

# MINISTRY OF EDUCATION

(MOE/DOC)

DEPARTMENT OF CONSTRUCTION / TECHNICAL SERVICES

(DOC)

## TYPICAL 6+2 CLASS ROOM SCHOOL

PROJECT CODE: S 0255-1

ARCHITECTURE

&

ENGINEERING

# DESIGN

پروردگار 6+2 طبقه ای فنی و حرفه ای  
نام "13" در مکتب آن



34

17









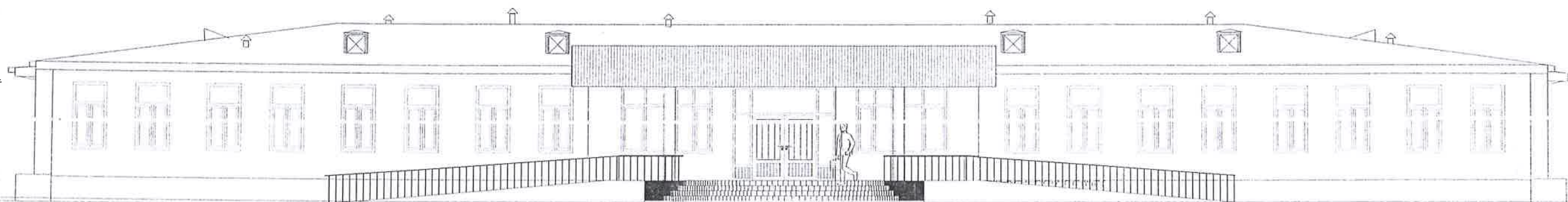
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FINISH FLOOR LEVEL +3.12  
BOTTOM OF BEAM LEVEL +2.77

WIND SILL LEVEL +0.80

GROUND FLOOR LEVEL ±0.00

GROUND LEVEL -0.75



**FRONT ELEVATION**

*[Handwritten signature]*

MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN AH FERAZ TAHIRY  
CHECKED BY ENG. FAMEEM

APPROVED BY ENG. AB. MOMEN RAD  
SCALE AS SHOWN

DRAWING TYPE ARCHITECTURE  
CODE  
SUBJECT

PROJECT NAME

PROJECT TYPE 6-10 CLASS ROOM SCHOOL  
DRAWING TITLE FRONT ELEVATION



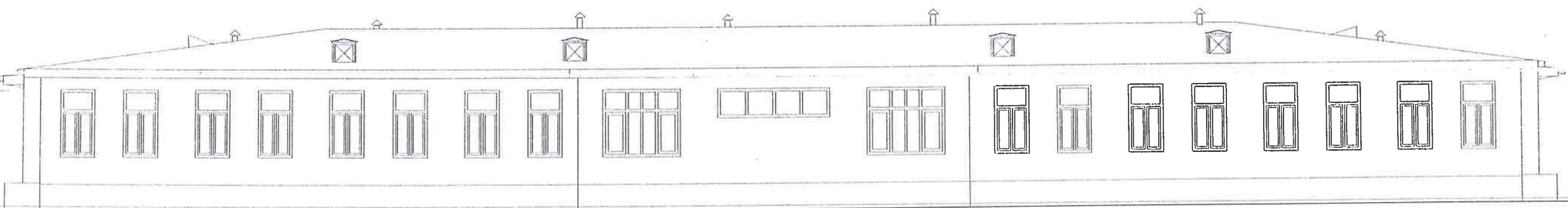
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BOTTOM OF BEAM LEVEL +1.77

WIND SILL LEVEL +0.80

GROUND FLOOR LEVEL +0.00

GROUND LEVEL -0.75



# **BACK ELEVATION**

*Handwritten signature and initials in blue ink.*

MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN	AM FERAZ TAHIRY	APPROVED Doc/She	ENG. AB. MOMEN RAD	DRAWING TYPE	ARCHITECTURE	PROJECT NAME
CHECKED BY	ENG. FAMEEM	IN CHARGE	AS SHOWN (A.D)	CODE		PROJECT TYPE & 62 CLASS ROOM SCHOOL METAL SHEET ROOF
TECH. APPROVAL		DATE	1 JAN 2000	Scale		DRAWING TITLE



TOP LEVEL OF GI SHEET +4.45

FINISH FLOOR LEVEL +3.12  
BOTTOM OF BEAM LEVEL +2.77

WIND SILL LEVEL +0.80

GROUND FLOOR LEVEL ±0.00

GROUND LEVEL -0.75



SIDE ELEVATION

*Handwritten signature and initials in blue ink.*

MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN

AH FERAZ TAHRIRY

CHECKED BY

ENG. FATEM

TECH. APPROVAL/DWG

ENG. AMANULLAH

APPROVED BY

ENG. AB. MOMEN RAD

AS SHOWN (A3)

JAN 2015

DRAWING TYPE

CODI

SUBMIT

ARCHITECTURE

4

10

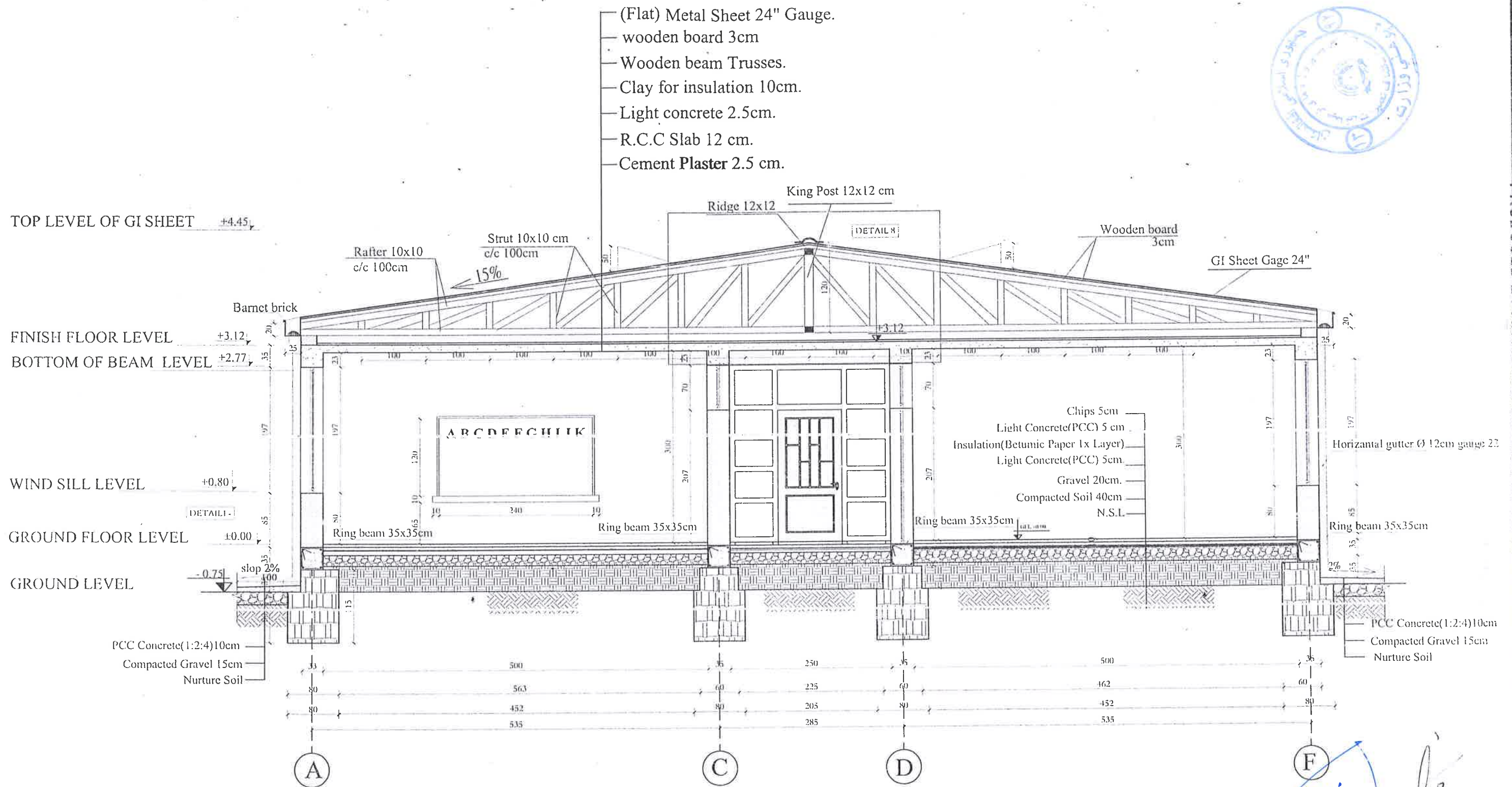
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PROJECT TYPE & 60 CLASS ROOM SCHOOL METAL SHEET ROOF

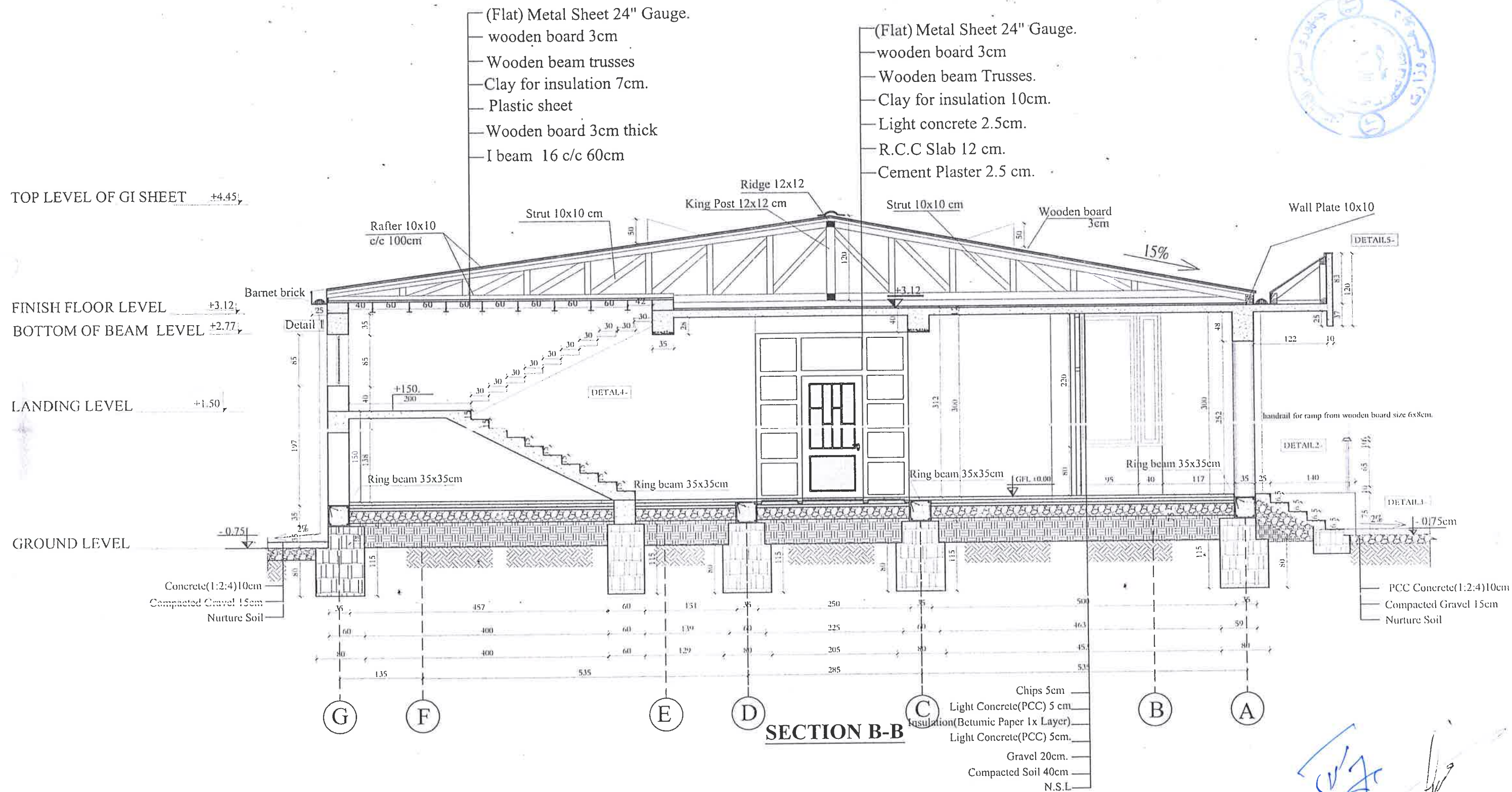
DRAWING TITLE

SIDE ELEVATION

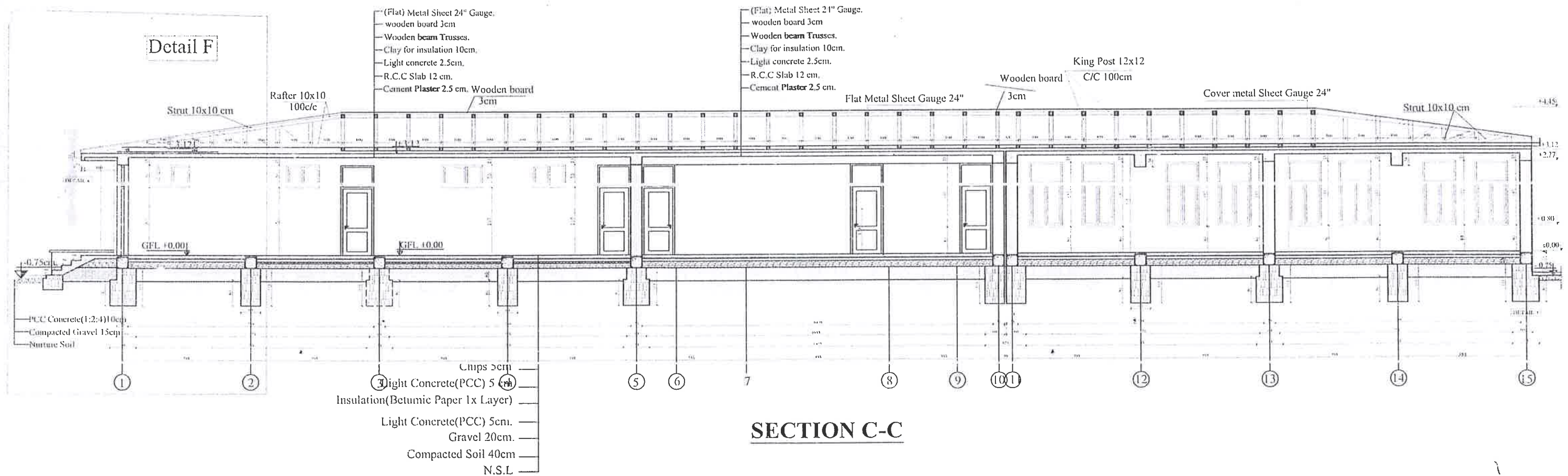










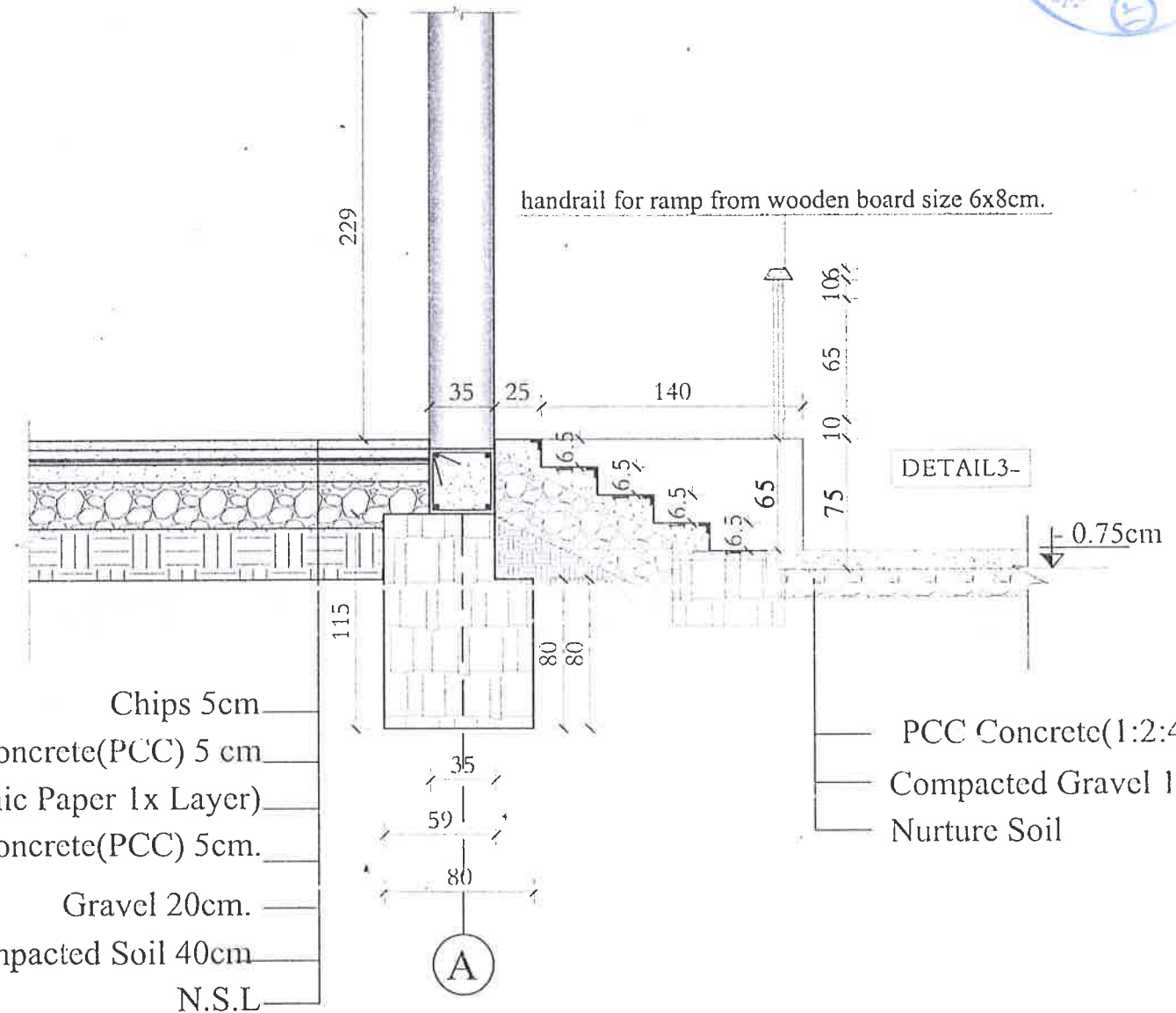
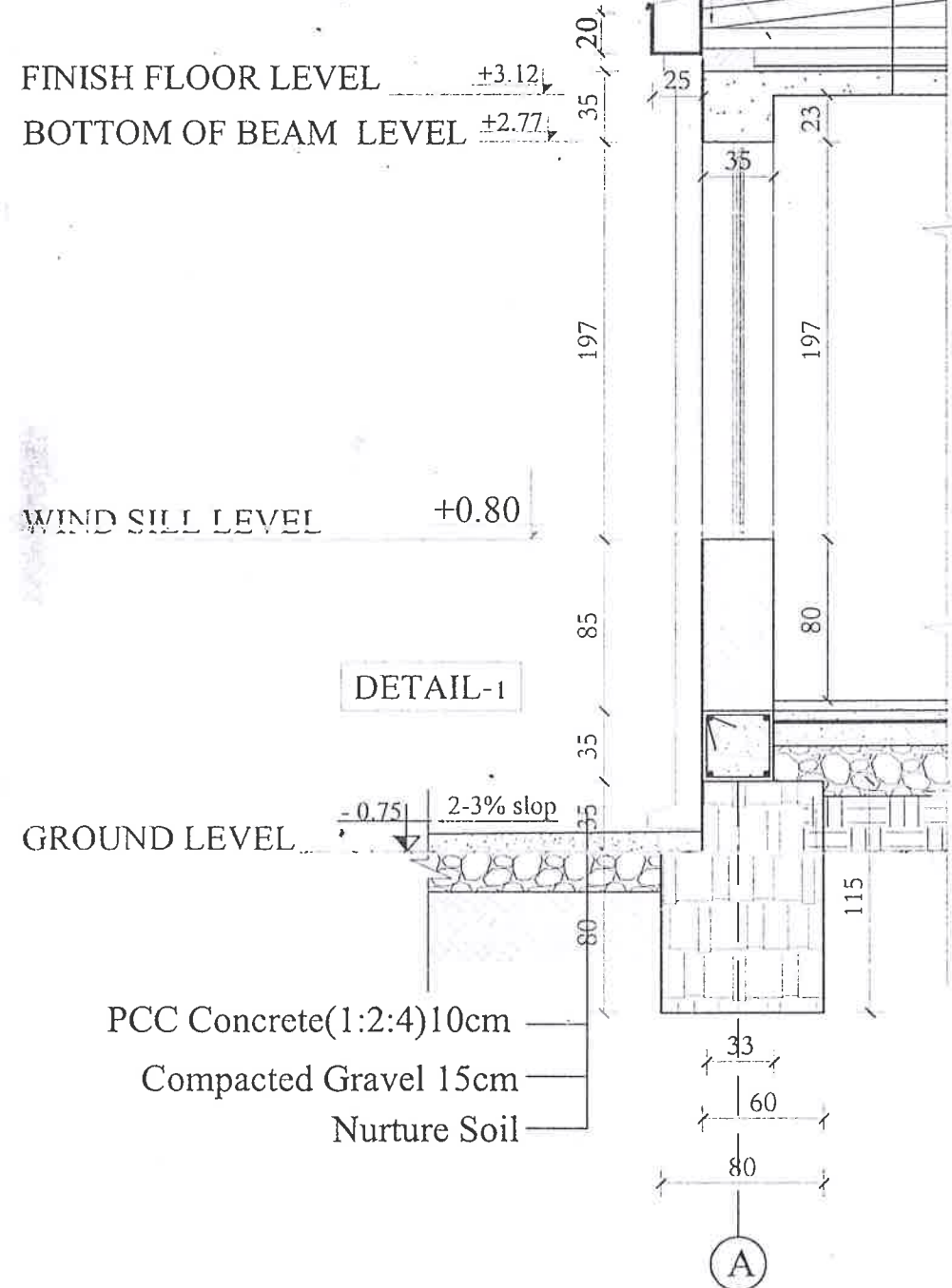


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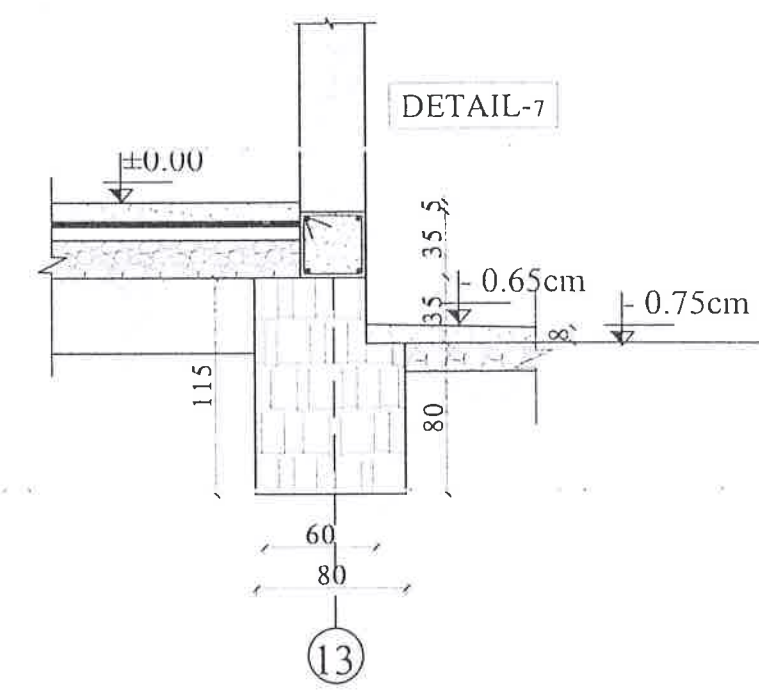
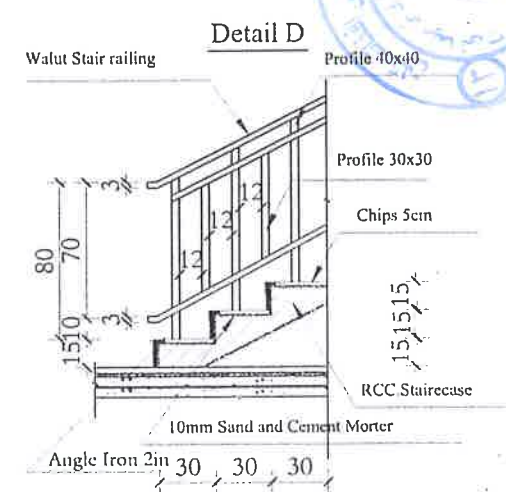
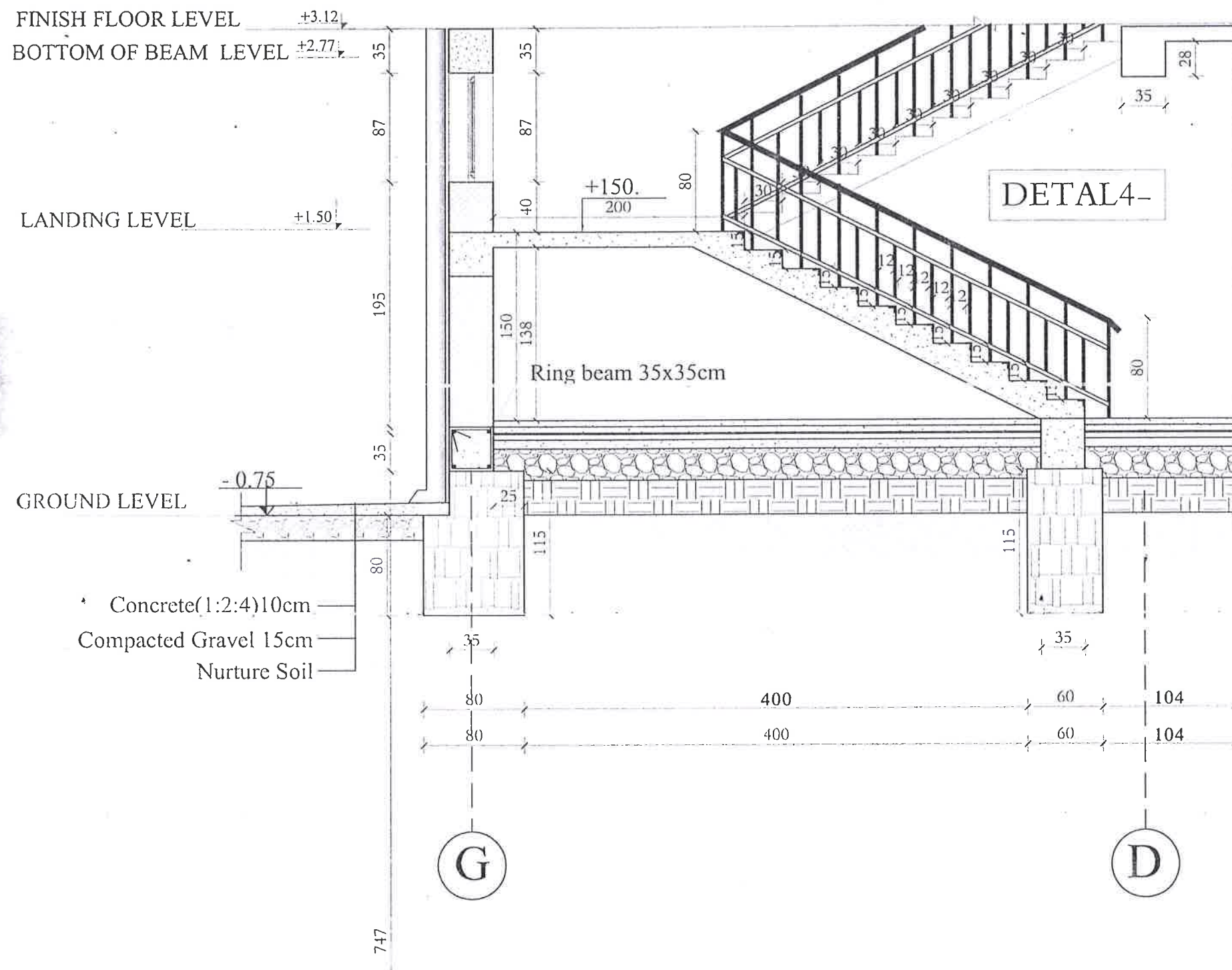


- (Flat) Metal Sheet 24" Gauge.
- wooden board 3cm
- Wooden beam Trusses
- Clay for insulation 10cm.
- Light concrete 2.5cm.
- R.C.C Slab 12 cm.
- Cement Plaster 2.5 cm.

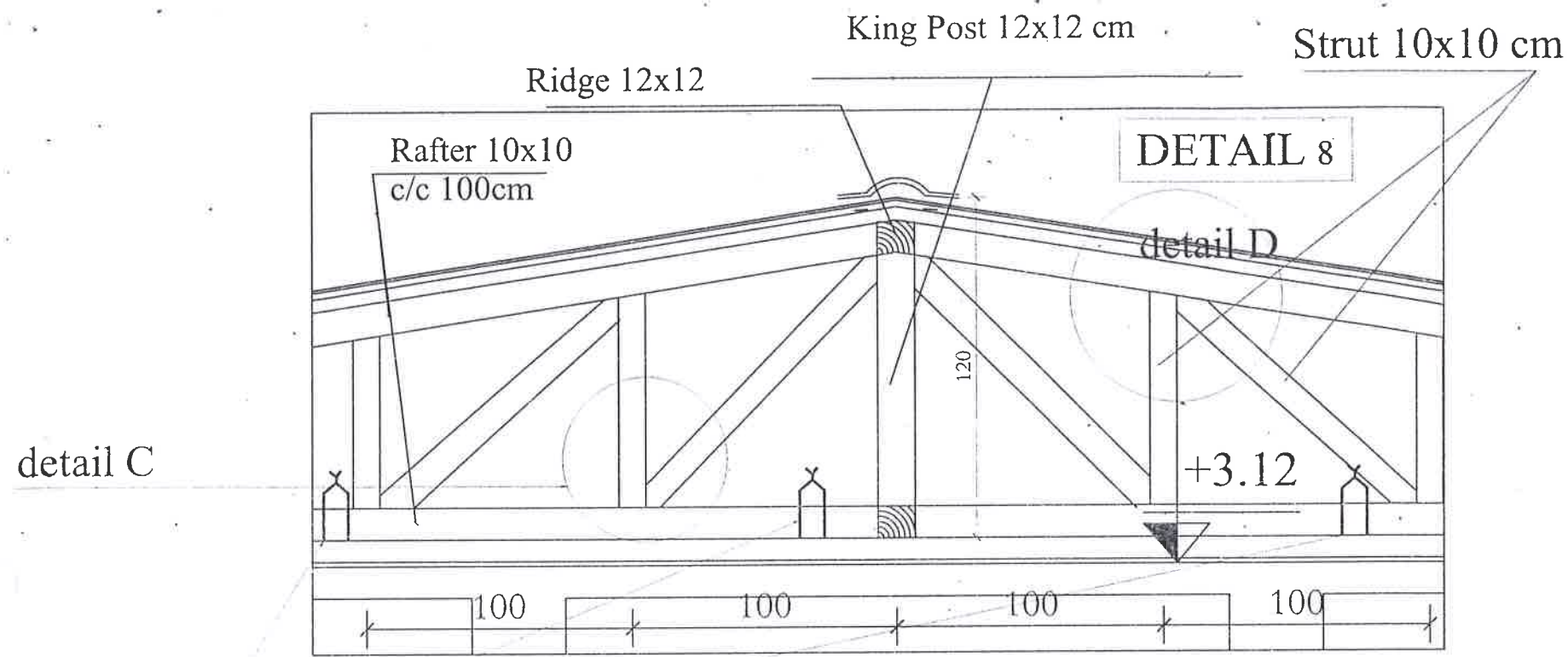


- Chips 5cm
- Light Concrete(PCC) 5 cm
- Insulation(Betumic Paper 1x Layer)
- Light Concrete(PCC) 5cm.
- Gravel 20cm.
- Compacted Soil 40cm
- N.S.L

- PCC Concrete(1:2:4)10cm
- Compacted Gravel 15cm
- Nurture Soil



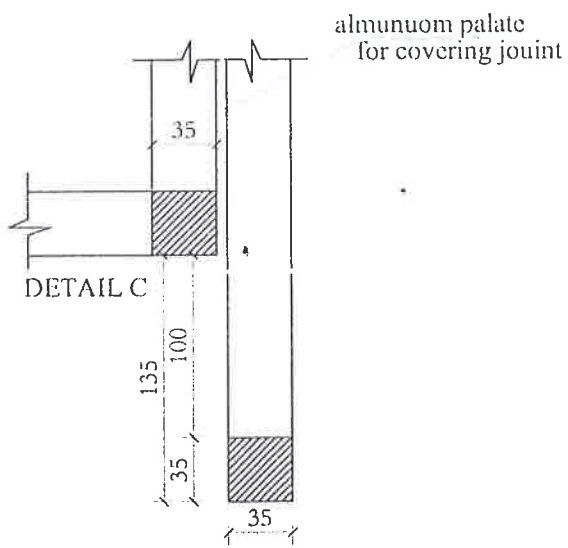
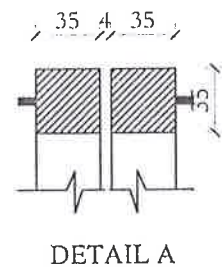
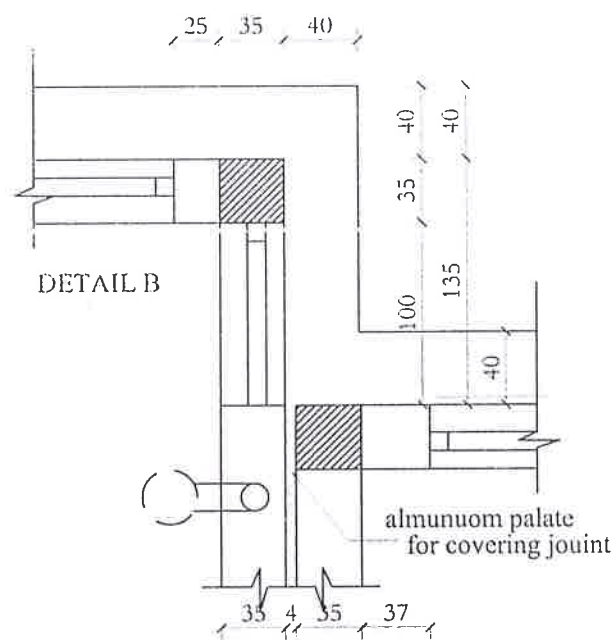
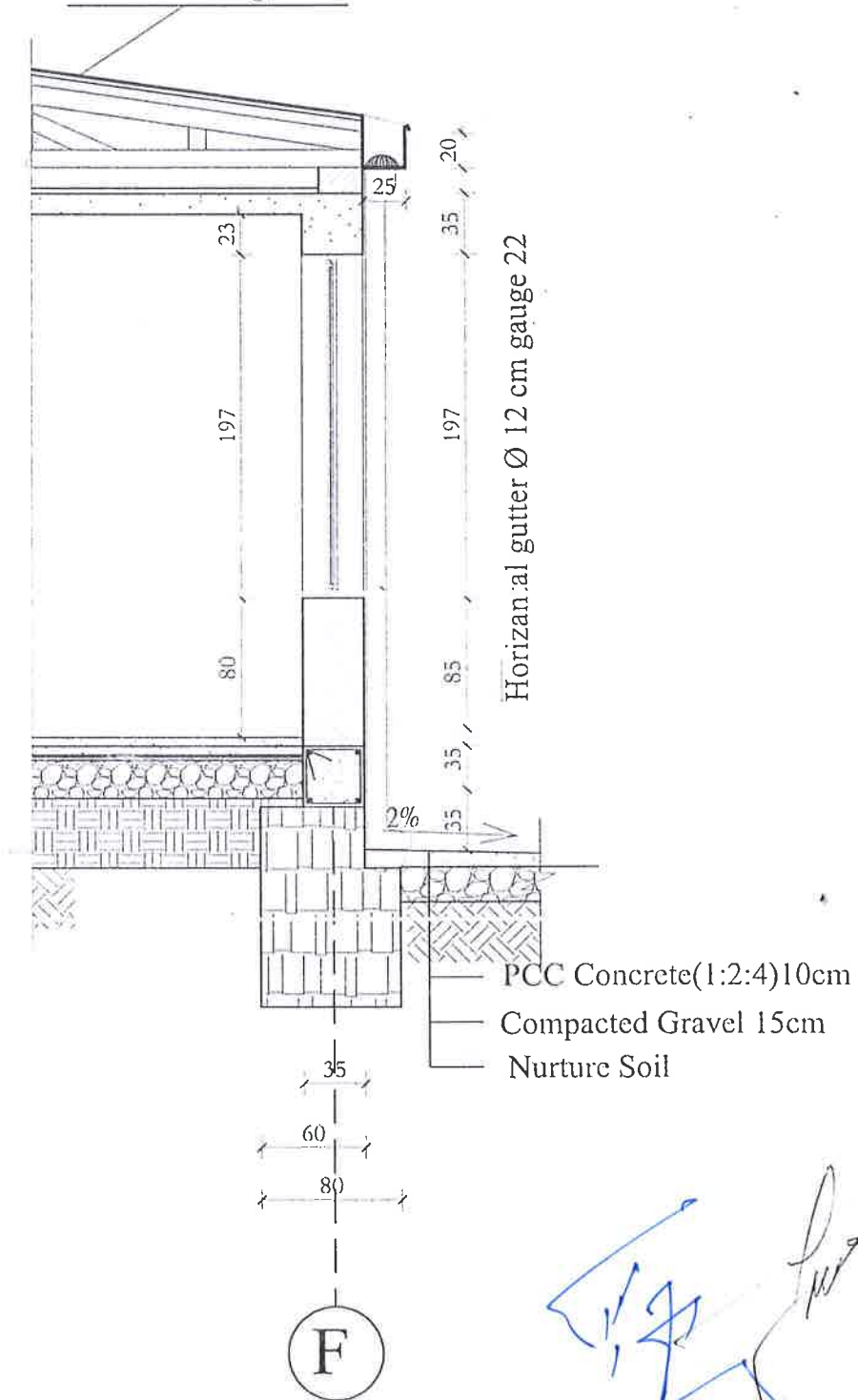




detail C

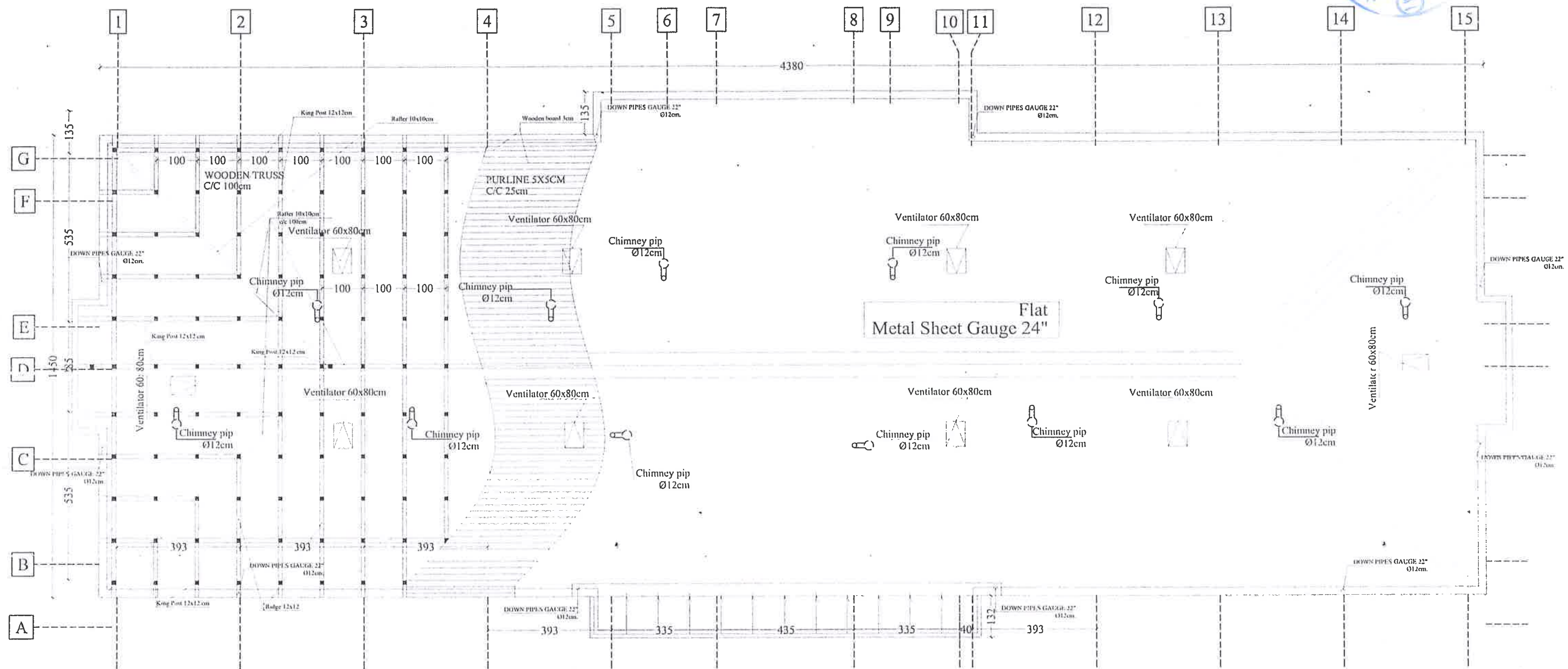
Ø 8 FOR FIXING SLAB WITH TRUSS  
C/C 200 cm

Flat GI Sheet Gage 24"



aluminum palate for covering joint

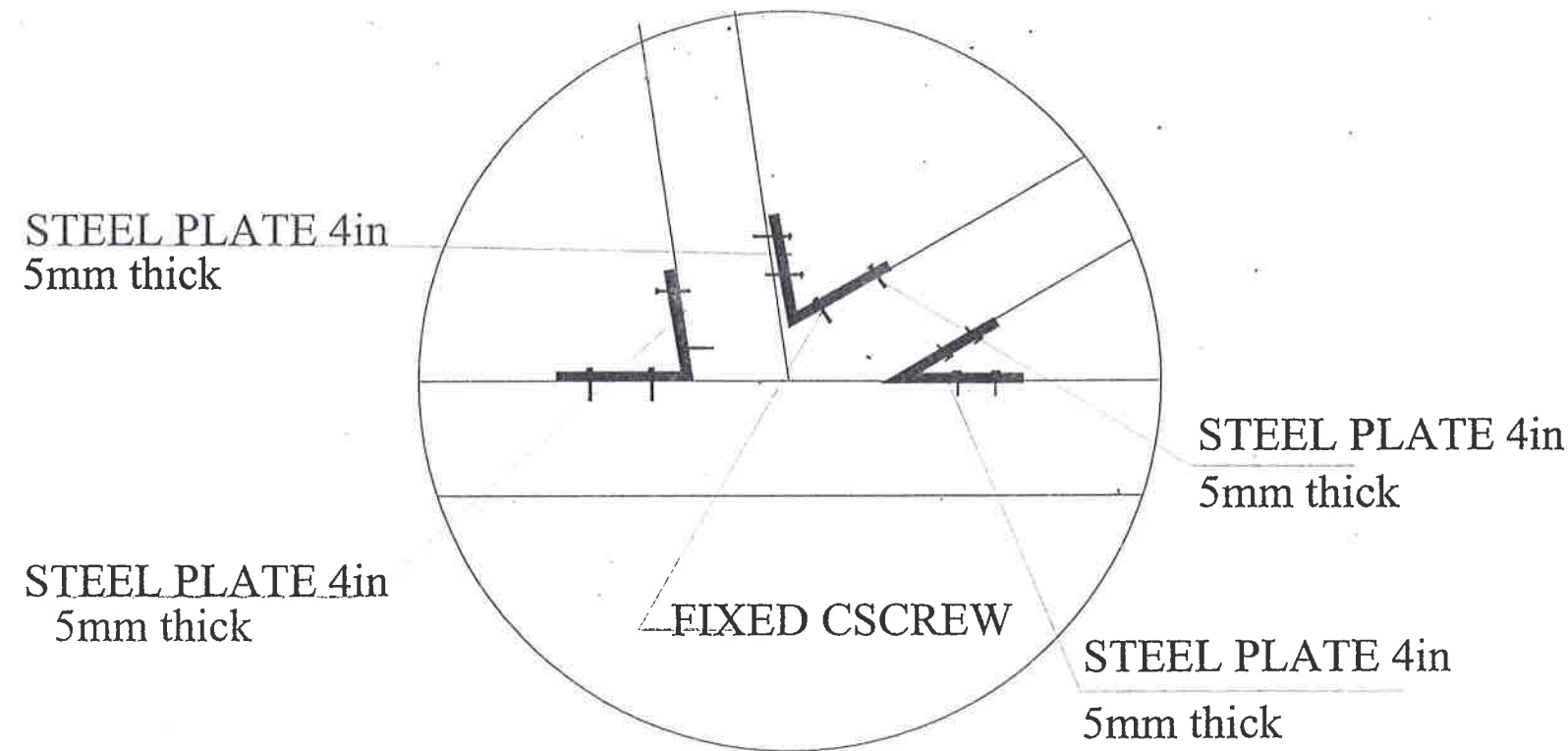
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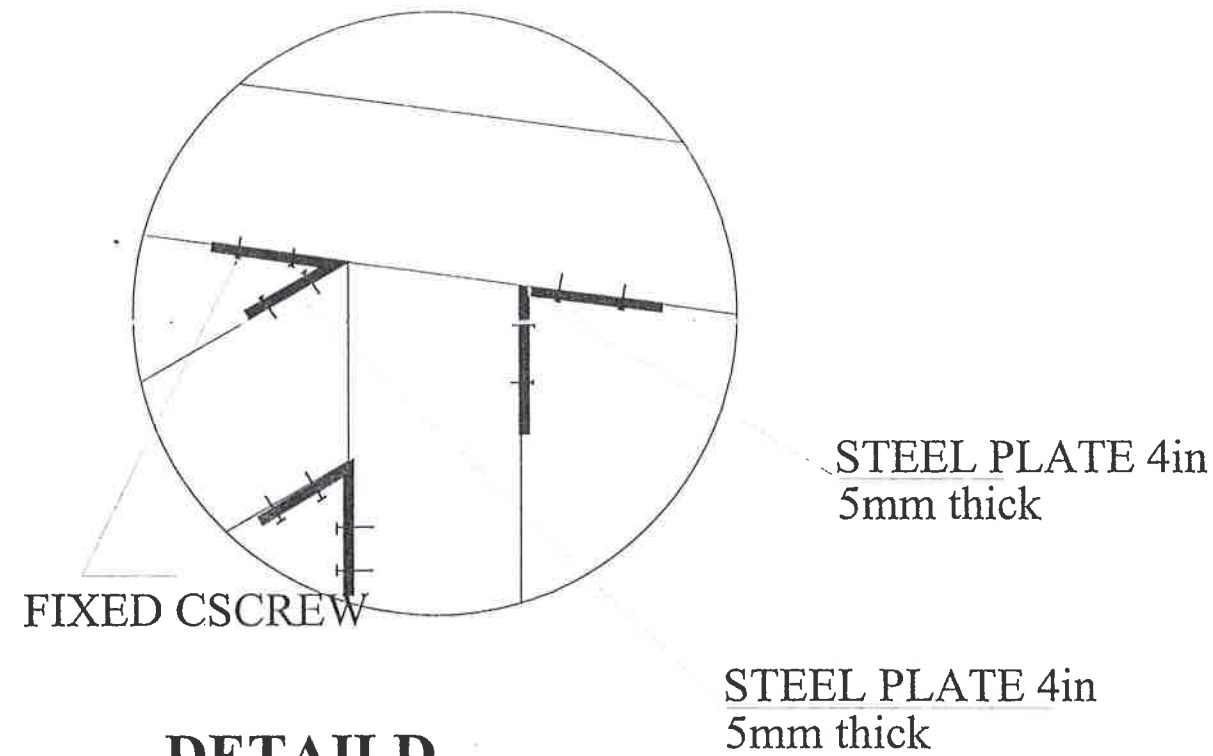
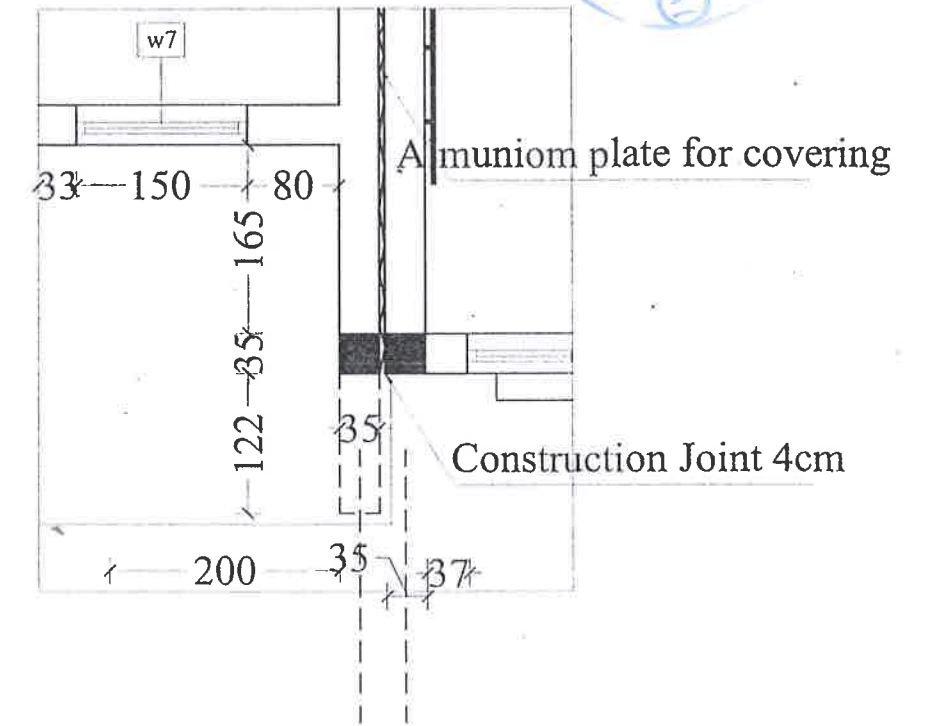
**TRUSS PLAN**

*[Handwritten signature]*





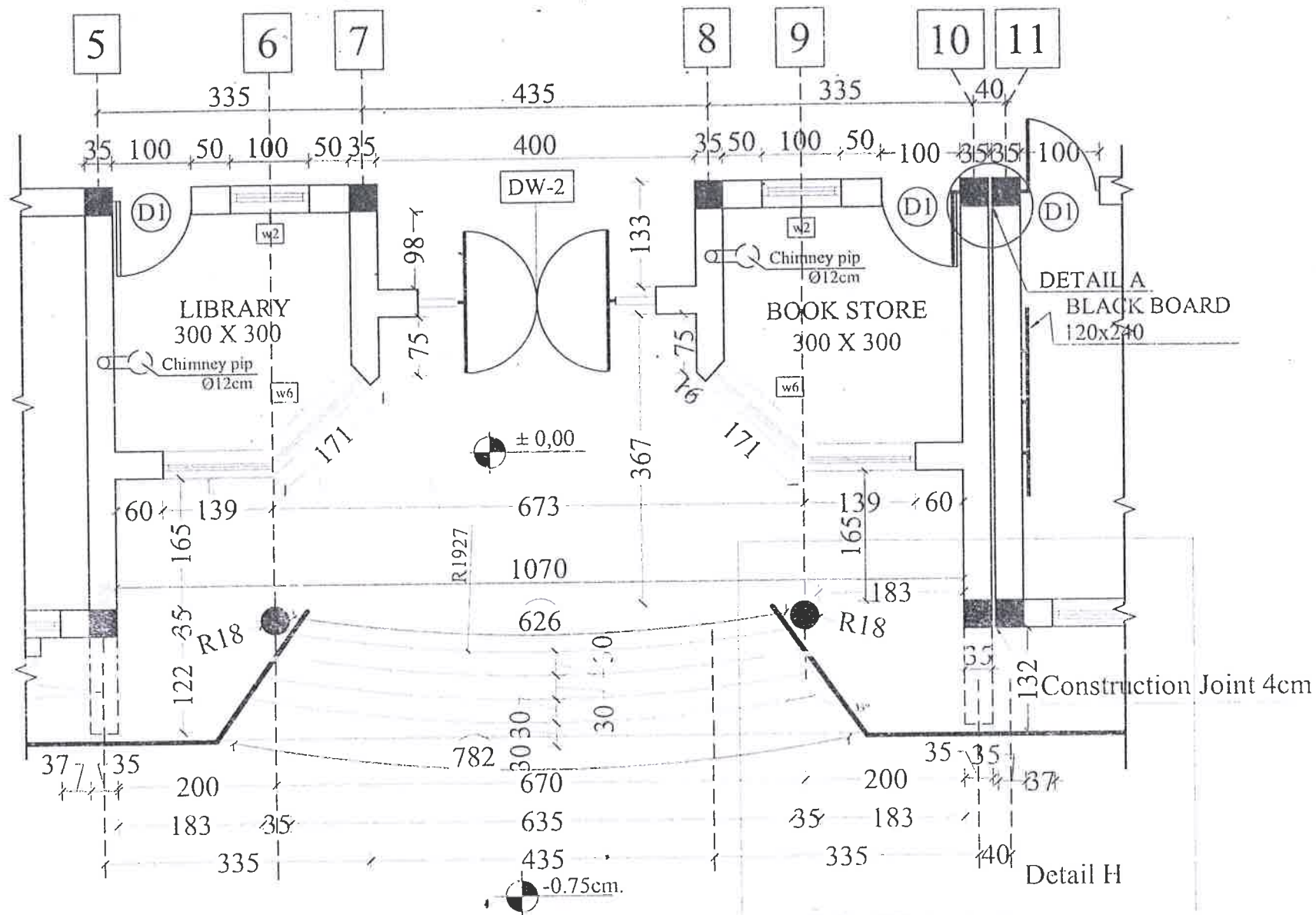
**DETAILC**



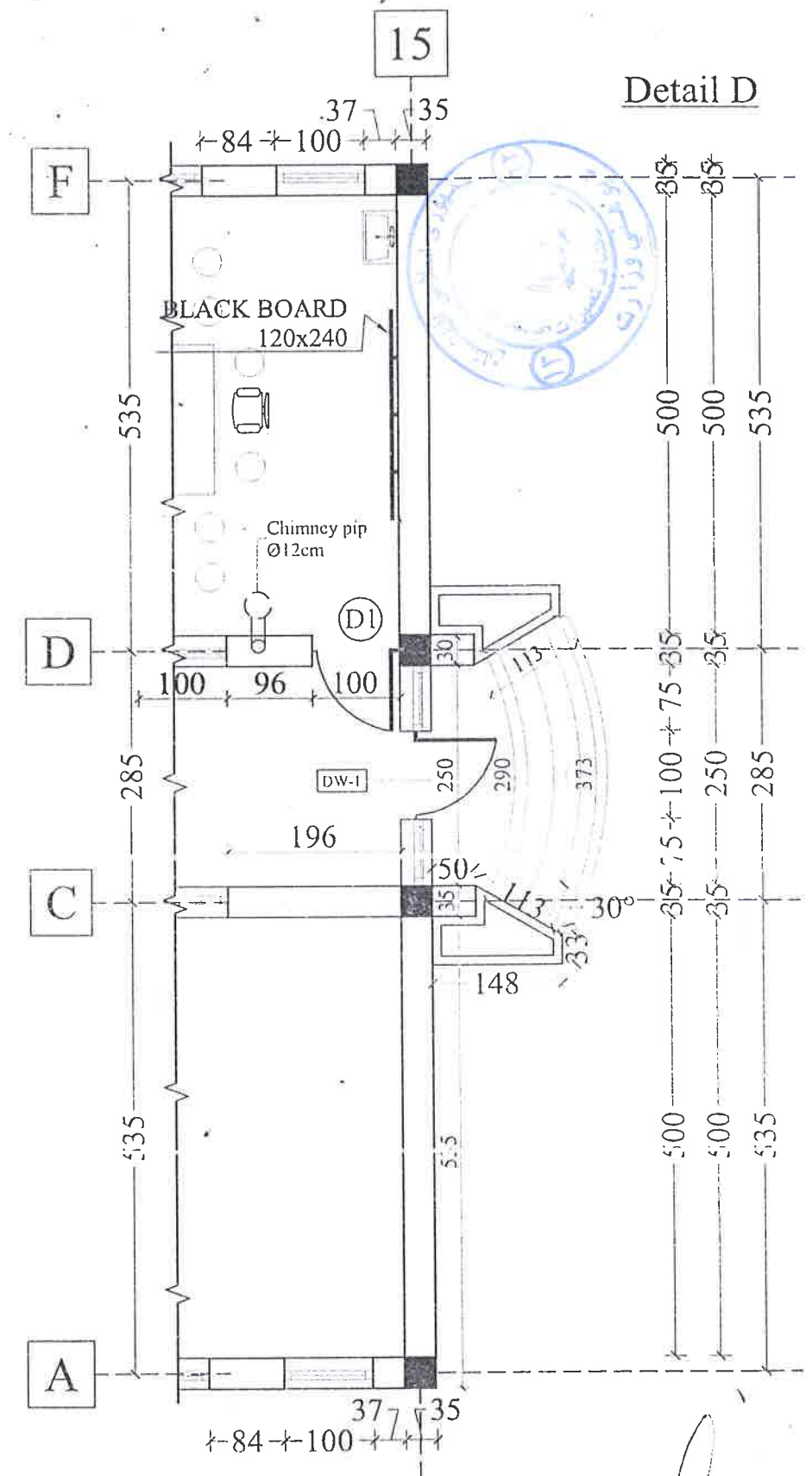
**DETAILD**

*Handwritten signature*

### Detail E



### Detail D



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION

# STANDARD SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT DESIGN ADVERTISING AGENCY

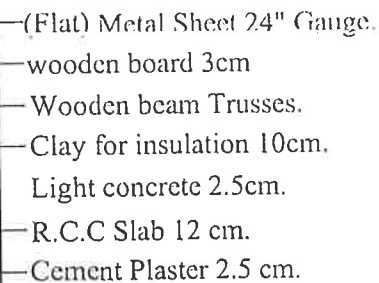
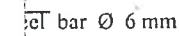
APPROVED Doc No: ENG AB MOMEN RAD

DRAWING TYPE	ARCHITECTURE
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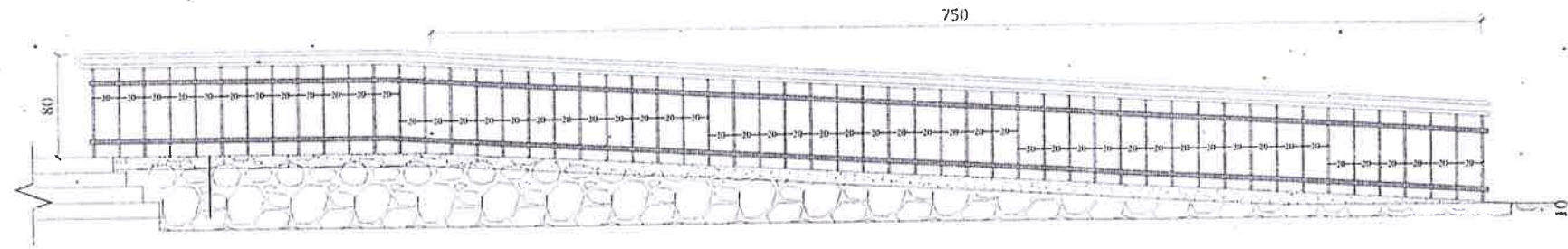
PROJECT NAME

PROJECT TYPE & SUBJECT CLASSROOM & TROOP MULTIMEDIA FROM  
DRAWING TITLE

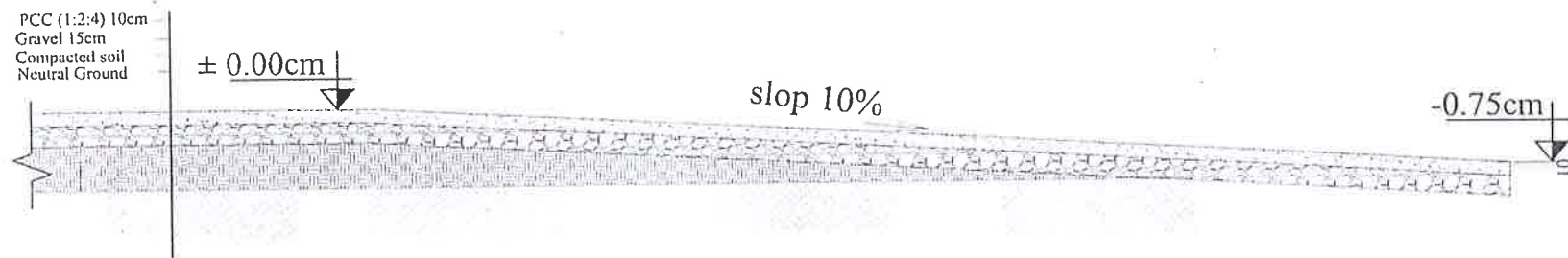




# ELEVATION

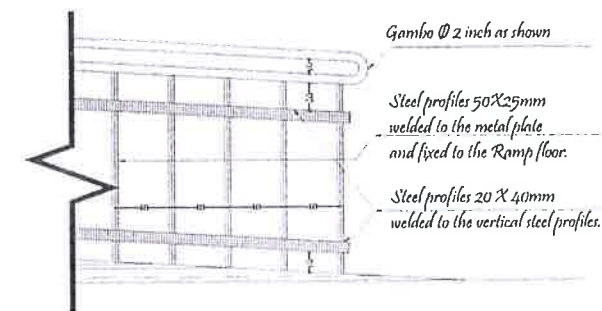
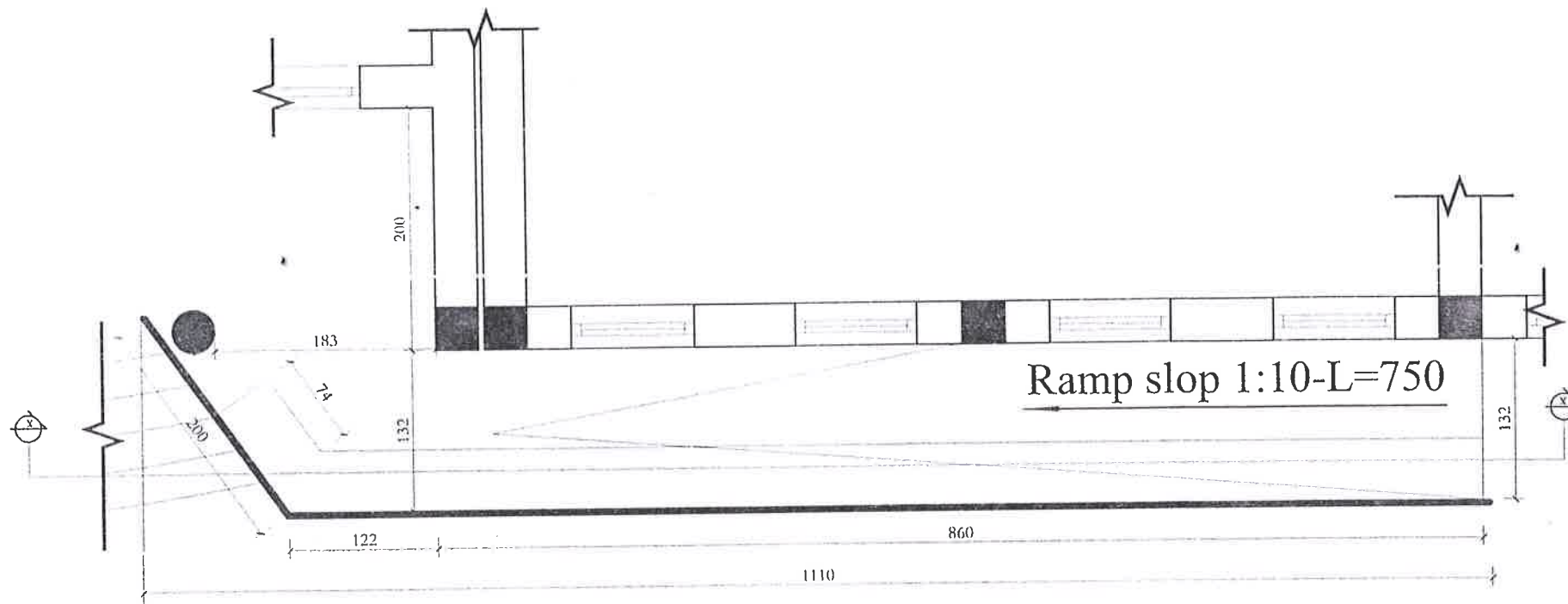


Ramp slop 1:10-L=750



section x-x

Ramp slop 1:10-L=750



Gambo Ø 2 inch as shown

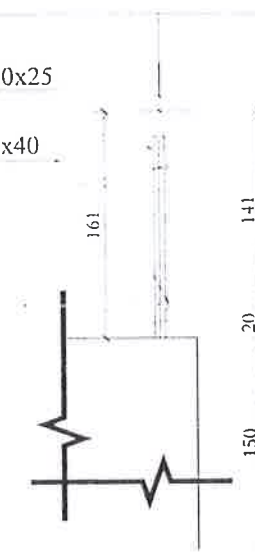
Steel profiles 50x25mm welded to the metal plate and fixed to the Ramp floor.

Steel profiles 20 x 40mm welded to the vertical steel profiles.

Gambo Ø 2 inch as shown

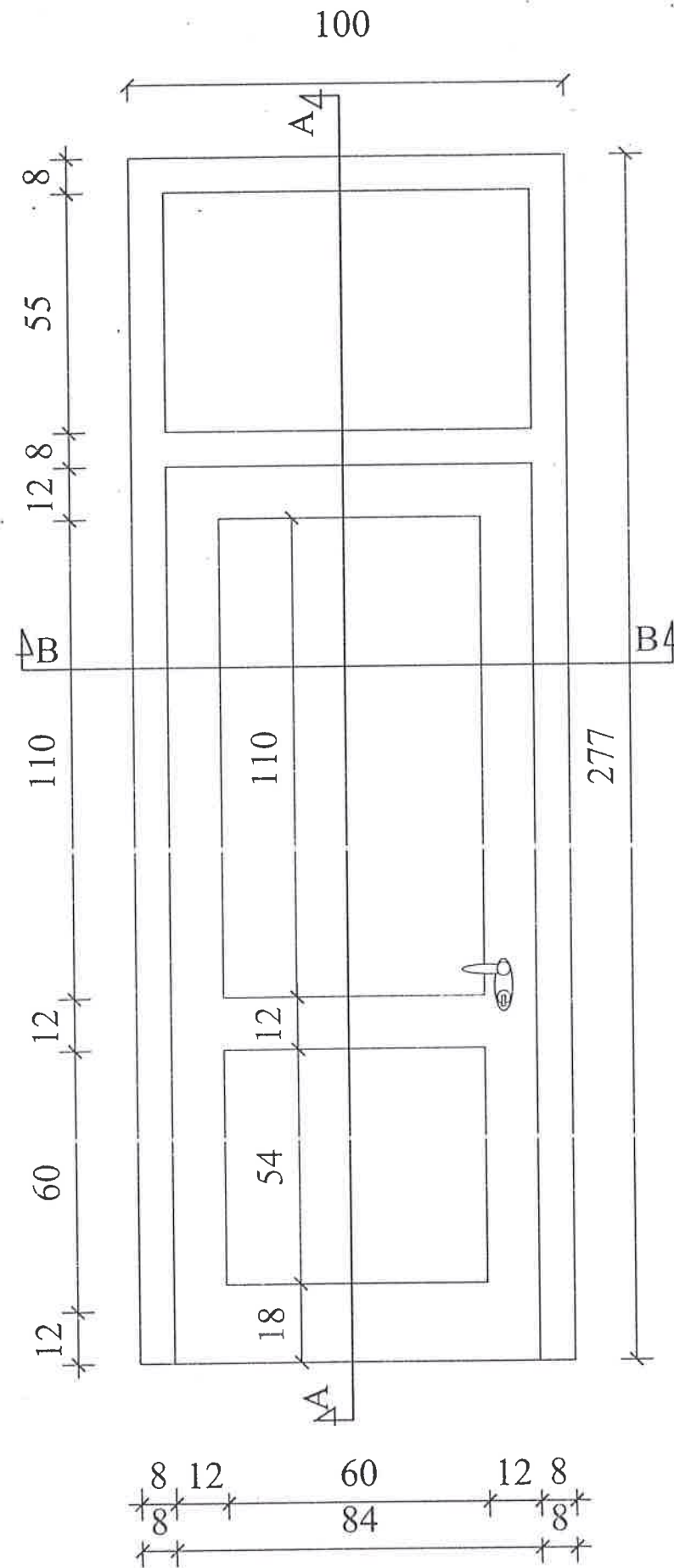
Profile box size 50x25

Profile box size 20x40

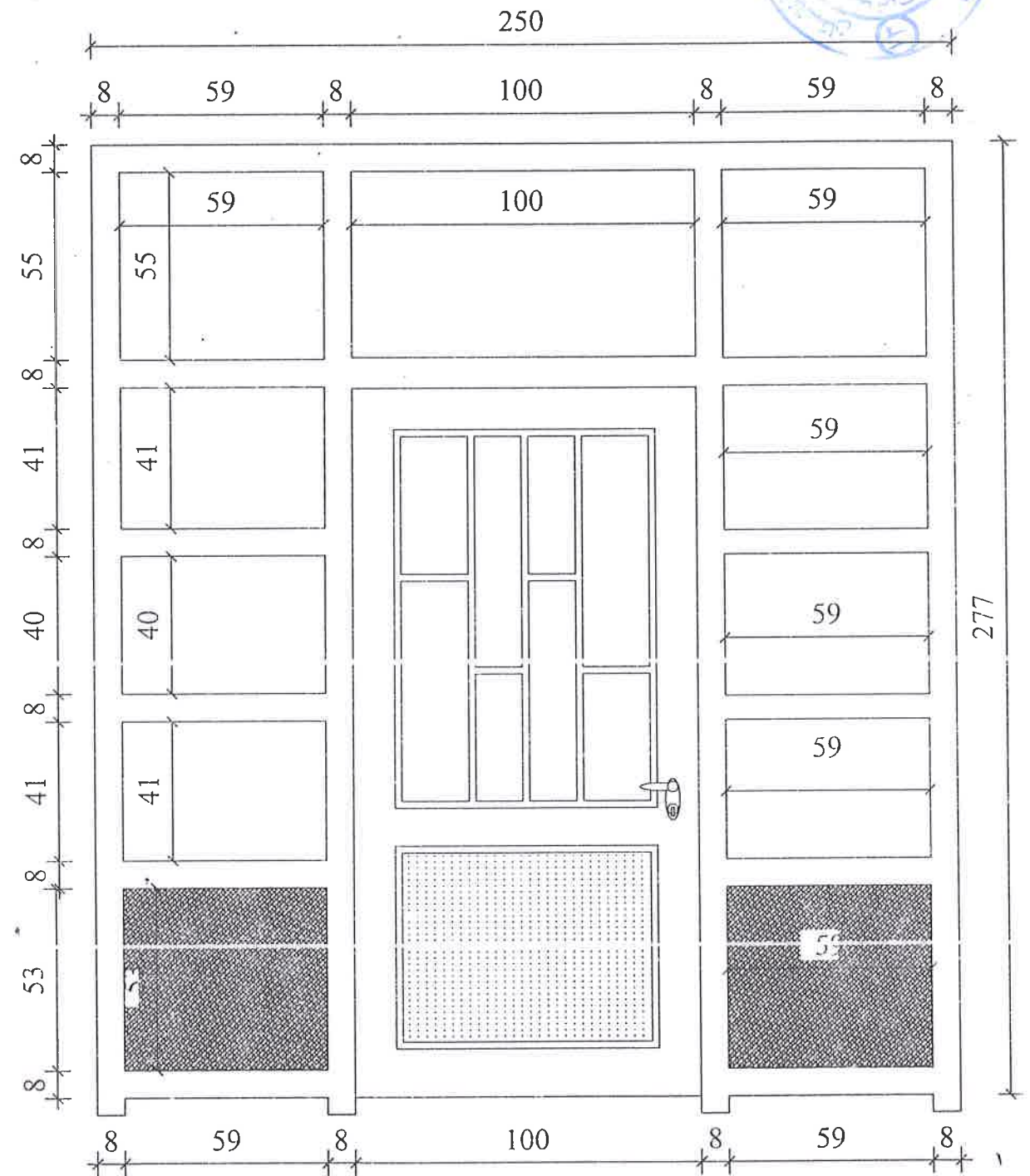




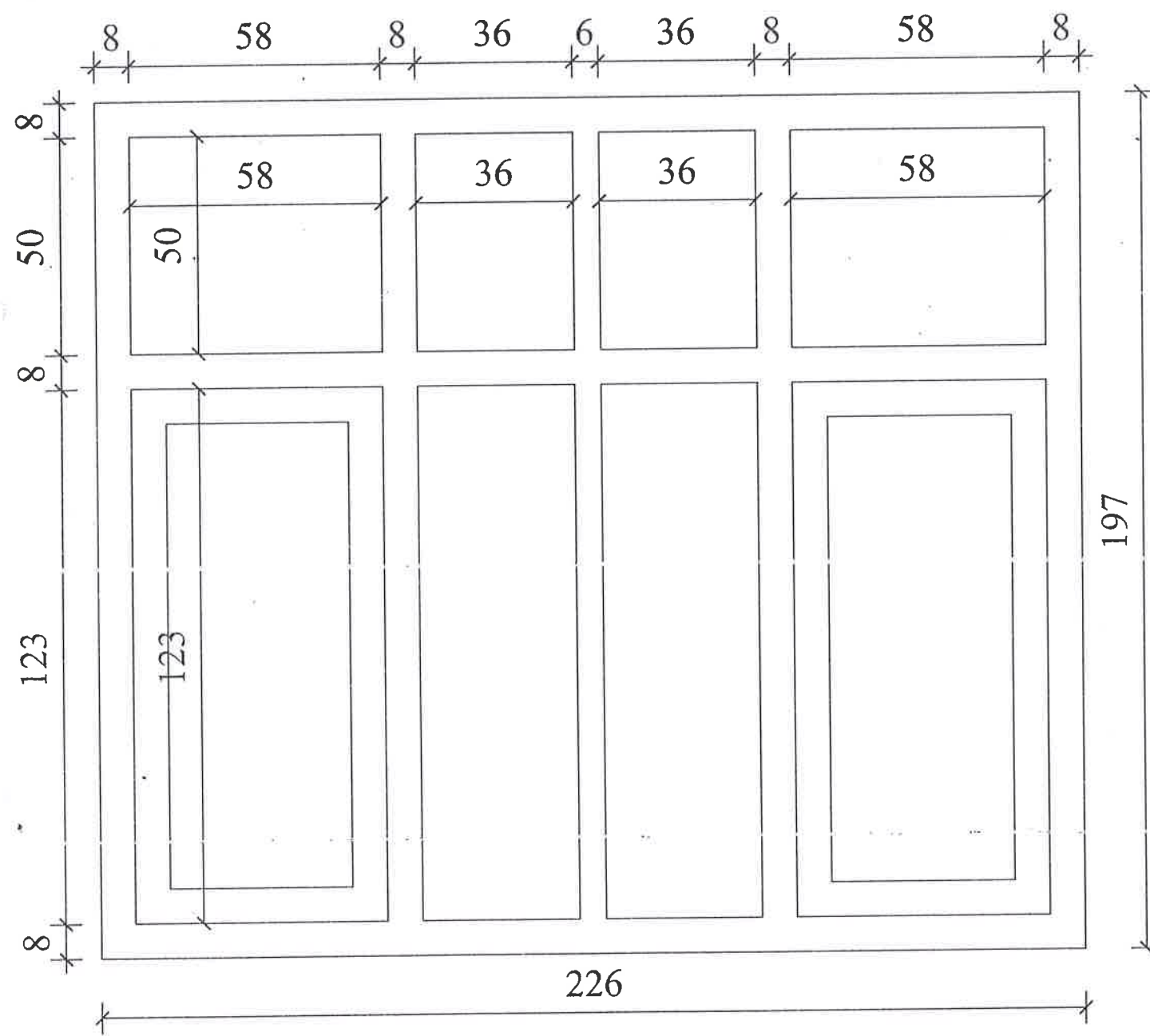
door-1 n=13



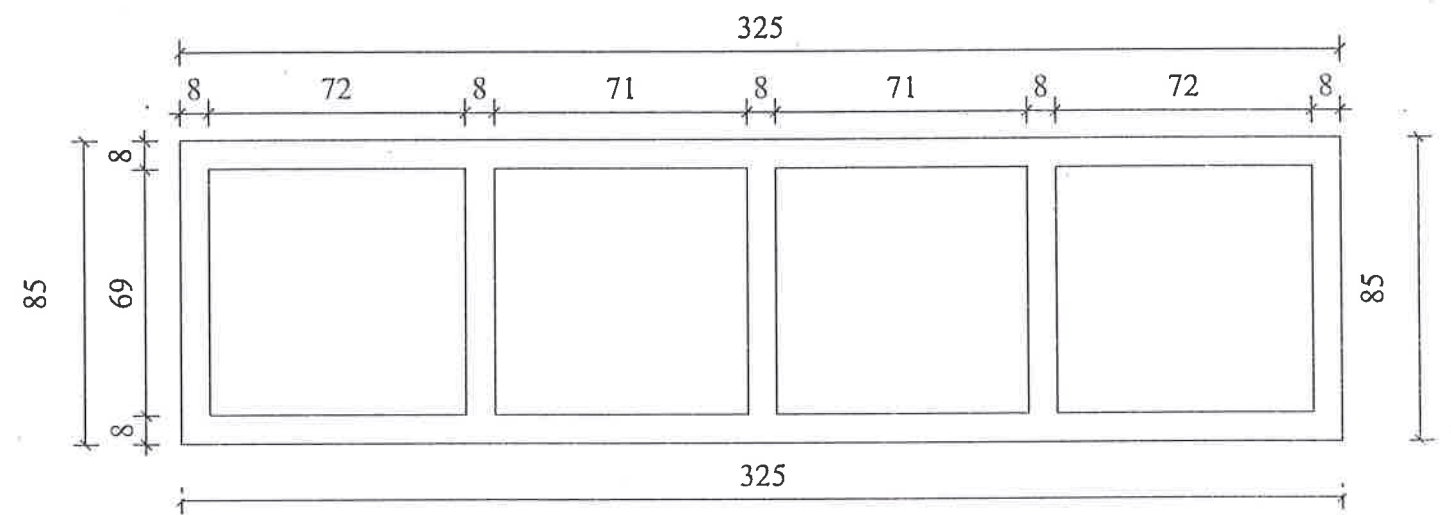
door win-1 n=2



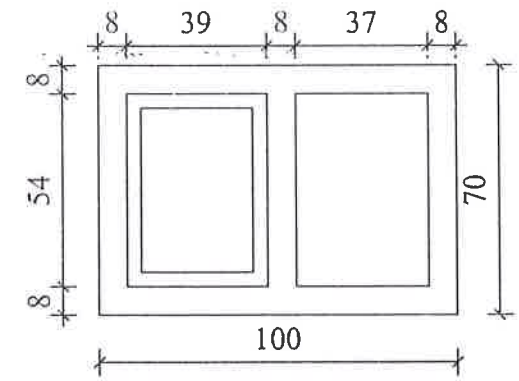
window 4n=2



window 3 n=1

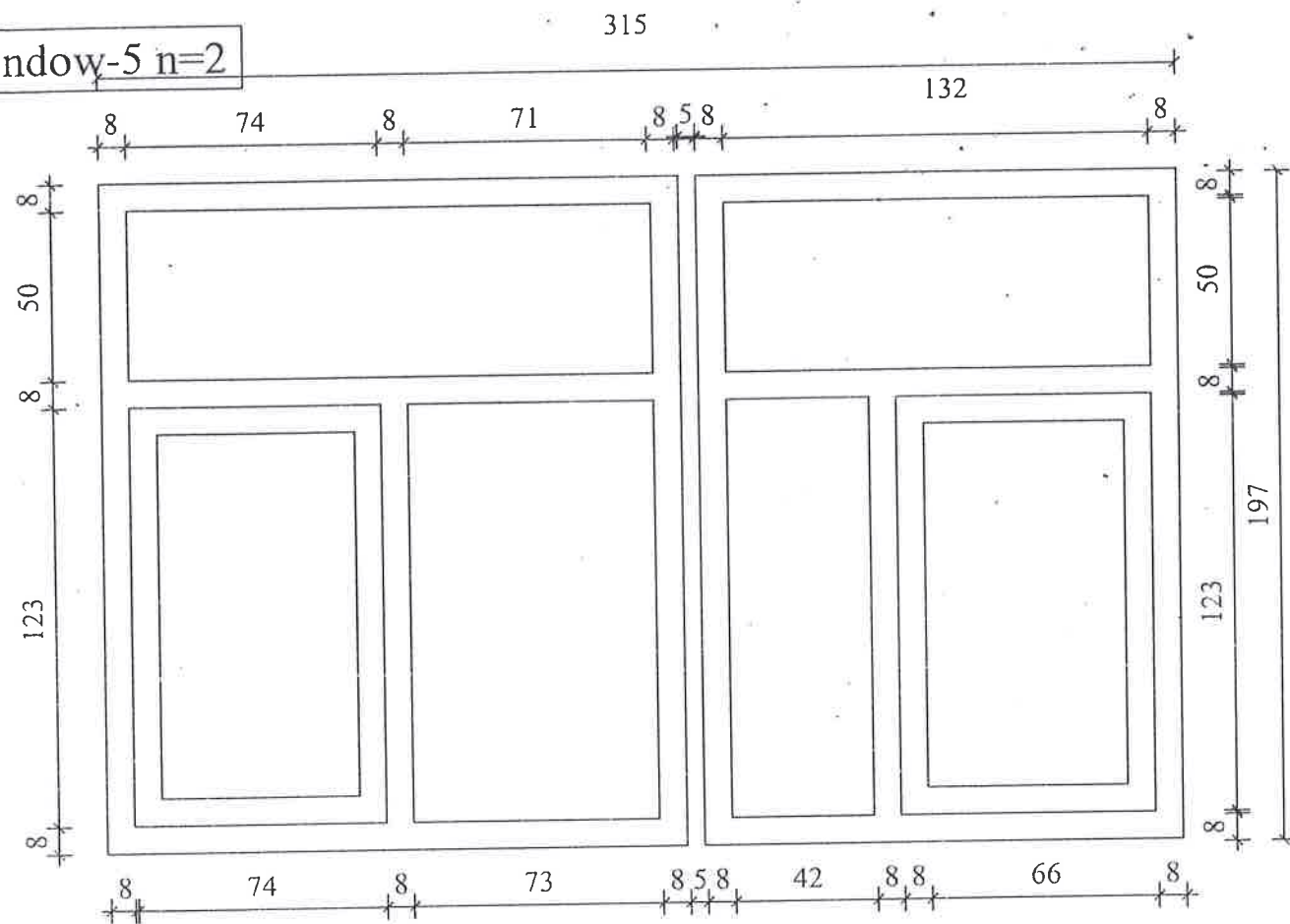


window 2 n=18

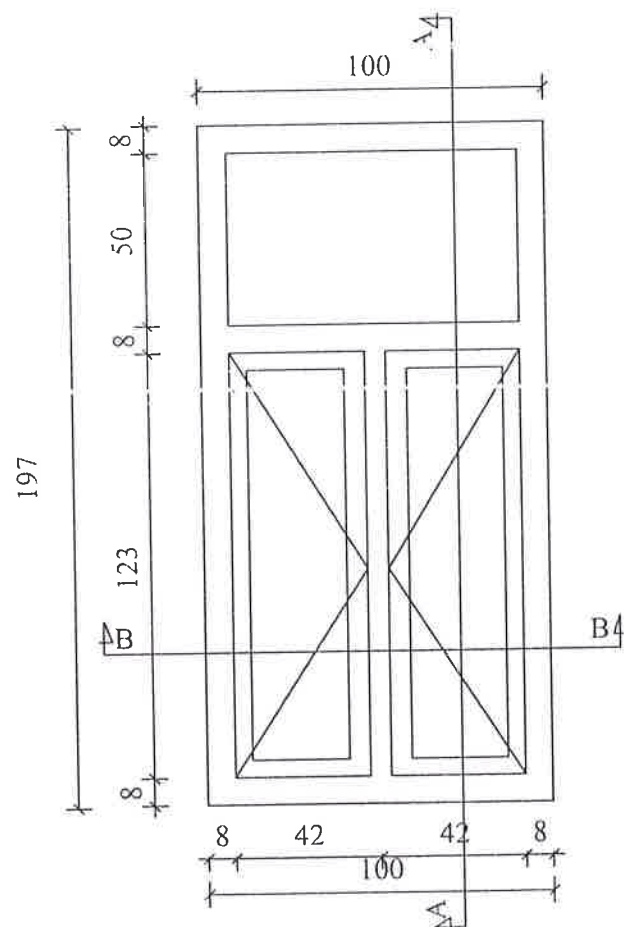




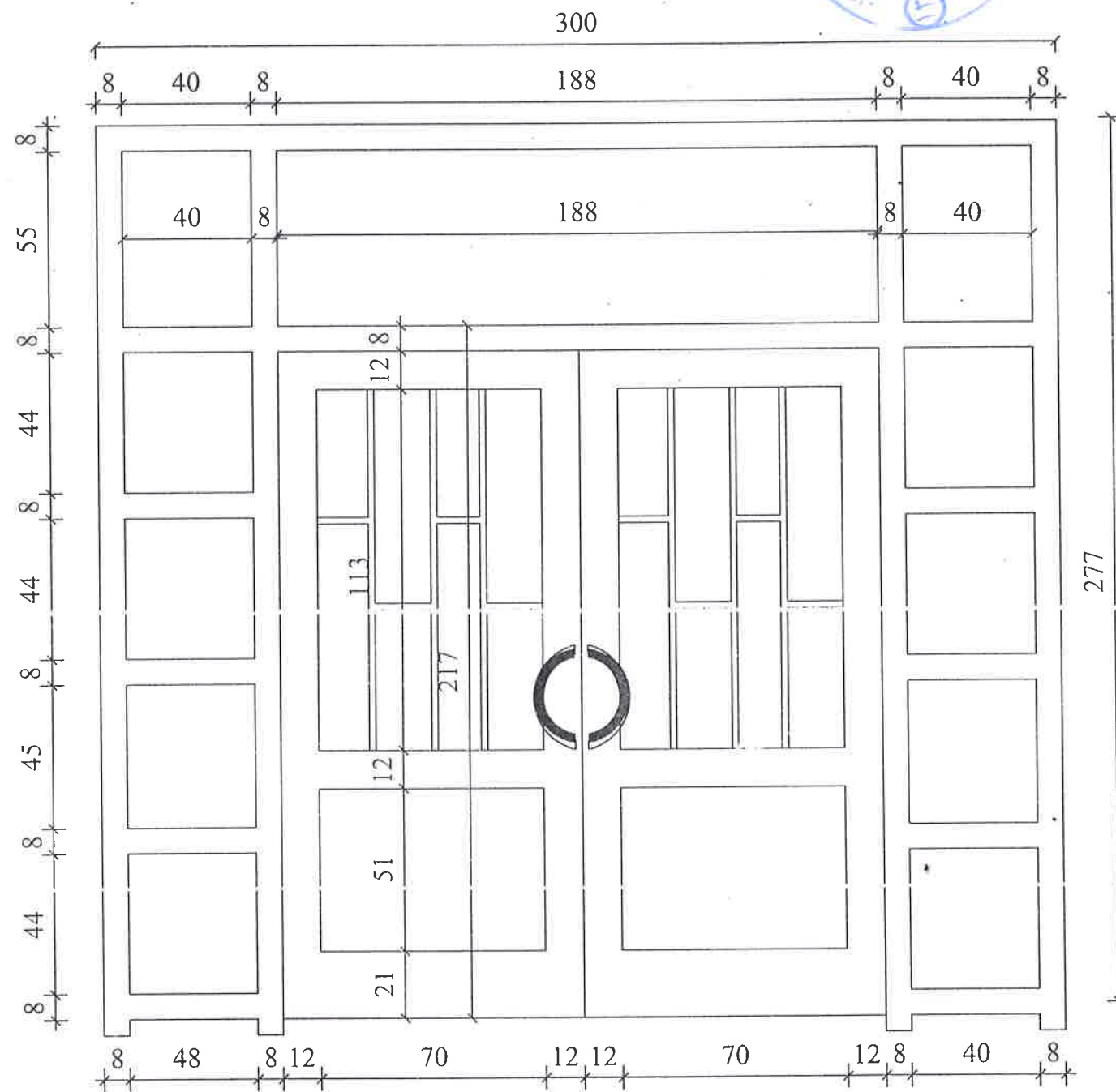
window-5 n=2

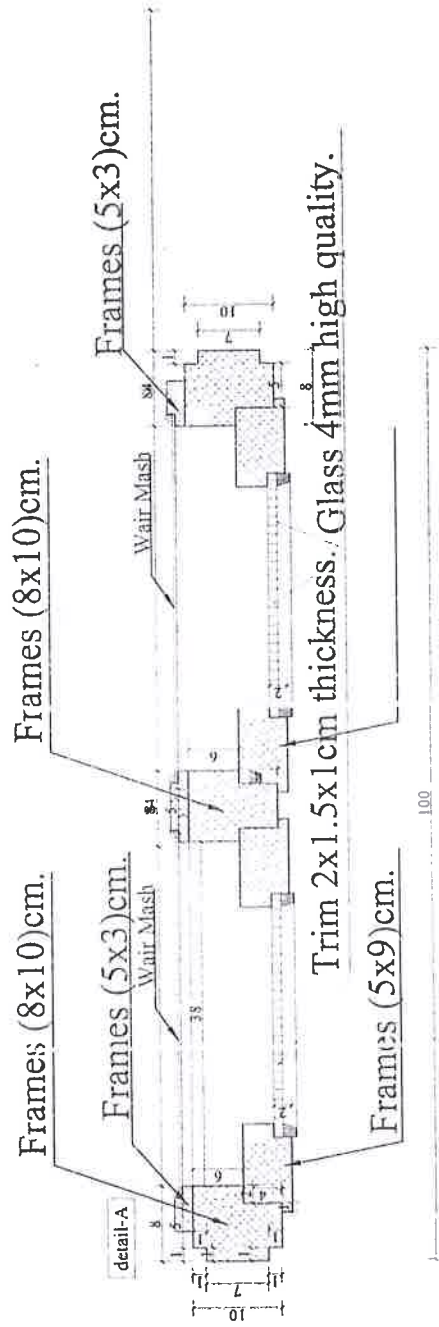


window-1 n=34

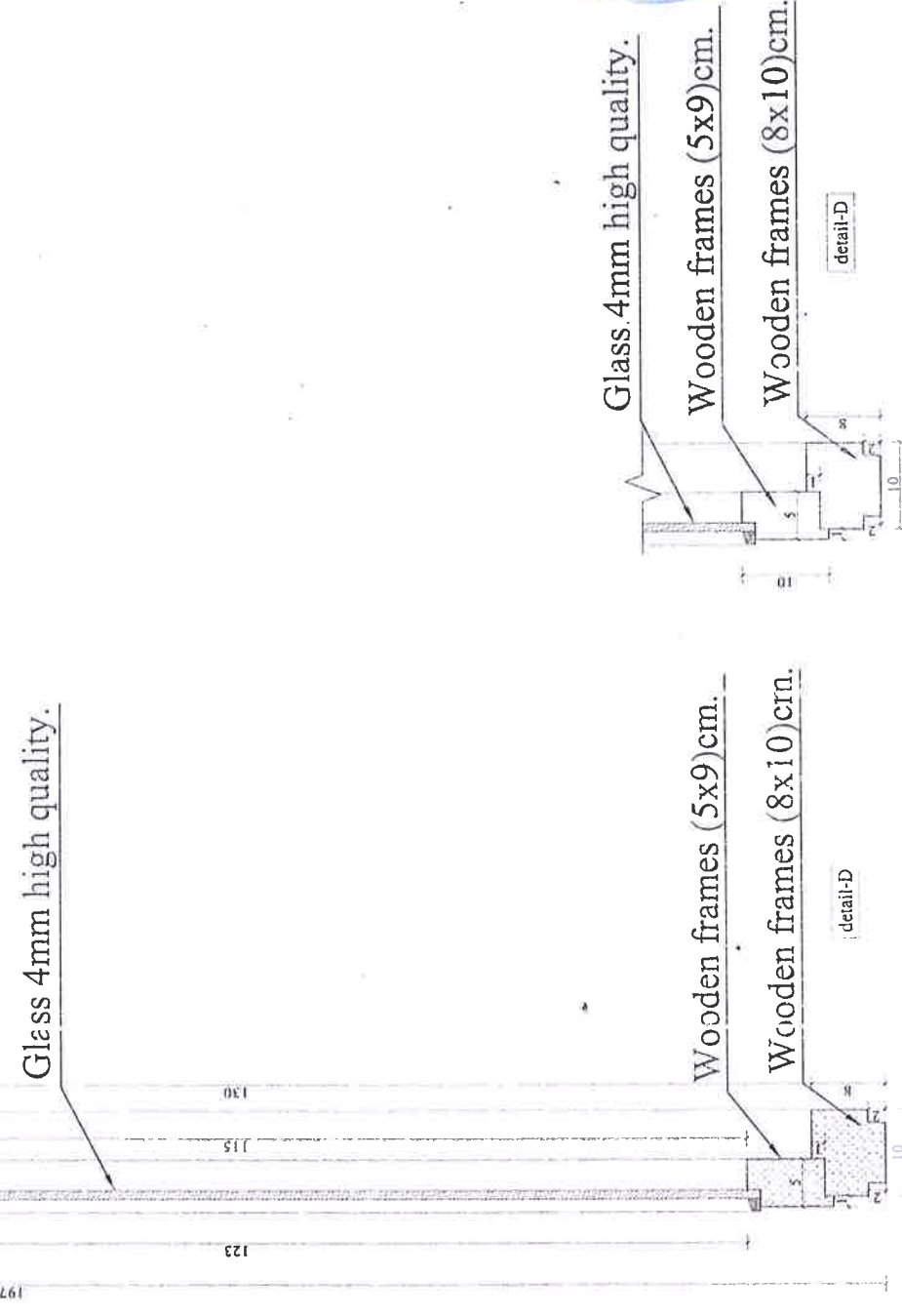
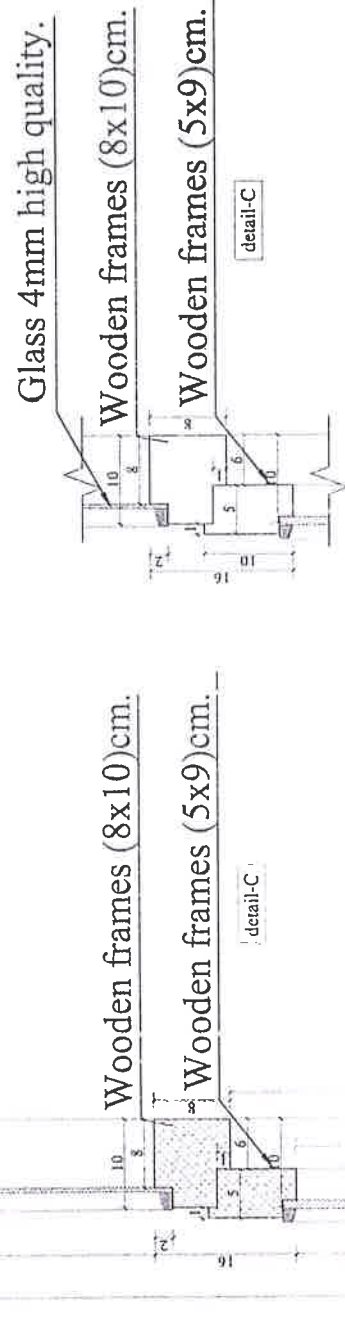
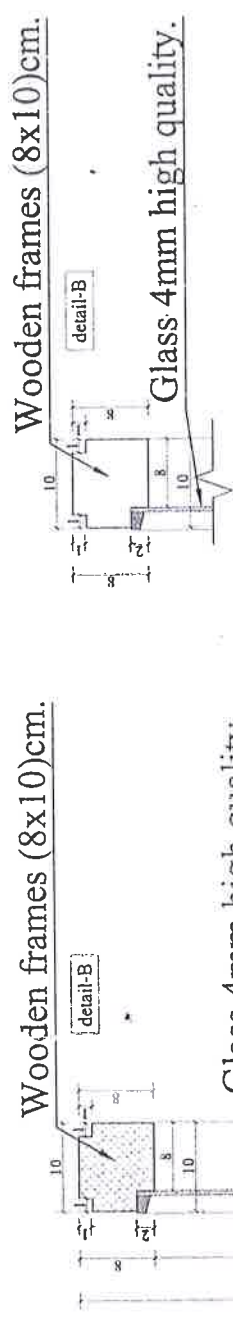
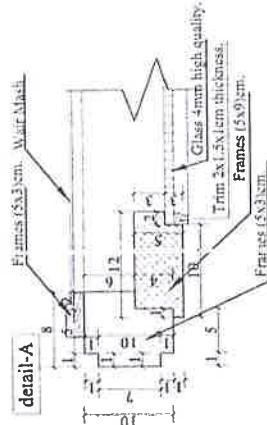


door window-2 n=1



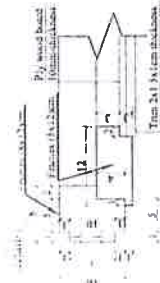
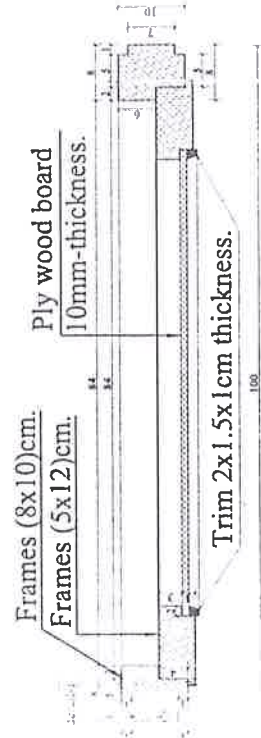


## SECTION B-B

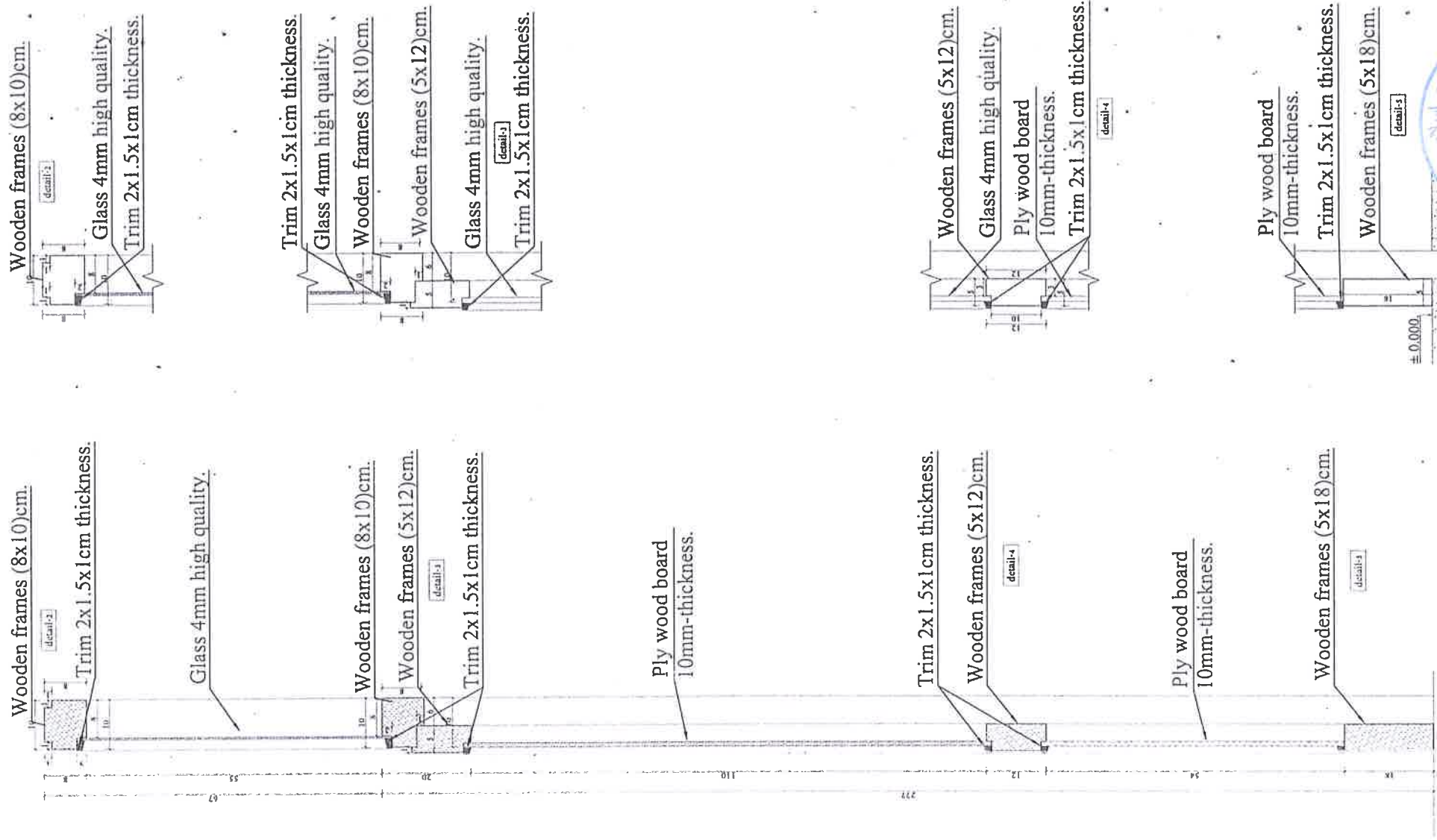




(Door horizontal section)

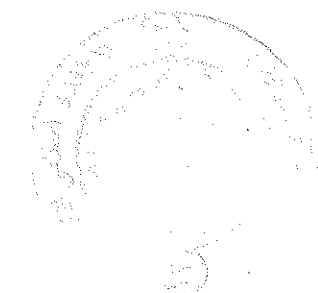


SECTION B-B



SECTION A-A





## General Notes

- Concrete for all reinforced elements will be of ratio(1:1.5:3) and cubical strength of  $(200\text{Kg}/\text{cm}^2)$  after 28 days.
- Reinforcement grade 1 mild steel having minimum yield stress of  $2100\text{kg}/\text{cm}^2$  and reinforcement grade 2 deformed bar having minimum yield stress of  $2700\text{kg}/\text{cm}^2$ .
- For Brick masonry Cement and sand mortar ratio should be (1:5).
- Interior and exterior wall plaster's Cement mortar ratio should be (1:3).
- Form work should be lubricated well before installing reinforcement on.
- Bricks should be soaked at water before using.
- The rebars should be without Corrosion(or Oxidant free)
- Sand and Gravel should be washed before using.
- Usable water for Concrete should not be Acidic , Salted and free of Organic materials
- In Concrete mixture river Gravel with size 2.5 cm be used rather than mountain Crash
- Form work for bending elements should not be removed for less than 18 days.
- Before amendment the structure design consulting with design Engineer is must.
- Procedure of the project commencement till ending should be supervised by MoE site Engineer
- Bearing Capacity of Soil for Foundation design is calculated  $1.5\text{Kg}/\text{cm}^2$ .
- The mark of brick for the shear wall should not be less  $70\text{kg}/\text{cm}^2$ .

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تبصره:

- 1- مارک کانکریت سیخدار در تمام عناصر ساختمانی (M-200) با تناسب (1:1.5:3) استفاده شود.
- 2- در تعمیر مذکور از سیخ های کلاس I-A با مقاومت سنجشی ( $R_n=2100\text{kg}/\text{cm}^2$ ) و I-AI با مقاومت سنجشی ( $R=2700\text{kg}/\text{cm}^2$ ) استفاده شده است.
- 3- برای خشت کاری از مصالح سمّت وریگ با تناسب (1:5) استفاده شود.
- 4- پلستر دیوارهای داخلی و خارجی از مصالح سمّت وریگ با مارک (M-300) با تناسب (1:3) استفاده شود.
- 5- قالب ها قبل از استفاده باید خوب چرب کاری شود.
- 6- خشت ها قبل از استفاده باید خوب مرطوب گردند.
- 7- سیخ های مورد استفاده باید عاری از زنگ زده گی باشد.
- 8- ریگ ویش قبل از استفاده باید دستشو گردد.
- 9- آب های مورد استفاده برای مخلوط کانکریت شور و نمکی نباشد.
- 10- در مخلوط کانکریت جنل کرش نوع دریایی با سورت های الی قطر 2.5 سانتی متر استفاده گردد و از جنل کرش نوع صخره ای یا کوهر استفاده نشود.
- 11- قالب های عناصر انحنایی به هیچ وجه قبل از 18 روز دور نگردند.
- 12- در حصه تدبیل نقشه با انجنیر دیراین کننده مشوره گردد.
- 13- پروژه کار پروژه از شروع تا ختم توسط انجنیر ساختمان مراقبت گردد.
- 14- مقاومت خاک ( $1.5\text{cm}/\text{glk}^2$ ) برای دیراین تهداب ها در نظر گرفته شده است.
- 15- مارک خشت برای شیروالهای خشتی نباید کمتر از  $70\text{kg}/\text{cm}^2$  باشد.

مقاومت فشاری مجاز خاک (qall) بر اساس  $\text{kg}/\text{cm}^2$

### Bearing Capacity of Soil Based on (ACI)

Recomm endatio	Limit	Specifications	Types of Soil
8	7-10	Very dense Compacted	Gravel, Gravel & Sand, Mix of Gravel & Stone جنل، جنل وریگ، مخلوط جنل و سنگ
6	5-7	Medium Course Compacted	
4	3-6	Loose Compacted	
4	4-6	Very dense Compacted	Stiff Sand, Sand with a little Greval ریگ سخت، ریگ با کمی جنل
3	3-4	Medium Course Compacted	
2	2-3	Loose Compacted	
3	3-5	Very dense Compacted	Medium Stiff Sand , Sand with Mud or Clay ریگ با سختی متوسط، ریگ با لای یارس
2.5	2-4	Medium Course Compacted	
1.5	1-2	Loos Compacted	
3	3-4	Very dense Compacted	Uniform Sand, Sand with a little Mud or Clay ریگ یکنواخت، ریگ با کمی جنل
2	2-3	Meidum Course Compacted	
1.5	1-2	Loos Compacted	
4	3-6	Very Stiff	Uniform Clay , Clay with Sand or Mud رس یکنواخت، ریگ با کمی جنل
2	1-3	Medium Siff	
0.5	0.5-1	Uncompacted	
3	2-4	Very Stiff	Mud,Sandy Mud or Clay لای، لای ریگی یارسی
1.5	1-3	Medium Siff	
0.5	0.5-1	Uncompacted	



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN: ENG. FARAH  
REVIEWER: ENG. LATHEBA ZULWARI  
CHECK APPROVED BY: ENG. AHMAD HIN MAJIDI

APPROVED Doc. No.: ENG. AHMAD HIN MAJIDI  
SCALE: AS SHOWN (A3)  
DATE: JAN. 2015

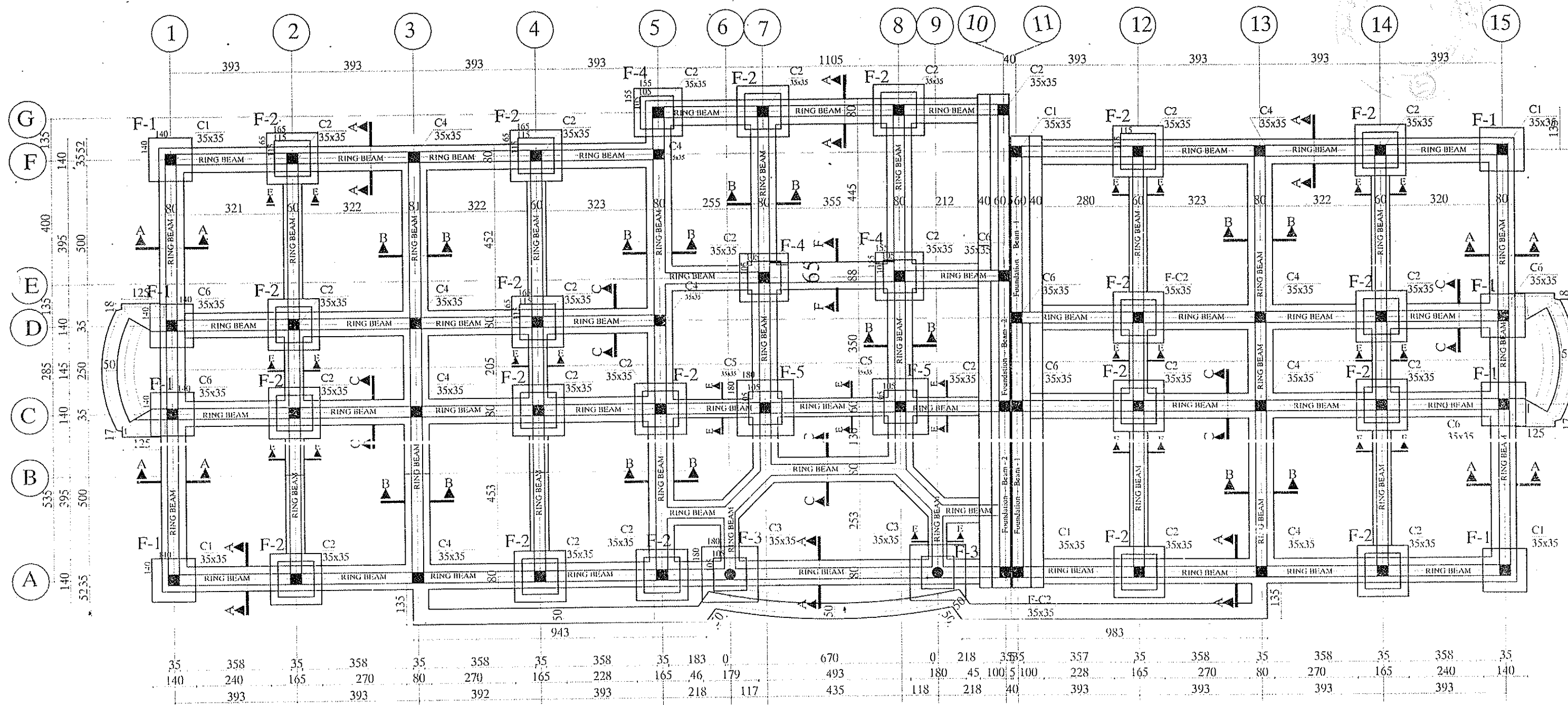
DRAWING TYPE: STRUCTURAL  
COMPOSED BY: 1  
NO. OF SHEETS: 20

PROVINCE:  
PROJECT NAME:  
DRAWING TITLE:

6 x 2 Class Room Metal Sheet Roof

GENERAL NOTES

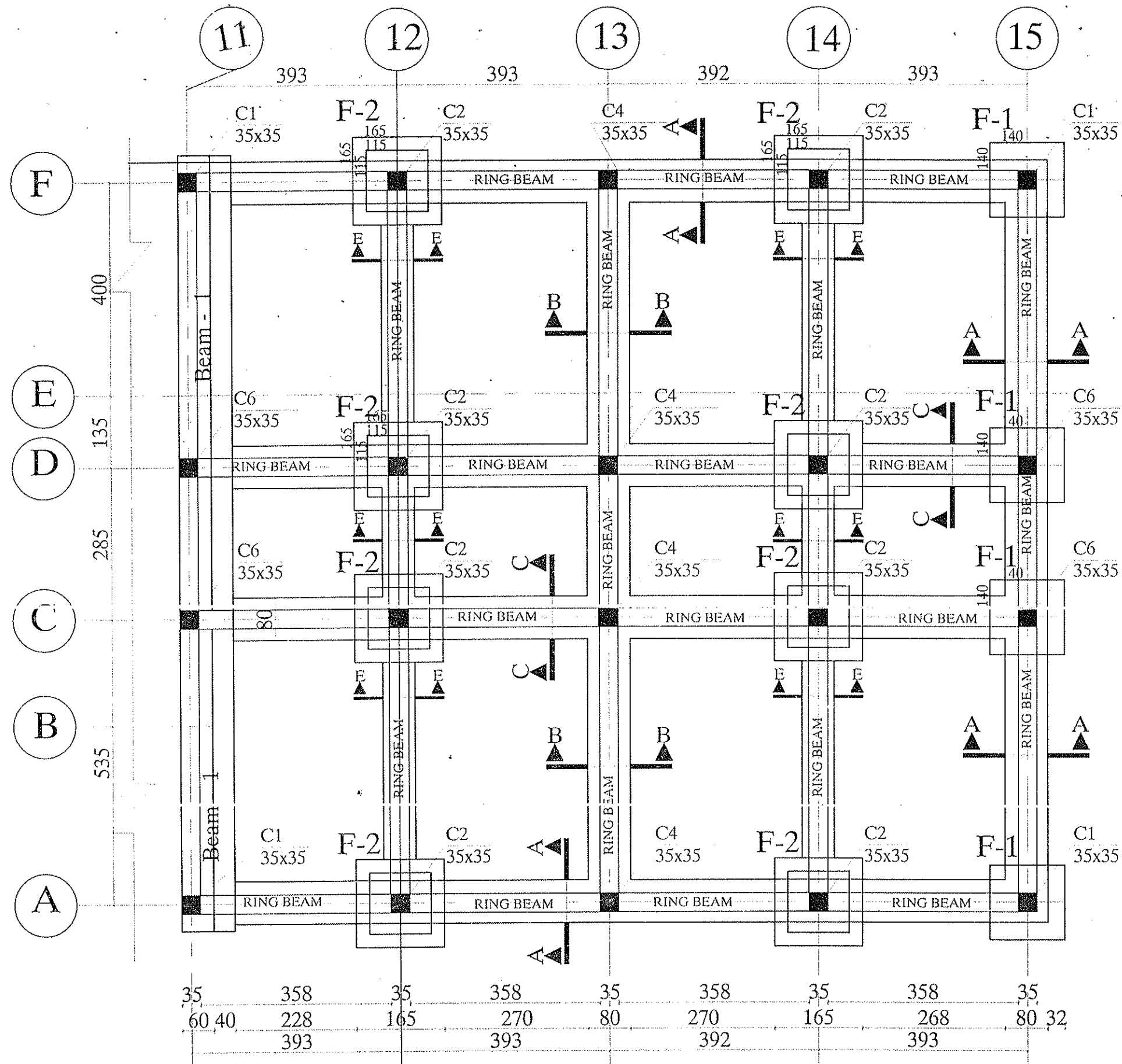




FOUNDATIONS PLAN







FOUNDATIONS PLAN



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

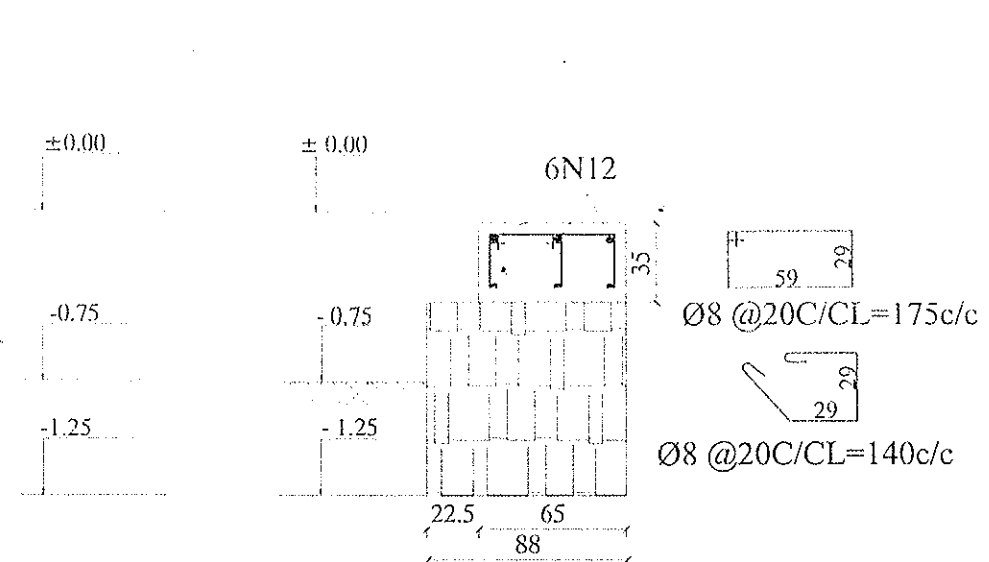
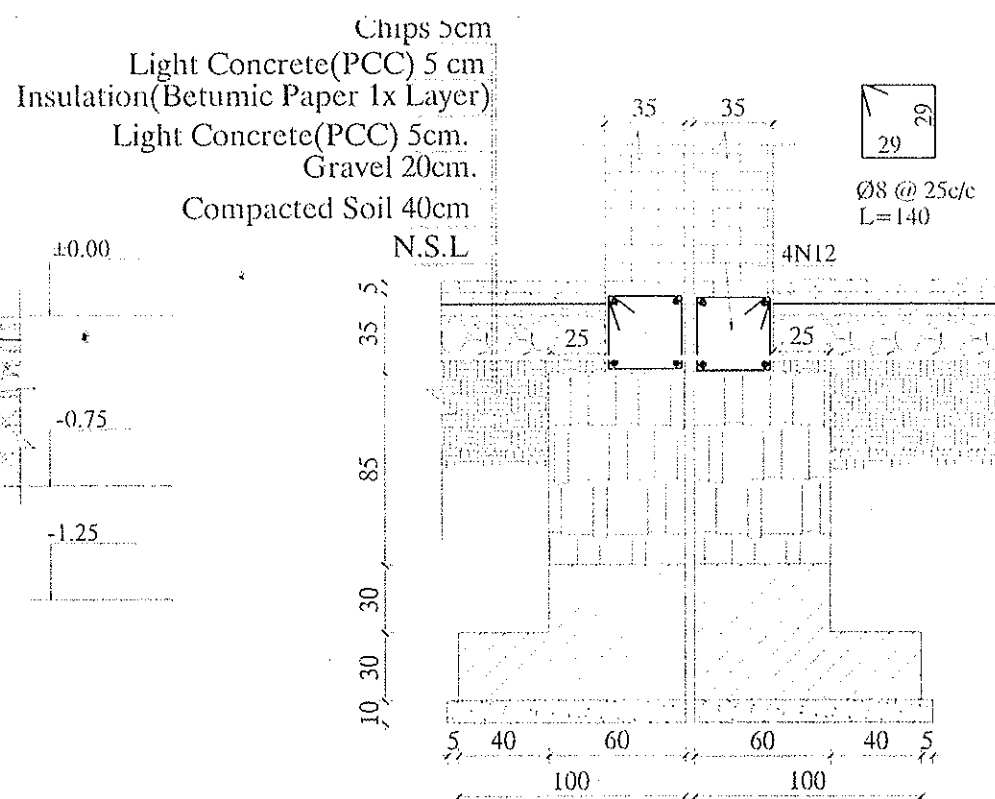
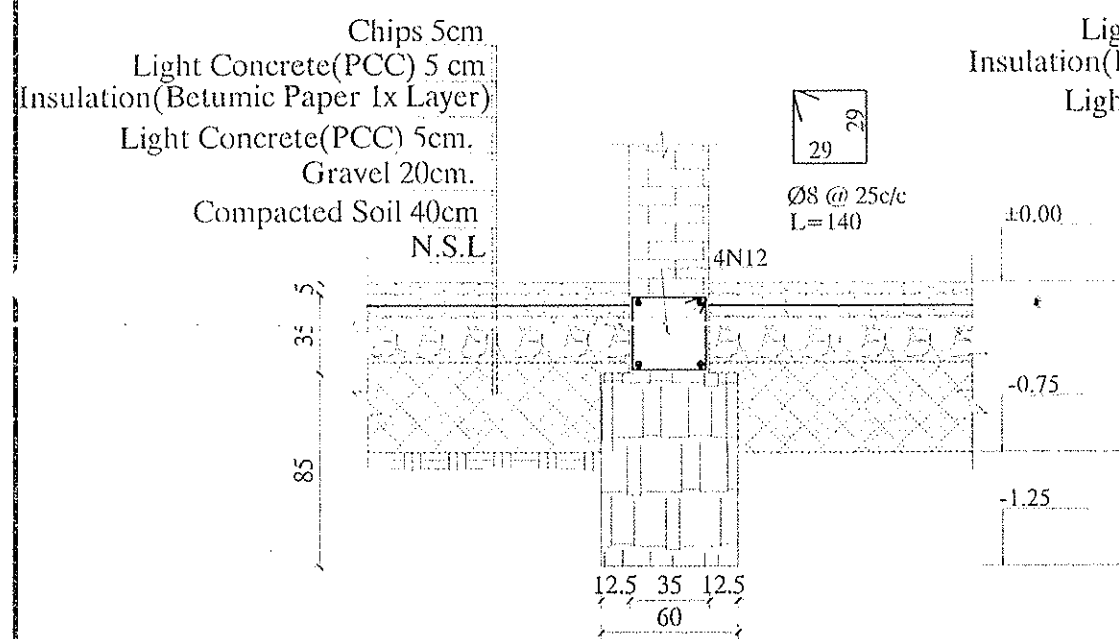
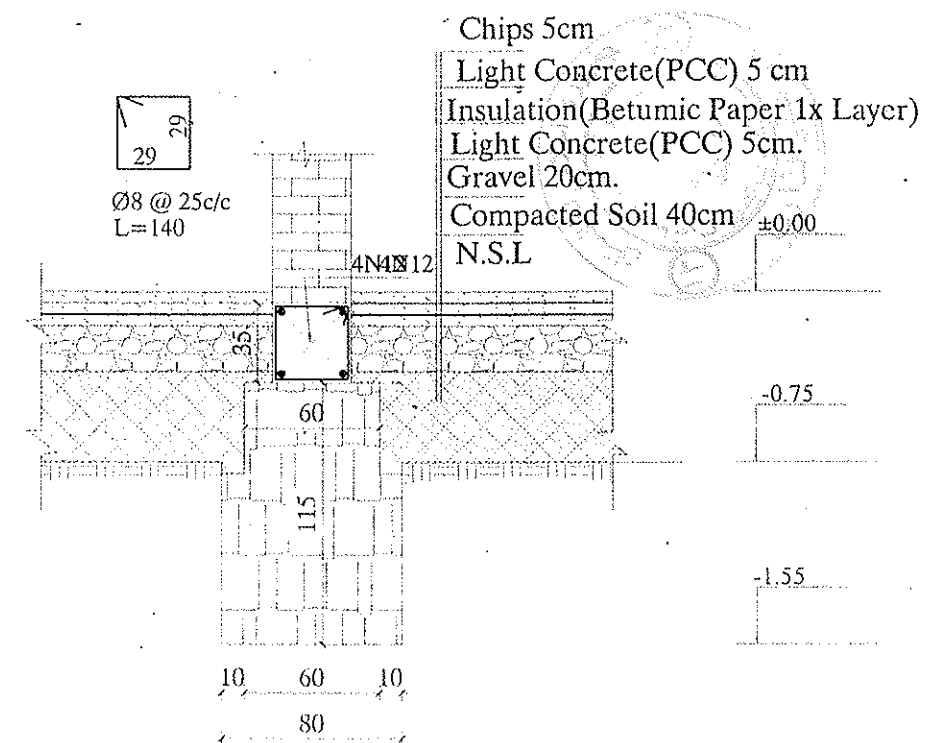
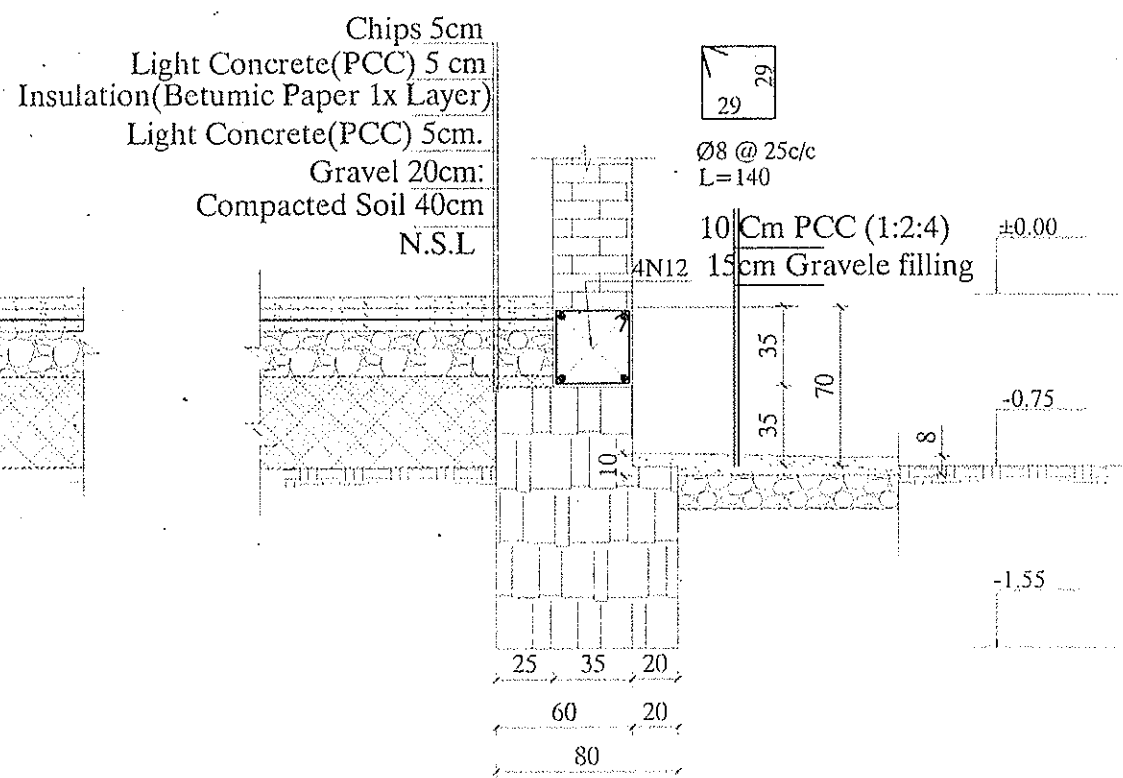
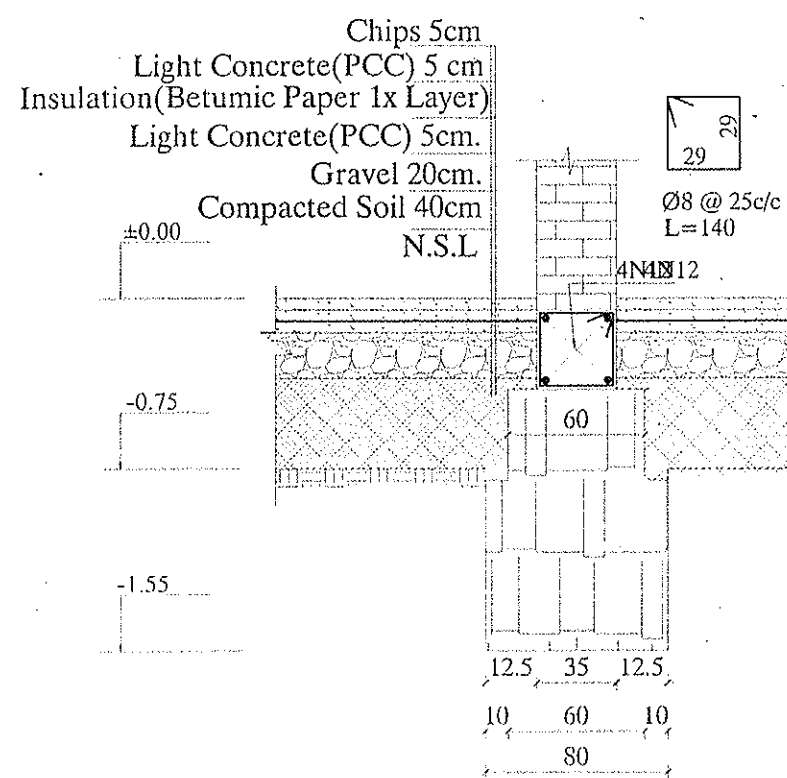
ARCHITECT-DESIGN: ENGR. FARAH  
REVISION: ENGR. LAFIA ZEWARI  
HEAD ARCHITECT: ENGR. ABIMATIN SAGOR

APPROVED: ENGR. ABIMATIN SAGOR  
SCALE: AS SHOWN (1:100)  
DATE: 2010

DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 6+2 Class Room Metal Sheet Roof  
DRAWING TITLE: Foundation

6+2 Class Room Metal Sheet Roof

Foundation



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN ENG. FARAH

RECUERDOS      ENCUENTROS

THE H. APTHEK FOUNDATION INC., 2001, ALL RIGHTS RESERVED.

APPROVED: MacMoe ENG AB MOMEN RAM

5654

22. A 40.

: DRAWING  
TIME

100

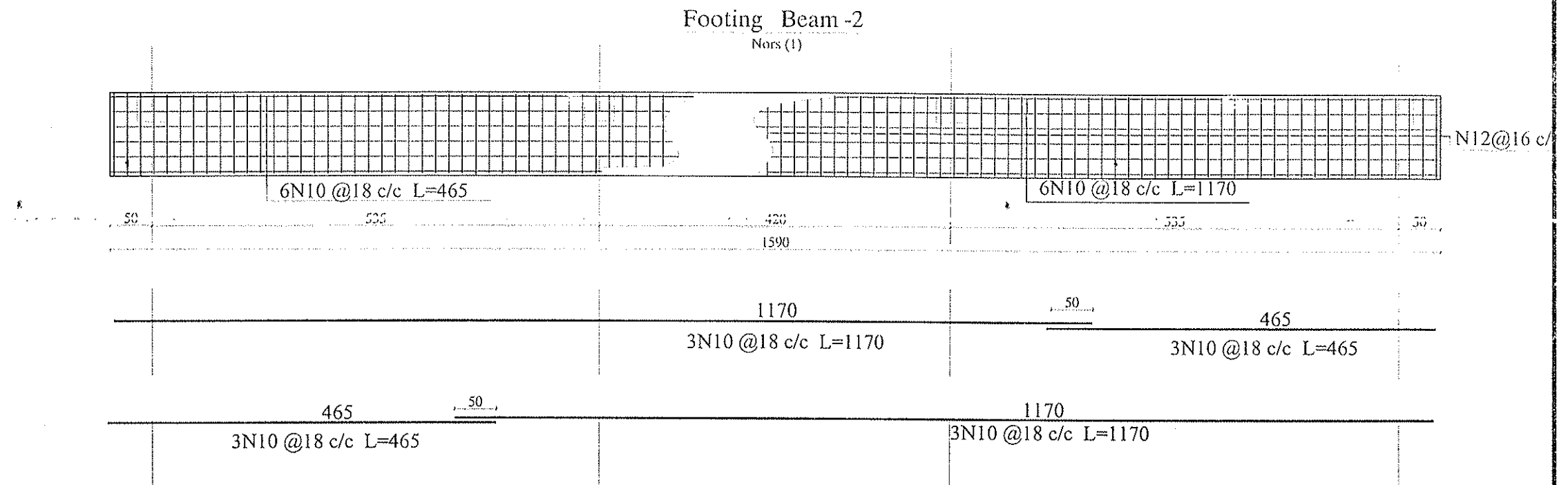
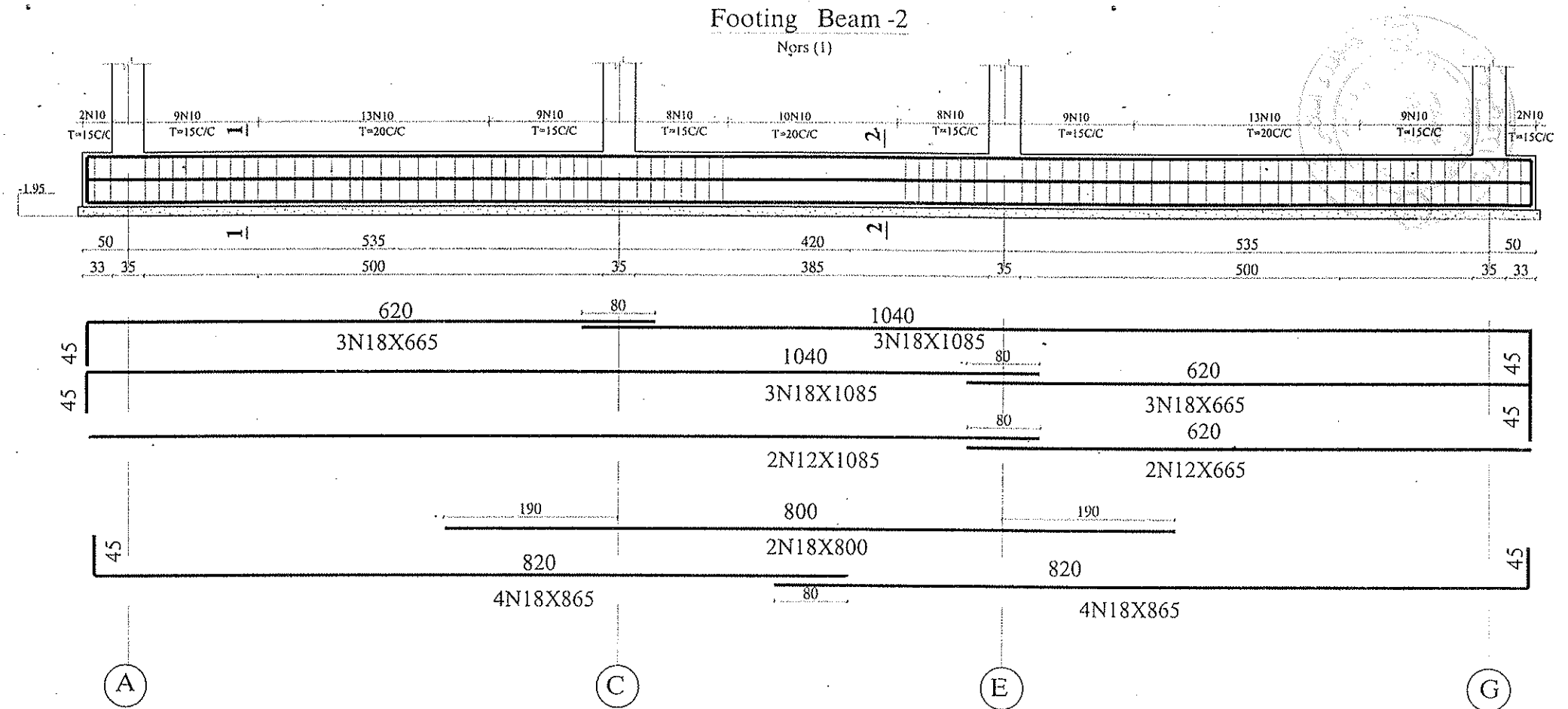
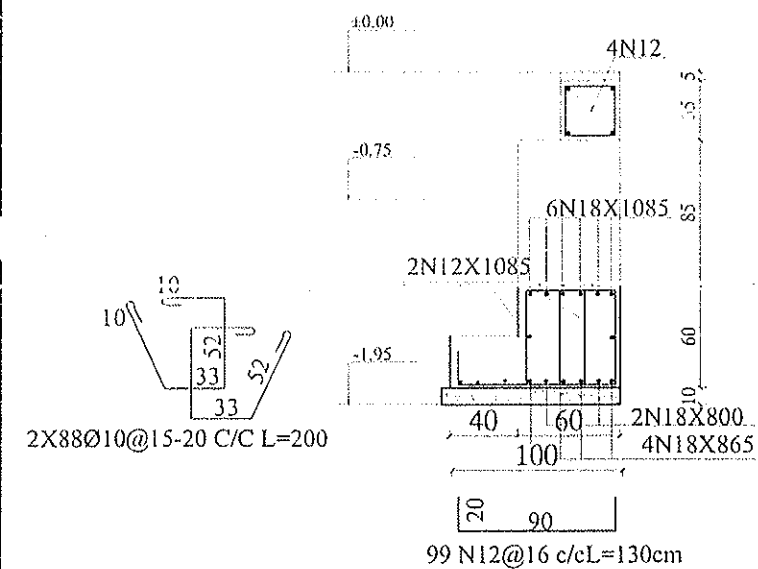
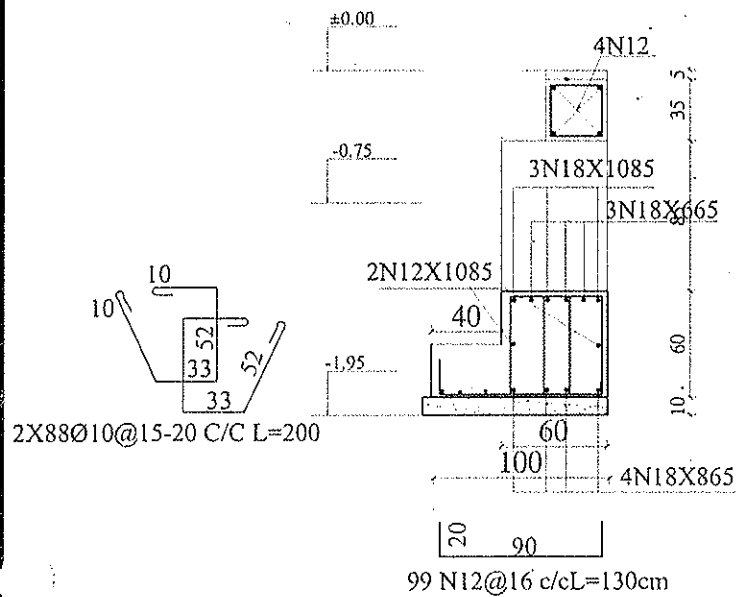
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PROVINCE

PROJECT NAME:

DRAWING TITLE





MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



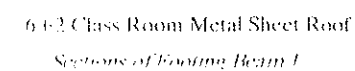
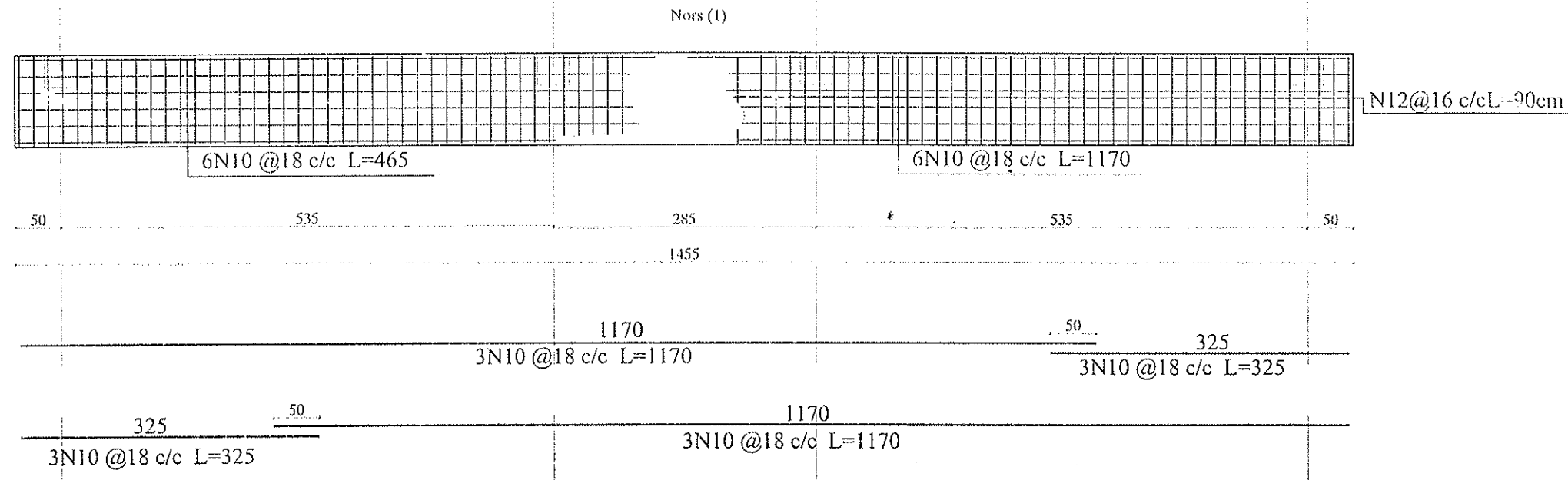
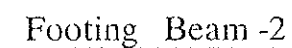
STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH  
RCC DESIGN: ENG. FAHMAZ FARAH  
DATE APPROVED BY: ENG. ABIMAHMAD MAJID

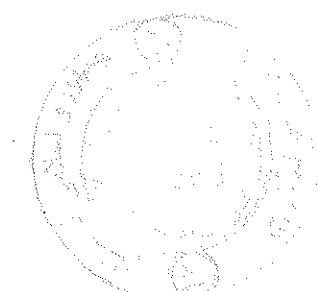
APPROVED: Doc/Mod: ENG. ABIMAHMAD MAJID  
SCALE: AS SHOWN (A1)  
DATE: JAN 2015

DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 6 + 2 Class Room Metal Sheet Roof  
DRAWING TITLE: Sections of Footing Beam 1

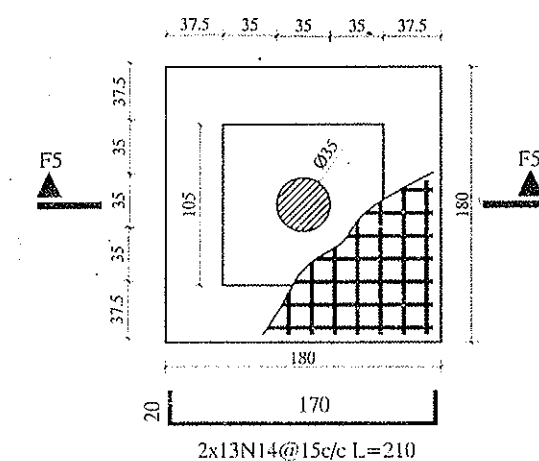
6 + 2 Class Room Metal Sheet Roof  
Sections of Footing Beam 1



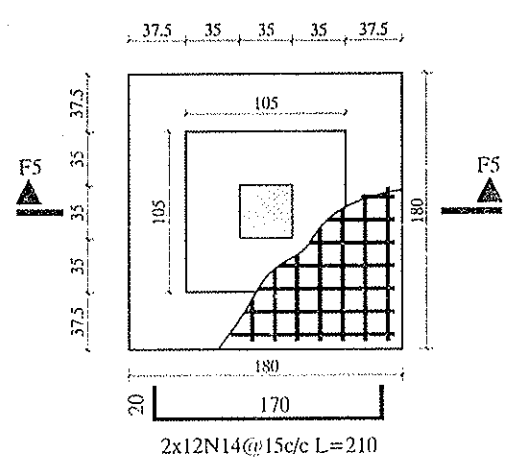




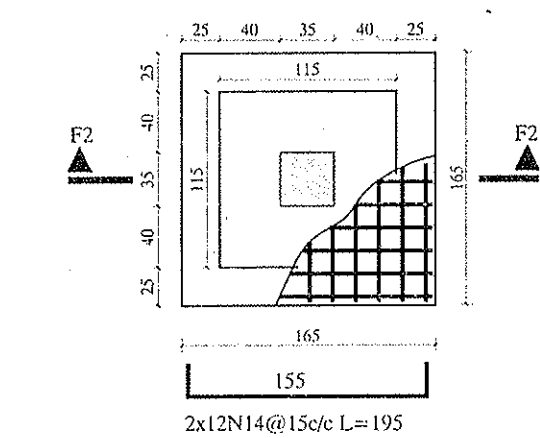
Footing FC-3  
N=2



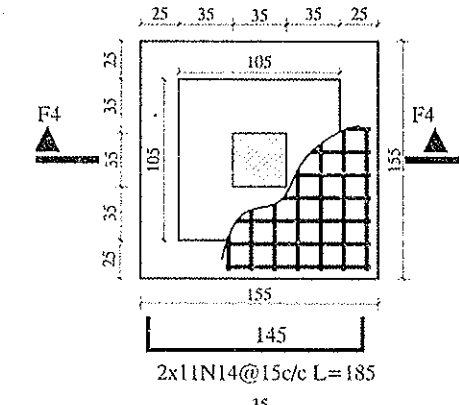
Footing FC-5  
N=2



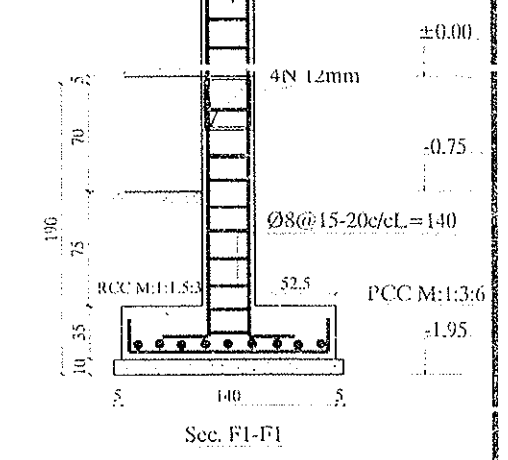
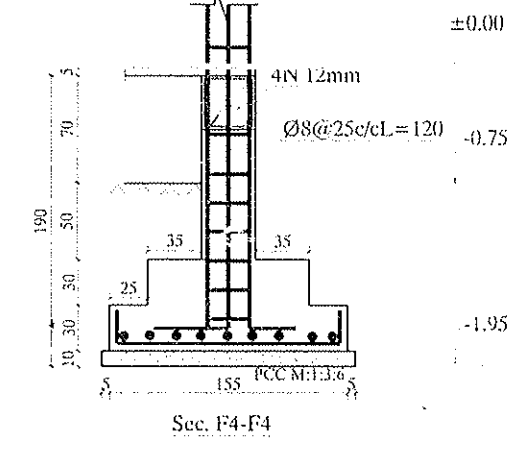
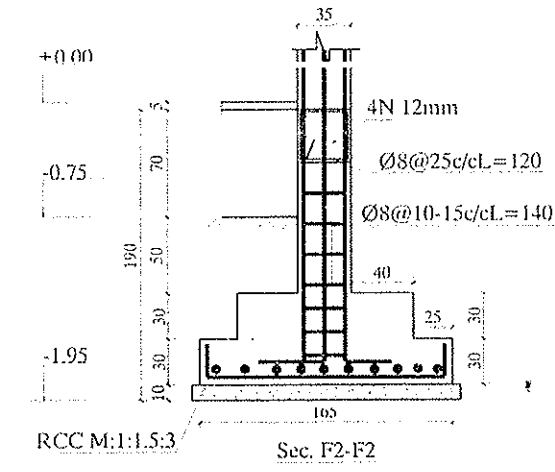
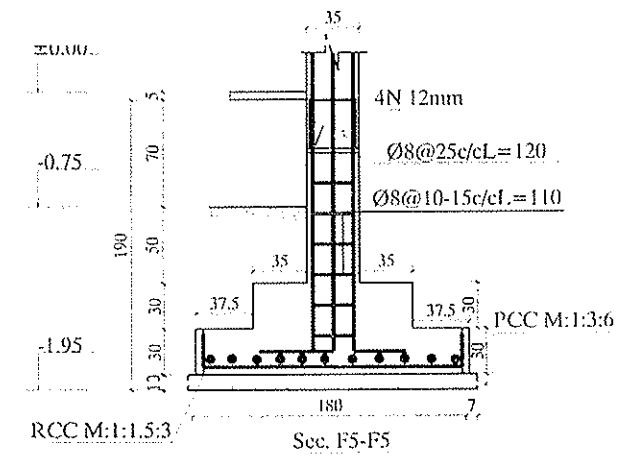
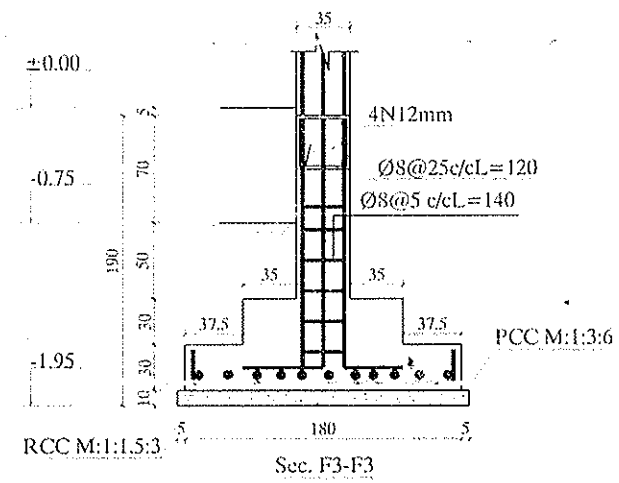
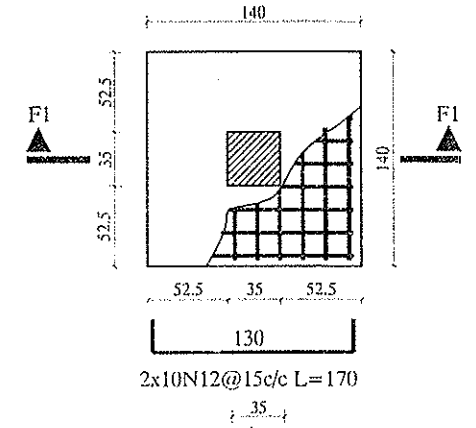
Footing -2  
N=21



Footing FC-4  
N=3



Footing -1  
N=8



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



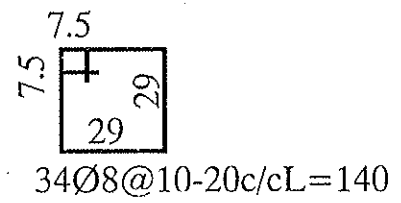
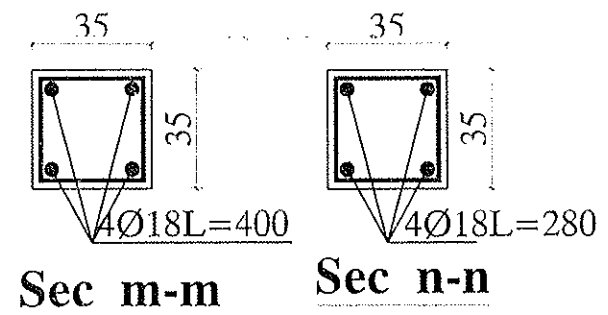
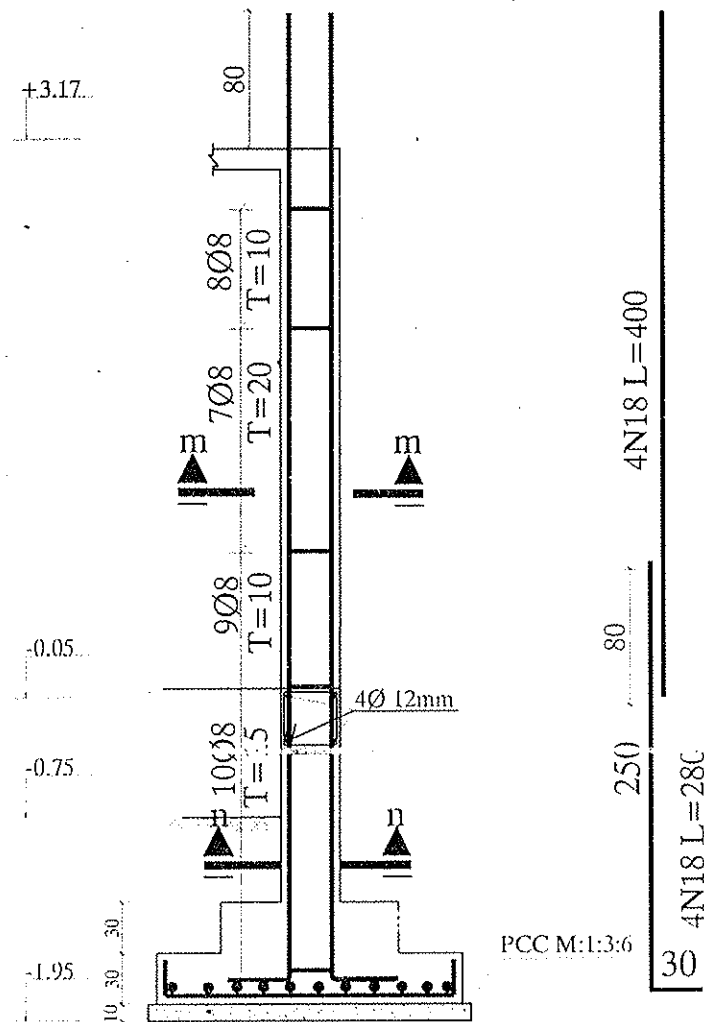
STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN	ENG. FARAH	APPROVED/Doc/Mod	ENG. AB. MOMEN RAAD
REC. DESIGN	ENG. FARIMA ZEWARI	SCALE	AS SHOWN (A4)
DATE APPROVAL	ENG. AB. MOMEN RAAD	DATE	ENG. AB. MOMEN RAAD

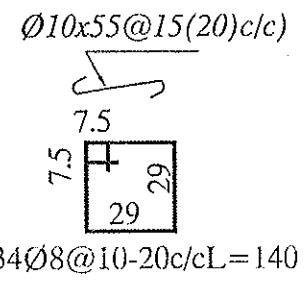
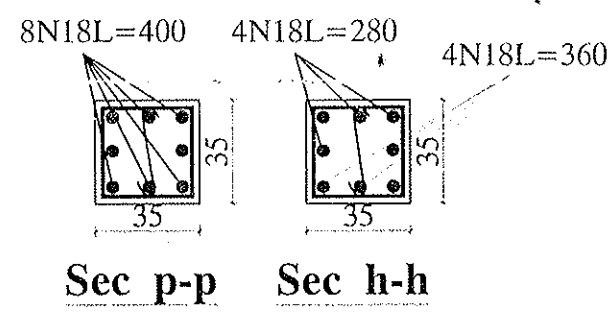
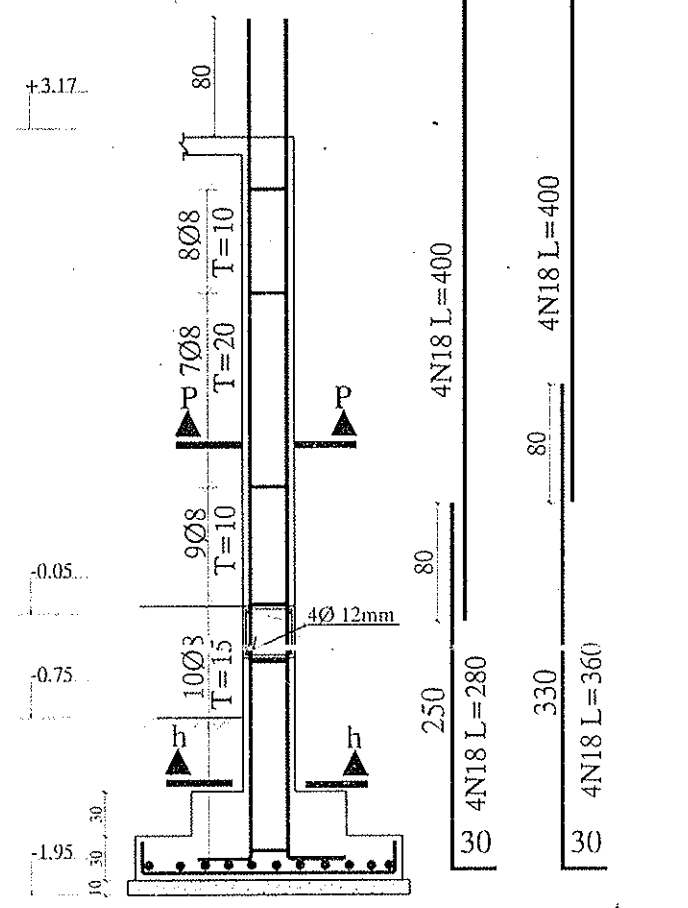
DRAWING TYPE	STRUCTURAL	PROVINCE
PROJECT NAME	6 + 2 Class Room Metal Sheet Roof	DRAWING TITLE

Sections Foundation

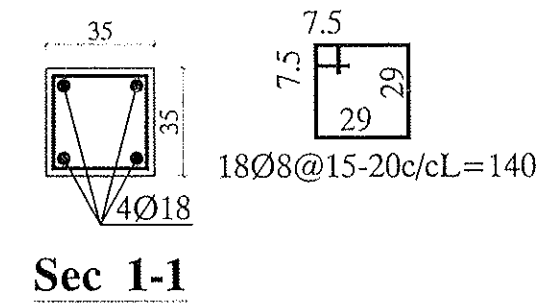
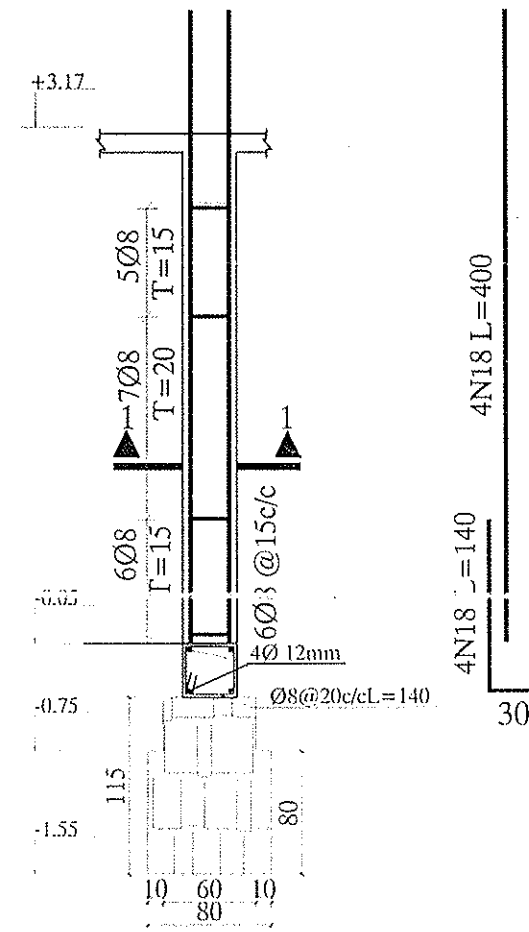
**Column C-1**  
N=6



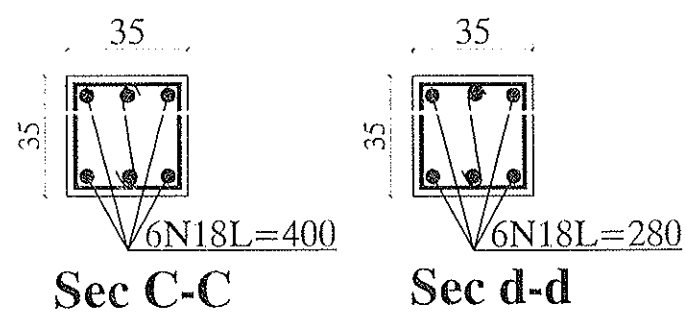
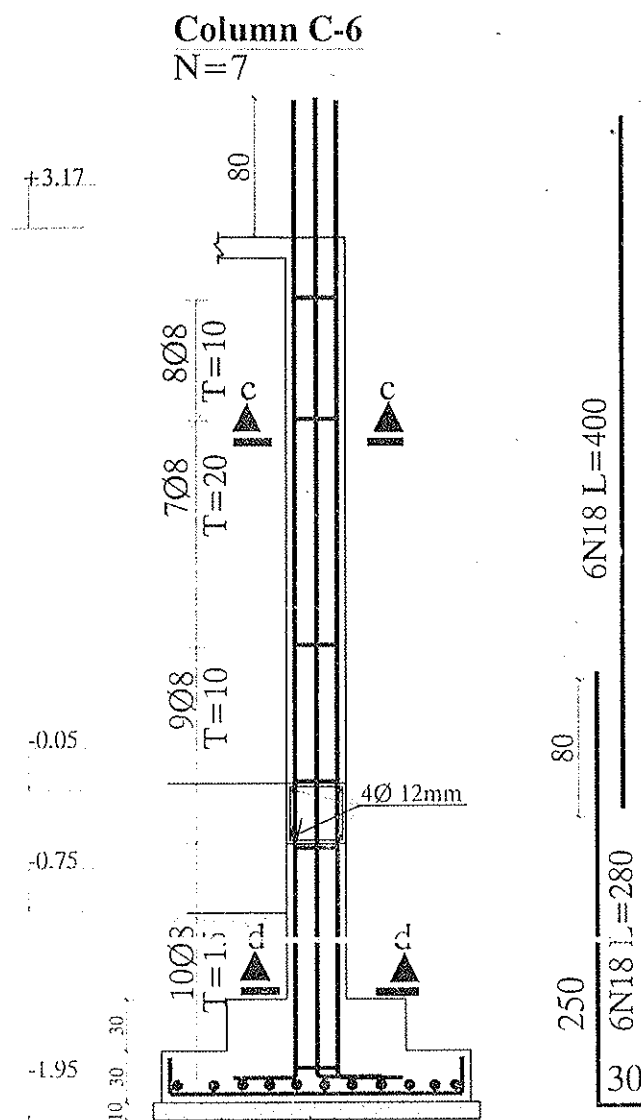
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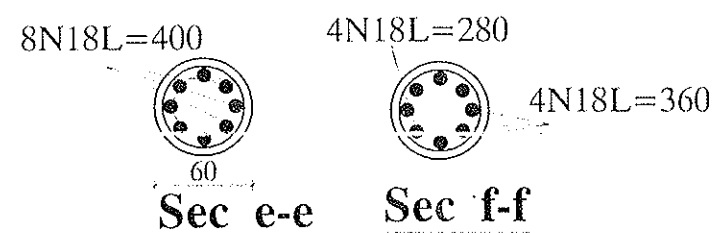
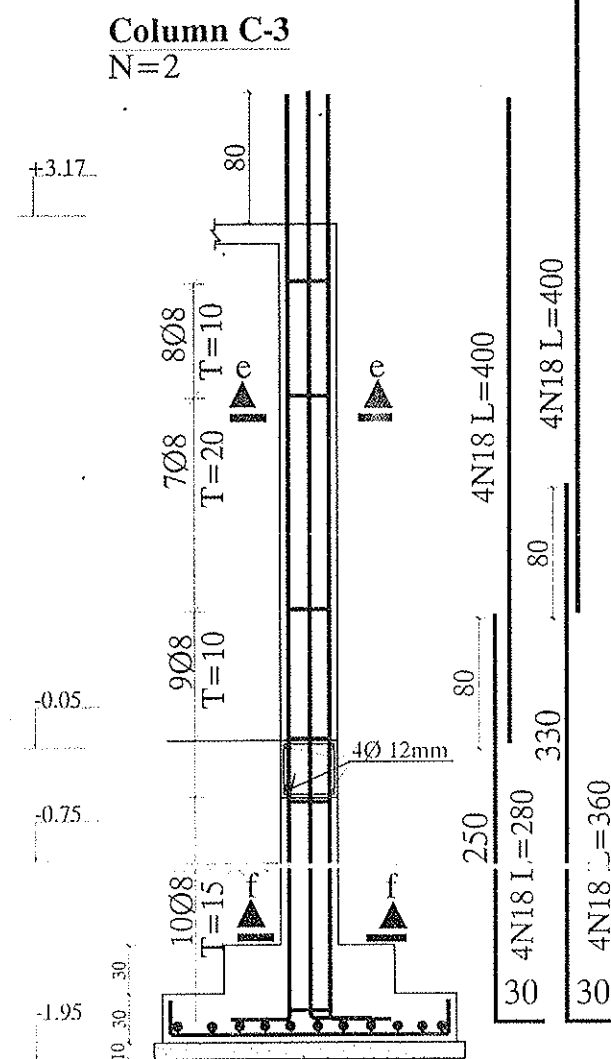
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N=10



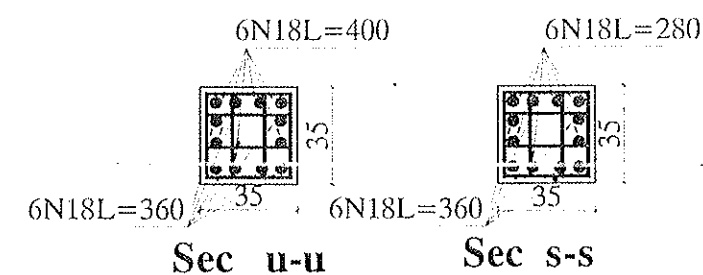
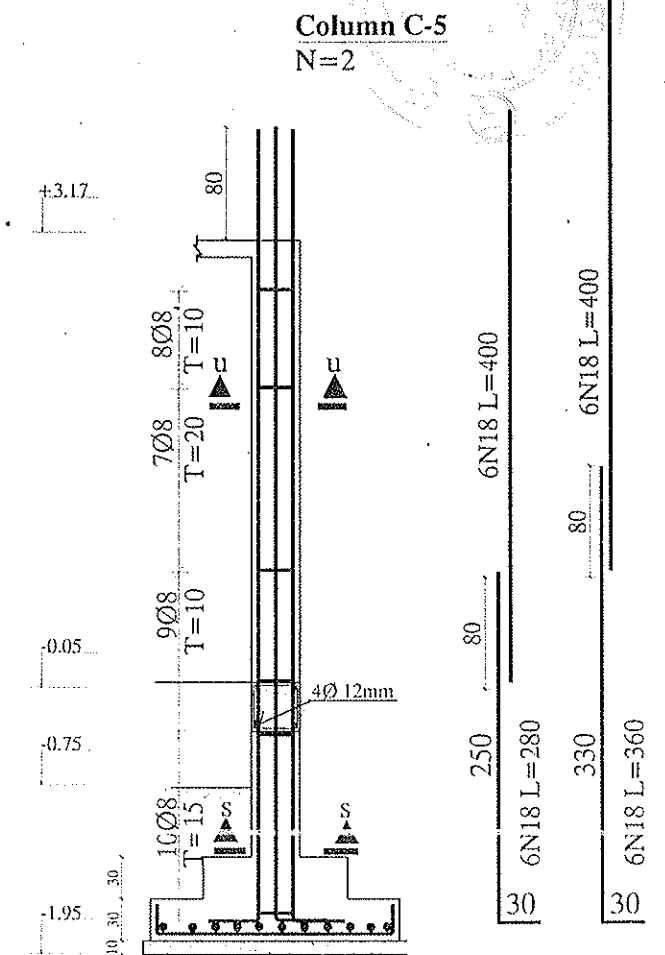




Ø10x55@15(20)c/c  
 34Ø8@10-20c/cL=140



46Ø8@7-10c/c L=125



34Ø8@10-20c/cL=100  
 34Ø8@10-20c/cL=140



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STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH

REVISION: ENG. LATIHA ZEWARI

DATE: 1400/05/10

APPROVED: Doc/Moc: ENG. AB MOMEN RAAD

SCALE: AS SHOWN

DATE: 1400/05/10

DRAWING TYPE: STRUCTURAL

PROJ: 60

DATE: 1400/05/10

PROVINCE: PAKISTAN

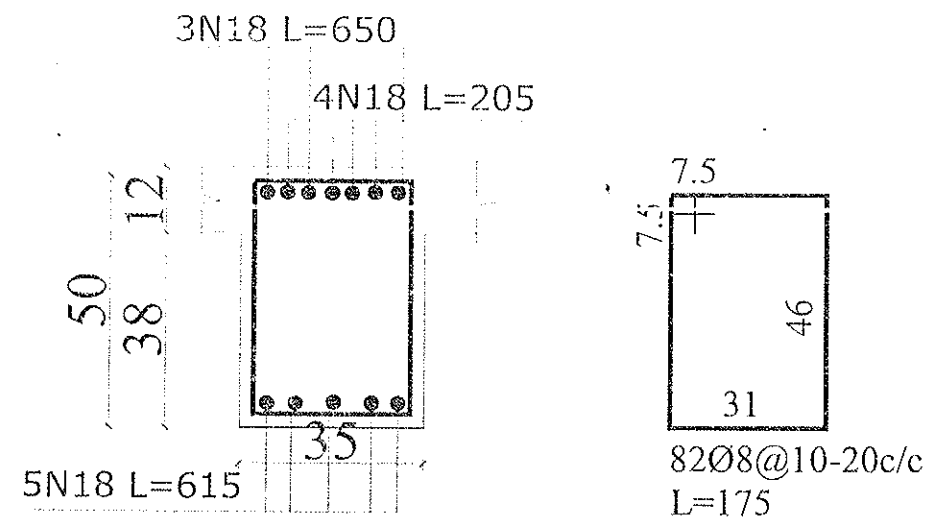
PROJECT NAME: 6+2 Class Room Metal Sheet Roof

DRAWING TITLE: COLUMNS

6+2 Class Room Metal Sheet Roof

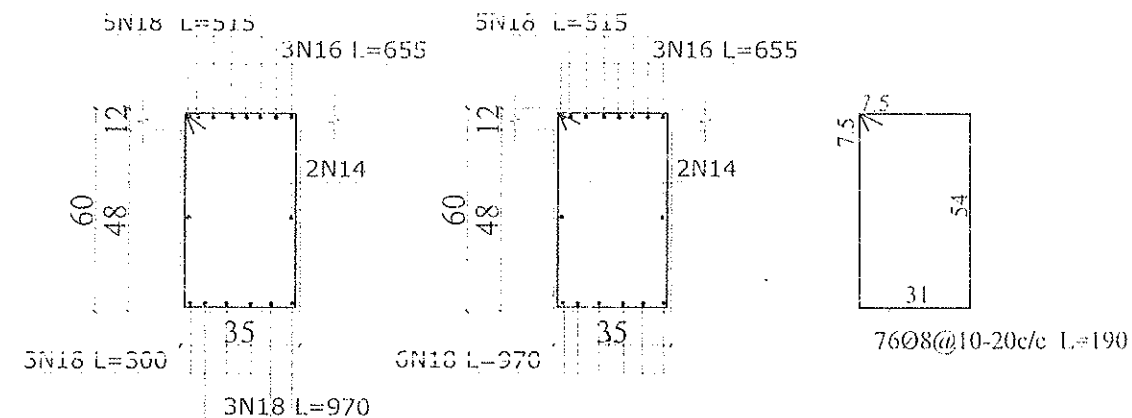
COLUMNS

N=8 35x50



## SECTION M-M

N=1 35x60



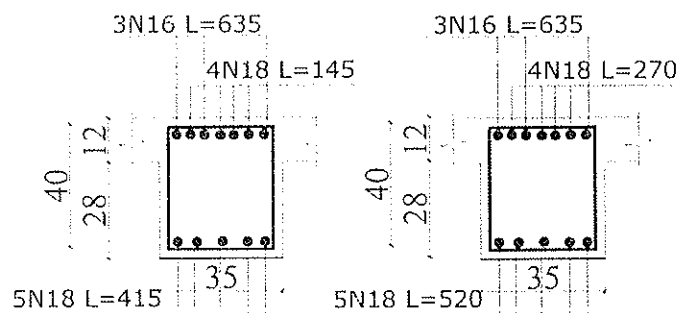
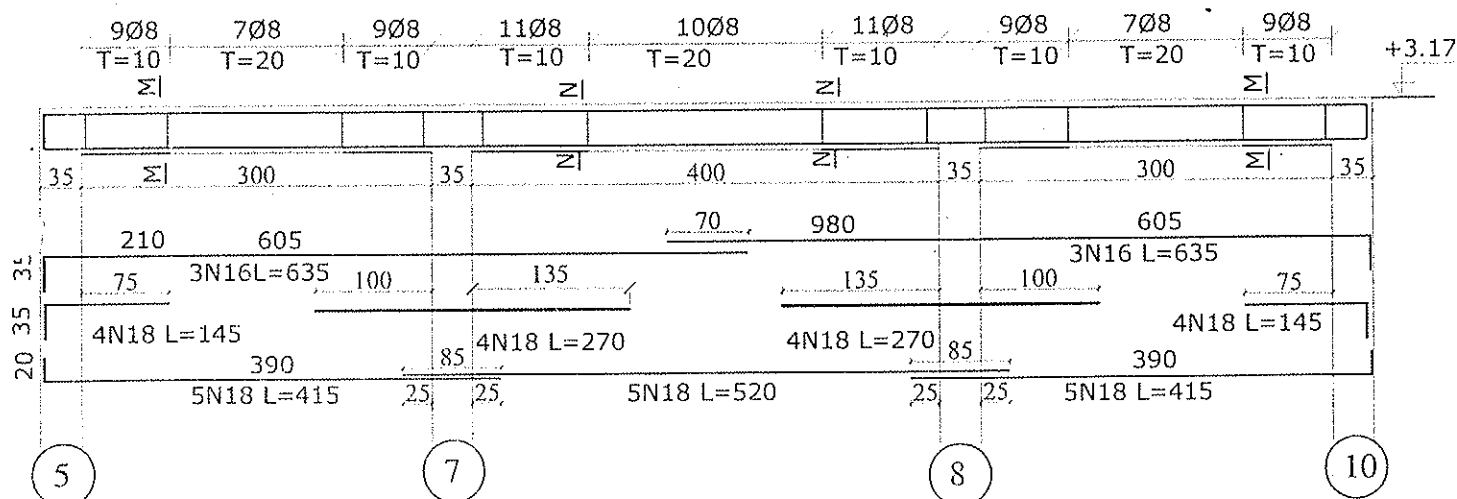
## SECTION R-R

## SECTION S-5



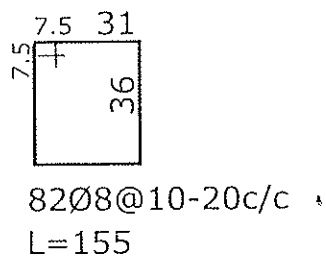
## FRAME-2

N=1 35x40



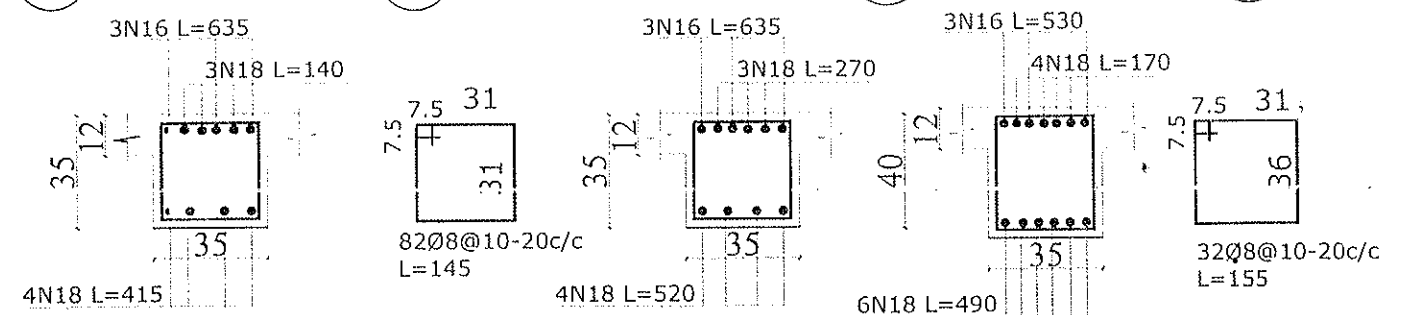
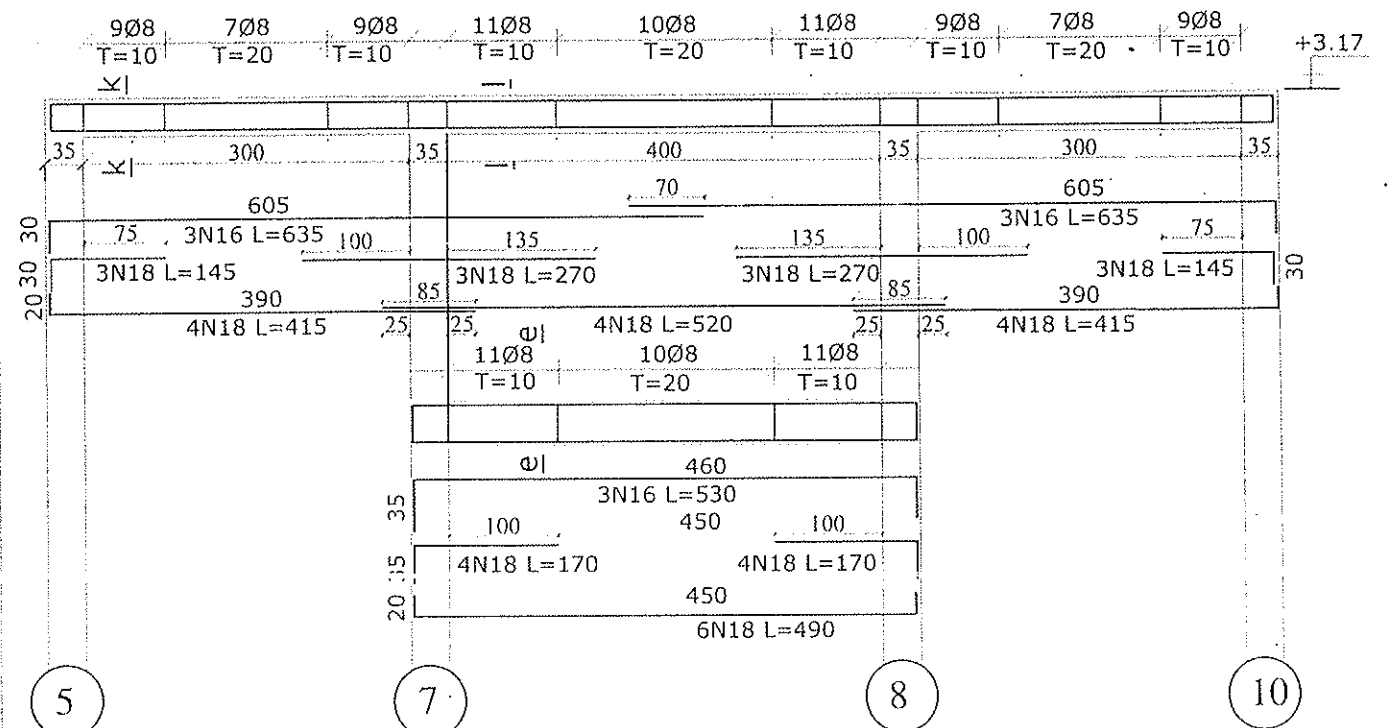
SECTION M-M

SECTION N-N



## FRAME-4

N=1 35x35



SECTION K-K

SECTION I-I

SECTION e-e



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DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH  
RECORD/DESIGN: ENG. FARHAT ZAWAR  
DATE: 1402/05/10

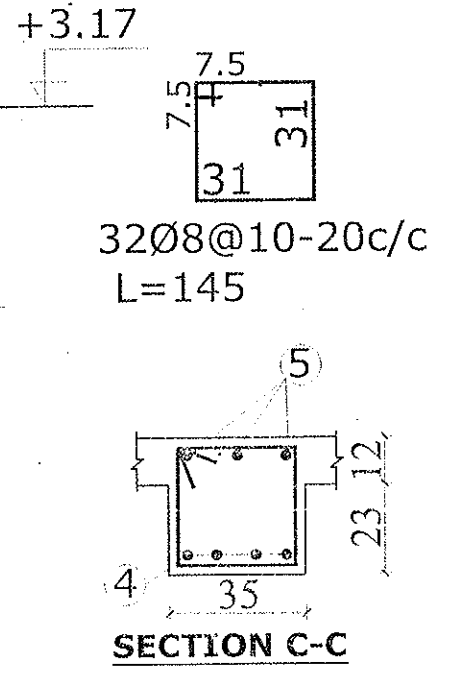
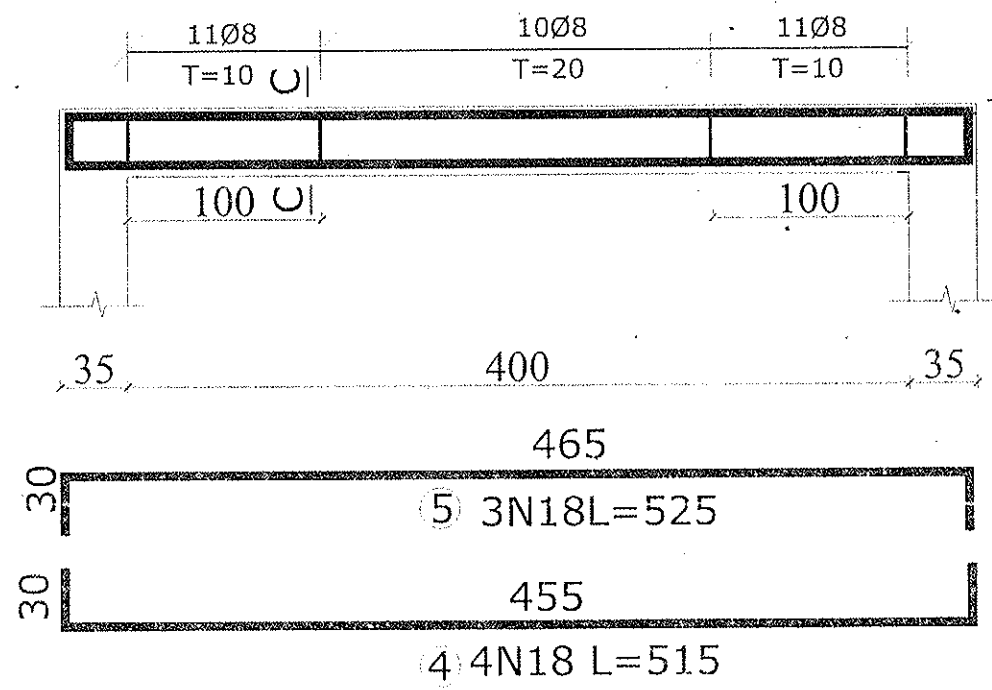
APPROVED: ENG. AHMAD RAAD  
SCALE: AS SHOWN (A1)  
DATE: 1402/05/10

DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 612 Class Room Metal Sheet Roof  
DRAWING TITLE: Reins and Sections

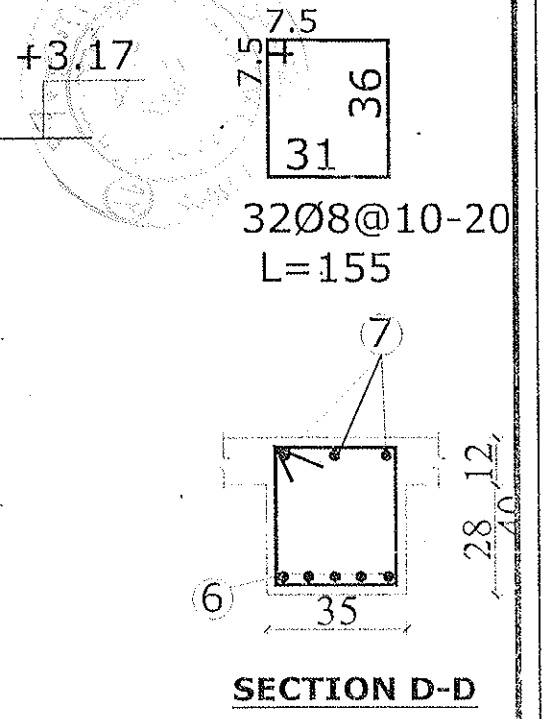
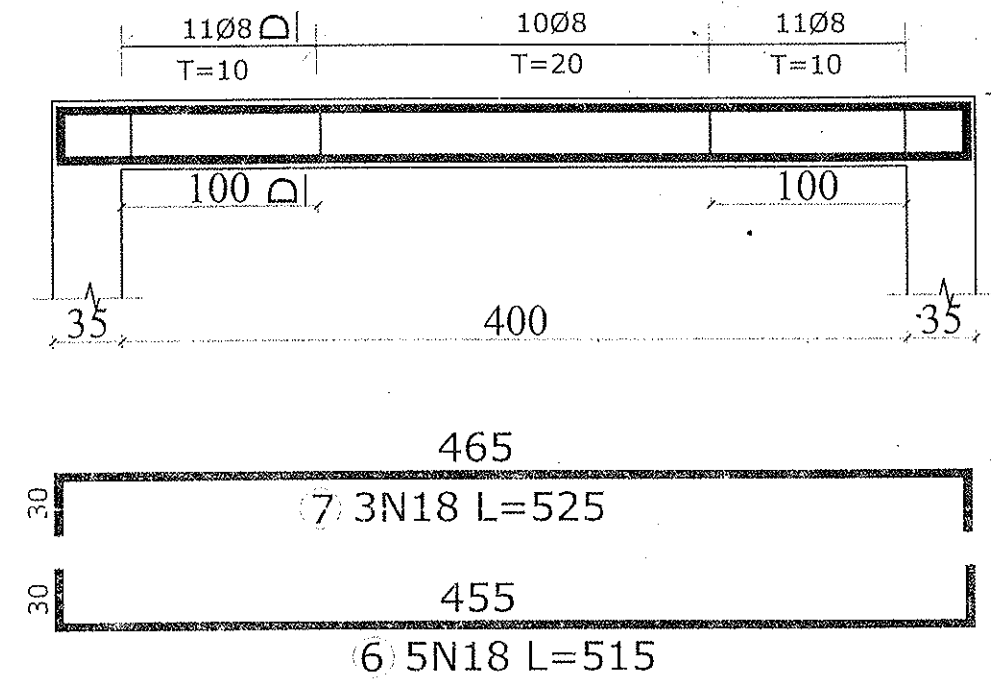
PROVINCE:   
PROJECT NAME:   
DRAWING TITLE:   
Reins and Sections

612 Class Room Metal Sheet Roof  
Reins and Sections

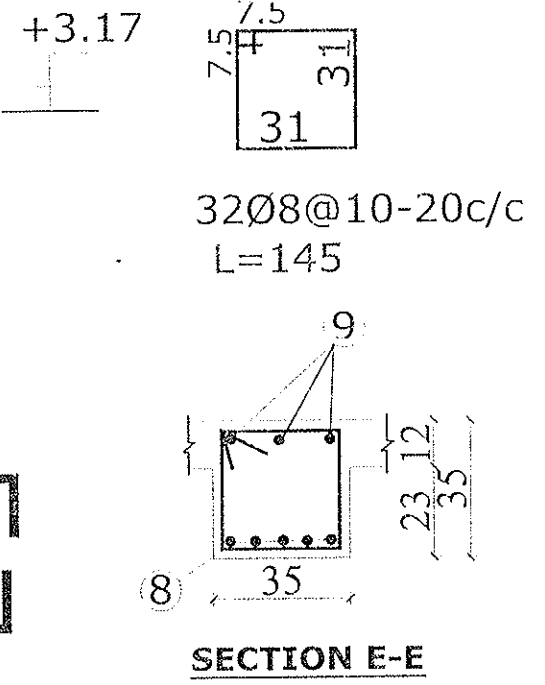
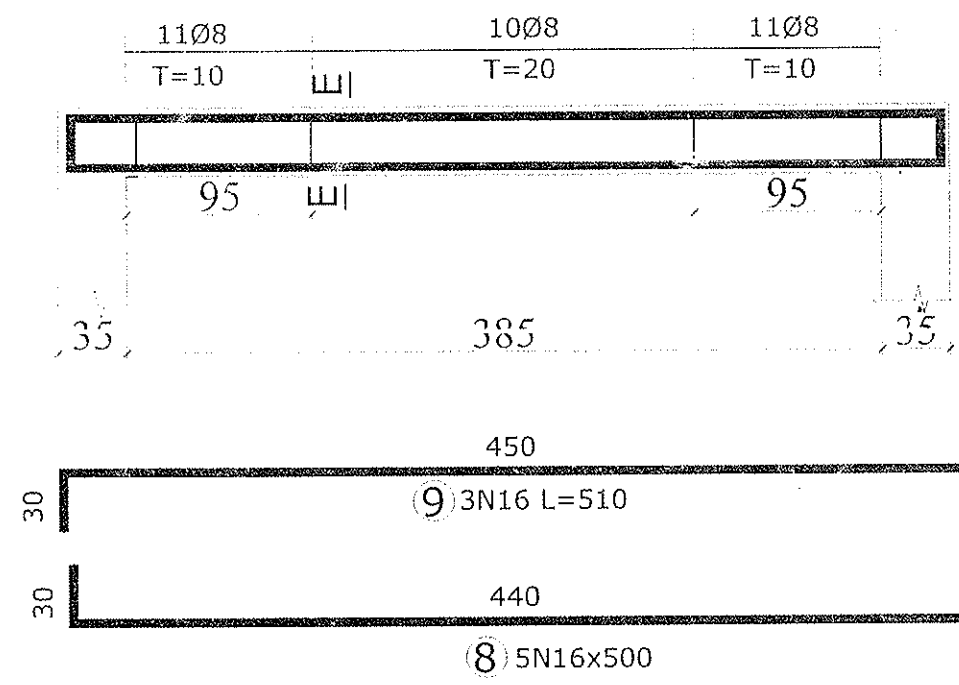
**BEAM-8**  
N=1 35x35



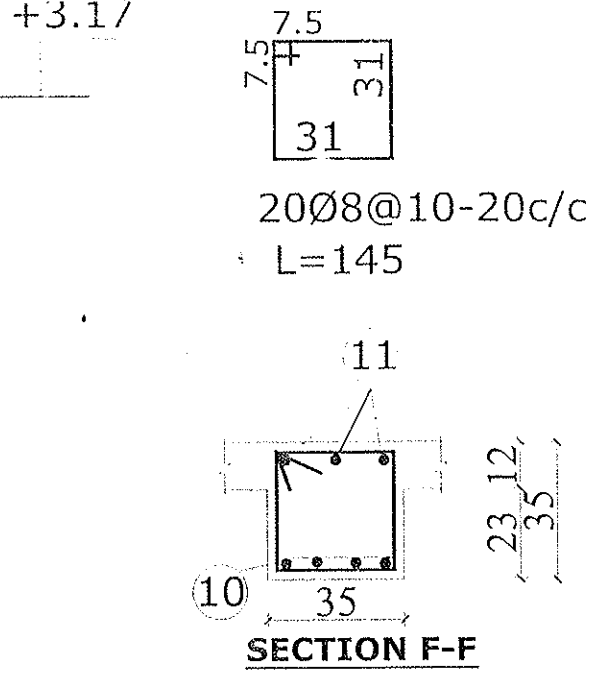
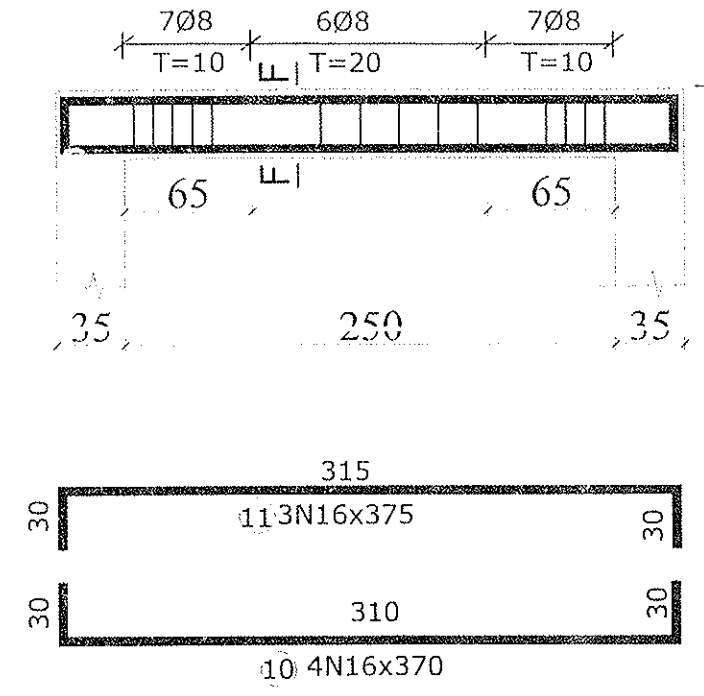
**BEAM-3**  
N=1 35x40



**BEAM-6**  
N=1 35x25



**BEAM-7**  
N=4 35x35



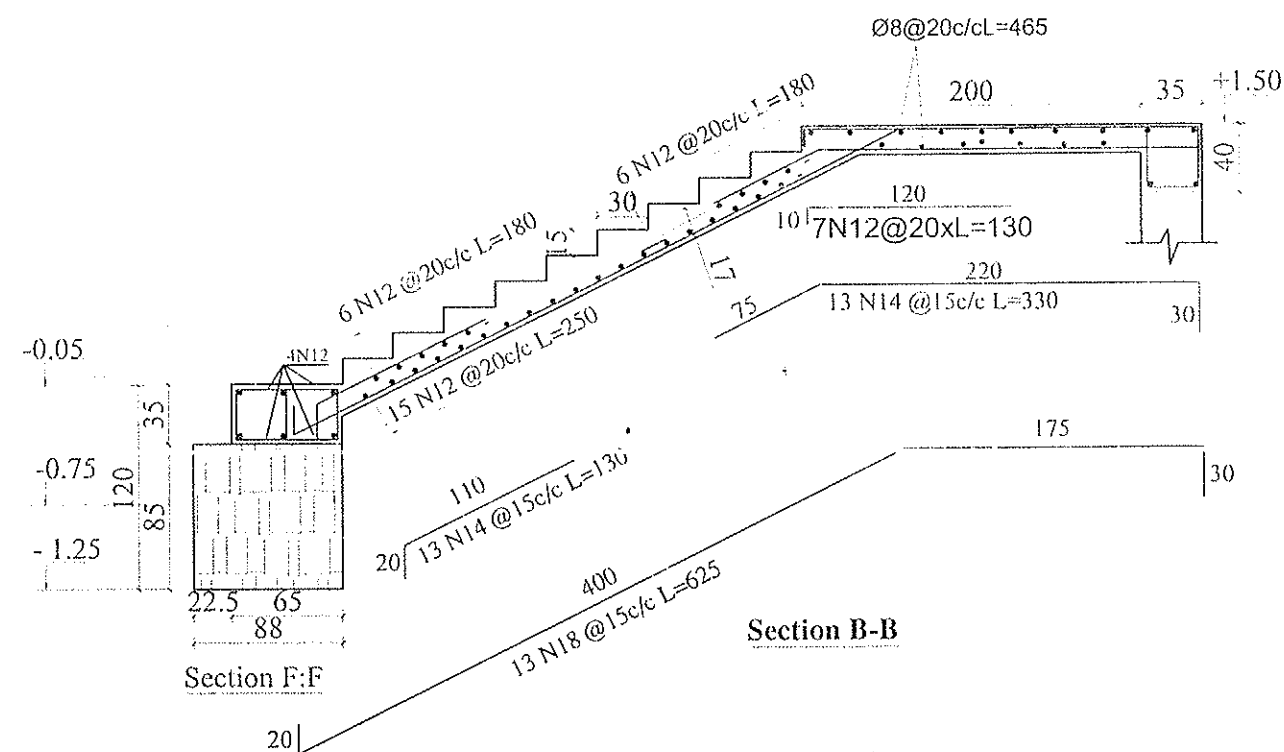
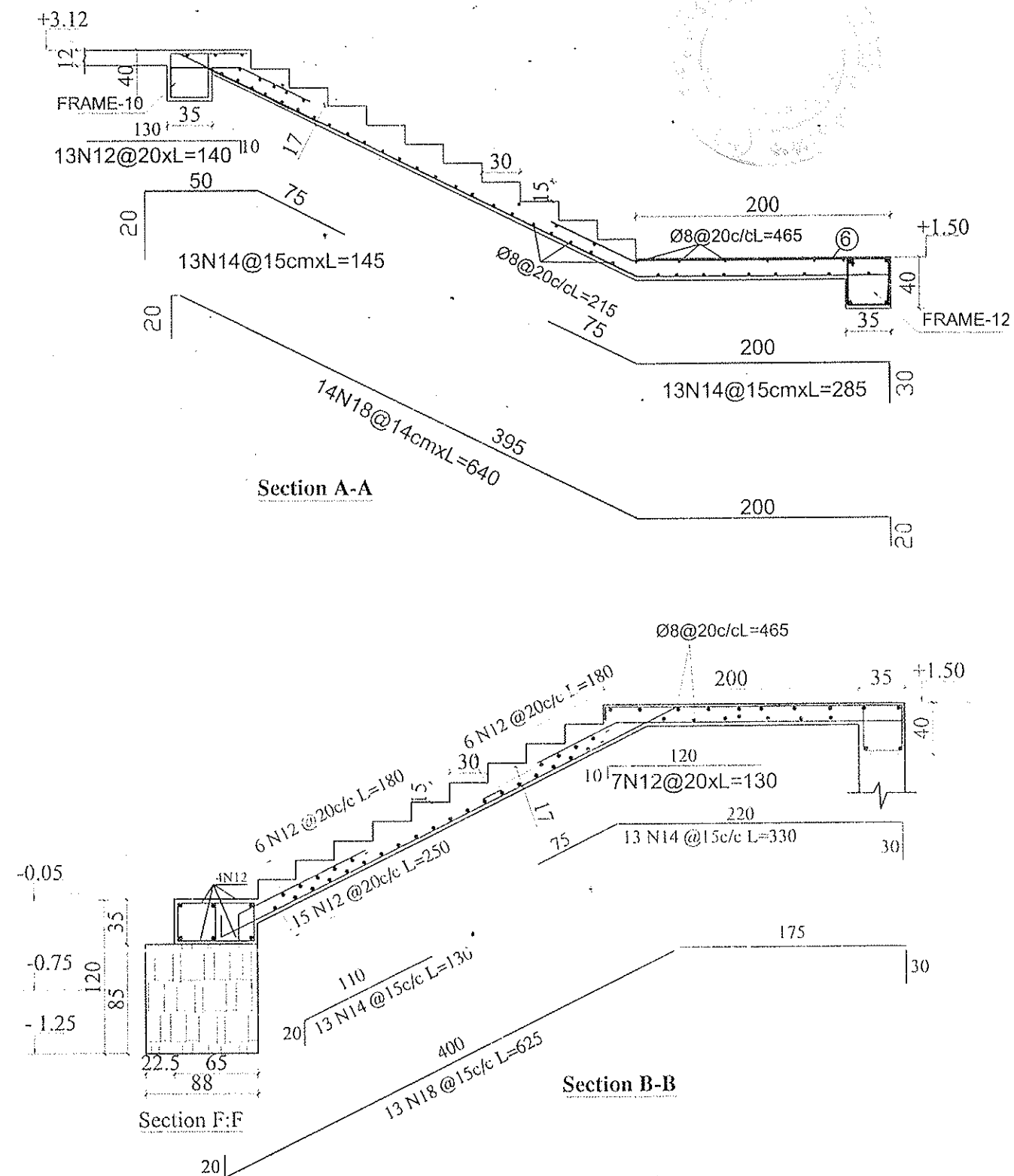
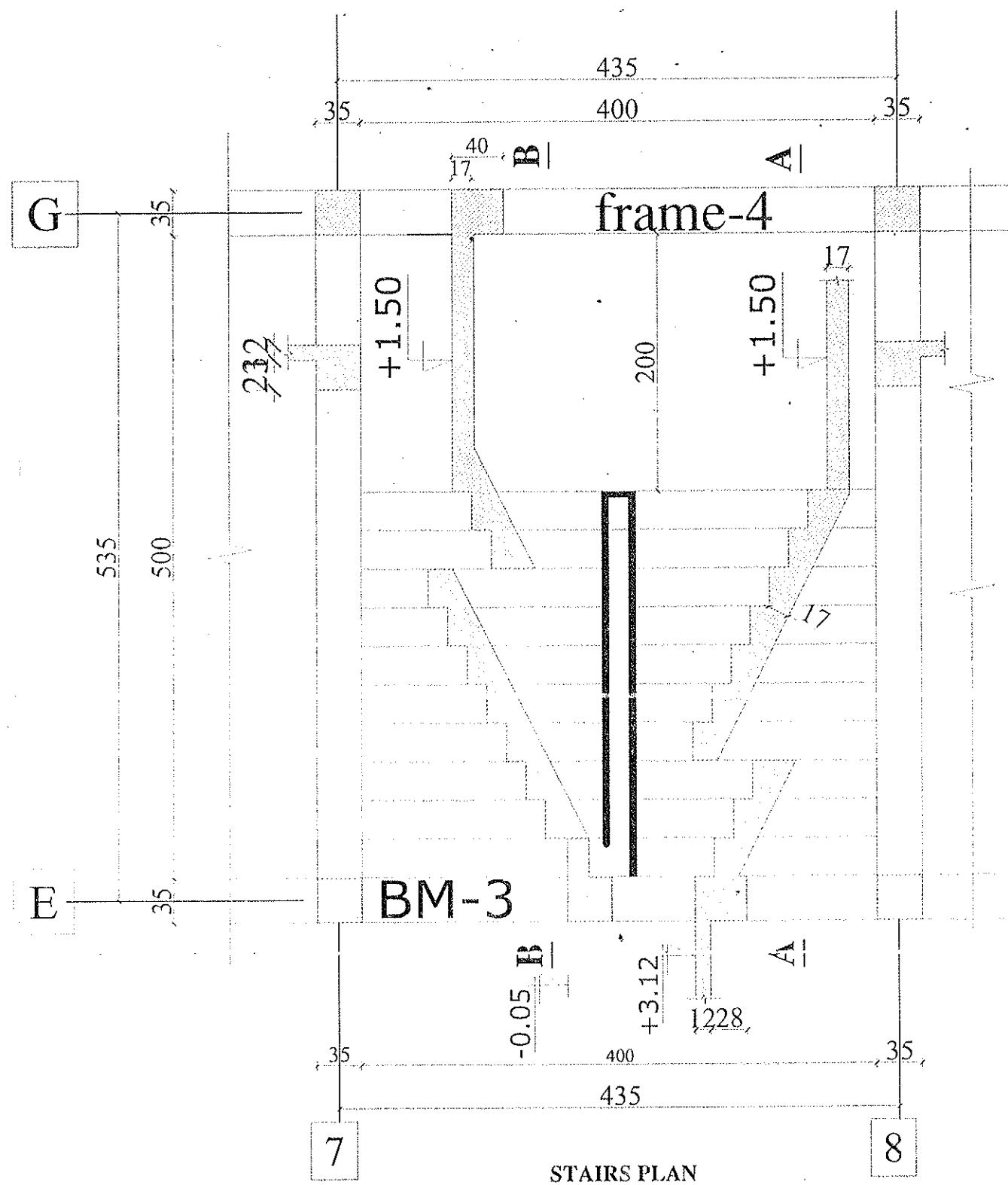
MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN	ENGL. FARAH	APPROVED: Eng. Momen Raad	ENGL. MOMEN RAAD	DRAWING TYPE	STRUCTURAL	PROVINCE	612 Class Room Metal Sheet Roof
REVISION	ENGL. FARAH ZAWAR	SCALE	AS SHOWN	1:3	13	PROJECT NAME	Regime and Sections
DATE		DATE		13	20	DRAWING TITLE	





MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



# STANDARD SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT-DESIGN ENG. FARAH

RATNAPARKHI AND KUMAR

$\lambda_1, \lambda_2, \lambda_3, \lambda_4, \lambda_5, \lambda_6, \lambda_7, \lambda_8, \lambda_9, \lambda_{10}, \lambda_{11}, \lambda_{12}, \lambda_{13}, \lambda_{14}, \lambda_{15}, \lambda_{16}, \lambda_{17}, \lambda_{18}, \lambda_{19}, \lambda_{20}, \lambda_{21}, \lambda_{22}, \lambda_{23}, \lambda_{24}, \lambda_{25}, \lambda_{26}, \lambda_{27}, \lambda_{28}, \lambda_{29}, \lambda_{30}, \lambda_{31}, \lambda_{32}, \lambda_{33}, \lambda_{34}, \lambda_{35}, \lambda_{36}, \lambda_{37}, \lambda_{38}, \lambda_{39}, \lambda_{40}, \lambda_{41}, \lambda_{42}, \lambda_{43}, \lambda_{44}, \lambda_{45}, \lambda_{46}, \lambda_{47}, \lambda_{48}, \lambda_{49}, \lambda_{50}, \lambda_{51}, \lambda_{52}, \lambda_{53}, \lambda_{54}, \lambda_{55}, \lambda_{56}, \lambda_{57}, \lambda_{58}, \lambda_{59}, \lambda_{60}, \lambda_{61}, \lambda_{62}, \lambda_{63}, \lambda_{64}, \lambda_{65}, \lambda_{66}, \lambda_{67}, \lambda_{68}, \lambda_{69}, \lambda_{70}, \lambda_{71}, \lambda_{72}, \lambda_{73}, \lambda_{74}, \lambda_{75}, \lambda_{76}, \lambda_{77}, \lambda_{78}, \lambda_{79}, \lambda_{80}, \lambda_{81}, \lambda_{82}, \lambda_{83}, \lambda_{84}, \lambda_{85}, \lambda_{86}, \lambda_{87}, \lambda_{88}, \lambda_{89}, \lambda_{90}, \lambda_{91}, \lambda_{92}, \lambda_{93}, \lambda_{94}, \lambda_{95}, \lambda_{96}, \lambda_{97}, \lambda_{98}, \lambda_{99}, \lambda_{100}$

APPROVED: Doc/Moe      ENGLISH MOMENT READ

SCALE AS SHOWN (A)

0.8, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0

**DRAWING TYPE**

0055

STRUCTURAL.

PROVINCE

PROJECT NAME

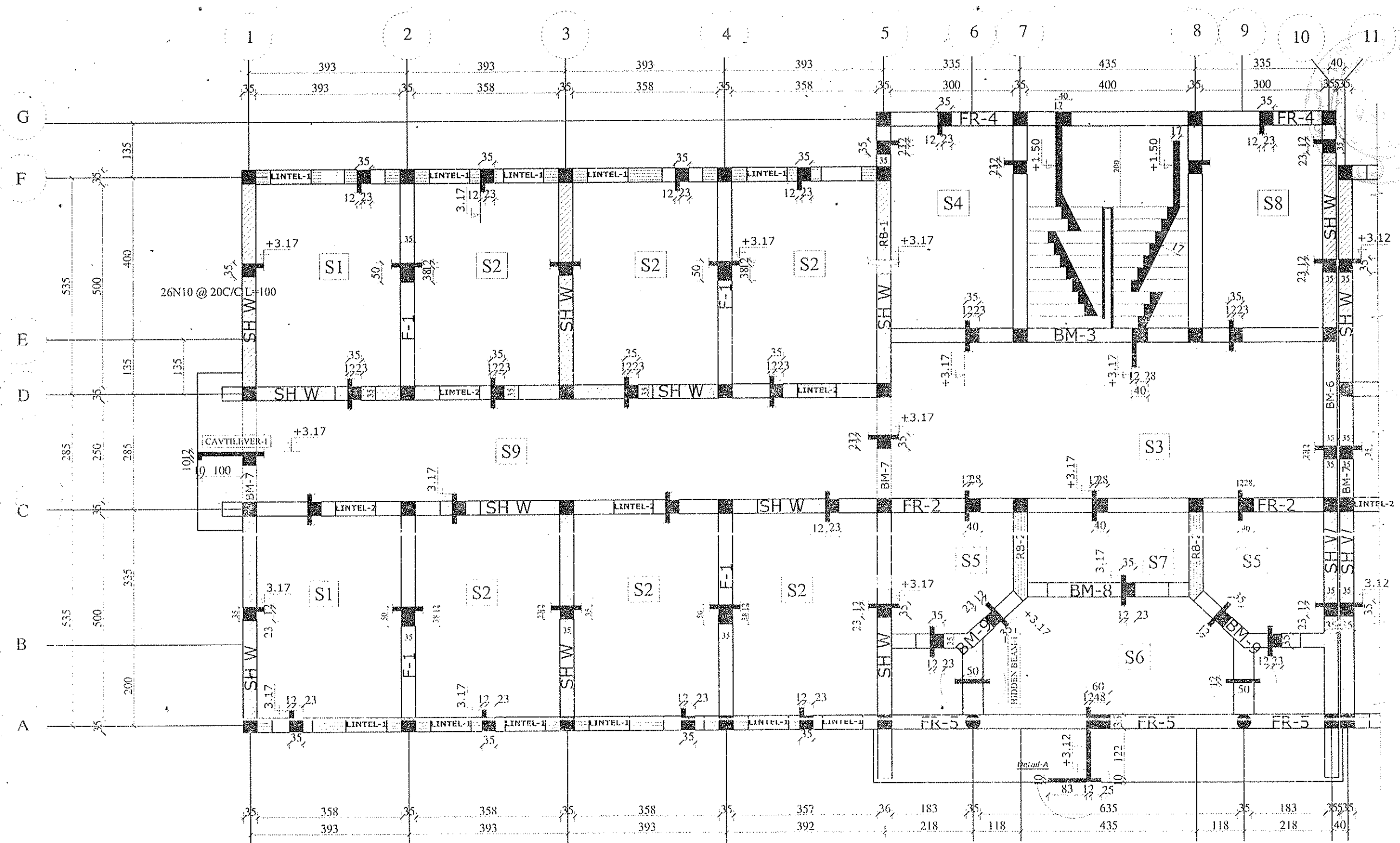
DRAWING TITLE

### 6.2 Class Room Metal Sheet Roof

### Storing Shuttering and Lays in a vault







## SHUTTERING PLAN



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN ENGR. FARAH

REVIEWER ENGR. TALMA ZAWAB

DATE: 2020/05/10

APPROVED Doc/Moe ENGLAB MOMEN RAAD

SCALE: AS SHOWN ON PLAN

DATE: 2020/05/10

DRAWING TYPE

16

90

STRUCTURAL

PROJECT NAME

DRAWING TITLE

PROVINCE

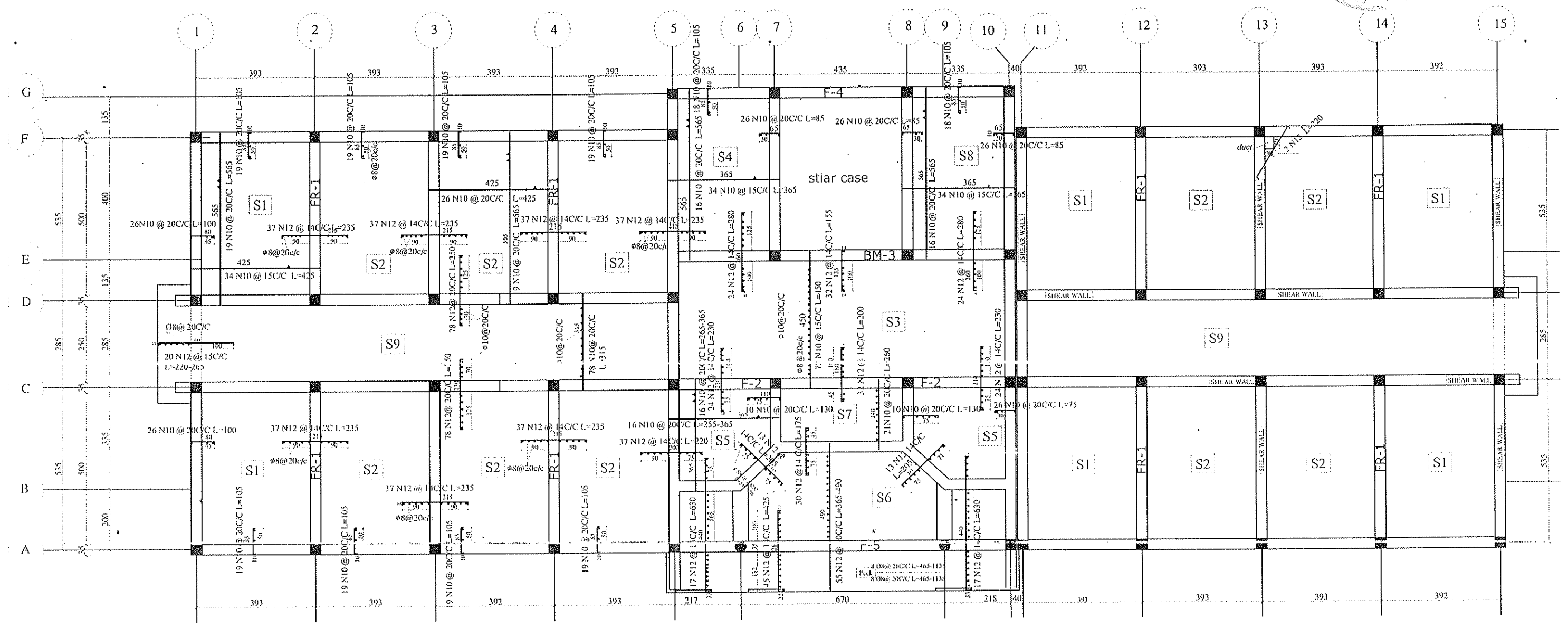
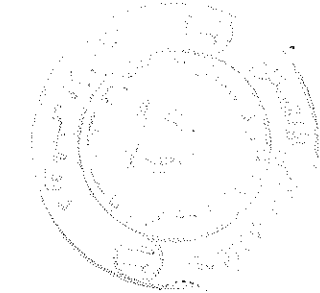
PROJECT NAME

DRAWING TITLE

602 Class Room Metal Sheet Roof

Change Log: 01/2020

*Handwritten signature*



REINFORCING PLAN



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH  
RCH/DESIGN: ENG. TALIMA ZIWAR  
RCH/APP/PROV: ENG. AHMAD MAJID

APPROVED: Doc/Msc  
SCALE: AS SHOWN (A/D)  
DATE: JAN 2011

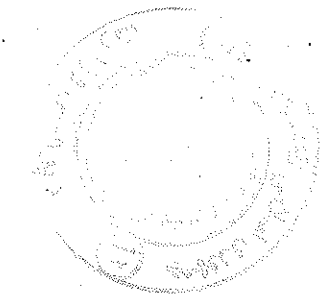
DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 6x2 Class Room Metal Sheet Roof  
DRAWING TITLE: Reinforcing Plan of 1st FLM

PROVINCE: PROJECT NAME: DRAWING TITLE:

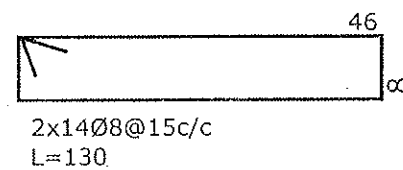
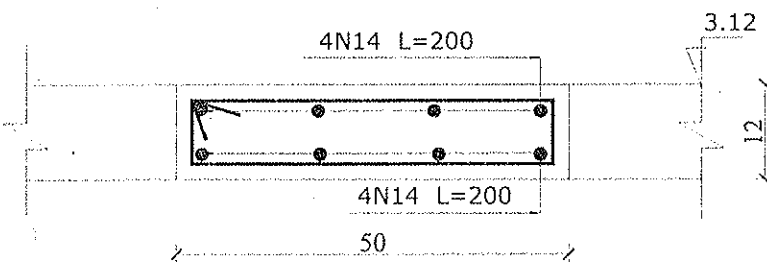
6x2 Class Room Metal Sheet Roof  
Reinforcing Plan of 1st FLM



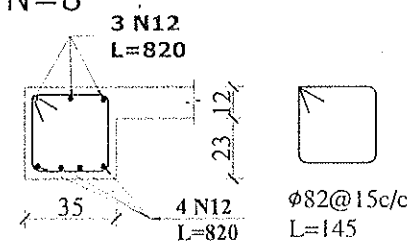




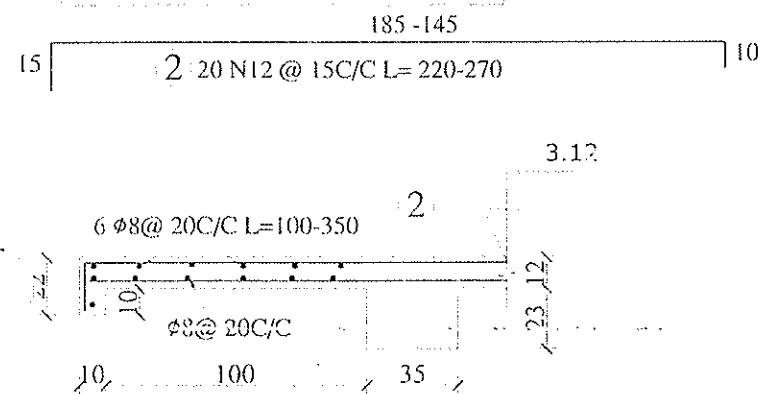
### HIDDEN BEAM-1



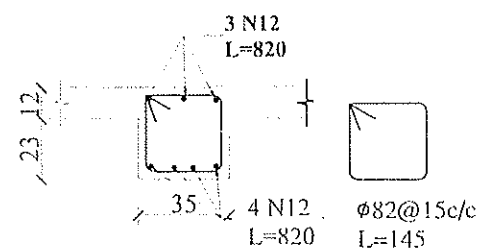
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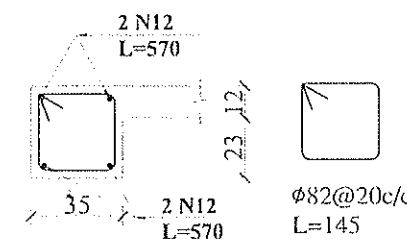
### CAVTILEVER-1



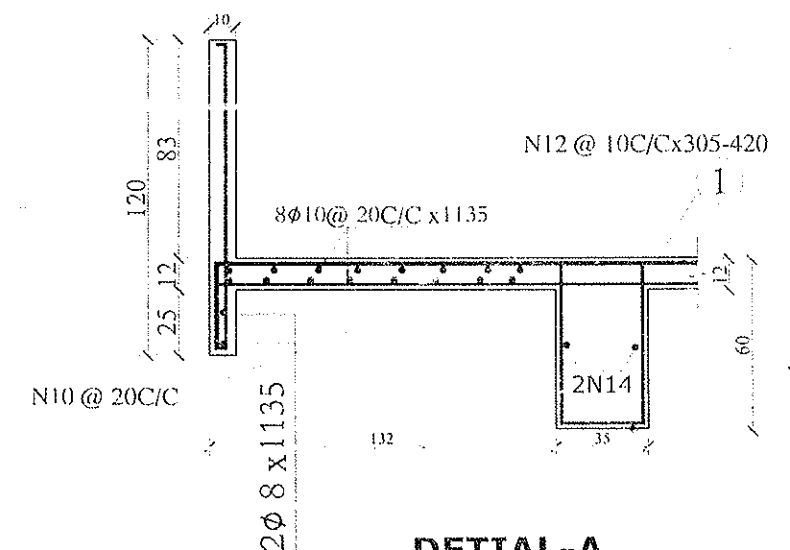
### LINTEL-2 N=8



### RING BEAM-1 N=16



3.17



### DETIAL-A



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN: ENG. FARAH  
R/C DESIGN: ENG. FATIMA ZILWARI  
E/C APPROVED BY: ENG. AB. MAMIN MAJID

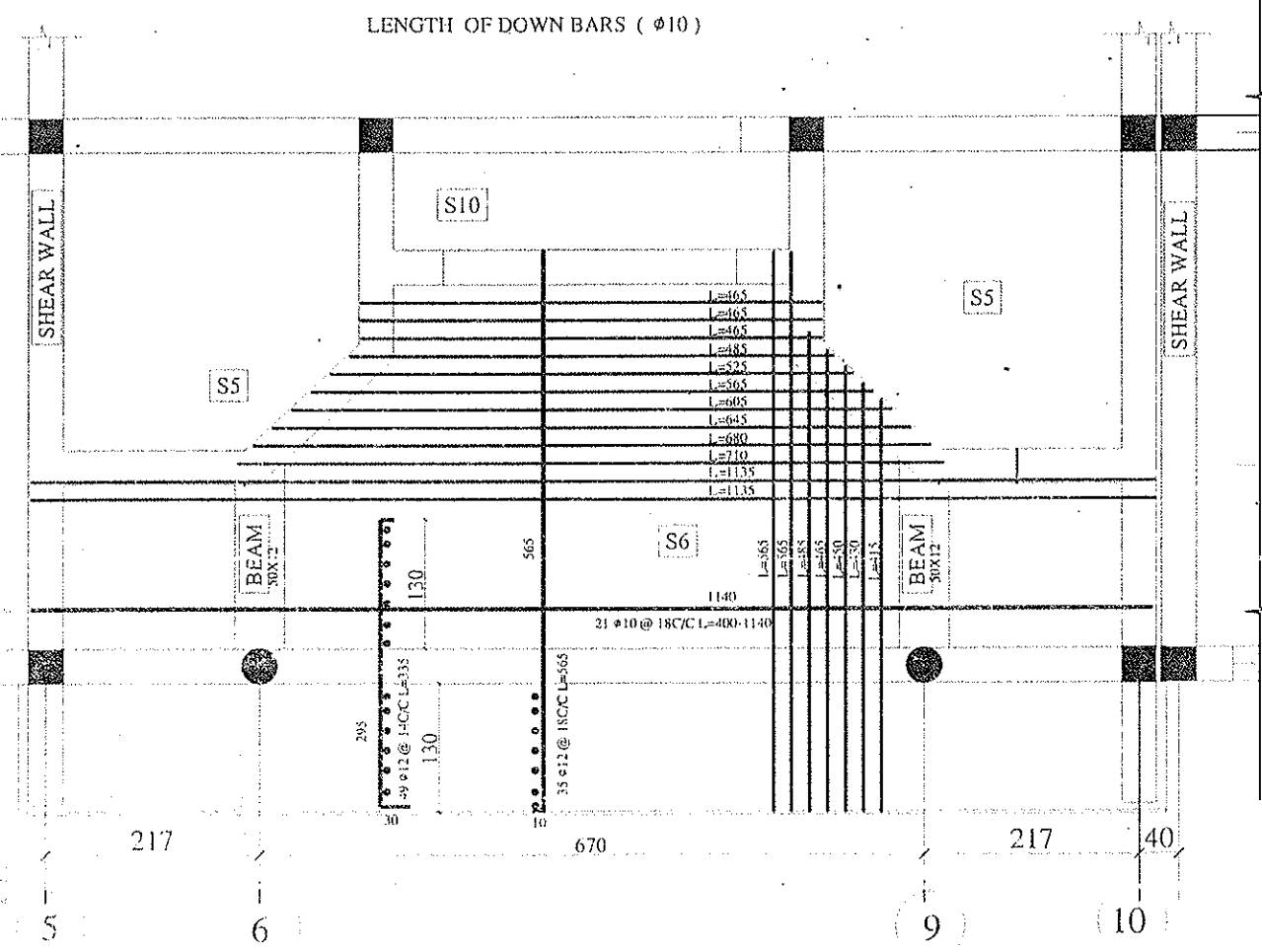
APPROVED: Dec/Mar ENG. AB. MOMEN RAAD  
SCALE: AS SHOWN  
DATE: JAN. 2015

DRAWING TYPE: STRUCTURAL  
NO: 19  
20

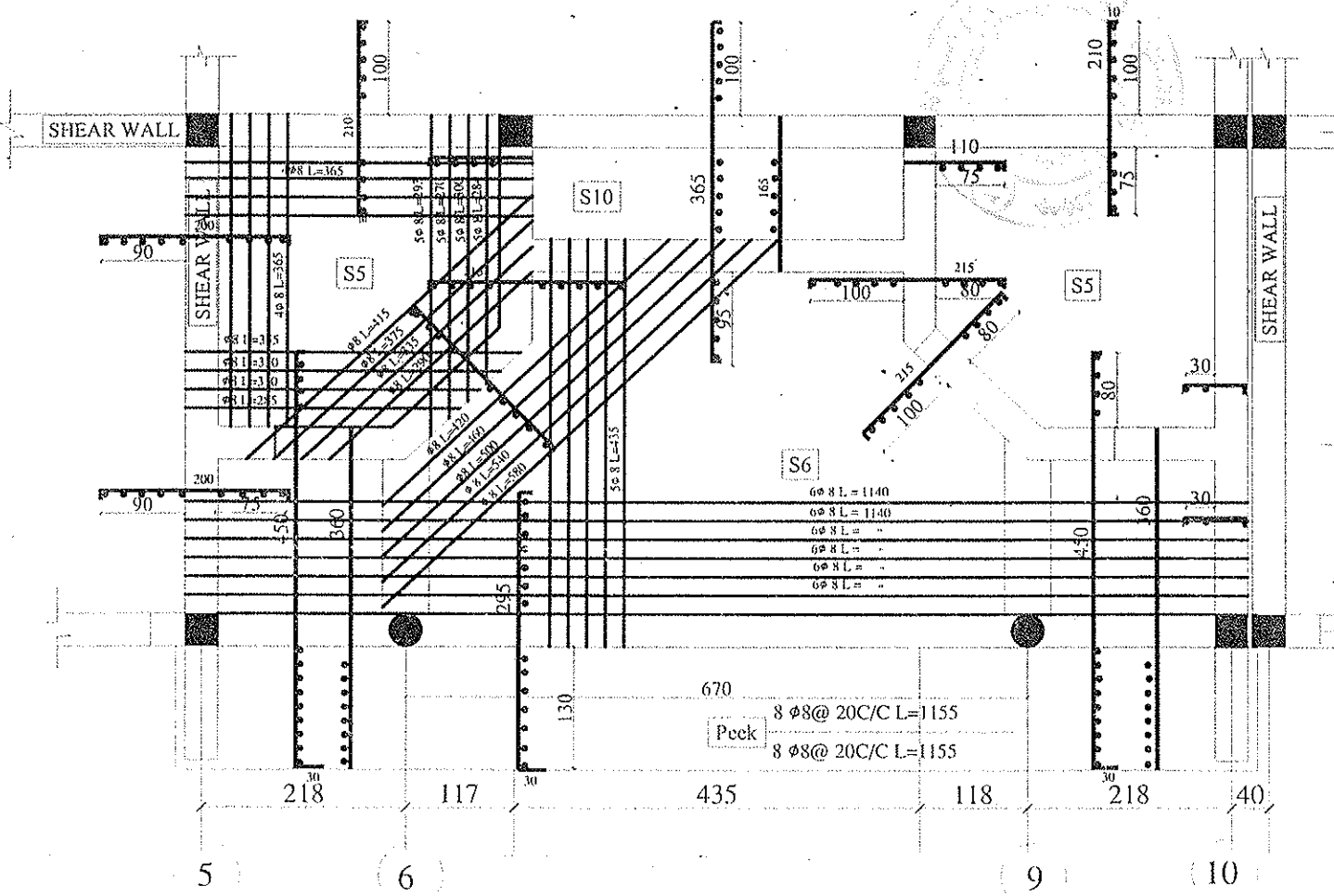
PROVINCE:  
PROJECT NAME:  
DRAWING TITLE:

6+2 Class Room Metal Sheet Roof  
PARAPET & LAMEN

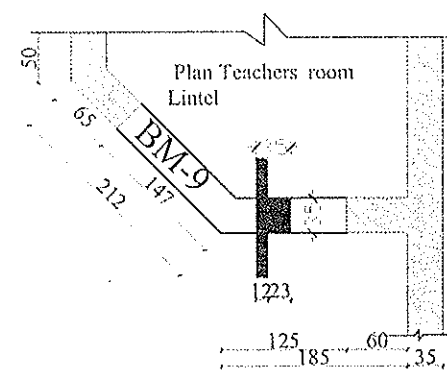
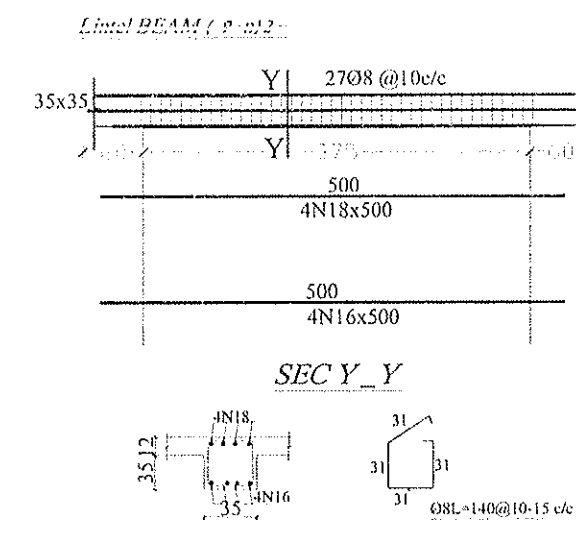
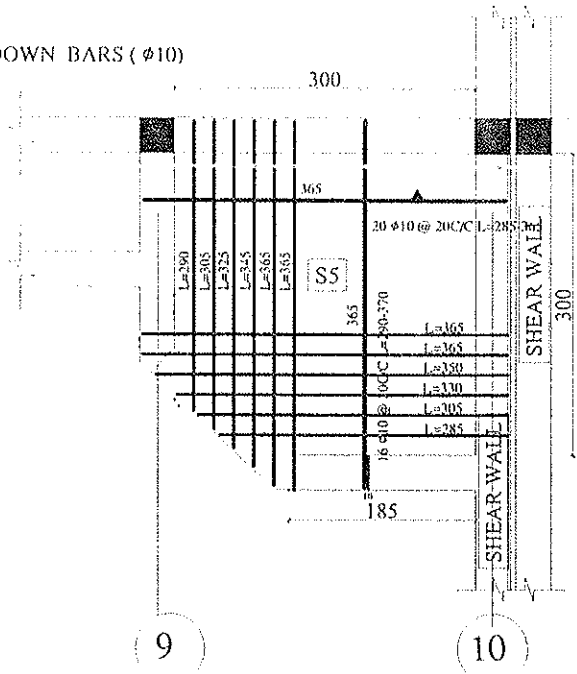
DETAIL "L"  
LENGTH OF DOWN BARS (  $\phi 10$  )



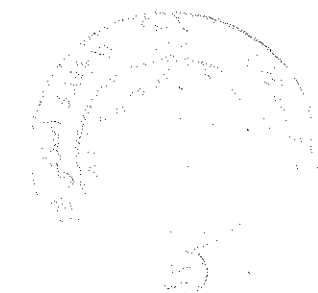
DETAIL ("L", "S")  
LENGTH OF (  $\phi 8$  )



DETAIL "S"  
LENGTH OF TOP AND DOWN BARS (  $\phi 10$  )







## General Notes

- Concrete for all reinforced elements will be of ratio(1:1.5:3) and cubical strength of  $(200\text{Kg}/\text{cm}^2)$  after 28 days.
- Reinforcement grade 1 mild steel having minimum yield stress of  $2100\text{kg}/\text{cm}^2$  and reinforcement grade 2 deformed bar having minimum yield stress of  $2700\text{kg}/\text{cm}^2$ .
- For Brick masonry Cement and sand mortar ratio should be (1:5).
- Interior and exterior wall plaster's Cement mortar ratio should be (1:3).
- Form work should be lubricated well before installing reinforcement on.
- Bricks should be soaked at water before using.
- The rebars should be without Corrosion(or Oxidant free)
- Sand and Gravel should be washed before using.
- Usable water for Concrete should not be Acidic , Salted and free of Organic materials
- In Concrete mixture river Gravel with size 2.5 cm be used rather than mountain Crash
- Form work for bending elements should not be removed for less than 18 days.
- Before amendment the structure design consulting with design Engineer is must.
- Procedure of the project commencement till ending should be supervised by MoE site Engineer
- Bearing Capacity of Soil for Foundation design is calculated  $1.5\text{Kg}/\text{cm}^2$ .
- The mark of brick for the shear wall should not be less  $70\text{kg}/\text{cm}^2$ .

0  
تبصره:

- 1- مارک کانکریت سیخدار در تمام عناصر ساختمانی (M-200) با تناسب (1:1.5:3) استفاده شود.
- 2- در تعمیر مذکور از سیخ های کلاس I-A با مقاومت سنجشی ( $R_n=2100\text{kg}/\text{cm}^2$ ) و I-AI با مقاومت سنجشی ( $R=2700\text{kg}/\text{cm}^2$ ) استفاده شده است.
- 3- برای خشت کاری از مصالح سمنت و ریگ با تناسب (1:5) استفاده شود.
- 4- پلستر دیوارهای داخلی و خارجی از مصالح سمنت و ریگ با مارک (M-300) با تناسب (1:3) استفاده شود.
- 5- قالب ها قبل از استفاده باید خوب چرب کاری شود.
- 6- خشت ها قبل از استفاده باید خوب مرطوب گردند.
- 7- سیخ های مورد استفاده باید عاری از زنگ زده گی باشد.
- 8- ریگ و شن قبل از استفاده باید دستشو گردند.
- 9- آب های مورد استفاده برای مخلوط کانکریت شور و نمکی نباشد.
- 10- در مخلوط کانکریت جنل کرش نوع دریایی با سورت های الی قطر 2.5 سانتی متر استفاده گردد و از جنل کرش نوع صخره ای یا کوهر استفاده نشود.
- 11- قالب های عناصر انحنایی به هیچ وجه قبل از 18 روز دور نگردند.
- 12- در حصه تبدیل نقشه با انجنیر دیراین کننده مشوره گردد.
- 13- پروژه کار پروژه از شروع تا ختم توسط انجنیر ساختمان مراقبت گردد.
- 14- مقاومت خاک ( $1.5\text{cm}/\text{glk}^2$ ) برای دیراین تهداب ها در نظر گرفته شده است.
- 15- مارک خشت برای شیروالهای خشتی نباید کمتر از  $70\text{kg}/\text{cm}^2$  باشد.

مقاومت فشاری مجاز خاک (qall) بر اساس  $\text{kg}/\text{cm}^2$

### Bearing Capacity of Soil Based on (ACI)

Recomm endatio	Limit	Specifications	Types of Soil
8	7-10	Very dense Compacted	Gravel, Gravel & Sand, Mix of Gravel & Stone جنل، جنل و ریگ، مخلوط جنل و سنگ
6	5-7	Medium Course Compacted	
4	3-6	Loose Compacted	
4	4-6	Very dense Compacted	Stiff Sand, Sand with a little Greval ریگ سخت، ریگ با کمی جنل
3	3-4	Medium Course Compacted	
2	2-3	Loose Compacted	
3	3-5	Very dense Compacted	Medium Stiff Sand , Sand with Mud or Clay ریگ با سختی متوسط، ریگ با لای یارس
2.5	2-4	Medium Course Compacted	
1.5	1-2	Loos Compacted	
3	3-4	Very dense Compacted	Uniform Sand, Sand with a little Mud or Clay ریگ یکنواخت، ریگ با کمی جنل
2	2-3	Meidum Course Compacted	
1.5	1-2	Loos Compacted	
4	3-6	Very Stiff	Uniform Clay , Clay with Sand or Mud رس یکنواخت، ریگ با کمی جنل
2	1-3	Medium Siff	
0.5	0.5-1	Uncompacted	
3	2-4	Very Stiff	Mud,Sandy Mud or Clay لای، لای ریگی یارسی
1.5	1-3	Medium Siff	
0.5	0.5-1	Uncompacted	



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN: ENG. FARAH  
REVIEWER: ENG. LATIHA ZULWARI  
CHECK APPROVED BY: ENG. AHMAD H. MAJIDI

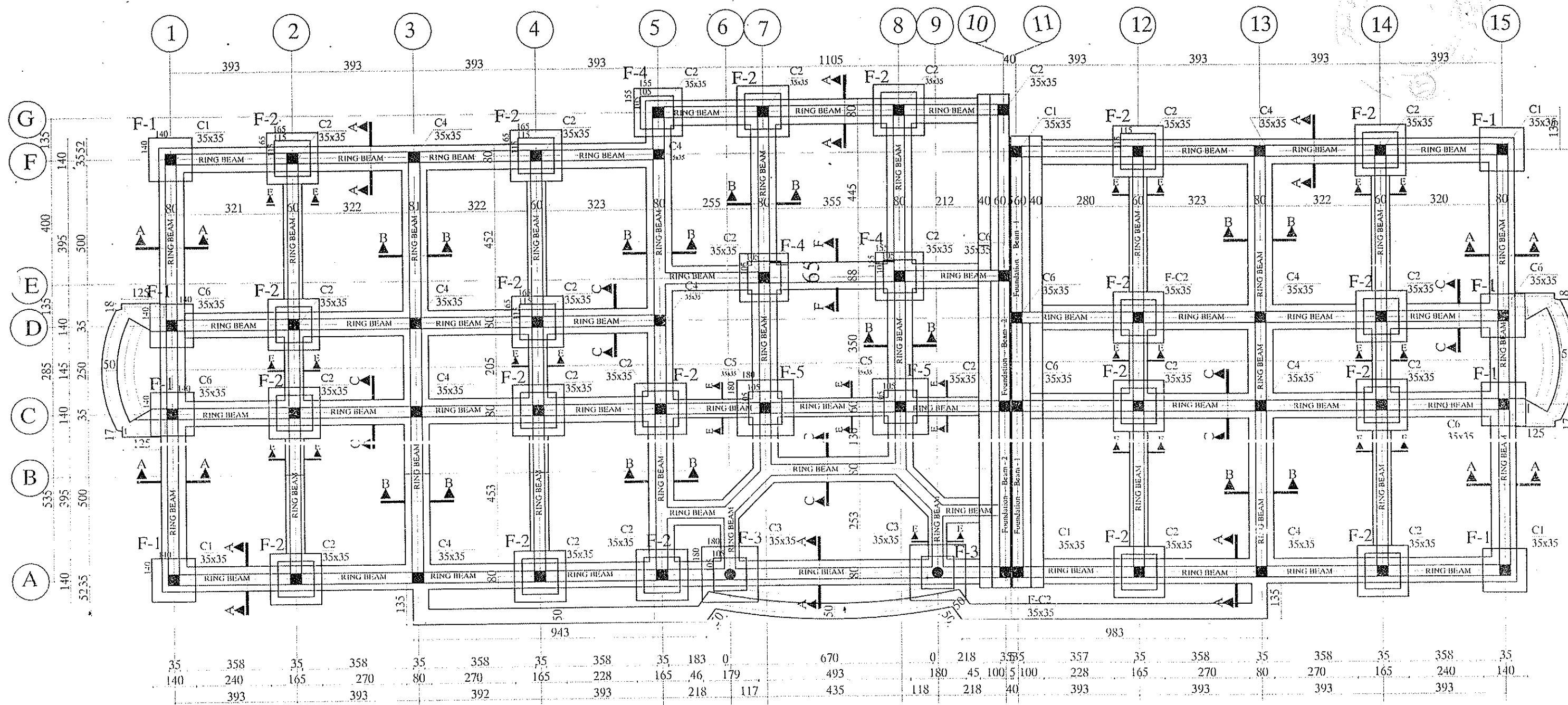
APPROVED Doc. No.: ENG. AHMAD H. MAJIDI  
SCALE: AS SHOWN (A1)  
DATE: JAN. 2015

DRAWING TYPE: STRUCTURAL  
COMPOSED BY: 1  
NO. OF SHEETS: 20

PROVINCE:  
PROJECT NAME:  
DRAWING TITLE:

6 x 2 Class Room Metal Sheet Roof

GENERAL NOTES

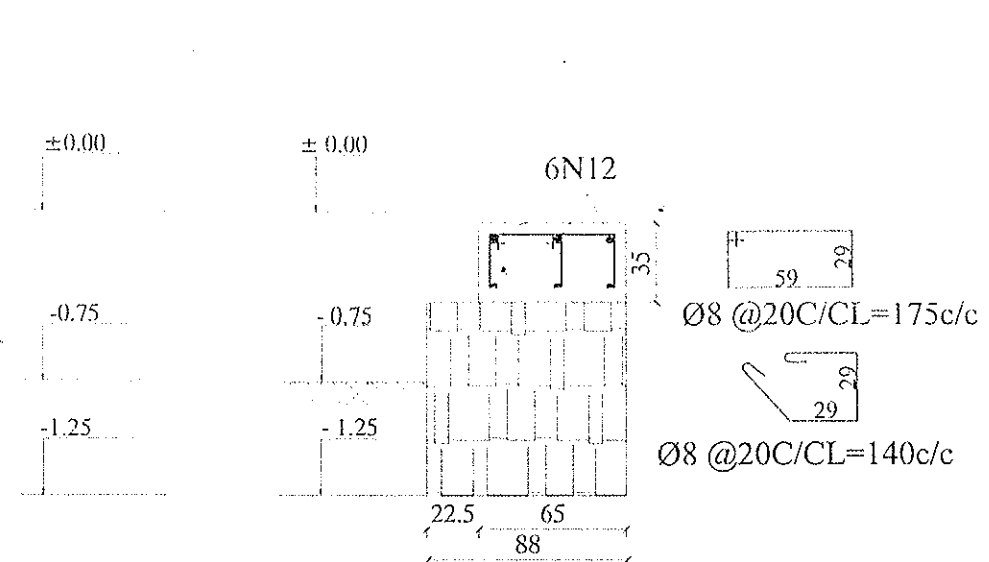
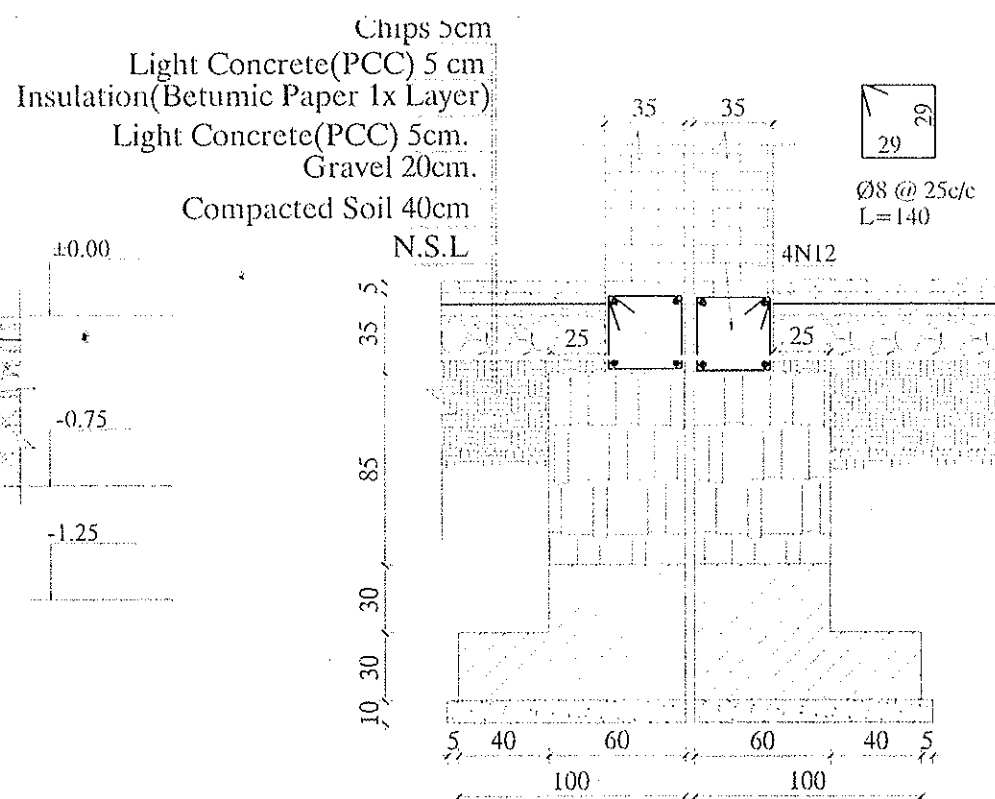
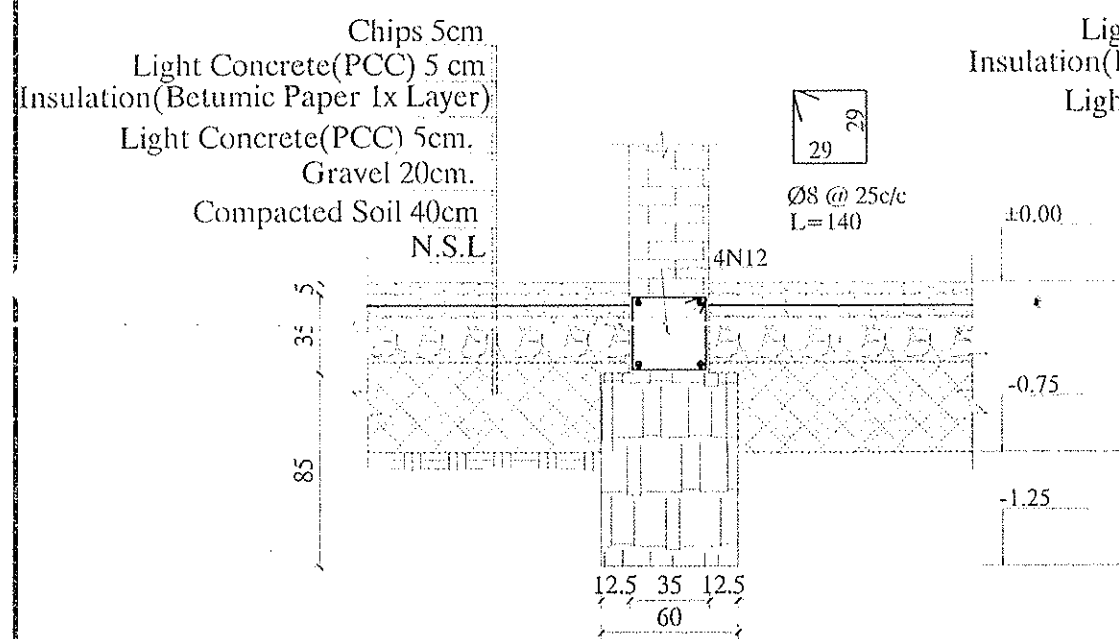
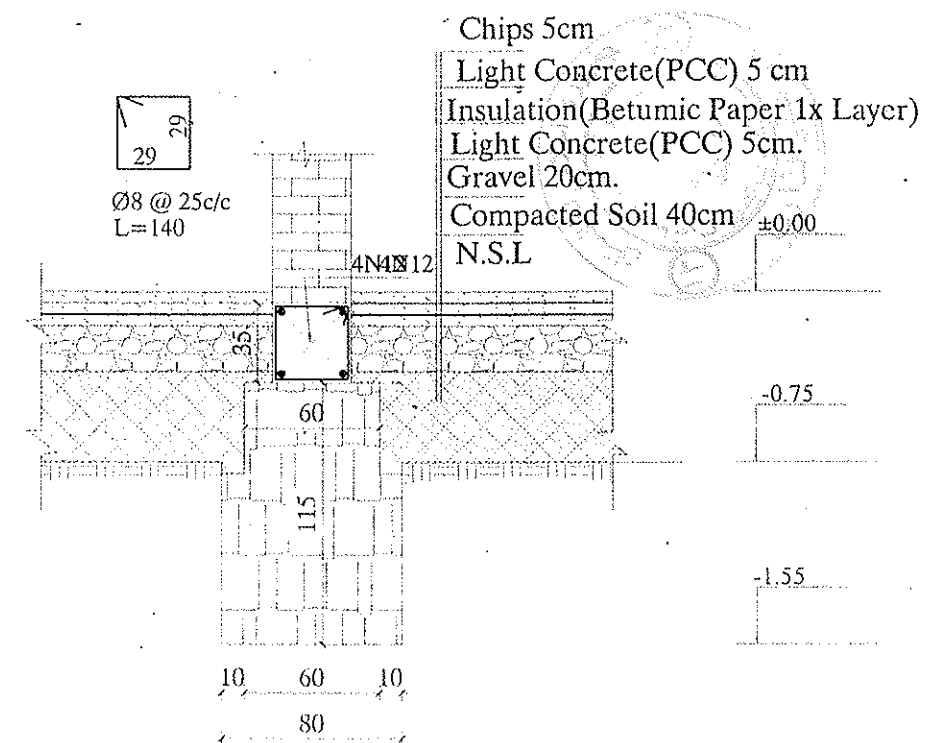
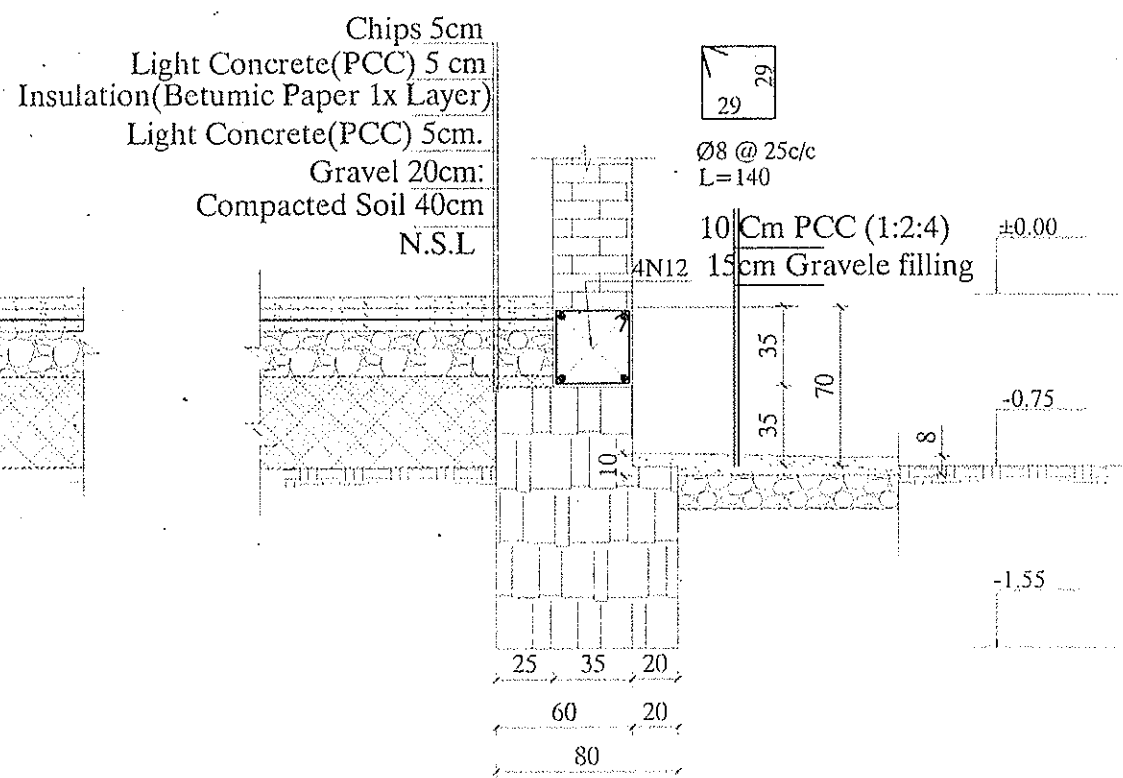
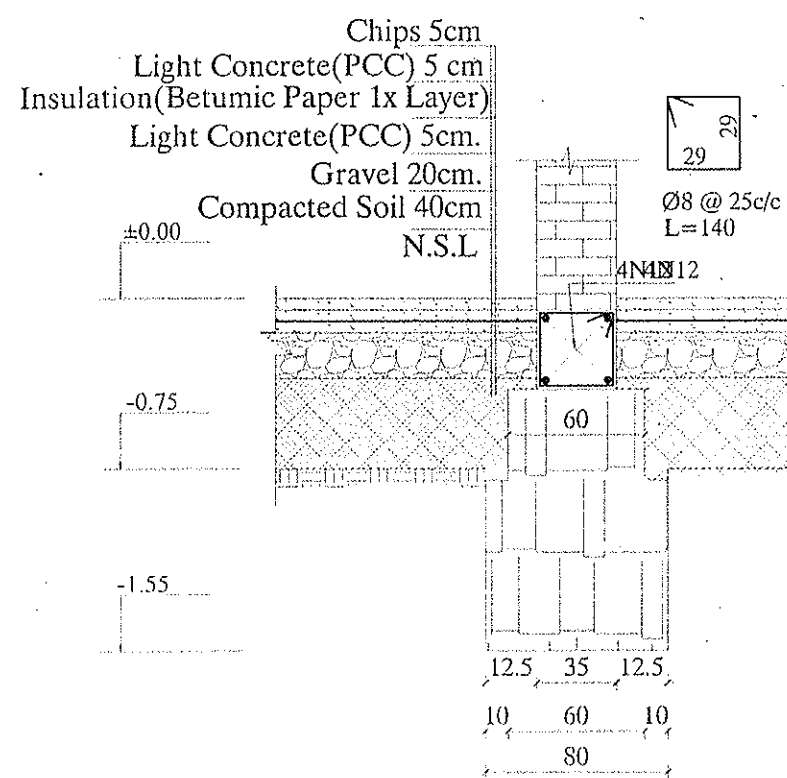


FOUNDATIONS PLAN









MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN ENG. FARAH

RECEIVED      ENGINEERING

11644 APPROVED FOR RELEASE BY NSA ON 08-25-2013

APPROVED DocMoog ENG AB MOMEN RAAI

444

22. A 40.

$$\text{ACGHN} = \text{AG}$$

688 JIN, ZHANG, AND CHEN

: DRAWING  
TIME

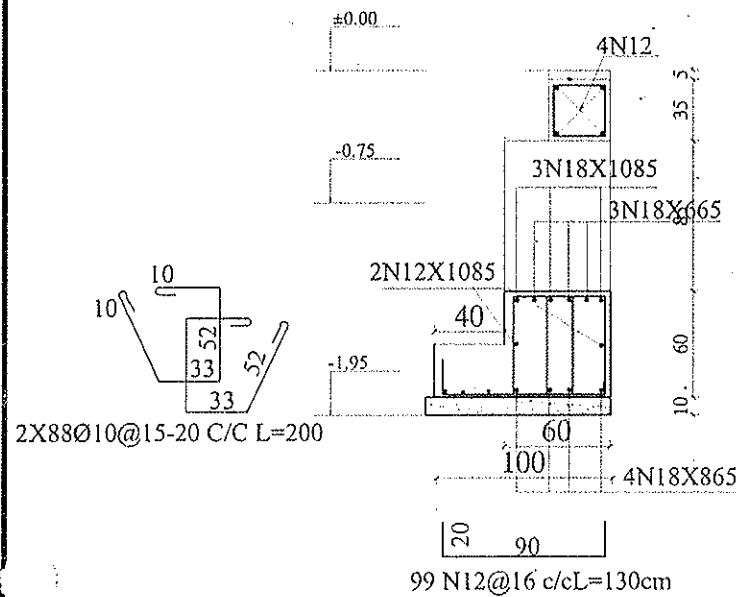
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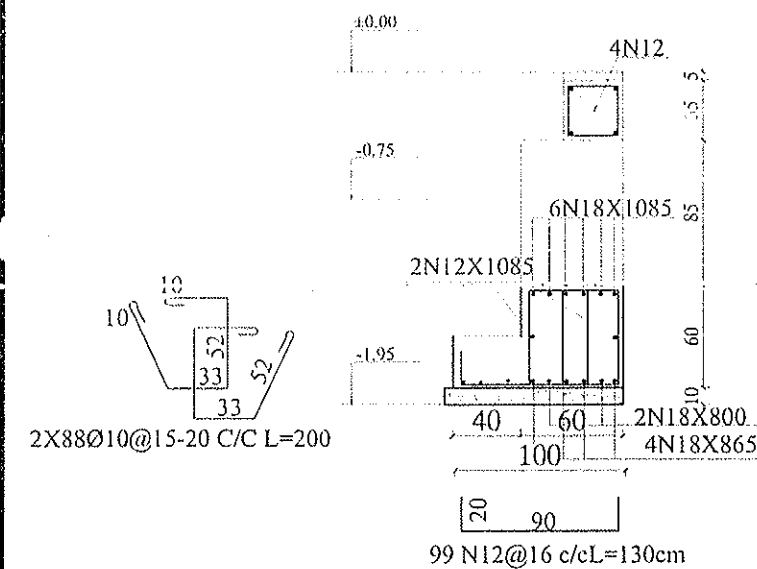
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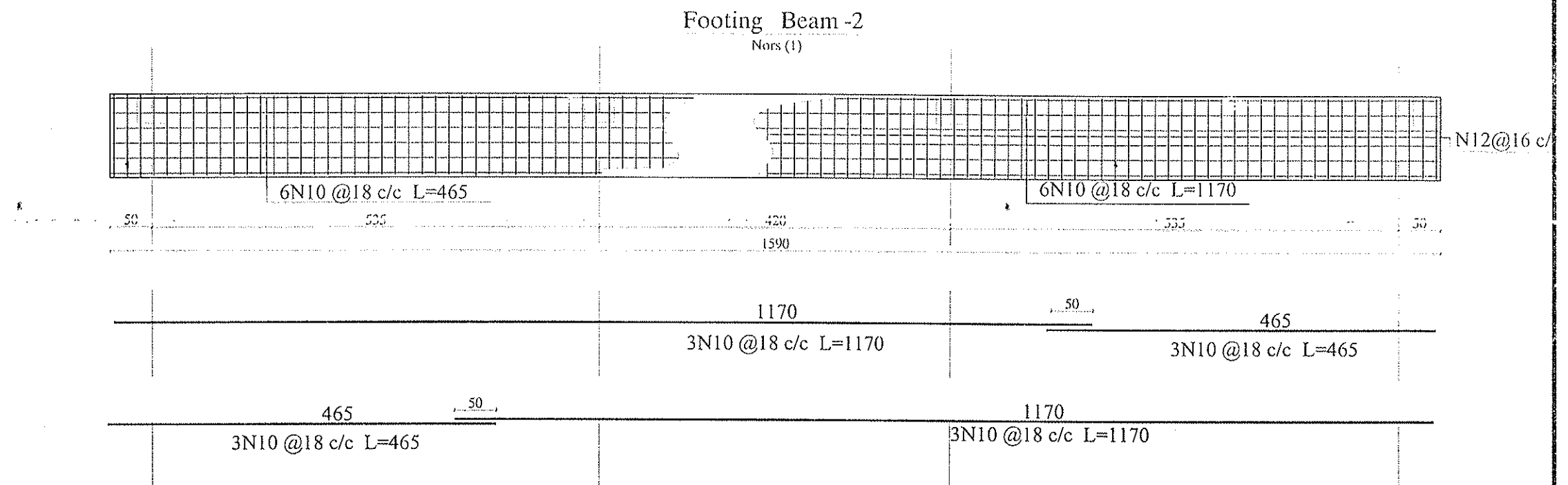
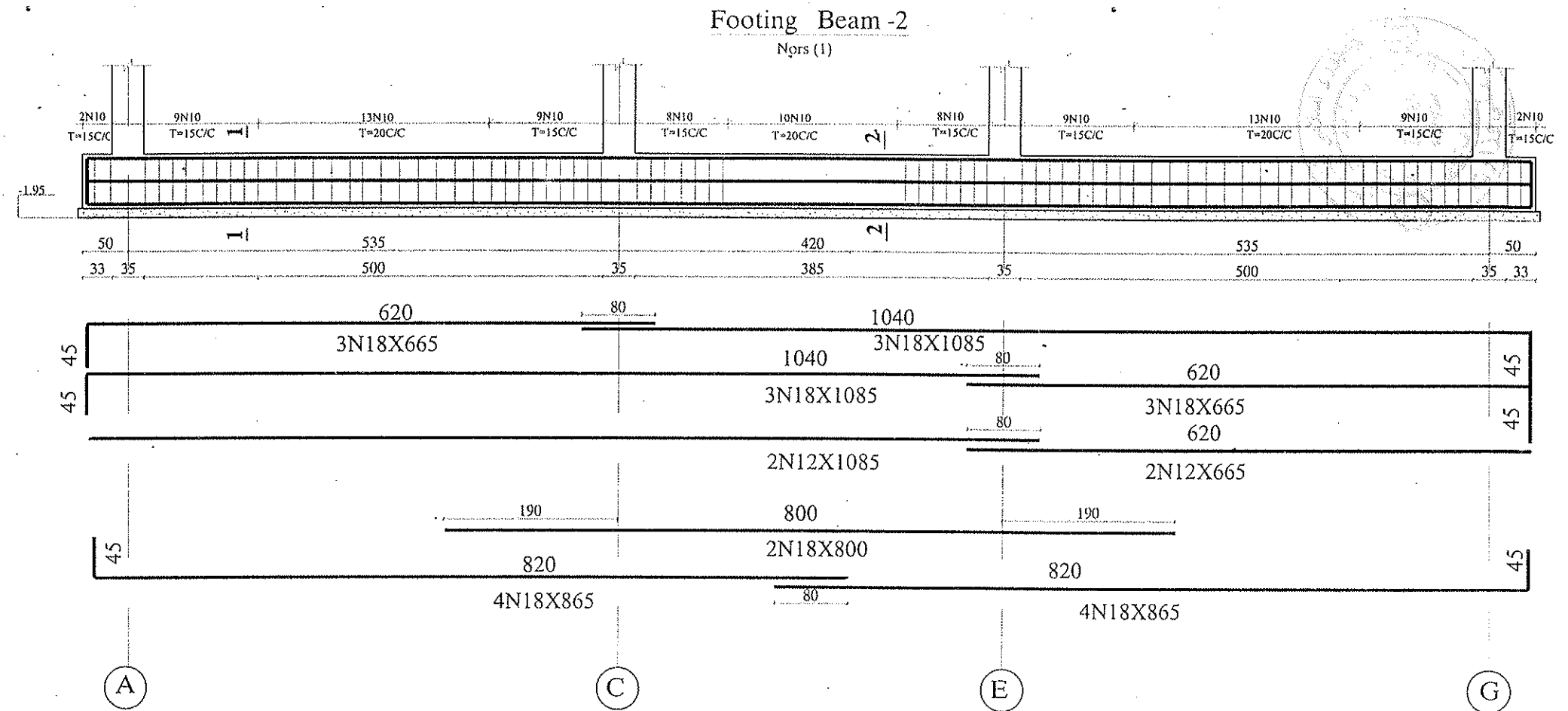
DRAWING 11111



**SEC 1-1**



**SEC 2-2**



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

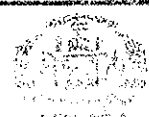
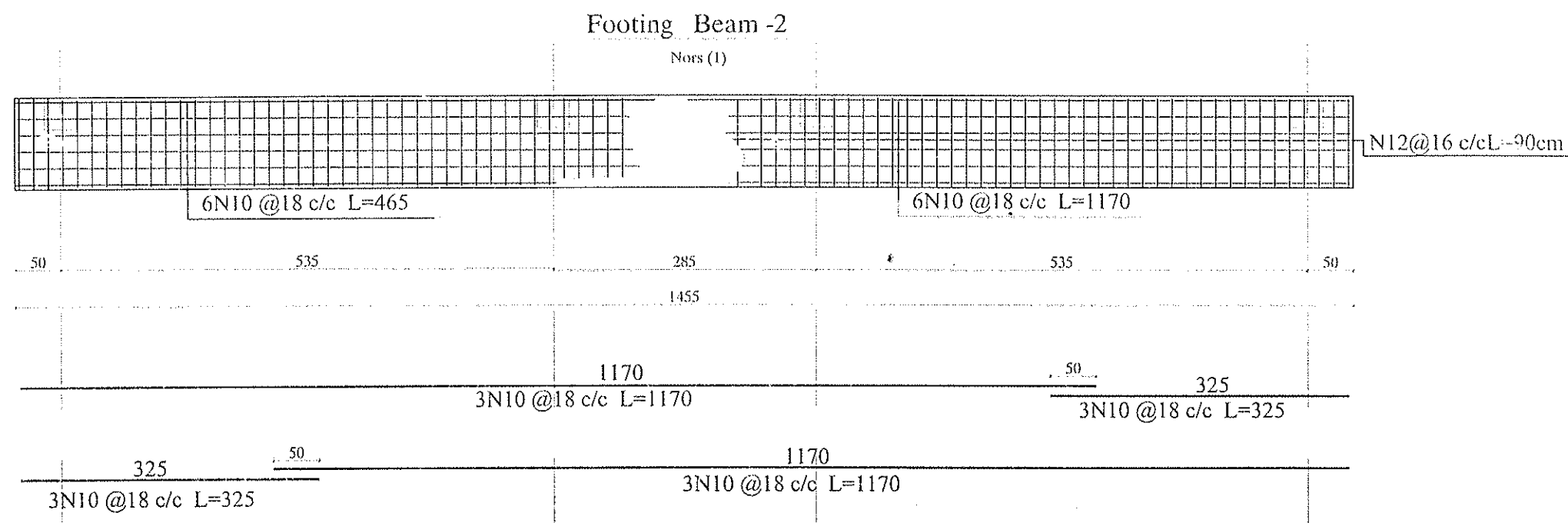
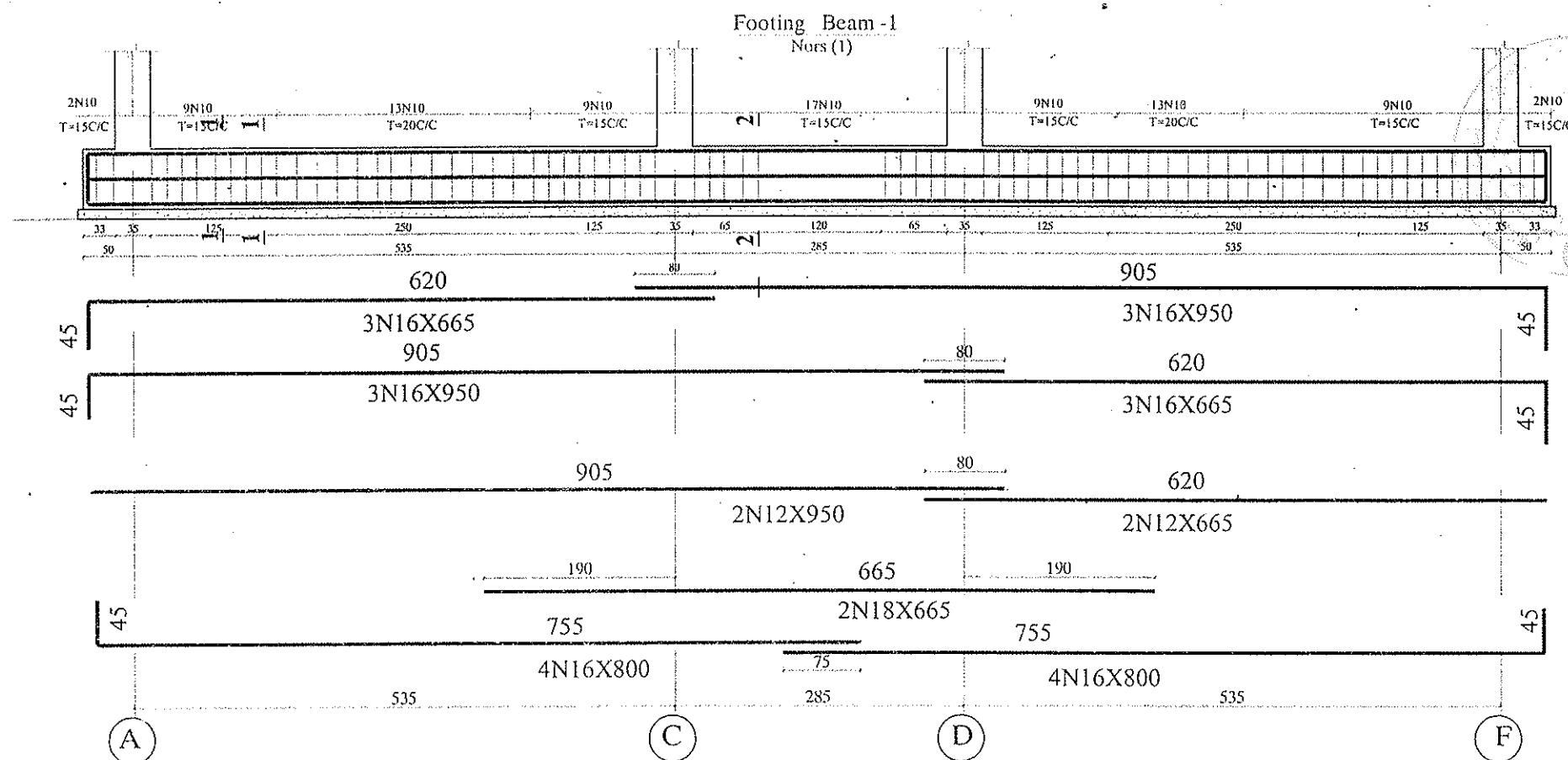
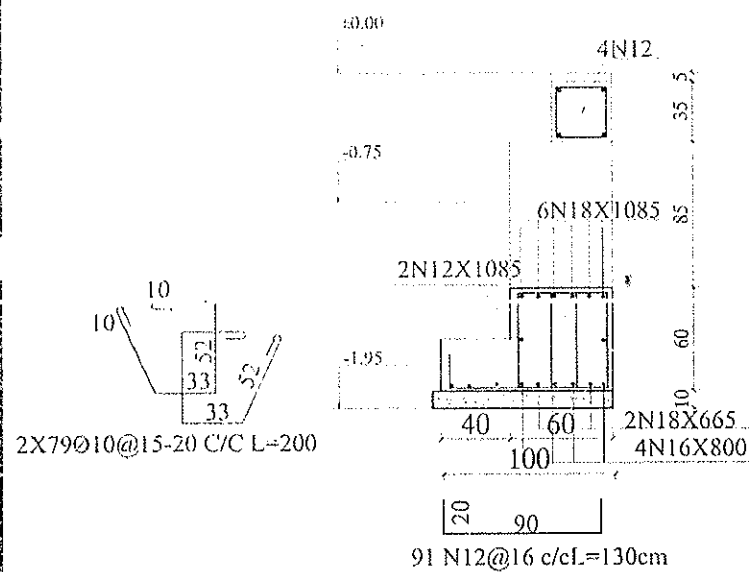
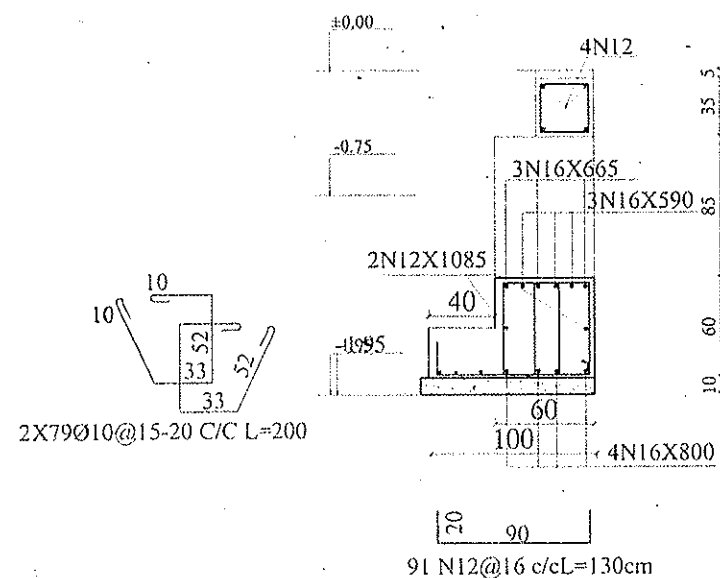
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RCC DESIGN: ENG. FAHMAZ FARAH  
DATE APPROVED BY: ENG. ABIMAHMAD MAJID

APPROVED: Doc/Mod: ENG. ABIMAHMAD MAJID  
SCALE: AS SHOWN (A1)  
DATE: JAN 2015

DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 6 + 2 Class Room Metal Sheet Roof  
DRAWING TITLE: Sections of Footing Beam 1

6 + 2 Class Room Metal Sheet Roof  
Sections of Footing Beam 1





MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



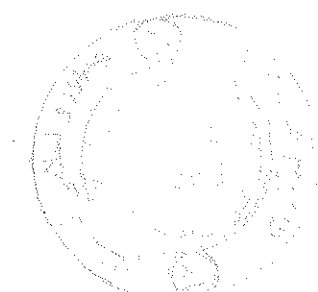
STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH  
REC'D/DESIGN: ENG. FATIMA ZEWARI  
CHECK/REVISION: ENG. FARAH

APPROVED/Doc/Moc: ENGLAB MOMEN RAAD  
SCALE: AS SHOWN/1:10  
DATE: 2023/05/11

DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 6-2 Class Room Metal Sheet Roof  
DRAWING TITLE: Sections of Footing Beam 1

6-2 Class Room Metal Sheet Roof  
Sections of Footing Beam 1



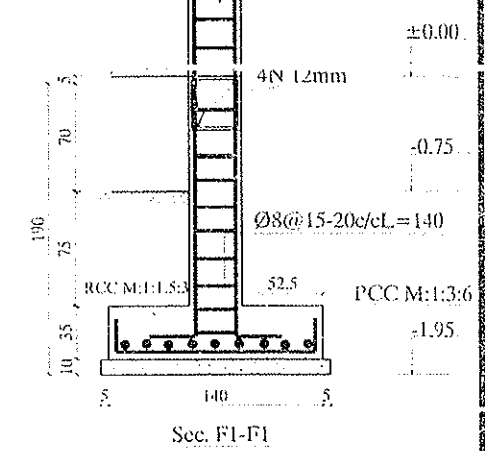
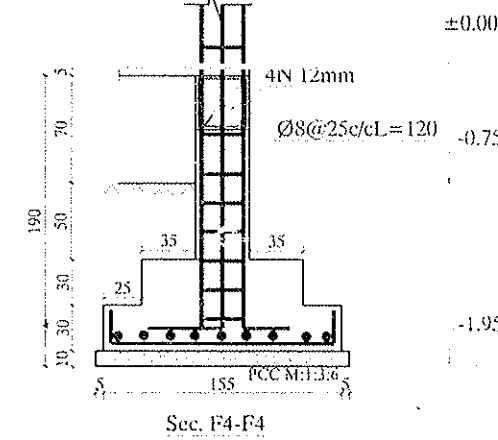
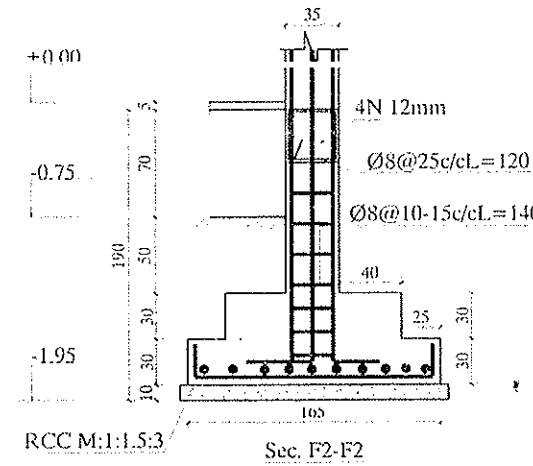
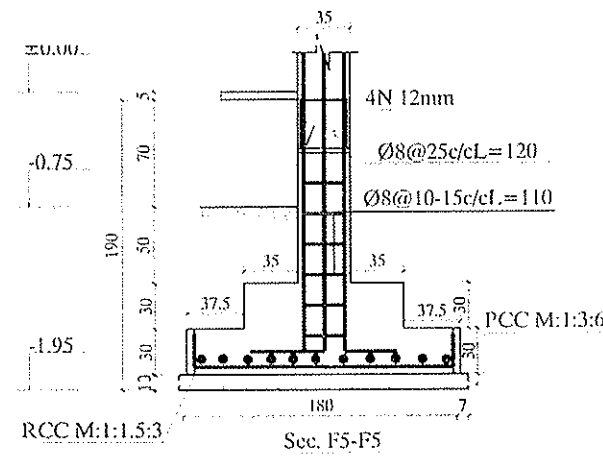
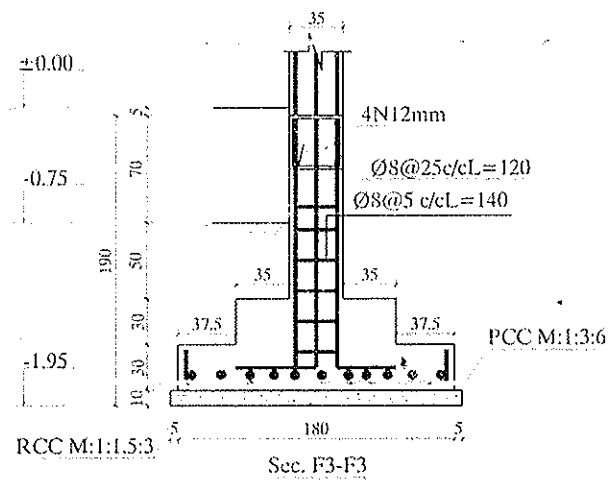
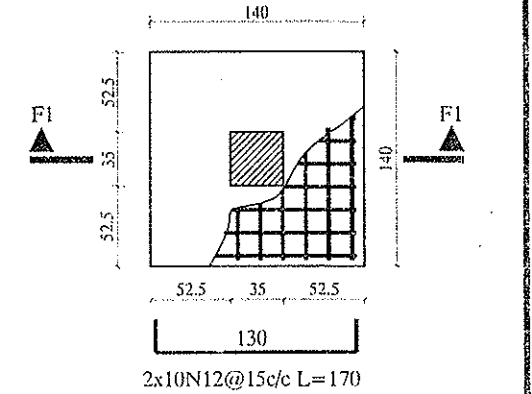
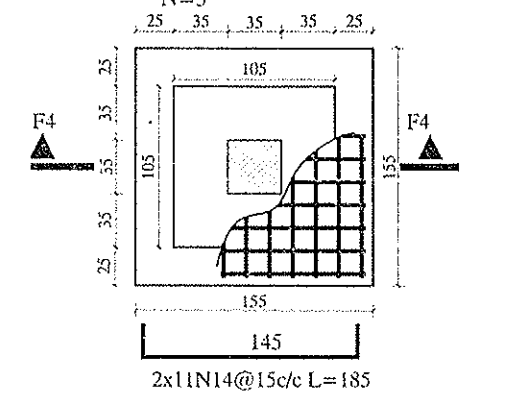
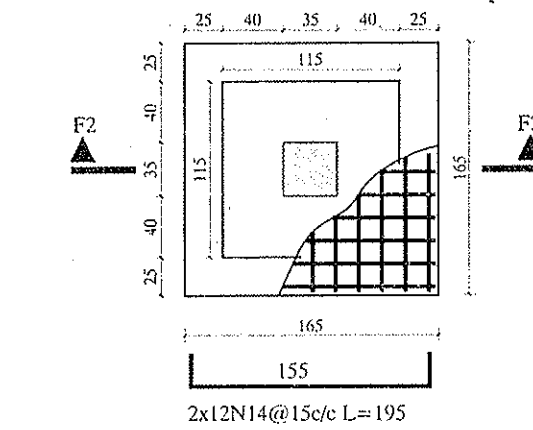
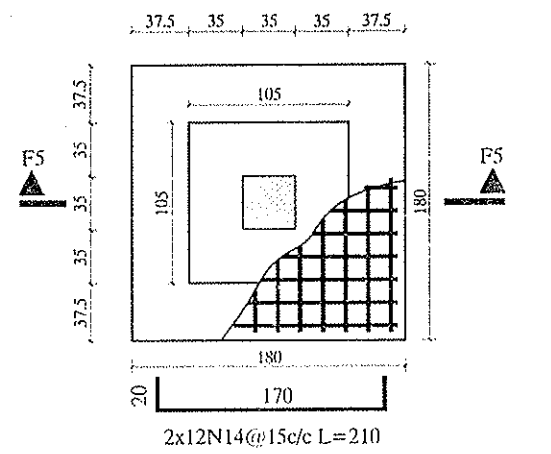
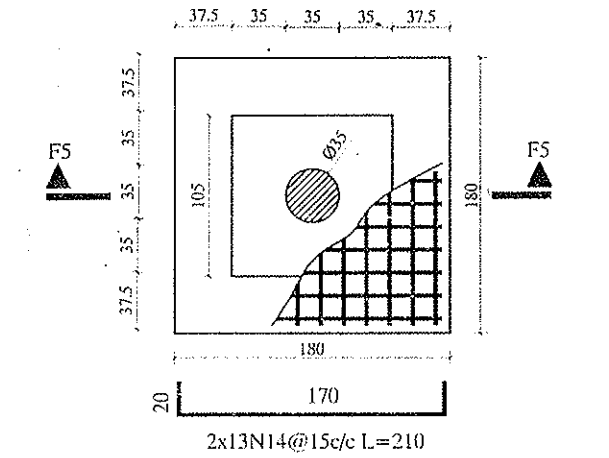
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Footing FC-5  
N=2

Footing -2  
N=21

Footing FC-4  
N=3

Footing -1  
N=8



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH  
RCC DESIGN: ENG. FARIMA ZEWARI  
CHECK APPROVAL: ENG. FARIMA ZEWARI

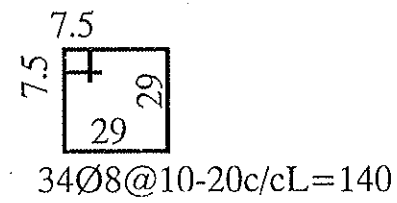
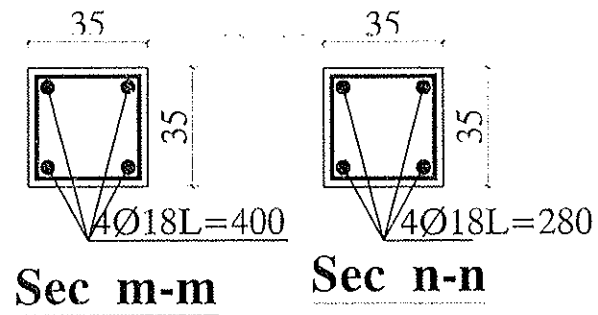
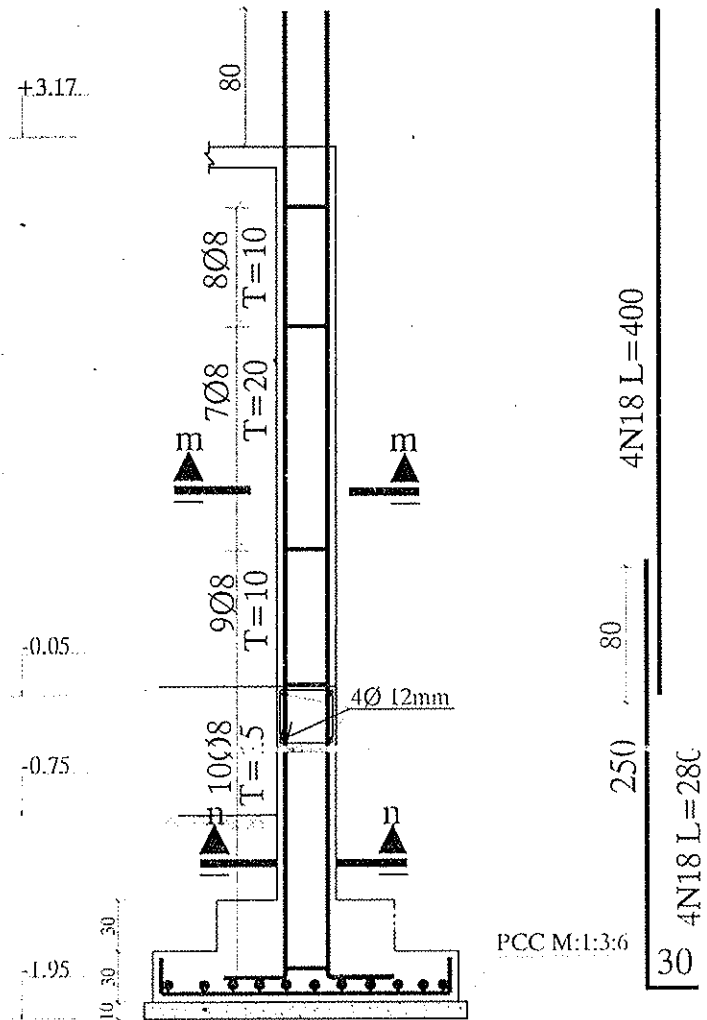
APPROVED/Doc/Mod: ENG. AB MUMEN RAAD  
SCALE: AS SHOWN (A4)  
DATE: 1402/05/11

DRAWING  
TYPE  
NO. 8/30

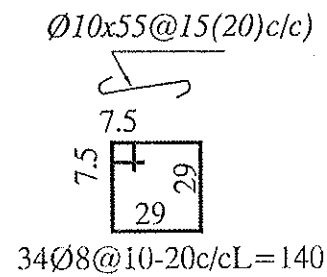
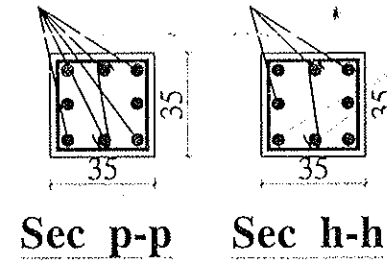
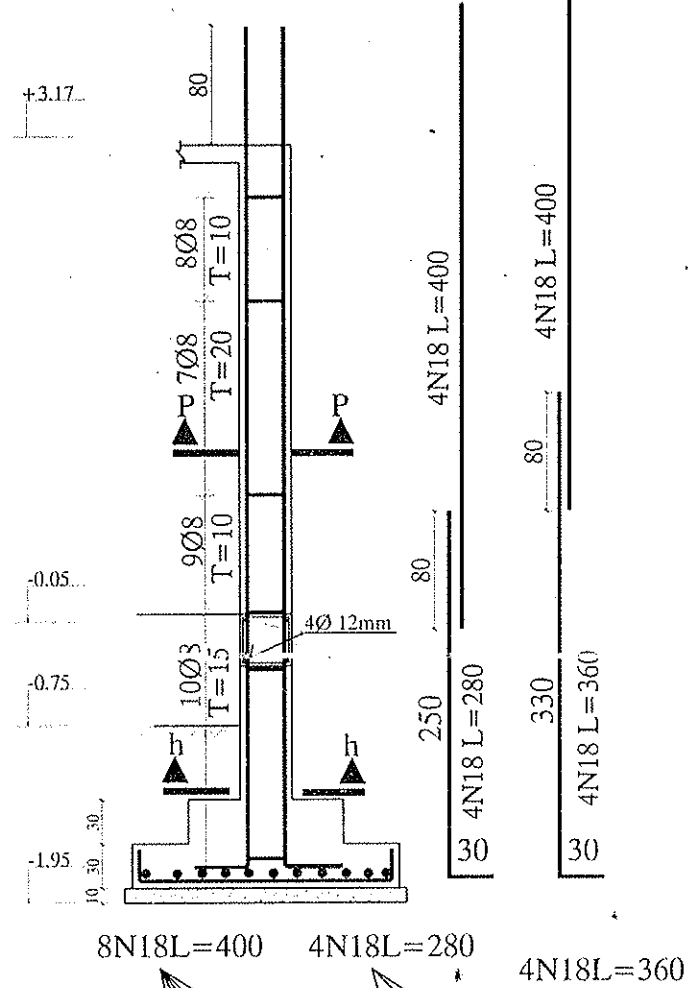
STRUCTURAL  
PROVINCE  
PROJECT NAME  
DRAWING TITLE

6 + 2 Class Room Metal Sheet Roof  
Sections Foundation

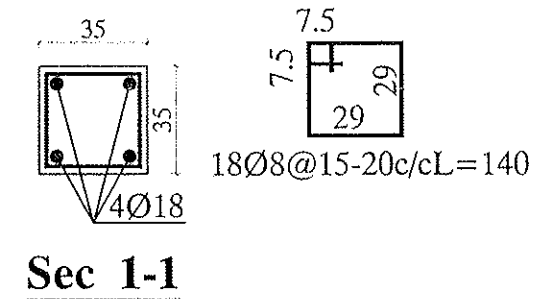
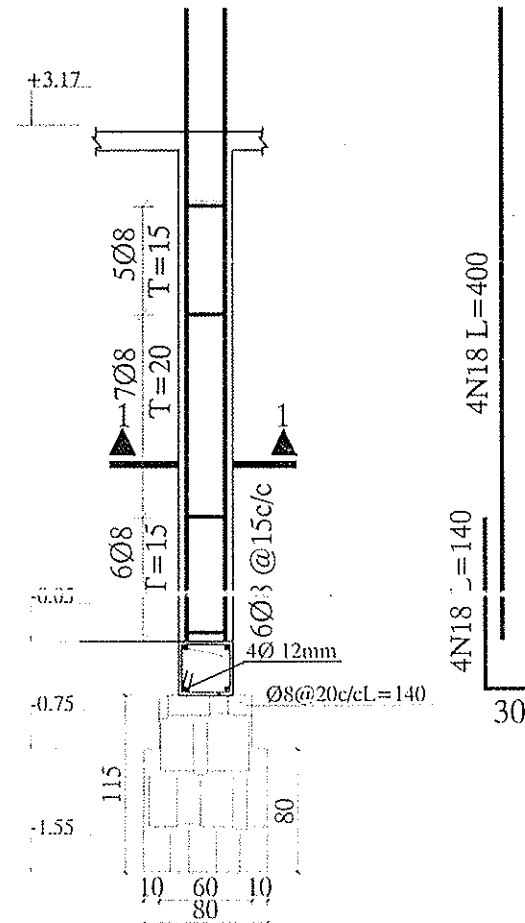
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**Column C-2**  
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**Column C-4**  
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MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



# STANDARD SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN ENG. FARAH

ROO DESIGN                      ENG. CAHMAZI WARI

IT IS APPROVED: ENCLAB MATIN MAJOL.

APPROVED: Doc/Moe ENGLAB MOMEN RAAD

SCALP AS SHOWN: A G

TABLE 1. CAN 361

DRAWING  
TYPE

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11

STRUCTURAL.

13

1988

PROVINCE

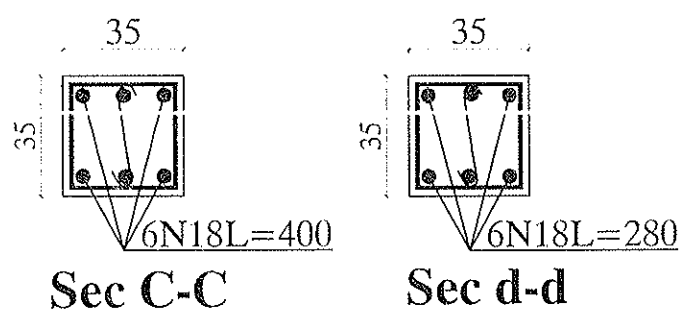
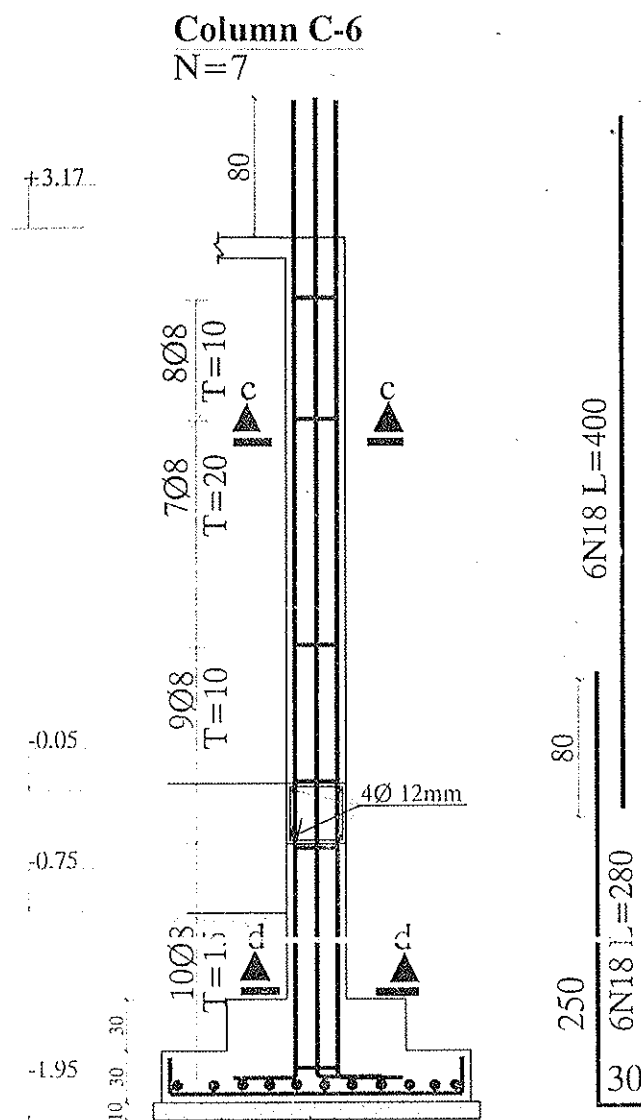
PROJECT NAME:

DRAWING: III

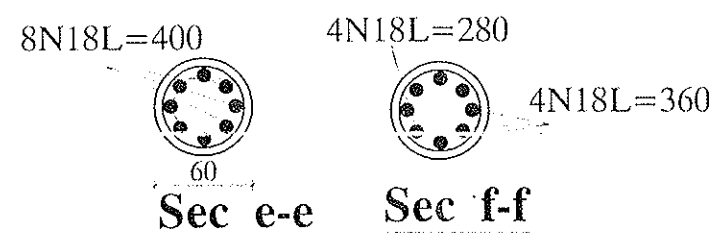
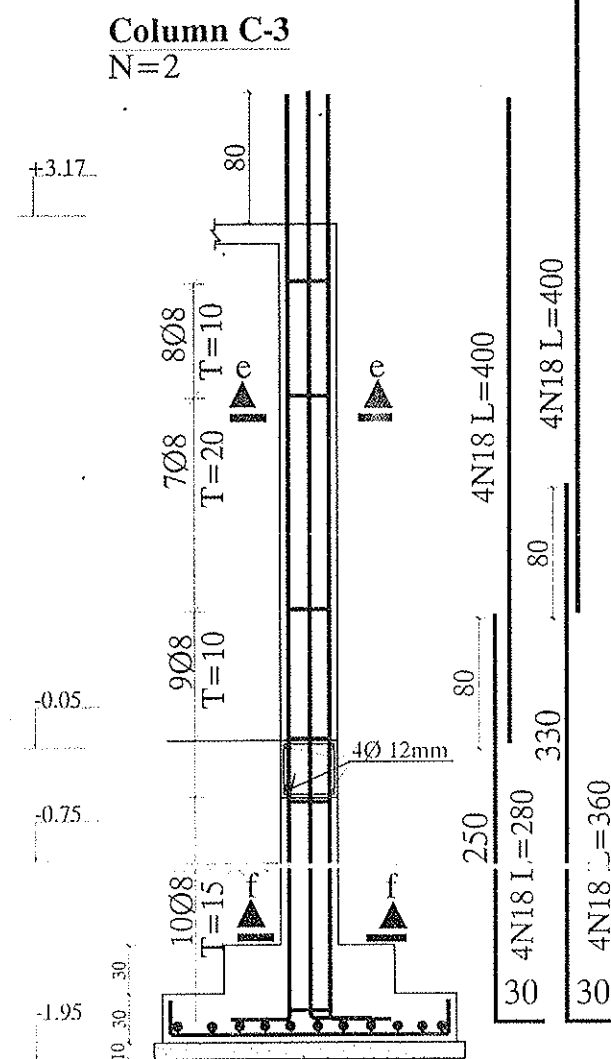
6.1.2 Class Room Metal Sheet Roof

COLUMNS

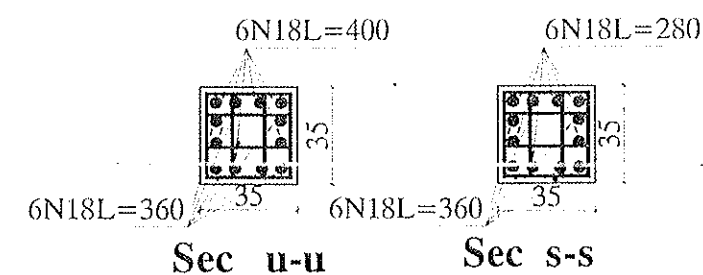
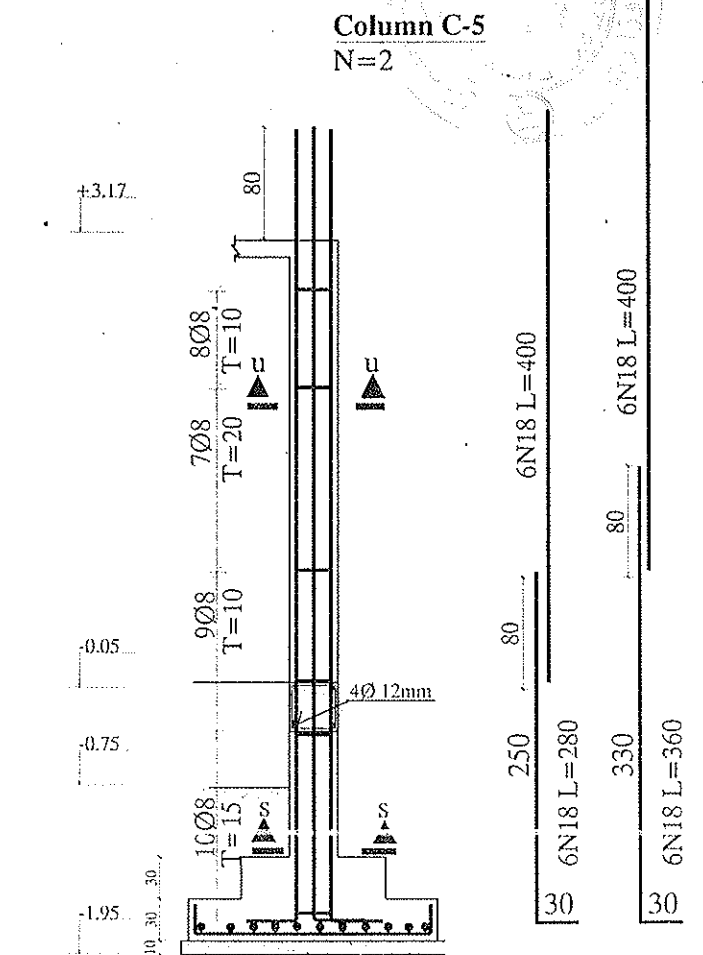




$\phi 10 \times 55 @ 15(20) c/c$   
 $34 \phi 8 @ 10-20 c/c L=140$



$46 \phi 8 @ 7-10 c/c L=125$



$34 \phi 8 @ 10-20 c/c L=100$   
 $34 \phi 8 @ 10-20 c/c L=140$



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH

REVISION: ENG. LATIHA ZEWARI

DATE: 1400/05/10

APPROVED: Doc/Moc: ENG. AB MOMEN RAAD

SCALE: AS SHOWN

DATE: 1400/05/10

DRAWING TYPE: STRUCTURAL

PROVINCE: PAKISTAN

PROJECT NAME: 6+2 Class Room Metal Sheet Roof

DRAWING TITLE: COLUMNS

DATE: 1400/05/10

PROJECT NAME: 6+2 Class Room Metal Sheet Roof

DRAWING TITLE: COLUMNS

DATE: 1400/05/10

PROJECT NAME: 6+2 Class Room Metal Sheet Roof

DRAWING TITLE: COLUMNS

DATE: 1400/05/10

PROJECT NAME: 6+2 Class Room Metal Sheet Roof

DRAWING TITLE: COLUMNS

DATE: 1400/05/10

PROJECT NAME: 6+2 Class Room Metal Sheet Roof

DRAWING TITLE: COLUMNS

DATE: 1400/05/10

PROJECT NAME: 6+2 Class Room Metal Sheet Roof

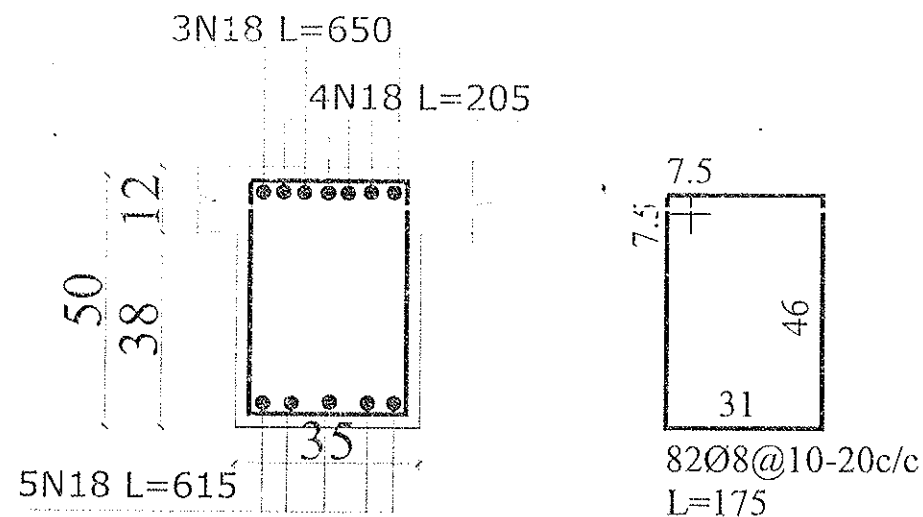
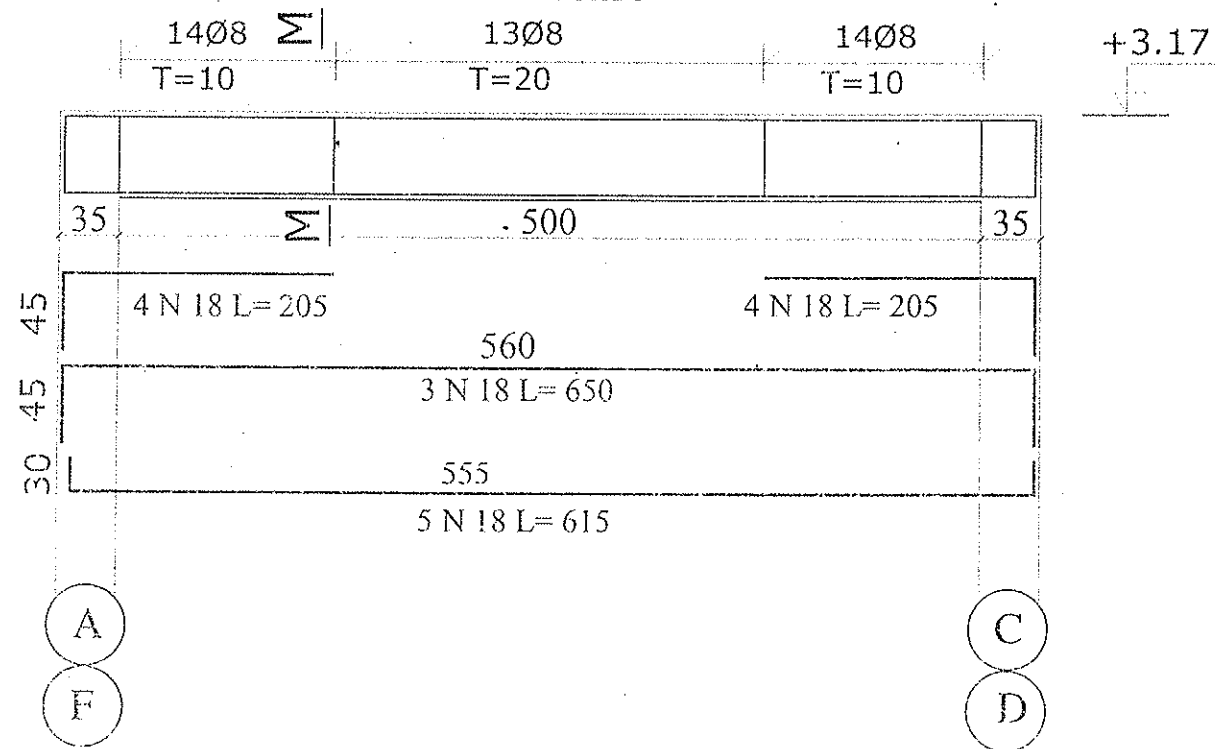
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DATE: 1400/05/10

PROJECT NAME: 6+2 Class Room Metal Sheet Roof

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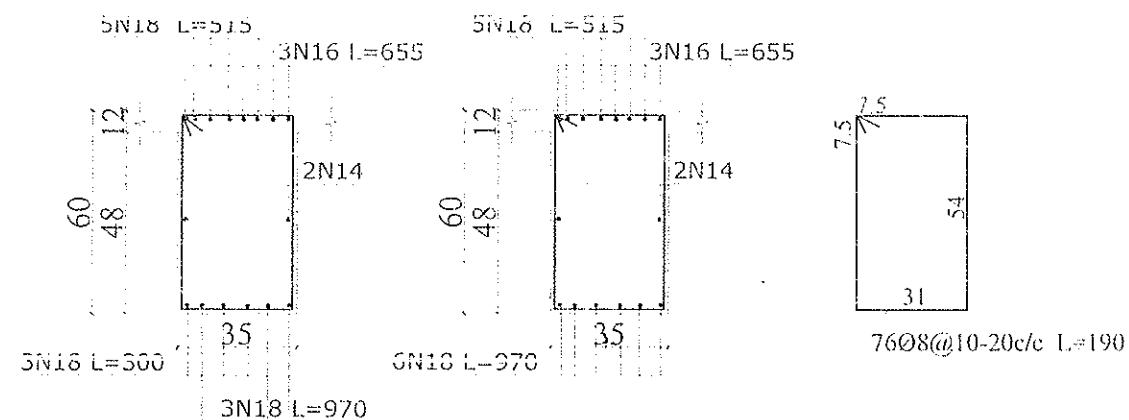
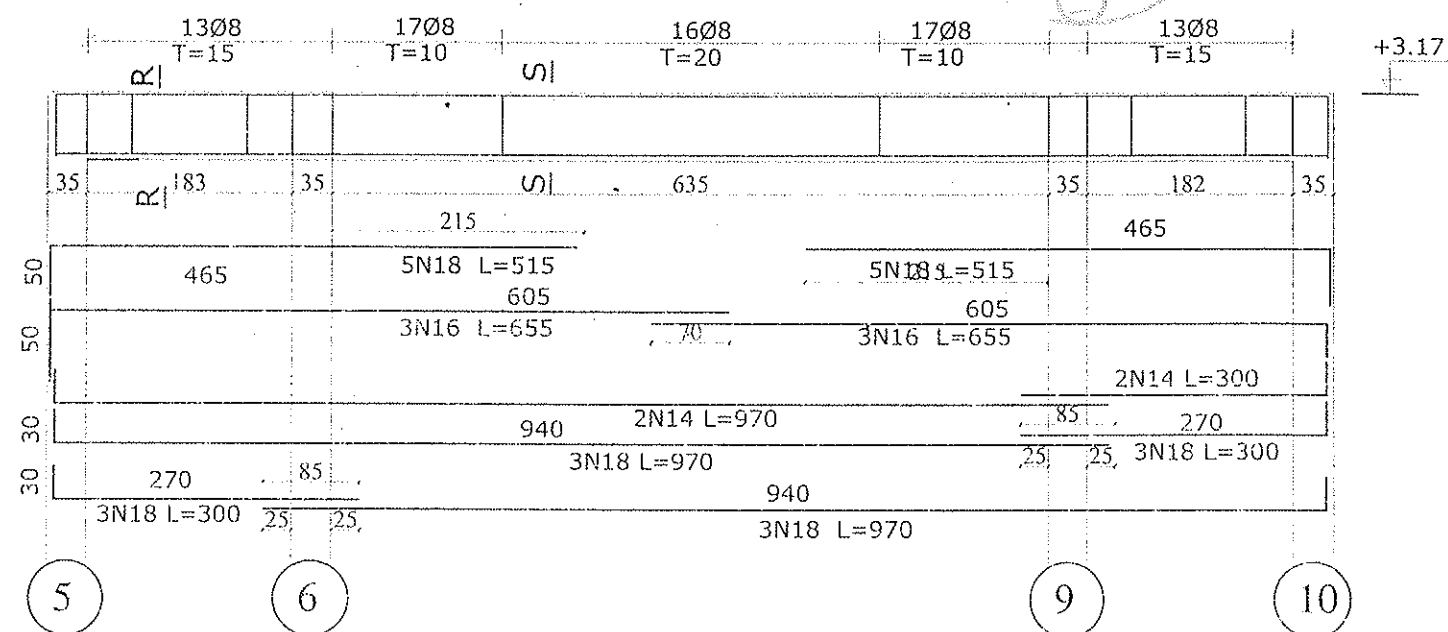
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## SECTION M-M

# FRAME-5

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## SECTION R-R

## SECTION S-S



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN: ENCL. FARAH  
SCALE: AS SHOWN  
DATE: 2010

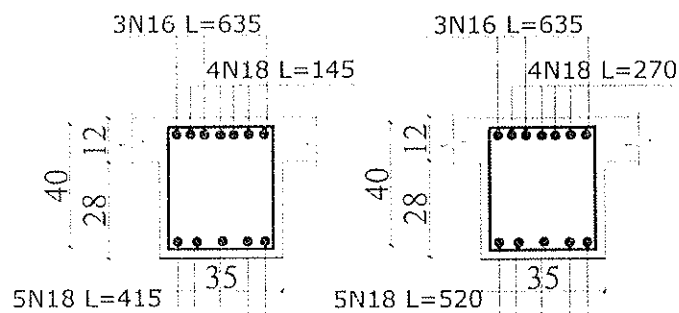
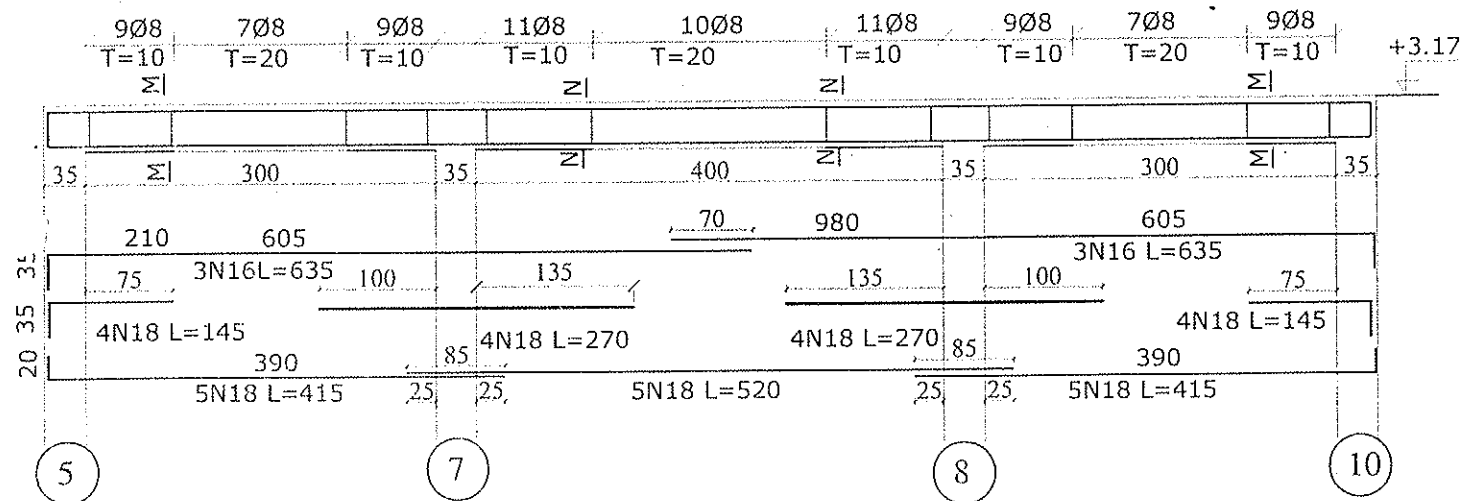
APPROVED: Dr. K. M. ENCL. AB. MOMEN RAAD  
SCALE: AS SHOWN  
DATE: 2010

DRAWING TYPE: STRUCTURAL  
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DRAWING TITLE: Details and sections

PROVINCE: PROJECT NAME: 6-1 Class Room Metal Sheet Roof  
DRAWING TITLE: Details and sections

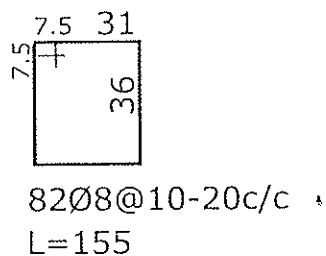
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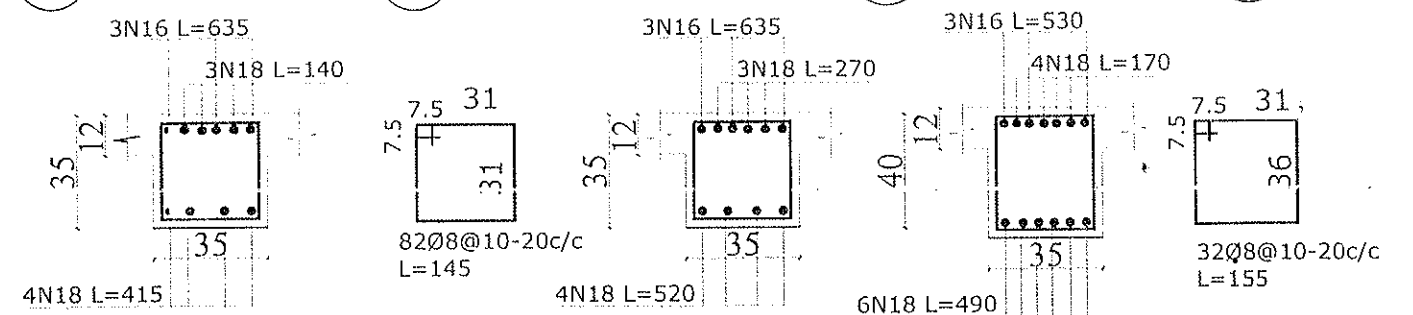
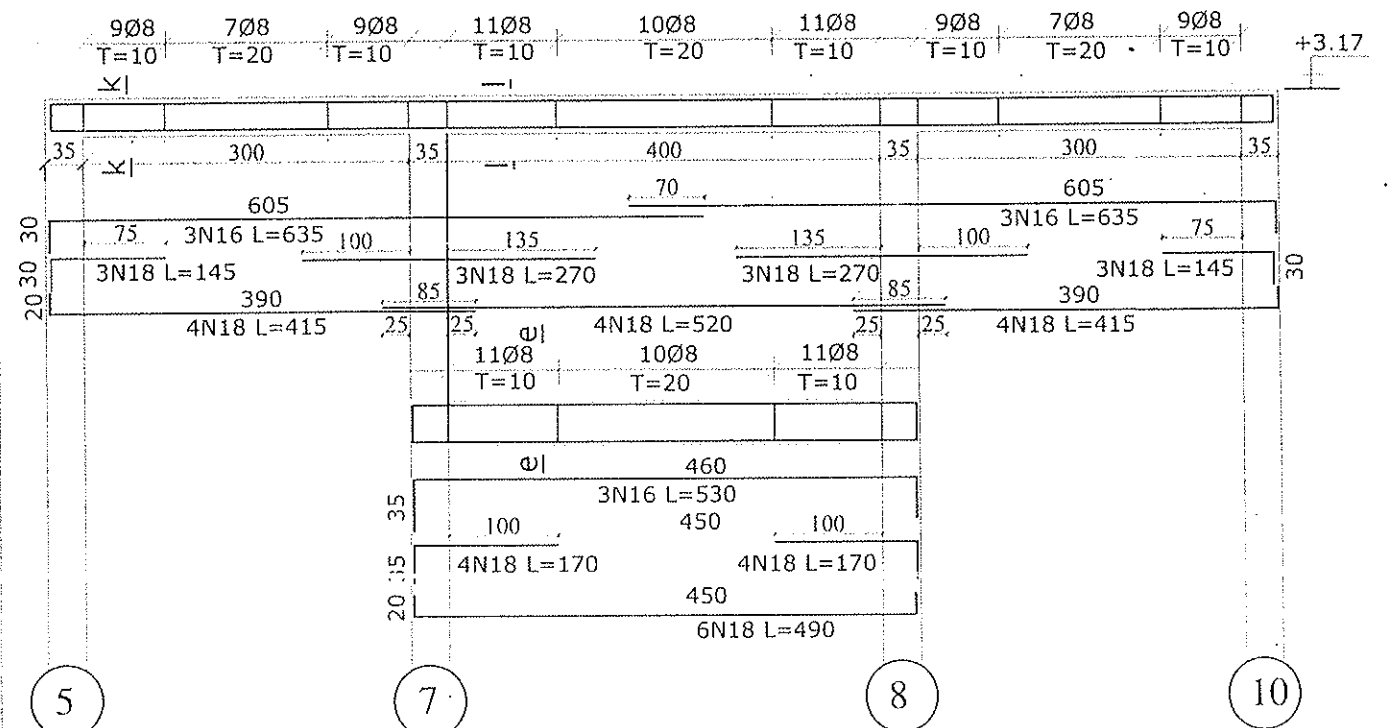
SECTION M-M

SECTION N-N



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SECTION K-K

SECTION I-I

SECTION e-e



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENG. FARAH  
RECORD/DESIGN: ENG. FARHAT ZAWAR  
DATE: 1402/05/10

APPROVED: ENG. AHMAD RAAD  
SCALE: AS SHOWN (A1)  
DATE: 1402/05/10

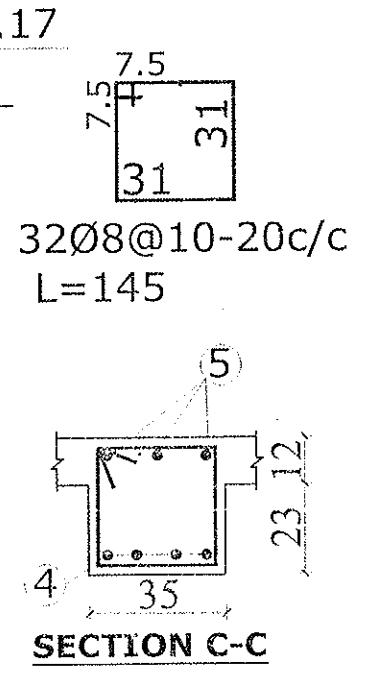
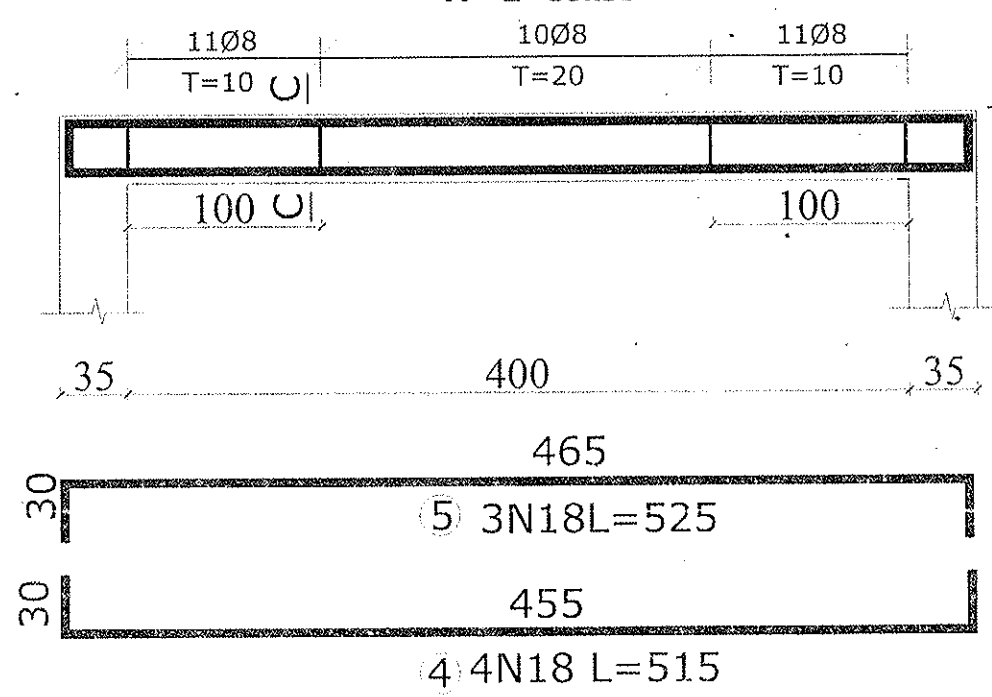
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PROJECT NAME: ...  
DRAWING TITLE: ...

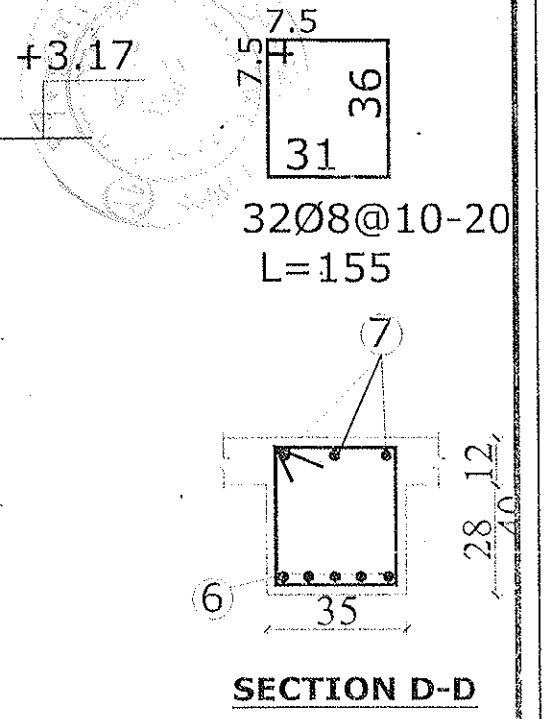
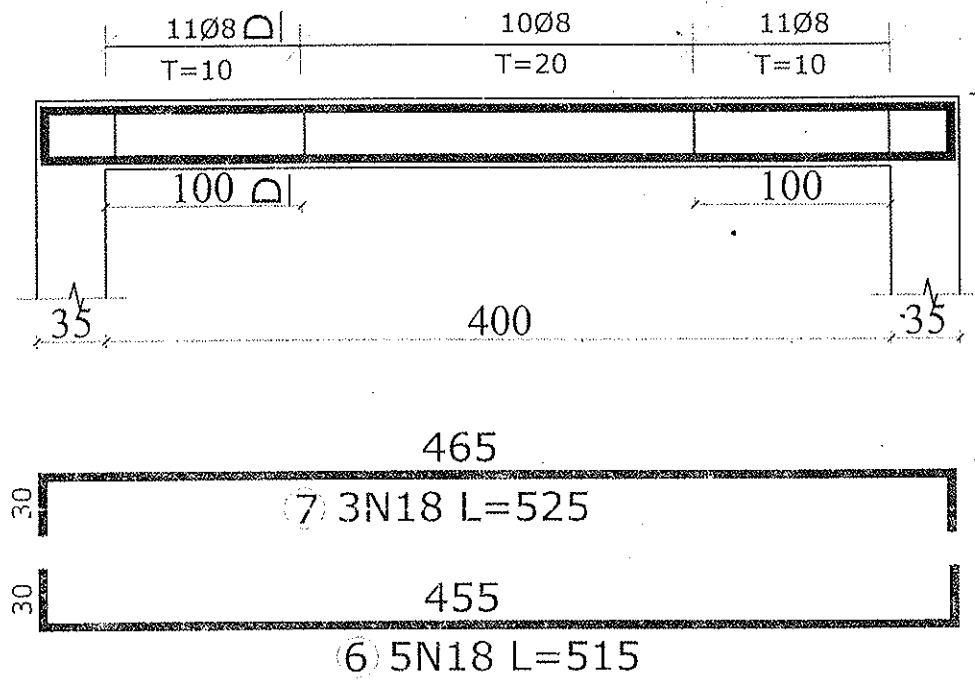
612 Class Room Metal Sheet Roof  
Reins and Sections



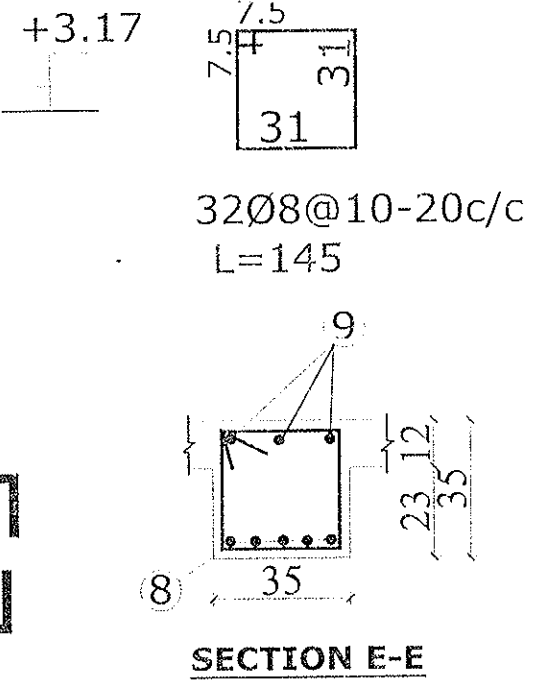
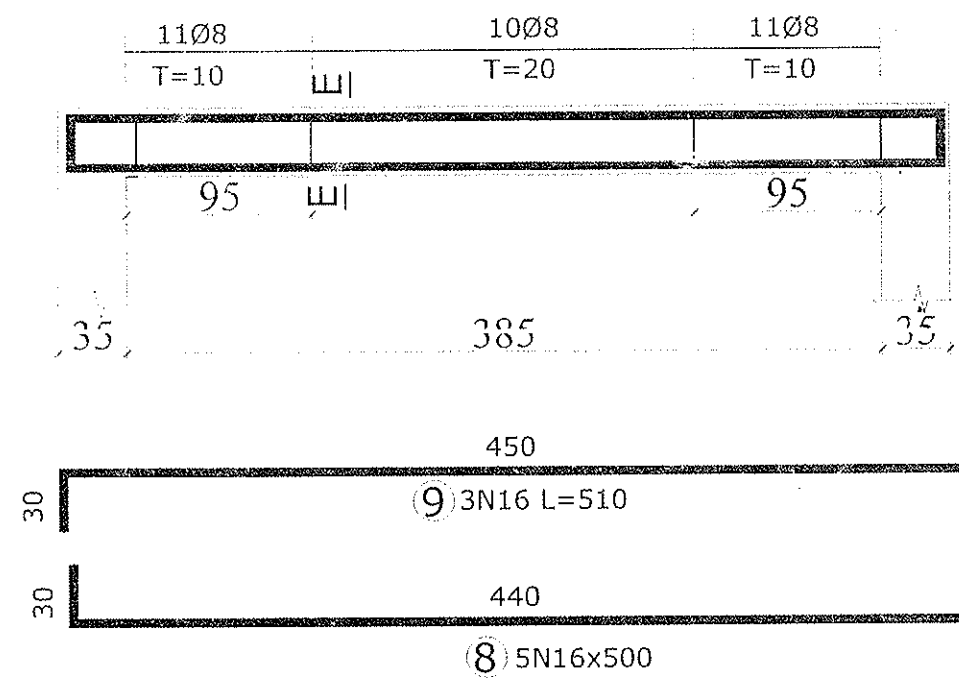
**BEAM-8**  
N=1 35x35



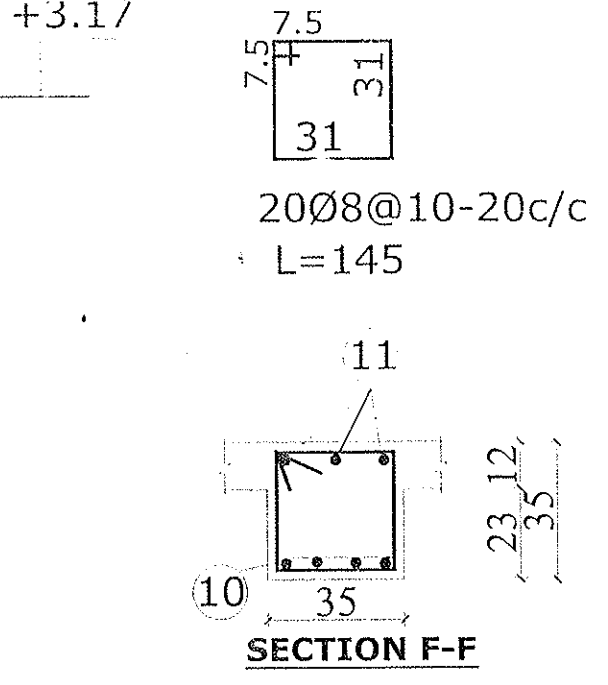
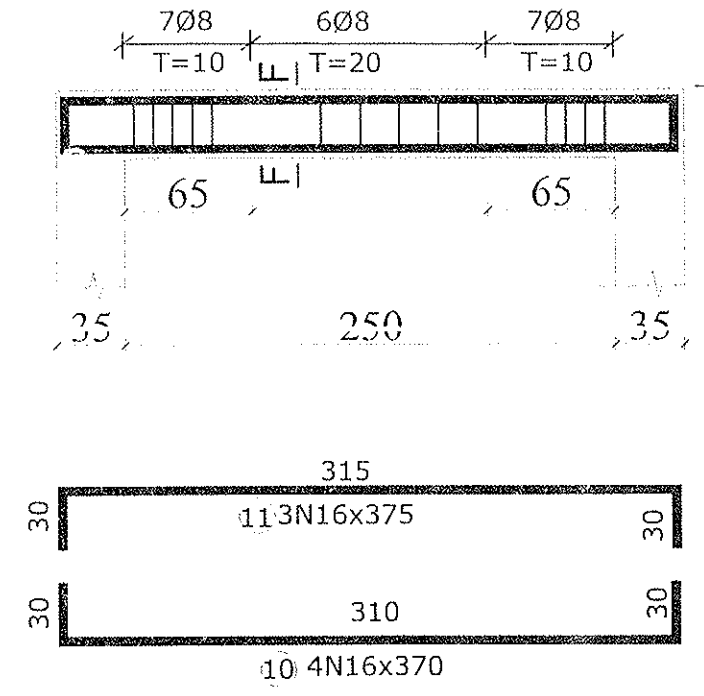
**BEAM-3**  
N=1 35x40



**BEAM-6**  
N=1 35x25



**BEAM-7**  
N=4 35x35

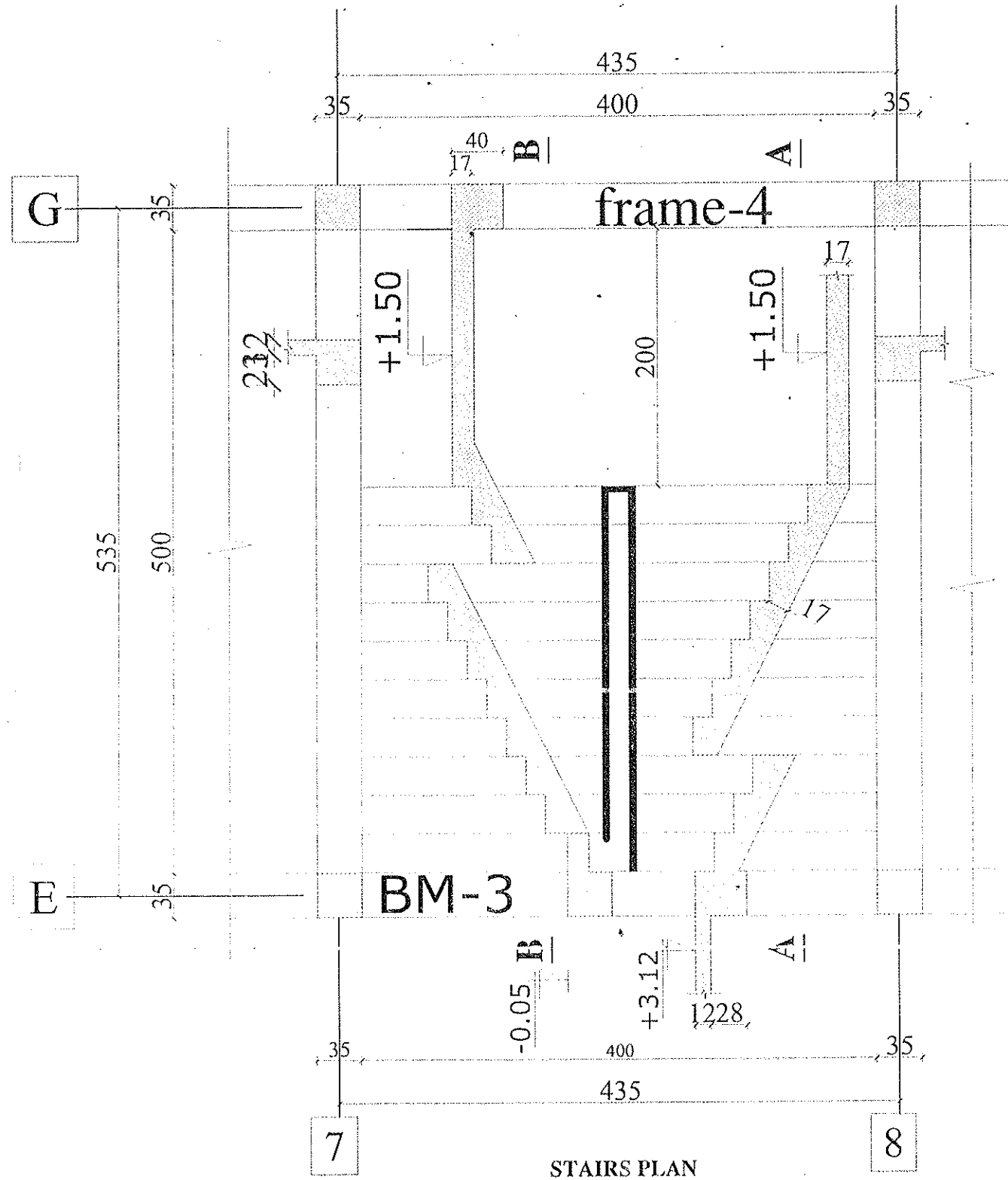


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DEPARTMENT OF CONSTRUCTION

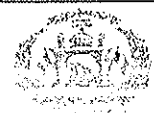
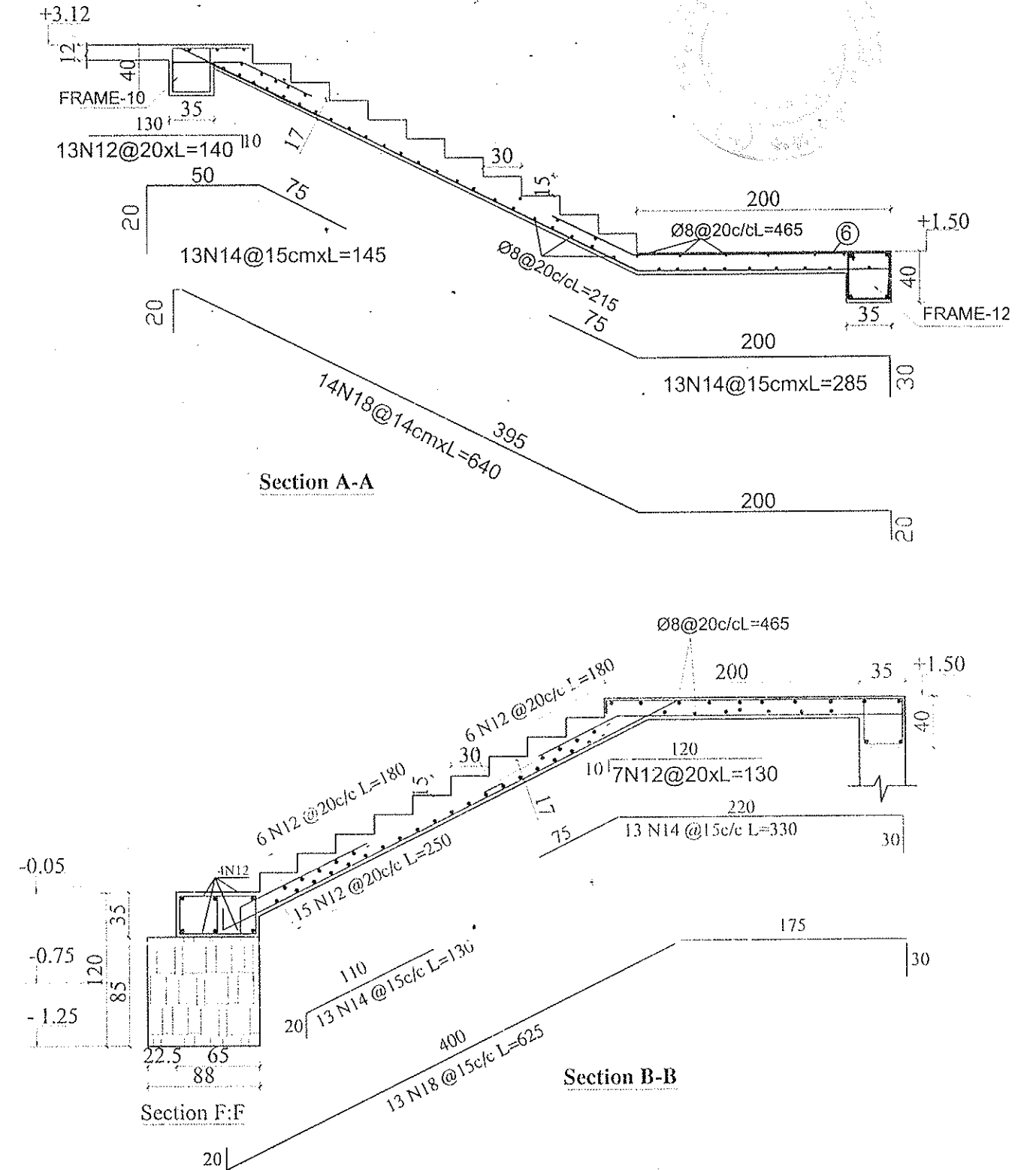


STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN	ENGL. FARAH	APPROVED/Doc/Moc	ENGL. AH. MOMEN RAAD	DRAWING TYPE	STRUCTURAL	PROVINCE	PROJECT NAME	612 Class Room Metal Sheet Roof
REVISION	ENGL. FAHMAZ ZAWAR	SCALE	AS SHOWN/TAY	1:3	13	DRAWING TITLE	Regime and Sections	
DATE		DATE						



STAIRS PLAN



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT-DESIGN: ENG. FARAH  
STRUCTURE-DESIGN: ENG. FATIMA ZEVAR  
DATE: JAN 2015

APPROVED: Doc/Moc: ENGLAH MOMEN RAAD  
SCALE: AS SHOWN/CAH  
DATE: JAN 2015

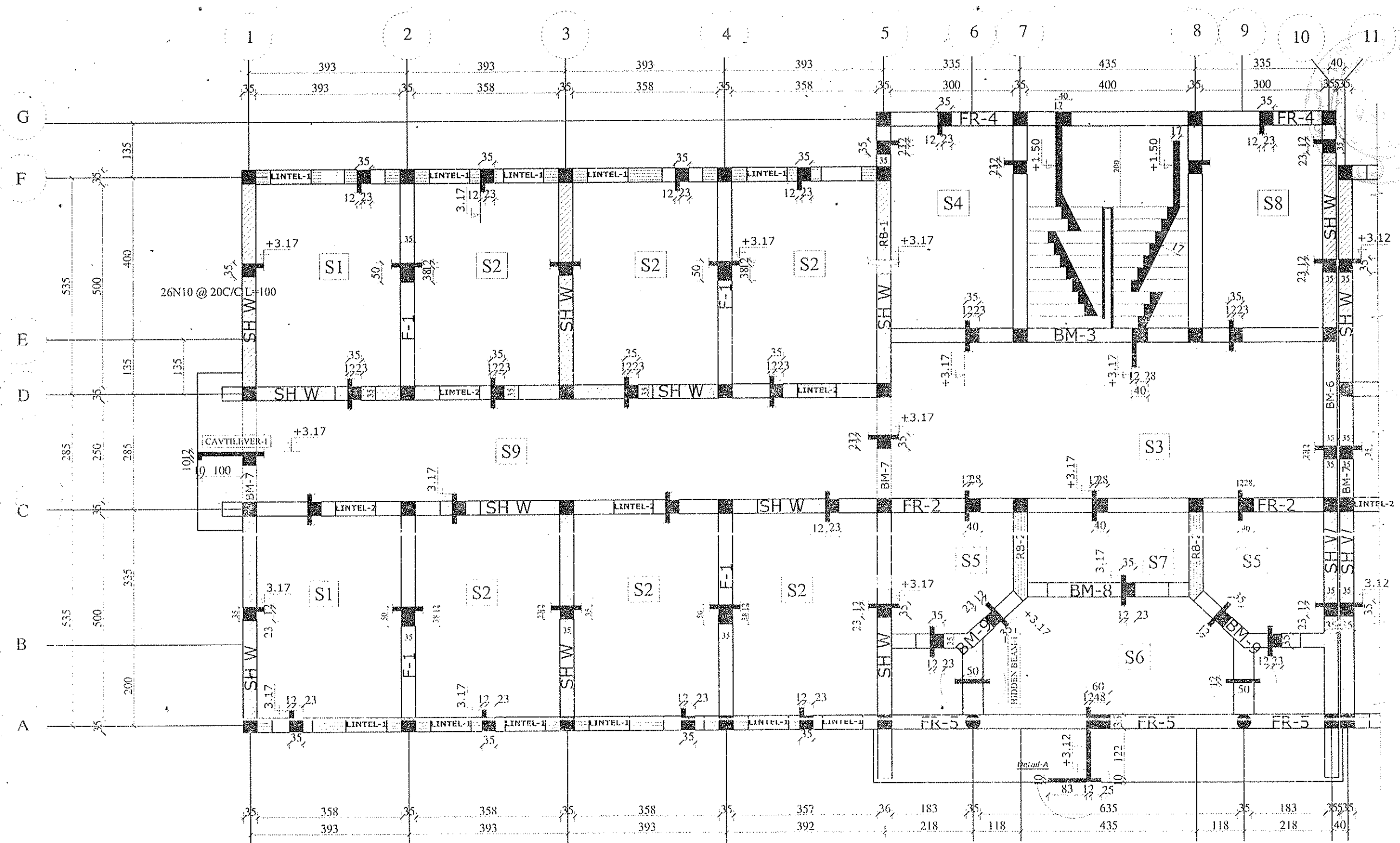
DRAWING TYPE: STRUCTURAL  
SHEET NO: 14  
TOTAL SHEETS: 20

PROVINCE: PROJECT NAME: DRAWING TITLE:

6+2 Class Room Metal Sheet Roof  
Stairs Shuttering and reinforcement







## SHUTTERING PLAN



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGN: ENGR. FARAH

REVIEWER: ENGR. TALMA ZAWAB

DATE: 2020/01/10

APPROVED: Doc/Mos: ENGLAB MOMEN RAAD

SCALE: AS SHOWN

DATE: 2020/01/10

DRAWING TYPE

10

90

STRUCTURAL

10

90

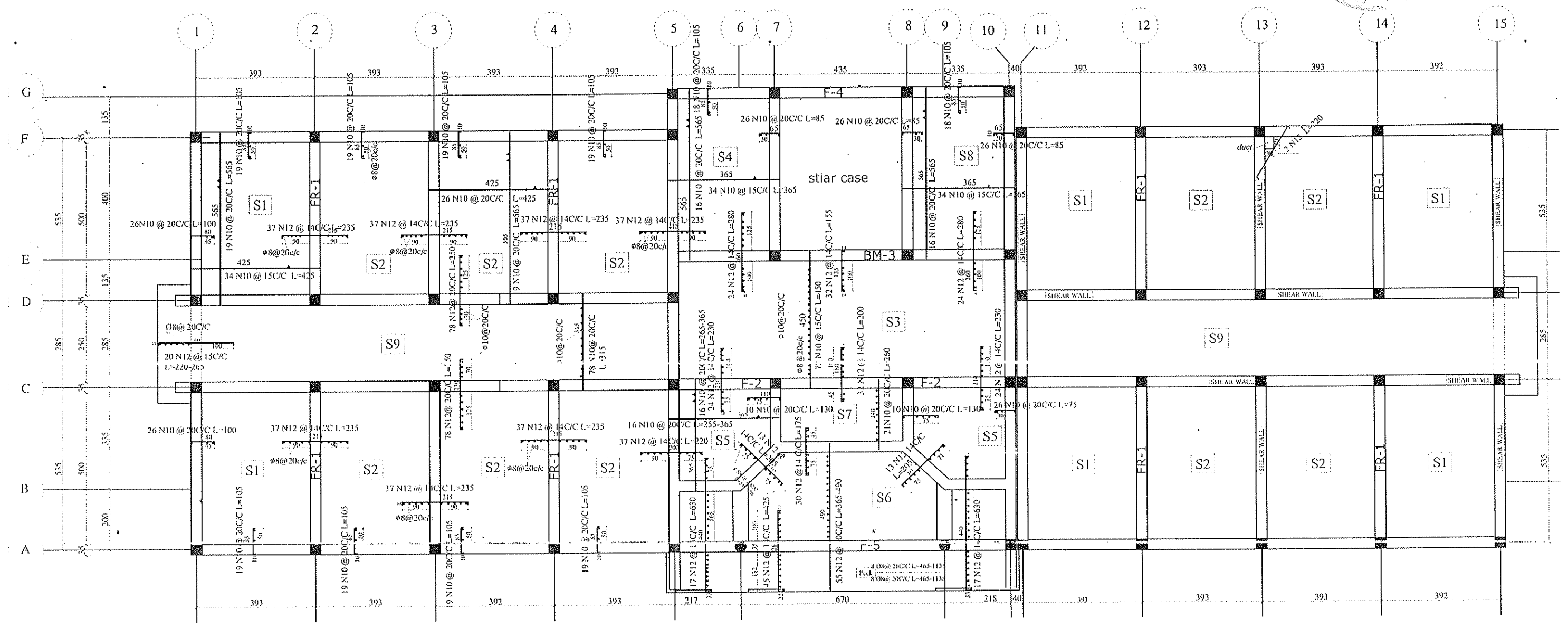
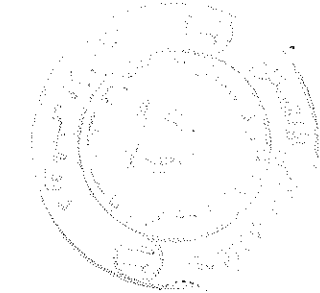
PROVINCE

PROJECT NAME

DRAWING TITLE

602 Class Room Metal Sheet Roof

Change Log: 01/10/2020



REINFORCING PLAN



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN: ENG. FARAH  
RCH DESIGN: ENG. TALIMA ZIWAR  
RCH APPROVED BY: ENG. AHMAD MAJID

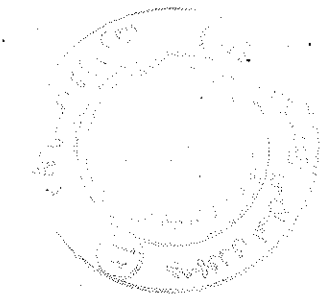
APPROVED: Doc/Msc  
SCALE: AS SHOWN (A)  
DATE: JAN 2011

DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 6x2 Class Room Metal Sheet Roof  
DRAWING TITLE: Reinforcing Plan of 1st FLM

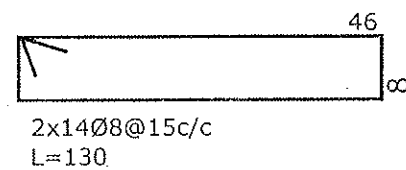
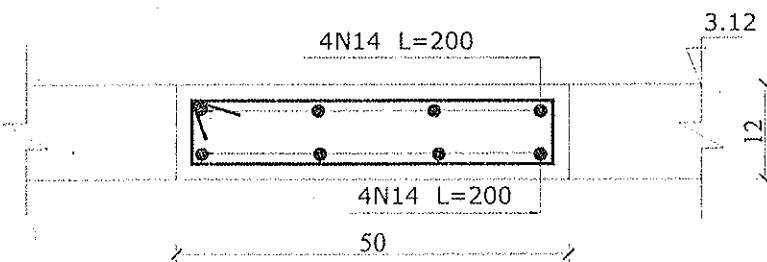
PROVINCE: PROJECT NAME: DRAWING TITLE:

6x2 Class Room Metal Sheet Roof  
Reinforcing Plan of 1st FLM

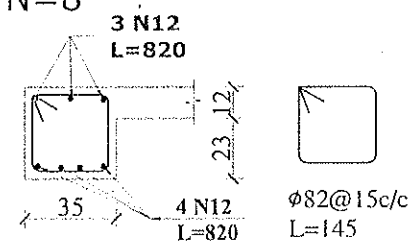




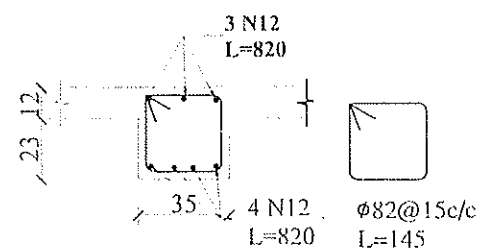
### HIDDEN BEAM-1



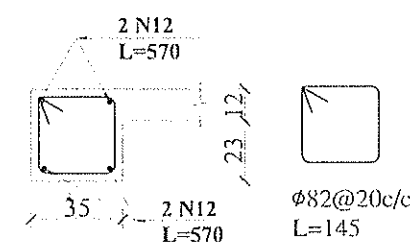
### LINTEL-1 N=8



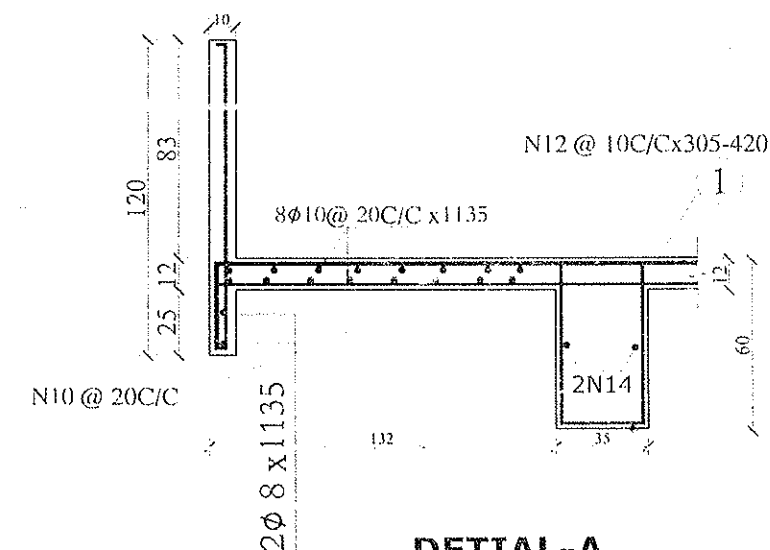
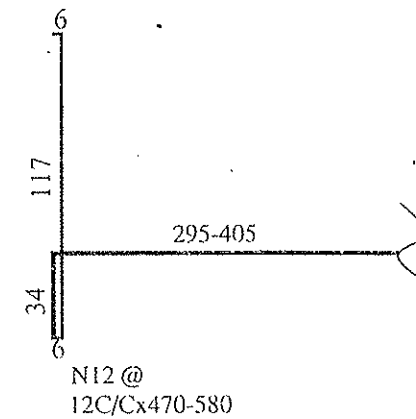
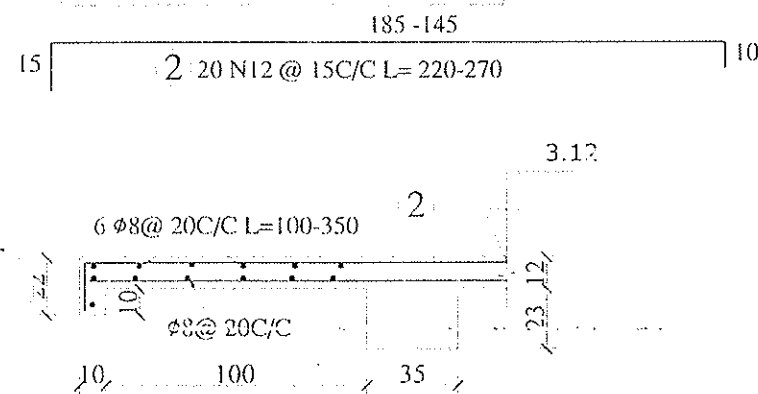
### LINTEL-2 N=8



### RING BEAM-1 N=16



### CAVTILEVER-1



### DETIAL-A



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DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN: ENG. FARAH  
STRUCTURE DESIGN: ENG. FATIMA ZILWARI  
ELECTRICAL DESIGN: ENG. AB. MAMIN MAJID

APPROVED: Dec 2014  
SCALE: AS SHOWN  
DATE: JAN 2015

DRAWING TYPE: STRUCTURAL  
PROJECT NAME: 6+2 Class Room Metal Sheet Roof  
DRAWING TITLE: PARAPET & LAMEN

PROVINCE:

PROJECT NAME:

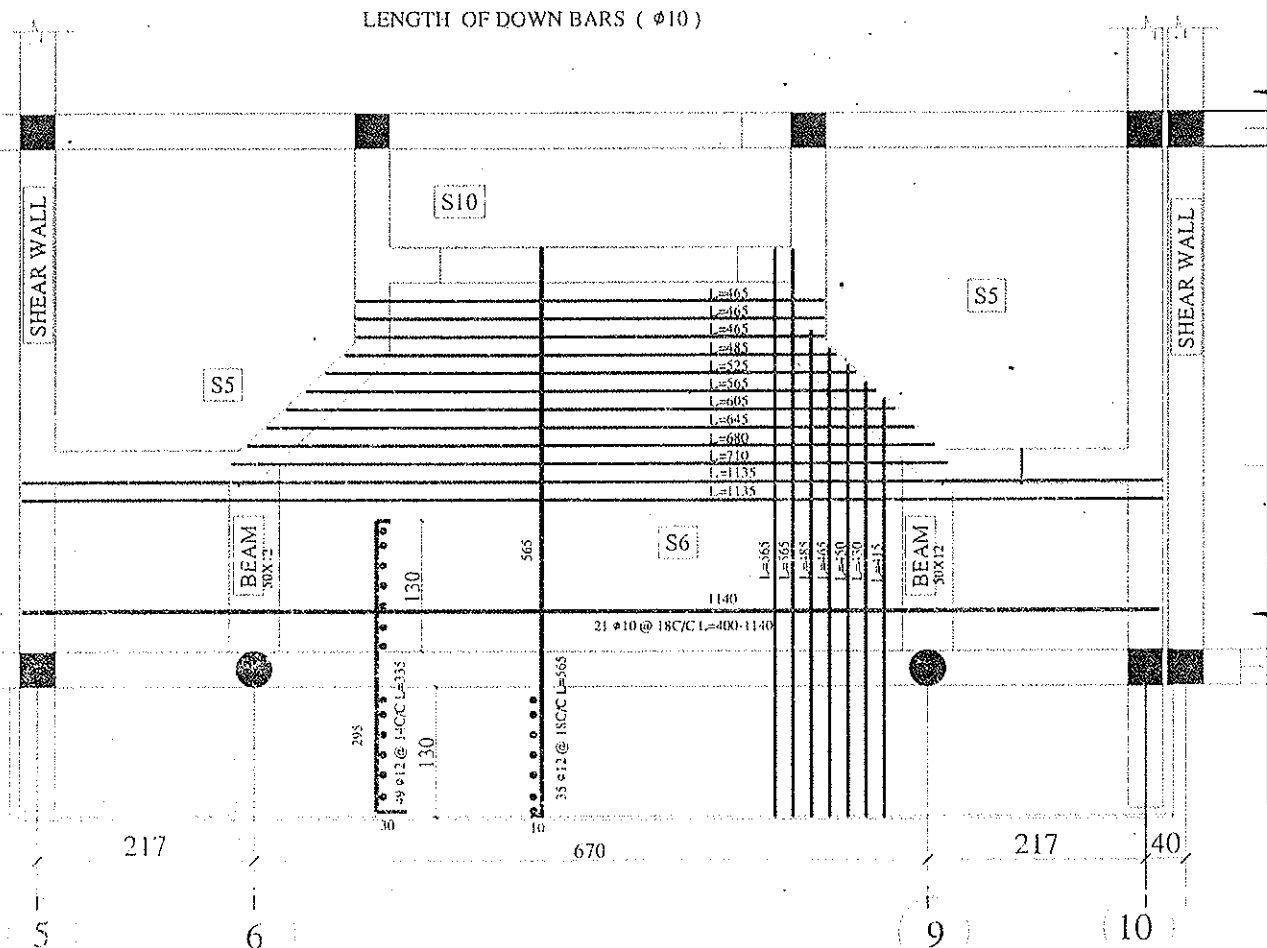
DRAWING TITLE:

6+2 Class Room Metal Sheet Roof

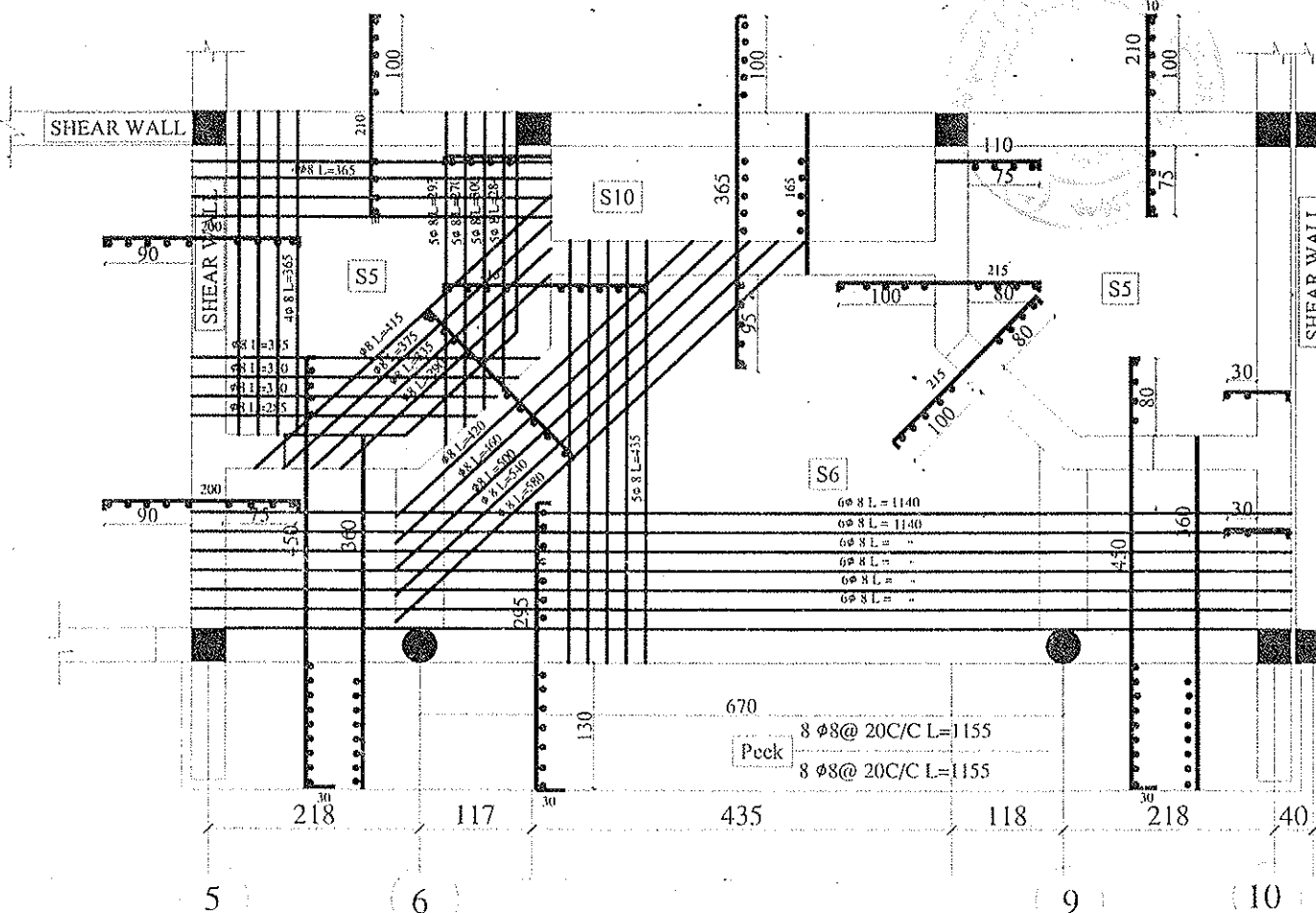
PARAPET & LAMEN



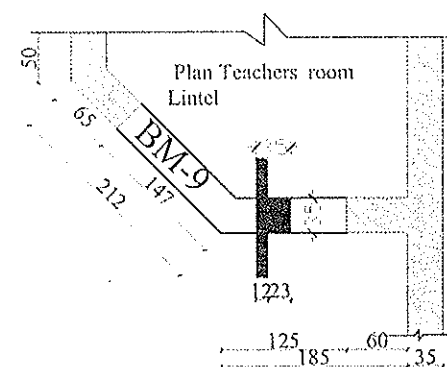
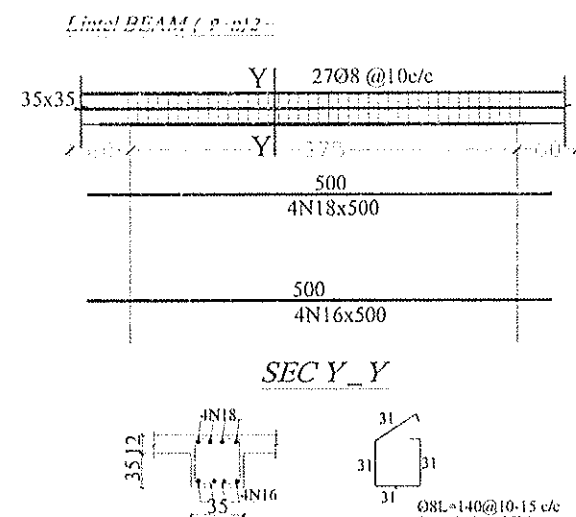
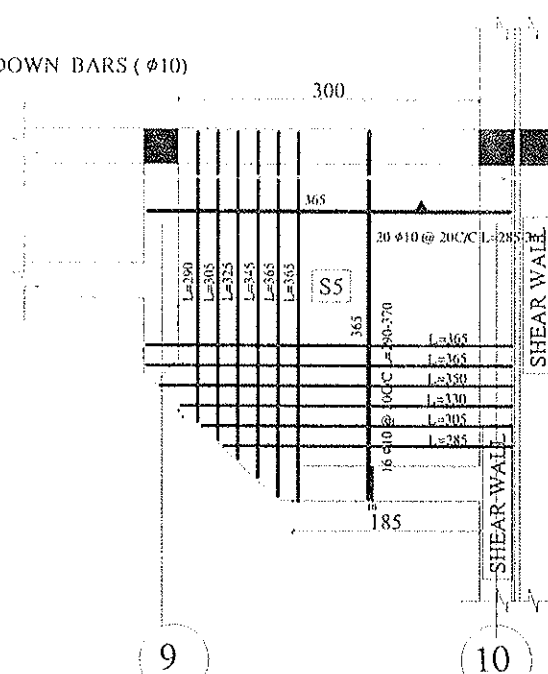
DETAIL "L"  
LENGTH OF DOWN BARS (  $\phi 10$  )



DETAIL ("L", "S")  
LENGTH OF (  $\phi 8$  )



DETAIL "S"  
LENGTH OF TOP AND DOWN BARS (  $\phi 10$  )



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT DESIGN: ENG. FARAH  
REVISION: ENG. FARAH  
TECH. APPROVAL: ENG. AB. MAMIN MAHMOUD

APPROVED Doc/Mac: ENG. AB. MAMIN MAHMOUD  
REVISION: ENG. AB. MAMIN MAHMOUD  
TECH. APPROVAL: ENG. AB. MAMIN MAHMOUD

DRAWING TYPE: STRUCTURAL  
SCALE: 1:20  
DATE: JAN. 2015

PROVINCE: PROJECT NAME: DRAWING TITLE:

612 Class Room Metal Sheet Roof  
Details