



**MINISTRY OF AGRICULTURE, LANDS, HOUSING AND THE ENVIRONMENT**

**P.O. Box 272**

**Brades**

**Montserrat**

**West Indies**

**Tel: (664)-491-2075**

**Fax: (664)-491-9275**

**E-Mail: [malhe@gov.ms](mailto:malhe@gov.ms)**

July 30<sup>th</sup>, 2014

Ref: MALHE 5/11 & 7/14

Dear Sir/Madam,

**Re: Tender for Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

You have been invited to tender for Construction of a **LJ Two Bedroom Residential Dwelling** at Davy Hill. Attached are the tender documents consisting of:

1. Instructions to Tenderers
2. Document Compliance Checklist
3. Form of Tender
4. Appendices and Schedules
5. Anti-Collusion Certificate
6. Preliminaries and General Matters
7. General Conditions of Contract
8. General Specifications
9. Construction Drawings

Please collect tender documents from the Project Implementation Unit (PIU) and **register** for the said LJ Two Bedroom Residential Dwelling Construction Project by paying \$100.00 (non-refundable). Return completed tender documents, addressed to **The Chairman, Public Procurement Board, Ministry of Finance and Economic Management, Brades, Montserrat** to be received no later than **1400 hrs on Wednesday, 6<sup>th</sup> August 2014**. Tenders and all supporting documents should be enclosed in an inner envelope duly sealed and bearing the words, "**Tender for Construction of LJ Two Bedroom Residential Dwelling Davy Hill**". The name and address of the tenderer should also be written on the inner envelope which should be addressed to the **Chairman, Public Procurement Board, Ministry of Finance and Economic Management, Brades, Montserrat**. The outer envelope should be duly sealed and bear the words, "**Tender for Construction of LJ Two Bedroom Residential Dwelling Davy Hill**" and addressed to the **Chairman, Public Procurement Board, Ministry of Finance and Economic Management, Brades, Montserrat**. The outer envelope should reveal **no** indication as to the identity of the sender. **All tenders MUST be submitted no later than 1400 hrs on Wednesday 6<sup>th</sup> August 2014.**

Given the nature and urgency in which these works are required, the successful tenderer will be expected to commence work within **seven (7) Calendar days** after the contract for works has been awarded. This contract is inclusive of Labour, Materials, Transportation and Equipment required to complete the said works. The Government of Montserrat Client Ministry representative will notify the successful contractor as to paint colours and tile selection during Stage 2 [Superstructure].

Tenderers shall at their own expense visit the site and obtain for themselves, on their own responsibility, all information they may require prior to submitting a tender and entering into a contract.

All queries should be emailed to Mr Owen Lewis, Director of the Project Implementation Unit at [lewis@gov.ms](mailto:lewis@gov.ms) no later than **16:00hrs on Monday 4<sup>th</sup> August 2014**. Clarifications will be provided to all tenderers no later than Tuesday 5<sup>th</sup> August 2014.

Please be guided accordingly.

Yours sincerely,

.....  
**Camille U C Thomas-Gerald (Mrs)**  
**Permanent Secretary**  
**Ministry of Agriculture, Lands, Housing and the Environment**

# **Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

## **INSTRUCTIONS TO TENDERERS**

The following instructions have been included for the advice and guidance of Tenderers. Care should be exercised in ensuring that all conditions and clauses are adhered to in the preparation and submission of tenders. Tenders that are found to have not complied with the instructions will be rejected.

1. **Confidentiality of 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 on or before the day and before the hour of tender closing stated in the Invitation to Tender. The Form of Tender shall be signed by an authorized representative of the Company. **Tenders received late shall not be considered.** The completed Tender shall be submitted using the Form of Tender, in the copy of the Tender Document provided. **Submitting an incomplete “Form of Tender” may result in the tender being rejected.**

Tenders and all supporting documents should be enclosed in an inner envelope duly sealed and bearing the words, **“Tender for Construction of LJ Two Bedroom Residential Dwelling Davy Hill”**. The name and address of the tenderer **should also be written on the inner envelope** which should be addressed to the Chairman, Public Procurement Board, Ministry of Finance and Economic Management, Brades, Montserrat. The outer envelope should be duly sealed and bear the words, **“Tender for Construction of LJ Two Bedroom Residential Dwelling Davy Hill”** and addressed to the Chairman, Public Procurement Board, Ministry of Finance and Economic Management, Brades, Montserrat. The outer envelope should reveal **no** indication as to the identity of the sender. **All tenders MUST be submitted no later than 1400 hrs on Wednesday 06<sup>th</sup> August 2014.**

### **Mandatory Contract Documents – TENDER SUBMISSION**

Below is a summary of the Contract Documents, which must be submitted together with the Form of Tender:

- a) **COMPLETED** Schedule A - Labour Rates
- b) **COMPLETED** Schedule B - Construction Materials
- c) **COMPLETED** Schedule C - Construction Equipment
- d) **SIGNED** Anti-Collusion Certificate
- e) **SUPPLIED** Tax & Social Security Compliance Certificate **(If company is Locally Based)**
- f) **SUPPLIED** Proof of three (3) construction contracts valued over \$200,000.00 or greater or Letter from the PIU indicating Housing Pre-qualification Status
- g) **COMPLETED & SIGNED** Document Compliance Checklist

### **Mandatory Contract Documents – PRIOR TO FORMAL AWARD OF CONTRACT**

Below is a summary of the Contract Documents, which must be submitted before formal award of contract:

- a) Schedule D - List of proposed establish sub-contractors.
- f) Construction Programme & Cash Flow Schedule
- g) Schedule E - Payment Schedule

3. **Contract Documents**

This Tender is based on the Drawings, Specifications, Articles of Agreement and Government of Montserrat General Conditions of Contract, hereinafter referred to as the Contract Documents.

4. No unauthorized alteration or addition should be made to the Form of Tender, 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 by the Architect/Contract Administrator.
5. Any neglect or failure on the part of the tenderer 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 contractor whose Tender is accepted from any risks of liabilities for the completion of the Works, nor will any claim for increase of the Contract sum be entertained as a result of such neglect or failure.
6. Tenderers shall at their own expense visit the site and obtain for themselves, on their own responsibility, all 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 inspected the site and its surroundings and is acquainted with the requirements of the Contract. Submission of a tender shall be considered conclusive evidence that the Tenderer has made such examinations 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. All works undertaken will be the subject of taxation and social security liability in accordance with current legislation. Tenderers **must** submit a current Tax Compliance and Social Security Compliance certificate with their bid if **locally based. All tenderers must be tax and social security compliant at the commencement of contract.**
9. The successful Tenderer will be required to supply Construction All Risk Insurance to the value of the Contract Sum. The insurance shall indemnify contractor and GoM.
10. Each Tender should 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 authorised 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 of incorporation and by the signature and designation of the President, Secretary or other person authorized to bind it in the matter. **Satisfactory evidence of the authority of the signer on behalf of the firm shall be furnished.**
11. Award of Contract will be made to the tenderer whose tender is found to be most advantageous to the Government of Montserrat. The Employer is not bound to accept the lowest or any tender and reserves the right to reject any or all tenders. **The employer is not bound to detail in-depth reason/s for the rejection of any tender. The Tenderer shall bear the cost of preparing the tender.**

12. 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 form that is in the Tender Documents.
13. **Performance Bond**  
The Tenderer to whom the award is made will be required to furnish, and deliver to the Employer, a written bond of indemnity, of the same form as that in Appendix A, in the amount of ten percent (10%) of the Contract Price, and with surety thereon acceptable to the Employer. The bond shall be furnished and maintained at the expense of the Contractor. The party to whom the Contract is awarded will be required to execute the Contract and (if required) furnish the Performance Bond duly executed within seven days of signing the Contract, not including Saturday & Sunday or Legal Holiday. Failure to so execute the Contract shall be sufficient reason for the Architect/Contract Administrator to cancel the award without obligation or claim upon the Employer.
14. **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 will lead to disqualification of the Tender.**
15. 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 or obscurity and submit them to the Architect/Contract Administrator not later than **Wednesday 30<sup>th</sup> July 2014**. These and any other outstanding matters will be answered in writing no later than **Friday August 01<sup>st</sup> 2014**.
16. Tenderers are to fill in all blank spaces in the Form of tender including the appendix, except where specifically instructed otherwise.
17. **Pricing**
- i. Tenderers are to insert rates or prices against each item in the Form of Tender, Schedules, Summary sheets and where required in the contract. 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 Contract.
  - ii. Prices inserted shall be based on duty free imports from abroad of materials and goods required specifically for this project 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, protection, etc and for all other things necessary for the completion of the Works in accordance with the Drawings, Specifications and Conditions of Contract.

**18. Import Duty Concessions**

- i. The tenderer should ascertain from the responsible official of the Customs Department the allowable concessions at present in force in respect of duty on imported materials to be incorporated in the Works.
- ii. The tenderer should 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 should allow for all Wharfage, Dues, Package Tax, Importer's Licenses (where applicable), Stamp Duties, taxes and other charges 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 deposits, duties, taxes, stamp duties or any other charges that may be required.

**19. Mistakes in Tenders**

Arithmetic errors discovered in the Tender will be dealt with as follows: The Tenderer will be given details of such errors and afforded an opportunity of accepting the Client's correction(s) or withdrawing his offer. If the Tenderer withdraws, the tender of the second most advantageous tenderer will be examined, and if necessary this Tenderer will be given a similar opportunity.

**20. Compliance with Instructions:**

- i. No tender will be considered unless it complies with the conditions set out in these instructions in its entirety.
- ii. All Addenda issued by the Architect/Contract Administrator prior to the date stated for the closing of Tenders shall be attached to and form part of the Tender.
- iii. The Employer will not be responsible for any expenses or losses that may be incurred by any Tenderer in the preparation of his Tender.
- iv. The Tenderer shall be bound by his Tender except as provided for in Paragraph 17 of these instructions.

**22. Discrepancies in Specifications or Drawings**

- i. Any ambiguity found in the drawings or specifications shall be called to the attention of the Architect/Contract Administrator prior to the date provided in paragraph 16 for clarification of tender queries.
- ii. Ambiguities will be clarified by the Architect/Contract Administrator 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/her Tender.
- iii. All information given to bidders other than by means of the drawings and tender 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 questions shall be submitted in writing to the Architect/Contract Administrator so as to be received no later than the dates provided in paragraph 16.
- v. Decisions rendered by the Architect/Contract Administrator in response to questions received as above-provided will be arranged as Addenda and shall become a part of the Contract.

**23. 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 Architect/Contract Administrator. The Contractor shall, however, commence work no later than the date specified in the above Notification.

**24. Scope Statement**

The proposed works embodying this contract comprises the construction of the LJ Two Bedroom Residential Dwelling Davy Hill **COMPLETE** with all the required external works as detailed in the working drawing provided and in accordance with the Scope of Works.

**25. Technical Compliance**

All tenderers shall satisfy the minimum criteria that they have previously successfully completed at least three (3) contracts of EC\$200,000 or greater. Alternatively, they shall be registered as a PIU Pre-Qualified Housing Petit-Contractor. Proof may be in the form of a written submission with details of previous clients, addresses, nature and value of the construction undertaken or a Letter from the PIU indicating Housing Pre-Qualification Status. **Tenderers are asked to note that checks will be made to verify the accuracy of these submissions.** A tenderer will be deemed to be technically suitable to perform the contract if either requirement is met.

## **SCOPE of WORKS – Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

The following items are considered to be **WITHIN** the scope of proposed LJ Two Bedroom Residential Dwelling Davy Hill, as per the Approved LJ Drawing issued:-

- LJ Two Bedroom Residential Dwelling
  - Substructure
    - Excavation & Filling
    - Concrete Work
    - Form Work
    - Reinforcement
    - Block Work
  - Superstructure
    - Concrete Work
    - Form Work
    - Reinforcement
    - Block Work
    - Sundries
    - Joinery
    - Carpentry
    - Roof → 6" Reinforce Concrete Slab, with smooth render and 1% water run, 6" x 6" roof lip with grade at top and 3/4" diameter groove at bottom. Finish with Roof sealer
  - Finishing
    - All finishes as per drawing
    - Wall Finishes (including Base Board)
    - Floor Finishes
    - Ceiling Finishes
    - Roof Finishes
    - Painting & Decorating
    - Balusters
  - Fixtures & Fittings
    - Built in Furniture
    - Fittings
  - Services
    - Plumbing & Sanitary Fittings
    - Vent Installation
    - Hot & Cold Water Installation
    - LPG Line Installation
    - Electrical Installation
    - Telephone & Cable Installation
  - External Works
    - Connection to Sewage Network
    - Drive way
    - Walk way
    - Staircases
    - Drainage
    - Tidy-up of Site
    - Disposal of ALL Construction Debris

**Note:** The Appendix forms part of the Tender. Tenderers are requested to fill all blank spaces in the Tender Form and the Appendix.



**The Tenderer declares that:**

- a) No person, other than the tenderer, has any interest in this tender or in the Contract proposed to be entered into.
- b) This tender is made without any connection, knowledge, comparison of figures or arrangement with any other person or persons making a tender for the same work, and is in all respects fair and without collusion or fraud.
- c) The general matters stated in the said tender are in all respects true:

***The tenderer has carefully inspected the locality and site of the proposed works, as well as all the drawings, form of tender, instruction to tenderers, specifications, general conditions, agreement and bond, and hereby accepts the same as part and parcel of this contract, and to hereby tender and offer to enter into a contract to do all the work, provide the labour and plant and to provide, furnish, deliver, place and erect all materials mentioned and described or implied therein, to construct, complete and maintain the whole of the said works in conformity with the said drawings, conditions of contract, and specifications, to complete and deliver the whole of the works comprised in the contract within the time stated in the Appendix.***

***The tenderer also agrees that this offer is to remain open to acceptance for a period of 90 calendar days from the date for the submission of tenders until receipt of written acceptance of the tender, or until the formal contract is executed by the successful tenderer.***

# **Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

## **Document Compliance Checklist**

Project Title: **Tender for Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

Date scheme advertised: **Wednesday 30<sup>th</sup> July 2014**

Tender Deadline Date: **Wednesday 6<sup>th</sup> August 2014**

Tender Deadline Time: **1400 hours (2:00pm)**

The following documents **must** be provided by the tenderer for his tender to be administratively compliant. Tenderers are required to supply and tick off the following information. **Failure to provide any of the stated documents will result in the bid being non-compliant and rejected.**

- The Form of Tender should be fully completed and signed (**Including time for completion and notice period**) [  ].
- Tax & Social Security Compliance Certificate (*If company is Locally Based*) [  ].
- Proof of three (3) construction contracts valued over \$200,000.00 or greater [  ] or Letter from the PIU indicating Housing Pre-qualification Status [  ].
- Schedule A - Labour Rates [  ].
- b) Schedule B - Construction Materials [  ].
- c) Schedule C - Construction Equipment [  ].
- e) Signed Anti-Collusion Certificate [  ].
- H) Signed Document Compliance Checklist [  ].

.....  
Signed on behalf of Tenderer

Date

**Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

**FORM OF TENDER**

Chairman,  
Public Procurement Board  
Ministry of Finance and Economic Management  
Government Headquarters  
Brades  
Montserrat

Dear Sir/Madam,

**Re: Tender for Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

I/We the undersigned undertake to perform and complete the above captioned works in accordance with the Conditions of Contract, specifications, drawings and scope of works for the sum of:

EC\$  
.....  
(words).....  
.....  
.....  
.....

If my/our tender is accepted, I/We undertake to commence the said Works within \_\_\_\_calendar days from the date of receipt by me/us of the official contract award letter and to complete the Works within ----- calendar days thereafter.

I/We understand I/We shall not be reimbursed for any cost that may have been incurred in compiling and submitting this tender.

I/We confirm this tender shall remain valid for a period of 90 calendar days from the date of submission of this tender.

Name.....

Signed.....

Name of firm (If Applicable) .....

Address.....  
.....

Tel. nr.....

Fax nr.....

Date.....

**APPENDIX TO FORM OF TENDER**

Clauses

Amount of Bond or Guarantee (if required):	10 percent of contract price
Minimum Amount of Third Party Insurance	EC\$200,000.00
Period for commencement from Notification of Award of Contract	..... Calendar Days **
Time for completion	..... Calendar Days **
Amount of Liquidated Damages	EC\$500 per week or part thereof
Period of Maintenance	6 months
Percentage of Retention	5 percent
Limit of Retention Money	5 percent of Contract Sum
Time within which payment to be made after issue of Certificate	14 Calendar Days

\*\* To be filled in by Tenderer

Dated this ..... day of .....2014

Signature ..... in the capacity of .....

duly authorised to sign tenders for and on the behalf of .....  
(IN BLOCK CAPITALS)

Address.....



SCHEDULE A - LABOUR RATES

I (We) hereby certify that to the best of my (our) knowledge and belief the wages, hours of work, and conditions of labour of all work people proposed to be employed by me (us) on this project for which I (we) am (are) offering myself (ourselves) as a Contractor are fair and reasonable having regard to the statutory provisions regulating rates of wages as are in force in Montserrat on the date of this my (our) Tender and I (we) will accept responsibility for the observance of these regulations by sub-contractors employed by me (us) in the execution of the works.

The above mentioned wages and hours of work are as listed on the following pages:

The Tenderer shall list the labour, by classification, which he proposes to have on the site for performing all of the work, together with the applicable hourly rates. The rates stated shall include all fringe benefits, overhead and profit.

Class of Work-person	Rates of Wages (*) \$ (EC)	Hours of Work (**)
Foreman		
Mason		
Carpenter		
Steel bender/fixer		
Skilled Labourer		
Labourer		
Electrician		
Plumber		
Tiller		

I (We) shall pay . . . . . times the above rates of wages for normal overtime work in excess of . . . . . hours per work day and . . . . . times the above rates of wages for work on Sunday and Statutory Holidays.

\* per hour  
 \*\* In a normal working day

Dated this ..... day of ..... 2014

..... (Signature) (Name in Block Letters)

being an officer of, and duly authorized to sign on behalf of

.....  
 ..... (Business Address)

.....  
 (Telephone)

Witness ..... Occupation .....

Address .....

SCHEDULE B CONSTRUCTION MATERIALS

On the following pages I (We) have listed to the best of my (our) knowledge all of the required construction materials to be incorporated into the Permanent Works, together with the names of my (our) proposed suppliers and the unit for each material including the country of origin thereof.

We have satisfied ourselves that the suppliers' delivery schedules are realistic and/or we have satisfied ourselves that materials are available in sufficient quantities to execute the works without delay, and that materials conform with all requirements of the Specification.

We understand that all materials will be subject to inspection and tests by the Architect/Contract Administrator.

Material	Supplier (Including Country of Origin)	Unit Cost \$ (EC)
Blocks		
Sand		
Aggregate		
Cement		
Reinforcement – 1/2"		
Reinforcement – 3/8"		
Reinforcement – 5/8"		
Lumber – 2" x 4"		
Lumber – Form Ply 3/4"		
Conduit		
Wiring per point		
Copper pipe		
Upvc pipe		
Concrete		

Dated this ..... day of ..... 2014

..... (Signature)

(Name in Block Letters)

being an officer of, and duly authorized to sign on behalf of

.....

..... (Business Address)

.....  
(Telephone)

Witness ..... Occupation .....

Address .....

SCHEDULE C CONSTRUCTION EQUIPMENT

I (We) propose to employ the following construction machinery and equipment for the execution of the Works and to the best of my (our) knowledge, the equipment listed is in sufficient capacity to construct all of the Works within the time specified for completion.

Note: Indicate (\*) if equipment is to be rented or sub-contracted locally, and provide details. Also list the rate of hourly hire of all equipment for Day-work purposes. Do not list hand tools or normal tools required by trade persons.

Description of Equipment	Hourly Rate for Day-work \$ (EC)
Concrete Mixer (with hopper)	
Concrete Mixer (without hopper)	
Rough Rider	
Bobcat	
5 Ton Lorry	
3 Ton Lorry	
Excavator	
Backhoe	
Compressor	
Vibrator	
Tele-handler	
Crane	
Concrete mixer truck	

Dated this ..... day of ..... 2014

..... (Signature)

(Name in Block Letters)

being an officer of, and duly authorized to sign on behalf of

.....

.....(Business Address)

.....  
(Telephone)

Witness ..... Occupation .....

Address .....



**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:

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

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

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.....2014

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 .....

**Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

**General Conditions of Contract**

## GENERAL CONDITIONS

### 1. Definitions

- 1) The "Contract" means these General Conditions together with the specification drawings and includes the contract agreement
- 2) The "Employer" means the Ministry of Finance and economic management for the Government of Montserrat
- 3) The "Engineer" means a duly authorized representative of the Employer
- 4) The "Contractor" means the Company appointed to carry out the Works
- 5) The "Colony" means the Colony of Montserrat
- 6) The "Site" means the lands and/or other places on, under or through which Works are to be carried out
- 7) The "Works" means the works to be executed in accordance with this Contract as described in the Specification
- 8) The "Language" of the Contract shall be English
- 9) The "Law" applicable to the Contract, shall be the Laws of Montserrat

### 2. Contract Document — Priority

- 1) The Agreement
- 2) Letter of Acceptance
- 3) Conditions of Contract
- 4) Specifications
- 5) The Drawings
- 6) 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 and Drawings and to supply all necessary labour, plant, materials and temporary works to complete the described works together with such materials as are required by the Specifications.

### 4. Power to Vary or Omit

- 1) 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 Supervising Officer. 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.
- 2) No variation, alteration or addition to the Work indicated in the Specification and/or Drawings 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 supply as detailed by the Specifications and future instructions from the project Manager all materials and quantities required to successfully complete the project.

7. **Setting Out**

- 1) The Contractor shall be responsible for setting out of the Work.

8. **Workmanship**

- 1) The Contractor shall at all times carry out his works in accordance with the Laws of the Colony of Montserrat.
- 2) The Employer may from time to 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 may in writing, inform the Contractor of his dissatisfaction.
- 3) 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.

9. **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.

10. **Supervision of Works and Skilled Workmen**

- 1) The Contractor shall provide all necessary supervision during the execution of the Works.
- 2) The Contractor shall employ in and about the execution of the Works only such persons who are carefully skilled, trained and experienced in their specific discipline.
- 3) The Supervising Officer may (but not unreasonably or vexatiously) issue instruction requiring the exclusion from the Works of any person employed thereon.

11. **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.

12. **Payment of 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 and shall be reimbursed for same by the Employer.

13. **Safety**

- 1) The Contractor is responsible for the safety of all persons employed by him.
- 2) 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.

14. **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.

15. **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 or default of the Contractor or any person for whom the Contractor is responsible.

16. **Evidence of Insurance**

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

17. **Payment to the Contractor**

Payment to Contractor will be made in a total of six (6) payment including, Four (4) Staged Payments, One (1) Advanced Payment and One (1) Final Retention Payment:-- Stage Payment # 1 on completion of foundation to floor; Stage Payment # 2 on completion of floor to roof complete; Stage Payment # 3 on completion of internal fixtures & fittings and services, including tiling, cabinets, plumbing and electrical work; Stage Payment # 4 on completion of Finishes and external works. Retention of 5% of the contract sum will be held. 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.

18. **Warranty Period**

A warranty period of Six (6) 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. The Employer reserves the right to make good any defects identified during the warranty period seven (7) days after notifying the Contractor to said defects. The Retention monies will be used to make good such defects.

19. **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 Work 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.

20. **Liquidated damages**

The amount of liquidated damages as a penalty for non-completion of contract shall be \$500.00 per week or part of a day beyond the agreed date for completion. This shall be applied by the Employer if the Contractor fails to complete the works by the date for completion or within any extended time fixed by the Employer and the Contractor shall be issued a Certificate of Non-completion. The Employer may claim or deduct payment for liquidated damages based on the above daily rate, prior to making final payment to the contractor.

21. **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 this Contract.

22. **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.

23. **Contract Documents**

- 1) The Contractor shall receive two complete copies of Contract Documents.
- 2) Subsequent to the commencement of the Contract, the Contractor shall receive a copy of all additions to and amendments to the Specifications or Drawings.

**Construction of LJ Two Bedroom Residential Dwelling Davy Hill**

**General Specifications**

# GENERAL SPECIFICATION FOR MATERIALS AND WORKMANSHIP

## **1.0 THE WORKS GENERALLY**

### **1.01 Materials and Workmanship**

All materials and workmanship shall be in accordance with current good practice and shall be fit for their purpose.

### **1.02 British Standards**

BS references in this specification are to current British Standard Specifications.

### **1.03 Manufactured Materials**

Strictly observe all manufacturers' instructions. Ensure that the manufacturers' instructions are available at the site. Incompatible materials shall not be mixed (for example, metric and imperial drainage systems). Where proprietary materials are specified on the drawing, the phrase or equal approved shall be deemed to be included.

### **1.04 Alternative Materials**

"Or equal approved" means that products other than those specified may be used provided that the contractor satisfies the Project Manager as to their suitability and obtains his written approval. The Project Manager reserves the right to insist on the specified product if such approval is not given.

### **1.05 Accuracy**

Work within dimensional limits that are suited to the structural stability and final appearance of the works taking account of the need for a good fit for prefabricated components.

### **1.06 Inspections**

Give notices in respect of any work that must be inspected before covering up and do not cover up until inspections have been carried out. Such work includes pipe work, drains and structural elements, e.g., foundations, ground slab and reinforcement for concrete.

### **1.07 Scaffolds**

Properly constructed scaffolds shall be provided for all work that cannot be done safely by workmen standing on permanent or solid construction, except when such work can be done safely on ladders. All such scaffolds shall be substantially constructed, to support at least four times the maximum load and shall be secured to prevent swaying.

Roof brackets, roof scantling, crawling boards and similar forms of support shall be substantial in construction and securely fastened in place when in use.



Planks used in the construction of stationary scaffolds shall not be less than 2" nominal thickness. Where such planks overlap at the ends, the overlap shall be not less than 6". Planks shall be placed so that they cannot tip under the weight of the worker at any point.

Nails used in construction of scaffolds shall be of ample size and length to carry loads they are intended to support and all nails shall be driven full length. No nails shall be subject to direct pull.

Barrels, boxes or other similar unstable objects shall not be used as supports for planking intended as scaffolds or places of work.

No materials or equipment other than required (*for present use*) by the workers shall be placed on scaffold platforms.

## **1.08 Clearing and Cleaning**

Remove all timber forms for concrete or other timber not required in the permanent works from the site. Keep the site clean and tidy. On completion, remove all plant, materials, waste and rubbish. Repair any damaged existing features and clean out gutters.

Remove all stains and splashes, clean glass, remove all dust and dirt from surfaces and leave the completed structure(s) to the Project Manager's satisfaction.

## **2.00 EXCAVATION AND EARTHWORKS**

### **2.01 Site Conditions**

Unless otherwise indicated in the tender document, no trial holes or site investigations have been undertaken. The Contractor shall make local inquiries and carry out his own investigations in respect of the ground conditions, water table and other factors affecting the proposed excavations.

### **2.02 Levels**

Set up and maintain an accurate site datum level. Carry out and record a site level grid and agree with the Project Manager. Excavate the site to the reduced levels as shown on the drawings.

### **2.03 Foundations**

Excavate for foundations as shown on the drawings.

Trenches are to be squarely dug and vertically stepped where necessary. Level and ram bottom of foundations to receive concrete. Excavate soft spots and fill with Class D concrete. Excavate, break up and remove all boulders that may be encountered. Keep excavation clear of water. Plug any pipes cut off at the perimeter with Class D concrete, rammed immediately into at least 12" depth.

For un-reinforced foundations, place concrete immediately after completing excavation.

For reinforced foundations, place minimum 2" thick Class D concrete immediately after completing excavation and compact level.

#### **2.04 Hardcore**

Hardcore or fill to consist of hard dry stone or broken concrete or other compactable materials approved by the Project Manager, capable of passing a 4" ring in all directions and thoroughly compacted by maximum 6" layers.

#### **2.05 Damp Proof Membrane/Underlay**

Under all concrete ground slabs, 1000 gauge polythene sheet laid over the blinded hardcore to be lapped accordance with manufacturer's instructions. Care must be taken to prevent the sheet being punctured before the placing of reinforcement or concrete. For external slabs, reduce underlay to 500 gauge.

#### **2.06 Backfill**

Backfill to all trenches to consist of hardcore or selected excavated material, free from organic matter thoroughly compacted in 6" to 9" layers. This excludes internal backfill to the building foundation, which shall be hardcore as specified above.

#### **2.07 Disposal**

Remove off site, all excavated material not suitable for fill or top soil.

#### **2.08 Termite Treatment**

Treat the building to prevent Termite activity. The work is to be carried out by an approved specialist, using 'Torpedo' or another approved proprietary system. The treatment is to be carried out in accordance with the manufacturer's recommendations using the higher concentrations where a range is recommended but is expected to consist at least of: Underground slabs, apply the treatment solution to the entire ground surface with additional applications at the slab perimeters and penetrations such as drains.

At each side of the foundation walls, after soil or fill has been graded to its final level, excavate a 6" x 6" trench, rod to the top of the foundation at 9" centres and apply the solution. Mix the solution with the soil and replace it in the trench.

#### **2.09 Grassing**

On completion of the work, make good all disturbances to grassed surfaces caused by excavations access.

### **3.0 CONCRETE WORK**

All structural concrete used on this project will be of the Type Class B

#### **3.01 Sand**

No sea dredged sand is to be incorporated in any of the work covered by this contract. Sand for concrete work shall be obtained from a source approved by the Project Manager.

All sand shall be clean and free from soil or deleterious matter and shall comply with BS 882. It shall be well graded between the limits given in BS 882.

### 3.02 Coarse Aggregate

All coarse aggregate shall consist of clean approved hard stone or gravel, free from soil or deleterious materials and shall comply with BS 882. Sea dredged or beach aggregate shall not be used.

Both sand and coarse aggregates shall be stored on hard clean surfaces and shall be handled so as to remain clean and well graded: and shall be kept separate from one another by separating walls if space is restricted until placed in the mixture.

### 3.03 Water

All water used throughout the works shall be clean fresh water free from harmful matter in undesirable quantities. **Seawater shall not be used.**

### 3.04 Cement

The cement for the whole works shall be Portland Cement (PC42.5) to BS12 of approved manufacture. Cement, which is not manufactured in Trinidad or Barbados, shall have a certified average alkali content of 0.6% or less. Cement shall be delivered in the original sealed bags of the manufacturer and stored in a suitably dry, weatherproof and properly ventilated store.

### 3.05 Concrete Mixes

Concrete specified by Class shall be mixed in the nominal proportions stated below, the proportion of sand to coarse aggregate being carefully adjusted to provide a dense and workable concrete to the satisfaction of the Project Manager. The water content shall be adjusted so that the slump lies within the limits stated and the quantity of water added to the mix shall be measured accurately. Batch testing shall be carried out before commencement of concreting.

Class of Concrete	Normal Mix	Allowable Slump	Nominal Cube Strength	Minimum Cube Strength	Nominal Cube Strength	Average Cube Strength
A	1 : 1½ : 3	1" to 3"	4500 psi		5500 psi	
B	1 : 2 : 4	1" to 3"	3000 psi		4000 psi	
C	1 : 3 : 6	1" to 2"	1000 psi		1500 psi	
D	1 : 4 : 8	1" to 2"	-		-	

Or as indicated on the Structural Engineering drawings

### 3.06 Admixtures

Nothing shall be added to the essential ingredients of the concrete (cement, sand and coarse aggregate and water) without the Project Manager's approval.

### 3.07 Steel Reinforcement

Steel bar reinforcement shall be deformed high yield steel bars complying with BS 4449. For the convenience of the contractor: the drawings may show imperial bar sizes for which equivalent metric sizes may be substituted.

Steel fabric (mesh) reinforcement shall be high yield welded fabric to BS 4483.  
All reinforcement shall be entirely free from loose mill scale, loose rust, oil, grease, paint etc.

**Existing exposed reinforcement because of concrete splinter shall be wire brushed and be entirely free from rust, oil, grease, paint, etc. before patching.**

Bar reinforcement in the bottom of foundations, ground beams or ground-bearing slabs must be fixed on 2" thick Class D blinding concrete.

The reinforcement shall be bent to the shapes and placed exactly as shown on the drawings and the Contractor before cutting shall check the lengths of all bars. Cutting shall be by sawing or shearing. All bars shall be bent cold. Bars shall not be re-bent.

All intersections of bars shall be bound together with soft pliable 16 SWG wire so that they will not be displaced in the process of depositing the concrete.

The whole of the steel reinforcement shall be spaced with concrete block or other proprietary spacers or suspended from above so that the concrete cover does not deviate by more than 1/4" from that shown on the drawing. Spacers should be a maximum 3' centres but closer centres may be necessary. For fabric reinforcement, spacers should be at 18" centres. The contractor shall request an inspection by the Project Manager of each section of completely assembled reinforcement. Concreting shall not be carried out until the Project Manager's final approval is given.

### 3.08 Formwork Generally

Formwork shall be constructed to the shape and dimensions shown, sufficiently tight to prevent leakage and shall be securely braced and shored to prevent displacement, at the same time safely supporting the construction loads.

Formed finishes shall have the appearance of a dense, well-compacted concrete and any minor voids or honeycombing shall be made good as directed.

Vertical formwork for columns, walls, sides of beams and other parts not supporting the weight of the concrete may be removed as soon as the concrete has hardened sufficiently to resist damage from removal operations but not less than 12 hours after concreting.

Formwork for soffits of beams and slabs and other parts that support the weight of the concrete shall remain in place until the concrete has reached its specified 28 days strength and in any case shall remain in place for at least the following periods:

Soffits of Slabs	8	days
Soffits of beams and cantilever slabs	12	days

The contractor shall be solely responsible for the safety of the constructions during and after form removal.

### **3.09 Fair-faced Concrete work**

Concrete designated fair-faced shall be constructed with tightly joined smooth forms producing smooth dense concrete without staining with  $\frac{3}{4}$ " x  $\frac{3}{4}$ " chamfered arises. Any blemishes shall be made good immediately after striking the formwork to the satisfaction of the Project Manager.

Plywood for fair-faced concrete shall be B-grade plywood class 1 or 2 with high-density overlay if several re-uses are required. A sample of the proposed plywood shall be submitted to the Project Manager before use.

### **3.10 Gauge Boxes**

Gauge boxes of suitable sizes shall be employed to give exact volumes of fine and coarse aggregate but due allowance shall be made for the bulking effect of sand in wet weather and the additional water entrained in the aggregates. In all cases, the amount of cement employed in a given mix shall be based on the tables in clause 3.05 and shall be such that it is necessary to divide a full bag of cement.

### **3.11 Mixing Concrete**

The mixing of the concrete shall be carried out by means of a batch machine of approved design and capacity to be agreed with the Project Manager prior to the commencement of the works.

The mixing shall continue until there is a uniform distribution of the materials and the mass is uniform in colour and consistency. The mixing time shall not be less than two minutes and the batch or any part thereof shall not be permitted to remain in the drum longer than ten minutes after being completely mixed.

### **3.12 Placing Concrete**

Before placing commences, all formwork shall be clean and free from construction debris and shall be properly oiled or lime-washed. All reinforcement shall have been placed in proper position and firmly supported and forms for all construction joints and stop ends completely installed. Runaways shall have been placed and any steel disturbed properly replaced. The formwork shall be wetted down to eliminate suction and all water used for this purpose drained away.

Immediately after mixing, the concrete shall be placed in the work in layers not exceeding 6" thick. Each layer shall be thoroughly vibrated or rammed until it has been made to penetrate and fill all the spaces between and around the reinforcement or other embedded fixtures and has properly and completely surrounded them throughout their entire length in such a manner as to ensure that all surfaces are dense and free from honey-combing or other defects. It is imperative that the work to be done quickly as well as effectively and a sufficient number of men shall be employed to ensure this. Vibrators must be used for all columns, beams and suspended slabs and for all paths, roads or hard-standings exceeding 4" thickness.

In no circumstances shall the concrete be thrown or dropped from a height or deposited under conditions that would cause the separation of the coarser from the finer portions of the concrete.

When no special placing plant is provided, the concrete shall be conveyed from the mixer to the point of deposit in as short a time as possible and shall be emptied onto a tray from which it shall be carefully placed in its final positions in the forms by shovels. Concrete shall be deposited at several points in line and shall not be permitted to flow along the forms.

In columns and other similar members, the bottom 1" shall be filled with grout which shall consist of cement and water mixed to a thick, creamy consistency. In deep members in which congestion of steel makes placing difficult the lower part of the forms shall be filled with grout in the same way. The grout in each case shall be

deposited immediately in advance of the concrete and shall not be permitted to dry out or set so as to lose its mobility before the concrete is placed on top of it.

### **3.13 Stoppage of Work**

No concrete of any kind shall be placed during inclement weather. The Project Manager reserves the right to stop concrete placing during periods of excessive rainfall unless adequate precautions are taken to protect freshly placed concrete from the weather.

### **3.14 Worked Finishes**

Tamped Finish: when no specific finish is required, tamp to a plain or evenly ribbed finish with tolerance suitable for subsequent work or use.

Wood Float Finish: close the surface with a wood float to produce an even slightly coarse texture, free from ridges and depressions.

Steel Trowel Finish: repeatedly trowel by appropriate means (e.g. Power float) to produce a dense smooth surface free from ridges and depressions. If a thin floor finishing is to be applied no defect in the concrete should show through the finish. Maximum permissible deviation is 1/8" from a 9" straight edge.

Brush Finish: after working to a smooth finish, draw a stiff bristled brush across the surface to produce an even non-slip finish of fine parallel line free from ridges and depressions. Trowel the margins of the panel with a steel float to produce a uniform band approximately 4" wide.

Generally: Form falls where required to ensure that all areas drain naturally towards outlets and other run-off points. All newly finished surfaces shall match existing finished surfaces.

### **3.15 Curing of Concrete**

Concrete after taking its initial set shall be protected from drying out at all times during the first three days. Acceptable methods of curing are by flooding, by polythene sheeting in close contact, by permanently wet Hessian or by an approved proprietary curing compound which should not affect adhesion of subsequent finishes, not stain exposed concrete. During the curing period the concrete should be shaded from direct sunlight.

### **3.16 Construction Joints**

All joints including day joints should be straight and perpendicular to the surfaces.

Construction joints for slabs and beams may be located at or near the middle of the span. Construction joints for columns and horizontal wall joints shall be made only at the underside of floor members or at floor level unless otherwise approved.

Un-reinforced slabs are to be laid in bays not exceeding 20' in length and no bay should have a length exceeding 1- ½ times its width. Fabric reinforced slabs are to be laid in bay not exceeding 30' in length.

Construction joints in retaining walls shall not exceed 10' centres.

Hardened concrete faces of joints should be prepared for subsequent concrete by cleaning and roughening the face of the joint to remove laitance and expose but not disturb the larger aggregate. For horizontal surfaces, washing off laitance and fines after concreting may attain exposure, once initial set has occurred.

The Contractor shall submit for approval construction joints scheduled for walls and slabs. The contractor shall not attempt to cast a single pour of more than 20 cu. yds. (e.g. 36 x 6') without obtaining the prior approval of the Project Manager.

### **3.17 Samples and Testing**

Testing shall be in accordance with BS 1881.

Samples for compressive strength shall be taken from concrete Classes A and B at the rate of 1 sample per 10 batches, but not less than 1 sample from each Class on each day of casting. A sample shall consist of three standard 6" cubes that shall be cured by immersion in water until tested. One cube from each sample shall be tested at 7 days and the remaining two cubes at 28 days. Each cube shall be marked with a unique reference number and record shall be kept to record the class, date of casting and location of member corresponding to the cube. Slump tests shall be carried out for each batch.

**The test results must be submitted to the Project Manager (designate)**

## **4.00 MASONRY**

### **4.01 Cement, Water, Coarse Aggregate and Reinforcement**

To be as specified for Concrete

### **4.02 Sand**

Sand is to be as specified for concrete. Alternatively, use sand to BS 1200

### **4.03 Concrete Blocks**

The hollow concrete blocks shall be obtained from an approved source and shall be nominally 15 ½" long by 7 ½" high by the thickness shown on the drawings and shall be handpicked for fair work where required. Actual dimensions shall not vary from nominal dimensions by more than ¼". Minimum wall thickness shall be 1".

All blocks shall be cured at the place of manufacture for a minimum of 14 days before being transported to the site and off loading shall be carried out with care – tipping will not be permitted and damaged blocks must not be used.

For laying in half bond, half blocks shall either be purpose made or cut from 3-core full blocks. They shall not be cut from 2-core blocks.

All block work to be fair faced with flush joints, except where walls will be plastered for tiling.

**4.04 Mortar**

Unless otherwise stated mortar for block work and stonework is to be composed of one part cement to four parts sand, mixed on the site with the minimum quantity of water to achieve a workable consistency. The proportions are to be obtained by actual measurement in gauge boxes, making due allowance for bulking of wet sand.

Mortar is to be made in such quantities as can be used within one hour after mixing and no mortar that has become set or hard must be used on any part of the work. Re-tempering is permitted only up to one hour after mixing.

**4.05 Block work Reinforcement**

Vertical reinforcement is to be 1/2" diameter high yield ribbed bars except where otherwise specified. Horizontal reinforcement is to be Dur-O-Wal Extra Heavy Duty galvanized "Ladur Type" ladder reinforcement with cross bars at 16" centres and with prefabricated corners and tees.

Vertical starter bars are to be anchored in the base concrete with 8" bends located below the top layer of reinforcement, or drilled 4 1/2" deep into the concrete and anchored with Hilti "HIT C100" resin.

At tops of walls, vertical bars are to be bent 8" into slabs or beams cast on top. Freestanding walls are to be capped with a 4" deep concrete beam reinforced with one continuous 1/2 dia. Bar, lapped 2'0" at splices and intersections.

Vertical bars are to be lapped 2'0". Horizontal ladder reinforcement is to be lapped 1'0". Unless otherwise detailed, reinforcement is to be provided as follows:

Vertically:	At each corner, end or intersection	
	Beside each opening exceeding 2'0" in width or height	
	At the following centres, measured horizontally:	4" block work - 48"
		6" block work - 32"
		8" block work - 16"
Horizontally:	At the following centres, measured vertically:	4" block work - 48"
		6" block work - 16"
		8" block work - 16"

**4.06 Grout**

Grout for filling the cores of blocks to comply with the concrete specification, is to have a slump of 8 to 10 inches and is to be of the following proportions, volume:

Block Size	Cement	Sand	3/8" Nominal Aggregate	Size
4"	1	3	-	
6" and 8"	1	3	2	

Unless otherwise specified, only cores containing vertical reinforcement are to be grouted. If un-galvanized horizontal reinforcement is used, all cores are to be grouted. For retaining walls, walls below ground level and walls below ground slabs, all cores are to be grouted.



#### **4.07 Workmanship**

The concrete blocks shall be laid in half bond in mortar as specified with joints nominally 1/2" thick covering all concrete areas of the block. Block work shall be carefully set out at foundation and floor level so that at jambs of opening only half blocks and full blocks are used: cut blocks may be used where necessary above and below centres of openings, midway between openings and at faces of columns. Where lintels, ring beams, etc are cast over open block cores, place Dur-O-Wal "Dur-O-Stop" mesh over cores to prevent concrete from dropping through.

Grout shall be placed and compacted in maximum 4'-0" lifts. Excess mortar shall be removed from cavities before grouting. Grout shall be placed to 1" below the top of the blocks to provide a key.

Protection shall be provided at all times as necessary to prevent damage to work done by storms and no part of a wall shall be built higher than 4'0" above the surrounding walls.

Generally conduits shall be built into the cores of new work. Otherwise, chases shall be formed as required for the installation of other work – there shall be at least 10 inches of masonry between the chases and the jambs of openings. Where chasing exposes block cores, they shall be solidly grouted. Chases exceeding 2'0" in length shall have expanded metal lath fixed over them before plastering. The lath shall be 6" wider than the chase. Unfinished work shall be stepped back to permit jointing of new work. Chasing shall not take place on both sides of the same wall.

#### **4.08 Samples and Testing**

Blocks shall be sampled at the rate of one sample per day of deliveries, but not less than one sample per 1000 blocks. A sample shall consist of three blocks, selected at random by the Project Manager. The strength of the blocks shall be measured over the gross area including voids and shall not be less than 700 psi for a single block

### **5.00 CARPENTRY & JOINERY**

#### **Generally**

Comply with BS 5268: Parts 2 and 3

#### **5.01 Timber and Plywood**

All timber and plywood is to be clean, sound, merchantable, properly seasoned timber, free from any defects making it unsuitable for its function in the Works. Unless otherwise stated, timber is to be stress graded imported Southern Yellow Pine, Grade No.1 or No.2 to NGRDL rules. Each piece of timber shall be marked with the grade and species. Plywood is to be American construction and industrial A-C or B-C grade sanded plywood, marked "APA: A-C (or B-C) exterior."

#### **5.02 Preservative**

Timber and plywood are to be pressure impregnated with copper/chrome/arsenic (CCA) solution to BS 4072. After cutting or machining, brush on preservative in two applications to cut surfaces.

### **5.03 Fastenings**

All fastenings are to be galvanized or zinc plated. Bolt washers are to be large diameter, i.e., at least 3 times the bolt diameter with a thickness of at least  $\frac{1}{4}$  of the bolt diameter.

### **5.04 Splices**

Do not splice timber members except where shown on the drawing.

### **5.05 Doors**

A specialist manufacturer shall construct doors. Timber shall be specially selected for straightness and is to be well seasoned, tenoned and glued and wedged or pinned together when being fabricated. Plywood faced doors shall be glued and pressed to the framework and suitably dressed and finished with lipped stiles for internal doors.

### **5.06 Built-In Cabinets**

The Contractor shall finish and/or furnish and install complete the interior finished joinery work shown on the drawings or hereinafter specified or both.

All brads and screws shall be brass and all nails shall be galvanized.

Work shall be assembled at the workshop in so far as practicable and delivered ready for erection and shall be done in accordance with measurements taken at the job.

Cabinet tops, bottoms, slides, divisions and shelves shall be  $\frac{3}{4}$ " plywood or clear white pine, drawer faces shall also be of  $\frac{3}{4}$ " plywood unless otherwise specified.

Upper and lower cabinets should be adequately framed and braced internally as necessary to provide rigidity and prevent sagging of shelving and workshops.

Cabinet tops shall be surfaced in Formica or as otherwise specified, with hardwood edge and shall have compensating veneer on the underside: cabinet drawers shall have Formica on the front face only, with hardwood trim on all edges. Interior of drawers and cabinet and all surfaces seen shall be sealed with undercoat and finished with two coats of gloss enamel.

All drawers shall have patent Roller Slides and shall be screwed to a tight and even fit.

### **5.07 Door and Window Frames**

Where not otherwise specified, frames should be fixed to all sides of openings at not more than 12" centres. Fixtures are to consist of built-in cramps, plugs and anchorages at least 2" deep into the adjacent structure.

## **6.00 ROOF CONSTRUCTION**

### **6.01 Roof and Gutter waterproofing treatment**

RADCON 7 waterproofing surface sealer or equivalent applied to reinforced concrete slab in accordance with the Manufacturers Particular Specification, obtained through local suppliers.

## **7.00 METAL WORK**

### **7.01 Ironmongery**

Provide and fix all screws, nails, bolts, washers, galvanized wall ties, metal flashings etc to complete the contract.

### **7.02 Finished Hardware**

The Contractor shall supply and install all operating gear, finished hardware locking devices and similar appliances.

Hardware for aluminium windows shall be supplied as part of the window assembly.

Locksets and latch sets shall be as secure and fit for their intended purposes. Locks shall be supplied with master keys. Locks must be provided with two keys that will be turned over to the Project Manager on completion of this Contract.

### **7.03 Windows**

Windows shall be of Lausell manufacturer or equivalent, obtained from local suppliers (catalogue enclosed).

## **8.00 PLASTERING, PAVING AND TILING**

### **8.01 Materials**

Materials as are as described in Concrete Work, except that sand for plastering shall comply with BS 1199. Over-sifting of sand shall be avoided.

### **8.02 Substrates**

All surfaces specified or indicated on the drawings to be plastered or rendered are to be thoroughly brushed and cleaned and well wetted before the work is executed. Plaster on concrete surfaces shall be applied to galvanized expanded metal lath, securely fixed and overlapping by 4" onto adjacent block work. Joints between new and existing plaster are to be carefully executed by cutting plaster on a splay as directed by the Project Manager before applying new plaster.

### **8.03 Proportioning Mixing and Timing**

The materials used for plastering shall be proportioned by volume by means of gauge boxes.

Unless otherwise specified, the proportions shall be one part of cement to between four and six parts of sand. Once an acceptable mix within this range has been determined and approved by the Project Manager, the same proportions shall be used throughout.

Mortar mixes shall be used up within two hours of the first contact of the cement with water. All mixes remaining after this time are to be discarded. No re-tempering shall be carried out.

#### **8.04 Cement Screeds**

Lay sand and cement screeds to the thickness necessary, well bonded to the sub-concrete. Screeds are to be smooth and level and approved by the Project Manager prior to applying tiling or finish.

#### **8.05 Tiling**

Project Manager shall approve tiles before incorporation into the Works. Vegetable based mastic shall not be used. The cement and sand screed shall be clean and smooth and mixed only with sufficient water to bind the sand and cement. Adequate protection shall be supplied and laid by the Contractors as soon as possible after laying.

### **9.00 PAINTING**

#### **9.01 Preparation**

Clean down all new and existing surfaces and brush off all loose and flaky paint before commencing decoration. Remove any oil or grease spots with white spirit. Apply fungicide treatment to existing surfaces where necessary. All surface-fixed hardware, fittings etc., except hinges shall be removed before painting/re-painting and re-fixed on completion.

Existing metal surfaces are to be washed down with soap and water and roughened with abrasive paper.

Surfaces of wood to be painted shall be filled as required at no more than 1/8" per layer, each layer being dried in between. Treat all knots, shakes and resinous portions of timber with shellac knotting. Rub down and remove dust and decorate.

#### **9.02 Materials**

All painting materials and colours shall be selected or approved by the Project Manager.

Samples of all colours shall be submitted to the Project Manager for approval. Undercoats shall be flat and of the approved colour. All paint, when approved, is to be ordered in one batch to ensure the matching of colours. Paint shall be latex based for all wood and concrete surfaces except where otherwise specified.

#### **9.03 Mixing**

All paint shall be properly mixed and strained free from skins and loose particles before application.

#### **9.04 Painting**

All paints to be used on this project shall free from skins, etc. Paints shall be lead and mercury free. Colours will be specified on site. All surfaces to be painted are to be free from oil, rust, dust, chalking and any other deleterious materials or conditions.

External rendered block work or exposed concrete surfaces: Apply Weather shield paint in accordance with the manufacturer's instructions.

Internal non-painted fair faced block work or exposed concrete surfaces: Apply one coat primer and two coats of latex paint.

External Previously Painted Surfaces: As non painted surfaces. Where mildew is determined, the surface preparation sterilization process below shall be followed by paint applied to the local area

To floors where tiles are not laid, if specified, apply traffic resistant floor paint strictly following manufacturer's instructions.

Metalwork: To all external and internal metalwork, where specified, apply one coat Red oxide anticorrosive metal primer and one coat alkyd gloss. Rub down with abrasive paper between coats.

Woodwork generally: To all external and internal woodwork apply one coat primer (other than pre-finished woodwork/joinery) and two coats gloss paint.

Galvanized steel: Apply etch primer before decoration then apply one coat of anticorrosive metal primer and one coat alkyd hard gloss paint

## **10.00 PLUMBING**

### **10.01 Water Authority**

The water supply is to be executed in accordance with the requirements, regulations and approval of the Local Water Authority, by qualified and competent workmen.

### **10.02 Water Pipes**

Cold-water service pipes may be either polyethylene or copper tubing with fittings to match. Polyethylene pipes are to be appropriately jointed and provision is to be made for all bends, elbows, junctions, tees, etc. Copper pipes shall have compression or capillary fittings. Connections to each sanitary fitting are to be by means of an approved union. The use of pressure type PVC tubing will be permitted but for cold water services only and shall be installed according to manufacturer's instructions. Only proprietary brackets shall fix surface mounted pipes.

### **10.03 Solder**

Only lead free solder is to be used. This shall be clearly marked on the product labels.

### **10.04 Stopcock**

Provide and fix a brass pressure screw-down stopcock on the cold-water service at point of entry to buildings showing plumbing installations. Install an isolating valve at every fixture, sinks and washbasins, water closets and showers, urinals, etc.

**10.05 Waste Pipes**

Run the waste pipes so as to discharge the wastewater from basins, etc in a sanitary manner.

**10.06 Protection and Fixtures**

The Contractor will be responsible for covering up and protecting against damage from building materials, acids, tools and equipment, all plumbing fixtures, worktables, computers, woodworking equipment and all other equipment found in any of the buildings.

The cost of repair or replacement of damaged fixtures caused by the Contractor shall be borne by the Contractor.

**10.07 Water Main**

Pay all fees including charges for water meter installation and all water charges during construction.

**10.08 Water Meter**

Provide a concrete block chamber using 4" blocks on 4" concrete base with 2" concrete loose slabs top, to house the water meter, pressure reducing valve and main stock cock.

**11.00 ELECTRICAL INSTALLATION**

**11.01 Compliance with Statutory Authorities**

The electrical installation is to be executed in accordance with the requirements and regulations of and to the approval of Montserrat Utilities Ltd. and the Electrical Inspectorate Division by qualified and competent workmen.

**11.02 Examination of Work**

The Contractor is to process the "Application to Wire for Electricity Supply" forms and submit them to the Electrical Inspectorate Division. Make safe existing electrical installation and liaise with supply authority as necessary. Before starting work and from time to time as the work progresses, the Contractor shall examine the work and materials installed by Subcontractors insofar as it affects his own work and shall promptly notify the Project Manager if any conditions exist that will prevent him from carrying out satisfactory work. The Contractor will be required to have sufficient workmen on site during the whole period of construction to ensure that all conduits, duct sleeves etc. can be placed in position as the work progresses.

**11.03 Approval, Testing, Fees and Permits**

The work shall include the provision of all necessary notices, obtaining and paying for all permits, governmental taxes, fees and other costs in connection with their work; filing all necessary plans, preparation of all documents and obtaining all necessary approvals of Government Departments having jurisdiction; obtaining all required Certificates of Inspection for the work and delivery of the same to the Employer before request for acceptance and final payment.

## **12.00 DRAINAGE**

### **12.01 Excavation**

Excavations for drainage trenches shall be in straight lines and to the correct depths and gradients required. In the event of excavations being made deeper than necessary, they shall be filled to the proper level with rammed bedding Class D concrete at the Contractor's expense.

All rock projections must be removed from the bottom and sides of the trench.

The minimum excavation depth should provide 15" cover generally to the crown of the pipe and 3' under pads, unless protected by a concrete slab.

### **12.02 Bedding**

Drains shall be laid in a 4" bed and surround of bedding, comprising stone crushed to pass a 5/8" ring (i.e., 3/8" nominal size) and complying in other respects with the Specification for coarse aggregate.

### **12.03 Drains**

Drains shall be constructed with PVC pipes and fittings to BS 4660 or Schedule 40 to ASTM D1785-68 or D2241-69, all laid and jointed in accordance with the manufacturer's instructions. Particular care shall be taken to remove burrs and excess solvent at joints.

### **12.04 Testing**

Drains shall be water tested to a pressure equal to 5' head of water measured above the invert at the head of the drain. The drain should be filled, left to stand for two hours and topped up. The leakage over 30 minutes should be measured and should not exceed 2½ pints per 100' 0" of 3" drain or proportional for other pipe sizes.

### **12.05 Manholes**

Manholes must be 6" above ground level.

Unless otherwise specified or detailed, these are to be made of 4" solid filled block work laid in cement mortar on Class C concrete bases, properly haunched and channelled. Internal surfaces to be rendered in cement and sand (1:3) and finished with a steel trowel to a smooth hard surface. Manhole covers to be made of 4" concrete reinforced with BRC fabric and must fit on-top perimeter of manhole. Cover must be sealed to underlying structure to prevent ingress of rainwater. The standard of construction is to be equal to the appropriate sample manhole at the Public Works Department, which is to be inspected by the Contractor.

**Drawings will be collected from the office of the Project  
Implementation Unit at the time of registration.**