:bbeharell@cornerstonearchitecture.ca) (the “**Consultant**”) and copy Tony Prizio, [tony.prizio@st-clair.net](mailto:tony.prizio@st-clair.net) (the “**Owner**”). The Consultant is the sole contact for bidding on this Project and a Bid may be disqualified where contact is made with any person other than the Consultant.

All questions are to be in writing, and not less than eight (8) Working Days before the Closing Date so that if a response is warranted, the question and its answer will be set out in an addendum. In responding to questions, similar questions from different bidders may be answered only once, questions may be edited for purposes of clarity, and questions which, in the Consultant's opinion, are obscure, ambiguous or unclear may be ignored.

Neither the Owner nor the Consultant will be responsible for answers, instructions, clarifications or amendments communicated orally. Answers, instructions, clarifications or amendments which affect the Bid Documents may only be made by addendum.

Report all discrepancies, omissions, errors, departures from building by-laws, codes or good practice, and points considered to be ambiguous or conflicting to the Consultant in writing, and not less than eight (8) Working Days before the Closing Date so that, if deemed necessary, instructions, clarifications or amendments may be issued to all bidders by addendum.



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Addenda issued during the bidding period shall become part of the Bid Documents and their receipt shall be acknowledged in the space provided on the Bid Form. A bidder's failure to do so shall result in its Bid being declared non-compliant.

## **8. APPROVED ALTERNATIVES**

Specifications are written in generic form where possible. Reference to trade names is used when necessary to set a standard of acceptance.

Where a trade name is specified, suppliers of alternate products must obtain a letter of acceptance from the Consultant for the product to be included in the base bid.

Requests for approval of alternate products must be received 7 days prior to the bid closing; and must include a written statement that the alternate product meets or exceeds the performance of the specified product.

## **9. MATERIALS SUBSTITUTION**

Submitted Bids shall be based on the supply of named articles and or products as specified in the Bid Documents. Substitution of the named articles and or products will only be permitted when the bidder and or subcontractor and or supplier has submitted a written request to substitute from the manufacturer, product or system. The submission shall include data and information as necessary to demonstrate and verify equal performance. The Consultant will perform a review of the submission and at the sole discretion of the Consultant, will ascertain conformance of the submitted manufacturer, product or system with the Bid Documents and acknowledge acceptance of the proposed substitution by addendum only. Requests to substitute a manufacturer, product or system must be made not less than ten (10) Working Days before the Closing Date so that, if deemed necessary, acceptance of the substitution may be issued to all bidders by addendum.

When two or more of the products are named in the Bid Documents, any one of the products named will be acceptable. When requested by the Consultant, after the Bid Contract has been awarded, the bidder shall notify the Consultant of the name of the manufacturer, product or system included in the Bid. If due to availability or colour limitations, the Consultant has to request a change to one of the other named manufacturers, products or systems, this shall be completed without extra cost to the Bid Contract.

The Bid shall be based on the use of approved products only.

## **10. NOTICES, PERMITS & FEES**

The Owner will apply and pay for the Building Permit and Municipal Levy and Development Fees.

The successful General Contractor will be required to assume the Building Permit and ensure that it is posted on the job site.

The General Contractor and his Subcontractors will be responsible for the application and payment of all other municipal permits.

The General Contractor will be responsible for any charges against the indemnity deposit that the Owner has provided to the Municipality for work on municipal property.



## 11. MANDATORY PRE-BID SITE MEETING

A mandatory pre-bid site meeting for all pre-qualified general contract bidders has been scheduled on **July 6, 2016 at 1:00 p.m. at St. Michael's Catholic School** located at **1930 Wildwood Drive, Bright's Grove ON**. "Place of Work". All pre-qualified general contract bidders must attend and will be required to sign the "Site Meeting Log" to confirm their attendance.

Anyone attending the pre-bid site meeting must report to the reception of the Catholic Education Centre and notify the receptionist of the purpose of the visit. The pre-bid meeting will take place in the meeting room.

The Consultant will oversee the signing of the "Site Meeting Log" and once all in attendance have signed the log and the Consultant has called the meeting to order, pre-qualified general contract bidders who arrive after that time shall be considered late and will not be permitted to sign the "Site Meeting Log".

Only bids from pre-qualified general contract bidders who have signed the "Site Meeting Log" will be considered. All other bids shall be deemed non-compliant and will not receive further consideration.

## 12. BID SECURITY, PERFORMANCE SECURITY, AND INSURANCE

- .1 Bid Security is not required for this Contract.
- .2 Labour & Materials and Performance Security are not required for this Contract.
- .3 The Contract requires the Contractor to provide the insurance coverage described in GC 11.1 of the Contract. In particular, where Products are specified to be provided by the Owner for incorporation into the Work, the full value of such Products, as stated in the Supplementary Conditions, shall be added to the Contract Price for the purpose of "broad form" property insurance coverage. Bidders are encouraged to carefully review the insurance coverage requirements of the Contract.

## 13. INSTRUCTIONS FOR COMPLETING THE BID

### .1 Bid Form

- .a Fill in all blank spaces on the Bid Form in ink, or typewritten, providing all information requested, and ensure each is signed by an authorized person or persons. Submission of a Bid Form which does not bear an original signature will result in the Bid being declared non-compliant and rejected.
- .b Use only the Bid Form issued as part of the Bid Documents for the Project. If any or all pages of the Bid Form are amended by addendum, only the amended pages shall be used to submit a Bid. Failure to comply with this paragraph shall result in the Bid being declared non-compliant.
- .c A bidder's failure to provide all requested information on the Bid Form or to fill in all blank spaces shall result in the Bid being declared non-compliant. Submission of a Bid Form which is illegible or incomplete, or which contains modifications, erasures, changes, exceptions, additions, conditions, qualifications or uninitialled amendments, shall result in the Bid being declared non-compliant.
- .d Information provided by bidders on the Bid Form may be amended prior to the Closing Date, provided corrections are initialled by an authorized representative of the bidder.
- .e Bidders are not to submit any information or documents not specifically required by these Instructions to Bidders, and any such extraneous material will be ignored.

### .2 Prices

- .a Where the bid price or any other prices are provided in words and in numbers, the words shall govern in case of conflict or ambiguity between the words and numbers.



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- .b Harmonized Sales Tax (HST) shall not be included in any prices submitted as part of a Bid. All other taxes shall be included.
- .c The contract price includes Cash Allowances as listed in Section 01020. Cash Allowances cover all costs associated with provision of the item described, excluding HST and the General Contractor's overhead and profit.
- .d Bids shall be for a stipulated sum without an escalation clause or other qualifications of any kind.

**.3 Listing of Bidder Key Personnel and Subcontractors**

- .a Where required by the Bid Documents, bidders shall indicate their Key Personnel for the project and submit a list of the Subcontractors and/or Suppliers proposed to perform or supply an item of the Work called for by the Contract by completing and submitting Key Personnel and Subcontractors identified on the Bid Form. Failure to list Bidder Key Personnel where required, or the listing of more than one Key Person to perform in a position, may result in the Bid being rejected. Failure to reach mutual agreement on Key Personnel may result in the Bid being rejected. Failure to list Subcontractors and/or Suppliers where required, or the listing of more than one Subcontractor and/or Supplier to perform or supply an item of Work, may result in the Bid being rejected.
- .b Where a bidder lists "own forces" in place of a Subcontractor, the bidder shall carry out such item of the Work with its own forces. Where "own forces" have been listed by a bidder, the Owner reserves the right to obtain information from the bidder and from third parties respecting the qualifications and experience of the bidder's "own forces" for such item of the Work.

**.4 Price, Separate, Identified, Alternate & Supplementary Prices**

Where required by the Bid Documents, bidders shall submit:

- .a Price - Contractors shall quote on the entire general construction work including all trades as described in the drawings and specifications.  
Unless otherwise stated in the documents, it is proposed to start work immediately and bidders shall base their cost of materials for immediate delivery.
- .b Unit Price – NOT APPLICABLE.
- .c Identified Price – NOT APPLICABLE.

- .5 Each Bid shall be irrevocable and shall remain open for acceptance by the Owner for the duration of the Irrevocability Period.

**14. INSTRUCTIONS FOR SUBMITTING THE BID**

Submit one (1) completed original of:

- .1 The **Bid Form**, together with the required bid bond and agreement to bond, in a sealed opaque envelope. Ensure that the outside of the envelope bears the bidder's return address, clearly labels the envelope as "BID PRICE" and includes a label clearly identifying the bidder, the Project, and the Project number.

Submit the envelope to:

**St. Clair Catholic District School Board  
245 Tecumseh Street,  
Sarnia, ON N7T 2L1**

**before 2:00:00 p.m. Local Time on the Closing Date.** Upon receipt the envelope will be date and time stamped at the Reception Desk.





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In the event of a dispute over the time of submission, the time stamped on the envelope shall govern.

Bids submitted by any form of delivery other than as set out in this Article will not be accepted or considered. Bidders are solely responsible for the method and timing of delivery of their Bids.

#### **15. BID OPENING**

Only Bids received before the time stipulated in paragraph 15.1 will be opened and received for evaluation.

Bids are generally opened in public at the offices of the Owner following submission of Bids, however, the Owner reserves the right to open Bids in private.

#### **16. ADDITIONAL INFORMATION**

The Owner and/or Consultant may contact any one or more bidders to request "**Additional Information**" including:

- .1 the submission of a trade by trade breakdown of the bid price;
- .2 the submission of a preliminary construction schedule showing Project milestones and critical schedule items; and/or
- .3 clarification or any other information,

without any obligation to contact any other bidder or bidders with the same or any requests for Additional Information. Requests for Additional Information shall not be construed as award of the Contract, acceptance of a Bid, or the rejection of a Bid.

Bidders shall respond to all requests for Additional Information within the time stipulated at the time of the request. Failure to do so may result in the Bid being rejected.

Information, prices, rates and documents submitted in response to a request for Additional Information shall form part of a bidder's Bid.

#### **17. BID EVALUATION AND OWNER'S RIGHTS**

- .1 The evaluation process will be conducted by the Consultant, who may obtain the assistance of the sub consultants and advisors as they may deem appropriate. However, and notwithstanding anything else contained in the Bid Documents, the award of the Contract, if any, may be subject to the approval of the Board, in its sole and unfettered discretion. Bidders shall have no claims whatsoever against the Owner or any member of the Board arising out of the Board's exercise of its authority, particularly in the event the Owner, in its sole and unfettered discretion, and for any or no reason, decides not to award the Contract.
- .2 Without limiting the generality of paragraph 18.6 , Bids will be evaluated as follows:
  - .a Bids will first be evaluated based on the mandatory requirements set out in paragraph 18.3
  - .b Bids which comply with all of the mandatory requirements will be evaluated as described in paragraph 18.4 and considered for an award of the Contract.
- .2 Mandatory Requirements. Only bidders that submit Bids which the Consultant determines meet all of the mandatory requirements set out below on a "pass/fail" basis will be eligible to be considered for an award of the Contract:
  - .a The Bid is complete and includes the Bid Form.
  - .b Bidder is pre-qualified.
  - .c Subcontractors as per Article 7 are pre-qualified.
  - .d Bidder attended the mandatory pre-bid meeting and signed the "Site Meeting Log".



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- .4 Bids which meet all of the mandatory requirements will be evaluated by bid price.
- .5 Where there is a tie between two or more Bids and the Owner intends to award the Contract to one of the tied bidders, the tie will be broken using the submission date and time of the "BID PRICE" envelope based on the order in which the submissions were received.
- .6 The Owner may, in its sole discretion, and for any or no reason, reject the Bid with the lowest bid price, accept or reject the whole or any part of any Bid, reject all Bids, or cancel this bid process in whole or in part, and may then re-bid all or any part of the Work.
- .7 If only one Bid is received on time the Owner may:
  - .a take any action in accordance with paragraph 18.6 or
  - .b notify the bidder that it is the only bidder and, upon being so advised, the bidder may:
    - i. request the Owner to return its Bid unopened and the Owner agrees to do so; or
    - ii. authorize the Owner, in writing, to open the Bid but, in such case, the bidder specifically agrees that the Owner is not required to award the Contract and may reject the Bid even if it meets all of the mandatory requirements set out in paragraph 18.3.
- .8 If all of the Bids fail at least one of the mandatory requirements set out in paragraph 18.3 the Owner, in its discretion, may:
  - .a evaluate one or more of the Bids using the criteria set out in paragraph 18.4 and may award a contract for the whole or any part of the Work to the bidder with the lowest Bid Price; and/or
  - .b negotiate a contract for the whole or any part of the Work with any bidder.

#### **18. AWARD OF THE CONTRACT, DOCUMENTS TO BE DELIVERED, AND EXECUTION OF THE CONTRACT**

If the Owner decides to award the Contract to a bidder, it will issue an award letter to the successful bidder.

Within five (5) Working Days of receiving an award letter from the Owner, and prior to commencing the Work, the successful bidder shall deliver to the Owner:

- .1 certified true copies of the insurance policies required by the Contract or certificates of insurance, at the option of the Owner; and
- .2 a current WSIB clearance certificate.

The successful bidder shall execute the Contract and shall deliver the executed original to the Owner within five (5) Working Days of receipt of the same.

#### **19. BIDDER DEBRIEFING**

If requested in writing to the Consultant and/or the Owner by an unsuccessful bidder, representative(s) of the Consultant and/or the Owner agree to meet with the interested party within sixty (60) days of award notice.

#### **20. DISPUTES**

In the event of a dispute arising in connection with this bid process including, without limitation, a dispute concerning the existence of the Bid Contract or a breach of the Bid Contract, or a dispute as to whether the Bid of any bidder was submitted on time or whether a Bid is compliant, the parties to the dispute agree:

- .1 to use their best efforts to resolve the dispute through amicable and good faith negotiations for a period of at least ten (10) days, having such written and oral communications and meetings as appropriate;



- .2 if a dispute is not resolved through negotiations any party may, at any time prior to the dispute being referred to arbitration in accordance with paragraph 21.3, request that a mediator be retained to assist in resolving the dispute. In the event a request for mediation is made, the parties shall, within five (5) business days, make reasonable attempts to agree on a mediator and shall mediate the dispute;
- .3 if the dispute is not resolved within thirty (30) days of a request for the appointment of a mediator, the Owner, in its unqualified subjective discretion, may refer the dispute to confidential binding arbitration before a single arbitrator with knowledge of procurement/bidding law and practice at Toronto, Ontario pursuant to the Arbitration Act, 1991 (Ontario), as amended. In the event that the Owner refers the dispute to arbitration, each bidder agrees that it is bound to arbitrate such dispute with the Owner. Unless the Owner shall refer such dispute to arbitration, there shall be no arbitration of such dispute.

The Owner may give notice of a dispute to one or more or all of the bidders, each of whom shall be a party to and shall be entitled to participate in the negotiation, mediation and/or arbitration, as the case may be and, in the case of arbitration, each of whom shall be bound by the arbitrator's award, whether or not they participated in the arbitration.

In the event the Owner refers a dispute to arbitration, the parties to the arbitration shall exchange brief statements of their respective positions on the dispute, together with the relevant documents, and submit to an arbitration hearing which shall last no longer than two days, subject to the discretion of the arbitrator to increase such time. The parties further agree that there shall be no appeal from the arbitrator's award.

This Article is not intended to form part of any "bid contract" that may come into being between a bidder and any prospective Subcontractor or Supplier of that bidder.

## **21. LIMIT OF LIABILITY**

The liability of a bidder to the Owner for loss and damage arising out of the bidder's breach of the Bid Contract shall be limited to the lesser of the actual loss suffered by the Owner and the amount of the bid bond to be submitted as part of the Bid.

The liability of the Owner to any bidder for loss and damage arising in tort or for the breach by the Owner of the Bid Contract shall be limited to the reasonable cost to the bidder of preparing its Bid.

## **22. PUBLIC STATEMENTS, CONFIDENTIALITY, AND MFIPPA**

Bidders shall not publish, issue or make any statements or news release, electronic or otherwise, concerning their or any other Bid, the bid process, the evaluation of the Bids, the award of the Contract, or cancellation of the bid process, without the express written consent of the Owner. The Owner's award of the Contract to a bidder does not constitute a general endorsement of that bidder's products or services.

All information provided by or obtained from the Owner in connection with this bid process is the sole property of the Owner and must be treated as confidential. Such information is not to be used for any purpose other than preparing a Bid.

By submitting a Bid, bidders acknowledge that the contents of their Bids will be disclosed, on a confidential basis, to the Board and the Owner's staff, agents and advisors. The Owner will use reasonable efforts to protect pricing, commercial terms, and other sensitive and confidential information provided by the bidders (the "**Confidential Material**"), however, the Owner accepts no liability in the event that the Confidential Material, or any part of it, is disclosed even if the Owner, its staff, agents, advisors or any other person associated with the Board or the Owner may have been negligent with respect to such disclosure.



ST. CLAIR CATHOLIC  
DISTRICT SCHOOL BOARD  
*Lighting the Way – Rejoicing in Our Journey*

**ST. MICHAEL'S CATHOLIC SCHOOL  
PARKING LOT EXPANSION**

Section 00100  
**INSTRUCTIONS TO BIDDERS**

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Information provided in the Bids may be presented at public meetings of the St. Clair District Catholic District School Board and may be divulged to the public. In addition, the Owner may be required to disclose information provided in the Bids pursuant to the provisions of the *Municipal Freedom of Information and Protection of Privacy Act* or other legislation. By submitting a Bid each bidder agrees to such disclosure and releases the Owner and the Consultant from any liability for the same.

**End of Instructions to Bidders**



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NAME OF BIDDER \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_

**BID PRICE**

I/We the undersigned, having carefully examined the Bid Documents, having received, carefully examined and incorporated Addenda No. \_\_\_\_\_ to No. \_\_\_\_\_ inclusive, the General Conditions of the contract as amended by the Supplementary General Conditions, having complied with the Instructions to Bidders, having visited and investigated the Place of the Work, and having examined all conditions, circumstances and limitations affecting the Work, offer to enter into a Contract with the Owner to perform the Work required by the Bid Documents for the price of

\_\_\_\_\_ CANADIAN DOLLARS (\$ \_\_\_\_\_). The price offered **excludes** all Harmonized Sales Tax (HST) but includes all other eligible taxes.

**HST**

The HST amount **not** included in the BID PRICE: \$ \_\_\_\_\_.

**ACCEPTANCE**

In submitting this bid, we recognize the right of the Owner to accept any bid at the price submitted, to reject any and all bids, or to negotiate contract terms with various bidders, at the Owner's sole discretion without liability to the Owner or Consultant.

**ACCEPTANCE OF BID**

If we are notified of the acceptance of this bid within 60 days from this date, we will:

1. Furnish a General Analysis of the contract sum, the total aggregating the amount of our Bid.
2. Furnish an accurately prepared construction schedule indicating the start and completion of the work according to the Scheduling of the Work stipulated in the General Conditions.



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3. The following personnel will represent the Contractor on this project.

Project Manager \_\_\_\_\_

Superintendent \_\_\_\_\_

**ALTERNATE PRODUCTS**

We submit the following alternate products for consideration. These are not included in the base bid.

- 1.
- 2.
- 3.

**DECLARATIONS**

I/We the undersigned declare that:

1. I/We agree to perform the Work in compliance with the Contract Documents and attain Substantial Performance of the Work on or before August 26<sup>th</sup>, 2016.
2. No person, firm or corporation other than the undersigned has any interest in this bid or in the proposed Contract for which this bid is made.
3. This bid is irrevocable and is open for acceptance by the Owner for a period of sixty (60) days from the date of submission.

**LIST OF SUBCONTRACTORS**

We will subcontract the following parts of the work to the subcontractors listed for each part. We agree not to make any changes in the following list without written consent of the Consultant. We accept responsibility for the competence of the subcontractors to perform the part of the work for which each is listed. We understand that if we fail to complete this list, or if we indicate that the work will be done by our own forces where we are not actually capable, our bid may be disqualified.

**Part of Work**

**Name of Subcontractor**

Concrete Curbs & Sidewalks

\_\_\_\_\_

Chain Link Fences

\_\_\_\_\_



ST. CLAIR CATHOLIC  
DISTRICT SCHOOL BOARD  
*Lighting the Way – Rejoicing in Our Journey*

ST. MICHAEL'S CATHOLIC SCHOOL  
PARKING LOT EXPANSION

SECTION 00300  
**BID FORM**

Date: June 29, 2016

Project #: 639-CP1631

**AUTHORIZATION**

\_\_\_\_\_

**Corporate Name and Seal**

\_\_\_\_\_

**Signature (Signing Officer)**

\_\_\_\_\_

**Name (Print)**

\_\_\_\_\_

**Date**

**END OF DOCUMENT**

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**PART 1 - GENERAL**

## 1.1 Description of Work

- .1 Work under this Contract covers construction of the:

**ST. MICHAEL'S CATHOLIC SCHOOL**  
PARKING LOT EXPANSION  
Bright's Grove, Ontario

- .2 Maintain at job site, one copy each of the following:
- .1 Contract drawings
  - .2 Specifications
  - .3 Addenda
  - .4 Reviewed shop drawings
  - .5 Bulletins
  - .6 Change Orders
  - .7 Field test reports
  - .8 Copy of approved work schedule
  - .9 Manufacturers' installation and application instructions.
  - .10 Site Visit Reports

## 1.2 Codes and Standards

- .1 Perform work in accordance with the current edition of the Ontario Building Code (OBC) and any other code of provincial or local application provided that in any case of conflict or discrepancy, more stringent requirements shall apply.
- .2 Meet or exceed requirements of specified standards, codes and referenced documents.

## 1.3 Project Meetings

- .1 Contractor will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.

## 1.4 Setting Out of Work

- .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .2 Provide devices needed to lay out and construct work.
- .3 Supply such devices as straight edges and templates required to facilitate inspection of work.
- .4 Supply stakes and other survey markers required for laying out work.

## 1.5 Locations of Equipment &amp; Fixtures

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety.
- .3 Inform Consultant of impending installation and obtain his approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Consultant.



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- 1.6 Concealment
- .1 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.
- 1.7 Cutting, Fitting and Patching
- .1 Execute cutting (including excavation), fitting and patching required to make work fit properly together.
  - .2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.
  - .3 Obtain Consultant's approval before cutting, boring or sleeving load-bearing members.
  - .4 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.
  - .5 Fit work airtight to pipes, sleeves, ducts and conduits.
  - .6 Cutting and patching of new or existing work to accommodate installation of work of Mechanical and Electrical trades, is the responsibility of the trade performing the installation.
- 1.8 Existing Services
- .1 Before commencing Work, establish location and extent of service lines in area of work and notify Consultant of findings.
  - .2 Where unknown services are encountered, immediately advise Consultant and confirm findings in writing.
- 1.9 Additional Drawings
- .1 Twelve (12) complete sets of Drawings and Specifications are furnished to the General Contractor. Additional sets may be provided at the cost of the General Contractor.
  - .2 Consultant may furnish additional drawings to assist proper execution of work. These drawings will be issued for clarification only. Such drawings shall have the same meaning and intent as if they were included in original documents.
  - .3 Drawings provide overall dimensions to finished surfaces or grid lines. The General Contractor is responsible for verifying all dimensions and determining any additional dimensions required for layout or coordination.
  - .4 The General Contractor shall coordinate the layout of all building components and systems, including ceilings, bulkheads, and service spaces to avoid interference before installation. The General Contractor shall revise services or components not properly coordinated in advance, at no additional cost to the Owner.
- 1.10 Work Schedule
- .1 Provide schedule showing anticipated progress stages and final completion of work within time period required by Contract Documents.
  - .2 Utilize a digital Gantt chart format correlated to cost breakdown format showing progress of each trade division against a baseline.
  - .3 Provide an updated schedule with each payment application. Failure to provide an acceptable schedule will result the monthly general accounts being withheld.
- 1.11 Cost Breakdown
- .1 Submit breakdown of Contract prices by Specification Division and Section and aggregating contract price. After approval by Consultant cost breakdown will be used as the basis for progress payment.

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- .2 Indicate initial set up costs separately from on going site operation costs. Provide a complete list of initial costs with invoices for specific items including insurance and bonds.
  - .3 Ongoing site operation costs shall include the cost of the Superintendent at full time for the duration of the work.

#### 1.12 Contractor's Use of Site

- .1 Use of the site is as illustrated on the Drawings and is restricted to the area of the site within the construction barrier.
- .2 The General Contractor shall restore surfaces damaged by construction outside of the construction area to their original condition, at no additional cost to the Contract.

#### 1.13 Workmanship

- .1 Workmanship is to be of the best quality, executed by workers experienced and skilled in respective duties for which they are employed.
- .2 Do not employ any unfit person or anyone unskilled in their required duties. A minimum of five years trade experience is required for work on this project or tradesman who has completed and passed his apprenticeship program or other educational program acceptable to the Consultant. An apprentice accompanied by a qualified trade instructor is allowed.
- .3 When requested by the Consultant, provide a completely finished sample of each element of the work for review by the Consultant. Once accepted, this sample will be used to determine the workmanship expected for the remaining work.
- .4 Decisions as to quality or fitness of workmanship in cases of dispute rest solely with the Consultant, whose decision is final. The General Contract shall enforce such decisions with the respective subtrades.

#### 1.14 Deficiencies

- .1 The Consultant will make periodic inspections of the work and advise the Construction manager in writing of deficiencies.
- .2 Deficiencies which remain outstanding for over one month's time will entitle the Consultant to not certify any further payment for that respective trade division until the deficiencies are corrected to the Consultant's satisfaction.

END OF SECTION

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1.1 PROCEDURE

- .1 The manner in which cash allowances and contingency allowances will be addressed is as specified in the Contract Documents as amended by the Supplementary General Conditions.
- .2 No expenditure against Cash Allowances shall be made or incurred except as instructed by the Consultant in writing.
- .3 No additional mark up for the Contractor's expense and profit will be allowed where individual specific purpose Cash Allowances are exceeded.
- .4 The amounts listed are deemed to be all inclusive but not to include Value Added Taxes (H.S.T.).

1.2 SPECIFIC PURPOSE CASH ALLOWANCES

- .1 Include in the Bid Price the following specific Cash Allowances to be expended in whole or in part only as directed by the Consultant.
  - .1 Contingency Allowance: \$10,000.00

END OF SECTION

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**PART 1 - GENERAL**

## 1.1 General

- .1 All prices described in this Section shall include the total cost of materials, labour, tools, equipment, fees, bonding, insurance, testing, preparation of drawings, submittals, calculations, supervision, inspections, deliveries, travelling, out-of-town accommodations, rentals, duties, taxes, head office and site office overheads, profits, and all other direct and indirect expenses required to fully perform the specified Work.
- .2 Changes to Work shall be established by using current labour rates, including mandatory benefits, prevailing local market prices of materials and/or equipment, taxes, specific fees related to the change only, and overhead costs as defined below.
- .3 Overhead shall include all costs of:
  - .1 Operating head office and site facilities.
  - .2 Head office and site personnel.
  - .3 Custom duties, basic permits and other licenses required by jurisdictional authorities.
  - .4 Insurance.
  - .5 All services.
  - .6 Calculations, inspections, testing.
  - .7 Deliveries, travelling, out-of-town accommodations.
  - .8 Hand and small power tools required for the efficient completion of the Work.

## 1.2 Changes to Work

- .1 Conform to the requirements of the General Conditions for pricing contemplated and or changes to the Work.
- .2 Any costs related to preparation of the necessary documentation for changes/ contemplated changes are deemed to be included in the specified overhead and profit. The value of a change shall be determined in one or more of the following methods as directed by the *Consultant*.
  - .1 by estimate and acceptance of a lump sum;
  - .2 by negotiated unit prices which include the *Contractor's Overhead* and profit, or;
  - .3 by the actual cost to the *Owner*, such costs to be the actual cost after all credits included in the change have been deducted, plus the following ranges of mark-up on such costs:
    - .1 for *Change Orders* with a value of \$0 to \$15,000 the total *Subcontractor/ Supplier* mark-up including *Overhead* and profit shall be 10% and the total *Contractor* mark-up including overhead and profit shall be 5%.
    - .2 For *Change Orders* in excess of \$15,000, the total *Subcontractor/ Supplier* mark-up including *Overhead* and profit shall be 5% and the total *Contractor* mark-up including *Overhead* and profit shall be 3%.

END OF SECTION

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**PART 1 - GENERAL**

## 1.1 General

- .1 Erect the Work in accordance with the Contract Documents and be responsible for delays or costs resulting from failure to properly inspect or coordinate the Work and for replacement or corrective work required.

## 1.2 Preconstruction Checklist

- .1 The following items are required prior to commencing any work on the site.
  - .1 Signed contracts or a Letter of Intent from the Owner.
  - .2 Workers Compensation Insurance Certificate of Clearance.
  - .3 Insurance Certificates of General Liability naming the Owner and Consultants.
  - .4 Automobile Insurance Certificate.
  - .5 Equipment Insurance Certificate.
  - .6 Builders Risk Insurance Certificate.
  - .7 Construction Progress Schedule.
  - .8 Contract breakdown by specification division and section. Sample draft supplied by General Contractor for Consultant's approval.
  - .9 Shop drawing and sample submittal schedule. Shop drawing schedule should show a critical path delivery date, which may be referenced into Construction Progress Schedule.
  - .10 Drawings and Specifications with all addendum items marked at pertinent pages.
  - .11 Arrangements made for immediate installation and hook up for items specified under Temporary Facilities Section 01500.

## 1.3 Project Administration

- .1 Project Manager: Submit resume giving name and qualifications.
- .2 Superintendent: Submit resume giving name and qualifications.
- .3 The above are reviewed and qualified by Consultant. Once accepted, they are to remain on project for complete duration, unless directed otherwise by Consultant.
- .4 The Consultant will provide one warning in the event of a concern with the performance of the General Contractor's personnel. The General Contractor shall remove such personnel if so directed by the Consultant, and submit a substitute's name and qualifications for the Consultant's approval.

## 1.4 Lines of Communication

- .1 Site Instructions are in written form only and are issued by the Consultant. If such instructions involve a change in cost or schedule, work shall not proceed until this change is accepted by Change Directive or Change Order. Proceeding without such acceptance in advance will imply no change in cost or time.
- .2 Bulletins are descriptions of changes to the work for which a quotation is requested. General Contractor shall submit changes in costs and schedule for the changes. Cost submitted must include a complete breakdown of labour and material quantities showing how the cost has been determined.
- .3 Change Directives are instructions to proceed with changes to the work in a Bulletin at an upset cost or as otherwise indicated. General Contractor shall submit changes in costs and schedule for the changes, with labour and material breakdowns. The final cost approved will not exceed the original upset limit.
- .4 Change Orders are the acceptance of the cost and scope of changes of the work. These are signed by the Owner, Consultant and Contractor and become part of the Contract.

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- .5 A Certificate indicates the amount of the Contractor's monthly billing approved for payment. Two copies are sent to the Contractor and one copy to the Owner. The Contractor shall sign one copy once he receives payment and return it to the Consultant.
- 1.5 Cooperation
- .1 Provide forms, templates, anchors, sleeves, inserts and accessories required to be fixed to or inserted in the Work and set in place or instruct separate Subcontractors as to their location.
- .2 Supply items to be built in, as and when required together with templates, measurements, shop drawings and other related information and assistance.
- 1.6 Dimensions
- .1 Verify dimensions at the Place of the Work before commencing shop drawings. Before fabrication commences report discrepancies to Consultant in writing. Incorporate accepted variances on shop drawings and as-built records.
- 1.7 Cooperation with Owner
- .1 Owner reserves the right to commence moving furniture, fitments and equipment into building as soon as areas become available, and Contractor and Subcontractors shall be required to cooperate closely with Owner and coordinate the Work to ensure that Owner's requirements are accommodated.
- 1.8 Coordination
- .1 Coordinate and ensure workers, Subcontractors, and Suppliers cooperate to ensure that the Work will be carried out expeditiously and in proper sequence.
- .2 Make adjustments to allow adjustable work fit to fixed work.
- 1.9 Building Dimensions and Coordination
- .1 Take necessary dimensions for the proper execution of the Work. Assume complete responsibility for the accuracy and completeness of such dimensions, and for coordination.
- .2 Verify that the Work, as it proceeds, is executed in accordance with dimensions and positions indicated which maintain levels and clearances to adjacent work, as set out by requirements of the Contract Documents, and ensure that work installed in error is rectified before construction resumes.
- .3 Check and verify dimensions referring to interfacing of services. Verify such dimensions with interconnected portions of the Work.
- .4 Do not scale directly from drawings. Obtain clarification from Consultant if there is ambiguity or lack of information.
- .5 Details and measurements of any work which is to fit or to conform with work installed shall be taken at the Place of the Work.
- .6 Advise Consultant of discrepancies and omissions in the Contract Documents, that affect aesthetics, or that interfere with services, equipment or surfaces. Do not proceed with work affected by such items without clarification from Consultant.
- .7 Prepare and submit setting drawings, templates and other information necessary for the location and installation of material, holes, sleeves, inserts, anchors, accessories, fastenings, connections and access panels.
- .8 Subcontractors shall direct related Subcontractors on site of specific locations required for sleeves and openings.

END OF SECTION

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**PART 1 - GENERAL**

## 1.1 Schedule

- .1 Before commencement of Work, submit Construction Schedule to Consultant's and Owner's approval.
- .2 Schedule shall show:
  - .1 Commencement and completion dates of Contract.
  - .2 Commencement and completion dates of Trades.
  - .3 Order and delivery times for materials and equipment, where possible.
  - .4 Dates for submission of Shop Drawings, material lists and samples.
  - .5 Any other information relating to the orderly progress of Contract, considered by Contractor to be pertinent.
- .3 Commencement of the Contract and the construction is deemed to be the date of notification by the "Letter of Intent" from the Owner and it is expected that the Work will commence immediately thereafter.
- .4 The work for this project **MUST** attain Substantial Performance no later than **26 August, 2016**.
  - .1 Work may commence on 30 June 2016.

## 1.2 Updating and Monitoring

- .1 Set up format of Construction Schedule to allow plotting of actual progress against scheduled progress.
  - .1 Allow sufficient space for modifications and revisions to the Schedule as Work progresses.
  - .2 Format shall be approved by the Consultant.
- .2 Copy of Schedule shall be displayed in Site Office during the complete construction period and actual progress plotted weekly.
- .3 Updated and Progress Reporting:
  - .1 Arrange participation, on Site and off Site, with Subcontractors and Suppliers, as and when necessary for the purpose of updating schedule and monitoring progress.
  - .2 Reviews of progress by inspections and meetings will be conducted at least once a month or as directed by Consultant.

## 1.3 Completion

- .1 Completion of the Work for this Project shall as certified by the Consultant.
- .2 The Work will not be certified complete unless all requirements of these documents and those of regulatory agencies are met. The certification shall include all the requirements of Division C, Part 1.3, Paragraph 1.3.3 of the Ontario Building Code, all millwork and fitments, all finishes, fully operational mechanical and electrical systems, all life safety systems and temporary hoarding. All Work shall be as required and delineated by the Drawings and Specifications.

END OF SECTION

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**PART 1 - GENERAL**

## 1.1 Section Includes

- .1 Shop drawings and product data.
- .2 Samples.
- .3 Certificates and transcripts.

## 1.2 Administrative

- .1 Submit to Consultant submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Work affected by submittal shall not proceed until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6 Notify Consultant, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant review.
- .10 Keep one reviewed copy of each submission on site.

## 1.3 Shop Drawings and Product Data

- .1 Refer to CCDC 2 GC 3.10.
- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .3 Allow 10 days for Consultant's review of each submission.
- .4 Adjustments made on shop drawings by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.
- .5 Make changes in shop drawings as Consultant may require, consistent with Contract Documents. When resubmitting, notify Consultant in writing of any revisions other than those requested.
- .6 Accompany submissions with transmittal letter, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.



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- .7 Submissions shall include:
    - .1 Date and revision dates.
    - .2 Project title and number.
    - .3 Name and address of:
      - .1 Subcontractor.
      - .2 Supplier.
      - .3 Manufacturer.
    - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
    - .5 Details of appropriate portions of Work as applicable:
      - .1 Fabrication.
      - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
      - .3 Setting or erection details.
      - .4 Capacities.
      - .5 Performance characteristics.
      - .6 Standards.
      - .7 Operating weight.
      - .8 Wiring diagrams.
      - .9 Single line and schematic diagrams.
      - .10 Relationship to adjacent work.
  - .8 After Consultant's review, distribute copies.
  - .9 Submit one PDF copy of the drawings for each requirement requested in specification Sections, one PDF copy will be returned after review.
  - .10 Delete information not applicable to project.
  - .11 Supplement standard information to provide details applicable to project.
  - .12 If upon review by Consultant, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

#### 1.4 Samples

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to General Contractor's business address.
- .3 Notify Consultant in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.
- .6 Make changes in samples which Consultant may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

END OF SECTION

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**PART 1 – GENERAL**

## 1.1 General

- .1 Accept responsibility for all temporary structures and comply with applicable rules and regulations. Pay all taxes.
- .2 The expression "provide" shall be deemed to include the provision, installation and finishing, maintenance, servicing and removal of the Work described. All work damaged by temporary installations shall be repaired and made good at no extra cost to the Owner.
- .3 Maintain temporary facilities in good condition.
- .4 Clean sanitary facilities daily.
- .5 On completion, or at earlier date if facility no longer requires, clear away temporary facilities and make good all work disturbed.
- .6 Clean streets and sidewalks as required to prevent accumulation of debris, waste or soil.

## 1.2 Traffic Control and Security

- .1 Provide necessary traffic control and security personnel as required for the safe performance of the Contract and security of the premises. Provide all necessary flagmen to ensure the safe delivery of materials to the site and signage to direct and protect pedestrian and vehicular traffic.
- .2 Conform to the requirements of local authority.
- .3 Conform to the requirements of the insurance companies providing coverage for this Contract.

## 1.3 Access

- .1 Provide and maintain adequate access to project site.
- .2 Build and maintain temporary roads and provide snow removal during period of work.
- .3 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads.

## 1.4 Storage Sheds

- .1 Erect secure weather-tight sheds in which to store construction materials that require protection from the elements. Include construction and operating hardware, with security locks, as required.
- .2 Build sheds with floors clear of grade and so that no damage is suffered by stored materials from flooding.
- .3 Install lighting in storage areas and heat in those storage areas containing materials damaged by low temperature.
- .4 Separate storage for painters' materials and tools from other storage areas.
- .5 Locate all sheds where directed.
- .6 Locate both field offices and storage sheds within barriers erected to enclose the site.

## 1.5 Sanitary Facilities

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition. Have toilets maintained in sanitary conditions under contract. Clean and disinfect site of the toilets.

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## 1.6 Temporary Services

- .1 Provide, install, maintain and locate where directed, the following temporary facilities for the Work and for all trades except where specified otherwise and remove them upon completion of the Work. These facilities shall be considered minimal and shall be increased as necessary. **Existing building services may be used as required; costs for use of utilities will be borne by the Owner.**
- .2 Light and Power: Supply electric power for all construction purposes. Make connections available to any part of the Work within distance of 30 metres extension. Provide power at temporary storage sheds and field office.
- .3 Provide water of potable quality for all construction purposes.
- .4 Maintain fire protection as required by jurisdictional authorities.

## 1.7 Drainage

- .1 Refer to Section 01560 for site drainage and pumping requirements.

## 1.8 Construction Aids

- .1 Select, operate and maintain hoisting equipment and cranes as may be required. Operate such equipment only by qualified hoist or crane operators. Make hoist available for Work of each Section.
- .2 Erect scaffolding, independent of walls. Use scaffolding so as to interfere as little as possible with the Work. When not in use, move scaffolding as necessary to permit other work. Construct and maintain scaffolding in rigid, secure and safe manner. Remove scaffolding promptly when no longer required. Scaffolding shall permit convenient access to all levels for all workmen and inspection staff.

## 1.9 General Protection

- .1 Without limiting the Contractor's responsibility to provide all necessary protection, the Contractor shall:
  - .1 Remove snow and ice as may be required for the protection and/ or execution of the Work. Do not use salt under any circumstances.
  - .2 Wet all areas to prevent dust from rising and power hose daily to remove dirt. During cold weather, ensure that mud is scraped off areas outside hoarding as well as in.
  - .3 Protect materials and equipment delivered to the Site in the Owner's name for installation in the Work.
- .2 Any Work damaged by failure to provide protection as required or damaged as a result of lack of adequate temporary heat shall be removed and replaced with new, at no additional cost to the Owner.
- .3 Each Trade shall avoid damaging the Work of other Trades. Conduct the Work and provide protective covering as necessary to meet this requirement. Make good at own expense any damage resulting from failure to meet this requirement. Protective measures shall be to Consultant's approval.

## 1.10 Parking and Equipment Storage

- .1 Facilities for parking of vehicles and temporary storage for machinery and equipment shall be as directed by the Owner. If the Contractor is directed to park on municipal streets, the Contractor shall be responsible, at its cost, for compliance with all related by-laws and ordinances. The Contractor shall not allow any of the foregoing personnel to park on any third party's property, without the prior written approval of such third party.

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1.11 Site Signs and Notices

- .1 Only notices for safety or instructions are permitted on site.
- .2 Signs and notices for safety or instructions to be in French and English language, or commonly understood graphic symbols.
- .3 Maintain signboards, signs and notices for duration of project. Remove and dispose of signs off site on completion of project.

1.12 Removal of Temporary Facilities

- .1 Remove temporary facilities from site when directed by Consultant.

END OF SECTION

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**PART 1 - GENERAL**

## 1.1 Fires

- .1 Fires and burning of rubbish on site is not permitted.

## 1.2 Disposal of Wastes

- .1 Do not bury rubbish and waste materials on site.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

## 1.3 Drainage

- .1 Provide temporary drainage and pumping as necessary to keep site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

## 1.4 Pollution Control

- .1 Maintain pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

END OF SECTION

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**PART 1 - GENERAL****1.1 Section Includes**

- .1 Product quality, availability, storage, handling, protection, and transportation.
- .2 Manufacturer's instructions.
- .3 Quality of Work, coordination and fastenings.
- .4 Existing facilities.

**1.2 Reference Standards**

- .1 Canadian Construction Association.
- .2 Conform to these standards, in whole or in part as specifically requested in specifications.
- .3 If there is question as to whether any product or system is in conformance with applicable standards, Consultant reserves right to have such products or systems tested to prove or disprove conformance.
- .4 The cost for such testing will be born by Owner in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .5 Conform to latest date of issue of referenced standards in effect on date of submission of Tender, except where specific date or issue is specifically noted.

**1.3 Quality**

- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Consultant based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

**1.4 Availability**

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to notify Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Consultant reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

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### 1.5 Storage, Handling and Protection

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber, doors, and other materials subject to warping on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Consultant.
- .9 Touch-up damaged factory finished surfaces to Consultant's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

### 1.6 Transportation

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Owner. Unload, handle and store such products.

### 1.7 Manufacturer's Instructions

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Consultant in writing, of conflicts between specifications and manufacturer's instructions, so that Consultant may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Consultant to require removal and re-installation at no increase in Contract Price or Contract Time.

### 1.8 Quality of Work

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Consultant if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Consultant reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Consultant, whose decision is final.

### 1.9 Coordination

- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

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#### 1.10 Concealment

- .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation, inform Consultant if there is interference. Install as directed by Consultant.

#### 1.11 Remedial Work

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

#### 1.12 Location of Fixtures

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform Consultant of conflicting installation. Install as directed.

#### 1.13 Fastenings

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

#### 1.14 Protection of Work in Progress

- .1 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of Consultant.

#### 1.15 Existing Utilities

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

END OF SECTION



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**PART 1 – GENERAL**

## 1.1 General

- .1 This section is intended to include criteria for and requirements of the final completion of the contract.
- .2 Conform to OAA/OGCA Take-Over Procedures Document No. 100, latest edition.

## 1.2 Final Cleaning

- .1 When the work is substantially performed, remove surplus products, tools, construction machinery and equipment not required for the performance of the remaining work.
- .2 Remove waste products and debris.
- .3 Broom clean and wash exterior walks, steps and surfaces. Rake clean other surfaces of grounds. Sweep and wash clean site paved areas. Remove dirt and other disfigurements from exterior surfaces.

## 1.3 Procedure

- .1 Upon written notification from the General Contractor that the project has reached Substantial Performance together with a copy of their own inspection lists showing all work is completed, the Consultant will make a comprehensive deficiency inspection, and provide a deficiency list to the General Contractor, unless in the Consultant's opinion the project is not substantially complete.
- .2 Upon written notification from the General Contractor that all items in the deficiency list have been completed, the Consultant will inspect the work with the superintendent and provide the General Contractor with a re-inspection list if any items are outstanding; including any new deficiencies resulting from the correction of the original list.
- .3 Within 10 working days of the second inspection the Consultant will make a final inspection of the work and provide the General Contractor with a final deficiency list if any items are outstanding. If so, the Owner will have the right to provide the General Contractor with 5 days notice, complete the outstanding work, on a time and material basis and deduct the cost of completion from the balance owing the Contractor.
- .4 Until all deficiencies are completed, the final month's operation cost, as determined in Section 01005 General Instructions, Item 1.11.3 Cost Breakdown will be withheld from the General Contractor, in addition to costs for specific items.

END OF SECTION

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**PART 1 – GENERAL**

## 1.1 Section Includes

- .1 As-built, samples, and specifications.
- .2 Product data, materials and finishes, and related information.
- .3 Warranties and bonds.

## 1.2 Related Sections

- .1 Section 01311 - Project Coordination.

## 1.3 Submission

- .1 Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- .2 If requested, furnish evidence as to type, source and quality of products provided.
- .3 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- .4 Pay costs of transportation.
- .5 Provide three copies of final manuals incorporating Consultant's comments.

## 1.4 Format

- .1 Organize data in the form of an instructional manual.
- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279mm with spine and face pockets.
- .3 When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
- .4 Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: Manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .9 Provide AUTOCAD files of all in .dwg format on CD-ROM discs.

## 1.5 Contents - Each Volume

- .1 Table of Contents: provide title of project;
  - .1 date of submission; names,
  - .2 addresses, and telephone numbers of Consultant and Contractor with name of responsible parties;
  - .3 schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
  - .1 list names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.

- .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

#### 1.6 As-Built Drawings and Samples

- .1 In addition to requirements in General Conditions, maintain at the site for Consultant one record copy of:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Change Orders and other modifications to the Contract.
  - .5 Reviewed shop drawings, product data, and samples.
  - .6 Field test records.
  - .7 Inspection certificates.
  - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Consultant.
- .6 Upon completion of project, provide AUTOCAD files of all as-built drawings in .dwg format on CD-ROM discs.

#### 1.7 Recording Actual Site Conditions

- .1 Record information on set of drawings, provided by Consultant.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
  - .1 Measured depths of elements of foundation in relation to finish first floor datum.
  - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
  - .4 Field changes of dimension and detail.
  - .5 Changes made by change orders.
  - .6 Details not on original Contract Drawings.
  - .7 References to related shop drawings and modifications.
- .5 Specifications: legibly mark each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
  - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

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**1.8 Materials and Finishes**

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional Requirements: as specified in individual specifications sections.

**1.9 Warranties and Bonds**

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within [ten] days after completion of the applicable item of work.
- .4 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
- .5 Verify that documents are in proper form, contain full information, and are notarized.
- .6 Co-execute submittals when required.
- .7 Retain warranties and bonds until time specified for submittal.

END OF SECTION

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**PART 1 - GENERAL**

## 1.1 References

- .1 Canada Labour Code, Canada Occupational Safety and Health Regulations.
- .2 Canadian Standards Association (CSA)
  - .1 CSA S350-M1980, Code of Practice for Safety in Demolition of Structures.
- .3 Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990.

## 1.2 Submittals

- .1 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
  - .1 Site specific safety hazard assessment.
  - .2 Safety and health risk or hazard analysis for site tasks and operation.
- .2 Submit Construction Safety Checklists after completion.
- .3 Submit copies of reports or directions issued by Federal and Provincial health and safety i inspector.
- .4 Submit copies of incident and accident reports.
- .5 Submit to Consultant with Material Safety Data Sheets (MSDS).
- .6 Personnel training requirements including as follows:
  - .1 Names of personnel and alternates responsible for site safety and health, hazards present on site, and use of personal protective equipment.
- .7 Consultant will review Contractor's site-specific Health and Safety Plan and provide comments. Revise plan as appropriate and resubmit plan to Consultant.
- .8 On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.

## 1.3 Filing of Notice

- .1 File Notice with Provincial authorities prior to commencement of Work.

## 1.4 Work Permit

- .1 Assume Building Permit related to project prior to commencement of Work. Owner will pay for costs associated with the application of the Building Permit.

## 1.5 Safety Assessment

- .1 Perform site specific safety hazard assessment related to project.

## 1.6 Meetings

- .1 Pre-construction meetings: attend health and safety pre-construction meeting.

## 1.7 Regulatory Requirements

- .1 Comply with specified standards and regulations to ensure safe operations at site containing hazardous or toxic materials.

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## 1.8 General Requirements

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Relief from or substitution for any portion or provision of minimum Health and Safety Guidelines specified herein or reviewed site-specific Health and Safety Plan must be submitted to Consultant in writing. Consultant will respond in writing, either accepting or requesting improvements.

## 1.9 Responsibility

- .1 Be responsible for safety of persons and property on site and for protection of persons off site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

## 1.10 Communication Requirements

- .1 Comply with Ontario Health and Safety Act.
- .2 Provide Consultant with Material Safety Data Sheets (MSDS).

## 1.11 Unforeseen Hazards

- .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, immediately stop work and advise Consultant verbally and in writing.

## 1.12 Posted Documents

- .1 Provide documents as follows and post on site:
  - .1 Safety Policy.
  - .2 Health and Safety Representative.
  - .3 General Requirements - Constructor's name.
  - .4 Worker's Compensation Board Form 82.
  - .5 Worker's Compensation Board Regulation 1101.
  - .6 Ministry of Labour Orders.
  - .7 Occupational Health and Safety Act.
  - .8 Material Safety Data Sheets.
  - .9 Floor Plan.
  - .10 Notice of Project.
  - .11 Joint Health and Safety Committee Members.
- .2 Comply with Provincial general posting requirements.

## 1.13 Correction of Non-Compliance

- .1 Immediately address health and safety non-compliance issues identified by Consultant or Authorities Having Jurisdiction.
- .2 Provide Consultant with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Consultant may stop Work if non-compliance of health and safety regulations is not corrected.

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1.14 Blasting

- .1 Blasting or other use of explosives is not permitted.

1.15 Powder Actuated Devices

- .1 Use of powder actuated devices is not permitted.

1.16 Work Stoppage

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
- .2 Assign responsibility and obligation to Health and Safety Officer to stop or start Work when, at Health and Safety Officer's discretion, it is necessary or advisable for reasons of health or safety. Consultant may also stop Work for health and safety considerations.

END OF SECTION

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**PART 1 - GENERAL**

## 1.1 General

- .1 Conform to Division 1 - General Requirements.

## 1.2 Related Sections

- .1 Section 03300 – Cast-in-Place Concrete.
- .2 Civil Engineering Drawings.

## 1.3 References

- .1 American Society for Testing and Materials (ASTM)
  - .1 ASTM C 117- 95, Test Method for Material Finer Than 0.075mm (No.200) Sieve in Mineral Aggregates by Washing.
  - .2 ASTM C 136- 95a, Test Method for Sieve Analysis of Fine and Coarse Aggregates.
  - .3 ASTM D 422- 63(1990), Test Method for Particle-Size Analysis of Soils.
  - .4 ASTM D 698- 91, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> ) (600 kN-m/m<sup>3</sup> ).
  - .5 ASTM D 1557- 91, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> ) (2,700 kN-m/m<sup>3</sup> ).
  - .6 ASTM D 4318- 95, Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- .2 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-8.1- 88, Sieves, Testing, Woven Wire, Inch Series.
  - .2 CAN/CGSB-8.2- M88, Sieves, Testing, Woven Wire, Metric.
- .3 Canadian Standards Association (CSA)
  - .1 CAN/CSA-A23.1- 94, Concrete Materials and Methods of Concrete Construction.

## 1.4 Definitions

- .1 Excavation classes: two classes of excavation will be recognized; common excavation and rock excavation.
  - .1 Rock : any solid material in excess of 0.25 m<sup>3</sup> and which cannot be removed by means of duty mechanical excavating equipment having a 0.95 to 1.15 m<sup>3</sup> bucket. Frozen material not classified as rock.
  - .2 Common excavation: excavation of materials of whatever nature, which are not included under definitions of rock excavation.
- .2 Topsoil: material capable of supporting good vegetative growth and suitable for use in top dressing, landscaping and seeding.
- .3 Waste material: excavated material unsuitable for use in work or surplus to requirements.
- .4 Borrow material: material obtained from locations outside area to be graded, and required for construction of fill areas or for other portions of work.
- .5 Unsuitable materials:
  - .1 Weak and compressible materials under excavated areas.
  - .2 Frost susceptible materials under excavated areas.
- .6 Unshrinkable fill: very weak mixture of Portland cement, concrete aggregates and water that resists settlement when placed in utility trenches, and capable of being readily excavated.
- .7 Clear stone: loose free draining stones.



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### 1.5 Samples

- .1 Submit samples in accordance with Section 01330 - Submittal Procedures.
- .2 Inform Consultant at least 4 weeks prior to commencing work, of proposed source of fill materials and provide access for sampling.

### 1.6 Protection of Existing Features

- .1 Existing buried utilities and structures:
  - .1 Size, depth and location of existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.
  - .2 Prior to commencing excavation work, notify applicable owner or authorities having jurisdiction, establish location and state of use of buried utilities and structures. Owners or authorities having jurisdiction to clearly mark such locations to prevent disturbance during work.
  - .3 Confirm locations of buried utilities by careful test excavations.
  - .4 Maintain and protect from damage, water, sewer, gas, electric, telephone and other utilities and structures encountered as indicated.
  - .5 Where utility lines or structures exist in area of excavation, obtain direction of Consultant before removing/ re-routing.
  - .6 Record location of maintained, re-routed and abandoned underground lines.
  - .7 Where required for excavation, cut roots or branches as approved by Consultant.

### 1.7 Site Data

- .1 Drawings show existing grades and various levels relative to the work specified herein.
- .2 The Contractor shall inform the Consultant immediately of any variations encountered to determine alternative action to be taken if necessary.
- .3 Drawings show existing footings and foundations as taken from original drawings. These are not as-built drawings and variations may be encountered.

## **PART 2 - PRODUCTS**

### 2.1 Materials

- .1 Type 1 (Granular A in accordance with O.P.S.S. Form 1010) and Type 2 (Granular B in accordance with O.P.S.S. Form 1010) fill:
  - .1 Crushed, pit run or screened stone, gravel or sand.
  - .2 Gradations to be within limits specified when tested to ASTM C 136 and ASTM
- .2 Type 3 fill (Granular C): selected material from excavation or other sources, approved by Consultant for use intended, unfrozen and free from rocks larger than 75mm, cinders, ashes, sods, refuse or other deleterious materials.
- .3 Unshrinkable fill: proportioned and mixed to provide:
  - .1 Maximum compressive strength of 0.4MPa at 28 days.
  - .2 Maximum Portland cement content of 25kg/m<sup>3</sup>.
  - .3 Minimum strength of 0.07 MPa at 24 h.
  - .4 Concrete aggregates: to CAN/CSA-A23.1.
  - .5 Portland cement: Type 10.
  - .6 Slump: 160 to 200mm.
- .4 Clear stone: 19mm maximum size, free of clay, shale and organic matter.

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**PART 3 - EXECUTION**

## 3.1 Site Preparation

- .1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.

## 3.2 Stripping of Topsoil

- .1 Strip topsoil and stockpile on site for reuse.

## 3.3 Stockpiling

- .1 Stockpile fill materials in areas designated by Consultant. Stockpile granular materials in manner to prevent segregation.
- .2 Protect fill materials from contamination.

## 3.4 Fill Types and Compaction (Other)

- .1 Use fill of types as indicated or specified below. Compaction densities are percentages of maximum densities obtained from ASTM D 698 ASTM D 1557 corrected maximum dry density.
  - .1 Under asphalt paving: use type 3 fill as required to raise grade to underside of granular sub-base course. Compact to 98%. Prior to placing fill remove all soft and loose materials and proof-roll sub-grade detected to a depth of 1000mm below the finished asphalt surface and replace with specified fill compacted to 98%, or as directed by Geotechnical Engineer.
  - .2 Asphalt granular base: provide a well compacted granular base consisting of Type 1 and Type 2 fill to underside of asphalt surface to depths and compaction levels as noted on Civil Engineering Drawings.
  - .3 Concrete sidewalk base: Place Type 1 fill to underside of concrete sidewalk 150mm deep and compacted to 98%. Prior to placing granular base proof-roll and compact sub-grade to 95%
  - .4 Place unshrinkable fill in areas as indicated.

## 3.5 Bedding and Surround of Underground Services

- .1 Place and compact granular material for bedding and surround of underground services as indicated. Refer also to Civil Engineering Drawings.
- .2 Place bedding and surround material in unfrozen condition.

## 3.6 Asphalt Granular Sub-base and Base

- .1 Obtain Consultant's approval of subgrade before placing granular base.
- .2 Carefully lay out areas to be paved and place granular sub-base and base materials to lines, levels, widths and depths as indicated on Drawings.
- .3 Extend granular base course a minimum of 150mm beyond edge of walks.
- .4 Taper shoulders of roadway with compacted Granular "A"

## 3.7 Testing

- .1 Inspection and testing of soil compaction will be carried out by testing laboratory designated by Consultant. Refer to Section 01410 – Testing Laboratory Services.

### 3.8 Restoration

- .1 Upon completion of work, remove waste materials and debris, trim slopes, and correct defects as directed by Consultant.
- .2 Replace topsoil as indicated.
- .3 Clean and reinstate areas affected by work as directed by Consultant.
- .4 Use temporary plating to support traffic loads over unshrinkable fill for initial 24 hours.

END OF SECTION

**PART 1 - GENERAL**

## 1.1 General

- .1 Conform to Division 1 - General Requirements

## 1.2 Related Work

- .1 Section 02200 – Excavating, Backfilling & Rough Grading.
- .2 Civil Engineering Drawings.

## 1.3 Testing

- .1 Obtain Consultant's approval of topsoil source.
- .2 Test topsoil from source prior to stripping and stock piling, for NPK, Mg, soluble salt content, organic matter and PH value.
  - .1 Use 25 mm diameter sampling tube or space and take 25 samples per hectare to full depth of topsoil at random across entire area to be stripped. Mix samples thoroughly before submitting for testing.
  - .2 Submit 0.5 Kg sample of topsoil to testing laboratory and indicate intended use, type of mulches to be applied, type of topsoil and quality of drainage. Prepare and ship sample according to provincial regulations.
  - .3 Determine required lime or sulphur treatment to bring PH value of soil to 5.5 - 7.5 level.
  - .4 Submit two copies of soil analysis and recommendations for corrections to Consultant.
  - .5 Inspection and testing of topsoil will be carried out by testing laboratory designated by Consultant. Costs for testing will be paid for by Cash Allowance. Refer to Section 01020.

## 1.4 Scheduling of Work

- .1 Schedule placing of topsoil and finish grading to permit sodding operation within 2 days.

## 1.5 Delivery and Storage

- .1 Deliver and store fertilizer, lime sulphur in water proof bags showing weight, analysis and name of manufacturer.

**PART 2 - PRODUCTS**

## 2.1 Materials

- .1 Topsoil: original topsoil stock piled on site. Material subject to analysis by testing laboratory before use.
- .2 Imported topsoil: a triple mix, containing a minimum of 4% organic matter. Free from subsoil, roots, grass, weeds, toxic materials, stones, foreign objects and with an acidity range, PH, of 5.5 to 7.5. Topsoil containing crabgrass, coughgrass, or a noxious weeds is not acceptable.
- .3 Peatmoss: decomposed plant material, fairly elastic and homogeneous, free of decomposed colloidal residue, wood, sulphur and iron containing a minimum of 60% organic matter by weight and moisture content not exceeding 15%. Shredded particle may not exceed 6mm in size. Minimum PH value of peat 4.5, maximum 6.0.

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- .4 Fertilizer:
    - .1 Complete commercial synthetic slow release fertilizer with maximum 35% water soluble nitrogen.
    - .2 Formulation ratio: 1:4:4
  - .5 Lime:
    - .1 Ground agricultural limestone containing a minimum 85% of total carbonates.
    - .2 Graduation requirements: percentage passing by weight, 90% passing 1.0mm sieve, 50% passing 125 micrometer sieve.
    - .3 Use lime as indicated by acidity analysis of topsoil to bring PH to required level.
  - .6 Bonemeal: raw bonemeal, finely ground with a minimum analysis of 3% nitrogen and 20% phosphoric acid.
  - .7 Sand: hard, granular sharp sand to CSA A82. 56a M1976, well washed and free of impurities, chemical or organic matter.
  - .8 Sulphur: finely crushed agricultural elemental sulphur, free of impurities.

### **PART 3 - EXECUTION**

#### 3.1 Preparation

- .1 Grade subgrade, eliminating uneven areas and low spots, ensuring positive drainage. Remove debris, roots, branches, stones in excess of 50mm diameter and other deleterious materials. Remove subsoil that has been contaminated with oil, gasoline or calcium chloride. Dispose of removed materials as directed.
- .2 Cultivate entire area which is to receive topsoil to a depth of 100mm. Repeat cultivation in those areas where equipment used for hauling and spreading has compacted subgrade.

#### 3.2 Spreading of Topsoil

- .1 Do not spread topsoil until Consultant has inspected and approved subgrade.
- .2 Spread topsoil with adequate moisture in uniform layers during dry weather over approved, dry, unfrozen subgrade, where sodding or planting is indicated.
- .3 Keep topsoil 15mm below finished grade for sodded areas; elsewhere bring topsoil up to finished grade.
- .4 Apply topsoil to the following minimum depths: 200mm for sodded areas, 450mm for shrub beds.
- .5 Remove stones, roots, grass, weeds, construction materials, debris and foreign, non organic objects from topsoil.
- .6 Manually spread topsoil.

#### 3.3 Soil Amendments

- .1 Apply lime, sulphur or other soil amendment at rate determined from soil sample test.
- .2 Mix soil amendment well into full depth of top soil by cultivating or roto-tilling prior to application of fertilizer.

#### 3.4 Application of Fertilizer

- .1 Apply fertilizer at least one week after lime application and at least 6 (six) days before sodding.
- .2 Spread fertilizer with mechanical spreaders over entire area of topsoil at manufacturer's recommended rate of application.
- .3 Mix fertilizer thoroughly into upper 50mm of topsoil.

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### 3.5 Finish Grading

- .1 Fine grade manually, entire topsoiled area to contours and elevations as indicated. Eliminate rough spots and low areas to ensure positive drainage.
- .2 Fine grade and loosen topsoil prior to sodding. Eliminate rough spots and low areas to ensure positive drainage. Prepare loose friable sod bed by means of discing and subsequent raking. Roll lightly and rake wherever topsoil is loose.
- .3 Roll topsoil with 50kg roller, minimum 900mm wide, to compact and retain surface.
- .4 Leave surface smooth, uniform, firm against deep foot printing, with a fine loose texture.

### 3.6 Restoration of Stockpile Sites

- .1 Restore stockpile sites within or adjacent to contract limits to a "rake clean" condition acceptable to Consultant.

### 3.7 Surplus Material

- .1 Dispose of surplus topsoil not required for fine grading and landscaping off site.

END OF SECTION

**PART 1 - GENERAL**

## 1.1 General

- .1 Conform to Division 1 – General Requirements.

## 1.2 Related Sections

- .1 Section 02200 – Excavating, Trenching & Rough Grading.
- .2 Section 02770 – Concrete Walks & Curbs.

## 1.3 References

- .1 Ontario Provincial Standard Specifications as follows:
  - .1 OPSS 310, latest revised edition, "Construction Specification for Hot Mixed, Hot Laid Asphaltic Concrete".
  - .2 OPSS Form 1150, latest revised edition, "Material Specification for Hot Mixed, Hot Laid Asphaltic Concrete".

## 1.4 Environmental Conditions

- .1 Asphalt shall be laid only when base is dry and weather conditions are suitable.
- .2 H.L.8 Asphaltic Concrete shall be laid at minimum temperature of 2°C (35°F) and rising.
- .3 H.L.3 Asphaltic Concrete shall be laid at minimum temperature of 8°C (45°F) and rising.

## 1.5 Special Protection

- .1 Barricade paved surfaces from traffic for 72 hours and until surfaces are ready for normal traffic.

**PART 2 - PRODUCTS**

## 2.1 Materials

- .1 Granular base: To Section 02200 and Site Engineering Drawings.
- .2 H.L.8 Asphaltic Concrete Base Course: To OPSS 1150.
- .3 H.L.3 Asphaltic Concrete Surface Course: To OPSS 1150.
- .4 Porous Paving: Refer to Civil Engineering Drawings.
- .5 Marking paint: To OPSS 1710 "Material Specification for Coning and Non-Coning Traffic Paint" colour as noted on Drawings.

**PART 3 - EXECUTION**

## 3.1 Granular Sub-base and Base

- .1 Carefully lay out areas to be paved to required lines and levels.
- .2 Extend granular base course a 300mm minimum beyond the edge of paved areas; 150mm minimum beyond walks.
- .3 Refer to Section 02210 for removal of topsoil.
- .4 Refer to Section 02200 and Site Engineering Drawings for installation of granular sub-base and base.
- .5 Taper shoulders of roadway with compacted Granular "A".

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### 3.2 Installation of Asphalt Paving

- .1 Over the compacted Granular "A", apply layer of H.L.8 (thickness as indicated on Drawings) compacted to OPSS 310.
- .2 Finish off entire areas to be paved with layer of H.L.3 (thickness as indicated on Drawings), compacted as outlined in OPSS 310.
- .3 Temperature of asphalt shall not be less than 120°C (245°F) after spreading and prior to initial rolling.
- .4 Use mechanical spreaders and compact using rollers of sufficient size and weight as specified by OPSS.
- .5 Maintain specified slopes, elevations and "crowns" as shown on the Drawings and in accordance with good construction practice.
- .6 Neatly slope shoulders of Granular "A" from asphalt at 1:50 away from paving.

### 3.3 Installation of Porous Paving

- .1 Refer to Civil Engineering Drawing for installation requirements.
- .2 Over the sub-base, apply layers of porous paving (thickness as indicated on Drawings) in lifts with a minimum of 50mm and a maximum of 100mm.
- .3 Use mechanical spreaders and compact using rollers of sufficient size and weight as specified by OPSS.
- .4 Maintain specified slopes, elevations and "crowns" as shown on the Drawings and in accordance with good construction practice.

### 3.4 Patching and Tying In

- .1 If and when patching is required, the area to be patched shall be sawcut to its entire thickness and repaved making sure that the edges are primed and compacting is equal to that outlined in approved grades. Surface layer shall be milled 300mm wide beyond sawcut to create a staggered joint between layers.

### 3.5 Quality Control

- .1 Materials to be used will be tested by Section 01410 – Testing Laboratory Services.
- .2 Notify the testing company of the paving schedule, sufficiently in advance so that tests may be made.
- .3 Provide representative samples of the materials as requested by the testing and inspection company at no additional cost to the Owner.
- .4 The cost of any additional testing and/ or the cost of replacement of any part of the asphalt to meet the test requirements, shall be borne by the Contractor.
- .5 Where field tests have been cut as block samples from the in-place asphalt concrete, replace and make good to the satisfaction of the Consultant.

### 3.6 Protection and Clean-up

- .1 Exercise care in paving operations adjacent to curbs, lighting standards, sidewalks, etc., so as not to damage these items. Make good any damaged items to the satisfaction of the Consultant.
- .2 At the completion of the work of this Section, remove from the site all tools, equipment, surplus materials and debris.



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### 3.7 Pavement Markings

- .1 Lay out lines as indicated on Drawings and apply 100mm wide lines for parking, use a mechanical application equipment. End limit of each line to have clean, sharp 90° corners with no over spray fogging. Thickness of paint application to be consistent throughout. Under-sprayed lines shall be repainted.
- .2 Paint accessibility markings to municipal standards and as indicated on the Drawings.

END OF SECTION

**PART 1 - GENERAL**

## 1.1 General Requirements

- .1 Conform to Division 1 – General Requirements.

## 1.2 Work Included

- .1 Furnish all labour, materials and equipment necessary for the supplying and installation of this Section.

## 1.3 Related Work

- .1 Section 02513 – Hot Mix Asphalt Paving.
- .2 Section 02770 – Concrete Walks & Curbs.
- .3 Section 03300 – Cast-in-Place Concrete.

**PART 2 - PRODUCTS**

## 2.1 Materials

- .1 Medi Post Signs:
  - .1 “Medi Post” signs in accordance with regulation of the municipality having jurisdiction.
- .2 Precast parking bumpers:
  - .1 Air entrained, reinforced 280mm x 2440mm x 150mm (width x length x height) chamfered, precast concrete parking bumpers, complete with two 19 x 915mm hot dipped galvanized steel rods, equal to units manufactured by Brooklin Concrete Products Limited, (800) 655 3430.

**PART 3 - EXECUTION**

## 3.1 Examination

- .1 Obtain Consultant’s approval of the grade surface prior to installing site devices.

## 3.2 Location Schedule

- .1 Medi Post Signs:
  - .1 provide “Medi Post” signs in quantities and locations shown on Drawings.
- .2 Precast Parking Bumpers:
  - .1 provide at Garbage Enclosure and at parking spaces in quantities and locations shown on Drawings.

## 3.3 Clean-up

- .1 Promptly as the works proceeds and on completion, remove all rubbish and debris from the building and site resulting from the work of this Section.

END OF SECTION

**PART 1 - GENERAL**

## 1.1 General

- .1 Conform to Division 1 - General Requirements

## 1.2 Related Sections

- .1 Section 02200 – Excavating, Backfilling & Rough Grading.
- .2 Section 03300 – Cast-in-Place Concrete.

## 1.3 References

- .1 Canadian Standards Association (CSA).
  - .1 CAN/CSA-A23.1-94, Concrete Materials and Methods of Concrete Construction.
- .2 Canadian General Standards Board (CGSB).
  - .1 CAN/CGSB-1.2-M89, Boiled Linseed Oil.
  - .2 CAN/CGSB-3.3-M89, Kerosene.
- .3 American Society for Testing and Materials (ASTM).
  - .1 ASTM D698-91, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort.

**PART 2 - PRODUCTS**

## 2.1 Materials

- .1 Concrete mixes and materials: to Section 03300 - Cast-in-Place Concrete.
- .2 Fibre Expansion Joints: Manufactured commercial type meeting requirements of ASTM D1751; 13mm thick.
- .3 Granular base: Refer also to Civil Engineering Drawings.
- .4 Non-staining mineral type form release agent: chemically active release agents containing compounds that react with free lime to provide water soluble soap.

**PART 3 - EXECUTION**

## 3.1 Grade Preparation

- .1 Do grade preparation work in accordance with Section 02200 – Excavating, Backfilling & Rough Grading.
- .2 Place Granular “B” Type 1 fill in maximum 150mm layers and compact to at least 98% of maximum density to ASTM D698.

## 3.2 Granular Base

- .1 Obtain Consultant's approval of subgrade before placing granular base.
- .2 Place Granular “A” base material to lines, widths, and depths as indicated.
- .3 Compact granular base to at least 98% of maximum density to ASTM D698.

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### 3.3 Concrete

- .1 Obtain Consultant's approval of granular base and reinforcing steel prior to placing concrete.
- .2 Do concrete work in accordance with Section 03300 – Cast-in-Place Concrete.
- .3 Slip-form pavers equipped with string line system for line and grade control may be used if quality of work acceptable to Consultant can be demonstrated. Hand finish surfaces when directed by Consultant.

### 3.4 Concrete Walks

- .1 Concrete walks to be 125mm thick 32MPa compressive strength at 28 days, unless noted otherwise on Drawings, on minimum 100mm thick base of Granular "A" compacted to 98% Standard Proctor maximum dry density.
- .2 Immediately after floating, give sidewalk surface uniform broom finish to produce regular corrugations not exceeding 2mm deep, by drawing broom in direction normal to centre line. Refer to Architectural Drawings for other finishes required by municipal accessibility standards.
- .3 Provide edging as indicated with 10mm radius edging tool.
- .4 Slope concrete walks to one side, away from building, 1:50, or as indicated on Drawings.

### 3.5 Concrete Curbs

- .1 Curb design to be as indicated on Drawings, on 300mm minimum Granular "B" compacted to 98% Standard Proctor maximum dry density.

### 3.6 Tolerances

- .1 Finish surfaces to within 3mm in 3m as measured with 3m straightedge placed on surface.

### 3.7 Expansion and Contraction Joints

- .1 Install tooled, transverse contraction joints after floating, when concrete is stiff, but still plastic, at intervals of 1.5m.
- .2 Install expansion joints as indicated on Drawings at intervals of 6m.
- .3 Install expansion joints around manholes and catch basins and along length adjacent to concrete curbs, catch basins, buildings, or permanent structure.
- .4 When sidewalk is adjacent to curb, make joints of curb, gutters and sidewalk coincide.
- .5 Install joint filler in expansion joints as indicated.
- .6 Seal expansion joints with sealant approved by Consultant.
- .7 Refer to Drawings for saw cut patterns.

### 3.8 Curing

- .1 Cure concrete by adding moisture continuously in accordance with CAN/CSA-A23.1 to exposed finished surfaces for at least 1 day after placing, or sealing moisture in by curing compound approved by Consultant.
- .2 Where burlap is used for moist curing, place two prewetted layers on concrete surface and keep continuously wet during curing period.
- .3 Apply curing compound evenly to form continuous film. In accordance with manufacturer's requirements.

3.9 Backfill

- .1 Allow concrete to cure for 7 days prior to backfilling.
- .2 Backfill to designated elevations with material approved by Consultant.

END OF SECTION

**PART 1 - GENERAL**

## 1.1 Related Work

- .1 Conform to Division 1 – General Requirements.

## 1.2 Related Sections

- .1 Section 02200 – Excavating, Backfilling & Rough Grading.
- .2 Section 02212 – Topsoil & Finish Grading.
- .3 Section 03300 – Cast-in-Place Concrete.

## 1.3 References

- .1 ASTM A 53-90b, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- .2 ASTM A 90-81(1991), Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles.
- .3 ASTM A 121-86, Specification for Zinc-Coated (Galvanized) Steel Barbed Wire.
- .4 ASTM A 525M-91b, Specification for General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process.
- .5 CAN/CSA-A23.1-M90, Concrete Materials and Methods of Concrete Construction.
- .6 CAN/CSA-G164-M92, Hot Dip Galvanizing of Irregularly Shaped Articles.
- .7 CAN/CGSB-138.1-M80, Fence, Chain Link, Fabric.
- .8 CAN/CGSB-138.2-M80, Fence, Chain Link, Framework, Zinc-Coated, Steel.
- .9 CAN/CGSB-138.3-M80, Fence, Chain Link - Installation.
- .10 CAN/CGSB-138.4-M82, Fence, Chain Link, Gates.
- .11 CAN/CGSB-1.181-92, Ready-Mixed Organic Zinc-Rich Coating.

## 1.4 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01330 - Submittal Procedures.

**PART 2 - PRODUCTS**

## 2.1 Materials

- .1 Concrete mixes and materials: to Section 03300 - Cast-in-Place Concrete CAN/CSA-A23.1.
  - .1 Nominal coarse aggregate size: 20-5.
  - .2 Compressive strength: 20MPa minimum at 28 days.
- .2 Chain-link fence fabric: to CAN/CGSB-138.1.
  - .1 Zinc coated steel fabric, galvanized steel 3.5mm core wire X 50mm mesh.
  - .2 Height of fabric: as indicated on Drawings.
- .3 Posts, braces and rails: to CAN/CGSB-138.2, galvanized steel pipe.
  - .1 Line posts: 60.3mm outside diameter.
  - .2 Terminal posts: 90mm outside diameter.
  - .3 Gate posts: 90mm outside diameter galvanized steel pipe.
  - .4 Top rail: 42.8mm outside diameter complete with 125mm minimum length galvanized spliced couplings.
- .4 Bottom tension wire: to CAN/CGSB-138.1, Table2, single strand, galvanized 4.12mm steel wire.

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- .5 Braces: 42.88mm outside diameter pipe, horizontal at mid-height to all terminal and corner posts.
  - .6 Tie wire fasteners: to CAN/CGSB-138.1, Table 2(steel wire) single strand, galvanized 9ga steel wire.
  - .7 Tension bar: to ASTM A 525M, 5x20mm minimum galvanized steel.
  - .8 Gate frames: to ASTM A 53, galvanized steel pipe, standard weight 42.8mm outside diameter pipe for outside frame.
    - .1 Fabricate gates as indicated with electrically welded joints, and hot-dip galvanized painted with zinc pigmented paint after welding.
    - .2 Fasten fence fabric to gate with twisted selvage at top.
    - .3 Furnish gates with galvanized malleable iron hinges, latch and latch catch with provision for padlock which can be attached and operated from either side of installed gate.
    - .4 Furnish double gates with chain hook to hold gates open and centre rest with drop bolt for closed position.
  - .9 Fittings and hardware: to CAN/CGSB-138.2, cast aluminum alloy, galvanized steel or malleable or ductile cast iron. Post caps to provide waterproof fit, to fasten securely over posts and to carry top rail.
  - .10 Organic zinc rich coating: to CAN/CGSB-1.181.

### **PART 3 - EXECUTION**

#### 3.1 Grading

- .1 Remove debris and correct ground undulations along fence line to obtain smooth uniform gradient between posts. Provide clearance between bottom of fence and ground surface of 30mm to 50mm.

#### 3.2 Erection of Fence

- .1 Erect fence along lines as indicated and in accordance with CAN/CGSB-138.3.
- .2 Excavate post holes 1200mm depth x 1200mm diameter.
- .3 Space line posts 3m apart, measured parallel to ground surface.
- .4 Space straining posts at equal intervals not exceeding 150m if distance between end or corner posts on straight continuous lengths of fence over reasonably smooth grade is greater than 150m.
- .5 Install additional straining posts at sharp changes in grade and where directed by Consultant.
- .6 Install corner post where change in alignment exceeds 10°.
- .7 Install end posts at end of fence and at buildings. Install gate posts on both sides of gate openings.
- .8 Place concrete in post holes then embed posts into concrete. Extend concrete 50mm above ground level and slope to drain away from posts. Brace to hold posts in plumb position and true to Alignment and elevation until concrete has set.
- .9 Do not install fence fabric until concrete has cured a minimum of 5 days.
- .10 Install brace between end and gate posts and nearest line post, placed in centre of panel and parallel to ground surface at inclination as indicated. Install braces on both sides of corner and straining posts in similar manner.
- .11 Install overhang tops and caps.
- .12 Install top rail between posts and fasten securely to posts and secure waterproof caps and overhang tops.

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- .13 Install bottom tension wire, stretch tightly and fasten securely to end, corner, gate and straining posts with turnbuckles and tension bar bands.
  - .14 Lay out fence fabric. Stretch tightly to tension recommended by manufacturer and fasten to end, corner, gate and straining posts with tension bar secured to post with tension bar bands spaced at 300mm intervals. Knuckled selvedge at bottom. Twisted selvedge at top.
  - .15 Secure fabric to top rails, line posts and bottom tension wire with tie wires at 450mm intervals. Give tie wires minimum two twists.

### 3.3 Installation of Gates

- .1 Install gates in locations as indicated.
- .2 Level ground between gate posts and set gate bottom approximately 40mm above ground surface.

### 3.4 Cleaning

- .1 Clean and trim areas disturbed by operations. Dispose of surplus material and replace damaged turf with sod as directed by Consultant.

END OF SECTION



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**PART 1 - GENERAL**

## 1.1 General

- .1 Conform to Division 1 – General Requirements.

## 1.2 Related Sections

- .1 Section 02212 – Topsoil & Finish Grading.

## 1.3 Quality Assurance

- .1 The contractor must have five (5) years of experience in sodding work. All crew members must work under the direction of a skilled foreman.
- .2 Submit topsoil test report with adjustment recommendation to consultant prior to sod installation.

## 1.4 Product Delivery, Storage &amp; Handling

- .1 Cut sod by approved methods in accordance with recommendations of the Nursery Sod Growers Association (N.S.G.A.) of Ontario. Cut in pieces approximately 1.000 square metres in area with a minimum soil thickness of 20mm.
- .2 Roll or fold sod prior to lifting in such a manner as to prevent tearing or breaking.
- .3 Protect sod during transportation to prevent drying and ensure that it arrives at the site in a fresh and healthy condition.
- .4 Install sod immediately after arrival. If there is a delay in installation, keep sod moist and cool and protected from direct exposure to the sun until installation.
- .5 Provide fertilizer in standard manufacturer's containers, clearly marked with the name of the manufacturer, weight and analysis.
- .6 Store fertilizer in a weatherproof storage area until use.

## 1.5 Job Conditions

- .1 Proceed with sodding operations only during suitable weather conditions and in accordance with good horticultural practice.

## 1.6 Inspection

- .1 Obtain approval from Consultant of the finished topsoil surface before proceeding with sodding.
- .2 Give timely notice, in writing, to Consultant when final acceptance is required.

## 1.7 Maintenance

- .1 Maintain sodded areas from the time of installation, until final acceptance by the Consultant.
- .2 Maintenance shall include all measures necessary to establish and maintain all sodded areas in vigorous and healthy growing condition, including but not limited to:
  - .1 Mowing at regular intervals to maintain a maximum height of 60mm. Do not cut more than one third (1/3) of the grass height at any one mowing. Trim and clip edges. Remove clippings after mowing and clipping.
  - .2 Watering when required and in sufficient quantities to prevent sod from drying out.

- .3 Weed control when required and/ or directed. Use herbicide only in accordance with the manufacturer's recommendations, federal, provincial and local bylaws or ordinances. Make good all damage resulting from the use of herbicides at no extra cost.
- .4 Make good any erosion that results from faulty workmanship and /or material at no extra cost.
- .5 Replace with new sod any dead, deteriorated, or bare spots.

#### 1.8 Warranty

- .1 Guarantee all sodded areas for a period of six months from the **date of acceptance**.
- .2 During the warranty period replace all material that is dead or not in satisfactory, healthy growing state or which does not meet the requirements of the specifications, at no extra cost to the contract. Final determination of the acceptability of the sod will be made by the Consultant.

### **PART 2 - PRODUCTS**

#### 2.1 Materials

- .1 Grass Sod:  
Certified No. 1 grade 'RTF' Tall Fescue Sod with a composition of 50% Barrington Fall Fescue, 35% Barlexas II Tall Fescue, 5% Labarinth (RTF) Tall Fescue, 5% Barrister Kentucky Bluegrass, and 5% Yellow Jacket Coating or as specified on the drawings, grown and sold in accordance with the N.S.G.A. classifications. At the time of sale, the sod must have a strong, fibrous root system and be free of stone and burned or bare spots. Mosses and clover shall not be apparent in the turf with no more than 2 broadleaf weeds or 10 other weeds per 40 square meters.
- .2 Wooden Pegs: 25mm x 25mm x 230mm minimum length hardwood pegs.

#### 2.2 Top Soil

- .1 Topsoil: fertile and friable sandy loam with a minimum 2% organic matter content with acidity values between pH 6.0 and 7.5, free from admixtures of subsoil, clay lumps, stones or roots over 50mm in diameter, toxic chemicals or any other foreign matter.
- .2 Test all topsoil, native and imported, for nitrogen, phosphorous, magnesium, soluble salt content, texture, organic matter content, pH and chemical residues through accredited laboratory with recommendations for improvement for intended use. Make improvements in accordance with analysis.
- .3 Topsoil may be taken from existing stockpile provided it meets specified requirements.
- .4 At no extra cost to the Contract, provide topsoil from another source if quantity of suitable stockpiled material is not sufficient.

### **PART 3 - EXECUTION**

#### 3.1 Preparation

- .1 Provide a finished topsoil surface that is smooth and firm against footprints, with a fine loose texture, before sod is placed. Finished topsoil surface is to be free of rocks or other deleterious material.

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### 3.2 Installation of Plant Material

- .1 Lay sod with tight butt joints. Do not leave any open joints or overlap adjacent pieces of sod.
- .2 Ensure finished sod surface is flush with adjoining grass area, pavement, or top surface of curbs.
- .3 On slopes steeper than 3:1, lay sod perpendicular to the slope and peg each row at intervals of not more than 600mm on each side of the sod strip. Drive pegs flush with the surface of the sod.
- .4 Immediately after installation, water the sod with sufficient quantities of water to penetrate the sod and top 50mm of the underlying topsoil.
- .5 When the sod has dried sufficiently to prevent damage, roll all sodded areas to ensure a good bond between topsoil and sod.
- .6 Ensure that topsoil is amended as recommended by the soil analysis.

### 3.3 Clean Up

- .1 At the completion of sodding operations remove all excess material from the site at no extra cost.
- .2 Make good all damage resulting from work carried out under this contract, at no extra cost.

END OF SECTION

**PART 1 - GENERAL**

## 1.1 General

- .1 Conform to Division 1 – General Requirements

## 1.2 Description

- .1 Work Included: Cast-in-place concrete required for this work is indicated on the Drawings and includes, but is not necessarily limited to:
  - .1 Exterior walks, curbs, ramps and driveways
- .2 Related work described elsewhere:
  - .1 Concrete Formwork - Section 03100
  - .2 Concrete Reinforcement - Section 03200
  - .3 Concrete Finishing - Section 03350
- .3 Work not furnished but installed:
  - .1 Setting pipe sleeves, anchors etc., supplied under Divisions 15 and 16.

## 1.3 Quality Assurance

- .1 Qualifications of Workmen:
  - .1 Provide at least one person who shall be present at all times during execution of this portion of work, and who shall be thoroughly trained and experienced in placing the types of concrete specified, and who shall direct all work performed under this Section.
  - .2 For finishing of exposed surfaces of the concrete, use only thoroughly trained and experienced journeyman concrete finishers.
- .2 Codes and Standards
  - .1 Cast-in-place concrete shall meet the requirements of CAN-A23.1-04, "Concrete Materials and Method of Concrete Construction".
  - .2 The Ontario Building Code, current edition.
  - .3 CAN3-A23.2-04, "Method of Test for Concrete".
- .3 Testing and Inspection
  - .1 All materials and workmanship shall be subject to test and inspection by an independent testing and inspection company appointed by the Owner.
  - .2 The cost of all inspection and testing will be paid for from the Testing Allowance.
  - .3 All operations relating to mixing, transporting and curing as well as quality of materials and testing shall meet with the approval of the Consultant. Unless otherwise noted, they shall conform to CAN3-A23.2-04, "Concrete Materials and Methods of Concrete Construction", CAN3-A23.2-04, "Methods of Test for Concrete". The Contractor shall provide unhindered access to the project for purposes of inspection and selection of samples by the Consultant.
  - .4 The Contractor shall provide the storage space and the necessary protection for the specimens against injury or loss while they are not on the site.
  - .5 If required by the Consultant, the Contractor shall provide trial mixes made with samples of the materials to be used in the concrete, sufficiently in advance of the commencement of the work to enable them to be tested to the Consultant's satisfaction.
  - .6 Each test shall consist of three standard cylinders accompanied by a slump test and measurement of air content where specified. All admixtures, temperature of concrete, ambient temperature, time of mixing and discharge, and additions of admixtures shall be noted on the test report.

- .7 The strength level of each class of concrete shall be considered satisfactory if the averages of sets of three consecutive strength tests for that class of concrete at one age equal or exceed the specified strength and no individual strength test is more than 3.5 MPa below the specified strength.

#### 1.4 Product Handling

- .1 Protection: Use all means necessary to protect cast-in-place concrete materials before, during and after installation and to protect the installed work and materials of all other trades.
- .2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Consultant and at no additional cost to the Owner.

### **PART 2 - PRODUCTS**

#### 2.1 Materials

- .1 Cement
  - .1 Type 10, normal in accordance with C.S.A. Standard CAN3-A5.
  - .2 Supplementary cementing materials in accordance with CSA standard A23.5.2.2 (Maximum 15% by mass of cements), may be employed.
- .2 Aggregates
  - .1 Sand for fine aggregate shall conform to CAN3-A.23.1-04.
  - .2 All concrete aggregate shall conform to CAN3-A23.1-04 and shall consist of either natural sand and gravel, crushed rock or other inert materials which have clean uncoated grains of strong durable materials.
- .3 Pit run gravel is not acceptable for this work.
- .4 Water shall be clean and free from any ingredients which may set off a harmful physical or chemical reaction in the concrete.
- .5 Admixtures
  - .1 Air entraining admixtures used shall conform to ASTM C260.
  - .2 Chemical admixtures used shall conform to ASTM C494.
  - .3 Prozzolic mineral admixtures used shall conform to CAN3-A23.5-M82.

#### 2.2 Concrete Mixes

- .1 General
  - .1 Proportion the materials to provide the following specified design strengths and slumps.
  - .2 Job mixing will not be allowed on this project.
  - .3 Mixed in transit concrete conforming to the requirements of CAN3-A23.1-94 and obtained from an established local supplier approved by the Consultant, may be used in the work, providing that the concrete materials are in accordance with the specifications and that the equipment is of suitable type, and is operated in such a manner that strict control of mix proportions and water content is maintained.
  - .4 With each delivery of transit mix concrete to the job, the contractor shall furnish the Consultant certification of the specified strength and such information pertaining to each batch as the Consultant may require.
  - .5 All concrete shall be mixed with aggregates graded and proportioned to produce a plastic mass of such consistency as to flow slowly under its own weight and which can be worked into corners of forms and under and around the reinforcing without forming voids or honeycomb surfaces.

- .6 When mixed, all particles of the aggregate shall be coated with cement and The aggregates shall not separate when placed in the forms, nor shall there be any free water therein.
- .7 The water to cement ratio (w/c) should be less than 0.5. Mix design should be proportioned to minimize possible increased cracking and curling due to vapour retarder directly under the slab.
- .8 Use of calcium chloride is not permitted.

MIX LOCATION	SPECIFIED 28 DAY COMPRESSIVE STRENGTH MPa.	SLUMP (mm)	ENTRAINED AIR
Lean Fill	15	125	nil
Exterior Slabs, Piers, Ramps	32	90 ± 25	6%±1%

- .2 Quality
  - .1 The concrete used on this project shall be proportioned to provide specified design strengths, slumps and air contents as noted on the drawings or specifications.
  - .2 Water reducing admixtures, accelerators or retarders shall only be used when directed by the Consultant.

### 2.3 Accessories

- .1 Shrinking Compensating Grout: Premixed compound consisting of non-metallic aggregate, Portland cement, water reducing and plasticizing agents.
  - .1 Compressive strength: 30 MPa at 28 days.
- .2 Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water, reducing and plasticizing agents.
  - .1 Compressive strength: 17 MPa at 48hrs and 48 MPa at 28 days.

### 2.4 Joint Devices and Filler Materials

- .1 Joint filler: Asphalt impregnated fibreboard or felt, 6mm thick; tongue and groove profile.

### 2.5 Materials

- .1 All other materials not specifically described but required for a complete and proper installation of cast-in-place concrete shall be as selected by the Contractor, subject to the approval of the Consultant.

## **PART 3 - EXECUTION**

### 3.1 Surface Conditions

- .1 Inspections
  - .1 Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
  - .2 Verify that all items to be embedded in concrete are in place.
  - .3 Verify that concrete may be placed to the lines and elevations indicated on the drawings, with all required clearances from reinforcement.

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- .2 Discrepancies
    - .1 In the event of discrepancy, immediately notify the Consultant.
    - .2 Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
  
  - 3.2 Preparation
    - .1 General
      - .1 Remove all wood scraps and debris from the areas in which concrete will be placed.
    - .2 Notification Notify the Consultant at least 24 hours before placing concrete, for a site review of the work.
  
  - 3.3 Placing Concrete
    - .1 Method
      - .1 Convey concrete from mixer to place of final deposit by methods that will prevent separation and loss of materials.
      - .2 For chuting, pumping and pneumatically conveying concrete, use only equipment of such size and design as to ensure a practically continuous flow of concrete at the delivery end without loss or separation of materials.
      - .3 Deposit concrete as nearly as possible in its final position to avoid segregation due to rehandling and flowing.
      - .4 Place concrete as dry as possible consistent with good workmanship, never exceeding the maximum specified slump.
      - .5 The vertical height of free fall of concrete shall not exceed 1800mm. For falls greater than 1800mm, chutes or spouts designed to prevent segregation shall be used or intermediate openings shall be provided in the forms.
    - .2 Rate of Placement
      - .1 Place concrete at such a rate that concrete is at all times plastic and flows readily between bars.
      - .2 When placing is started, carry it on as a continuous operation until placement of the panel or section is complete, consideration being given the pressure exerted on vertical forms by plastic concrete.
      - .3 Do not pour a greater area at one time than can be properly finished; this is particularly important during hot and dry weather.
    - .3 Compaction
      - .1 Thoroughly consolidate ALL concrete by suitable mechanical means during placement, working it around reinforcing steel, all embedded fixtures and into corners of forms.
      - .2 During placement thoroughly compact the concrete by mechanical vibration.
      - .3 Not less than two (2) vibrators shall be available at the site for any pour.
      - .4 Acceptability
        - .1 Do not use retempered concrete or concrete that has been contaminated by foreign materials.
  
  - 3.4 Curing
    - .1 General
      - .1 All surfaces of concrete shall be kept thoroughly moist for not less than seven (7) days after placing and in freezing weather when the concrete shall be protected from loss of both moisture and heat.
      - .2 Maintain all equipment and materials for the protection and curing of concrete on site, ready to use before concrete placing is started.

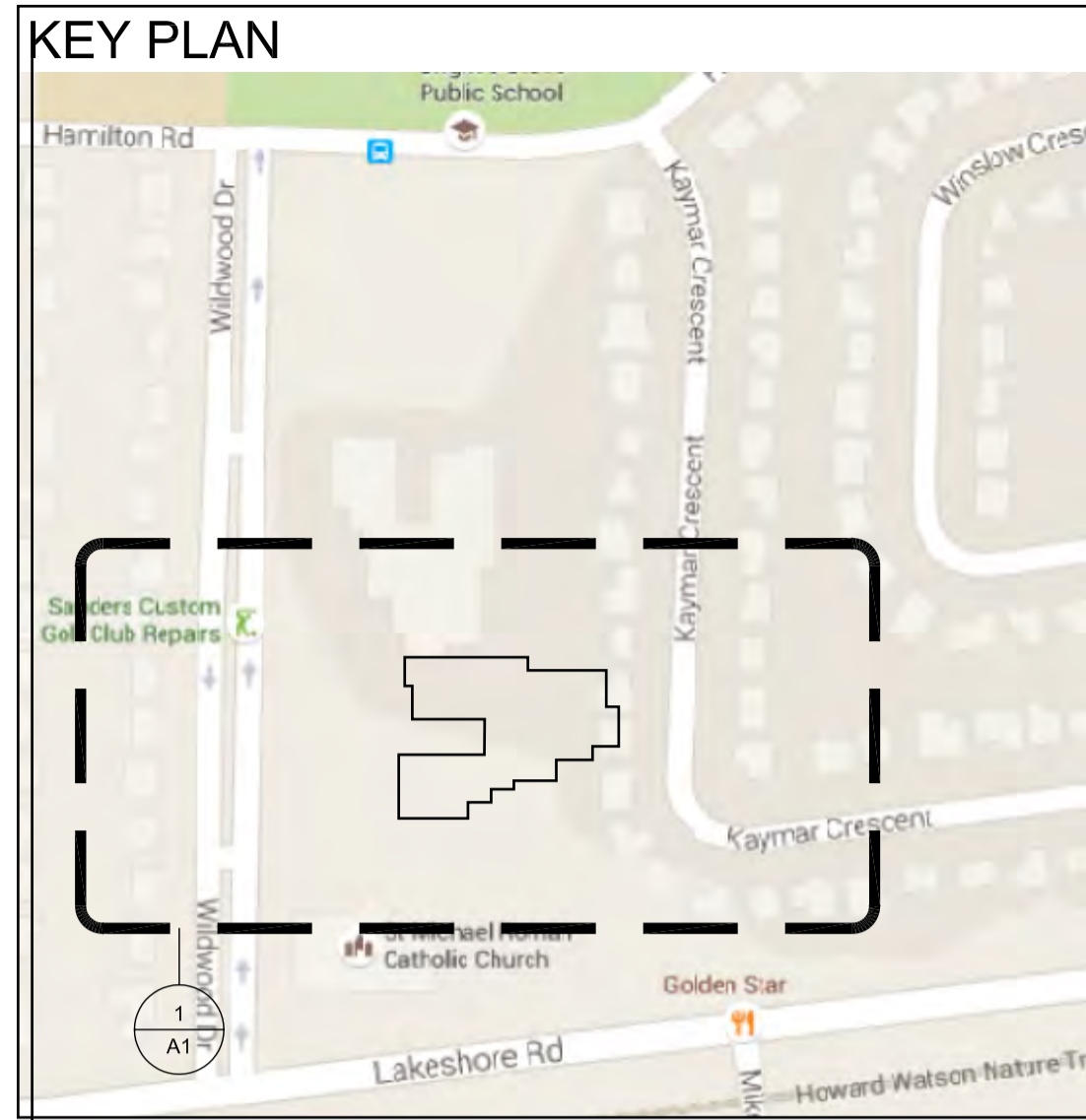
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- .2 Sidewalks, exterior paved areas, curbs and gutters
    - .1 Completely cover floor slabs with 4 mil polyethylene sheeting, properly lapped at side and end laps and weighted down.
    - .2 A liquid membrane curing agent may be used for surfaces listed under paragraph above in lieu of polyethylene sheeting for concrete poured between April 1 and October 14th, provided that the curing agent is compatible with the specified floor finish.

### 3.5 Hot Weather Requirements

- .1 General
  - .1 All concreting operations during hot weather shall be in accordance with CAN3-A23.1-04.
  - .2 Protect the work from damage due to rapid loss of moisture during hot weather.
- .2 Methods
  - .1 Provide wind breaks to slow down the flow of air over concrete surfaces.
  - .2 Provide sun shades to protect concrete surfaces from the direct heat of the sun.
  - .3 Cover those areas of already placed and finished concrete as rapidly as possible.
  - .4 All protective measures shall be on hand before concreting is begun and adequate competent personnel available to install them.
  - .5 The use of a water reducing-retarding admixture may be required at the Consultant's discretion.

END OF SECTION





**LEGAL DESCRIPTION**

TOPOGRAPHICAL PLAN OF SURVEY  
OF PART OF  
PART LOTS 13 & 14, CONCESSION #9  
REF. PLAN #25R-3961 & 25R-4433

IN THE  
CITY OF SARNIA  
COUNTY OF LAMBTON

**SITE STATISTICS**

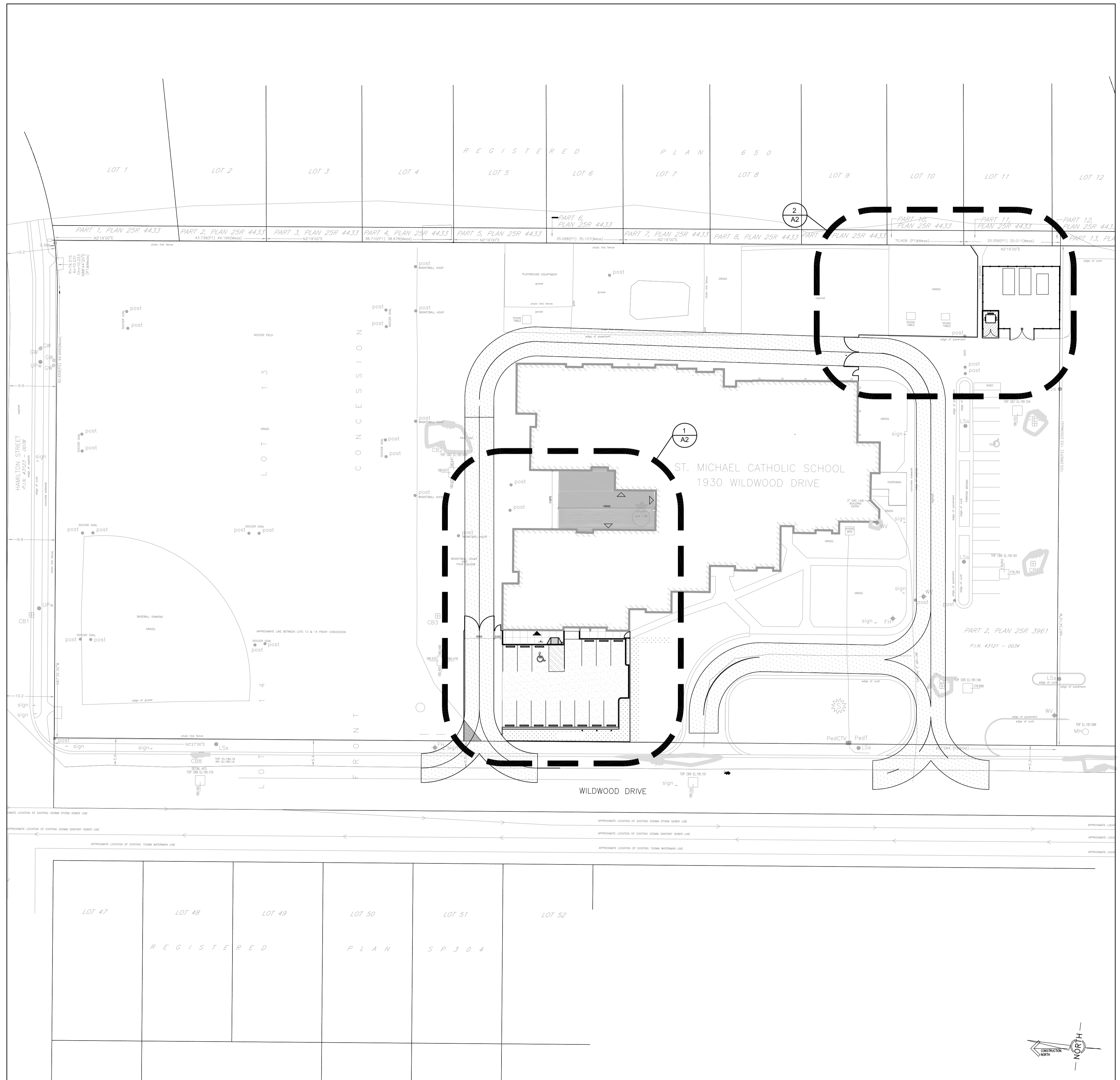
ZONING	UR1		
SITE AREA:	2,331 Ha	(23 316 m <sup>2</sup> )	
LOT AREA	AREA (m <sup>2</sup> )	PROVIDED	REQUIRED
BUILDING AREA	2 935 m <sup>2</sup>		460 m <sup>2</sup> MIN
LOT COVERAGE	2 935 m <sup>2</sup>	13.0%	35% MAX
LANDSCAPED OPEN SPACE	20 381 m <sup>2</sup>	87%	30% MIN
FRONT YARD SETBACK	23.8m	9 m (LOCAL STREET)	
SIDE YARD SETBACK	92.3m & 36.8m	6 m	
REAR YARD SETBACK	83m	7.5 m	
LOT FRONTAGE	207 m	23 m MIN	
GROSS FLOOR AREA	2 935 m <sup>2</sup>		
BUILDING HEIGHT	6.4m	12m MAX	
PARKING SPACES	SCHOOL	28	28 (1.5 /CLASSROOM) (1 per 30m2 OFFICES)

**LEGEND** NOTE: THIS LEGEND IS APPLICABLE TO ALL DRAWINGS.

	PRINCIPAL / FIRE FIGHTER ENTRANCE
	EXIT/ENTRANCE
	BARRIER FREE PARKING SPACE
	FIRE ROUTE
	EXIST. or EX. EXISTING
	NEW ASPHALT
	CROSSING LINES - PAINTED YELLOW
	NEW PERMEABLE ASPHALT - SEE SITE SERVICES FOR DETAILS
	NEW SOD
	CONCRETE SIDEWALK
	FENCE
	FIRE HYDRANT (SEE CIVIL DWGS DWGS.)
	MANHOLE (SEE SITE SERVICES)
	CATCH BASIN (SEE SITE SERVICES)
	CURB RAMP (SEE CIVIL DWGS)

**NOTES**

- REFER TO CIVIL ENGINEERING DOCUMENTS FOR REMOVALS, GRADING, PAVING AND UNDERGROUND SERVICES.
- COORDINATE SITE PLAN WITH SITE SERVICE PLAN, GRADING PLAN, MECHANICAL AND ELECTRICAL SITE PLAN.
- CONTRACTOR TO SITE VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- CONTRACTOR TO REPAIR ALL GRASSED AREAS WITHIN CONSTRUCTION WORK AREA OR DAMAGED DURING CONSTRUCTION WITH SOD.



11/20/2016 10:51 AM C:\Users\jmc\Documents\Projects\StMichael\DWGS\SitePlan.dwg 11/20/2016 10:51 AM

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ISSUED FOR SITE PLAN APPROVAL  
2016-JUN-15  
ISSUED FOR TENDER  
2016-JUN-29



**St. Michael's Catholic School**

1830 Wildwood Drive, Bright's Grove ON

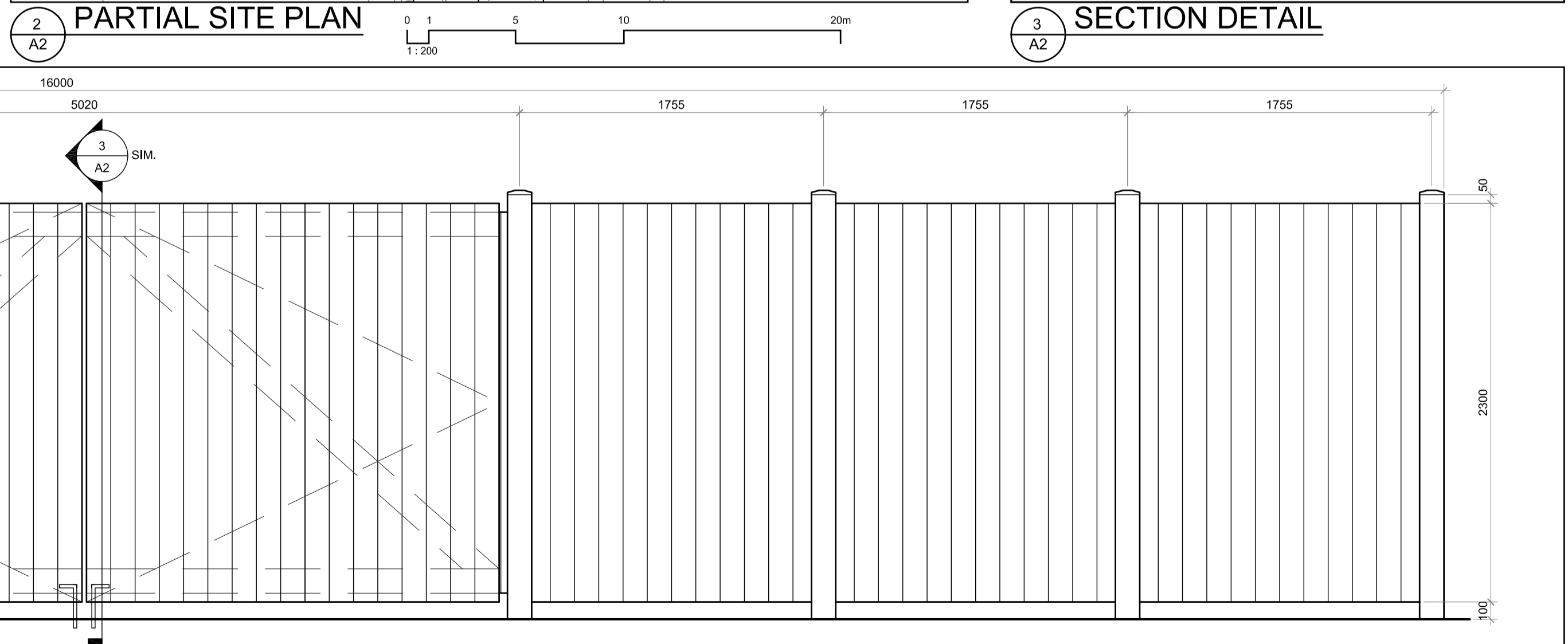
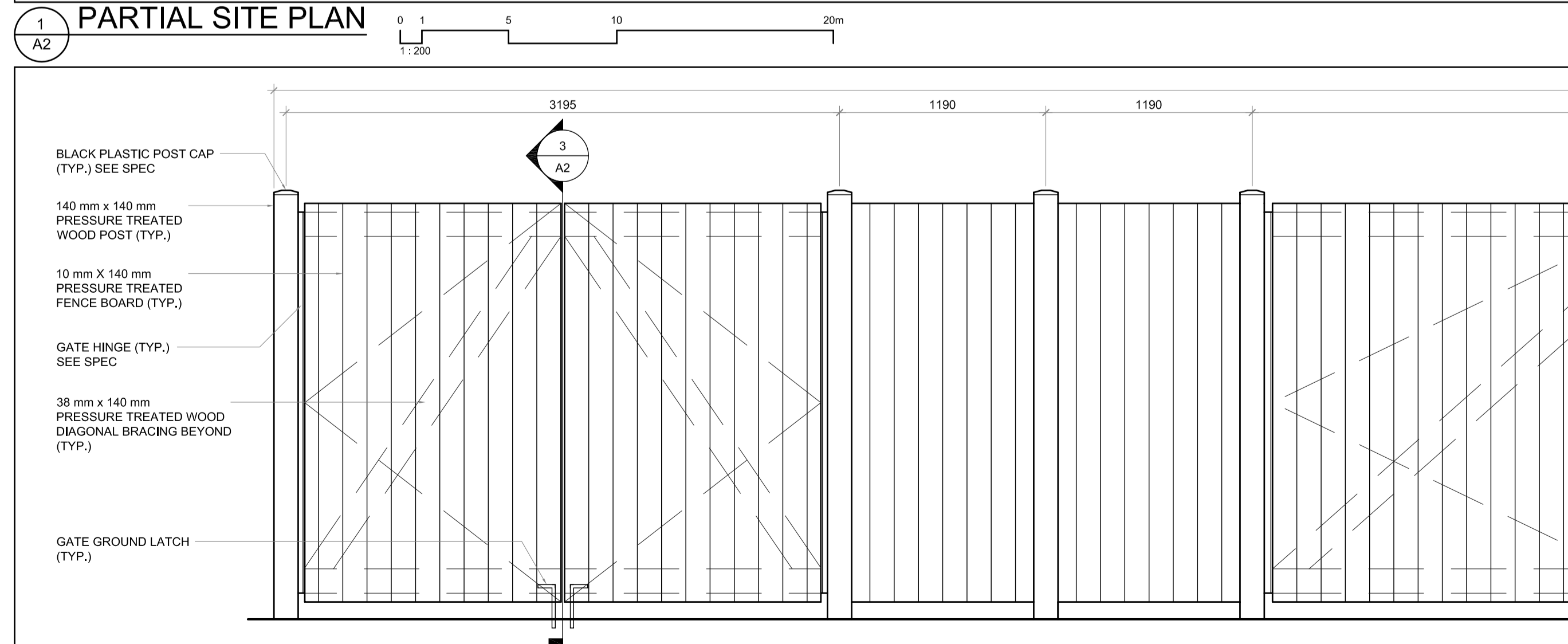
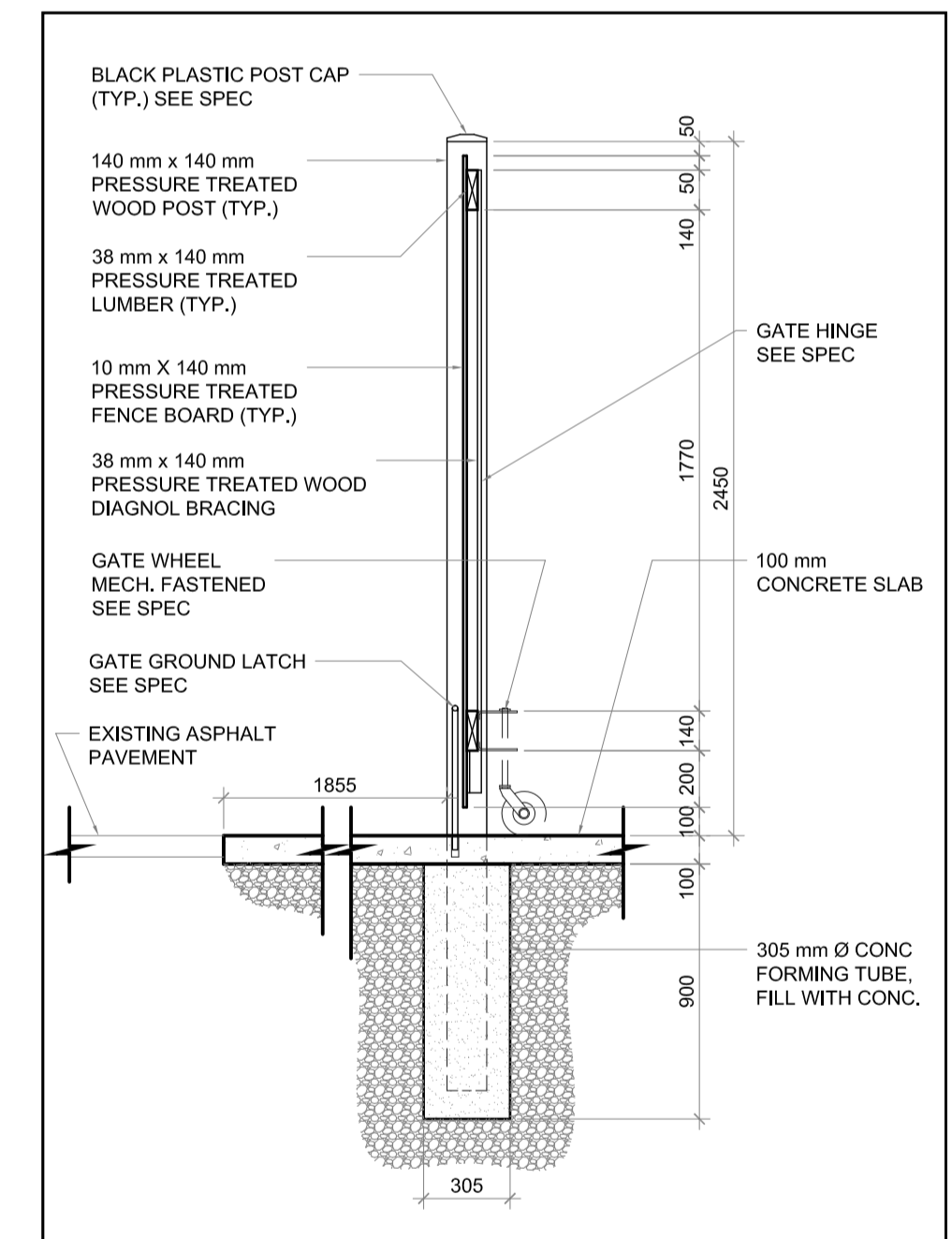
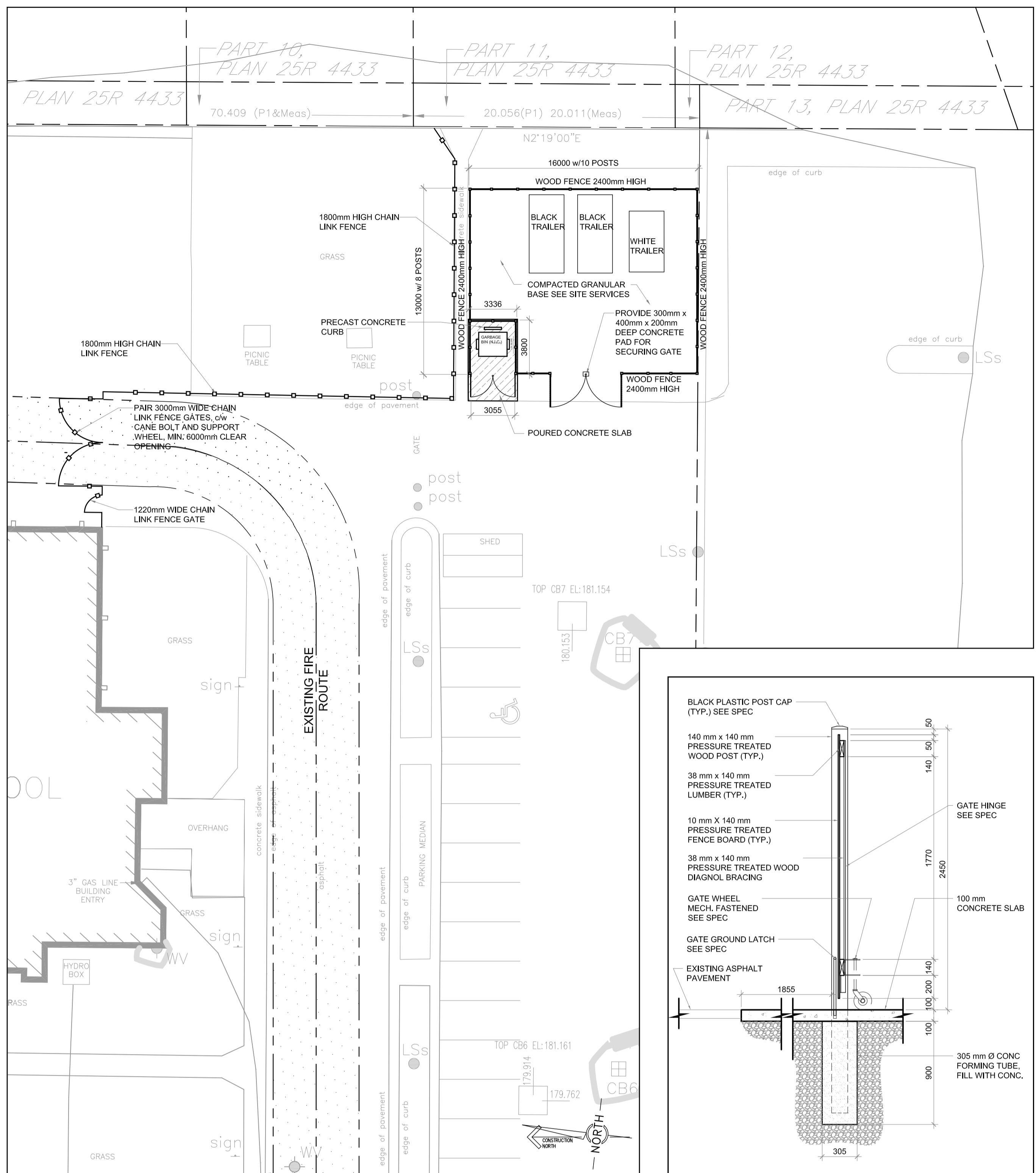
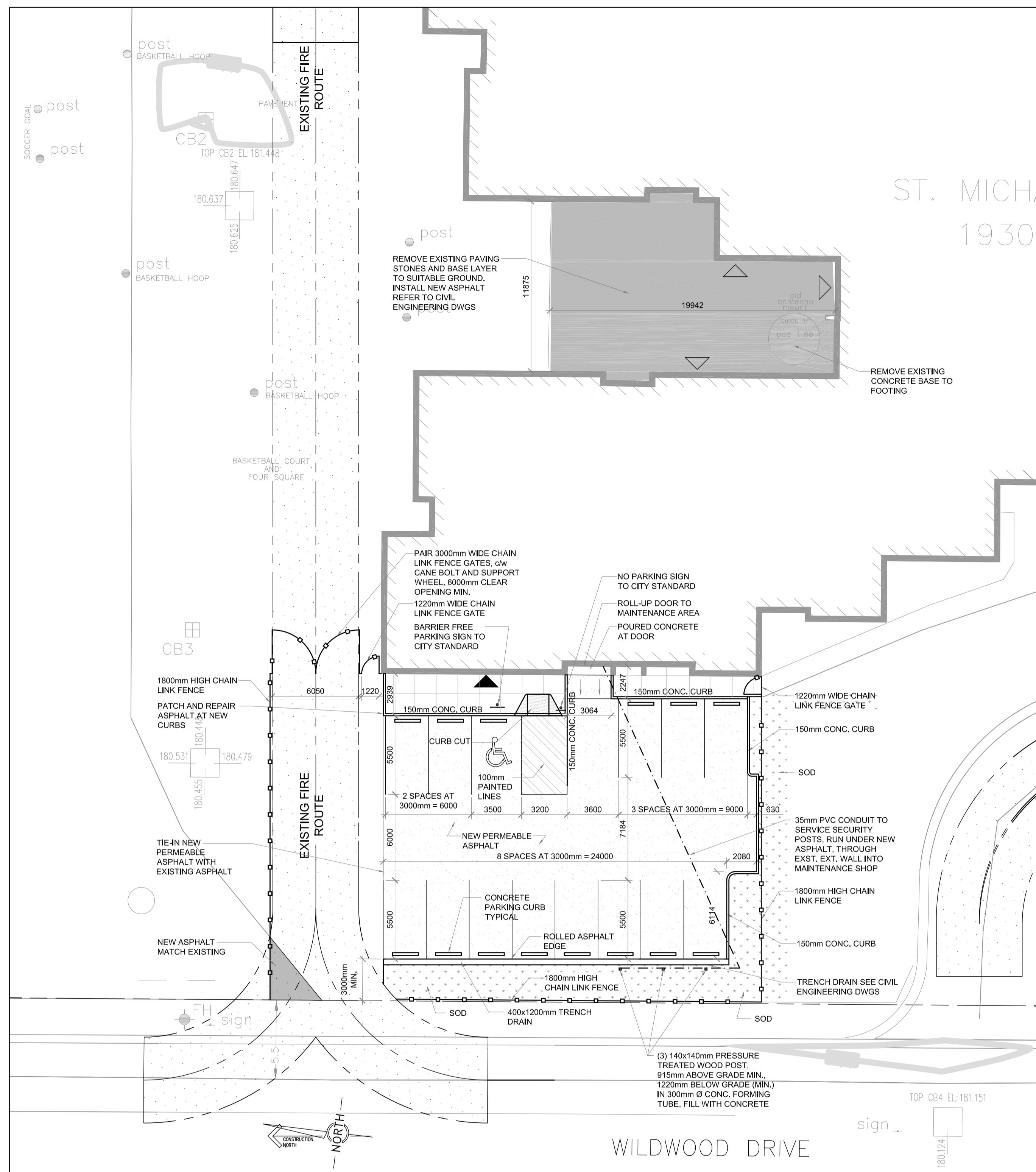
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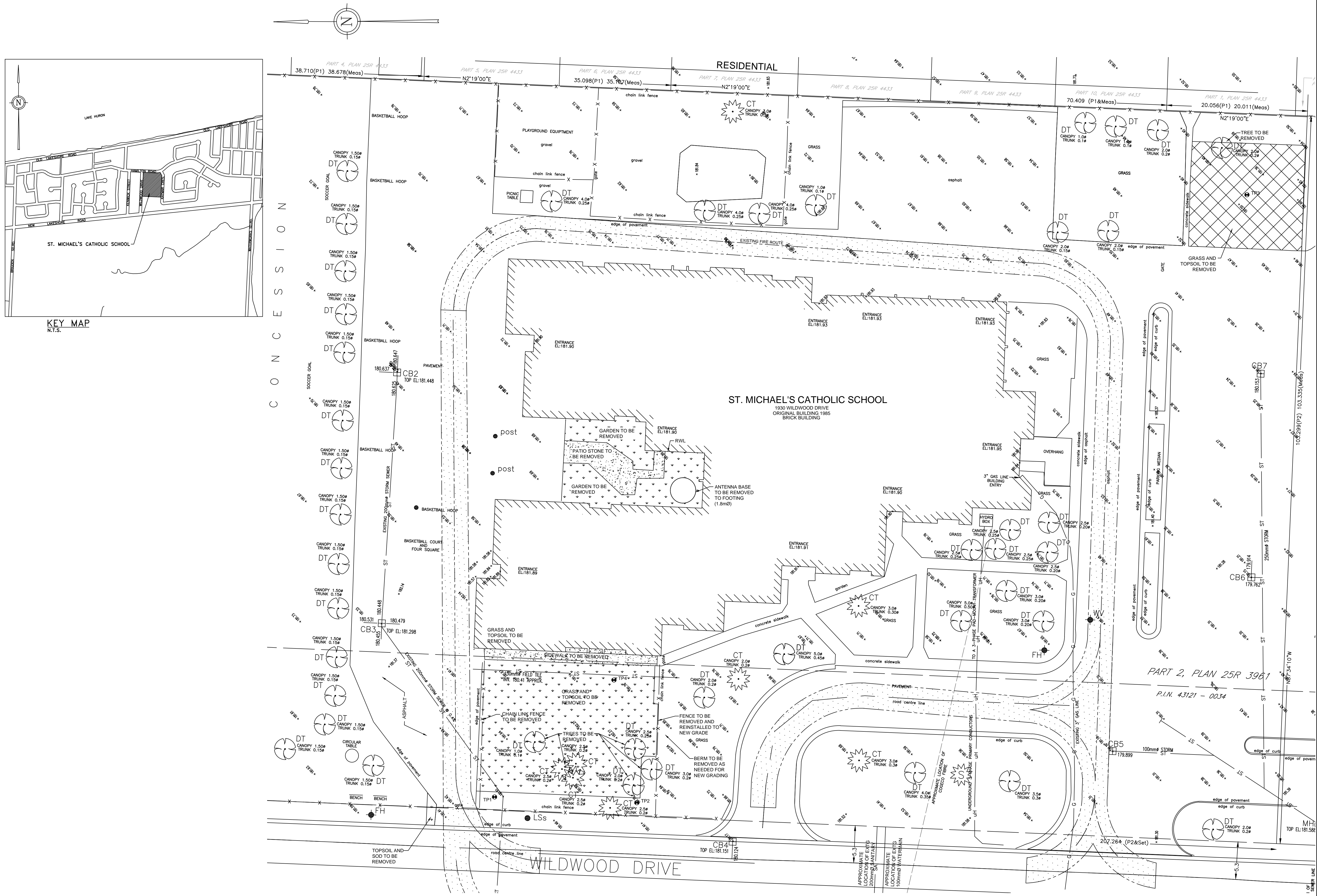
Drawn By: JNL

Revised: JUNE 2016



PARKING LOT EXPANSION  
OVERALL SITE PLAN

A1





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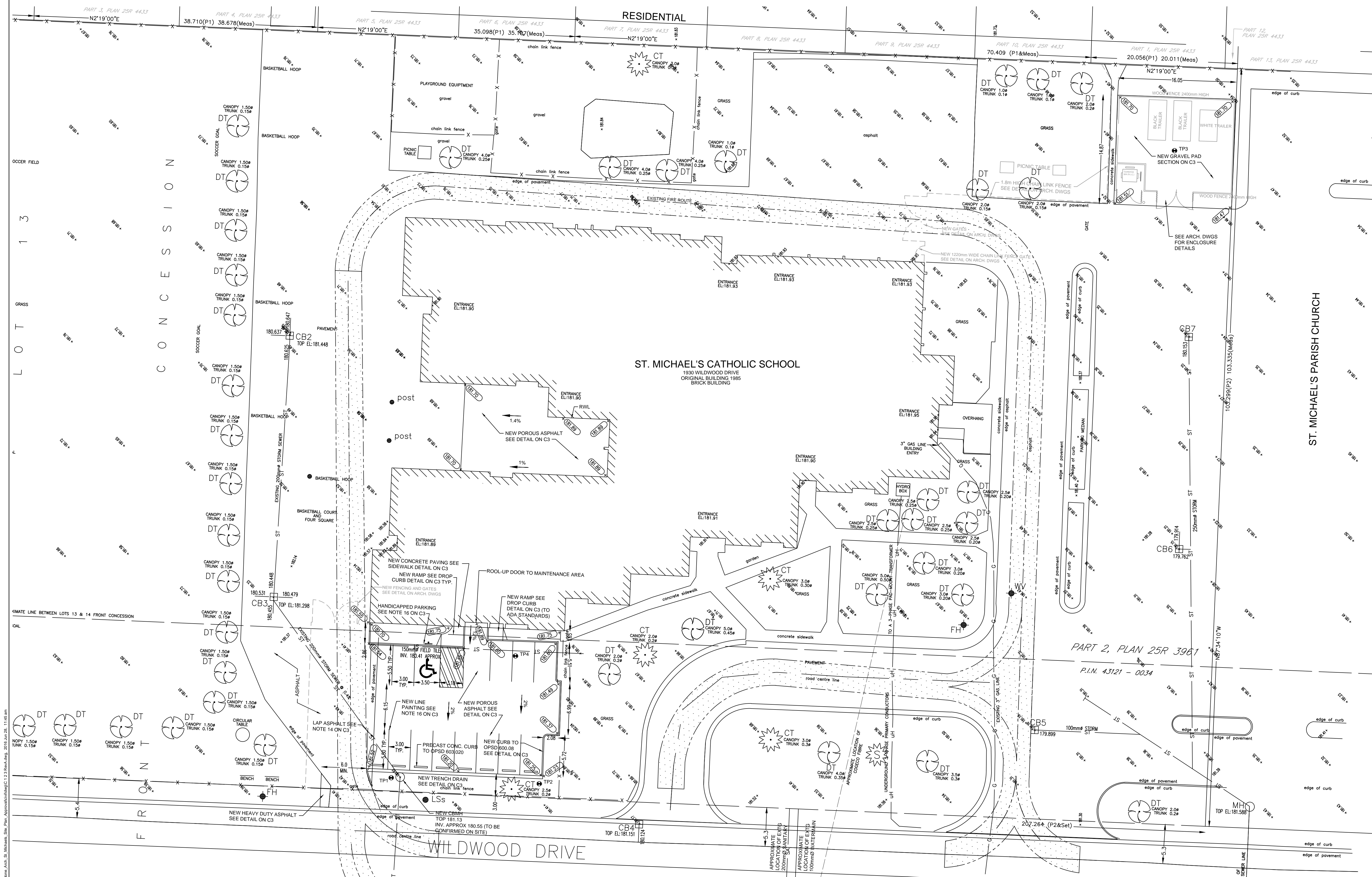
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 2016 JUN 29 ISSUED FOR TENDER

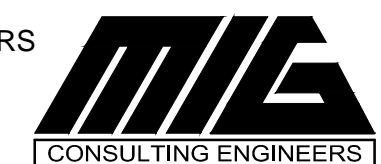


**St. Michael's Catholic School**  
 1930 Wildwood Drive, Bright's Grove ON  
 Project No.: PS  
 Drawn By: PS  
 Revised: JUNE 2016  
**EXISTING CONDITIONS AND REMOVALS**


C1



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PROJECT No. 10876

# St. Michael's Catholic School

1930 Wildwood Drive, Brights Grove ON  
 Project No.: PS  
 Drawn By: PS  
 Revised: JUNE 2016

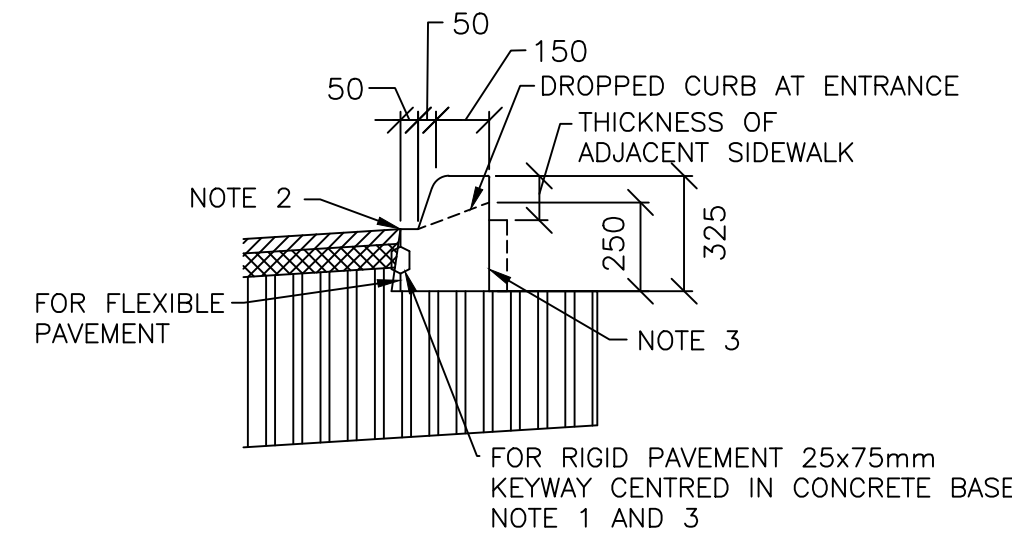
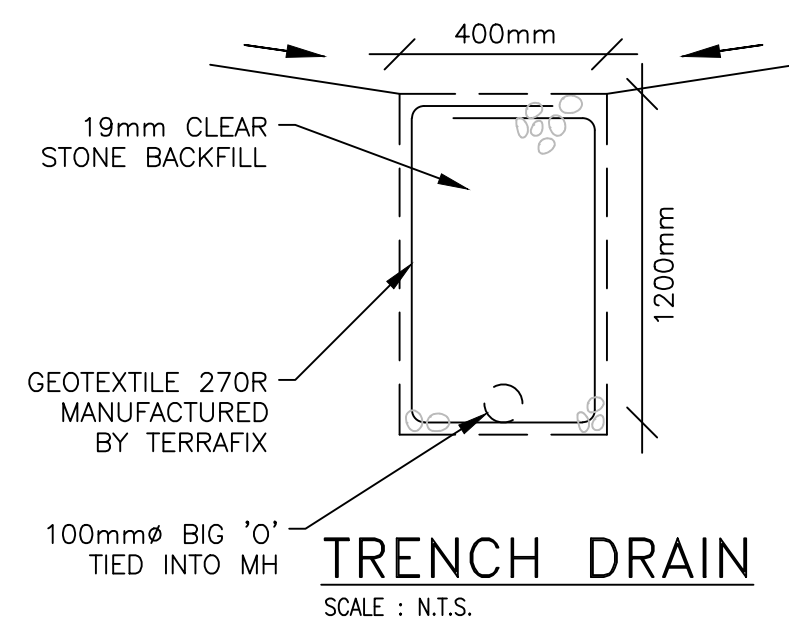
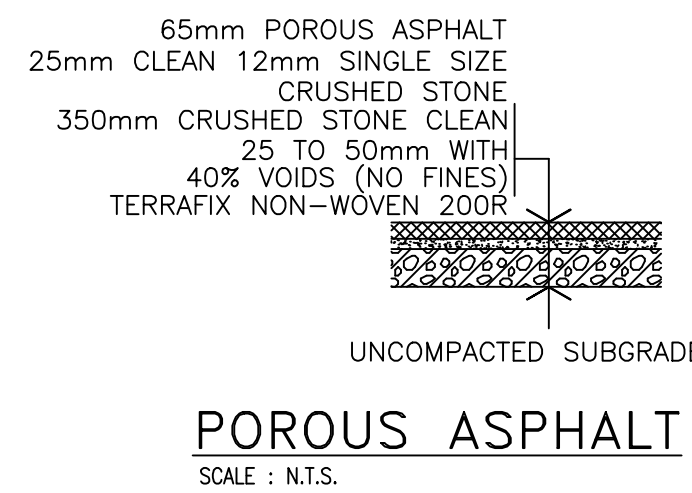
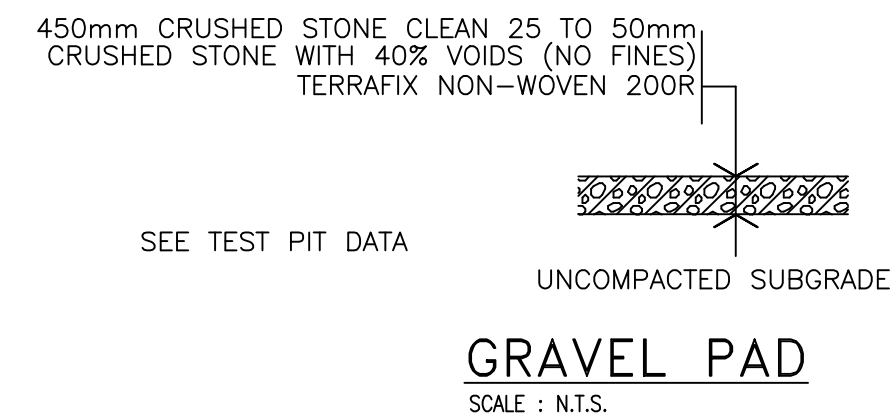
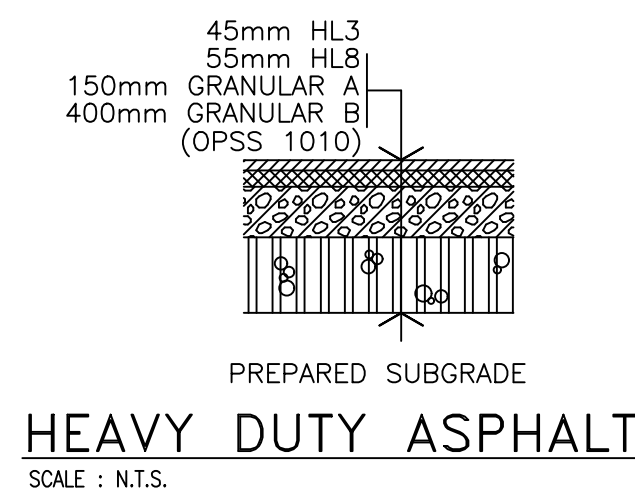
## SITE WORKS



ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

# CORNERSTONE ARCHITECTURE

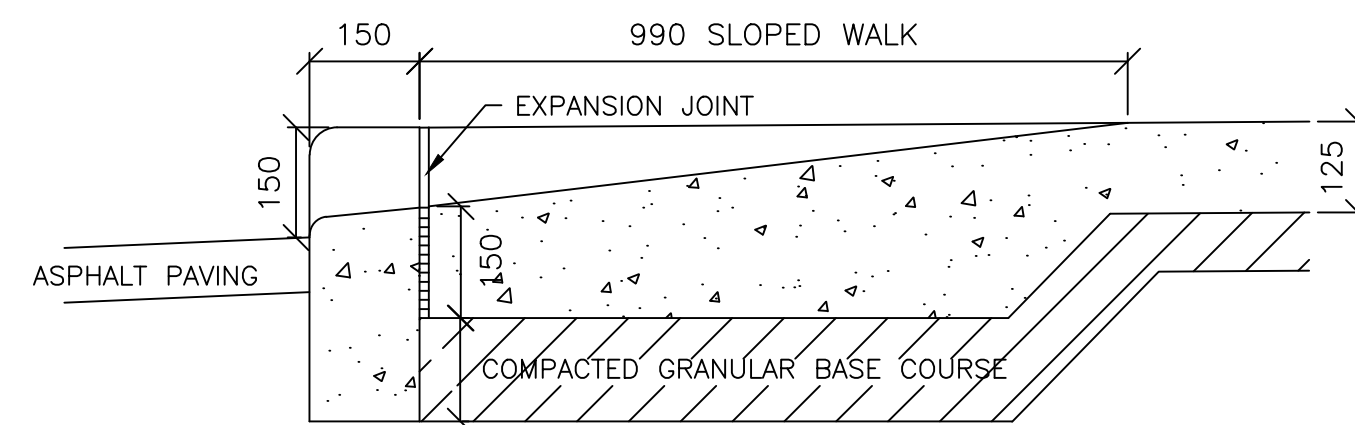
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**CONCRETE BARRIER CURB WITH NARROW GUTTER**

SCALE : N.T.S. AS PER OPSS 600.080

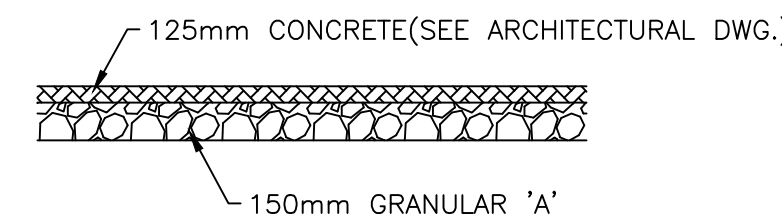
**CURB NOTES:**  
1 WHEN CURB AND GUTTER IS ADJACENT TO CONCRETE PAVEMENT OR BASE, THIS DRAWING IS TO BE USED IN CONJUNCTION WITH OPSS-552.010 AND 552.020.  
2 FLEXIBLE AND COMPOSITE PAVEMENT SHALL BE PLACED 5mm ABOVE THE ADJACENT EDGE OF GUTTER.  
3 FOR SLIPFORMING PROCEDURE, A 5% BATTER IS ACCEPTABLE.  
A TREATMENT AT ENTRANCES SHALL CONFORM WITH OPSS-351.010  
B OUTLET TREATMENT SHALL CONFORM WITH OPSS-610 SERIES.  
C THE LENGTH OF TRANSITION FOR ONE CURB TYPE TO ANOTHER SHALL BE 3.0m, EXCEPT IN CONJUNCTION WITH GUIDE RAIL, IT SHALL CONFORM TO OPSS-900 SERIES.  
D ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.



**DROP CURB**

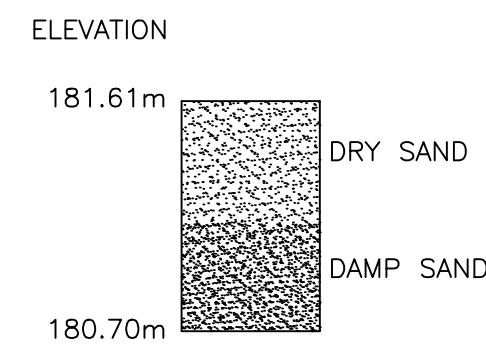
SCALE : N.T.S.

**CONCRETE NOTES:**  
1. STRUCTURAL CONCRETE TO BE 30 MPA STRENGTH @ 28 DAYS.  
2. CEMENT SHALL CONFORM TO CSA CAN3-A5 AND BE TYPE 10 NORMAL.  
3. CONCRETE & CONCRETING TO BE TO CAN/CSA A23.1/A23.2-04.  
CONCRETE COVER TO BE AS FOLLOWS: TOP & SIDES 38mm BOTTOM 75mm  
4. ALL CONCRETE (EXCLUDING MUDMATS AND INTERNAL FLOOR SLABS) SHALL BE AIR ENTRAINED WITH A TOTAL AIR CONTENT OF 6% +/- 1%  
5. REINFORCING STEEL SHALL BE NEW DEFORMED BARS, FREE FROM RUST, MUD, OIL OR OTHER BOND REDUCING COATINGS AND CONFORM TO CAN/CSA G30.18-M92(R1998) MINIMUM YIELD STRENGTH TO BE 400 MPA FOR MAIN BARS AND 300 MPA FOR TIES & STIRRUPS.  
6. MINIMUM SLS BEARING CAPACITY AT UNDERSIDE OF ANY FOUNDATION TO BE NOT LESS THAN 3000 PSF. (144 KPA)  
7. ANCHOR BOLTS TO BE "J" TYPE BOLTS AND BE TO ASTM 307 OR 300W THREADED ROD TO CAN/CSA G40.1-M98 UNLESS OTHERWISE SHOWN.  
8. FORMWORK AND REINFORCEMENT TO BE CHECKED AND APPROVED BY THE ENGINEER PRIOR TO POURING.

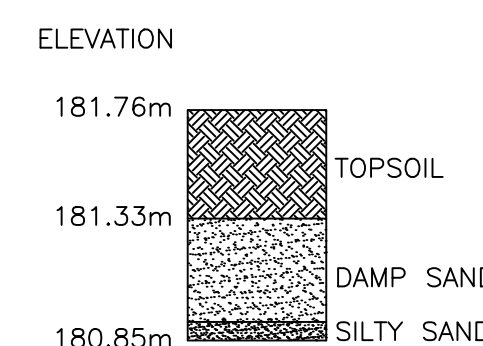


**CONCRETE PAVING DETAIL (SIDEWALK AREAS)**

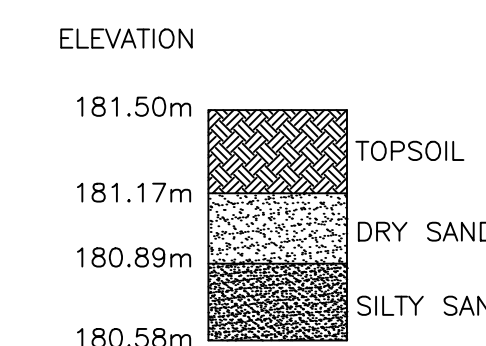
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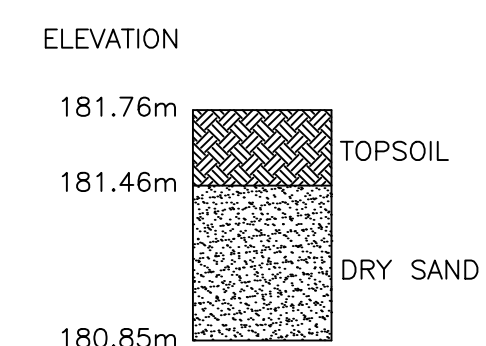
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SCALE : N.T.S.



**TEST PIT #2**  
SCALE : N.T.S.



**TEST PIT #3**  
SCALE : N.T.S.



**TEST PIT #4**  
SCALE : N.T.S.

FOR INFORMATION ON PERMEABILITY OF THE SOILS REFER TO REPORT PREPARED BY WILSON ASSOCIATES DATED JUNE 3, 2016

**GENERAL CONSTRUCTION NOTES**

- ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH CITY OF SARNIA STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION 2015.
- FOR MINIMUM MATERIAL AND CONSTRUCTION REQUIREMENTS FOR WORK ON CITY PROPERTY REFER TO THE CITY OF SARNIA STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION REVISED 2015.
- ALL WORK ON CITY PROPERTY SHALL BE DONE BY A CONTRACTOR THAT IS APPROVED BY THE CITY OF SARNIA.
- SHOULD THERE BE A CONFLICT BETWEEN THE REQUIREMENTS OF OPSS AND ANY OTHER QUOTED SPECIFICATION, THEN THE MOST STRINGENT WILL APPLY.
- WHERE A QUOTED SPECIFICATION REFERS TO A SPECIFICATION NOT LISTED ABOVE THEN SAID SPECIFICATION SHALL APPLY AS THOUGH IT WERE LISTED.
- THE GENERAL CONTRACTOR OR APPROPRIATE SUB-TRADE SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY OF SARNIA ENGINEERING DEPARTMENT AS WELL AS THE ENGINEERING CONSULTANT PRIOR TO COMMENCING ANY WORK ON THE CITY'S RIGHT OF WAY OR EASEMENT. NO WORK SHALL COMMENCE UNTIL SUCH NOTIFICATION HAS BEEN DONE. CONTACT MR. JAY VANVLYMEN AT 332-0330 EXT. 3282 AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE PLUMBING INSPECTOR FOR THE COUNTY OF LAMBTON AT 845-0801 SHALL ALSO BE CONTACTED AND GLEN HAMILL, COUNTY OF LAMBTON, PUBLIC WORKS DEPARTMENT AT (519) 845-0809 EXT 5250 IN ADVANCE OF WORK WITHIN THE COUNTY'S ROAD ALLOWANCE.
- THE CONTRACTOR IS REQUIRED TO SUBMIT TO THE CITY OF SARNIA ENGINEERING DEPARTMENT A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO TRAFFIC MANUAL BOOK #7. THE ENGINEERING DEPARTMENTS REVIEW IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH GENERAL CONCEPTS. THE REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR MEETING ALL REQUIREMENTS OF THE TRAFFIC CONTROL MANUAL.
- ALL WORK ON CITY PROPERTY SHALL BE COORDINATED WITH THE CITY'S ENGINEERING DEPARTMENT AND WILL REQUIRE FULL TIME INSPECTION BY THE CONSULTANT ON ALL UNDERGROUND SERVICING AND PART TIME ON OTHER WORK.
- ALL WORK ON CITY RIGHT OF WAY SHALL REQUIRE A ROAD CUT PERMIT. (\$125.00 FEE FOR 2016)
- EROSION/SILTATION CONTROL MEASURES**  
THE CONTRACTOR SHALL MAINTAIN THE FOLLOWING MEASURES ON SITE DURING CONSTRUCTION UNTIL SUCH TIME AS ALL ASPHALT PAVING AND LANDSCAPING WORKS ARE COMPLETED AND PERMANENT SOD HAS BEEN LAID:  
A) PROVIDE AND MAINTAIN A LIGHT DUTY SILT FENCE BARRIER TO OPSS 219.110 ALONG THE BOUNDARIES OF CONSTRUCTION  
B) PROVIDE AND MAINTAIN FILTER CLOTH BENEATH NEW CATCHBASIN COVERS TO PREVENT SILT ENTERING THE NEW STORM SEWERS UNTIL GRANULAR BASE IS COMPLETED AND READY TO RECEIVE ASPHALT PAVING.
- PRESERVE AND PROTECT ALL EXISTING FACILITIES IN ACCORDANCE WITH OPSS 504.
- REMOVE ALL DELETERIOUS MATERIALS FROM SITE AND DISPOSE OF OFF SITE IN ACCORDANCE WITH OPSS 180.
- ALL GRASSED AREAS ON THE CITY RIGHT OF WAY SHALL BE SOD ONLY.
- A MILLED 450mm WIDE BY 50mm DEEP LAPPED JOINT MUST BE PROVIDED WHERE NEW ASPHALT MEETS EXISTING ASPHALT. DENSOBOND BONDING AGENT MUST BE APPLIED TO ASPHALT JOINTS WITHIN THE ROW.
- THE ROAD MUST BE RESTORED IMMEDIATELY AFTER INSTALLATION OF SERVICES. IF IT IS NOT POSSIBLE THEN THE CONTRACTOR MUST IMMEDIATELY PROVIDE A TEMPORARY ASPHALT SURFACE 50mm THICK UNTIL PERMANENT RESTORATION CAN TAKE PLACE.
- PROVIDE TWO COATS OF LINE PAINTING. REFER TO SITE PLAN FOR LOCATION OF ALL PAINTED LINES. LINE PAINTING AS PER MTO STANDARDS. HANDICAPPED PARKING SYMBOLS TO CITY OF SARNIA STANDARDS WITH GLASS BEADS INBEDDED IN THE BLUE PAINT AND THE HANDICAPPED SYMBOL PAINTED IN THE SPACE. A HANDICAPPED PARKING SIGN SHALL BE PURCHASED FROM CITY OF SARNIA AND INSTALLED ON A POST OR WALL AT THE END OF THE SPACE.
- REPLACE SIDEWALK TO FIRST JOINT EACH SIDE OF DRIVEWAY ENTRANCES.
- MUD TRACKING SHALL BE PREVENTED ONTO EXISTING ROW'S AND ANY CLEAN UP REQUIRED SHALL BE PROVIDED AT THE CONTRACTORS EXPENSE. DUST CONTROL SHALL ALSO BE PROVIDED AT THE CONTRACTORS EXPENSE WHEN REQUIRED.
- THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING PRIOR TO BEGINNING ANY WORK ON SITE.
- SECURITY FENCING SHALL BE PROVIDED AROUND CONSTRUCTION AREAS AS REQUIRED BY THE MINISTRY OF LABOUR.
- FIRE ROUTE SIGNS SHALL BE PURCHASED FROM THE CITY OF SARNIA AND INSTALLED ON A POST OR WALL WHERE DESIGNATED ON THE DRAWING.

**SERVICING CONSTRUCTION NOTES**

- INSTALL ALL STORM SEWERS & SEWER CONNECTIONS AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH OPSS 407, 408, 410 & 516. ALL SERVICE CONNECTIONS SHALL BE MADE USING MANUFACTURED TEES. ALL CONNECTIONS TO NEW CHAMBERS SHALL INCORPORATE A MANUFACTURED RUBBER BOOT CONNECTION SUCH AS 'KOR-N-SEAL'.
- SINGLE INLET CATCH BASINS SHALL BE AS PER 705.010, FRAMES AND GRATES SHALL BE AS PER OPSS 400.02. DOUBLE CATCHBASIN OUTLETS SHALL BE AS PER OPSS 705.020.
- ALL MANHOLES TO BE BENCH AS PER OPSS 701.021.
- ANY EXISTING STORM/SANITARY LATERAL PROPOSED FOR REUSE MUST BE FLUSHED WITH HIGH PRESSURE WATER AND SHALL BE A MINIMUM DIAMETER OF 150mm AND CCTV CAMERA INSPECTED. THE CCTV INSPECTION IS TO BE REVIEWED BY THE CITY OF SARNIA ENGINEERING DEPARTMENT. USE OF THE EXISTING LATERAL SHALL BE AT THE DISCRETION OF THE CITY OF SARNIA ENGINEERING DEPARTMENT. IT IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER TO PROVIDE AND PAY FOR THE CCTV INSPECTION.
- ALL EXISTING SERVICES THAT ARE TO BE REMOVED OR ABANDONED MUST BE REMOVED OR ABANDONED AS PER CITY OF SARNIA STANDARD SPECIFICATIONS. WATER SERVICES THAT ARE TO BE REMOVED OR ABANDONED MUST BE TURNED OFF AND DISCONNECTED AT THE MAIN. ANY ABANDONED PIPING WITHIN THE ROW MUST BE REMOVED.

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**St. Michael's Catholic School**

1930 Wainwood Drive, Bright's Grove ON

Project No.: PS  
Drawn By: PS  
Revised: JUNE 2016

**NOTES AND DETAILS**

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**C3**

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