Provincial Government
Sudurpaschim Province
Ministry of Social Development
Dhangadhi, Kailali

FINAL REPORT

Detail Engineering Design & Cost Estimate of Two Room School Building (Hill & Mountain Region)

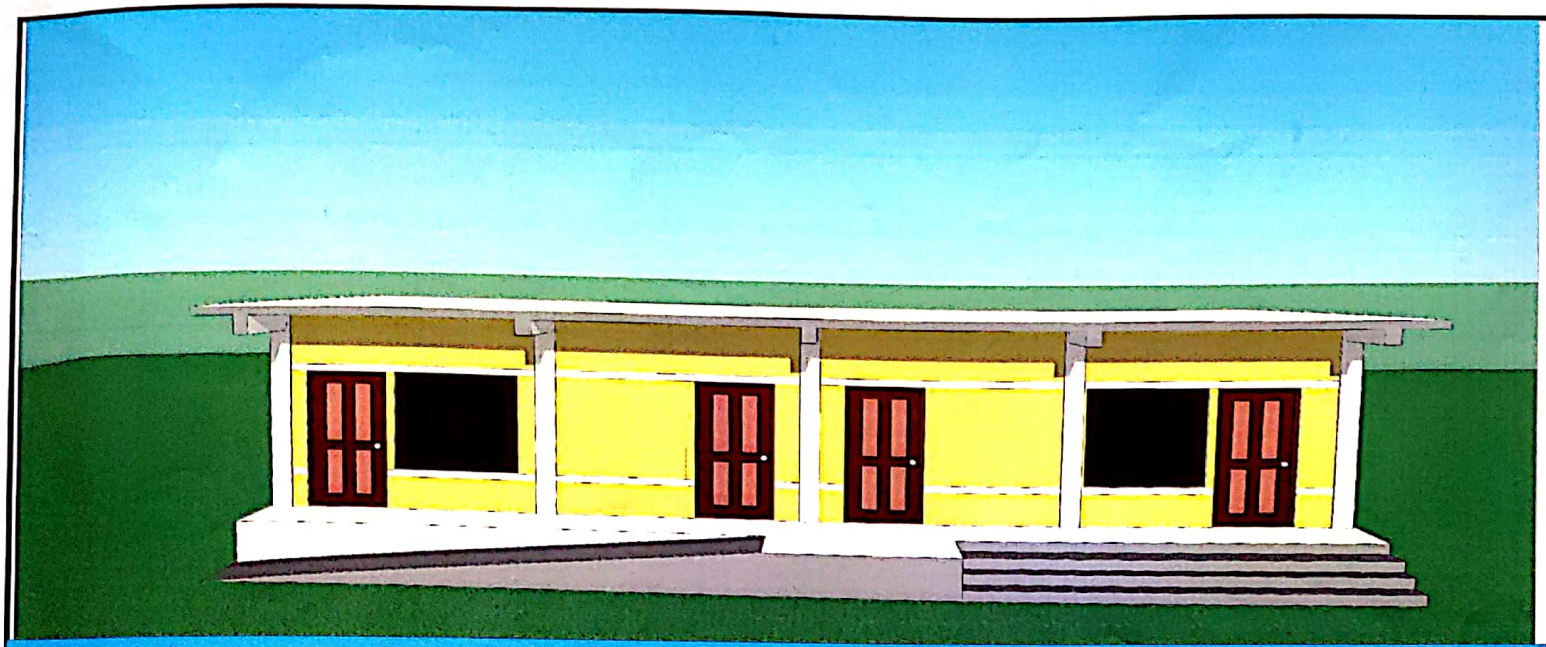
DRAWING REPORT
Volume II

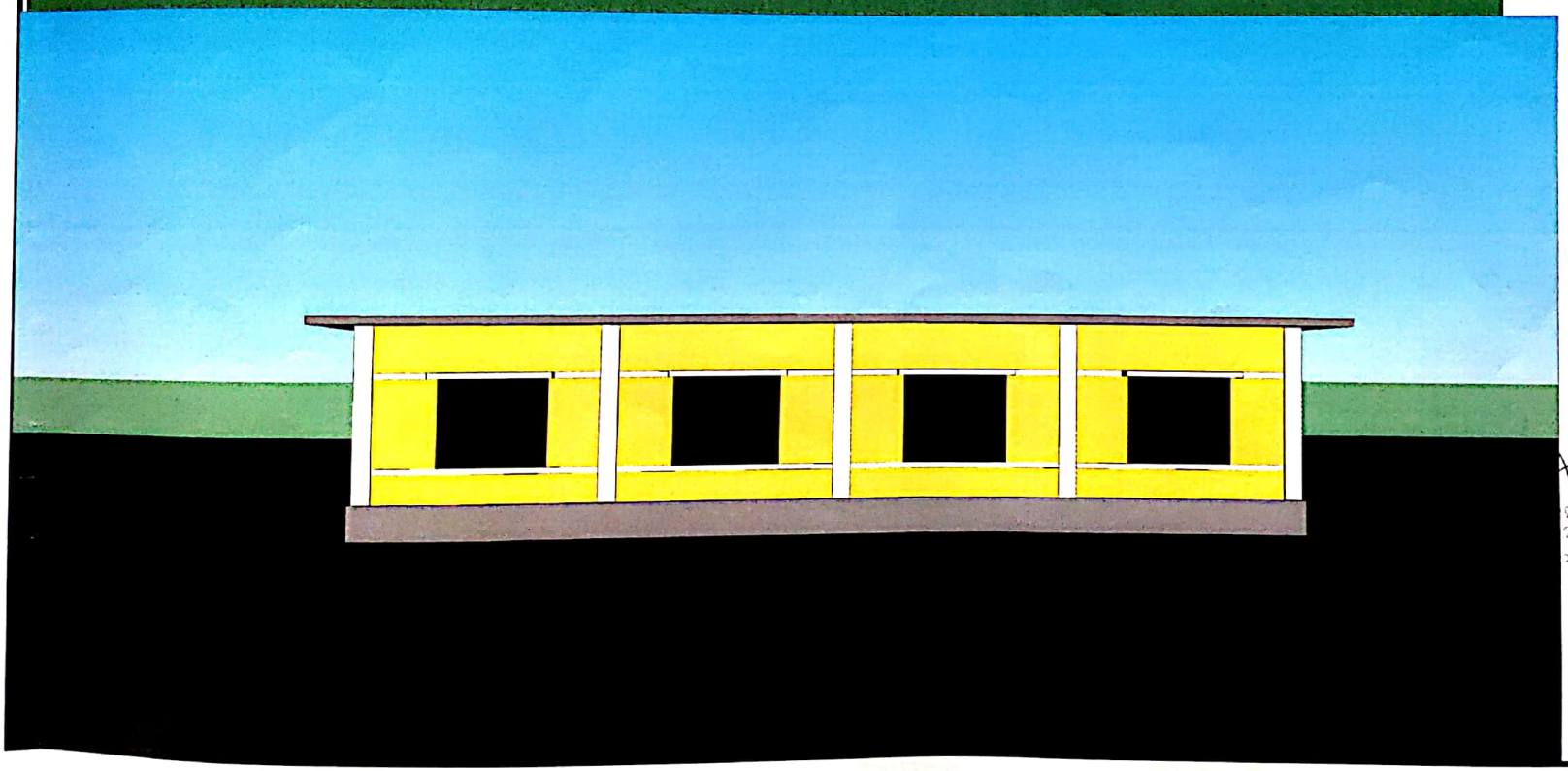
Submitted By:

2076B.S

Durga Engineering Construction and Consult Nepal Pvt. Ltd.
Dhn

Scanned by CamScanner





FOR OFFICIAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"

डिभिजनल इन्जिनियर

CLINT:

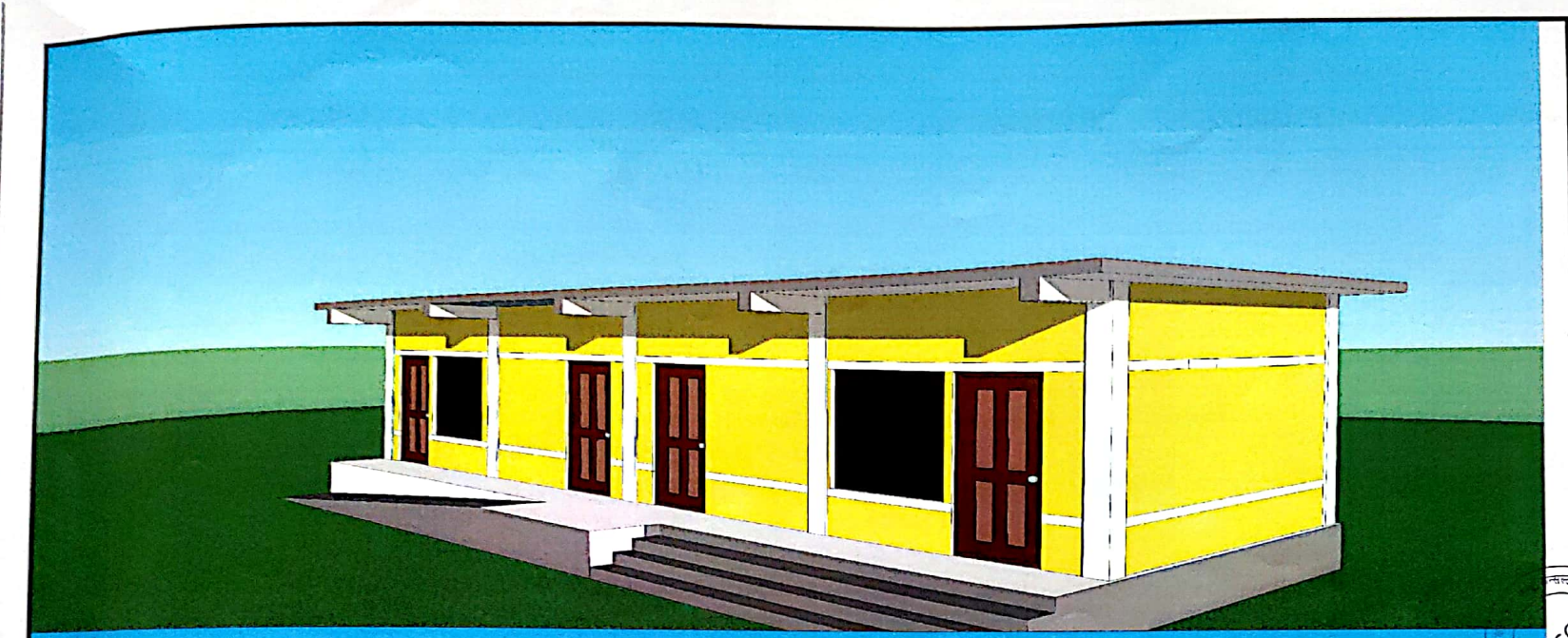
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant:

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By:
Firm's Stamp:	Drawn By:
Scale: 1" = 8'-0"	Details : ELEVATION
Date:- 2020	Sheet No:- A

Scanned by CamScanner



FOR OFFICIAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"

डिभिजनल इन्जिनियर

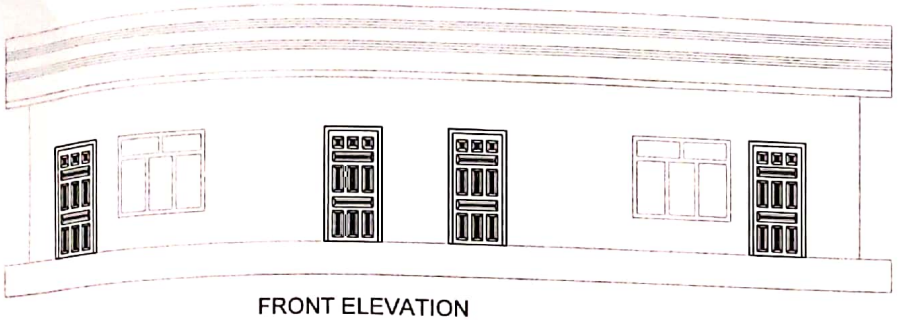
CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant :

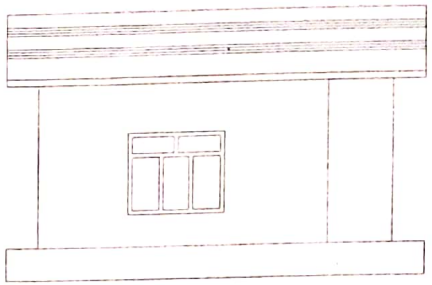
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By:
Firm's Stamp:	Drawn By:
Scale: 1" = 5'-0"	Details : ELEVATION
Date:- 2020	Sheet No:-

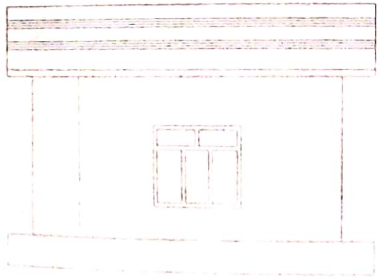
Scanned by CamScanner



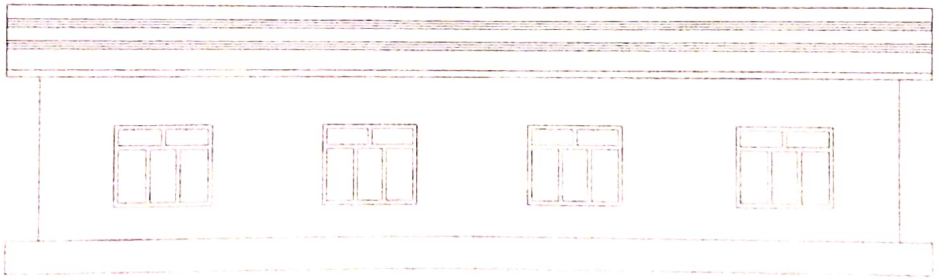
FRONT ELEVATION



WEST ELEVATION



EAST ELEVATION



BACK ELEVATION

Er. Deepak Upadhyay
NEC No. 16260 "Civil"
Category "A"

FOR OFFICAL USE ONLY

धनगढी उप-महानगरपालिकाको नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

CLINT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali.

Name Of Consultant :

Durga Engineering Construction & Consult Nepal Pvt Ltd. Doti

Name Of Project:	Two Room School Building
Building Area - 810.00 square ft.	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: ELEVATION
Date:- 2020	Sheet No:- A 3

Scanned by CamScanner

Note -

1) Concrete grade for all the R.C.C. work shall be of M20(1:1 $\frac{1}{2}$:3)

2) Mortar mix for all brick works shall be 1:4

3) Minimum clear cover for slab, beam, column and foundation shall be 15mm, 25mm, 40mm and 50mm respectively.

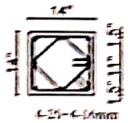
4) The Formwork should be removed only after 24 hours of Concreting. The curing of Columns should be carried properly by putting water on column surfaces for minimum 7 days. Jute bags can be used to cover the Column surfaces during curing to keep the surfaces wet.

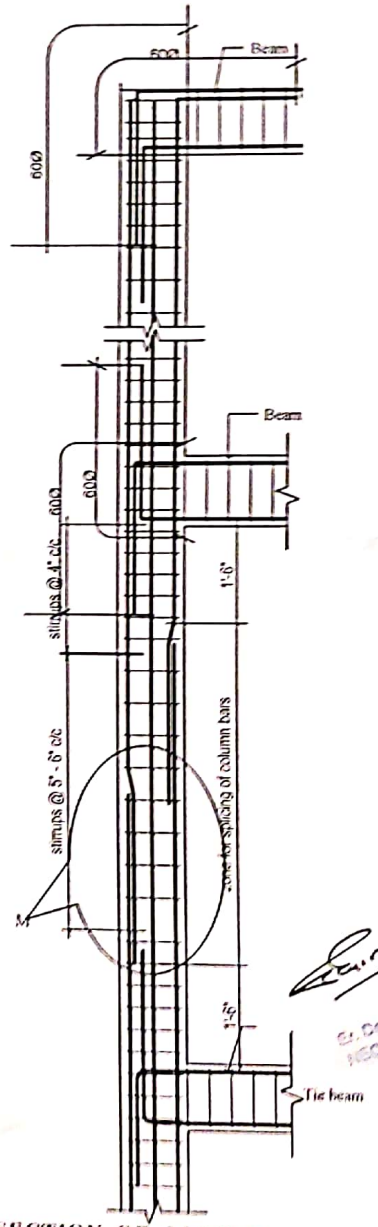
5) Shear key of size 100 x 100 x 100 mm should be provided at the top surface of the Column to avoid cold joint between old and new concrete and to strengthen the Column.

6) According to soil type round the foundation, it is adopted for medium foundation according to NBC 205.

COLUMN DETAIL

Steel grade : Fe415 SCALE:1"=1'0"-0"

	Type	Concrete grade	Lateral Ties: Dia (f1=6) Ext Ties	Lateral Ties: Dia (f1=2f1) Mid Ties	C1
Column (For Ground Floor)		M20	8mm@ c/c	8mm@ c/c	 4-25+4-16mm
Column (For First Floor)		M20	8mm@ c/c	8mm@ c/c	4-25+4-16mm



L- SECTION OF COLUMN WITH LAPPING

Scale- (1" = 2'-0")

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: [illegible]
Chief Engineer

डिभिजनल इन्जिनियर

CLINT:

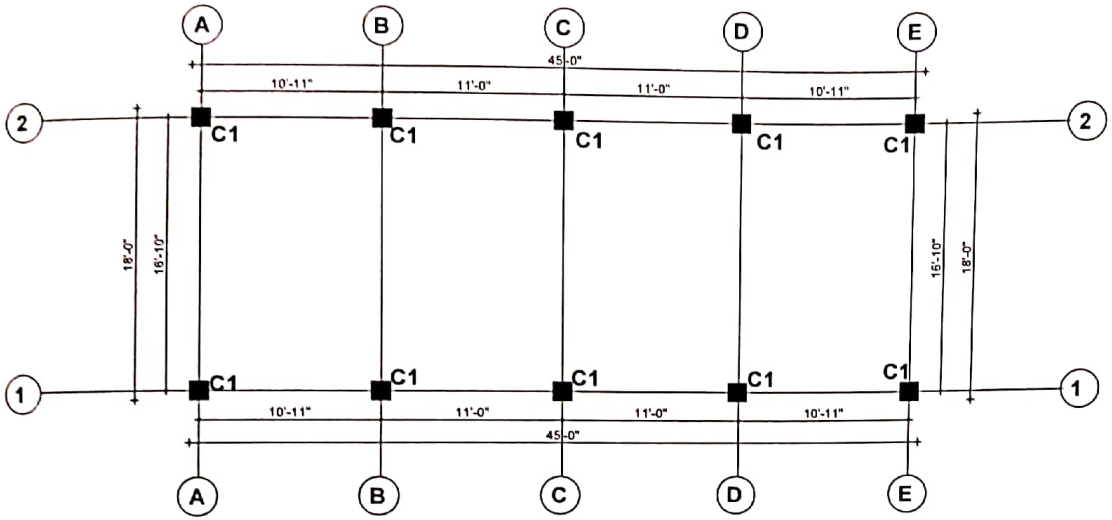
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali

Name Of Consultant:

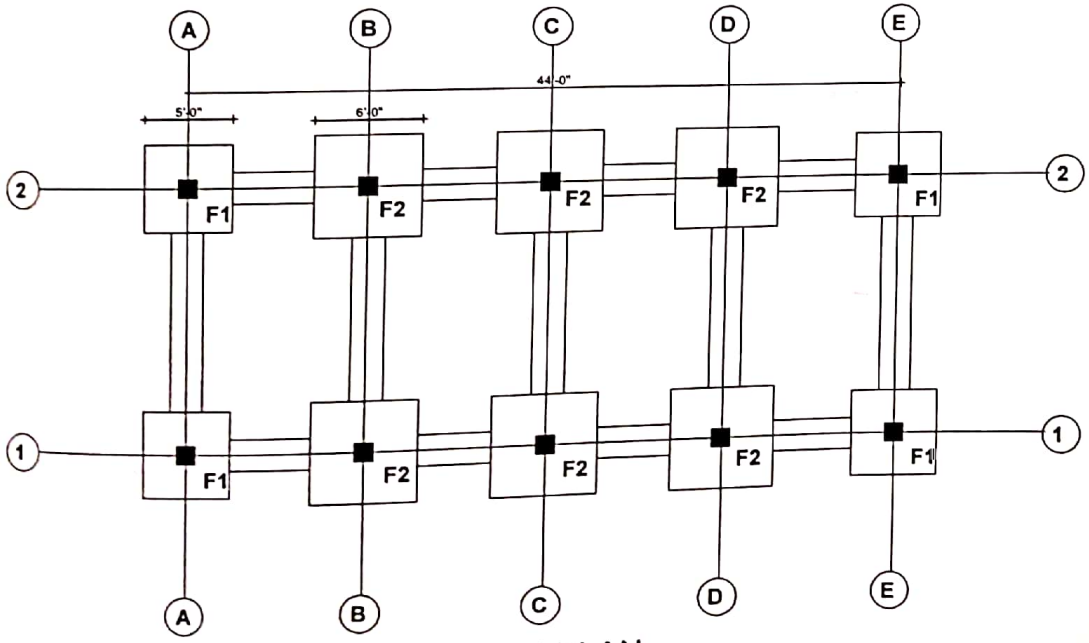
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project	Two Room School Building
Building Area - 816.66 square ft	Checked By: Er. Deepak Upadhyay
Firm's Stamp	Drawn By: Sudip Chaudhary
Scale: 1" = 6'-0"	Details: REINFORCEMENT DETAILS
Date:- 2020	Sheet No: S-4

Scanned by CamScanner



LAYOUT PLAN



TRENCH PLAN

TRENCH DETAIL

FOOTING ID	LxB
F1	5'-0"x5'-0"
F2	6'-0"x6'-0"

FOR OFFICAL USE ONLY

प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
धनगढी, नेपाल
२०७४

Er. Upendra Prasad Bhatta
NEC Regd. No. 13339 Civil
Category: "A"

डिभिजनल इन्जिनियर

धनगढी उपमहानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

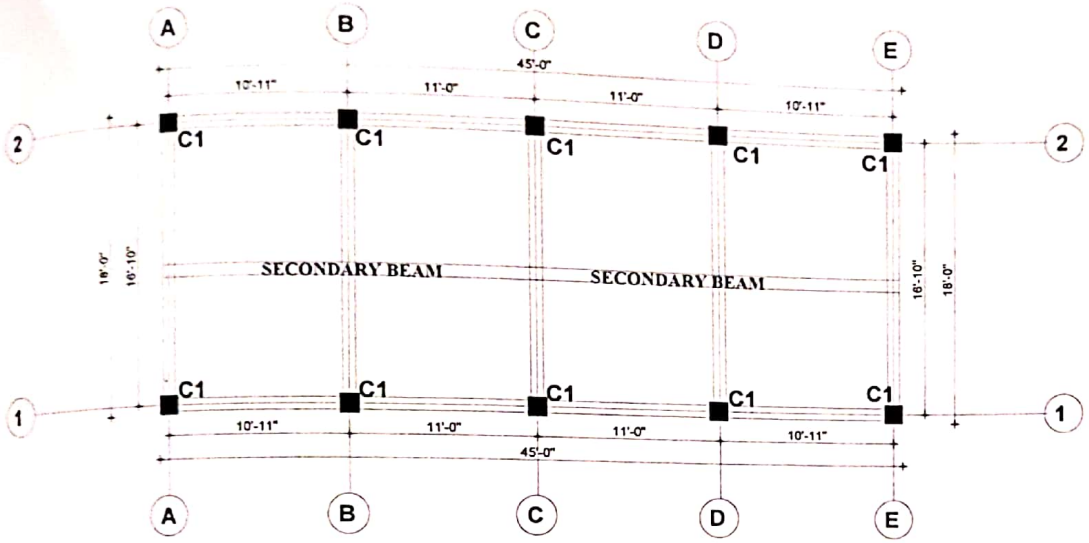
Er. Deepak Upadhyay
NEC No. 16269 Civil
Category "A"

CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali

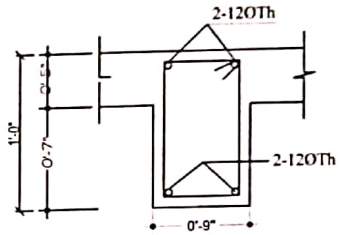
Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : LAYOUT & TRENCH PLAN
Date:- 2020	Sheet No:- S/5

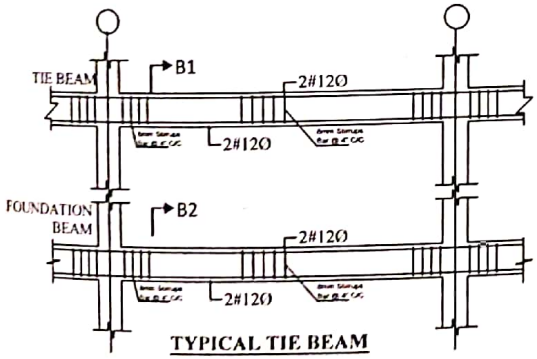
Scanned by CamScanner



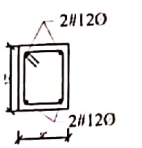
COLUMN BEAM PLAN



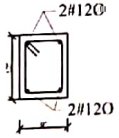
SECTION
Secondary Beam



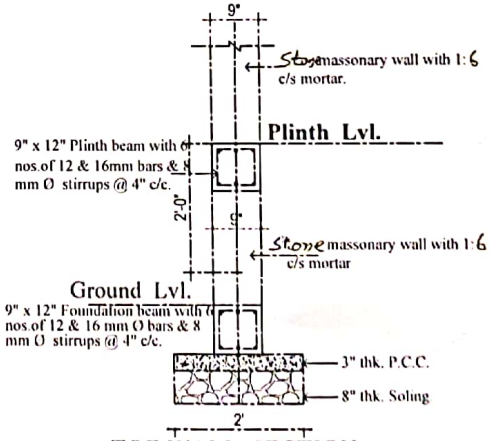
TYPICAL TIE BEAM



SECTION OF FOUNDATION TIE BEAM AT B2-B2



SECTION OF PLINTH TIE BEAM AT B1-B1



TOE WALL SECTION

Er. Deepak Upadhyay
NEC No. 16250 "Civil"
Category "A"

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

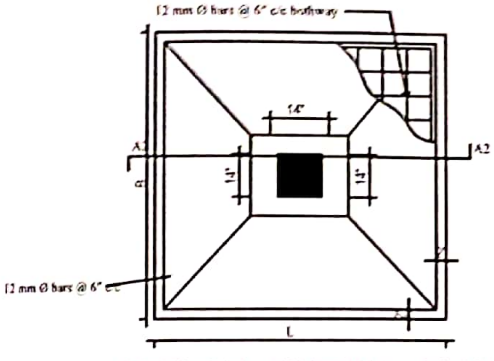
CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

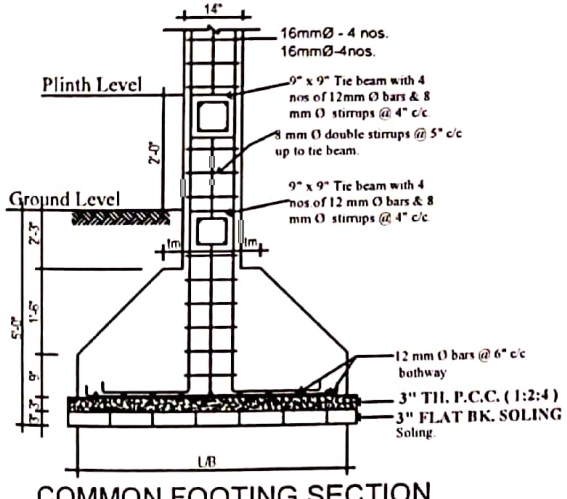
Name Of Project:	Two Room School Building
Building Area :- 810.00 square ft	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: COLUMN BEAM PLAN
Date:- 2020	Sheet No:- S 6

Scanned by CamScanner

FOOTING ID	LxB	THICKNESS tm	REINFORCEMENT BOTH WAY
F1	5'-0"x5'-0"	1'-0"	12 MM DIA. @ 6" C/ C BOTH WAY
F2	6'-0"x6'-0"	1'-0"	12 MM DIA. @ 6" C/ C BOTH WAY



COMMON FOOTING PLAN



COMMON FOOTING SECTION

FOR OFFICAL USE ONLY

प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७४

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339 'Civil'
Category: "A"

डिभिजनल इन्जिनियर

धनगढी उपमहानगर पालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

Er. Deepak Upadhyay
NEC No. 16269 'Civil'
Category "A"

CLINT:

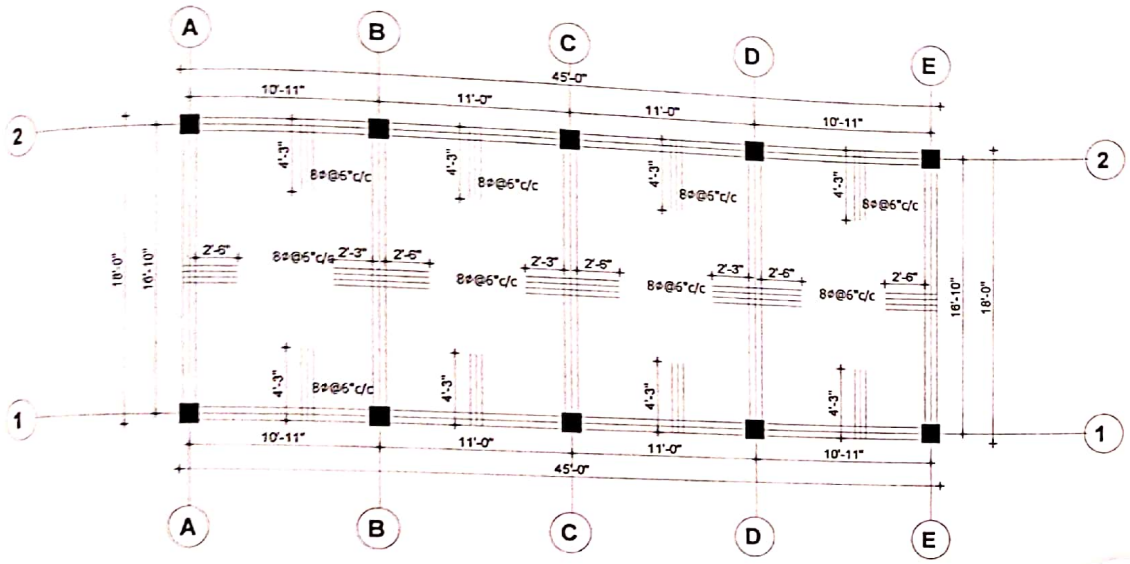
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali

Name Of Consultant :

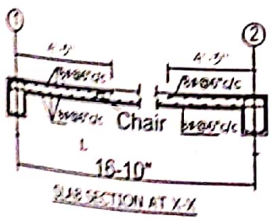
Durga Engineering Construction & Consult Nepal Pvt. Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No.: 16269 civil A
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale 1" = 8'-0"	Details FOUNDATION DETAILS
Date:- 2020	Sheet No:-

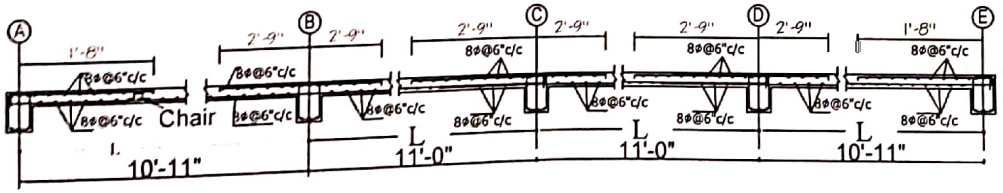
Scanned by CamScanner



Slab Reinforcement Top Bar Plan



SLAB SECTION AT X-X



SLAB SECTION AT Y-Y

Er. Deepak Upadhyay
NEC No. 16269 "Civil"
Category "A"

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

CLIENT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

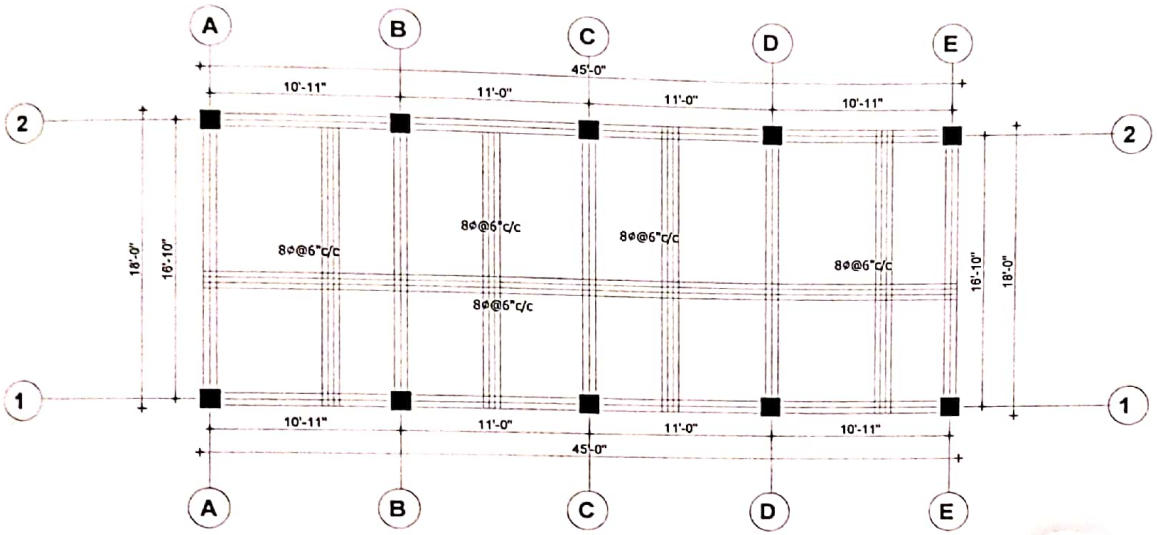
Name Of Consultant :

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

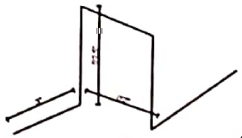
DECCN

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No.- 16269 civil 'A'
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : SLAB DETAILS
Date:- 2020	Sheet No:- S 8

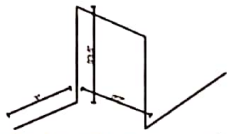
Scanned by CamScanner



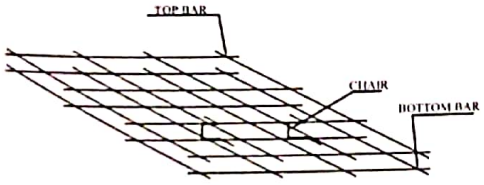
Slab Reinforcement Bottom Bar Plan



8mm dia Chair Resting on bottom bars



8mm dia Chair Resting on Slab formworks



CHAIR DETAIL
SCALE: 1"=2'0"

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

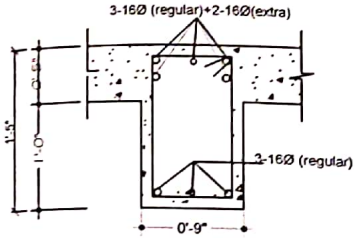
CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali

Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

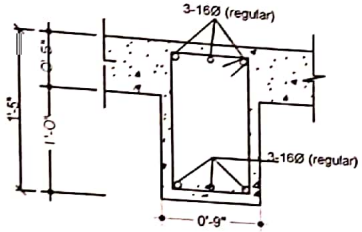
Er. Deepak Upadhyay
NEC No. 10209"Civil"
Category "A"

Name Of Project:	Two Room School Building
Building Area - 810.00 square ft	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: SLAB DETAILS
Date:- 2020	Sheet No:- S 9

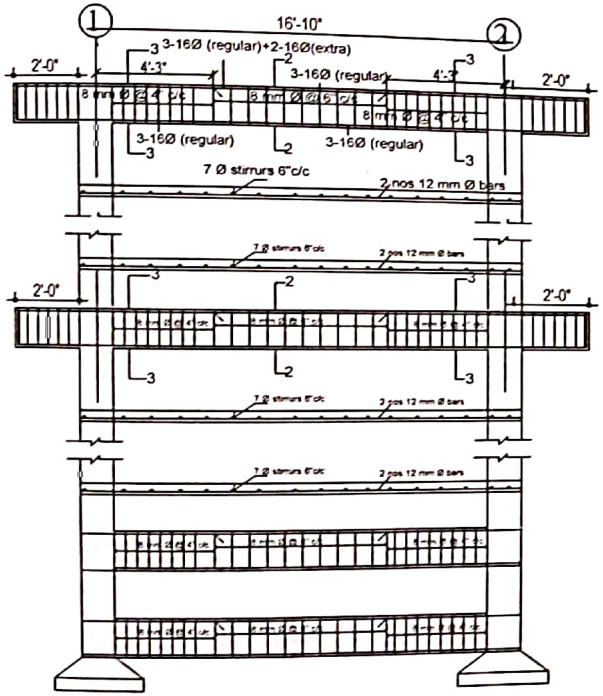
Scanned by CamScanner



SECTION AT 3-3



SECTION AT 2-2



TYPICAL BEAM SECTION ALONG GRID X-X

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
डिभिजनल इन्जिनियर

CLIENT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

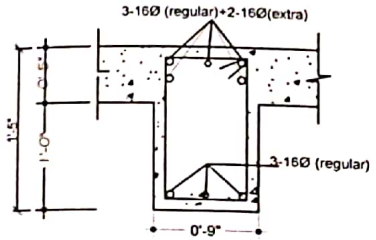
Name Of Consultant:

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

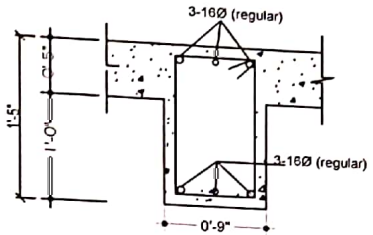
Er. Deepak Upadhyay
NEC No. 18269 "C"
Category "A"

Name Of Project:	Two Room School Building
Building Area - 810 square ft	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : TYPICAL BEAM
Date:- 2020	Sheet No:- S 10

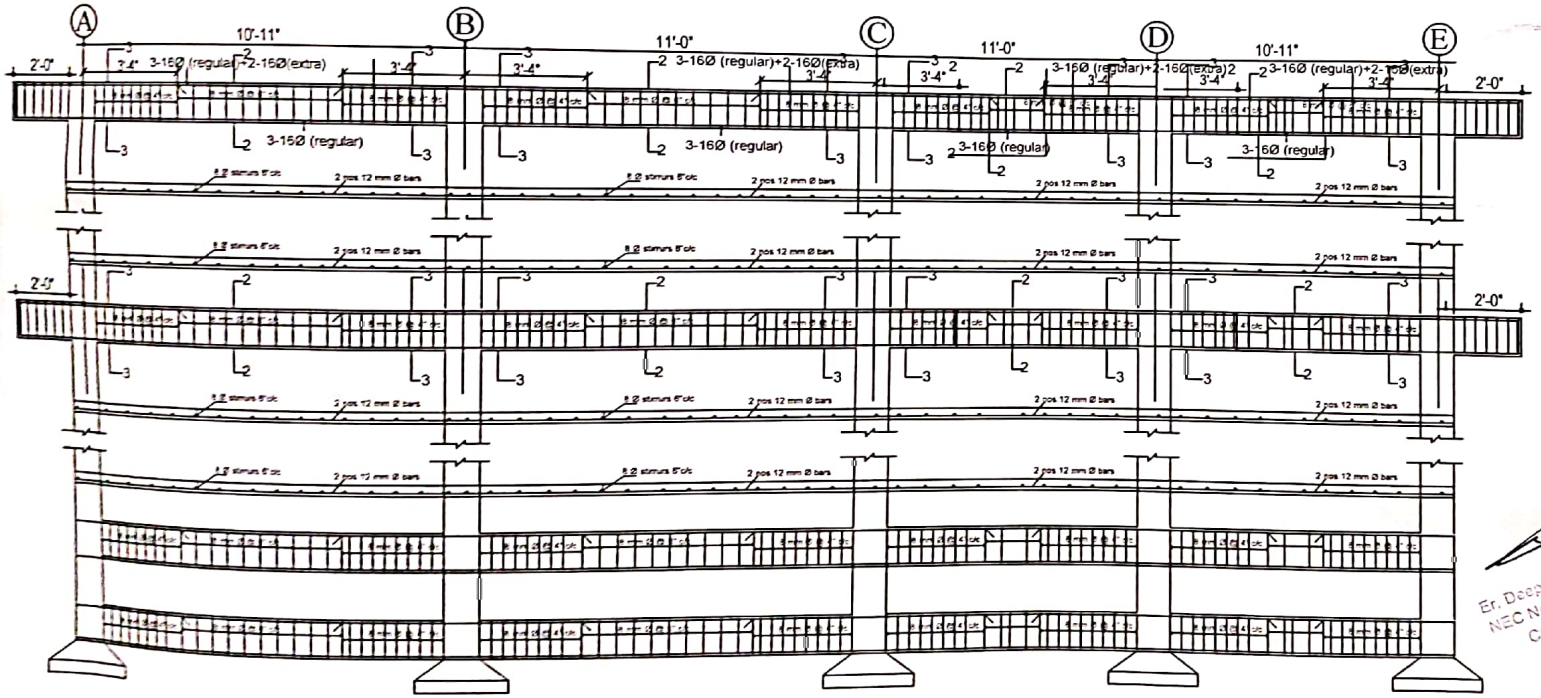
Scanned by CamScanner



SECTION AT 3-3



SECTION AT 2-2



TYPICAL BEAM SECTION ALONG GRID Y-Y

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

CLINT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

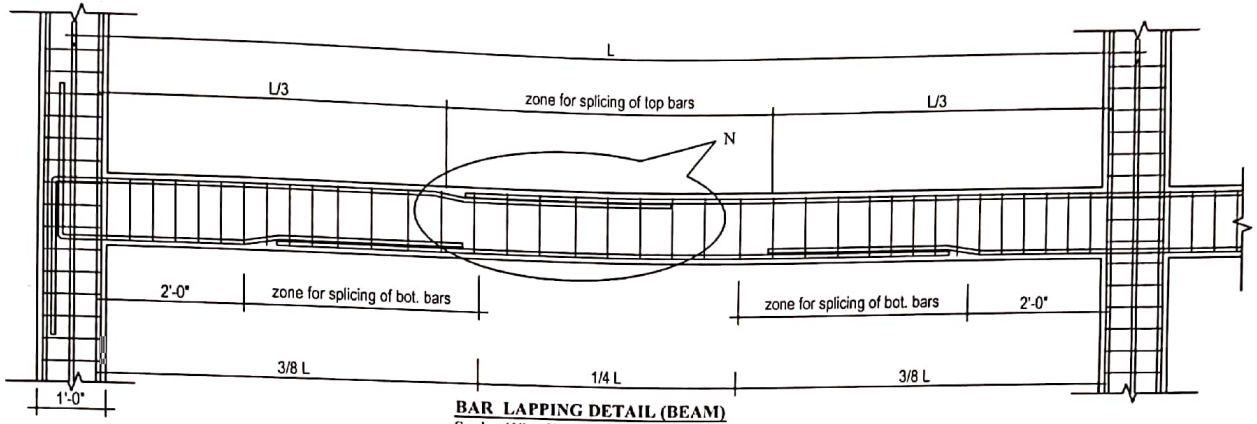
Name Of Consultant:

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

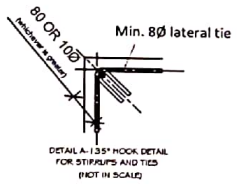
Er. Deepak Upadhyay
NEC No. 16269 "Civil"
Category "A"

Name Of Project:	Two Room School Building
Building Area:- 810.00square ft.	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : TYPICAL BEAM
Date:- 2020	Sheet No:- S 11

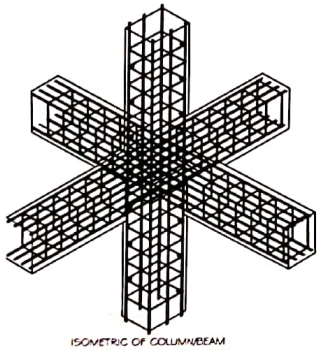
Scanned by CamScanner



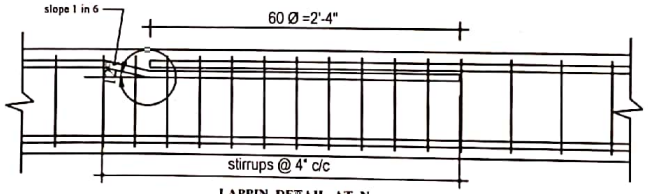
BAR LAPPING DETAIL (BEAM)
Scale- (1" = 2'-0")



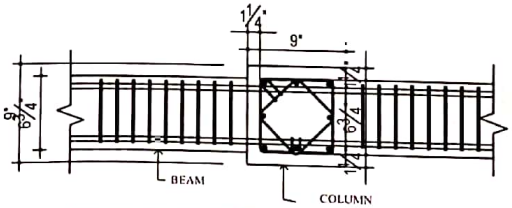
DETAIL AT A



ISOMETRIC OF COLUMN/BEAM
JOINT REINFORCEMENT DETAIL



LAPPIN DETAIL AT N
(Scale-1" = 1'-0")



BEAM AND COLUMN JUNCTION DETAIL (12" x 12") COLUMN
(Scale-1" = 1'-0")

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

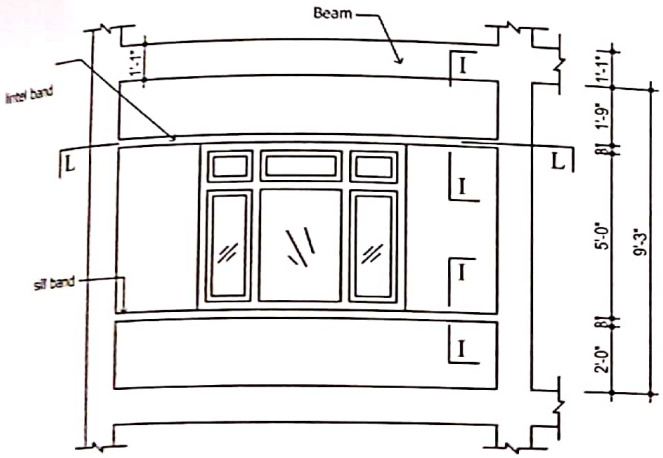
Er. Deepak Upadhyay
NEC No. 16269 "Civil"
Category "A"

CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali

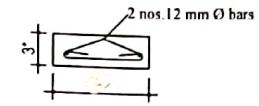
Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00square ft	Checked By: Er. Deepak Upadhyay Nec Regd No - 16269 civil A
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : LAPPING DETAILS
Date:- 2020	Sheet No:- S 12

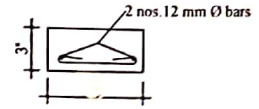
Scanned by CamScanner



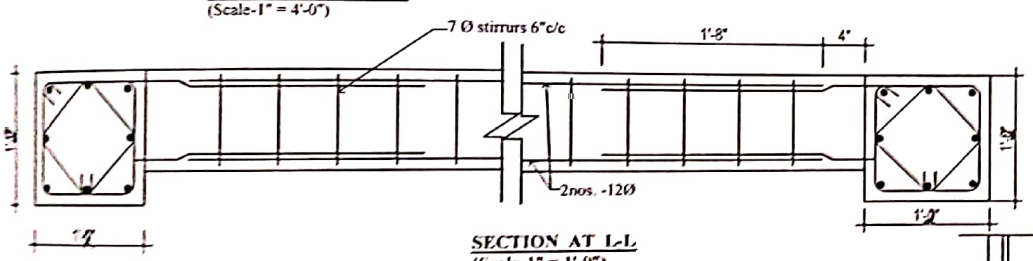
ELEVATION OF WALL
(Scale-1" = 4'-0")



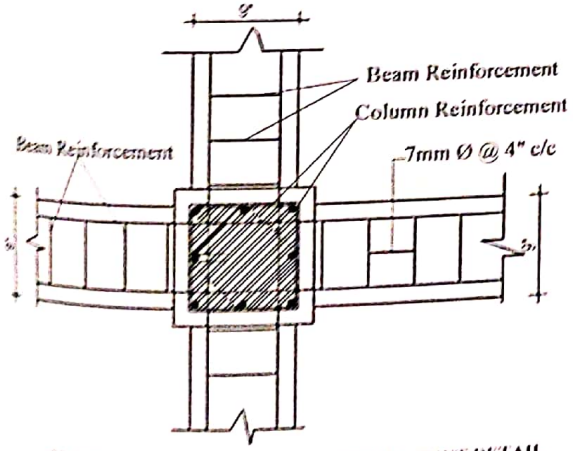
DETAIL OF SILL/PARAPET BAND AT I-I
(Scale-1" = 1'-0")



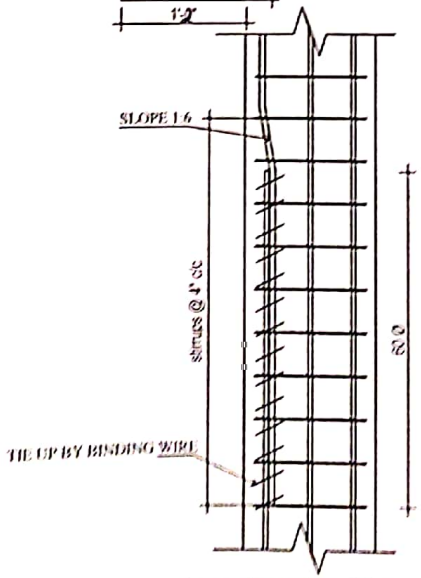
DETAIL OF LINTEL BAND AT I-I
(Scale-1" = 1'-0")



SECTION AT L-L
(Scale-1" = 1'-0")



SECTIONAL PLAN OF BEAM COLUMN JOINT DETAIL
(Scale-1" = 1'-0")



LAPPING DETAIL AT M
(Scale-1" = 1'-0")

FOR OFFICAL USE ONLY

Er. Upendra Prasad Bhatta
NEC Regd. No. ...
Category "A"

डिभिजनल इन्जिनियर

CLINT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant

Durga Engineering Construction & Consult Nepal Pvt.Ltd., Doti

Name Of Project	Two Room School Building
Building Area - 810.00 square ft	Checked By Er. Deepak Upadhyay
Firm's Stamp	Drawan By Sudip Chaudhary
Scale 1" = 8'-0"	Details SECTION DETAILS
Date:- 2020	Sheet No. S 13

Scanned by CamScanner

Notes :-

1. Minimum concrete grade to be M20.
2. Grade of reinforcement steel to be FE500.
3. Cover to reinforcement shall not be less than 50mm in foundation, 40mm in column, 25mm in Beam and 20mm in Slab & Stair.
4. All lateral ties in column to be 8mm dia. at 100mm (4") centers.
5. All stirrups in Beam to be 2 legged 8 mm dia
6. Hooks in lateral ties and stirrups shall be bent at 135°and hook length shall not be less than 3.5".
7. Lapping of longitudinal reinforcement in columns shall be done at the mid hight in each story.
8. In Beam & Slab no bottom reinforcement shall be lapped near mid-span and no top reiinforcement shall be lapped near support.
9. All chairs in slab to be 10mm at 500mm.
10. Development / lap length (ld.) for bars. (for M20 concrete & fe 500)

BAR DIA-(mm)	8	10	12	16	20	25	28	32
Ld(inch)	18	22	26	35	45	55	65	75

10. Only written dimensions to be followed, drawings not to be measured.
11. Any discrepancy or omission in the drawing if found shall be reported immediately to the site engineer.

Er. Deepak Upadhyay
NEC No. 16269 "Civil"
Category "A"

FOR OFFICIAL USE ONLY

धनगढी उप महानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७४

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

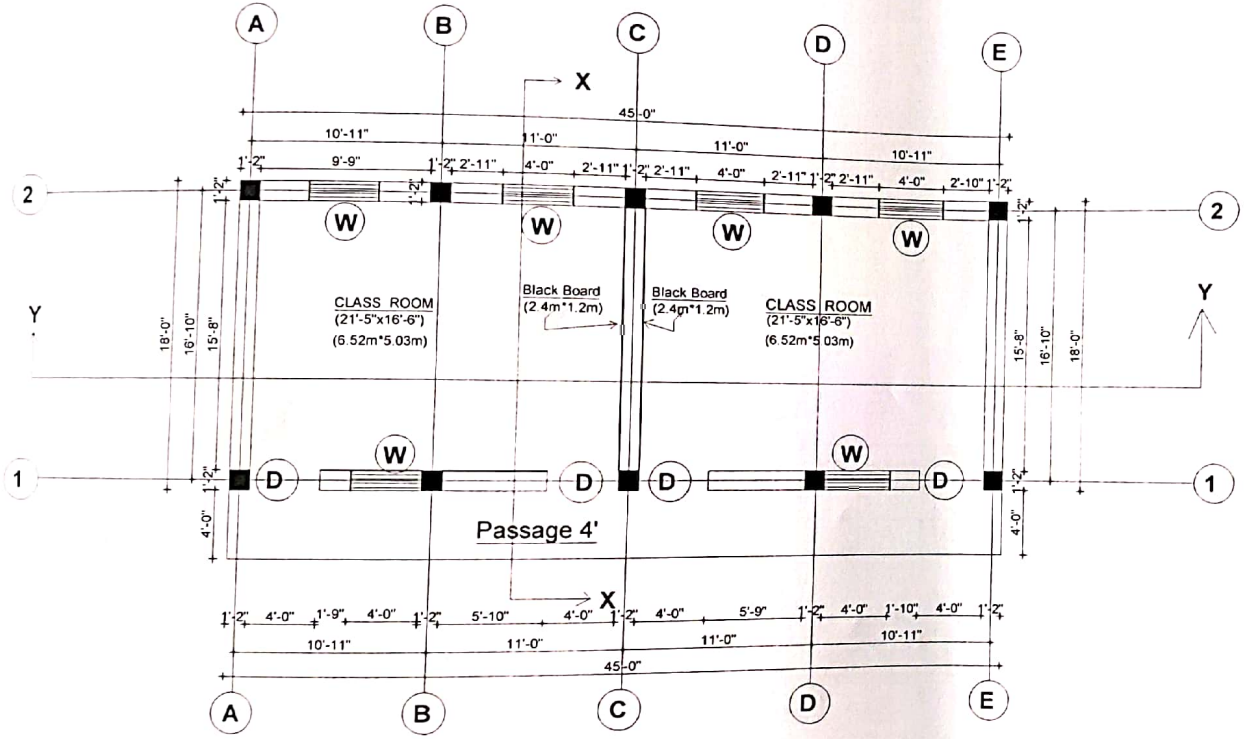
डिभिजनल इन्जिनियर

CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant :-
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay (Nec Regd No - 16269 civil 'A')
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: NOTES
Date:- 2020	Sheet No:- S 14

Scanned by CamScanner



GROUND FLOOR PLAN

(AREA:-810.00 SQ.FT)

FOR OFFICAL USE ONLY

प्रदेश सरकार
सुदूरपश्चिम, नेपाल
नगरविकास मन्त्रालय
धनगढी, नेपाल
२०७४

धनगढी उप-महानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली, नेपाल
सुदूरपश्चिम प्रदेश, नेपाल

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civi
Category: "A"

डिभिजनल इन्जिनियर

Er. Deepak Upadhya
NEC No. 16269 'Civ
Category "A"

CLINT:

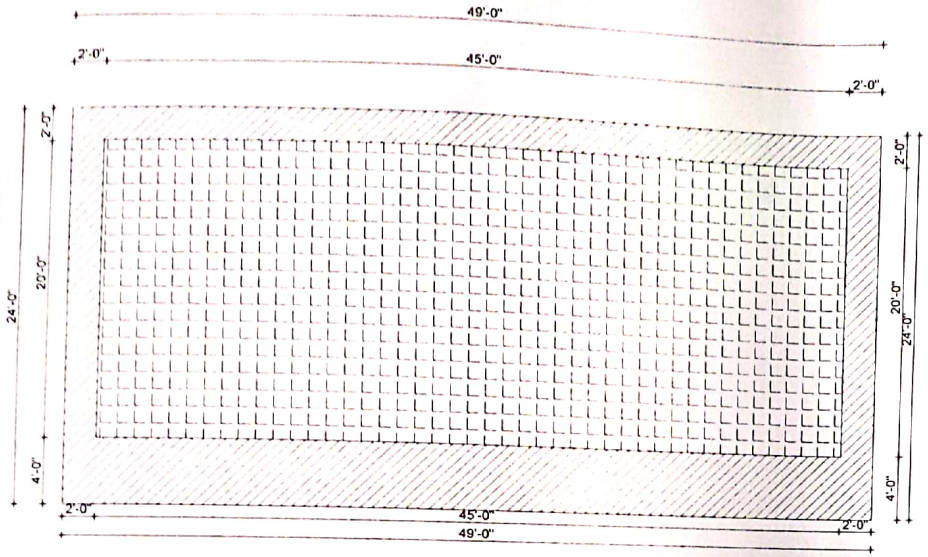
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant :

Durga Engineering Construction & Consult Nepal Pvt Ltd. Doti

Name Of Project:	Two Room School Building
Building Area:- 810 00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No - 16269 Civil 'A'
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : Site Plan
Date:- 2020	Sheet No:- A1

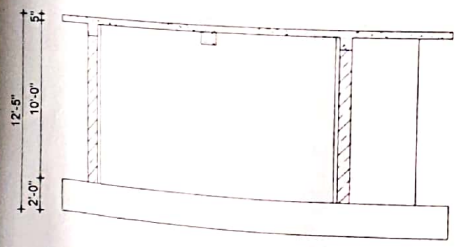
Scanned by CamScanner



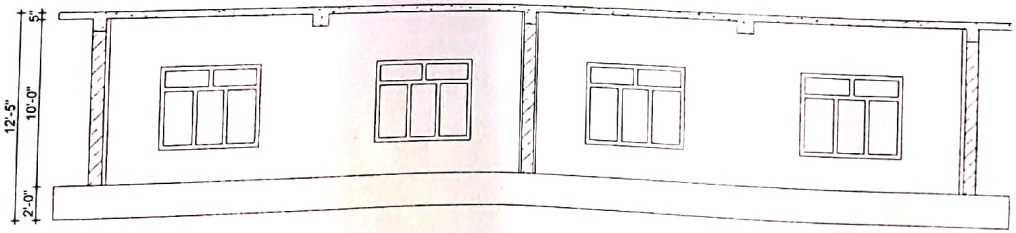
ROOF PLAN
(AREA:-1078.000SQ.FT)

OPENINGS SCHEDULE

S.N.	SYM.	PARTICULAR	WIDTH	HEIGHT	NOS.
1.	D	DOOR	4'-0"	7'-0"	4
2.	W	WINDOW	4'-0"	5'-0"	6



SECTION AT X-X



SECTION AT Y-Y

Er. Deepak Upadhyay
NEC No. 16269 'Civil'
Category

FOR OFFICAL USE ONLY

धनगढी उप-महानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

सुदूरपश्चिम विकास समिति
कैलाली, नेपाल
२०७५

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339

डिभिजनल इन्जिनियर

(Structural Analysis 2 Storey)

CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project.	Two Room School Building
Building Area :- 810 00 square ft.	Checked By Er. Deepak Upadhyay Nec Regd No - 16269 civil 'A'
Firm's Stamp:	Drawan By Sudip Chaudhary
Scale: 1" = 8'-0"	Details : ROOF PLAN & SECTION
Date:- 2020	Sheet No:- A 2

Scanned by CamScanner