



འབྲུག་བཟོ་བཤའ་ཚོགས་མིེ།  
TOURISM COUNCIL OF BHUTAN



## **INVITATION TO BID (ITB)**

**for**

**Name of the work: Construction of Restroom**

**Location: Hongtsho, Thimphu Dzongkhag**

**January 2018**

## NATIONAL COMPETITIVE BIDDING

Date: January 23, 2017

Bid No.TCB/IPDD-10/2017-2018/3345

1. The *Tourism Council of Bhutan (TCB)* invites bids for the construction of works detailed in the table. The bidders may submit bids for any or all of the following works, for the package or for any of the slices.
2. Bidding documents can be downloaded from TCB and CDB websites. Interested bidders may obtain further information at the same address.
3. Bids must be accompanied by a bid security of Nu. 2% of quoted amount drawn in favour of the **The Chief, Infrastructure and Product Development Division, TCB, Thimphu** Bid security will have to be in any one of the forms as specified in the bidding document and shall have to be valid for **60 days** beyond the validity of the bid.
4. Bids must be delivered to **Office of Chief, IPDD, TCB, Thimphu** on or before **11:00 a.m** on **12th February, 2018** and will be opened on **12<sup>th</sup> February, 2018** at **11: 30 a.m** , in the presence of the bidders who wish to attend.

INVITATIONS TO BIDS (ITB)

TCB/IPDD-10/2017-2018/3345

January 23, 2018

**The Tourism Council of Bhutan, Thimphu invites sealed bids for small works: Construction of Restroom at Hongtsho , Thimphu Dzongkhag.**

**Sale of Tender:** 25<sup>th</sup> January to 12<sup>th</sup> February, 2018

**Submission of tender:** 12<sup>th</sup> February,2018 on or before 11.00 a.m.

**Opening of Tender:** 12<sup>th</sup> February at 11:30 a.m.

**Venue:** TCB Conference Hall B

A complete set of tender documents may be downloaded from TCB website- [www.tourism.gov.bt](http://www.tourism.gov.bt) and CDB website from 25<sup>th</sup> January, 2018 to 12<sup>th</sup> February, 2018.

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## Section 1: Instructions to Bidder (ITB)

### A. General

- |   |     |  |
|---|-----|--|
| 1. Scope of Tender                                    | 1.1 | The Employer, as <b>indicated in the BDS</b> issues this Bidding Document for the procurement of Works as specified in Section 6 (Employer’s requirement): The name, identification and identification of this bidding are <b>provided in the BDS</b> .  |
|   | 1.2 | The successful Bidder will be required to complete the Works within the Time for Completion stated in the Special Conditions of Contract (SCC).  |
|   | 1.3 | Throughout this Bidding Documents; <ul style="list-style-type: none"> <li>(a) The term “in writing means communicated in written form with proof of receipt;</li> <li>(b) If the context so requires, singular means plural and vice versa; and</li> <li>(c) “Day” means calendar day.</li> </ul>  |
| 2. Corrupt Fraudulent Collusive or Coercive Practices | 2.1 | The Royal Government of Bhutan requires that Employers and the Bidders shall observe the highest standard of ethics during the implementation of procurement proceedings and the execution of Contracts under public funds.  |
|   | 2.2 | In pursuance of this requirement, the Employer shall <ul style="list-style-type: none"> <li>(a) exclude the bidder from participation in the procurement proceeding concerned or reject a proposal for award; and</li> <li>(b) declare a bidder ineligible, either indefinitely or for a stated period of time, from participation in procurement proceedings under public funds;</li> </ul> |
|   | 2.3 | If it, at any time, determines that the bidder has engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Contract under the public funds.   |
|   | 2.4 | The Government defines, for the purposes of this provision, the terms set forth below as follows : <ul style="list-style-type: none"> <li>a) “<b>corrupt practice</b>”<sup>1</sup> is the offering, giving, receiving or soliciting, directly</li> </ul>   |

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<sup>1</sup> ‘Another party’ refers to a public official acting in relation to the procurement process or contract execution.

or indirectly, of anything of value to influence improperly the actions of another party;

- b) “*fraudulent practice*”<sup>2</sup> is any intentional act or omission including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefits or to avoid an obligation;
- c) “*collusive practice*”<sup>3</sup> is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- d) “*Coercive practice*”<sup>4</sup> is impairing *or* harming or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party.

2.5 The bidder shall be aware of the provisions on fraud and corruption stated in GCC Clause 3 and GCC Sub-Clause 34.2(d).

2.6 The RGoB requires that the Employer’s personnel have an equal obligation not to solicit, ask for and/or use coercive methods to obtain personal benefits in connection with the said proceedings.

- 3. Eligible Bidders
  - 3.1 Bidders of the categories **specified in the BDS** are eligible to participate in this bidding process.
  - 3.2 The Employer shall invite Bids using the Open Tendering Method (National Competitive Bidding) or limited tender as applicable.
  - 3.3 The bidder shall meet the qualification requirement stated in the BDS
- 4. Site Visit
  - 4.1 The Bidders, at their own responsibility and risk, is encouraged to visit and examine the Site and obtain all information that may be necessary for preparing the bid and entering into a Contract for performance of the Works. The costs of visiting the Site shall be at the bidder’s own expense.

## **B. Content of Bidding Document**

- 5. Contents of Bidding Documents
  - 5.1 The sections comprising the Bidding Document are listed below and should be read in conjunction with any Amendment issued in accordance with ITB Clause 7:

### **PART 1 Bidding Procedures**

- Section 1: Instructions to Bidders (ITB)
- Section 2: Bidding Data Sheet (BDS)
- Section 3: Evaluation and Qualification Criteria
- Section 4: Bidding forms
- Section 5: General Conditions of Contract (GCC)

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<sup>2</sup> A ‘party’ refers to a public official; the term ‘benefit’ and ‘obligation’ relate to the procurement process or contract execution; and the ‘act or omission’ is intended to influence the procurement process or contract execution.

<sup>3</sup> ‘parties’ refers to participations in the procurement process including public officials attempting to establish bid prices at artificial, non competitive levels.

<sup>4</sup> A ‘party’ refers to a participant in the procurement in the procurement process or contract execution.

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- Section 6: Special Conditions of Contract (SCC)
- Section 7: Contract Forms
- Section 8: Bill of Quantities & Specifications
- Section 9: Drawings

5.2 The Employer is not responsible for the completeness of the Bidding Document and their Addenda, if they were not obtained directly from the source stated by the Employer in the Invitation for Bids.

5.3 The Bidder is expected to examine all instructions, forms terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.

- |                                       |   |
|---------------------------------------|---|
| 6. Clarification of Bidding Documents | 6.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer’s address <b>indicated in the BDS</b> .  |
| 7. Amendment of Bidding Documents     | 7.1 At any time prior to the deadline for submission of Bid, the Employer may amend the Bidding Document by issuing addenda and extend the deadline for the submission of bids at its discretion. Any amendment issued shall become an integral part of the Bidding Document and shall be communicated in writing to all those who have purchased the Bidding Document. |

### C. Preparation of Bids

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|----------------------------------|--|
| 8. One Bid per Bidder            | 8.1 A Bidder shall submit only one (1) Bid. A Bidder who submits or participates in more than one (1) Bid shall cause all the proposals with the Bidder’s participation to be disqualified.  |
| 9. Bid Preparation Costs         | 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bids, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.   |
| 10. Language of Bid              | 10.1 All documents relating to the Bid shall be in the language specified in the BDS.  |
| 11. Documents comprising the Bid | <p>11.1 The original and copy(ies) of Bid submitted by the Bidder shall comprise the following:</p> <ul style="list-style-type: none"> <li>a) The Bid form (in the format indicated in Section IV – Forms of Bid, Qualification Information, Letter of Acceptance, and Contract);</li> <li>b) License and certificate</li> <li>c) Bid Security in accordance with Clause 19;</li> <li>d) Priced Bill of Quantities;</li> <li>e) And any other materials required to be completed and submitted by Bidders, as specified in the BDS.</li> </ul> <p>11.2 The Instruction to Bidders, Bidding Data Sheet, General Conditions of</p> |



Contract, Special Conditions of Contract, Specifications and drawings are for the information of the bidders and is not required to be submitted by the bidder,

- |   |      |  |
|---|------|--|
| 12. Letter of Bid and Schedule                            | 12.1 | The letter of Bid, Schedules, and all documents listed under Clause 11, shall be prepared using the relevant forms in Section 4 (Bidding Forms), if so provided in BDS. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.   |
| 13. Alternative Bid                                       | 13.1 | Alternative Bid shall not be considered in small works.  |
| 14. Bid Price and Discount                                | 14.1 | The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall confirm to the requirements specified below;   |
|   | 14.2 | The bidder shall submit a bid for the whole of the works described in ITB 1.1 by filling in prices for all items of the Works, as identified in Section 4, Bidding Forms. In case of admeasurements contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities. |
|   | 14.3 | The Bid price shall take into account the cost of materials, transportation, labour, taxes, levies, overheads and profit and any other cost. The Bid price shall be fixed for the duration of performance of the Contract and shall not be subject to any adjustment on any account. The Bid price shall be applicable for the whole works described in the Drawings, Specifications and Schedule of Works.  |
| 15 Currencies of Bid and Payment                          | 15.1 | All prices shall be quoted in Bhutanese Ngultrum (BTN) and shall be paid in BTN.   |
| 16 Documents comprising the Technical Proposal            | 16.1 | The bidder shall furnish a work plan in simple bar chart and other information if provided in BDS, to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.   |
| 17 Documents establishing the Qualification of the Bidder | 17.1 | To establish its qualification to perform the Contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding information sheets included in Section 4 (Bidding Forms).  |
| 18 Bid Validity   | 18.1 | Bids shall remain valid for the period <b>specified in the BDS</b> . Any Bids which does not meet the validity requirement as per the BDS shall be rejected by the Employer as non-responsive.   |

- 19 Bid Security
- 19.1 The Bidder shall at their option furnish, as part of the Bid, a Bid Security as **specified in the BDS** issued by any reputed Financial Institutions in Bhutan and shall be valid thirty (30) days beyond the Bid validity period.
- a) Unconditional Bank Guarantee;
  - b) A demand Draft; or
  - c) Cash Warrant
- 19.2 In exceptional circumstances, prior to the expiration of the Bid validity period, the Employer may solicit the Bidder's consent to an extension of the Bid validity period. The request and responses shall be made in writing. The validity of Bid Security shall be suitably extended promptly.
- 19.3 The Bid Security may be forfeited:
- a) If the Bidder withdraws the Bid after Bid opening during the period of Bid validity. Further the bidder may be excluded from future participation for a period of two years.
  - b) If the Bidder does not accept the correction of the Bid price, pursuant to clause 31; or
  - c) In the case of a successful Bidder, if the Bidder fails within the specified time limit to sign the Agreement; or furnish the required Performance Security.
- 20 Format and Signing of Bid
- 20.1 The Bidder shall prepare one (1) original of the documents comprising the Bid as described in ITB Clause 11 and clearly mark it "ORIGINAL." In addition, the Bidder shall prepare the number of copies of the Bid, as specified in the BDS and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2 The original and each copy of the Bid shall be typed or written in indelible ink and shall be signed by the person duly authorized to sign on behalf of the Bidder.
- 20.3 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person(s) signing the Bid.

**D. Submission and Opening of Bids**

- 21 Sealing and Marking of Bids
- 21.1 The Bidder shall enclose the original in one (1) envelope and all the copies of the bid in another envelope, duly marking the envelopes as “ORIGINAL” and “COPY.” These two (2) envelopes shall then be enclosed in one (1) single outer envelope.
- 21.2 The inner envelopes shall:
- (a) Be signed across the seals by the person authorised to sign the Bid on behalf of the Bidder;
  - (b) Be marked “ORIGINAL” and “COPY” and
  - (c) Bear the name and address of the Bidder.
- 21.3 The outer envelope shall;
- a. Be signed across the seals by the person authorised to sign the Bid on behalf of the Bidder;
- 21.4 be addressed to the Employer at the address specified in the BDS; bear a statement “DO NOT OPEN BEFORE.....” the time and date for Bid opening as specified in the BDS.
- 21.5 If all or any envelopes are not sealed and marked as required by ITB Sub-Clause 21, the Employer **shall not reject the bids but assume no responsibility for the misplacement or premature opening of the Bid.**
- 22 Bid Submission Deadline
- 22.1 Bids must be received by the Employer at the address and no later than the date and time **specified in the BDS.**
- 22.2 Bids may be hand delivered, posted by registered mail or sent by courier.
- 22.2 The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB Clause 7, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the new deadline as extended.
- 23 Late Bids
- 23.1 Late bids shall not be considered and shall be returned unopened
- 24 Modification, Substitution or Withdrawal of Bids
- 24.1 A Bidder may modify, substitute or withdraw their Bids after it has been submitted by sending a written notice before the deadline for submission of Bids.
- 25 Bid Opening
- 25.1 The Employer shall open the Bids in the presence of the bidders who is attending the bid opening, including modifications or substitutions made pursuant to ITB Clause 24. Bidders or their representatives shall be allowed to attend and witness the bid opening and shall sign a register evidencing their attendance.
- 25.2 The name of the Bidder, Bid modifications, substitutions or withdrawals, total amount of each Bid, number of corrections, discounts, and the presence or absence of requisite Bid Security, and such other details as the Employer, at its discretion, may consider appropriate, shall be read out aloud and recorded.

- 25.3 The Employer shall prepare minutes of the Bid opening. The minutes shall include, as a minimum, the name of the Bidders and whether there has been a withdrawal, substitution or modification; the Bid Price including any discounts and the presence or absence of a Bid Security, if one was required.
- 25.4 Bids not opened and read out at the Bid opening shall not be considered, irrespective of the circumstances, and shall be returned unopened to the Bidder.
- 25.5 Bids shall be rejected at the Bid opening only on the following grounds;
  - a) If the bid form is not complete and signed
  - b) Non-signing of BoQ; and
  - c) Insufficient amount of Bid Security and validity.

**E. Tender Opening and Evaluation**

- |  |      |   |
|--|------|---|
| 26 Confidentiality                       | 26.1 | After the opening of Bids, information relating to the examination, clarification, and evaluation of Bids and recommendations for award shall not be disclosed to Bidders or other persons not officially concerned with the evaluation process until after the award of the Contract is announced.   |
| 27 Clarification                         | 27.1 | The Employer may ask Bidders for clarification of their Bids in order to facilitate the examination and evaluation of Bids. The request for clarification and the response shall be in writing, and any changes in the prices or substance of the Bid shall not be sought, offered or permitted, except to confirm the correction of arithmetical errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB Clause 31.  |
| 28 Bidder:<br>Contacting the<br>Employer | 28.1 | Following the opening of Bids and until the Contract is signed no Bidder shall make any unsolicited communication to the Employer or try in any way to influence the Employer's examination and evaluation of Bids which may result in the rejection of bids. If any Bidder wishes to contact the Employer on any matter related to the Bidding process, it should do so in writing   |
| 29 Determination<br>of<br>Responsiveness | 29.1 | The Employer's determination of a bid's responsiveness is to be based on the contents of the Bid itself without recourse to extrinsic evidence.   |
|  | 29.2 | A substantially responsive Bid is one that conforms in all respects to the requirements of the Bidding Document without material deviation, reservation or omission. A material deviation, reservation or omission is one that: <ul style="list-style-type: none"> <li>(a) affects in any substantial way the scope, quality, or performance of the Works specified in the Contract; or</li> <li>(b) limits in any substantial way, or is inconsistent with the Bid Document, the Employer's rights or the Bidder's obligations under the Contract; or</li> <li>(c) If rectified would unfairly affect the competitive position of other</li> </ul> |

Bidders presenting substantially responsive Bids.

- 29.3 If a Bid is not substantially responsive to the Bidding Document it shall be rejected by the Employer and shall not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.
- 29.4 There shall be no requirement as to the minimum number of responsive Bids.
- 30 Non Conformities, Errors and Omissions
- 30.1 The Employer may regard a Bid as responsive even if it contains minor deviations that do not materially alter or depart from the characteristics, terms, conditions and other requirement set forth in the Bidding Document or if it contains errors or oversights that are capable of being corrected without affecting the substance of the Bid.
- 31 Evaluation and Comparison of Tenders
- 31.1 The Employer shall evaluate and compare only those Bids determined to be substantially responsive to the requirements of the Bidding Document. Substantially responsive Bids are those which fulfil the requirements of ITB Clauses 11 and 12.
- 31.2 The evaluation will take into account corrected Bid Price and discounts (if any).
- 31.3 The Employer will check substantially responsive Bids for any arithmetical errors. Where there is a discrepancy between the amounts in figures and words, the amount in words will govern. If a Bidder refuses to accept the correction, its Bids shall be rejected. The Employer shall correct arithmetical errors on the following basis:
- (a) if there is a discrepancy between the unit price and the line item total, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price, as quoted, shall govern and the unit price shall be corrected; and
32. Employer's Right to accept or Reject any or all
- 32.1 The Employer reserves the right to accept any Bid, to annul the Bid proceedings, or to reject any or all Bids, at any time prior to Contract award, without thereby incurring any liability to Bidders, or any obligation to inform Bidders of the grounds for the Employer's actions.

**F. Contract Award**

33. Award Criteria
- 33.1 The Employer shall award the Contract to the Bidders whose offer is substantially responsive to the Bidding Document and that has been determined to be the lowest evaluated Bid, provided that the Bidder is determined to be qualified to perform the Contract satisfactorily

34. Notification of Award
- 34.1 Prior to the expiration of the period of Bid validity, the Employer shall notify the successful Bidder, in writing that its Bid has been accepted. Until a formal contract is prepared and executed, the Notification of Award shall constitute a binding Contract.
- 34.2 Within fifteen (15) working days of the receipt of the Notification of Award from the Employer, the successful Bidder shall furnish the Performance Security, in the amount specified in the BDS.
- 34.3 The proceeds of the performance security shall be payable to the Employer unconditionally upon first written demand as compensation for any loss resulting from the Contractor's failure to complete its obligations under the Contract
- 34.4 Within fifteen (15) working days of receipt of the notification of award, the successful Bidder shall sign, date and return it to the Employer.
- 35 Complaints
- 35.1 If there are any complaints both the parties shall submit the complaints as specified in BDS. The complaints if any shall be submitted within 10 working days from the date of notification of award.

## **Section 2 - Bidding Data Sheet**

*Instructions for completing the Bidding Data Sheet are provided, as needed, in the notes in italics mentioned for the relevant ITB Clauses*

### **ITB Clause Amendment of, and Supplements to, Clauses in the Instructions to Bidders**

#### **A. General**

- ITB 1.1** The Employer is *Tourism Council of Bhutan*.  
The Work is **Construction of Restroom at Hongtsho, Thimphu Dzongkhag.**
- ITB 3.2** **Option A: Limited bidding:**
- ITB 3.3** **The evaluation shall be based on the lowest price of the responsive bidder. The abnormally low bid may or may not be awarded the work based on the decision of evaluation committee.**

#### **B. Bidding Documents**

- For **clarification of Tenders purposes** only, the Employer's address is:
- ITB 7.1** Attention: *Dorji Wangdi*  
Address: *Infrastructure and Product Development Division*), Telephone: [02-323251- ext-248], Facsimile number: [02-323695], [Electronic mail address: \(dwangdi@tcb.gov.bt\)](mailto:dwangdi@tcb.gov.bt)

#### **C. Preparation of Bids**

- ITB 15.1** The Bid validity period shall be **60** days.
- A Bid Security in the amount of Nu. 2% of quoted amount will be required, in the form;
- ITB 15.2**
1. Unconditional Bank guarantee
  2. Cash warrant; or
  3. Demand Draft
- ITB 16.1**
- Site supervisor: 1 number (ID copy, contract agreement)

**ITB  
19.1**

In addition to the original, *one* copy shall be submitted.

#### **D. Submission and Opening of Bids**

The inner and outer envelopes shall bear the following additional identification marks:

- *A bid shall be contained in an inner envelope sealed with adhesive or other sealant which will prevent re-opening;*
- *Inner envelope shall be signed across the seal. The name of the bidder shall be written on the inner envelope.*
- *The inner envelope shall be placed inside a further outer envelope similarly sealed. On this outer envelope, only the addressee, the words “ Confidential, “and any other relevant information in accordance with the bidding documents shall appear.*
- *The bidders shall be advised to mark the outer envelope of the original document as “ORIGINAL” and the envelopes of the others as “COPY”)*
- *Do not open before specific hours at mentioned date*

**ITB  
21.2**

For **Bid submission purposes** only, the Employer’s address is:

**ITB  
21.4**

Attention: **Mr. Rinzin Jamtsho,**

Address: **The Chief, Infrastructure and Product Development Division, TCB, Thimphu**  
**The deadline for the submission of Tender is: 12<sup>th</sup> February,2018 on or before 11:00 a.m**

**ITB  
34.1**

The Bid opening shall take place on **12<sup>th</sup> February,2018 at TCB Conference Hall B at 11:30 a.m**

#### **F. Award of Contract**

**ITB  
34.2**

The amount of Performance Security shall be *Ten percent (10%)* of the Contract Price

**ITB  
35.1**

The name and address of the office where complaints to the Procuring Entity is to be submitted **Mr. Rinzin Jamtsho, Chief, Infrastructure and Product Development Division, TCB, Thimphu.**

### **Section 3 – Evaluation and Qualification Criteria**

This section contains all the criteria that the Employer shall use to evaluate bids and qualify Bidders if the bidding was not preceded by a prequalification exercise and post qualifications are applied. Procuring Agency may apply basic minimum technical qualification requirement (manpower and equipment) only if there is a project specific need.

#### **1. Evaluation**

1.1 Evaluation shall be done to determine the responsiveness and the award shall be made to the lowest evaluated bidder.

#### **Table of Standard Forms**

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Standard Form: Form of Bid

Standard Form: Letter of Acceptance

Standard Form: Bid security Bank Guarantee

**Standard Form: Letter of Intent**

*(Letterhead paper of the Employer)*

**Notes on standard form of letter of Intent**

*This issuance of Letter of Intent (always before letter of acceptance) is the information of the selection of the bid of the successful bidder by the Employer and for providing information to other unsuccessful bidders who participated in the bid as regards the outcome of the procurement process*

*The Employer shall allow 10 days as described in ITB 34.2 between this letter of intent and letter of acceptance to allow aggrieved bidders to challenge your decision if they feel they have treated unfairly.*

*(Insert date)*

To:-----[Name and address of the Contractor]

This is to notify you that, it is our intention to award the contract for your Bid dated-----  
-----[Insert date] for execution of the-----  
-----[Insert name of the contract and identification number, as given in the BDS/SCC] for the Contract Price of-----  
-----[Insert amount in figure and words and name of currency]  
as corrected and modified[if any corrections] in accordance with the Instructions to Bidders.

Authorized Signature: -----  
-----

Name and Title of Signatory:-----  
-----

Name of Agency:-----  
-----

CC:  
[Insert name and address of all other bidders who submitted the bid]



**Section 4: Forms of Bid and Qualification Information**

**Standard Form: Form of bid**

*Notes on Form of Bid:*

*The Bidder shall fill in and submit this bid form with the Bid. If Bidders do not fill in the Contract Price and does not sign this Bid form, the bids will be rejected.*

\_\_\_\_\_ [date]

To,  
The Chief  
Infrastructure and Product Development Division  
TCB, Thimphu

We offer to execute the contract for construction of “**Construction of Restroom at Hongtsho, Thimphu**” in accordance with the Conditions of Contract accompanying this Bid for the Contract Price of \_\_\_\_\_ [*amount in figures*] ( \_\_\_\_\_ ) [amount in words] \_\_\_\_\_ [*name of currency*].

The contract shall be paid in Ngultrums (Nu)

This Bid and your written acceptance of it shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity and Bid Security required by the bidding documents and specified in the Bidding Data.

Affix  
Legal  
Stamp

Authorized Signature: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Bidder: \_\_\_\_\_

Address: \_\_\_\_\_

**Standard Form: Qualification Information**

*Notes on Form of Qualification Information: The following information is to be filled in by bidders which will be used for purposes of evaluation.*

**1. Individual bidders**

1.1 Constitution of legal status of Bidder [attach copy]  
Place of registration: \_\_\_\_\_  
Principal place of business: \_\_\_\_\_  
Power of attorney of signatory of Bid [attach]

1.2 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Refer BDS. The supporting documents such detailed, **Contract agreement or letter of undertaking, Identity Card Photocopy, and Qualification certificate and experience certificate.**

<b>Position</b>	<b>Name &amp; CID No.</b>	<b>Year of experience in proposed position (min. 1 year)</b>	<b>Remarks (attached relevant documents)</b>
Supervisor			

**Standard Form: Letter of Acceptance**

[Letter head paper of the Employer]

*Notes on Standard Form of Letter of Acceptance*

*The Letter of Acceptance will be the basis for formation of the Contract as described in Clauses 31 and 32 of the Instructions to Bidders. This Standard Form of Letter of Acceptance should be filled in and sent to the successful Bidder only after evaluation of bids has been completed.*

\_\_\_\_\_ [date]

To: \_\_\_\_\_  
[name of the Contractor]

\_\_\_\_\_  
[address of the Contractor]

This is to notify that your Bid dated \_\_\_\_\_ for the execution of the contract for the construction of “\_\_\_\_\_ - \_\_\_\_\_” for the Contract Price \_\_\_\_\_ [amount in numbers] \_\_\_\_\_ [amount in words] \_\_\_\_\_ [name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency. The start date of the project is \_\_\_\_\_. The completion date for whole of the works shall be \_\_\_\_\_.

You are hereby instructed to precede with the execution of the said Works in accordance with the Contract documents.

Authorized Signature:  
\_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Agency:  
\_\_\_\_\_

Attachment: Agreement

## Bank Guarantee for Bid Security

*[This is the format for the Bid Security to be issued by a financial institutions in Bhutan in accordance with ITB Clause 19]*

Invitation for Bid No:

Date:

Bid Package No:

To:

[Name and address of Employer]

### TENDER GUARANTEE No:

We have been informed that *[name of Bidder]* (hereinafter called “the Bidder”) intends to submit to you its Bid dated *[date of bid]* (hereinafter called “the Tender”) for the execution of the Works of (“**Construction of Restroom at Hongtsho, Thimphu**”) under the above Invitation for Bids (hereinafter called “the IFB”).

Furthermore, we understand that, according to your conditions Bids must be supported by a Bid Guarantee.

At the request of the Bidder, we *[name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Nu *[insert amount in figures and words]* upon receipt by us of your first written demand accompanied by a written statement that the Bidder is in breach of its obligation(s) under the Bid conditions, because the Bidder:

- (a) has withdrawn its Bids during the period of Bid validity specified by the Bidder in the Form of Bid; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders ITB; or
- (c) having been notified of the acceptance of the Bid by the Employer during the period of Bid validity, (i) fails or refuses to furnish the performance security in accordance with the ITT, or (ii) fails or refuses to execute the Contract Form,

This guarantee will expire

- (a) if the Bidder is the successful Bidder, upon our receipt of a copy of the Performance Security and a copy of the Contract signed by the Bidder as issued by you; or
- (b) if the Bidder is not the successful Bidder, thirty days after the expiration of the Bidder’s Tender validity period, being *[date of expiration of the Tender]*.

Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Signature

## Section 5. General Conditions of Contract

1. Definitions
- 1.1 The following words and expressions shall have the meaning hereby assigned to them. Boldface type is used to identify the defined terms:
- (a) **Completion Certificate** means the Certificate issued by the Employer as evidence that the Contractor has executed the Works in all respects as per drawing, specifications, and Conditions of Contract.
  - (b) The **Completion Date** is the date of completion of the Works as certified by the Engineer, in accordance with GCC Clause 18.
  - (c) **Contract** means the Agreement entered into between the Employer and the Contractor to execute, complete and maintain the Works.
  - (d) **Contractor** means the person or corporate body whose Tender to carry out the Works has been accepted by the Employer and is named as such in the SCC.
  - (e) **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract. The **Contractor's Bid** is the completed Bid Document including the priced offer submitted by the Contractor to the Employer.
  - (f) **Days** mean calendar days.
  - (g) A **Defect** is any part of the Works not completed in accordance with the Contract.
  - (h) The **Employer** is the party named in the SCC who employs the Contractor to carry out the Works.
  - (i) The **Engineer** is the person named in the SCC, who is responsible for supervising the execution of the works and administering the Contract.
  - (j) The **Intended Completion Date** is the date specified in the SCC on which the Contractor shall complete the Works and may be revised if extension of time or an acceleration order is issued by the Engineer.
  - (k) The **Site** is the area defined as such in the SCC.
  - (l) The **Works** are what the Contract requires the Contractor to construct, install, and hand over to the Employer, as defined in the SCC.
2. Interpretation & Documents forming the Contract
- 2.1 In interpreting the GCC, singular also means plural, male also means female or neuter, and the other way around. Headings in the GCC shall not be deemed part thereof or be taken into consideration in the interpretation or contrivance of the Contract. Words have their normal meaning under the language of the Contract unless

specifically defined.

- 2.2 The following documents forming the Contract shall be interpreted in the following order of priority:
- (a) The signed Contract Agreement.
  - (b) The letter of Notification of Award.
  - (c) The completed Bid form as submitted by the Bidder.
  - (d) The Special Conditions of Contract.
  - (e) The General Conditions of Contract.
  - (f) Specifications
  - (g) The Drawings.
  - (h) Any other document listed in the PCC as forming part of the Contract.

3. Corrupt, Fraudulent, Collusive or Coercive Practices

3.1 The Government requires that Employers, as well as Contractors shall observe the highest standard of ethics during the implementation of procurement proceedings and the execution of Contracts under public funds.

3.2 In pursuance of this requirement, the Employer shall

- (a) exclude the Contractor from participation in the procurement proceedings concerned or reject a proposal for award; and
- (b) declare a Contractor ineligible, either indefinitely or for a stated period of time, from participation in procurement proceedings under public fund;

3.3 The Government defines, for the purposes of this provision, the terms set forth below as follows:

- a) corrupt practice<sup>5</sup> is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value<sup>6</sup> to influence improperly the actions of another party;
- b) “fraudulent practice”<sup>7</sup> is any intentional act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- c) “collusive practice”<sup>8</sup> is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party; and
- d) “Coercive practice”<sup>9</sup> is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property

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<sup>5</sup> “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes staff and employees of any organizations (including any institutions providing finance for the Works) taking or reviewing procurement decisions.

<sup>6</sup> “anything of value” includes, but is not limited to, any gift, loan, fee, commission, valuable security or other asset or interest in an asset; any office, employment or contract; any payment, discharge or liquidation of any loan, obligation or other liability whatsoever, whether in whole or in part; any other services, favour or advantage, including protection from any penalty or disability incurred or apprehended or from any action or proceeding of a disciplinary or penal nature, whether or not already instituted and including the exercise or the forbearance from the exercise of any right or any official power or duty.

<sup>7</sup> a “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

<sup>8</sup> “parties” refers to participants in the procurement process (including public officials) and an “improper purpose” includes attempting to establish bid prices at artificial, non competitive levels.

<sup>9</sup> a “party” refers to a participant in the procurement process or contract execution.

of the party to influence improperly the actions of a party.

- 3.4 The Government requires that the Client's personnel have an equal obligation not to solicit, ask for and/or use coercive methods to obtain personal benefits in connection with the said proceedings.
4. Governing Language and Law 4.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Contractor and the Employer, shall be written in English unless otherwise stated in the SCC. The Contract shall be governed by and interpreted in accordance with the laws of the Kingdom of Bhutan.
5. Engineer's Decision 5.1 Except where otherwise specifically stated in the SCC, the Engineer will decide Contractual matters between the Employer and the Contractor in the role as representative of the Employer.
6. Delegation 6.1 The Engineer may delegate any of his duties and responsibilities to his representative, after notifying the Contractor, and may cancel any delegation, without retroactivity, after notifying the Contractor.
7. Communications and Notices 7.1 Communications between Parties pursuant to the Contract shall be in writing to the address specified in the SCC. A notice shall be effective when delivered or on the notice's effective date, whichever is later.
8. Sub- Contracting 8.1 The Contractor shall not be permitted to subcontract any part of the Works in whole or in part.
9. Contractor's Personnel 9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the SCC, to carry out the functions stated in the Schedule, or other personnel approved by the Engineer.
10. Welfare of Labourers & Child Labour 10.1 The Contractor shall provide proper accommodation to his labourers and arrange proper water supply, conservancy and sanitation arrangements at the site in accordance with relevant regulations, rules and orders of the government.
- 10.2 The Contractor shall comply with the applicable minimum age, labour laws and requirements of (including applicable treaties which have been ratified by) the Government of Bhutan regarding hazardous forms of child labour.
11. Safety, Security and Protection of the Environment 11.1 The Contractor shall throughout the execution and completion of the Works and the remedying of any defects therein :
- (a) have full regard for the safety of all persons entitled to be upon the Site and keep the Site and the Works in an orderly state;
  - (b) provide and maintain at the Contractors own cost all lights, guards, fencing, warning signs and watching for the protection of the Works or for the safety on-site; and
  - (c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of the Contractors methods of operation.

12. Access to the Site	12.1	The Contractor shall allow the Engineer and any person authorised by the Engineer access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
13. Documents, Information.	13.1	The Contractor shall furnish to the Engineer all information, schedules, calculations and supporting documentation that may be requested of it.
14. Property	14.1	If the contract is terminated by the Employer because of the contractors default, then, the contractor shall not be allowed to remove any materials on the Site, Plant, and Temporary Works until the matter is amicably resolved.
15. Insurance	15.1	The Contractor shall provide insurance as stated in the SCC
	15.2	The Contractor shall deliver policies and certificates of insurance to the Engineer, for the Engineer's approval, before the Start Date.
	15.3	If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
16. Possession of the Site	16.1	The Employer shall give possession of the Site, or parts of the Site, to the Contractor on the date(s) specified in the SCC.
17. Commencement of Works	17.1	The Contractor may commence execution of the Works on the Start Date, or other such date as specified in the SCC, and shall carry out the Works in an expeditious manner.
	17.2	If the Contractor fails to commence the works within the above stated period, the Employer may, at his sole discretion, terminate the Contract and forfeit the Performance Security, if any.
18. Completion of Works	18.1	The Contractor shall complete the Works within the number of days stated in the SCC from the date of commencing the Works on the Site.
19. Programme of Works	19.1	Within the time stated in the SCC, the Contractor shall submit to the Engineer for approval a work program. The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the SCC.
20. Early Warning	20.1	The Contractor shall warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, result in increase to the Contract Price or delay in the execution of the Works.
21. Compensation Events	21.1	The following shall be Compensation Events: <ul style="list-style-type: none"> <li>(a) the Employer does not give access to the Site or part of the Site by the Site Possession Date stated in the SCC; and</li> <li>(b) If the payment is delayed pursuant to Clause 25.1.</li> </ul>
	21.2	If a Compensation Event would prevent the work being completed before the Intended Completion Date, the Intended



Completion Date shall be extended, as appropriate, by the Engineer.

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|----------------------------------|------|---|
| 22. Non-Scheduled Items of Works | 22.1 | The Contractor shall be paid for non-scheduled items of works only when the Engineer approves such works and at the rates and in the manner stated in the SCC.  |
| 23. Schedule of Works            | 23.1 | The Schedule of Works will contain rates for all items for the construction including temporary works, installation, testing, and commissioning work to be done by the Contractor.  |
|                                  | 23.2 | The Contractor shall be paid for the quantity of the work done at the rate in the Contract Agreement for each item.   |
|                                  | 23.3 | The Contractor shall be entirely responsible for all taxes, duties, license fees, and other such levies imposed outside and inside Bhutan.  |
| 24. Payment Certificates         | 24.1 | The Contractor shall submit to the Engineer monthly statements of the estimated value of the work executed less the cumulative amount certified previously. The Engineer shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.  |
|                                  | 24.2 | The value of work executed shall be determined by the Engineer.   |
|                                  | 24.3 | The value of work executed shall comprise the value of the quantities of the items in the Schedule of Works completed.  |
|                                  | 24.4 | The value of work executed shall include the valuation of Variations, Certified Day works and Compensation Events.  |
|                                  | 24.5 | The Engineer may exclude any item certified in previous certificates or reduce the proportion of any item previously certified in any certificate in the light of later information.  |
| 25. Payments and Currency        | 25.1 | The Employer shall pay the Contractor the amounts certified by the Engineer within thirty (30) days of the date of each certificate.  |
|                                  | 25.2 | The Employer shall make Advance Payment (mobilization and secured advance) to the Contractor of the amounts and by the dates stated in the SCC against provision by the Contractor of an unconditional Bank Guarantee, (Form 4).  |
|                                  | 25.3 | The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilisation expenses required specifically for the execution of the Contract. The Contractor shall demonstrate that the advance payment has been used in this way by submitting copies of invoices or other documents to the Employer. |
|                                  | 25.4 | The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, variations, claims     |

or any amount payable due to failure to complete the works.

- |                           |      |  |
|---------------------------|------|--|
| 26. Retention             | 26.1 | The Employer shall retain from each payment due to the Contractor the proportion stated in the SCC until the completion of the whole of the Works.   |
|                           | 26.2 | On completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor, the remaining half when the Defects Liability Period has passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected. |
| 27. Liquidated Damages    | 27.1 | The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion date for the works or for any part thereof.  |
| 28. Performance Security  | 28.1 | Upon Notification of Award, a Performance Security shall be provided to the Employer in the amount and form stated in the Contract Forms (Form 3). The Performance Security shall be valid until a date thirty (30) days from the date of issue of the Certificate of Completion.  |
| 29. Price Adjustment      | 29.1 | The rates and prices in the bill of quantities are fixed for the duration of the Contract and not subject to price adjustment during the performance of the Contract.  |
| 30. Completion            | 30.1 | The Contractor shall request the Engineer to issue a Certificate of Completion of the Works, and the Engineer will do so upon deciding that the work is substantially completed.   |
| 31. Correction of Defects | 31.1 | The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as the Defects remain to be corrected.   |
|                           | 31.2 | If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.  |
| 32. Taking Over           | 32.1 | The Employer shall take over the Site and the Works within seven (7) days of the Engineer issuing a Certificate of Completion.   |
| 33. Final Account         | 33.1 | The Contractor shall supply the Engineer a detailed account of the total amount that the Contractor considers payable under the Contract. The Engineer shall certify any final payment that is due to the Contractor within twenty-one (21) days of receiving the Contractor's account if it is correct and complete.    |
|                           | 33.2 | The Employer shall effect payment of the final account within thirty (30) days from the date of certification by the Engineer.   |

## 34. Termination

- 34.1 The Employer or the Contractor by giving thirty (30) days written notice of default to the other party, may terminate the Contract in whole or in part if the other party causes a fundamental breach of Contract.
- 34.2 Fundamental breaches of the Contract shall include, but shall not be limited to, the following:
- a) The Contractor stops work for more than thirty (30) days when no stoppage of work is shown on the current Programme and the stoppage has not been authorised by the Engineer;
  - b) The Engineer gives notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
  - c) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of Liquidated Damages can be paid;
  - d) The Contractor, in the judgment of the Employer, has engaged in corrupt or fraudulent practices, as defined in GCC Clause 3, in competing for or in executing the Contract; and
  - e) A payment certified by the Engineer is not paid to the Contractor by the Employer within sixty (60) days of the date of the Engineer's certificate.
- 34.3 The Employer and the Contractor may at any time terminate the Contract by giving notice to the other party if either of the parties becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to any party provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue to the other party.
- 34.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 34.5 If the Contract is terminated, the Contractor is to stop work immediately, make the Site safe and secure and hand over the Site to the Employer as soon as reasonably possible.

## 35. Payment upon Termination

- 35.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done and Plant and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the SCC.. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
- 35.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Contractor shall be entitled to payments for completed works and

the materials that have been brought to the site for the purpose of the works, but not used as certified by the Engineer after adjusting any payments received by the Contractor.

36. Release from Performance
- 36.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible, after receiving this certificate. The Contractor shall be paid for all works carried out before stoppage of work and any work carried out afterwards to which a commitment was made.
37. Force Majeure
- 37.1 For the purposes of this Contract, "Force Majeure" means an exceptional event or circumstance:
- a) which is beyond a Party's control,
  - b) which such Party could not reasonably have provided against before entering into the Contract,
  - c) which, having arisen, such Party could not reasonably have avoided or overcome, and
  - d) Which is not substantially attributable to the other Party.
- 37.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:
- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
  - b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
  - c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,
  - d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
  - e) Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.
- 37.3 However, force majeure shall not include the following;
- i. rainfall
  - ii. snowfall
  - iii. strikes in other countries
  - iv. non-availability of labourer and materials such as timbers, boulders, sand, and other materials
  - v. Difficulty and risky terrain and remoteness of site.

38. Settlement of Disputes

38.1 The Employer and the Contractor shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

38.2 Any dispute between the parties to the Contract that may not be settled amicably will be referred to Arbitration at the initiative of either of the parties.

38.3 The Arbitration shall be conducted in accordance with the Arbitration Rules of the Kingdom of Bhutan in force

**Section 6. Special Conditions of Contract**

*Instructions for completing the Special Conditions of Contract are provided, as needed, in the notes in italics mentioned for the relevant GCC Clauses.*<sup>3</sup>

**Clause Ref. Amendments of, and Supplements to, Clauses in the General Conditions of Contract**

- GCC 1.1(d)** The Contractor is *[name, address and name of authorised representative]*.
- GCC 1.1(i)** The Employer is *Tourism Council of Bhutan, Thimphu, Bhutan*.
- GCC 1.1(j)** The Engineer: **Dorji Wangdi**.
- GCC 1.1(k)** The Intended Completion Date for the whole of the Works shall be **110 days**.
- GCC 1.1(l)** The Site is located at **Hongtsho, near Immigration Check post**.
- GCC 1.1 (m)** The Work is **“Construction of Restroom at Hongtsho, Thimphu”**.
- GCC 2.2(i)** The additional documents forming part of this Contract are: *“Previous work experience certificate (If any), trade license, CDB registration certificate and Tax clearance certificate”*.
- GCC 4.1** The Language governing the Contract shall be *English language*.
- GCC 5.1** The Engineer shall obtain specific approval of the Employer before taking any of the following actions:
- GCC 7.1** The addresses for Communications shall be:  
For the Employer: Chief, Infrastructure and Product Development Division, TCB
- GCC 9.1** The Key Personnel of the Contractor are: *1 site supervisor (Documents required: experience certificate (If any), The contract agreement or letter of undertaking, the qualification certificate, and CID photocopy)*.
- GCC 15.1** For insurance purposes the type of cover required shall be: The contractor shall be responsible for the insurance-*NA*.

- GCC 16.1** Possession of the site shall be within **seven** days from the date of signing of the Contract.
- GCC 17.1** Commencement of work shall be **immediately** from the date of handing over possession of the site.
- GCC 18.1** Completion of works shall be within **110 days** from the date of commencing the works on the site.
- GCC 19.1 and GCC 19.2** The Contractor shall submit the first work plan within **7** days after signing the Contract, and shall update the work plan every **2** weeks during the period of the Contract.
- GCC 25.2** An advance payment of **10%** of the Contract Price will be made to the Contractor within (14) days of Contract signing date.
- GCC 26.1** The Retention shall be **10 %** of the Contract Price.
- GCC 27.1** The liquidated damages for the whole of the Works are **0.1%** per day.  
The maximum amount of liquidated damages for the whole of the Works is **10% percent of the initial contract price**
- GCC 31.1** The Defects Liability Period shall be **12 months**.

**GCC 35.**

The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is [percent, it is generally 20% of the value of work not completed up to a maximum of 10% of the initial contract price]

**Additional condition:**

**a. Abnormally low bids**

The lowest evaluated bidder quoting abnormally low/unbalanced shall be asked to deposit cash warrant to secure quality and timely completion of works in addition to 10% performance security. The cash warrant shall be valid for at least six (6) months and thereafter, can be converted into Bank Guarantee. The cash warrant amount shall be worked out as follows:

If, Departmental estimate = x

Quoted bid price = y

Then, cash warrant amount =  $x - y - 20\%$  of x.

In the case of a bid which appears seriously unbalanced, the successful bidder shall be required to produce written explanations/justifications and detailed price analyses for any or all items of Bill of Quantities to demonstrate the consistency of those rates with the proposed construction methods and material specification during the evaluation of bids.

Failure of the successful bidder to comply with above requirements shall constitute a sufficient grounds for cancellation of the award of work and forfeiture of the bid security. Additionally, the bidder shall be required to pay the positive difference equivalent to the amount between his bid price and that of the next successful bidder's price to whom the work is awarded.

**b. Amendment of bidding documents**

The procuring agency shall reserve the right to amend or modify the bidding documents for any reasons by issue of addendum either in its initiative or in response to a clarification request from a prospective any time prior to the deadline for submission of bids. The following clauses to this effect shall be incorporated in the bidding documents.

a. Any addendum thus issued shall be part of the bidding documents and shall be binding on the prospective bidders;

b. The addendum, if any, shall be made available in Kuensel and TCB website. All the prospective bidders who have purchased or received the bidding documents shall confirm receipt thereof before bid opening;

c. The Procuring Agency may, at its discretion, extend the deadline for submission of bids to allow the prospective bidders reasonable time for taking the addendum into account in preparation of their bids.

## Section 7 – Contract Forms

This section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after Contract award.

### Contract Forms

Forms	Title
Form -1	Notification of Award
Form -2	Contract Agreement
Form -3	Bank Guarantee for Performance Security
Form -4	Bank Guarantee for Advance Payment



**Notification of Award**

Contract No:

Date:

To:

*[name and address of Contractor]*

This is to notify you that your Bid dated *[insert date]* for the execution of the Works for (“**Construction of Restroom at Hongtsho, Thimphu**”) for the Contract Price of Nu *[amount in figures and in words]*, as corrected and modified in accordance with the Instructions to bidder is hereby accepted by *[name of the Employer]*.

You are requested to proceed with the execution of the Works on the basis that this Notification of Award shall constitute the formation of a Contract, which shall become binding upon you furnishing a Performance Security within fourteen (14) days, in accordance with ITB Clause 32, and the signing the Contract Agreement within twenty-one (21) days, in accordance with ITB Clause 33.

We attach the Contract Agreement and Special Conditions of Contract for your perusal and signature.

Signed

Duly authorised to sign for and on behalf of  
*[name of Procuring Entity]*

Date:

## Contract Agreement

THIS AGREEMENT, made the [day] of [month] [year] between [Mr. Rinzin Jamtsho, Tourism Council of Bhutan as Employer (hereinafter called “the Employer”) of the one part and [name and address of Contractor] (hereinafter called “the Contractor”) of the other part.

WHEREAS, the Employer invited Tenders for certain Works, viz, (“**Construction of Restroom at Hongtsho, Thimphu**”) and has accepted a Tender by the Contractor for the execution of those works in the sum of Ngultrum [insert amount in figures and words], hereinafter called “the Contract Price.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract hereinafter referred to.
2. The documents forming the Contract shall be interpreted in the following order of priority:
  - (a) The signed Contract Agreement;
  - (b) The letter of Acceptance;
  - (c) The completed Bid form as submitted by the Bidder;
  - (d) The Special Conditions of Contract;
  - (e) The General Conditions of Contract;
  - (f) Specifications
  - (g) The Drawings; and
  - (h) Any other document listed in the SCC as forming part of the Contract..
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and to remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

**IN WITNESS whereof the Parties thereto have caused this Agreement to be executed in accordance with the laws of Bhutan on the day month and year first before written.**

For the Employer

For the Contractor

Signature

Print Name

Title

In the presence of  
(Name)

Address

**Bank Guarantee for Performance Security**

*[this is the format for the Performance Security to be issued by any financial institute in Bhutan in accordance with ITB Clause 35]*

Contract No:

Date:

To:

[Name and address of Employer]

**PERFORMANCE GUARANTEE No:**

We have been informed that *[name of Contractor]* (hereinafter called “the Contractor”) has undertaken, pursuant to Contract No *[reference number of Contract]* dated *[date of Contract]* (hereinafter called “the Contract”), the execution of works “**Construction of Restroom at Hongtsho, Thimphu**” under the Contract.

Furthermore, we understand that, according to your conditions, Contracts must be supported by a performance guarantee.

At the request of the Contractor, we *[name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Nu *[insert amount in figures and in words]* upon receipt by us of your first written demand accompanied by a written statement that the Contractor is in breach of its obligation(s) under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein.

This guarantee is valid until *[date of validity of guarantee]*, consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Signature

**Bank Guarantee for Mobilisation Advance**

*[This is the format for the Advance Payment Guarantee to be issued by a financial institutions in Bhutan in their letter pad in accordance with SCC Clause 25.2]*

Contract No:

Date:

To:

[Name and address of Employer]

**ADVANCE PAYMENT GUARANTEE No:**

We have been informed that *[name of Contractor]* (hereinafter called “the Contractor”) has undertaken, pursuant to Contract No *[reference number of Contract]* dated *[date of Contract]* (hereinafter called “the Contract”), the execution of works (“**Construction of Restroom at Hongtsho, Thimphu**”) under the Contract.

Furthermore, we understand that, according to your conditions, Advance Payments must be supported by a bank guarantee.

At the request of the Contractor, we *[name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Nu *[insert amount in figures and in words]* upon receipt by us of your first written demand accompanied by a written statement that the Contractor is in breach of its obligation(s) under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein.

We further agree that no change, addition or other modification of the terms of the Contract to be performed, or of any of the Contract documents which may be made between the Employer and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee is valid until *[date of validity of guarantee]*, consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Signature

**Tourism Council of Bhutan**

**Thimphu**

**Name of Work: The construction of restroom at Hongtsho, Thimphu**

**INTEGRITY PACT STATEMENT**

**1 General**

Whereas, **Chief, Infrastructure and Product Development Division**, representing the **Tourism Council of Bhutan, Thimphu**, Royal Government of Bhutan, hereinafter referred to as the Employer on one part and the **Mr/Miss. ....** representing **M/s...** ..... **CDB No.** ..... on the other part hereby execute this agreement as follows.

This agreement should be a part of the tender document, which shall be signed and submitted along with the tender document. The head of the employing agency/or his authorized representative should be the signing authority. For the bidders, the bidder himself or his authorized representative must sign the Integrity Pact (IP). If the winning bidder had not signed during the submission of the bid, the tender shall be cancelled.

**2 Objectives**

Now, therefore, the Employer and the Bidder agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :-

- 2.1 Enabling the Employer to obtain the desired contract at a reasonable and competitive price in conformity to the defined specifications of the works, goods and services;
- 2.2 Enabling bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices and the Employer will commit to prevent corruption, in any form by their officials by following transparent procedures.

**3. Commitments of the Employer:**

The Employer Commits itself to the following:-

- 3.1 The Employer hereby undertakes that no official of the Employer, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.
- 3.2 The Employer further confirms that its officials has not favored any prospective bidder in any form that could afford an undue advantage to that particular bidder during the tendering stage, and will further treat all Bidders alike.
- 3.3 All the officials of the Employer shall report to the head of the employing agency or an appropriate Government office any attempted or completed violation of clauses 3.1 and 3.2.



- 3.4 Following report on violation of clauses 3.1 and 3.2 by official (s), through any source, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Employer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Employer the proceedings under the contract would not be stalled

#### **4 Commitments of Bidders**

The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following :-

- 4.1 The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Employer, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.
- 4.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Employer or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the Contract or any other contract with the Government.
- 4.3 The Bidder will not collude with other parties interested in the contract to preclude the competitive bid price, impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 4.4 The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Employer of their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

#### **5 Sanctions for Violation**

Any breach of the aforesaid provisions or providing false information by employers, including manipulation of information by evaluators, shall face administrative charges and penal actions as per the existing relevant rules and laws. The breach of the Pact or providing false information by the Bidder or any one employed by him or acting on his behalf (whether with or without the knowledge of the Bidder) or the commission of any offence by the Bidder or any one, employed by him or acting on his behalf, shall be dealt with as per the provisions of the Bhutan Penal Code 2004, and the Anti-Corruption Act, 2006.

The Employer/relevant agency shall also take all or any one of the following actions, wherever required:-

- 5.1 To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.
- 5.2 To immediately cancel the contract, if already awarded/signed, without giving any compensation to the Bidder.

- 5.3 To recover all sums already paid by the Employer.
- 5.4 To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the Bidder, in order to recover the payments, already made by the Employer, along with interest.
- 5.5 To cancel all or any other Contracts with the Bidder.
- 5.6 To debar the Bidder from entering into any bid from the government of Bhutan as per the Debarment Rule.

**6. Conflict of Interest**

- 6.1 A conflict of interest involves a conflict between the public duty and private interests (for favor or vengeance) of a public official, in which the public official has private interest which could improperly influence the performance of their official duties and responsibilities. Conflict of Interest would arise in a situation when any concerned members of both the parties are related either directly or indirectly, or has any association or had any confrontation. Thus, conflict of interest of any tender committee member must be declared in the prescribed form (attached).
- 6.2 The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any committee member, and if he does so, the Employer shall be entitled forthwith to rescind the Contract and all other contracts with the Bidder.

**7. Examination of Books of Accounts**

- 7.1 In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Employer/authorized persons or relevant agencies shall be entitled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents and shall extend all possible help for the purpose of such examination.

**8. Monitoring and Arbitration**

- 8.1 The respective procuring agency shall be responsible for monitoring and arbitration of IP as per the Procurement Rule.

**9 Legal Actions**

- 9.1 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

**10 Validity**

- 10.1 The validity of this Integrity Pact shall cover the tender process and extend until the completion of the contract to the satisfaction of both the Employer and the Bidder.
- 10.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

**We hereby declare that we have read and understood the clauses of this agreement and the information provided in this agreement are true and correct to the best of our knowledge and belief. In case any information is found incorrect, we assume full responsibility thereof and shall be liable for penalties as per clause 5 of this agreement.**



The parties hereby sign this Integrity Paqt at \_\_\_\_\_ on \_\_\_\_\_

**EMPLOYER**



0307

Witness:

1. WARISA KOBERATIPUNTHAWONE  
(Name and CID No.) 1414100091146635  
Tourism Council of Bhutan

**BIDDER**

(Affix Legal Stamp)

Witness:

1. \_\_\_\_\_  
(Name and CID No.)



# RESTROOM AT HONGTSHO

## ARCHITECTURAL CONSTRUCTION DRAWING



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ARCHITECT:

DECHEN LHAZOM CHHOPHEL  
WARISA KEERATIPUNTHAWONG

ENGINEER:

DORJI WANGDI

NOTES:

-

LIST OF ARCHITECTURAL DRAWINGS			
PAGE	DESCRIPTION	PAGE	DESCRIPTION
A-000	LIST OF DRAWINGS, SPECIFICATIONS	A-301	SECTIONS 1
A-101	LOCATION PLAN	A-302	SECTIONS 2
A-102	SITE PLAN	A-401	DOORS 1
A-103	PLAN	A-402	DOORS 2
A-104	FLOOR PLAN	A-403	WINDOWS 1
A-105	ROOF PLAN	A-404	WINDOWS 2
A-106	ROOF STRUCTURE	A-501	DETAILS 1
A-107	CEILING PLAN	A-502	DETAILS 2
A-201	ELEVATIONS 1	A-601	INTERIOR ELEVATION
A-202	ELEVATIONS 2	A-701	SANITARY WARE
		A-702	ELECTRICAL PLAN

CEILING – FINISHING SPECIFICATION	
<b>C1</b>	SOLID TIMBER CEILING, PANELLING, CEILING FRAME 75x75MM.@1000 NATURAL TIMBER COLOR COATED WITH PRESERVATIVE(NO PAINTED COLOR)
<b>C2</b>	SOLID TIMBER CEILING, PANELLING, CEILING FRAME 75x75MM.@1000 NATURAL TIMBER COLOR COATED WITH PRESERVATIVE(NO PAINTED COLOR)

WALL – FINISHING SPECIFICATION	
<b>1</b>	CEMENT PLASTER PAINTED WITH WHITE COLOR(FOR EXTERIOR)
<b>2.1</b>	CERAMIC TILES (light beige color or similar), 300X300 MM. • END AT BOTTOM OF W1,W2, (see interior elevation) • CEMENT PLASTER PAINTED WITH WHITE COLOR ABOVE
<b>2.2</b>	CERAMIC TILES (light beige color or similar), 300X300 MM. • END AT BOTTOM OF W3,W4 (see interior elevation) • CEMENT PLASTER PAINTED WITH WHITE COLOR ABOVE

FLOOR – FINISHING SPECIFICATION	
<b>F1</b>	NON-SLIP FLOOR TILES(beige color or similar), 500x500 MM.
<b>F2</b>	FLAT STONE FINISHING
<b>F3</b>	POLISHED CONCRETE

NO.	DATE	DESCRIPTION

PROJECT NAME:

**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:

**COVER**

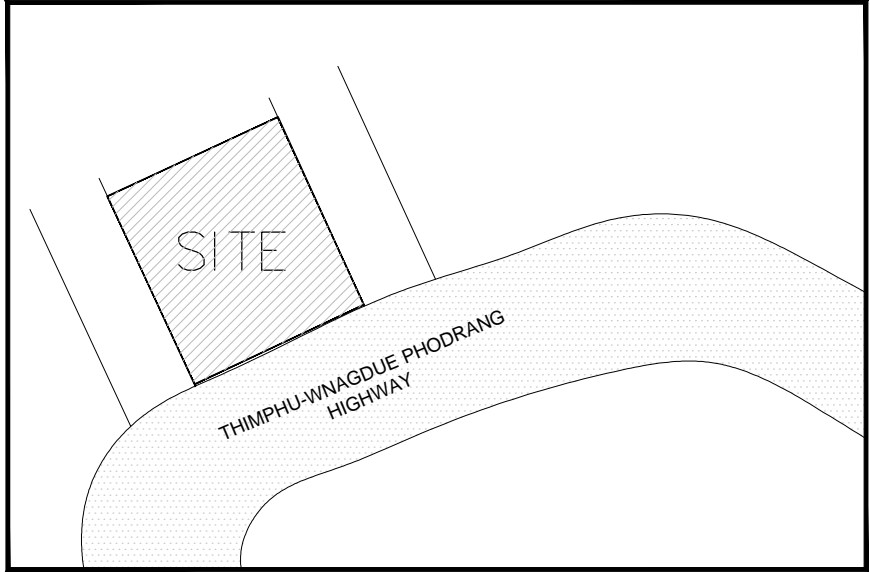
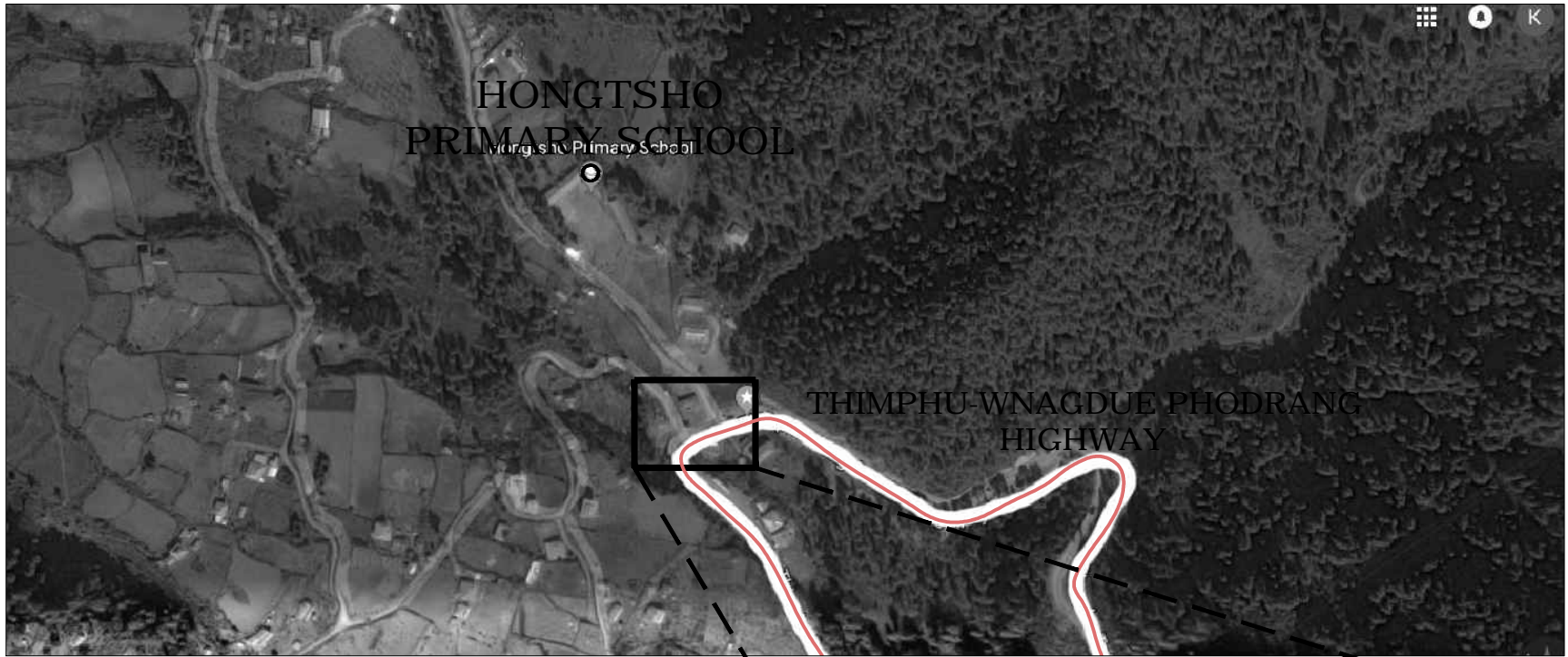


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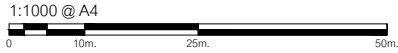
DATE:  
23 JAN 2018

DRAWING NO.:

**A000**



Location Plan



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ARCHITECT:  
DECHEN LHAZOM CHHOPHEL  
WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

NOTES:  
-

NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT HONGTSHO**

DRAWING TITLE:  
**LOCATION PLAN**



SCALE: -	DRAWING NO.: <b>A101</b>
DATE: 23 JAN 2018	



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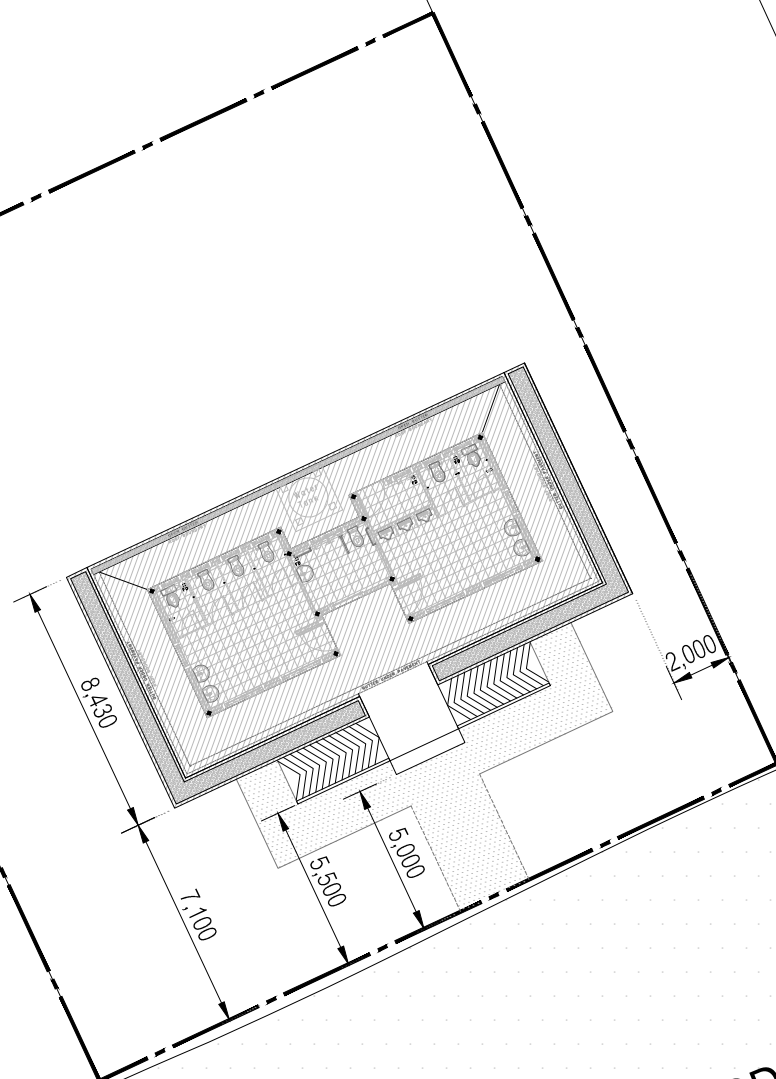
NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**SITE PLAN**

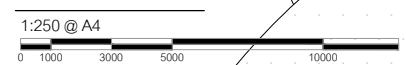


SCALE: 1:250	DRAWING NO.: <b>A102</b>
DATE: 23 JAN 2018	



**THIMPHU-WNAGDUE PHODRANG HIGHWAY**

Site Plan





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ENGINEER:

DORJI WANGDI

NOTES:

NO.	DATE	DESCRIPTION

PROJECT NAME:

**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:

**PLAN**

SCALE:

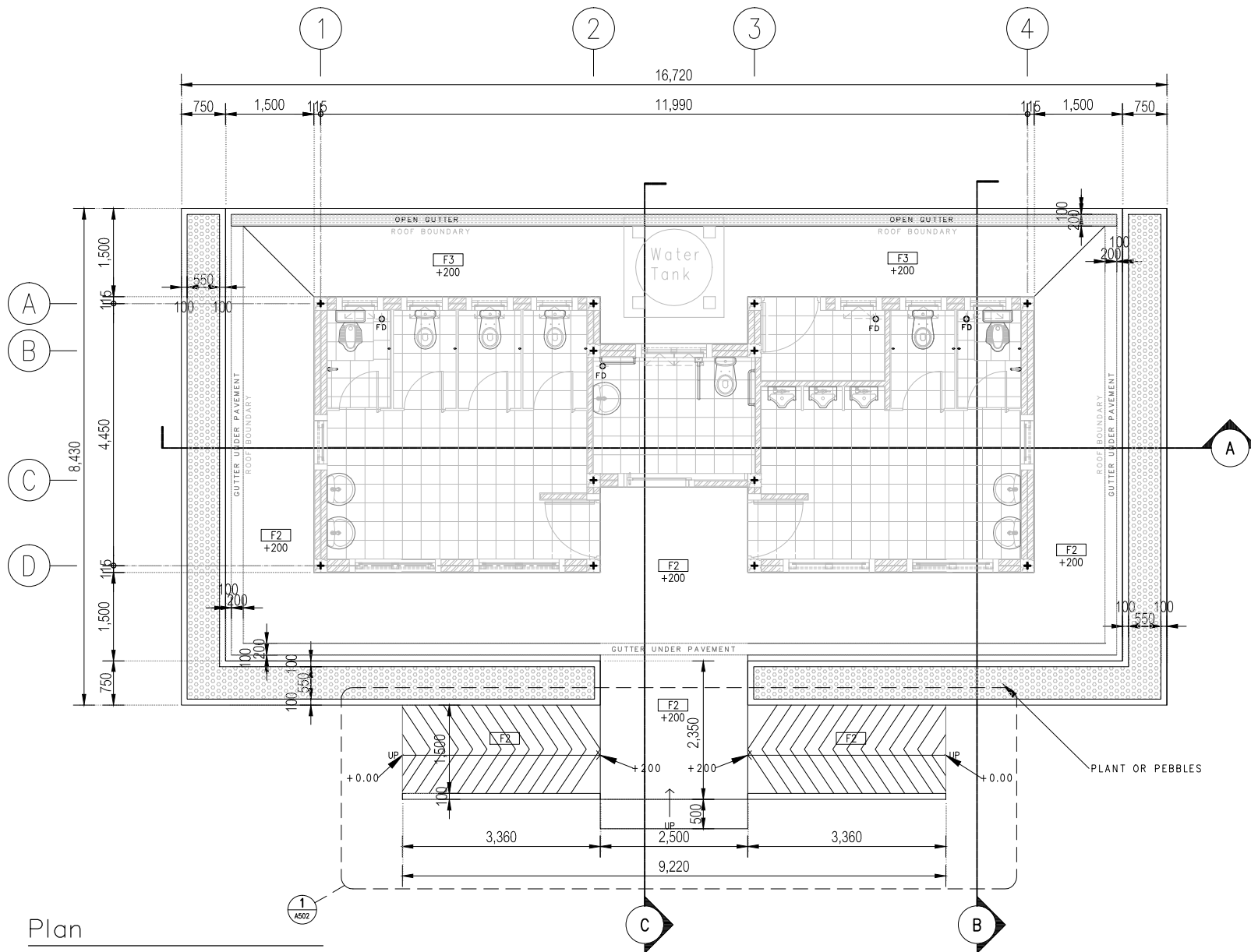
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DRAWING NO.:

**A103**

DATE:

23 JAN 2018



Plan

1:100 @ A4



1/4802



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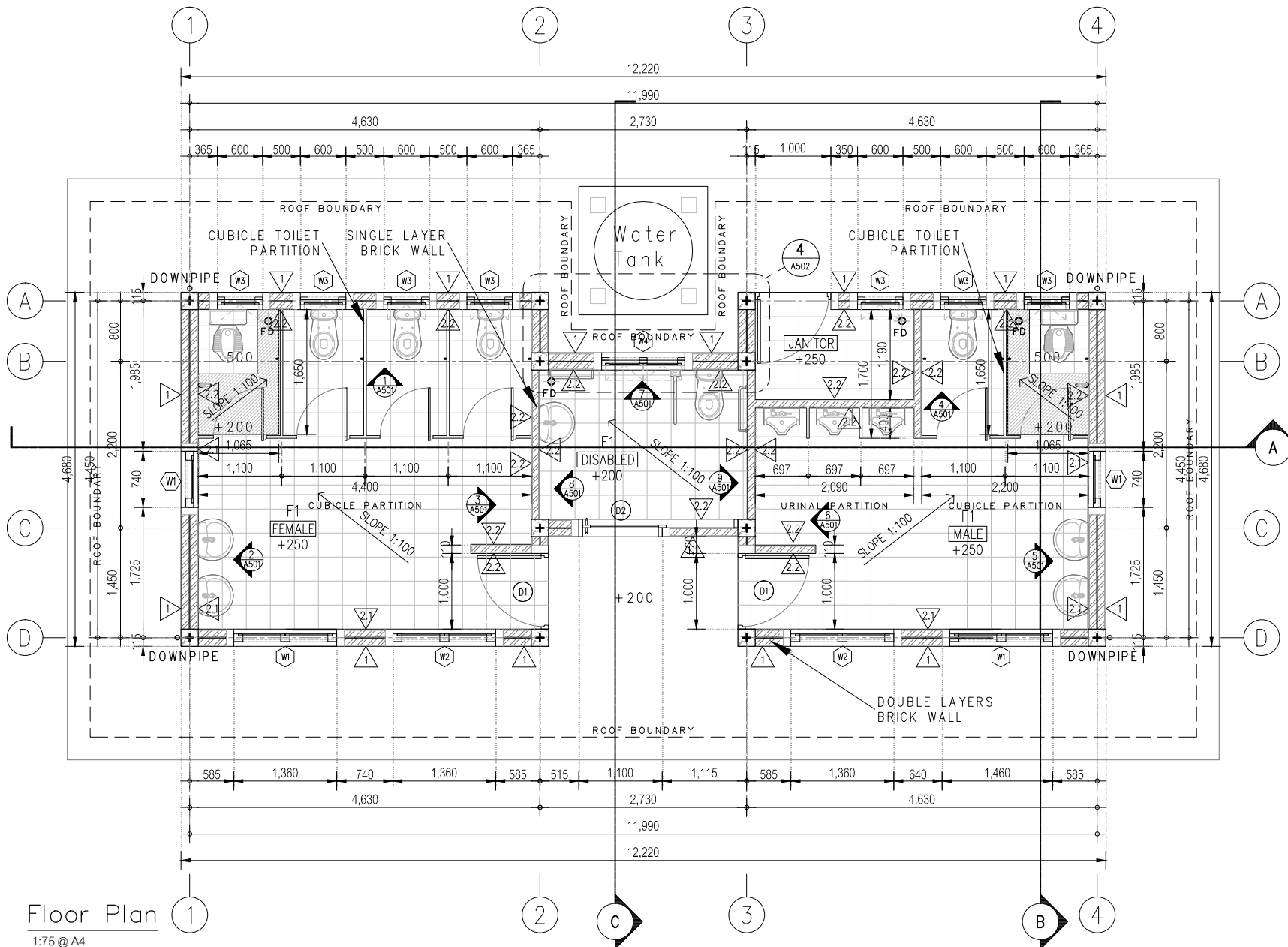
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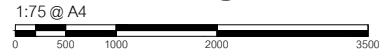
PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**FLOOR PLAN**

SCALE: 1:75  
DATE: 23 JAN 2018  
DRAWING NO.: **A104**



Floor Plan 1





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ENGINEER:  
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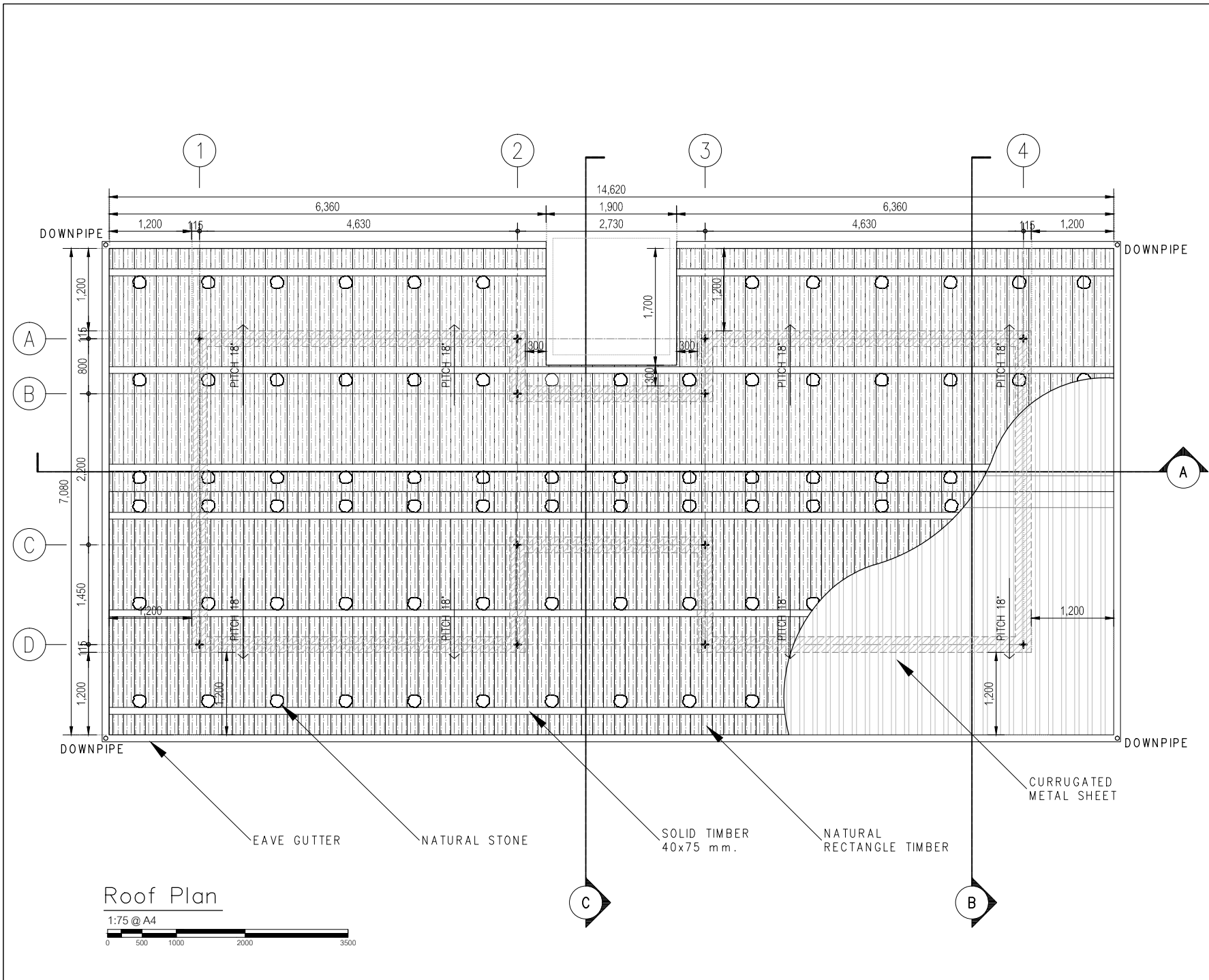
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NO.	DATE	DESCRIPTION

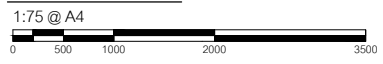
PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**ROOF PLAN**

SCALE: 1:75  
DATE: 23 JAN 2018  
DRAWING NO.: **A105**



Roof Plan





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ARCHITECT:  
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WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

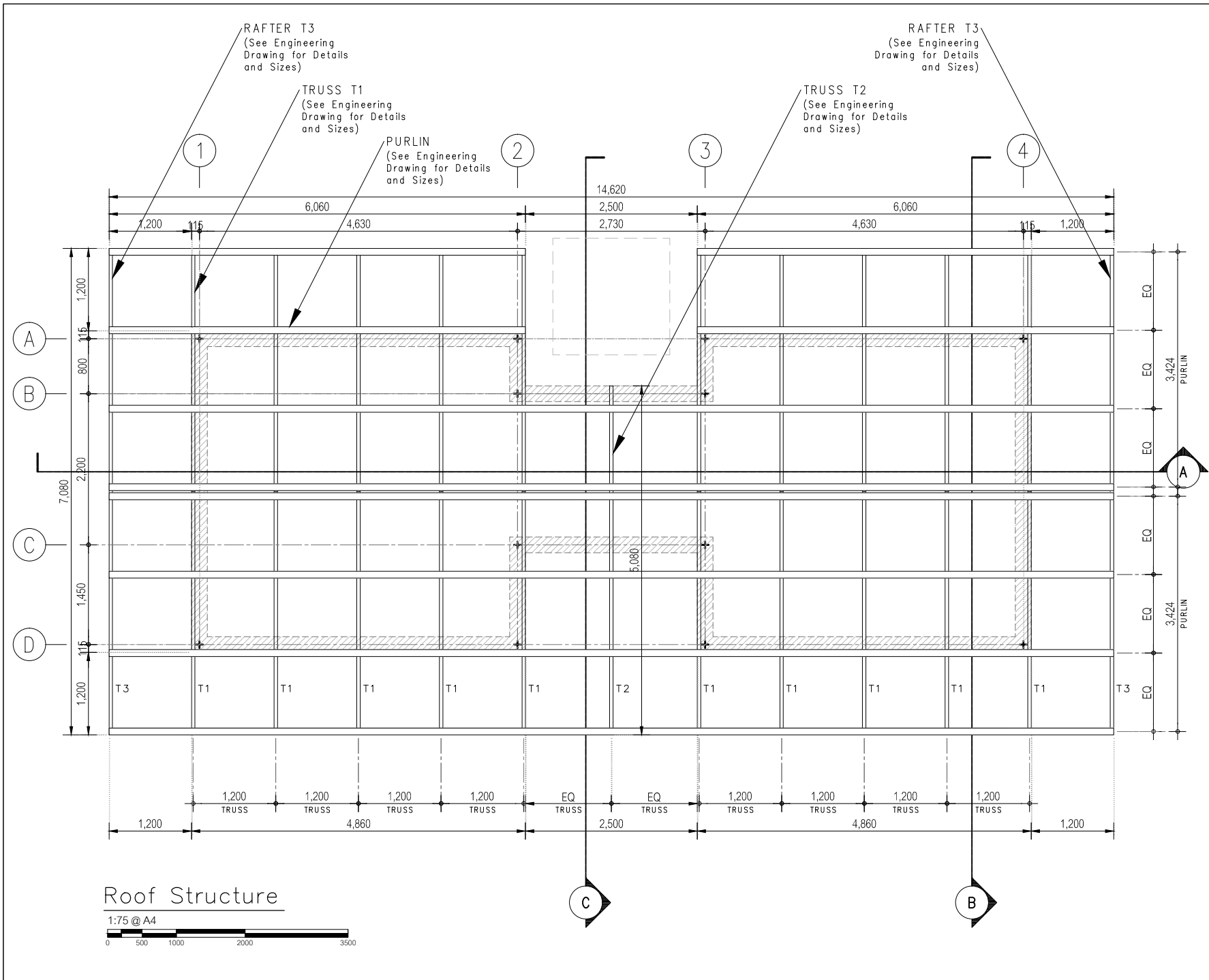
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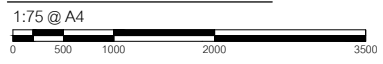
PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**ROOF STRUCTURE**

SCALE: 1:75  
DATE: 23 JAN 2018  
DRAWING NO.: **A106**



Roof Structure





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ARCHITECT:  
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WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

NOTES:

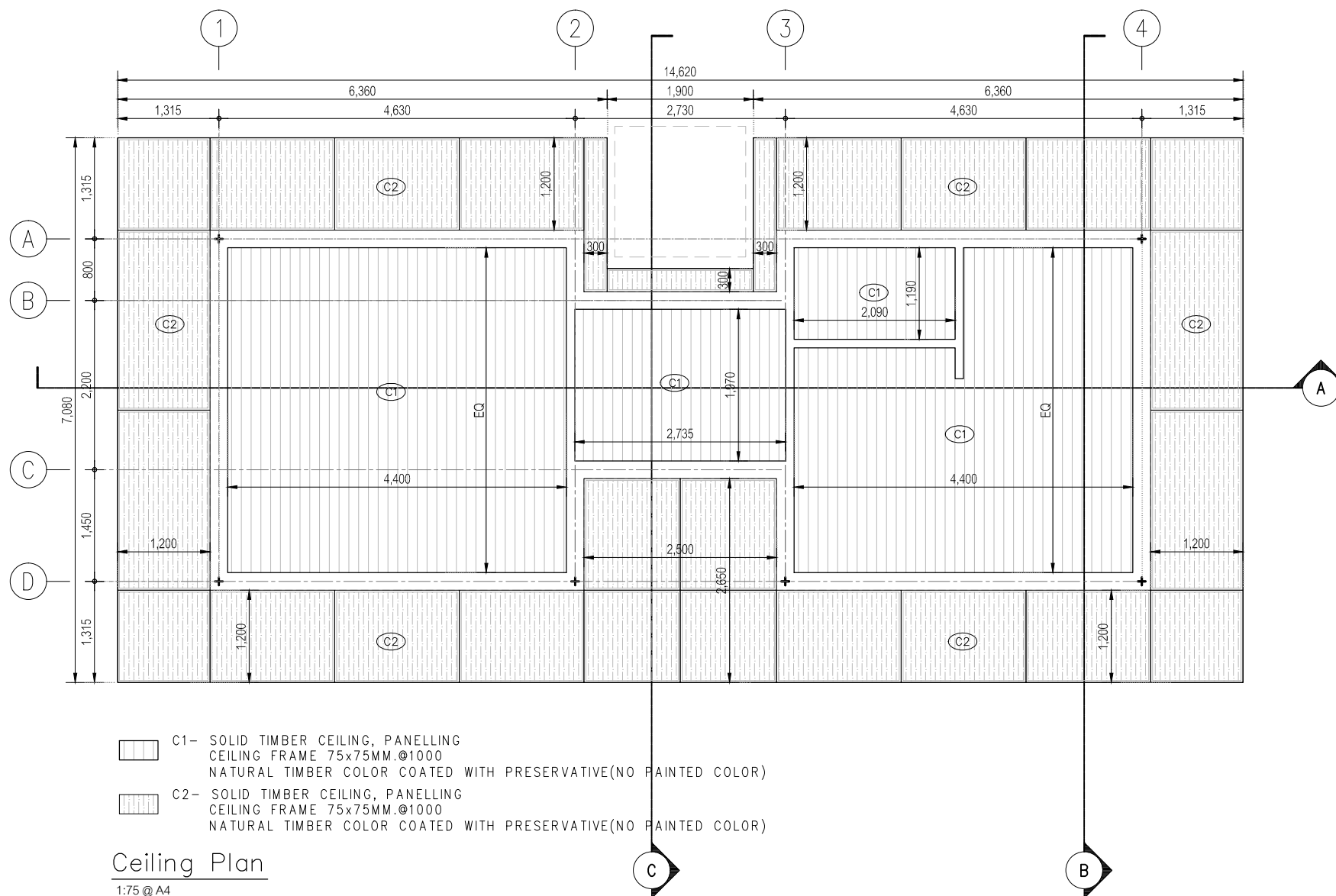
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NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**CEILING PLAN**

SCALE: 1:75	DRAWING NO.:
DATE: 23 JAN 2018	<b>A107</b>



- C1- SOLID TIMBER CEILING, PANELLING  
CEILING FRAME 75x75MM.@1000  
NATURAL TIMBER COLOR COATED WITH PRESERVATIVE(NO PAINTED COLOR)
- C2- SOLID TIMBER CEILING, PANELLING  
CEILING FRAME 75x75MM.@1000  
NATURAL TIMBER COLOR COATED WITH PRESERVATIVE(NO PAINTED COLOR)

Ceiling Plan

1:75 @ A4







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ARCHITECT:  
DECHEN LHAZOM CHHOPHEL  
WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

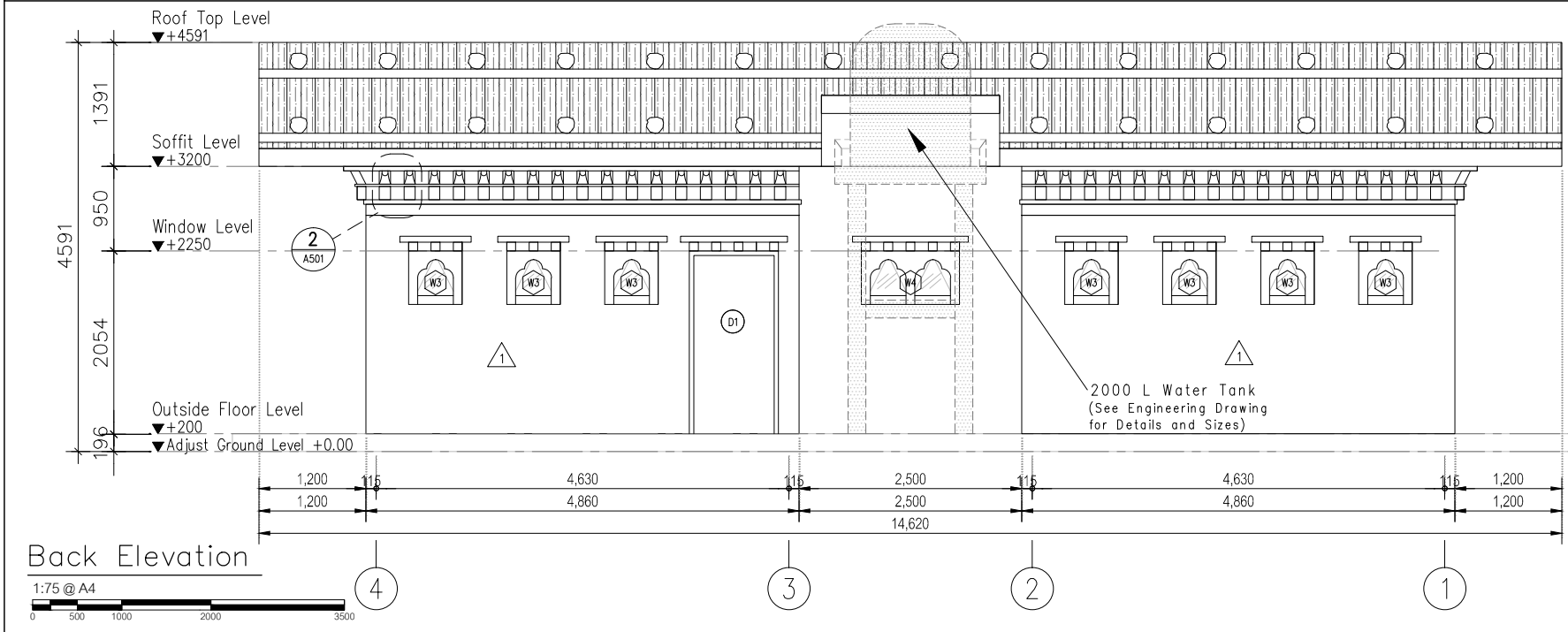
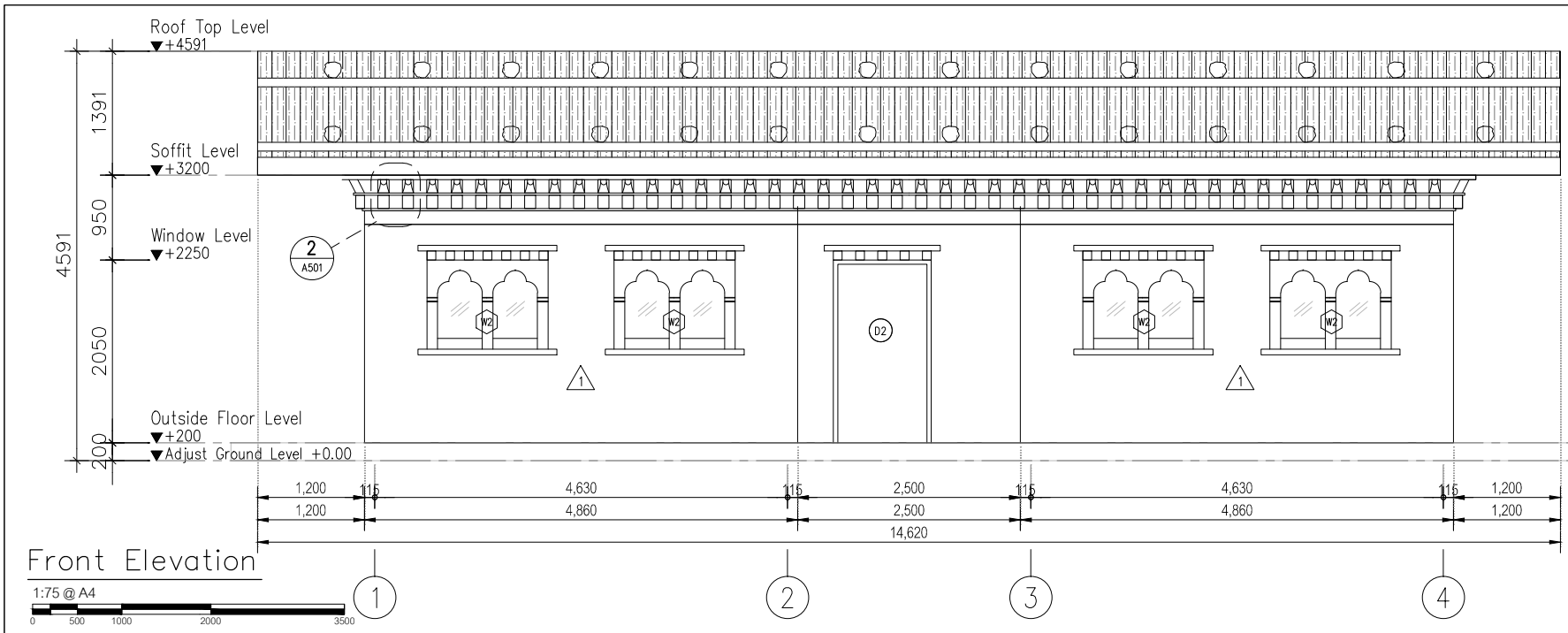
NOTES:

NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**ELEVATION1**

SCALE: 1:75  
DATE: 23 JAN 2018  
DRAWING NO.: **A201**





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ARCHITECT:  
**DECHEN LHAZOM CHHOPHEL  
WARISA KEERATIPUNTHAWONG**

ENGINEER:  
**DORJI WANGDI**

NOTES:

-

NO.	DATE	DESCRIPTION

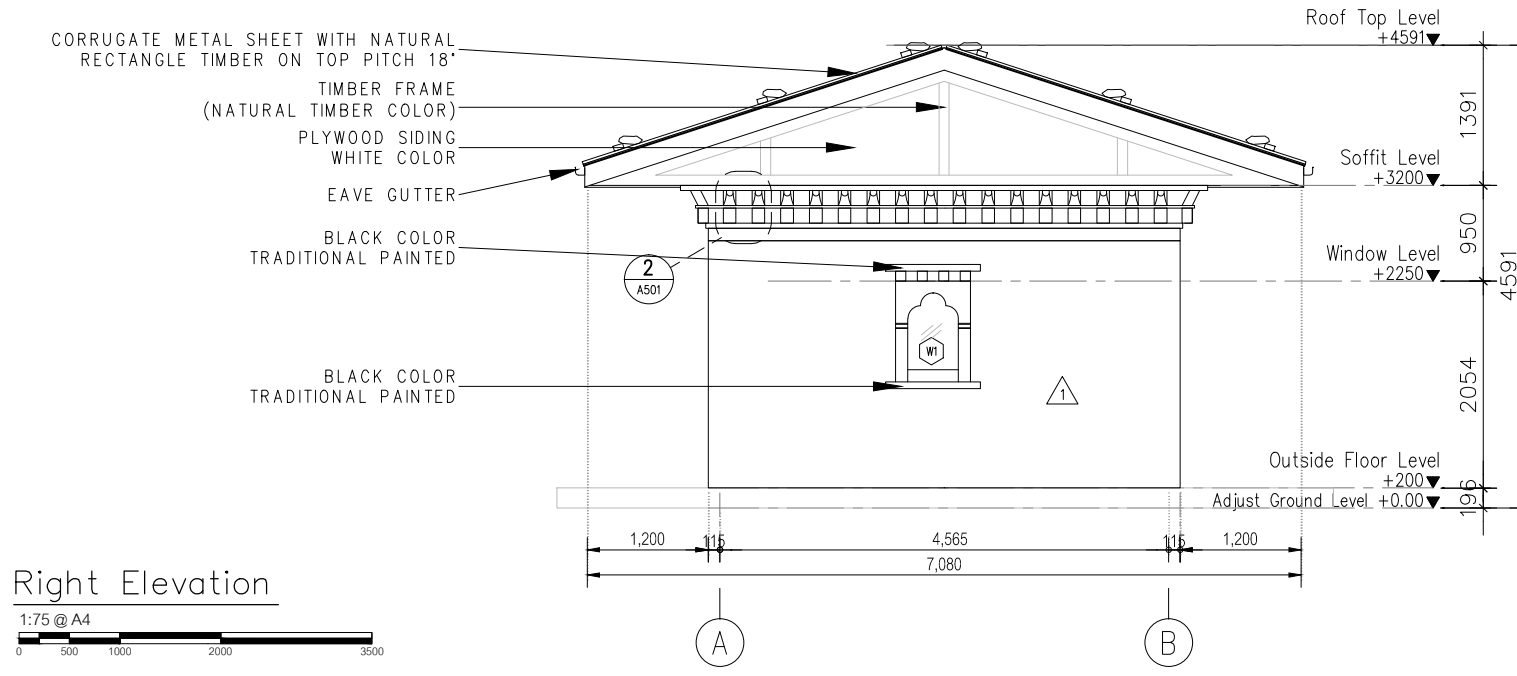
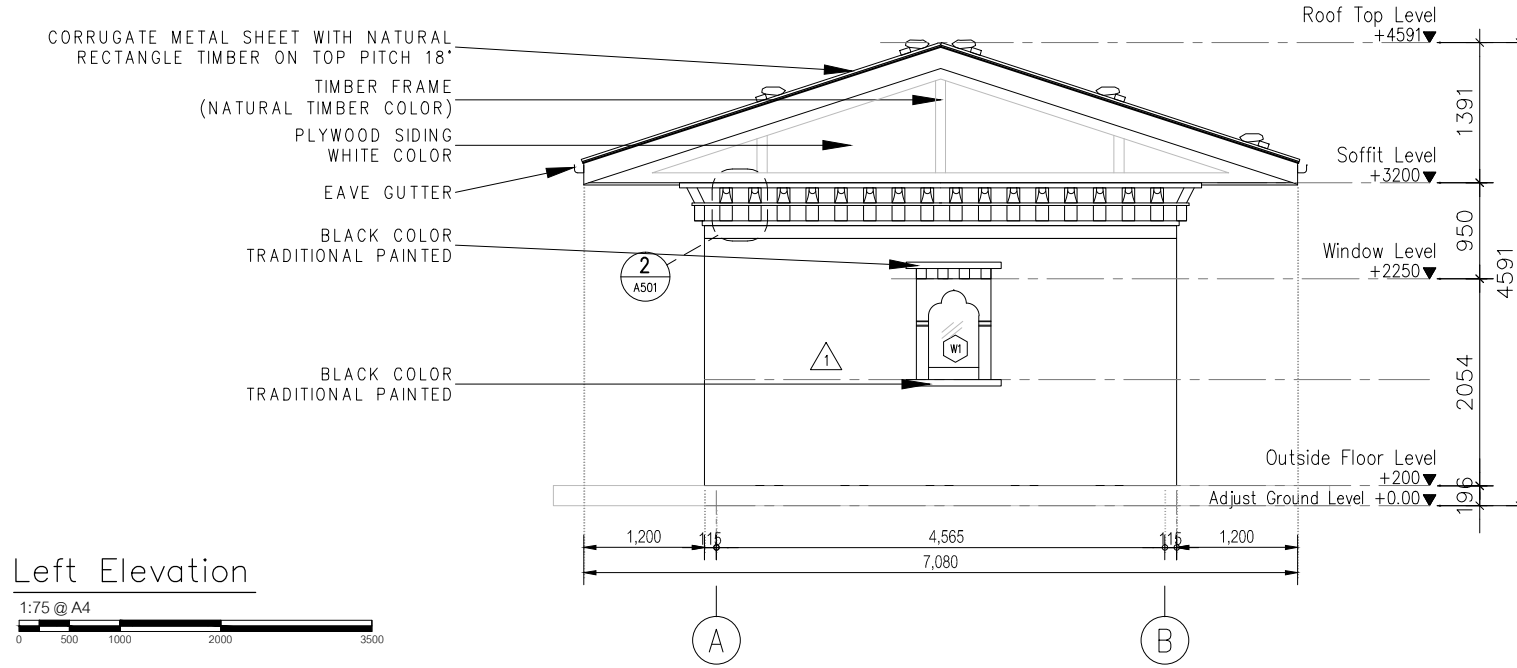
PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**ELEVATION2**



SCALE:  
1:75  
DATE:  
23 JAN 2018

DRAWING NO.:  
**A202**





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ARCHITECT:  
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WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

NOTES:

-

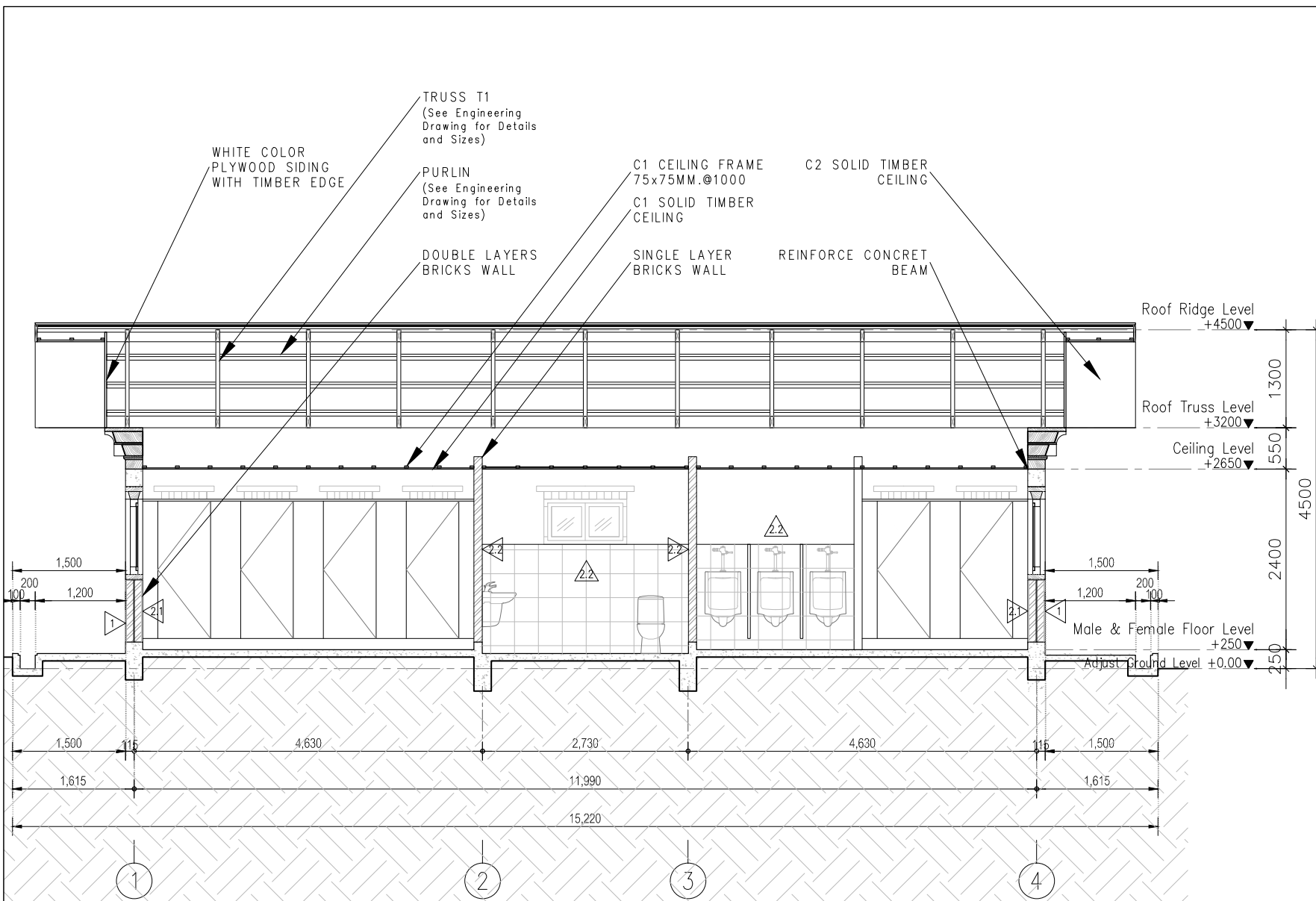
NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**SECTION1**



SCALE: 1:75  
DATE: 23 JAN 2018  
DRAWING NO.: **A301**



Section A





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WARISA KEERATIPUNTHAWONG

ENGINEER:

DORJI WANGDI

NOTES:

-

NO.	DATE	DESCRIPTION

PROJECT NAME:

**RESTROOM AT HONGTSHO**

DRAWING TITLE:

**SECTION 2**

SCALE:

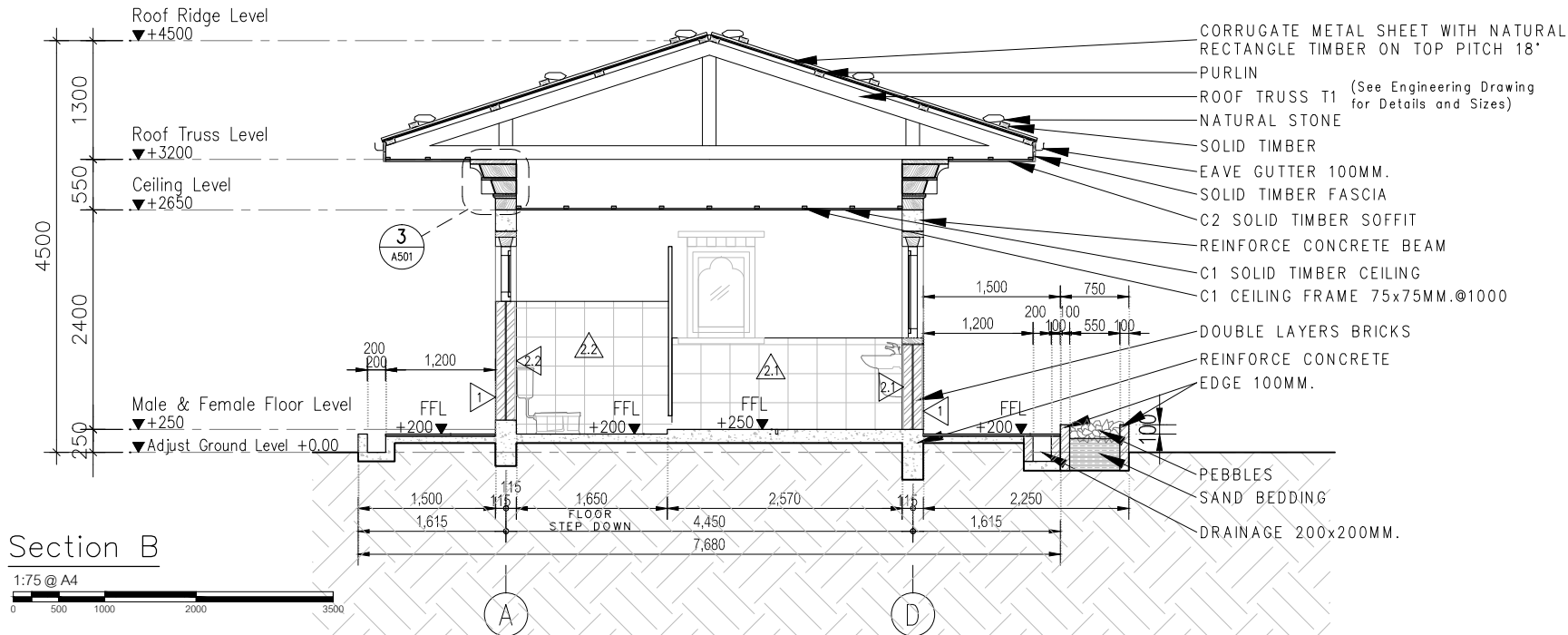
1:75

DRAWING NO.:

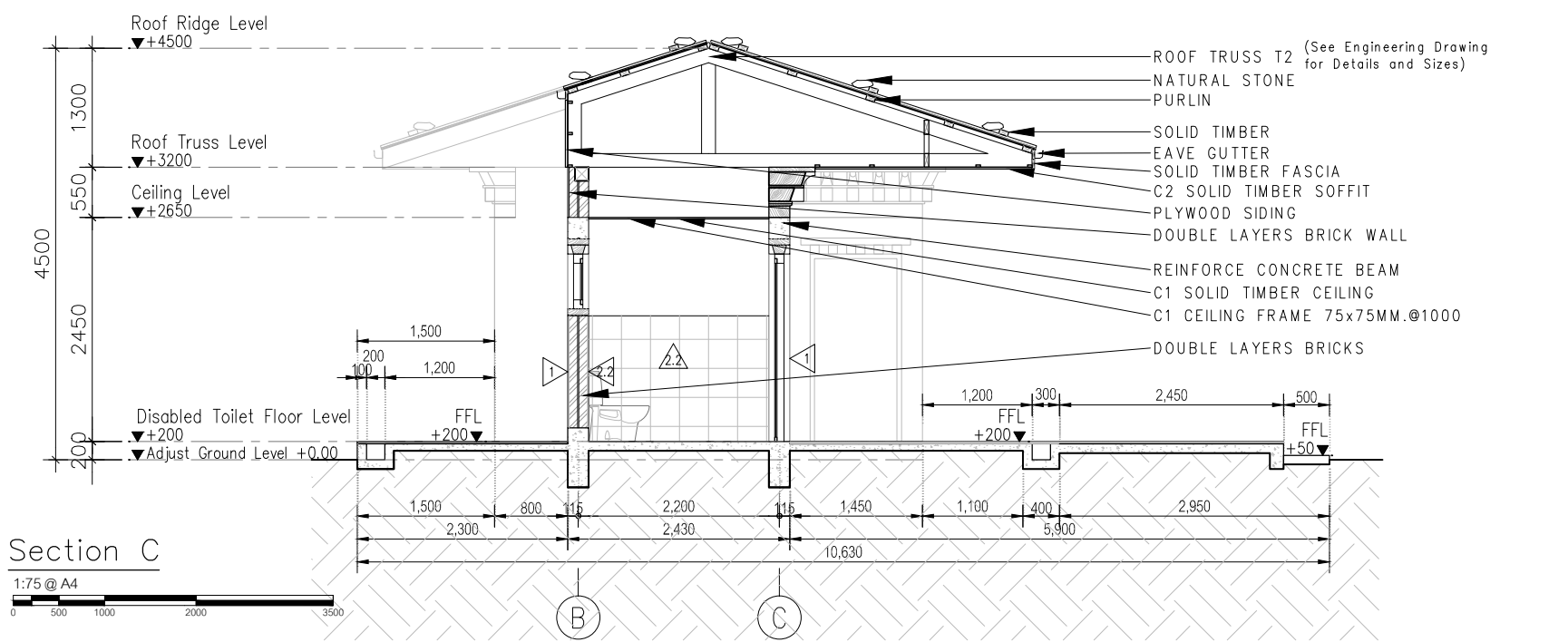
**A302**

DATE:

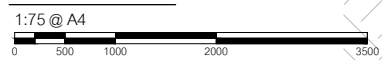
23 JAN 2018



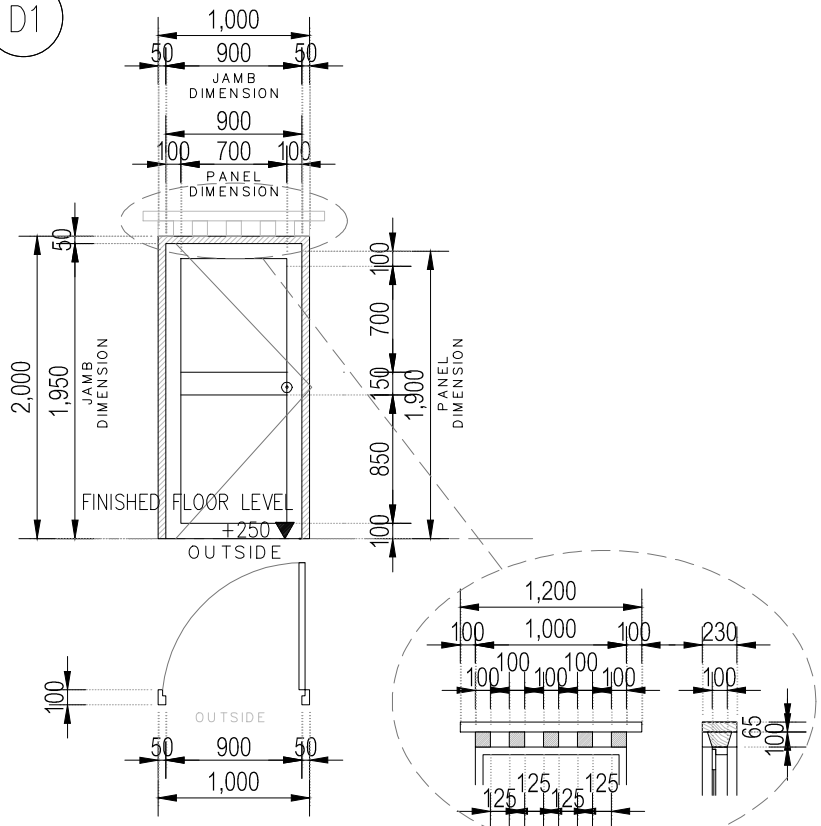
Section B



Section C

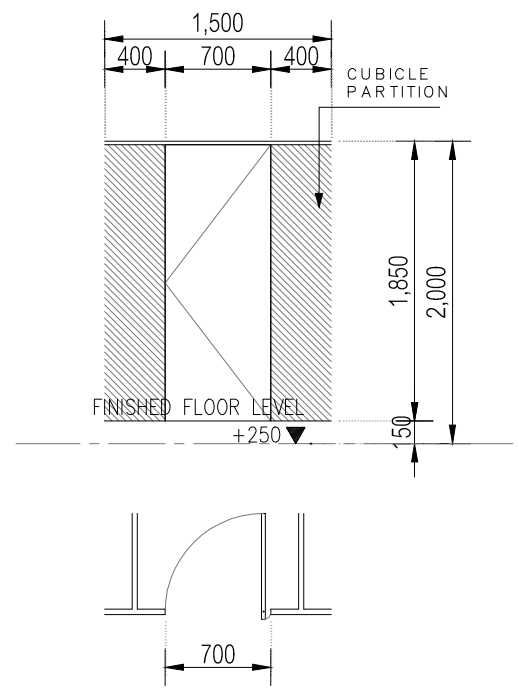


D1



ZANGSHING & BOGH DETAILS

TYPE	SINGLE SWING DOOR	
DOOR JAMB	Solid timber	50x100 mm.
PANEL FRAME	Solid timber	100x35,150x35 mm.
INNER PANEL	Solid timber	25mm THK.
HINGES	Stainless hinges	75mmx3
HANDLE	Traditional style handle	-
DOOR BOLT	Stainless sliding tower bolt x2	-
QUANTITY	3	



TYPE	SINGLE SWING DOOR for cubicles	
DOOR JAMB	Standard fitting for cubicle door	-
PANEL FRAME	Standard fitting for cubicle door	-
INNER PANEL	Standard fitting for cubicle door	-
HINGES	Standard fitting for cubicle door	-
HANDLE	Standard fitting for cubicle door	-
DOOR BOLT	Standard fitting for cubicle door	-
QUANTITY	6	



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ARCHITECT:  
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WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

NOTES:  
-

NO.	DATE	DESCRIPTION

PROJECT NAME:

**RESTROOM AT HONGTSHO**

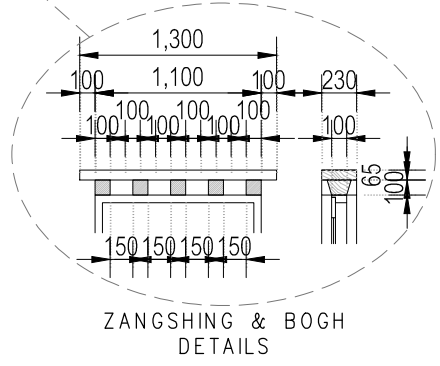
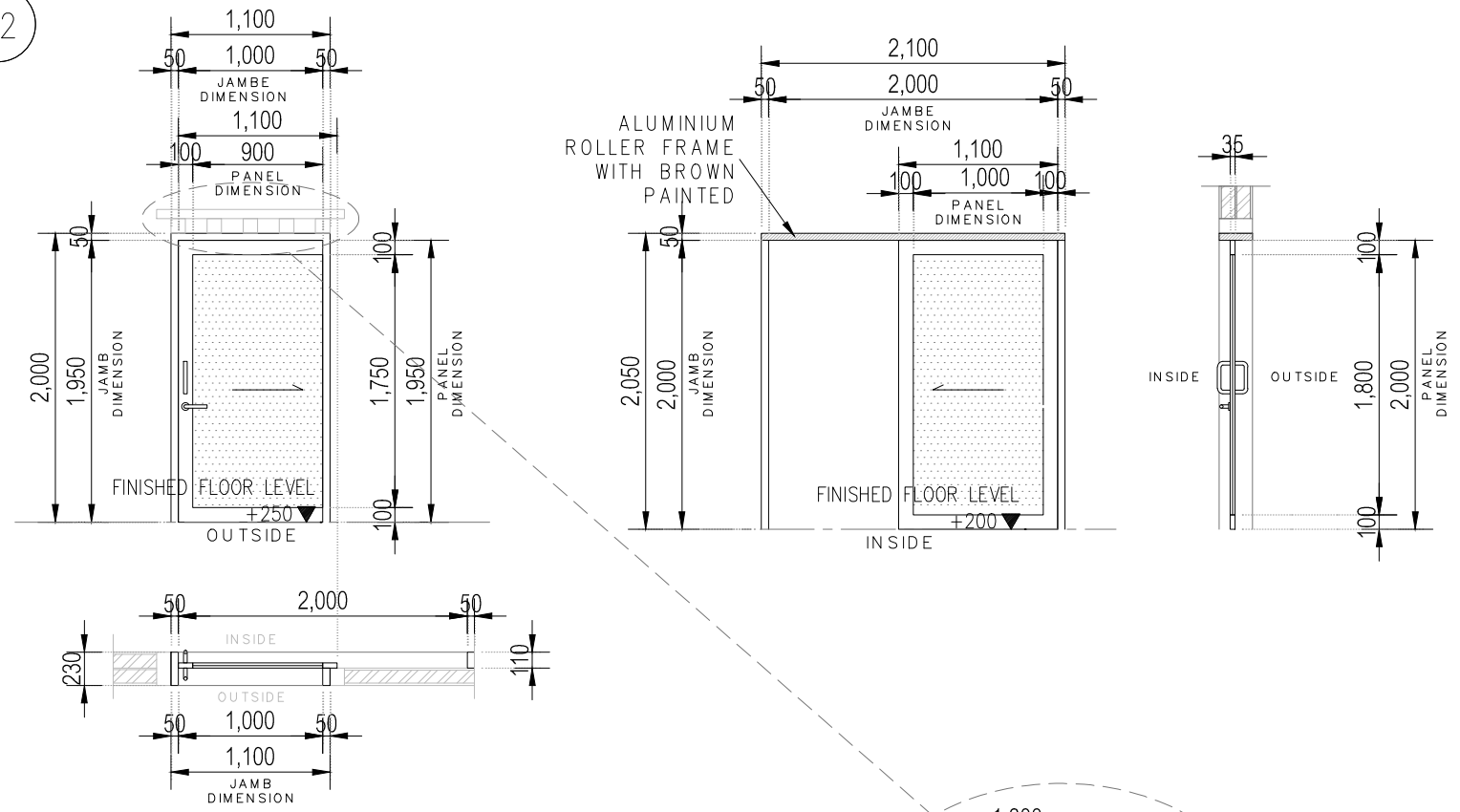
DRAWING TITLE:

**DOOR 1**

SCALE:  
1:50  
DATE:  
23 JAN 2018

DRAWING NO.:  
**A401**

D2



TYPE	ALUMINIUM SLIDING DOOR	
DOOR JAMB	Solid timber	50x100 mm.
PANEL FRAME	Brown color Aluminium panel Frame	100x35 mm.
INNER PANEL	Frosted Glass	10mm THK.
RAIL&ROLLER	Standard fitting for aluminium sliding door	-
HANDLE	Stainless bar handle	-
DOOR BOLT	-	-
QUANTITY	1	



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ARCHITECT:  
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ENGINEER:  
DORJI WANGDI

NOTES:  
-

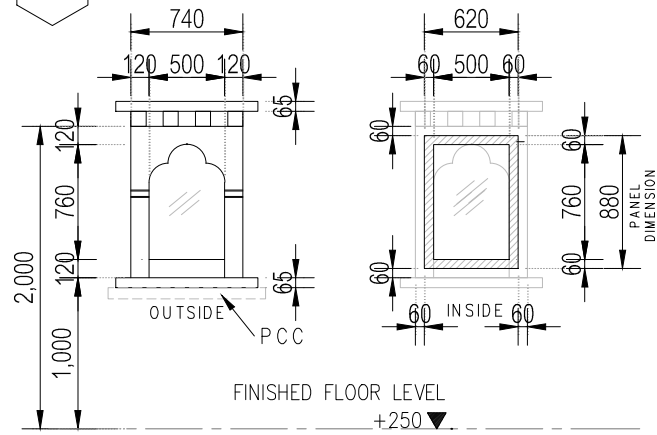
NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT HONGTSHO**

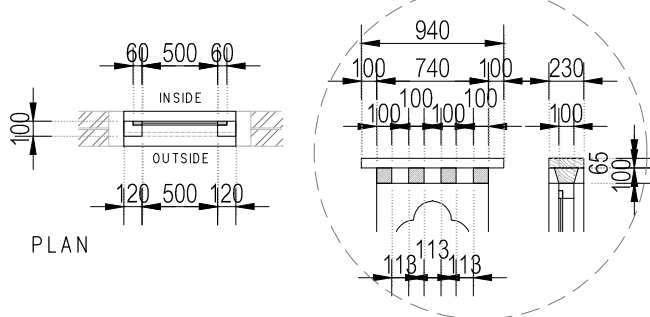
DRAWING TITLE:  
**DOOR 2**

SCALE: 1:50  
DATE: 23 JAN 2018  
DRAWING NO.: **A402**

W1



ELEVATION

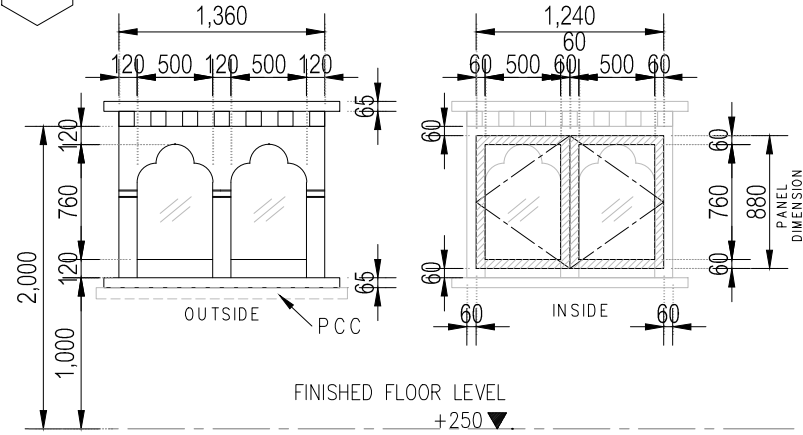


PLAN

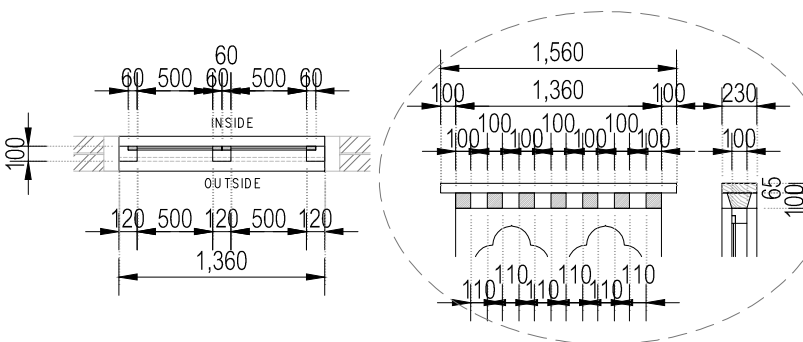
ZANGSHING & BOGH DETAILS

TYPE	FIXED GLASS WINDOW, SINGLE	
WINDOW JAMB	Solid timber	120x100 mm.
PANEL FRAME	Solid timber	60x25 mm.
INNER PANEL	Fixed glass	6mm THK.
HINGES	-	-
HANDLE	-	-
WINDOW BOLT	Stainless sliding tower bolt x2	-
QUANTITY	2	

W2



FINISHED FLOOR LEVEL +250



ZANGSHING & BOGH DETAILS

TYPE	CASEMENT WINDOW, DOUBLE	
WINDOW JAMB	Solid timber	120x100 mm.
PANEL FRAME	Solid timber	60x25 mm.
INNER PANEL	Fixed glass	5mm THK.
HINGES	-	-
HANDLE	Traditional style handle	-
WINDOW BOLT	Stainless sliding tower bolt x2	-
QUANTITY	2	



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ARCHITECT:  
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WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

NOTES:

NO.	DATE	DESCRIPTION

PROJECT NAME:

**RESTROOM AT HONGTSHO**

DRAWING TITLE:

**WINDOW 1**

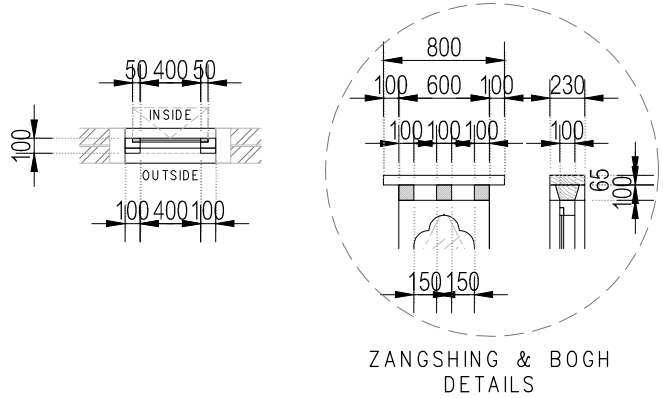
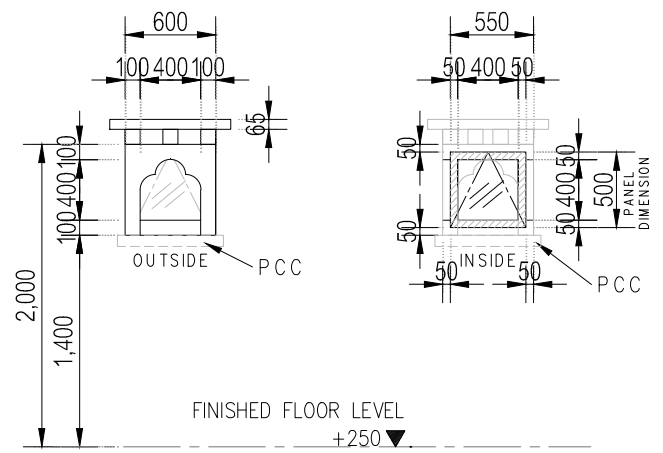
SCALE:  
1 : 50

DATE:  
23 JAN 2018

DRAWING NO.:

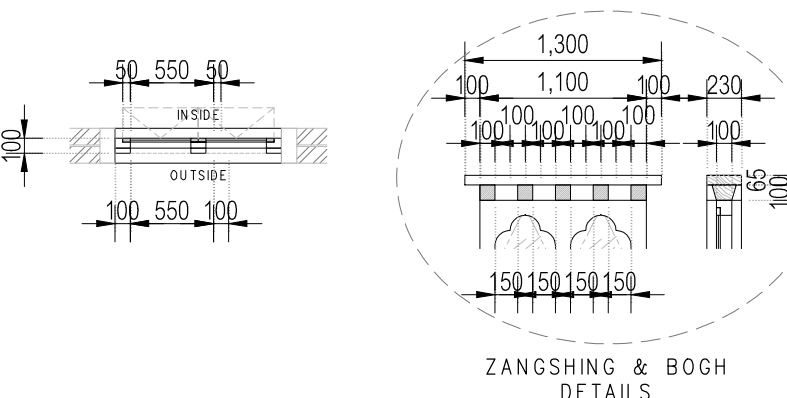
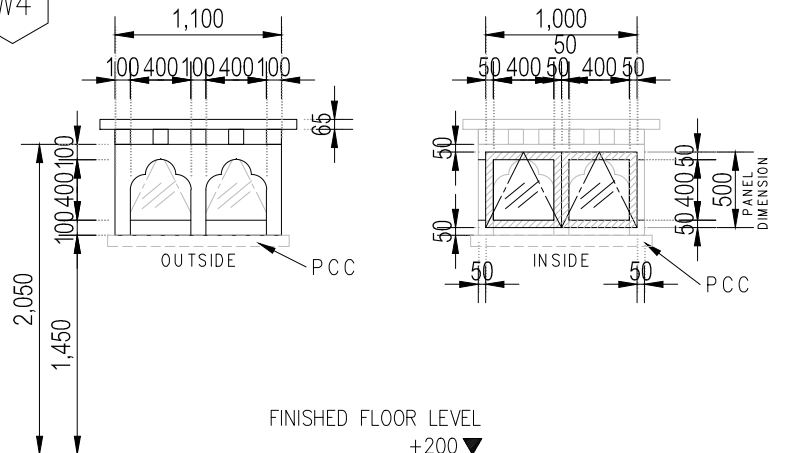
**A403**

W3



TYPE	AWNING WINDOW, SINGLE	
WINDOW JAMB	Solid timber	100x100 mm.
PANEL FRAME	Solid timber	50x25 mm.
INNER PANEL	Fixed Frosted glass	5mm THK.
HINGES	-	-
HANDLE	Traditional style handle	-
WINDOW BOLT	Stainless sliding tower bolt x2	-
QUANTITY	7	

W4



TYPE	AWNING WINDOW, DOUBLE	
WINDOW JAMB	Solid timber	100x100 mm.
PANEL FRAME	Solid timber	50x25 mm.
INNER PANEL	Fixed glass	5mm THK.
HINGES	-	-
HANDLE	Traditional style handle	-
WINDOW BOLT	Stainless sliding tower bolt x2	-
QUANTITY	1	



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ARCHITECT:  
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WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

NOTES:  
-

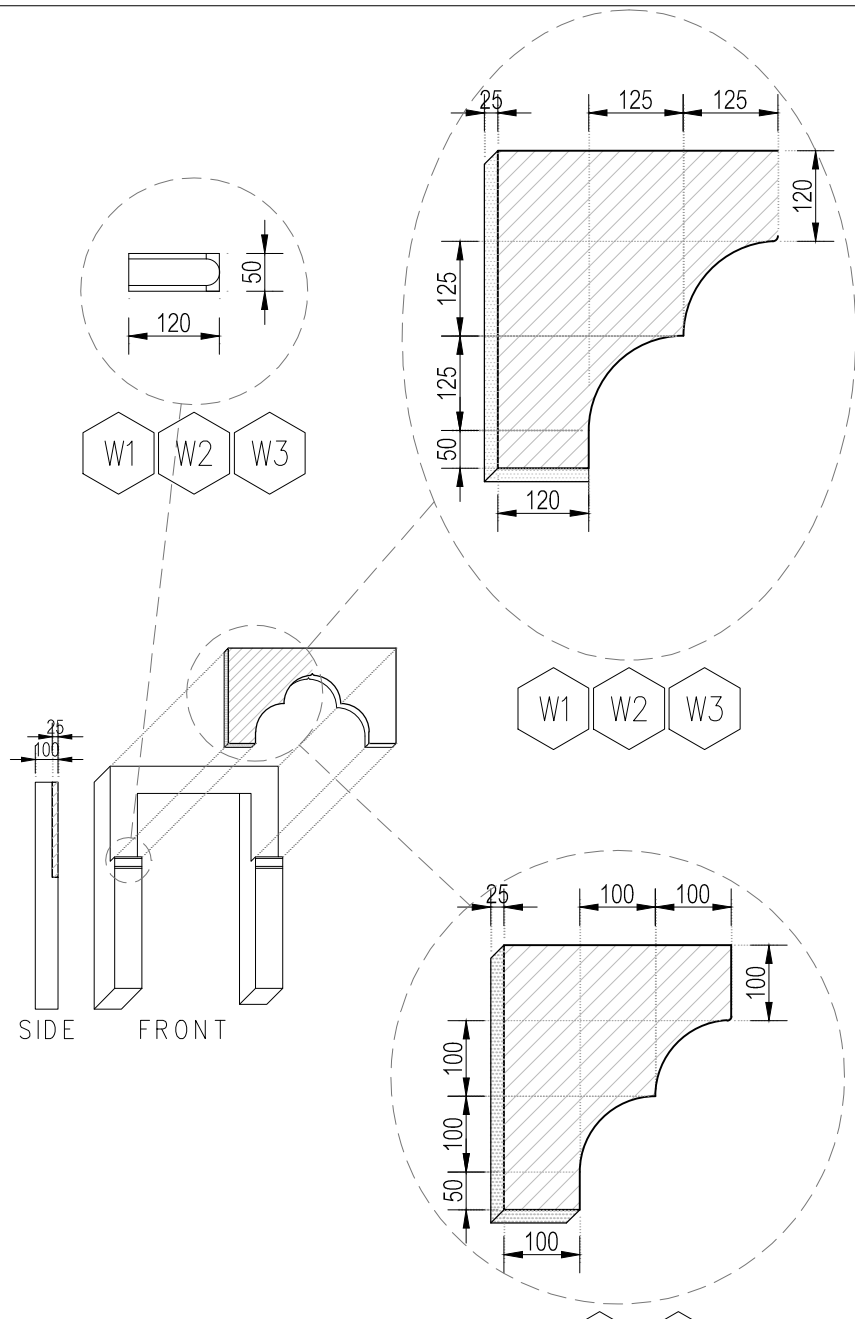
NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT HONGTSHO**

DRAWING TITLE:  
**WINDOW 2**

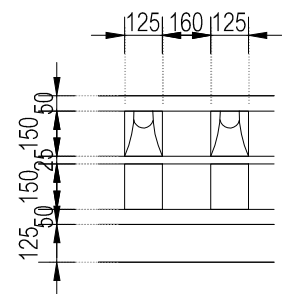
SCALE: 1 : 50  
DATE: 23 JAN 2018  
DRAWING NO.: **A404**



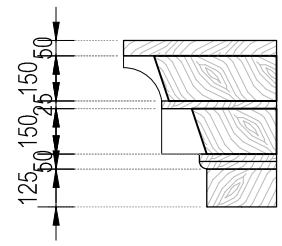


**1** Window Horzhu Installation Details  
 A501 NOT TO SCALE

**2** Cornice Elevation Details  
 A501 1:25 @ A4



**3** Cornice Section Details  
 A501 1:25 @ A4



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ENGINEER:  
 DORJI WANGDI

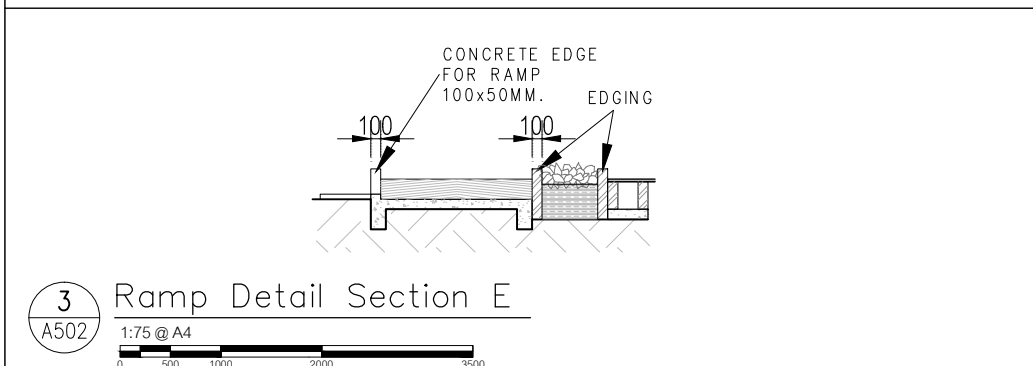
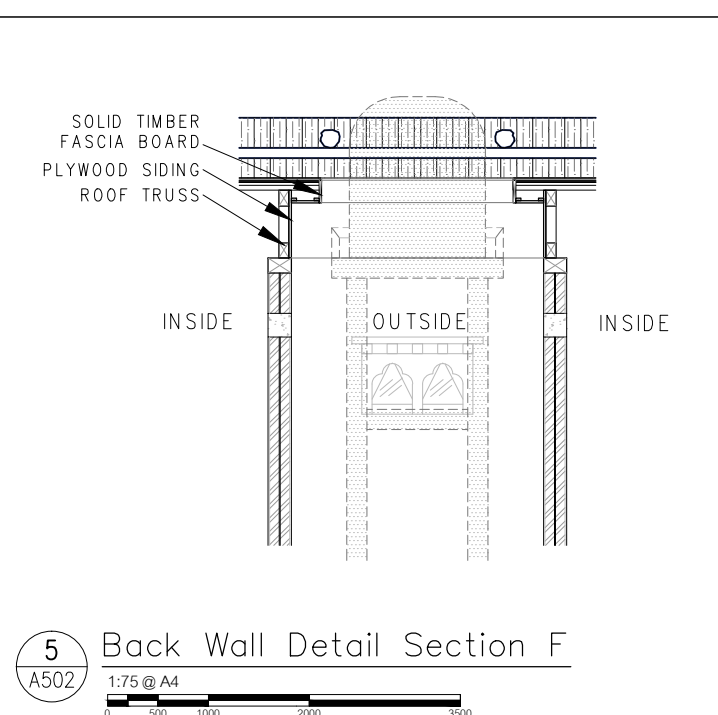
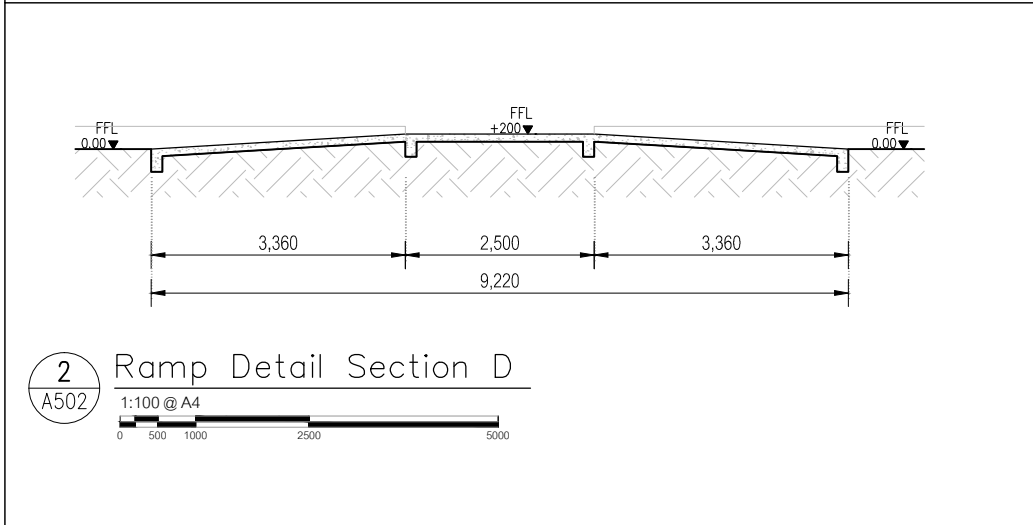
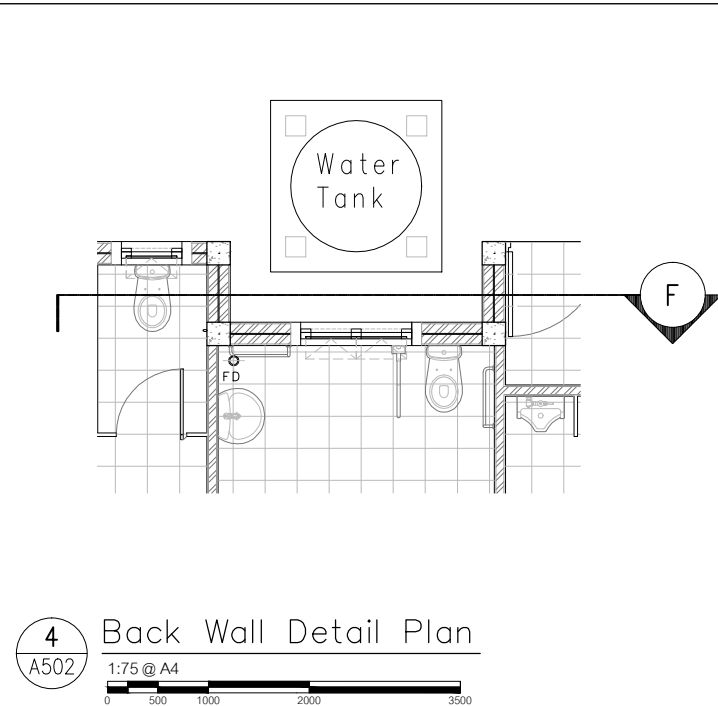
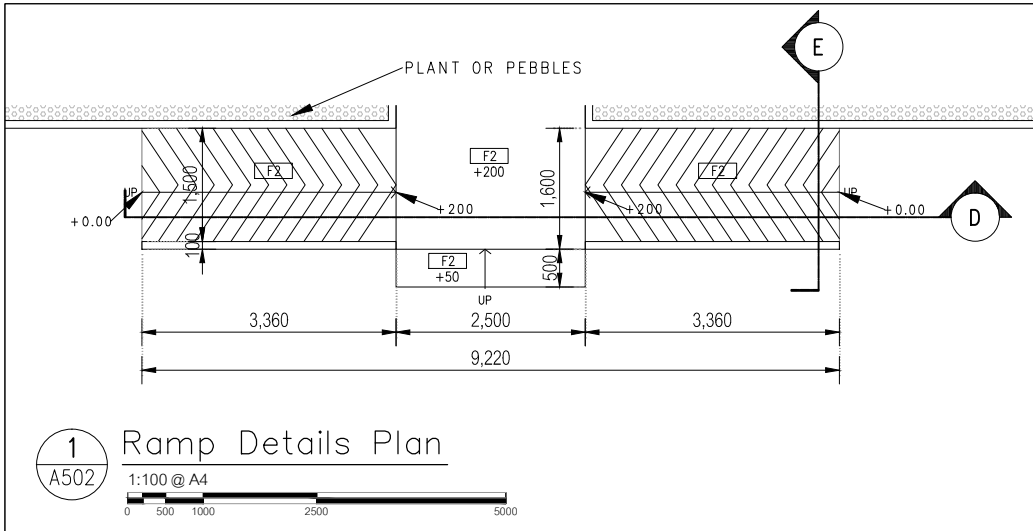
NOTES:  
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NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT HONGTSHO**

DRAWING TITLE:  
**DETAILS 1**

SCALE: NTS, 1 : 25	DRAWING NO.:
DATE: 23 JAN 2018	<b>A501</b>



  
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ARCHITECT:  
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ENGINEER:  
 DORJI WANGDI

NOTES:  
 -

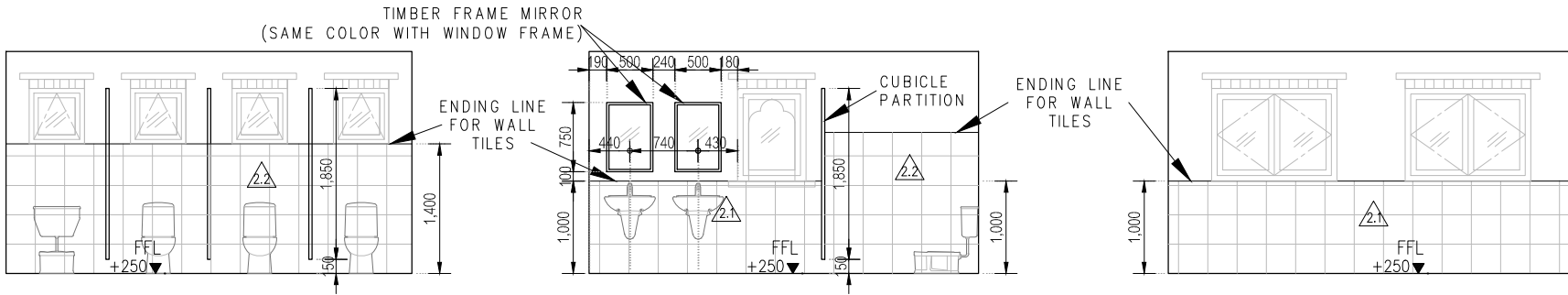
NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT HONGTSHO**

DRAWING TITLE:  
**DETAILS 2**

SCALE: 1:100      DRAWING NO.: **A502**

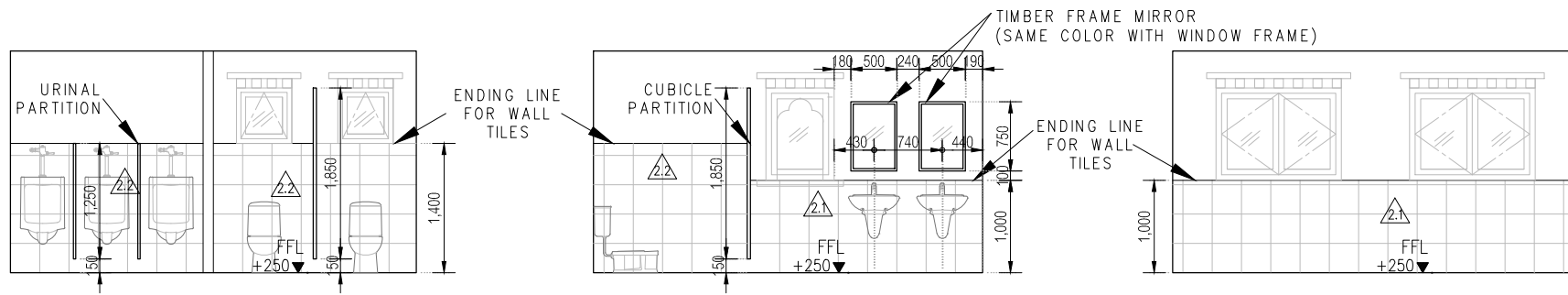
DATE: 23 JAN 2018



1 Female Interior 1  
A601 1:75 @ A4

2 Female Interior 2  
A601 1:75 @ A4

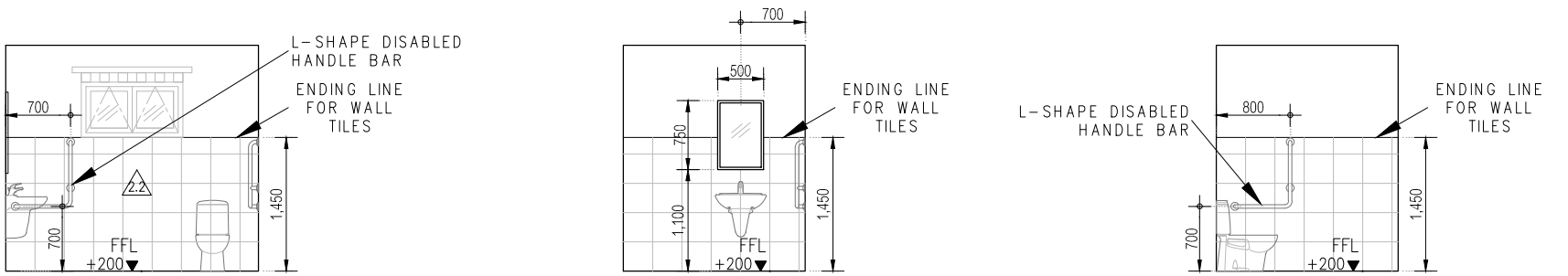
3 Female Interior 3  
A601 1:75 @ A4



4 Male Interior 4  
A601 1:75 @ A4

5 Male Interior 5  
A601 1:75 @ A4

6 Male Interior 6  
A601 1:75 @ A4



7 Disabled Interior 7  
A601 1:75 @ A4

8 Disabled Interior 8  
A601 1:75 @ A4

9 Disabled Interior 9  
A601 1:75 @ A4



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WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

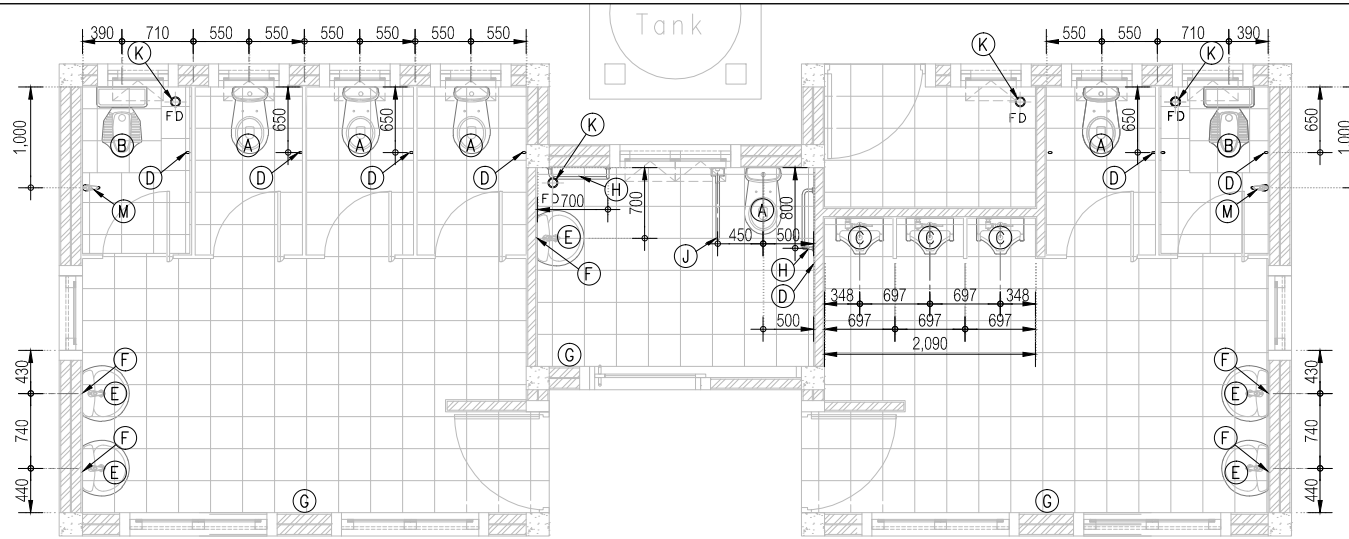
NOTES:

NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT HONGTSHO**

DRAWING TITLE:  
**INTERIOR ELEVATION**

SCALE: 1:75  
DATE: 23 JAN 2018  
DRAWING NO.: **A601**



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ARCHITECT:  
DECHEN LHAZOM CHHOPHEL  
WARISA KEERATIPUNTHAWONG

ENGINEER:  
DORJI WANGDI

NOTES:

-

NO.	DATE	DESCRIPTION

PROJECT NAME:  
**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:  
**SANITARY WARE**

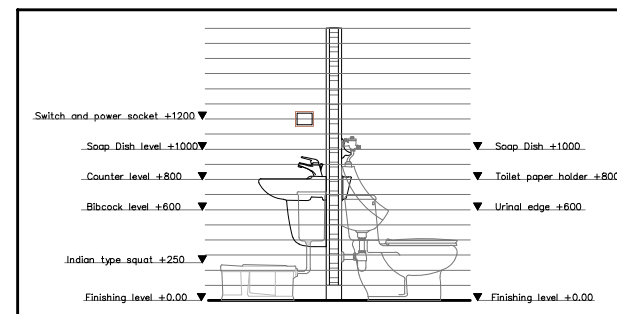


SCALE:  
1:75, 1:50  
DATE:  
23 JAN 2018

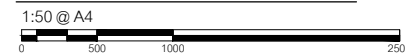
DRAWING NO.:  
**A701**

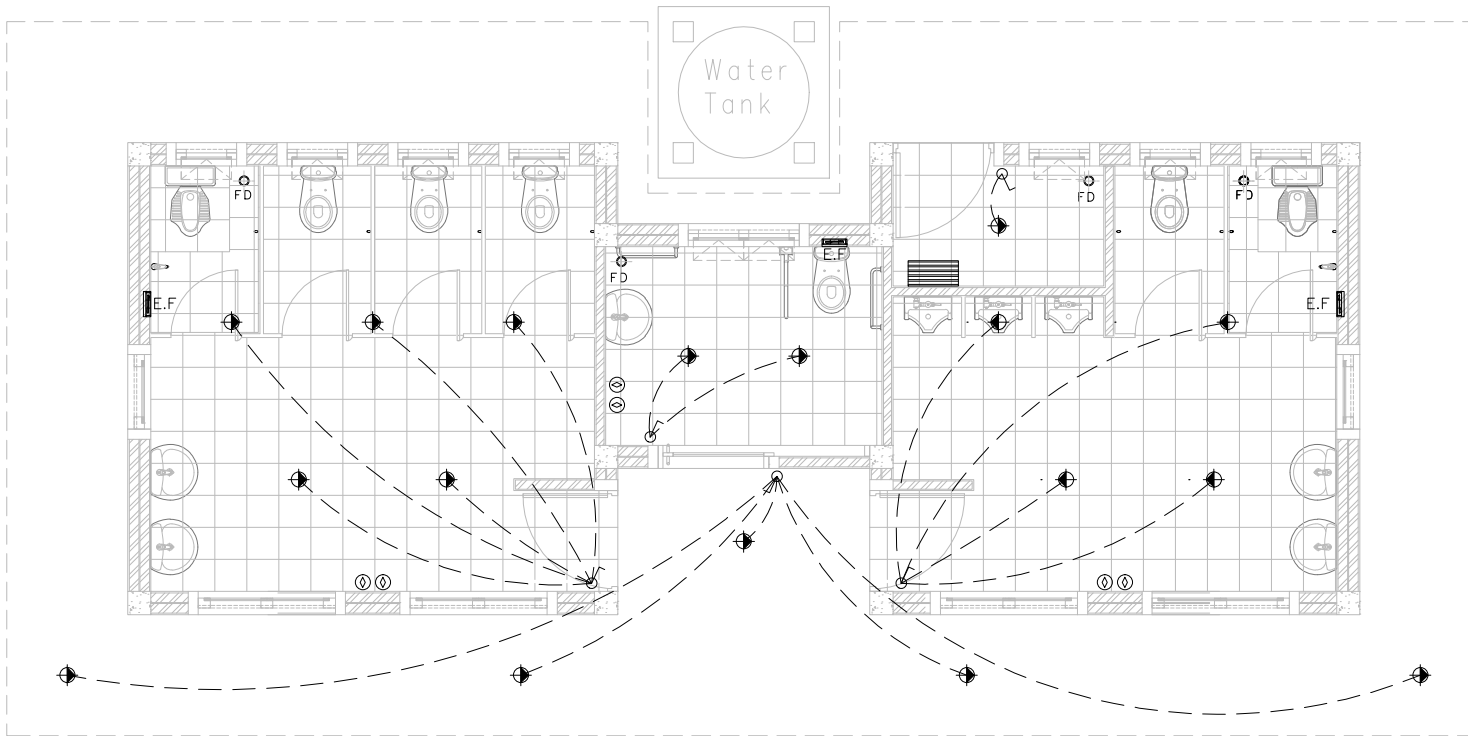
SYM	SANITARY WARE	DESCRIPTION	QTY.	EXAMPLE
(A)	FLUSH TOILET WITH STOP VALVE	• European type toilet, build-in water tank	5	
(B)	SQUAT TOILET WITH STOP VALVE	• Stand-alone Squat toilet, with water tank	2	
(C)	URINAL	• Wall-hung urinal, with flush	3	
(D)	TOILET PAPER HOLDER	• Standless steel	7	
(E)	WASH BASIN BASIN FAUCET WITH STOP VALVE SOAP DISH	• Wall hung wash basin, with half-pedestal • Single handle faucet, hot&cold water mixer • Standless steel, Wall Mountable	5 5 4	  
(F)	MIRROR 500x750 mm.	• Timber frame 25mm. Same Color as window frame	5	
(G)	HAND DRYER	• Automatic Single blower hand dryer	3	
(H)	DISABLED HANDLE BAR L-SHAPE	• L-shape, Wall-hung 500x7000 mm.	2	
(J)	DISABLED HANDLE BAR U-SHAPE	• U-shape, Wall-hung 800x800 mm.	1	
(K)	FLOOR DRAIN	• With cover	4	
(M)	BIB COCK	• Standless Steel, Wall Mounted	4	

**Sanitary Ware**



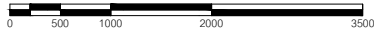
**Sanitary Ware Level**





### Electrical Plan

1:75 @ A4



SYM	ELECTRICAL ELEMENTS	
	CEILING LIGHT	
	EXHAUST FAN Ceiling-Mounted Type	
	SINGLE SWITCH	
	POWER SOCKET	
	GEYSER	



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ARCHITECT:

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WARISA KEERATIPUNTHAWONG

ENGINEER:

DORJI WANGDI

NOTES:

-

NO.	DATE	DESCRIPTION

PROJECT NAME:

**RESTROOM AT  
HONGTSHO**

DRAWING TITLE:

**ELECTRICAL PLAN**



SCALE:

1:75

DRAWING NO.:

**A702**

DATE:

23 JAN 2018

# STRUCTURAL DRAWINGS

FOR PROPOSED RESTROOM AT  
HONGTSHO

CLIENT: TOURISM COUNCIL OF BHUTAN



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PROJECT  
RESTROOM AT HONGTSHO

DRAWING TITLE:

### NOTES:

- All the dimensions are in mm unless specified.
- Concrete Grade **M20**
- Steel Grade Fe **500**

ARCHITECT:  
Dechen Lhazom Chophel

ENGINEER :  
Dorji Wangdi

CHECKED BY:

APPROVED BY:

SUBMISSION  
DATE:

REVISION: 1

REVISION: 2

REVISION:  
—

DATE:  
12/12/2017

SCALE:  
NTS

DRAWING NO:

STR/DWG - 001

## STRUCTURAL DESIGN NOTES AND COMPLIANCE

### 1:GENERAL NOTES

- READ THIS DRAWINGS IN CONJUNCTION WITH ENGINEERS' AND OTHER RELAVANT ENGINEERS' DRAWING.
- ALL DIMENSIONS ARE IN MILIMETER UNLESS NOTED OTHERWISE.
- DRAWINGS SHALL NOT BE SCALED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.

### 2:DESIGN CODES:

- IS-456:2000 - CONCRETE DESIGN
- IS-13920:1993 - DUCTILE DETAILING OF REINFORCE CONCRETE STRUCTURES SUBJECTED TO SEISMIC FORCES.
- IS-1893:2002 - CRITERIA FOR EARTHQUAKE RESISTANT DESIGN OF STRUCTURES & BUILDING CODE OF BHUTAN 2003.
- IS-806 - DESIGN OF STEEL STRUCTURES
- SP 16 : 1987 - HAND BOOK ON CONCRETE REINFORCEMENT AND DETAILING
- WIND LOAD IN ACCORDANCE WITH IS 875, PART 3 ASSUMING WIND SPEED OF 44M/S
- BHUTAN CODE FOR STRUCTURAL DESIGN.

### 3:DESIGN LOADS:

- UNIT WEIGHT OF RCC = 25KN/M3
- UNIT WEIGHT OF PCC = 24KN/M3
- UNIT WEIGHT OF BRICK MASONRY = 19.6KN/M3
- UNIT WEIGHT OF CEMENT MORTAR = 20KN/M3
- LIVE LOAD ON ROOF = 0.75KN/M2

### 4:FOUNDATION:

- THE DEPTH OF FOUNDATION SHALL EXTENDED TO A MINIMUM OF THE SPECIFIED DEPTH OR TO A STABLE HARD STRATA WHICHEVER IS MORE.
- BEARING CAPACITY OF SOIL FOR DESIGN WORKS= 150KN/M2 (AS PER ACTUAL SOIL TEST REPORT BY SQCA)
- THE COMPACTED FILL MATERIAL SHOULD CONSIST OF CLEAN GRANULAR MATERIAL FREE OF ORGANIC OR DECOMPOSITE MATTER.
- RRM WALL SHALL BE CONSTRUCTED BETWEEN COLUMNS IRRESPECTIVE OF EXTERIOR OR INTERIOR GRIDS.
- THE SOIL UNDER THE CONCRETE BASE SLAB SHALL BE COMPACTED THROUGHLY AND A MINIMUM OF 150 MM LAYER OF STONE SOLING SHALL BE PLACED OVER THE COMPACTED EARTH AND SEALED WITH 100 MM THICK LAYER OF BINDING CONCRETE.
- BACKFILL SHALL BE DONE ONLY AFTER CONSTRUCTION OF WALLS.

### 5:REINFORCEMENTS:

- ALL REINFORCEMENT BARS SHOWN AS  $\phi$  ARE Fe 500 (TMT).
- SPlicing/LAPPING OF BARS SHALL BE STAGGERED AND IN NO CASE MORE THAN 50% BARS SHALL BE LAPPED AT ANY SECTION.
- LAPPING OF BARS FOR BEAMS & SLABS SHALL BE AVOIDED IN THE MAXIMUM TENSION ZONES.
- REINFORCEMENT SHALL BE SUITABLY ADJUSTED AT SITE TO CLEAR POCKETS, BOLTS, OPENINGS, CUTOUTS ETC... AS APPROVED BY THE ENGINEER IN CHARGE UNLESS SHOWN OTHERWISE IN THE DRAWINGS.
- BAR BENDING SCHEDULE AS PER IS 456:2000 SHALL BE FOLLOWED STRICTLY TO AVOID UNINTENDED LOCATION OF SPLICES.

### 6:CONCRETE WORKS:

- ALL STRUCTURAL REINFORCED CONCRETE WORKS SHALL BE WITH MIX CONCRETE GRADE OF M20 UNLESS SPECIFIED OTHERWISE.
- AGGREGATE FOR ALL RCC WORKS SHALL BE WELL GRADED AND MAXIMUM SIZE OF 20MM UNLESS STATED OTHERWISE
- WATER CEMENT RATIO SHALL BE MAXIMUM OF 0.55.
- LEAN CONCRETE FOR FILLING UNDER FOUNDATION SHALL BE 1:4:8 WITH AGGT. OF 40MM.
- LOCATION OF CONSTRUCTION JOINTS IF ANY IN STRUCTURAL CONCRETE SHALL BE AS PER THE APPROVAL TAKEN FROM THE ENGINEER-IN-CHARGE BEFORE EXECUTION.
- MINIMUM CLEAR CONCRETE COVER FROM THE OUTSIDE FACE OF THE MAIN BAR AS PER IS 456 2000 SHALL BE AS FOLLOWS.

- FOUNDATION = 50MM
- COLUMN = 40MM
- BEAM = 25MM
- SLAB AND STAIRCASE = 20MM

- ALL EXPOSED CONCRETE SURFACES SHALL BE NEAT PLASTER FINISHES.
- FOR POSITION AND SIZE OF CUTOUT IN R.C SLAB PLEASE REFER TO THE CORRESPONDING DRAWINGS OF OTHER DECIPLINE, UNLESS SHOWN OTHERWISE.

- DO NOT PLACE ANY CONDUITS AND OTHER PIPES THROUGH BEAMS & COLUMNS UNLESS APPROVAL FROM THE STRUCTURAL ENGINEER

- CONCRETE SHALL BE VIBRATED BY USING NEEDLE VIBRATORS PROPERLY AS PER STANDARD CODE OF PRACTICE.

- ALL CONSTRUCTION SHALL BE CARRIED OUT AS PER THE LATEST SQCA OR ANY RELEVANT AGENCIES SPECIFICATION AND RELEVANT CODE OF PRACTICES.
- WATER FIT FOR DRINKING SHALL BE USED FOR MIXING THE CONCRETE INGREDIENTS AND CURING.

### 7:TIMBER

- ALL STRUCTURAL TIMBER SHALL CONFIRM TO BTS-006-2003
- MOISTURE CONTENT OF THE STRUCTURAL TIMBER SHALL NOT EXCEED 12%.
- ALL STRUCTURAL TIMBER SHALL HAVE A MINIMUM ALLOWABLE BENDINGG STRESS 'fb' OF 7MPa, A MINIMUM ALLOWABLE HORIZONTAL SHEAR STRESS 'fv' OF 0.6 MPa, A MINIMUM MODULAS OF ELASTICITY 'e' OF 9800 MPa.

### 8:FORMWORKS

- QUALITY OF FORMWORK SHALL BE IN ACCORDANCE WITH IS 456:2000
- FORMWORJK SHALL BE PROPERLY HELD IN POSITIONS AND MUST NOT ALLOW ANY ANY KIND OF MOVEMENT DURING PLACEMENT OR LABOURING.
- STRIPPING OF FORMWORK SHALL ALSO COMPLY WITH THE CLAUSE 11.3 OF IS 456:2000
- THE CONCRETE RECEIVING FACE OF FORMWORK SHALL BE VERY SMOOTH AND FIRMED.
- NO BURNT MOBILE SHALL BE USED AT FORMWORKS. THE FACE OF FORMWORK IN CONTACT WITH CONCRETE SHALL BE CLEANED AND TREATED WITH A FORM RELEASE AGENT.

### 9: MASONRY WORKS

- MORTAR FOR MASONRY WORKS SHALL BE CM 1:4 OR RICHER.
- ALL EXTERIOR WALLS SHALL BE PREVENTED FROM OUT OF PLANE FAILURES BYB PROVIDING REINFORCEMENT SHOWN IN DETAILS.

### 10:DIMENSIONS

- ALL DIMESNITIONS ARE IN MILLIMETERS (mm) UNLESS SPECIFIED IN DRAWINGS.
- THE DIMENSIONS SHALL BE READ, NOT ,MEASURED.

## IMPORTANT NOTES:

THE CLIENT AND ENGINEER HAS RIGHT TO REJECT, DISMANTLE, ASK FOR REPLACEMENT etc. AT ANY TIME OF WORKK DURING CONTRACT PERIOD IF THE WORK, MATERILAS AND WORKMANSHIP ARE FOUND NOT SATISFACTORILY DONE OR PROVIDED AT THE SITE AT THE CONTRACTOR'S COST.



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### PROJECT

RESTROOM AT HONGTSHO

### DRAWING TITLE:

Design Compliance

### NOTES:

- All the dimensions are in mm unless specified.
- Concrete Grade **M20**
- Steel Grade **Fe 500**

### ARCHITECT:

Dechen Lhazom Chophel

### ENGINEER :

Dorji Wangdi

### CHECKED BY:

### APPROVED BY:

SUBMISSION  
DATE:

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REVISION:  
-

DATE:  
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SCALE:  
NTS

DRAWING NO:

STR/DWG - 002



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Foundation layout

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

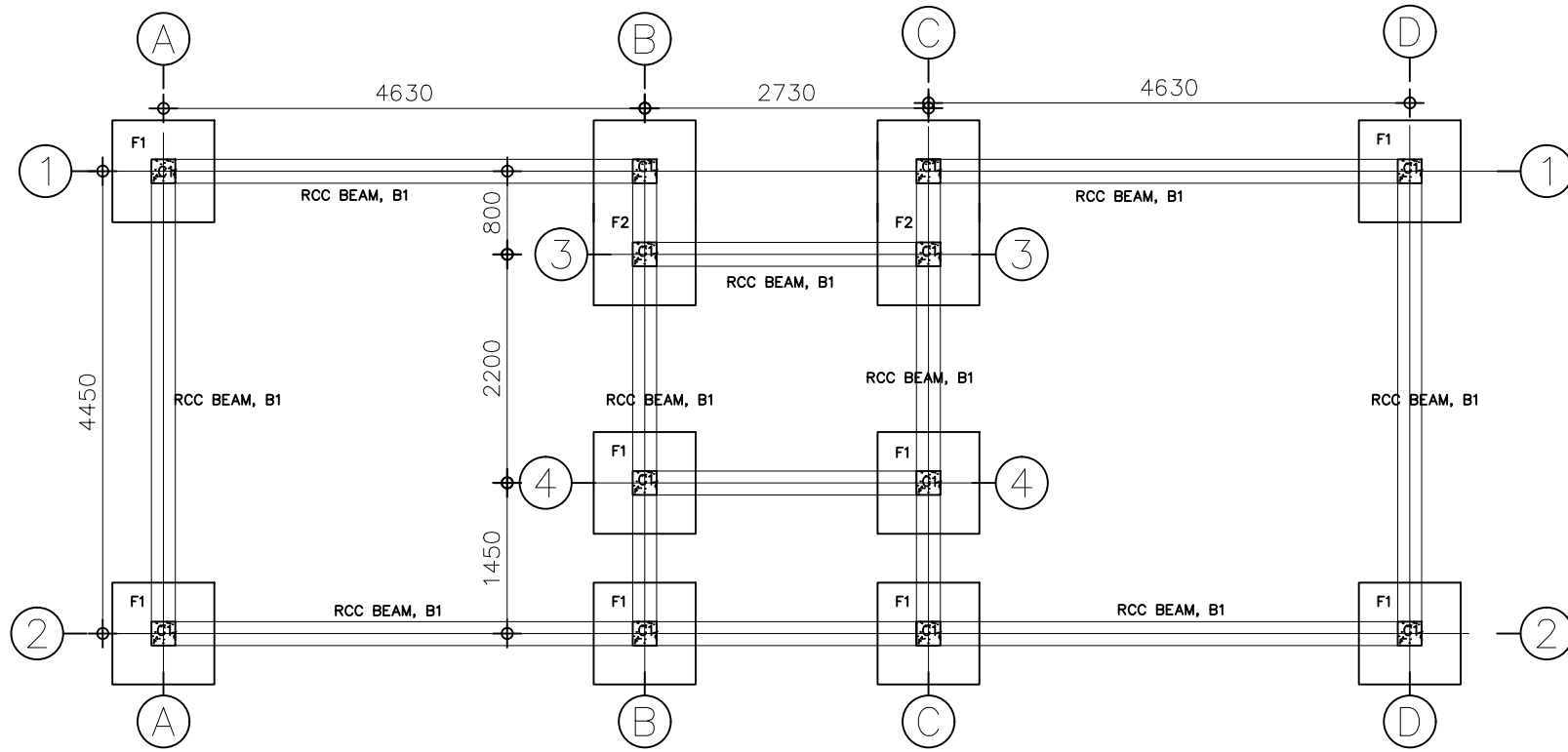
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COLUMN & FOOTING AND BEAM LAYOUT  
PLAN





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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

**SUBMISSION DATE:**

**REVISION: 1**

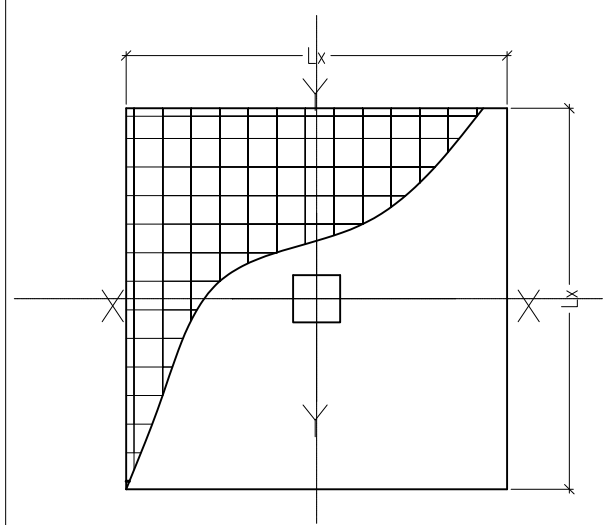
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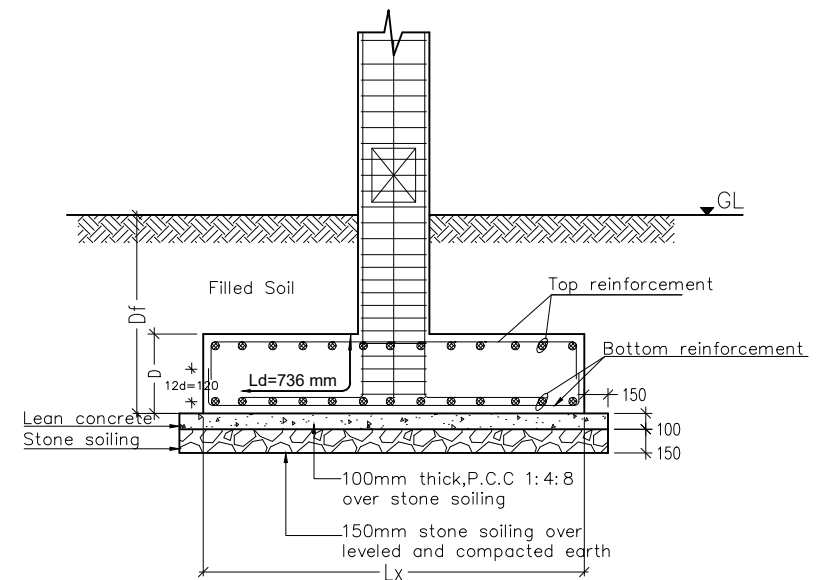
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**DRAWING NO:**

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ISOLATED FOOTING REBAR LAYOUT PLAN, F1

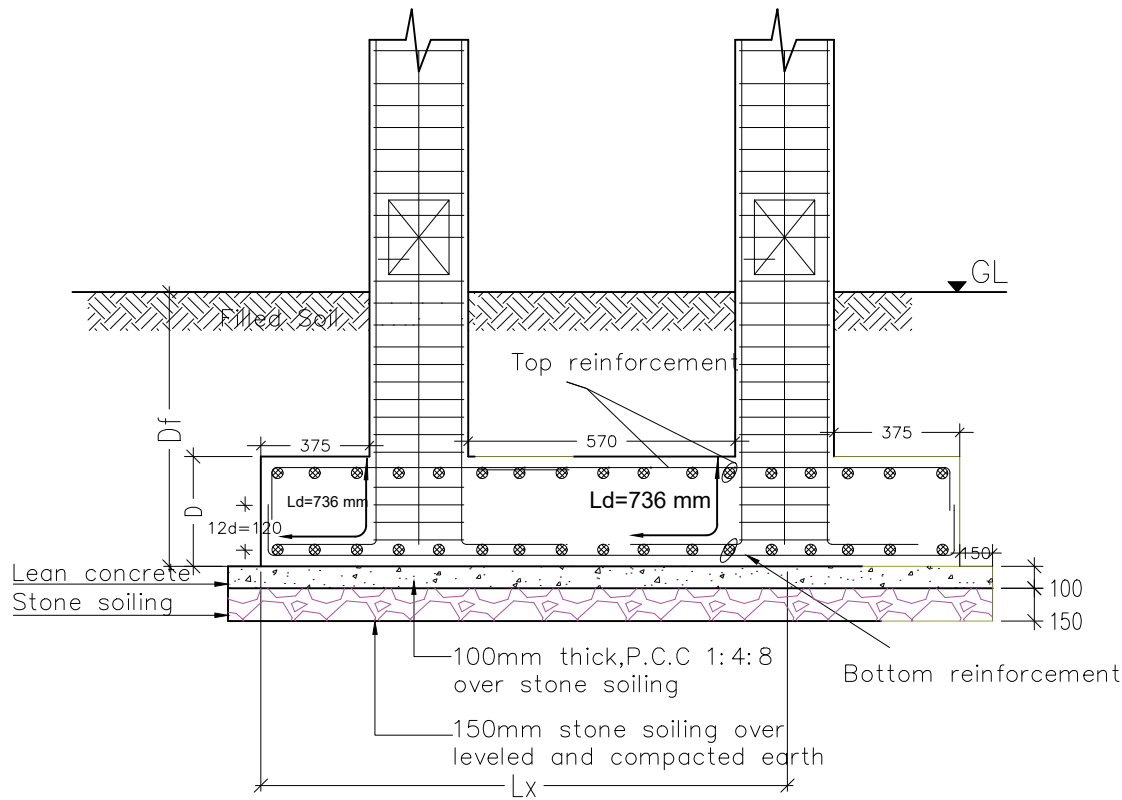
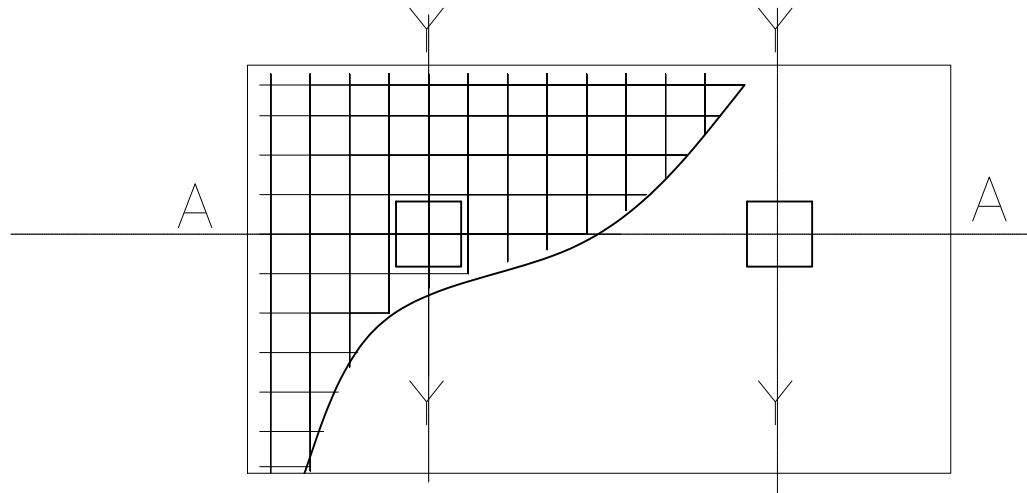


SECTIONAL ELEVATION FOR ISOLATED FOOTING, F1  
AND SIDE ELEVATION OF F2 (Section X-X AND Y-Y)

SCHEDULE OF FOOTINGS

SL/ NO	FOOTINGS TYPE	FOOTING SIZE		DEPTH(D)	BOTTOM REINFORCEMENTS		TOP REINFORCEMENTS		DEPTH OF FOUNDATION(DF)
		LENGTH(Lx)	WIDTH(Ly)		X-DIRECTION	Y-DIRECTION	X-DIRECTION	Y-DIRECTION	
F1	ISOLATED FOOTING	1000	1000	300	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	1000
F2	COMBINED FOOTING	1820	1000	300	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	1000

NOTE: TOTAL DEVELOPMENT LENGTH= 736 MM BEYOND THE UPPER FACE OF FOOTING MAT  
 -SPECIAL CONFINING ZONE EXTENDED FOR FULL DEPTH OF FOUNDATION  
 -HOOK LENGTH OF REINFORCEMENT IN FOOTING MAT IS  $12 \times \text{diameter of bar}(D_b) + 2 \times \frac{\pi \times 8 D_b}{8} = 120 + 62.8 = 182.8 \text{ mm}$



FRONT SECTIONAL ELEVATION FOR COMBINED FOOTING,  
F2(SECTION A-A)



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

**SUBMISSION DATE:**

**REVISION: 1**

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**DATE:**  
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**SCALE:**  
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**DRAWING NO:**

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Drain and plinth protection section

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

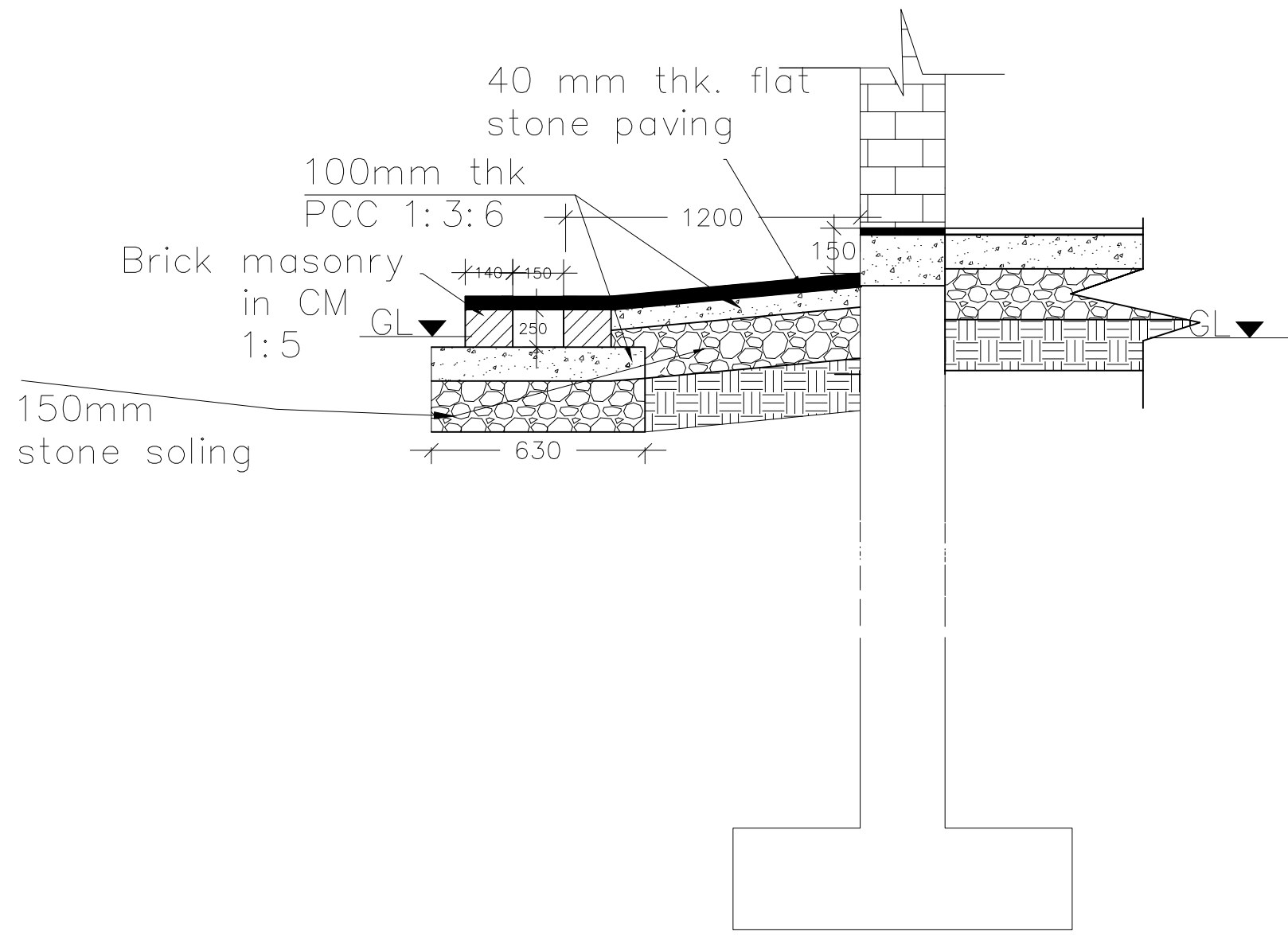
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**SCALE:**  
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**DRAWING NO:**  
STR/DWG - 006



Drain and Plinth protection section

125mm brick wall

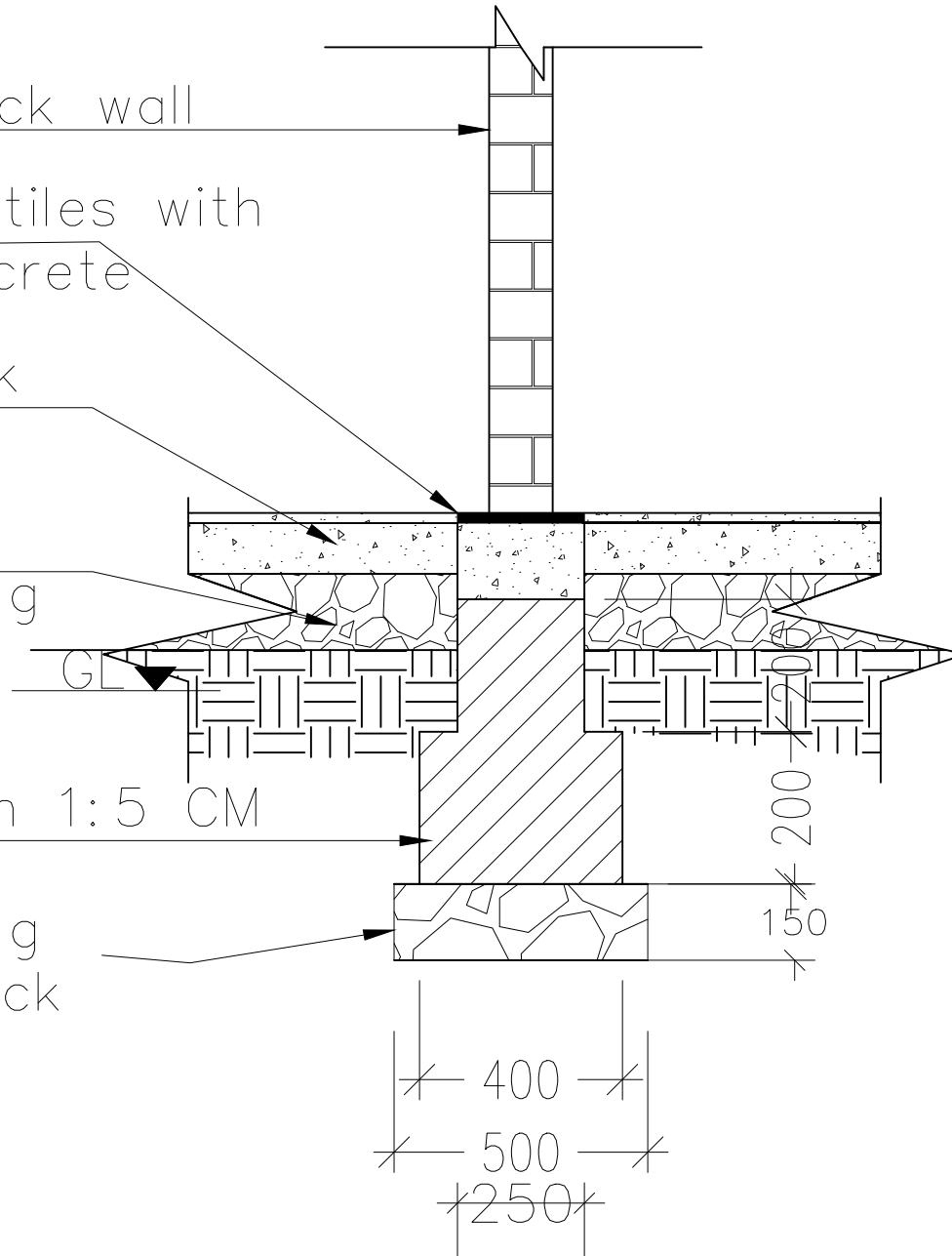
Anti-skid tiles with  
1:2:4 concrete

100mm thk  
PCC 1:4:8

150mm  
stone soling

RRM wall in 1:5 CM

Stone soling  
150mm thick



INTERNAL WALL FOUNDATION  
DETAILS FOR 125mm WALL



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Internal wall foundation Details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
external wall foundation Details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

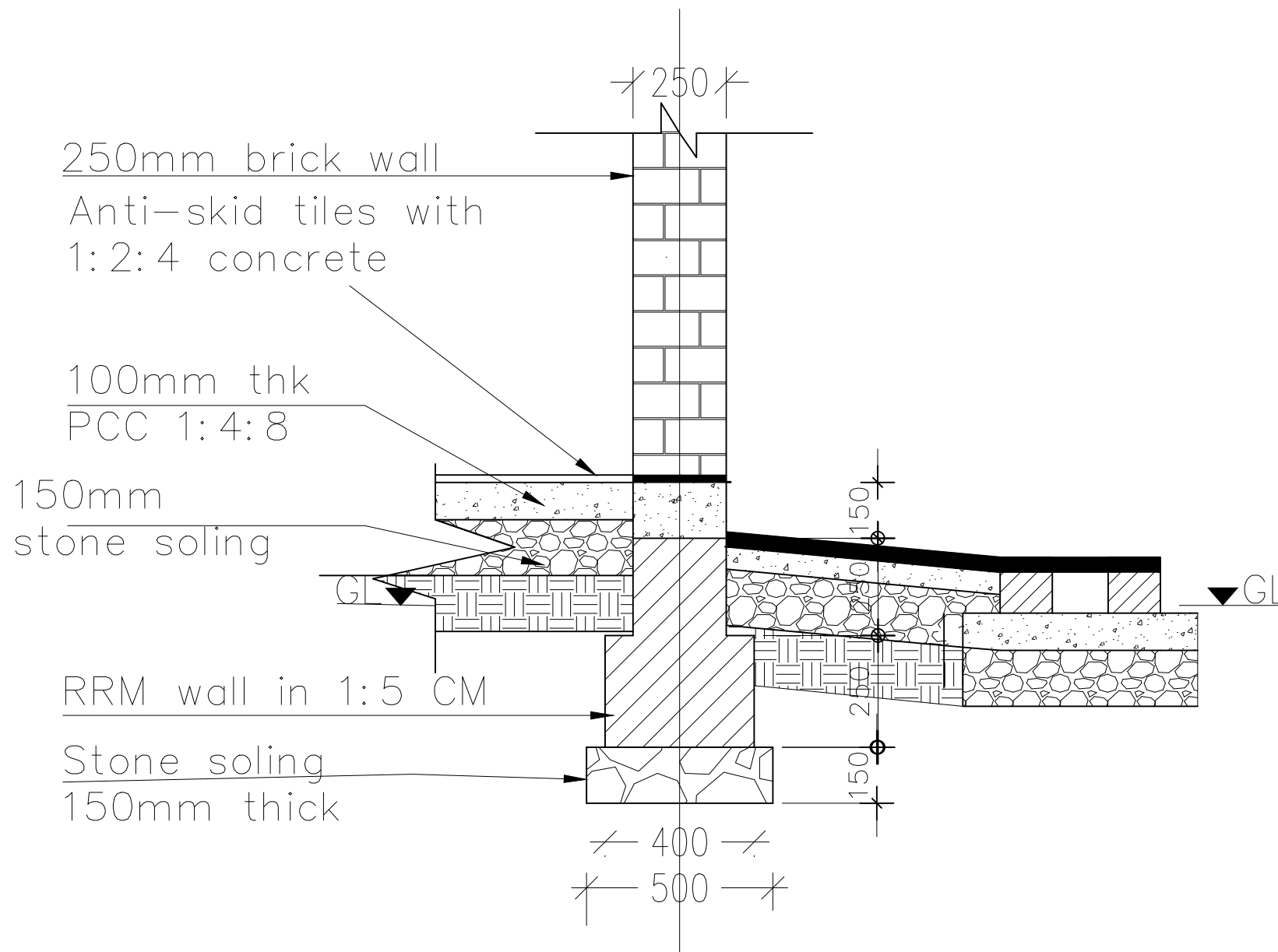
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**SCALE:**  
NTS

**DRAWING NO:**  
STR/DWG - 008



250mm brick wall  
Anti-skid tiles with  
1:2:4 concrete

100mm thk  
PCC 1:4:8

150mm  
stone soling

RRM wall in 1:5 CM

Stone soling  
150mm thick

EXTERNAL WALL FOUNDATION  
DETAILS FOR 250mm WALL



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
stirrups and columns details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

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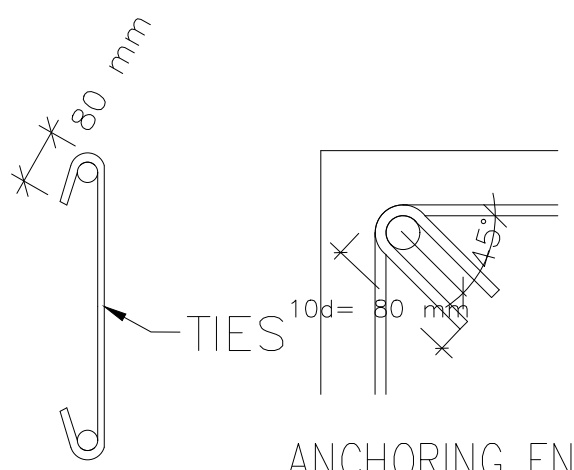
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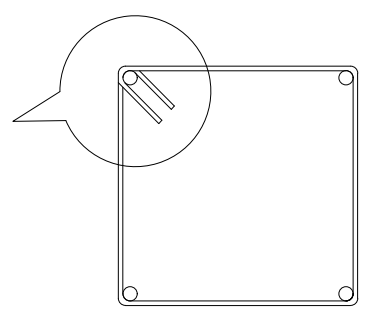
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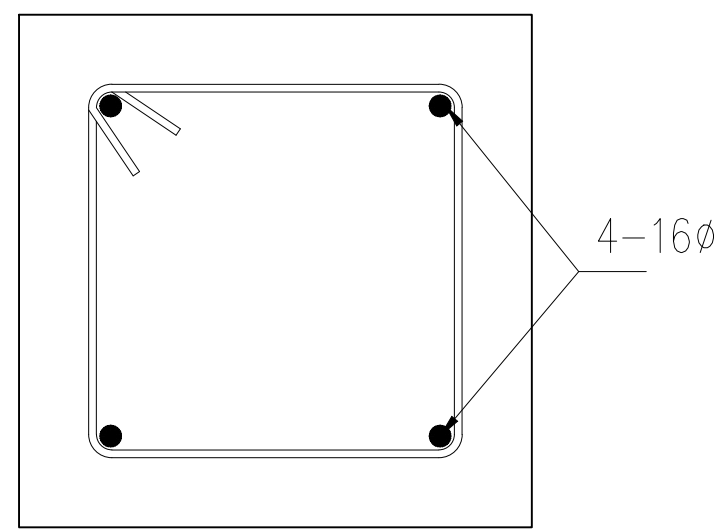
ANCHORING ENDS  
OF STIRRUPS



2 LEGGED LINKS

**Development length for M20 and FE500**

Rebar size	Ld in tension=57 Ø	Ld in compression=46Ø
12Ø	684	552
16Ø	912	736
20Ø	1140	920
25Ø	1425	1150
Lo	500 mm at all joints	



COLUMN C1

SCHEDULE FOR COLUMN

SL.NO	COLUMN	SIZE	REINFORCEMENTS	
			LONGITUDINAL	TIES
				NORMAL
1	C1	250*250	4-16 $\phi$	8 $\phi$ @ 150 C/C      8 $\phi$ @ 100 C/C

NOTE: -

1. Main Bars splices in column shall be located only in the central half of the column length
2. Only 50% of the bars shall be spliced at any storey, but if more than 50% of the bars are spliced at one location, the lap length shall be increased by 30%;
3. Same section and main reinforcement shall be provided for entire length of the column;
4. Special confining steel shall be provided as shown in the drawing and should continue at least 500mm on either sides of the columns and 350 mm on the either sides of beams;
- 4: Details for other beam column junction can be similarly applied according to sample detailing



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**PROJECT**

RESTROOM AT HONGTSHO

**DRAWING TITLE:**

Schedule of columns

**NOTES:**

-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**

Dechen Lhazom Chophel

**ENGINEER :**

Dorji Wangdi

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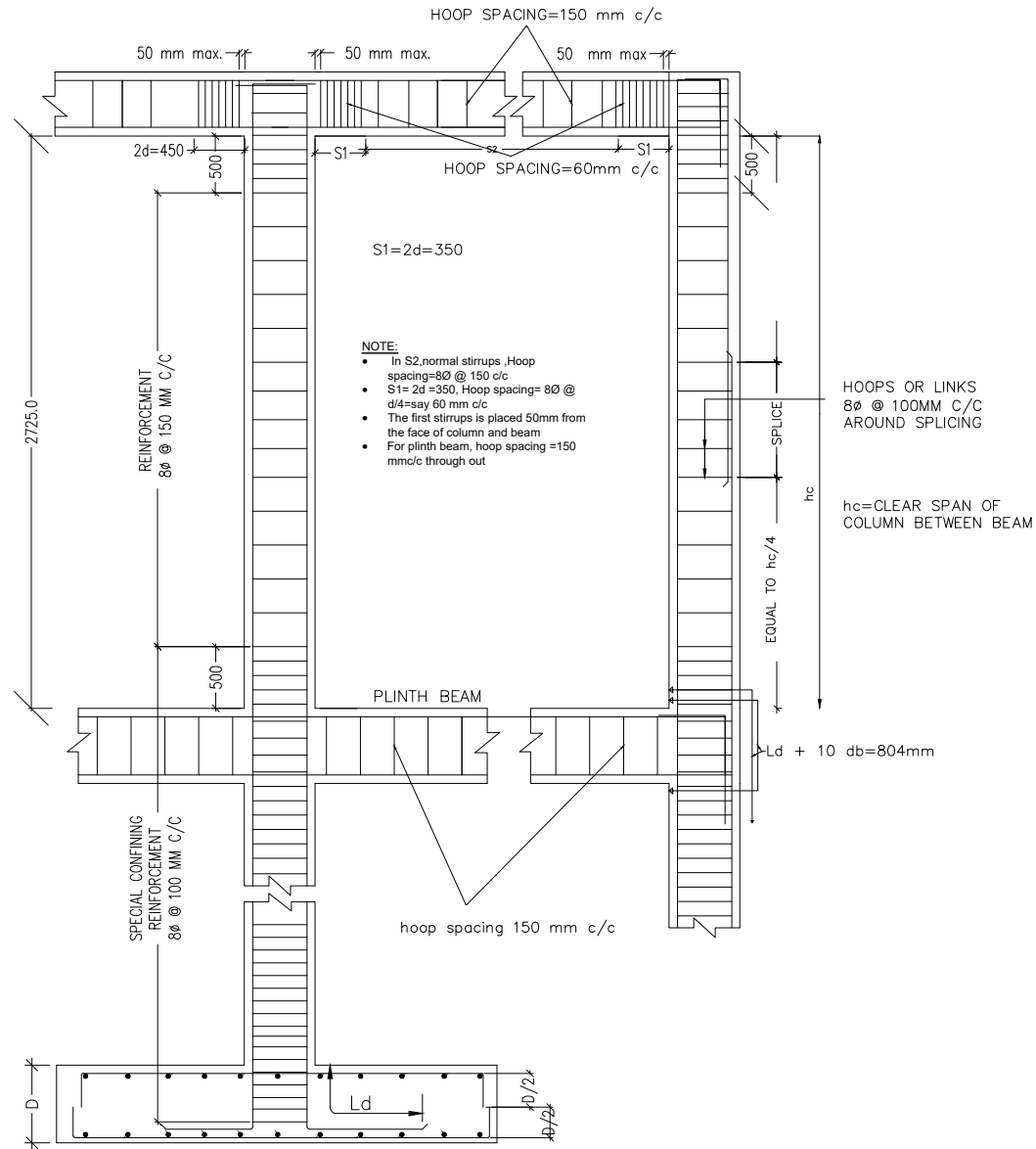
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COLUMN & JOINT DETAILING (The detailing will be same for all other grids. The detailing at the junction shall be adjusted accordingly from this sample)



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
columns , beams and footing section

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

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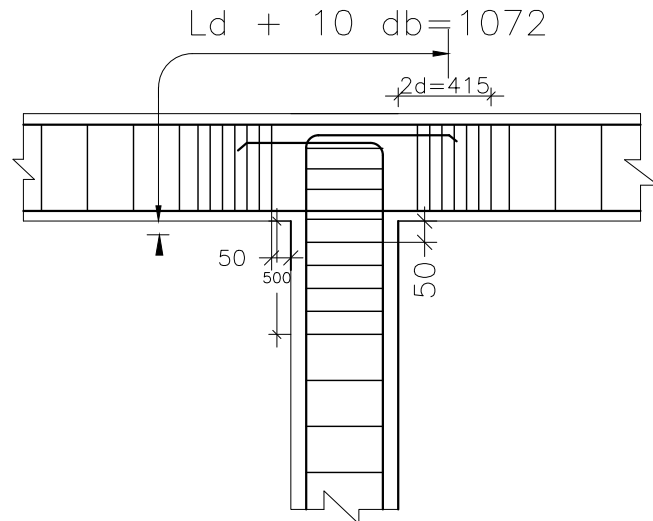
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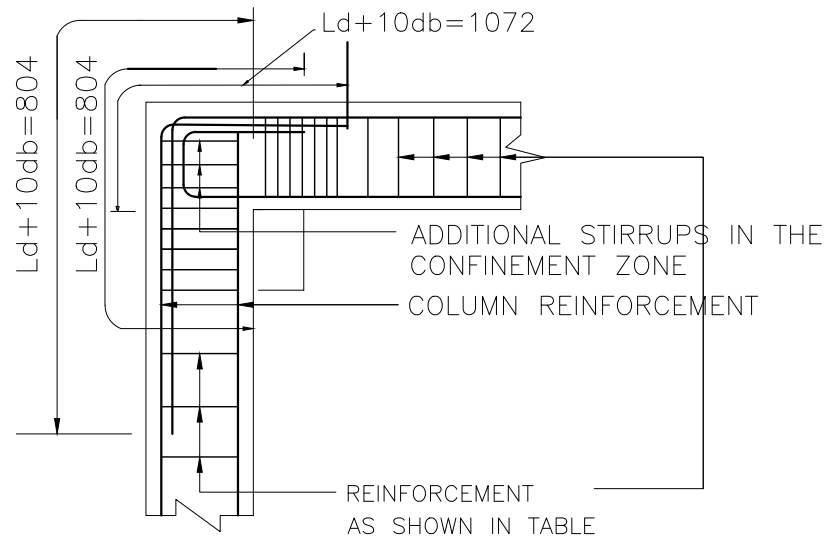
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TYPICAL ANCHORAGE JOINTS  
 @ central/interior column  
 and continuous beam



ANCHORAGE OF BEAMS IN CORNER JOINT  
 (SINGLE SPAN BEAM terminating  
 the corner columns)



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**PROJECT**  
 RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
 Joint details

**NOTES:**  
 -All the dimensions are in mm  
 unless specified.  
 -Concrete Grade M20  
 -Steel Grade Fe 500

**ARCHITECT:**  
 Dechen Lhazom Chophel

**ENGINEER :**  
 Dorji Wangdi

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Beam layout

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

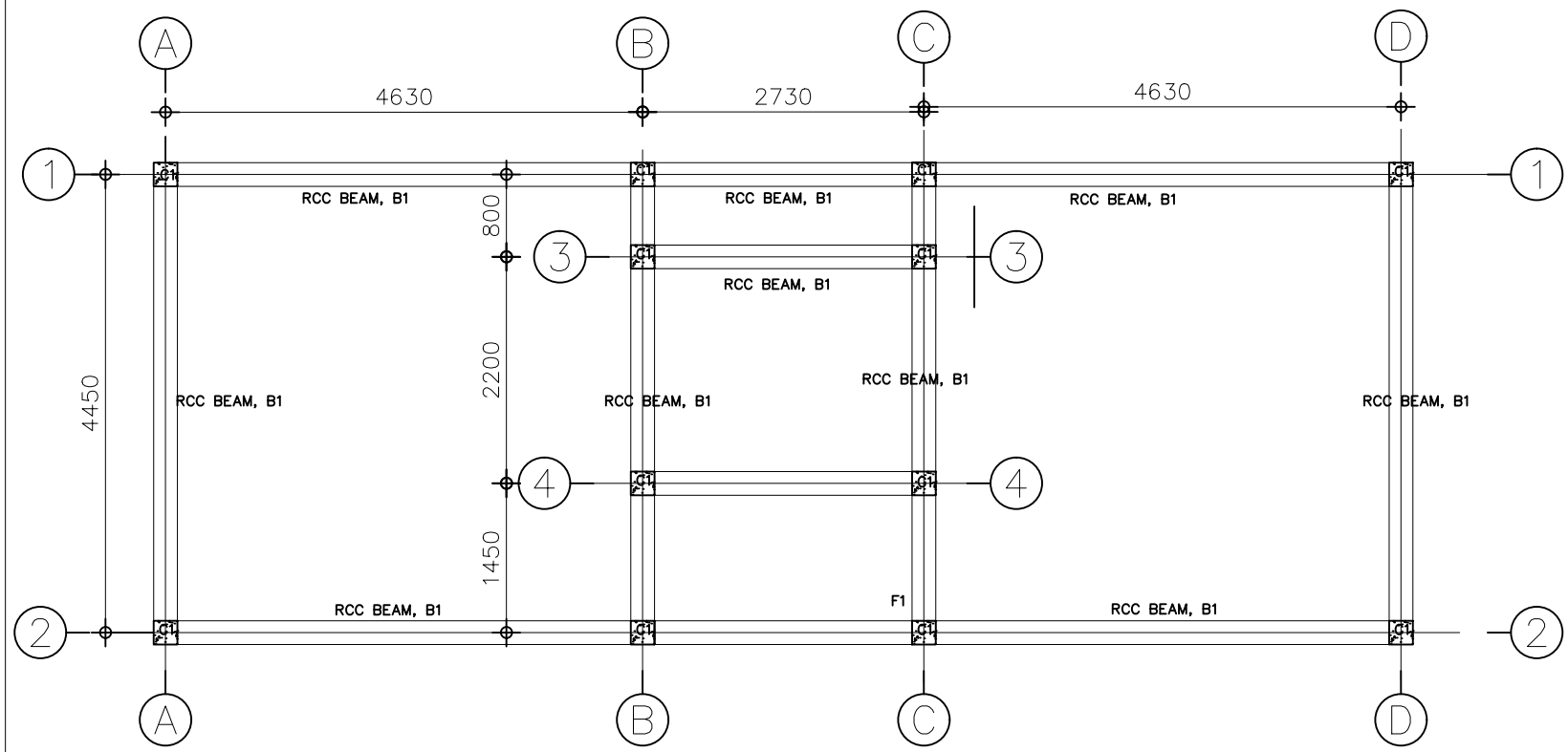
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**DRAWING NO:**  
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PLINTH BEAM AND ROOF BEAM  
LAYOUT

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Beam details

**NOTES:**  
-All the dimensions are in mm  
unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

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**SUBMISSION  
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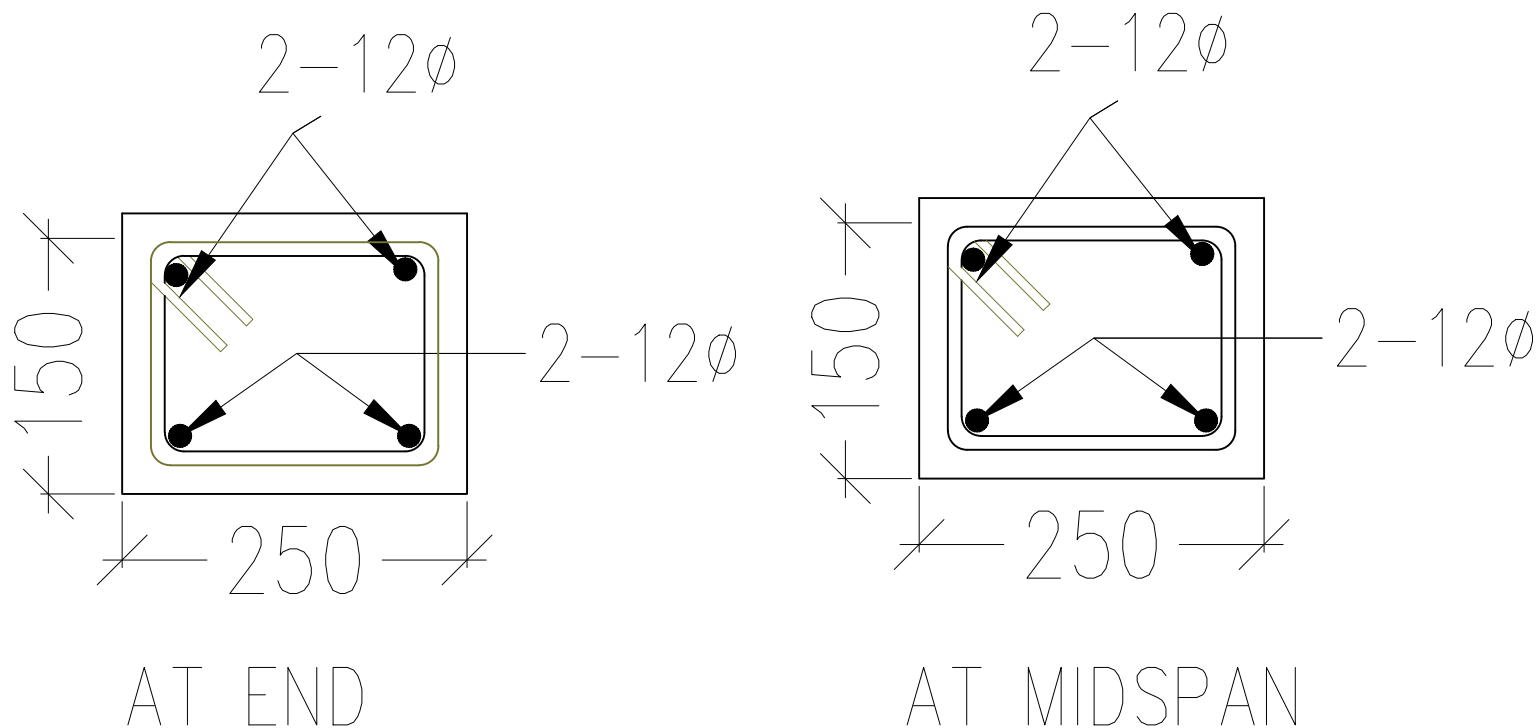
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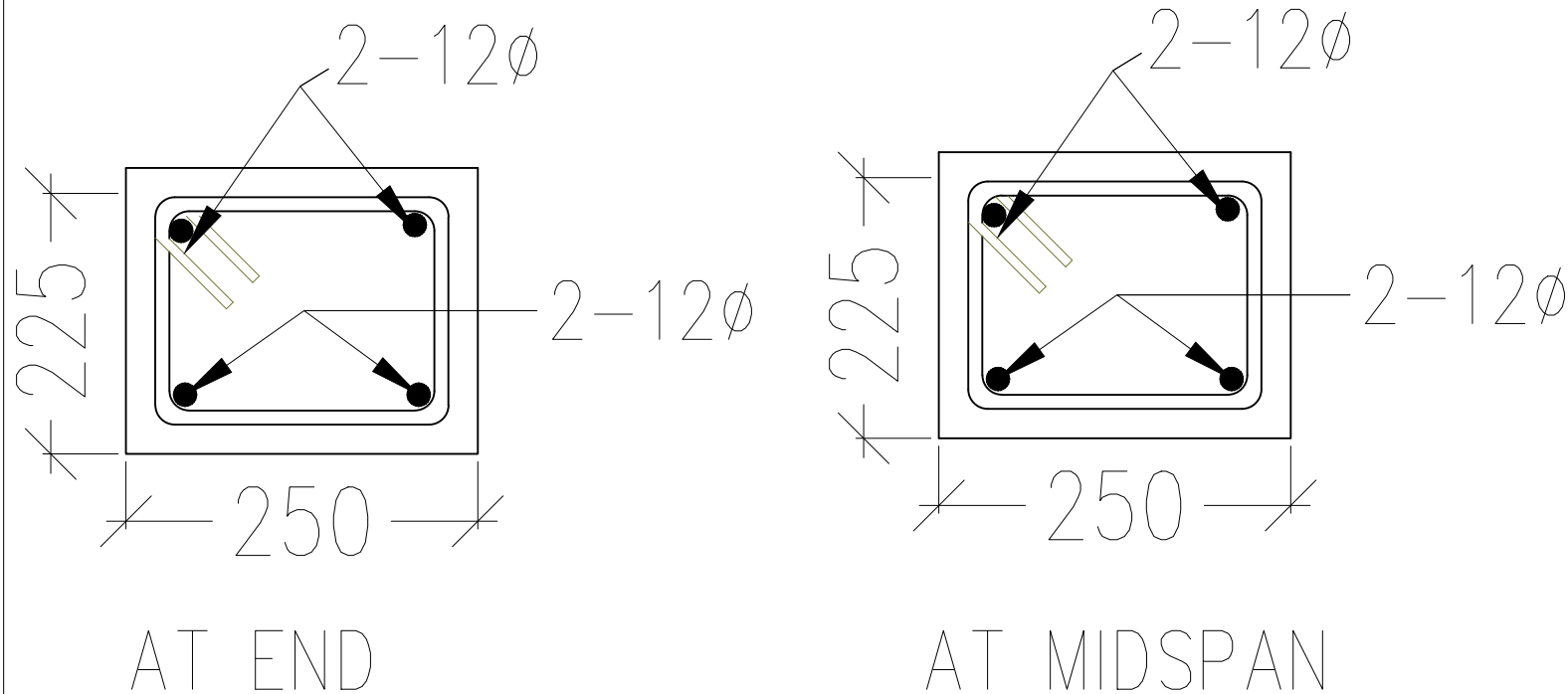
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## PLINTH BEAM DETAILS

**NOTE:**

- Hoop spacing, 150 mm c/c throughout



## ROOF BEAM DETAILS

### NOTE:

- In S2, normal stirrups, Hoop spacing =  $8\emptyset @ 150$  c/c
- S1 =  $2d = 350$ , Hoop spacing =  $8\emptyset @ d/4 = \text{say } 60$  mm c/c



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**PROJECT**  
RESTROOM AT HONGTSHO

### DRAWING TITLE:

Beam details

### NOTES:

- All the dimensions are in mm unless specified.
- Concrete Grade M20
- Steel Grade Fe 500

### ARCHITECT:

Dechen Lhazom Chophel

### ENGINEER :

Dorji Wangdi

### CHECKED BY:

### APPROVED BY:

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NTS

DRAWING NO:

STR/DWG - 015

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Roof details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

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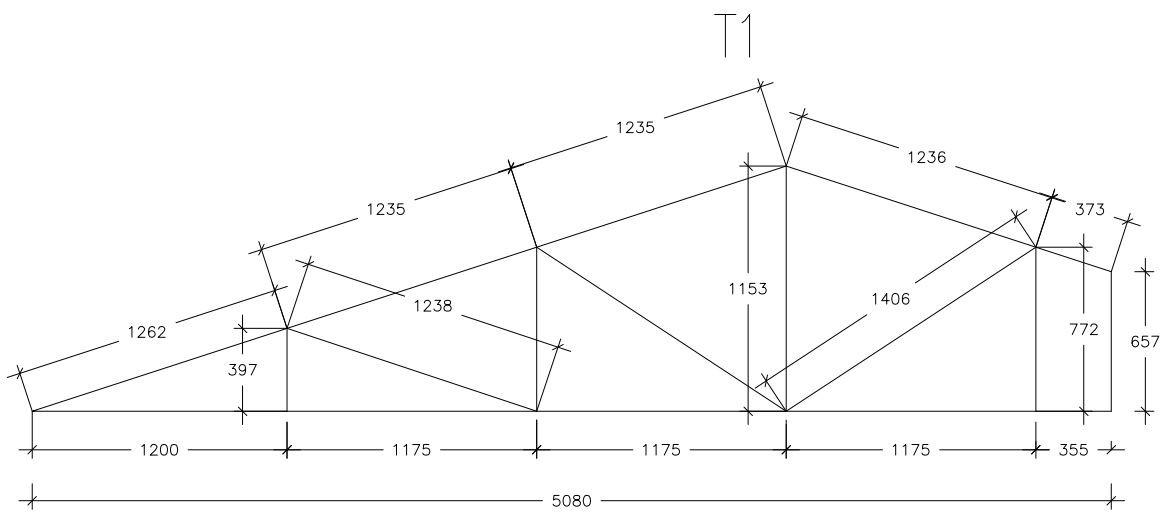
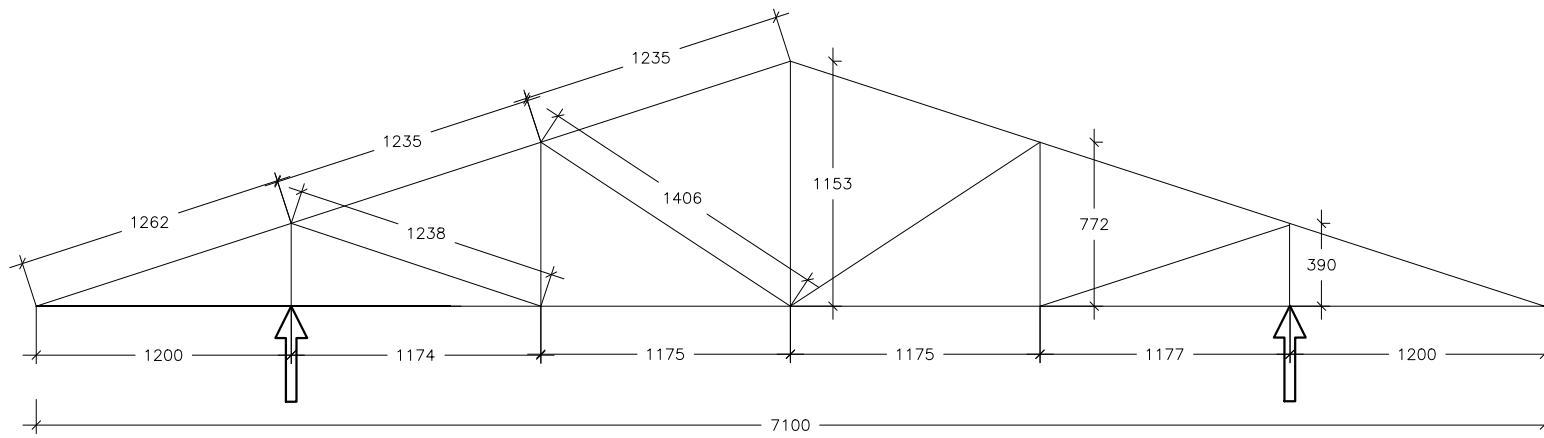
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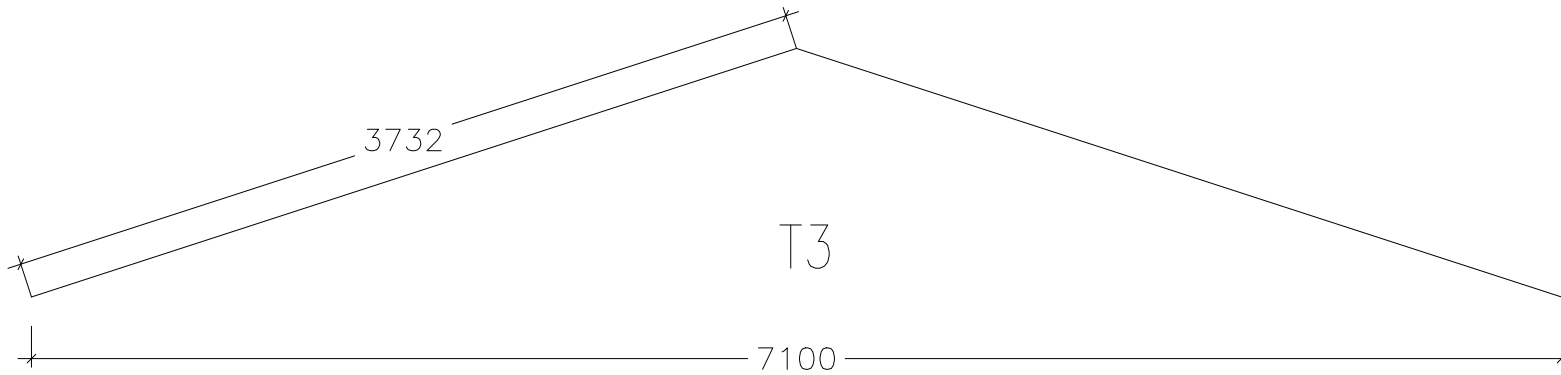
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**DRAWING NO:**

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ROOF TRUSS DETAILS (Refer architectural drawing for the layout of the truss)



ROOF TRUSS DETAILS (Refer architectural drawing for the layout of the truss)

### Truss member sizes

1. Rafter= 75x100mm
2. Bottom chord=100x125mm
3. Struts (vertical/inclined) = 75x100mm
4. Purlin below shinglep = 50\*100 @1141 c/c



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### PROJECT

RESTROOM AT HONGTSHO

### DRAWING TITLE:

Roof details

### NOTES:

- All the dimensions are in mm unless specified.
- Concrete Grade **M20**
- Steel Grade Fe **500**

### ARCHITECT:

Dechen Lhazom Chopel

### ENGINEER :

Dorji Wangdi

### CHECKED BY:

### APPROVED BY:

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Truss connection details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

**SUBMISSION DATE:**

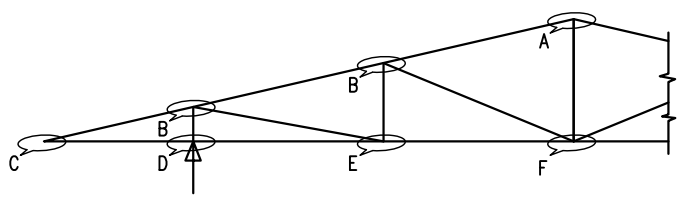
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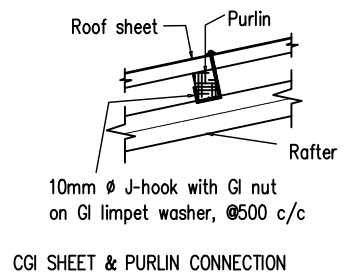
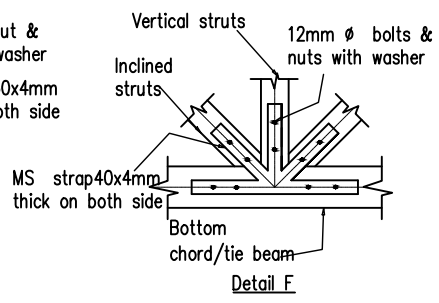
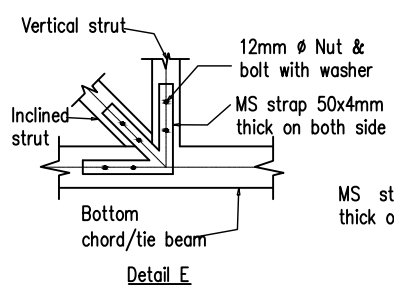
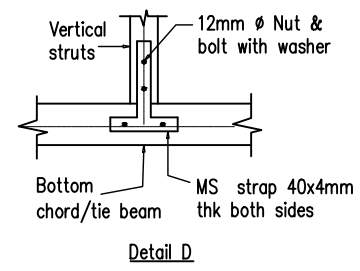
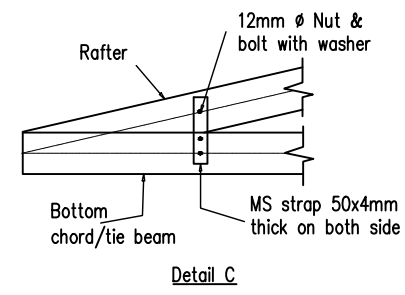
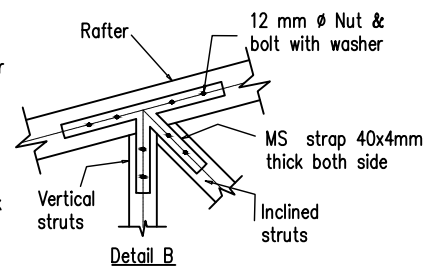
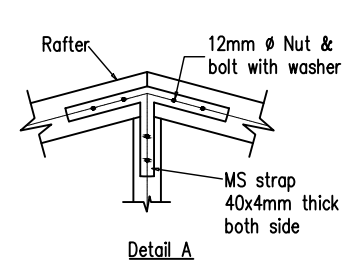
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**DRAWING NO:**  
STR/DWG - 018



- Notes:**
1. Roofing sheet should be connected to the purlin using J-bolt and overlap of 300 mm longitudinally along slope.
  2. All screws, bolts, nuts and nail shall be dipped in oil before use. Only 12Ø bolt and nuts shall be used with MS plate.
  3. The timber of either mixed conifer or blue pine with moisture content of not more than 12% shall be used.
  4. Pitch distance and edge distance for nut & bolt will be 4Ø & 7Ø respectively, where Ø is bolt diameter.
  5. Wherever possible, attic partitions wall shall used as truss/rafter supports.



**TRUSS CONNECTION DETAILS**



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Truss connection details

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

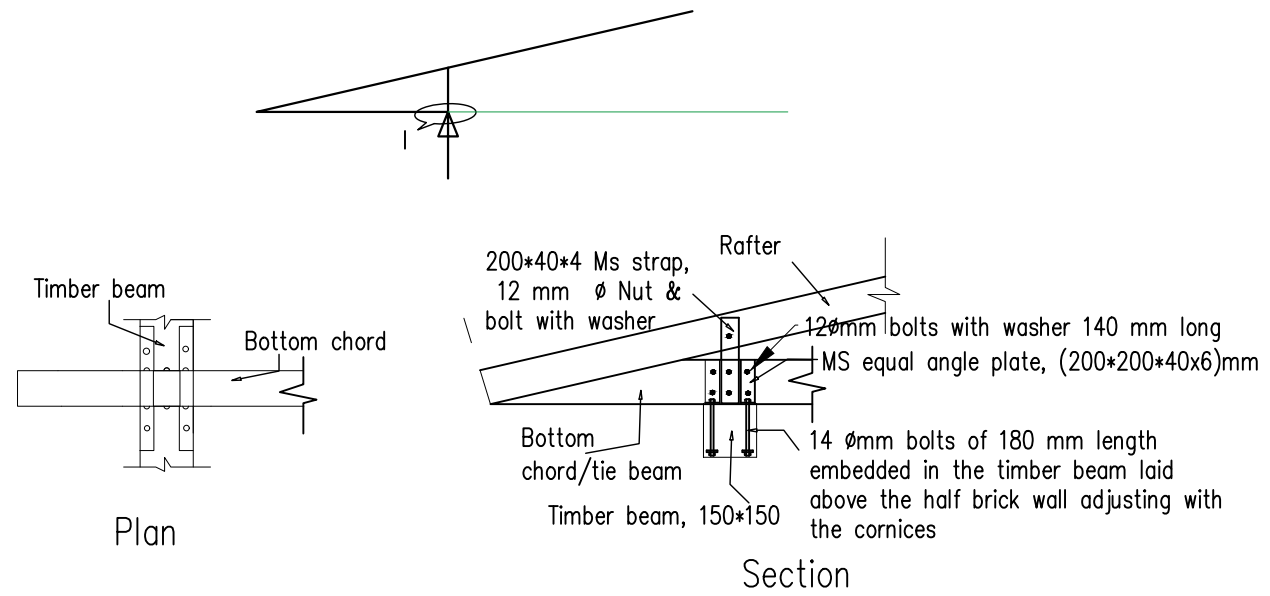
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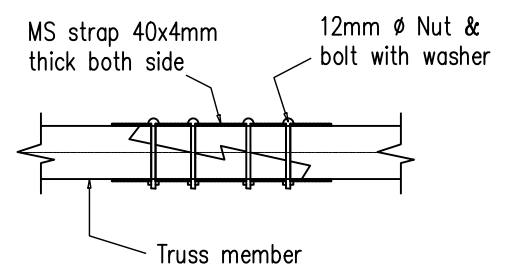
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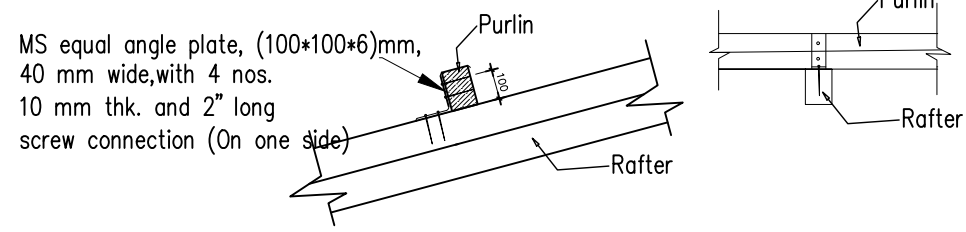
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TRUSS CONNECTION WITH ROOF BEAM(I)



TYPICAL TIMBER JOINT DETAIL(5 NOS.)



RAFTER & PURLIN CONNECTION DETAILS





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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
ramp

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

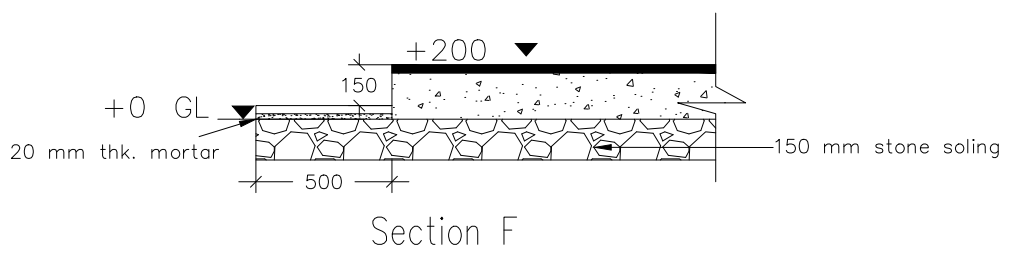
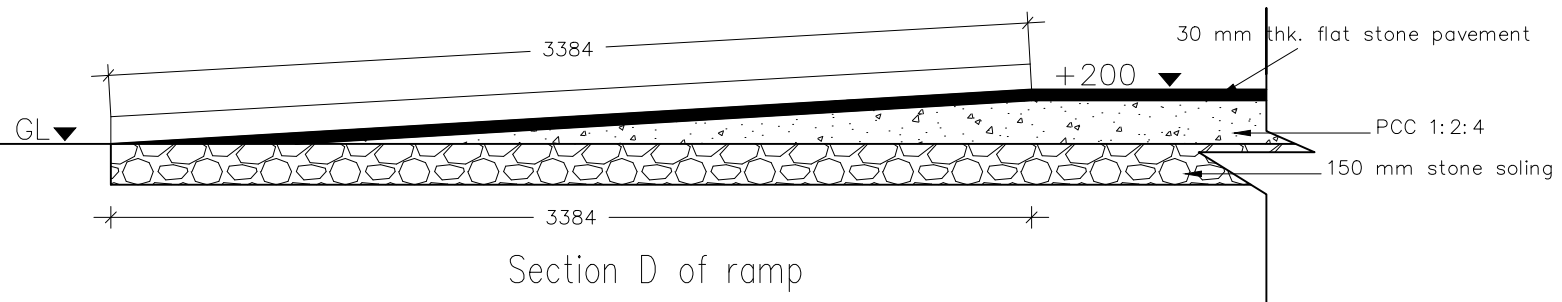
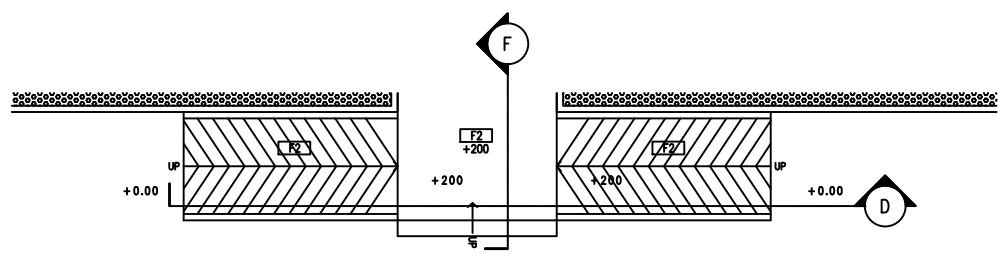
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**SCALE:**  
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**DRAWING NO:**  
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# RAMP



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
PLUMBING & SANITATION  
NOTES

**NOTES:**  
-All the dimensions are in mm  
unless specified.  
-Concrete Grade **M20**  
-Steel Grade Fe **500**

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

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**DATE:  
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**SCALE:**  
NTS

**DRAWING NO:**







PLUMB/DWG - 001

# PLUMBING & SANITATION DRAWINGS

RESTROOM AT HONGTSHO  
CLIENT: TOURISM COUNCIL OF BHUTAN

# PLUMBING & SANITATION NOTES

## LEGEND & NOTES:

-  MH - Inspection Chamber - AS PER SPEC.  
 NT - NAHANI TRAP  
 - SOIL PIPE - AS PER SPEC.  
 - WASTE PIPE - AS PER SPEC.  
 - COLD WATER - (CPVC PIPE AS PER SPEC.)  
 - HOT WATER FROM GEYSER - (CPVC PIPE AS PER SPEC.)  
 WC - WESTERN WATER CLOSET - AS PER SPEC.

## NOTES:

SL #	DESCRIPTION	DIA (MM)	TYPE	SLOPE	REMARKS
1.	SOIL WATER PIPE (from water closet)	110	PVC	1 IN 57	Under the floor: water closet-main hole-septic tank-soak pit
2..	WASTE WATER PIPE (waste fittings: from kitchen sink and wash basin, and floor drain, drain water pipe )	75	PVC	1 IN 48	Under the floor: Waste wtaer fixtures-Open drains
3..	WASTE WATER PIPE (From Urinal)	75	PVC	1 IN 48	Under the floor: Urinal-man hole-septic tank-soak pit
4.	COLD WATER PIPE TO TANK	25	HDPE	1 IN 48	UNDER GROUND-Tank
5	COLD WATER PIPE (Internal distribution and distribution from pipe)	15 and 20 mm	DO	1 IN 48	THROUGH WALLS
6	FIXING OF PIPE AND CONNECTION PIPE MAY BE ADJUSTED AS PER SITE CONDITION				
7	ALL PIPES ARE FIXED WITH NECESSARY FITTINGS AS PER BS/IS/NPC STANDARD WITH PVC SOLVENT CEMENT COMPOUND				
8	ALL THE WATER PIPES SHALL BE GI. WITH NECESSARY FITTINGS AS PER BS/IS/NPC STANDARD				
9.	SIZES OF PIPES HAVE TO BE FOLLOWED AS PER THE SPECIFICATION MENTIONED ABOVE EXCEPT FOR THOSE MARKED IN SANIATION LAYOUT DRAWING.				
10.	SEPTIC TANK AND SOAK PIT SHOULD BE ATLEAST LOCATED 30 M FROM EXTERNAL WALL SURFACE.				



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**PROJECT**  
 RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
 PLUMBING & SANITATION  
 NOTES

**NOTES:**  
 -All the dimensions are in mm unless specified.  
 -Concrete Grade M20  
 -Steel Grade Fe 500

**ARCHITECT:**  
 Dechen Lhazom Chophel

**ENGINEER :**  
 Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

**SUBMISSION**  
**DATE:**

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**SCALE:**  
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**DRAWING NO:**

PLUMB/DWG - 002

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
PLUMBING & SANITATION  
LAYOUT

**NOTES:**  
-All the dimensions are in mm  
unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

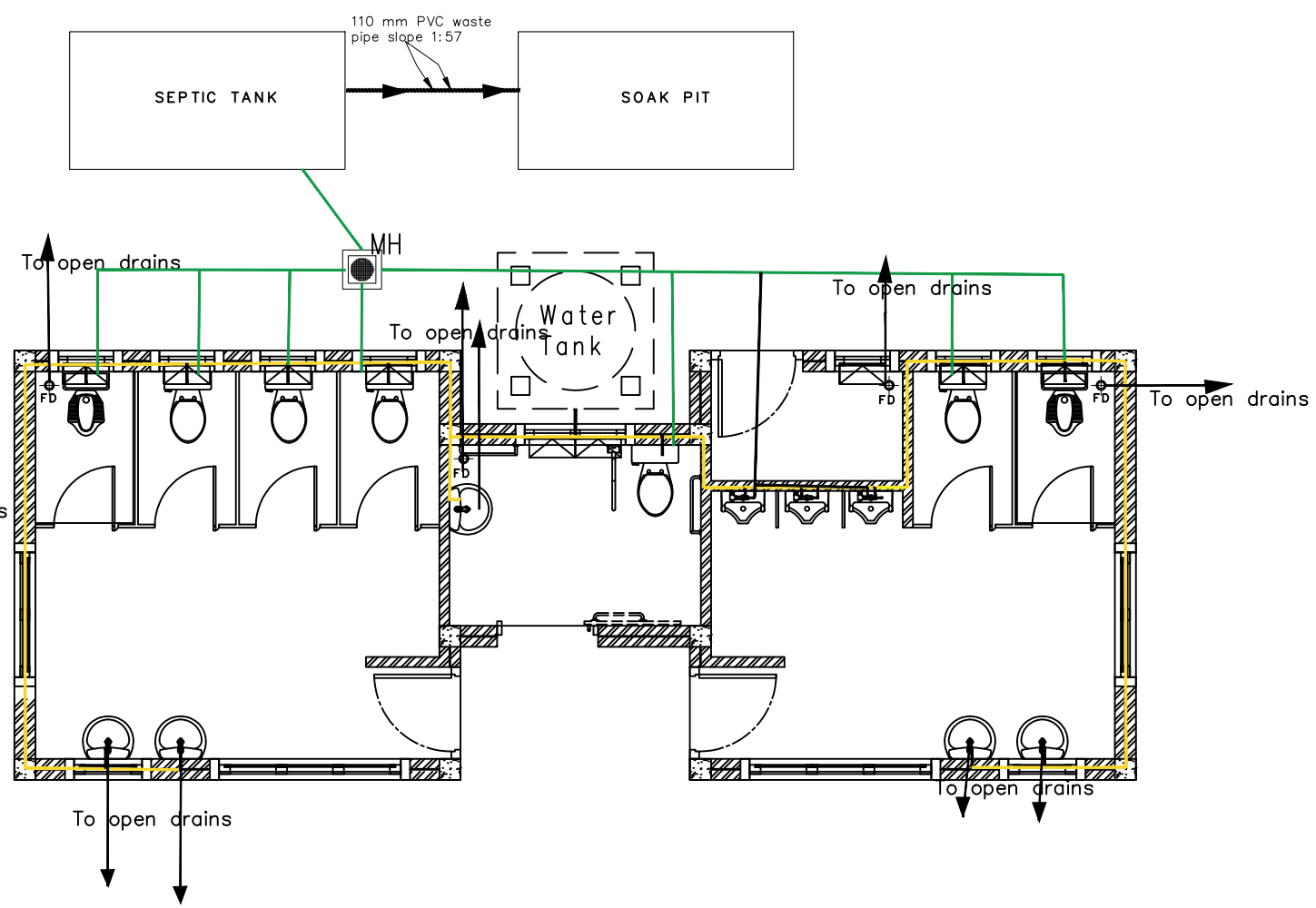
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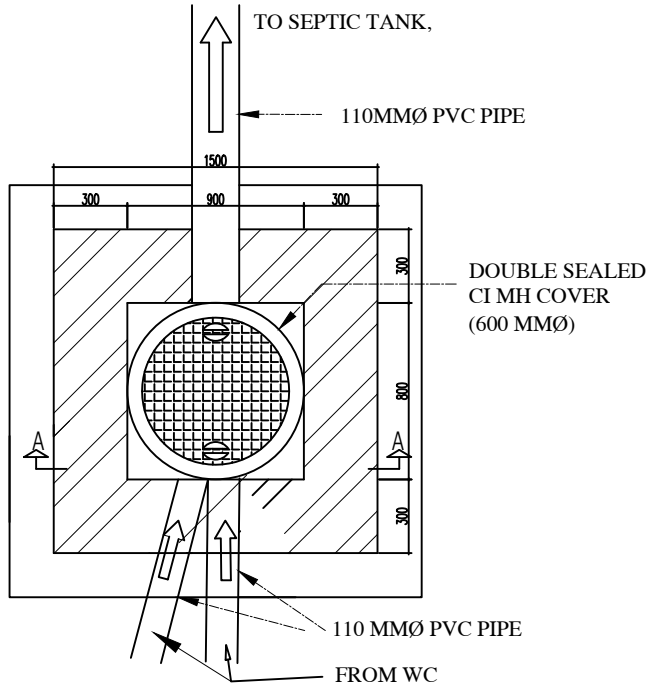
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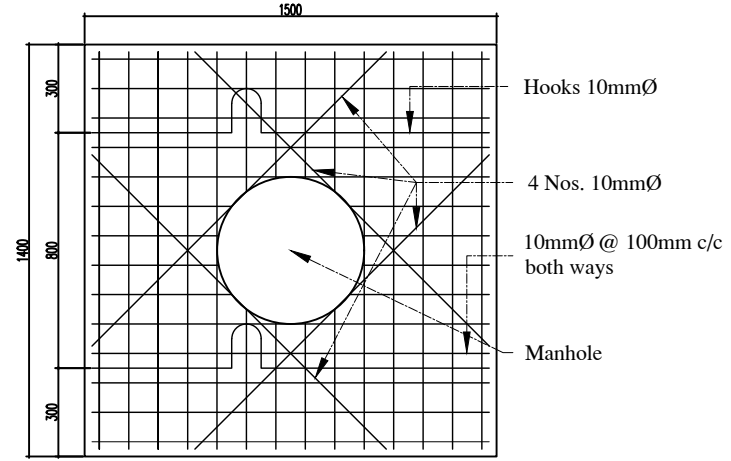


- S Soil water pipe
- W Waste water pipe
- CW Cold water pipe
- HW Hot water pipe

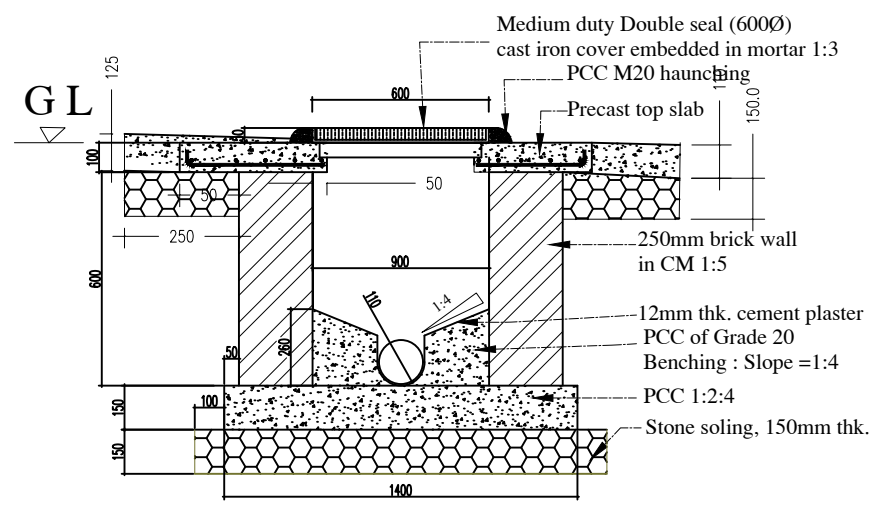
Sanitary system plan



**INSPECTION CHAMBER - PLAN**



**TOP SLAB, GRADE 20 CONCRETE - PLAN**



**INSPECTION CHAMBER - TYPICAL SECTION**



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Inspection chamber

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

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**REVISION: -** **DATE: 18/12/2017**

**SCALE:**  
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**DRAWING NO:**

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
soak pit and septic tank

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

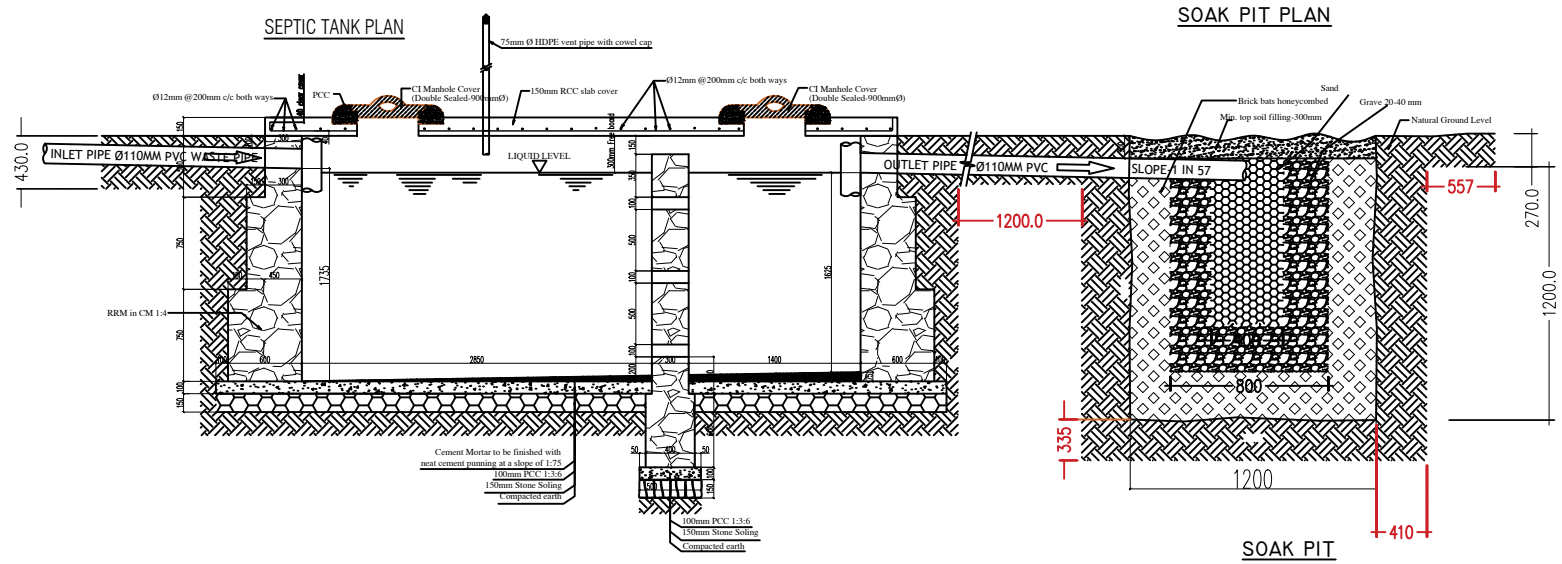
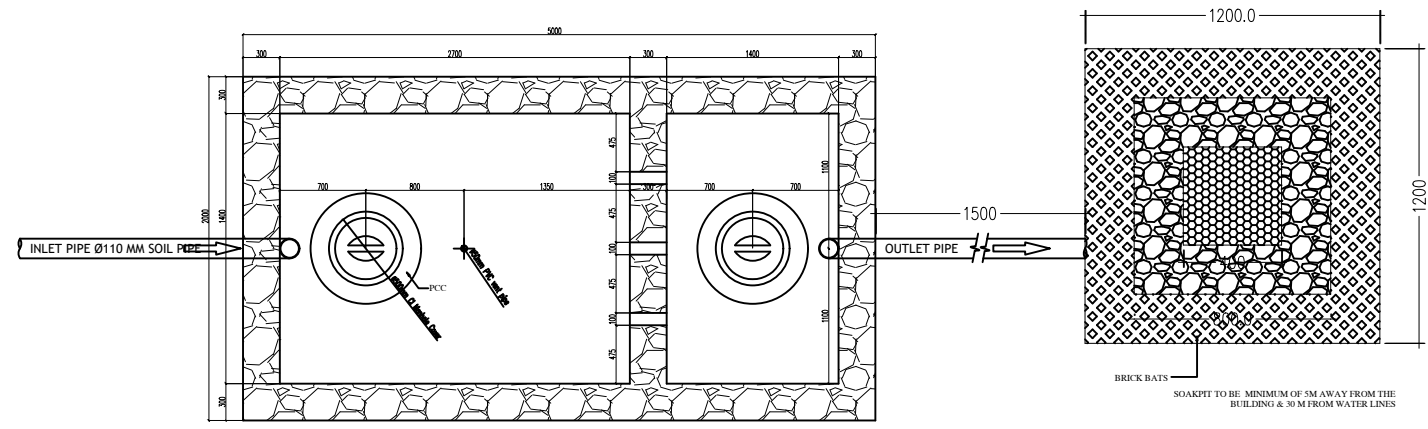
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**SCALE:**  
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**DRAWING NO:**  
PLUMB/DWG - 005



**SEPTIC TANK DETAILS FOR 50 USERS**

**SOAK PIT**

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
water tank foundation layout

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

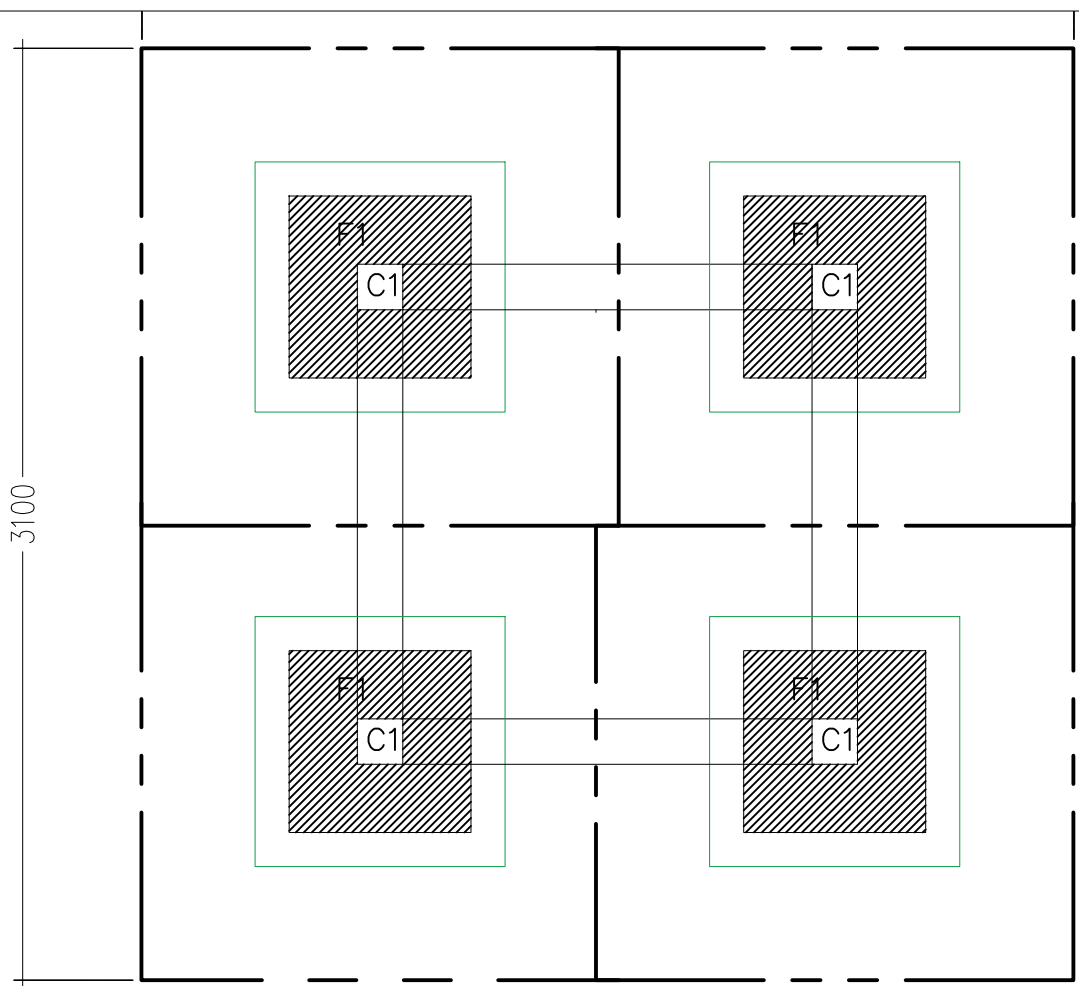
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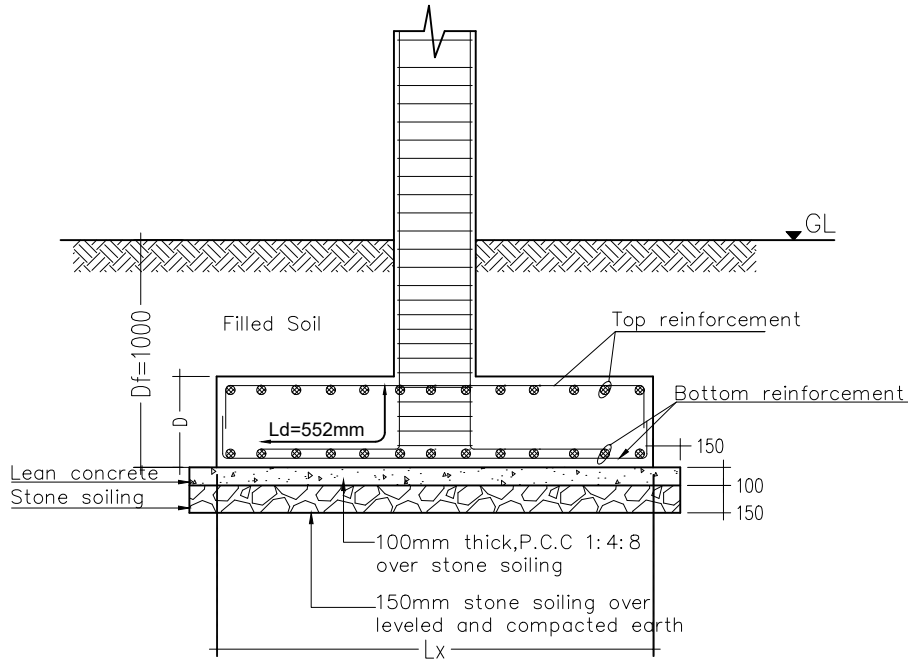
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LAYOUT OF FOUNDATION TRENCHES WITH SUB-STRUCTURE LAYERS FOR WATER TANK

- Edges of excavation
- Bracing
- PCC and Stone soling layer
- Footing mat
- column



SECTIONAL ELEVATION FOR ISOLATED FOOTING FOR COLUMN

SCHEDULE OF FOOTINGS

SL/NO	FOOTINGS TYPE	FOOTING SIZE		DEPTH(D)	BOTTOM REINFORCEMENTS		TOP REINFORCEMENTS		DEPTH OF FOUNDATION(Df)
		LENGTH(Lx)	WIDTH(Ly)		X-DIRECTION	Y-DIRECTION	X-DIRECTION	Y-DIRECTION	
F1	ISOLATED FOOTING	800	800	200	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	10 $\phi$ @150mmc/c	1000

NOTE: TOTAL DEVELOPMENT LENGTH= 552 MM BEYOND THE UPPER FACE OF FOOTING MAT  
 -SPECIAL CONFINING ZONE EXTENDED FOR FULL DEPTH  
 -DEVELOPMENT LENGTH FOR BRACING= 804 mm



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**PROJECT**  
 RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
 water tank foundation

**NOTES:**  
 -All the dimensions are in mm unless specified.  
 -Concrete Grade **M20**  
 -Steel Grade **Fe 500**

**ARCHITECT:**  
 Dechen Lhazom Chophel

**ENGINEER :**  
 Dorji Wangdi

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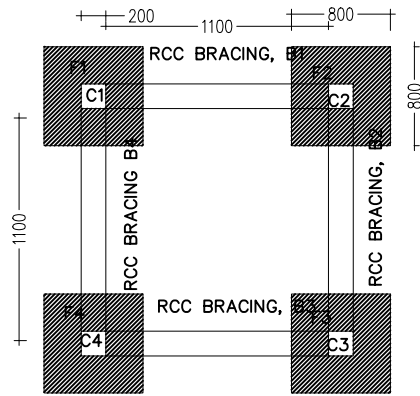
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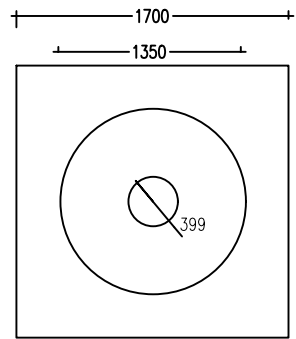
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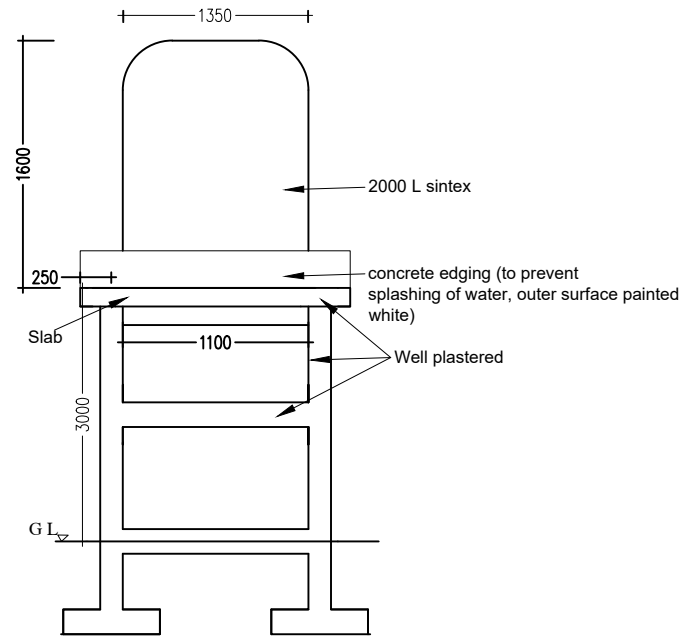




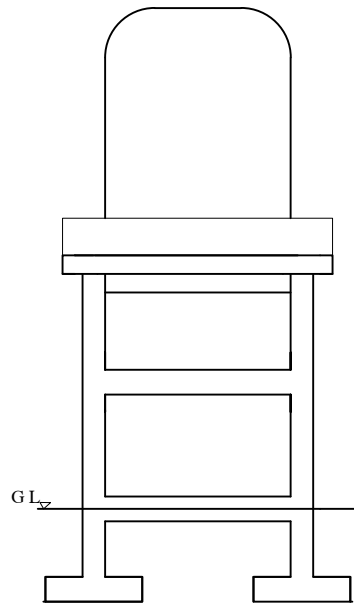
COLUMN, FOUNDATION AND BRACING LAYOUT PLAN



PLAN



FRONT ELEVATION



RIGHT ELEVATION



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**PROJECT**

RESTROOM AT HONGTSHO

**DRAWING TITLE:**

water tank: Plan and elevation

**NOTES:**

- All the dimensions are in mm unless specified.
- Concrete Grade M20
- Steel Grade Fe 500

**ARCHITECT:**

Dechen Lhazom Chophel

**ENGINEER :**

Dorji Wangdi

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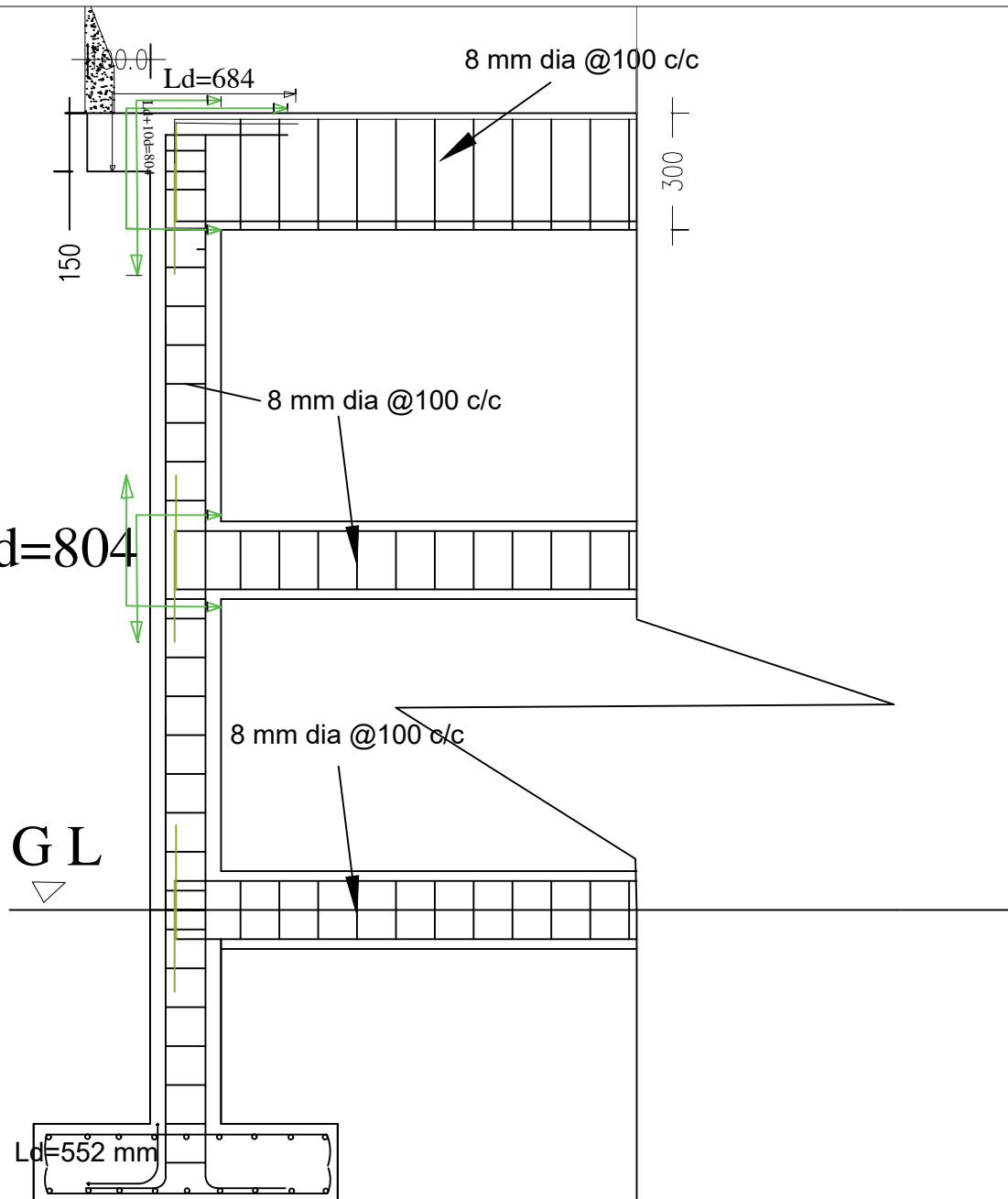
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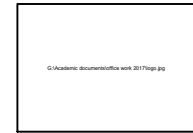
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DRAWING NO:

PLUMB/DWG - 008



Sectional Elevation



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
water tank: sectional iev

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

**SUBMISSION DATE:**

**REVISION: 1**

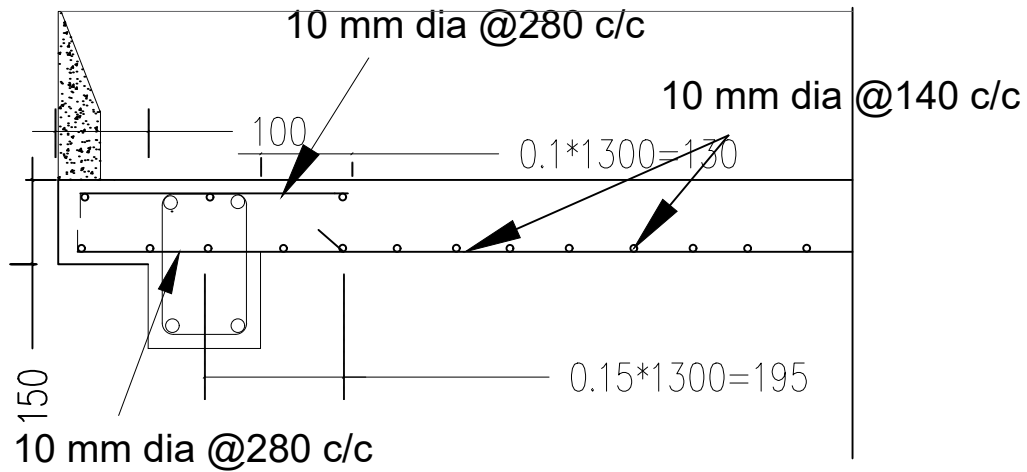
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**REVISION: -** **DATE: 18/12/2017**

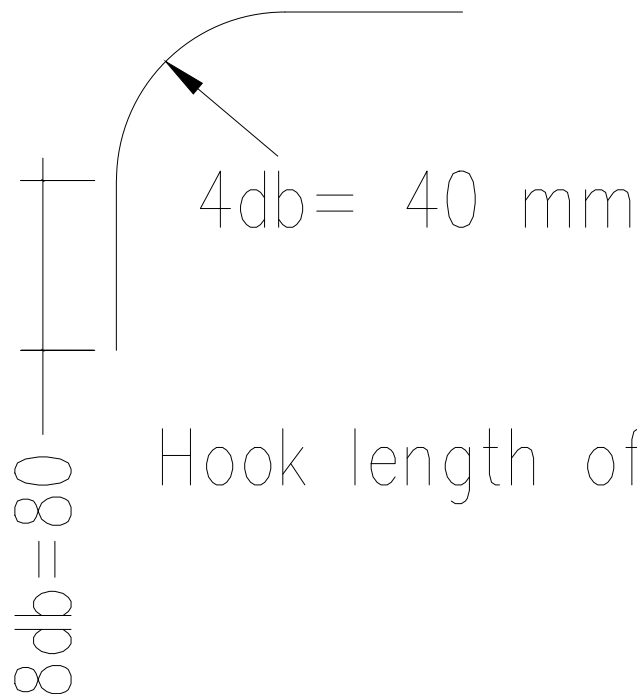
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**DRAWING NO:**

PLUMB/DWG - 009



Sectional view of slab (Section I-I)



Hook length of stirrup at the end



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**PROJECT**

RESTROOM AT HONGTSHO

**DRAWING TITLE:**

water tank: sectional view

**NOTES:**

- All the dimensions are in mm unless specified.
- Concrete Grade **M20**
- Steel Grade **Fe 500**

**ARCHITECT:**

Dechen Lhazom Chophel

**ENGINEER :**

Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

SUBMISSION  
DATE:

REVISION: 1

REVISION: 2

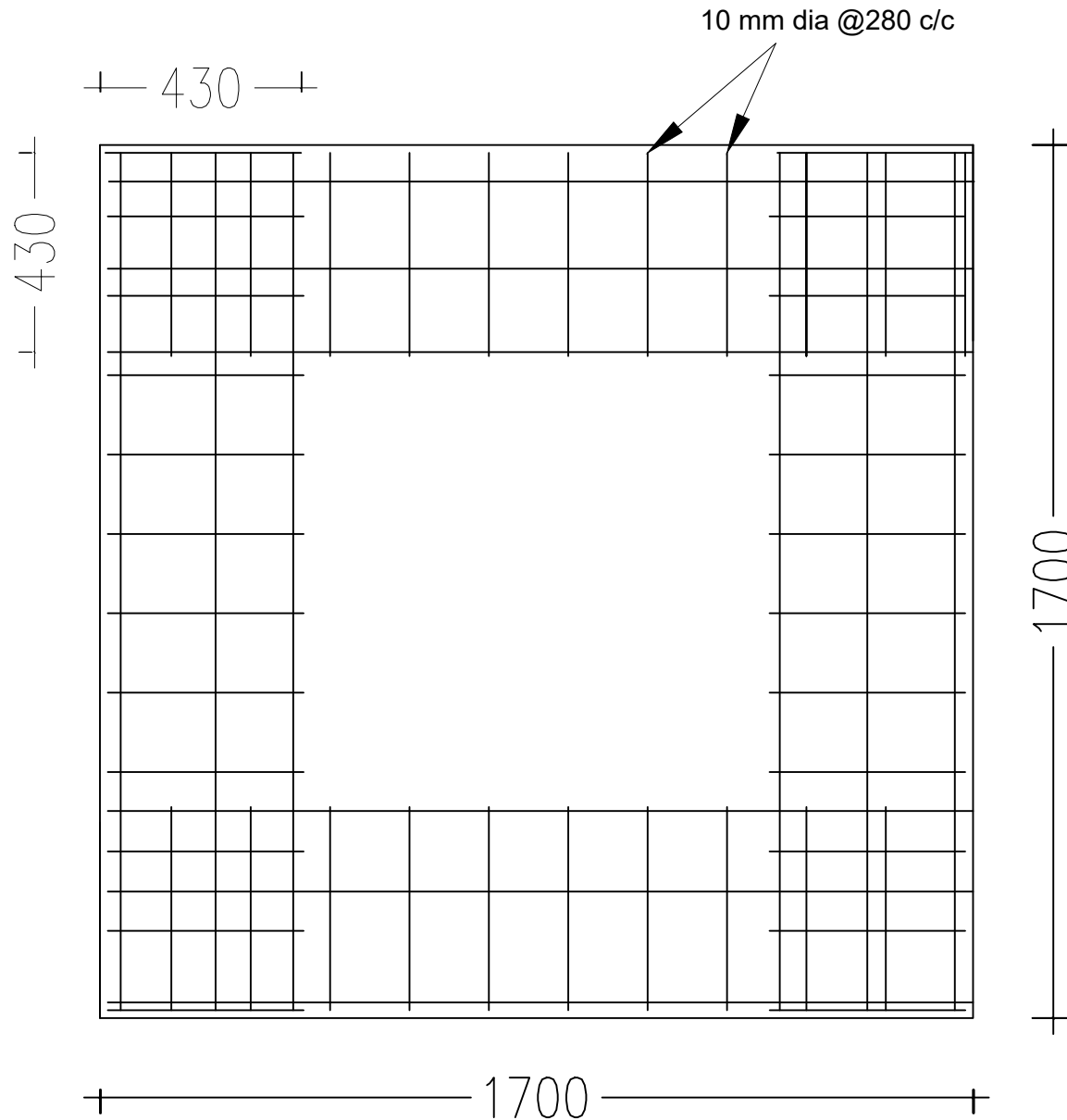
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DRAWING NO:

PLUMB/DWG - 010



Top Reinforcement Layout Plan



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**PROJECT**

RESTROOM AT HONGTSHO

**DRAWING TITLE:**

water tank: top reinforcement for slab

**NOTES:**

- All the dimensions are in mm unless specified.
- Concrete Grade **M20**
- Steel Grade **Fe 500**

**ARCHITECT:**

Dechen Lhazom Chophel

**ENGINEER :**

Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

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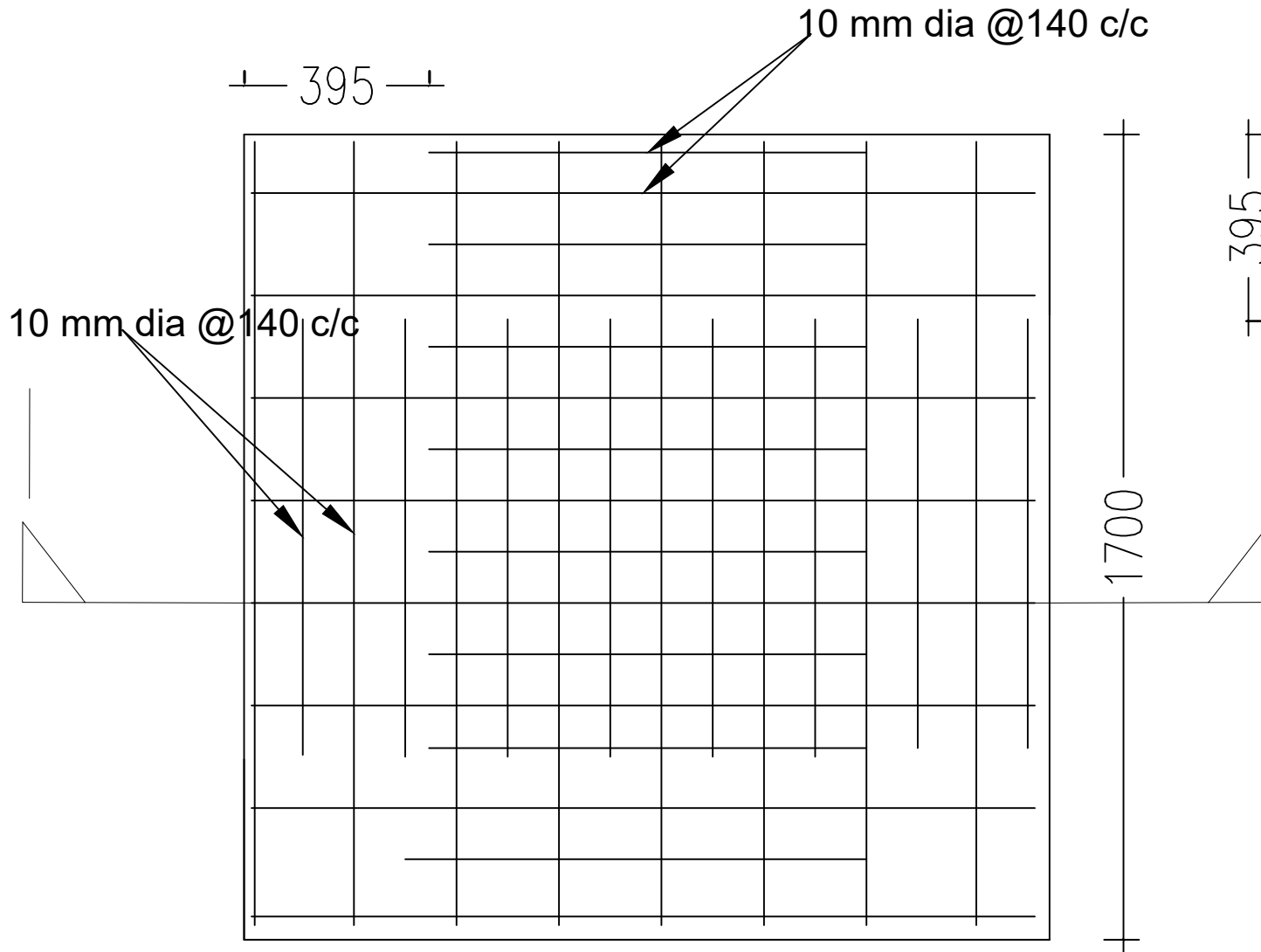
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DATE:  
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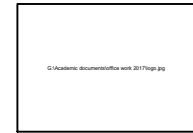
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DRAWING NO:

PLUMB/DWG - 011



Bottom Reinforcement Layout Plan



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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
water tank:bottom reinforcement  
for slab

**NOTES:**  
-All the dimensions are in mm  
unless specified.  
-Concrete Grade **M20**  
-Steel Grade **Fe 500**

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

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DATE:**

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**DATE:  
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**SCALE:**  
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**DRAWING NO:**

PLUMB/DWG - 012

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
Notes on intake of water

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade Fe **500**

**ARCHITECT:**  
Dechen Lhazom Chopel

**ENGINEER :**  
Dorji Wangdi

**CHECKED BY:**

**APPROVED BY:**

**SUBMISSION  
DATE:**

**REVISION: 1**

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**REVISION:**      **DATE:**  
\_                      18/12/2017

**SCALE:**  
NTS

**DRAWING NO:**

PLUMB/DWG - 013

Notes on water supply sytem from Intake tank to Water tank:

— The intake pipe should be located low enough to collect water all year but not too close to the bottom where the sediment or the rock could enter and clog it. It can be located at around 50–100 mm from the floor of chamber.

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**PROJECT**  
RESTROOM AT HONGTSHO

**DRAWING TITLE:**  
concrete edging detail

**NOTES:**  
-All the dimensions are in mm unless specified.  
-Concrete Grade **M20**  
-Steel Grade Fe **500**

**ARCHITECT:**  
Dechen Lhazom Chophel

**ENGINEER :**  
Dorji Wangdi

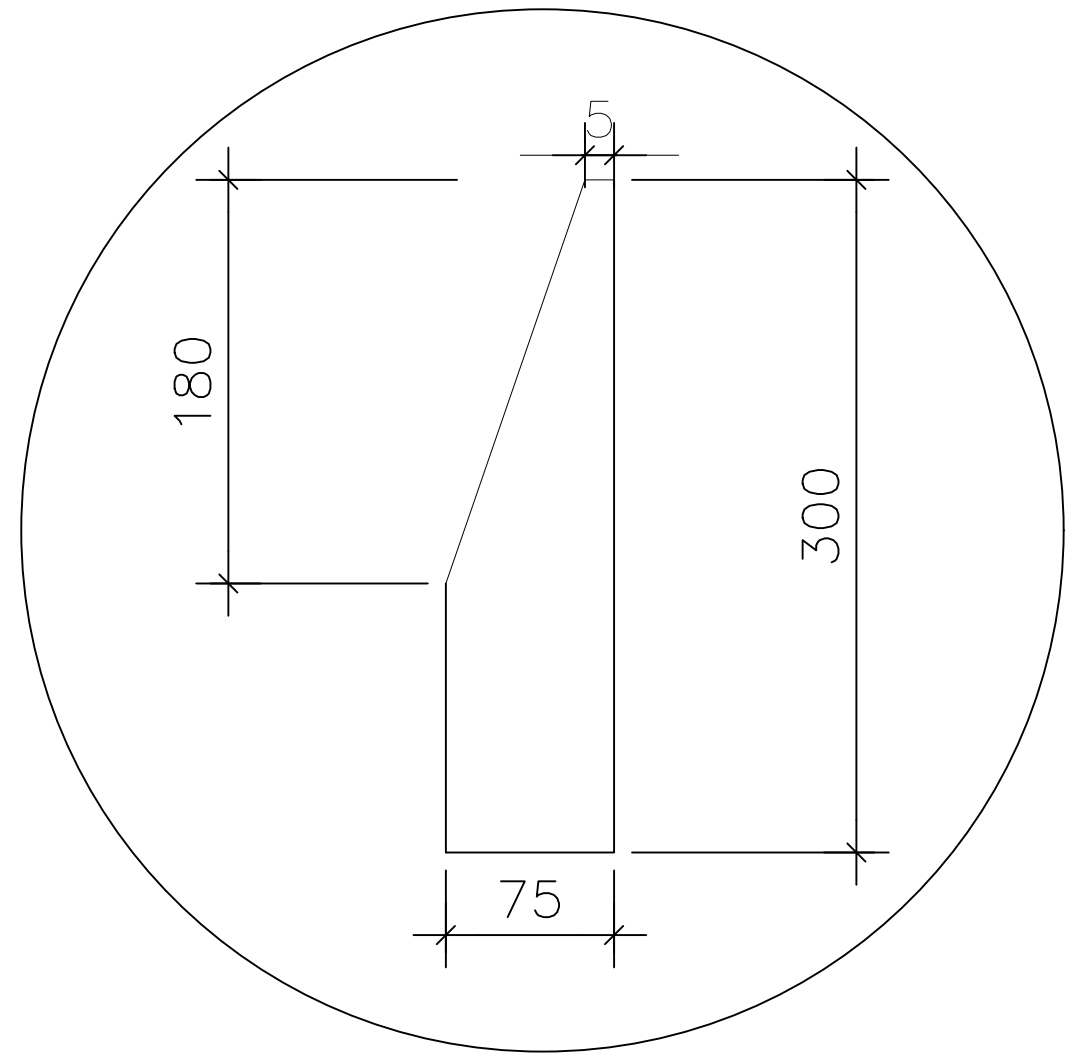
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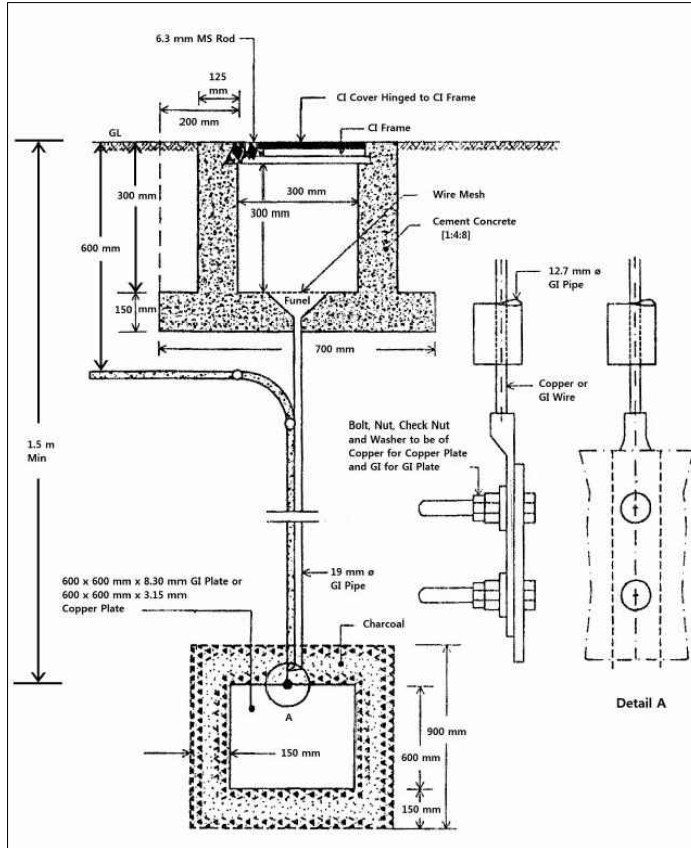
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REVISION: -	DATE: 18/12/2017

**SCALE:**  
NTS

**DRAWING NO:**  
PLUMB/DWG - 014



Concrete ceding details



## Notes on Earthing:

— The corresponding drawing is a sample drawing for earthing. The specification has to be followed as per BOQ but the dimensions shall be considered same as drawing.

— G.I plate of 600\*600\*6 mm shall be used instead of 600\*600\*8.3 mm in drawing.

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PROJECT  
RESTROOM AT HONGTSHO

DRAWING TITLE:  
Earthing drawing

NOTES:  
-All the dimensions are in mm unless specified.  
-Concrete Grade M20  
-Steel Grade Fe 500

ARCHITECT:  
Dechen Lhazom Chophel

ENGINEER :  
Dorji Wangdi

CHECKED BY:

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REVISION:  
—

DATE:  
18/12/2017

SCALE:  
NTS

DRAWING NO:

PLUMB/DWG - 015



NAME OF WORK :Restroom at Hongtsho								
Client:Tourism Council of Bhutan								
A: Civil works								
Sl. No.	BSR Code	Description of items	Qty.	Unit	Rate in numeric	Rate in words	Amount	Remarks
<b>A: EARTHWORKS</b>								
1	EW0001+ EW0002	Surface dressing of ground (construction site), including removal of vegetations and inequalities < 150mm deep, disposal of rubbish within 50m lead and 1.5m lifts: Ordinary +hard soil :	<b>200.000</b>	cu.m				
2.0	EW0030+3 1	Earth work in excavation over areas, depth >300mm, width >1.5m, area >10 sq.m on plan, including disposal of excavated earth within all lead & lifts and the disposed soil to be neatly dressed.:	<b>69.068</b>	cu.m				
		<i>Footings for columns</i>	32.400					
			11.790					
		<i>Footings for water tank columns</i>	12.013					
		<i>External wall foundations</i>	6.837					
		<i>Internal wall foundations</i>	2.465					
		<i>Ramp portion infrom of the restroom</i>	1.521					
		<i>Flat stone at the base of the ramp</i>	0.188					
		<i>For brick work Around the building for laying pebbles(200mm underground and 300 mm above ground: Refer the architectural drawing )</i>	1.856					
3.0	EW0135	Hand excavation and refilling in layers < 200mm, of trenches for pipes incl. dressing of sides/ ramming of bottom, depth up to 1.5m, disposal of surplus materials within lead of 50 m. ( For external water supply & soil pipes) - All kinds of soil for pipes(80mm< dia < 300mm) : <b>(The distance may cahnge according to plumbing layout at site)</b>	<b>170.000</b>	m				
		<i>For plumbing network beyond external wall</i>	20.000					
		<i>Water supply from intake chamamber-water tank)</i>	150.000					
4.0	EW0197	Providing &laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing : <b>45% of excavation for all kinds of work</b>	<b>31.081</b>	cu.m				
5.0	EW0196	Providing &laying sand bedding, including watering, ramming, dressing for below the pebbles around the restroom (200 mm depth)	<b>3.210</b>	cu.m				
<b>B: P.C.C &amp; R.C.C WORKS</b>								
6.0	CW0003	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level. : 1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	<b>12.165</b>	cu.m				
		<i>Footings for columns</i>	1.352					
			0.551					
		<i>Footings for water tank columns</i>	0.121					
		<i>Flooring</i>	4.783					
		<i>Concrete edging at the edge of ramp as specified in the drawing</i>	0.068					
		<i>Concrete eding around three corners of water tank slab to prevent water from splashng on to gable of the roof (upto 300 mm high)</i>	0.080					
		<i>Ramp and flat stone pavement at the front and side of the restroom</i>	4.600					
		<i>Window sill</i>						
		<i>W1(Hidden in the wall)</i>	0.039					
		<i>W2(Hidden in the wall)</i>	0.125					
		<i>W3(Hidden in the wall)</i>	0.092					
		<i>W4(Hidden in the wall)</i>	0.023					
7.0	RC0002	Providing & laying R.C.C 1:1.5:3, 20mm agg. excluding the cost of formwork & reinforcement cost in foundation footing pads & bases of columns - All works upto plinth level, etc complete	<b>4.657</b>	cu.m				
		<i>Rcc footing mat for columns</i>	2.400					
			1.092					
		<i>Rcc columns for water tank</i>	0.525					
		<i>Rcc footing mat for water tank columns</i>	0.512					
		<i>Rcc columns for water tank</i>	0.128					
8.0	RC0010	Providing & laying R.C.C 1:1.5:3, 20mm agg. excluding the cost of formwork & reinforcement cost for- Columns above plinth upto roof levels, etc complete	<b>2.444</b>	cu.m				
		<i>Rcc columns up to roof level</i>	1.988					
		<i>Rcc columns for water tank above ground level</i>	0.456					

9.0	RC0018	Providing & laying R.C.C 1:1.5:3, 20mm agg. excluding the cost of formwork & reinforcement cost for - Plinth & roof beams, lintels and plain window sill, wash basin, bracing etc complete	<b>4.758</b>	cu.m				
		<i>Plinth beam</i>	1.519					
		<i>Roof beam</i>	2.278					
		<i>Water tank slab</i>	0.434					
		<i>Water tank bracing</i>	0.528					
<b>C: FORM WORKS</b>								
10.0		Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork.						
	RC0090	<b>Foundation &amp; plinth</b>	<b>29.454</b>	sq.m				
		<i>Rcc footing mat for columns</i>	9.600					
			1.200					
			2.184					
		<i>Plinth beam</i>	12.150					
		<i>Rcc footing mat for water tank columns</i>	2.560					
		<i>water tank bracing at plinth level</i>	1.760					
	RC0092	<b>Lintels, beams, girders, bressumers, cantilevers etc</b>	<b>33.630</b>	sq.m				
		<i>Roof beam</i>	18.225					
			10.125					
		<i>water tank bracing</i>	5.280					
	RC0093	<b>Columns, pillars, post, struts etc.</b>	<b>56.120</b>	sq.m				
		<i>Rcc columns</i>	43.800					
		<i>Rcc columns for water tank</i>	12.320					
	RC0095	<b>Suspended floor, roof, landing, shelves and their supports, balconies, chajjas, etc</b>	<b>3.030</b>	sq.m				
		<i>Water tank slab</i>	1.020					
			2.890					
		<i>deduction</i>	0.880					
<b>D. STONE/BRICKWORK</b>								
11.0	SM0072	Providing & laying Hand packed stone filling/soling under the RCC footings, etc complete.	<b>12.813</b>	cu.m				
		<i>Footings for columns</i>	2.028					
			0.827					
		<i>Footings for water tank columns</i>	0.726					
		<i>Flooring</i>	0.000					
		<i>External wall foundations</i>	1.935					
		<i>Internal wall foundations</i>	0.698					
		<i>Stone soling for Ramp and flat stone pavement at the front and side of the restroom</i>	6.600					
12	SM0101	Providing & laying all sides chisel dressed flat stone paving in cement mortar 1:6 on prepared bedding (excluding the cost of 10 mm CM 1:5 bedding): 30 mm thick : <b>For ramp, plinth protection at front and side covering the drain. The flat stone covering the drain shall be removalbe and the gap of 3 cmm shall be kept betwee the stones</b>	<b>55.060</b>	sq.m				
13.0	BW0002+B W0012	Providing & laying Second-Class One Brick work (250mm) in foundation and plinth- In CM 1:4+ Extra for brick work in superstructure above plinth level, up to floor two level	<b>11.596</b>	cu.m				
		<i>250 mm walls</i>	14.061					
		<i>At cornices level for wall near water tank</i>	0.627					
		<i>deduction</i>	0.068					
		<i>Seat of Indian water closet</i>	0.332					
		<b>Deductions: Indian WC</b>	0.087					
		<i>: Windows,w1</i>	0.463					
		<i>Windows,w2</i>	1.700					
		<i>Windows,w3</i>	0.814					
		<i>Windows,w4</i>	0.213					
		<i>Ventilation fan</i>	0.080					
14	BW0021	Providing & laying Second-Class Half-brick Masonry (125 mm) in wash basin and internal partition	<b>62.121</b>	sq.m				
		<i>Internal 125 mm walls</i>	18.095					
		<i>125 mm walls near door(equal to the height of the cubical partition: around 2 m)</i>	3.200					
		<i>Around the building for laying pebbles(200mm underground and 300 mm above ground: Refer the architectural drawing )</i>	16.815					
			14.115					
		<i>125 mm wall at cornice level at the back of cornices</i>	12.052					
		<i>Deduction for Bho</i>	2.156					
15	SM0006	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth: in cement mortar 1:5	<b>9.594</b>	cu.m				
		<i>250 mm wall foundations</i>	8.385					0.4*0.25+0.25*0.25
		<i>125 mm walls foundations</i>	1.209					0.4*0.22+0.2*0.25
16	DR0011	Constructing second class brick masonry open surface drain in cement mortar 1:4 including earth work in excavation 100 mm thick concrete bed 1:5:10, 40mm aggregate and 25mm thick cement concrete 1:2:4,12 mm aggregate for filling haunches including 12mm cement plastering 1:4 with a floating coat of neat cement and disposal of surplus earth etc. complete : 150*250 mm depth	<b>43.800</b>	m				

17	DR0001	Providing and laying 50mm thick Plinth Protection and grouted with fine sand mix including well rammed, finishing the top smooth :With cement concrete 1:3:6, 20mm aggregates, laid over 75mm thick layer of compacted gravel (40mm) : <b>Only for plinth protection at back of the restroom.Refer the architectural drawing for reference</b>	<b>14.077</b>	sq.m				
<b>E. PLASTERING, PAINTING</b>								
18.0	PL0041	Providing & laying 20mm cement plaster - C.M 1:4 (External and internal walls Above plinth)	<b>261.379</b>	sq.m				
		<i>external surface of 250 mm walls</i>	61.920					<b>After deduction</b>
			81.264					
		<i>internal 125 mm walls</i>	36.190					
			1.535					
			0.424					
		<i>125 mm walls near door(equal to the height of the cubical partition: around 2 m)</i>	12.800					
			0.660					
			0.264					
		<b>Deductions :</b> Window,w1	3.700					
		Window,w2	6.800					
		Window,w3	6.510					
		Window,w4	1.705					
		Ventilation fan	0.640					
		<b>Additions in window portion:</b> Window w1	2.388					
		Window,w2	6.264					
		Window,w3	5.775					
		Window,w4	1.125					
		Ventilation fan	0.960					
		Door : D1	4.500					
		D2	1.530					
		<i>For half brick work around the building for laying pebbles(300 mm high above ground)</i>	6.816					
			6.516					
			6.668					
			2.842					
			5.596					
			2.798					
		<i>water tank stagings and slab</i>	22.560					
		<i>For wall at cornices level near water tank</i>	2.255					
			1.984					
		<i>Concrete edging at the edge of ramp as specified in the drawing</i>	2.040					
		<i>concrete edging on the slab of water tank</i>	3.060					
18.0	PT0030+PT0010	Finishing wall(both internal and external) with white water-Proof Cement Paint - New work, three coats with one coat of cement primer as a base coat <b>excluding the portion covered by wall tiles</b>	<b>164.840</b>	sq.m				
			143.640					
		<i>water tank stagings and slab</i>	19.670					
		<i>Outer face of concrete edging on the slab of water tank</i>	1.530					
19.0	PT0111	Providing, preparing and applying Sumdang washable painting: Ding	<b>32.323</b>	sq.m				
		<i>Cornices</i>	<b>22.700</b>					
		<i>Cornices at lintel level</i>	<b>2.247</b>					
		<i>Window,w1 (outer surface only)</i>	<b>0.960</b>					
		<i>Window,w2(outer surface only)</i>	<b>3.336</b>					
		<i>Window,w3(outer surface only)</i>	<b>1.680</b>					
		<i>Window,w4(outer surface only)</i>	<b>0.420</b>					
		<i>Door : D1 and D2 (on outer surface of frames)</i>	<b>0.980</b>					
21.0	PT0070	Providing and applying wood preservatives:copper Brown, two coats on new work and celing frames	<b>179.592</b>	sq.m				
		<i>Ceiling frames</i>	32.310					
		<i>Trussess(excluding purlin above below and above shingleb)</i>	129.850					
		<i>Timber beam/Tie beam at roof level (150*150 mm)</i>	14.664					
		<i>Plywood gable at the back of the restroom near water tank</i>	2.768					
22.0	PT0042	Providing and applying finishing coats: Acrylic washable distemper, two coats on new work, including cement primer coat: <b>White on side Gable of the roof: Refer the architatural drawing A202</b>	<b>8.190</b>	sq.m				
23.0	PT0062	Providing and applying Synthetic varnish (clear) - two coats, including coat of wood filler on new work:	<b>139.805</b>	sq.m				
		<i>For ceiling and soffit area</i>	<b>97.050</b>					
		<i>Window,w1 (Inner surface and shutter)</i>	<b>2.320</b>					
		<i>Window,w2(Inner surface and shutter)</i>	<b>8.760</b>					
		<i>Window,w3(Inner surface and shutter)</i>	<b>4.480</b>					
		<i>Window,w4(Inner surface and shutter)</i>	<b>1.220</b>					
		<i>D1(Inner surface and shutter: outer surface of shutter shall consist of different shades of pinting similar to the restroom at Tamchogkha))</i>	<b>13.310</b>					

		D2(Inner surface)	0.725					
		Eave board	10.746					
			1.194					
<b>F:FLOORING, CEILING &amp; PARTITIONS</b>								
24.0	GL0009'	Providing & fixing Ageis Beige/dark beige anti skid tiles, 600*600 in flooring ( <b>Somany or BSB approved brands</b> ) laid on bed of 12mm thick cement mortar 1:3 finished with flush pointing in white cement: ( <b>Note:Refer the Architectural drawing A103 for reference.The sample to be shown to the client amd consult the engineer before laying</b> )	42.200	sq.m				
25.0	GL0001'	Providing & fixing corsa crema/light beige glazed tiles, 300 x 300 mm in dado ( <b>Somany brand/or any brands approved by BSB</b> )finished with flushpointing in white cement ( <b>Note: Refer the Architectural drawing A103 for reference. The sample to be shown to the client amd consult the engineer before laying</b> ) .	57.329	sq.m				
		Up to 1.4 m height	21.770					
		Up to 1.45 m height (In disbaled water closet and Indian water closet)	20.880					
		Up to 1 m height	14.100					
		Up to 0.15 m height (In sunken area for Indian water closet)	0.579					
26.00	WW0055	Providing and fixing Mixed Conifer undressed joists in walls-frames etc.. 75 mm*75 mm as celing frames: <b>Refer the sectional drawing and the drawing A107 in Architectural drawing for reference</b>	0.606	cu.m				
			0.250					
			0.050					
			0.260					
			0.046					
27.00	WW0090	Providing & fixing to frames (wall or ceiling) blue pine plain lining, tongued & grooved, including necessary fixtures, wooden plugs & priming coat on unexposed surfaces with wood preservatives (excluding cost of frames). 75 x12 mm thick.:	99.823	sq.m				
		<b>Ceiling: Same area as the area of floor tile.</b>	47.830					
		<b>Soffit</b>						
			25.500					
			3.959					
		<b>Near gable (Inclined soffit)</b>	17.904					
			1.260					
			0.599					
28.00	WW0132	Providing & fixing Plywood lining with necessary nails etc. including beading complete (excluding cost of frame): 6 mm exterior grade commercial ply:	10.958	sq.m				
		<b>In gable portion of the roof</b>	8.186					
		<b>Gable at the back near water tank(As this portion is susceptible to splashing of rain water, exterior grade plywood with presevative coating must be provided. Sample to be shown to the Engineer)</b>	1.320					
			1.452					
29.0	A/R	Providing & fixing T line toilet cubicles ssystem including 12 mm compact board with SS hardware and fittings (standard size: 1500 (L),1200 (W), (1800(H)) inclusive of all the taxes and deleivery charge: <b>Light brown color/white (Sample must be shown to the client before purchasing)</b>	24.404	sq.m				
		<b>water closet partiton</b>	23.904					
		<b>Urinal partitition</b>	0.500					
<b>G: WINDOWS, DOOR WOOKS, VENTILATION</b>								
30.00	WW0001/ WW0003	Providing and fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed. (Blue Pine/Mixed conifer wood). <b>The finishes should be machine finished, not manual finish. Refer the architectural drawing for the detail. Consult the Engineer for any queries on sizing. And also mention wood type while quoting the price.</b>	0.839	cu.m				
		Door: D1(frames)	0.147					
		D2(frames)	0.050					
		Windows: W1(excluding bow and zangshing)	0.104					
		Windows: W2(excluding bow and zangshing)	0.350					
		Windows: W3(excluding bow and zangshing)	0.143					
		Windows: W4(excluding bow and zangshing)	0.028					
		Dressed woodwork for verticle frames (100*550 mm ,with natural timber colour) in gable side of the roof (Refer the Architectural drawing A202 for detail)						
		i.	0.008					

			0.009					
31.0	WW0695	P&f 40x3mm M.S. hold fast 400mm long, fixing to frame with 10mm bolts & nuts, plugs, concrete blocks 300x100x150mm with 1:3:6, 20mm aggregate	<b>66.000</b>	each				
		<i>D1 and D2(3 nos on each side)</i>	24.000					
		<i>W1(2 nos on each side)</i>	8.000					
		<i>W2(2 nos on each side)</i>	16.000					
		<i>W3( 1 no on eac side)</i>	14.000					
		<i>W4(2 nos on each sid)</i>	4.000					
32.0	WW0211	Providing and fixing 35 mm thick paneled or glazed doors and windows shutters etc. complete including SS Hinges excluding other door fittings. (Blue pine wood/Mixed conifer) as per drawing A401 for D1, A402 for D2., <i>The finishes should be machine finished, not manual finish. The glass to be used is frosted</i>	<b>5.265</b>	sq.m				
		<i>D1(Wooden Panelled)</i>	5.265					
33.0	WW0201'	Providing & fixing 25mm thick Panelled or glazed Shutters for cup-boards etc. complete including hinges: (Blue pine wood/Mixed conifer) as per drawing : A403 FOR W1, A404 for W2 and W3 and A405 for W4; <i>The finishes should be machine finished, not manual finish. The glass to be used is frosted</i>						
		<i>W1(Glazed fixed window with frosted glass)</i>	<b>1.091</b>	sq.m				
		<i>W2(Glazed double casement window with frosted glass)</i>	<b>4.365</b>	sq.m				
		<i>W3(Glazed awning type window with frosted glass)</i>	<b>1.750</b>	sq.m				
		<i>W4(Glazed double awning window with frosted glass)</i>	<b>0.500</b>	sq.m				
34.0	WW0646	Providing & fixing brass tower bolt (barrel type) with necessary screws etc. complete						
		<i>150 mm for D1</i>	<b>3.000</b>	each				
		<i>150 mm for W2</i>	<b>16.000</b>	each				
	WW0647	<i>100 mm for W3</i>	<b>7.000</b>	each				
		<i>100 mm for W4</i>	<b>2.000</b>	each				
35.0		Providing & fixing brass handle with necessary screws etc. complete						
	WW0665	<i>150 mm for Door : D1</i>	<b>6.000</b>	each				
	WW0666	<i>125 mm for W2</i>	<b>8.000</b>	each				
	WW0668	<i>75 mm for w3</i>	<b>7.000</b>	each				
		<i>75 mm for w4</i>	<b>2.000</b>	each				
36.0	WW0545'	Providing and fixing Godrej brand Cylindrical stainless steel locking system Code 5329. for D1	<b>3.000</b>	each				
37.0		Providing & fixing bright finished brass hook-and-eye with necessary screws etc. complete						
	WW0686	<i>100mm for W2</i>	<b>8.000</b>	each				
38.0	WW0656	Providing & fixing brass sliding door bolt with nuts necessary screws etc. complete	<b>3.000</b>	each				
39.0	WW0590'	P/F a pair aluminium top hung friction stay for awning window with necessary aluminium screws	<b>9.000</b>	each				
<b>H: STEEL WORKS</b>								
40.0	RC0083	Providing & fixing cold twisted deformed bar (Fe500) for R.C.C work incl. cutting, bending, binding & placing in position complete - Footings, Columns, beams, bracing and slab etc.	<b>2125.700</b>	kg				
41.0	SW0081	Providing & fixing bolts of 12 mm dia bolts, 120 mm length for fixing struts and rafter and 140 mm length for fixing bottom tie with other components including nuts & washers for roof truss connection as per design drawing and specification.	<b>149.056</b>	kg				
		<i>For Truss T1: 120 mm long</i>	<b>78.300</b>					
		<i>140 mm long</i>	<b>24.480</b>					
		<i>For truss T2: 120 mm long</i>	<b>1.620</b>					
		<i>For Truss T3 (120 mm long )</i>	6.480					
		<i>140 mm long</i>	2.448					
		<i>For bottom tie connection to timber tie/roof beam (i. 140 mm long)</i>	13.464					
		<i>ii. 14 mm dia. 180 mm long</i>	22.264					
42.0	SW0090	Providing, making and fixing M.S. straps, flats, sole plates etc. for roof truss connection as	<b>277.3481</b>	kg				
		<i>Flats</i>	16.680					
		<i>At joint A(200*40*4)</i>						
		<i>For truss T2: At joint B(200*40*4)</i>	80.640					
		<i>Truss T2</i>	4.032					
		<i>At joint C</i>	10.080					
		<i>At joint D</i>	20.160					
		<i>At joint E</i>	30.240					
		<i>At Joint F</i>	25.200					
		<i>Others for T2</i>	3.024					
		<i>Equal angle MS bracket(200*200*40*6) for bottom tie connection to Tie/roof beam</i>	66.880					

		<b>100*100*40*6 mm for purlin connection with rafter staggerd along length and width of the roof</b>	20.412				
43.0	SW0081'	Providing & fixing screw of of various sizes for MS bracket connection: <b>Refer the sample of connection as shown for the purlin connection detail</b>	<b>6.696</b>	kg			
		<i>Purlin connection with rafter (10 mm dia, 2 " long)</i>	6.696				
<b>I. ROOFING AND CORNICES</b>							
44.00	RF0003	Providing & fixing Pre Painted Steel Corrugated Roofing sheets, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses.: TATA SHAKTEE, green colour , (25g (0.50mm))	<b>109.582</b>	sq.m			
			113.610				
		<i>Deduction</i>	4.028				
45.0	RF0007	Providing & fixing 600mm ridges or hips in Pre Painted Steel sheets, including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection :TATA SHAKTEE, green colour , (25g (0.50mm))	<b>27.242</b>	m			
46.00	RF0130	Providing and fixing shinglep roofing with shinglep of size 1350x125x12mm in 3 layers including tying, uplift protection complete with the flat natural stone(boulder) >5 kg as per the drawing A-08	<b>109.580</b>	sq.m			
47.00	A/R	Providing and placing/fixing the flat type natural stone on the shinglep as per roofing detail of >5 kg weight at 0.5 m spacing.	<b>200.000</b>	each			
48.0	WW0061/ WW0060	Providing & fixing roof framing, in trusses, purlins, rafters, posts, post plates including hoisting, etc. in Blue pine/Mixed conifer ( <b>Mention wood type wjile quaoiting the rate</b> )	<b>3.874</b>	cu.m			
		<i>Truss, T1</i>	<b>2.110</b>				
		<i>Truss, T2</i>	<b>0.162</b>				
		<i>Truss, T3</i>	<b>0.112</b>				
		<i>Purlin</i>	<b>0.560</b>				
		<i>Purlin below shingleb(20*75)</i>	<b>0.128</b>				
		<i>Purlin above shingleb(40*75)</i>	<b>0.252</b>				
		<i>Timber beam /Ti e beam at roof level to suppor troof truss(150*150 mm)</i>	<b>0.550</b>				
49.0	WW0030	Providing & fixing Eaves board (225x25mm) with moulding fitted and fixed with necessary screws, etc complete: In mixed conifer	<b>50.900</b>	m			
50.0	RF0010'	Providing & fixing 450mm over all semi-circular plain PVC gutter, including brackets, bolts, nuts, washers & rain water pipes connections, excluding the cost of pipes as per the design drawing and specification.:	<b>31.140</b>	m			
51.0	RF0190	Providing and fixing on wall face single socketed rigid PVC (working pressure 4kgf per sq.cm) rain water pipes including jointing with seal ring leaving 10mm gap for thermal expansion - complete - 75mm dia	<b>15.650</b>	m			
			10.700				
			4.950				
52.0	RF0210	Providing and fixing on the wall face PVC bend for rigid rain waer pipes including jointing with seal ring leaving 10 mm gap for thermal expansion - complete - 75 mm.	<b>12.000</b>	each			
53.0		Providing, making & fixing woodwork dressed in traditional cornices complete as per standard design in Mixed Conifer, including applying wood preservative on unexposed surfaces, excluding decorative painting (Measurement to be taken along the cornice and wall junction line):					
	WW0037	<i>For single-storied structure including phana</i>	<b>32.370</b>	m			
	WW0039	<i>At lintel level (for abovw windows and doors)</i>	<b>13.620</b>	m			
<b>J. PLUMBING WORKS (1. The quantity of plumbing fittings may change depending on the site and layout; 2. The sample of all plumbing fittings should be shown to the Engineer/Client before procuring; 3. Refer the Architectural drawing for the sample)</b>							
54.00	PI0011'	Providing & fixing CPVC pipes including clamps accessories & repair walls etc. complete. 20 mm Ashirvad brand: part no: SDR 11, 2129112: For <b>cold water distribution from tank, overflow and intake</b>					
		<i>Overflow pipe from tank+intake+distribution pipe</i>	<b>16.500</b>	m			
55.0	PO0015'	Providing & fixing CPVC pipes (excluding trenching, refilling & thrust block) complete.15 mm Ashirvad brand, SDR 11, 2129111 <b>Internal water distribution</b>	<b>25.000</b>	m			
56.0	R/A	Providing & fixing CPVC equal single tee, part no: SDR 11 2226001: 15 mm , Ashirvad brand: <b>For internal water distribution</b>	<b>14.000</b>	each			
57.0	R/A	Providing & fixing CPVC 90 degree elbow, part no: SDR 11 2225701: 15 mm , Ashirvad brand: <b>For internal water distribution</b>	<b>12.000</b>	each			

58.0	R/A	Providing & fixing CPVC 90 degree elbow, part no: SDR 11 2225702: 20 mm , Ashirvad brand: <b>For cold water distribution from tank (2 for intake, 2 for overflow pipe, 2 for distribution pipe)</b>	6.000	each				
59.0	R/A	Providing & fixing CPVC reducer 20 *15 mm, part no: SDR 11 2224601: 20 mm , Ashirvad brand: <b>For cold water distribution from tank</b>	1.000	each				
60.0	R/A	Providing & fixing CPVC tank nipple with one side pipe fitment, part no: SDR 11 2223607: 20 mm , Ashirvad brand: <b>For tank connection with pipe</b>	3.000	each				
61.0	R/A	Providing & fixing CPVC reducer male adaptor plastic threaded (MAPT), 20*15 mm and converter bushing , 15 mm, Ashirvad brand: <b>For cpvc and hdpe connection near water tank</b>	1.000	each				
62.0	PI0205'	Providing & fixing CP Bib Cock (Standard vertical), 15 mm ( <b>Hindware brand/any other brand approved by BSB</b> )	2.000	each				
63.0	PI0260'	Providing & fixing Stainless steel toilet Paper Holder with Flap Recessed Type: ( <b>Hindware brand/any other brand approved by BSB</b> )	7.000	each				
64.0	PI0275'	Providing & fixing CP Soap Dish Recessed Type (Stainless Steel). ( <b>Hindware brand/any other brand approved by BSB</b> )	4.000	each				
65.0	PI0255'	Providing & fixing CP Towel Ring Round with Round Flange. ( <b>Hindware brand/any other brand approved by BSB</b> )	4.000	each				
66.0	PI0050	Providing & fixing European-type vitreous china w.c pedestal including seat and lid with c.p brass hinges, 15 lit white vitreous china low level cistern, fittings, brackets, repair walls : white, with plastic seat & lid : <b>1 for male, 3 for female, 1 for disabled ( Hindware brand/any other brand approved by BSB)</b>	5.000	each				
67.0	PI0041	Providing & fixing Indian-type vitreous china w.c squatting pan, including 100 mm H.C.I P or S trap, 10 lit low level vitreous china cistern & fittings, repair walls: <b>580mm, white Orissa-model</b>	2.000	each				
68.0	PI0065	Providing & fixing white vitreous china flat back, lipped front urinal basin 430x260x350mm including C.I cistern & fittings, brackets, G.I. flush pipe & spreaders, brass unions, G.I. clamps, painting, repair walls: <b>One bowl-5 litres. C.I. cistern with push type flushing tap : (Hindware brand/any other brand approved by BSB)</b>	3.000	each				
69.0	PI0086	Providing & fixing white vitreous china wash basin, including C.I brackets, 15mm C.P. brass pillar taps, c.p. chain & rubber plug, 32mm pvc waste, 32mm dia. trap & union, repair walls : Flat back wash basin 630x450mm with 15 mm single handle cp mixer ( <b>Hindware brand/any other brand approved by BSB</b> )	4.000	each				
70.0	PI0115	Providing & fixing pedestals for basins, white vitreous china, recessed back for pipes and necessary fittings; <b>The pedestal shall be fixed to the wash basin mentioned in the item code PI0095 ( Hindware brand/any other brand approved by BSB)</b>	4.000	each				
71.0	PO0565	P & f P.V.C Nahani Trap - 110mm inlet & 75mm outlet	4.000	each				
72.0	WW0665'	Providing & fixing for Disabled person SS handle L shaped for flush toilet with necessary screws etc. complete. 500x700 mm.	2.000	each				
73.00	WW0665"	Providing & fixing for Disabled person SS handle U shaped for wash basin with necessary screws etc. complete. 800x800 mm.	1.000	each				
74.00	A/R	Providing and fixing Jaguar brand hand drier, product code: HDR-WHTMO4A	3.000	each				
75.00	PI0250	Providing & fixing 500*750 mm bevelled edge mirror (superior glass) incl.4mm A.C sheet base fixed to wooden cleats: <b>Refer the architectural drawing for the size of frame.. The colour of the frame shall be same as that of window frames (vanishes)</b>	5.000	each				
76.00	PI0185	Providing & fixing CP Angular Stop Cock :15mm, standard, c.p knob ( <b>Hindware brand/any other brand approved by BSB</b> )	15.000	each				
77.0		Providing & fixing P.V.C soil and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings)						
	PO0372	110 mm	45.87	m				Under the floor: water coset-manhole-septic tank-soak pit +And from open drains
	PO0370	75 mm	20.100	m				For waste water conveyance
78.0		Providing & fixing P.V.C Coupler						
79.0	PO0387	110mm dia	3.000	each				
80.0		Providing & fixing P.V.C Long arm bend with door						
	PO0425	75 mm dia	1.000	each				
	PO0427	110 mm	7.000	each				

81.0		Providing & fixing P.V.C Single Tee plain ,							
	PO0435	75mm dia	1.000	each					
	PO0437	110 mm dia.	5.000	each					
82.0		Providing & fixing P.V.C Reducer ,							
	PO0396	110x75mm	1.000	each					
83.0		Providing & fixing P.V.C plain bend: 110 mm							
	PO0407	110 mm	5.000	each					
84.0	PO0405	75 mm	3.000	each					
85.0	A/R	Providing & fixing CPVC ball valve , Ashirvad brand: <b>before inlet and outlet from tank</b>	2.000	each					
86.0	PI0033	Providing & fixing plastic tank including all accessories complete <i>approved brand as per BSB</i> - 2000 litre capacity	1.000	each					
87.0	PO0600	Size 1200x1200x1200mm, filled with brick bats including 100mm SW drain pipe X 1200mm long	1.000	each					
88.0	PO0612	Constructing Septic Tanks, in R.R Masonry in cement mortar 1:6, including fittings, C.I cover with frame, 40mm thick concrete flooring (40mm aggregates) cement plaster concrete base in C.C 1:4:8 etc. complete as per standard design : 50 users	1.000	each					
89.0	DR0106	Constructing Brick masonry manhole in cement mortar 1:5, R.C.C top slab with 1:2:4 20mm aggregates, foundation concrete 1:4:8 40mm aggregates, 12mm plaster in CM 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 20mm aggregates, neatly finished complete:Inside dimension 900 x 800mm & 600mm deep including C.I. cover & frame (weight >38 kg)	1.000	each					
90	A/R	Providing & placing SS bucket of 20l and Plastic Jug 1l. <b>(sample to be approved by TCB)</b>	4.000	each					
91.0	A/R	Providing & fixing SS 20L Push dustbin Bin with SS Lid <b>(sample to be approved by TCB)</b>	3.000	each					
92.0		Providing & laying H.D.P.E pipes, pressure class 10kg/sq.m, with gradient 1 in 40, including H.D.P.E fittings (excluding trenching, refilling & thrust block), 25 mm from intake chamber							
	PO0018	50 mm(upto 50 m from intake)	50.000	m					
	PO0016	32 mm(from 50-100)	50.000	m					
	PO0015	25 mm(from 100 to 150 m)	50.000	m					
93	A/R	Providing two layers cloth filter at the opening of intake pipe in intake chamber and the pipe at source	2.0	sq.foot					
94	A/R	Providing and fixing Insulation jacket/cotton for 2000 L tank to prevent water from freezing. Consult the Engineer to discuss on insulation	1.0	each				Optional to use	
<b>L. ALUMINIUM WORK</b>									
95.0	SW0046	Providing & fixing anodised Aluminium section for doors, windows, ventilators, partitions framing, false ceiling framing of specified sections including all accessories such as U-rubber gasket for fixing glass panes, weather strips or weather seals, roller, springs, etc complete (excluding the cost of glass panes or boards in case of partitions/doors/windows and ceiling boards in case of ceiling). Sliding and open able doors : <b>Brown color Aluminium frame</b>	14.15	kg					
		Rectangular aluminium section (100*45*2) for frames of door	8.83						
		Aluminium Channel for Horizontal roller frame(50*50*2)	2.21						
		Aluminium square section (50*50*5) for fixing aluminium lock	0.53						
		Aluminium inclined beading	1.88						
		Rubber gasget for fixing glass panes	0.70						
96.0	SW0057	Providing and fixing plain glass panes on aluminium section complete (excluding the cost of aluminium frame & accessories) : 10 mm thick frosted glass	1.62	sq.m					
97.0	WW0610	Providing & fixing anodised aluminium handle with necessary aluminium screws etc. complete; 150 mm	2.0	each					
98.0	A/R	Providing & fixing Aluminium door lock with necessary screws etc. complete, 5" X 2"	1.0	each					
99.0	A/R	Providing and fixing Roller for aluminium sliding door complete. A pair of rollers for each Leaf of door	2.0	each					
<b>M. Site Development work (Pebbles)</b>									
100.0	RW0056'	Supplying/collection and placing at site : River gravels or pebbles for site development aroound the drain; 200 mm depth	3.2	cu.m					
<b>Total amount(Civil)</b>									



**Electrification works for the restroom at Hongtsho**

Sl.no.	BSR Code	Description	Qty	Unit	Rate in numeric	Rate in words	Amount	Remarks
1		Provide & Draw Single Core 1.1KV grade PVC insulated copper conductor cable in existing PVC conduit surface						
	WP0066	2x4 sq.mm	153.00	mtrs.				
	WP0040	1 x 1 sq.mm	76.50	mtrs.				
	WP0049	2x1.5 sq.mm	167.00	mtrs.				
	WP0061	2 x 2.5 sq.mm	102.00	mtrs.				
		<b>PVC CONDUIT</b>						
2		Supplying and fixing of PVC conduit on surface including all accessories such as screws, bends, elbows, Tees, corners, etc. complete as required						
	CD0091	25 mm	170.50	mtrs.				
		<b>SWITCH &amp; SOCKETS</b>						
3		Supplying & fixing of 6A switch on existing PVC/metal / moulded tough surface box (recessed/surface ) including necessary cutting, connection testing etc. as required						
	SS0001	6A switch SP 1-way modular type	17.00	each				
4		Supplying & fixing of switch/socket on existing PVC/ wooden /metal/ moulded tough surface box with fibre sheet cover, round block, junction box (recessed or surface) including necessary cutting, connection testing etc. as required.						
	SS0220	5/6 pin, 6/16A switch/socket combined, shuttered, modular type	6.00	each				
		<b>INDOOR LUMINIARIES &amp; FANS</b>						
5	A/R	S/F/T/C 18 watts round shape LED specially for ciling with necessary accessories (sample will be shown by the client)	17.00	ech				
6		Supply of exhaust fan 240 volts AC 900 rpm with all accessories such as frame with arm 3 nos. sweep 3 nos. condenser and fan body etc complete as required as per bsb approved brand						
	FN0016	380 mm sweep	2.00	each				
		<b>PVC BOXES</b>						
7		Supplying & fixing of PVC boxes for switch/socket outlet/switch socket combined/ gang switches on surface including painting etc as required as per BSB approved brand						
	BX0020	1 module	1.00	each				
	BX0021	2 module	1.00	each				
	BX0023	4 module	1.00	each				
	BX0024	6 module	2.00	each				
8		Supplying & fixing of metal boxes for switch/socket outlet/switch socket combined/ gang switches on surface including painting etc as required						
	BX0050	1 module	1.00	each				
	BX0051	2 module	1.00	each				
	BX0052	3 module for socket	1.00	each				
	BX0053	4 module	8.00	each				
	BX0054	6 module	2.00	each				
		<b>Miniature Circuit Breaker (MCB)</b>						
9		Supply of miniature circuit breaker (MCB) single pole, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required						
	GB0271	10 Ampers	2.00	each				
	GB0272	16 Ampers	5.00	each				
10		Supplying of residual current circuit breaker (RCCB) double pole, sensitivity 30 mA , 230 volts A.C complete with all accessories suitable to fix on din-bar etc. as required						
	GB0249	63 Ampers	1.00	each				
		<b>DISTRIBUTION BOX</b>						
11		Supplying and fixing of SPN distribution board (DIN type, horizontal) with metal door, 230 volt A.C complete with all accessories without MCB/isolator/RCCB out going or incoming etc. as required						
	GB0523	12 ways	1.00	each				
		<b>ERECTION/INSTALLATION</b>						
12		Installation, testing and commissioning of SPN/DP miniature circuit breaker DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required						
	EI0380	6/10/16/20 A	5.00	each				
	A/R	63 A (RCCB)	1.00	each				

13		Installation, testing and commissioning of SPN DB (DIN type, horizontal/vertical) with no door, metal door or acrylic door (double/single door) complete with all accessories to accommodate incoming RCCB DP 63 A sensitivity 30/100/300mA and outgoing SP MCB 6/10/16A on/in prefabricated MS surface/MS cubical control panel board including drilling holes, connections etc. as required						
	EI0515	12 ways	1.00	each				
14		Installation, testing and commissioning exhaust fan upto 450 mm sweep the existing opening including making the hole to suit the size of the indicated fan making good the damages, and connection with PVC insulated copper conductor						
	EI0121	1.5 sq.mm single core cable 1.1 KV grade	2.00	each				
15		Providing and fixing of earthing including all accessories, machinery enclosure, C.I cover plate having locking arrangement, watering pipe with excavation and refilling work including charcoal or coke and salt complete as required as per standard earthing drawing						
	ET0001	With G.I earth plate 600x600x6mm	1.00	each				
16		Providing and laying earth connection from earth electrodes in 15mm dia G.I pipe from earth electrodes as required as per guidance of standard earthing drawing						
	ET0015	With 4.06mm dia (8SWG) G.I wir	10.00	m				
17		Supplying and laying of 3- Core 1.1KV grade PVC insulated and sheathed Aluminium conductor armoured power cables						
	PC0139	16 sq.mm	10.00	m				
18	A/R	S/F/T/C of single phase kilowatt hour meter completed as required	1.00	each				
19	A/R	Providing and fixing of wood box with shutter having locking system arrangement on the wall mounted to accommodate the give SPN BB and energy meter including painting asrequired	1.00	each				
							<b>Total Amount (Nu)</b>	