



# **Government of Montserrat**

## **TENDER DOCUMENTS**

### **ST. JOHN'S COMMUNITY RESOURCE CENTRE & ACCESS IMPROVEMENTS & MISCELLANEOUS WORKS**

Project No: BNTF 8  
Employer: Government of Montserrat  
Project Consultants: Galloway & Associates  
Issue Date: 25 August 2016

**A CARIBBEAN DEVELOPMENT BANK BASIC NEEDS TRUST FUND PROJECT**



**GOVERNMENT OF MONTSERRAT BASIC NEEDS  
TRUST FUND PROGRAMME  
INVITATION FOR BIDS**

The Government of Montserrat (GOM) has received financing from the Caribbean Development Bank (CDB) in an amount equivalent to XCD 1,374,399.00 towards the cost of the Basic Need Trust Fund 8 Project (the BNTF Project) and intends to apply a portion of the proceeds of this financing to eligible payments under these contracts. Payments by CDB will be made only at the request of GOM and upon approval by CDB, and will be subject, in all respects, to the terms and conditions of the Financing Agreement. The Financing Agreement prohibits withdrawal from the financing account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of CDB, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than GOM shall derive any rights from the Financing Agreement or have any claim to the proceeds of the Financing.

The Project is being implemented by the BNTF Project through its Implementing Agency (IA). CDB has contracted a Consultant who will assist the BNTF office with delivering the Project. The Consultant has prepared designs and contract documentation and will assist in tender administration and evaluation and supervision of BNTF Project activities.

Tenders are invited from qualified contractors for the works associated with the St. Johns Community Resource Centre Access Improvements & Miscellaneous Works Project. This project is funded by the Government of Montserrat and the Caribbean Development Bank, as part of the Basic Needs Trust Fund Project.

Consideration will be limited to firms or joint ventures of firms, which are legally incorporated or otherwise, organised in, and have their principal place of business in an eligible country and are either:

- (a) more than 50% beneficially owned by a citizen or citizens and/or a bona fide resident or residents of an eligible country, or by a body corporate or bodies corporate meeting these requirements; or
- (b) owned or controlled by the Government of an eligible country provided that it is legally and financially autonomous and operated under the commercial law of an eligible country and otherwise meets the eligibility requirements of the CDB Guidelines for Procurement (2006).

Eligible countries are member countries of CDB.

Eligible bidders will be required to submit full qualification information with their bids establishing their eligibility to bid and qualification to perform the contract if the bid is accepted. Tender and qualification information are to be submitted in the English Language on the prescribed forms inserted in the Bid Documents. Submissions that do not provide the information required, or do not demonstrate the prospective contractor's ability to perform satisfactorily, will not qualify and will not be considered for further evaluation.

Qualification requirements include for this tender package, inter alia:

- (a) an average annual turnover (defined as certified payments received for works in progress or completed) within the last 3 years of at least one Hundred Thousand Eastern Caribbean Dollars (XCD100,000.00);
- (b) experience as prime contractor in the construction of at least three (3) assignments of a nature, scope and complexity comparable to the proposed project activity within the last three (3) years (to comply with this requirement, works quoted should be at least 80 percent complete).

Eligible bidders should register at the BNTF office prior to obtaining bidding documents. Bidding document can be obtained by eligible bidders from the BNTF office. Requests may also be made by written application. Written applications must be clearly marked: **“Request for Bidding Documents for the St. John’s Community Resource Centre & Access Improvements & Miscellaneous Works”**, along with the name, address and contact information of the bidder for which Bidding Documents is being requested

Tenders and all supporting documents should be enclosed in an inner envelope duly sealed and bearing the words, **“Tender for the St. John’s Community Resource Centre & Access Improvements & Miscellaneous Works”** and addressed to **The Chairperson, Public Procurement Board, Ministry of Finance and Economic Management, Brades, MSR1110, Montserrat**. The name of the tenderer **should** be written on this inner envelope. Tenders should then be placed in an outer envelope, duly sealed and addressed to **The Chairperson, Public Procurement Board, Brades, MSR1110, Montserrat**.

Tenders should be received no later than **2:00pm on Wednesday, 28 September 2016**. **The name of the project should be written on the outer envelope and should read “Tender for the St. John’s Community Resource Centre & Access Improvements & Miscellaneous Works”**. *The name of the Bidder should not be written on this outer envelope*. Tenders should not have any additional marks on the envelope. **Late tenders will not be considered**.

Bid opening will take place immediately after the deadline for submission at the Ministry of Finance and Economic Management, Brades, MSR1110, Montserrat in the presence of bidders’ representatives who choose to attend.

GOM/BNTF reserves the right to accept or reject any bid, and to annul the process and reject all bids, at any time prior to award of contract, without thereby incurring any liability to the affected prospective bidder(s) or any obligation to inform the affected prospective bidder(s) of the grounds for GOM/BNTF action. GOM/BNTF will not defray any costs incurred by any bidder in the preparation of bids.

#### **QUALIFICATION REQUIREMENTS**

The following documents should be provided for a contractor’s bid to be valid. Bidders are asked to supply the following information. Failure to provide any of the stated documents may result in the bid being considered noncompliant and rejected.

- Signed Form of Tender (Including time for completion and notice period)
- Completed Bill of Quantities
- Details of work completed by the company of a similar nature and work of equal or greater value. Please state project name, brief description of work, client name and value of work completed. Supporting evidence must be included
- Tax Compliance Certificate

## **INSTRUCTIONS TO TENDERERS**

The following instructions have been included for the advice and guidance of Tenderers. Care should be exercised that the conditions and clauses are adhered to, since failure to comply may result in the refusal of a tender.

### **1. Confidentiality Documents**

All recipients of tender documents and drawings for the proposed contract (whether they submit a tender or not) shall treat the details of the documents and drawings as private and confidential. Failure to do so will result in disqualification from this and future tenders.

### **2. Dispatch of Tenders**

The tender shall be delivered before the time of tender closing stated in the Invitation to Tender. The Form of Tender shall be signed by an authorized officer of the Company. The completed Tender shall be submitted using the Form of Tender, in the copy of the Tender Document provided. The Tender and all supporting documents shall be enclosed in a sealed envelope bearing only the words **“Tender for St. John’s Community Resource Centre & Access Improvements & Miscellaneous Works”** with no indication of the identity of the sender. The envelope must be addressed to:

#### **The Chairperson**

Public Procurement Board

Ministry of Finance and Economic Management Government

Headquarters

Brades, Montserrat

3. This Tender is based on the Drawings, Specifications, Conditions of Contract and Bills of Quantities hereinafter referred to as the Contract Documents.
4. No unauthorized alteration or addition should be made to the Form of Tender, to the Bills of Quantities or to any other component of the Tender Document. If any such alteration or addition is made or these instructions are not fully complied with, the Tender may be rejected. Should any further information be required, it will be supplied on request.
5. Any neglect or failure on the part of the tenders to obtain reliable information upon any matters affecting the cost, execution, construction, completion and maintenance of the Works and the Contract shall not relieve the persons whose Tender is accepted from any risks of liabilities for the completion of the Works, nor will any claim for increase of the Contract be entertained as a result of such neglect or failure. Quantities contained within the Bills of Quantities do not necessarily indicate conclusively the amount or the extent of works to be performed. The Contractor must inform himself, as no claims for increases will be entertained on this basis.
6. Tenderers are required to visit the site of the works to obtain for themselves, on their own responsibility, any information they may require prior to submitting a tender and entering into a contract. Each Tenderer, in submitting a proposal, warrants that he has investigated and is acquainted with the requirements of the Contract. Submission of a tender shall be considered conclusive evidence that the Tenderer has made such examination and knows all the conditions that will affect the Works.
7. Tenders must be submitted on the Form provided. Prices shall be in Eastern Caribbean Dollars. Each form

shall be completely filled out. Tender prices must be completed in ink. Erasures or other changes must be noted over the signature of the Tenderer.

8. Each Tender must contain the name, residence and place of business of the person or persons making the Tender and must be signed by the Tenderer with his usual signature. Tenders by partnership must furnish the full names of all partners and must be signed with the partnership name by one of the members of the partnership or by an authorized representative followed by the signature and designation of the person signing. Tenders by corporation to be signed with the legal name of the corporation followed by the name of the State or jurisdiction of incorporation and by the signature and designation of the President, Secretary or other persons authorized to bind it in the matter. Satisfactory evidence of the authority of the signer on behalf of the firm shall be furnished.
9. Award of Contract will be made, if at all, to the tenderer whose tender the Employer deems most advantageous to the Government of Montserrat. The Employer reserves the right to reject any or all tenders or to accept any tender should it be deemed in the interests of the Employer so to do, and, in particular, if only one tender is received, the Employer reserves the right to reject it.
10. The Tenderer to whom the award is made will be required to enter into an agreement with the Employer. This agreement will be of the same form as that in the Conditions of Contract.
11. Increases / Decreases in Cost of Labour and Materials.
  - i. Increases / decreases in the current cost of labour and certain materials subsequent to the date for closing of Tenders will not result in an adjustment to the Contract Price.
  - ii. Basic unit costs of labour and certain materials upon which the Tender is based and upon which day works and variations will be considered shall be listed in Schedule A, B, C and D of the Form of Tender. These Schedules shall be completed and submitted with the Tender. Failure to submit them may lead to disqualification of the Tender.
12. Should there be any doubt or obscurity as to the meaning of the Tender Documents, or as to anything to be done or not be done under the Contract or concerning these instructions, or any other matter or thing, Tenderers shall set forth in writing such doubts to obscurity and submit them to the Project Consultant not later than two weeks before the date for submission of Tenders. These and any other outstanding matters will be answered in writing within one week of the above date.
13. Tenderers are to fill in all blank spaces in the Form of tender including the appendix, except where specifically instructed otherwise.
14. Pricing
  - i. Tenderers are to insert rates or prices against each item in the Bills of Quantities. Items against which no rate or price is entered by the Tenderer will be deemed to be covered by the rates of prices set against other items in the Bills.
  - ii. Prices inserted shall be based on duty free imports from abroad of material and goods required specifically for this product and shall be deemed to include for the provision of all labour, materials and plant, for transport, for deliveries to Site (where not specifically mentioned in the description), for temporary storage of materials and return of empties, for the erection, maintenance and removal of scaffolding, temporary staging, plank ways, protection, etc. and for all other things necessary for the completion of the Works in accordance with the Drawings, Specifications, Conditions of Contract and Schedule of Works.

## 15. Import Duty Concessions

- i. The Tenderer must ascertain from the responsible official of the Montserrat Customs and Revenue Services the allowable concessions at present in force in respect of duty on imported materials to be incorporated in the Works.
- ii. The Tenderer must familiarize himself with the workings of the Customs Department and shall allow for the costs of, and shall accept responsibility for preparing and processing the necessary documents involved in the importation of materials, etc. to be incorporated in the Works.
- iii. The Tenderer must allow for all Wharfage dues, Package Tax, Importer's Licenses (where applicable), Stamp Duties, taxes and charge that may be required.
- iv. Special rules are in force in respect of the importation of plant, scaffolding, tools, equipment and consumable stores that are not incorporated in the Works. The Tenderers must allow for the result of licenses, bonds, taxes, stamp duties or any other charges that may be required.

## 16. Errors in Tenders

Errors discovered in the Contractor's Tender will be dealt with as follows:

The Contractor will be given details of such errors and afforded an opportunity of confirming or withdrawing his offer. If the Contractor withdraws, the tender of the second most advantageous Tenderer will be examined, and if necessary this Contractor will be given a similar opportunity.

## 17. Compliance with instructions:

- i. No tender will be considered unless it complies with the conditions set out in these instructions.
- ii. All Addenda issued by the Project Consultant prior to the date stated for the closing of Tenders shall be attached to and form part of the Tender.

18. The Employer will not be responsible for any expenses or losses that may be incurred by any Tenderer in the preparation of this Tender.

19. The Tenderer shall be bound by his Tender except as provided for in Paragraph 16 of these instructions.

## 20. Discrepancies in Specifications or Drawings

- i. Any ambiguity found in the drawings or specifications shall be called to the attention of the Project Consultant prior to tendering.
- ii. Ambiguities will be clarified by the Project Consultant by Addenda prior to accepting tenders, and one copy of each Addendum shall be submitted with the Tender. No consideration will be given to any claim by any Tenderer that an ambiguity or question was settled verbally prior to submitting his Tender.
- iii. All information given to bidders other than by means of the drawings and contract documents or by Addenda as described above, is given informally and shall not be used as the basis of a claim.
- iv. To receive consideration, such question shall be submitted in writing to the Project Consultant so as to be received at least ten days before the established date for receipt of tenders. If the question involves the quality or use of products or methods, it must be accompanied by drawings, specifications or other data in sufficient detail to enable the Project Consultant to determine the quality or suitability of the product or method. In general, the Project Consultant will neither approve nor disapprove particular products prior to the opening of the bids; such products will be considered when offered by the Contractor for incorporation into the works.
- v. Decisions rendered by the Project Consultant in response to questions received as above- provided will be arranged as Addenda and shall become a part of the Contract.

- vi. All information given on the drawings or in the contract documents relating to materials encountered, ground-water, sub-surface conditions, natural phenomena, and existing pipes and other structures is from the best source available to the Employer at present. All such information is furnished only for the information and convenience of tenderers.

#### 21. Commencement of the Works

Tenderers are advised that the actual work of this Contract must not be started until a "Notice to Commence Work" has been issued by the Project Consultant. The Contractor shall, however, commence work no later than the date specified in the above Notification.

#### 22. Acceptance of Tender

The Employer, Government of Montserrat, does not bind itself to accept the lowest or any tender nor to assign any reason for the rejection of any tender. Tenders may be declared void if the tender sum exceeds the funds available for the works.

#### 23. Construction Programme

If the Contractor is awarded the Contract, the Contractor shall submit a proposed programme or a summary thereof showing the sequence and timing of the principal parts of the Works, he shall agree the details of his programme with the Consultant and shall produce four (4) copies of the agreed chart for the Consultant. The Contractor shall so programme the work as not to interfere with the free use of any existing buildings, roads, and other areas and or adjoining the site.

# FORMS OF TENDER

FORM OF TENDER

To: The Chairperson  
Public Procurement Board  
Ministry of Finance and Economic Management Government Headquarters  
Brades, Montserrat

Dear Sir,

**Re: Tender for the St. John’s Community Resource Centre & Access Improvements & Miscellaneous Works**

Having examined the Drawings, Conditions of Contract, Specifications and Bills of Quantities for the construction of the above-named Works, we, the undersigned, offer to construct, complete and maintain the whole of the said Works for the sum of: \_\_\_\_\_

(\$ \_\_\_\_\_) Of such other sum as may be ascertained in accordance with the said conditions. We undertake, if our tender is accepted, to commence the Works within \_\_\_\_\_ calendar days of receipt of the Project Consultant’s order to commence, and to complete and deliver the whole of the Works comprised in the Contract within \_\_\_\_\_ calculated from the date of commencement.

We agree to abide by this tender for the period of \_\_\_\_\_ days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period. Unless and until a formal agreement is prepared and executed this tender, together with your written acceptance thereof, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this ..... day of ..... 2016.

Signature ..... in the capacity of .....  
duly authorised to sign tenders for and on the behalf of

(IN BLOCK CAPITALS)

Address.....  
.....

**FORM OF AGREEMENT**

THIS AGREEMENT made the..... day of ..... 2016

Between the Basic Needs Trust Fund (hereinafter called "The Employer") of the one part and

-----

-----of -----

-----hereinafter called

"The Contractor") of the other part.

WHEREAS the Employer is desirous that certain Works should be constructed, namely

**the performance of the St. John’s Community Resource Centre & Access Improvements & Miscellaneous Works** and has accepted a Tender from the Contractor for the construction, completion and maintenance of such Works. Now this agreement witnesses as follows:

- 1. In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
- 2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
  - (a) The Tender
  - (b) The Bond (if required)
  - (c) The Drawings
  - (d) The Conditions of Contract
  - (e) The Specification
- 3. In consideration of the payments to be made by the Employer to the Contractor, the Contractor hereby covenants with the Employer to construct, complete and maintain the Works in conformity in all respects with the provisions of the Contract.
- 4. The Employer hereby covenants to pay the Contractor in consideration of the construction, completion and maintenance of the Works the Contract Price at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties have hereunto set their respective hands

SIGNED AND DELIVERED by the said.....

.....in the presence of .....

SIGNED AND DELIVERED by the said.....

.....in the presence of .....

**Advance Payment Bond**

- 1 THE parties to this Bond are:  
(1)-----  
whose registered office is at-----  
-----('the Surety'), and  
(2)-----  
of-----  
-----('the Employer').
- 2 The Employer and-----('the Contractor') have agreed to enter into a contract for building works 'the Works' at-----  
-----('the Contract').
- 3 The Employer has agreed to pay the Contractor the Sum of \$----- as an advance payment of sums due to the Contractor under the Contract (the Advance Payment) for reimbursement by the Surety on the following terms:
  - (a) When the Surety receives a demand from the Employer in accordance with Clause 3(b) the Surety shall repay the Employer the sum demanded up to the amount of the Advance Payment.
  - (b) The Employer shall in making any demand provide to the Surety a completed notice of demand in the form of the **Schedule** attached hereto which shall be accepted as conclusive evidence for all purposes under this Bond. The signature on any such demand must be authenticated by the Employer's bankers
  - (c) The Surety shall within 5 Business Days after receiving the demand pay to Employer the sum so demanded. 'Business Day' means the day (other than a Saturday or a Sunday) on which commercial banks are open for business in Montserrat.
- 4 Payments due under this Bond shall be made notwithstanding any dispute between the Employer and the Contractor and whether or not the Employer and the Contractor are or might be under any liability one to the other. Payment by the Surety under this Bond shall be deemed a valid payment for all purposes of this bond and shall discharge the Surety from liability to the extent of such payment.
- 5 The Surety consents and agrees that the following actions by the Employer may be made and done without notice to or consent of the Surety and without in any way affecting changing or releasing the Surety from its obligations under this Bond and the liability of the Surety hereunder shall not in any way be affected hereby. The actions are:
  - (a) waiver by the Employer of any of the terms, provisions, conditions, obligations and

agreements of the Contractor or any failure to make demand upon or take action against the Contractor;

(b) any modification or changes to the Contract: and/or

(c) the granting of any extension of time to the Contractor without affecting the terms of clause 7-c below.

6 The Surety's maximum aggregate liability under this Bond which shall commence on payment of the advance by the Employer to the Contractor shall be the amount of which shall be reduced by the amount of any reimbursements made by the Contractor to the Employer as advised by the Employer in writing to the Surety.

7 The obligations of the Surety and under this Bond shall cease upon whichever is the earliest of:

(a) the date on which the Advance Payment is reduced to nil as certified in writing to the Surety by the Employer;

(b) the date on which the Advance Payment or any balance thereof is repaid to the Employer by the Contractor (as certified in writing to the Surety by the Employer) or by the Surety; and

(c) (longstop date to be given),

and any claims hereunder must be received by the Surety in writing on or before such earliest date.

8 This Bond is not transferable or assignable without the prior written consent of the Surety. Such written consent will not be unreasonably withheld.

9 This Bond shall be governed and construed in accordance with the laws of Montserrat.

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**IN WITNESS** hereof this Bond has been executed as a Deed by the Surety and delivered on the date below:

EXECUTED as a Deed by-----  
for and on behalf of the Surety-----

-

EXECUTED as a Deed by-----  
for and on behalf of the Surety-----

-

Date:-----

**GOVERNMENT OF MONTSERRAT**  
**TENDER SUBMISSION ANTI-COLLUSION**  
**CERTIFICATE**

I/we certify that this tender is made in good faith, and that we have not fixed or adjusted the amount of the tender by or under or in accordance with any agreement or arrangement with any other person. I/we also certify that we have not and I/we undertake that we will not before the award of any contract for the work:

- i. Disclose the tender price or any other figures or other information in connection with the tender to any other party (including any other company or part of a company forming part of a group of companies of which I am/we are a part of) nor to any sub-contractor (whether nominated or domestic) nor supplier (whether nominated or domestic) or any other person to whom such disclosure could have the effect of preventing or restricting full competition in this tendering exercise
- ii. Enter into any agreement or arrangement with any person that they shall refrain from tendering, that they shall withdraw any tender once offered or vary the amount of any tender to be submitted or otherwise collude with any person with the intent of preventing or restricting full competition
- iii. Pay, give or offer pay or give any sum of money or other valuable consideration directly or indirectly to any person for doing or having done or causing or having caused to be done in relation to another tender or proposed tender for the work any act or thing of the sort described at i), ii) or iii) above.

I/we further declare that I/we have no knowledge either of any sum quoted or of any other particulars of any other tender for this contract by any other party.

I/we further certify that the principles described above have been, or will be, brought to the attention of all sub-contractors, suppliers and associated companies providing services or materials connected with the tender and any contract entered into with such sub-contractors, suppliers or associated companies will be made on the basis of compliance with the above principles by all parties.

I/we acknowledge that any breach of the foregoing provisions shall lead automatically to this tender being disqualified and may lead to criminal or civil proceedings.

The Government of Montserrat shall treat any tender received in confidence but reserves the right to make the same available to any other funding organisation or statutory regulatory authority either having jurisdiction over the Works or who may now or at any time in the future have statutory power to require disclosure of this tender.

In this certificate, the word 'person' includes any persons and any body or association, incorporated or unincorporated; any agreement or arrangement includes any transactions, formal or informal and whether legally binding or not; and 'the work' means the work in relation to which this tender is made.

SIGNATURE..... IN CAPACITY OF  
..... DATE.....2016

Duly authorised to sign tenders and acknowledge the contents of the Anti-Collusion Certificate for and on behalf of:

Name Of  
Firm.....

Full Postal Address.....  
Telephone No..... Fax No .....

**GENERAL CONDITIONS**

**OF**

**CONTRACT**

**For the St. John's Community  
Resource Centre & Access  
Improvements & Miscellaneous  
Works**

## GENERAL CONDITIONS

### **1 Definitions**

- a) The “Contract” means these General Conditions together with the Specification drawings and includes the contract agreement
- b) The “Employer” means the Basic Needs Trust Fund (BNTF)
- c) The “Project Consultant” means a duly authorized representative of the Employer
- d) The “Contractor” means the company appointed to carry out the works
- e) The “colony” means the colony of Montserrat
- f) The “Site” means the lands and/or other places on under or through which Works are to be carried out
- g) The “Works” means the works to be executed in accordance with this Contract as described in the Specification
- h) The “language” of the Contract shall be English
- i) The “Law” applicable to the Contract, shall be the Laws of Montserrat

### **2 Contract Document - Priority**

- 1) Contract Agreement
- 2) The Drawings
- 3) Specifications
- 4) Conditions of Contract
- 5) Any other document forming part of the Contract

### **3 Extent of Contract**

The Contract comprises of the construction and completion of all Works described in the Specifications, Drawings and Bill of Quantities and to supply all necessary labour, plant and temporary works to complete the described works together with such materials as are required by the Specifications.

### **4 Power to Vary or Omit**

- a) The Employer reserves the right to vary from time to time during the progress of the works, the Specifications or Drawings and shall in writing, notify the Contractor of such variation. If the instructions are given orally, they shall, within two days be confirmed in writing by the Project Consultant, in the event of any such variation involving an alteration in the cost, or in the period required for completion an agreed revision of contract price and/or time of completion may be made, any such alterations should be deemed part of the Contract.
- b) No variation, alteration or addition to the work indicated in the Specification and/or Drawing shall be made unless the written instruction of the employer has been obtained.

**5 Assignment of Contract**

- 1) The Contractor shall remain responsible to the Employer for workmanship and manner of workmanship defaults and neglects of any sub-contractor or agent or workman employed by him.

**6 Supply Materials**

- 1) The Contractor shall within the agreed contract price, supply such materials as required and detailed by the Specifications

**7 Setting Out**

- 1) The Contractor shall be responsible for setting out of the work as set out in the specifications, *providing an experience surveyor* for the task required.

**8 Measurement**

The quantities set out in the Bill of Quantities are the estimated quantities for the Works, and they are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfilment of his obligations under the Contract.

The Project Consultant shall, except as otherwise stated, ascertain and determine by measurement the value of the Works in accordance with the Contract. The Project Consultant shall, when he requires any part of the Works to be measured, give reasonable notice to the Contractor, who shall:

(a) forthwith attend or send a qualified representative to assist the Project Consultant in making such measurement, and

(b) supply all particulars required by the Project Consultant. Should the Contractor not attend, or neglect or omit to send such representative, then the measurement made by the Project Consultant or approved by him shall be taken to be the correct measurement of such part of the Works. The Works shall be measured net, notwithstanding any general or local custom, except where otherwise provided for in the Contract.

**9 Workmanship**

- i. The Contractor shall at all times carry out his works in accordance with the laws of the Colony.
- ii. The Employer may from time during the course of the Contract inspect any completed or part-completed work of the Contractor. If the Employer is not satisfied with such work, he in writing, inform the Contractor of his dissatisfaction.

- iii. Notwithstanding any such progress inspection by the Employer the Contractor shall at all times carry out the Contract in a workman-like manner. On completion of the works, the Contractor shall satisfy the Employer as to the quality and fitness of the work.

**10 Removal of Debris**

The Contractor shall remove all debris caused by their work from time to time as it accumulates and shall leave the site clean on completion of the Contracted Works.

**11 Supervision of Works and Skilled Workmen**

- a) The Contractor shall provide all necessary superintendence during the execution of the works.
- b) The Contractor shall employ in and about the execution of the Works only such persons who are carefully skilled and experienced in their several trades.
- c) The Supervising Officer may (but not unreasonably or vexatiously) issue instructions requiring the exclusion from the Works of any person employed thereon.

**12 Contractor's Plant**

The Contractor shall provide at their own cost all tools, and other plant necessary for the purpose of carrying out the specified Work in an organized and expeditious manner.

**13 Payment Fees**

The Contractor shall be responsible for the payment of all fees necessary for the completion of the Contract required by a Statutory Authority within or without the Colony.

**14 Safety**

- a) The Contractor is responsible for the safety of all persons employed by him.
- b) He shall in no way carry out any work that could be seen to endanger the life of any of his employees or of any member of the general public, including any other employee of the employer.

**15 Injury to or death of a person**

The Contractor shall be liable for and shall, indemnify the Employer against any expense, liability, loss, claim or proceedings whatsoever arising under any statute or at Common Law in respect of personal injury to or death of any person whomsoever

arising out of or in the course of or caused by the carrying out of the Works.

**16 Damage to Property**

The Contractor shall be liable for and indemnify the Employer against any expense, liability, loss, claim or proceedings in respect of any damage whatsoever to any property real or personal insofar as such damage arises out of or in the course of or by reason of the carrying out of the Works and is due to any negligence, omission and default of the Contractor is responsible.

**17 Evidence of Insurance**

The Contractor shall produce such evidence as the Employer may reasonably require that the insurance's referred to herein have been taken out and are in force at all material times.

**18 Traffic Control**

Due to the nature of the Works it will be the responsibility of the Contractor to ensure that a system of traffic control is in operation, including no vehicular access, if necessary.

**19 Certificates & Payment to the Contractor**

Payment to the Contractor will be made after the issue of a Project Consultant's certificate based on the amount of work completed to date. A retention of 5% will be held from the value of each certificate up to a maximum of 3% of the contract sum. Such retention money will be released at the end of the warranty period provided that all works and repairs have been executed to the satisfaction of the employer.

**20 Warranty Period**

A warranty period of 12 months is part of the Contract agreement, during which time the Contractor bears the full responsibility for the execution of maintenance of the works and any repair or correction which might become necessary due to the failure and incorrect performance of the Contractor.

**21 Handing Over Completed Works**

The Contractor shall notify the Employer in writing of his completion of the contracted Works. Said work shall be subject to the satisfaction of the employer and the statutory body having jurisdiction that all the works is completed and in good order. The supervising Officer shall certify the date when in his opinion, the works have reached practical completion. This date shall be the date of commencement of the warranty period.

**22 Failure to Meet Completion Date**

Should the contractor fail to complete the contracted works within the agreed time he shall be subject to a fine of 1% of the contract price a day, for every day the completion is overdue.

**23 Matters not Contained in the Contract**

Any matter not explicitly provided for within this Contract shall be in the matter of

a separate agreement between the Employer and Contractor. Any such agreement shall be part of his Contract.

**24 Matter of Disagreement**

If in the execution of this Contract any matter arises that cannot be agreed on by the Contractor and the Employer, the matter shall be referred to an arbitrator agreed on by both parties. Should both parties fail to agree on an arbitrator, the provisions of the arbitration act shall apply. Each party shall bear its own cost in arbitration proceedings.

**25 Contracts Documents**

- a) The Contractor shall receive two complete copies of Contract Documents
- b) Subsequent to the commencement of the Contract, the Contractor shall receive a copy of all additions to and amendments to the Specifications or drawings if required.

**26 DETERMINATION OF THE CONTRACT**

1) Default by the Contractor

If, before the date for practical completion, the Contractor shall make a default in any one or more of the following respects:

- a) Without reasonable cause he wholly or substantially suspends the carrying out of the works, or
- b) He fails to proceed regularly or diligently with the works, or
- c) He refuses or neglects to comply with a written instruction given by the Project Consultant and by such refusal or neglect the works are materially affected

The Project Consultant may give to the Contractor a notice specifying the default or defaults.

If the Contractor continues with the default for 14 days from the issue of the notice under the contract the Employer may by a further notice to the Contractor determine the employment of the Contractor under this Contract. Such determination shall take effect on the date of receipt of such further notice.

A notice of determination shall not be given unreasonably or vexatiously.

2) Consequences of determination under clause 26 1)

The Project Consultant shall determine the amount due to the Contractor which shall include loss, damage or expenses incurred by the Employer as a direct consequence of the determination. A final payment certificate will be prepared accordingly.

### 3) Determination by the Contractor or Employer

If, before the date of practical completion, the carrying out of the whole or substantially the whole of the uncompleted works is suspended by reason of one or more of the events stated below for a period of three months or more

- a) Force majeure, or
- b) The Project Consultants instruction

Then the Contractor or the Employer may upon expiry of the period of the Suspension give notice to the other that unless suspension is terminated within 7 days after the receipt of such notice.

The Employer shall pay to the Contractor, the total value of the work properly executed at the date of determination of the employment of the Contractor, such value ascertained in accordance with the conditions as if the employment of the Contractor had not been determined

A notice of determination shall not be given unreasonably or vexatiously.

## **27 SUSPENSION OF THE UNCOMPLETED WORKS**

- a) The Project Consultant may issue instructions in regard the postponement of any or all the works to be executed under this contract.

## SCHEDULE 1

### Terms and Conditions

- I. **BNTF** may at any time by a written notice modify the deliverables in the Schedule and promptly upon receipt of such modification the **Contractor** shall within 7 days either advise that the change will not affect its costs or cause a delay in providing the deliverables, or furnish a breakdown of estimated changes in costs or delay in the deliverables attributable thereto. Upon receipt of the breakdown by **BNTF** any changes necessary to the other terms and conditions of the agreement shall promptly be negotiated by the parties and incorporated in an amendment to this contract. The **Contractor's** failure to advise of any such changes or delays shall constitute the **Contractor's** consent to the modification without adjustment to the other terms and conditions of this agreement.
  
- II. As full consideration for the services performed by the **CONTRACTOR** under the terms of this agreement the **BNTF** will pay the fees as outlined in the BoQ, payable against original invoices delivered to the **BNTF** at its headquarters by the **CONTRACTOR**, provided that **BNTF** may give notice of its intention not to pay such fee where:
  - a. the **CONTRACTOR** has failed to carry out services/provide the deliverables, or has defectively carried out services/provided deliverables required by this Agreement to be carried out and has not remedied such failure or defect within a reasonable time;
  - b. the **CONTRACTOR**, by act or omission has caused damage to personnel or property of the **BNTF** or any third party;
  - c. there is a breach of any other provision of this Agreement;  
and upon giving such notice the **BNTF** may withhold payment accordingly.
  
- III. The **BNTF** shall have the right, at its expense, to have a representative of the **BNTF** inspect such records and invoices of the **CONTRACTOR** as are necessary to verify the **CONTRACTOR's** performance and all expenses submitted pursuant to this Agreement and the **CONTRACTOR** shall make such records and invoices available for inspection during normal business hours at the **BNTF** Headquarters.
  
- IV. All records related to this Agreement at any time in the possession of the **CONTRACTOR** shall be retained for a period of one (1) year after the termination of this Agreement. Records relating to any claim arising out of the performance of this Agreement, or costs and expenses of this Agreement to which exception has been taken by the **BNTF**, shall be retained by the **CONTRACTOR** until the claim has been resolved.
  
- V. The **CONTRACTOR** shall not remove any material, goods or equipment purchased by the **BNTF** and furnished to the **CONTRACTOR** to facilitate the performance of its obligations under this contract without the prior written consent of the Project Consultant.
  
- VI. The **CONTRACTOR** shall not at any time during or after the term of this Agreement divulge or allow to be divulged to any person any information which comes into its possession by virtue of its performance of this Agreement, which relates to the business and affairs of the **BNTF** except upon authorization by the **BNTF**. The **CONTRACTOR** shall not seek to acquire any such information outside of the performance of its/his duties under this Agreement.

- VII. (a) The **Contractor** shall not assign or sub-contract any of its rights or duties under this Agreement without the prior written consent of the **BNTF**, such consent not to be unreasonably withheld.
- (b) The **Contractor** retains full and complete responsibility for every aspect of the Works and deliverables including any aspect which might be sub-contracted or assigned to another person under clause
- VII (a), including the duty to ensure that any such part of the Works or deliverables are completed in a good and workmanlike manner, with sound materials and in conformity in all respects with the drawings, elevations and specifications and at all times and in every respect in compliance with the Building Codes of Montserrat and all the applicable laws.
- (c) The **Contractor** shall respond to any reasonable query from BNTF regarding the quality and quantity of materials procured by him/it for use in the Works and deliverables and shall provide **BNTF** with satisfactory evidence of his/its compliance with the agreed specifications periodically/monthly/quarterly during the construction of the Works and within Seven days of completion.
- (d) The **Contractor** shall procure and supply all resources required and described in the priced Bill of Quantities, specifications, tender circular, EMP and contract drawings and shall ensure that those resources are used in construction of the Works and provision of the deliverables.
- VIII. The **Contractor** agrees to undertake and complete excavation and construction as describe in the works described in the Specifications, drawings, the tender documents and all tender circulars and EMP.
- IX. The **Contractor** and **BNTF** agree that they will each have the respective obligations under this agreement as outlined in the **Schedule**.
- (a) The **Contractor** agrees to indemnify, and keep the **BNTF** indemnified, from and against any and all loss, damage, expense, liability, claim or proceedings (whether criminal or civil) suffered by **BNTF's** agents, servants or third parties, including any legal fees and costs incurred, resulting from a breach of this Agreement by the **Contractor** and/or arising in connection with the performance of this agreement by the **Contractor** or arising out of or in the course of or caused by the carrying out of the Works:
- (i) in respect of personal injury to or death of any person; or
- (ii) in respect of any damage whatsoever to any property real or personal due to any negligence, omission and default of the Contractor.
- (b) The **Contractor** agrees to indemnify **BNTF** in respect of claims from anyone suffering damage to their equipment or property, or accidents suffered by their employees, agents or third parties, resulting from the **Contractor's** actions.
- X. The Contractor shall produce such evidence as BNTF may reasonably require that the insurance's referred to in the form of tender have been taken out and are in force from commencement of works until project completion.

- XI. The Contractor shall ensure that suitable systems for controlling traffic and pedestrian movements are discussed with the Traffic Commissioner and implemented during its operations to minimize any delays to road users.
- XII. (a) BNTF will disburse each payment in respect of the deliverables only after receipt of certification issued by the Project Consultant that:
- (i) the respective phase of the Works or deliverable has been satisfactorily completed and complies with the drawings and building code;
  - (ii) the value of the work completed at that stage corresponds to or exceeds the sums previously disbursed.
- (b) **BNTF** shall retain 5% of each payment up to a maximum of 3% of the contract sum and release the accumulated total retention to the **Contractor** at the end of the warranty period provided that all works and repairs have been executed to **BNTF's** satisfaction.
- XIII. The parties agree that a warranty period of 12 months is part of the agreement, during which time the Contractor bears full responsibility for the execution of maintenance of the works and any repair or correction which becomes necessary due to the failure and incorrect performance of the Contractor.
- XIV. The **Contractor** shall notify **BNTF** in writing of his/its completion of the Works. The Project Consultant shall certify the date when in his opinion, the Works have reached practical completion. This date shall be the date of commencement of the warranty period.
- XV. The **Contractor** shall pay to **BNTF** a penalty of 1% of the contract price a day, for every day the completion of the Works is overdue.
- XVI. The parties agree that a dispute relating to the agreement shall be determined by a Mediator. Any party may request that a Mediator be appointed. The parties shall try to agree a single Mediator by whom the matter shall be determined. The Mediator once appointed shall specify a reasonable time and date for submissions, and information by each party. The parties shall cooperate with the Mediator and with such enquiries that he/she may deem necessary. No confidential information supplied to the Mediator shall be disclosed to any third party. The Mediator may set out his/her own procedure and be entitled to award financial damages or to order the performance or prohibition of any act as he/she deems fit. If the parties fail to agree on the name of a Mediator within 14 days (or any agreed extension) after:
- a) the notice of Mediation is served serve on the other Party, or
  - b) a previously appointed Mediator ceases to hold office for any reason,
- either party may apply to the Eastern Caribbean Supreme Court for the appointment of a Mediator.
- XVII. (a) The **Contractor** shall receive two complete originals of this agreement.  
(b) Subsequent to the commencement of the agreement, the **Contractor** shall receive a copy of all additions to and amendments to the Specifications or drawings.
- XVIII. (a) If, before the date for practical completion, the **Contractor** shall make a default in any one or more of the following respects:
- (i) Without reasonable cause wholly or substantially suspends the carrying out of the

Works, or

- (ii) Fails to proceed regularly or diligently with the Works, or
- (iii) Refuses or neglects to comply with a written notice/instruction given by the Project Consultant and by such refusal or neglect the works are materially and adversely affected  
The Project Consultant may give to the **Contractor** a notice specifying the default or defaults.
- (b) If the **Contractor** continues with the default for 14 days from the issue of the notice under the agreement **BNTF** may by a further notice to the **Contractor** terminate this agreement. Such termination shall take effect on the date of receipt of such further notice.
- (c) **BNTF** shall not issue a notice of termination unreasonably or vexatiously.
- (d) The Project Consultant shall determine the amount due to the **Contractor** which shall include loss, damage or expenses incurred by **BNTF** as a direct consequence of the termination. A final payment certificate will be prepared by the Project Consultant.
- (e) If, before the date of practical completion, the carrying out of the whole or substantially the whole of the uncompleted works is suspended by reason of one or more of the events stated below for a period of three months or more
  - (i) Force majeure, or
  - (ii) The Project Consultant's instruction

the **Contractor** or **BNTF** may upon expiry of the period of the suspension give notice to the other party that unless suspension is terminated within 7 days after the receipt of such notice, **BNTF** shall pay to the **Contractor** the total value of the Works properly executed at the date of termination of this agreement, such value ascertained in accordance with the conditions as if the agreement had not been terminated.

- (f) A party shall not issue a notice of termination unreasonably or vexatiously.

- XIX. The Project Consultant may issue instructions on behalf of **BNTF**, with regard to the postponement of any or all the Works to be executed under this contract.
- XX. The failure by either party to enforce at any time or for any period any one or more of the terms or conditions of this Agreement shall not be a waiver of them or of the right at any time subsequently to enforce all terms and conditions of this Agreement. No waiver of any default or non-performance by any party shall be considered a waiver of any subsequent default or non-performance.
- XXI. This Agreement supersedes any prior Agreement between the parties whether written or oral relating to the subject matter hereof, but without prejudice to any rights which have already accrued to either of the parties.
- XXII. This Agreement shall be governed by the laws of Montserrat in every particular and shall be

deemed to be made in Montserrat.

XXIII. (a) Both parties shall be released from their respective obligations in the event of national emergency, natural disaster, war, prohibitive governmental regulation or if any other cause beyond the reasonable control of the parties or either of them renders the performance of this Agreement impossible whereupon all money due under this Agreement shall be paid immediately.

(b) A party that is delayed in meeting or that fails to perform its obligation under this agreement because of Force Majeure shall have no liability to the other for such delay or failure to perform. Both parties shall use reasonable endeavours to mitigate as far as possible, the effects of the Force Majeure event.

(c) If one party is prevented from or delayed in performing its obligations under this agreement as a result of Force Majeure, the other party shall be released to the equivalent extent from its obligation in relation to that particular Force Majeure event.

XXIV. The provisions relating to confidentiality, indemnities and limitation of liability shall survive any completion, rescission, expiration or termination of this agreement. In addition, all rights and restrictions relating to any perpetual licenses and all payment terms relating to any outstanding payments shall survive.

XXV. Any notice or other document required to be given under this agreement or any communication between the parties with respect to any of the provisions of this Agreement shall be in writing and may be sent by electronic mail to the correct email address, facsimile transmission to the correct number, post or hand delivery to the last known business address of the party upon whom it is being served. Notice shall be deemed to have been effected within 24 hours of the date of sending of the notice when sent by electronic mail or facsimile transmission, within 72 hours of the date of posting of the notice when sent by post and upon delivery when hand delivered.

(a) A notice shall be delivered as follows:

(i) if to **BNTF**, to:

Project Consultant

Galloway & Associates

404 Sweeney's, Montserrat

West Indies, MSR 1110

Tel. (664) 491-3318

Fax. (664) 491-4009

Email.: info@galloway.ms



**St. John's Community Resource Centre & Access  
Improvements & Miscellaneous Works  
SPECIFICATIONS**

Basic Need Trust Fund - BNTF 8

## **SECTION 1 — GENERAL ITEMS**

### **1.1 SITE SERVICES**

Any arrangements that the Contractor enters into regarding the provision of electricity, water and other services shall be the sole responsibility of the Contractor. The Contractor shall take all reasonable care to ensure that water is not wasted. The Contractor shall be liable for all charges arising from such arrangements

### **1.2 SITE POSSESSION**

The contractor is responsible for obtaining permission to enter private lands.

### **1.3 PLANT HIRE**

The contractor shall be responsible for payment of all plant hire charges from MCWL or others for plant the contractor uses on this project. The Employer shall not be responsible for delays or costs attributable to the delivery, performance or workmanship of plant or equipment under hire. The Contractor shall be responsible for the actions of any plant on hire and shall provide adequate instruction and supervision of drivers, plant, and machines.

### **1.4 DISRUPTION**

The Contractor is responsible for arranging the Works to minimise disruption to, local residents and commercial activities in the vicinity of the site. Full and sufficient precautions to ensure the safety of all traffic through and around the work site and of traffic that is diverted by the Works shall be taken at all times, such measures to be approved by the MCWL. Signs shall be erected and maintained on the Site and at prescribed points on the approaches to the Site for the direction and control of traffic. The sizes of all such signs and the lettering and wording thereon shall be approved before erection. Construction and excavations shall be signed posted and, during periods of darkness lighted.

In the event of the operation of single-way traffic becoming necessary on any particular length of the Works or on the approaches to the Works, through traffic routes shall be maintained by providing a width of at least 3m for single-way traffic. Manually "Stop/Go" signal shall be used and be of an approved colour and type.

The Contractor is obliged to seek the approval of the Engineer before occupying any area of the site for the storage of materials, plant or equipment or welfare facilities.

### **1.5 UTILITY COMPANY SERVICES**

St John's Community Resource Centre Drain  
Specifications,

The Contractor shall be responsible for contacting the utility companies to arrange for location of their plant at the site. The Contractor shall also notify the companies of any excavation in the vicinity of their plant and give sufficient notice to allow them to attend on site if required.

The contractor shall locate all buried plant in the vicinity of any area of excavation and mark the position clearly on site. The Contractor shall locate buried service within any area of excavation by hand digging before mechanical excavation is used.

The Contractor shall be deemed to be in control of all plant hired to him and shall be responsible for its actions. Should any utility company equipment be damaged by the Contractor or plant hired to him, the Contractor shall be responsible for paying any charges or costs associated with its repair. The Contractor shall also allow free and unhindered access to utility company employees carrying out any such repair work.

**1.6 INSURANCE**

The Contractor is required to obtain contractors all risk insurance to cover at least public liability and damage to property and persons. The Contractor shall be required to prove that he has such insurance and that the sums insured are sufficient for the works in hand prior to commencement of the works. The Contractor shall ensure that the insurance remains valid throughout the period of the works and that any premiums due are paid. The Engineer may request proof of insurance at any time during the works.

## **SECTION 02201: SITE PREPARATION AND LAYOUT**

### **PART I. GENERAL**

#### **1.1 SCOPE**

- A. Site clearing
- B. Site protection
- C. Stakeout of construction
- D. Disposal of material

#### **1.2 GENERAL REQUIREMENTS**

- A. The Contractor shall ensure that the work of this section is coordinated with the work of all related trades affected by or affecting the work of this Section.
- B. The work of this section includes providing all labour, material, miscellaneous fasteners and accessories, and equipment required to complete the work of this Section including but not limited to that work specified herein and on the Drawings or as required for a complete job.

#### **1.3 RELATED SECTIONS**

- A. Submittals and Substitutions, Section 01300
- B. Excavation and Earthwork, Section 02300
- C. Site Utilities, Section 02500
- D. Cast in Place Concrete, Section 03300
- E. Paving, Division 2

#### **1.4 STANDARDS AND QUALITY CONTROL**

- A. Site protection shall conform to all governing local codes and regulations.
- B. A Pre Installation Meeting will be required:
  - 1. The following persons at this meeting shall include but not be limited to:

- a) Owner's representative
- b) Architect
- c) Contractor

## PART II. PRODUCTS

### 2.1 SHORING MATERIALS

- A. Shoring materials shall be as required by design prepared by Contractor's engineer unless otherwise specified herein or on the Drawings.

## PART III. EXECUTION

### 3.1 CONSTRUCTION LAYOUT AND STAKING

- A. The Contractor shall be held responsible for maintaining all surveying data, including but not limited to stakes, offsets, control points, bench marks, etc.
- B. Locations shown on contract plans is not guaranteed:
  - 1 The structures, obstructions, utilities, trees, shrubs and other features shown on the Contract Plans are those known to exist, but their location is not guaranteed to be exact, nor is it guaranteed that all structures, obstructions, utilities, trees, shrubs and stone walls are shown.
  - 2. The Contractor shall, however, be responsible for the protection of all structures, obstructions, utilities, trees, shrubs, and stone walls whether shown or not on the Contract Plans.

### 3.2 SAFEGUARDS AND PROTECTION

- C. Provide all necessary safeguards including the installation of shoring, signing, structural supports, protective fencing and barriers, etc., as may be required to prevent damage to adjacent property or injury to persons.

- D. All work shall be performed in accordance with the requirements of the local building codes and the rules, regulations and ordinances of all governing bodies having jurisdiction.
- E. The Contractor shall be responsible for any claims arising from his failure to provide proper safeguards or for his failure to conduct his operation in a manner consistent with the rules, regulations and ordinances of the governing agencies having jurisdiction.

### 3.3 NOTIFICATION OF UTILITY OWNERS

- A. CALL BEFORE YOU DIG:
- B. Notify all utility owners at least seventy-two (72) hours prior to the start of any excavation operation.
- C. The Contractor is responsible for any claims arising from his failure to make such notification, or for his failure to do the work in accordance with the rules and regulations of the governing authorities.

### 3.4 CLEARING AND GRUBBING

- A. All material obtained from clearing and grubbing shall become the property of the Contractor and, unless otherwise specified, shall be chipped or disposed of off-site in an approved disposal site, subject to local codes.
- B. Fill depressions or holes left from grubbing that are not to be excavated further. Fill with material approved by the Architect/Engineer.

### 3.5 DISPOSAL OF MATERIAL

- A. Stones and boulders over twenty-seven (27) cubic feet in volume shall be removed in accordance with Rock Removal, Excavation and Earthwork, Section 02300.
- B. In addition to the above-mentioned items the Contractor shall also be responsible for the off-site removal of construction related debris.
- C. This disposal shall be in accordance with all applicable codes, rules and regulations.
- D. This material shall be defined as anything used by the Contractor to complete his work and shall include such items as leftover pipe,

St John's Community Resource Centre Drain  
Specifications,

pallets and garbage.

## **SECTION 02300: EXCAVATION AND EARTHWORK**

### **PART I. GENERAL**

#### **1.1 SCOPE**

- A. Site clearing
- B. Excavation
- C. Rock removal
- D. Rough grading
- E. Trenching
- F. Backfilling and compaction
- G. Final grading
- H. Topsoil placement
- I. Imported fill
- J. Unit prices
- K. Soil testing
- L. Samples
- M. Submittals

#### **1.2 GENERAL REQUIREMENTS**

- A. The Contractor shall ensure that the work of this section is coordinated with the work of all related trades affected by or affecting the work of this Section.
- B. The work of this section includes providing all labour, material, miscellaneous fasteners and accessories, and equipment required to complete the work of this Section including but not limited to that work specified herein and on the Drawings or as required for a complete job.

#### **1.3 RELATED SECTIONS**

- A. Paving, Division 2
- B. Site Utilities, Section 02500
- C. Cast in Place Concrete, Section 03300
- D. Plumbing, Division 15
- E. Electrical, Division 16

#### 1.4 DEFINITIONS

- A. Rock shall be defined as limestone, sandstone, shale or granite in solid beds or masses in its original or stratified position that can be removed only by continuous drilling and wedging and all boulders having a volume greater than twenty-seven (27) cubic feet.
- B. No soft, "rotten" or disintegrated rock which can be removed with the Contractor's excavation equipment, hand pick and shovel work, or ledge nor boulders equal to or less than twenty-seven (27) cubic feet in volume will be classified as rock.
- C. Subgrade is defined as the top surface of excavation or fill directly below the subbase, drainage fill, or topsoil.
- D. Borrow material is soil material obtained from a source off site. Borrow material is to be used only when there is inadequate material onsite for completion of the Work.
- E. Topsoil is to be friable clay loam free of subsoil, roots, grass, excessive amounts of weed, stones over 1 inch and shall be at least 4 inches deep.

#### 1.5 STANDARDS AND QUALITY CONTROL

- A. All debris shall be removed from the site and disposed of legally.
- B. All rock removal by chipping shall be in accordance with local ordinances for sound and vibration control.
- C. A Pre Installation Meeting will be required:
  - 1. The following persons at this meeting shall include but not be limited to:
    - a. Architect
    - b. Owner's representative
    - c. Civil or Geotechnical Engineer.
    - d. Contractor
    - e. Excavation subcontractor.

### PART II. PRODUCTS

#### 2.2 SOIL MATERIALS

- A. Topsoil is to be friable clay loam free of subsoil, roots, grass, excessive amounts of weed, stones, and other foreign matter. Stockpiled topsoil from site may be used if acceptable.
- B. Import topsoil, as required, to provide thickness of topsoil noted on the Drawings or specified herein.

- C. Subsoil may be stockpiled, excavated subsoil if it is acceptable and conforms to the requirements of ASTM D 2487 noted herein.
- D. Imported subsoil, if required, to be free of organic matter and debris, and graded to be free of lumps and rocks larger than 4" (four inches), per reviewed submittals.

### PART III. EXECUTION

#### 3.2 EXAMINATION AND PREPARATION

- A. Make preparations as specified in Section 02201, Site Preparation and Layout.
- B. Prior to starting Work:

##### CALL BEFORE YOU DIG.

- 1. Ensure that all underground utilities have been identified, located, and carefully marked so that services are not interrupted.
  - 2. Ensure that a bench mark is set by the Surveyor prior to starting excavation.
- C. Clear all brush and trees from site in areas required by plans, prior to starting excavations. Remove all stumps and roots and dump legally off site. Remove chippings and logs from site.
  - D. Rock excavation, if required, shall be performed under Section 02316.

#### 3.2 EXCAVATING FOR STRUCTURES AND PAVING

- A. Excavate as required for building foundation, walks, terraces and other Work noted on the Drawings.
- B. Excavate only to grades shown on Drawings. Do not over excavate unless directed to do so by Architect or Engineer.
- C. Over-cut at building lines only as required to set forms and perform other construction and inspections.
- D. Stockpile excavated subsoil for use as backfill material. Remove all debris and organic matter from stockpiled subsoil and remove from site.
- E. Correct unauthorized excavation at no extra cost to the Owner. Fill over-excavated areas as directed by Architect and Engineer.
- F. Keep excavated areas free from water at all times. Remove and replace any areas that become saturated and unstable at no extra cost

to the Owner.

- G. Remove from site all excavated materials that are in excess of that needed for backfilling, rough grading and finish grading.

### 3.3 TRENCHING

- A. Excavate for all utilities including sanitary sewer, site drainage, footing drains, electrical, telephone, and others required or noted on Drawings.
- B. Trenches are to be cut to the depth and width as required by local utilities and codes, and Drawings and shall be over cut as required to allow for bedding.
- C. Remove all loose fill from trenches prior to setting pipes.
- D. At deep trench excavations, provide shoring of trench walls to prevent cave-ins.
- E. Provide a 12 inch clearance on each side of the pipe unless otherwise noted.

### 3.4 ROCK REMOVAL

- A. Rock, if encountered, shall be removed per the requirements of Section 02316, Rock Excavation.

### 3.5 BACKFILLING, GENERAL

- A. Before starting backfilling operations, verify the following:
  - 1. That all foundation walls and retaining walls are cured and are adequately braced to support backfill.
  - 2. That all footing drains, waterproofing, insulation and other below grade work on foundation are complete and inspected.
  - 3. That all wood scraps, forms, paper, and other debris have been removed from trenches and foundation area.
  - 4. All underground utilities have been located and mapped and tested by the local agencies.
- B. Backfill areas to contours and elevations shown on Drawings. Do not use saturated materials.
- C. Backfill as early as practical in the Project to allow maximum time for natural settlement.
- D. Place and compact backfill in such a way as to not damage or disturb foundation walls, insulation, footing drains, or utilities in trenches.
- E. During backfill operations, maintain proper moisture content of fill for proper compaction.
- F. When backfilling against an unsupported foundation wall, backfill

both sides simultaneously.

- G. Prepare sub grades for all walks, terraces, driveways, parking areas and other site work as shown on Drawings. Compact fill as noted above. Provide granular fill for finished work for each area as noted on Drawings.

### 3.6 TRENCH BACKFILLING

- A. Adequately support pipes and conduits with sand or gravel prior to backfilling.
- B. See Section 02500 for bedding material and fill required for different utilities.
- C. Place bedding material and compact to a thickness of 6 inches.
- D. After placing pipe or conduit, cover with bedding material or granular fill. Carefully compact this fill to a depth of 6 inches over pipe or conduit.
- E. Backfill trenches with fill material to within 12" of required contours and elevations. Place and compact fill materials as for Backfilling.
- F. Finish backfilling with subsoil material to top of subgrade and compact.
- G. At trenches that pass under drives, parking areas, or roadways encase conduits or pipe in concrete. Install a 4 inch concrete base, set pipes or conduits and test. Cover with 4 inches of concrete above top of pipe. Concrete shall be as specified in Section 03300.

### 3.7 ROUGH GRADING

- A. Unless noted otherwise, slope grade away from building a minimum of 2 inches in 10 ft.
- B. Rough grade to a smooth even grade. Grade to an elevation that allows for thickness of topsoil shown on Drawings or specified herein.
- C. While grading, remove all debris, trash, wood scraps and rocks over 2 inches in diameter.

### 3.8 PLACEMENT OF TOPSOIL

- A. Place topsoil in the areas and to the proper depth and to within 1/2" of the contours and elevations shown on the Drawings.
- B. Fine grade and rake topsoil to remove all debris and rocks over 1/2".
- C. Lightly compact topsoil by roller after raking.
- D. Leave site clean and raked and ready for landscaping.

3.9 TESTS AND FIELD CONTROL

- A. Where fill does not meet the required compaction, remove area of undesirable fill, refill with new fill, compact and retest area until the area achieves proper compaction.

3.10 TOLERANCES

- A. Top of rough grading, plus or minus 1 inch.
- B. Top of topsoil, plus or minus 1/2 inch.

## **SECTION 02500: SITE DRAINAGE AND UTILITIES**

### **PART I. GENERAL**

#### **1.1 SCOPE**

- A. Site utilities
- B. Footing drains
- C. Connect to public utilities

#### **1.2 GENERAL REQUIREMENTS**

- A. The Contractor shall ensure that the work of this section is coordinated with the work of all related trades affected by or affecting the work of this Section.
- B. The work of this section includes providing all labour, material, miscellaneous fasteners and accessories, and equipment required to complete the work of this Section including but not limited to that work specified herein and on the Drawings or as required for a complete job.

#### **1.3 RELATED SECTIONS**

- A. Site drawings and notes.
- B. Clearing, Excavation, and Earthwork, Section 02300
- C. Plumbing, Division 15
- D. Electrical, Division 16

#### **1.4 QUALITY ASSURANCE**

- A. All pipe material and accessories shall conform to local governing codes.
- B. Installation of site drainage and utilities shall conform to all governing codes and utility company requirements.

### 1.5 DELIVERY, STORAGE AND HANDLING

- C. Pipe shall be stored neatly in bundles off the ground.
- D. Fittings and accessories for pipe shall be stored in boxes on pallets or otherwise off the ground and out of the weather.
- E. Store all materials in a way that facilitates inspection.
- F. Damaged or deteriorated materials shall be removed from the premises.

## PART II. PRODUCTS

### 2.3 PIPE AND CONDUIT MATERIALS: Sizes are noted on the Drawings

- A. Perforated footing and curtain drains and fittings:
  - 1. PVC fittings, ASTM D2729
  - 2. HPDE pipes and fittings
- B. Water, oil, and gas piping see Division 15.
- C. Conduits and piping may be increased to Schedule 80 if required by Drawings.

### 2.2 SEPTIC SERVICE

- A. Materials for septic system are noted and detailed on the approved Septic System Drawings.
- B. Contractor shall be responsible for obtaining all necessary permits for septic system.

### 2.3 BEDDING MATERIAL

- A. Filter aggregate, 3/4" crushed stone

PART III. EXECUTION

3.3 EXAMINATION AND PREPARATION

- A. Prior to starting Work, ensure that trenches for all site utilities are of proper depth and pitch as prepared by Section 02300.
- B. Install bedding material to proper depth and pitch.
- C. Ensure that all rock and other sharp objects are removed from sides and bottoms of trenches before installing bedding material and piping.

3.2 INSTALLATION

- A. Installation of work of this Section is to be done in conjunction with Section 02300.
- B. Install pipe and conduit per manufacturer's instructions and per local codes.
- C. Pitch footing, leader drains, and site drainage a minimum of 1/8" per foot.
- D. Bed and cover water piping with a minimum of 6" of dead sand.
- E. Minimum cover over electrical and communications conduits is 24" unless otherwise required by local codes.
- F. Install drywells and catch basins plumb and level and as per Drawings and/or approved shop drawings. Bed in gravel as noted on Drawings.

3.3 CONNECTION TO PUBLIC UTILITIES

- A. The following utilities provided by local utility companies services are at the site and are to be connected to for this project. Others, noted herein, are to be provided on site:
  - 1. Electricity
  - 2. Telephone
  - 3. Water
- B. Contractor is responsible for coordinating connection to these services.
- C. Contractor shall be responsible for paying for all tap and connection fees related to the connection to these utilities.
- D. Contractor shall be responsible for conforming to the requirements of each utility for the installation of, or connection to, their service.

3.5 BACKFILLING, GENERAL

- A. Do not cover or backfill any pipe or conduit until inspections and/or tests have been made and installation approved by Engineer, Architect, and local building officials.
- B. Backfill over bedded pipe as per Section 02300.

3.6 TESTS

- A. Testing shall be performed on piping as per Divisions 15 and 16 and as required by local code.

## **SECTION 02750: CONCRETE PAVING AND WALKS**

### **PART I. GENERAL**

#### **1.1 SCOPE**

- A. Forming, preparation, and gravel placement for work of this Section.
- B. Concrete paving for walks and terraces.
- C. Concrete sub paving for tile and stone paving.
- D. Concrete paving for driveways and parking areas.
- E. Exterior concrete poured in place steps and stairs.
- F. Supply, fabrication and installation of reinforcing bars
- G. Supply and installation of welded wire fabric
- H. Pavement marking
- I. Concrete bumpers

#### **1.2 GENERAL REQUIREMENTS**

- A. The Contractor shall ensure that the work of this section is coordinated with the work of all related trades affected by or affecting the work of this Section.
- B. The work of this section includes providing all labour, material, miscellaneous fasteners and accessories, and equipment required to complete the work of this Section including but not limited to that work specified herein and on the Drawings or as required for a complete job.

#### **1.3 RELATED SECTIONS**

- A. Clearing, Excavation, and Earthwork, Section 02300
- B. Site Utilities, Section 02500
- C. Cast in Place Concrete, Section 03300
- D. Painting, Section 09900

#### 1.4 STANDARDS AND QUALITY CONTROL

- A. In case of conflict between the specifications, the architectural drawings, structural drawings and the referenced standards the more restrictive shall govern.
- B. Subgrades are to be reviewed by Architect and/ or Engineer prior to pouring of any concrete.
- C. Concrete testing shall be done on every 50 yards of concrete poured using the following methods:
  - 1. Tests are to be performed by an independent testing agency contracted by the Owner.
- D. Mold and cure 4 samples from each pour in accordance with ASTM C 31. Cure 3 cylinders under controlled conditions. Cure one cylinder on site.
  - 1. Test one cylinder at 7 days.
  - 2. Test two cylinders at 28 days. These cylinders shall be cured under controlled conditions.
  - 3. Test one cylinder kept on site at 28 days.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Store all materials off the ground on pallets and cover with waterproof tarps.
- B. Store all reinforcing materials and accessories in a way that facilitates inspection of materials prior to installation.
- C. Damaged or deteriorated materials shall be removed from the premises.

### PART II. PRODUCTS

#### 2.1 MATERIALS

- A. Forms to be wood or steel.
- B. Fabrication of reinforcing bars:
  - 1. Make all bends cold.
- C. Welded wire fabric to be of the following sizes. See Drawings for locations.
  - 1. Sizes and gauges as noted on Drawings.
- D. Reinforcing wire to be deformed wire fabric conforming to ASTM

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Specifications,

A 497.

- E. Fine and course aggregates to be well graded and comply with ASTM C33.
- F. Water reducing agents, if permitted, to comply with ASTM C 494, Type A, D, or G.

## 2.2 CONCRETE MIX

- A. Concrete strength to be:
  - 1. 3000 psi at 28 days for walks and sub slabs.
  - 2. 4000 psi at 28 days for aprons, driveways and parking areas.

## 2.3 ACCESSORIES

- A. Bumpers to be precast concrete per details.
- B. Paint marking shall be provided as specified under Section 09900.
- C. Sealants shall be as specified under Section 07900.
- D. Construction joints to be:
  - 1. Wood, size as required to form a true even joint between pours.

# PART III. EXECUTION

## 3.4 PREPARATION

- A. Verify elevations of all subgrades prior to placing base. Coordinate this work with Site Works, Section 02201.
- B. Coordinate all finish grading with site drainage and other site paving noted in related section above.
- C. Verify with soils engineer that subgrades are properly compacted for the loads to be carried.
- D. Proof roll area to ensure that subgrades are properly compacted. Any areas that are soft or spongy need to be re-excavated, filled with granular fill, compacted and re-tested.
- E. All subgrades to be compacted to 95% Proctor.
- F. Verify that sub surfaces are graded to drain properly.
- F. Protect all items to be embedded in concrete before starting work.
- G. Verify that all site utilities are installed and inspected prior to start of work of this Section. Coordinate work of this section with all catch basins, grates, curbs, etc. that are to be incorporated into the concrete paving.

- H. Do not proceed with pours until subgrades, expansion joint layouts, and reinforcing have been reviewed by the Architect and Engineer.
- I. Provide for dampening of sub surfaces as required.
- J. Provide for dewatering as required. All sub surfaces are to be free of standing water prior to placement of concrete.
- K. Ensure that adequate protection materials are on hand if concrete is to be placed in inclement weather. Provide for protection of concrete from rain, or hot weather over 90 degrees F.
- L. Add or remove gravel as required to bring subgrade to proper elevation.

### 3.2 FORMING

- A. Layout and install forms per Drawings and reviewed shop drawings.
- B. Ensure that forms are securely installed and will not fail or move out of alignment during placement of concrete.
- C. Install joint fillers with forms as per approved layouts.
- D. Place control joints a minimum of every 20 lineal feet for walks and as per noted on approved layout.
- E. Place control joints a minimum of every 300 square feet for slabs, and as per noted on approved layout.
- F. Place joint filler at perimeter of paving where it abuts other structures or appurtenances.
- G. Hold joint fillers down 1/2" below top of slabs to receive sealant installed under this section and specified in Section 07900.

### 3.3 REINFORCEMENT

- A. Place slab reinforcement as per layout and details on Drawings and reviewed shop drawings.
- B. Place reinforcement in concrete as per structural Drawings and details. Maintain the following minimum coverage for all reinforcement:
  - 1. Minimum concrete cover for reinforcement shall be per ACI 301, Table 3.3.2.3.
  - 2. At slabs, 1 1/2" coverage
  - 3. At walls, 2" coverage

### 3.4 PLACING CONCRETE

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- A. Place concrete in accordance with ACI 301.
- B. Review layout of expansion joints and control joints with Architect before pouring concrete.
- C. Review layout of grid lines with Architect before scoring slabs.
- D. Scoring shall be trowelled with scoring and edging trowel.
- E. Control joints may be cut into concrete after concrete has been finished. This must be done within 24 hours after initial set.
- F. Place concrete continuously between control joints. Do not allow cold joints between predetermined joints.
- G. Concrete paving to receive the following finish:
  - 1. Heavy broom finish over a wood float finish.
  - 2. All edges are to be hand tooled after broom finish has been applied.

3.6 INSTALLATION OF SEALANTS

- A. Sealants and their installation are specified in Section 07900.
- B. Sealants for expansion and control joints at concrete slabs shall be done as part of this work of this Section.

3.7 TOLERANCES

- A. Variation from design elevations may be 1/2" if drainage is maintained and no ponding occurs.
- B. Variation from design elevations or lippage at doors, steps, curbs and adjacent slabs shall be a maximum of 1/8".

3.8 DEFECTIVE CONCRETE

- A. Modify or replace as required by the Architect or Engineer all concrete that does not comply with drawings, specifications, mock ups, and/or details noted herein or on the drawings. Contractor shall bear all direct and associated cost of this replacement.

## **SECTION 03300: CAST IN PLACE CONCRETE**

### **PART I. GENERAL**

#### **1.1 SCOPE**

- A. Cast in place concrete
- B. Concrete reinforcing and accessories, supply and installation.
- C. Supply and erection of all formwork for cast in place concrete.
- D. Footings for interior and exterior walls.
- E. Reinforced concrete walls.
- F. Concrete slabs on grade.
- G. Structural concrete slabs.
- H. Architectural quality concrete
- I. Concrete retaining walls.
- J. Submittals
- K. Testing

#### **1.2 GENERAL REQUIREMENTS**

- A. The Contractor shall ensure that the work of this section is coordinated with the work of all related trades affected by or affecting the work of this Section.
- B. The work of this section includes providing all labour, material, miscellaneous fasteners and accessories, and equipment required to complete the work of this Section including but not limited to that work specified herein and on the Drawings or as required for a complete job.

#### **1.3 RELATED SECTIONS**

- A. Excavation and Earthwork, Section 02300
- B. Unit Masonry, Section 04200
- C. Structural and Miscellaneous Steel, Section 05120
- D. Rough Carpentry, Section 06100
- E. Waterproofing, Section 07100

#### 1.4 SUBMITTALS

- A. Submit mix design for all structural concrete for review prior to pouring concrete.

#### 1.5 REFERENCE STANDARDS

- A. In case of conflict between the specifications, the architectural drawings, structural drawings and the referenced standards the more restrictive shall govern.
- B. All references shall be to the latest edition of each manual cited.
- C. Concrete work shall comply with ACI 301-96, Standard Specification for Structural Concrete.
- D. Construction finishes shall comply with ACI 117-90: Specifications for Tolerances.
- E. Concrete reinforcing to comply with ACI 301-96 and ACI 318, Building Code Requirements for Reinforced Concrete, and The Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practices".
- F. Concrete formwork shall comply with ACI 347, latest edition.

#### 1.6 QUALITY ASSURANCE

- A. Subgrades are to be reviewed by Architect and Structural Engineer prior to pouring of any footings.
- B. Concrete testing shall be done on every 50 yards of concrete poured using the following methods:
  - 1 Tests are to be performed by an independent testing agency paid for by the contractor which is acceptable to the Owner.
  - 2 Mold and cure 4 samples from each pour in accordance with ASTM C 31. Cure 3 cylinders under controlled conditions. Cure one cylinder on site.
    - a. Tests are to be performed by an independent testing agency paid for by the contractor which is acceptable to the Owner.
    - b. Mold and cure 4 samples from each pour in accordance with ASTM C 31. Cure 3 cylinders under controlled conditions. Cure one cylinder on site.

- c. Test cylinders in accordance with ASTM C 39.
  - d. Test one cylinder at 7 days.
  - e. Test two cylinders at 28 days. These cylinders shall be cured under controlled conditions.
  - f. Test one cylinder kept on site at 28 days
- C. Materials shall be mixed in an approved mixer at the site by an approved ready mix plant.
  - D. Concrete shall be placed in a manner which will avoid segregation or separation of the ingredients.
  - E. Care shall be used to prevent the vibrator from penetrating any portion of previously set concrete.

#### 1.7 DELIVERY, STORAGE AND HANDLING

- A. Store all reinforcing materials and accessories in a way that facilitates inspection of materials prior to installation.
- B. Materials shall be delivered in their original, unopened packages, and protected from exposure to the elements.
- C. Store all materials off the ground in a dry place until erection.
- D. Damaged or deteriorated materials shall be removed from the premises.

## PART II. PRODUCTS

### 2.2 FORM MATERIAL AND ACCESSORIES FOR VERTICAL FORMWORK

- A. All material used for forms shall be of adequate strength and thickness to ensure that the forms do not deform while concrete is being poured and in its plastic state.
  - 1. Maximum deflection permitted in formwork is  $l/360$ .
- B. Wall, beam and column forms:
- C. At textured concrete, forms shall be faced with boards or other liner material in patterns as noted on the drawings.
- D. Forms for cylindrical columns shall be;
  - 1. Strength of tubes shall be adequate to prevent deformation

of forms during pouring of concrete.

- E. Form releasing agents shall not contain oils or waxes and shall be compatible with all finishes to be applied to concrete. They shall conform to ASTM C 309, Type I, Class A or B:
- F. Construction joints to be:
  - 1. Wood, size as required to form a true even joint between pours.
- G. Pipe sleeves to be Schedule 40 PVC if permitted by local codes. Coordinate size and number of sleeves required with related trades.
- H. Block outs for windows, doors and other openings to be formed of framing lumber.

## 2.2 FORMS AND ACCESSORIES FOR SLABS ON GRADE

- A. Edges of slabs to be formed with framing lumber, plywood, or steel forms.
- B. Vapour barrier to be:
  - 1. 10 mil black polyethylene
- C. Waterproofing will be required under slabs on grade. See Section 07100.

## 2.3 FORMS AND ACCESSORIES FOR SLABS ABOVE GRADE

- A. Edges of slabs to be formed with framing lumber, plywood, or steel forms.
- B. Horizontal forms for slabs above grade shall be:
  - 1. Plywood as specified above in thickness required to ensure no deformation of the concrete when poured.
- C. Provide all required shoring, framing, and temporary structural support for forming slabs above grade.

## 2.4 REINFORCEMENT MATERIALS

- A. Reinforcing wire to be plain welded wire fabric conforming to ASTM A 185.
- B. Welded wire fabric to be of the following sizes.
  - 1. 6x6/W2.1xW2.1 (6x6 x 8/8)
- C. Chairs, bolsters, bar supports, and spacers to be steel and be of shape and sizes as required for proper support of reinforcing.
- D. Fabrication of reinforcing bars:
  - 1. Make all bends cold.
  - 2. Minimum bend of bars shall be as per the requirements of ACI 301-96.

2.5 CONCRETE MATERIALS

- A. Water to be potable and clean.

2.6 MISCELLANEOUS MATERIALS

- A. Bonding agent:

2.7 CONCRETE MIX

- A. Mix and deliver concrete in accordance with ASTM C94.
- B. Provide concrete of the following strengths:
  - 1. Footings and reinforced concrete walls, 4000 psi at 28 days.
  - 2. Floor slabs, 3500 psi at 28 days.
  - 3. Other strengths as noted on Drawings.

PART III. EXECUTION

3.5 EXAMINATION AND PREPARATION FOR SLABS AND FOOTINGS

- A. Prior to forming footings or preparation of slabs verify that subgrades are stable and able to support design loads. Proof roll areas to confirm if required by Engineer or Architect.
- B. Ensure that subgrades are free of standing water.
- C. Ensure that all footings and slabs areas are properly de-watered prior to pour.
- D. Ensure that proper inspections and tests have been made on subgrade, piping, conduits, and other utilities that are to be encased in concrete prior to pour.

3.2 FORMWORK ERECTION

- A. Set all formwork to achieve design requirements to tolerances noted herein.
- B. Comply with ACI 347 for erection and tolerances of formwork:
- C. Provide all bracing required to ensure stability of formwork during pouring of concrete. Formwork to remain true in plain, plumb,

- straight and level.
- D. Apply releasing agent to concrete forms in accordance with manufacturer's recommendations. Do not use releasing agents on forms where finishes will be applied that are not compatible with the releasing agent.
  - E. Clean all forms of foreign matter before erecting.
  - F. Cast-in-place concrete shall be within the tolerances set forth in ACI 117 Section 4.
  - G. Abut all forms one to another to ensure no leakage of cement during pour.
  - H. Fabricate all formwork to ensure easy removal without damaging concrete.
  - I. Provide temporary openings in forms for cleanouts where required. Ensure that these openings are securely sealed and braced during pour. Locate these cleanouts in inconspicuous places approved by the Architect.
  - J. Unless noted otherwise, provide chamfers at all exposed edges. Ensure that the materials used to form these will provide a true, straight line during pour.
  - K. Remove all debris from forms prior to pour.
  - L. Do not enclose forms until all required inspections and review of forms and reinforcing have been made.

### 3.3 INSERTS, EMBEDDED COMPONENTS, AND OPENINGS

- A. Provide formed openings or sleeves where required for work to be embedded in or passing through concrete members. Insure that these openings do not violate structural requirements of the members.
- B. Coordinate work of other sections in forming and setting openings, sleeves, slots, reglets, bolts, anchors, and other accessories embedded in concrete.
- C. Install all accessories and inserts in locations noted on architectural drawings or shop drawings this or other trades.
- D. Place construction joints in slabs in pattern noted on plans or shop drawings.
- E. Place joint filler as required at perimeter of slab at wall.

### 3.4 REINFORCEMENT PLACEMENT

- A. Install reinforcement as noted on the drawings.
- B. Install reinforcement in a manner so that it is supported and secure and will not be displaced during placement of concrete.

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- C. Ensure that reinforcement is clean and free of scaling, rust, dirt, oil, and other foreign matter.
- D. Place reinforcement in concrete as per structural Drawings and details. Maintain the following minimum coverage for all reinforcement:
  - 1. Minimum concrete cover for reinforcement shall be per ACI 301, Table 3.3.2.3.
  - 2. At walls, 2" coverage
  - 3. At slabs, 1 1/2" coverage
  - 4. At footings, 3" coverage unless indicated otherwise on Drawings.
- E. Reinforcement shall be placed within the tolerances set forth in ACI 117, Section 2.

### 3.5 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301-96.
- B. Hot weather placing shall be in accordance with ACI 305R.
- C. Do not place any concrete until all inspections required by the building department, the Architect and Engineer have been made and approval given to pour.
- D. Do not pour slabs until insulation, vapor barrier and waterproofing installation is complete and has been observed by the Architect.
- E. Coordinate placement of waterproofing and insulation under slabs with those trades.
- F. Provide proper protection of poured concrete from heat if over 90 degrees, and from rain or ground water. Do not pour in the rain unless concrete is protected from the rain.
- G. If concrete is being pour against previously poured concrete, thoroughly clean with wire brush and apply bonding agent before pour. Prepare for and apply bonding agent in accordance with manufacturer's recommendation.
- H. Separate slabs-on-grade from vertical surfaces with 1/2" thick joint filler flush with bottom of slab and 1/4" from top of slab.
- I. Where new concrete is doweled to old, drill hole for dowel in existing concrete, insert steel dowels, pack with non-shrink grout prior to pouring new concrete.
- J. Screed all floors level unless noted to pitch to drain.
- K. Ensure that concrete is properly vibrated to prevent honey-comb or other voids.
  - 1. Do not use vibrators to move concrete in forms.
  - 2. Provide the size of vibrators and number required for each pour per requirements of ACI-301-96, Table 5.3.2.5.

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3. Place vibrators into forms prior to placing concrete and pull through concrete as vibrating.
  4. Vibrate only to remove honey comb and air bubbles and to consolidate concrete.
  5. Conform to the requirements of ACI 309 for consolidating concrete.
- L. Embedded items:
1. Coordinate placement of sleeves with mechanical and electrical installations but place only in areas approved by Architect and structural Engineer.
  2. Place anchor bolts and knock outs in locations as noted on the Drawings. Insure that these items are securely installed in formwork. Ensure that their location has been reviewed with the related trades.

### 3.6 FORM REMOVAL

- A. Do not remove forms in hot weather until proper protection is in place to keep concrete from curing too fast.
- B. Do not remove forms until concrete has set sufficiently to carry its own weight and imposed loads.
- C. Remove formwork in a way that complies with all codes.
- D. Remove formwork in such a way so as not to damage concrete surfaces.

### 3.7 FLOOR SLAB FINISHING

- A. Finish concrete floor in accordance with ACI 301-96.
- B. Spread, screed, and float concrete in a uniform manner.
- C. Provide the following finishes:
  - D. Provide a smooth steel troweled finish at floors to receive carpet, vinyl, thin set tile or interior slabs to remain exposed.
  - E. Other finishes are noted on the Drawings.
  - F. At areas with floor drains, maintain a level slab at walls and slope from walls to drain. Slope at 1/8" per foot unless otherwise noted.

### 3.8 CURING

- A. Immediately after pouring concrete, protect concrete from

premature drying.

### 3.9 TOLERANCES

- A. Tops of all walls to be level and true to within 1/8 in. in 20 feet with total variation to be no more than 3 in.
- B. Each wall shall be plumb to within 1/8 in. per 8 foot of length.
- C. Each wall shall be straight to within 1/8 in. per 10 feet of length.
- D. Tolerances for architectural quality concrete shall be per approved mock up.
- E. The following inspections are required in addition to those required by the building department.
  - 1. Layout of footings, prior to pour, after forms and reinforcing are in place
  - 2. Reinforcing steel prior to closing of forms.
  - 3. Level of top of forms prior to pouring of walls.
  - 4. Review of insulation and waterproofing under slabs.

### 3.10 DEFECTIVE CONCRETE

- A. Modify or replace as required by the Architect or Engineer all concrete that does not comply with drawings, specifications, mock ups, and/or details noted herein or on the drawings. Contractor shall bear all direct and associated cost of this replacement.

## **SECTION 04200: UNIT MASONRY**

### **PART I. GENERAL**

#### **1.1 SCOPE**

- A. Concrete unit masonry and accessories.
- B. Masonry reinforcing
- C. Masonry cleaning
- D. Masonry sealers
- E. Controlled inspections
- F. Scaffolding and hoisting

#### **1.2 GENERAL REQUIREMENTS**

- A. The Contractor shall ensure that the work of this section is coordinated with the work of all related trades affected by or affecting the work of this Section.
- B. The work of this section includes providing all labor, material, miscellaneous fasteners and accessories, and equipment required to complete the work of this Section including but not limited to that work specified herein and on the Drawings or as required for a complete job.

#### **1.3 RELATED SECTIONS**

- A. Cast in Place Concrete, Section 03300
- B. Rough Carpentry, Section 06100

#### **1.4 QUALITY ASSURANCE**

- A. Perform all work in accordance with ACI 530 and ACI 530.1

### **PART II. PRODUCTS**

#### **2.3 CONCRETE MASONRY UNITS**

- A. Sizes and shapes are noted on the Drawings.

#### **2.2 REINFORCEMENT MATERIALS**

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Specifications,

- A. Single Wythe Joint Reinforcement:
  - 1. Truss type, hot dipped galvanized steel wire, ASTM A 641 Class 3
  - 2. Ladder type, hot dipped galvanized steel wire, ASTM A 641 Class 3, in widths appropriate for wall width.
  - 3. Truss type, cold drawn steel wire, ASTM A 82, in widths appropriate for wall width.
  - 4. Ladder type, cold drawn steel wire, ASTM A 82, in widths appropriate for wall width.
  - 5. Truss type, stainless steel wire, ASTM A 580 Type 304, in widths appropriate for wall width.
  - 6. Ladder type, stainless steel wire, ASTM A 580 Type 304, in widths appropriate for wall width.
  - 7. Any of the above is satisfactory
- B. Reinforcing steel to be ASTM A 615:
  - 1. As shown on structural drawings

### 2.3 MASONRY TIES AND ANCHORS

- A. Rigid Anchors:

### 2.4 MORTAR AND GROUT

- A. Aggregate for grout to comply with ASTM C 404.
- B. Grout to be mixed per ASTM C 476 for site mixed grout.
  - 1. Grout shall have a minimum compressive strength of 3,000 psi after 28 days unless otherwise noted on the Drawings.
  - 2. Minimum slump of grout shall be 8 inches.
- C. Grout to be mixed per ASTM C 94 for transit mixed grout.
  - 1. Grout shall have a minimum compressive strength of 3,000 psi after 28 days unless otherwise noted on the Drawings.
  - 2. Minimum slump of grout shall be 8 inches.

## PART III. EXECUTION

### 3.6 EXAMINATION AND PREPARATION

- A. Coordinate all masonry work with structural, framing and mechanical trades before starting work of this section.

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- B. Block out for all openings as work progresses.
- C. Ensure that all work required to be installed in masonry work but supplied by other sections, is on the job before masonry work begins. Coordinate this with all related trades. This includes but is not limited to:
- D. Review layout of masonry work with Architect at pre-installation meeting before starting any work of this section.
- E. Keep all materials dry before and during installation and for 48 hours after installation.
- F. Protect tops of newly laid masonry with plastic at the end of each work day. Weight the plastic with bricks or blocks to ensure that it stays in place.
- G. Do not apply any vertical loading on the block work for at least 3 days after blocks have been laid.

3.2 MASONRY: GENERAL

- A. Layout coursing so that horizontal joints work out on a full course at heads and sills of openings.

3.3 CONCRETE MASONRY UNITS

- A. All horizontal and vertical mortar joints are to be of consistent, even width over total width and height of wall.
- B. Block are to be set in full bed of mortar at horizontal and head joints.
- C. Joints are to be tooled as follows unless noted otherwise on the Drawings:
  - 1. Joints on concealed faces shall be flush.

3.4 REINFORCEMENT AND WALLS TIES

- A. Install single wall reinforcing 24" on center vertically at CMU work, unless otherwise noted on the Drawings.
- B. Reinforcing shall be laid on top of bare masonry unit with mortar being applied over the reinforcing.

3.5 SCAFFOLDING and HOISTING

- A. This Contractor shall furnish, install and maintain safe, adequate scaffolding, centering, and other equipment necessary for the proper execution of all masonry work.
- B. This Contractor shall be responsible for the hoisting and protection

of his materials and the cleaning and removal from the site of all rubbish caused by this work.

### 3.6 INSPECTION AND TESTING

- A. "Controlled Inspections" shall be performed on masonry work as required by local laws.
- B. It is the Inspector's responsibility to observe the construction and to make certain that plans and specifications are fully complied with. The Contractor shall cooperate with the inspector and any conflicts shall be immediately submitted to the Architect for solution.
- C. The presence of the inspector in no way relieves the contractor from his obligation to follow the plans and specifications and to provide the designated quality and quantity for material and workmanship for all stages of the job.

### 3.7 CLEANING AND PROTECTION

- A. Remove excess mortar and smears on face of masonry.
- B. Clean all debris, excess sand, and mortar from site at close out of this section.
- C. Keep all work adjacent to masonry work protected from damage at all times.
- D. When each section of masonry is completed, thoroughly clean that area before starting next area.
- E. At close out of job, check to see that all joints are properly pointed and that all lime and mortar has been removed from masonry surfaces.



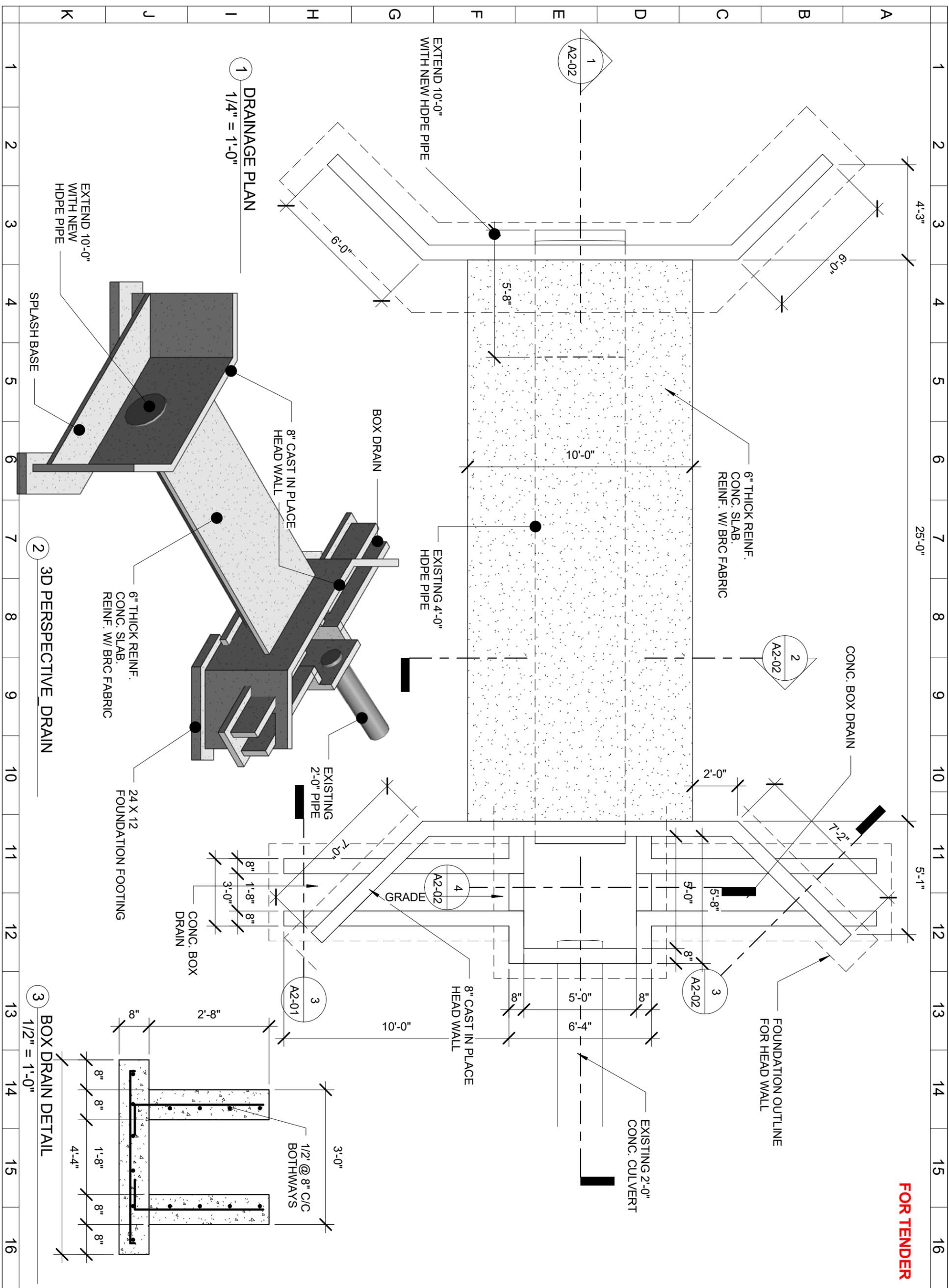
**St. John's Community Resource Centre & Access  
Improvements & Miscellaneous Works  
DRAWINGS**

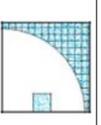
Basic Need Trust Fund - BNTF 8





**FOR TENDER**



SEAL	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
ARCHITECT																
 <b>Galloway and Associates</b> SWEENEY'S Tel: (664) 492-2640 Tel: (664) 491-4009 12864 BISCAYNE BLVD, SUITE 334 NORTH MIAMI, FLORIDA 33181 TEL: (954) 482-7662																
Page 65																

Client's Name: SJCC

**ST. JOHNS COMMUNITY CENTER ACCESS IMPROVEMENT AND MISC. WORKS**

ST. JOHNS, MONTSERRAT

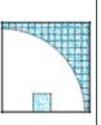
Project No.      Project Number      Block & Parcel No. 12/06/88

Revision Schedule		
No.	Date	Description
1	20-02-2016	Design Drawings

Issue Date		2016-02-20
Drawing Title:		
<b>DRAINAGE PLAN</b>		
Drawn By:	Mervin Francis	
Designed By:	Ivason Galloway	
Scale:	As indicated	
Sheet Number	<b>A2-01</b>	

SEAL

ARCHITECT



Galloway and Associates  
SWEENEY'S

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# ST. JOHNS COMMUNITY CENTER ACCESS IMPROVEMENT AND MISC. WORKS

ST. JOHNS, MONTSERRAT

Client's Name: SJCC

Project No. Project Number Block & Parcel No. 12/06/88

Issue Date 2016-02-20

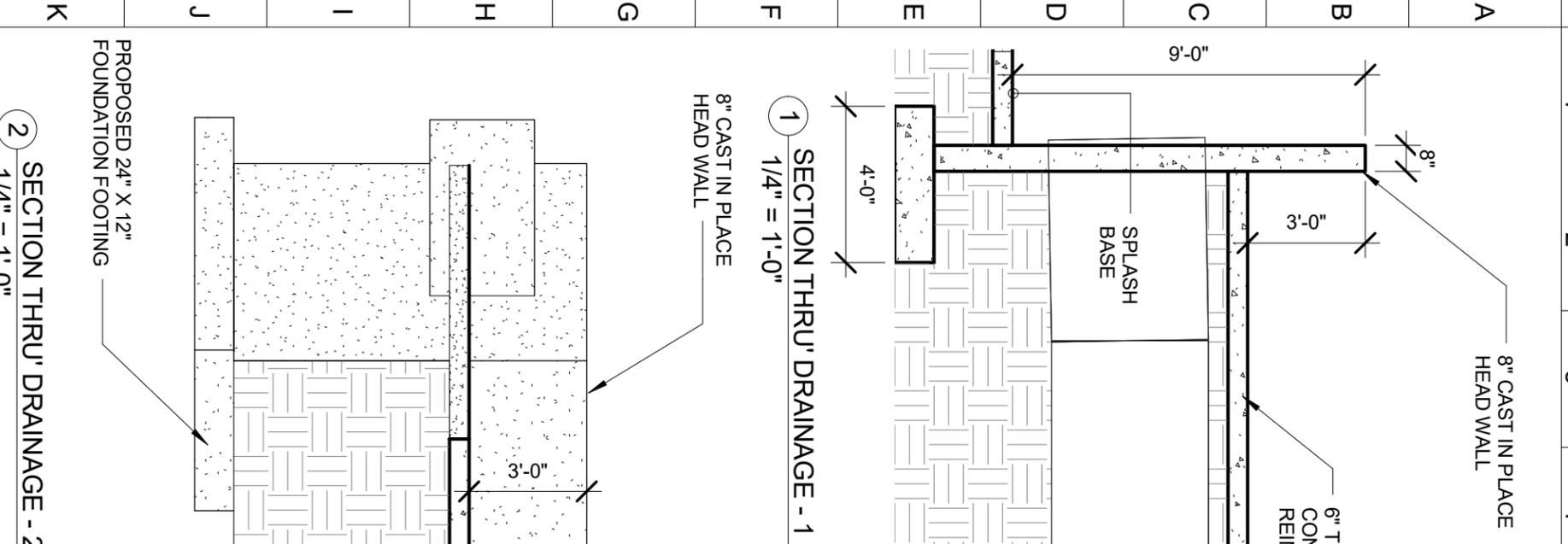
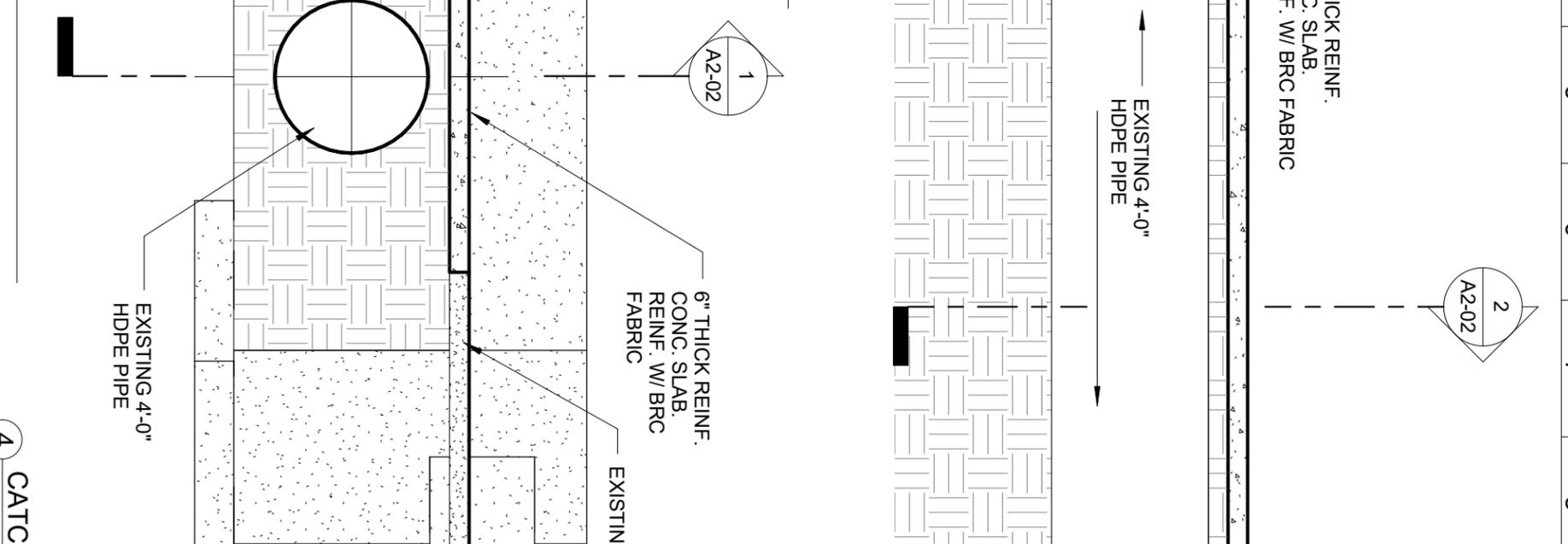
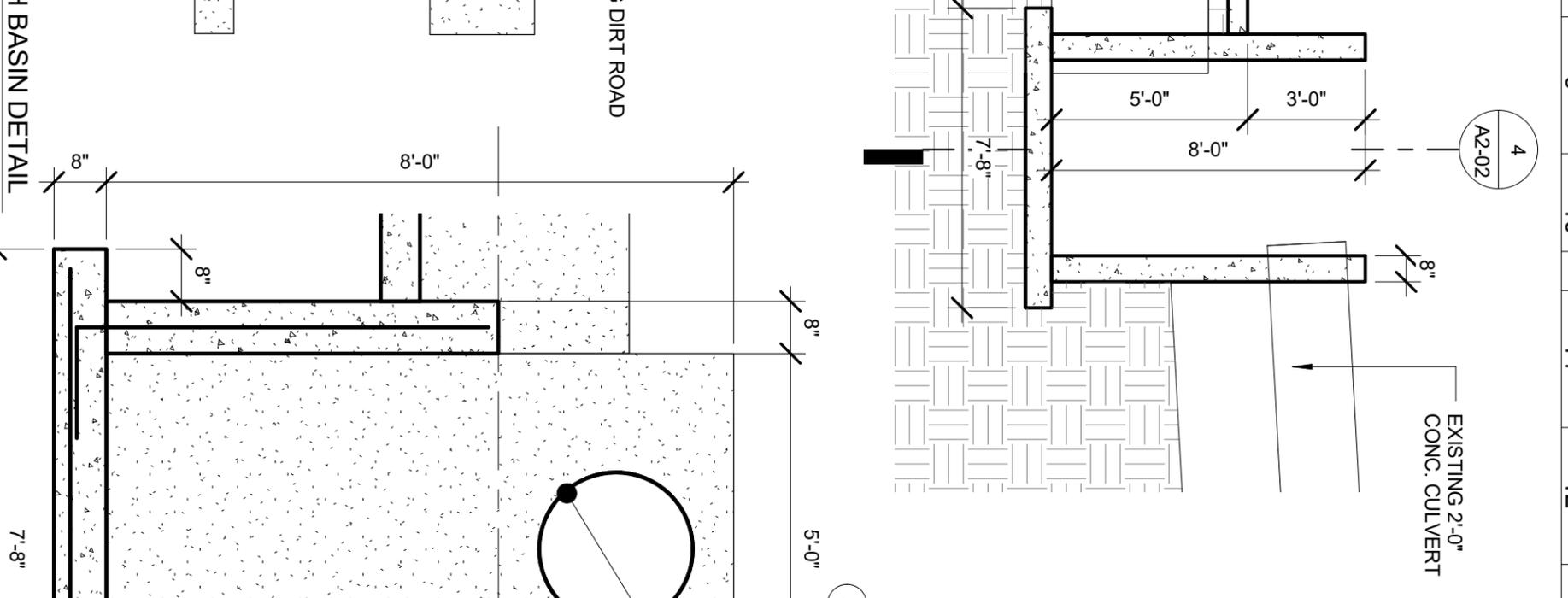
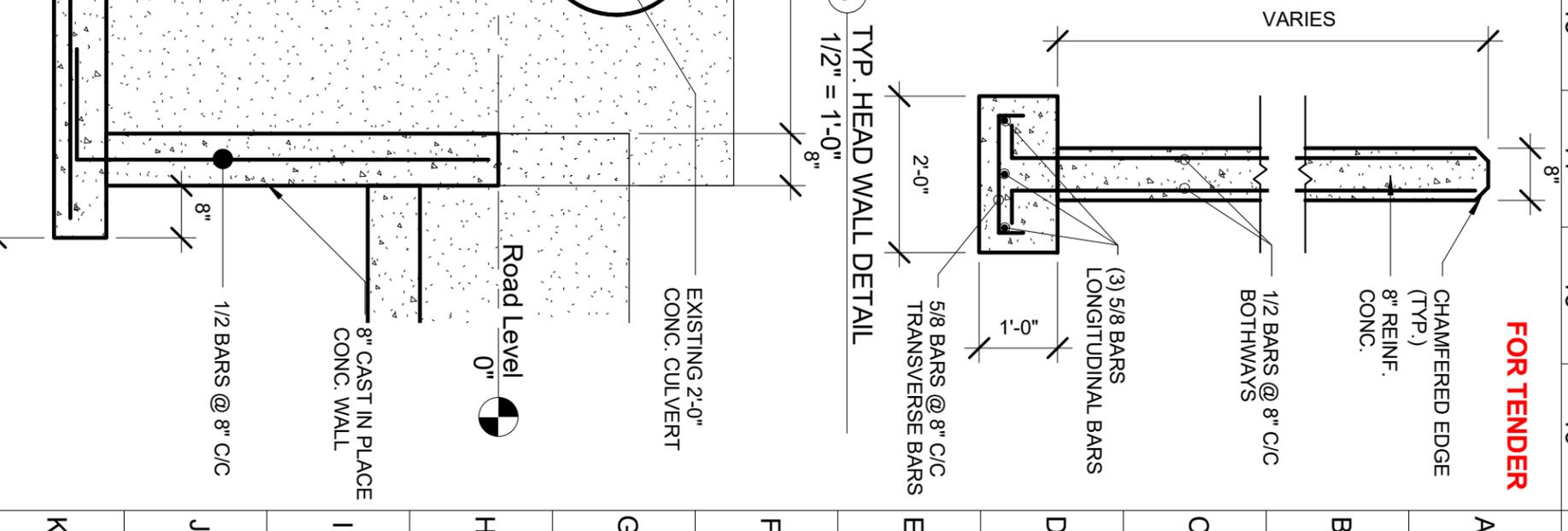
Revision Schedule		
No.	Date	Description
1	20-02-2016	Design Drawings

Drawing Title:  
**DRAINAGE DETAILS**

Drawn By:	Mervin Francis
Designed By:	Ivason Galloway
Scale:	As indicated
Sheet Number	<b>A2-02</b>

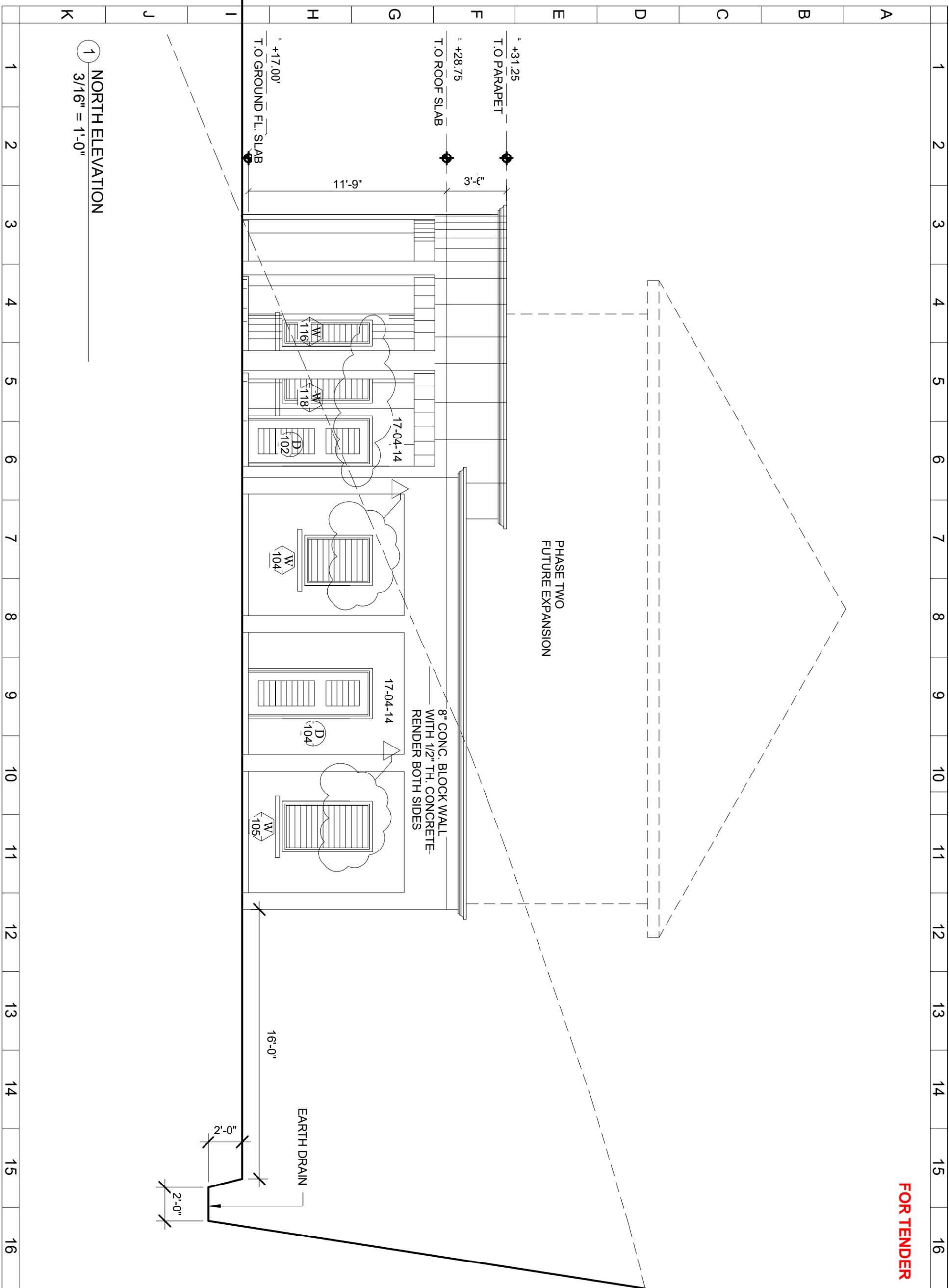
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**FOR TENDER**



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**FOR TENDER**



1 NORTH ELEVATION  
 3/16" = 1'-0"

SEAL

ARCHITECT  
 Page 67

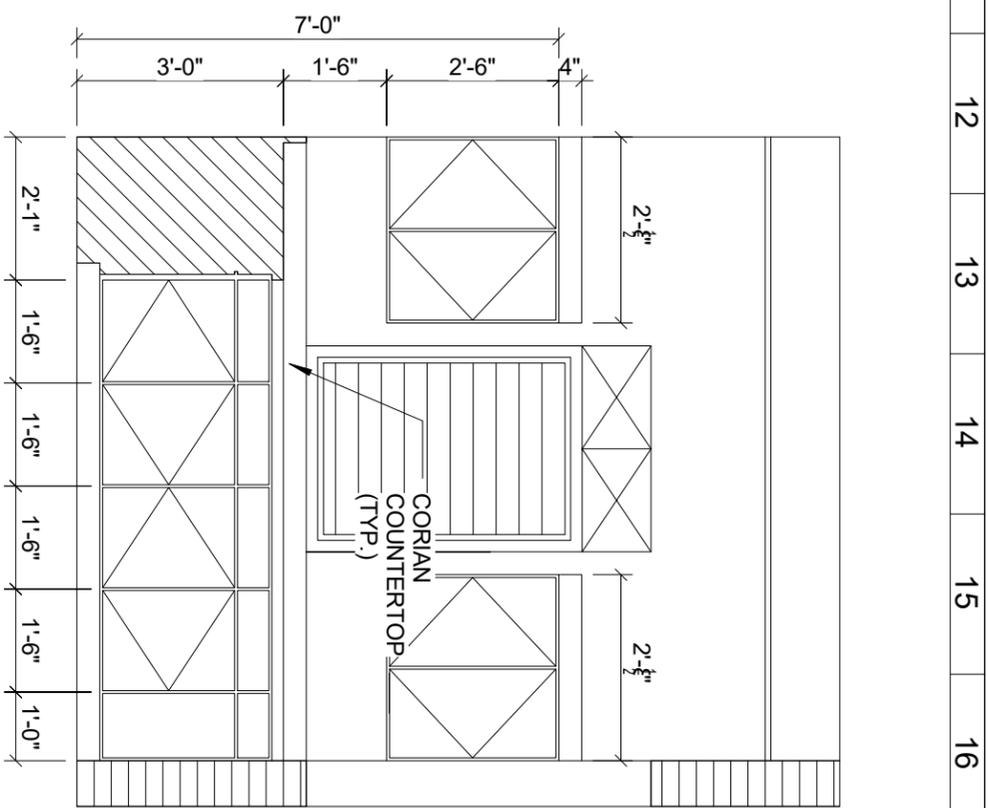
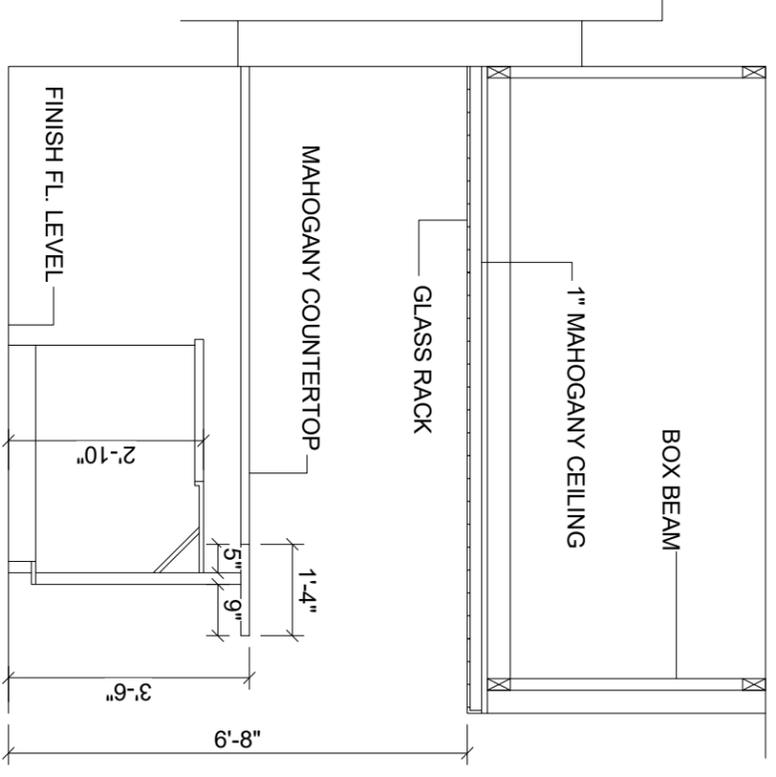
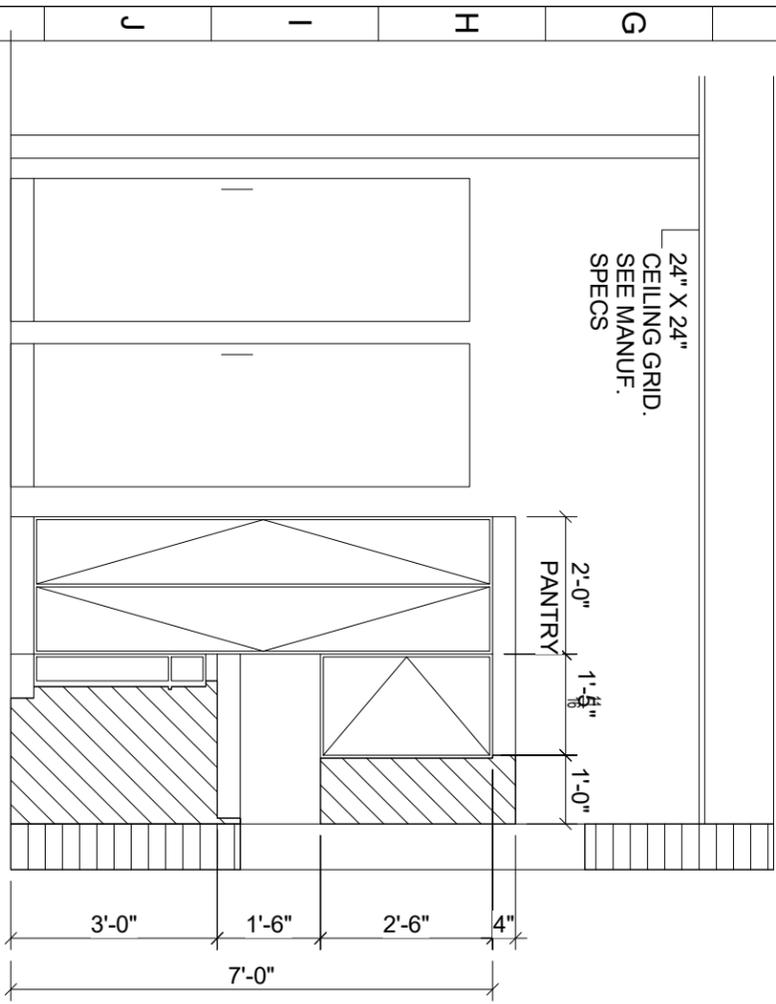
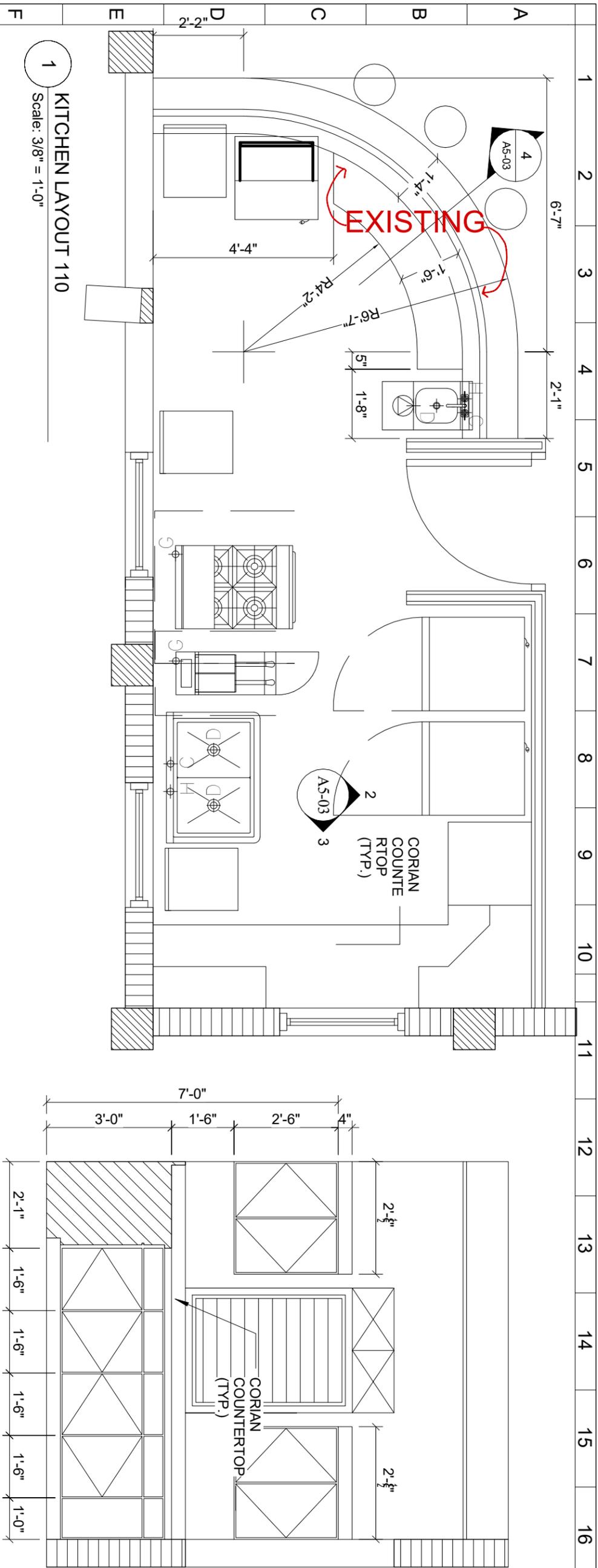
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 NORTH MIAMI, FLORIDA 33181  
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Client's Name: SJCC  
**ST. JOHNS COMMUNITY CENTER ACCESS IMPROVEMENT AND MISC. WORKS**  
 ST. JOHNS, MONTSERRAT  
 Project No. Project Number Block & Parcel No. 12/06/88

Revision Schedule	
No.	Description

Issue Date: 2016-02-20  
 Drawing Title:  
**BUILDING ELEVATION**

Drawn By: Mervin Francis  
 Designed By: Ivason Galloway  
 Scale: 3/16" = 1'-0"  
 Sheet Number  
**A3-01**



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

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SEAL

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Client's Name: SJCC

**ST. JOHNS COMMUNITY CENTER ACCESS IMPROVEMENT AND MISC. WORKS**  
ST. JOHNS, MONTSERRAT

Project No. Project Number Block & Parcel No. 12/06/88

Issue Date: 2016-02-20

**Revision Schedule**

No.	Date	Description

Drawing Title:  
**INTERIOR ELEVATION**

Drawn By: Mervin Francis  
Designed By: Ivason Galloway  
Scale: 3/8" = 1'-0"  
Sheet Number

**A5-03**





**St. John's Community Resource Centre & Access  
Improvements & Miscellaneous Works  
BILL OF QUANTITIES**

Basic Need Trust Fund - BNTF 8

<b>BILL OF QUANTITY</b>				
Name	Qty	Units	Cost	Price Total
St. Community Centre Drain and Access Improvements				
<b>1. PRELIMINARIES</b>				
Insurances etc.	1	Item		
<b>2.DRAIN CONSTRUCTION</b>				
<b>2.1 Excavation</b>				
2.1.1 Excavation - Trenches or the like - Foundation Trenches. To include allowance for compacting around the elements.	59	CU YD		
<b>2.2 Concrete</b>				
2.2.1 Concrete in foundations and Splash base	12	CU YD		
2.2.2 Concrete Walls	21	CU YD		
2.2.4 Concrete in strip Road Slabs	5	CU YD		
<b>2.3 Reinforcement</b>				
2.3.1 #4 Reinforcement in foundations	200	LBS		
2.3.2 #5 Reinforcement in foundations	1000	LBS		
2.3.3 #4 Reinforcement in walls	3400	LBS		
3.3.4 WWM in floor Slab	29	SQ YD		
<b>2.4 Formwork</b>				
2.4.1 12" Formwork to sides of strip foundation	41	YD		
2.4.2 8" Formwork to sides of strip foundation	31	YD		
2.4.3 Formwork to ft head walls	150	SQ YD		
<b>2.5 Sundries</b>				
2.5.1 Cost to supply and install 10Ft of 48" HDPE pipe and connect to existing	1	EA		
2.5.2 To connect exist 2ft conc. and integrate into proposed works as shown on the drawings	1	EA		
<b>3. EARTH DRAIN &amp; SITE WORKS (REAR OF EXISTING BLDG</b>				
3.1.1 Excavate area rear of the existing building as per the profile on the drawings and specifications. The excavated soil to be redistributed in even layers on the adjacent lot to the north of the property.	1	Item		
<b>SUB-TOTAL (PAGE 1)</b>				

	<b>SUB-TOTAL (PAGE 1 CARRIED FORWARD)</b>			
	<b>4. Kitchen Cabinets</b>			
	4.1.1 Kitchen cupboard bottom and overhead units; as Architect's drawings; timber bearers and framing; Corian top; mahogany veneered plywood panelling and shelves; mahogany doors; hardware (Ferrari consealed hinges, Amerock Shaub & Co. #7010 door pulls and Unity General shelf hardware); varnishing; fixing with screws to backgrounds requiring plugging Kitchen Units Kitchen cupboard bottom and overhead units; as Architect's drawings; timber bearers and framing; Corian top; mahogany veneered plywood panelling and shelves; mahogany doors; hardware (Ferrari consealed hinges, Amerock Shaub & Co. #7010 door pulls and Unity General shelf hardware); varnishing; fixing with screws to backgrounds requiring plugging.	1	Item	
	<b>TOTAL</b>			