



Engineers

Town of Lunenburg

**Tender #TOL2024017
Duke Street Extension Reinstatement**

Intersection of Duke St. & Montague St.

**BID DOCUMENTS, TECHNICAL
SPECIFICATIONS, AND DRAWINGS**

Prepared for:

Town of Lunenburg
119 Cumberland Street P.O. Box 129
Lunenburg, NS B0J 2C0

Prepared by:

Read Jones Christoffersen Ltd.
17415 - 102 Ave NW, Suite #100
Edmonton, AB T5S 1J8

RJC No. EDM.137257.0002

May 2024 - Issued for Tender

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1.0 Drawings

The drawings listed below will be included in the General Contractor/Owner agreement and will become part of the contract.

Drawing No.	Drawing Title	Date
	Cover	May 24, 2024
R1.0	Site Plan and General Notes	May 24, 2024
R1.1	Plan – Existing Conditions and Demolition Requirements	May 24, 2024
R2.1	Plan – Restoration Requirements	May 24, 2024
R3.1	Sections and Details	May 24, 2024

END OF SECTION

1.0 Overview

In accordance with the Town of Lunenburg's procurement practices, this document package shall be considered supplementary to:

The Standard Specification for Municipal Services, issued by the *Joint Committee on Contract Documents* (JCCD) in association with the *Nova Scotia Road Builders Association* (NSRBA) and the *Consulting Engineers of Nova Scotia* (CENS).

Copies of The Standard Specifications are available from the JCCD located at:

18 Laurier Street
Dartmouth, NS B3A 2G7
P: (902) 233-9362
E: info@standardspec.ca

END OF SECTION

1.0 Instructions

- .1 Before submitting a bid, Bidders shall:
 - .1 Examine and read the Bid Documents thoroughly.
 - .2 Examine the site and ascertain the extent and nature of all conditions, limitations, or building regulations affecting the performance of the Work. The site is open and available for review by the Bidders during normal business hours. Coordinate site access through the Consultant.
 - .3 Confirm all utility services in the vicinity of the Work that will require protection and maintenance during the course of the Work.
 - .4 Consider the effect of regulatory requirements applicable to the Work.
 - .5 Study and correlate Bidder's observations with the Bid Documents. All dimensions are to be confirmed by on-site measurement by the Bidder.
 - .6 Immediately notify Consultant of all perceived omissions and discovered conflicts, errors, and discrepancies in the Bid Documents.
 - .7 Be satisfied that Bidder understands the Bid Documents and is competent to undertake and complete the Work.
- .2 Bid shall include cost of all permits required (including the building permit), royalties, freight, government duties, and taxes where applicable.
- .3 The Owner reserves the right to add or delete items to be performed under this Contract before and after the Contract is awarded without any penalty. Revisions to the Contract Price resulting from these deletions are to be solely based on the unit prices (or lump sum prices) quoted by the Bidder for those items.
- .4 The Bidder shall not engage in collusion of any sort and, in particular, shall ensure that no person or other legal entity other than the Bidder has an interest in the Bidder's bid. The bidder shall prepare the bid without any knowledge of, comparison of figures with, or arrangement with any other person or firm preparing a bid for the same work.

- .5 It is the Bidder's responsibility to provide all labour, material, equipment and supervision to complete the repairs outlined in these Bid Documents taking into account all site conditions, schedule and noise restrictions, work area restrictions, protection requirements, accessibility restrictions, etc. No extras will be entertained for inconveniences after award of the Contract.
- .6 If the Bidder is a joint venture, each party to the venture must execute the bid under seal in the manner appropriate to such party.

2.0 Site

- .1 The Work is to be performed at the Duke Street Extension pedestrian area located at the intersection of Duke Street and Montague Street in Lunenburg, Nova Scotia.

3.0 Contract Form

- .1 The Form of Agreement between the accepted Bidder and Owner is attached for information purposes only until execution of the Contract, as amended by Section 00 73 00 – Supplementary Conditions.

4.0 Owner

- .1 Owner: **Town of Lunenburg**
119 Cumberland Street P.O. Box 129
Lunenburg, NS B0J 2C0
- .2 Owner's Representative: Cali Beck, BBA, PCP, PSPP
Procurement Officer
Telephone: (902) 634-4410 x227
Email: purchasing@townoflunenburg.ca

5.0 Consultant

- .1 Consultant: Read Jones Christoffersen Ltd.
- .2 Consultant's Representative: Leigh Besanger, P.Eng.
Telephone: (780) 399-4576
Email: lbesanger@rjc.ca

6.0 Examination of Site

- .1 The onus shall be on the Bidders to investigate the project site and inform themselves before bidding of all physical and labour conditions and administrative practices prevailing at the project site.
- .2 The Bidder shall not claim at any time after the submission of their bid any misunderstanding of the terms and conditions of the Contract relating to the site conditions.
- .3 The Bidder shall make allowances as required for the installation of temporary exhaust, heating, and ventilators into and out of the work area. No extra for this item will be entertained after bids have closed.

7.0 Bid Submission

- .1 Completed Bid Forms with the required bid bond, consents of surety to provide project bonding, and all supplementary bid submission material shall be delivered in hard copy (1) to the Lunenburg Town Office no later than **2:00 pm AST on June 7, 2024** and addressed as follows:

Confidential: **Bid Submission: Tender #TOL2024017**

Bid For: **Town of Lunenburg**
119 Cumberland St. P.O. Box 786
Lunenburg, NS B0J 2C0

Attention: Cali Beck

- .2 Bidder's name shall be clearly identified on the reverse side of the envelope.
- .3 Bids will be opened in private at the Town office.
- .4 Fill out the provided Bid Form in ink or by typing and have Bid Form signed in longhand by a duly authorized company official and sealed with the Bidder's corporate seal.
- .5 The Bid Form shall not be altered and all spaces for information shall be completed.
- .6 E-mail, telephone, or facsimile bid proposals or bid modifications will not be considered.
- .7 The Owner and Consultant may, after bid closing time and before Contract award, require any Bidder to submit, in a form prescribed by or acceptable to the Consultant, supplementary information about any aspect of the Bidder's bid that, in the Owner or Consultant's opinion, is necessary for bid evaluation purposes.

8.0 Bonding Requirements

- .1 Any Reference to "Contract Price", with respect to any or all bonding requirements, refers to the largest Total Stipulated Contract Price of the alternatives.
- .2 Provide a certified cheque, money order, or bid bond bid deposit on CCDC Form 220 made payable to the Owner for 10% of the Contract Price.

9.0 Sufficiency of Bid

- .1 The submission of a bid shall constitute an incontrovertible representation by the Bidder that:
 - .1 The Bidder has complied with all bid requirements.
 - .2 The Bidder is qualified and experienced to perform the Work in accordance with the Bid Documents.
 - .3 The bid is based upon performing the Work in accordance with the Bid Documents, without exception.

- .4 The price or prices stated in the bid cover all the Bidder's obligations under the Contract and all matters and things necessary for the performance of the Work in accordance with the Bid Documents.

10.0 Bid Irregularities

- .1 At the discretion of the Owner, bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, or contain arithmetical errors, erasures, alterations, or irregularities of any kind may be accepted or declared informal.
- .2 At the discretion of the Owner, bids that fail to include or to comply with bid security, bonding, or insurance requirements may be accepted or declared informal.
- .3 Informal bids may or may not be considered at the sole discretion of the Owner.
- .4 The Owner may accept or waive a minor and inconsequential irregularity, or where practicable to do so, the Owner may, as a condition of bid acceptance, request a Bidder to correct a minor and inconsequential irregularity with no change in bid price.
- .5 The determination of what is or is not a minor and inconsequential irregularity, the determination of whether to accept, waive, or require correction of an irregularity, and the final determination of the validity of a bid shall be at the Owner's sole discretion.
- .6 Discrepancies between words and figures will be resolved in favour of words.

11.0 Bid Withdrawal and Acceptance

- .1 The Owner reserves the right to reject any or all bids as the interests of the Owner may require, without stating reasons for rejection.
- .2 The lowest or any bid will not necessarily be accepted.
- .3 A Bidder who has already submitted a bid may submit a further bid at any time up to the official closing time. The last bid that is received shall supersede and invalidate all previously submitted bids by that Bidder for this Contract.

- .4 A bid may be withdrawn at any time before the bid closing time, provided the request is in the form of a signed letter on company letterhead received in hard copy at the office of the Consultant before the bid closing time.
- .5 Withdrawn bids may be resubmitted in accordance with these bidding requirements providing the resubmitted bid is received at the office of the Consultant before the bid closing time.
- .6 A bid may not be withdrawn at or after bid closing time and shall be open to acceptance by the Owner until whichever of the following occurs first:
 - .1 Another Bidder has entered into a Contract with the Owner for performance of the Work.
 - .2 60 calendar days after the bid closing time.
 - .3 Bid is released or rejected.
- .7 The 60-day acceptance period commences at midnight on the date of bid closing and terminates at midnight of the 60th day thereafter. If the 60th day falls on a statutory holiday, the statutory holiday will be deleted from the computation.
- .8 The 60-day acceptance period may be extended at the Consultant's request and subject to the Bidder's written agreement to the extension.
- .9 In the case of an error in addition, the correct sum of the amounts shown for each bid item shall be deemed to be the total bid price regardless of the total amount submitted by the Bidder.
- .10 Evaluation of Bid:

In evaluating the bids, the Owner may consider any criteria, with such consideration to be exercised by the Owner in its sole discretion, including the following:

 - .1 Bid Contract Price as determined from the base bid or alternate bid.
 - .2 Owner's budget for the Work.
 - .3 Contract Time.
 - .4 Bidder's ability to effectively manage and perform the Work and work with other Subcontractors.

- .5 Bidder's understanding of the Work.
 - .6 Bidder's Unit Prices, Allowances, and Separate Prices, if applicable.
 - .7 Bidder's ability to present cost saving opportunities that may be appropriate and acceptable to the Consultant and Owner.
 - .8 Bidder's experience, competence, and past performance in undertaking similar work, as well as that of its Subcontractors.
 - .9 Bidder's financial strength and capability.
 - .10 Experience, qualifications, and abilities of Bidder's supervisory personnel.
 - .11 Aesthetic changes resulting from Bidder's proposed approach to the Work.
 - .12 Other criteria that the Owner, in its sole discretion, may consider appropriate to its evaluation.
- .11 Acceptance of Bid
- .1 The lowest or any bid need not be accepted by the Owner. The Owner reserves the right to accept or reject any or all bids at their sole discretion on any basis at any time without further explanation or to accept any bids considered advantageous to the Owner.
 - .2 The Bidder acknowledges and agrees that the Owner will not be responsible for any costs, expenses, losses, damages, or liabilities incurred by the Bidder as a result of or arising out of participation in this bid process, submission of a bid, or due to the Owner's acceptance or non-acceptance of the bid.
 - .3 The Owner may also elect not to proceed with the Project.

12.0 Addenda

- .1 Direct all questions in writing to the Owner.
- .2 Answers to queries are only binding when confirmed by written addenda.

- .3 Clarifications requested by Bidders must be submitted in writing to the Owner no less than two business days before the date set for receipt of the bids. Any reply will be in the form of an addendum, a copy of which will be forwarded to known Bidders before the date set for receipt of the bids.
- .4 Addenda may be issued by the Consultant during the bid period. Any addenda will be delivered by the Consultant via e-mail to all parties recorded by the Consultant as having received the Bid Documents.
- .5 All addenda become part of the Bid and Contract Documents and the costs arising from any addenda are to be included in the bid price.
- .6 Each Bidder shall ascertain before bid submission that all addenda issued by the Consultant have been received and the Bidder shall indicate in the Bid Form the addendum number(s) of all addenda received.

13.0 Construction Schedule

- .1 Schedule requirements are outlined in General Conditions, as amended by Section 00 73 00 - Supplementary Conditions and Supplementary Specification Section 01 10 01: General Requirements.

14.0 Alternative Materials or Equipment

- .1 A base bid submission is to include only approved and/or specified products and methods of construction.
- .2 Alternative materials or equipment will be considered provided requests for approval have been submitted to the Owner and Consultant.
- .3 If a Bidder wants to submit substitutes to the material, equipment, or workmanship specified or indicated, they may include the substitutes as an unsolicited alternative, and this shall be stated as such in the Alternate Prices section of the Bid Form.

15.0 Alternate Bids

- .1 A Bidder may, at the Bidder's discretion, submit an alternate bid ("Alternate Bid") that varies in some manner from the Bid Documents.
- .2 Alternate Bids may only be submitted in addition to, and not in substitution of, a bid that complies with the requirements of the specifications and drawings (the "Base Bid").

- .3 Products or systems identified in an Alternate Bid that vary from the products or systems described in the Bid Documents do not require pre-approval by the Consultant or Owner. An Alternate Bid should contain sufficient description and identification of any such varying products or systems to permit evaluation and review by the Consultant and the Owner.

16.0 Qualifications

- .1 Bidders shall be actively engaged and experienced in the type of work required by these Bid Documents and the Bidder shall provide, on request, a statement of similar work performed by those persons.
- .2 Submit a resume of key project personnel with the bid.

17.0 Damages Due to Delay in Work Schedule

- .1 If the area of the work is not available for occupancy by the Owner after the date for Substantial Performance of the Work outlined in the Agreement and as modified by Change Order, the Contractor will be responsible for all damages in accordance with the General Conditions.

18.0 Third Party Liability Claims

- .1 In accordance with the General Conditions, the Owner may withhold total or partial payments after Contract award to cover third party liability claims for damages. Withheld payment amounts will be used by the Owner to cover third party liability claims for property damage when there is a dispute between the Owner and Contractor regarding responsibility for the claim. These funds are intended to ensure that third parties receive compensation promptly.
 - .1 Payments to the third party are to be released immediately and unresolved disputes with respect to the responsibility of the claim shall be settled prior to Project total completion.
 - .2 Receipts for payments to cover third party liability claims for damages shall be provided to the Contractor before Project total completion.

END OF SECTION

PROJECT: **#TOL2024017**
2024 Duke Street Extension Reinstatement

DATE: _____

SUBMITTED BY: _____
(Company Name)

OF: _____
(address) *(telephone)*

To: **Town of Lunenburg**
119 Cumberland St. P.O. Box 129
Lunenburg, Nova Scotia
B0J 2C0

1.0 Contract Price

1.1 Having examined the project site, and having carefully examined the General Conditions of the Standard Specification for Municipal Services, as amended by Section 00 73 00 - Supplementary Conditions, the Specifications, Drawings, and schedules, including Addenda ___ to ___ issued as supplements thereto, and having examined and complied with Section 00 21 00 - Instructions to Bidders, we hereby offer to perform the Work set forth in the aforesaid documents for the Contract Price of:

Contract Price	\$ _____
HST	\$ _____
Contract Price including HST	\$ _____

2.0 Identified Price Breakdown

The Owner reserves the right to add or delete any item(s) to be performed under this Contract before and/ or after the Contract is awarded without penalty. Any revisions to the submitted Contract Price as a result of these deletions are to be solely based on the unit prices (or lump sum prices) quoted by the Contractor for those items.

The following identified prices **are included** in the Contract Price. The Contract Price shall include the total of all the separate Bid Form Items and shall include all work as described in these Documents.

.1 Contract Lump Sum Price Items

Where the items are indicated as Lump Sum (LS) and a quantity is indicated, this quantity is for guidance of the Contractor only. The Owners and Consultant assume no responsibility for the accuracy of this quantity. The Contractor shall confirm the actual quantities by site measurement prior to bidding. No quantity measurement will be made and no adjustment to Lump Sum price will be made as a result of any quantity variation.

The Lump Sum (LS) amount for Mobilization, Miscellaneous Overheads, and Special Costs is to include the following:

- Cost of mobilization and demobilization
- Cost of traffic control barriers, hoarding, and signs as required
- Cost of protection of existing utilities as required
- Cost of any protection of the public not specifically described under any other pay item
- Cost of all permits **(including building and development permits)**, royalties, freight, and government duties.

The cost of all general site overheads not named above are to be distributed to the various pay items in a balanced manner.

.2 Work Items Not Specified on Bid Form

The identified items listed on the Bid Form include all costs associated with that item. In the event that particular items are deleted from the Contract, the price for those items noted on the Bid Form represents the credit to the Contract. If there is an item or portion of the work that a bidder feels is not adequately covered in the separate bid items listed on the Bid Form, the bidder shall identify that item and its associated cost separately as part of the Bid Form.

ITEM	SPEC NO.	DESCRIPTION	CONTRACT PRICE
2.1	Div. 01	Bonding	LS \$ _____
2.2	Div. 01	General Requirements, Mobilization, Demobilization, Special Costs, etc.	LS \$ _____
2.3	Div. 01	Cleaning	

ITEM	SPEC NO.	DESCRIPTION	CONTRACT PRICE
	.1	Cleaning and disposal of all waste products and/or debris generated by construction activity, as well as any material present in work area prior to commencement of work.	LS \$ _____
2.4	Div. 03&05	Handrail Restoration	
	.1	Remove and dispose of existing handrails where indicated on the drawings. Construct new handrails, including all required concrete curbs, piers, footings and associated anchoring. Handrails to be CSA G40.21 Grade 44W/300W, primed and painted in shop.	LS \$ _____
2.5	Div. 32	Stone Retaining Wall Repairs	
	.1	Localized re-establishment of stone retaining wall structures as indicated on the drawings. Includes new geotextile, granular backfill materials, and blasted granite spalls where required.	LS \$ _____
2.6	Div. 32	Brick Paving Repairs	
	.1	Localized removal and replacement of damaged bricks with new. Includes re-establishing bedding materials and new geotextile where required.	LS \$ _____
2.7	Any additional item(s) not specified in BID FORM, which are specified in the Contract, that the Contractor would like to specifically designate in BID FORM. (Indicate: - Description of Work Item - Quantity (if applicable) - Unit Cost with '*' - Lump Sum Cost with 'LS')		
	.1	_____	\$ _____
	.2	_____	\$ _____

ITEM	SPEC NO.	DESCRIPTION	CONTRACT PRICE
	.3	_____	\$ _____
	.4	_____	\$ _____
2.8		CONTRACT PRICE	\$ _____
2.9		HST (15%)	\$ _____
2.10		CONTRACT PRICE INCLUDING HST	\$ _____

3.0 Schedule of Hourly Rates

The following schedule of hourly rates shall be used to modify the Contract amount for Owner directed Changes to the Work and for the purposes of evaluating time and material changes. Additional services shall not commence without the Owner’s prior written approval, and the Owner must approve any claim for such additional service in writing.

ITEM	DESCRIPTION	UNIT	UNIT PRICE (REGULAR TIME)	UNIT PRICE (OVERTIME)
3.1	Project Manager	Per hour	\$ _____	\$ _____
3.2	Site Superintendent	Per hour	\$ _____	\$ _____
3.3	Foreperson	Per hour	\$ _____	\$ _____
3.4	Construction Labourer	Per hour	\$ _____	\$ _____
3.5	Rough Carpenter	Per hour	\$ _____	\$ _____
3.6	Concrete Worker	Per hour	\$ _____	\$ _____
3.7	Welder/Fabricator	Per hour	\$ _____	\$ _____

4.0 Subcontractors

4.1 We submit a complete list of subcontractors we propose to use on this Contract and the Sections of the Work to be done by them.

- 4.2 We reserve the right to substitute another Subcontractor for the same work in the event that a subcontractor should withdraw its bid or become bankrupt. All subcontractor substitutions are subject to the Owner's approval.
- 4.3 Any such substitution, in order to be considered for approval by the Owners and/or Consultant, is contingent on the submission of conclusive evidence of withdrawal, bankruptcy, or unsatisfactory performance.
- 4.4 The Contractor is responsible for all costs incurred as a result of substituting one subcontractor for another.
- 4.5 Bid may not be considered unless the names of all subcontractors are listed in space provided.

SECTION	TITLE	SUBCONTRACTOR

- 4.6 The following is a list of the sections of the Work that we propose to execute with our own forces:

SECTION	TITLE

5.0 Bid Deposit and Agreement to Bond

- 5.1 Attached is our Bid Security in the amount of 10% of the Tender Price and an agreement to provide all bonds requested in Bid Documents.
- 5.2 We agree to furnish Bonds in accordance with the General Conditions as amended by the Supplementary Specifications of this Contract within 14 days of Contract execution.

6.0 Acceptance

- 6.1 This Bid is irrevocably open to acceptance for a period of 60 days from the date of bid closing and is promised in consideration of the amount of 10% of the bid (we attach a Bid Security). Failure to enter into a contract after Owner's acceptance of this bid shall result in forfeiture of the Bid Security.
- 6.2 We agree to enter into a contract with the Owner in accordance with the Standard Specification for Municipal Services as amended by this Bid Document, within five days of written notification of acceptance of this Bid.
- 6.3 We understand and agree that this bid may be adjusted in accordance with any or all of the separate or additional prices submitted herewith.
- 6.4 We understand that submission of this bid implies acceptance of the existing conditions at the site.
- 6.5 We understand that the lowest or any tender will not be necessarily be accepted and that selected items may be deleted from the Project as represented in the Bid Form.
- 6.6 We understand that the Owner reserves the right to waive minor defects or irregularities in the bid submission.
- 6.7 We understand that the Owner may withhold total and partial payment to cover third party liability claims as outlined in Tender Documents.
- 6.8 We agree to staff on-site activity on the specified start date (to be confirmed with Owner) or within five days of Award of Contract. We agree to complete the Work by the specified completion date as outlined in these specifications.
- 6.9 We understand that Contract time is of the essence and that any improvements to the schedule submitted with our bid will be considered prior to Contract award. We therefore submit the following improvement to the completion date indicated in the tender package for consideration in evaluating our Bid _____ .

7.0 Bidder's Signature and Company Seal

Bidder: _____
(Company Name)

Signature _____
(Authorized Officer)

Signature _____ *(Seal)*
(Authorized Officer)

Date _____

END OF SECTION

This Agreement made on the ____ day of _____, 2024.

BY AND BETWEEN

Town of Lunenburg

hereinafter called the “Owner”

and

[Contractor]

hereinafter called the “Contractor”

The Owner and the Contractor agree as follows:

ARTICLE A1 – THE WORK

The Contractor shall:

.1 Perform the Work required by the Contract Documents for

Duke Street Extension Reinstatement

located at Lunenburg, Nova Scotia

For which the Agreement has been signed by the parties, and for which

Read Jones Christoffersen Ltd.

is acting as and is hereinafter called the “Engineer”

and

.2 do and fulfill everything indicated by this Agreement, and

- .3 commence the Work by the _____ day of _____ in the year _____ and attain Substantial Performance of the Work by the ____ day of _____ in the year _____ and Total Performance of the Work by the ____ day of _____ in the year _____ (as applicable and per the Contract).

ARTICLE A2 – AGREEMENTS AND AMENDMENTS

This Contract supersedes all prior negotiations, representations and agreements, either written or oral, relating in any manner to the work, including the bidding documents that are not expressly listed in Article A3 of the Agreement.

ARTICLE A3 – AGREEMENTS AND AMENDMENTS

The following is an exact list of the Contract Documents referred to in Article A1.1 of this Agreement and as defined in subsection 6 of Section 00 71 00 DEFINITIONS. This list is subject to subsequent amendments in accordance with the provisions of the Contract Documents.

- .1 Standard Specifications for Municipal Services.
- .2 Section 00 20 00 - Overview
- .3 Section 00 21 00 - Instructions to Bidders
- .4 Section 00 41 00 - Bid Form
- .5 Section 00 73 00 - Supplementary Conditions
 - .1 Including the following Supplementary Specification Sections:
 - .1 01 10 00 – General Requirements
 - .2 03 30 00 – Cast-in-Place Concrete
 - .3 05 52 00 – Metal Railings
 - .4 34 14 00 – Brick Unit Paving
 - .5 32 32 00 – Stone Retaining Wall Repair
- .6 Drawings, as outlined in Section 00 01 15 - List of Drawings.

ARTICLE A4 – CONTRACT PRICE

- .1 The Contract Price is the sum of the Lump Sum Prices in the Bid Form excluding the amount of Harmonized Sales Tax.

- .2 The Estimated Contract Prices is \$ _____
- .3 All amounts shall be in Canadian funds.
- .4 The amounts shall be subject to adjustments as provided in the Contract Documents.

ARTICLE A5 – PAYMENT

- .1 The Owner shall pay the Contractor in Canadian funds for the performance of the Contract.
- .2 The Owner shall make monthly payments on account to the Contractor for the Work performed, as certified by the Engineer, subject to 10% holdback.
- .3 The amount of the monthly payments shall be calculated as follows:
 - .1 The quantity for each pay item on which actual work has been performed shall be measured.
 - .2 For each Lump Sum Item, multiply the percent complete by the value of the Lump Sum Item.
 - .3 The total value of work completed for the payment period shall be calculated by adding the total for all pay items from 3.2 of this Article.
 - .4 The amount of the monthly payment shall be determined by deducting the 10% holdback and the total of all previous payments from the total value of such completed work as determined under 3.3 of this Article.
 - .5 To the amount calculated above, the Harmonized Tax will be added.
- .4 Upon Substantial Performance of the Work as certified by the Engineer, the Owner shall pay to the Contractor the holdback monies then due in accordance with the provisions of Section 00 72 45 – General Conditions, subsection GC5.8 – PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK.

- .6 Upon the issuance of the final certificate for payment as certified by the Engineer, the Owner shall pay to the Contractor the balance of monies then due in accordance with the provision of Section 00 72 54 – General Conditions, subsection GC5.10 – FINAL PAYMENT.
- .7 In the event of loss or damage occurring where payment becomes due under the property and boiler insurances policies, payment shall be made to the Contractor in accordance with the provisions of Section 00 72 45 – General Conditions, subsection GC11.1 – INSURANCE.

ARTICLE A6 – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

- .1 Notices in writing will be addressed to the recipient at the address set out below.
- .2 The delivery of a Notice in Writing will be by hand, courier, prepaid first class mail, facsimile or e-mail.
- .3 A Notice in Writing delivered by one party in accordance with this Contract will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it shall be deemed to have been received (5) working days after the date on which it was mailed.
- .4 A Notice in Writing sent by facsimile or e-mail shall be deemed to have been received on the date of its transmission provided that such day is a Working Day or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it shall be deemed to have been received at the opening of business at the place of receipt on the first Working Day next following the transmission thereof.
- .5 An address for a party may be changed by Notice in Writing setting out the new address delivered to the other party in accordance with this Article.
 - .1 The Owner at 119 Cumberland Street, P.O. Box 129, Lunenburg, NS B0J 2C0
 - .2 The Contractor at _____
 - .3 The Engineer at 17415 102 Ave NW #100, Edmonton, AB T5S 1J8

ARTICLE A7 – LANGUAGE OF THE CONTRACT

This Agreement is drawn in English at the request of the parties hereto.

ARTICLE A8 – SUCCESSION

The aforesaid Contract Documents are to be read into and form part of the Agreement and the whole shall constitute the Contract between the parties and subject to law and the provisions of the Contract Documents shall inure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors and assigns.

ARTICLE A9 – RIGHTS AND REMEDIES

No action or failure to act by the Owner, Engineer, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

ARTICLE A10 – TIME

Time shall be construed as being the essence of the Contract.

In witness whereof the parties hereto have executed this Agreement and by the hands of their duly authorized representatives.

SIGNED AND DELIVERED

In the presence of:

OWNER

Town of Lunenburg

Name of Owner

Witness

Signature

Date

Witness

Signature

Name and Title of Person Signing

CONTRACTOR

Name of Contractor

Witness

Signature

Name and Title of Person Signing

Date

Witness

Signature

Name and Title of Person Signing

Date

N.B. Where legal jurisdiction, local practice or Owner or Contractor requirements calls for proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution name the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership.

END OF SECTION

1.0 INTENT OF SUPPLEMENT

- .1 Construct Work of this Contract in accordance with the Standard Specification for Municipal Services, published by the Joint Committee on Contract Documents (JCCD) in association with the Nova Scotia Road Builders Association (NSRBA) and the Consulting Engineers of Nova Scotia (CENS).
- .2 These Supplementary Specifications take precedence over the sections of Standard Specification for Municipal Services indicated.
- .3 Standard Specification for Municipal Services sections are modified in this supplement as follows:

2.0 SUPPLEMENTARY DEFINITIONS

Definitions used in the Standard Specification for Municipal Services as copied from CCDC18, are hereby amended as follows, and wherever the Definitions are referred to in the *Contract Documents*, it shall be understood that such reference means as amended by these Supplementary Definitions.

- .1 Consultant: Add the following sentence to the end of the definition:
“The term *Consultant* means the *Consultant* or the *Consultant's* authorized representative.”
- .2 Contract Time: Delete the following words:
“the time from commencement of the *Work* to the date of *Ready-for-Takeover*”
- .3 Contractor: Add the following sentence to the end of the definition:
“The term *Contractor* shall be defined as the *Contractor* or the *Contractor's* authorized representative, but does not include the *Consultant*.”
- .4 Dictionary: Add the following new definition:
“In case of dispute, The Concise Oxford Dictionary of Current English (current edition) shall prevail, except for those definitions given in Standard Specification for Municipal Services and in various other places in the Contract Documents.”

- .5 Owner: Add the following sentence to the end of the definition:
- “The term *Owner* shall be defined as the *Owner* or the *Owner's* authorized representative, but does not include the *Consultant*.”
- .6 Standard Specification: Add the following new definition:
- The Standard Specification consists of Definitions, General Conditions, Supplementary General Conditions, Measurements and Payment, General Requirements, other technical specifications and standard details contained within the Standard Specification for Municipal Services, as issued by the Joint Committee of Contract Documents.
- .7 Substantial Performance of the Work: Add the following sentence to the end of the definition:
- “If such legislation is not in force or does not contain such definition at the *Place of the Work*, *Substantial Performance of the Work* shall have been reached when the *Work* is ready for use or is being used for the purpose intended and is so verified by the *Consultant*.”
- .8 Supplementary Specifications: Add the following new definition:
- Supplementary Specifications consist of the specifications for a specific project which amend or add to the Standard Specification.
- .9 Total Performance: Add the following new definition:
- “With the exception of warranty obligations, *Total Performance* of the *Work* shall be achieved when the *Contractor* has fulfilled the requirements of the *Contract* in their entirety, including issuance of the Occupancy / Closeout Permit by the Authority having Jurisdiction if applicable; and is so verified by the *Consultant* through issuance of the final Certificate for Payment in accordance with GC 5.5.”
- .10 Total Performance Date: Add the following new definition:
- “The date in which *Total Performance* has been scheduled and/or attained by the *Contract*.”

3.0 SUPPLEMENTARY CONDITIONS

The General Conditions of the Standard Specification for Municipal Services as copied from CCDC18 are hereby amended as follows and wherever the General Conditions are referred to in the *Contract Documents*, it shall be understood that such reference means as amended by the Supplementary Conditions.

3.1 GC 1.1 Contract Documents

- .1 Paragraph 1.1.7.5: Add the following new paragraph:

“Notwithstanding the other clauses in Subsection 1.1.7, any permits or directives issued by the Nova Scotia Environment, Nova Scotia Department of Public Works or other applicable regulatory agencies for this project shall govern over all Contract Documents.”

- .2 Paragraph 1.1.8: Delete entirely and replace with the following:

"The *Owner* will provide the *Contractor*, without charge, two hard copies and one PDF copy of the *Contract Documents* to perform the *Work*. Additional copies of the *Contract Documents* or parts thereof required by the *Contractor* shall be provided at the *Contractor's* expense."

3.2 GC 2.2 Role of the Consultant

- .1 Paragraph 2.2.1: Delete entirely and replace with the following:

"The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents* during construction until issuance of Final Certificate for Payment, and subject to GC 2.1 - Authority of the Consultant."

- .2 Paragraph 2.2.2: Delete entirely.

3.3 GC 2.3 Review and Inspection of the Work

- .1 Paragraph 2.3.8: Add the following new paragraph:

"Where standards of performance are specified and the *Work* is not compliant, such deficiency shall be corrected as directed by the *Consultant*. Any subsequent testing (including re-testing by the *Owner*) to verify performance shall be done at the *Contractor's* expense."

3.4 GC 3.4 Document Review

- .1 Paragraph 3.4.1: In the last sentence, delete the words:

“shall not proceed with the work affected”,

and replace with the words:

“shall take all reasonable measures so as not to delay the work affected”.

3.5 GC 3.5 Construction Schedule

- .1 Paragraph 3.5.1.1: Delete the words: "prior to the first application for payment",
- and replace with the words: "within one week of Contract award and prior to commencing construction".

3.6 GC 3.8 Subcontractors and Suppliers

- .1 Paragraph 3.8.7: Add the following new paragraph:
- "*Specifications* are arranged in Divisions and Sections for convenience. They shall be read as a whole. This arrangement places no responsibility upon the *Owner* or *Consultant* to settle disputes between *Subcontractors* and *Suppliers* or between the *Contractor* and *Subcontractors* and *Suppliers*."

3.7 GC 3.9 Labour and Products

- .1 Paragraph 3.9.1: Delete the words: "The Contractor",
- and replace with the words: "Unless otherwise specified, the Contractor".

3.8 GC 3.11 Shop Drawings

- .1 Paragraph 3.11.5: In the second sentence, delete the words:
- "in accordance with the schedule agreed upon, or in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*",
- and replace with the words:
- "to *Contractor* within 10 working days of receipt".

3.9 GC 4.1 Cash Allowances

- .1 Paragraph 4.1.7: Delete entirely and replace with the following:
- "The *Contractor* in consultation with the *Consultant* shall prepare a schedule that shows when the items called for under cash allowances must be ordered to avoid delaying the progress of the *Work*."

3.10 GC 5.1 Financing Information Required of the Owner

- .1 Paragraphs 5.1.1 and 5.1.2: Delete entirely.

3.11 GC 5.5 Applications for Progress Payment

- .1 Paragraph 5.5.2: Delete the words:

"and *Products* delivered to the *Place of the Work* at that date",

and insert the following sentence to the end of the paragraph:

"Payment will not be made for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work*."

- .2 Paragraph 5.5.4.2: Delete entirely and replace with the following:

"The schedule of values shall be made out in such form as specified in the *Contract* and supported by such evidence and possible modification as the *Consultant* may reasonably require until accepted by the *Consultant*."

- .3 Paragraph 5.5.7: Add the following new paragraph:

"Upon establishing that the *Work*, or a portion of the *Work*, has been Completed (as per the governing Builder's Lien Legislation), the *Contractor's* applications for payment for those portions of the *Work* deemed Complete, shall reflect the balance of the *Contract* price less:

- .1 the aggregate amount, if any, determined in accordance with GC 5.7.1 multiplied by two, and
- .2 the amount, if any, determined in accordance with GC 5.11 - Withholding of Payment.

Until all of the deficient and incomplete work for which amounts are withheld pursuant to subparagraphs .1 and .2 of this Paragraph 5.5.9 are rectified and completed to the satisfaction of the *Consultant*, the *Owner* may withhold the full amounts set out in Subparagraphs .1 and .2 of this Paragraph 5.2.9 respectively."

- .4 Paragraph 5.5.8: Add the following new paragraph:

"The *Contractor* shall complete the deficient and incomplete work in a timely manner in accordance with the *Contract*. Acceptance of the *Work* or occupancy of the *Project* or any portion thereof shall not relieve the *Contractor* from the obligation of correcting deficiencies which are not identified at the time of establishing the list of deficient and incomplete items of work."

- .5 Paragraph 5.5.8: Add the following new paragraph:

“Unless all independent material testing results of *Products* supplied to the site have been received, or if the deficiency review process has not yet commenced, the maximum percent of work completed that can be claimed by the Contractor and certified by the *Consultant* for any item of work is 90%.”

3.12 GC 5.6 Payment

- .1 Paragraph 5.6.1: in the first sentence: add the following words after “receipt of the application for payment”:

.1 “that is complete and in conformance with the *Contract*”.

.2 In the last sentence: add the following words after “the *Consultant*”:

“, in consultation with the *Owner*,”.

.3 Add the following sentences to the end of the paragraph:

"In addition to the statutory lien holdback, Certificates for Payment may provide for retention of amounts, as determined by the *Consultant*, to account for deficient or incomplete work, until the items in question have been addressed and are determined to be in general conformance with the *Contract*."

- .2 Paragraph 5.6.2: Delete the words: “5 Working Days”

and replace with the words: “28 Working Days”.

- .3 Paragraph 5.6.2: Delete the words: “by the *Owner* and the *Consultant* of the application for payment”

and replace with the words: “of the Certificate for Payment by the *Consultant*, and in any event, in compliance with *Payment Legislation*”.

.4 Paragraph 5.6.4: Add the following new paragraph:

“The *Owner*, in consultation with the *Consultant* and as verified through a Certificate for Payment, may withhold total or partial payments at any point after Contract award to cover third party liability claims related to the *Contractor’s* operations or actions. The withheld payment amounts shall be used by the *Owner* to cover third party liability claims when there is a dispute between the *Owner* and the *Contractor* regarding responsibility for the claim. These funds are intended to ensure that third parties receive compensation promptly.

- .1 Payments to the third parties are to be released immediately and unresolved disputes between the *Owner* and the *Contractor* shall be addressed in accordance with the *Contract*.
- .2 Receipts for payments to cover third party liability claims for damages shall be provided to the *Contractor* as requested or required in accordance with the *Contract*.”

3.13 GC 5.7 Substantial Performance of the Work

.1 Paragraph 5.7.1: Delete entirely and replace with the following:

“When the *Contractor* considers the *Work* to be substantially performed and in accordance with any applicable lien legislation requirements, the *Contractor* shall submit to the *Consultant* and the *Owner* a written application for *Substantial Performance of the Work*, which shall include a declaration stating that the *Contractor* has attained *Substantial Performance of the Work*, a comprehensive list of items to be completed or corrected, and a request for the *Consultant* to review the claim. The *Consultant* will review the *Work* to certify or verify the validity of the application and, in accordance with applicable lien legislation, or in the absence of such legislation, no later than 10 calendar days after receipt of the *Contractor’s* application:

- .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
- .2 Issue or request the required documents for *Substantial Performance of the Work* in accordance with applicable lien legislation, or in the absence of such legislation, issue the Certificate of Completion.”

- .2 Paragraph 5.7.5: Add the following new paragraph:

“No later than five calendar days following the issuance of the Certificate of Completion, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for attaining *Substantial Performance of the Work* and/or *Total Performance*. Where applicable, as the project may require and as confirmed by the *Consultant*, the dates for *Ready-for-Takeover* and *Total Performance* may be the same day. Should an independent earlier *Substantial Performance of the Work* date apply, the base provisions of Part 12 of the *Contract* shall be followed, including Clause 5.7.4 which shall be intended to establish a *Total Performance Date*. The established *Substantial Performance of the Work* and/or *Total Performance* dates shall be incorporated into the *Contract* through a *Change Order*. If the *Contractor* does not fulfill all requirements of the *Contract* by the established *Substantial Performance of the Work*, and/or *Total Performance* dates, the *Contractor* may be considered in default of the *Contract*. The *Substantial Performance of the Work* and *Total Performance* dates are directly linked to section GC 5.10 – FINAL PAYMENT.”

3.14 GC 5.5 Final Payment

- .1 Paragraphs 5.10.2, 5.10.3, and 5.10.4: Delete entirely.

- .2 Paragraphs 5.5.2 and 5.5.3: Add the following new paragraphs:

“5.10.2 All parties are to process in accordance with Part 5 – PAYMENT.

5.10.3 The *Consultant* will not consider the application for final payment valid until all applicable materials installed are tested and the *Contractor* has fulfilled the project closeout requirements that include, but are not limited to, GC 5.7, GC 5.8, and Part 12”

3.15 GC 6.1 Changes

- .1 Paragraph 6.1.2: Add the following to the paragraph:

"The valuation for the change shall include the following maximum adjustments for overhead and profit based on the actual costs:

- .1 For Subcontractors - 10% for overhead and 5% for profit on the cost of their work.
- .2 For Contractor - 2.5% for overhead and 2.5% for profit on the cost of the Subcontractors' work.

- .3 For Contractor - 10% for overhead and 5% for profit on the cost of their work.

Profit to be based on the value of work including overhead.”

3.16 GC 6.2 Change Order

- .1 Paragraph 6.2.1: Delete entirely and replace with the following:

“When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall prepare and submit to the *Consultant*, in a form required by the *Consultant* to permit evaluation, the adjustment in *Contract Price*, if any, and adjustment in *Contract Time*, if any, for the proposed change in the *Work*. Time is of the essence with respect to changes and the *Contractor* shall submit requested *Change Order* documents within a reasonable timeframe commensurate with the requirements of the *Change Order*, and as required to not cause a delay in the contract schedule.”

- .2 Paragraph 6.2.3: Delete the words “be effective immediately and shall be recorded in a *Change Order*”

and replace with the words “be recorded in a *Change Order* and shall take effect when the *Change Order* is fully signed by the required parties”

- .3 Paragraph 6.2.4: Add the following new paragraph:

“The *Contractor* shall ensure that all adjustments in *Contract Price* and *Contract Time* associated with bonding are included in all *Change Orders* and *Change Directives*. The *Contractor* remains responsible to ensure bonding of the work is not jeopardized. Upon request by either the *Owner* or the *Consultant*, the *Contractor* shall provide proof that the Surety Company is being notified and kept apprised of the status of the *Contract* and any changes. The *Contractor* shall also provide, upon request by the *Owner* or *Consultant*, written confirmation from the Surety Company of any increases to bonding costs.”

3.17 GC 6.3 Change Directive

- .1 Paragraph 6.3.5: Delete entirely and replace with the following:

“If an *Owner* requested change results in a net decrease in the *Contractor’s* cost, the *Contract Price* shall be decreased by the amount of the net decrease on the *Contractor’s* costs, excluding the typical adjustment for the *Contractor’s* percentage fee. If a *Contractor* requested change results in a net decrease in the *Contractor’s* cost and is not required to maintain the primary design performance or intent of the *Project* as interpreted by the *Consultant*, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor’s* cost, including the adjustment for the *Contractor’s* percentage fee.”

3.18 GC 6.5 Delays

- .1 Paragraph 6.5.4: Revise as follows:

.1 In Sentence .4, insert the phrase, “except lack of funds or breakdown of Construction Equipment, and,” after the word “control”.

.2 In Sentence .4, replace “one” with “ones”.

3.19 GC 6.6 Claims for a Change in Contract Price

- .1 Paragraph 6.6.1: Delete entirely and replace with:

“If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall provide *Notice in Writing* of intent to claim to the other party and to the *Consultant* no later than 10 working days after discovery of the condition or event giving rise to the claim. Should either party fail to submit proper notice within the required time frame, the responding party, in conjunction with the *Consultant*, reserves the right to reject the claim.”

3.20 GC 7.2 Contractor's Right to Suspend the Work or Terminate the Contract

- .1 Paragraph 7.2.3.1: Delete entirely.

.2 Paragraph 7.2.4: Replace the words “5 *Working Days*” with “10 *Working Days*”.

- .3 Paragraph 7.2.6: Add the following new paragraph:

"Withholding of payments to the *Contractor* shall remain in effect and may be implemented despite the requirements of GC 7.2. As deemed required by the *Consultant*, amounts may be retained for the *Contractor's* failure to pay all just claims and invoices in accordance with the *Contract*. Furthermore, at the discretion of the *Consultant*, registration or notice of a project-related lien against the *Owner's* property may also result in funds being retained pursuant to provincial lien legislation at the *Place of the Work*."

3.21 GC 8.2 Negotiation, Mediation, and Arbitration

- .1 Paragraph 8.2.8.1(1): Delete entirely and replace with the following:

"*Total Performance*,"

3.22 GC 10.2 Laws, Notices, Permits, and Fees

- .1 Paragraph 10.2.2: Delete "permits," after "for all necessary approvals,".
- .2 Paragraph 10.2.3: Insert the words "(including building and development permits)" after the word "permits" in the first line.

3.23 GC 10.4 Workers' Compensation

- .1 Paragraph 10.4.3: Add the following new paragraph:

"The *Contractor* shall indemnify and hold harmless the *Owner* from and against all claims, demands, actions, suits, or proceedings by any of the employees of the *Contractor* or *Subcontractors* with respect to worker's compensation insurance. This indemnity shall survive the completion of the *Work* or termination of the *Contract* for any reason."

3.24 GC 12.1 Indemnification

- .1 Paragraph 12.1.1: Insert the following before Paragraph 13.1.1:

"The *Contractor* and the *Owner* shall indemnify and hold harmless each other, and their respective agents and employees from and against all claims, demands, losses, costs or damages of third parties arising or alleged to arise directly, indirectly or incidentally by reason of the operations of the party from whom indemnification is sought in the carrying out of the *Contract*. This indemnification shall survive completion of the *Work* or termination of this *Contract* for any reason."

The *Contractor* shall indemnify and hold harmless the *Consultant* and their respective agents and employees from and against all claims, demands, losses, costs or damages of third parties arising or alleged to arise directly, indirectly or incidentally by reason of the operations of the *Contractor*, his *Subcontractors* and their respective agents or employees, in the carrying out of the *Contract*. This indemnification shall survive completion of the *Work* or termination of this *Contract* for any reason.”

Paragraph 12.1.2: Replace the value “\$2,000,000” with the value “\$5,000,000” in both places.

3.25 GC 12.3 Warranty

- .1 Paragraph 12.3.4: Delete the words “through the Consultant,”.
- .2 Paragraph 12.3.4: Replace the words “one year” with the word “specified”.
- .3 Paragraph 12.3.6: Delete the following sentences:

“The *Contractor’s* responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.”

4.0 SUPPLEMENTARY SPECIFICATIONS

The Technical Specification Sections of the Standard Specification for Municipal Services are hereby amended as follows and wherever the Specifications are referred to in the *Contract Documents*, it shall be understood that such reference means as amended by the Supplementary Specifications.

- .1 Delete entirely Section 01 10 00 – General Requirements and replace with the following attached:
 - .1 Section 01 10 01 – General Requirements
- .2 Delete entirely Section 03 30 00 – Cast-in-Place Concrete and replace with the following attached:
 - .1 Section 03 30 00 – Cast-in-Place Concrete
- .3 Delete entirely Section 05 50 00 – Metals and replace with the following attached:
 - .1 Section 05 52 00 – Metal Railings

- .4 Delete entirely Section 32 14 00 – Unit Paving and replace with the following attached:
 - .1 Section 32 14 00 – Brick Unit Paving

- .5 Delete entirely Section 32 32 00 – Retaining Walls and replace with the following attached:
 - .1 Section 32 32 00 – Stone Retaining Wall Repair

END OF SECTION

1.0 GENERAL

1.1 Description of Work

- .1 The Work includes, but is not necessarily limited to, the following:
 - .1 Localized repair of existing stone retaining wall units including installation of granular backfill materials and blasted granite spall wedges.
 - .2 Forming and placement of concrete for new curbs, footings, and piers.
 - .3 Supply and installation of new handrails.
 - .4 Removal and replacement of damaged brick paving.
 - .5 Final cleaning of Work area and the disposal all waste products and/ or debris generated by the construction activity as well as any material present in the work area prior to the commencement of the Work. The areas requiring cleaning shall consist of all areas affected by the Work.

1.2 Work Sequence

- .1 Contractor to propose start date with their bid submission.
- .2 Time and time limits stated within Bid submittal and Contract Documents are of the essence to the Contract. Perform work expeditiously and with adequate forces to complete the Contract Work within the time specified.

1.3 Schedule

- .1 In conjunction with and in a form acceptable to the Consultant and Owner, provide within one week of contract award a schedule indicating phasing and procedures required to complete the Work within the submitted time frame.
- .2 Construction schedule shall reflect completion of all work under the Contract within the time specified and in accordance with these Specifications.
- .3 Submit a revised schedule to the Consultant if, after commencing the Work, the schedule fails to reflect actual progress or the Contractor wishes to make a major change to their approach. Submit a revised construction schedule in advance of beginning a revised approach.

1.4 Contractor's Use of Site

- .1 Use of all equipment is to be restricted in accordance with noise by-laws.
- .2 Noise or dust generating work is to be performed between 0700 and 2300, Monday to Friday.
- .3 Contractor has 24-hour access to site; however, use of premises will be restricted due to user occupancy.
- .4 Schedule operations to minimize interruption of the normal use of the site and building, and to comply with laws, ordinances, rules, and regulations relating to Work.
- .5 Businesses in the area are to remain open, fully accessible, and operational through the Contract. It is the Contractor's responsibility to coordinate with the businesses in the area to ensure construction does not block or impede safe access at all times.
- .6 Confine construction equipment, temporary work, storage of products, waste products and debris, and operations of employees and subcontractors to limits indicated by laws, ordinances, permit, or Contract Documents and do not unreasonably encumber the Place of Work.
- .7 Construction-related debris shall not be permitted to accumulate on site where visible to users. Remove daily if necessary.
- .8 Do not overload the structure.
- .9 Do not close, obstruct, or store materials in roadways, sidewalks, or passageways without prior approval from the Owner. Do not interfere with safe passage to and from businesses and adjacent public sidewalks and roads. Move stored products or equipment that interfere with building operations.
- .10 Take all precautions and provide all required protection to maintain the safety of the general public.
- .11 No storage of materials or equipment is allowed outside designated work areas without Owner approval.
- .12 During transportation of materials or equipment through occupied areas, protect the public, property, and finishes from damage. All damage caused by the Contractor is to be repaired or rectified at the Contractor's expense.
- .13 Propane powered equipment not permitted within interior areas.

- .14 Arrange all construction access into occupied areas with the Owner to allow the Owner to provide proper notice, where required.
- .15 Maintain work areas and the vicinity clean and tidy to the satisfaction of the Owner and Consultant.
- .16 Obtain and pay for all permits required for completion of the Work, including the Building and Development Permits. Do not start construction until the permits have been issued. Provide copies of permits to Consultant and post on-site where required.

1.5 Temporary Lighting

- .1 Provide and maintain temporary lighting as required for safe demolition and working conditions, in accordance with Nova Scotia Occupational Health and Safety Act.

1.6 Electrical Power

- .1 Discuss available power with the Owner prior to bidding.
- .2 Contractor shall pay for any alternations to the electrical system needed to accommodate the Contractor's equipment. Coordinate any required alterations with the Owner. Reinstall system to its original condition upon completion of the Work.
- .3 Owner will pay for electrical consumption from building sources made available by the Owner.

1.7 Water Supply

- .1 Contractor shall pay for the cost of any temporary water connections or alterations required to perform the Work. Reinstall system to its original condition upon completion of the Work.
- .2 Owner will pay for water consumption from building sources made available by the Owner.

1.8 Sanitary Facilities

- .1 Provide portable washrooms at time of initial mobilization and maintain throughout the course of work where washroom facilities are not available on-site for the Contractor's use. Locate where agreeable to the Owner.

1.9 Traffic Control and Signage

- .1 Provide all signage necessary to protect the public from the construction and work area, control pedestrian and vehicular traffic flow, and to inform users that construction activity is in progress. Signage to be of professional quality to the Consultant's satisfaction.
- .2 Provide flaggers and/ or traffic control lights as necessary to maintain safe traffic flow through work areas.

1.10 Protection of Work and Property

- .1 Take all reasonable precautions necessary to protect the Work and property from damage during performance of the Contract, and rectify any damage to the Work or property caused by the Contractor or its Subcontractors.
- .2 Protect all property from dust and damage. Clean interior areas that require access outside of working hours at the end of each work shift to provide a functional environment for the user.
- .3 Contain dust, dirt, construction debris, water, and fumes from the Work so as to not affect areas remaining in operation outside designated work areas. Damage to all property, mechanical equipment, motors, elevator equipment, fixtures, air intakes, etc. resulting from contamination is the responsibility of the Contractor.
- .4 Provide protection for all entrance and exit-ways, floors, walls, standing fixtures, air intakes, and equipment rooms.
- .5 Patch and repair all finishes or painted surfaces damaged during the course of the Work, including surfaces damaged by tape, fasteners, or similar materials during hoarding and protection.

1.11 Construction Barriers and Enclosures

- .1 All work areas are to be enclosed by hoarding and dust protection and only accessible to the Contractor, Owner, and Consultant.
- .2 Supply and construct hoarding, barriers, and enclosures as indicated in these Specifications, on Drawings, and as directed by the Consultant or Owner as construction progresses.
- .3 No extras will be entertained for hoarding, barriers, and enclosures after bid closing unless the scope of work significantly changes.

- .4 The following types of enclosures / hoarding systems will be required for this construction project:
 - .1 Type 1 – Fast Fence

This system consists of 6'-0" high modular "fast fencing" secured to the ground surface with counterweights, both sufficient to prevent the overturning of fencing due to wind, or forceful entry. Poly-weave mesh shall be securely fastened to the fencing (full height) to prevent dust from exiting the work area.

 - .1 Main purpose of this system is to delineate the work area from the rest of the pedestrian area and limit airborne dust from exiting work site.
 - .2 Type 2 – Hi-Vis Barricades and Reflective Traffic Cones

To be installed around the work areas to control flow of pedestrian traffic.

 - .1 The main purpose of this system is to delineate the areas of work from the rest of the pedestrian area.
- .5 All seams in poly-weave tarping are to be taped together.
- .6 Restrict access for unauthorized personnel by placing barricades or posting guards around areas of the Work. Unauthorized personnel means the public and anyone not directly involved with execution, supervision, or inspection.

1.12 Protection of Existing Exposed Facilities / Services

- .1 Protect exposed conduit, fixtures, attached devices, wet sprinkler fire system plumbing, mechanical system components, louvers, and ducts or correct damages at own expense. Promptly report any damage to the Owner and Consultant.
- .2 Prior to commencing the Work, contact the Owner to locate all protective or alarm systems and sensors. Protect services against damage or interruption. Provide Owner with 48 hours minimum advance notice of any necessary interruption. All claims resulting from damage are the responsibility of the Contractor.
- .3 Restore landscaping beds in area of work to their original plantable state after Work is complete. If required, Owner will arrange to remove all landscaping, including plants, shrubs, trees, etc., impacted by the work and store for replanting.

1.13 Walk-Through Inspection of Site

- .1 Perform a thorough inspection of the site prior to the start of Work, and provide a written notice to the Consultant detailing all damaged property as well as all items that appear to be of poor working order or appearance (i.e. sign fixtures, dirt, etc.)
- .2 Upon receiving this notice, the Consultant and Owner will verify the validity of the items listed.
- .3 If written notice is not given within five days of commencement of Work, it will be assumed the Contractor reviewed the site and accepted the condition of the property as being free of damage.
- .4 Any damages not listed as part of the written notice of clause 1.13.1 above, found after completion of the Work will be the Contractor's responsibility to rectify. Complete rectifications in a timely and satisfactory manner.

1.14 The Work, Work In Progress, Property, and Persons

- .1 Protect the Work during construction from damage by weather.
- .2 Provide protection as required to protect work in progress and other property from damage and to provide suitable conditions for the progress of finishing work.
- .3 Take reasonable and required measures, including those required by authorities having jurisdiction, to protect the public and those employed on the Work from bodily harm.
- .4 Comply with requirements of the Nova Scotia Occupational Health and Safety Act and Regulations for Construction Projects.
- .5 Be prepared to provide respirators, dust protection, ear protection, hard hats, etc. for those employed by the Consultant and Owner on-site.
- .6 Direct all Subcontractors to protect their own work, existing property, adjacent public and private property, and work of other Sections from damage while working.

1.15 Location of Existing Utilities

- .1 Locate all existing utilities prior to construction and protect them during construction.

1.16 Work Site Safety – Contractor is “Prime Contractor”

- .1 Contractor shall, for the purposes of the Nova Scotia Occupational Health and Safety Act, and for the duration of the Work and Contract:
 - .1 Be designated as “Prime Contractor” pertaining to safety at the “Work site”.
 - .2 Do everything reasonably practicable to establish and maintain a system or process for compliance with the Act and its regulations, as required to maintain the health and safety of all persons at the “Work site”.
- .2 Direct all subcontractors, workers, and any other persons at the “Work site” on safety related matters, to the extent required to fulfill its “Prime Contractor” responsibilities pursuant to the Act.

1.17 Material and Equipment

- .1 Unless otherwise specified, provide, maintain, and pay for all materials, tools, machinery, equipment, temporary facilities, controls, and conveniences necessary for execution of the Work. All materials shall be new, of merchantable quality, and suitable for the intended purpose.
- .2 Unless otherwise specified, comply with manufacturer’s latest printed instructions for materials and installation methods. Notify the Consultant in writing of any conflict between Contract Documents and manufacturer’s instructions. Deliver, store, and maintain packaged materials with manufacturer’s seals and labels intact.

1.18 Coordination

- .1 Contractor is responsible for coordination of trades. Lines of demarcation between Contractor’s work and trades’ work are sole responsibility of the Contractor. Consultant assumes no responsibility for division of the Work or for any jurisdiction regarding such division.
- .2 Contractor is responsible for coordinating with the Owner for on-site activity as it affects operation of the building.
- .3 Notify the Consultant at least 24 hours in advance for site review. No work shall be covered or concealed until the Consultant has reviewed it, unless informed by Consultant that a site review will not be performed. Such review does not absolve the Contractor from their responsibility to perform the Work in accordance with Contract Documents.

1.19 Cutting and Remedial Work

- .1 Perform cutting and remedial work required to make affected parts of the Work come together properly.
- .2 Coordinate the Work so that cutting and remedial work are kept to a minimum.
- .3 Cutting and remedial work shall be performed by specialists familiar with the Products affected and in a manner that neither damages nor endangers the Work.

1.20 Waste Removal and Cleaning

- .1 Maintain the Place of the Work free from unsightly or hazardous accumulations of waste materials and rubbish, and perform all required cleaning during the Work.
- .2 Provide on-site containers for collection of waste materials and rubbish.
- .3 Remove wastes that create hazardous conditions from the premises daily.
- .4 Dispose of waste products in strict accordance with product manufacturer Safety Data Sheets (SDS) and provincial waste control regulations. Drainage systems shall not be used to dispose of project wastes and materials.
- .5 Remove moisture sensitive equipment (i.e. exposed electrical and mechanical systems, etc.) or protect against moisture infiltration during washing and dust-generating activities.
- .6 Remove all construction-related grease, dust, dirt, stains, labels, fingerprints, over-spray, and other foreign materials immediately prior to Consultant's final review. Return all adjacent areas, equipment, duct work, etc. to the Owner in a dust-free condition. Leave site in a neat and tidy condition at completion of the Work.

1.21 Superintendence

- .1 Provide a full time on-site Superintendent who is responsible for quality, control, organization, and coordination of the Work.
- .2 Superintendent shall attend all site meetings.
- .3 Superintendent shall have a cell phone.

- .4 Superintendence shall be satisfactory to the Owner and Consultant.
- .5 Superintendence shall be deemed unsatisfactory and changes or additions to superintendence can be demanded by the Owner or Consultant when control, organization, or coordination of the Work is not adequate, quality of the Work does not meet Contract Document requirements, directions given in accordance with Contract Documents are not followed, or progress is behind schedule.

1.22 Administration of Project Meetings

- .1 Consultant will preside at meetings.
 - .1 A representative of the Consultant will record minutes, including significant proceedings and decisions, and identifying "action by" parties.
 - .2 Consultant will reproduce and distribute copies of minutes to the Owner, Contractor, meeting participants, and affected parties not in attendance.
- .2 Consultant will schedule and administer project meetings.
 - .1 Prepare agenda for meetings.
 - .2 Distribute written notice of each unscheduled meeting three days in advance of meeting date to the Contractor, Owner, and relevant Subcontractors.
- .3 Contractor shall provide physical space and make arrangements for meetings on site.
- .4 Representatives of Contractor, Subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the party each represents.

1.23 Pre-Construction Meeting

- .1 After award of Contract, a meeting of all parties in the Contract shall be held to discuss and resolve administrative procedures and responsibilities.
- .2 Representatives of the Owner, Consultant, Contractor, major Subcontractors, and construction review personnel will attend.
- .3 Consultant will establish a time and location for the meeting and notify concerned parties at least five days before the meeting.

- .4 Agenda to include the following:
 - .1 Appointment of official representatives of participants of the Work.
 - .2 Schedule of Work, progress scheduling.
 - .3 Shop drawings (if required) and schedule of shop drawing submissions.
 - .4 Requirements of temporary facilities, site signage, hoarding, dust protection, offices, storage sheds, utilities, fences.
 - .5 Delivery schedule of critical equipment.
 - .6 Site security.
 - .7 Contemplated change orders, procedures, approvals required.
 - .8 Take over procedures, acceptance, warranties.
 - .9 Monthly progress claims, administrative procedures, holdbacks.
 - .10 Appointment of inspection and testing agencies or firms.
 - .11 Insurance, transcript of policies.

1.24 Progress Meeting

- .1 During course of Work, the Consultant may schedule progress meetings. Further progress meetings may be scheduled by the Consultant, Contractor, or Owner as required to expedite the Work.
- .2 Consultant, Contractor, major Subcontractors involved in the Work, and Owner, when required, will attend.
- .3 Consultant will notify parties minimum three days prior to scheduled meetings of any changes to time or place.
- .4 Agenda to include the following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.
 - .3 Field observations, problems that impede construction schedule, conflicts.

- .4 Progress, schedule, during succeeding work period.
- .5 Corrective measures and procedures to regain projected schedule.
- .6 Revisions to construction schedule.
- .7 Review of off-site fabrication delivery schedules.
- .8 Review submittal schedules; expedite as required.
- .9 Maintenance of quality standards.
- .10 Pending changes and substitutions, Notices of Proposed Change, Change Orders.
- .11 Review proposed changes for effect on construction schedule and on completion date.
- .12 Other business.

END OF SECTION

1.0 GENERAL

1.1 Work Included

- .1 Cast-in-place concrete materials, including production, mixing, handling, testing, transporting, placement, and curing of concrete.
- .2 Cast-in-place concrete curbs, footings, and piers as foundations for new handrails, where indicated on the Drawings.

1.2 Reference Standards

- .1 All referenced Standards are latest editions referenced by the Building Code in the Place of the Work, or latest editions if not referenced by Code.
- .2 Nova Scotia Building Code
- .3 CSA A23.1/CSA A23.2 Concrete Materials and Methods of Concrete Construction / Test Methods and Standard Practices for Concrete
- .4 CSA A3000 Cementitious Materials Compendium
- .5 ASTM C1202 Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
- .6 ACI 305R Guide to Hot Weather Concreting
- .7 ACI 306R Guide to Cold Weather Concreting

1.3 Performance Requirements

- .1 Surfaces shall not crack, scale, pit, dust, or unduly deteriorate or wear.
- .2 Cracks are to be repaired and sealed at Contractor's expense.

1.4 Submittals

- .1 Concrete Mix Design:
 - .1 Submit proposed concrete mix designs for Consultant review minimum two weeks prior to placement. Do not place concrete unless concrete mix design has been reviewed and accepted by Consultant.
 - .2 Concrete mix design is to meet minimum structural design and durability requirements indicated herein and as defined in CSA A23.1. Most severe exposure requirement governs.

- .2 Concrete Test Results:
 - .1 One copy of results shall be submitted directly from Testing Agency to each Owner, Contractor, and Consultant.
- .3 Transit-Mix Delivery Slips and Placing Records:
 - .1 Keep record of time and place for each concrete placement with corresponding transit mix delivery slip that indicates concrete contents, batch time, and general design criteria. Provide record to Owner or Consultant for review, upon request, and submit copy on completion of concrete placement.
- .4 Curing Procedures:
 - .1 Submit proposed concrete curing methods and details, including weather protection provisions, for Consultant review.
- .5 Construction Joints:
 - .1 Submit plan locations and details of construction joints not shown on Drawings for Consultant review.

2.0 PRODUCTS

2.1 General

- .1 Cast-in-place concrete shall satisfy the requirements of Reference Standards unless specified otherwise herein or on Drawings.

2.2 Materials

- .1 Materials shall conform to following requirements:
 - .1 Portland Cement: To CSA A3000.
 - .2 Aggregate: Natural stone to CSA A23.1.
 - .3 Water: Potable and to CSA A23.1.
 - .4 Air Entraining Agents: To CSA A3000.
 - .5 Chemicals Admixtures: To CSA A3000.
 - .6 Pozzolanic Mineral Admixtures: To CSA A3000.

2.3 Concrete Curbs, Footings, and Piers

.1 Concrete shall be homogeneous and when hardened shall have required strength, resistance to deterioration, durability, resistance to abrasion, water-tightness, appearance, and other specified properties.

.2 Concrete shall conform to exposure class C-2, as defined in CSA A23.1.

.3 Concrete Properties:

	<u>Description</u>	<u>Requirements</u>
.1	Compressive Strength (28 days)	32 MPa minimum
.2	Air Content	5.0% to 8.0%
.3	Aggregate Size	20 mm maximum*
.4	Slump	
	- Prior to Superplasticizer	50 mm maximum**
	- After Superplasticizer	125 mm maximum**
.5	Water/Cementing Materials Ratio	0.45 maximum
.6	Cement Content	335 kg/m ³ minimum
.7	Cement – type 10	Normal Portland Cement
.8	Concrete Density	Normal weight (2,400 kg/m ³)

.4 Non-chloride based plasticizers shall be used to facilitate concrete placement as required. Costs associated with the use of such materials shall be included in the contract price. Plasticizer shall be compatible with the air entrainment agent.

.5 Although a maximum slump is specified, endeavour to provide concrete at the minimum slump that permits placement and handling.

.6 Mix design is the responsibility of the Contractor.

.7 Do not add calcium chloride to concrete.

.8 Addition of water to the concrete mix shall not be permitted on-site. The Contractor shall be permitted to adjust only quantities of superplasticizer and air entraining agent on-site.

.9 No concrete shall be placed later than two hours after the time of batching. No re-tempered concrete shall be allowed.

.10 The Contractor shall use superplasticizers to facilitate concrete placement and must demonstrate to the satisfaction of the Consultant that such admixtures will have no deleterious effect on the durability or strength of the proposed concrete mix (i.e. freeze/thaw durability).

2.4 Admixtures

- .1 Use of calcium chloride not permitted.

2.5 Air Entrainment

- .1 Air entraining chemical admixtures shall be according to ASTM C260. Ensure chemical admixtures are compatible with each other and that they will not negatively impact performance of the concrete.
- .2 The total fresh air content of air entrained concrete will be tested via the pressure method with an air meter prior to the placement of concrete in accordance with CSA A23.2.
- .3 Air content in hardened concrete shall meet the requirements of CSA A23.1 and this Specification and, if directed by the Consultant, will be tested and determined in accordance with ASTM C457 as outlined in CSA A23.1.

2.6 Concrete Transit Mixes – General

- .1 Although maximum slumps are specified, endeavour to provide concrete at minimum slump that permits placement and handling.
- .2 Concrete mixes shall be proportioned by supplier to meet compressive strength, exposure class, and other performance specifications noted in contract documents. In addition, concrete mix design shall satisfy transport, placing, and finishing requirements. Concrete shall be normal weight unless noted otherwise.
- .3 Concrete mix design is responsibility of supplier, including use of admixtures, alone or in combination. Supplier is also responsible for ensuring plastic and hardened properties of concrete meet construction and specified requirements, including long-term performance of hardened mix.
- .4 Addition of water to concrete mix shall not be permitted on-site. Adjust only quantities of superplasticizer and air entraining agent on-site.

3.0 EXECUTION

3.1 General

- .1 Concrete work shall be in accordance with the standard unless otherwise specified herein or on Drawings. Work shall be done by workers who are skilled and experienced in their trade.

3.2 Formwork

- .1 Contractor shall be responsible for design and construction of formwork.

- .2 Build forms sufficiently strong and rigid to sustain weight or fluid pressure of concrete without noticeable deflection. Forms to be sufficiently tight to prevent mortar leaks.
- .3 Construct forms so they may be dismantled and removed without damaging concrete.
- .4 Treat forms with approved form release agent or keep untreated forms wetted down to prevent shrinkage prior to placing concrete. Untreated forms shall be surface wetted at time of placing.
- .5 Loosen and remove forms carefully, and in method that will prevent spalling and other damage to concrete surfaces or edges. Do not use wedge pry bars, hammers, or tools against exposed concrete finish surfaces.
- .6 Finished concrete surfaces to be smooth and regular, free of voids, and honeycombing. Repair concrete damage, mortar spillage, and uneven surfaces. Repair damage caused to adjacent surfaces during by formwork or concrete placement.

3.3 Concrete Mixing and Placing

- .1 Machine mix concrete. Mixing and placing shall be in accordance with CSA A23.1.
- .2 Convey concrete from mixer to place of deposit by methods that will provide required quality of concrete. Conveying equipment to be of adequate size and design for a practically continuous flow of concrete at delivery end without separation of materials.
- .3 Deposit concrete as near as practical to its final position to avoid re-handling.
- .4 Depositing shall be continuous throughout each division and concrete shall be placed and worked to produce a uniform texture.
- .5 No concrete shall be placed later than one half hour after leaving mixer. No re-tempered concrete shall be permitted.
- .6 Cement slurry used to prime concrete pump shall be discarded and not placed into structure.

3.4 Addition of Water

- .1 To conform to CSA A23.1.

- .2 No water shall be added after initial introduction of mixing water for batch except when, at start of discharge, measured slump of the concrete is less than that specified and no more than 60 minutes have elapsed from time of batching to start of discharge. In this case water may be added only under direction of producer's Quality Control Inspector who shall be dispatched from plant to site. In no case shall an amount of water exceeding lesser of 16 L/m³ or 10% of mixing water be added. Resulting concrete must satisfy specified requirements. Responsibility for product will remain with producer.

3.5 Compaction and Vibration

- .1 Thoroughly consolidate concrete during and immediately after depositing, by internal vibration. Consolidate concrete by means of sufficient vibrators of adequate size operated by competent workers that have been instructed in their use.
- .2 The use of vibrators to transport concrete shall not be permitted.
- .3 Thoroughly work concrete around reinforcement, around embedded items, and into corners, eliminating all air or stone pockets that may cause honeycombing, pitting, or planes of weakness.

3.6 Finishing

- .1 Concrete topping surfaces shall be bull floated and trowelled for a smooth finish.

3.7 Curing

- .1 As soon as possible after concrete has sufficiently set, and no later than 30 minutes after finishing, initiate wet curing with pre-saturated mats on concrete surfaces.
 - .1 Wet curing procedures shall keep concrete surfaces continuously wet for at least seven consecutive days at minimum temperature of 10°C. Water shall not be permitted to evaporate from concrete surfaces at any time within wet cure period.
 - .2 Minimum acceptable wet curing method on topping surfaces is pre-saturated filter fabric, or cotton mats; covered with soaker hoses and plastic sheeting. Wet-curing mats shall be overlapped 150 mm and held in place without marring surface of concrete. Use of chemical curing compounds shall not be permitted.
 - .3 Prevent airflow in space between wet-curing mats and plastic sheeting. Protect wet-curing assembly from freezing during cold weather.
- .2 When air temperature is below 5°C or when, in opinion of Consultant, there is a possibility of its falling below 5°C, no concrete shall be placed until after Consultant has approved provisions made for proper curing of concrete. These provisions shall conform to requirements of CSA A23.1, Section 7.

- .3 Provide adequate equipment for heating concrete materials and protecting concrete from freezing or near freezing temperatures. No frozen materials or materials containing ice shall be used. All concrete materials and all reinforcement, forms, existing concrete and ground with which concrete is to come into contact shall be free from frost. Whenever temperature of surrounding air is below 5°C all concrete placed shall have temperature between 15°C and 32°C and adequate means shall be provided for maintaining temperature of not less than 21°C for 3 days or 10°C for 5 days except when high early strength concrete is used, temperature shall be maintained at not less than 32°C for 2 days or 10°C for 3 days or for as long as necessary for proper curing of concrete. Under no circumstances may dry heat be used. Humidify air within enclosure and maintain moisture requirements for curing. No dependence shall be placed on calcium chloride or other chemicals for prevention of freezing.
- .4 In extreme weather conditions, either hot, windy, or freezing, all topping surfaces shall receive a protective covering to prevent, respectively, excessive evaporation or freezing.

3.8 Patching and Cutting

- .1 Honeycomb, exposed reinforcement, deviations in formwork, and other defects of a minor nature that have occurred as a result of poorly consolidated concrete may be patched by Contractor, at their cost, using materials and procedures pre-approved by Consultant. Cut out defect to sound concrete and fill with mortar to same proportions of cement and sand as in concrete.
- .2 Grind off or otherwise remove fins, ridges, and other imperfections immediately after removal of forms. Remove segregated concrete aggregate to sound material. Repair as directed by Consultant.
- .3 Holes shall not be permitted to be drilled or cored through in-place concrete unless specifically directed by Consultant. Take care to prevent cutting of embedded reinforcement.

3.9 Testing

- .1 Concrete testing will be as required by CSA A23.1 unless noted otherwise. Testing methods shall conform to CSA A23.2.
- .2 Testing agency shall be selected and paid for by Contractor. Contractor shall arrange with testing agency for performing all required testing.
- .3 Notify Consultant at least 24 hours before concrete is placed to allow Consultant to review the Work.
- .4 Provide casual labour to testing agency's field personnel for purpose of obtaining and handling sample materials. Provide suitable access to the Work for obtaining samples. Provide and maintain facilities for storage of concrete test cylinders for the first 24 hours.

- .5 Take at least one concrete test set consisting of a slump test, air entrainment test, and casting of three concrete cylinders for compressive strength testing. Test one moist-cured cylinder in 7 days and two in 28 days.
- .6 Forward concrete test results to Consultant, Owner, and Contractor. Include the following information:
 - .1 Project name
 - .2 Sampling date
 - .3 Supplier
 - .4 Delivery truck identification number
 - .5 Sampling and testing technician names
 - .6 Precise installation location of the sampled concrete batch
 - .7 Air and concrete temperatures
 - .8 Concrete design strength
 - .9 Admixtures,
 - .10 Cement type
 - .11 Maximum aggregate size.
- .7 Testing agency personnel are not authorized to revoke, relax, enlarge, or release any requirements of Specification, nor to approve or disprove any portion of the Work.
- .8 If additional testing is required to demonstrate adequacy of any concrete not meeting requirements for strength or which has been placed before formwork and reinforcement have been reviewed by Consultant, Contractor shall pay for such testing.

3.10 Rejection of Defective Work

- .1 In event that concrete tests do not conform to requirements of Specifications, or when conditions are such to cause doubt about the safety of structure, test that portion of structure in accordance with CSA A23.1. Such test shall be made at expense of Contractor and to satisfaction of Consultant.
- .2 Where, in opinion of Consultant, material or workmanship fails to meet requirements of Specification, such work may be rejected. Replace or repair rejected work to approval of Consultant and at no additional cost to Owner.

DIVISION 03 - CONCRETE

Town of Lunenburg – 2024 Duke Street Extension Reinstatement

Section 03 30 00

TOL #2024017 | RJC No. EDM.137257.0002

CAST-IN-PLACE CONCRETE

May 2024

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END OF SECTION

1.0 GENERAL

1.1 Work Included

- .1 Provide labour, materials, equipment, and services to supply and erect steel assemblies as indicated on Drawings or specified herein, including but not limited to:
 - .1 Supply and install handrails as indicated on Drawings.
- .2 Furnish labour, materials, and equipment necessary for surface preparation and application of new paint, and to repair existing finishes where damaged.

1.2 Reference Standards

- .1 All referenced Standards are latest editions referenced by the Building Code in the Place of the Work, or latest editions if not referenced by Code.
- .2 Nova Scotia Building Code
- .3 ASTM A53/A53M Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
- .4 CSA A500 Building Guards
- .5 CAN/CGSB-1.40 Anticorrosive Structural Steel Alkyd Primer (Withdrawn)
- .6 CAN/CGSB-1.108 Bituminous Solvent Type Paint (Withdrawn)
- .7 CAN/CGSB-1.181 Ready-Mixed Organic Zinc-Rich Coating (Withdrawn)
- .8 CSA G40.20/G40.21 General Requirements for Rolled or Welded Structural Quality Steel / Structural Quality Steel
- .9 CSA S16 Design of Steel Structures
- .10 CSA W48 Filler Metals and Allied Materials for Metal Arc Welding
- .11 CSA W59 Welded Steel Construction (Metal-Arc Welding)
- .12 Steel Structures Painting Council (SSPC)

1.3 Qualifications

- .1 Supplier: Company with minimum five years of experience in specialized manufacturing of guardrail systems, with satisfactory experience in steel fabrication, including cutting, bending, forming, and finishing.
- .2 Installer: Company specializing in installation of handrails and with minimum five years of proven satisfactory experience on projects of similar size and complexity.
- .3 Suppliers and installers must be certified under CSA W47.1, as required by CSA S16.
- .4 Welding procedures, welders, and welding operations shall be qualified in accordance with Canadian Welding Bureau Standards.

1.4 Design Requirements

- .1 Design is based on Limit States Design principles using factored loads and resistances.
- .2 Loads and load factors are determined in accordance with the referenced Building Code and bylaws of the local municipality.
- .3 Resistances and resistance factors are determined in accordance with the National Building Code and CSA S136.
- .4 Conform to the requirements of specified fire rated assemblies.
- .5 Install components or assemblies to accommodate specified erection tolerances of the structure.
- .6 Design and install handrails, railings, landings, and stairs to conform to loading and safety requirements of the referenced Building Code, Occupational Health and Safety Act, and W47.2, as may be applicable.
- .7 Maximum deflection for individual members shall not exceed 1/360th of the span.
- .8 Work of this Section that will support other items or will be required to support structural loads of any nature shall be designed by a Professional Structural Engineer registered in Nova Scotia, who shall affix their professional seal and signature to the shop drawings for such items.

1.5 Examinations

- .1 Prior to fabrication, confirm dimensions taken from drawings on-site. Verify correctness of measurements and report discrepancies between measurements at site and those shown on Drawings prior to commencing work to Consultant in writing. Verify location of embedded steel and that work is at a proper elevation, on line, level, and true.
- .2 Locate conflicts due to existing fixtures, and electrical and mechanical equipment and systems, prior to fabrication of new structural steel.

1.6 Submittals

- .1 Shop Drawings:
 - .1 Shop drawings shall be signed and sealed by a specialty structural Engineer retained by Contractor and registered to practice in Place of the Work.
 - .2 Incorporate plans, elevations, sections, and full size details for work of this Section. Completely detail items indicating all dimensions and methods of fixing, field jointing, attachment to structure, and size, thickness, and gauges of metals and fasteners.
 - .3 Shop drawings to show complete shop and erection details necessary for fabrication and erection of component parts of assembly, including cuts, connections, splices, and weld location, type, size, and extent. Splices not shown on shop drawings will be rejected. Indicate shop welds by AWS Welding Symbols specified in CSA W59 Appendix D and E.
 - .4 Provide full description of finishing system, inclusive of pre-treatment coating, on shop drawing submission.
 - .5 Engineer who sealed shop drawings shall provide periodic field review of the installation and perform sufficient reviews to provide a letter of professional assurance to verify compliance of the installed system with the reviewed shop drawings and applicable codes and standards. Submit written field review inspection reports to Consultant within five days of field review.
- .2 Do not fabricate work of this Section until Consultant has reviewed shop drawings.
 - .1 Fabrication that commences prior to Consultant's shop drawing review is at Contractor's risk.
 - .2 Review of shop drawings by Consultant is intended as an assistance and does not relieve Contractor of responsibility for completeness and accuracy of work and conformance with contract documents.

- .3 Clearly identify revisions, changes, or modifications on shop drawings.
- .4 Resubmit reviewed shop drawings where noted in Consultant's review stamp, or when making revisions for own purposes.
- .5 Allow at least two business days for shop drawing review by Consultant.

1.7 Delivery, Storage, and Handling

- .1 Exercise care in storing, handling, and installing components, and provide protection and support at all times to prevent structural damage or deterioration of finishes.
- .2 Repair or replace damaged materials and finishes to Consultant's satisfaction at no additional expense to Owner. Consultant will review damaged materials and finishes and determine whether repair or replacement is warranted.
- .3 Fabricate large assemblies for safe and easy handling to their place of installation.
- .4 Store other related, packaged materials in a weather-tight and dry place until ready for use in Work.

1.8 Warranty Periods

- .1 Steel Handrail Assemblies: 20 years
- .2 Paint Coating: 10 years

1.9 Site Conditions

- .1 Coordinate this work with remainder of work and schedule so that work is carried out and items incorporated during appropriate construction phase.
- .2 Protect other sections of work from damage by this Section.
- .3 Take necessary care to avoid damage of adjacent surfaces.
- .4 Examine the underlying visible surfaces and adjoining work, and report defects at time of installation that might impair the work of this section to the Consultant, in writing.
- .5 Commencement of work implies acceptance of surfaces.

2.0 PRODUCTS

2.1 Materials

- .1 Rolled Shapes and Sections: To CSA G40.21 grade 300W or better.

- .2 Steel Pipe: To ASTM A53/A53M standard weight, black finish, formed to shape and sizes as indicated.
- .3 Base Plate Fasteners: per drawings.
- .4 Shop Primer: To CGSB 1-GP-40M.
- .5 Paint: Two coats Alkyd Enamel.
- .6 Paint structural steel suitable for exterior exposure and substrate conditions.
- .1 All painting work shall be done in accordance with MPI Premium Grade requirements.
- .2 Finish coat colour shall be black with a satin finish (MPI Gloss Level 4).

2.2 Fabrication

- .1 Verify dimensions and take necessary field measurements before fabrication.
- .2 Fabricate pedestrian railings as shown and detailed on approved shop drawings.
- .3 Fabrication shall be to CSA S16.
- .4 Welded connections to provide proper weathering. Grind welds smooth where exposed to view.
- .5 Assemble built-up work in shop and match-mark for correct field erection. Execute work in accordance with reviewed shop drawings.
- .6 Reinforce all work to suit its intended purpose and to withstand design loads.
- .7 Fabricate curved work to smooth, uniform constant radii as detailed.
- .8 Make joints in materials to form fine hairline joints flush with adjacent surfaces.
- .9 Build items square, true, straight, and accurate for required size, with joints fitted closely and secured properly.
- .10 Where possible, fit and shop assemble items, ready for erection.
- .11 Exposed welds to be continuous and non-porous for length of each joint. File or grind exposed welds smooth and flush.
- .12 Insulate contact surface to prevent electrolysis due to metal-to-metal contact or between metal and concrete. Use bituminous paint, butyl tape, or other approved means.

3.0 EXECUTION

3.1 Preparation

- .1 Examine work affecting installation of work of this Section prior to fabrication and installation to inform detailed design and to determine if conditions are suitable for installation. Report unsatisfactory conditions requiring resolution to Consultant.
- .2 Proceed with installation only after identified deficiencies in other work have been corrected.
- .3 Confirm necessary measurements of previously executed work that may affect work of this Section prior to delivery.

3.2 Installation

- .1 Install work in accordance with Consultant reviewed shop drawings and applicable codes and regulations.
- .2 Cut, fit, and drill as required to install work and make connections with adjoining work.
- .3 Fit joints accurately and rigidly secured to hairline contacts.
- .4 Do welding in accordance with CSA W59 as follows:
 - .1 Companies engaged in welding shall be certified by Canadian Welding bureau to CSA W47.1. Companies shall have welding procedures approved and welders qualified for base material types and thicknesses that are to be welded.
 - .2 For material less than 3.0 mm thick, shop drawings may show nominal weld leg sizes. For such material, effective throats of welds shall not be less than thickness of thinnest connected part.
- .5 Touch-up welds with zinc rich paint.
- .6 Remove and replace work that is not acceptable to Consultant, when and as directed. Such operation shall be at no extra charge to Owner.

3.3 Anchorage

- .1 Anchor items securely to supporting members using anchorage methods detailed on reviewed shop drawings.
- .2 Accurately locate anchor holes with diameter, depth, edge distance, and substrate in conformance with anchor Supplier requirements.

- .3 Fasten work in place without distortion, damage to finishes, or overstressing of fasteners.
- .4 Provide shims, washers, and spacers required to make installation firm, tight, anchored in true alignment, neatly fitted, and free from unsightly fastenings, or raw edges.
- .5 Maximum deviation from alignment, level, or plumb shall not exceed 1.5 mm in 76 mm.
- .6 Existing reinforcement in concrete structure may conflict with anchor locations. Prior to installation of anchors, locate existing reinforcing steel at locations of concrete anchors.
- .7 At locations of interference between concrete anchors and existing reinforcement, adjust proposed location of anchors as required to avoid reinforcement. Obtain Consultant's review and approval prior to installing anchors. Do not cut reinforcement unless specifically directed by Consultant.

3.4 Finish

- .1 Handrail assembly finish, including railings and base plates, shall be durable and suitable for exterior exposure and be primed and painted in shop. Colour: Black (to match existing handrails). Confirm with Owner.

3.5 Field Quality Control, Testing, and Inspection

- .1 The shop drawing Engineer shall perform regular field review during construction and submit field reports to the Consultant.
- .2 Include cost of railing designer's field reviews in Contract Price.
- .3 Where, in opinion of Consultant, materials or workmanship fail to meet requirements of Specification, such Work or materials will be rejected. Replace or repair rejected Work to approval of Consultant and at no additional cost to Owner.

3.6 Touch-Ups and Cleaning

- .1 After erection and connections are completed, provide a field touch-up coat of paint to surfaces that have been chipped or scraped.

END OF SECTION

1.0 GENERAL

1.1 Work Included

- .1 Provide all labour, material, equipment, and supervision necessary to install brick unit paving stones on prepared setting and base materials in areas designated on the Drawings.
- .2 Brush and vibrate high-strength polymeric joint sand to completely fill the joints between the precast concrete paving stones.

1.2 References

- .1 All referenced Standards are latest editions referenced by the Building Code in the Place of the Work, or latest editions if not referenced by Code.
- .2 Nova Scotia Building Code
- .3 CSA A23.4 Precast Concrete – Materials and Construction
- .4 Interlocking Concrete Pavement Institute (ICPI) Tech Specs

1.3 Submittals

- .1 Submit product data sheets for new brick paving units. Provide sample to Owner if requested for colour matching.

2.0 PRODUCTS

2.1 Materials

- .1 Brick unit paving stones shall meet the following performance requirements:
 - .1 Compressive Strength to CSA A23.4 minimum 55 MPa
 - .2 Water Absorption to CSA A23.4 maximum 5%
 - .3 Freeze/Thaw Resistance to CSA A23.4 maximum 1% weight loss (avg) in 3% sodium chloride solution after 50 cycles
 - .4 Colour, texture, shape, thickness to match existing

- .2 All concrete paving stone shall be sound and free of cracks, chips, and defects that interfere with placement or impair strength, and defects on visible surfaces.
- .3 Bedding sand and joint sand shall meet the following gradation limits based on percentage passing by mass:

Sieve Size (mm)	Bedding Size (%)	Joint Sand (%)
9.52	100	-
4.75	95-100	-
2.36	80-100	-
1.18	50-85	100
.600	25-60	50-90
0.300	10-30	25-60
0.150	5-15	12-30
0.075	0-10	0-10

- .4 Joint sand to be high-strength polymeric sand consisting of blended native sands mixed with synthetic polymers for pavement joint stabilization.
- .5 Gradation testing shall be conducted by a testing agency designated by Consultant and paid for by Owner.

3.0 EXECUTION

3.1 Granular Base

- .1 Prepare existing granular base materials in preparation for new bedding sand.

3.2 Bedding Sand

- .1 Bedding sand shall have uniform moisture content of 6% to 8% by mass when spread.
- .2 Spread sand uniformly and screed lightly to achieve designated uniform thickness after placement and tamping of paving units. Compacted thickness to 30 mm minimum unless otherwise stated in the Reference Standards.
- .3 Screeded sand shall not be compacted, disturbed, or allowed to dry prior to placing paving stones. Remove, loosen, re-spread, and re-screed unsuitable bedding.

- .4 Do not allow prepared bedding sand to be walked across or raked prior to paver placement.
- .5 Place no more sand than will be covered with concrete paving stones on the same day.

3.3 Laying Concrete Paving Stones

- .1 Brick unit paving stones shall be placed in the existing running bond pattern.
- .2 Concrete paving stones shall be placed uniformly and hand-tight with all joints correctly aligned and joint spaces no wider than 3 mm.
- .3 Concrete pavers requiring trimming shall be cut with a quick-cut saw or a guillotine to provide a straight edge.
- .4 Use planks for foot and wheelbarrow traffic to prevent disturbance of concrete paving stones prior to tamping.
- .5 Tamp concrete paving stones with flat plate vibrator shortly after laying to bring surface to correct grade, eliminate lipping between adjacent stones, and consolidate bedding sand.
- .6 Remove and replace stones that become damaged during placing and compaction.
- .7 Check finished surface to ensure surface and grade tolerances are met.

3.4 Joint Sand

- .1 After initial paving stone placement and compaction, broom dry joint sand over paving stones to fill joints and provide a depth of not less than 5 mm.
- .2 Make two passes, minimum, over surface with a plate vibrator while simultaneously sweeping sand into joints.
- .3 Sprinkle water during vibration and sweeping for proper sand compaction.
- .4 Sweep excess sand from paver surface.

3.5 Tolerance for Installed Paving Units

- .1 A 6 mm variation under a 3 m straightedge shall be maximum tolerance under concrete paving stones with no variation greater than 2 mm between adjacent stones and/or edge restraints.

3.6 Protection and Clean Up

- .1 Do not open newly installed paving stones to traffic until reviewed by Consultant.
- .2 Clean surface daily of all construction-related items.
- .3 Protect paving stones from damage during storage and prior to placement.

END OF SECTION

1.0 GENERAL

1.1 Work Included

- .1 Work includes repairing existing stone retaining walls as shown on the Drawings and as specified herein. Includes supply and installation of new geotextile, granular materials, and blasted granite spalls as required.
- .2 The Contractor is solely responsible for safety. The Engineer and Owner shall not be responsible for means or methods of construction or for safety of workers or the public.

1.2 References

- .1 All referenced Standards are latest editions referenced by the Building Code in the Place of the Work, or latest editions if not referenced by Code.
- .2 Nova Scotia Building Code
- .3 ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregate
- .4 ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- .5 ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort
- .6 ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
- .7 ASTM D4595 - Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method

1.3 Handling

- .1 Contractor shall protect the existing stone units from damage. Do not drill or anchor into units. Units cracked or damaged during the Work shall not be incorporated into the wall and shall be replaced by the Contractor at no additional cost to the Owner.
- .2 Contractor shall prevent excessive mud, concrete, adhesives and other substances that may adhere from coming in contact with the stone units.
- .3 Clean exposed faces of stone units after placement and setting.

2.0 PRODUCTS

2.1 Materials

- .1 All stone units requiring re-installation are existing and on site.
- .2 New geotextile shall be non-woven, needle punched, UV and rot resistant and suitable for application. Minimum Grab Tensile Strength: 700 N.
- .3 Supplement existing backfill with new as required. New backfill materials shall be Class "C".
- .4 Supplement existing blasted granite spalls with new for stone unit wedging/shimming. New spalls shall match existing in typical size and appearance.
 - .1 Provide sample to Owner for approval minimum one week prior to installation.

3.0 EXECUTION

3.1 Unit Installation

- .1 Check units for level and alignment. Units shall be within 5 mm of level from end to end and from front to back. Adjacent units should be in contact.
- .2 Fill all voids behind units with granular fill.
- .3 Place backfill behind the units in maximum loose lifts of 150 mm, tamp to consolidate and compact with vibratory plate compactor. Wet fill materials at stockpile and during placement. Limit dust during fill placement.
- .4 Final grade above and below the retaining wall shall provide for positive drainage and prevent ponding. Protect completed wall from other construction. Do not operate large equipment or store materials above the wall that exceed the design surcharge loads.

3.2 Field Quality Control

- .1 The Contractor shall verify that installation is in accordance with the Specifications and Drawings.

END OF SECTION

TOWN OF LUNENBURG 2024 DUKE STREET EXTENSION REINSTATEMENT

LUNENBURG, NOVA SCOTIA
EDM.137257.0002



PRIME CONSULTANT



Engineers

Read Jones Christoffersen Ltd.

17415 - 102 Avenue, Suite 100
Edmonton, AB T5S 1J8 Canada
tel 780-452-2325
fax 780-455-7516

rjc.ca

DRAWINGS LIST

- R1.0 - SITE PLAN AND GENERAL NOTES
- R1.1 - PLAN - EXISTING CONDITIONS AND DEMOLITION REQUIREMENTS
- R2.1 - PLAN - RESTORATION REQUIREMENTS
- R3.1 - SECTIONS AND DETAILS

ISSUED FOR TENDER
MAY 24, 2024

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CONSTRUCTION**



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1 OVERALL SITE PLAN
R1.0 N.T.S.

2	ISSUED FOR TENDER	MAY 24/24	SJR
1	ISSUED FOR OWNER REVIEW	MAY 22/24	SJR
No.	Revision	Date	By

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Project Name
**TOWN OF LUNENBURG 2024
DUKE STREET EXTENSION
REINSTATEMENT**

Sheet Title
**SITE PLAN AND
GENERAL NOTES**

Drawn By **PJL** Scale **AS NOTED**
Designed By **LHB** Date **MAY 24, 2024**
RJC Project Number **EDM.137257.0002**

Sheet Number **R1.0** Revision **1**

GENERAL NOTES	FIELD REVIEW BY RJC	DESIGN LOADS	GENERAL PROJECT INFORMATION
<ol style="list-style-type: none"> DEFINITIONS: A. RJC: READ JONES CHRISTOFFERSEN LTD. OR ITS REPRESENTATIVE. THIS SET OF DRAWINGS SHOWS THE COMPLETED PROJECT. IT DOES NOT INCLUDE COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION, AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES, FORM WORK, FALSE WORK, SHORING, ETC. REQUIRED TO COMPLETE THE WORK. THE INFORMATION ON THIS DRAWING SHALL NOT BE USED FOR ANYTHING OTHER THAN THE SPECIFIED WORKS OR PART OF THE WORKS FOR WHICH IT HAS BEEN AUTHORIZED BY RJC. THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION" IN THE REVISIONS COLUMN, AND SIGNED AND STAMPED BY AN ENGINEER OF RJC. THE DRAWINGS SHALL NOT BE USED FOR PRICING OR TENDER UNLESS SO INDICATED IN THE REVISIONS COLUMN. SECTION MARK SHOWN THUS  MEANS SECTION #4 ON DRAWING R3.1. THE CONTRACT DOCUMENTS ARE BASED ON DIMENSIONS FROM ORIGINAL DRAWINGS FOR THE EXISTING BUILDING STRUCTURE AND ASSUMPTIONS IN ACCORDANCE WITH STANDARD DETAILING AND CONSTRUCTION PRACTICE. MINOR MODIFICATIONS WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT RESULT IN A CHANGE IN CONTRACT PRICE. DO NOT PROCEED WITH MODIFICATIONS TO THE EXISTING STRUCTURE OR THE NEW WORK WITHOUT WRITTEN APPROVAL FROM RJC. RJC'S DRAWINGS, WHETHER IN ELECTRONIC FORMAT OR HARD COPY, MAY NOT BE USED AS OR MODIFIED TO PROVIDE SHOP DRAWINGS UNLESS: - RJC IS COMPENSATED FOR THE DRAWINGS AND - THE CONTRACTOR RESPONSIBLE FOR THE SHOP DRAWINGS SIGNS RJC'S STANDARD AUTHORIZATION AND WAIVER FORM. COMMENCEMENT OF CONSTRUCTION OR ANY PART THEREOF CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS AND MEANS DIMENSIONS AND ELEVATIONS HAVE BEEN CONSIDERED, VERIFIED AND ARE ACCEPTABLE. DO NOT OVERLOAD THE STRUCTURE. ENSURE ALL REASONABLE PRECAUTIONS ARE TAKEN TO PREVENT DAMAGE TO THE UNDERLYING STRUCTURES REMAINING IN PLACE. PROVIDE SHORING AS NECESSARY TO PREVENT OVERLOADING OF THE STRUCTURE DURING DEMOLITION AND CONSTRUCTION. CONTRACTOR TO ENSURE THAT EXISTING STRUCTURAL MEMBERS AND SERVICES ARE NOT DAMAGED THROUGH DEMOLITION, SAWCUTTING, HOLE AUGURING OR OTHER CONSTRUCTION ACTIVITIES. DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT WRITTEN PERMISSION OF RJC. 	<ol style="list-style-type: none"> RJC PROVIDES FIELD REVIEW ONLY FOR THE WORK SHOWN ON THESE DRAWINGS. THIS REVIEW IS NOT A "FULL TIME" REVIEW BUT IS CONDUCTED WITH SUCH FREQUENCY AS RJC DEEMS APPROPRIATE TO OBSERVE VARIOUS STAGES OF THE WORK AND TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY RJC. FIELD REVIEW BY RJC IS NOT CARRIED OUT FOR THE CONTRACTOR'S BENEFIT, NOR DOES IT MAKE RJC GUARANTORS OF THE CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. RJC WILL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. PROVIDE 24 HOURS ADVANCE NOTICE OF EACH REQUIRED FIELD REVIEW. FIELD REVIEWS SHALL BE SCHEDULED TO BE CARRIED OUT DURING NORMAL BUSINESS HOURS UNLESS SPECIAL ARRANGEMENTS ARE MADE WITH RJC. THE WORK TO BE REVIEWED SHALL BE GENERALLY COMPLETE IN NATURE. 	<p>NEW RAILINGS</p> <ol style="list-style-type: none"> IN ACCORDANCE WITH THE NATIONAL BUILDING CODE <ol style="list-style-type: none"> HORIZONTAL LOAD APPLIED INWARD OR OUTWARD AT ANY POINT AT THE MINIMUM REQUIRE HEIGHT OF THE GUARD. --- 0.75 kN/m OR CONCENTRATED 1 kN HORIZONTAL LOAD APPLIED OUTWARD ON --- 0.5 kN/m OR CONCENTRATED ELEMENTS WITHIN THE GUARD, INCLUDING SOLID PANELS AND BALUSTERS. OVER 100x100 AREA AT ANY POINT ON THE ELEMENT SO AS TO PRODUCE THE MOST CRITICAL EFFECT. EVENLY DISTRIBUTED VERTICAL LOAD ----- 1.5 kN/m APPLIED AT THE TOP OF GUARD. 	<ol style="list-style-type: none"> TYPES OF WORK BEING PERFORMED: <ol style="list-style-type: none"> LOCALIZED STRUCTURAL REPAIR OF EXISTING PEDESTRIAN AREA COMPONENTS TO GOOD OR SOUND CONDITION, FOR THE PURPOSE OF ITS REINSTATEMENT AFTER VEHICLE IMPACT DAMAGE. DESCRIPTION OF PROPOSED WORK: <ol style="list-style-type: none"> REPAIR OF EXISTING ROCK RETAINING WALLS. REMOVAL AND REPLACEMENT, AND SUPPLY AND INSTALL OF NEW HANDRAIL. AVAILABLE ORIGINAL CONSTRUCTION DRAWINGS: <p>BLUENOSE DRIVE PHASE 3 - PLAZA AND WALKWAY ISSUED FOR CONSTRUCTION DRAWINGS, PREPARED BY CBCL LIMITED CONSULTING ENGINEERS AND DATED AUGUST 7, 1990.</p>
	<p>REPAIRS TO EXISTING STRUCTURE</p> <ol style="list-style-type: none"> THE CONTRACT DOCUMENTS ARE BASED ON ASSUMED AS-BUILT DIMENSIONS FOR THE EXISTING BUILDING STRUCTURE AND ASSUMPTIONS IN ACCORDANCE WITH DETAILING AND PLACING PRACTICE. THESE ASSUMPTIONS MAY VARY FROM THE ACTUAL ON-SITE CONDITIONS. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE CONSULTANT OF ANY ACTUAL VARIATIONS FROM THE ASSUMED CONDITIONS. MINOR MODIFICATIONS WILL BE REQUIRED TO THE WORK INDICATED ON THESE DRAWINGS TO REFLECT ACTUAL SITE CONDITIONS. THE CONTRACTOR WILL COOPERATE WITH RJC IN THIS REGARD. MINOR MODIFICATIONS WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR AND WILL NOT RESULT IN A CHANGE IN THE CONTRACT PRICE. ENSURE THAT ALL NECESSARY JOB DIMENSIONS ARE TAKEN AND ALL TRADES ARE COORDINATED FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF SUCH DIMENSIONS, AND FOR COORDINATION. PRIOR TO FABRICATION OF ANY STRUCTURAL MEMBERS, THE CONTRACTOR SHALL COMPLETE THIS SITE REVIEW OF CRITICAL "TIE-IN" DIMENSIONS AND CONFIRM ALL DIMENSIONS TO ENSURE PROPER FIT OF NEW WORK TO EXISTING. REPORT ANY DISCREPANCIES TO RJC PRIOR TO STARTING WORK. COMMENCEMENT OF CONSTRUCTION OR ANY PART THEREOF CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS AND MEANS DIMENSIONS AND ELEVATIONS HAVE BEEN CONSIDERED, VERIFIED AND ARE ACCEPTABLE. CONTRACTOR TO ENSURE THAT UNDERGROUND OR IN-SLAB SERVICES ARE NOT DAMAGED THROUGH DEMOLITION, SAWCUTTING, OR OTHER CONSTRUCTION RELATED ACTIVITIES. 	<p>SAFETY DURING CONSTRUCTION</p> <ol style="list-style-type: none"> FIRE SAFETY DURING CONSTRUCTION IS TO BE PROVIDED AND MAINTAINED BY THE CONTRACTOR INCLUDING THE FIRE SAFETY PLAN MEANS OF SAFE EGRESS DURING CONSTRUCTION IS TO BE PROVIDED AND MAINTAINED BY THE CONTRACTOR GENERAL SAFETY DURING CONSTRUCTION IS TO BE PROVIDED AND MAINTAINED BY THE CONTRACTOR 	<p>SITE COORDINATION AND SIGNAGE</p> <ol style="list-style-type: none"> CONTRACTOR TO COORDINATE WITH SURROUNDING BUSINESSES DURING THE WORK. DO NOT BLOCK OR IMPEDE BUILDING ENTRANCES/EXITS, ACCESS WAYS, STAIRS, RAMPS, ETC. UNLESS APPROVED IN WRITING BY THE TOWN. CONTRACTOR MATERIAL/EQUIPMENT LAYDOWN AREA(S) TO BE APPROVED BY THE TOWN IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION. DO NOT BLOCK OR IMPEDE ROADWAYS, PARKING STALLS, SIDEWALKS, PEDESTRIAN AREAS ETC. DURING THE WORK UNLESS APPROVED IN WRITING BY THE TOWN. CONTRACTOR SHALL PROVIDE ALL SIGNAGE, OF PROFESSIONAL QUALITY, NECESSARY TO PROTECT THE PUBLIC FROM CONSTRUCTION, CONTROL TRAFFIC FLOW ADJACENT TO THE WORK AREA, AND TO INFORM PUBLIC THAT CONSTRUCTION ACTIVITY IS IN PROGRESS. ADDITIONAL SIGNS MAY BE REQUIRED AT THE DISCRETION OF THE TOWN OR THE CONSULTANT AS CONSTRUCTION PROGRESSES TO ENSURE VEHICLE AND PEDESTRIAN SAFETY AND FLOW IS MAINTAINED. NO EXTRAS WILL BE ENTERTAINED FOR SIGNAGE REQUIREMENTS AFTER TENDER CLOSES.
		<p>SHOP DRAWINGS</p> <ol style="list-style-type: none"> AS PART OF OUR CONSTRUCTION PHASE SERVICES, RJC WILL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON RJC'S DRAWINGS BY MEANS OF APPROPRIATE RATIONAL SAMPLING PROCEDURES AND COMMENT ON THE ACCURACY WITH WHICH THE CONTRACTOR PREPARED THE DRAWINGS. REVIEW OF SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAILED DESIGN INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS AND FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DRAWINGS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INFORMATION PERTAINING TO THE FABRICATION PROCESS, TECHNIQUES FOR CONSTRUCTION AND INSTALLATION, AND FOR CO-ORDINATION OF THE WORK OF ALL SUB-TRADES. SHOP DRAWINGS SHALL BE COMPLETE AND INCLUDE ANY REQUIRED SEALS FROM A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED PRIOR TO SUBMISSION. ALL SHOP DRAWINGS COMPRISING A REVISED SUBMISSION SHALL INDICATE THE REVISED CONTENT BY MEANS OF CLOUDING OR OTHER SUITABLE MARKINGS. 	<p>DESIGN CODE</p> <ol style="list-style-type: none"> THE STRUCTURAL REPAIR MEASURES SHOWN ON THE STRUCTURAL DRAWINGS HAS BEEN DESIGNED IN SUBSTANTIAL ACCORDANCE WITH THE NATIONAL BUILDING CODE.

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No.	Revision	Date	By
2	ISSUED FOR TENDER	MAY 24/24	SJR
1	ISSUED FOR OWNER REVIEW	MAY 22/24	SJR

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Seal

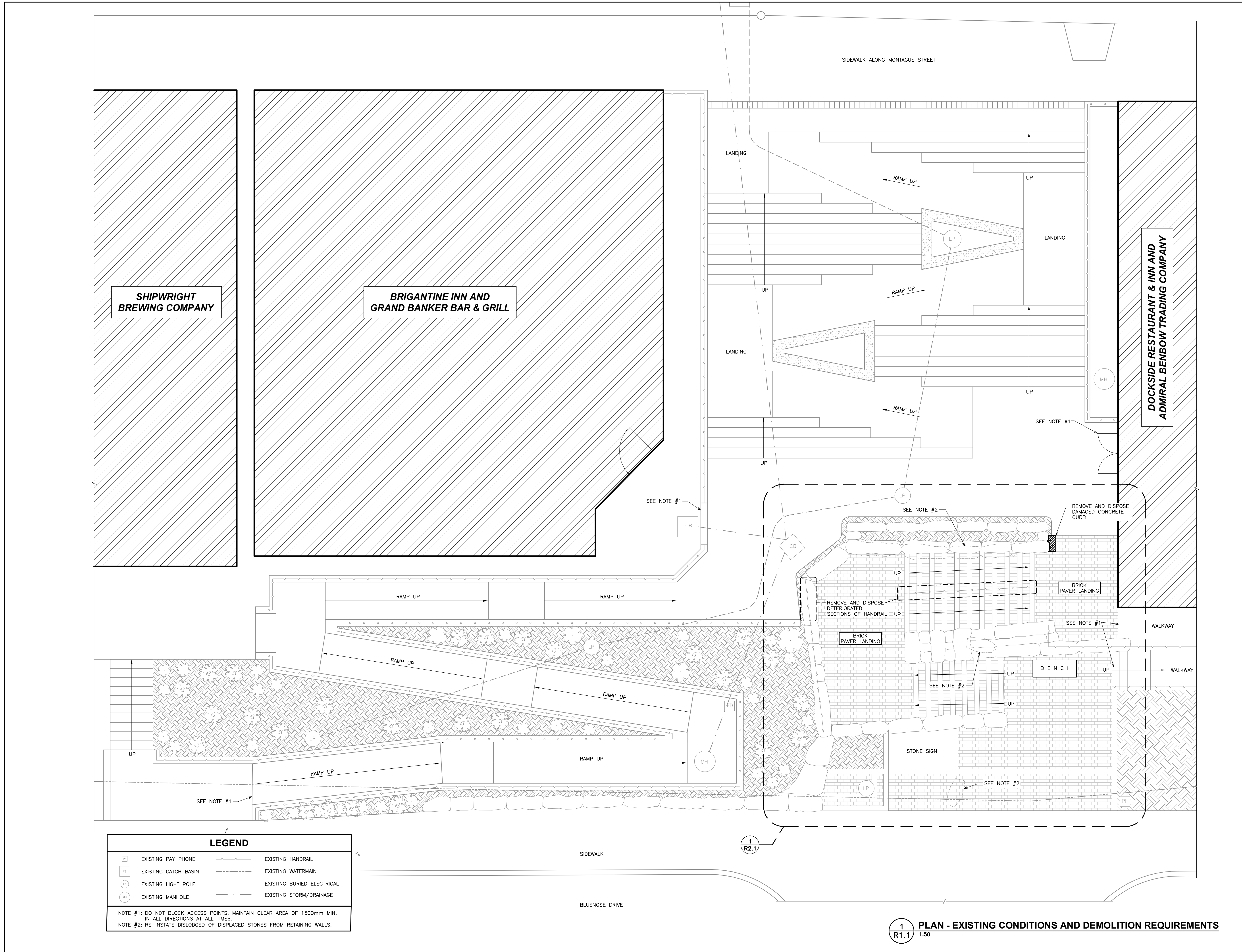


Project Name
**TOWN OF LUNENBURG 2024
DUKE STREET EXTENSION
REINSTATEMENT**

Sheet Title
**PLAN - EXISTING
CONDITIONS AND
DEMOLITION
REQUIREMENTS**

Drawn By **PJL** Scale **AS NOTED**
Designed By **LHB** Date **MAY 24, 2024**
RJC Project Number **EDM.137257.0002**

Sheet Number **R1.1** Revision **1**



LEGEND

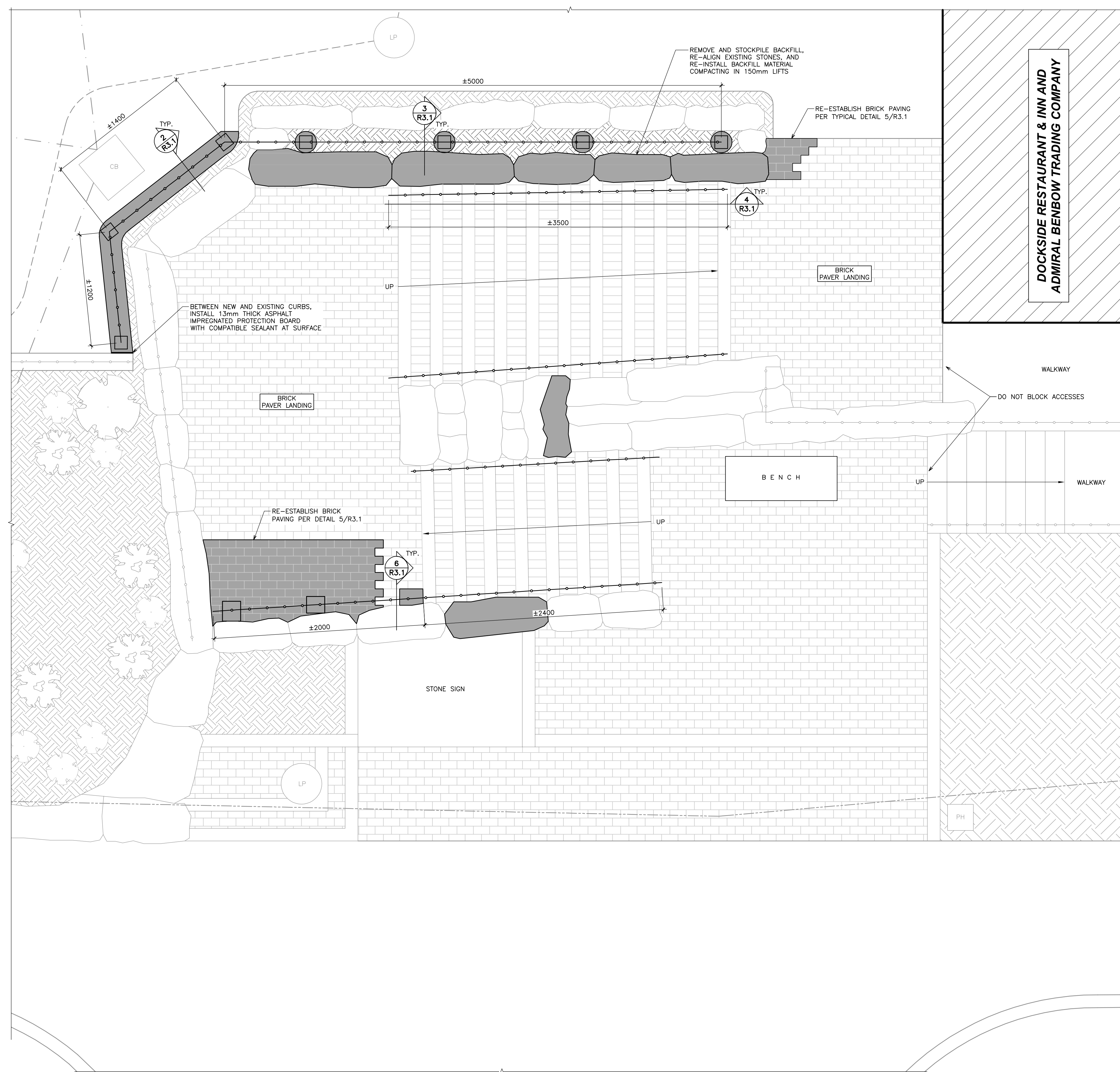
	EXISTING PAY PHONE		EXISTING HANDRAIL
	EXISTING CATCH BASIN		EXISTING WATERMAIN
	EXISTING LIGHT POLE		EXISTING BURIED ELECTRICAL
	EXISTING MANHOLE		EXISTING STORM/DRAINAGE

NOTE #1: DO NOT BLOCK ACCESS POINTS. MAINTAIN CLEAR AREA OF 1500mm MIN. IN ALL DIRECTIONS AT ALL TIMES.
NOTE #2: RE-INSTATE DISLODGED OR DISPLACED STONES FROM RETAINING WALLS.

1 PLAN - EXISTING CONDITIONS AND DEMOLITION REQUIREMENTS
R1.1 1:50

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CONSTRUCTION**

DOCKSIDE RESTAURANT & INN AND
ADMIRAL BEMBOW TRADING COMPANY



LEGEND			
	EXISTING PAY PHONE		NEW HANDRAIL (SEE TYPICAL DETAIL 1/R3.1)
	EXISTING CATCH BASIN		EXISTING HANDRAIL
	EXISTING LIGHT POLE		EXISTING WATERMAIN
	EXISTING MANHOLE		EXISTING BURIED ELECTRICAL
			EXISTING STORM/DRAINAGE

1 PLAN - EXISTING CONDITIONS AND DEMOLITION REQUIREMENTS
R2.1 1:25

No.	Revision	Date	By
2	ISSUED FOR TENDER	MAY 24/24	SJR
1	ISSUED FOR OWNER REVIEW	MAY 22/24	SJR

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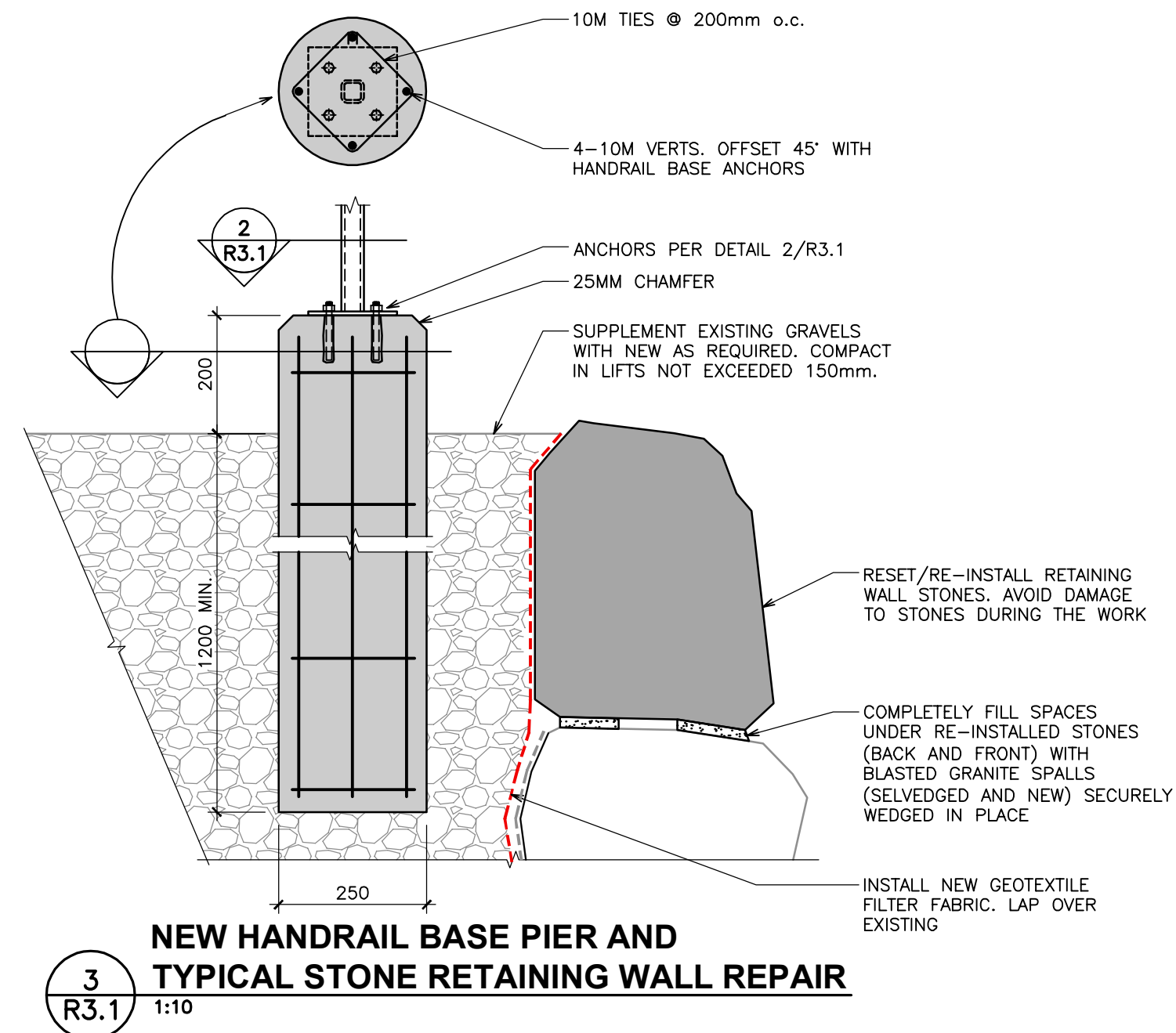
Project Name
**TOWN OF LUNENBURG 2024
DUKE STREET EXTENSION
REINSTATEMENT**

Sheet Title
**PARTIAL PLAN -
RESTORATION
REQUIREMENTS**

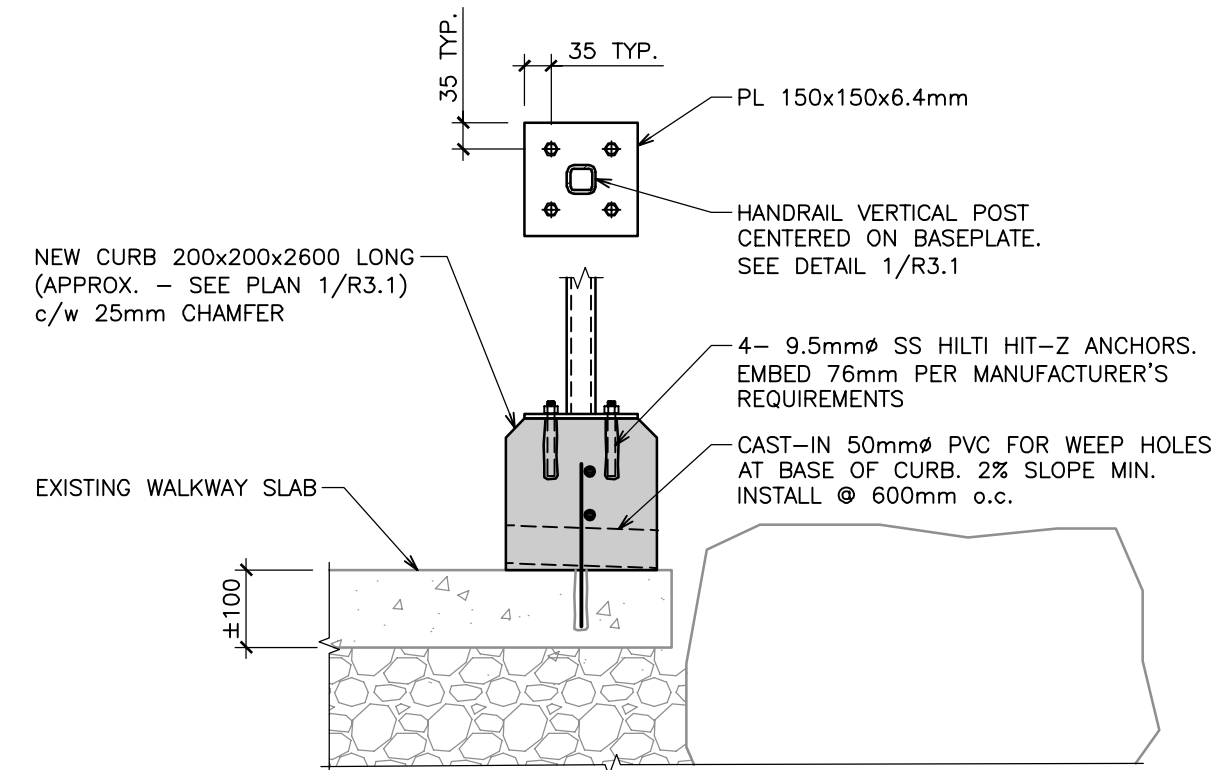
Drawn By **PJL** Scale **AS NOTED**
Designed By **LHB** Date **MAY 24, 2024**
RJC Project Number **EDM.137257.0002**

Sheet Number **R2.1** Revision **1**

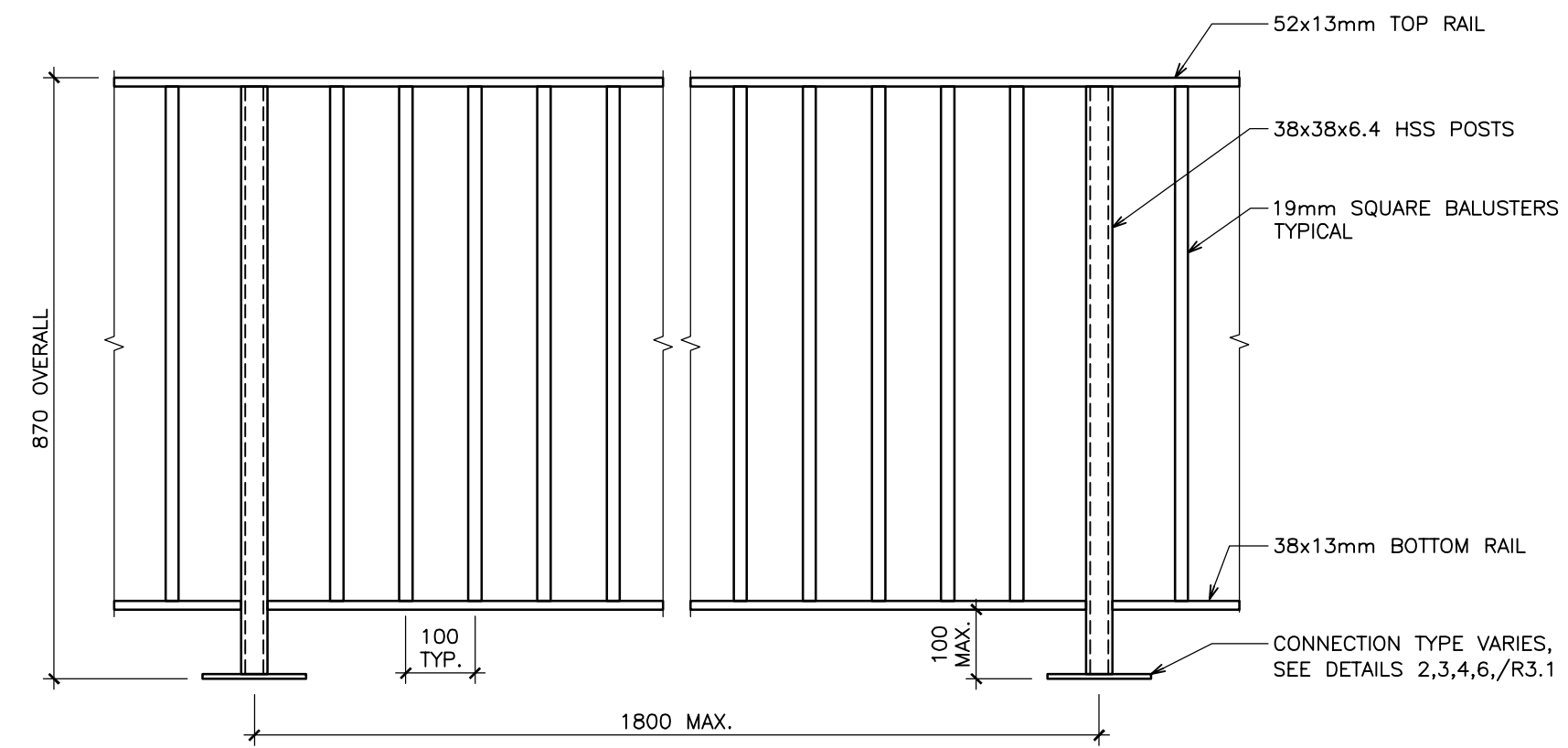
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3
R3.1
1:10

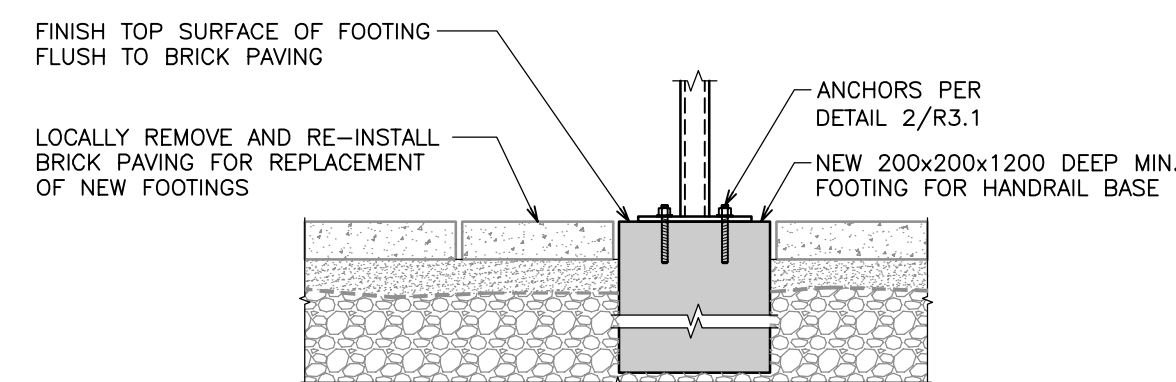


2
R3.1
1:10

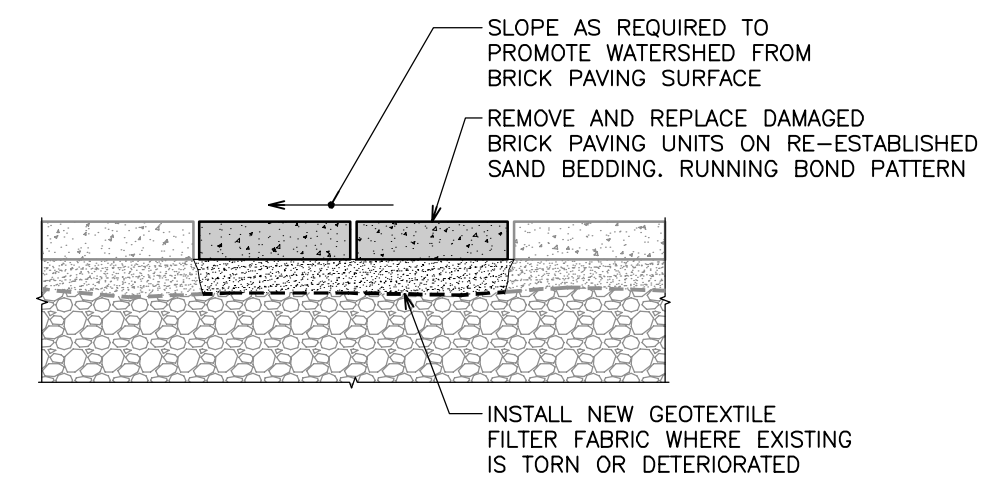


1
R3.1
1:10

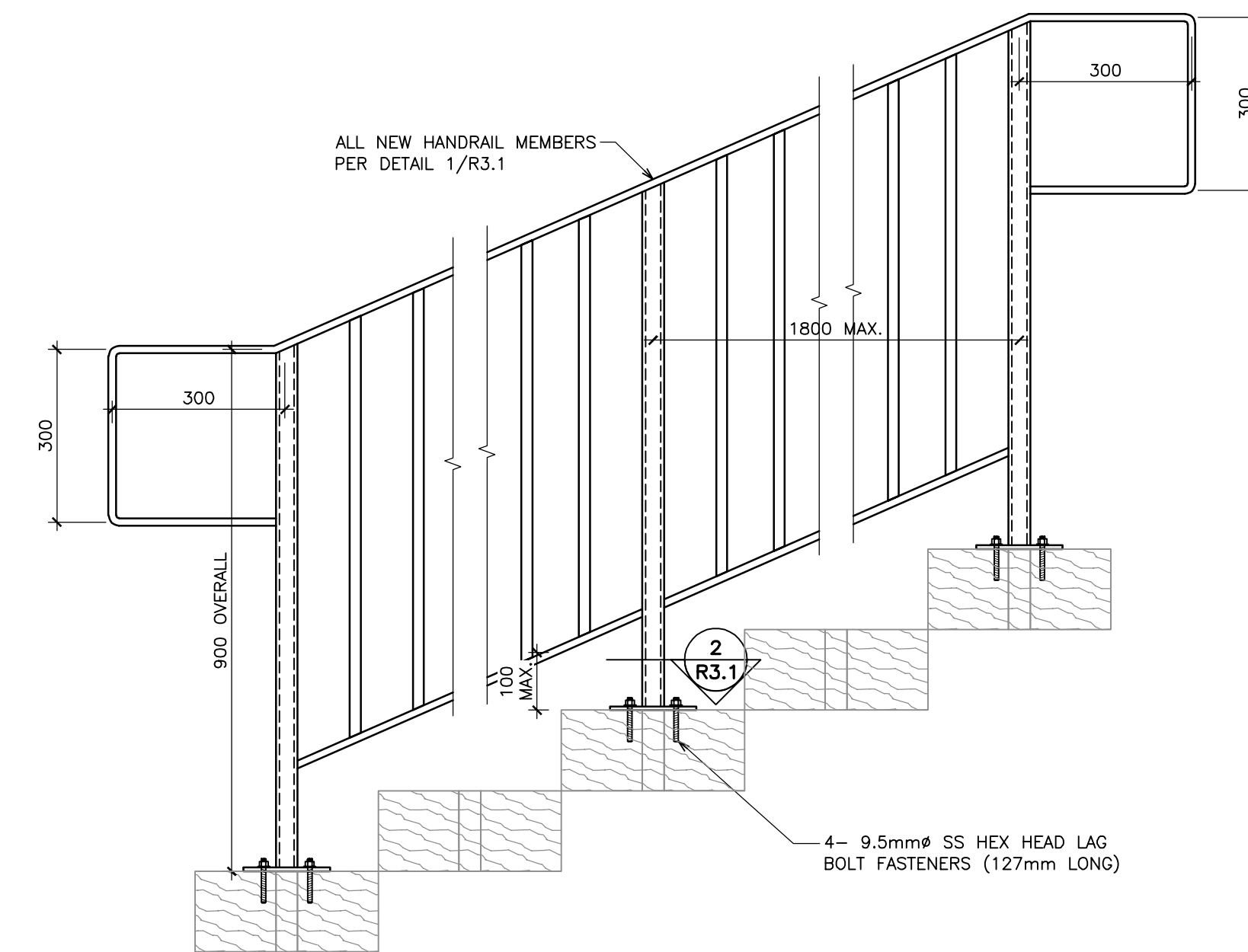
NOTE: NEW "WROUGHT IRON" HANDRAIL (CSA G40.21 300W), PRIMED AND PAINTED IN SHOP. SEE PLAN FOR APPROXIMATE LENGTHS. VERIFY ON SITE PRIOR TO FABRICATION.



6
R3.1
1:10



5
R3.1
1:10



4
R3.1
1:10

2	ISSUED FOR TENDER	MAY 24/24	SJR
1	ISSUED FOR OWNER REVIEW	MAY 22/24	SJR
No.	Revision	Date	By

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Project Name
**TOWN OF LUNENBURG 2024
DUKE STREET EXTENSION
REINSTATEMENT**

Sheet Title
**SECTIONS AND DETAILS -
OVERALL CROSS SECTION**

Drawn By **PJL** Scale **AS NOTED**
Designed By **LHB** Date **MAY 24, 2024**
RJC Project Number **EDM.137257.0002**

Sheet Number **R3.1** Revision **1**