

# MHERCHYA KUMA (Traditional Hyolmo House)

## Helambu Housing Reconstruction Programme

Prepared by:  
**Aashraya Nepal in Association  
with HEAL Nepal and Hyolmo  
Foundation**

Submitted to:  
**National Reconstruction  
Authority, Kathmandu, Singha  
Durbar**

Aashraya  
नेपाल

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MHERCHYA KUMA, TWO-STOREY

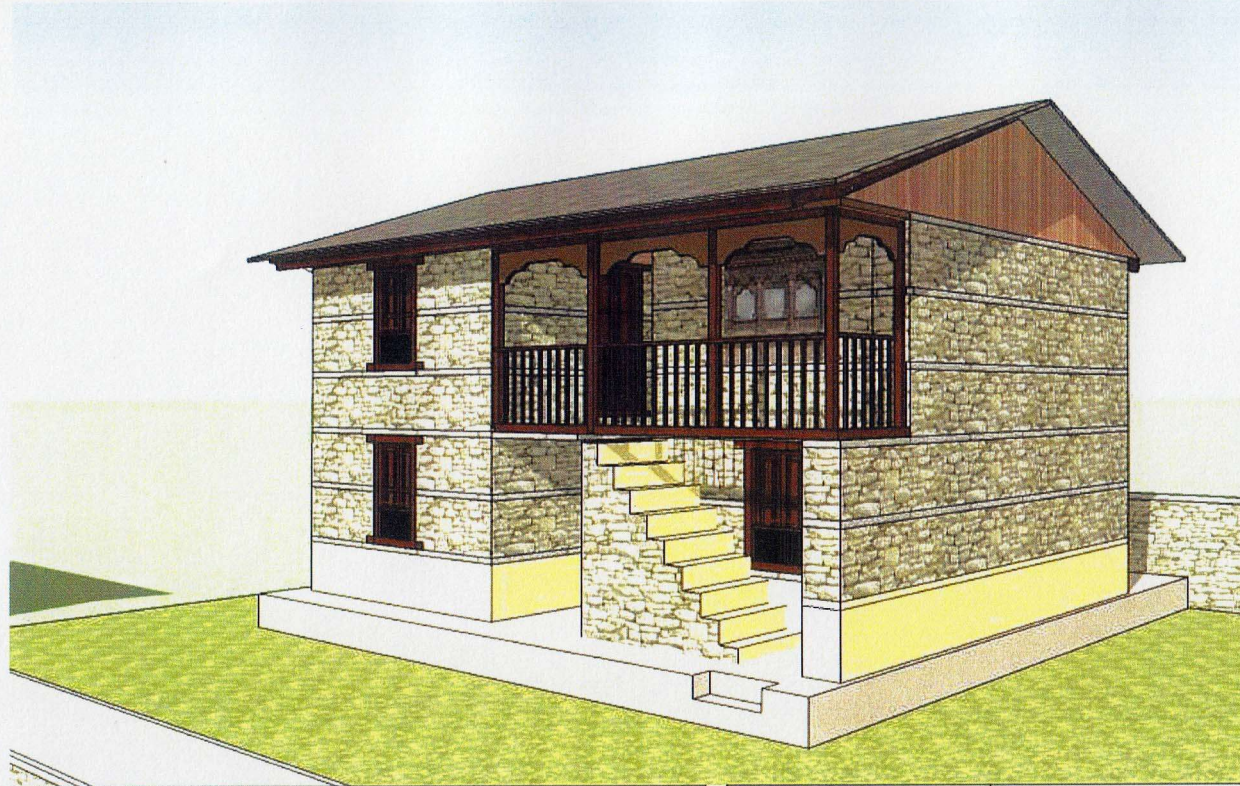
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नेपाल  
**SMC**

Model SMC is a two storey building (extension of SMC-1.1) called “Mherchya Kuma” which consists of four bedrooms of dimensions 3000x2750, a living room/kitchen of dimension 4650x2700 + 2700x1950. a store of dimensions 4650x2700 + 2700x1950.

The design depicts vernacular architecture and traditional lifestyle of Helambhu region and focuses on earthquake resistant construction using locally available construction materials. Similarly, stonemasonry in cement mortar has been used for structural type (as cement can be transported with good road access and residents can afford it with income from tourism), CGI sheet is used for covering the roof along with Metal Truss and purlins. The model has been based on the revised National Building Code of Nepal(NBC) in order to ensure that earthquake resistant construction measures are included. This includes the provision of horizontal bands, vertical reinforcements, corner reinforcement and T-junctions to improve the diaphragm effectiveness. Climatic conditions and socio-cultural aspects have also been factored into the design of the house. The design concept and the objective of the design is to vernacular architecture and traditional lifestyle contributing towards resilient models to improve safety in future earthquakes.

# SMC

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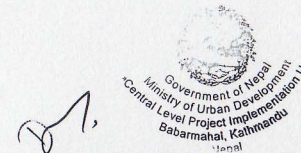


Materials			Labors	Man Day
Stone	119.68	cu.m	Skilled	410.49
Cement	294.32	Bags	Unskilled	737.04
Sand	58.95	cu.m		
Aggregate	11.19	cu.m		
Rebar	1009.36	Kg		
MS Pipe	613.21	Kg		
Wood	28.26	cu.m		
CGI sheet	5.91	Bundle		



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Reconstruction Programme

TYPE OF HOUSE: MODEL SMC  
DRAWING TITLE: PERSPECTIVE AND ESTIMATION



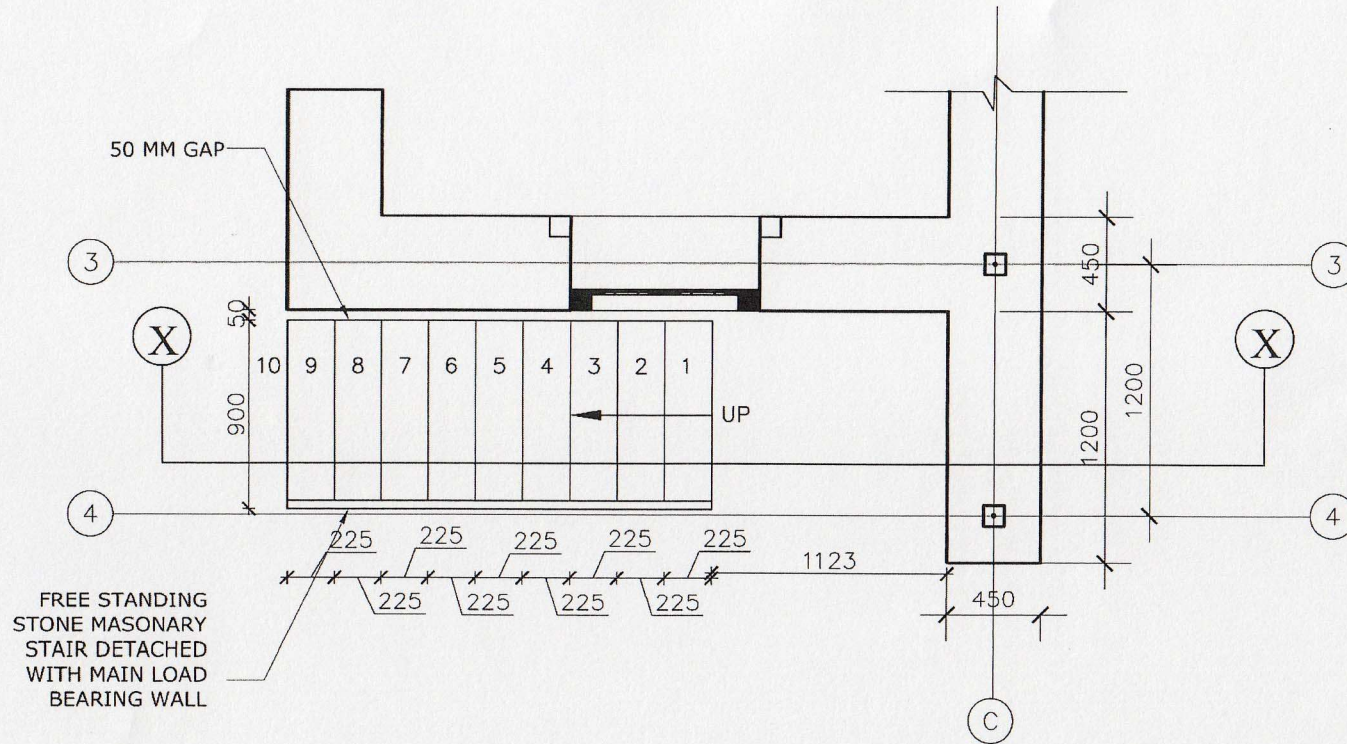
SCALE: NONE

DATE:

01/01/21  
**Aashraya**  
नेपाल SMC

DESIGNED BY: Aashraya Nepal

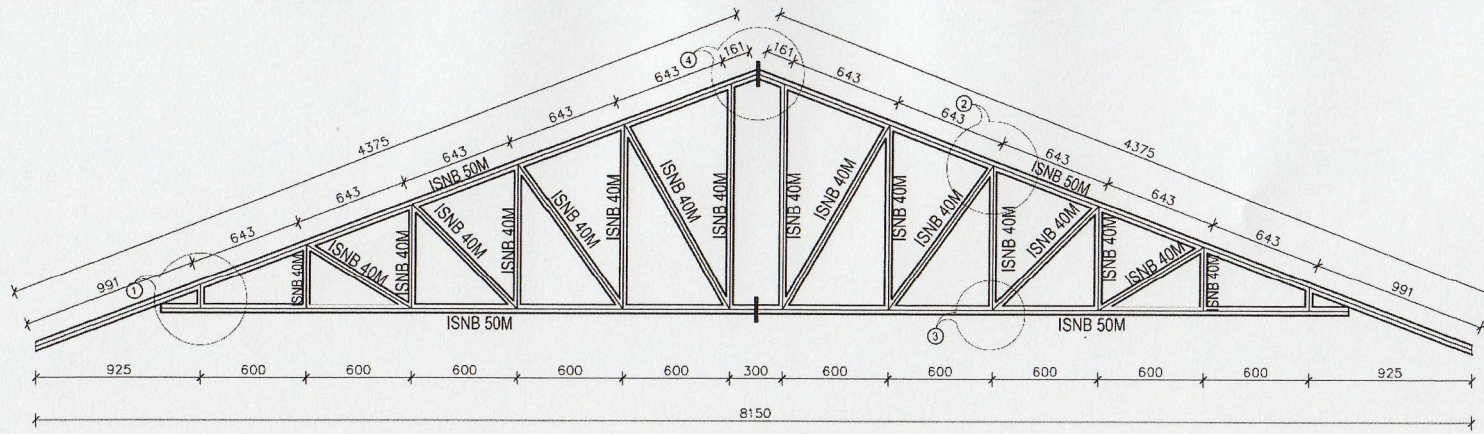
1/16



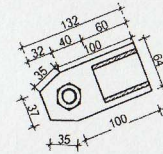
STAIRCASE PLAN

Government of Nepal  
 Ministry of Urban Development  
 Central Level of Project Implementation Unit  
 Bhatbhateni, Kathmandu  
 Aashraya  
 नेपाल

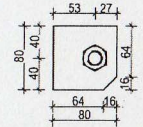
Nepal Housing Reconstruction Programme	TYPE OF HOUSE:	MODEL SMC	SCALE:	1/20	DATE:	नेपाल	SMC 16/16
	DRAWING TITLE:	STAIRCASE DETAIL	DESIGNED BY:	Aashraya Nepal			



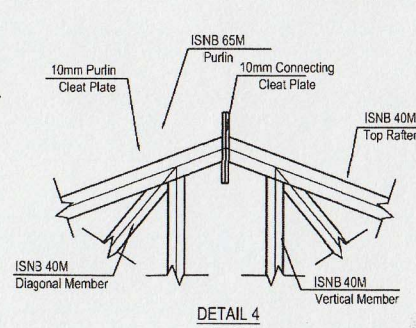
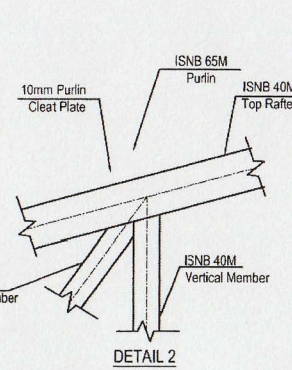
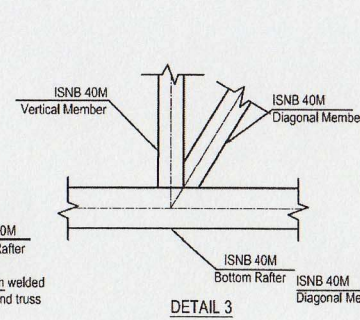
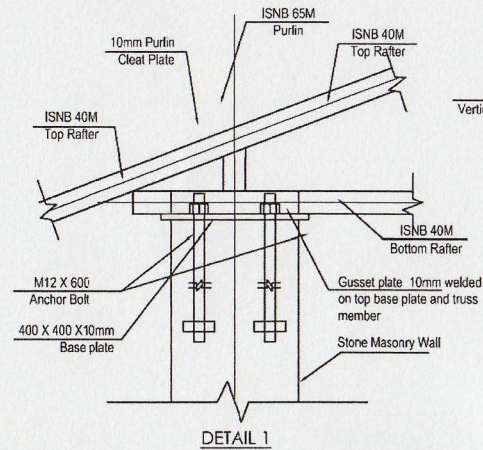
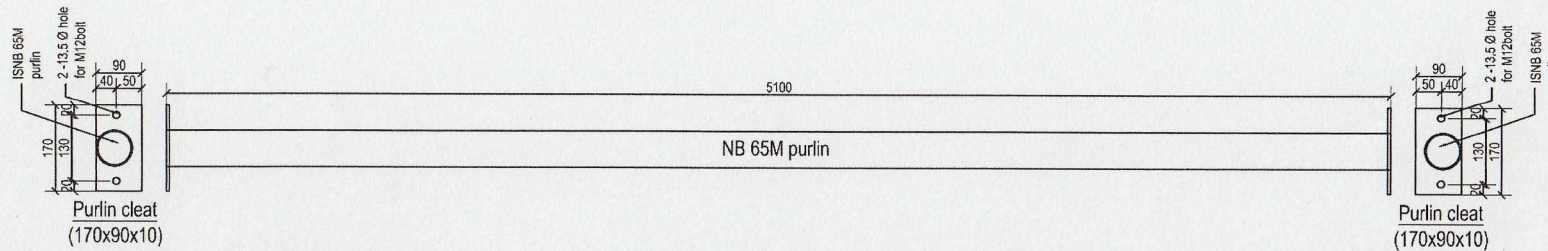
TRUSS SECTION



WIND TIES FLAT STIFFENER DETAILS  
SCALE-1:10



WIND TIES CLEAT DETAILS  
SCALE-1:10



Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC  
DRAWING TITLE: ROOF TRUSS

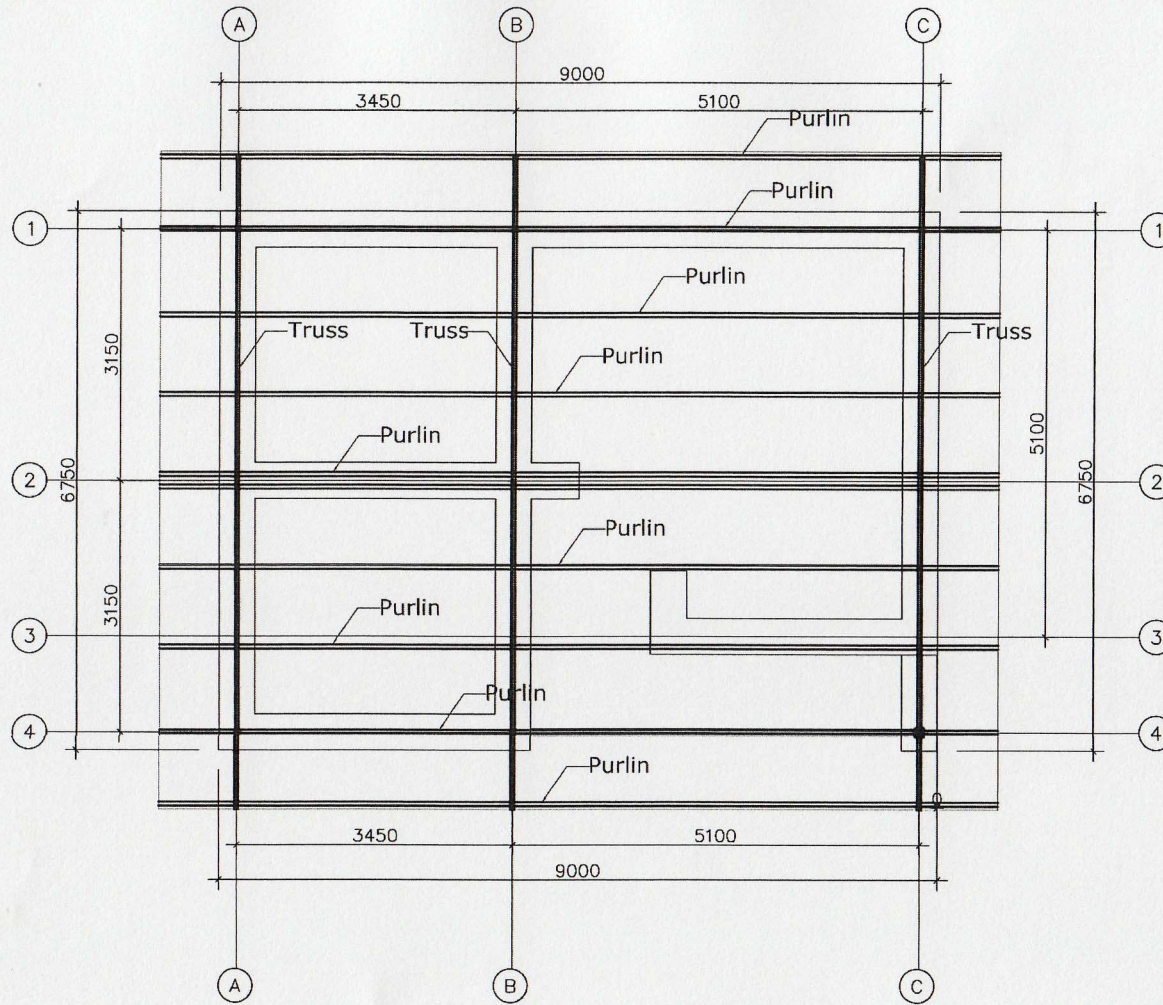
SCALE: 1/20

DATE: Aashraya SMC

DESIGNED BY: Aashraya Nepal

15/16


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Government of Nepal  
Ministry of Urban Development  
Central Level Project Implementation Unit  
Babarmahal, Kathmandu

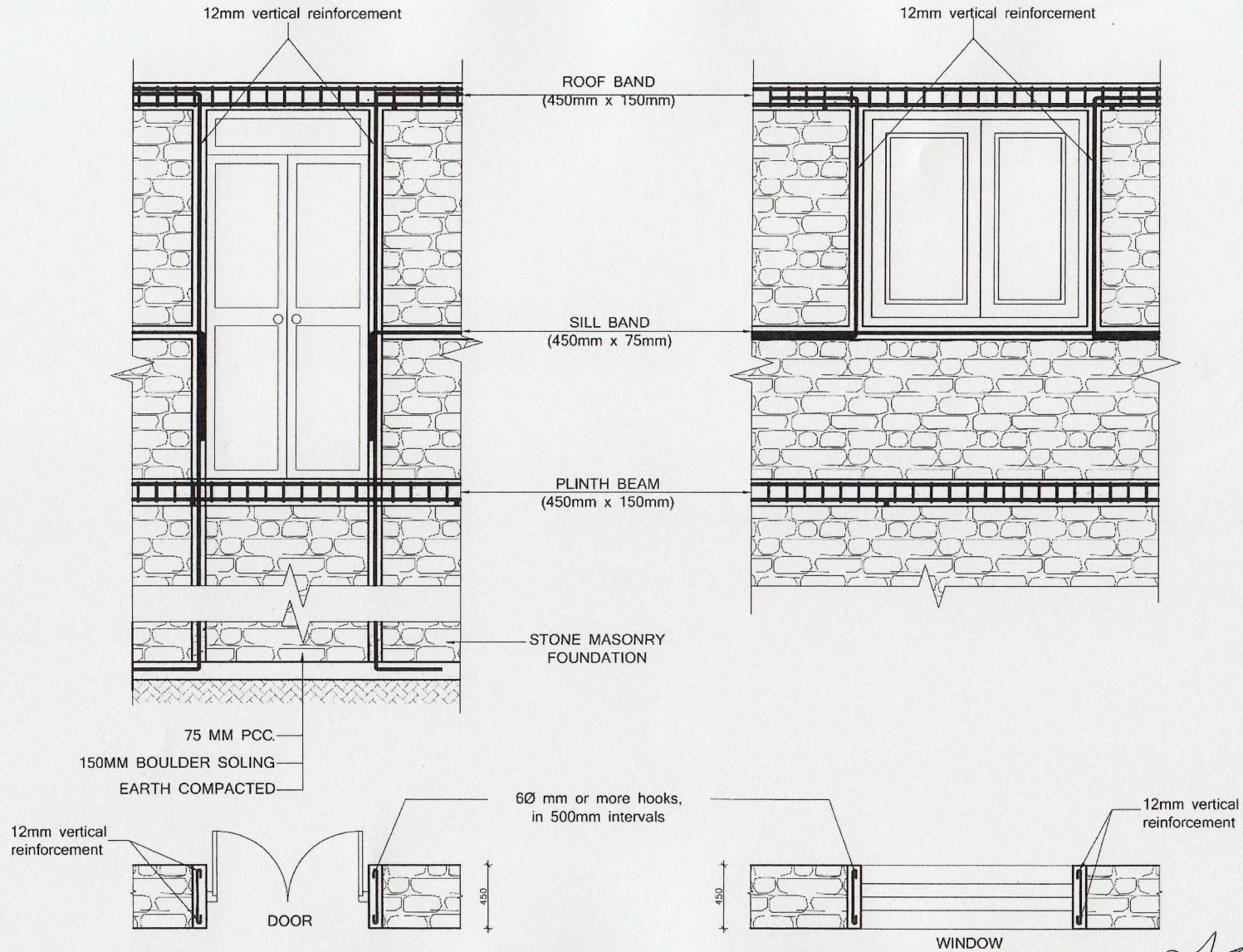


**TRUSS PLACEMENT DETAIL**

SCALE 1:100

*[Handwritten signature]*  
 Department of Housing  
 Central Level of Urban Development  
 Behavioral, Kathmandu

 Nepal Housing Reconstruction Programme	TYPE OF HOUSE: MODEL SMC	SCALE: 1/50	DATE: <i>Aashraya</i> SMC
	DRAWING TITLE: ROOF TRUSS	DESIGNED BY: Aashraya Nepal	14/16



Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC

DRAWING TITLE: DOOR AND WINDOW BEAM TIE

SCALE: 1/10

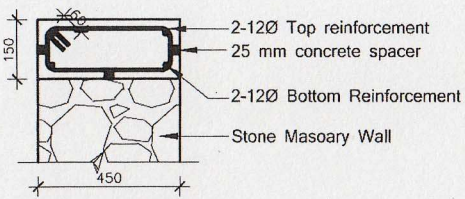
DATE: *Aashraya*  
SMC

DESIGNED BY: Aashraya Nepal

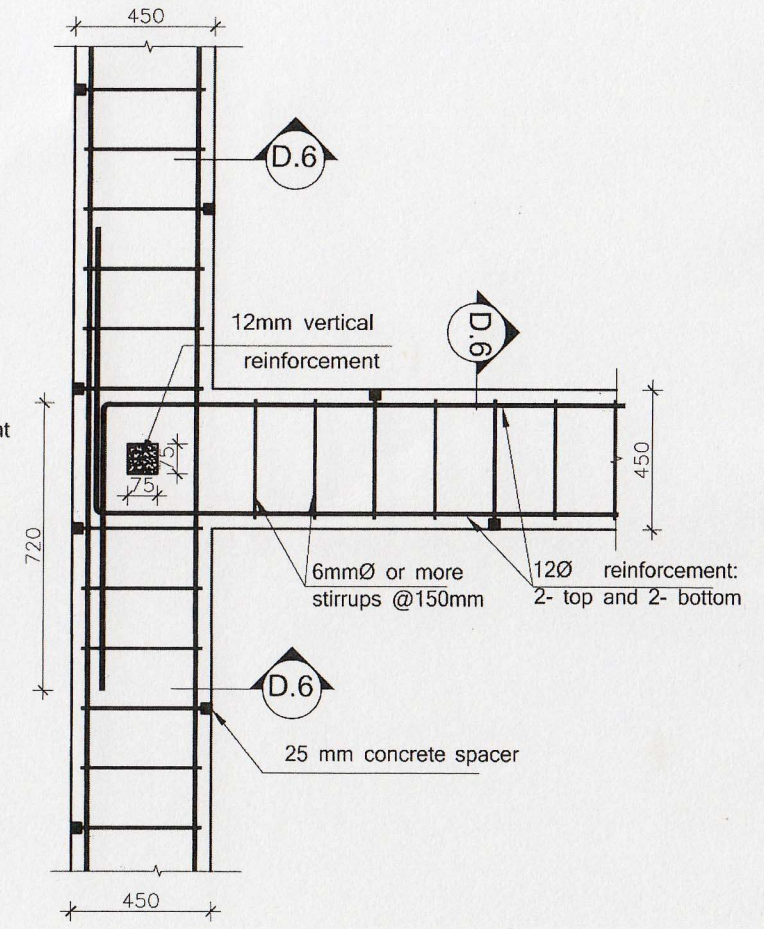
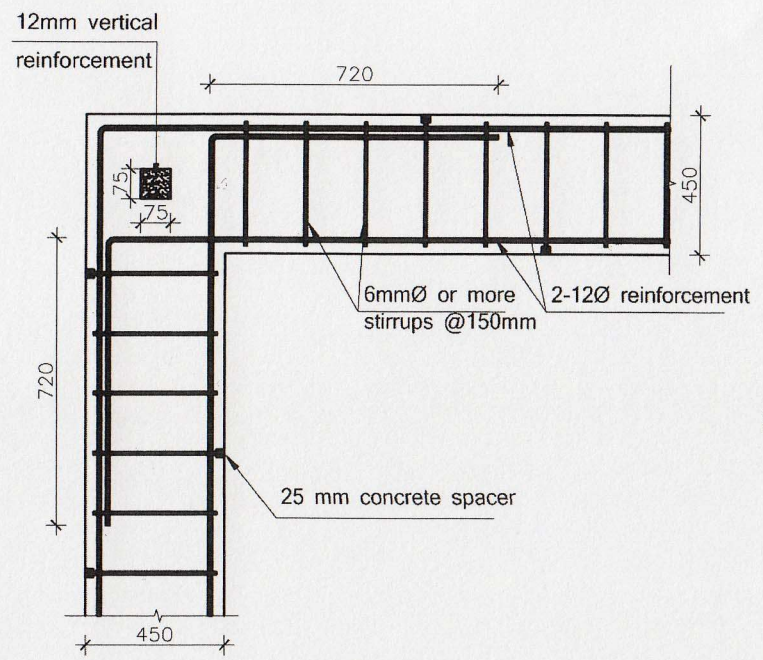
13/16

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Ministry of Urban Development  
Central Level Project Implementation Unit  
Babarmahal, Kathmandu





RING BEAM SECTION AT D6



Nepal Housing Reconstruction Programme

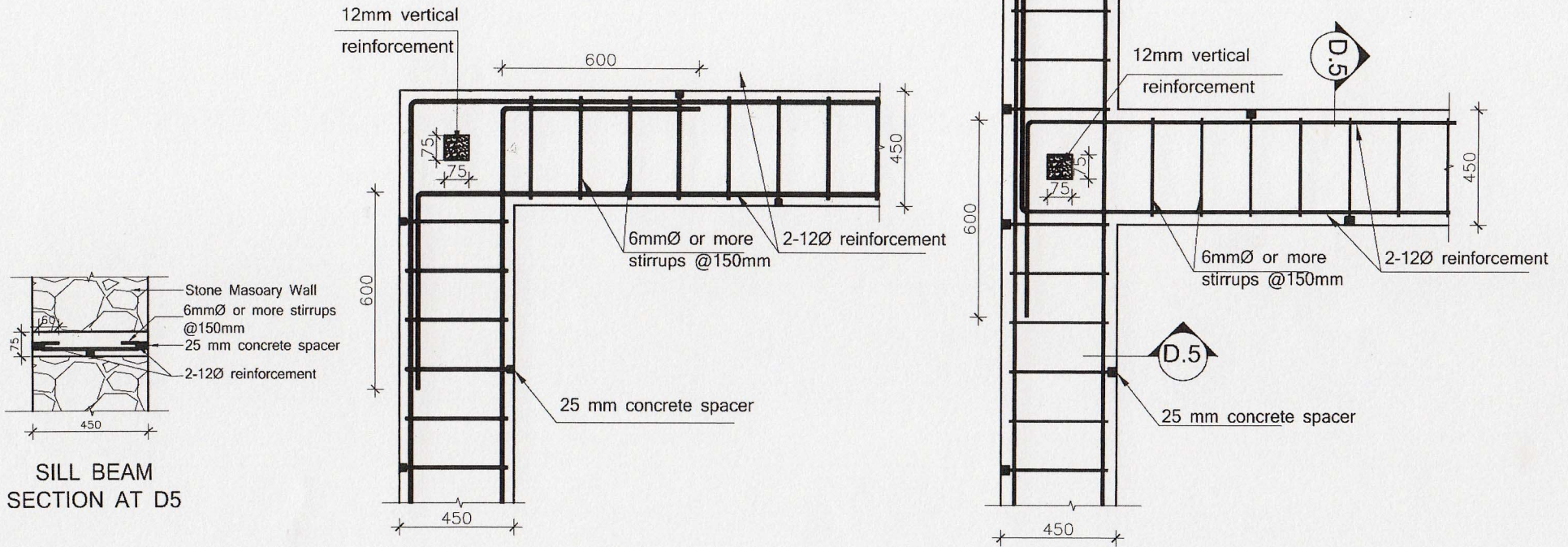
TYPE OF HOUSE:	MODEL SMC
DRAWING TITLE:	RING BEAM AND WALL INTERSECTION

SCALE:	1/10
DESIGNED BY:	Aashraya Nepal

DATE:	12/16
PROJECT NAME:	Aashraya SMC

Government of Nepal  
Ministry of Urban Development  
Central Level Project Implementation Unit  
Kathmandu, Nepal

*Aashraya*  
12/16



SILL BEAM SECTION AT D5



Nepal Housing Reconstruction Programme

TYPE OF HOUSE: MODEL SMC  
 DRAWING TITLE: SILL AND WALL INTERSECTION

SCALE: 1/10

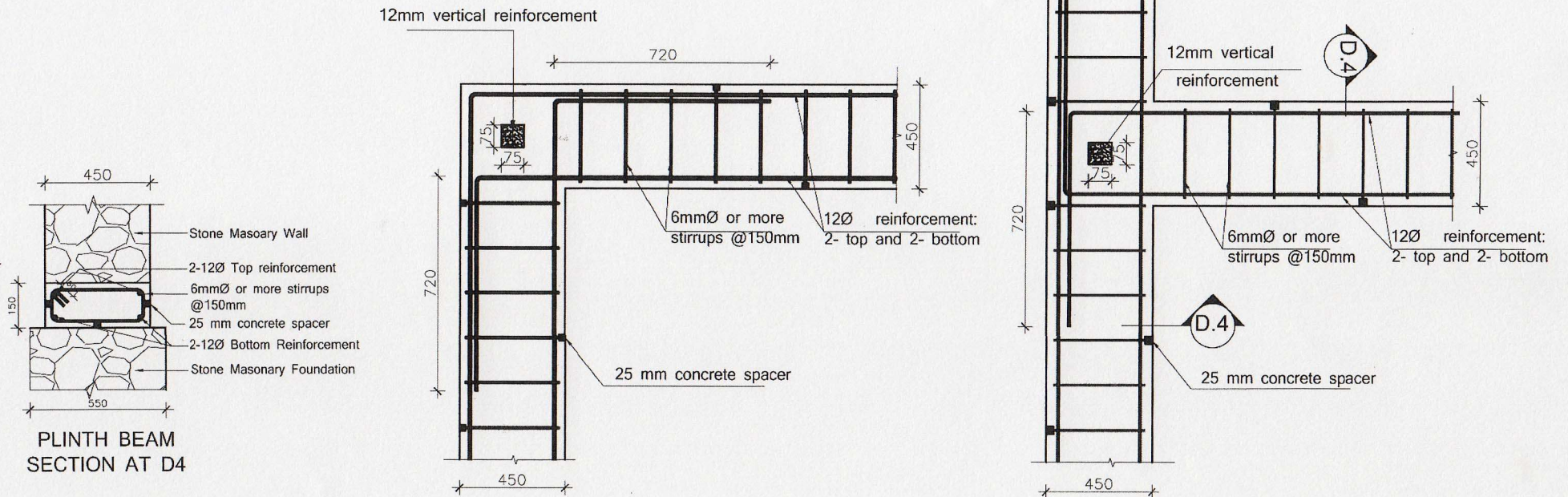
DATE:

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DESIGNED BY: Aashraya Nepal

SMC 11/16

Department of Nepal  
 Ministry of Urban Development  
 Central Level Project Implementation Unit  
 Babarmahal, Kathmandu  
 Nepal



Nepal Housing Reconstruction Programme

TYPE OF HOUSE: MODEL SMC

DRAWING TITLE: PLINTH BEAM AND WALL INTERSECTION

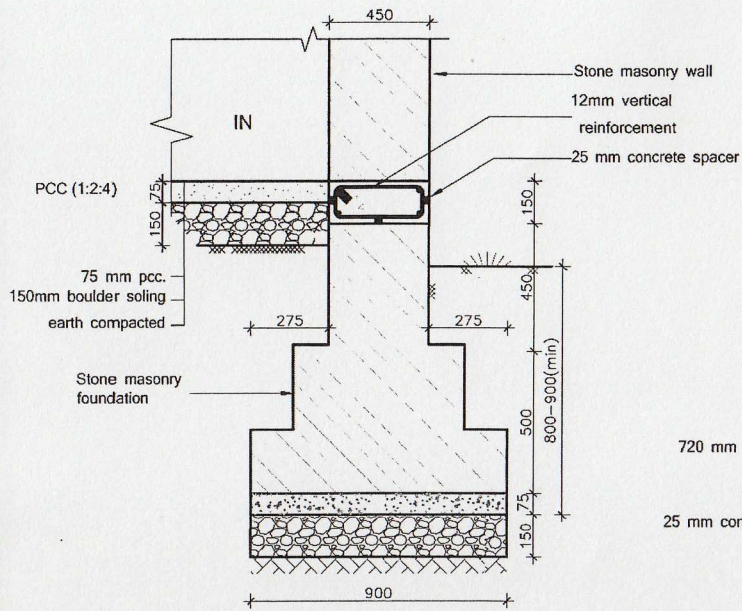
SCALE: 1/10

DESIGNED BY: Aashraya Nepal

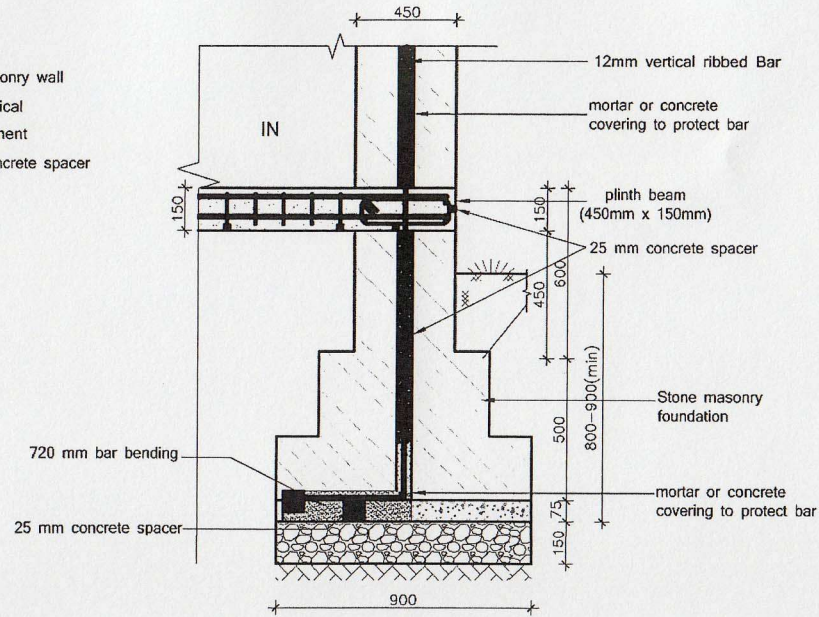
DATE: *Aashraya* SMC 10/16

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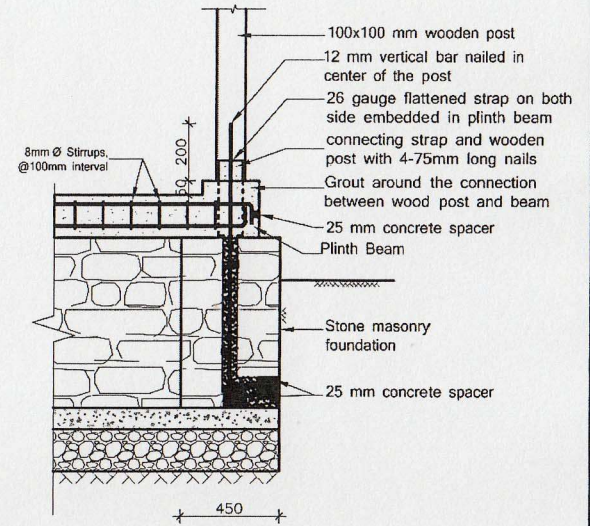
Government of Nepal  
Ministry of Urban Development  
Central Level Project Implementation Unit  
Bबरमाल, काठमाडौं



FOUNDATION DETAIL  
PLINTH BEAM DETAIL



FOUNDATION DETAIL  
VERTICAL BAR DETAIL



FOUNDATION DETAIL  
WOODEN POST DETAIL



Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC

DRAWING TITLE: FOUNDATION DETAIL

SCALE: 1/20

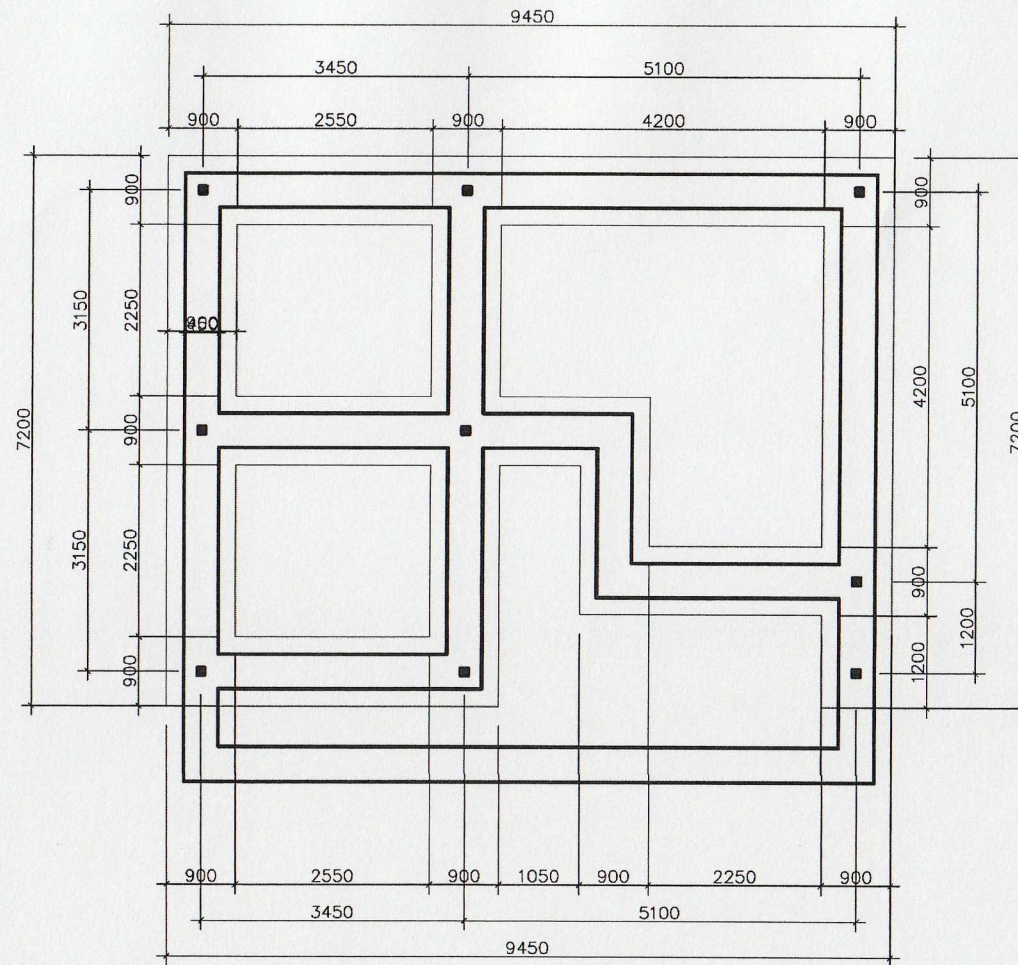
DATE: 4/16

DESIGNED BY: Aashraya Nepal

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9/16

Government of Nepal  
Ministry of Urban Development  
Village Level Project Implementation Unit  
Babarmahal, Kathmandu

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4/16



TRENCH/FOUNDATION PLAN



Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC

DRAWING TITLE: FOUNDATION DETAIL

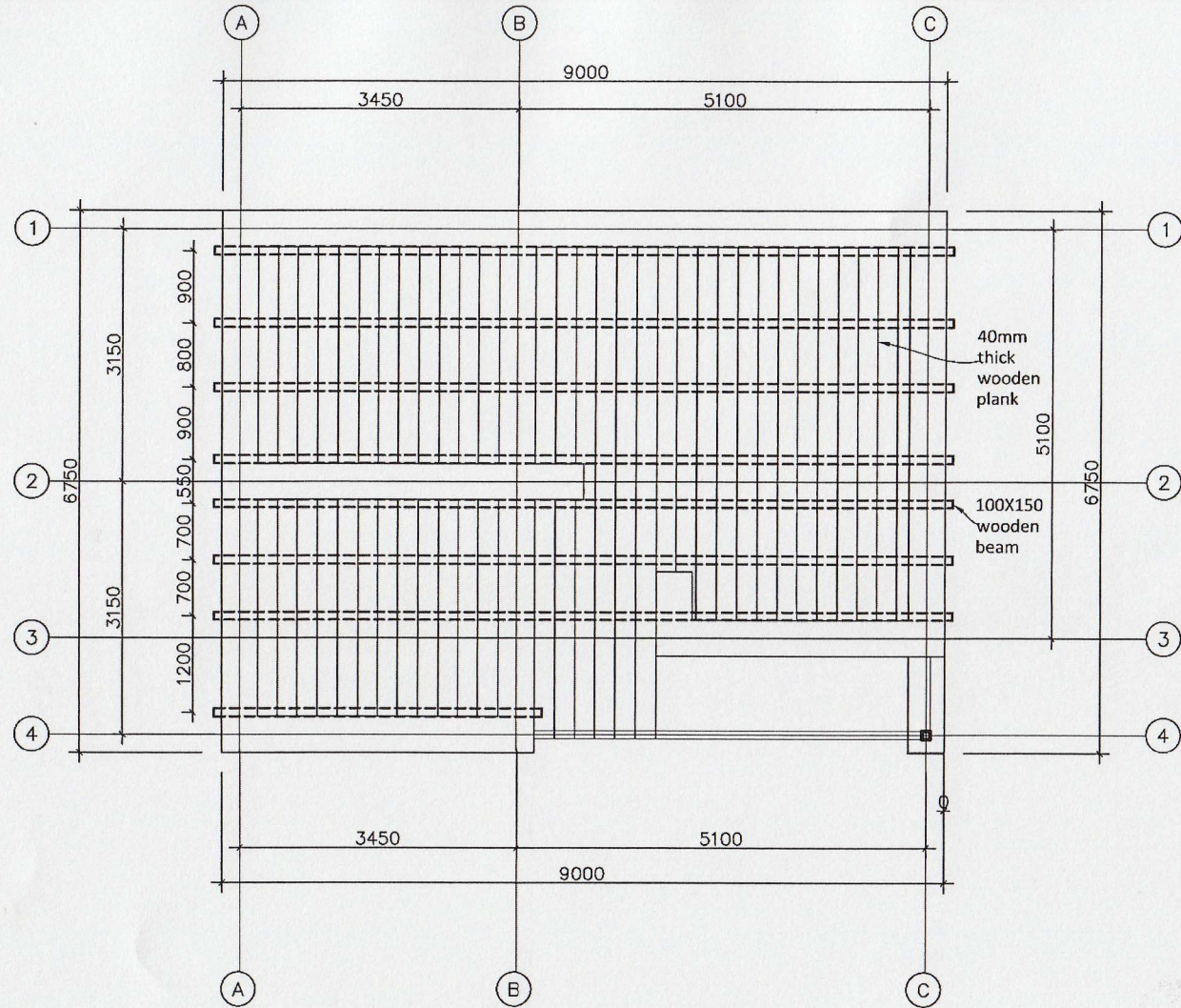
SCALE: 1/50

DATE: *Aashraya* SMC

DESIGNED BY: Aashraya Nepal

8/16

*Ministry of Urban Development  
Local Level Project Implementation  
Baburam, Khatimunda*



**REFLECTED CEILING PLAN**

SCALE 1:100



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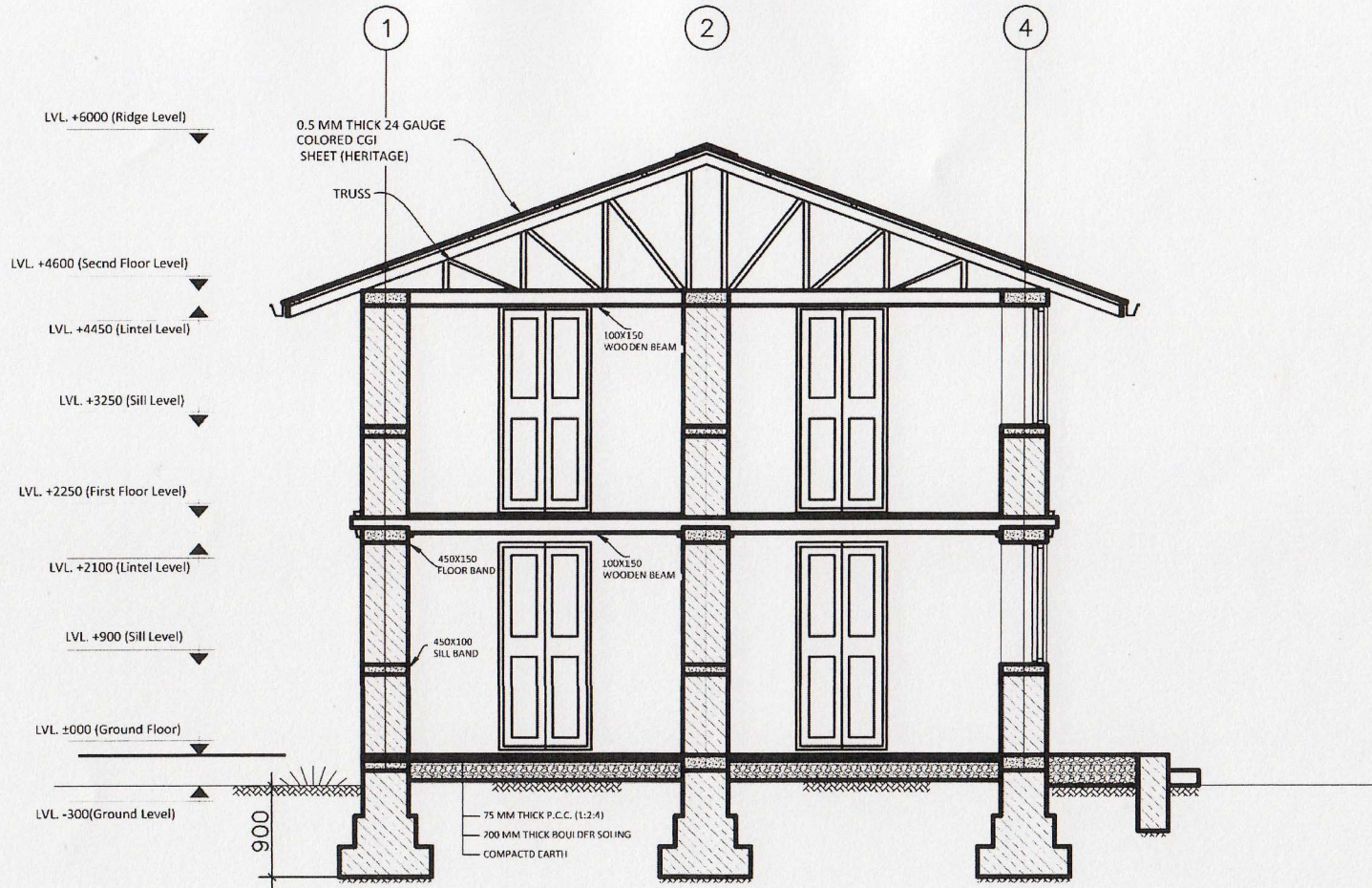
Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC  
DRAWING TITLE: REFLECTED CEILING PLAN

SCALE: 1/50  
DESIGNED BY: Aashraya Nepal

DATE: *[Handwritten date]*  
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नेपाल

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7/16



SECTION AT A-A

Government of Nepal  
Ministry of Urban Development  
Central Level Project Implementation Unit  
Babarmahal, Kathmandu



Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC

DRAWING TITLE: SECTION

SCALE: 1/50

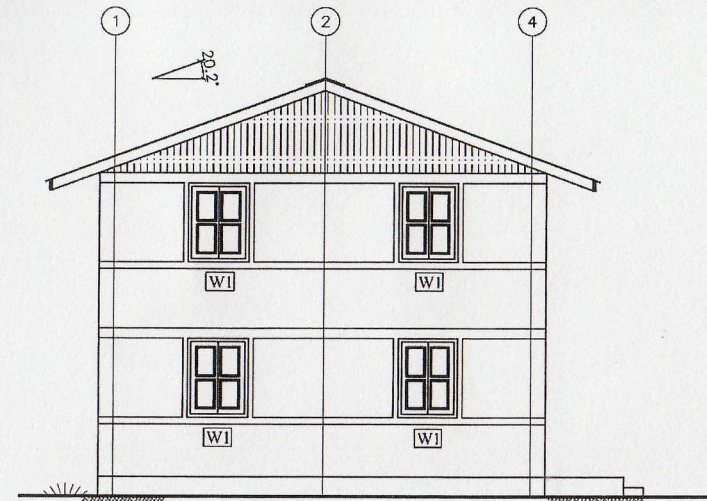
DESIGNED BY: Aashraya Nepal

DATE: *Aashraya* SMC 6/16

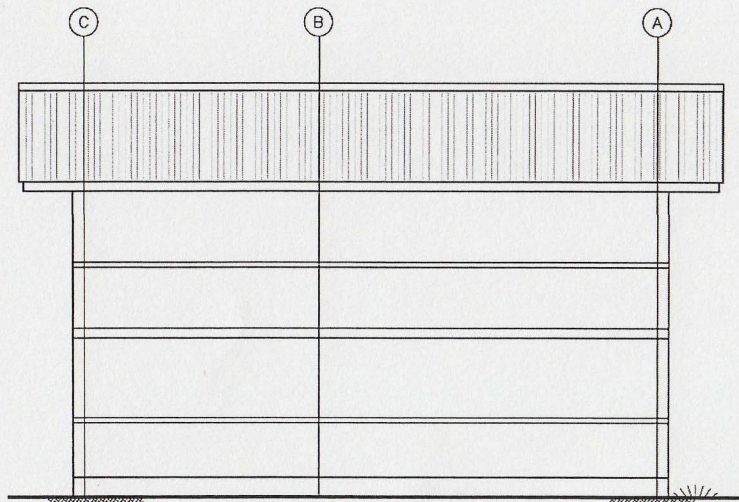
6/16



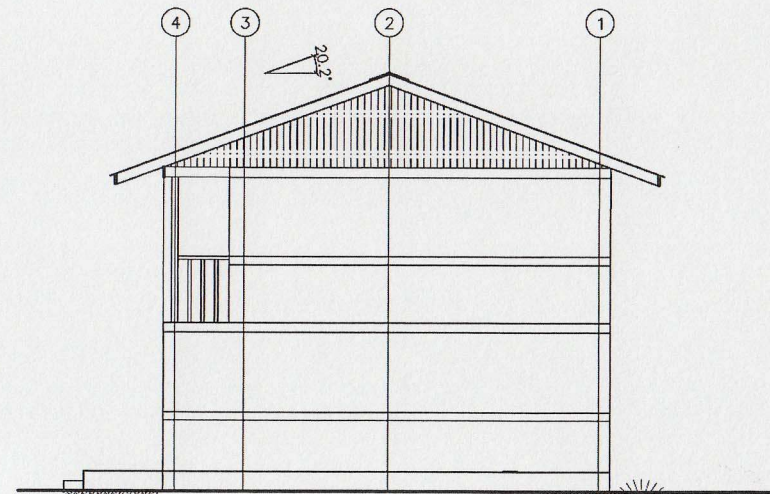
FRONT ELEVATION



RIGHT ELEVATION



BACK ELEVATION



LEFT ELEVATION



Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC  
DRAWING TITLE: ELEVATIONS

SCALE: 1/100

DATE: \_\_\_\_\_

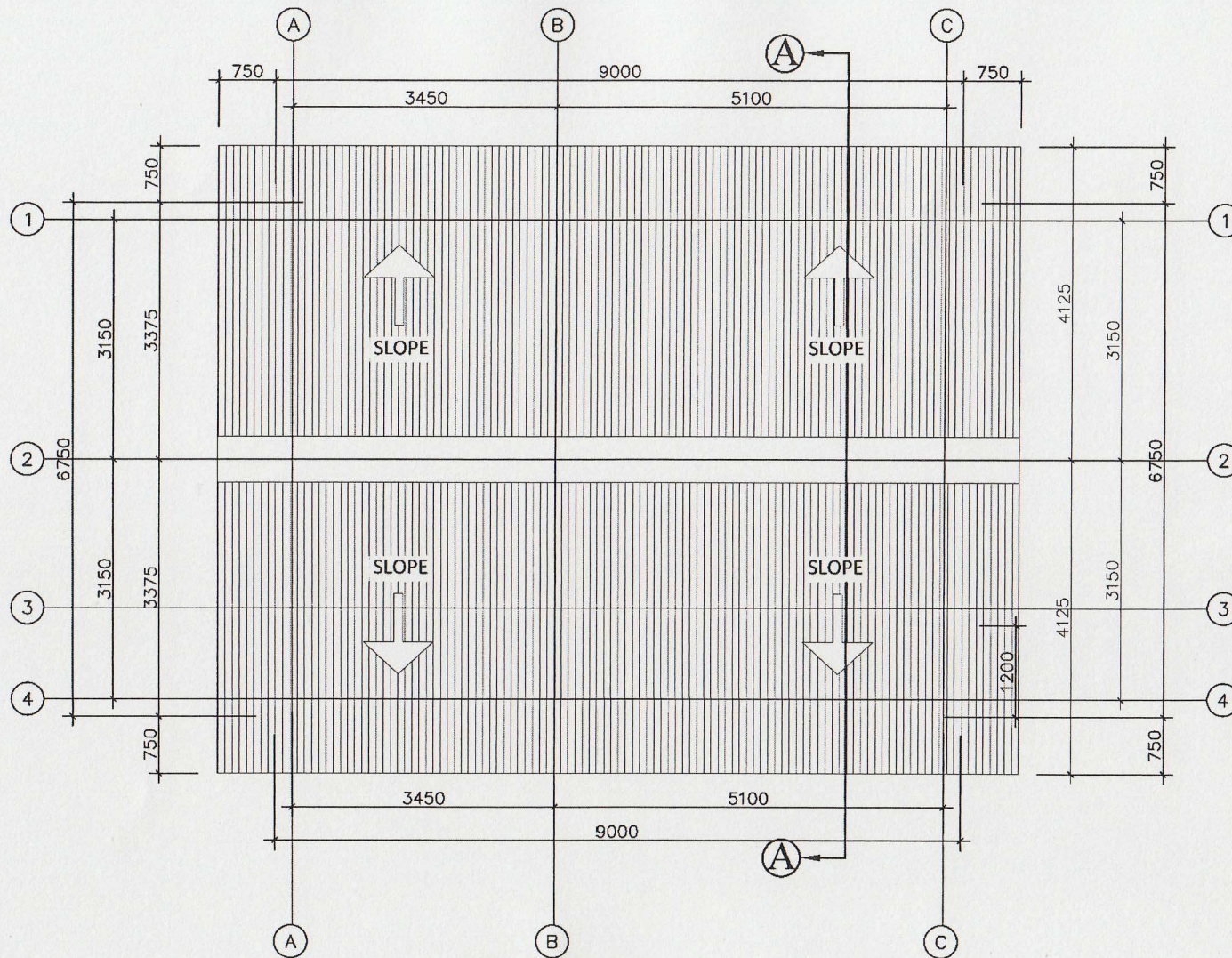
DESIGNED BY: Aashraya Nepal

SMC

5/16

Government of Nepal  
Ministry of Urban Development  
Central Level Project Implementation Unit  
B-1, Kathmandu  
Aashraya  
नेपाल





ROOF PLAN

*[Handwritten Signature]*  
 Government of Nepal  
 Ministry of Urban Development and  
 Rural Level Project Implementation  
 Baharmahal, Kathmandu, Nepal  
**Aashraya**  
 २०७२



Nepal Housing  
 Reconstruction Programme

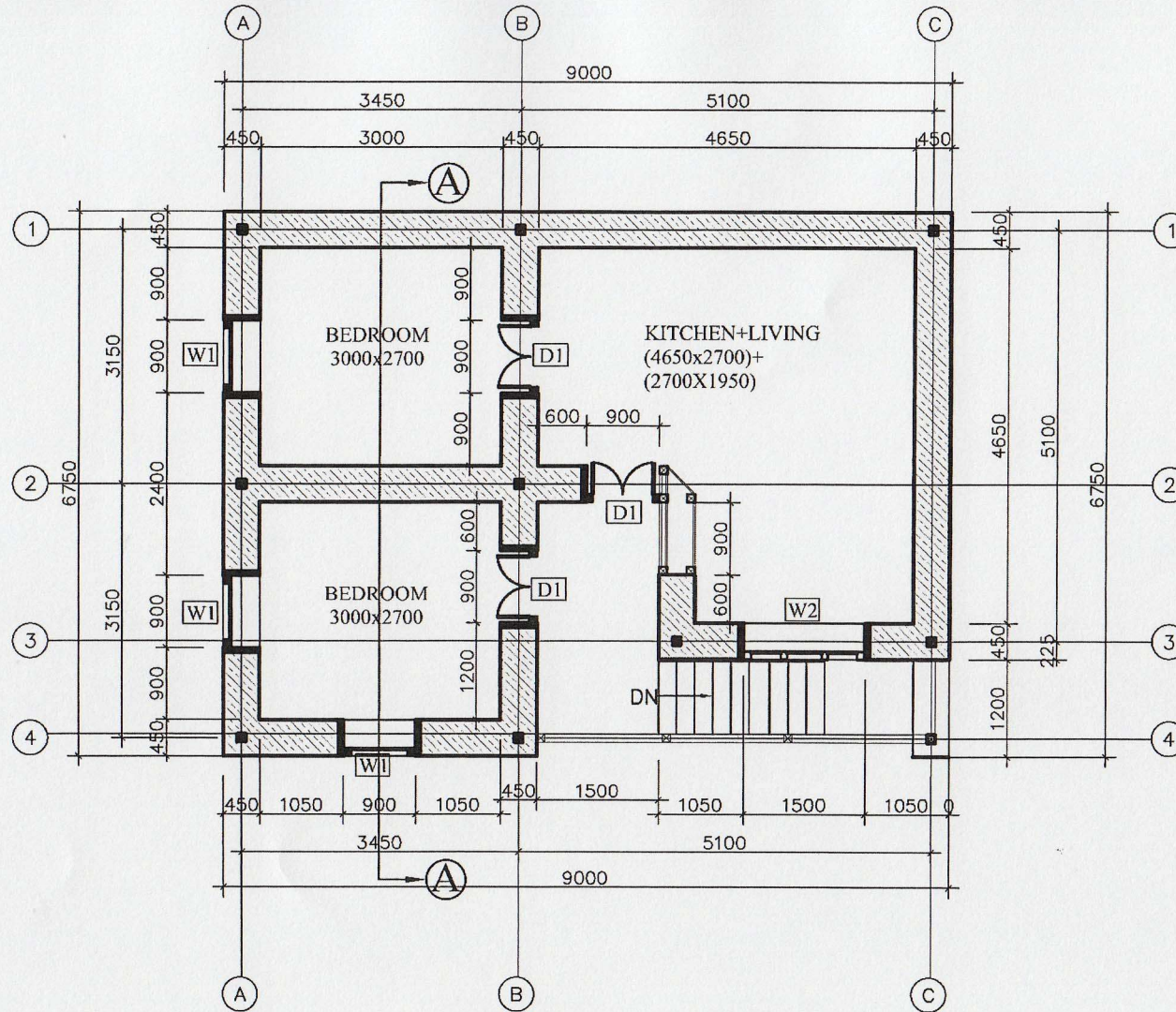
TYPE OF HOUSE: MODEL SMC  
 DRAWING TITLE: PLAN

SCALE: 1/50

DATE:

DESIGNED BY: Aashraya Nepal

SMC  
 4/16



**FIRST FLOOR PLAN**  
60.75 SQ M

*(Signature)*  
 Department of Nepal  
 Level of Urban Development  
 Level Project Implementation Unit  
 Kathmandu, Nepal  
**Aashroya**  
 Model SMC



Nepal Housing  
Reconstruction Programme

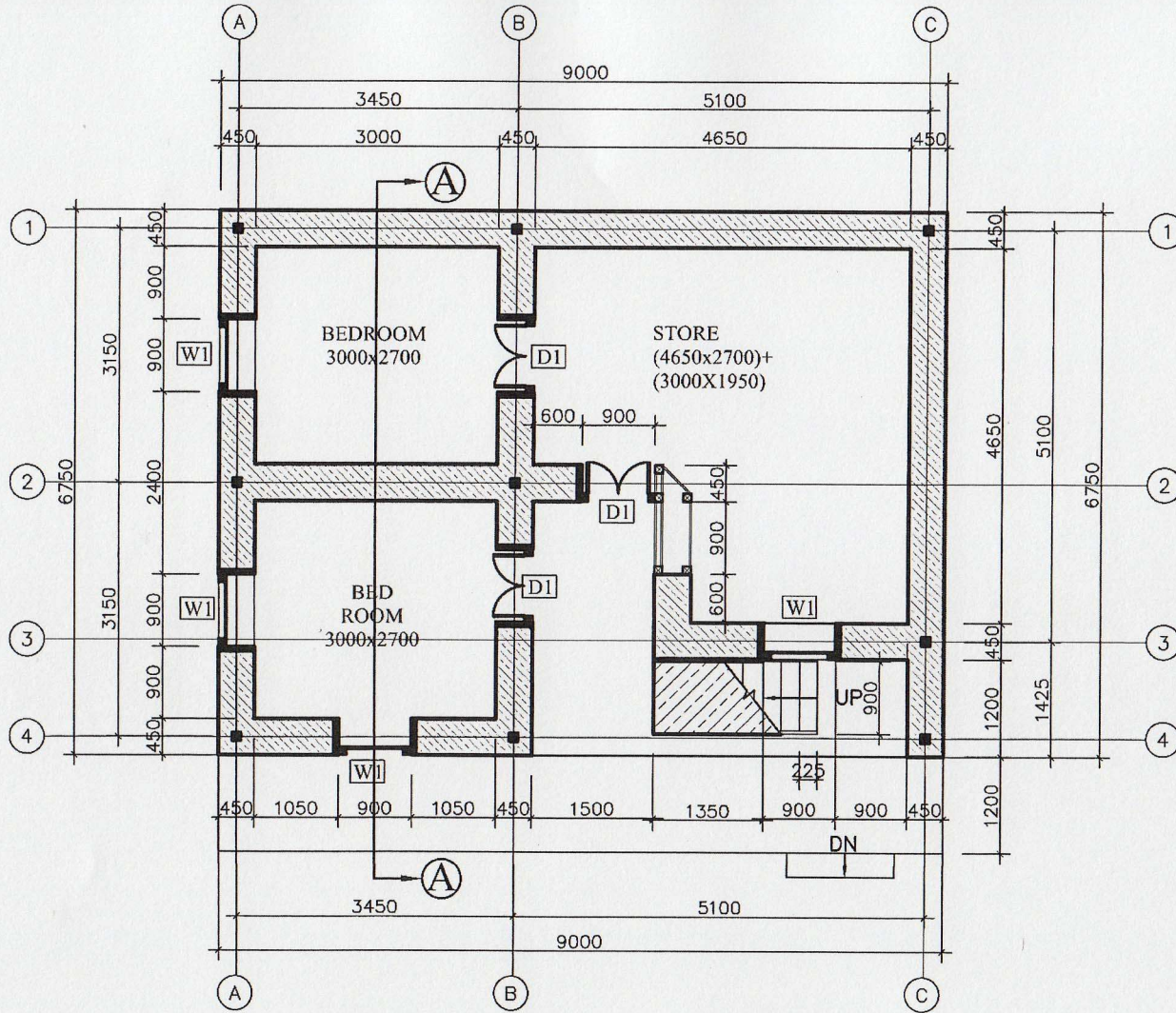
TYPE OF HOUSE: MODEL SMC  
DRAWING TITLE: PLAN

SCALE: 1/50

DATE:

DESIGNED BY: Aashroya Nepal

3/16



### GROUND FLOOR PLAN

60.75 SQ M

Ministry of Urban Development  
Central Level Project Implementation Unit  
Babarmahal, Kathmandu  
Nepal



Nepal Housing  
Reconstruction Programme

TYPE OF HOUSE: MODEL SMC  
DRAWING TITLE: PLAN

SCALE: 1/50

DATE: *Aashraya*  
DESIGNED BY: Aashraya Nepal  
SMC  
2/16

**Aashraya Team**

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Ar. Resma Shrestha

Ar. Prajjwal Pathak

Ar. Prashant Sharma

Ar. Sudip Adhikari

Er. Sudip KC (Str. Engineer)

**HyoImo Foundation/HEAL Nepal**

General Secretary/Director

Tashi D. Hyolmo

Aashraya  
HEAL  
Nepal