



Government of Nepal
Ministry of Education
Department of Education

2 STOREY - 4 ROOM - RCC

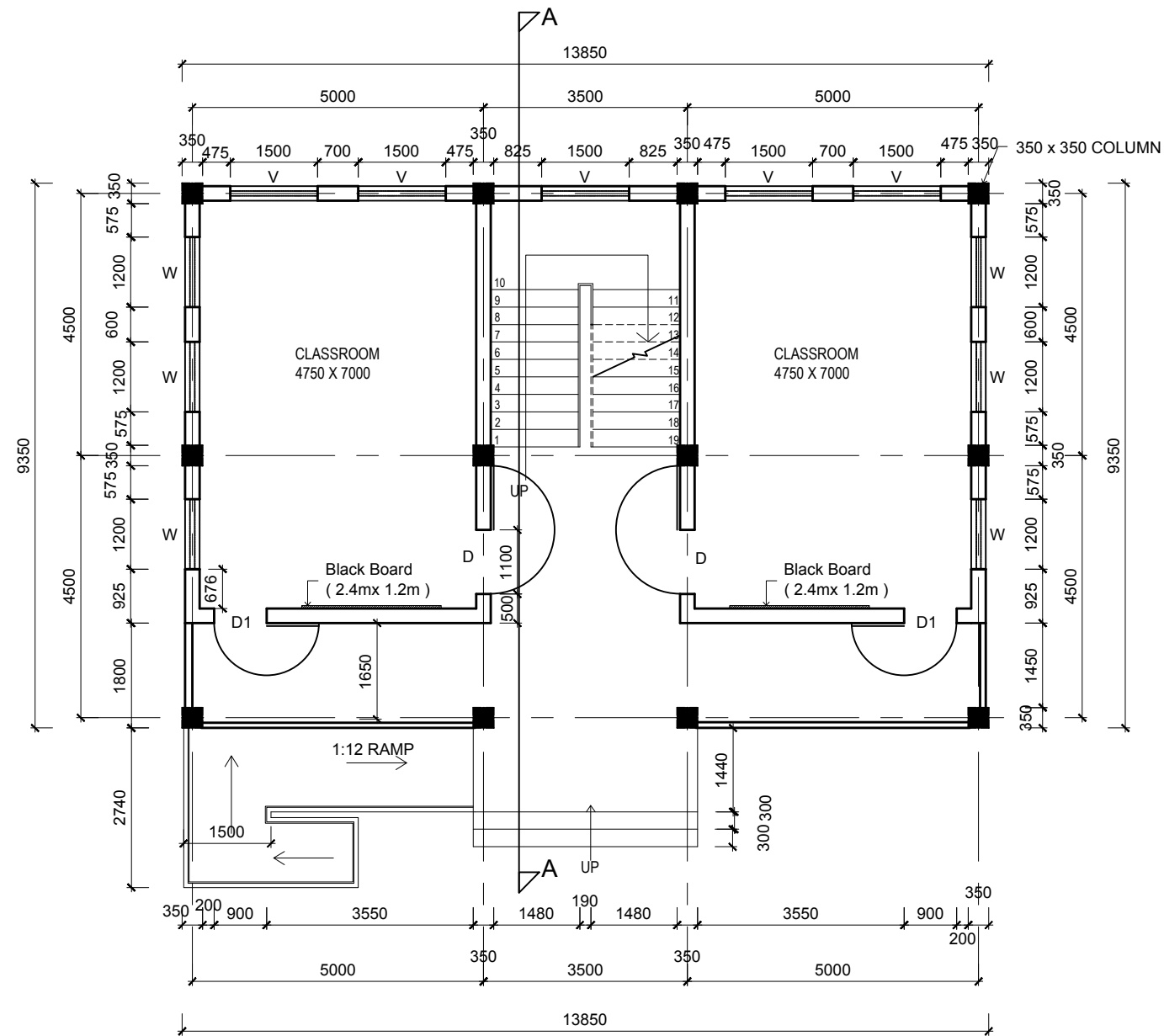
Type Design 2 - U-2b-alt 1

APPROVED: 2072/09/19




PUBLISHED: April 2016

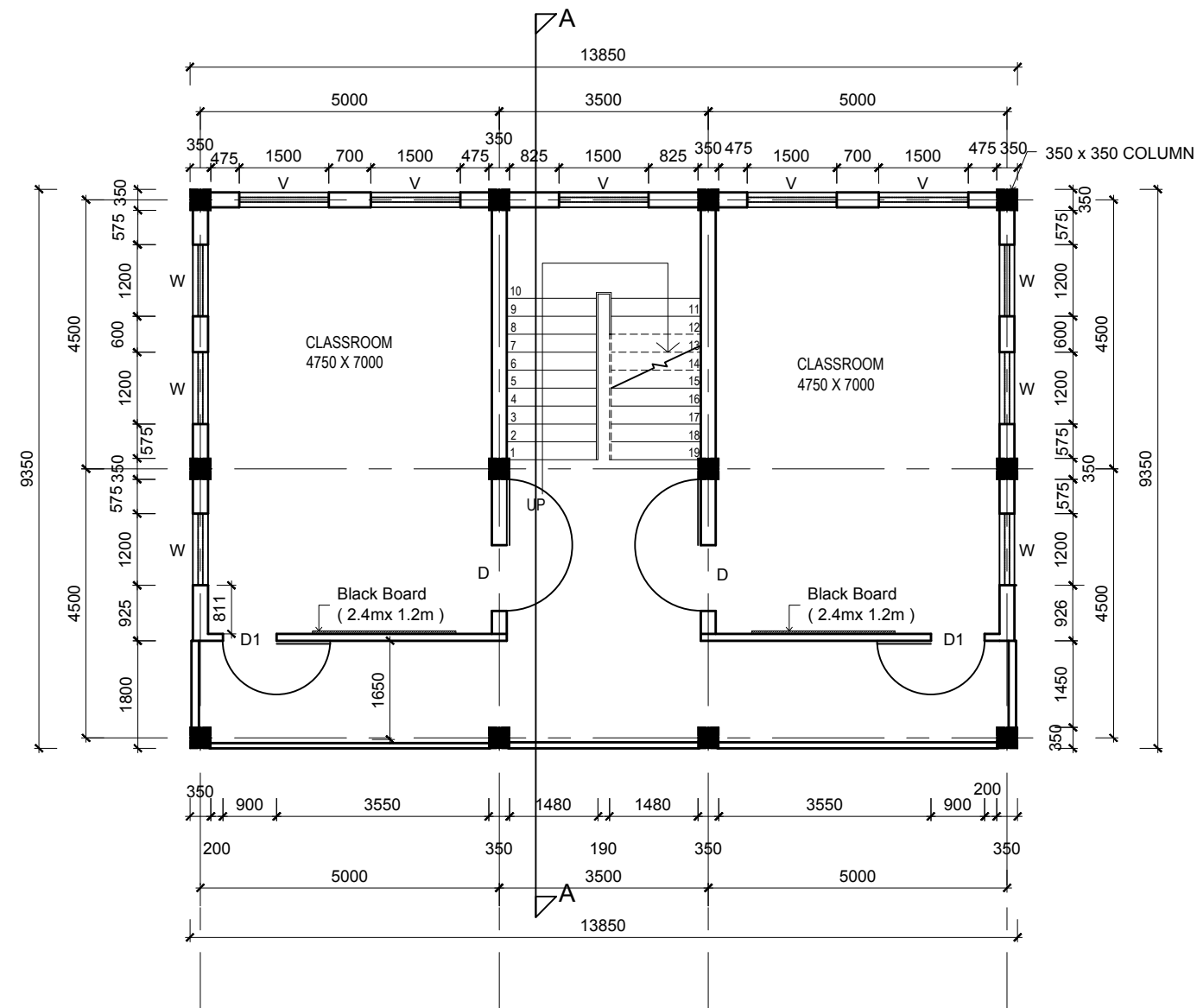
DRAWINGS LIST:

- A1. GROUND FLOOR PLAN
- A2. FIRST FLOOR PLAN
- A3. SECOND FLOOR PLAN
- A4. ELEVATIONS
- A5. ELEVATIONS 2
- S1. GENERAL NOTES
- S2. GRID, LAYOUT, EXCAVATION
- S3. FOUNDATION NAMING PLAN
- S4. FOUNDATION DETAILS
- S5. PLINTH WALL FORMWORK / SOFT SOIL
- S6. COLUMN DETAILS
- S7. COLUMN DETAILS
- S8. BEAM LAYOUT PLAN
- S9. BEAM DETAILS - FIRST FLOOR
- S10. BEAM DETAILS - SECOND FLOOR
- S11. SLAB DETAILS
- S12. SLAB DETAILS
- S13. STAIRCASE DETAILS
- S14. BAND DETAILS
- S15. BAND DETAILS



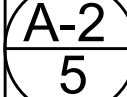


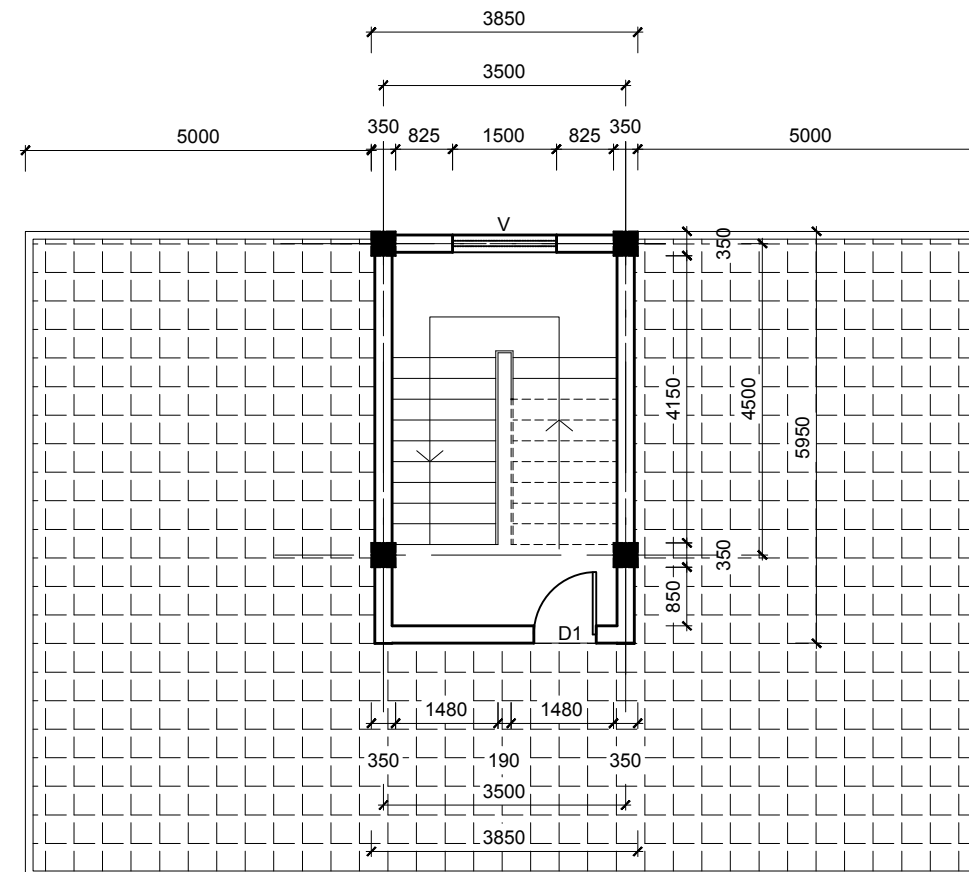
GROUND FLOOR PLAN

 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 2 classroom two story Building ARCHITECTURAL DRAWINGS	CONSULTANT	DRAWN BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name:	JAMUNA TULADHAR		1: 100	A3	
	GROUND FLOOR PLAN	Designation:			DATE : Jan 2016			
			NEC NO:					
			Date:					





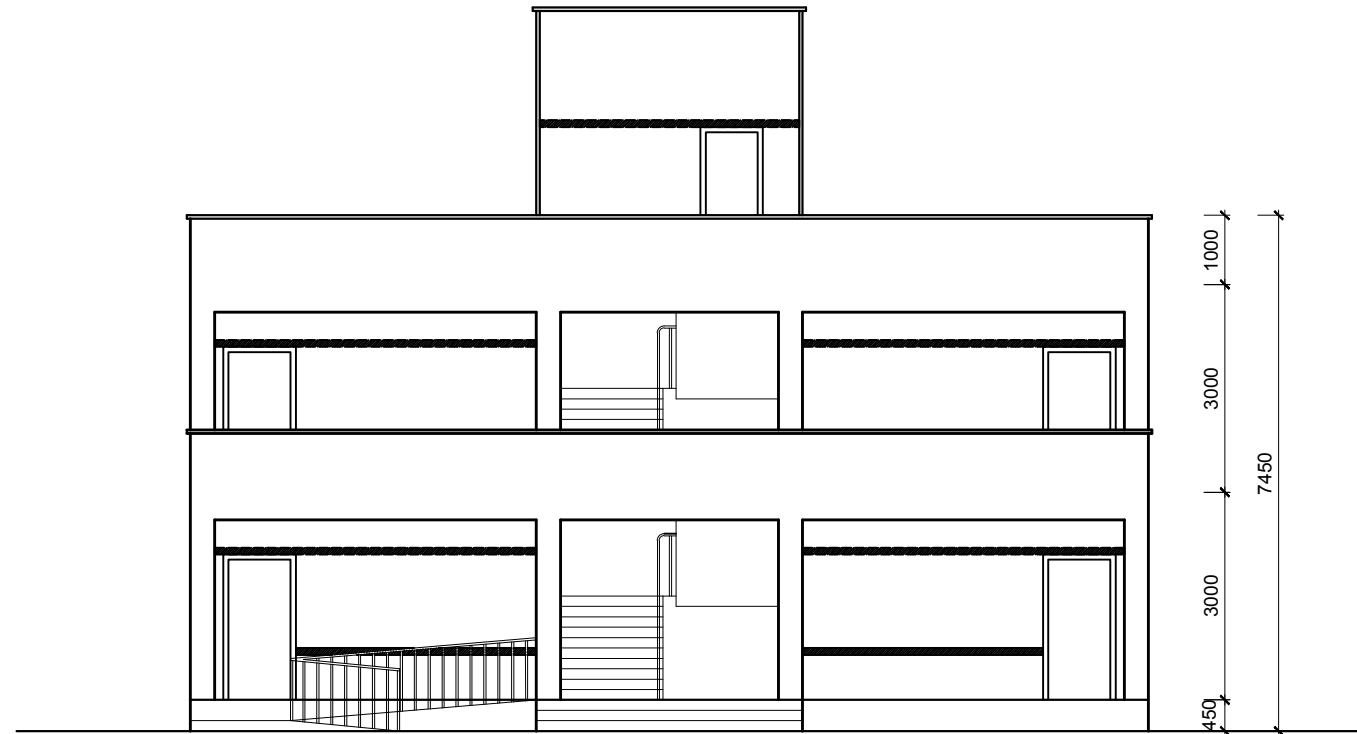
FIRST FLOOR PLAN

 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 2 classroom two story Building ARCHITECTURAL DRAWINGS	CONSULTANT	DRAWN BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name:	JAMUNA TULADHAR		1: 100	A3	
	FIRST FLOOR PLAN	Designation:			DATE : Jan 2016			
			NEC NO:					
			Date:					

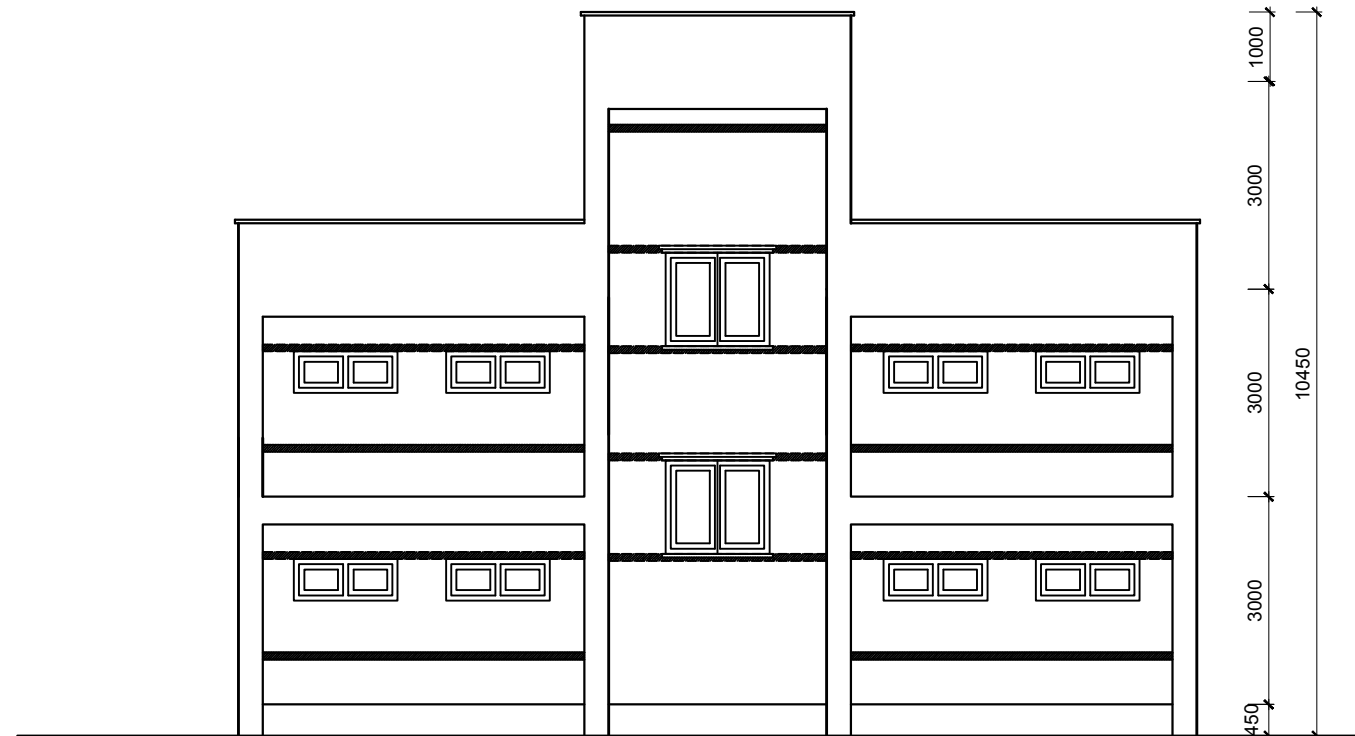


TOP FLOOR PLAN



 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 2 classroom two story Building ARCHITECTURAL DRAWINGS	CONSULTANT	DRAWN BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name:	JAMUNA TULADHAR		1: 100	A3	A-3
		SECOND FLOOR PLAN	Designation:			DATE : Jan 2016		5
			NEC NO:					
			Date:					

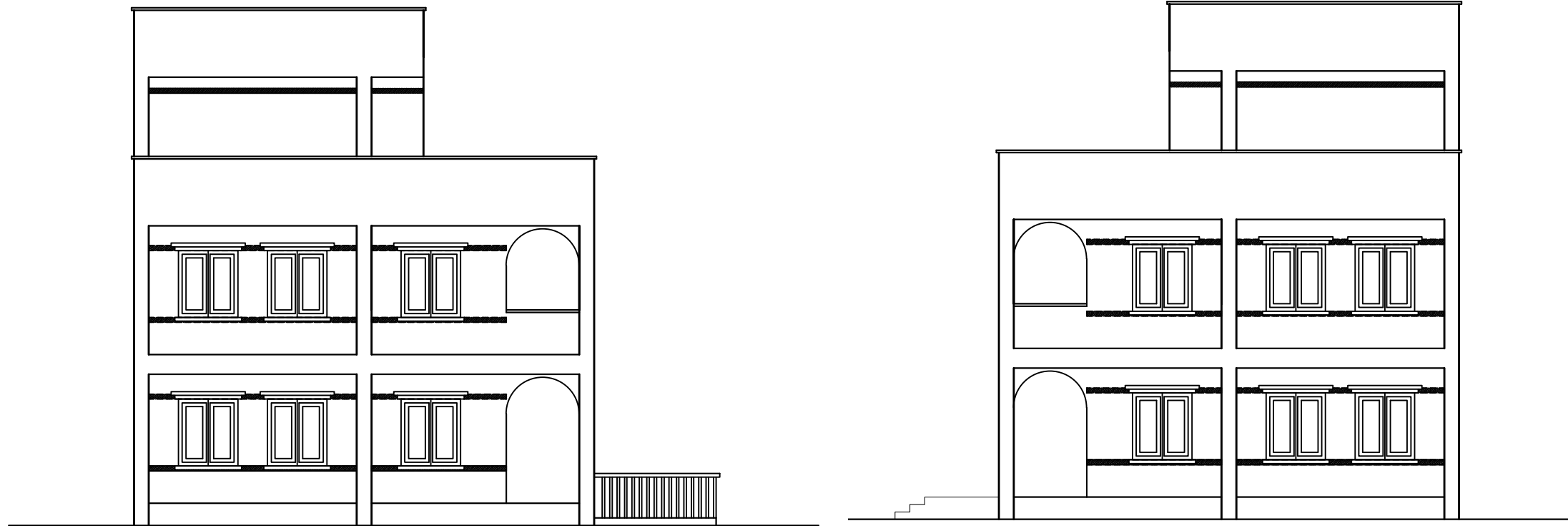


FRONT ELEVATION



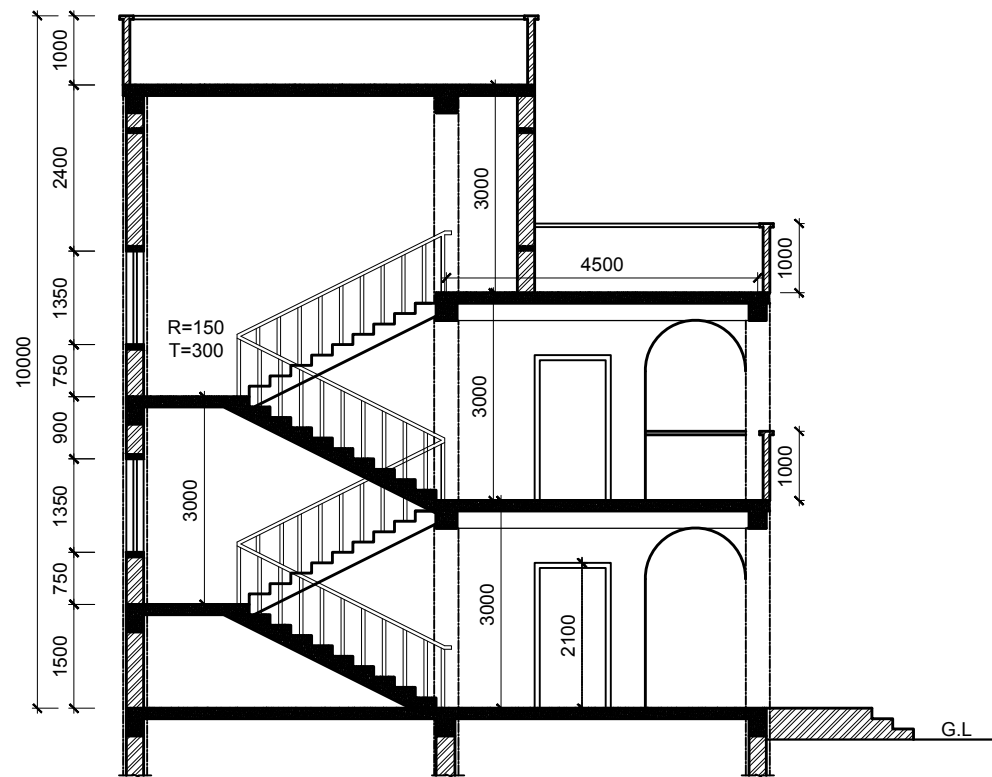
BACK ELEVATION

 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 2 classroom two story Building ARCHITECTURAL DRAWINGS	CONSULTANT	DRAWN BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name: JAMUNA TULADHAR			1: 100	A3	A-4
		ELEVATIONS	Designation:			DATE : Jan 2016		5
			NEC NO:					
			Date:					





LEFT SIDE ELEVATION

RIGHT SIDE ELEVATION



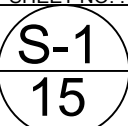


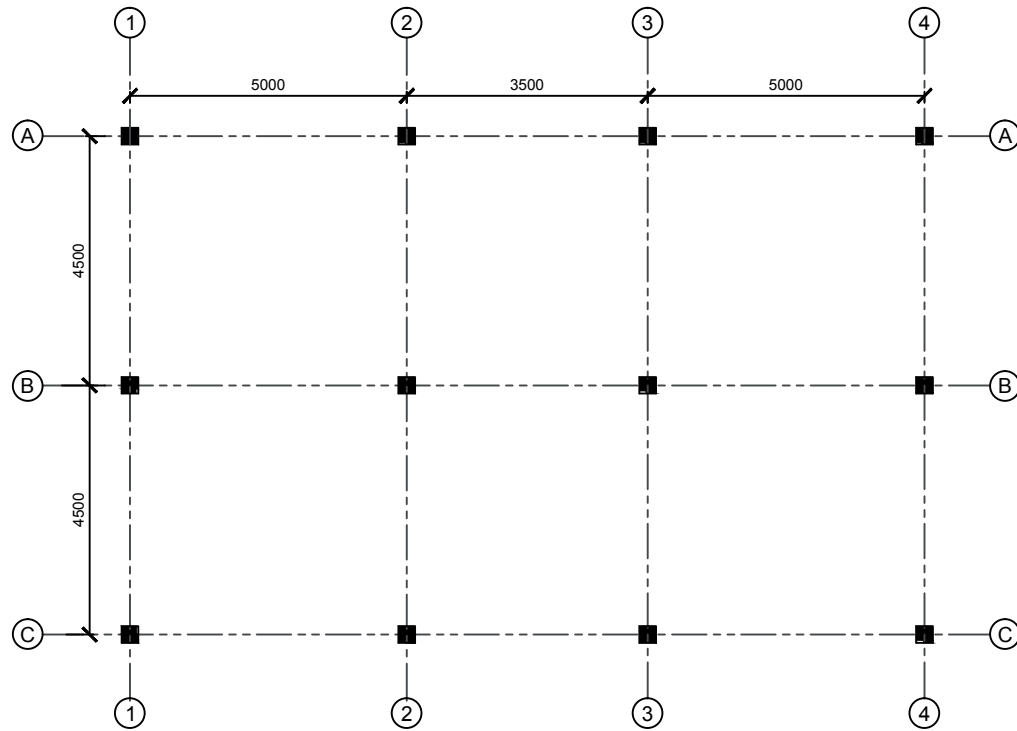
SECTION AT A-A

 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 2 classroom two story Building ARCHITECTURAL DRAWINGS	CONSULTANT	DRAWN BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name:	JAMUNA TULADHAR		1: 100	A3	A-5
		ELEVATIONS	Designation:			DATE : Jan 2016		5
			NEC NO:					
			Date:					

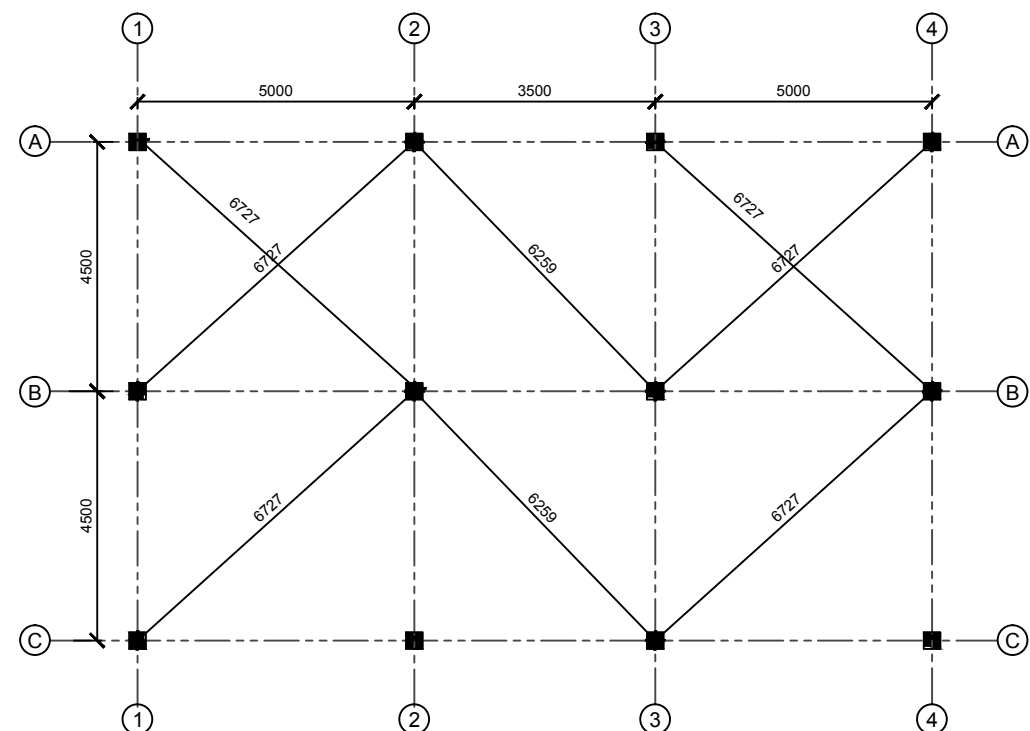
GENERAL NOTES:-

- THESE NOTES ARE APPLICABLE TO ALL DRAWING UNLESS MENTIONED OTHERWISE.
- ALL WORKS SHALL BE IN ACCORDANCE WITH RELEVANT NEPAL NATIONAL BUILDING CODES AND STANDARD.
- USE ELECTRO-MECHANICAL VIBRATOR FOR COMPACTION OF RCC WORK
- CLEAR CONCRETE COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS:
 - > FOUNDATION = 50 mm (FOR BELOW PCC)
 - > COLUMNS = 40mm
 - > SLAB = 15mm
- THE FOUNDATIONS TO REST ON FIRM SUBGRADE SOIL.
- LAYOUT DIMENSION SHOULD BE CHECKED BY THE ARCHITECT BEFORE STRUCTURAL DRAWINGS ARE ISSUED FOR CONSTRUCTION.
- IN CASE OF DISCREPANCY BETWEEN B.O.Q & DRAWINGS, FOLLOW DRAWINGS.
- ALL R.C.C WORK SHALL BE CONTINUOUSLY CURED FOR 14-DAYS.
- UNLESS NOTED OTHERWISE FORM WORK FROM R.C.C WORK SHALL BE REMOVED ACCORDING TO THE TIME INDICATED BELOW.
 - > COLUMNS / BEAMS SIDES AFTER 48 HRS OF POURING.
 - > BEAM BOTTOM AFTER 28 DAYS OF POURING.
 - > SLAB AFTER 21 DAYS OF POURING.
- ALL ELECTRICITY CONDUITS SHALL BE PLACED ON TOP OF TENSION REINFORCEMENT.
- THE DESIGN OF CONCRETE MIX USING ORDINARY PORTLAND CEMENT, FOR VARIOUS STRENGTHS SHALL BE BASED ON THE "STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR NORMAL HEAVYWEIGHT CONCRETE".
- THE CONCRETE COMPRESSIVE STRENGTH SHALL BE MEASURED ON 150*150*150 mm CUBE AT 28 DAYS, FOR VARIOUS STRUCTURAL ELEMENTS.
- ALL DIMENSION ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

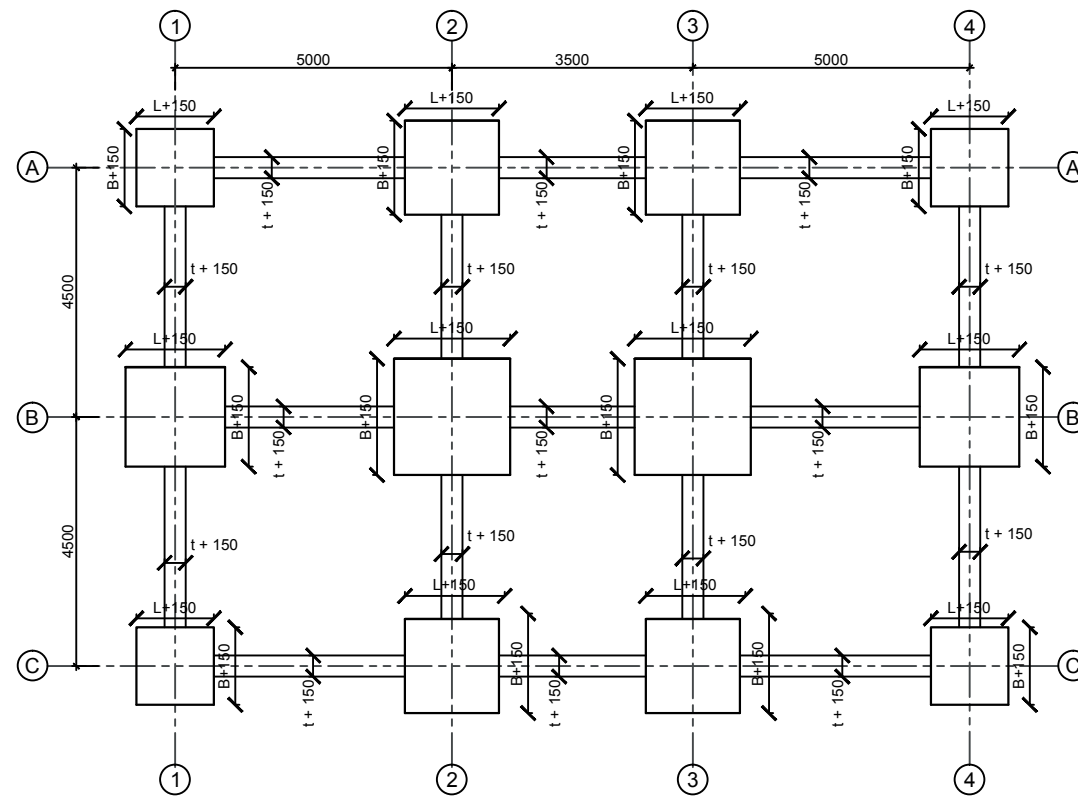
 <p style="text-align: center;">Department of Education Government of Nepal Ministry of Education Sanothimi , Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILINGS	CONSULTANT	STRUCTURE BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name:	R.K.Mallik		AS SHOWN	A3	
	GENERAL NOTES	Designation:	Structural Engineer		DATE : Jan 2016			
		NEC NO:	3200 Civil "A"					
		Date:						



GRID NAMING PLAN



LAYOUT PLAN



FOUNDATION EXCAVATION PLAN



Department of Education
Government of Nepal
Ministry of Education
 Sanothimi, Bhaktapur

CONSULTANT :



RND CENTRE PVT. LTD.

U-2b-alt-1, 4 classroom two story Building
 STRUCTURAL DETAILS

TITLE :
 GRID,LAYOUT, EXCAVATION

CONSULTANT

Name: R.K.Mallik

Designation: Structural Engineer

NEC NO: 3200 Civil "A"

Date:

STRUCTURE BY:

APPROVED BY:

SCALE :

AS SHOWN

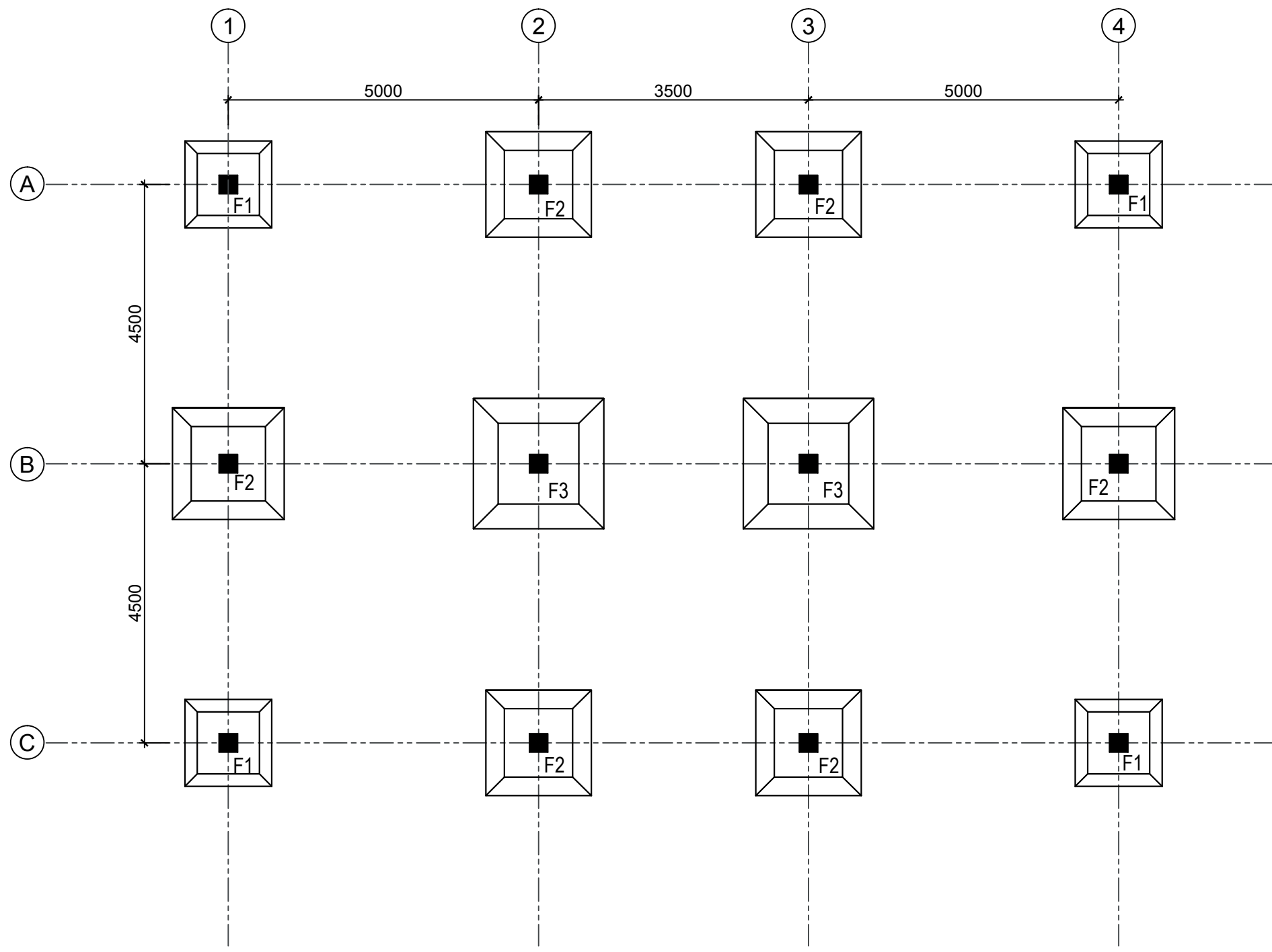
DATE : Jan 2016

PAPER SIZE



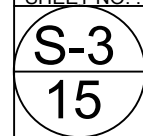
A3

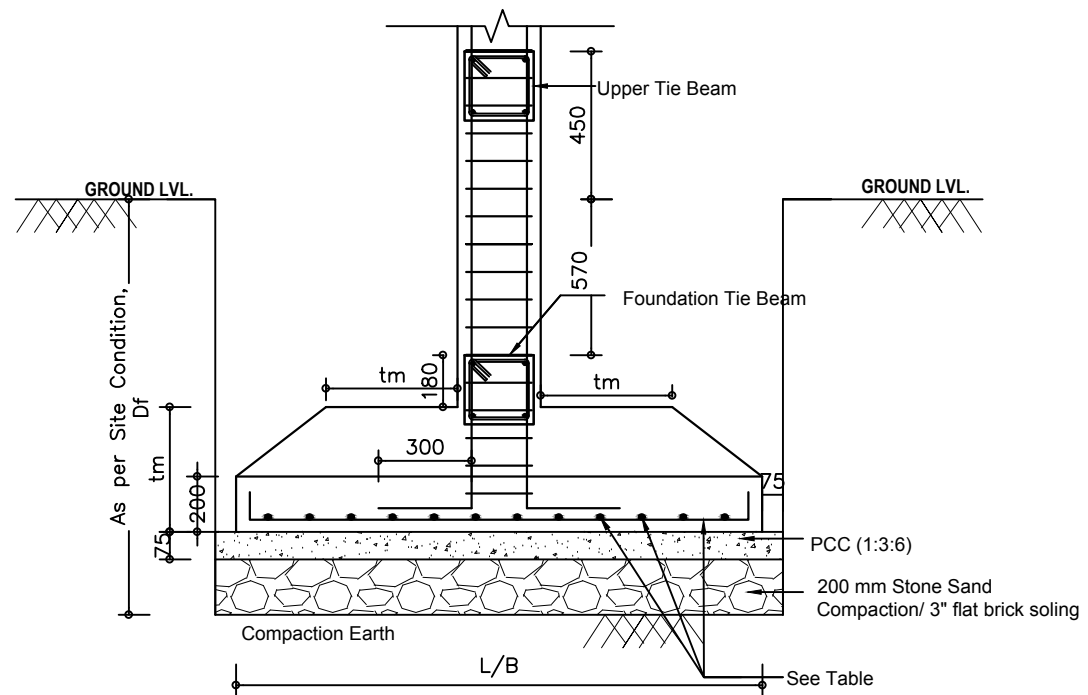
SHEET NO. :

S-2
15



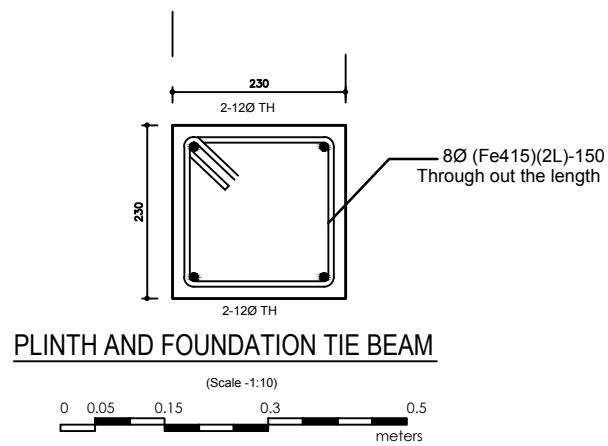
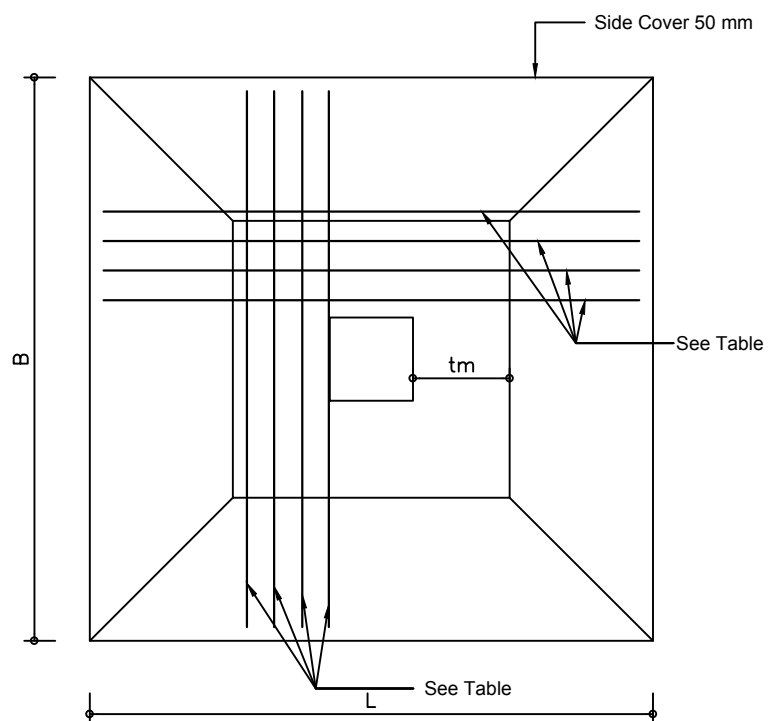
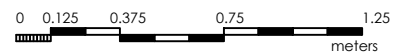
FOUNDATION PLAN

 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILINGS	CONSULTANT	STRUCTURE BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name:	R.K.Mallik		AS SHOWN	A3	
	FOUNDATION NAMING PLAN	Designation:	Structural Engineer		DATE : Jan 2016			
			NEC NO:	3200 Civil "A"				
			Date:					



FOOTING SECTION WITH PLINTH BEAM AND FOUNDATION BEAM

For Hard, Medium, Soft and Weak soil (Scale -1:25)



PLINTH AND FOUNDATION TIE BEAM

(Scale -1:10)

PAD FOUNDATION SIZE FOR WEAK SOIL (Safe bearing capacity = 50 KN/m ²)				
Column Type	Foundation Plan LXB (mm)	Max Thickness	Reinforcement and Spacing	Recommended Minimum foundation depth, Df(mm)
Corner (F1)	2000X2000	300	12 dia@150mm c/c	1500
Face(F2)	2800X2800	400	12 dia@150mm c/c	1500
Inner(F3)	3300X3300	475	12 dia@150mm c/c	1500
PAD FOUNDATION SIZE FOR SOFT SOIL (Safe bearing capacity = 100 KN/m ²)				
Column Type	Foundation Plan LXB (mm)	Max Thickness	Reinforcement and Spacing	Recommended Minimum foundation depth, Df(mm)
Corner (F1)	1500X1500	275	12 dia@150mm c/c	1500
Face(F2)	2000X2000	375	12 dia@150mm c/c	1500
Inner(F3)	2325X2325	450	12 dia@150mm c/c	1500
PAD FOUNDATION SIZE FOR MEDIUM SOIL (Safe bearing capacity = 150 KN/m ²)				
Column Type	Foundation Plan LXB (mm)	Max Thickness	Reinforcement and Spacing	Recommended Minimum foundation depth, Df(mm)
Corner (F1)	1200X1200	250	12 dia@150mm c/c	1500
Face(F2)	1600X1600	375	12 dia@150mm c/c	1500
Inner(F3)	1900X1900	425	12 dia@150mm c/c	1500
PAD FOUNDATION SIZE FOR HARD SOIL (Safe bearing capacity = 200 KN/m ²)				
Column Type	Foundation Plan LXB (mm)	Max Thickness	Reinforcement and Spacing	Recommended Minimum foundation depth, Df(mm)
Corner (F1)	1000X1000	250	12 dia@150mm c/c	1500
Face(F2)	1400X1400	350	12 dia@150mm c/c	1500
Inner(F3)	1700X1700	425	12 dia@150mm c/c	1500



Department of Education
Government of Nepal
Ministry of Education
Sanothimi, Bhaktapur

CONSULTANT :



RND CENTRE PVT. LTD.

U-2b-alt-1, 4 classroom two story Building
STRUCTURAL DETAILINGS

TITLE :
FOUNDATION DETAILS

CONSULTANT

Name:

Designation:

NEC NO:

Date:

STRUCTURE BY:

R.K.Mallik

Structural Engineer

3200 Civil "A"

APPROVED BY:

SCALE :

AS SHOWN

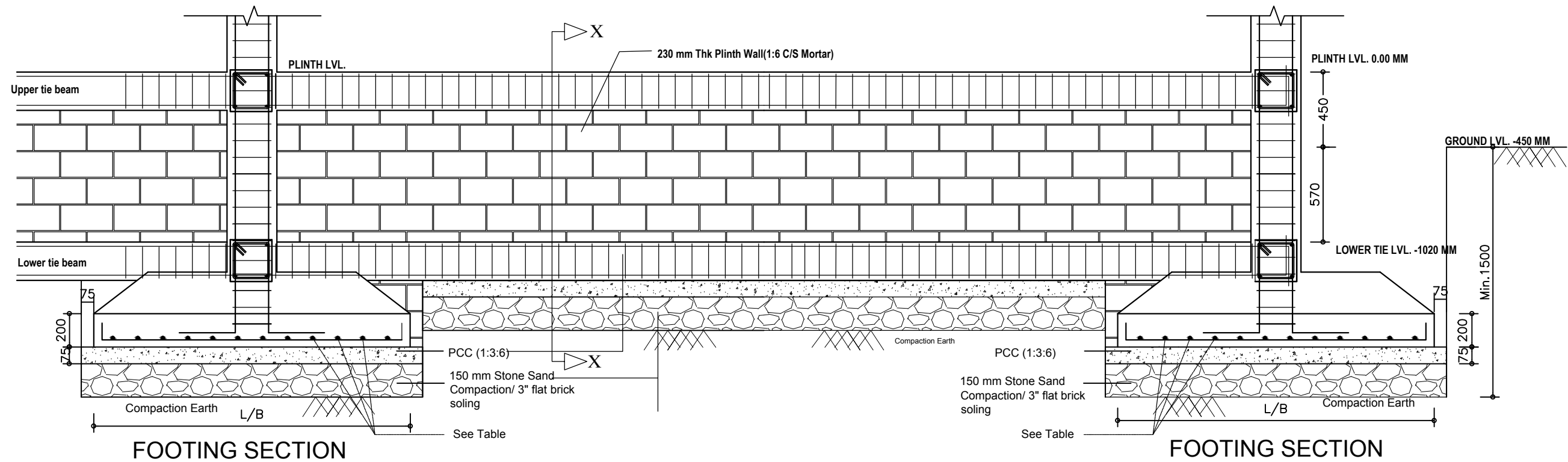
DATE : Jan 2016

PAPER SIZE

A3

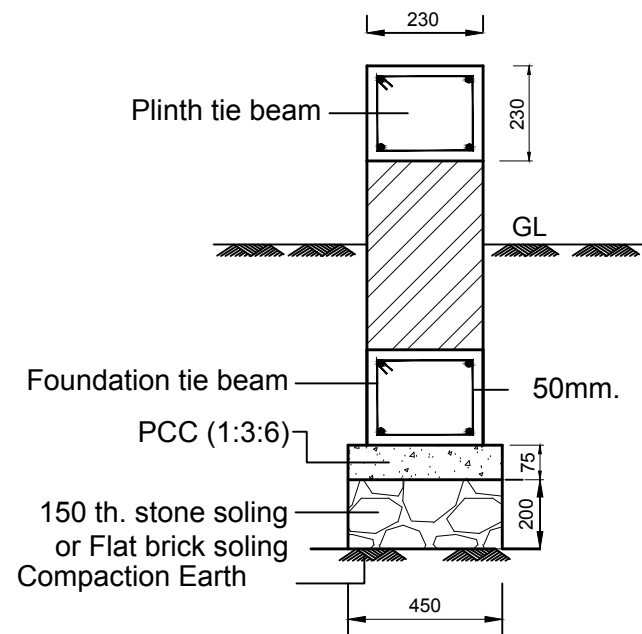
SHEET NO. :

S-4
15

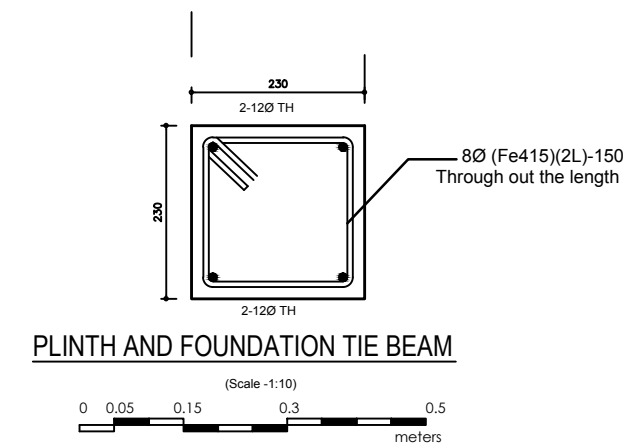


ELEVATION SHOWING FOOTING , LOWER TIE BEAM , UPPER TIE BEAM AND PLINTH WALL

For Hard, Medium, Soft and Weak soil (Scale -1:25)
 0 0.125 0.375 0.75 1.25
 meters






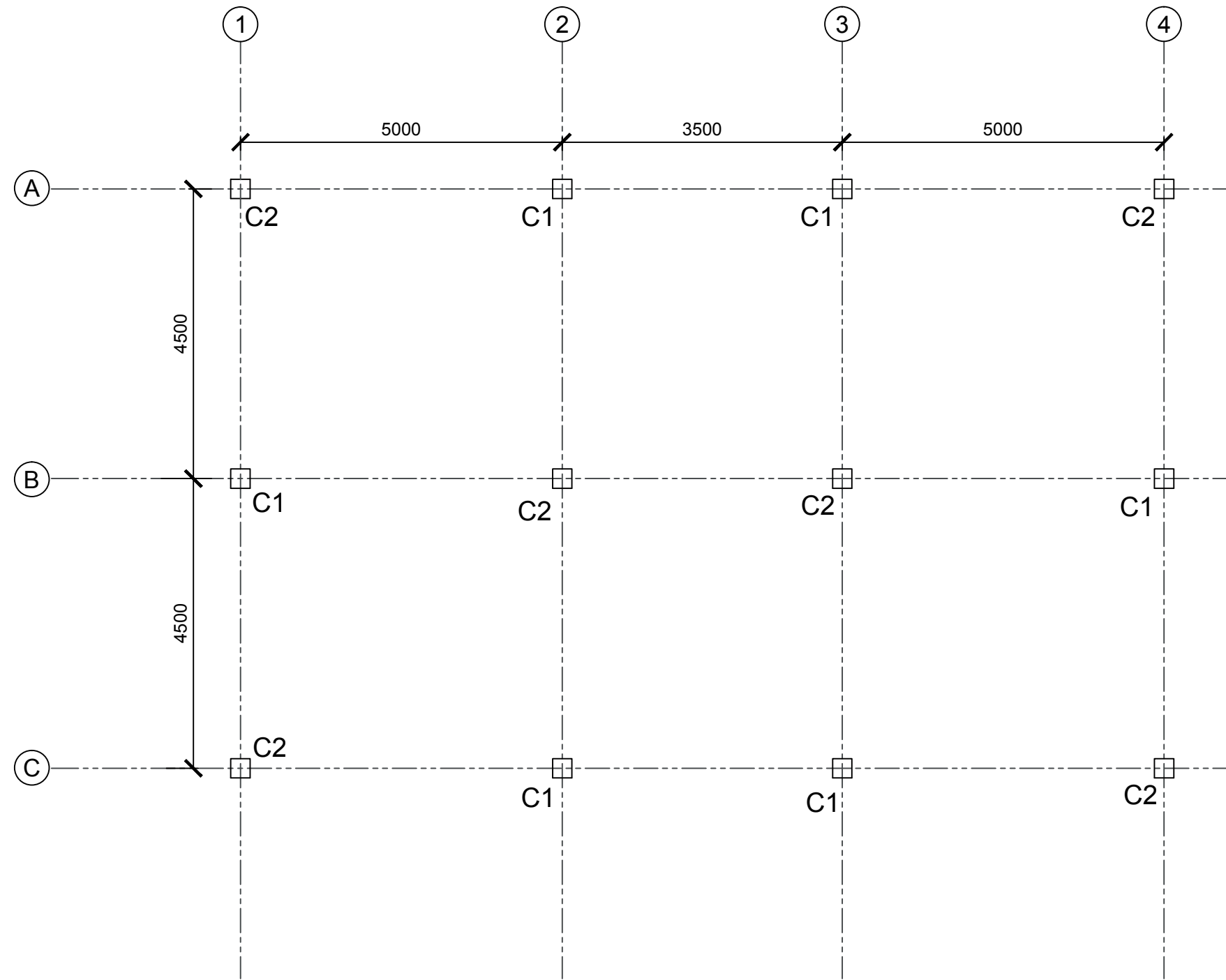
SECTION at X-X





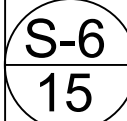
PLINTH AND FOUNDATION TIE BEAM

(Scale -1:10)
 0 0.05 0.15 0.3 0.5
 meters

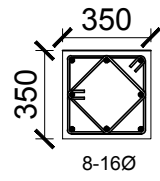
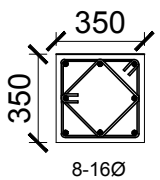
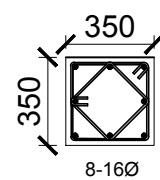
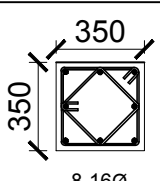
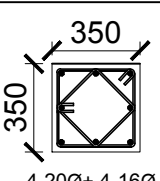
 <p>Department of Education Government of Nepal Ministry of Education Sanothimi , Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILS	CONSULTANT	STRUCTURE BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name: R.K.Mallik		AS SHOWN	A3		
	PLINTH WALL FOR WEAK / SOFT SOIL	Designation: Structural Engineer		DATE : Jan 2016				
			NEC NO: 3200 Civil "A"					
			Date:					

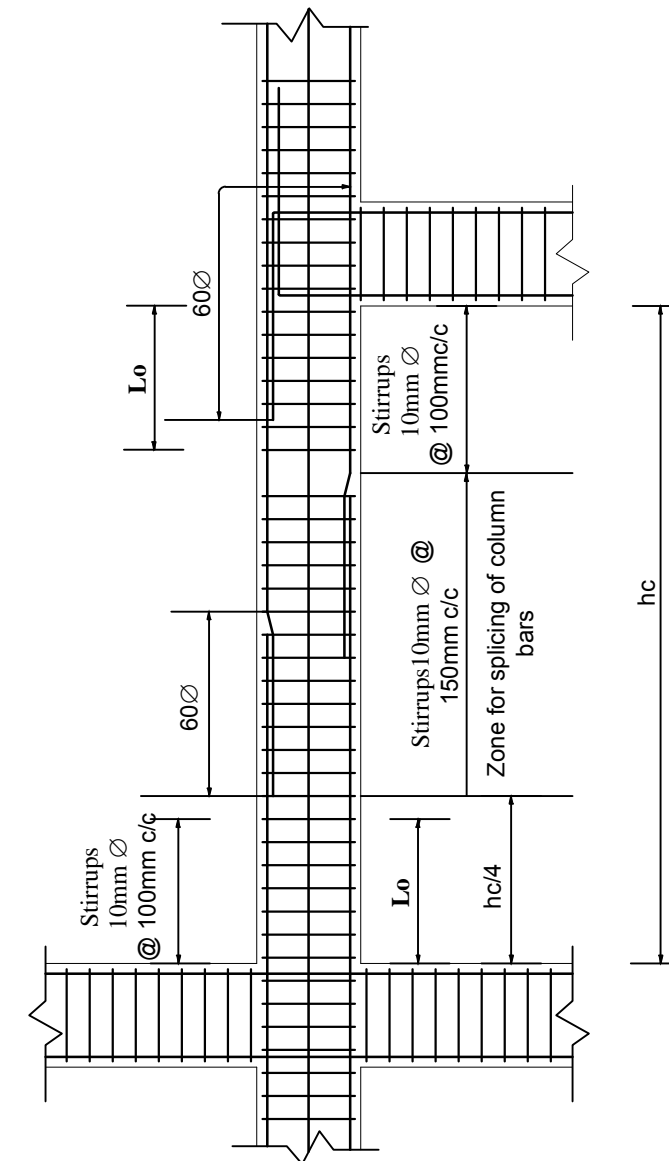


COLUMN PLAN

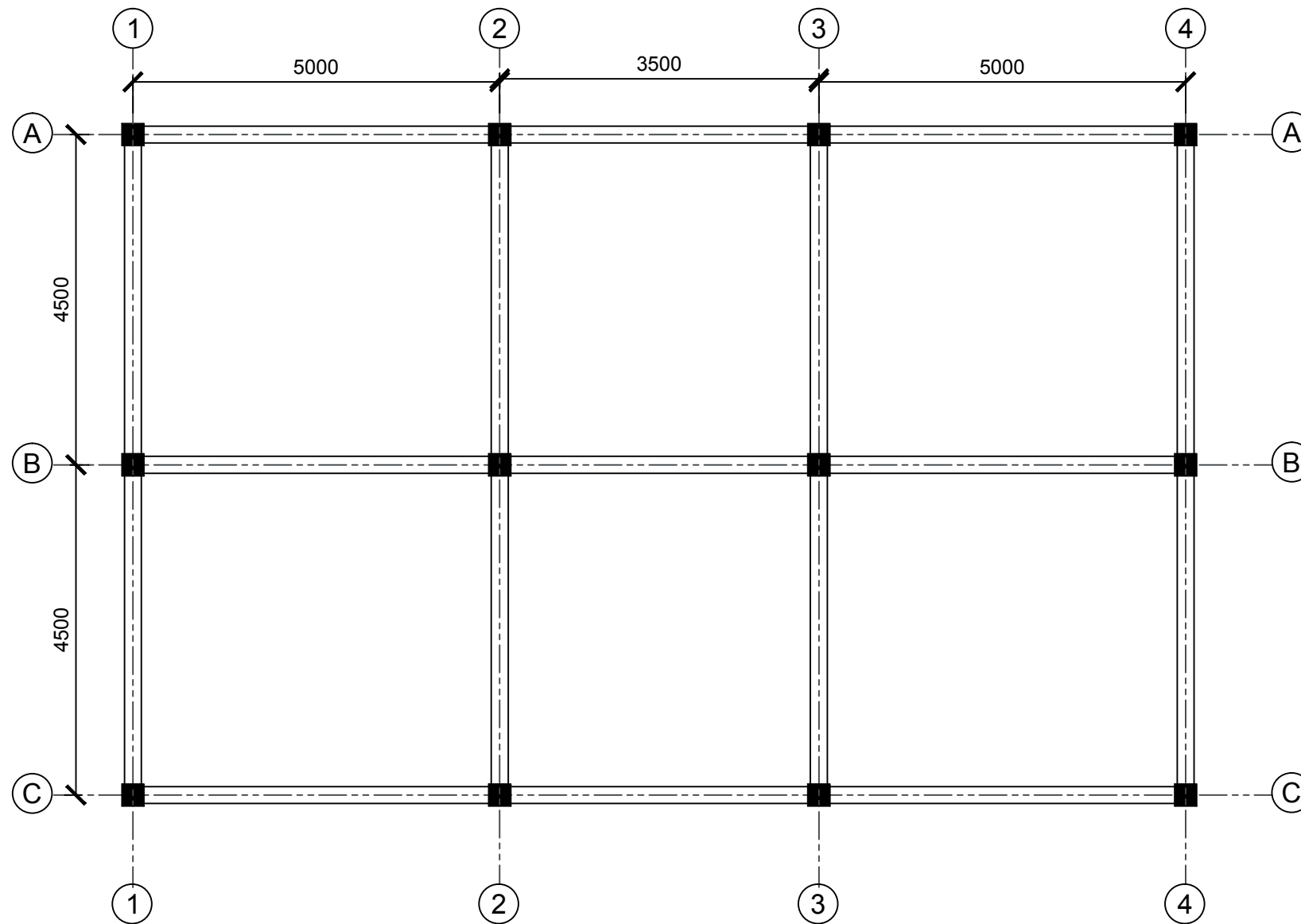
 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILINGS	CONSULTANT	STRUCTURE BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name: R.K.Mallik		AS SHOWN	A3		
	COLUMN DETAILS	Designation: Structural Engineer	NEC NO: 3200 Civil "A"	DATE : Jan 2016				
		Date:						

COLUMN SIZE AND REINFORCEMENT

Floor	Column C1	Column C2	Stirrups		Grade
			T & B (H/4)	Mid (H/2)	
Pent House Column			8Ø @ 100mm c/c	8Ø @ 150mm c/c	M 20 Fe 500
Second Storey			8Ø @ 100mm c/c	8Ø @ 150mm c/c	M 20 Fe 500
First Storey			8Ø @ 100mm c/c	8Ø @ 150mm c/c	M 20 Fe 500

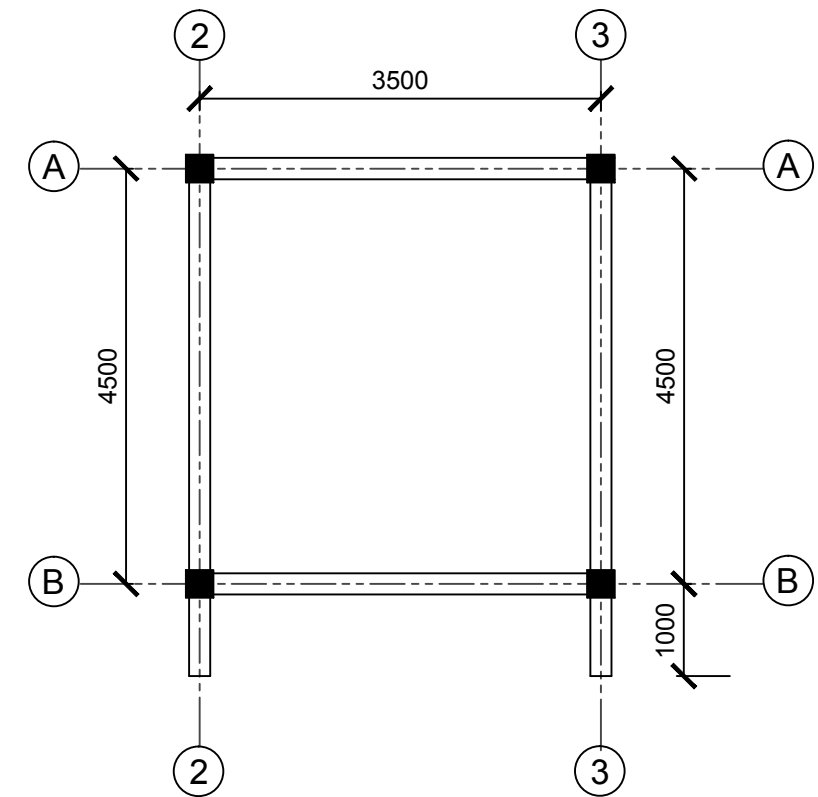


L-SECTION OF COLUMN WITH LAPPING





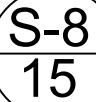
BEAM LAYOUT PLAN

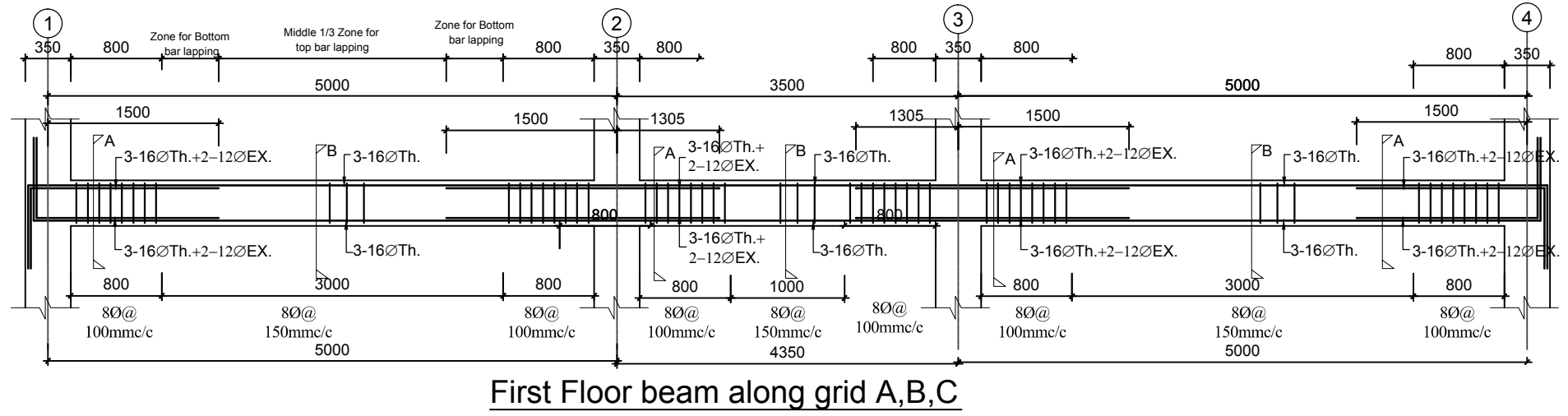
(First and Second Floor Level)



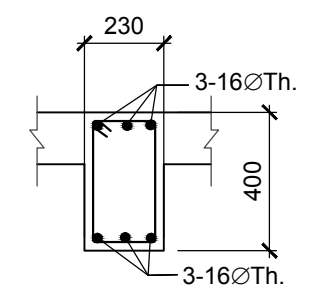
BEAM LAYOUT PLAN

(Staircase Roof Level)

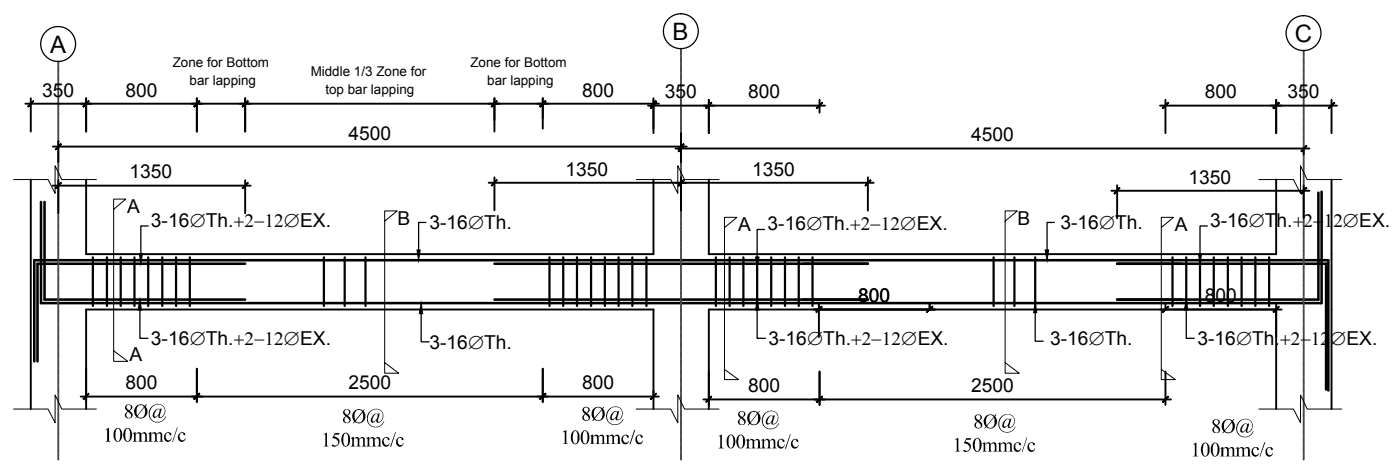
 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILINGS	CONSULTANT	STRUCTURE BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name: R.K.Mallik		AS SHOWN	A3		
	BEAM LAYOUT PLAN	Designation: Structural Engineer		DATE : Jan 2016				
			NEC NO: 3200 Civil "A"					
			Date:					



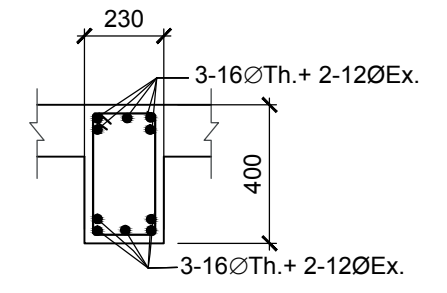
First Floor beam along grid A,B,C






Section at B-B

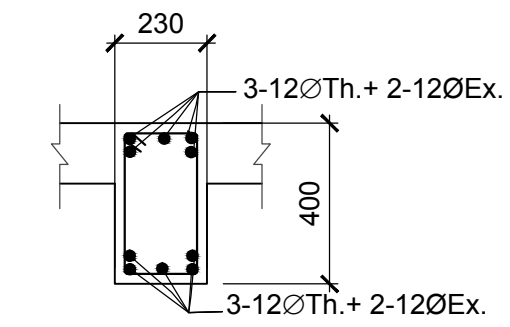
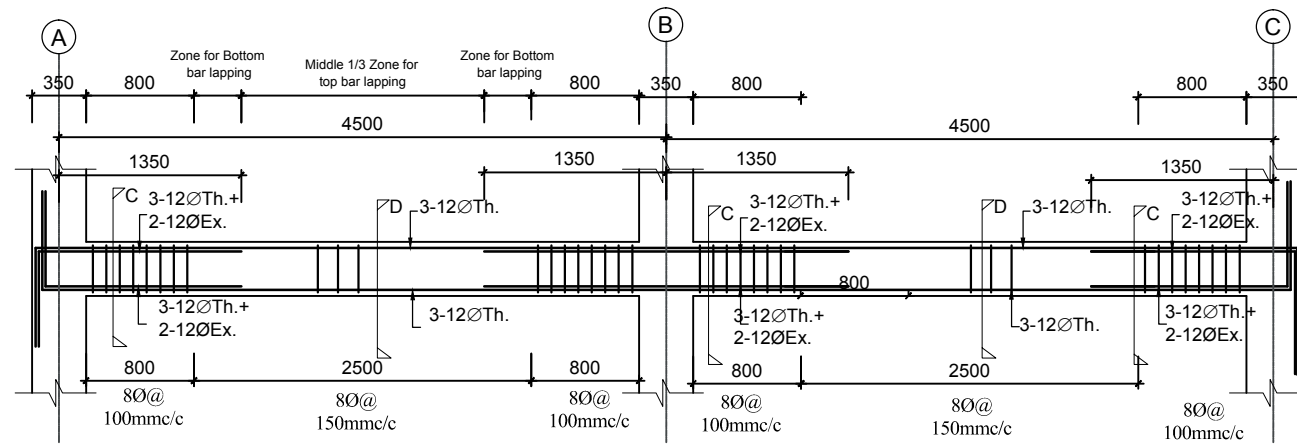
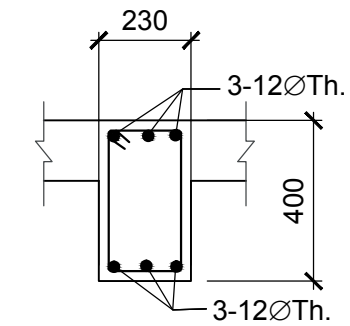
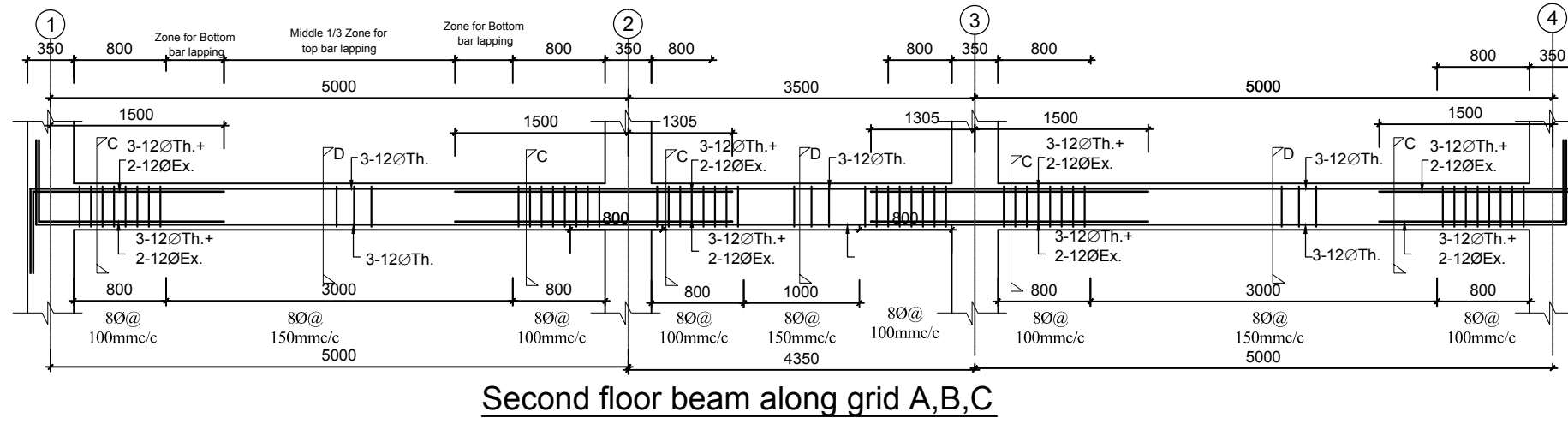




First floor beam along grid 1,2,3,4

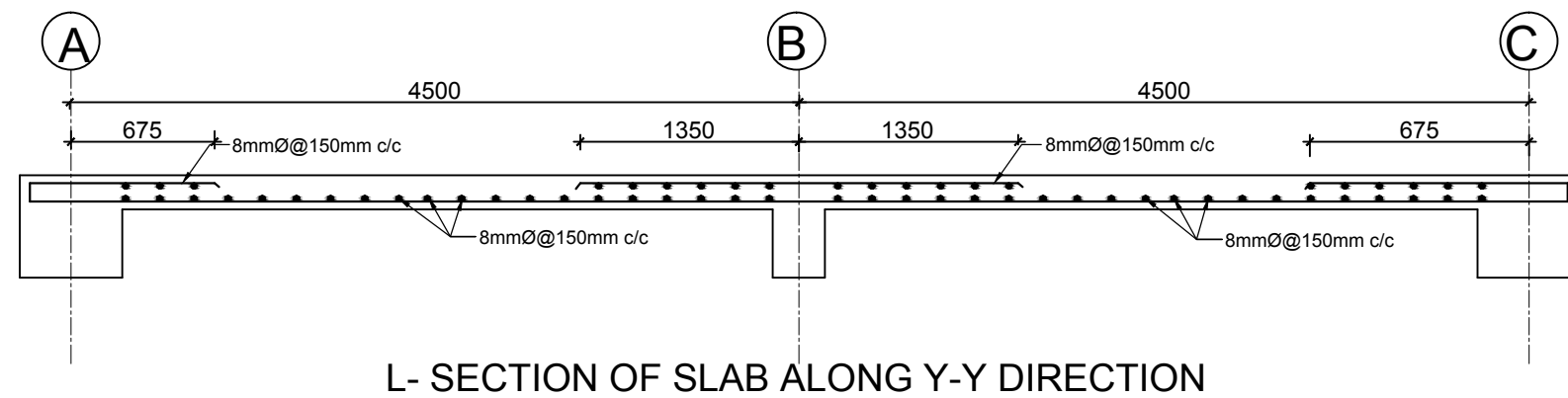
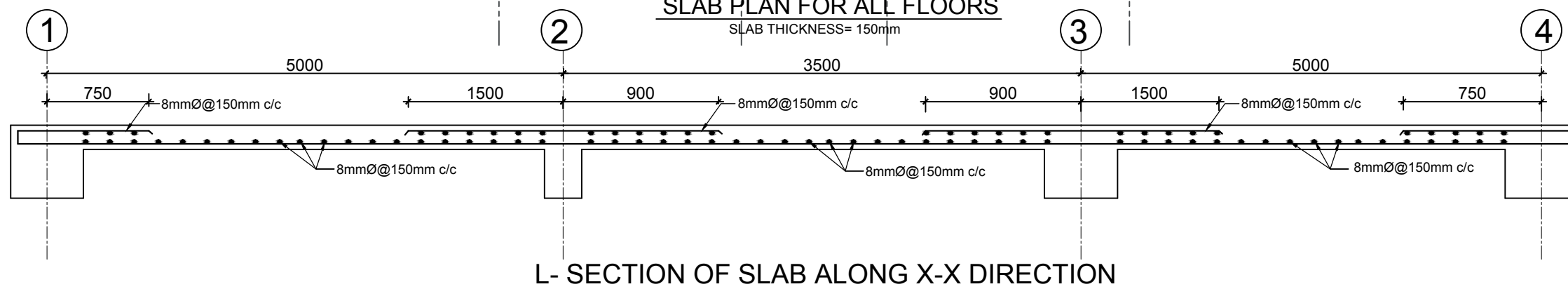
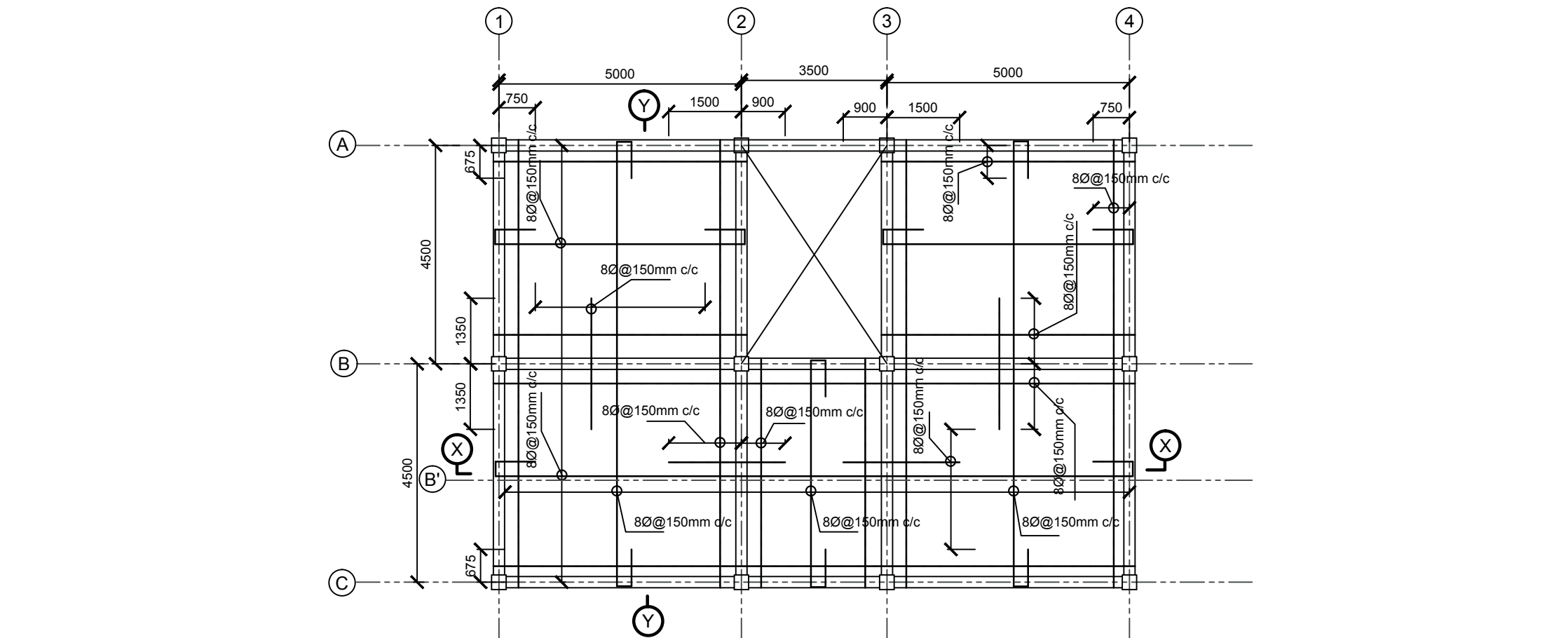




Section at A-A

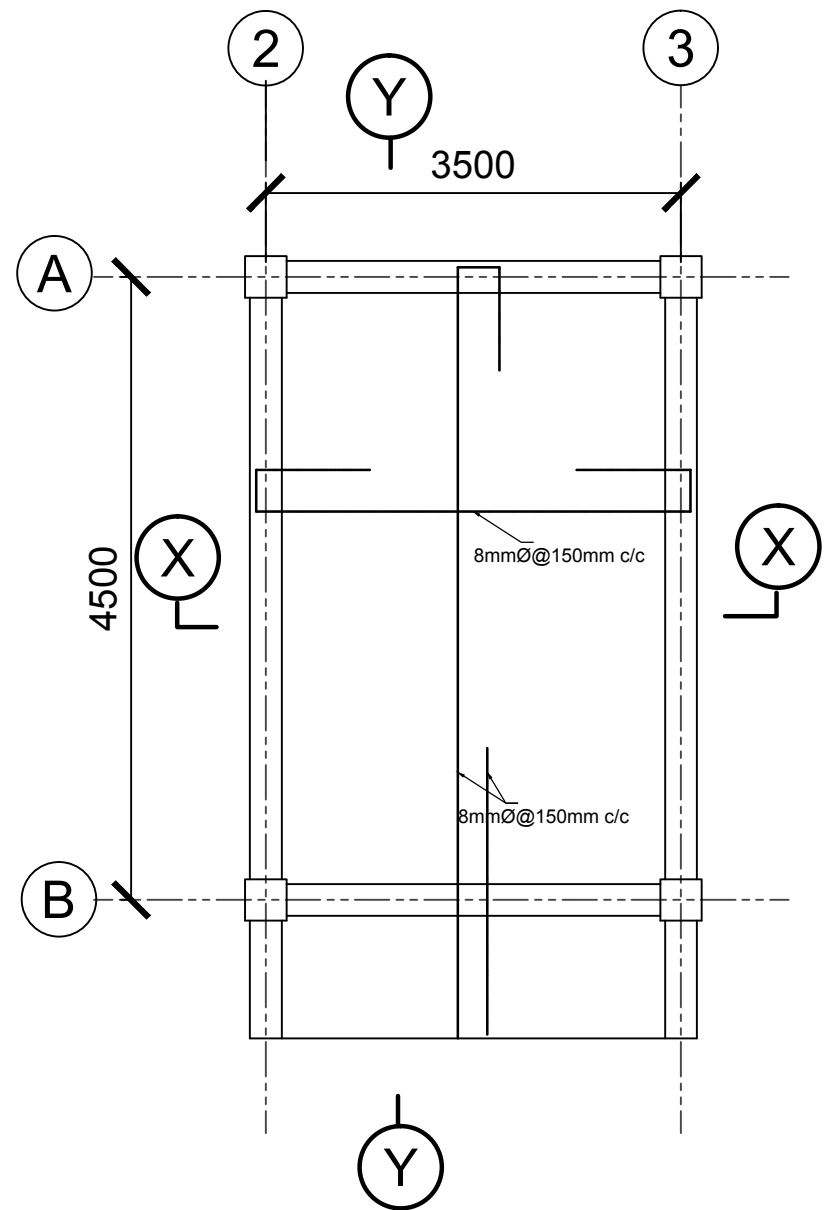
 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :	U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILS	CONSULTANT	STRUCTURE BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 <p>RND CENTRE PVT. LTD.</p>	TITLE :	Name:	R.K.Mallik		AS SHOWN	A3	
	BEAM DETAILS (First Floor Level)	Designation:	Structural Engineer		DATE : Jan 2016			
		NEC NO:	3200 Civil "A"					
		Date:						



 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	CONSULTANT :  RND CENTRE PVT. LTD.		U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILS		CONSULTANT Name: R.K.Mallik	APPROVED BY:	SCALE : AS SHOWN	PAPER SIZE A3	SHEET NO. : S-10
			TITLE : BEAM DETAILS (2nd Floor Level)		Designation: Structural Engineer NEC NO: 3200 Civil "A" Date:		DATE : jan 2016		15

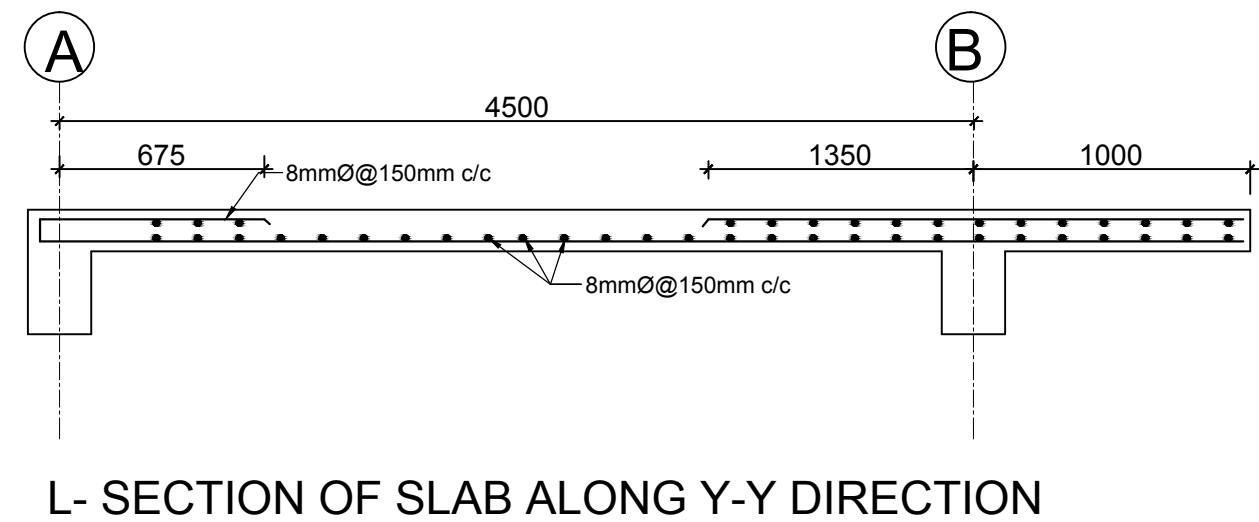
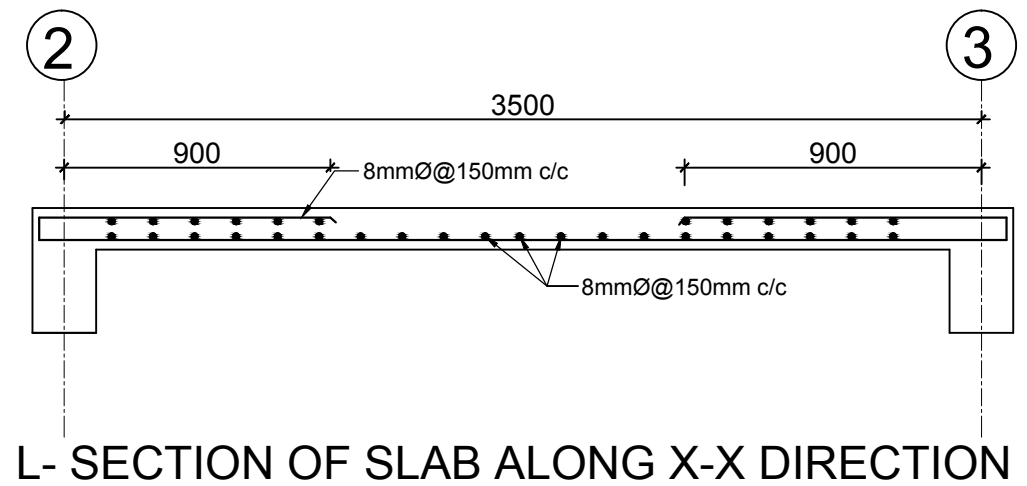


 Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur	CONSULTANT :	U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILS	CONSULTANT	STRUCTURE BY:	APPROVED BY:	SCALE :	PAPER SIZE	SHEET NO. :
	 RND CENTRE PVT. LTD.	TITLE :	SLAB DETAILS (First and 2nd Floor Level)	Name: R.K.Mallik			AS SHOWN	A3
			Designation: Structural Engineer			DATE : Jan 2016		15
			NEC NO: 3200 Civil "A"					
			Date:					



SLAB PLAN FOR STAIRCASE ROOF

SLAB THICKNESS= 150mm



Department of Education
Government of Nepal
Ministry of Education
Sanothimi, Bhaktapur

CONSULTANT :



RND CENTRE PVT. LTD.

U-2b-alt-1, 4 classroom two story Building
STRUCTURAL DETAILINGS

TITLE :
SLAB DETAILS (First and Top Floor Level)

CONSULTANT

Name: R.K.Mallik

Designation: Structural Engineer

NEC NO: 3200 Civil "A"

Date:

STRUCTURE BY:

APPROVED BY:

SCALE :

AS SHOWN

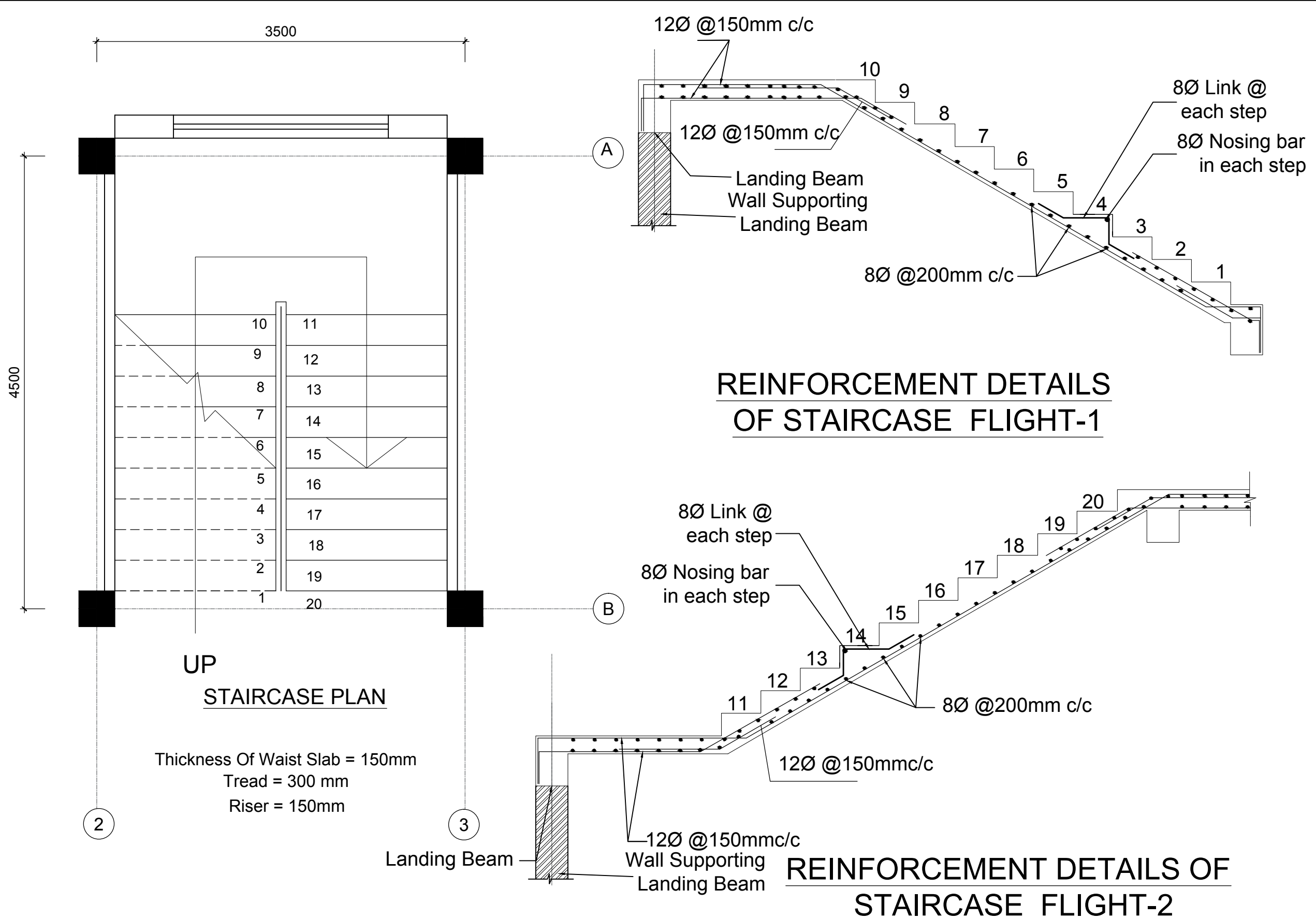
DATE : Jan 2016

PAPER SIZE

A3

SHEET NO. :

S-12
15





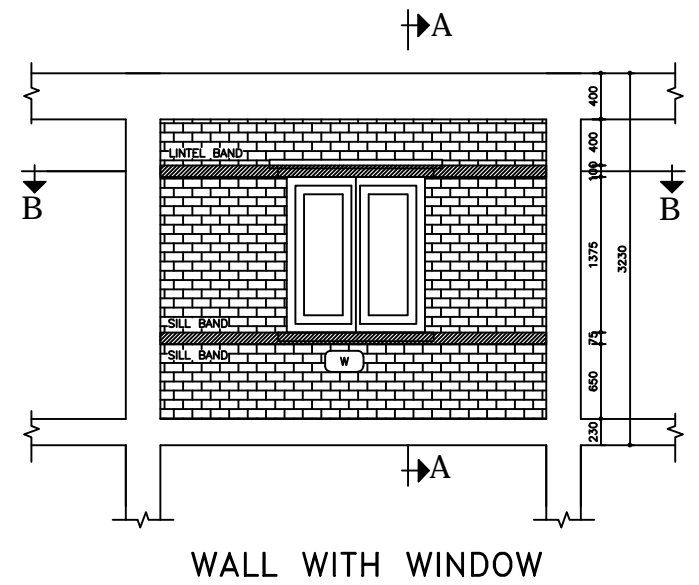
REINFORCEMENT DETAILS OF STAIRCASE FLIGHT-1

REINFORCEMENT DETAILS OF STAIRCASE FLIGHT-2

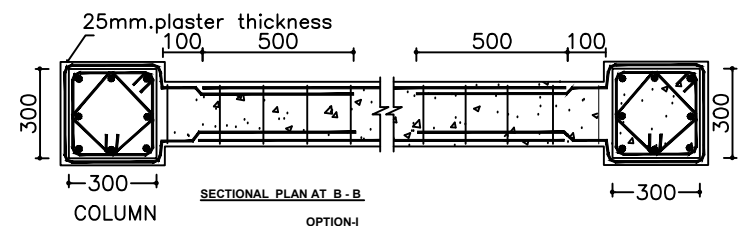
UP STAIRCASE PLAN

Thickness Of Waist Slab = 150mm
Tread = 300 mm
Riser = 150mm

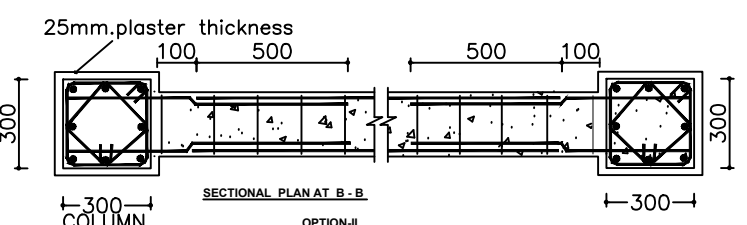
 <p>Department of Education Government of Nepal Ministry of Education Sanothimi, Bhaktapur</p>	<p>CONSULTANT :</p>  <p>RND CENTRE PVT. LTD.</p>	<p>U-2b-alt-1, 4 classroom two story Building STRUCTURAL DETAILINGS</p>	<p>CONSULTANT</p> <p>Name: R.K.Mallik</p> <p>Designation: Structural Engineer</p> <p>NEC NO: 3200 Civil "A"</p> <p>Date:</p>	<p>STRUCTURE BY:</p>	<p>APPROVED BY:</p>	<p>SCALE :</p> <p>AS SHOWN</p> <p>DATE : jan 2016</p>	<p>PAPER SIZE</p> <p>A3</p>	<p>SHEET NO. :</p> <p>S-13</p> <p>15</p>
	<p>TITLE : STAIR CASE DETAILS</p>							



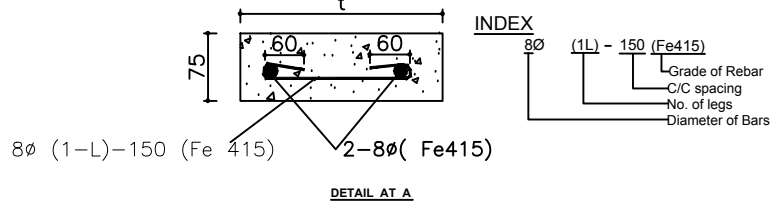
WALL WITH WINDOW



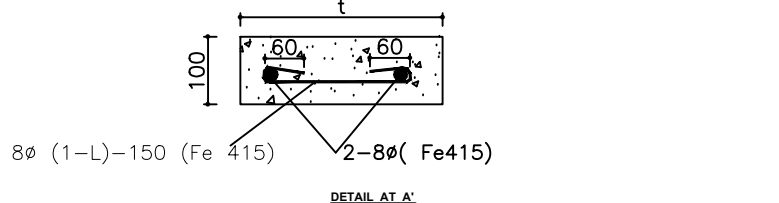
SECTIONAL PLAN AT B-B
OPTION-I



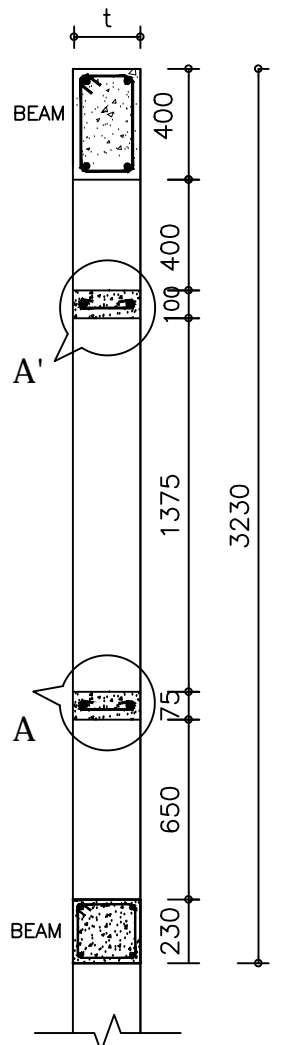
SECTIONAL PLAN AT B-B
OPTION-II



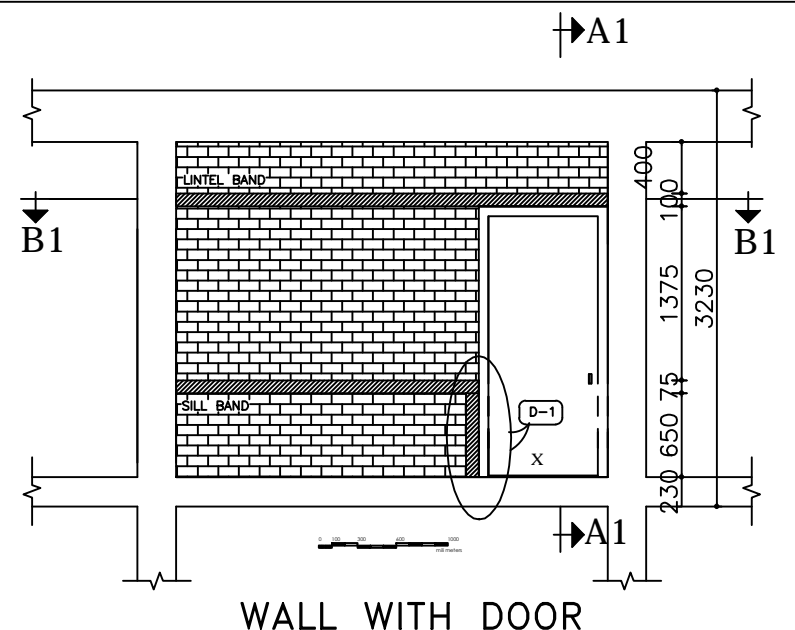
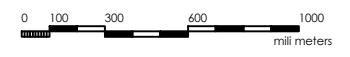
DETAIL AT A



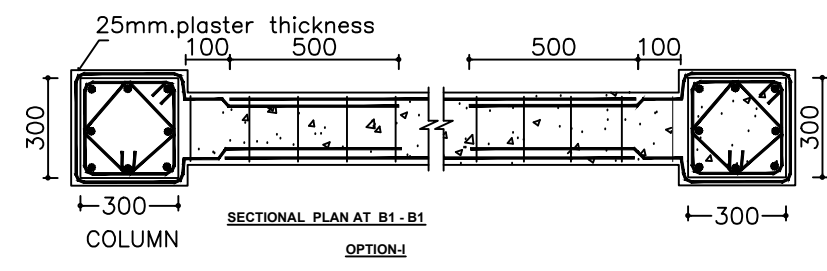
DETAIL AT A'



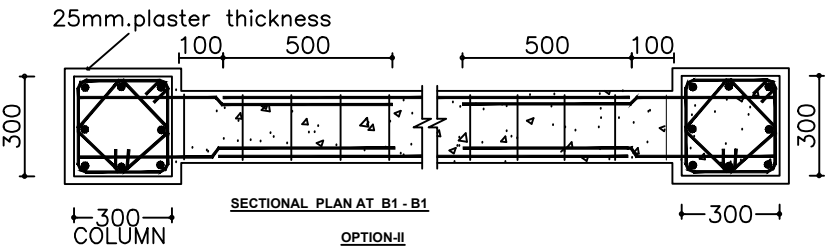
SECTION AT A - A



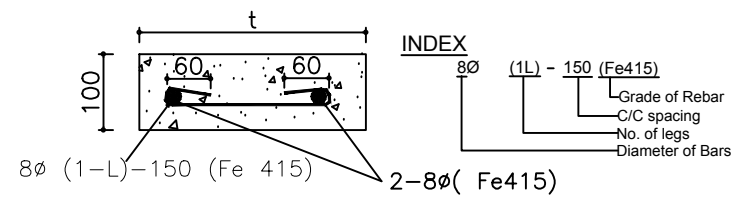
WALL WITH DOOR



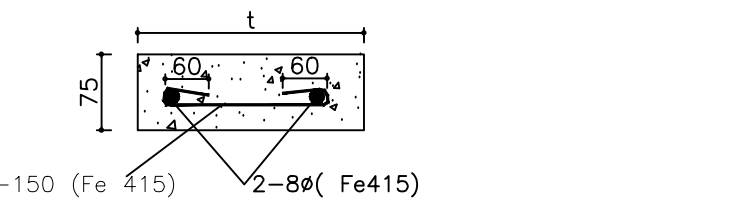
SECTIONAL PLAN AT B1 - B1
OPTION-I



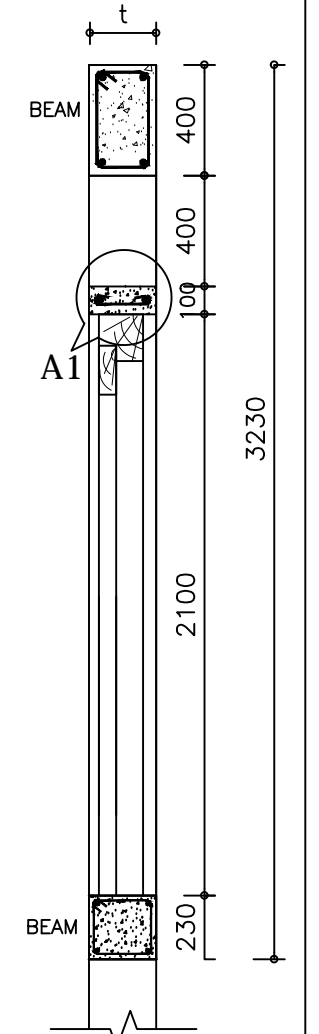
SECTIONAL PLAN AT B1 - B1
OPTION-II



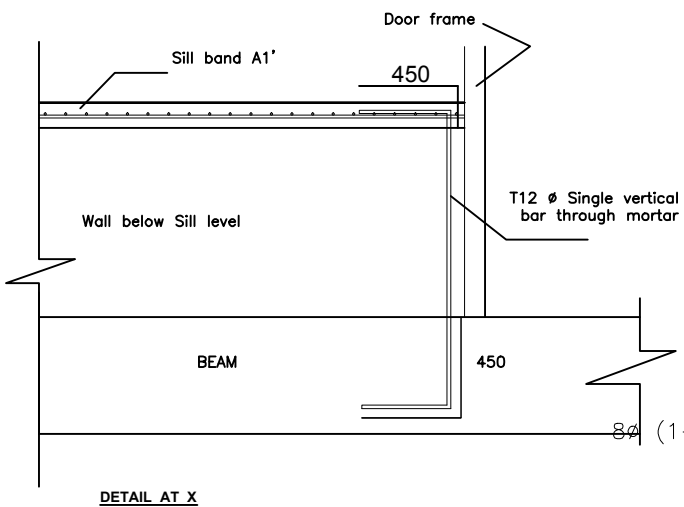
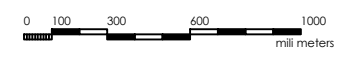
DETAIL AT A1



DETAIL AT A1'



SECTION AT A1 - A1



DETAIL AT X



Department of Education
Government of Nepal
Ministry of Education
Sanothimi, Bhaktapur

CONSULTANT :
 RND CENTRE PVT. LTD.

U-2b-alt-1, 4 classroom two story Building
STRUCTURAL DETAILINGS
TITLE :
BAND DETAILS

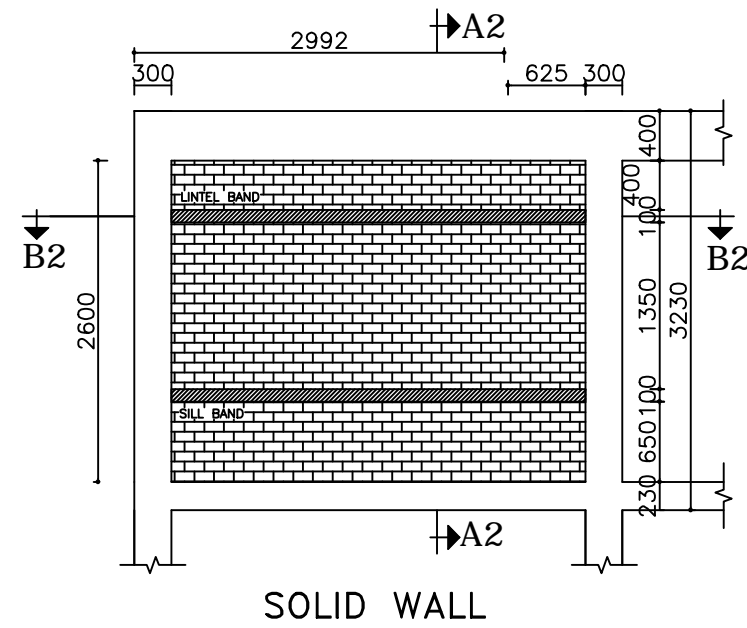
CONSULTANT STRUCTURE BY:
Name: R.K.Mallik
Designation: Structural Engineer
NEC NO: 3200 Civil "A"
Date:

APPROVED BY:

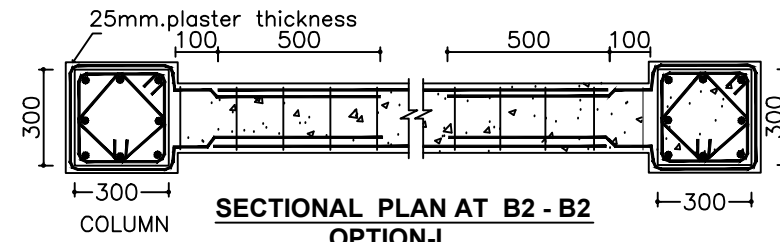
SCALE :
AS SHOWN
DATE : Jan 2016

PAPER SIZE
A3

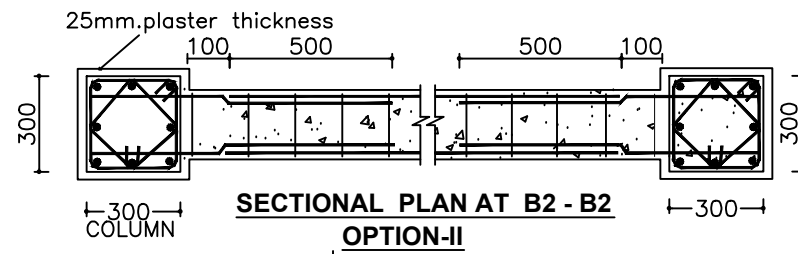
SHEET NO. :
S-14
15



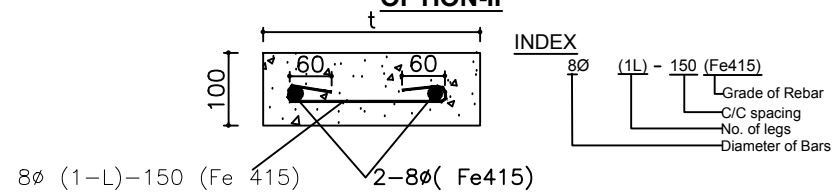
SOLID WALL



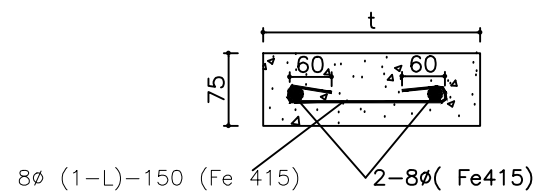
SECTIONAL PLAN AT B2 - B2
OPTION-I



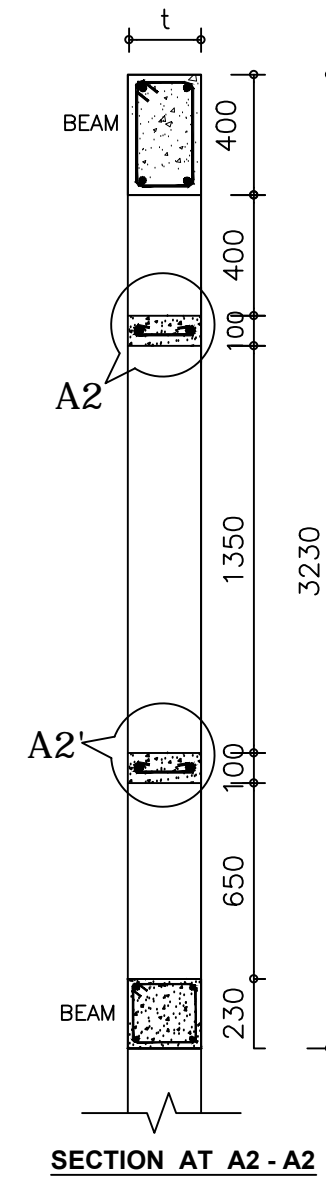
SECTIONAL PLAN AT B2 - B2
OPTION-II



DETAIL AT A2



DETAIL AT A2'



SECTION AT A2 - A2



Department of Education
Government of Nepal
Ministry of Education
Sanothimi, Bhaktapur

CONSULTANT :



RND CENTRE PVT. LTD.

U-2b-alt-1, 4 classroom two story Building
STRUCTURAL DETAILINGS

TITLE :
BAND DETAILS

CONSULTANT

Name:

Designation:

NEC NO:

Date:

STRUCTURE BY:

Name: R.K.Mallik

Designation: Structural Engineer

NEC NO: 3200 Civil "A"

Date:

APPROVED BY:

SCALE :

AS SHOWN

DATE : Jan 2016

PAPER SIZE

A3

SHEET NO. :

S-15
15