

DRAWING/DESIGN SAMPLE FOR THE CONSTRUCTION OF SINGLE STOREY HOUSE (LESS THAN 100 SQM PLINTH AREA) ONLY.

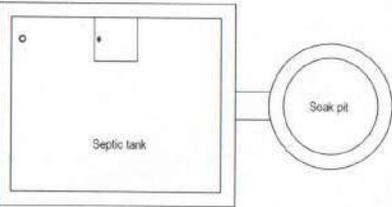
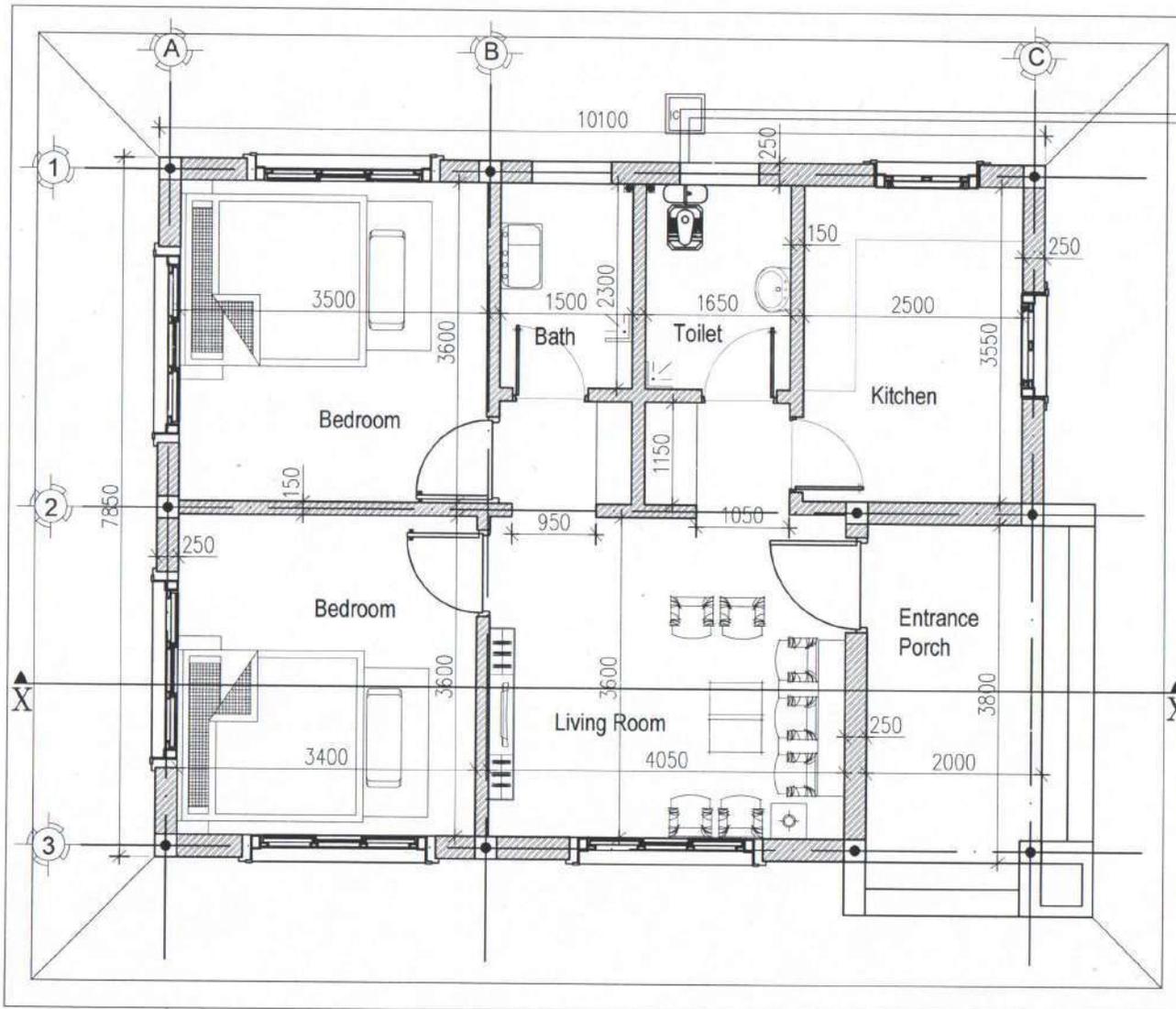
PREPARED BY Dz. HUMAN SETTLEMENT SECTOR,
SAMTSE DZONGKHAG.

Topography and site conditions shall be verified after the approval. Plot owner shall inform and make appointment with the Building Inspector.

 ལྷོ་ལྷོ་བསམ་ཚུ་རྗེའི་ལྷན་བདག་སྐྱོང་། ROYAL GOVERNMENT OF BHUTAN DZONGKHAG ADMINISTRATION SAMTSE <small>*A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment*</small>		Sample drawing & Minimal Standards for Rural Construction (for houses with less than 100sqm plinth area)	DESIGN AND DRAWN BY: Krishna Kafley [Architect - BA-255 (G)] Contact: 17363181; kkafley@samtse.gov.bt	VERIFIED BY:  Municipal Incharge	APPROVED BY: DASHO DZONGDA	REVISION	DWG NO.														
		LOCATION: Place/Area/Thram No/Plot No: DRAWING TITLE: AS STATED ON THE DRAWING	SCALE NTS	DATE APRIL 2021	<small>ANY DISCREPANCY IN DRAWING IS TO BE BROUGHT TO THE IMMEDIATE NOTICE OF THE DESIGN TEAM</small>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">SL NO</th> <th style="width: 70%;">REVISION NOTE</th> <th style="width: 25%;">DATE</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td></tr> </tbody> </table>	SL NO	REVISION NOTE	DATE	1.			2.			3.			4.	
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MINIMUM ROOM SIZES

1. Combined living/dining room: 3 metres x 4 metres
2. Only living room when separate dining is provided: 3 metres x 3 metres
3. Primary bedroom – when only one bedroom is provided: 3 metres x 4 metres
4. Secondary bedroom – when more than one bed is provided: 3 metres x 3 metres
5. Additional/other bedroom: 2.5 metres x 3 metres

SETBACK REQUIREMENTS

1. **Two floors or less** - 2 metres on three sides and 5 metres on the side accommodating septic tank.
2. **Three floors** - 3 metres on three sides and 5 metres on the side accommodating septic tank.
3. Two or more habitable structures of two floors or less on the same plot shall have minimum of 4 metres distance between them.
4. Two or more habitable structures of three floors on the same plot shall have minimum of 6 metres distance between them.



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ROYAL GOVERNMENT OF BHUTAN
DZONGKHAG ADMINISTRATION
SAMTSE

"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"



Sample drawing & Minimal Standards for Rural Construction
(for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: SAMPLE PLAN 1

SCALE: NTS
DATE: APRIL 2021

DESIGN AND DRAWN BY:

Krishna Kafley
Krishna Kafley (Architect)

VERIFIED BY:

[Signature]
Municipal Incharge

APPROVED BY:

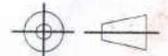
[Signature]
DASHO DZONGDA

REVISION

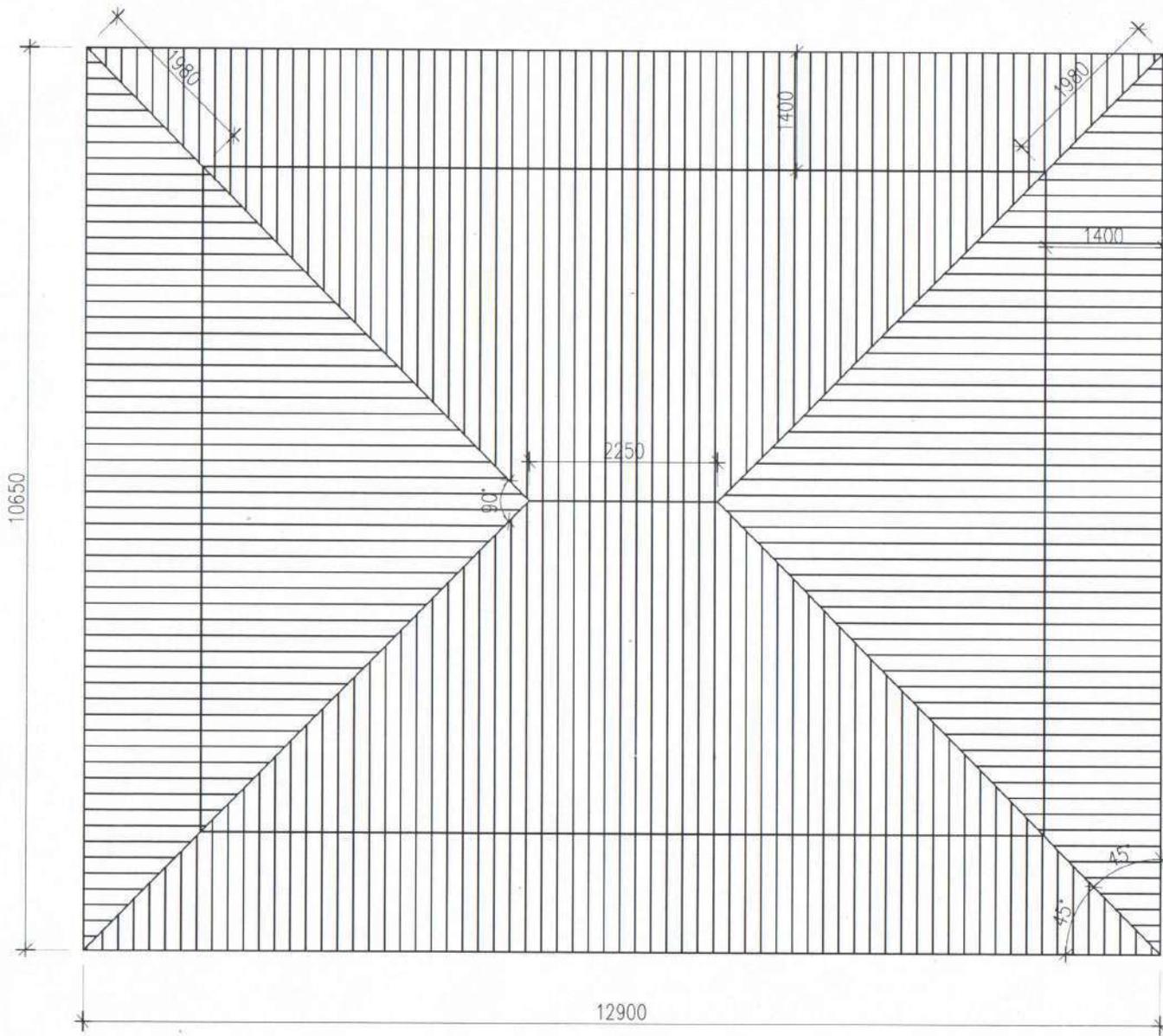
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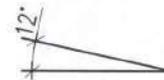
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ROOF ANGLE
 Roof angle for single storey building shall not exceed 11 degrees to 12 degrees slope.
 Jamthog shall not be permitted for single storeyed house.




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 ROYAL GOVERNMENT OF BHUTAN
 DZONGKHAG ADMINISTRATION
 SAMTSE
 "A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction
 (for houses with less than 100sqm plinth area)
 LOCATION: Place/Area/Thram No/Plot No:
 DRAWING TITLE: ROOF PLAN
 SCALE: NTS
 DATE: APRIL 2021

DESIGN AND DRAWN BY:

 Krishna Kafley (Architect)
 VERIFIED BY:

 Municipal Incharge

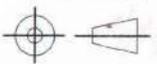
APPROVED BY:

 DASHO DZONGBA

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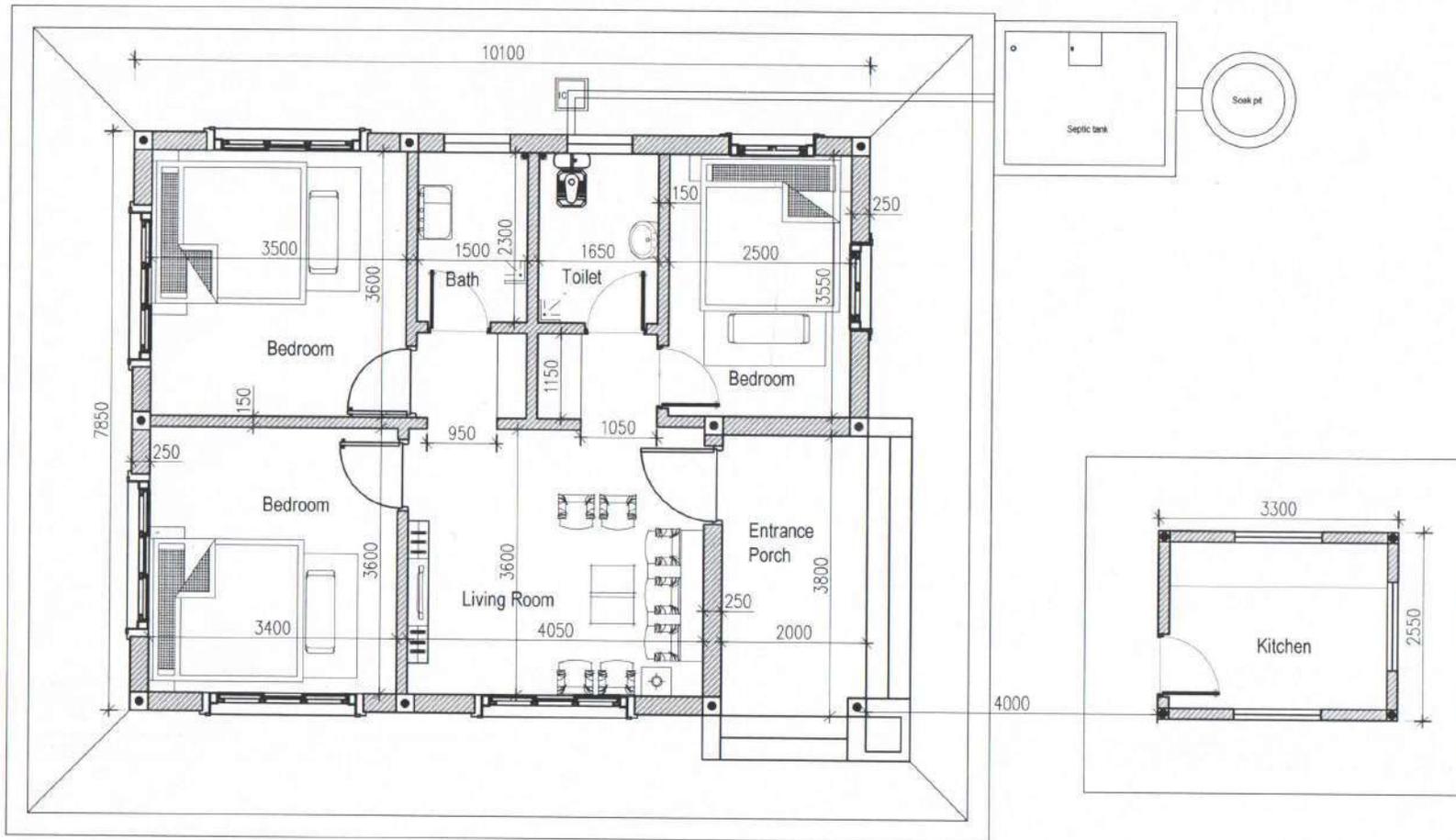
PROJECTION



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SETBACK REQUIREMENTS

1. **Two floors or less** - 2 meters on three sides and 5 meters on the side accommodating septic tank.
2. **Three floors** - 3 meters on three sides and 5 meters on the side accommodating septic tank.
3. Two or more habitable structures of two floors or less on the same plot shall have minimum of 4 metres distance between them.
4. Two or more habitable structures of three floors on the same plot shall have minimum of 6 metres distance between them.

MINIMUM ROOM SIZES

1. Combined living/dining room: 3 metres x 4 metres
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ROYAL GOVERNMENT OF BHUTAN
DZONGKHAG ADMINISTRATION
SAMTSE

"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"



Sample drawing & Minimal Standards for Rural Construction
(for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: SAMPLE PLAN 2

SCALE DATE
NTS APRIL 2021

DESIGN AND DRAWN BY:

Krishna Kaffley
Krishna Kaffley (Architect)

VERIFIED BY:

[Signature]
Municipal Incharge

APPROVED BY:

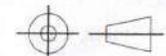
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DASHO DEONGDA

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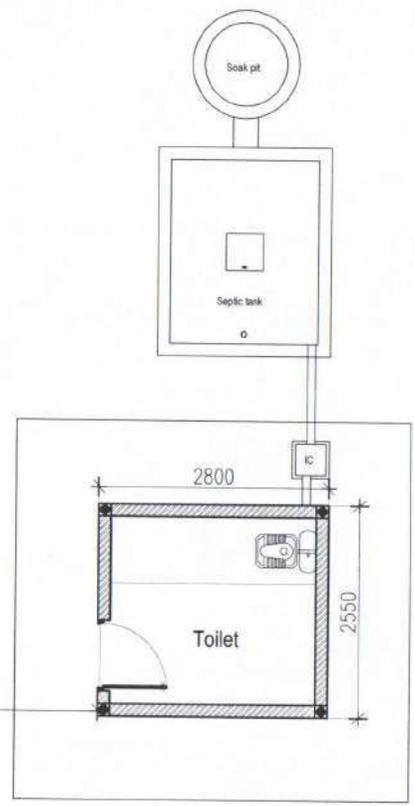
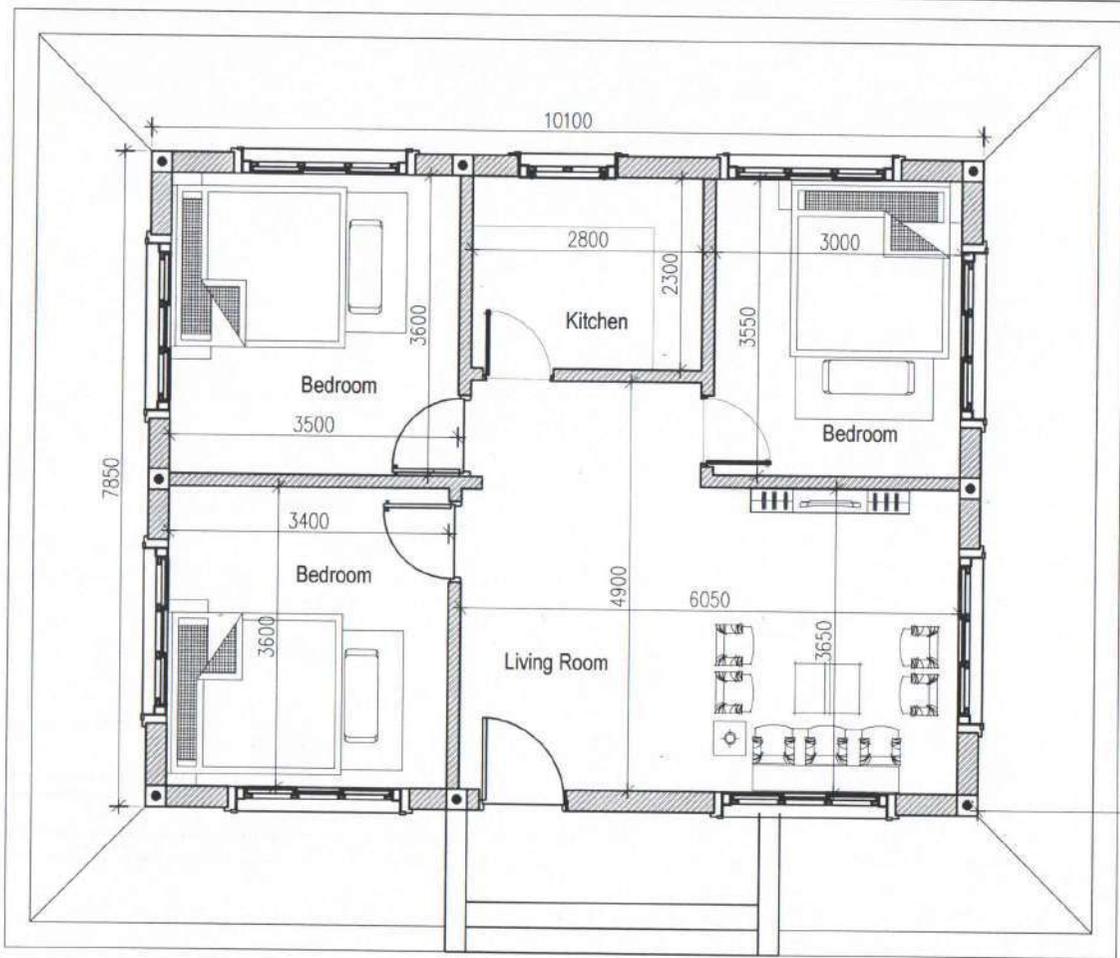
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PROJECTION



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SETBACK REQUIREMENTS

1. **Two floors or less** - 2 meters on three sides and 5 meters on the side accommodating septic tank.
2. **Three floors** - 3 meters on three sides and 5 meters on the side accommodating septic tank.
3. Two or more habitable structures of two floors or less on the same plot shall have minimum of 4 metres distance between them.
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MINIMUM ROOM SIZES

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ROYAL GOVERNMENT OF BHUTAN
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SAMTSE

"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction
(for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: SAMPLE PLAN 3

SCALE	DATE
NTS	APRIL 2021

DESIGN AND DRAWN BY: *Krishna Kallej*
Krishna Kallej (Architect)

VERIFIED BY: *[Signature]*
Municipal Incharge

APPROVED BY: *[Signature]*
DASHO DZONGDA

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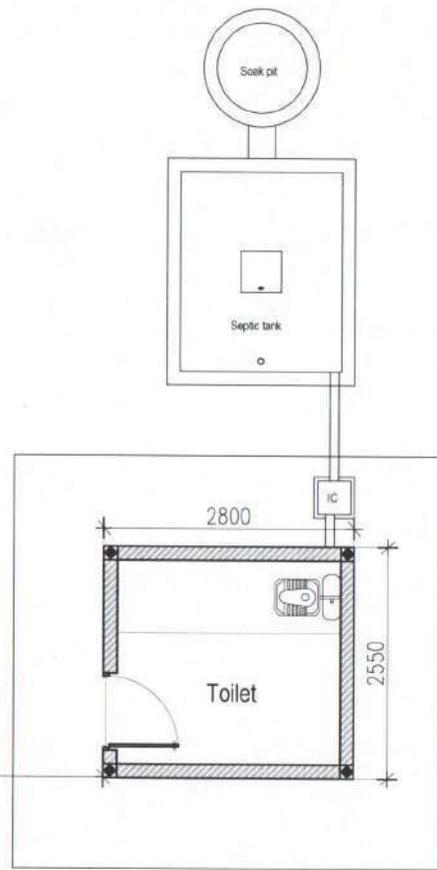
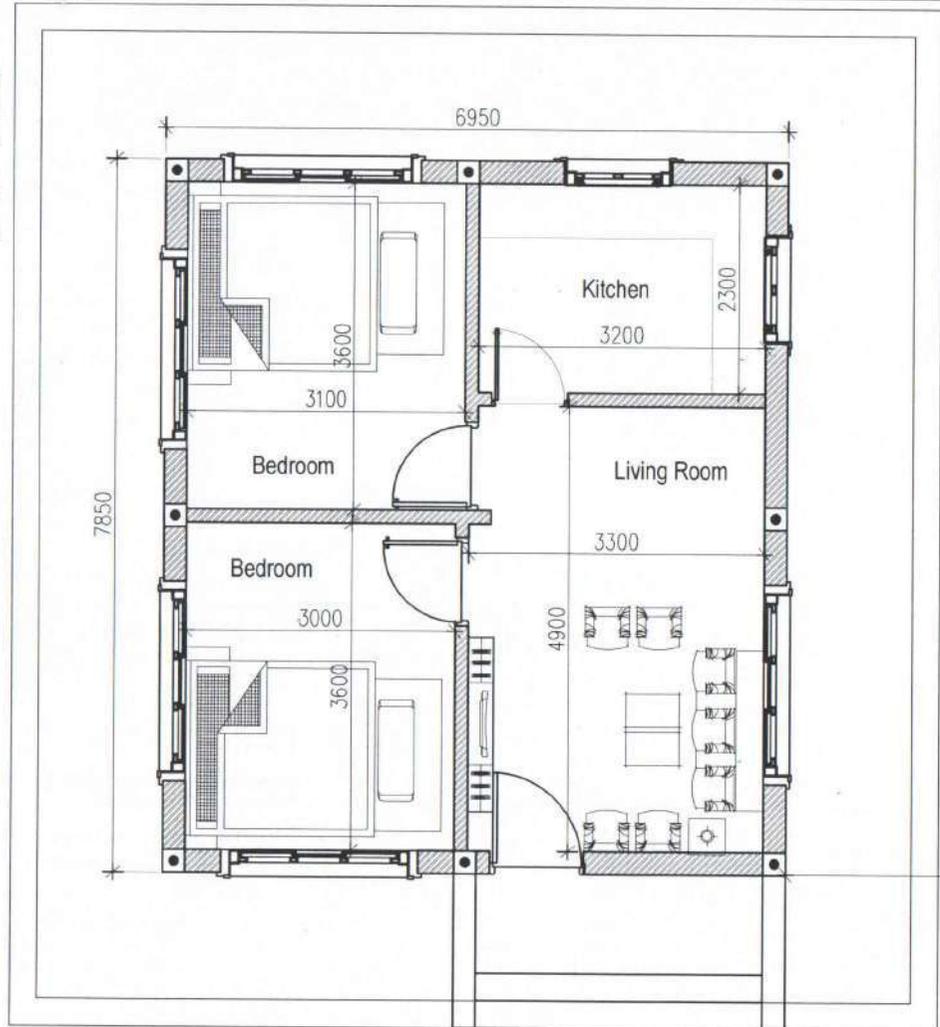
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SETBACK REQUIREMENTS

1. **Two floors or less** - 2 meters on three sides and 5 meters on the side accommodating septic tank.
2. **Three floors** - 3 meters on three sides and 5 meters on the side accommodating septic tank.
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MINIMUM ROOM SIZES

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		<p>LOCATION: Place/Area/Thram No/Plot No:</p> <p>DRAWING TITLE: SAMPLE PLAN 4</p>	<p>SCALE: NTS</p> <p>DATE: APRIL 2021</p>	<p><i>Krishna Kafley</i> Krishna Kafley (Architect)</p>	<p><i>[Signature]</i> Municipal Incharge</p>	<p><i>[Signature]</i> DASHO DZONGDA</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SL. NO.</th> <th>REVISION NOTE</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td></tr> </tbody> </table>	SL. NO.	REVISION NOTE	DATE	1.			2.			3.			4.	
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 ROYAL GOVERNMENT OF BHUTAN
 DZONGKHAG ADMINISTRATION
 SAMTSE



Sample drawing & Minimal Standards for Rural Construction
 (for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: SAMPLE ELEVATIONS

SCALE: NTS
 DATE: APRIL 2021

DESIGN AND DRAWN BY:

Kristina Kafley
 Kristina Kafley (Architect)

VERIFIED BY:

[Signature]
 Municipal Incharge

APPROVED BY:

[Signature]
 DASHO DZONGDA

REVISION

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PROJECTION



"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

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ROYAL GOVERNMENT OF BHUTAN
DZONGKHAG ADMINISTRATION
SAMTSE

"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"



Sample drawing & Minimal Standards for Rural Construction
(for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: SAMPLE ELEVATIONS

SCALE: NTS
DATE: APRIL 2021

DESIGN AND DRAWN BY:

Krishna Kafley
Krishna Kafley (Architect)

VERIFIED BY:

[Signature]
Municipal Incharge

APPROVED BY:

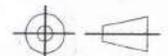
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DASHO DZONGBA

REVISION

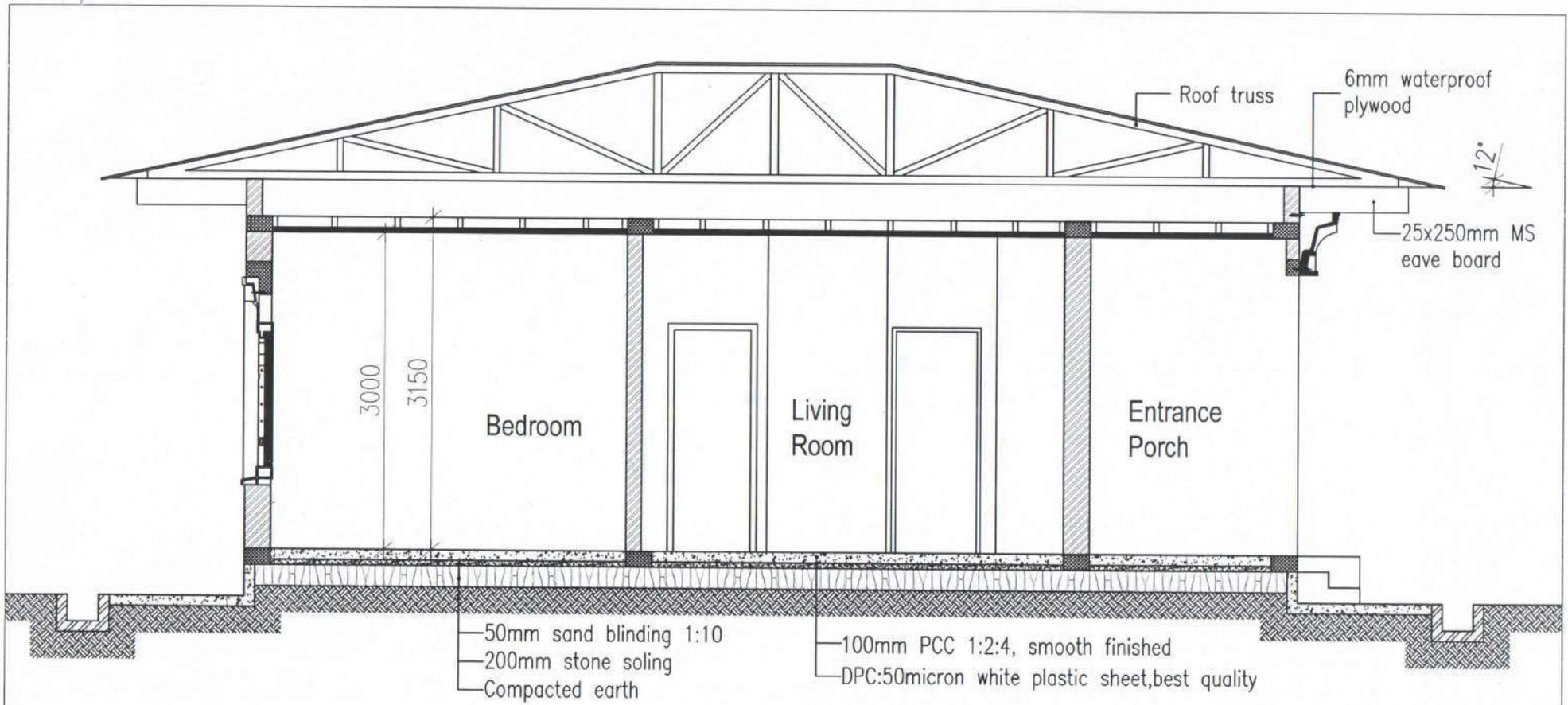
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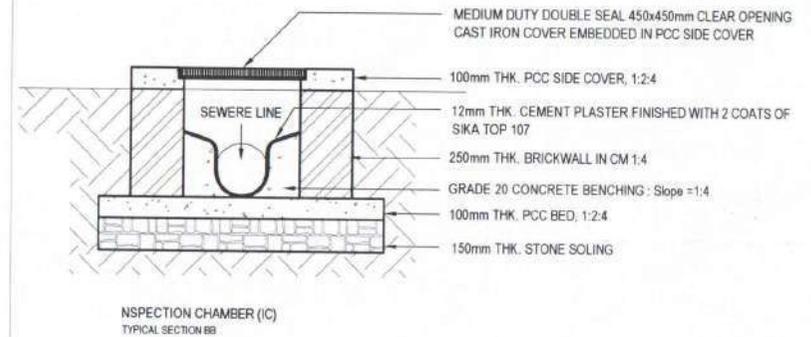
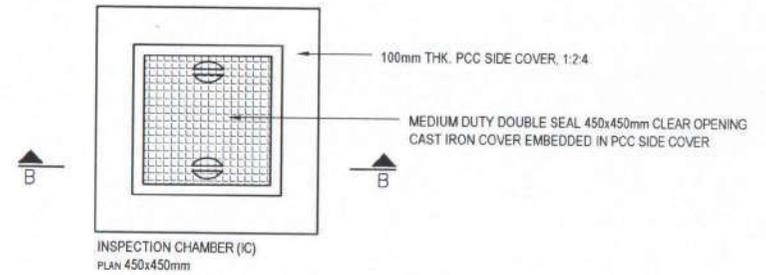
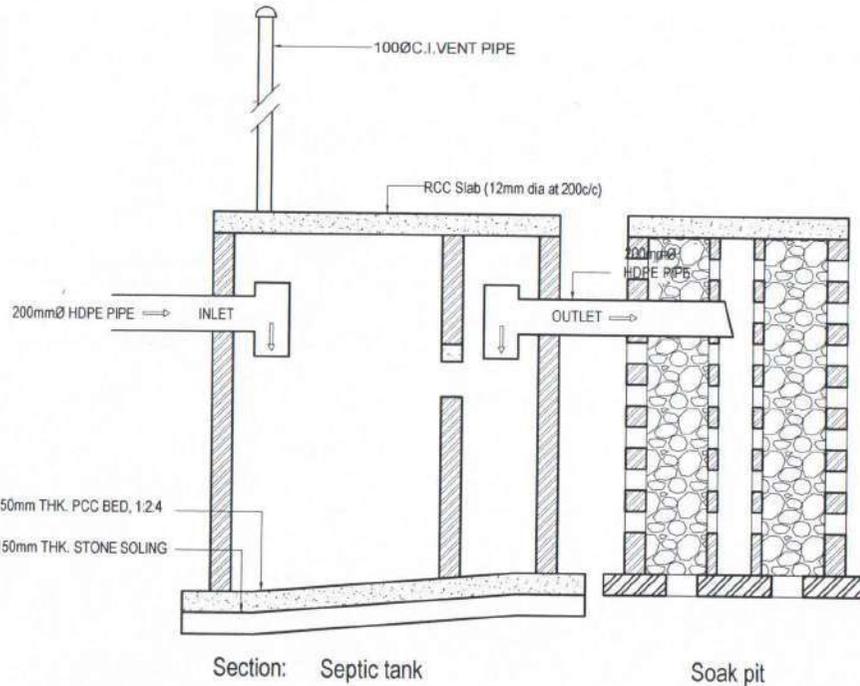
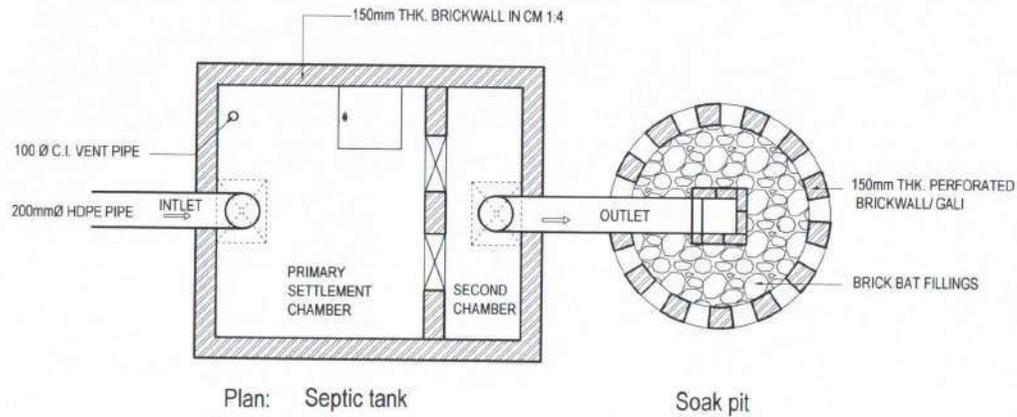
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NOTES:

Traditional Bhutanese Architectural features shall be strictly followed as per the Bhutan Architectural Guidelines 2014. For any detailed information the person constructing the house shall refer BBR-2018, Bhutan Building Code 2018, Bhutan Color Code 2014, or contact Dz. Human Settlement Sector/Municipality.

<p>འབྲུག་རྒྱལ་ཁབ་རྩ་ཁྲིམས་བཙུགས་པའི་རྒྱལ་ཁབ་</p> <p>ROYAL GOVERNMENT OF BHUTAN DZONGKHAG ADMINISTRATION SAMTSE</p> <p>"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"</p>	<p>Sample drawing & Minimal Standards for Rural Construction (for houses with less than 100sqm plinth area)</p>	<p>DESIGN AND DRAWN BY:</p> <p><i>Krishna Kafley</i> Krishna Kafley (Architect)</p>	<p>VERIFIED BY:</p> <p><i>[Signature]</i> Municipal Incharge</p>	<p>APPROVED BY:</p> <p><i>[Signature]</i> DASHO DZONGBA</p>	<table border="1"> <thead> <tr> <th>SL.NO</th> <th>REVISION NOTE</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td></tr> </tbody> </table>	SL.NO	REVISION NOTE	DATE	1.			2.			3.			4.			<p>DWG NO.</p>
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<p>LOCATION: Place/Area/Thram No/Plot No:</p> <p>DRAWING TITLE: SAMPLE SECTION XX</p>	<p>SCALE: NTS</p> <p>DATE: APRIL 2021</p>	<p>ANY DISCREPANCY IN DRAWING IS TO BE BROUGHT TO THE IMMEDIATE NOTICE OF THE DESIGN TEAM</p>		<p>PROJECTION</p>																	



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ROYAL GOVERNMENT OF BHUTAN
DZONGKHAG ADMINISTRATION
SAMTSE

"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction
(for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: SEPTIC TANK DETAILS

SCALE DATE
NTS APRIL 2021

DESIGN AND DRAWN BY:

Krishna Kallej
Krishna Kallej (Architect)

VERIFIED BY:

[Signature]
Municipal Incharge

APPROVED BY:

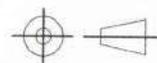
[Signature]
DASHO DZONGDA

REVISION

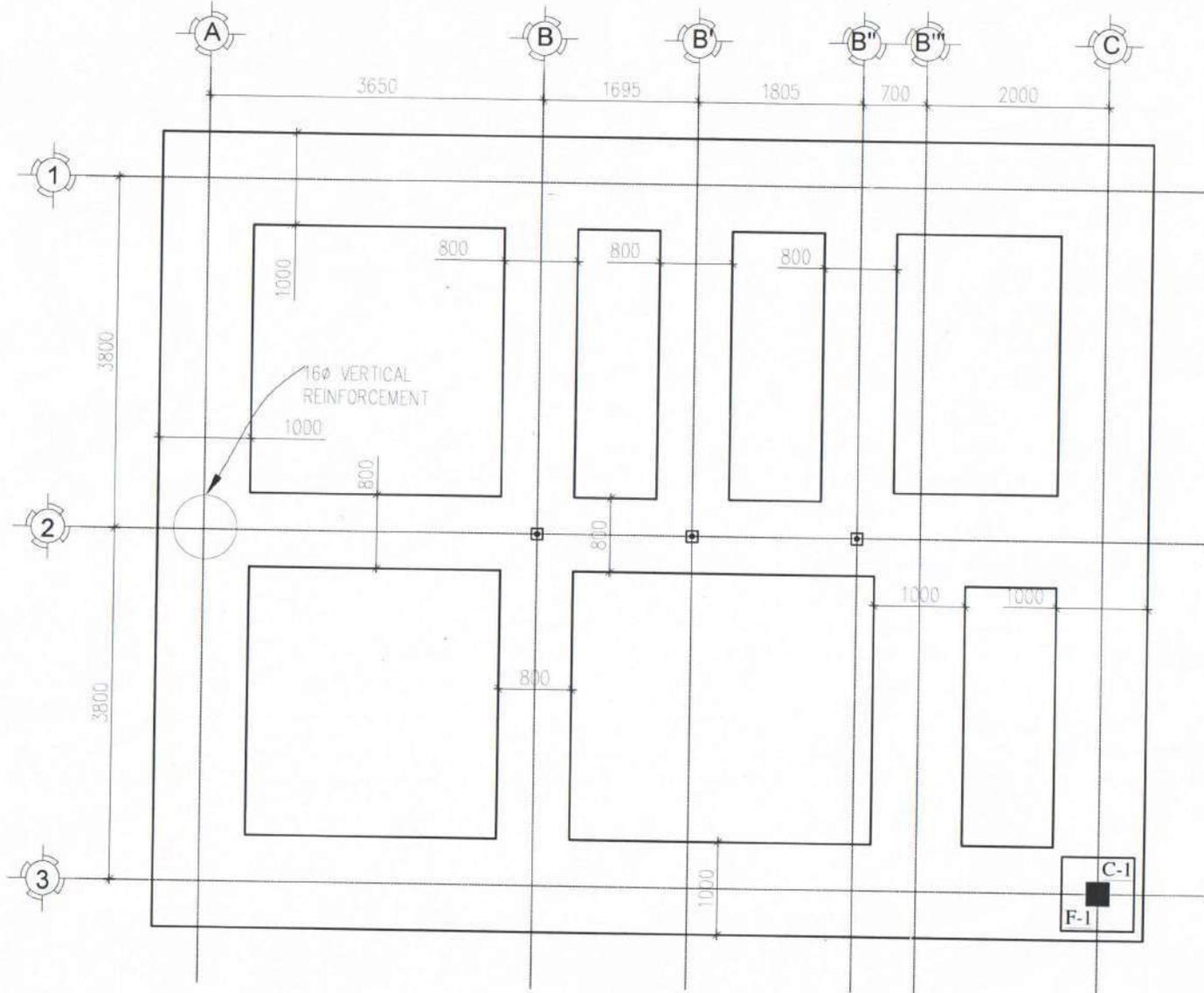
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Foundation layout



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ROYAL GOVERNMENT OF BHUTAN
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SAMTSE

"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction
(for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: FOUNDATION LAYOUT

SCALE: NTS
DATE: APRIL 2021

DESIGN AND DRAWN BY:

Ramesh Kr Ghalley
Ramesh Kr Ghalley
(Civil Engg)

VERIFIED BY:

[Signature]
Municipal Incharge

APPROVED BY:

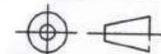
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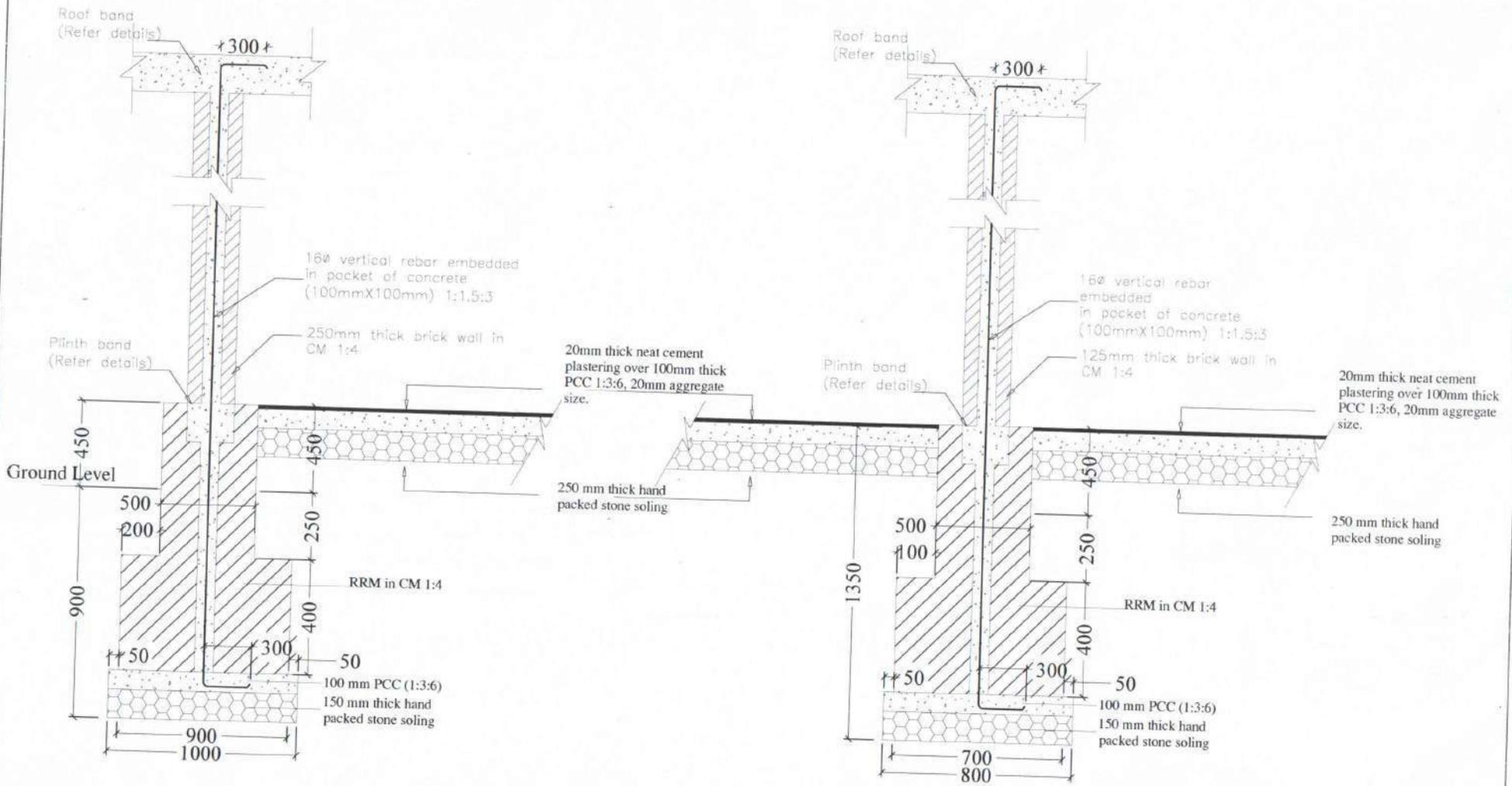
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Typical foundation section



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 ROYAL GOVERNMENT OF BHUTAN
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 SAMTSE



"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction
 (for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: TYPICAL FOUNDATION SECTION

SCALE: NTS
 DATE: APRIL 2021

DESIGN AND DRAWN BY:

Ramesh Kr Ghalley
 Ramesh Kr Ghalley
 (Civil Engg.)

VERIFIED BY:

Municipal Incharge
 Municipal Incharge

APPROVED BY:

DASHO-DZONGDA
 DASHO-DZONGDA

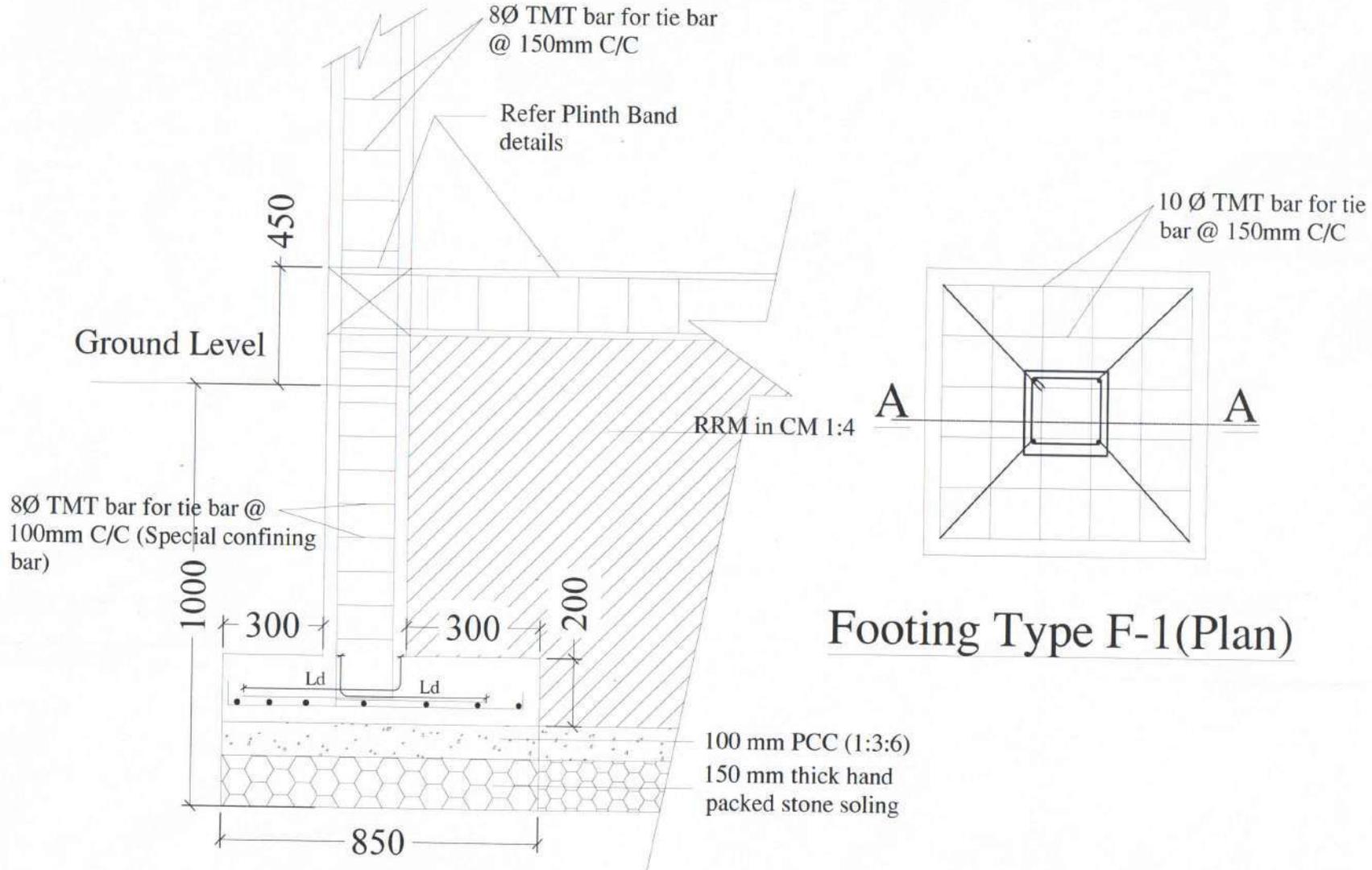
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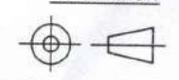


Section A-A

Footing Type F-1(Plan)


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 ROYAL GOVERNMENT OF BHUTAN
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 "A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction (for houses with less than 100sqm plinth area)	
LOCATION: Place/Area/Thram No/Plot No:	
DRAWING TITLE: F1 FOOTING DETAIL	SCALE: NTS
DATE: APRIL 2021	

DESIGN AND DRAWN BY: <i>Ramesh Kr Challey</i> Ramesh Kr Challey (Civil Engg.)	VERIFIED BY: <i>[Signature]</i> Municipal Incharge	APPROVED BY: <i>[Signature]</i> DASHO DZONGDA	REVISION	DWG NO.														
<table border="1"> <thead> <tr> <th>SL NO.</th> <th>REVISION NOTE</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td></tr> </tbody> </table>			SL NO.	REVISION NOTE	DATE	1.			2.			3.			4.			PROJECTION
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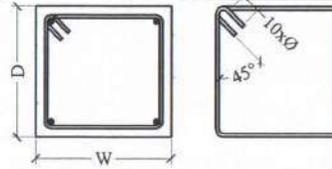
Column notes (General & longitudinal reinforcements):

1. The section sizes provided/drawn here refers to unfinished surfaces/does not include applied finishes.
2. The length of column vertical rebar shall be adjusted to different lengths while erecting to ensure proper lapping in different floors except in ground/basement floor, where lapping is not allowed.
3. One fourth (1/4) of column height of external columns shall be cast with beams/slab after necessary anchorage arrangement of beam rebar in the connecting column.
4. Special attention must be given for reinforcement details in footing-column joints, beam-column joints, staircase-beam joints & slabs.
5. The column longitudinal re-bars shall not be bent/cranked without engineers prior approval.
6. Do not make any unspecified holes or chisels or place conduits, pipes etc. through the structural members (column, beam, etc.) without engineers prior approval.

Material specifications:

1. Concrete grade of M20 (1:1.5:3) shall be used for all column works as per IS - 456 : 2000.
2. Steel reinforcement grade of Fe 500 (TMT/TOR) (SQCA approved) shall be used for all RC works.
3. Use nominal size of aggregate of 20mm (crushed) for all RC works.
4. Portable water/water fit for drinking shall be used for the concrete mix & curing.
5. Proper curing methods shall be adopted to achieve the desired strength of concrete as per IS 456:2000.
6. Form works shall not be removed until required strength of concrete is achieved.
7. Minimum clear covers, footing = 50mm, column = 40mm, beam = 25mm, slab & staircase = 20 mm shall be provided.

Schedule of column				
Column	Cross section, WxD	Main reinforcement bar	Special confining ties	Normal ties
C1	250x250	4-16Ø	8Ø@100c/c	8Ø@150c/c



C/S, Column (typical)

Column notes (Transverse Reinforcements):

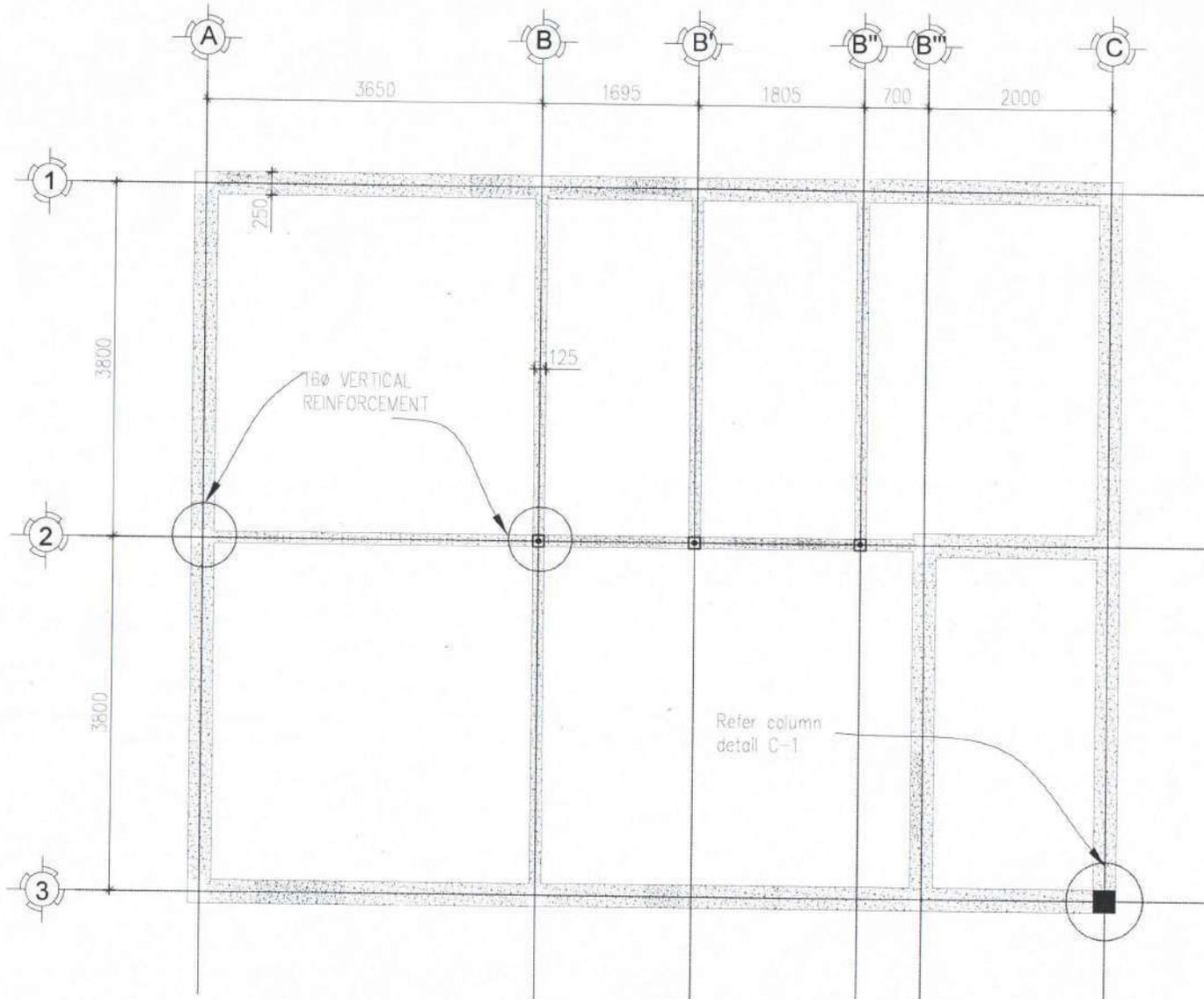
Normal ties;

1. The spacing of normal ties/hoops shall not exceed 150mm.
2. The minimum diameter of the transverse reinforcement shall be 8mm, as bars of diameter lesser than 32mm are used.
3. Except in confining zone, rest of the length of column will have stirrups of 8Ø@150mm c/c.

Special confining ties;

1. Special confining ties of 8Ø@100mm c/c shall be provided over length of 'lo' from the beam face, where 'lo' is larger of hc/6 or 450mm or larger of column section dimensions.
2. Special confining ties of 8Ø@100mm c/c shall be provided over the full lap length of longitudinal column re-bars.
3. Special confining ties of 8Ø@100mm c/c shall be continued into the footing pad by minimum of 300mm from the top pad surface.
4. Columns supporting staircase shall be provided with special confining ties of 8Ø@100mm c/c throughout the height of the column.

 <p>འབྲུག་རྒྱལ་ཁབ་རྒྱུ་རྒྱུ་རྒྱུ་</p> <p>ROYAL GOVERNMENT OF BHUTAN DZONGKHAG ADMINISTRATION SAMTSE</p> <p><small>"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"</small></p>	<p>Sample drawing & Minimal Standards for Rural Construction (for houses with less than 100sqm plinth area)</p> <p>LOCATION: Place/Area/Thram No/Plot No:</p>	DESIGN AND DRAWN BY:	VERIFIED BY:	APPROVED BY:	<table border="1"> <thead> <tr> <th colspan="3">REVISION</th> </tr> <tr> <th>SL.NO</th> <th>REVISION NOTE</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td></td> <td></td> </tr> <tr> <td>3.</td> <td></td> <td></td> </tr> <tr> <td>4.</td> <td></td> <td></td> </tr> </tbody> </table>	REVISION			SL.NO	REVISION NOTE	DATE	1.			2.			3.			4.			<p>DWG NO.</p>
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<p>DRAWING TITLE: NOTES</p> <table border="1"> <thead> <tr> <th>SCALE</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>NTS</td> <td>APRIL 2021</td> </tr> </tbody> </table>	SCALE	DATE	NTS	APRIL 2021	<p>Ramesh Kr. Ghalley [Civil Engg. - CDB/BE/0039(S)] Contact: 17976993; rkghalley@samtse.gov.bt</p>	<p>Municipal Incharge</p>	<p>DASHO DZONGDA</p>																	
SCALE	DATE																							
NTS	APRIL 2021																							



PLINTH, LINTEL AND ROOF BAND LAYOUT PLAN



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 ROYAL GOVERNMENT OF BHUTAN
 DZONGKHAG ADMINISTRATION
 SAMTSE



"A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction
 (for houses with less than 100sqm plinth area)

LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: PLINTH, LINTEL AND ROOF BAND

SCALE: NTS
 DATE: APRIL 2021

DESIGN AND DRAWN BY:
Ramesh Kr Ghalley
 Ramesh Kr Ghalley
 (Civil Engg.)

VERIFIED BY:
Municipal Incharge
 Municipal Incharge

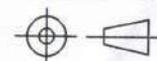
APPROVED BY:
DASHO DZONGDA
 DASHO DZONGDA

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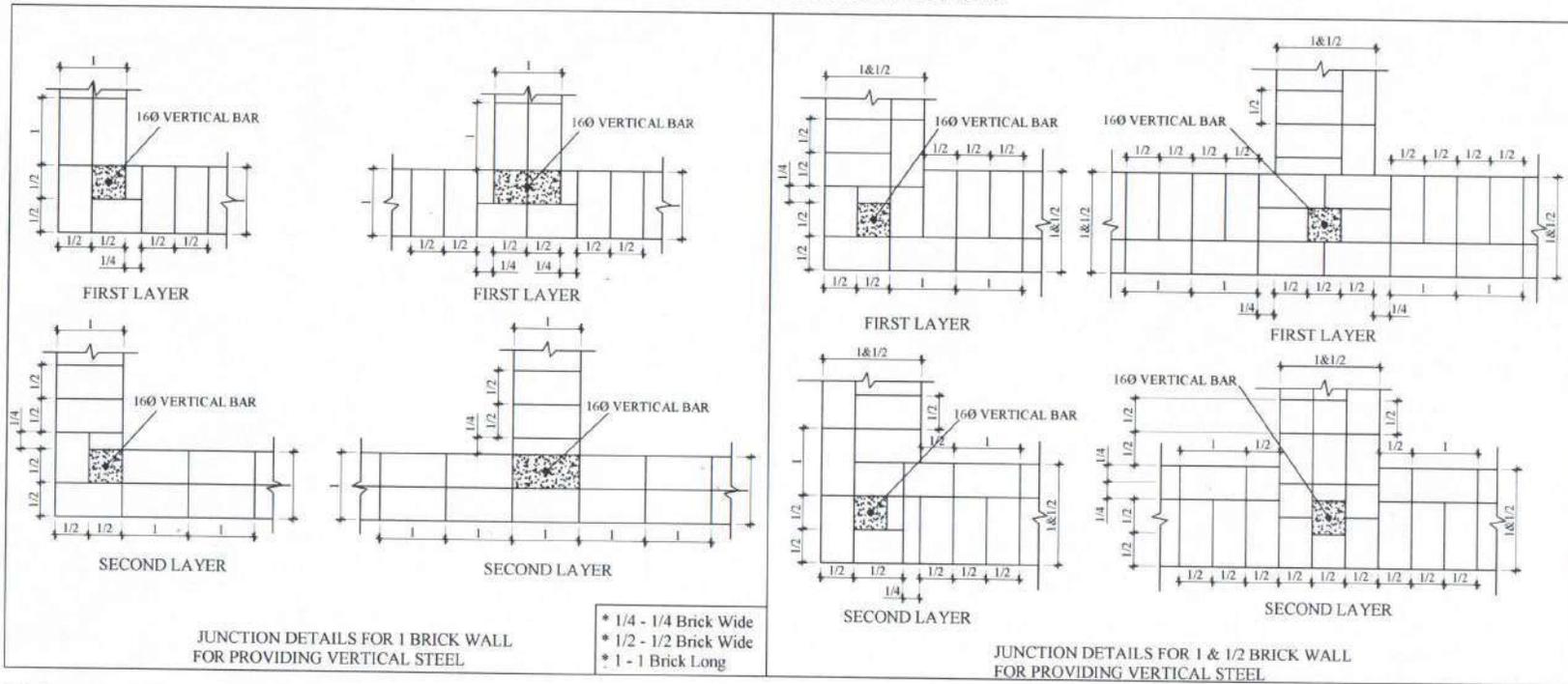
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PROJECTION



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VERTICAL REINFORCEMENT DETAILS AND NOTES



NOTE:

1. THE VERTICAL REINFORCEMENTS SHALL BE PROPERLY EMBEDDED INTO THE PCC BELOW THE FOUNDATION WALLS AND ROOF SLAB OR ROOF BAND SO AS TO DEVELOP ITS TENSILE STRENGTH IN BOND. IT SHALL PASS THROUGH THE LINTEL BANDS, FLOOR SLABS & FLOOR LEVEL BANDS IN ALL STOREYS.
2. BARS IN DIFFERENT STOREYS MAY BE WELDED (AS PER IS 2751: 1979 AND IS 9417: 1989, AS RELEVANT) OR SUITABLY LAPPED.
3. VERTICAL REINFORCEMENT AT JAMBS OF WINDOW AND DOOR OPENINGS SHALL START FROM FOUNDATION OF FLOOR AND MAY TERMINATE IN LINTEL BAND OR ROOF BAND.
4. VERTICAL REINFORCEMENTS SHALL BE COVERED WITH CONCRETE OF GRADE M20 USING COARSE AGGREGATE OF 10mm MAXIMUM SIZE, IN SUITABLY CREATED POCKETS AROUND THE BARS, ENSURING SAFETY FROM CORROSION AND GOOD BOND WITH MASONRY.
5. VERTICAL BARS ARE PROVIDED AT THE JUNCTIONS OF THE WALLS & AT A DISTANCE OF 150mm FROM BOTH THE SIDES OF ALL THE OPENINGS AS SHOWN IN VERTICAL REINFORCEMENT LAYOUT PLANS.
6. THE DISTANCES PROVIDED IN THE VERTICAL REINFORCEMENT LAYOUT PLAN ARE MEASURED FROM CENTER OF THE BARS TO THE INDICATED POINTS (EDGES OF THE OPENING OR TO THE OTHER CENTERS OF THE BARS).
7. REFER ARCHITECTURAL PLAN AND PROVIDE THE OPENINGS IN THE WALLS EXACTLY AS PER REQUIREMENT.
8. 20MM DIA. BARS (TMT/TOR Fe500) ARE TO BE USED FOR ALL REINFORCING WORKS IN THE WALLS OF THE MASONRY BLOCKS, UNLESS OTHERWISE SPECIFIED.



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ROYAL GOVERNMENT OF BHUTAN
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LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: VERTICAL REINFORCEMENT

SCALE: NTS
DATE: APRIL 2021

DESIGN AND DRAWN BY:

Ramesh Kr Ghaley
Ramesh Kr Ghaley
(Civil Engg.)

VERIFIED BY:

Municipal Incharge
Municipal Incharge

APPROVED BY:

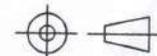
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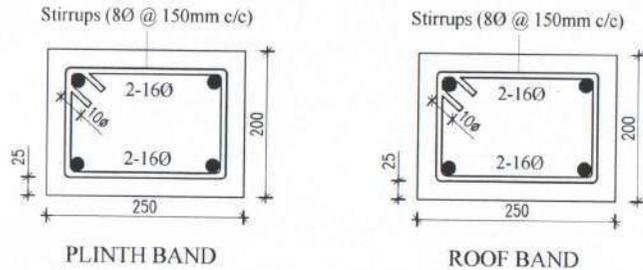
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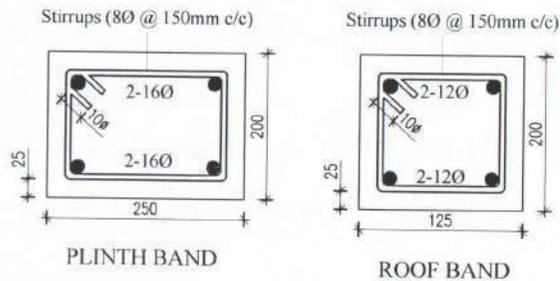


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BAND DETAILS AND NOTES



DETAILS OF DIFFERENT BANDS IN 250mm WALLS



DETAILS OF DIFFERENT BANDS IN 125mm WALLS

NOTES:

- Both Internal and External wall will have lintel band throughout the openings.
- Lintel band shall be provided above all windows and doors.
- Overlapping splice shall be of length 57ϕ in case of splice requirement and bars shall be properly tied using binding wire.
- Lintel shall be provided over the windows and door, shown in the Architectural drawings or vertical reinforcement layout plan.
- Cover to reinforcement shall be at least 25mm.
- Ties of 8mmØ bar at a spacing of 150mm shall be provided for main reinforcement.
- Use TMT rebars of Fe500.
- Use concrete mix of M20 (1:1.5:3).
- All external wall bands shall be provided at the external edge of the Walls and all other internal bands shall be provided at the center of the internal walls.
- Openings in all external wall shall preferably have their top at the same level, so that the openings do not disturb the continuity of the external lintel band.



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DRAWING TITLE: BAND DETAILS AND NOTES

SCALE DATE
NTS APRIL 2021

DESIGN AND DRAWN BY:

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Ramesh Kr Ghalley
(Civil Engg.)

VERIFIED BY:

Municipal Incharge
Municipal Incharge

APPROVED BY:

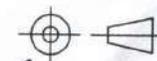
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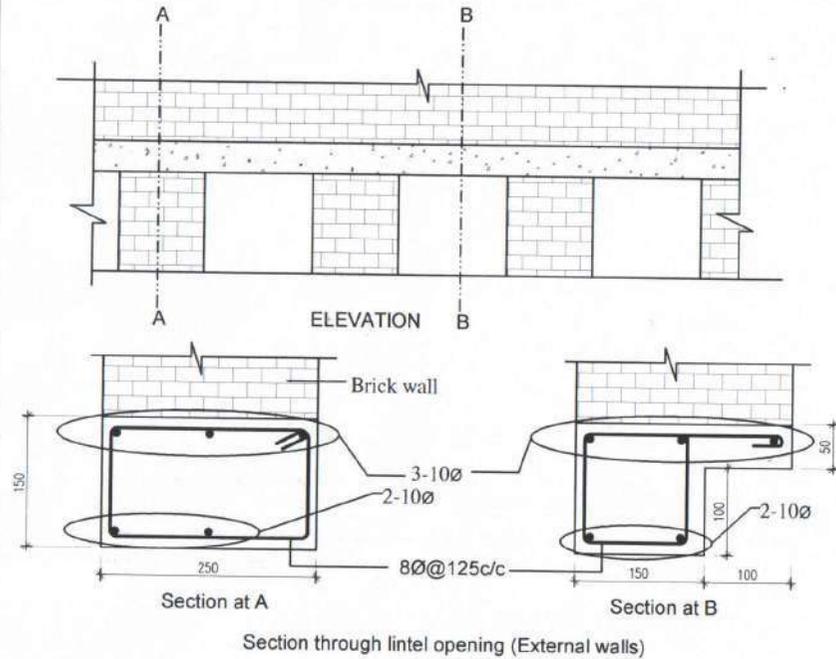
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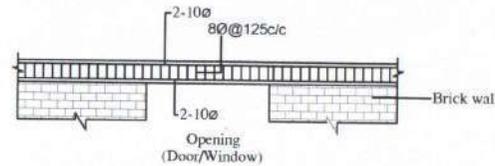
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NOTES:

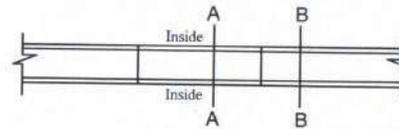
1. The external and internal wall will have a band lintel above the openings.



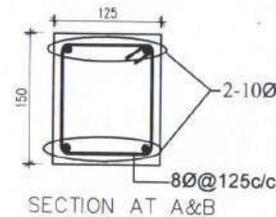
INTERNAL BAND LINTEL DETAILS OVER OPENINGS AND WALLS



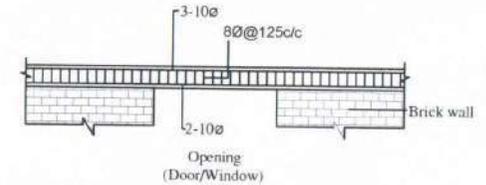
Lintel band elevation for internal walls and openings



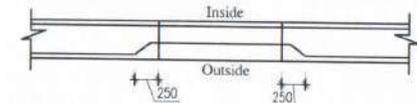
Top & Bottom reinforcement layout in lintel band (plan)



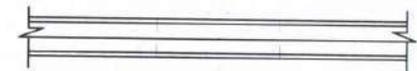
EXTERNAL BAND LINTEL DETAILS OVER OPENINGS AND WALLS



Lintel band elevation for external walls over openings



Bottom reinforcement layout in lintel band (plan)



Top reinforcement layout in lintel band (plan)
Typical reinforcement layout in lintel band over opening

LINTEL DETAILS

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LOCATION: Place/Area/Thram No/Plot No:

DRAWING TITLE: LINTEL BAND DETAILS

SCALE	DATE
NTS	APRIL 2021

DESIGN AND DRAWN BY:

Ramesh Kr Ghalley
Ramesh Kr Ghalley
(Civil Engg.)

VERIFIED BY:

Municipal Incharge
Municipal Incharge

APPROVED BY:

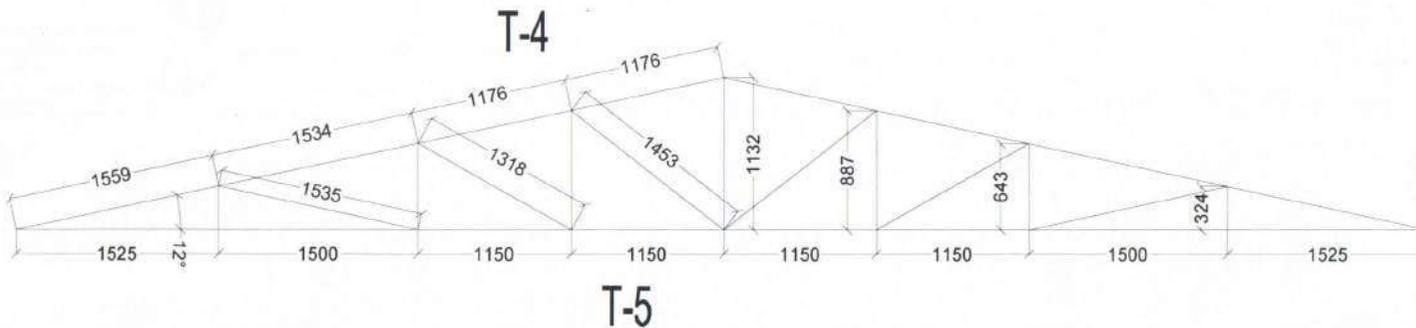
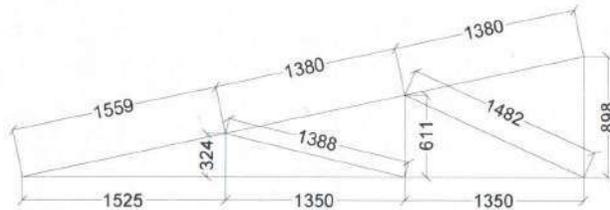
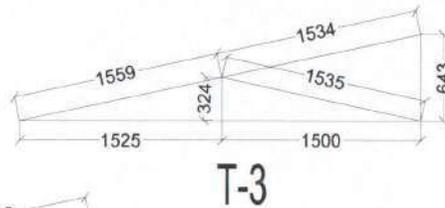
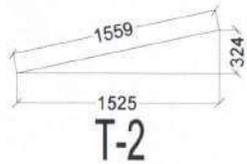
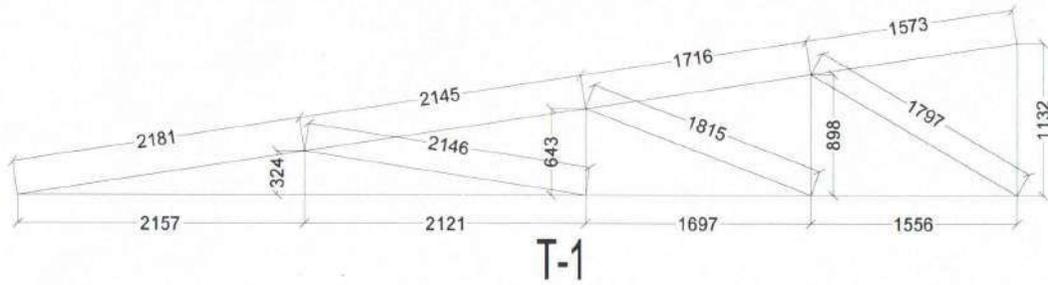
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SCHEDULE OF TRUSS MEMBERS FOR MAIN TRUSSES

SL#	MEMBER	SIZE
1	BOTTOM CHORD/TE	80.3mm OD, 3.00mm Wall, 5.1kg/m
2	RAFTER	80.3mm OD, 3.00mm Wall, 5.1kg/m
3	POST	48.3mm OD, 3.20mm Wall, 3.81kg/m
4	STRUT	48.3mm OD, 3.20mm Wall, 3.81kg/m
5	PURLIN	48.3mm OD, 3.20mm Wall, 3.81kg/m @ 900mm/c

T-5
TRUSS DETAILS PLAN



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(Civil Engg.)

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Municipal Incharge

APPROVED BY:

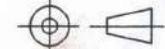
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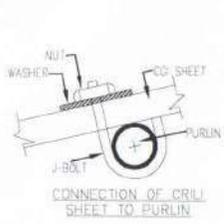
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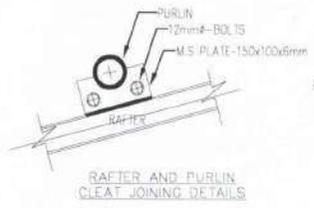
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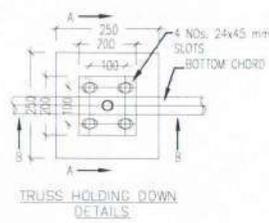
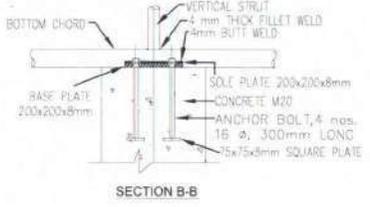
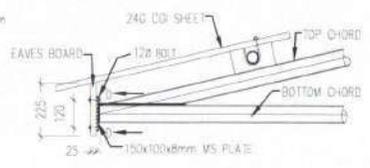
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CONNECTION OF CRILL SHEET TO PURLIN



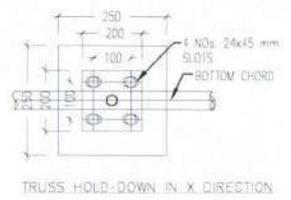
RAFTER AND PURLIN CLEAT JOINING DETAILS



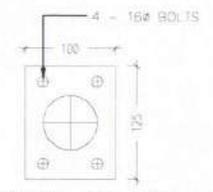
TRUSS HOLDING DOWN DETAILS

SECTION A-A

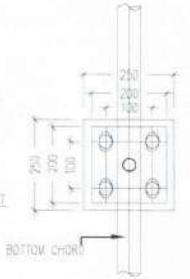
SECTION B-B



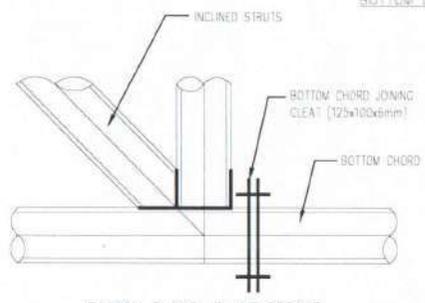
TRUSS HOLD-DOWN IN X DIRECTION



BOTTOM CHORD JOINING PLATE/CLEAT



TRUSS HOLD-DOWN IN Y DIRECTION

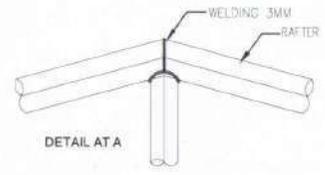


BOTTOM CHORD JOINING DETAILS

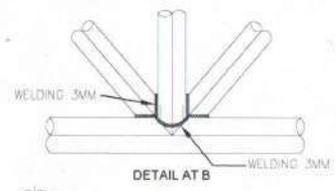
NOTES (FOR ROOF TRUSS):

1. THE GUSSET PLATES ARE MS PLATE OF DIFFERENT THICKNESS AND DESIGN CONFIRMS TO IS 806/1968
2. WELDING SHALL CONFORM TO IS:816
3. ALL ELECTRODES SHALL CONFORM TO IS:814 (PART-1)
4. ALL M.S. BOLTS & NUTS SHALL CONFORM TO IS:1563(PART-1-3)
5. WASHERS SHALL CONFORM TO IS:5369,IS:5370, IS:5372/IS:5374
6. HOLE SIZE = DIA OF BOLT + 1.5mm
7. ALL STRUCTURES AFTER FABRICATION SHALL BE PAINTED ANTI-CORROSIIVE PAINTS
8. ALL STRUCTURAL STEEL CONTACT SURFACES SHALL BE CLEANED OF ANY RUST, OIL, GREASE etc. BEFORE WELDING/PAINING
9. WRITTEN DIMENSIONS SHALL BE FOLLOWED & DOUBT MUST BE CLARIFIED BEFORE EXECUTION OF THE WORK
10. FABRICATION AND ERECTION WORK SHALL BE CARRIED OUT AS CHECKED BY ENGINEER-IN-CHARGE.

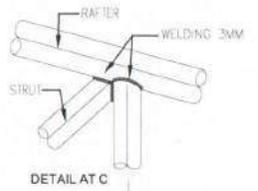
NOTE:
1. ALL THE SECTION DETAILS WILL BE SAME AS SHOWN BY SECTIONS A-A & B-B
2. THE PURLINS ARE SPACED AT 1200mm C/C



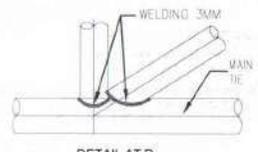
DETAIL AT A



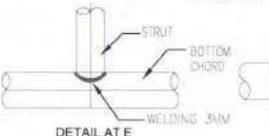
DETAIL AT B



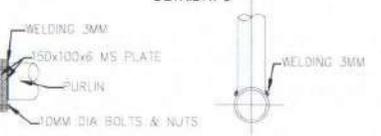
DETAIL AT C



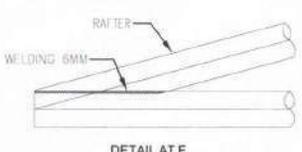
DETAIL AT D



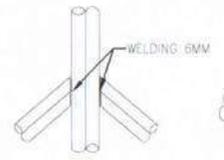
DETAIL AT E



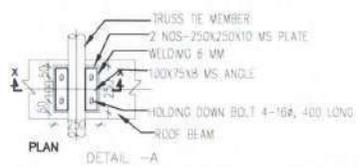
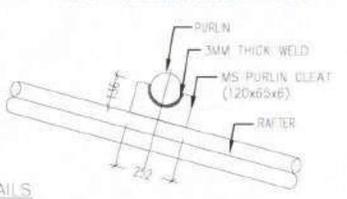
TYPICAL PURLIN & RAFTER JOINERY DETAIL



DETAIL AT F

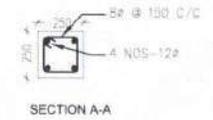


TYPICAL TRUSS JOINERY DETAILS

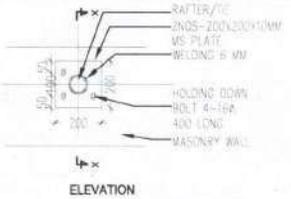


PLAN

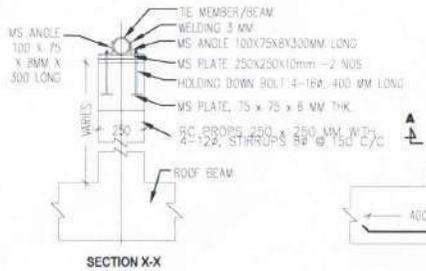
DETAIL -A



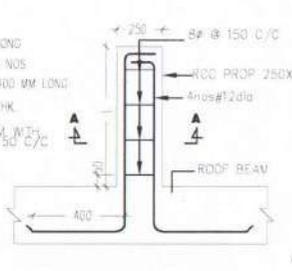
SECTION A-A



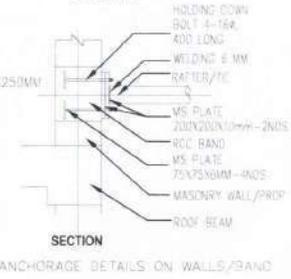
ELEVATION



SECTION X-X



DETAILS OF RCC PROP



SECTION

ANCHORAGE DETAILS ON WALLS/STAND



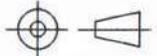

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ROYAL GOVERNMENT OF BHUTAN
DZONGKHAG ADMINISTRATION
SAMTSE
 "A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction (for houses with less than 100sqm plinth area)

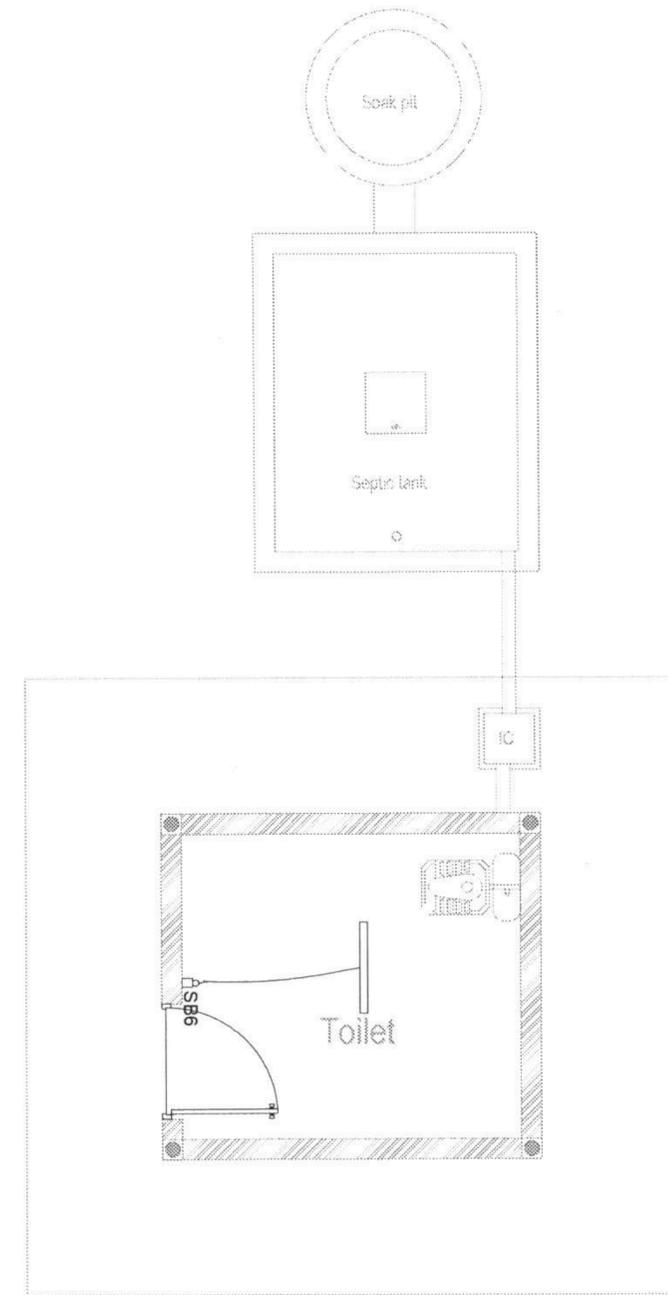
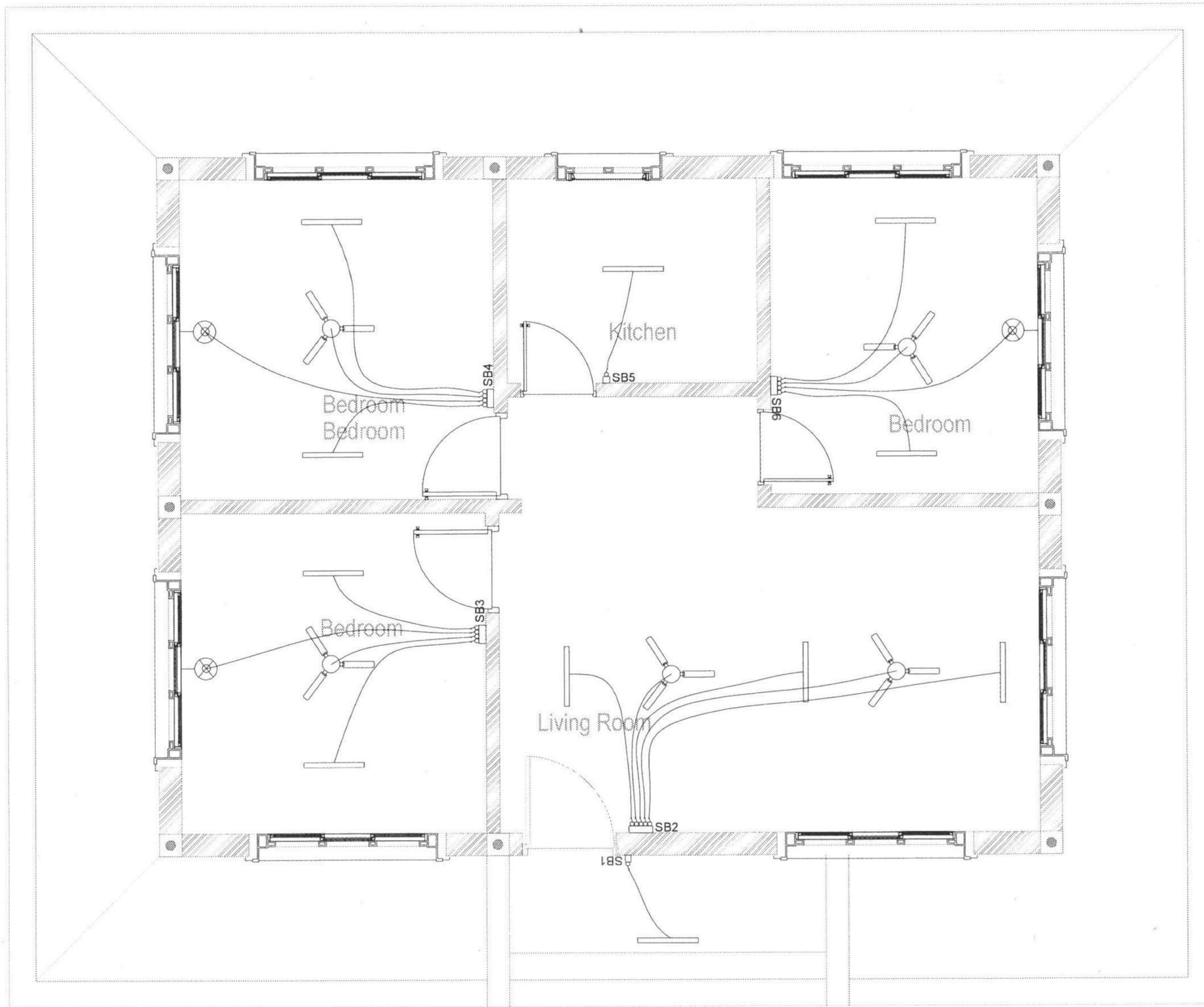
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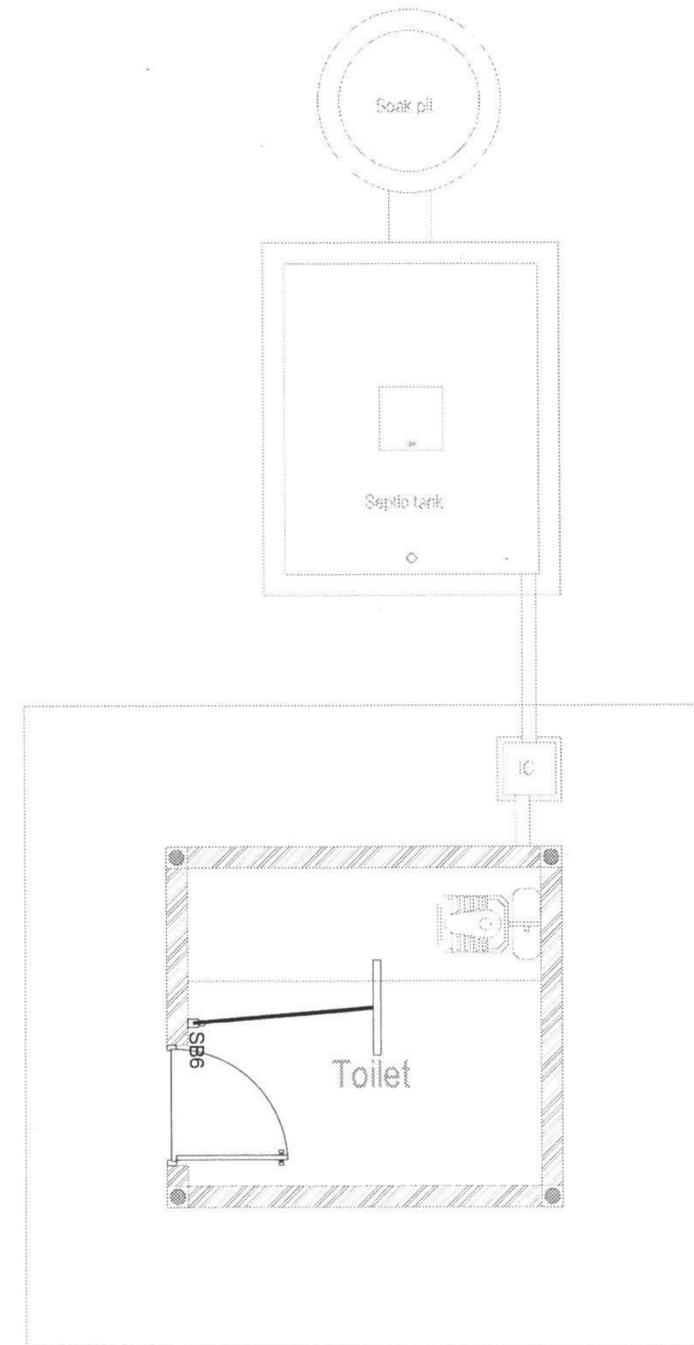
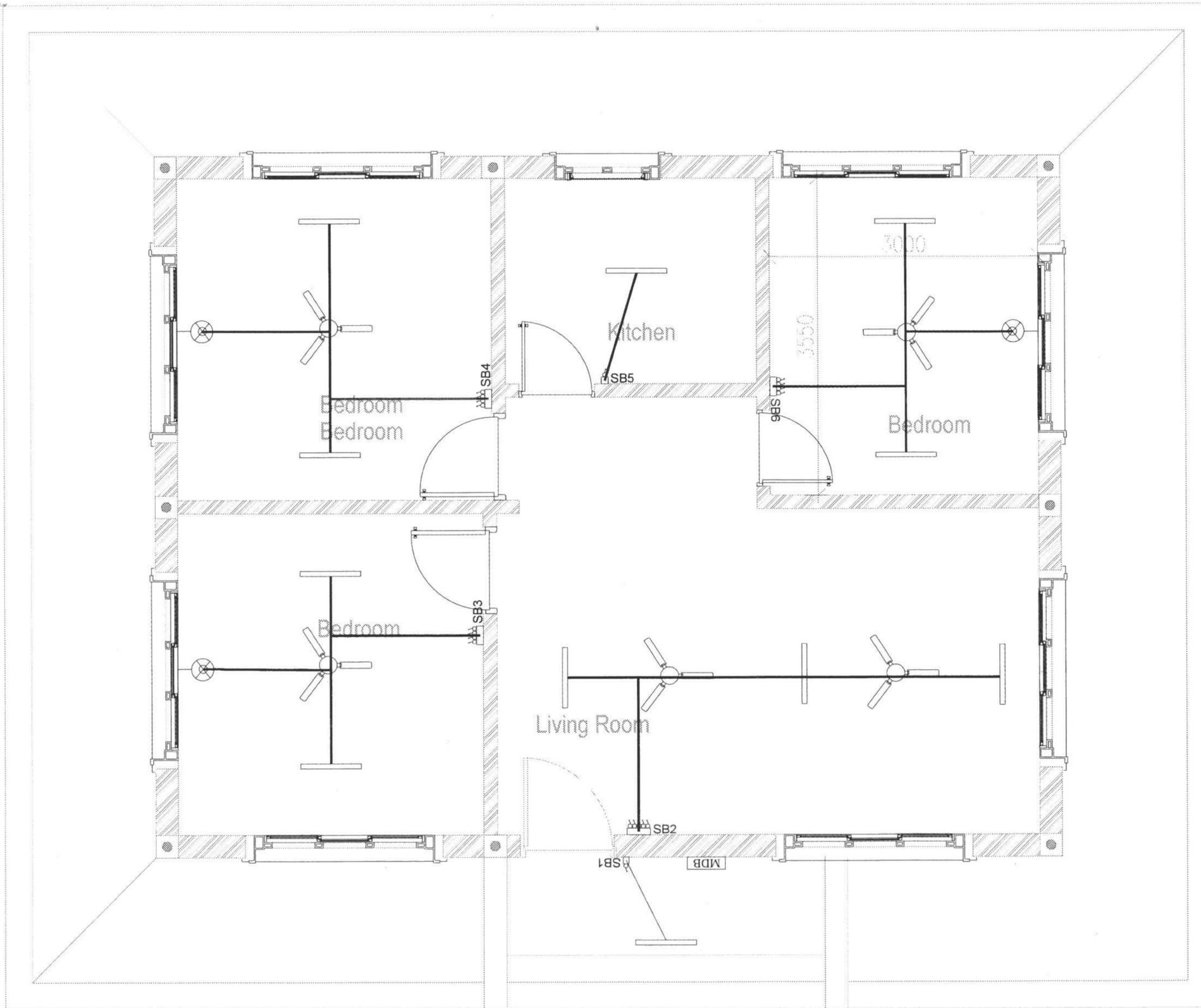
DRAWING TITLE: TRUSS JOINERY DETAILS	SCALE: NTS	DATE: APRIL 2021
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DESIGN AND DRAWN BY: <i>Ramesh Kr Ghalley</i> Ramesh Kr Ghalley (Civil Engg.)	VERIFIED BY: <i>Municipal Incharge</i> Municipal Incharge	APPROVED BY: <i>DASHO DZONGDA</i> DASHO DZONGDA
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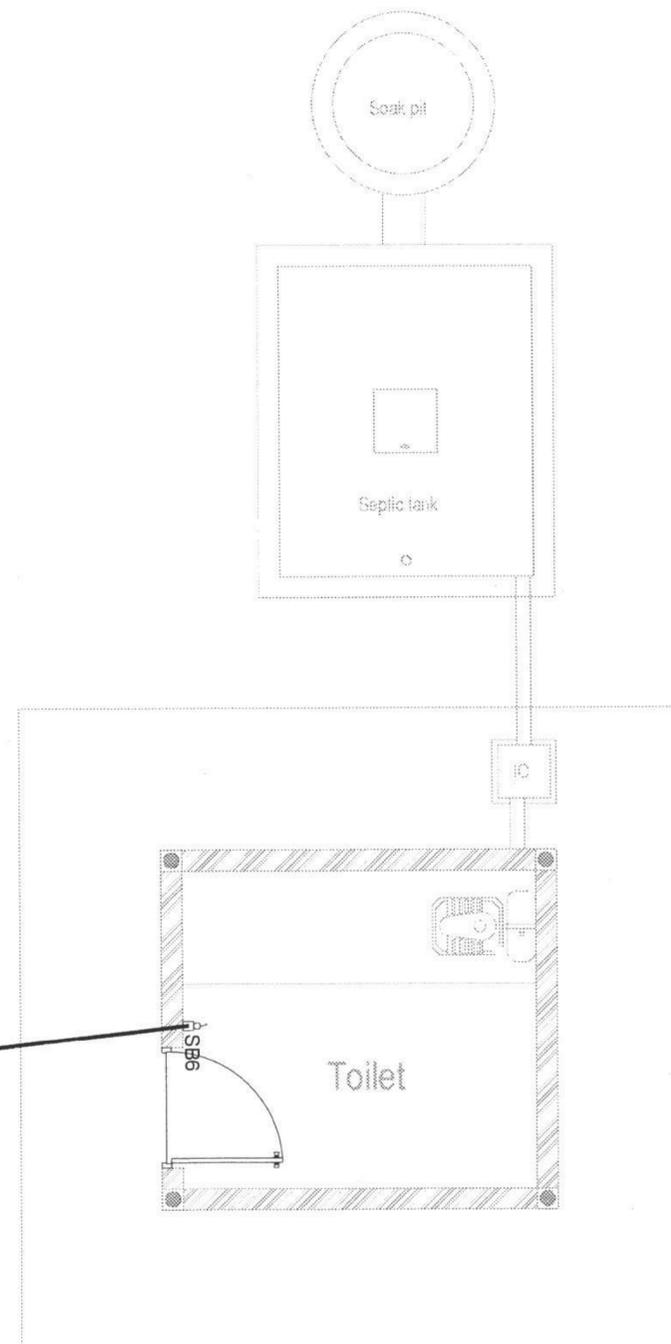
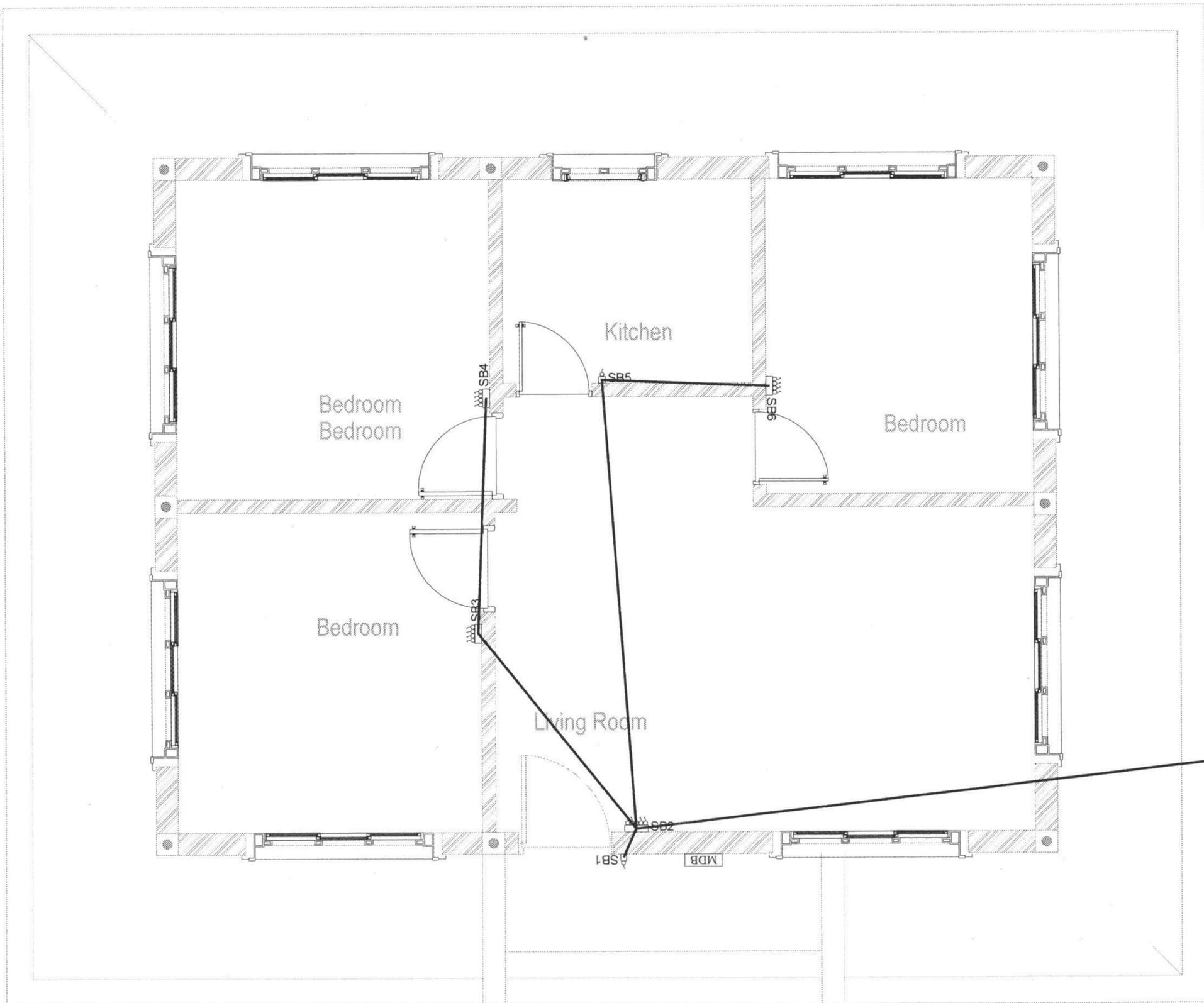
REVISION	DWG NO.															
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ROYAL GOVERNMENT OF BHUTAN
DZONGKHAG ADMINISTRATION
SAMTSE
 "A Prosperous Community Living in Harmony with Diverse Culture and Safe Environment"

Sample drawing & Minimal Standards for Rural Construction
 (for houses with less than 100sqm plinth area)
 LOCATION: Place/Area/Thram No/Plot No:
 DRAWING TITLE: SAMPLE PLAN 1
 SCALE: NTS
 DATE: JAN 2022

DESIGN AND DRAWN BY:

Thinley Phelgay
 (Asst. Engineer)

VERIFIED BY:

Municipal Incharge

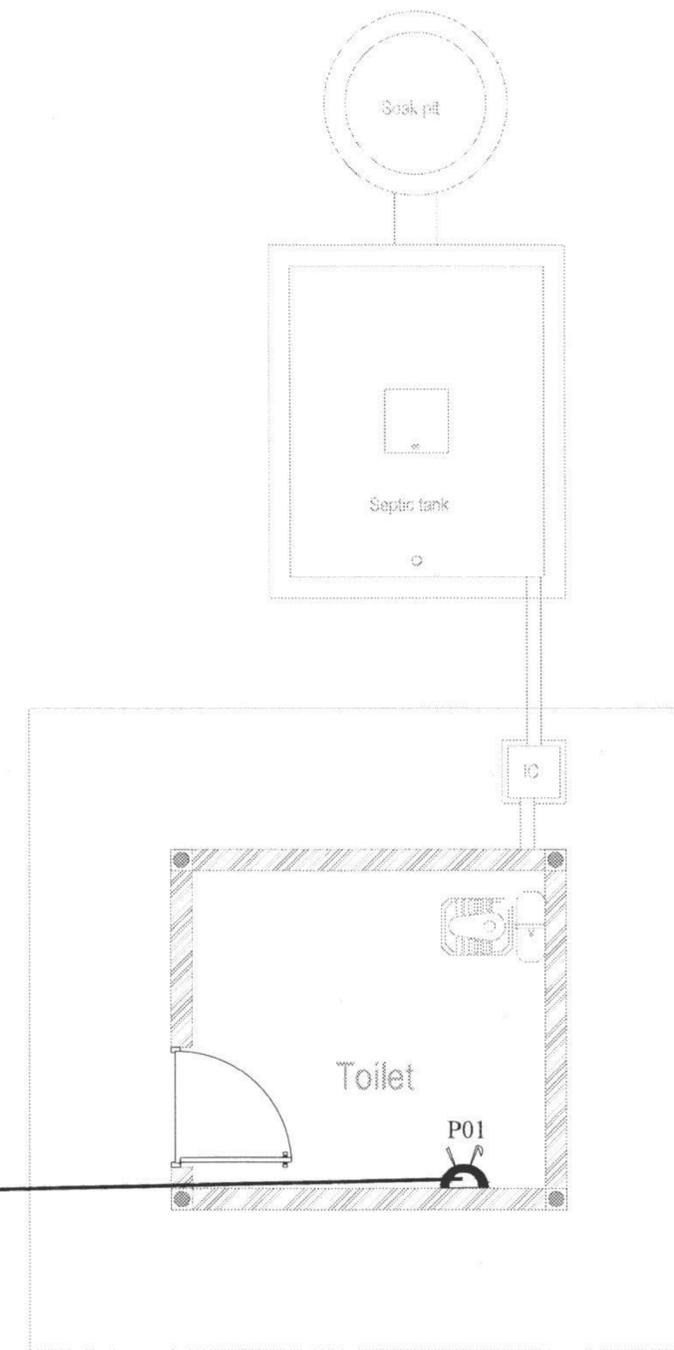
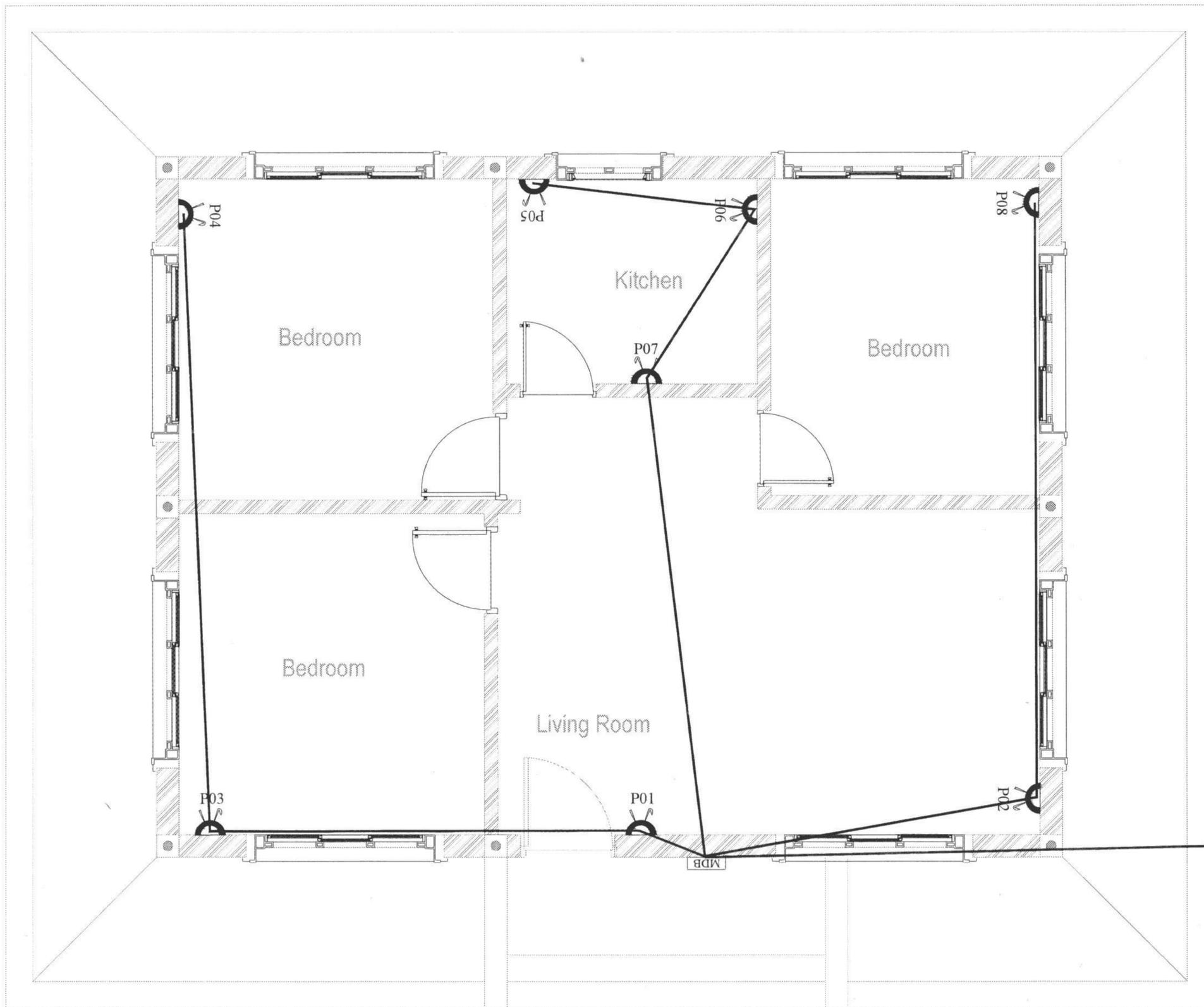
APPROVED BY:

DASHO DZONGDA

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DWG NO. 04
DRAWING TITLE
 Switch Boards & Conduit Layout

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Load Calculation for Building

Luminaries

LED Tube Light = $12 \times 20W = 240W$

Ceiling Fan = $5 \times 75W = 375W$

Wall Bracket = $3 \times 9 = 27$

Total Lights Loads = 642W

Power Point

Power Socket = $9 \times 2000W$

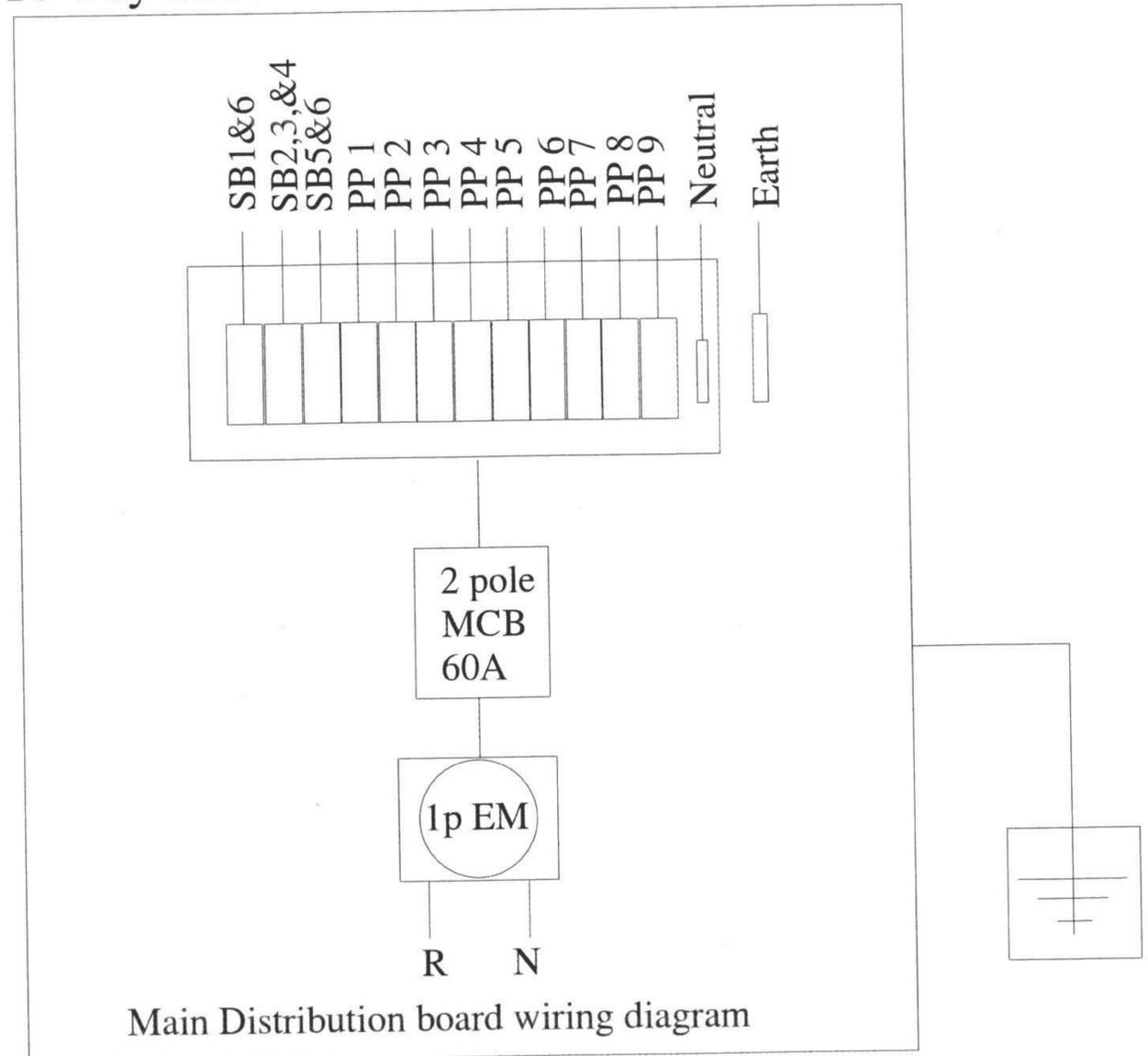
Power Point Loads = 18000 W

Total Load for Building = 18642W

Load Factor of 60% = 11185.2W

Load Current for Building = 57A

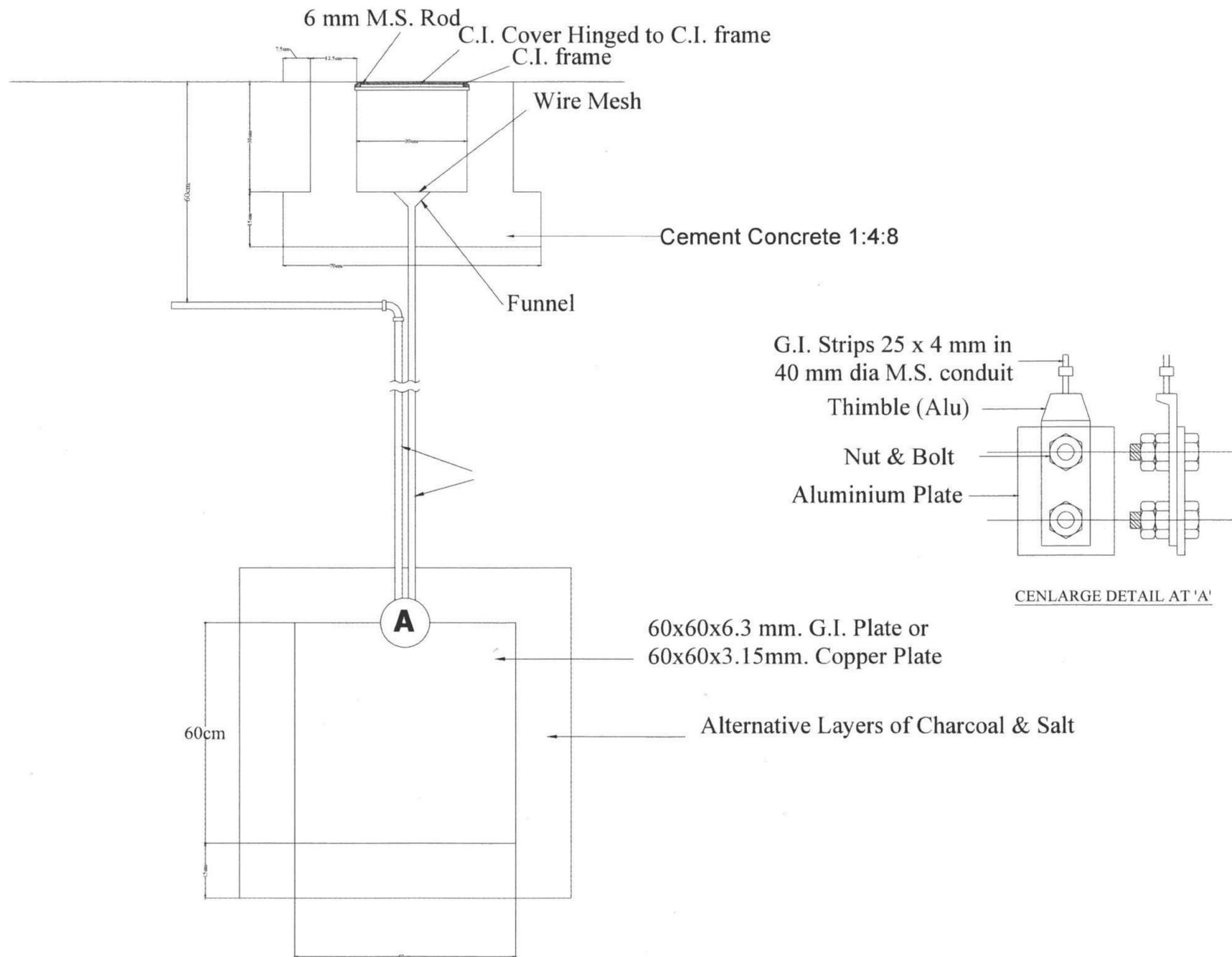
16 way SPN Double Door Distribution box



Main Distribution board wiring diagram

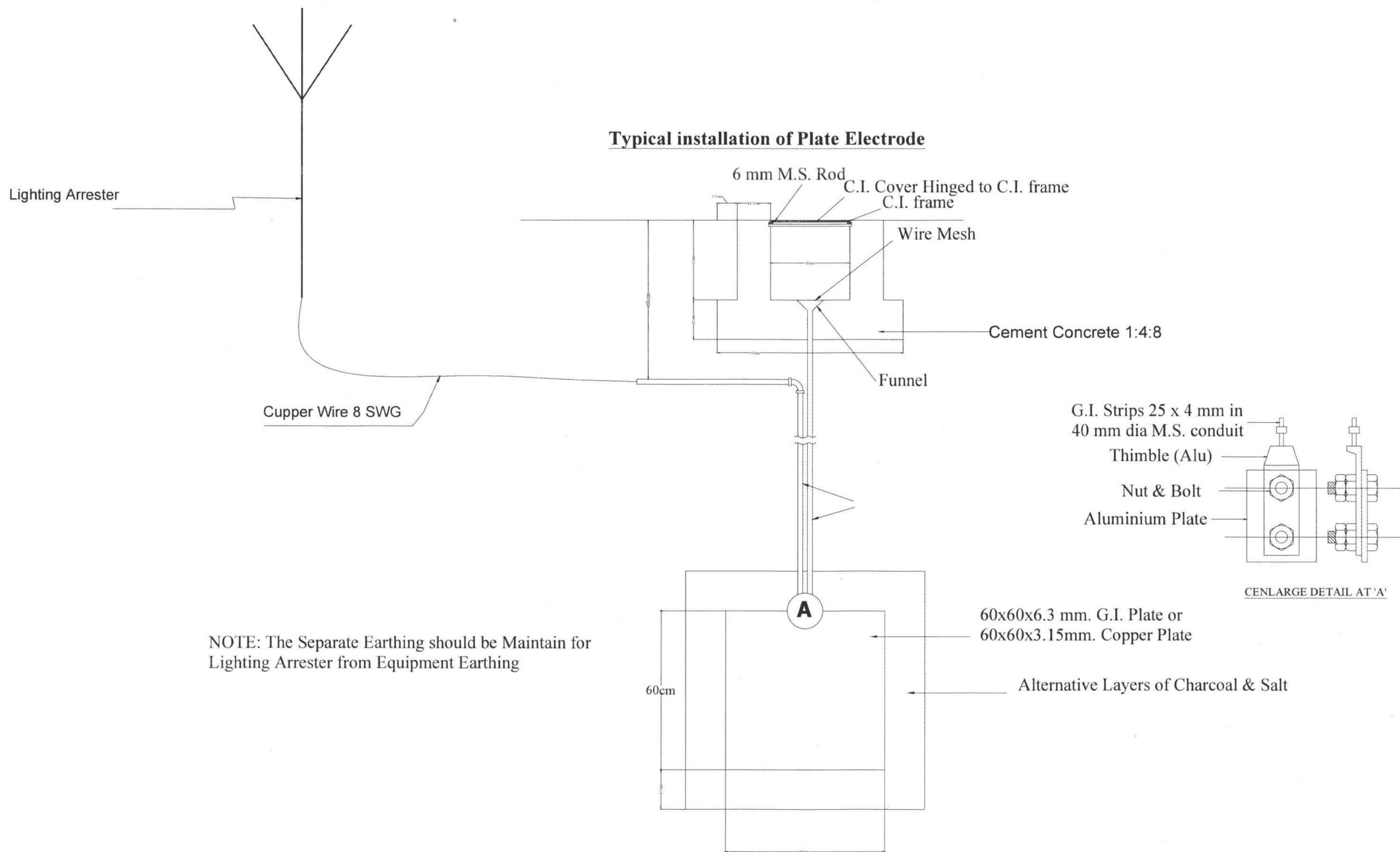
10 sqmm 2 core PVC insulated and sheathed armoured/unarmoured, aluminium cable, 1.1 KV.

Typical installation of Plate Electrode



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Typical installation of Plate Electrode



NOTE: The Separate Earthing should be Maintain for Lighting Arrester from Equipment Earthing


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Sample drawing & Minimal Standards for Rural Construction (for houses with less than 100sqm plinth area)		
LOCATION: Place/Area/Thram No/Plot No:		
DRAWING TITLE: SAMPLE PLAN 1	SCALE NTS	DATE JAN 2022

DESIGN AND DRAWN BY: *[Signature]*
 Thinley Phelgay
 (Asst. Engineer)

VERIFIED BY: *[Signature]*
 Municipal Incharge

APPROVED BY: *[Signature]*
 DASHO DZONGDA

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DWG NO. _____
 DRAWING TITLE
 Lighting Arrester Deta

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ELECTRICAL DRAWING SAMPLE FOR THE CONSTRUCTION OF SINGLE STOREY HOUSE (LESS THAN 100 SQM PLINTH AREA) ONLY.

PREPARED BY Dz. HUMAN SETTLEMENT SECTOR,
SAMTSE DZONGKHAG.

 <p>འབྲུག་རྒྱལ་ཁབ་རྩ་སྲིད་འཛིན་པའི་སྐབས་སྤྱི་བཤེན་ལྟེང་། ROYAL GOVERNMENT OF BHUTAN DZONGKHAG ADMINISTRATION SAMTSE "Sustainable Community Living in Harmony with Diverse Culture and Safe Environment"</p>	Sample drawing & Minimal Standards for Rural Construction (for houses with less than 100sqm plinth area)		DESIGN AND DRAWN BY: <i>Krishna Kafley</i> [Architect - BA-255 (G)] Contact: 17363181; kkafley@samtse.gov.bt	VERIFIED BY: <i>Municipal Incharge</i>	APPROVED BY: DASHO DZONGDA	REVISION	DWG NO.													
	LOCATION: Place/Area/Thram No/Plot No:	DRAWING TITLE: AS STATED ON THE DRAWING	SCALE NTS	DATE APRIL 2021	<table border="1"> <thead> <tr> <th>SL.NO</th> <th>REVISION NOTE</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td></td> <td></td> </tr> <tr> <td>3.</td> <td></td> <td></td> </tr> <tr> <td>4.</td> <td></td> <td></td> </tr> </tbody> </table>	SL.NO		REVISION NOTE	DATE	1.			2.			3.			4.	
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