

PROPOSED DESIGN  
OF  
GGPS JUGIAN TAXILA  
RAWWALPINDI



**PLANNERS CONSULTANTS ENGINEERS (PCE)**  
97-K Industrial Estate, Hayatabad Peshawar Pakistan  
Ph: 0092-91-5816017, 5891661-4, Fax: 5891845  
E-Mail:pce.pesh@yahoo.com

## LIST OF DRAWINGS

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SR.NO	DESCRIPTION	DRG. NO.	SR.NO	DESCRIPTION	DRG. NO.
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CLIENT:



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**SCHOOL NAME**

GGPS JUGIAN TAXILA RAWALPINDI

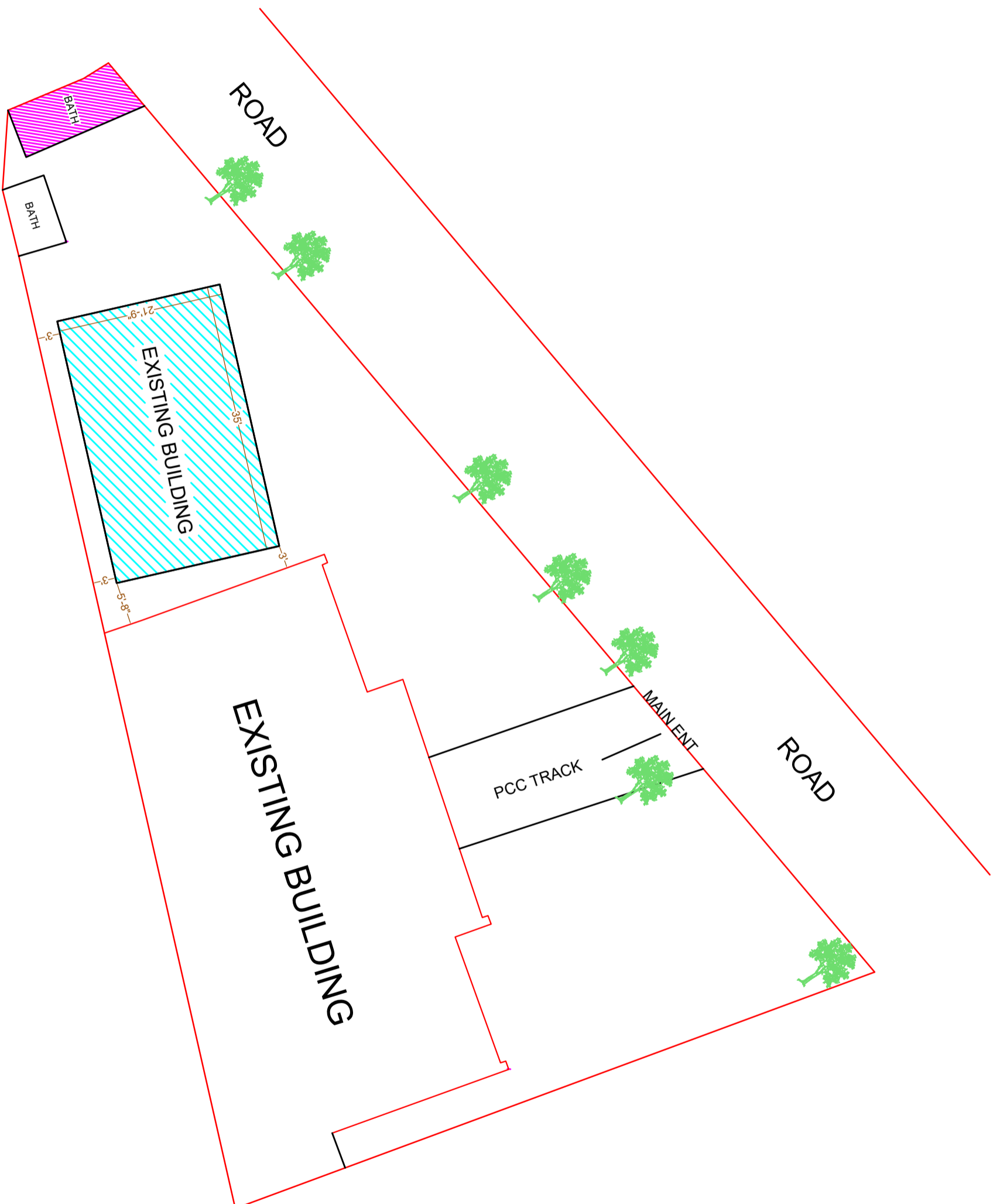
Date of Revision	Prepared By	Checked By	Approved By
	FAHAD KHAN KHANHADR	ARCHITECT	
	Designed By	MARWAT KHAN ORAKZAI (Architect Karachi) (Architect Lahore)	
	Checked By		
	Approved By		

**PROJECT:**

PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES

**TITLE:** LIST OF DRAWINGS

**DATE:** SEP 2023 **SCALE:** **DRG. NO.:** A-00



CLIENT:



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Date of Revision	Prepared By	Designed By	Checked By	Approved By
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PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

SITE PLAN

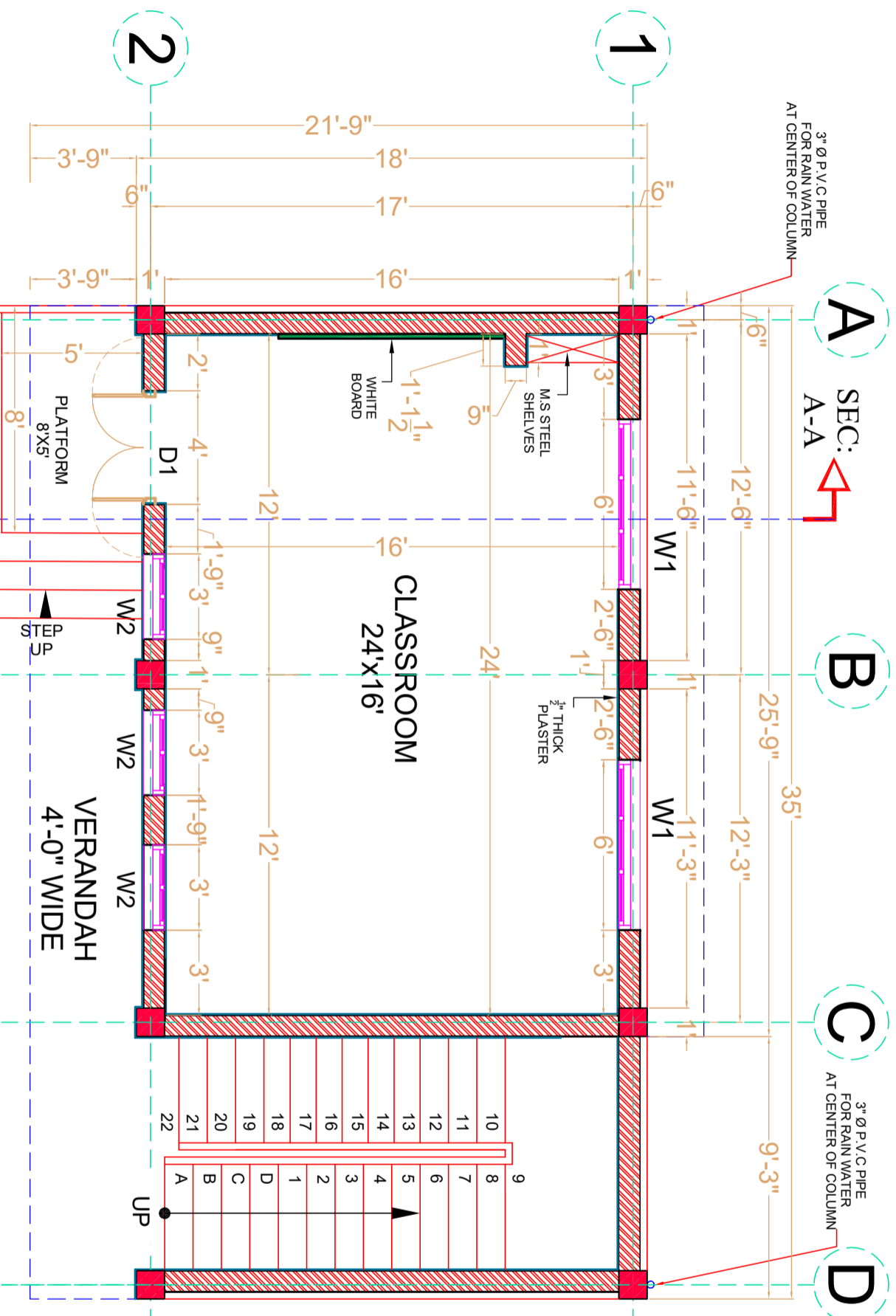
DATE

SEP 2023

SCALE

DRG. NO.

A-01



SEC: A-A  
 SEC: B-B  
 SEC: C-C  
 SEC: D-D

GROUND FLOOR PLAN

CLIENT:



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 KHAN HABIB

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DESIGNED BY

ARCHITECT  
 MARVAT KHAN OKARZAI  
 (B.Arch, D.C.E.T Kanah)  
 (M.Arch, UET, Lahore)

CHECKED BY

APPROVED BY

DATE

SCALE

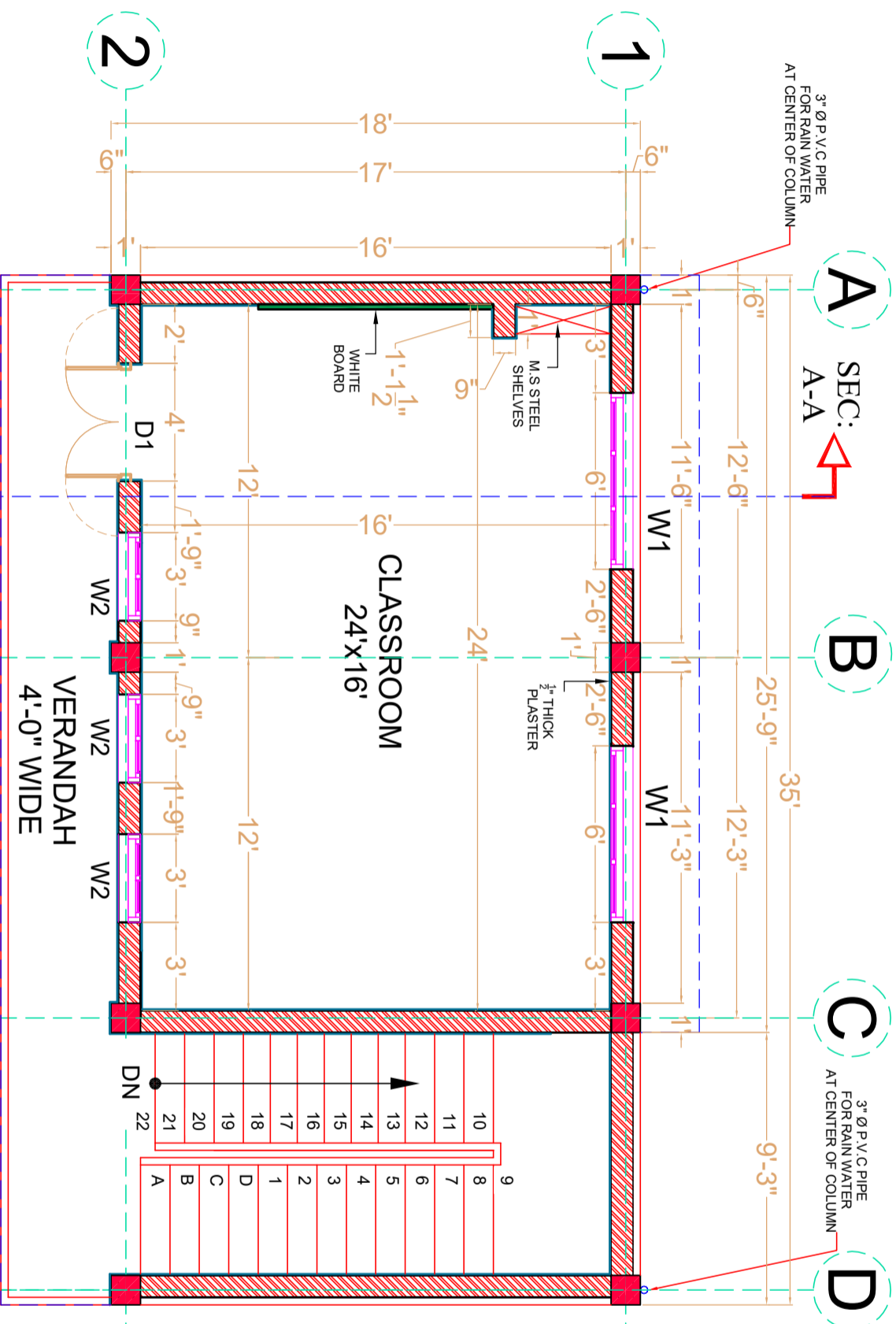
DRG. NO.

SEP 2023

SCALE

DRG. NO.

A-02



**FIRST FLOOR PLAN**

CLIENT:

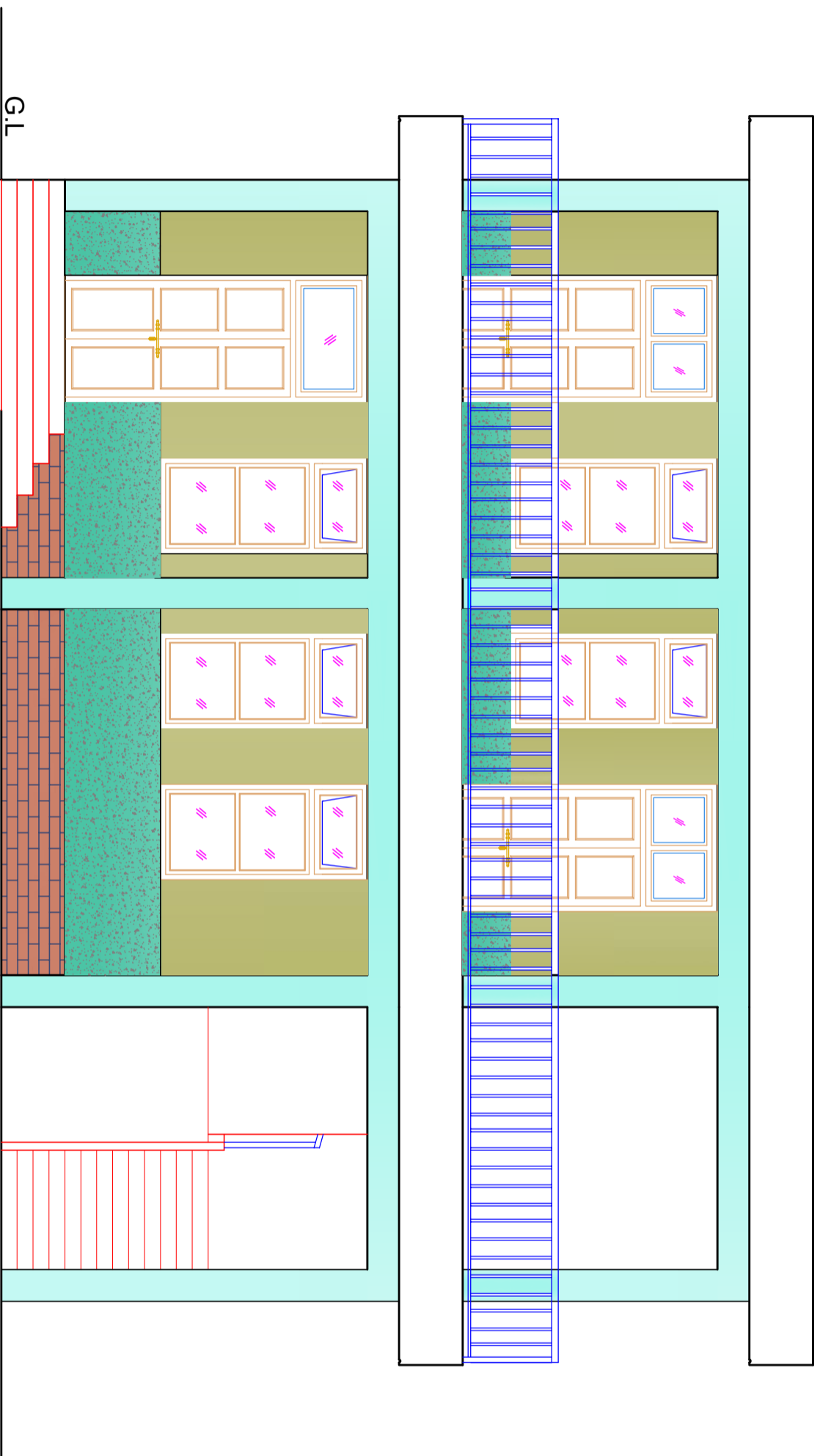


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	Prepared By	ARCHITECT	PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By	ARCHITECT	TITLE:
	Checked By	ARCHITECT	FIRST FLOOR PLAN
	Approved By	ARCHITECT	DATE
			SCALE
			DRG. NO.
			A-03



**FRONT ELEVATION**

CLIENT:



CONSULTANTS:



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ARCHITECT

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

FRONT ELEVATION

Designed By

MARKAT KHAN ORAKZAI  
 (M.Arch, FCI, Licensed)

Checked By

Approved By

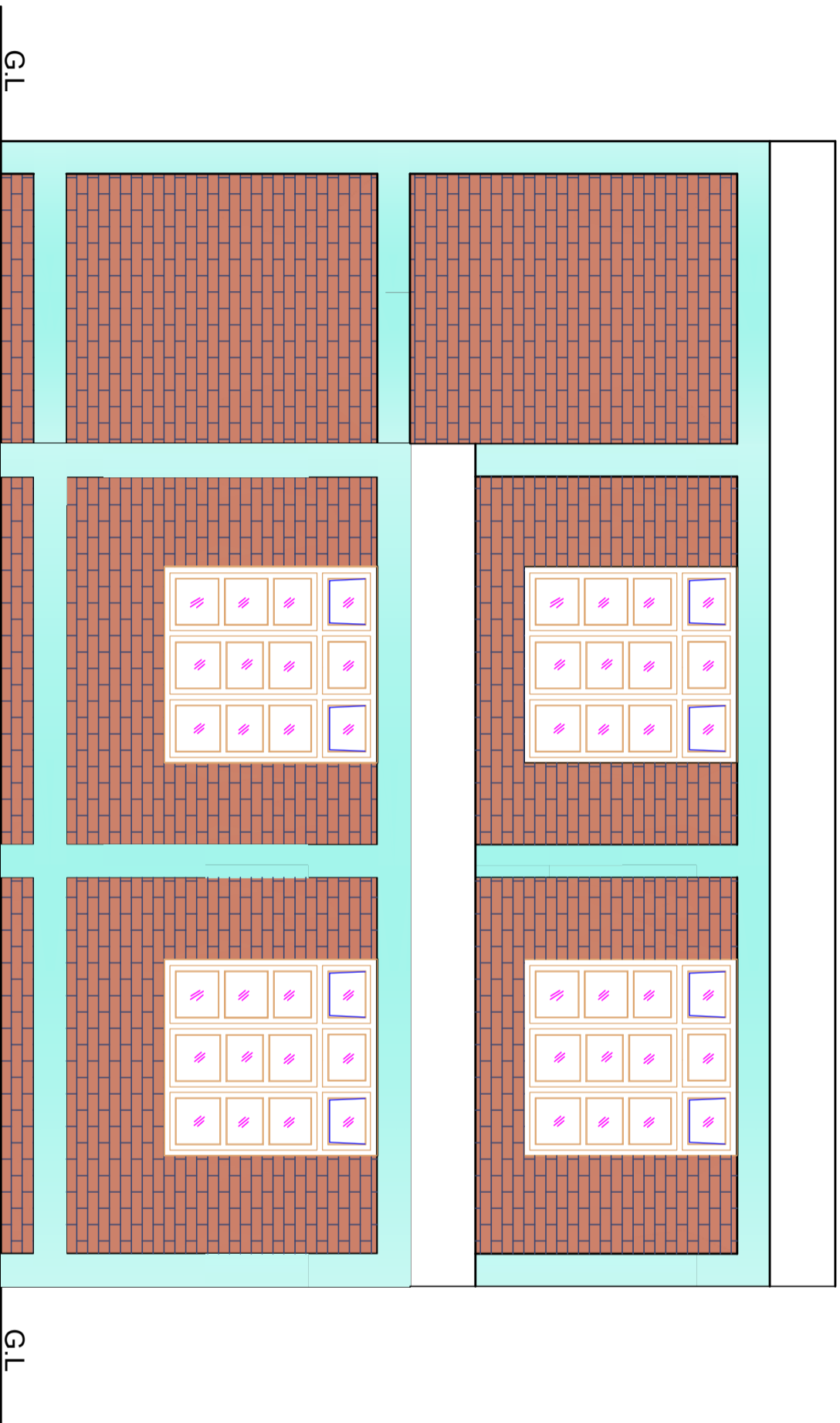
DATE

SEP 2023



SCALE

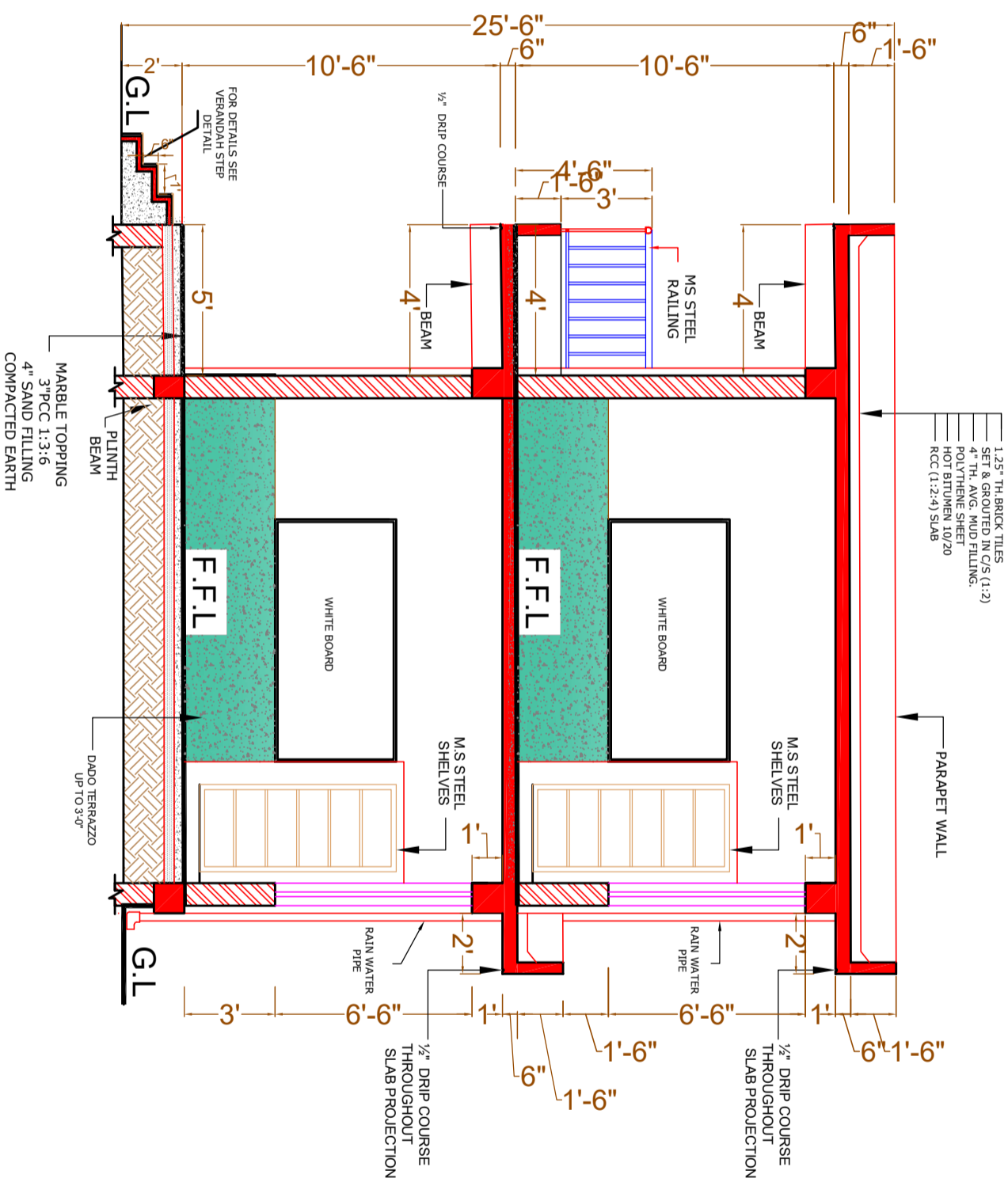
DRG. NO.

A.04



**REAR ELEVATION**

<b>CLIENT:</b> 		<b>CONSULTANTS:</b>  <b>PLANNERS CONSULTANTS ENGINEERS (PCE)</b> 97-K Industrial Estate, Hayatabad Peshawar Pakistan Ph: 0092-91-5816017, 5891661-4, Fax: 5891845 E-Mail: pce.pesh@yahoo.com		<b>SCHOOL NAME</b> GGPS JUGHAN TAXILA RAWALPINDI		Date of Revision Prepared By Designed By Checked By Approved By		<b>PROJECT:</b> PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES <b>TITLE:</b> REAR ELEVATION		<b>DATE</b> SEP 2023	<b>SCALE</b>	<b>DRG.NO.</b> A-05
		FARID KHAN KHAN HADIR ARCHITECT MAHWAT KHAN ORAZZI (B.Arch) (C.E.T Karachi) (M.Arch) (UET Lahore)										



SECTION AT A-A

CLIENT:



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Date of Revision

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FARID KHAN  
KHAN HANIDER

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ARCHITECT  
MARWAT KHAN ORAKZAI  
(B. Archt. CEIT Karachi)  
(M. Archt. UFT Lahore)

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQ FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

SECTION AT A-A

DATE

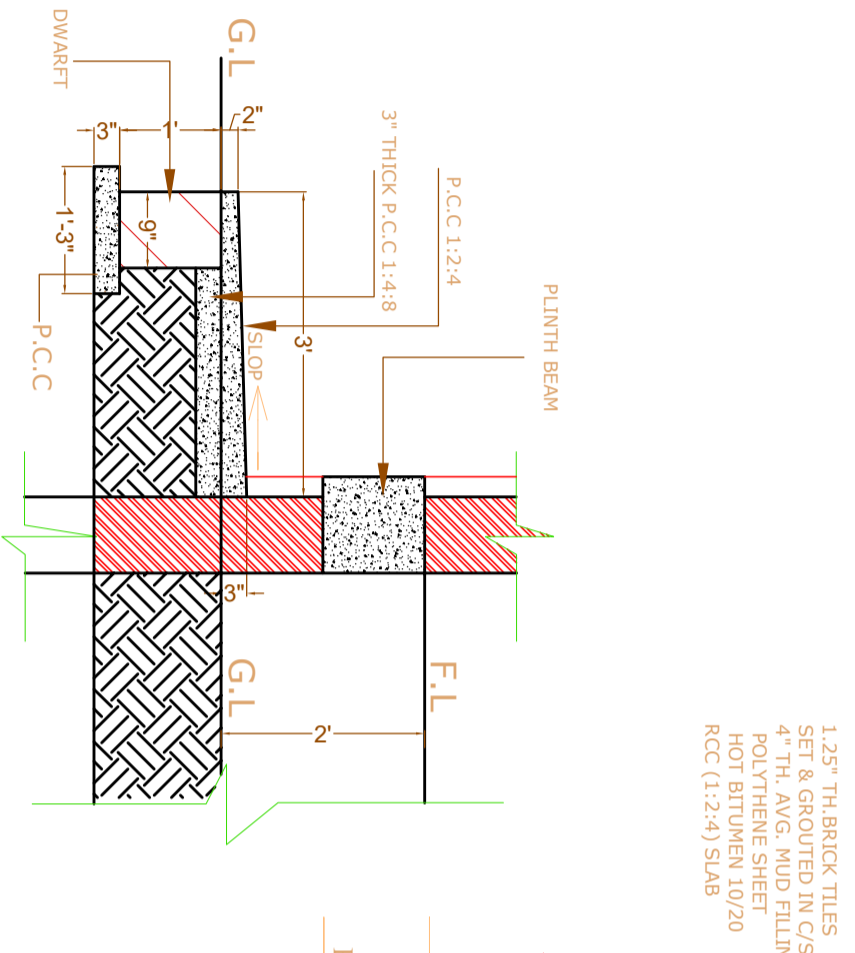
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SCALE

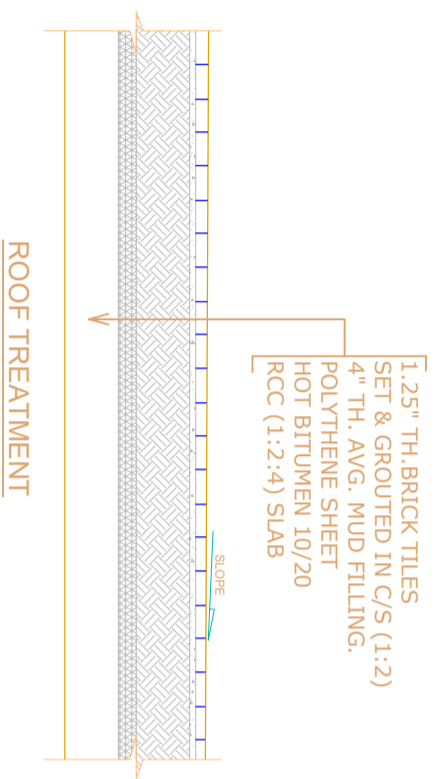
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A-06

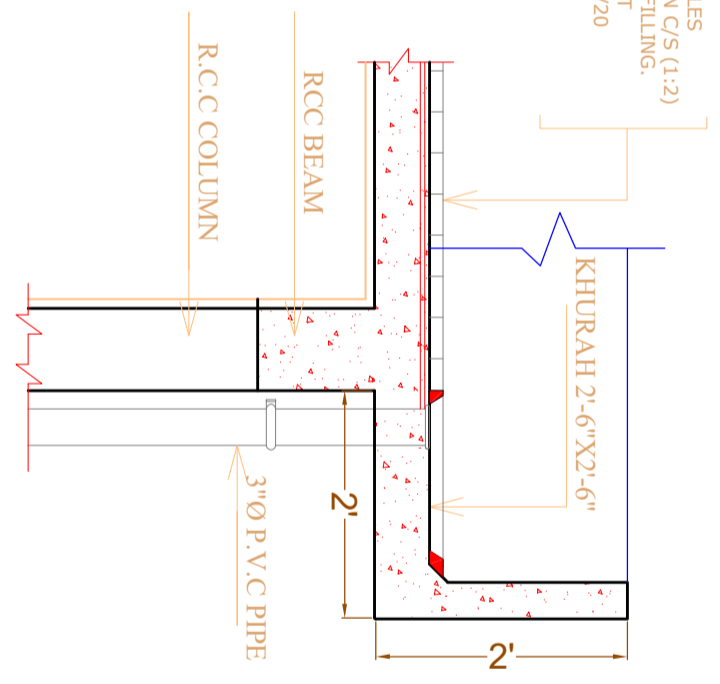




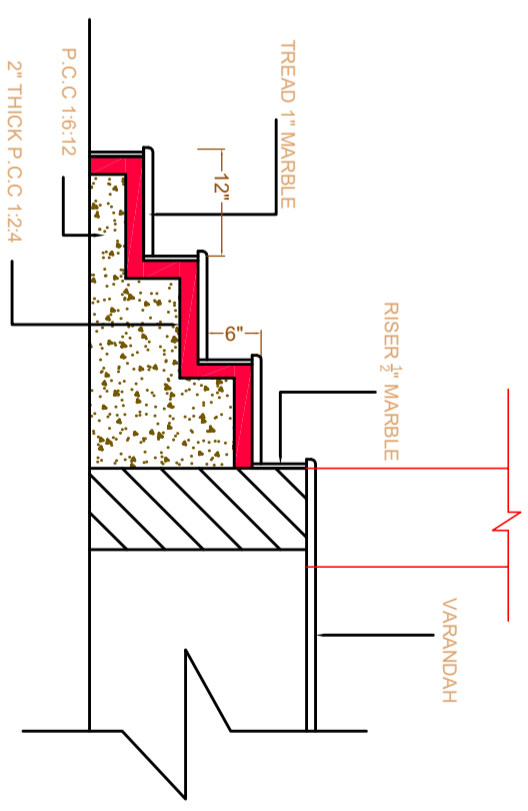
PLINTH PROTECTION



ROOF TREATMENT



RAIN WATER PIPE DETAIL



VERANDAH STEPS DETAILS

CLIENT:



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ARCHITECT

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Designed By

MARKWAT KHAN ORAKZAI  
 (B.Arch/D.C.E.T Kanah)  
 (M.Arch/UBT, Lahore)

TITLE:

PLINTH PROTECTION, RAIN WATER PIPE,  
 AND ROOF TREATMENT DETAILS

Checked By

Approved By

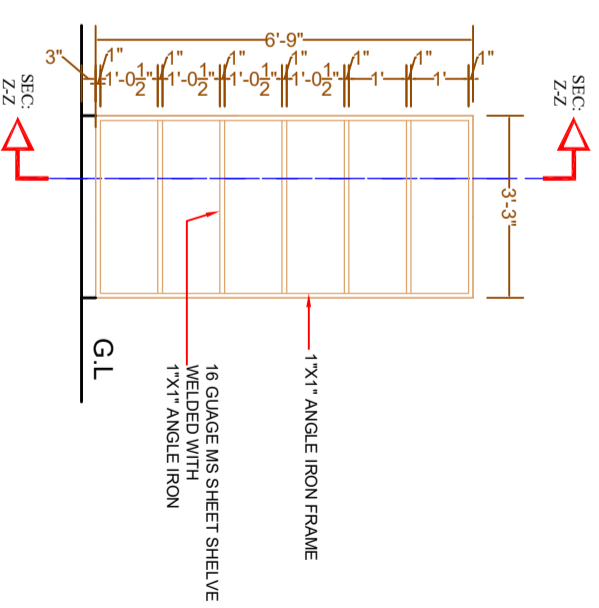
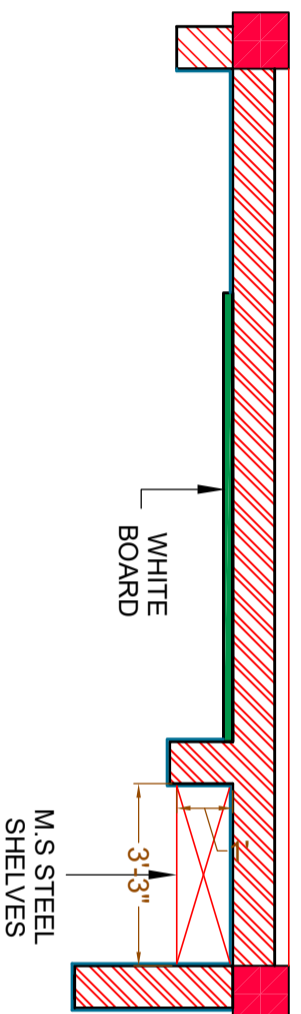
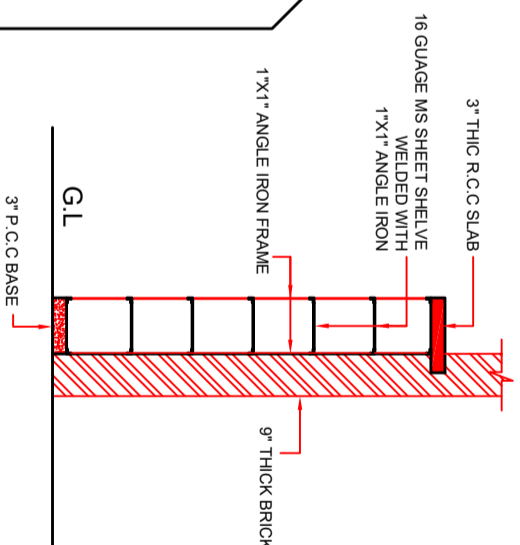
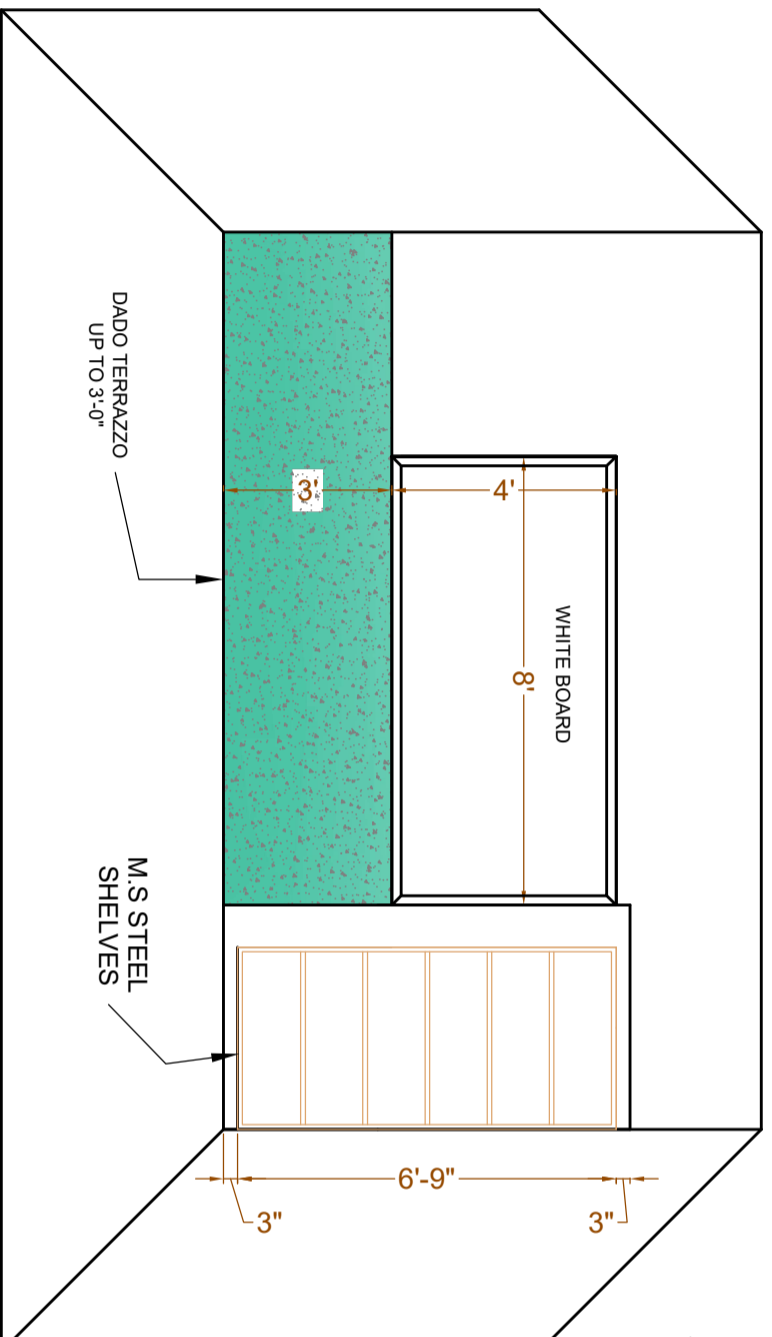
DATE

SCALE

DRG. NO.

SEP 2023

A-07



**PLAN OF WHITE BOARD & M.S STEEL SHELVES**

CLIENT:



CONSULTANTS:

**PLANNERS CONSULTANTS ENGINEERS (PCE)**

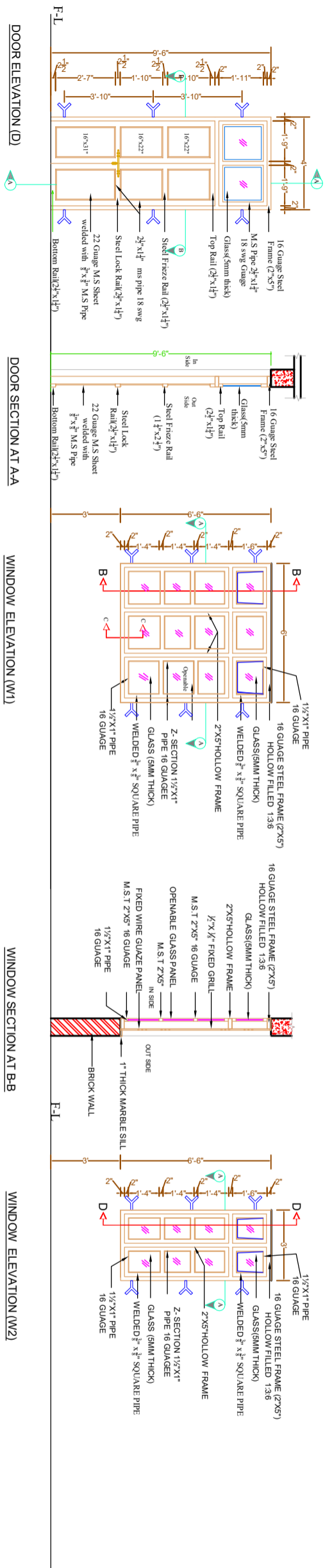
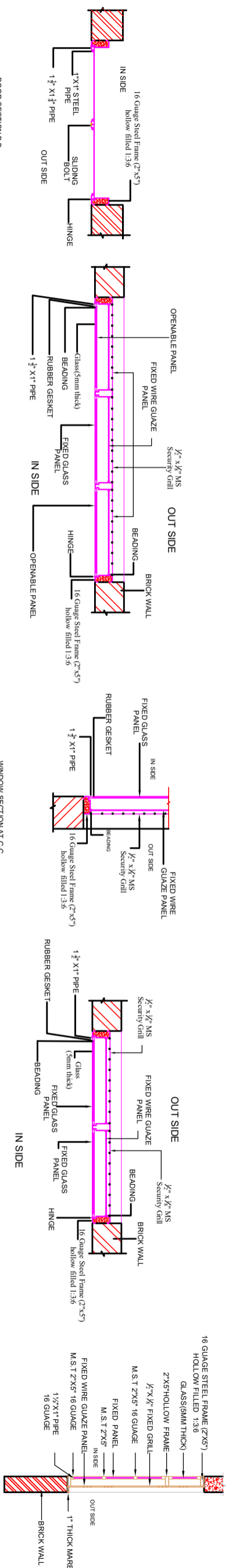
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SCHOOL NAME

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Date of Revision	Prepared By	ARCHITECT	PROJECT:
	Designed By	MAHWAT KHAN ORAKZAI (B.Arch, D.C.E.T Karachi) (M.Arch, IIT, Lahore)	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES
	Checked By		TITLE: PLAN OF WHITE BOARD & M.S STEEL SHELVES
	Approved By		DATE: SEP 2023
			SCALE
			DRG.NO. A-08

SCHEDULE OF OPENING			
TYPE	SIZE	S-LEVEL	DESCRIPTION
D1	4'-0" X 9'-6"	0"-0"	STEEL
W1	6'-0" X 6'-6"	3'-0"	STEEL
W2	3'-0" X 6'-6"	3'-0"	STEEL



CLIENT:



CONSULTANTS:



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SCHOOL NAME

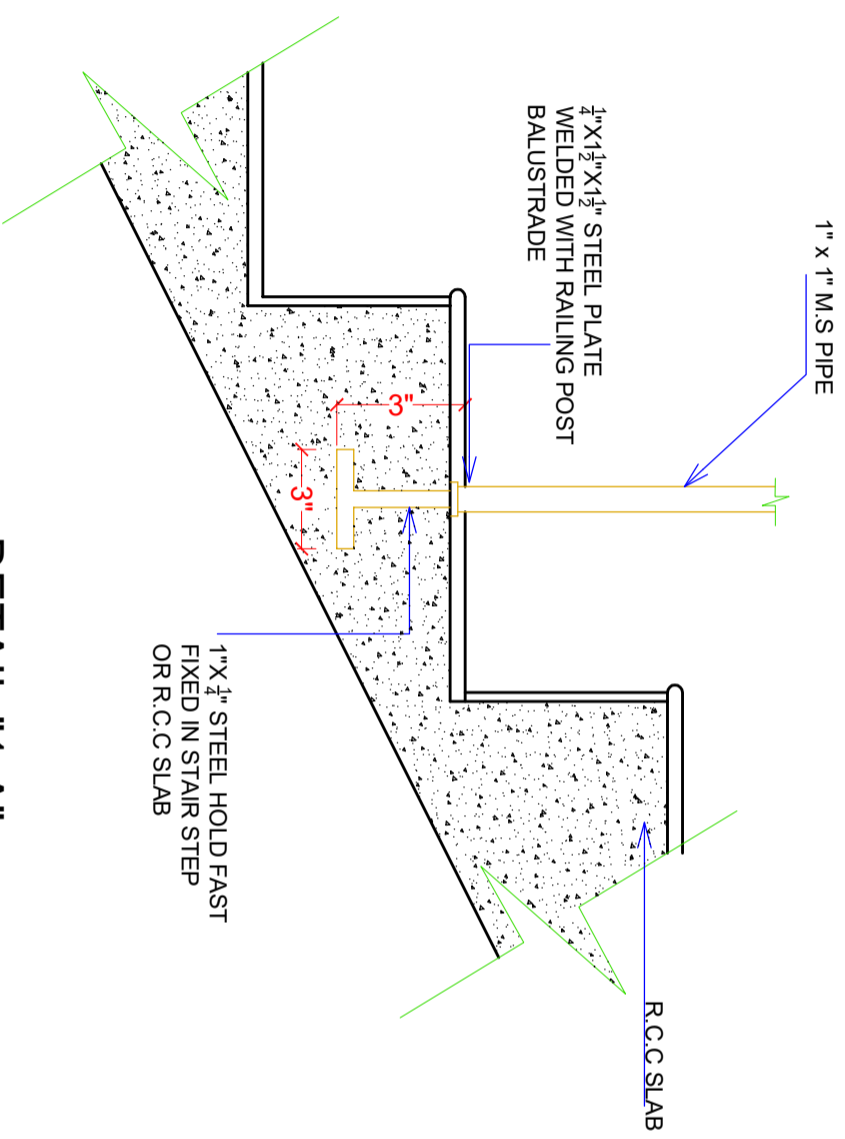
GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision	Prepared By	ARCHITECT
	Designed By	MARKAAT KHAN OKAZAI (B.Arch, D.C.E.T Karachi) (M.Arch, UET Lahore)
	Checked By	

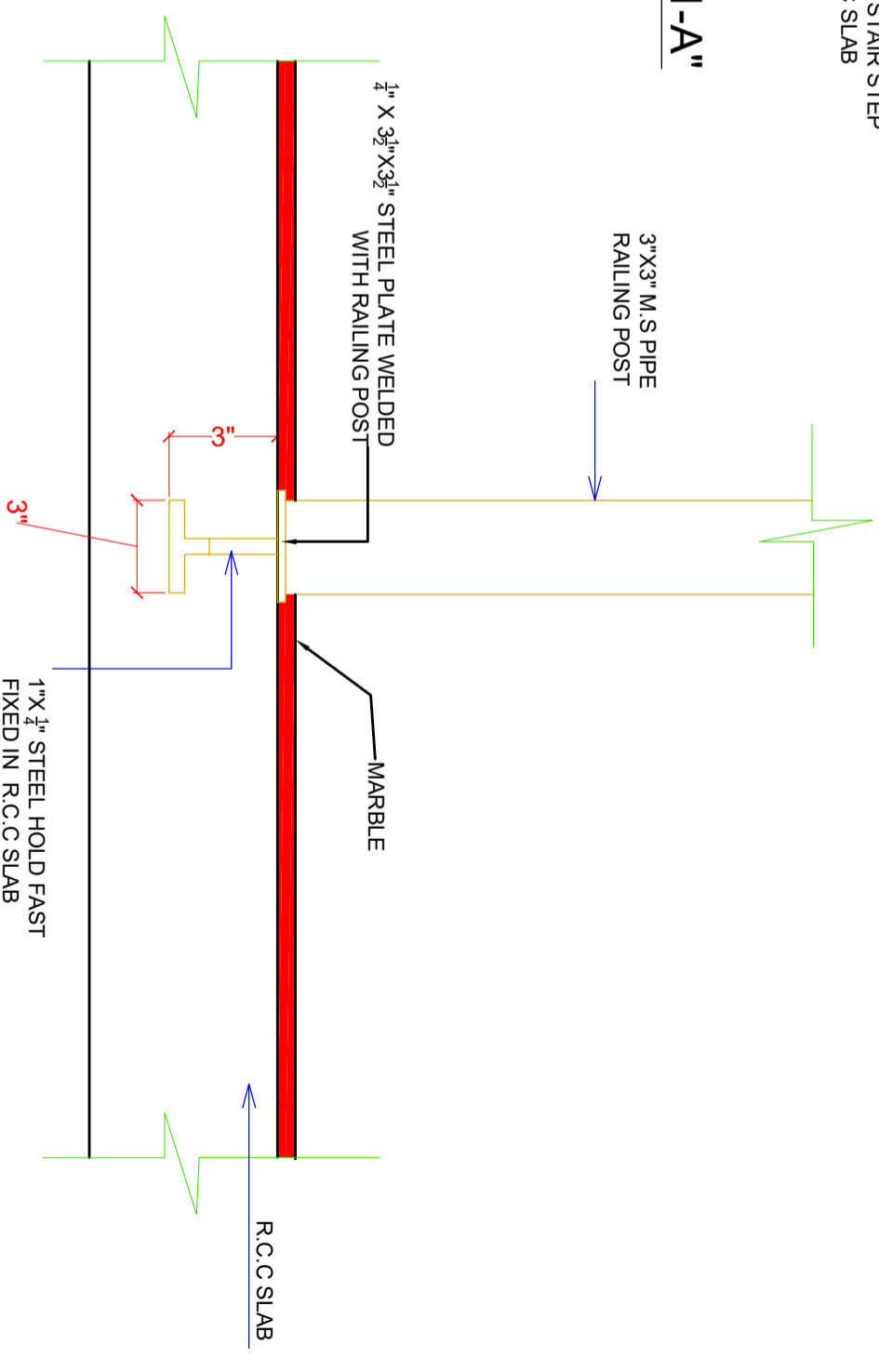
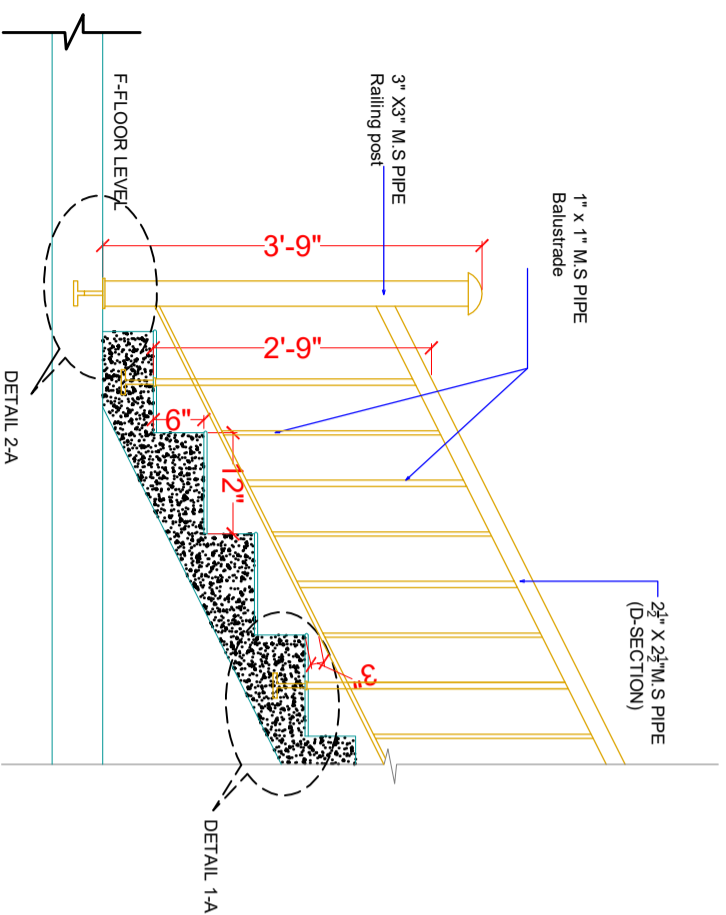
PROJECT: PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE: DOOR, WINDOW DETAILS

DATE	SCALE	DRG. NO.
SEP 2023		A-09



**DETAIL "1-A"**



**DETAIL "2-A"**

**STAIR RAILING DETAILS**

CLIENT:



The UN Refugee Agency

CONSULTANTS:

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SCHOOL NAME

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Date of Revision	Prepared By	ARCHITECT
	Designed By	MARWAT KHAN ORAKZAI (B.AGAD C.E.T Kanesh) (M.Arch. UET Lahore)
	Checked By	
	Approved By	

PROJECT:

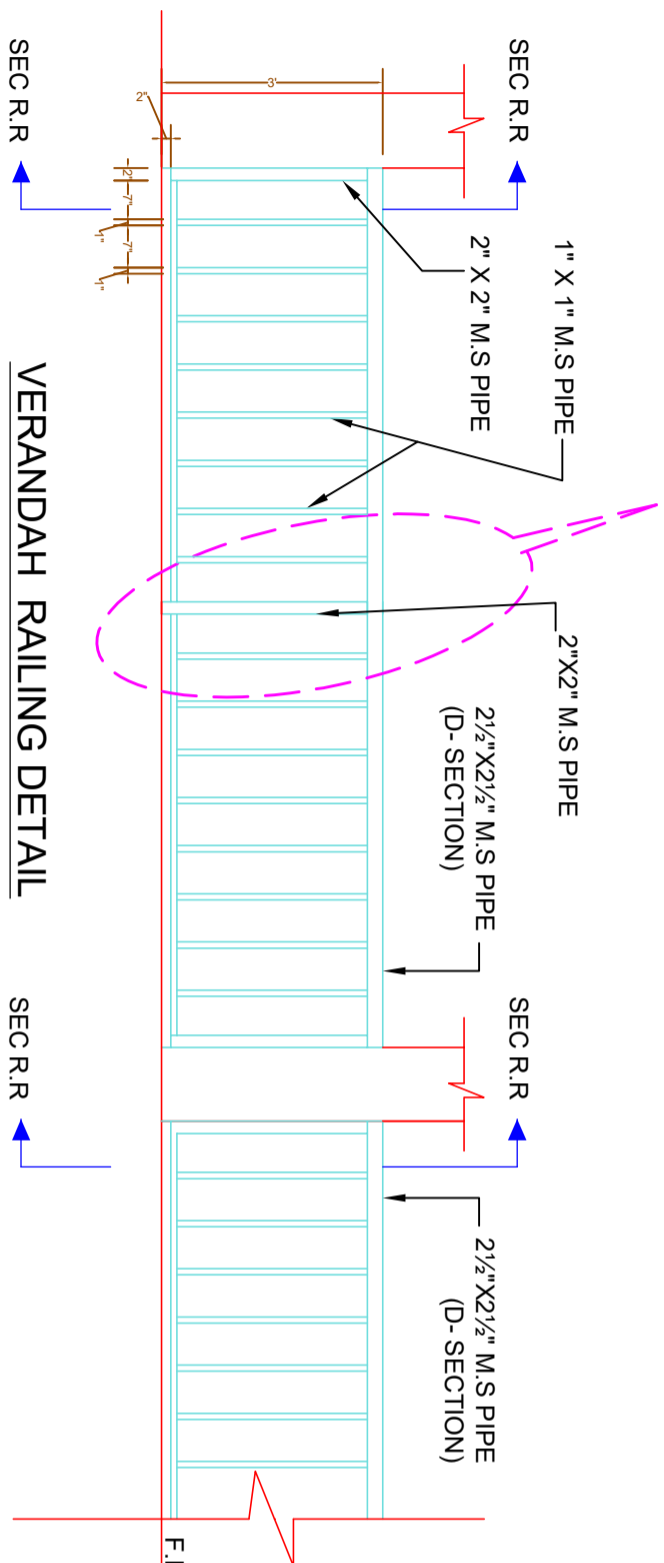
PREPARATION OF DESIGN, DRAWINGS & BOQS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:  
 STAIRS RAILING DETAIL

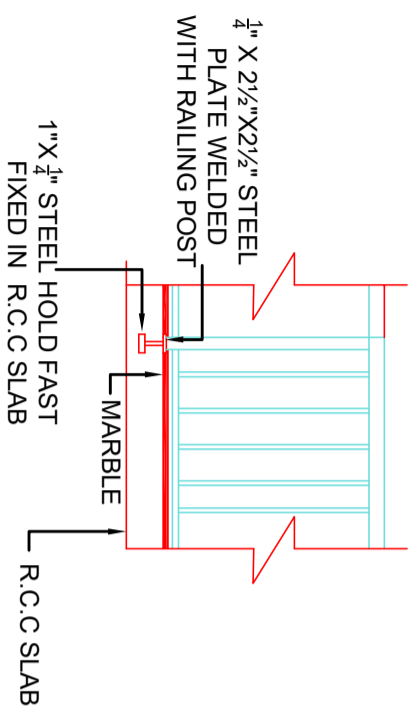
DATE	SCALE	DRG. NO.
SEP 2023		A-10



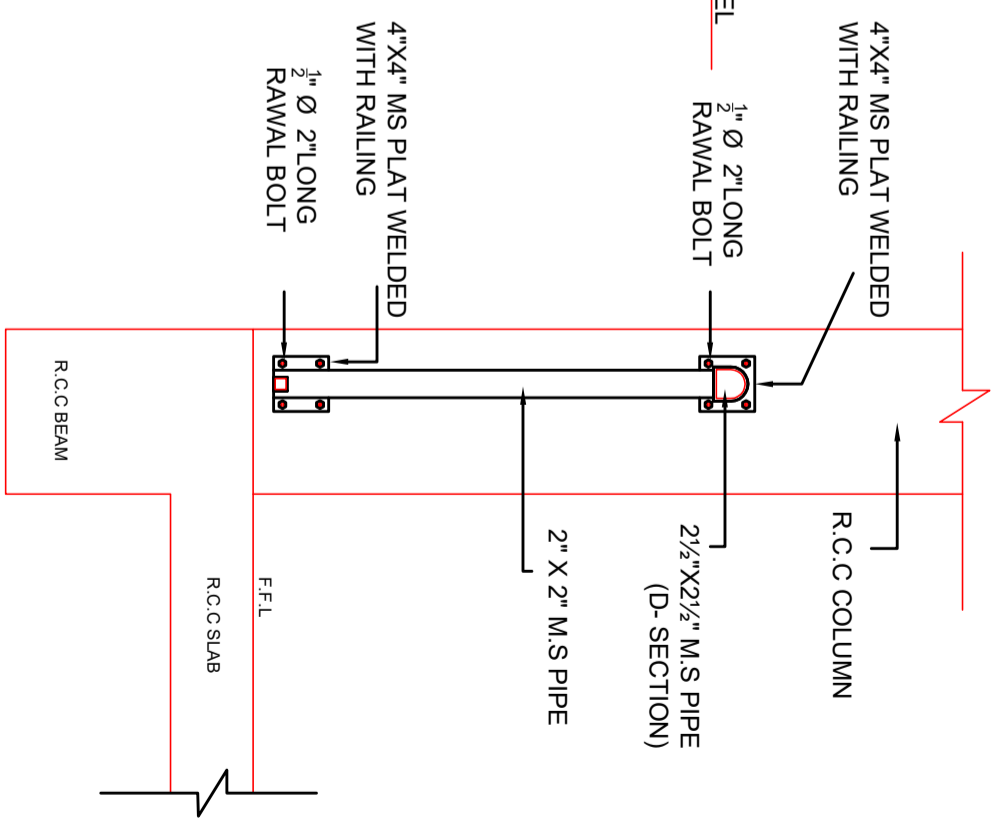
DETAIL R-2



VERANDAH RAILING DETAIL



VERANDAH RAILING DETAIL -R-2



SECTION R.R

CLIENT:



The UN Refugee Agency

CONSULTANTS:



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SCHOOL NAME

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision

Prepared By

ARCHITECT

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE: VERANDAH RAILING DETAIL

Designed By

MARWAT KIAN ORAZAI  
 (B.Arch/DCET/Kambh)  
 (M.Arch/LEED Lihore)

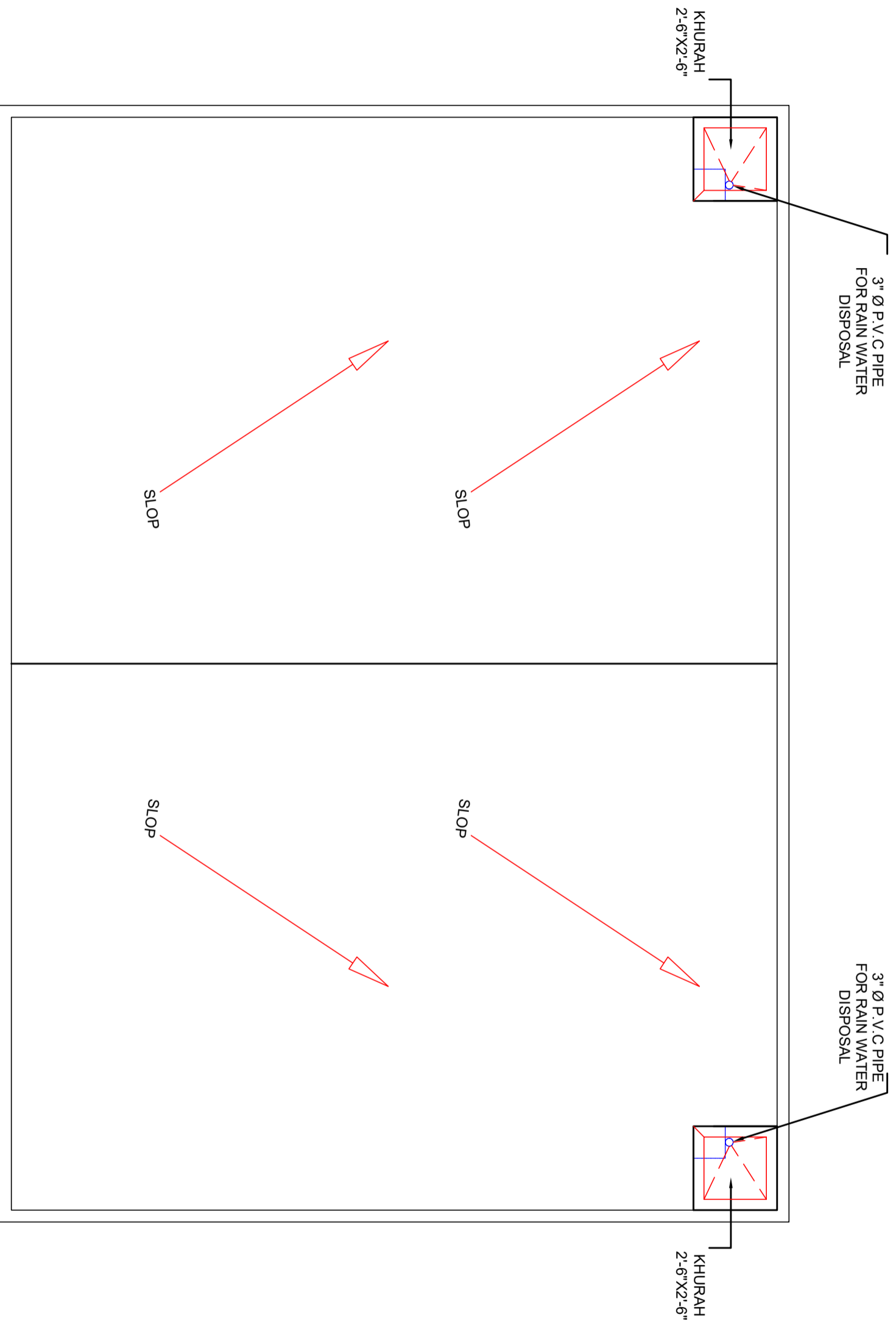
Checked By

Approved By

DATE: SEP 2023

SCALE

DRG.NO. A-11



# TOP ROOF PLAN

CLIENT:



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**SCHOOL NAME**

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Date of Revision	Prepared By	ARCHITECT
	Designed By	MARWAT KHANORAKZAI (B. ARCHITECT, KANBHO) (M. ARCHITECT, Lahore)
	Checked By	
	Approved By	

**PROJECT:**

PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES

**TITLE:**  
TOP ROOF PLAN

DATE	SCALE	DRG. NO.
SFP 2023		A-12

**STRUCTURE DRAWING  
OF  
GGPS JUGIAN TAXILA  
RAWALPINDI**

## 1. GENERAL

1. READ ALL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, GEOTECHNICAL, PLUMBING, MECHANICAL, ELECTRICAL & ANY OTHER RELEVANT DRAWINGS.
2. NOTES GIVEN IN THIS DRAWING ARE APPLICABLE TO ALL DRAWINGS UNLESS MENTIONED OTHERWISE. NOTES WRITTEN ON A DRAWING, SHALL BE APPLICABLE TO THAT PARTICULAR DRAWING ONLY UNLESS OTHERWISE CROSS-REFERRED.
3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE SPECIFICATIONS OF THE CONTRACT DOCUMENTS, IN ABSENCE OF ANY SPECIFICATIONS, ALL MATERIALS & WORKMANSHIP SHALL CONFORM TO RELEVANT ACIBRITISH CODES AND SHALL BE SUBJECTED TO APPROVAL OF THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURES DURING CONSTRUCTION. HE SHALL ALSO VERIFY ALL DIMENSIONS AND LEVELS BEFORE EXECUTION OF WORK. ANY DISCREPANCY, ERROR OR OMISSION, IF FOUND, SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR CORRECTION AND APPROVAL.
5. THE CONTRACTOR SHALL CO-ORDINATE WITH VARIOUS SERVICES DRAWINGS FOR SIZES & LOCATION OF ALL STRUCTURAL MEMBERS, FLOORS, WALLS OPENINGS, FLOOR FINISHES, PIPES ETC.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXECUTION OF DEWATERING SYSTEM WHERE SO REQUIRED DURING CONSTRUCTION.
7. ALL DIMENSIONS & LEVELS ARE IN FEET & INCHES.
8. DO NOT SCALE THE DRAWINGS. DIMENSIONS, GIVEN ON THE DRAWING, SHALL GOVERN.
9. ALL FABRICATION, PAINTING, ERECTION AND QUALITY CONTROL IS TO BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE ACIBRITISH SPECIFICATIONS.
10. BACKFILLING AROUND FOUNDATIONS AND WALLS SHALL BE WELL COMPACTED LAYERS NOT EXCEEDING 6 INCHES IN THICKNESS.
11. IT IS STRONGLY RECOMMENDED TO RECONFIRM THE SITE PLAN BEFORE START OF EXECUTION AT SITE. THE SITE SHOULD BE EXAMINED FOR CLEARANCE WITH RESPECT TO LOCAL SEISMIC HAZARDS.
12. THE CONTRACTOR SHALL INFORM THE ENGINEER ABOUT ANTICIPATED CONSTRUCTION LOADS IN THE STRUCTURE AND OBTAIN ENGINEER'S APPROVAL THEREOF BEFORE COMMENCING THE WORK.
13. THE CONTRACTOR SHALL VERIFY LAYOUT, CONFIGURATION, ALL DIMENSIONS AND LEVELS PERTAINING TO EXISTING WORKS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ADOPT ADEQUATE AND APPROPRIATE MEASURES SO AS NOT TO DAMAGE THE EXISTING WORKS.
14. THE CONTRACTOR SHALL EXERCISE UTMOST CARE AND PRECAUTION DURING THE WORKS, AGAINST ANY MISHAPS OR ACCIDENTS, FOR WHICH THE CONTRACTOR SHALL BE WHOLLY AND SOLELY RESPONSIBLE. THE CONTRACTOR SHALL INDEMNIFY THE OWNER AGAINST ANY ACCIDENTS AND ANY LOSSES THEREFROM AND SHALL REPAIR AND RECTIFY THEM AT HIS OWN COST AND TIME.
15. ANY DEPARTURES/DEVIATIONS DESIRED FROM THE DESIGN OR SPECIFICATIONS, OR SOLUTIONS TO ANY PROBLEMS ENCOUNTERED, SHALL BE GOT APPROVED FROM THE ENGINEER PRIOR TO IMPLEMENTATION. UNAPPROVED DEPARTURES/DEVIATIONS MAY LEAD TO REJECTION/REPLACEMENT OF THE ENTIRE WORK AT THE CONTRACTOR'S COST.
16. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND BAR BENDING SCHEDULES. THE ENGINEER'S APPROVAL SHALL NOT RELIEVE THE APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF SHOP DRAWINGS AND BAR BENDING SCHEDULES. FOR ENGINEER'S APPROVAL AND OBTAIN HIS CONTRACTOR FROM HIS RESPONSIBILITY.
17. The allowable bearing capacity of soil should be 1st.

## 2. SHORING AND BRACING

1. SHORE & BRACE ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION, TO THE EXTENT NECESSARY TO ENSURE COMPLETE SAFETY, STRENGTH & SERVICEABILITY OF ALL STRUCTURAL ELEMENTS UNDER ALL CONDITIONS OF LOADS WHICH MAY OCCUR DURING CONSTRUCTION. SUCH SHORING & BRACING IS THE CONTRACTOR'S SOLE RESPONSIBILITY AND IS NOT SHOWN ON STRUCTURAL DRAWINGS OR SPECIFIED IN THE PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND STABILITY OF THE SLOPES AND SHALL PROVIDE SHORING AND BRACING DURING EXCAVATION AND CONSTRUCTION, WHEREVER AND WHENEVER REQUIRED.
3. SEQUENCE OF REMOVAL OF FORMWORK SHALL BE APPROVED BY THE ENGINEER.
4. AT LEAST ONE LOWER FLOOR SHALL REMAIN PROPPED UNTILL THE UPPER FLOOR IS CAST AND CURED.

## 3. REINFORCED CONCRETE

1. STRUCTURAL DESIGN IS BASED ON THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OF AMERICAN CONCRETE INSTITUTE (ACI 318).
2. ALL STRUCTURAL CONCRETE SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI) REQUIREMENTS.
3. CONCRETE MIX TO BE DESIGNED ON THE BASIS OF ACI 211 OR EQUIVALENT. TRIAL STRENGTH RESULTS TO BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BEFORE CONCRETING.
4. NO CONCRETING SHALL BE CARRIED OUT UNTIL PERMISSION IS GIVEN IN WRITING OR APPROVED BY STRUCTURE ENGINEER.
5. ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM STANDARDS C31, C39, C173 & AS WRITTEN IN SPECIFICATIONS AND THE MINIMUM CYLINDER CRUSHING STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS. TESTING OF CLASS D & E CONCRETE SHALL BE PERFORMED IF SO SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.

CLASS	MIN. CYLINDER CRUSHING STRENGTH AT 28 DAYS (psi).
A	4000
B	3000
C	2400
D	1200
E	800

6. CLASS OF CONCRETE FOR DIFFERENT COMPONENTS OF THE STRUCTURE SHALL BE AS FOLLOWS UNLESS NOTED OTHER WISE:

COMPONENT	CONCRETE CLASS
COLUMNS	CLASS 'A'
SLABS, BEAMS, FOUNDATION	CLASS 'B'
RCC WALLS	CLASS 'D'
PCC STEPS	CLASS 'E'
LEAN / BLINDING CONCRETE	CLASS 'E'

7. ORDINARY PORTLAND CEMENT SHALL BE USED FOR ALL CONCRETE WORKS.
8. AN INTEGRAL WATER PROOFING AGENT SHALL BE USED IN CONCRETE THAT IS CONSTANTLY OR INTERMITTENTLY IN CONTACT WITH WATER AS PER MANUFACTURER'S RECOMMENDATIONS (GENCON GENPRUF RMG OR PENETRON ADMIX OR EQUIVALENT).
9. ALL DETAILING SHALL BE DONE AS PER ACI STANDARDS ACI-315, ACI-318 & ACI-350R.

STRUCTURAL ELEMENT	COVER (INCHES)
FOOTINGS	2"
BEAMS	1 1/2"
COLUMNS	1 1/2"
SLABS	3/4"

## 4. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM-A615 GRADE 60 HAVING A MINIMUM YIELD STRENGTH OF 60,000 PSI. FOR STIRRUPS, TIES AND #3 BARS USE ASTM A615, GRADE 60 HAVING MINIMUM YIELD STRENGTH OF 60,000 PSI.
  2. THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED STRENGTH BY MORE THAN 18,000 PSI (RETENTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3000 PSI)
  3. THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25
- FACE OF THE SUPPORTING MEMBER.
- WHERE:

7. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND HELD FIRMLY IN PLACE BEFORE & DURING THE PLACEMENT OF CONCRETE BY MEANS OF WIRE AND SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
8. LINTELS ARE EXTENDED AT 9" (INCHES) FROM BOTH SIDES OF OPENING.
9. PROVIDE 135° HOOK IN ADJACENT STIRRUPS ON ALTERNATE SIDES.

## 5. CONCRETE CONSTRUCTION

1. ALL STRUCTURAL SURFACES, AGAINST WHICH EARTH IS TO BE FILLED, SHALL BE COATED WITH TWO COATS OF HOT BITUMEN OF 10/20 GRADE AT THE RATE OF 0.2 lbs/ft<sup>2</sup>/coat.
2. PROVIDE POLYTHENE SHEET OVER TWO COATS OF HOT BITUMEN AT TOP OF PLINTH BEAM/DPG FOR EXTERIOR WALLS.
3. BEFORE CASTING OF ANY STRUCTURAL MEMBER, THE CONTRACTOR SHALL ENSURE THAT ALL EMBEDDED ITEMS FOR ELECTRICAL, MECHANICAL, HVAC, PLUMBING, STRUCTURAL STEEL AND OTHER WORKS ARE PROPERLY LOCATED AND FIRMLY SECURED IN PLACE.
4. DURING CONSTRUCTION, STACKING OF CONSTRUCTION MATERIALS, BLOCKS, etc. SHOULD BE AVOIDED ON SLAB PANELS.

## 6. BRICK WORK

1. ALL BRICK WORK SHALL CONFORM TO SPECIFICATIONS GIVEN IN THE CONTRACT DOCUMENT.
2. ALL BRICK SHALL BE SOUND, HARD, WELL BURNT AND OF UNIFORM SIZE COLOUR AND TEXTURE. DIMENSIONAL VARIATION IN SIZES SHALL NOT EXCEED 1/8". BRICKS SHOULD BE IN ACCORDANCE WITH SPECIFICATIONS AND SHOULD CONFORM TO ASTM C82.
3. ALL BRICK WORK SHALL BE ERECTED PLUMB AND TRUE TO LINE AND LEVEL. THE MAXIMUM VARIATION IN ANY STOREY HEIGHT OR ANY LENGTH OF WALL SHALL BE 1/8" IN 10'-0".
4. MORTAR USED IN MASONRY CONSTRUCTION SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF NOT LESS THAN 12 MPa (1800 psi) AND SHALL CONFORM TO ASTM C270.
5. COMPRESSIVE STRENGTH OF BRICK MASONRY AVERAGE OF 5 UNITS AT 28 DAYS SHALL NOT BE LESS THAN AS SPECIFIED IN SPECIFICATION AND SHALL CONFORM TO RELEVANT ASTM STANDARD.
6. ALL DESIGN, DETAILING, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT ACI, ASTM, AND UBC CODES AND STANDARDS.
7. BRICK SHALL BE LAID "FROG" UPWARD WITH MORTAR JOINT AND IN ENGLISH FLEMISH BOND OR AS SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.
8. BRICKS SHOULD BE SOAKED WITH WATER PROPERLY BEFORE USE.
9. VERTICAL JOINTS SHOULD BE STAGGERED.
10. ALL MASONRY WALLS SHALL BE ANCHORED TO STRUCTURAL FRAME WORK AS INDICATED ON THE DRAWINGS

### CLIENT:



UNHCR  
The UN Refugee Agency

### CONSULTANTS:

### PLANNERS CONSULTANTS ENGINEERS (PCE)

97-K Industrial Estate, Hayatabad Peshawar Pakistan  
Ph: 0092-91-5816017, 5891661-4, Fax: 5891845  
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### SCHOOL NAME

GGPS JUGIA TAXILA  
RAWALPINDI

Date of Revision	Prepared By	Checked By	Approved By
	FARID KHAN KHAN HADDER STRUCTURE ENGINEER	Egr. HUMZA AHMAD	
	Designed By		
	Checked By		
	Approved By		

PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES

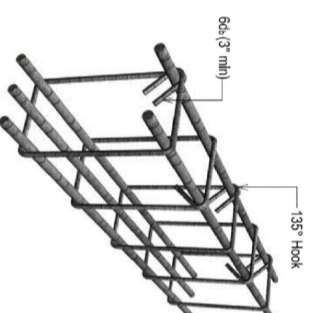
TITLE: GENERAL NOTES

DATE: SEPT 2023 SCALE: DRG. NO. S-01

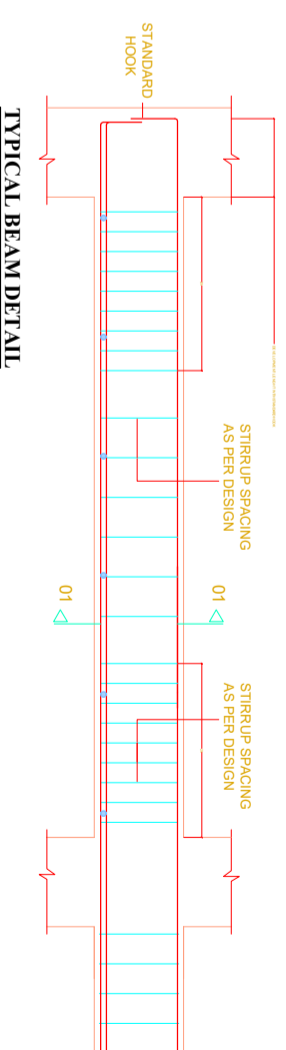


## 7. CONSTRUCTION JOINTS

1. JOINTS, NOT SHOWN ON THE DRAWING, SHALL BE SO MADE AND LOCATED AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND SHALL NEED PRIOR APPROVAL OF THE ENGINEER. THEY SHALL BE LOCATED NEAR THE MIDDLE OF THE SPANS OF SLAB & BEAMS. JOINTS IN WALLS & COLUMNS SHALL BE AT THE UNDER-SIDE OF FLOORS, SLABS OR BEAMS AND AT THE TOP OF FOOTINGS OR FLOOR SLABS.
2. JOINTS SHALL BE PERPENDICULAR TO MAIN REINFORCEMENT. ALL REINFORCING STEEL SHALL BE CONTINUED ACROSS THE JOINTS.
3. JOINTS IN BASE SLAB & WALLS AND ROOF SLAB, IN ADDITION TO THOSE SHOWN ON THE DRAWINGS SHALL BE BORNE BY THE CONTRACTOR. BEAMS & BRACKETS SHALL BE PLACED AT THE SAME TIME AS SLABS.



SEISMIC HOOK DETAILS



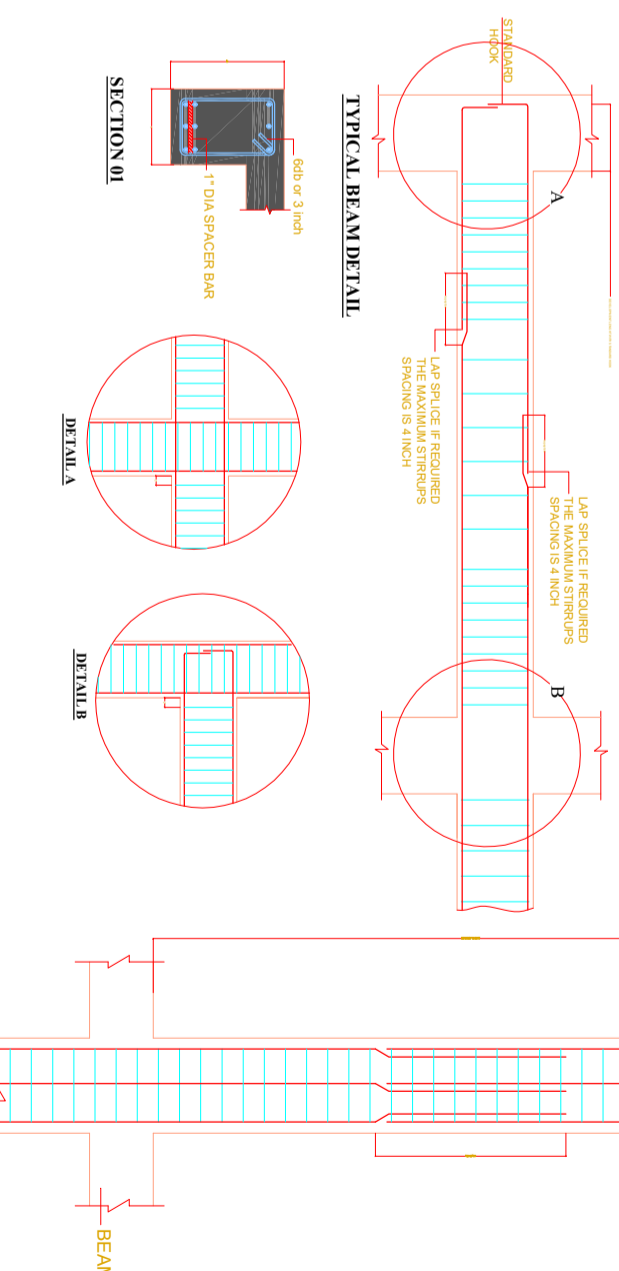
TYPICAL BEAM DETAIL

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)	
BAR DIA	DEVELOPMENT LENGTH (INCHES) $f_c' = 4,000 \text{ psi}$ $f_y = 60,000 \text{ psi}$
3/8"	18
1/2"	24
3/4"	30
1"	48

SPICE LENGTH (ACI 21.3.2.4, Class B Splice)	
BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES) $f_c' = 3,000 \text{ psi}$ $f_y = 40,000 \text{ psi}$
3/8"	15
1/2"	20
3/4"	30
1"	48

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)	
BAR DIA	DEVELOPMENT LENGTH (INCHES) $f_c' = 3,000 \text{ psi}$ $f_y = 60,000 \text{ psi}$
1/2"	22
5/8"	30
3/4"	34
1"	55

SPICE LENGTH (ACI 21.3.2.4, Class B Splice)	
BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES) $f_c' = 3,000 \text{ psi}$ $f_y = 60,000 \text{ psi}$
1/2"	25
5/8"	-
3/4"	-
1"	-



TYPICAL BEAM DETAIL

TYPICAL COLUMN DETAIL

CLIENT:



**UNHCR**  
The UN Refugee Agency

CONSULTANTS:



**PLANNERS CONSULTANTS ENGINEERS (PCE)**

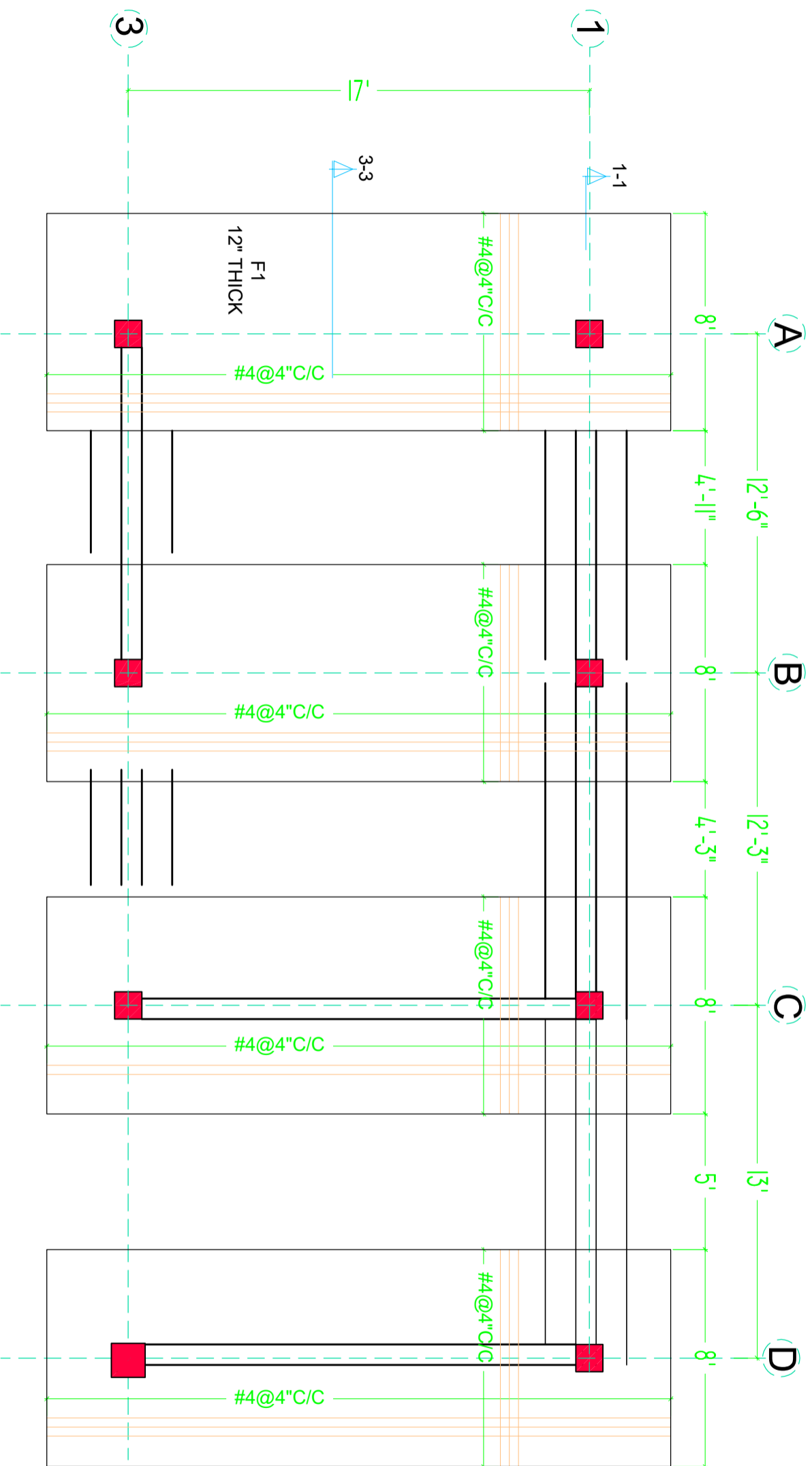
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SCHOOL NAME

GGPS JUGIA TAXILA  
RAWALPINDI

Date of Revision	Prepared By	PAJID KHAN KHAJANJAN
	Designed By	STRUCTURE ENGINEER :
	Checked By	Engr. HUMZA AHMAD
	Approved By	

PROJECT:	
PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	
TITLE: GENERAL NOTES	
DATE	SCALE
SEP 2023	DRG. NO.
	5-02



**FOUNDATION PLAN  
BOTTOM REINFORCEMENT**

CLIENT:



CONSULTANTS:

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Designed By

Engr. HUMZA AHMAD

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Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS  
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

FOUNDATION PLAN  
BOTTOM REINFORCEMENT

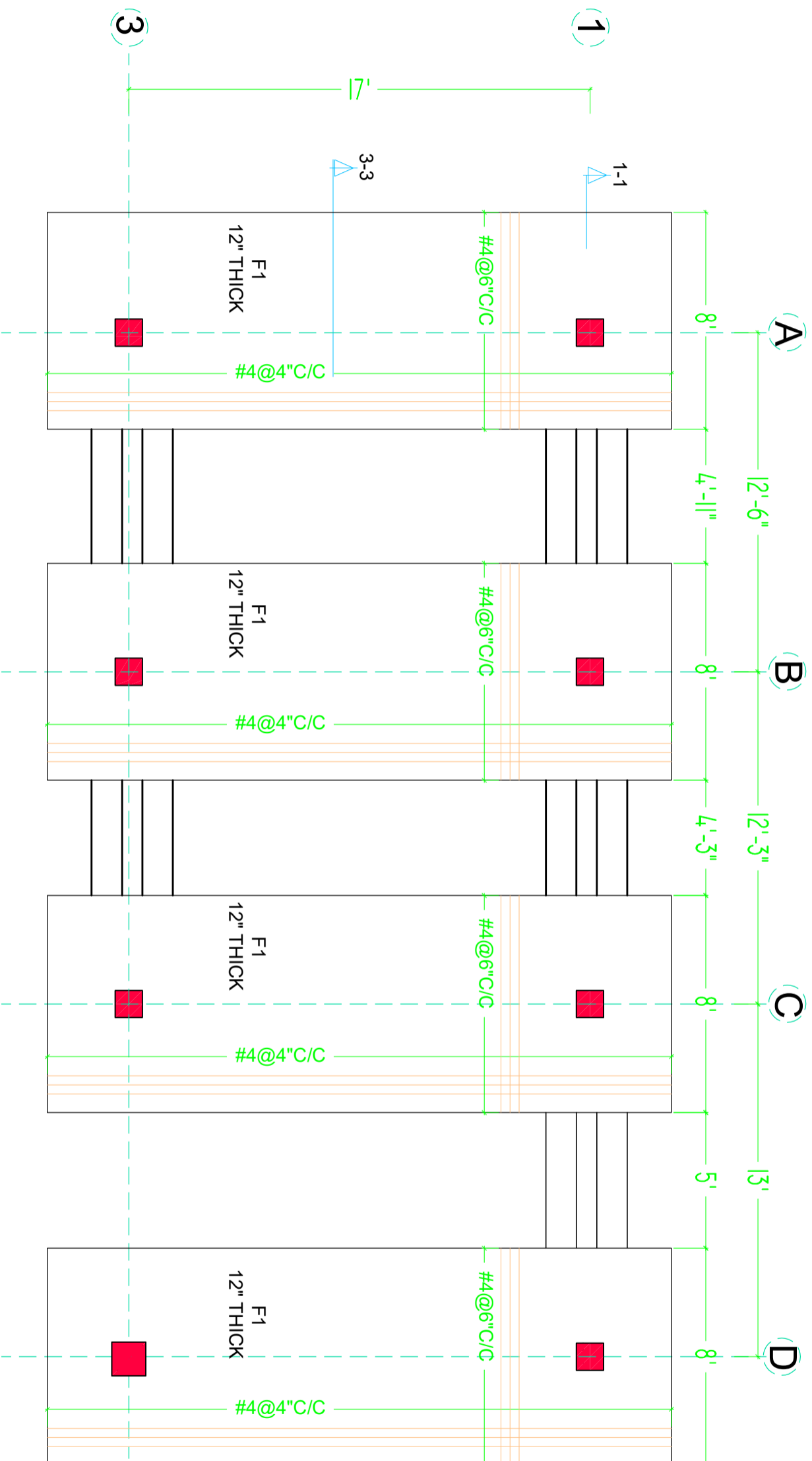
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SEP 2023

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DRG.NO.

S.03



**FOUNDATION PLAN  
TOP REINFORCEMENT**

CLIENT:



**CONSULTANTS:**  
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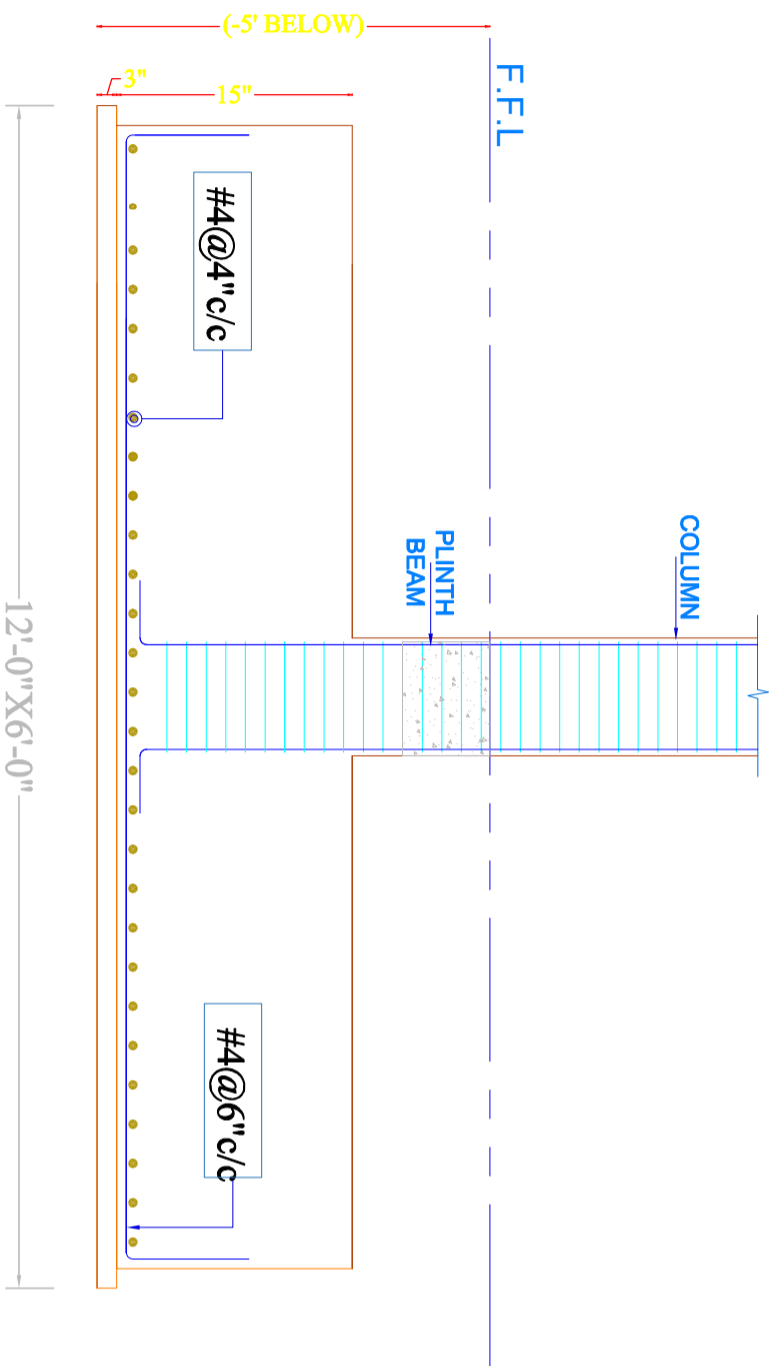
**SCHOOL NAME**  
GGPS JUGIA TAXILA  
RAWALPINDI

Date of Revision	Prepared By	FARID KHAN KIYAN HANIDER STRUCTURE ENGINEER
	Designed By	Engr. HUMZA AHMAD
	Checked By	
	Approved By	

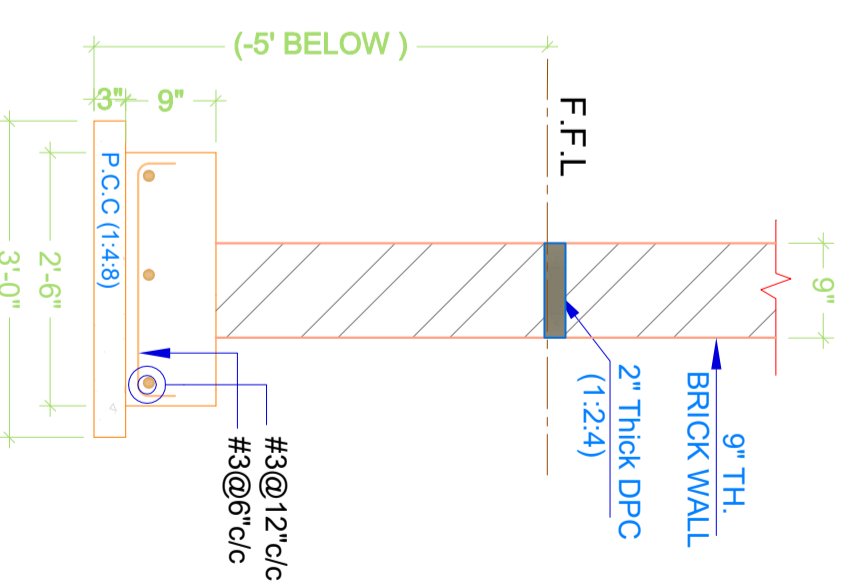
**PROJECT:**  
PREPARATION OF DESIGN, DRAWINGS & BOQS  
FOR CONSTRUCTION/REHABILITATION OF SITES

**TITLE:**  
FOUNDATION TOP  
REINFORCEMENT PLAN

**DATE:** SEP 2023    **SCALE:**    **DRG.NO.:** S-04



SECTION 1-1



SECTION 3-3

CLIENT:



CONSULTANTS:



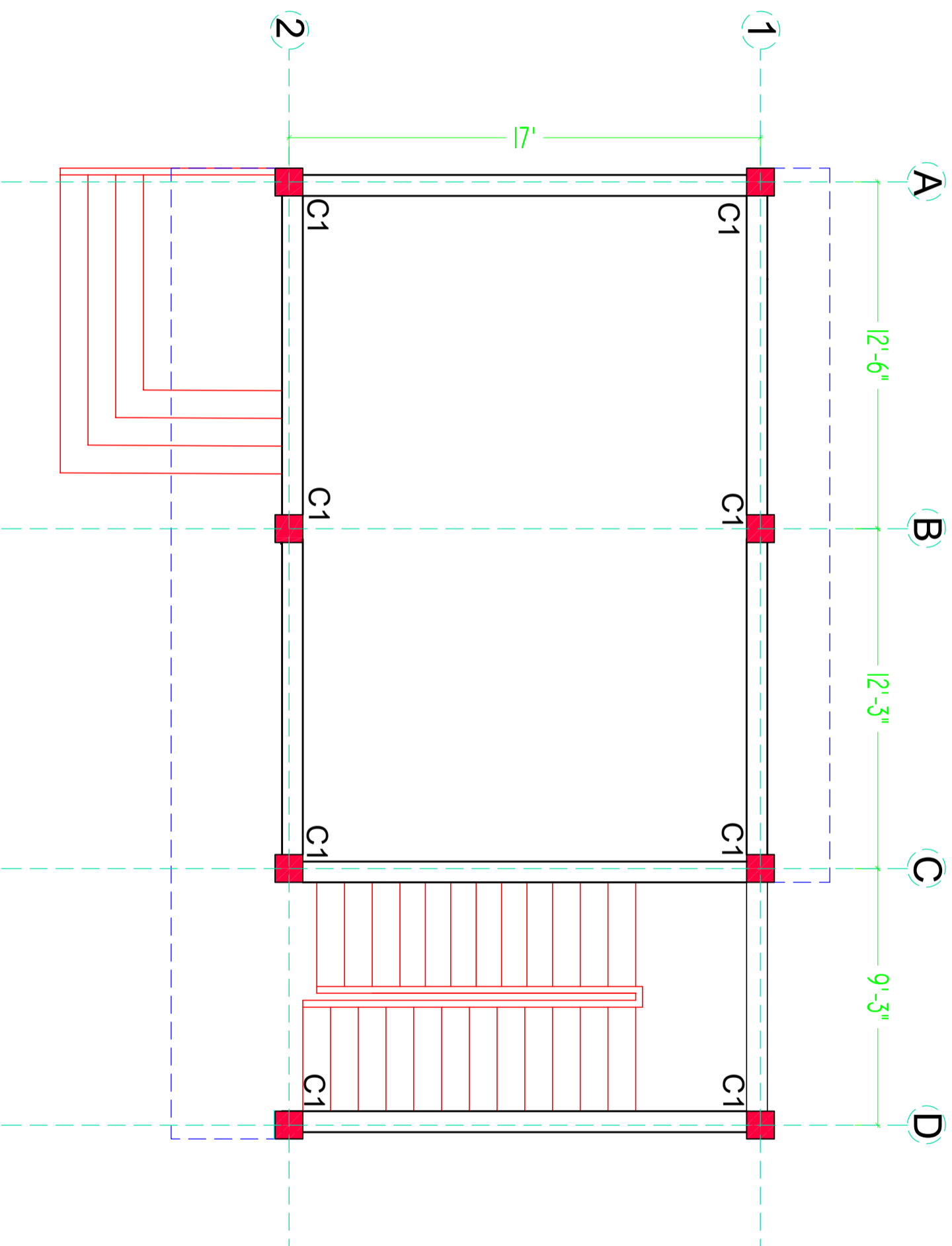
**PLANNERS CONSULTANTS ENGINEERS (PCE)**  
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SCHOOL NAME



GGPS, JUGIA TAXILA  
 RAWALPINDI

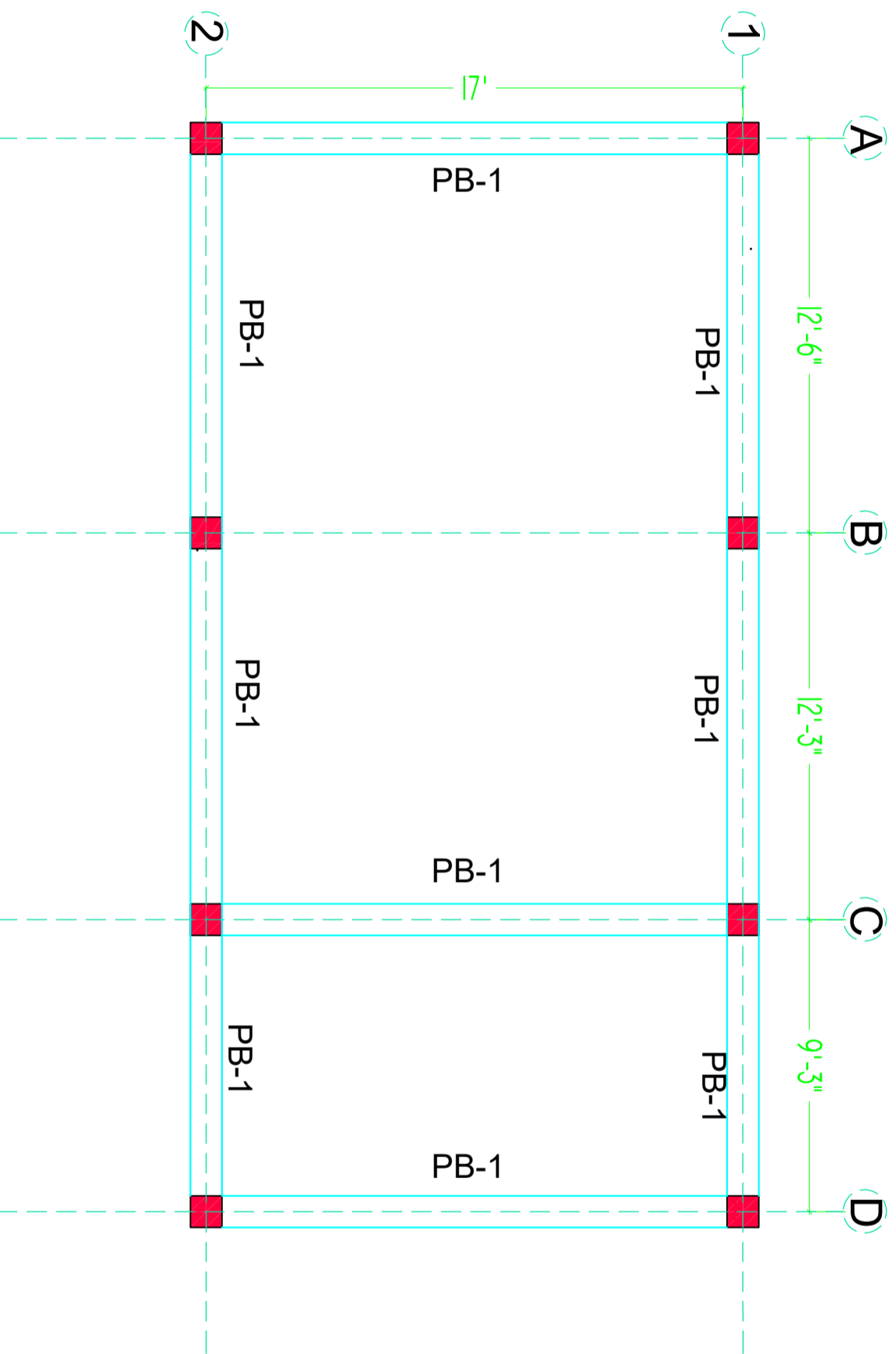
Date of Revision	Prepared By	FARID KHAN KHAIS HANIDER STRUCTURE ENGINEER
	Designed By	Engr. HUMZA AHMAD
	Checked By	
	Approved By	

PROJECT:	PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
TITLE:	FOUNDATION SECTION DETAIL
DATE	SEP 2023
SCALE	
DRG. NO.	S-05





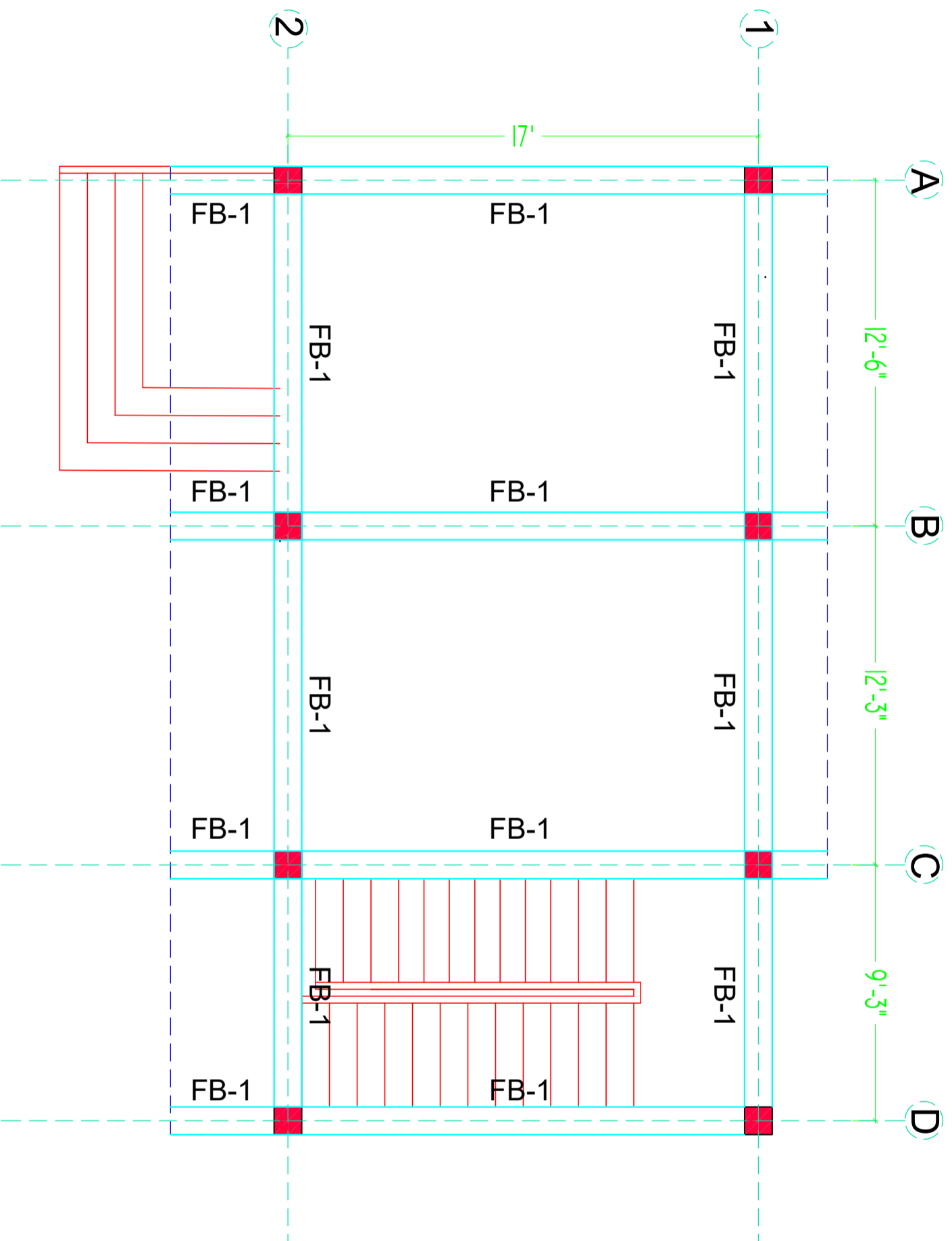
# GROUND FLOOR COLUMN LAYOUT PLAN

<b>CLIENT:</b>  The UN Refugee Agency		<b>CONSULTANTS:</b>  <b>PLANNERS CONSULTANTS ENGINEERS (PCE)</b> 97-K Industrial Estate, Hayatabad Peshawar Pakistan Ph : 0092-91-5816017, 5891661-4, Fax: 5891845 E-Mail : pce.pesh@yahoo.com		<b>SCHOOL NAME</b> GGPS JUGIA TAXILA RAWALPINDI		Date of Revision Prepared By Designed By Checked By Approved By		FARD KHAN KHAN HADIR STRUCTURE ENGINEER Engr. HUMZA AHMAD		<b>PROJECT:</b> PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES TITLE: GROUND FLOOR COLUMN LAYOUT PLAN DATE SEP 2023 SCALE DRG.NO. S-06	
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## PLINTH BEAM PLAN

<b>CLIENT:</b>  		<b>CONSULTANTS:</b> <b>PLANNERS CONSULTANTS ENGINEERS (PCE)</b> 97-K Industrial Estate, Hayatabad Peshawar Pakistan Ph: 0092-91-5816017, 5891661-4, Fax: 5891845 E-Mail: pce.pesh@yahoo.com		<b>SCHOOL NAME</b> GGPS JUGIA TAXILA RAWALPINDI	
Date of Revision	Prepared By Designed By Checked By Approved By	FARID KHAN KHAN HABIB STRUCTURE ENGINEER: Engr. HUMZA AHMAD	<b>PROJECT:</b> PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/ REHABILITATION OF SITES TITLE: PLINTH BEAM PLAN		
DATE SEP 2023	SCALE	DRG.NO. S-07			



## GROUND FLOOR BEAM PLAN

CLIENT:



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**SCHOOL NAME**

GGPS JUGIA TAXILA  
 RAWALPINDI

Date of Revision

Prepared By

FARID KHAN  
 KHAN HAIDER  
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PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

GROUND FLOOR BEAM PLAN

Designed By

Engr. HUMZA AHMAD

Checked By

Approved By

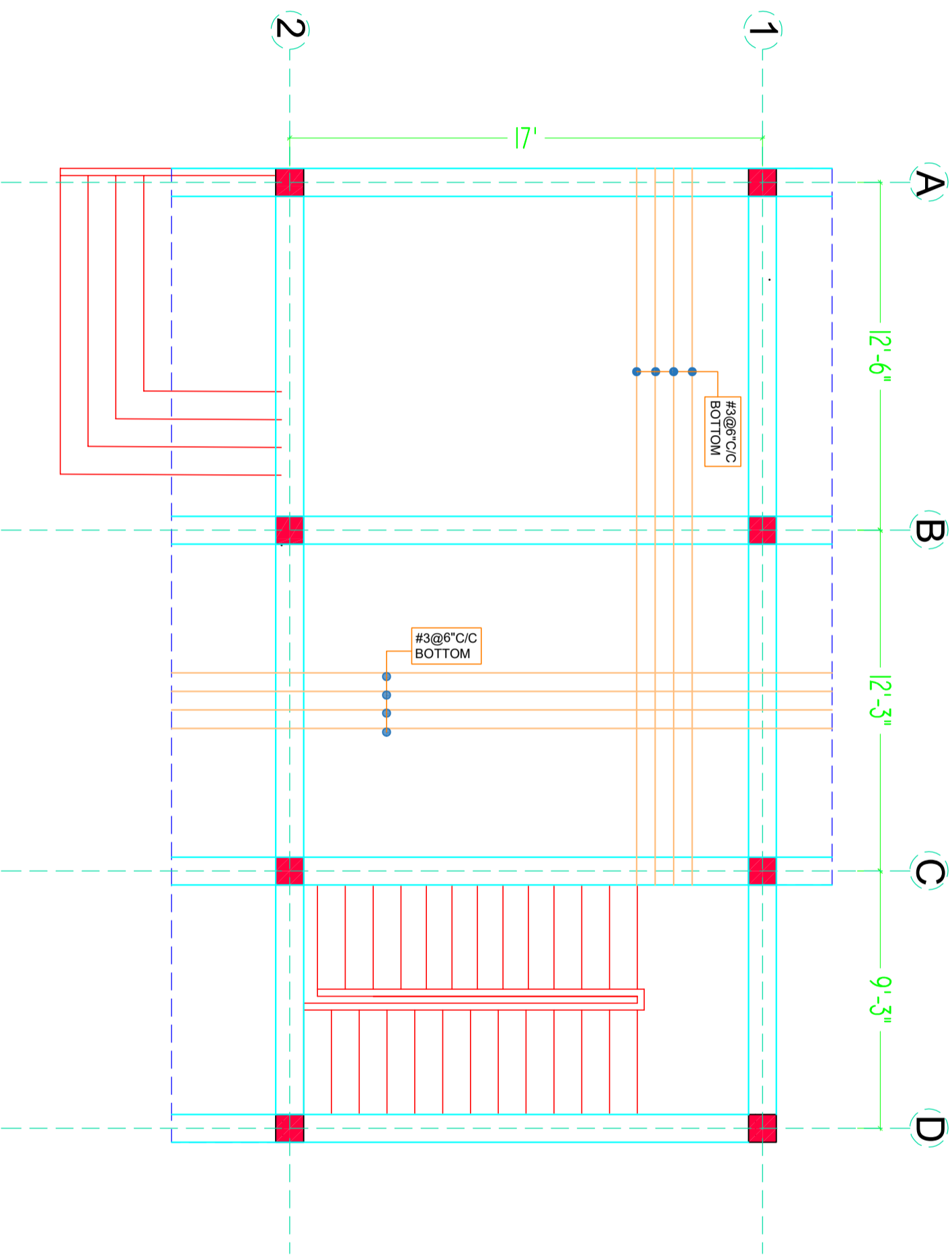
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SEP 2023

SCALE

DRG. NO.

S-08

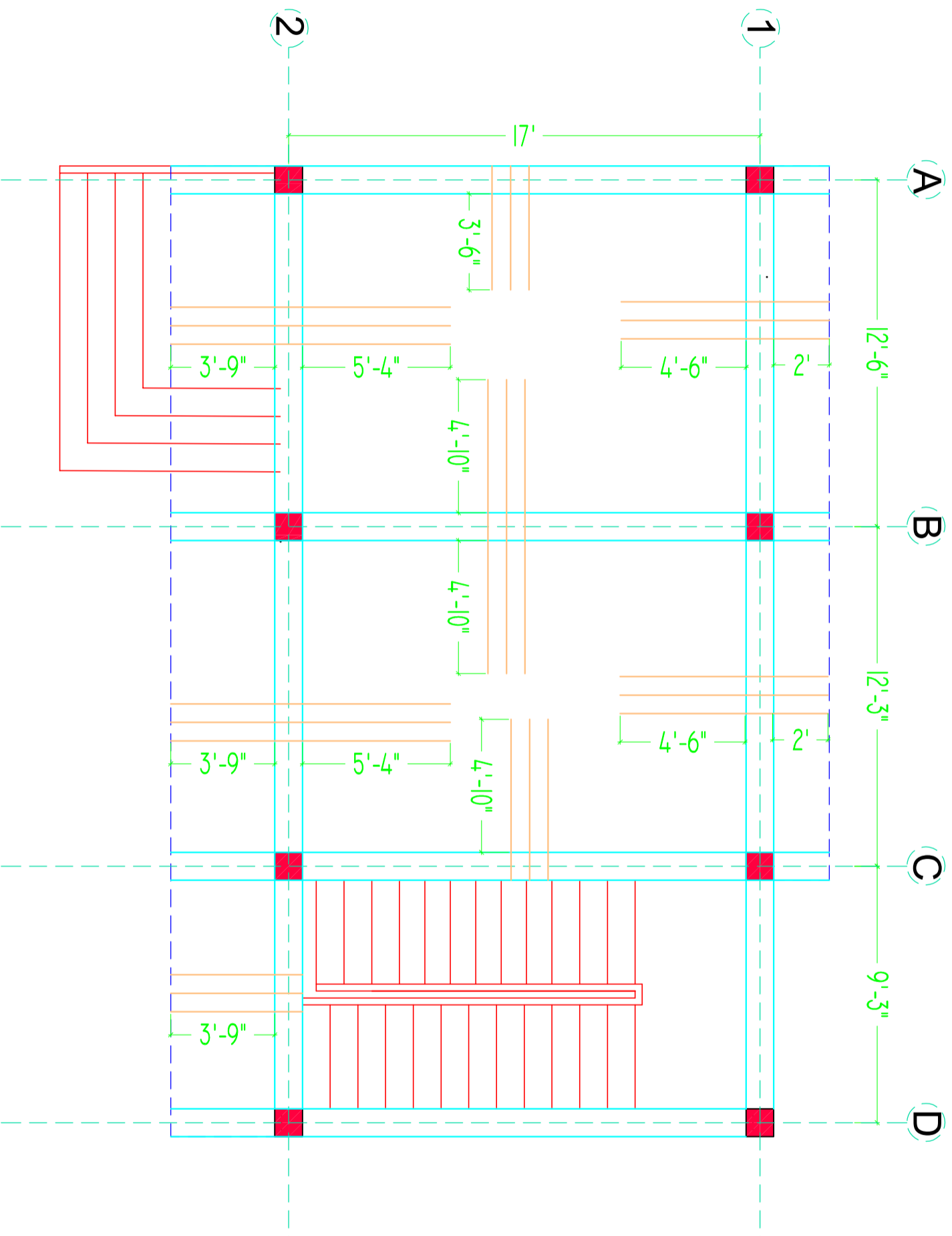


## GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN

NOTE :  
SLAB THICKNESS = 6"

<b>CLIENT:</b> 		<b>SCHOOL NAME</b> GGPS JUGIA TAXILA RAWALPINDI	
<b>CONSULTANTS:</b> 		<b>PLANNERS CONSULTANTS ENGINEERS (PCE)</b> 97-K Industrial Estate, Hayatabad Peshawar Pakistan Ph: 0092-91-5816017, 5891661-4, Fax: 5891845 E-Mail: pce.pesh@yahoo.com	
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Designed By		Checked By	Engr. HUMZA AHMAD
Approved By			
<b>PROJECT:</b> PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES		<b>TITLE:</b> GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN	
DATE	SCALE	DRG.NO.	S-9
SEP 2023			





NOTE:  
 SLAB THICKNESS = 6"  
 TOP REINFORCEMENT = #3@6" C/C


## GROUND FLOOR SLAB TOP REINFORCEMENT PLAN

CLIENT:



The UN Refugee Agency

CONSULTANTS:



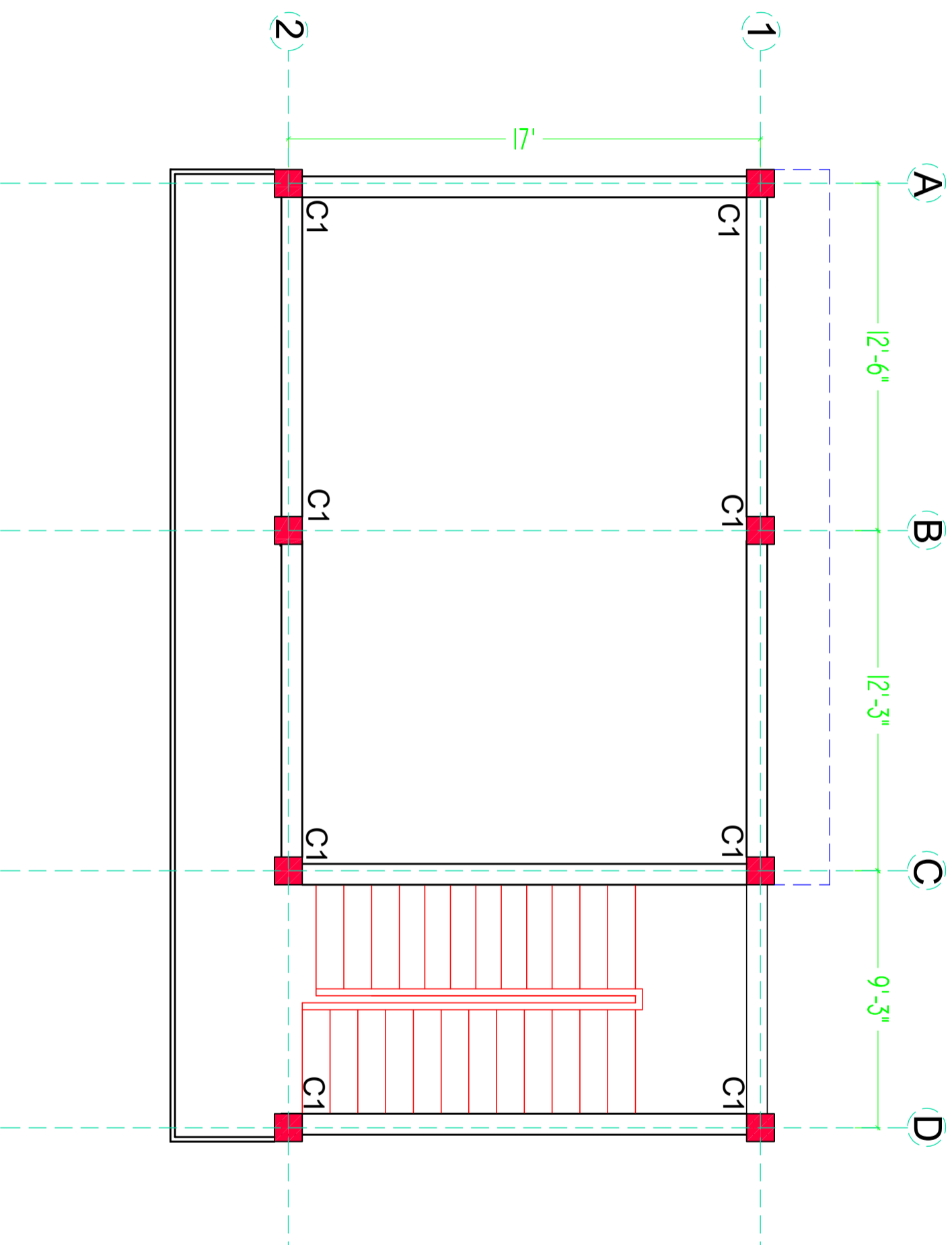
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SCHOOL NAME

GGPS JUGIA TAXILA  
 RAWALPINDI

Date of Revision	Prepared By	STRUCTURE ENGINEER:
	FARD KHAN KHAN HADDER	Engr. HUMZA AHMAD
	Designed By	
	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		S-10
TITLE:			
GROUND FLOOR SLAB TOP REINFORCEMENT PLAN			



## FIRST FLOOR COLUMN LAYOUT PLAN

CLIENT:



**PLANNERS CONSULTANTS ENGINEERS (PCE)**

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Date of Revision

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HABIB KHAN  
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Designed By

Engr. HUMAZA AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

FIRST FLOOR COLUMN LAYOUT PLAN

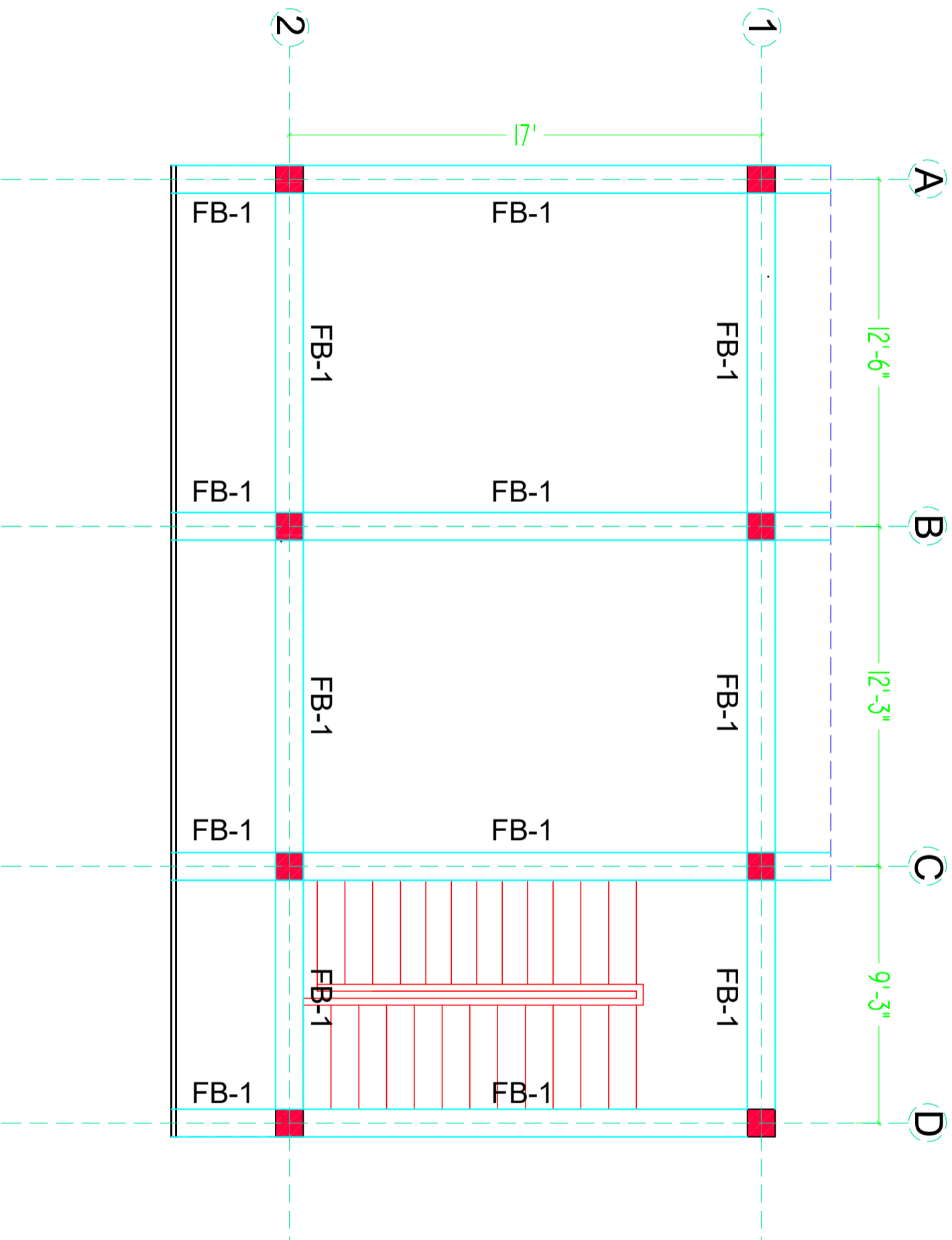
DATE

SEP 2023

SCALE

DRG.NO.

S-11



## FIRST FLOOR BEAM PLAN

CLIENT:



CONSULTANTS:

**PLANNERS CONSULTANTS ENGINEERS (PCE)**

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SCHOOL NAME

GGPS JUGIA TAXILA  
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Date of Revision

Prepared By

FARID KHAN  
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Designed By

Engr. HUMZA AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

FIRST FLOOR BEAM PLAN

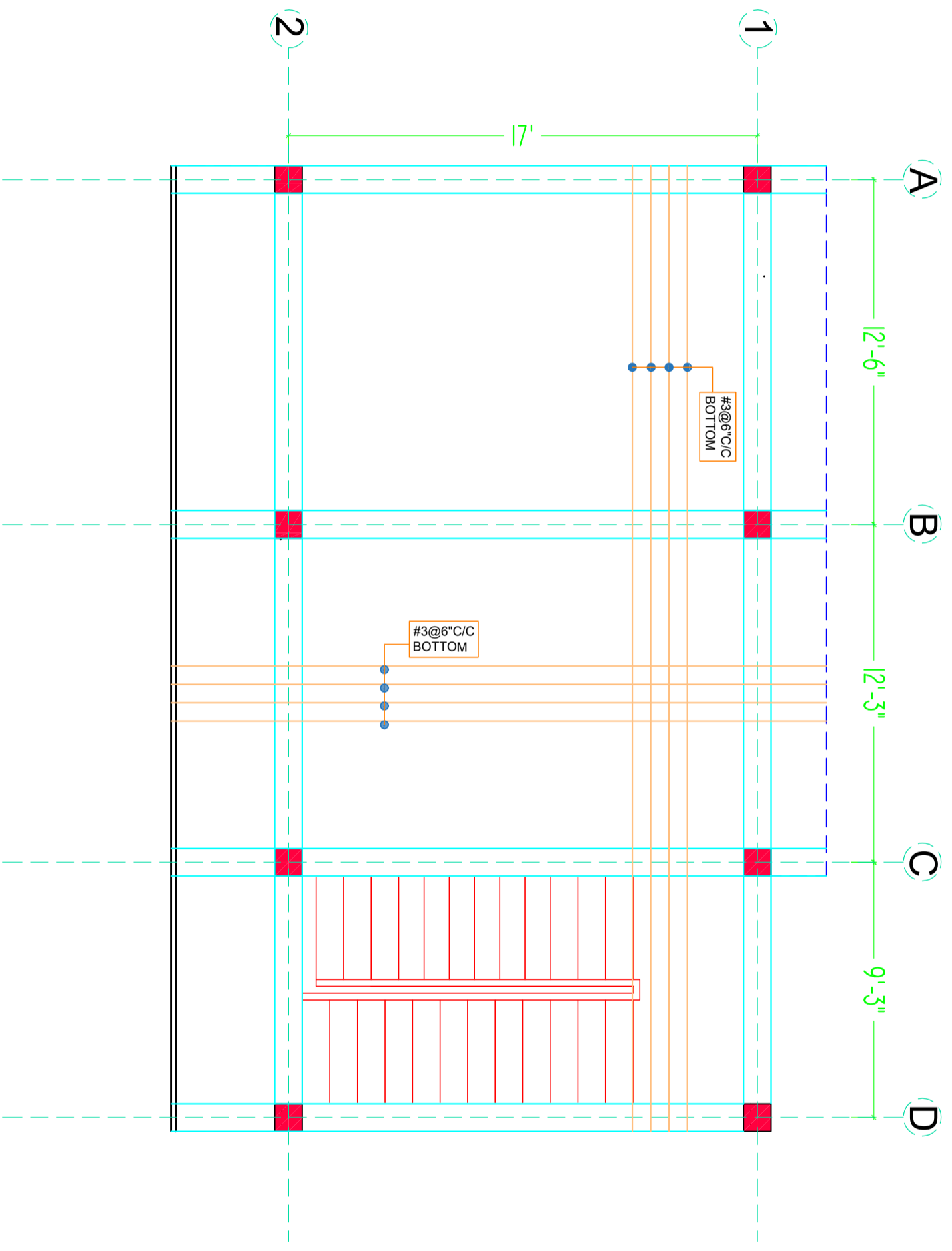
DATE

SEP 2023

SCALE

DRG.NO.

S-12



# FIRST FLOOR SLAB BOTTOM REINFORCEMENT PLAN


NOTE:  
SLAB THICKNESS = 6"

CLIENT:



The UN Refugee Agency

CONSULTANTS:



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SCHOOL NAME

GGPS JUGIA TAXILA  
 RAWALPINDI

Date of Revision	Prepared By	STRUCTURE ENGINEER:
	Designed By	Engr. HUMZA AHMAD
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	Approved By	

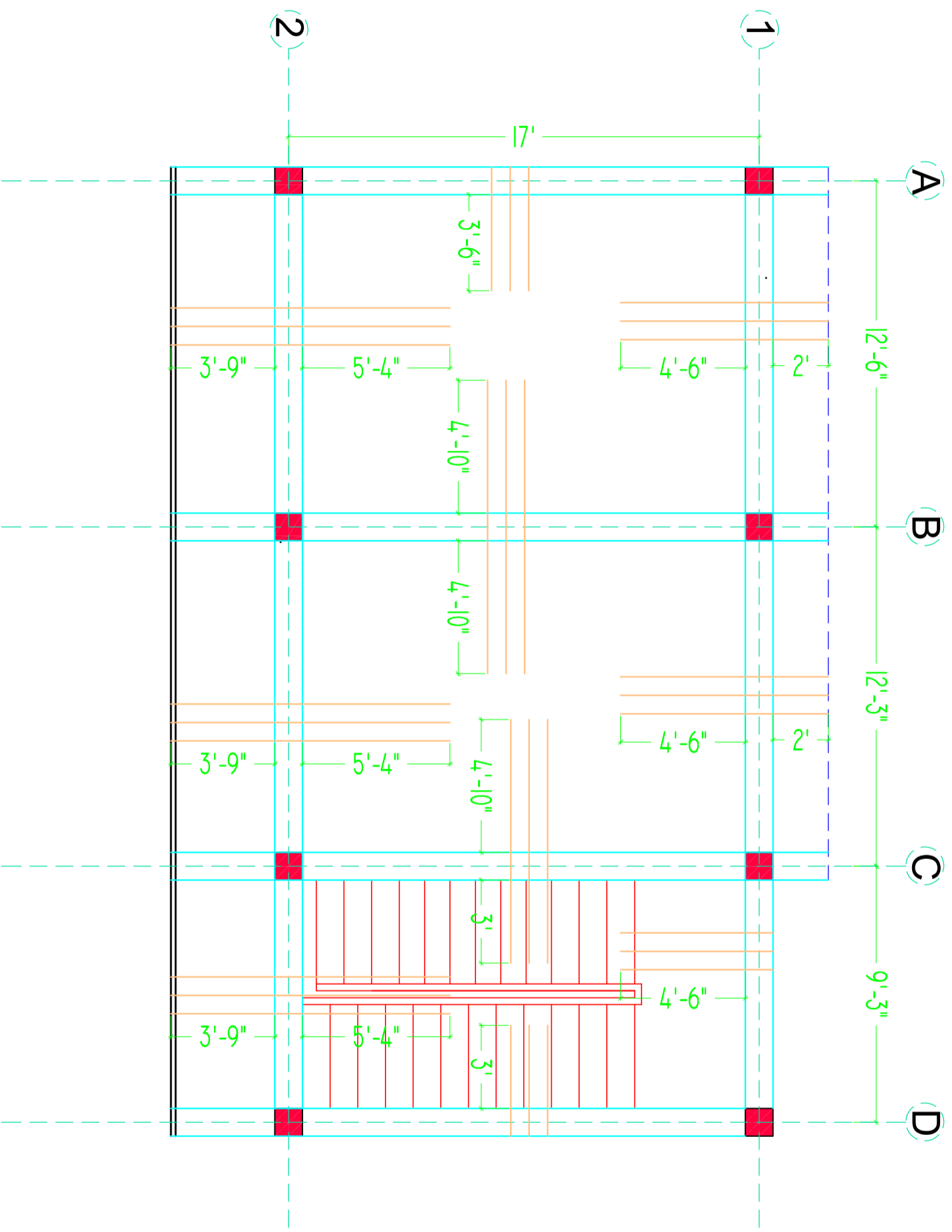
PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:  
FIRST FLOOR SLAB BOTTOM REINFORCEMENT PLAN

DATE: SEP 2023

SCALE: DRG.NO. S-13



## FIRST FLOOR SLAB TOP REINFORCEMENT PLAN

NOTE:  
SLAB THICKNESS = 6"  
TOP REINFORCEMENT = #3@6"C/C

CLIENT:



CONSULTANTS:

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SCHOOL NAME

GGPS JUGIA TAXILA  
RAWALPINDI

Date of Revision

Prepared By

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KHAN HAIDER  
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Designed By

Engr. HUMZA AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOOK  
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

FIRST FLOOR SLAB TOP  
REINFORCEMENT PLAN

DATE

SEP 2023



SCALE

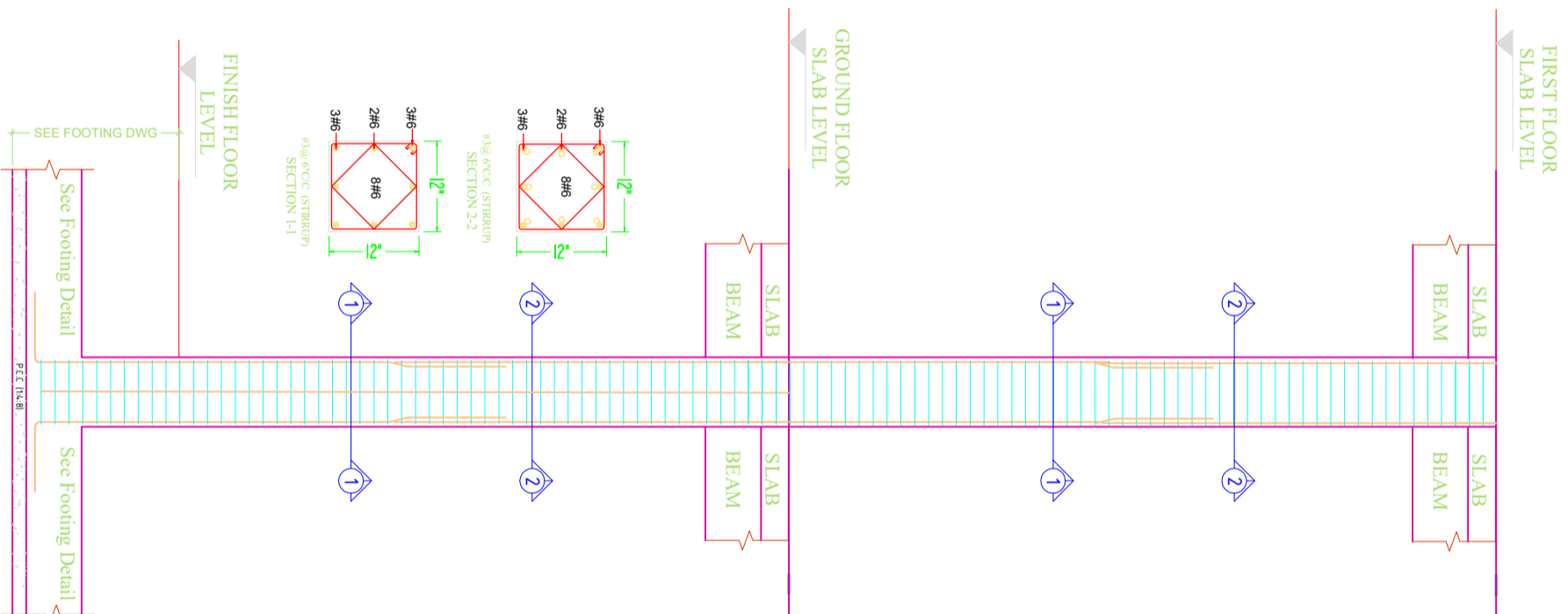
DRG.NO.

S-14

COLUMN TYPES	COLUMN C1	
GROUND FLOOR		
FIRST FLOOR		

# COLUMN DETAIL

<b>CLIENT:</b>  The UN Refugee Agency	<b>CONSULTANTS:</b>  <b>PLANNERS CONSULTANTS ENGINEERS (PCE)</b> 97-K Industrial Estate, Hayatabad Peshawar Pakistan Ph: 0092-91-5816017, 5891661-4, Fax: 5891845 E-Mail: pce.pesh@yahoo.com	<b>SCHOOL NAME</b> GGPS JUGIA TAXILA RAWALPINDI	<table border="1"> <tr> <td>Date of Revision</td> <td>Prepared By</td> <td>FARID KHAN KHAZHABER STRUCTURE ENGINEER</td> <td rowspan="3"> <b>PROJECT:</b>            PREPARATION OF DESIGN, DRAWINGS &amp; BOQS            FOR CONSTRUCTION/REHABILITATION OF SITES            TITLE:            COLUMN DETAIL         </td> </tr> <tr> <td></td> <td>Designed By</td> <td>Engr. HUMZA AHMAD</td> </tr> <tr> <td></td> <td>Checked By</td> <td></td> </tr> <tr> <td></td> <td>Approved By</td> <td></td> <td>           DATE: SEP 2023    SCALE:    DRG.NO.: S-15         </td> </tr> </table>	Date of Revision	Prepared By	FARID KHAN KHAZHABER STRUCTURE ENGINEER	<b>PROJECT:</b> PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES TITLE: COLUMN DETAIL		Designed By	Engr. HUMZA AHMAD		Checked By			Approved By		DATE: SEP 2023    SCALE:    DRG.NO.: S-15
Date of Revision	Prepared By	FARID KHAN KHAZHABER STRUCTURE ENGINEER	<b>PROJECT:</b> PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES TITLE: COLUMN DETAIL														
	Designed By	Engr. HUMZA AHMAD															
	Checked By																
	Approved By		DATE: SEP 2023    SCALE:    DRG.NO.: S-15														



**COLUMN SECTION DETAIL**

**COLUMN LONG SECTION C1**

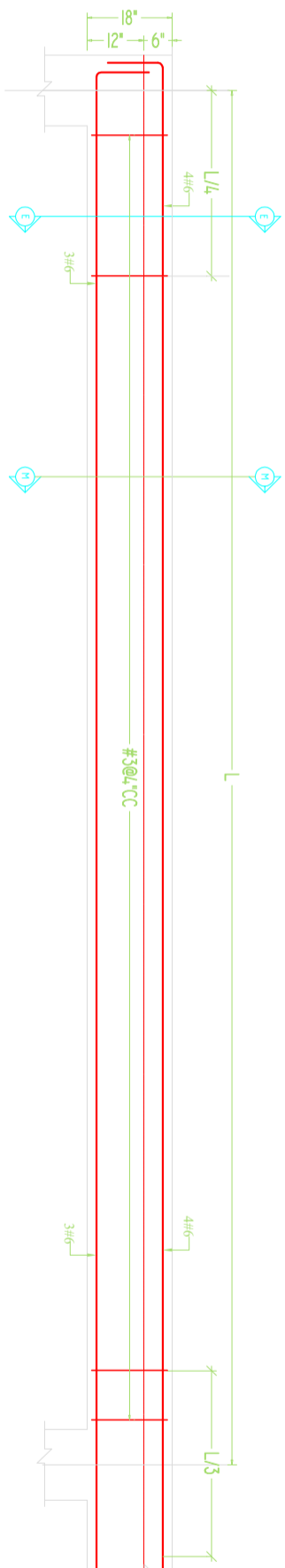
CLIENT:  
  
 The UN Refugee Agency

CONSULTANTS:  
**PLANNERS CONSULTANTS ENGINEERS (PCE)**  
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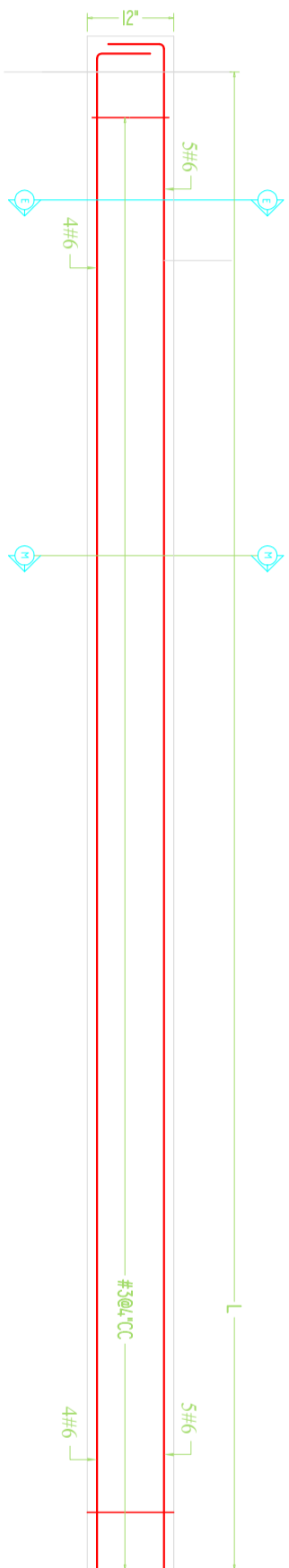
SCHOOL NAME  
**GGPS JUGIA TAXILA RAWALPINDI**

Date of Revision	Prepared By	FARID KHAN KHAN HADIR STRUCTURE ENGINEER
	Designed By	Engr. HUMZA AHMAD
	Checked By	
	Approved By	

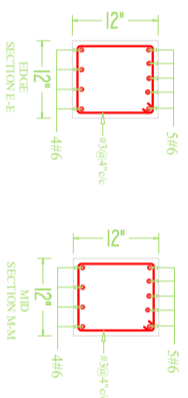
PROJECT:	PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES
TITLE:	COLUMN SECTION DETAIL
DATE	SEP 2023
SCALE	
DRG. NO.	S-16



TYPICAL ELEVATION OF PB-1



TYPICAL ELEVATION OF PB-1



CLIENT:



**CONSULTANTS:**  
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**SCHOOL NAME**

GGPS JUGIA TAXILA  
 RAWALPINDI

Date of Revision	Prepared By	FARID KHAN KILAN HANIDER STRUCTURE ENGINEER
	Designed By	Engr. HUMZA AHMAD
	Checked By	
	Approved By	

<b>PROJECT:</b>	PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
<b>TITLE:</b>	BEAM DETAIL
<b>DATE</b>	SEP 2023
<b>SCALE</b>	
<b>DRG.NO.</b>	S-17



**ELECTRIFICATION DRAWINGS  
OF  
GGPS JUGIAN TAXILA RAWALPINDI**

	<b>ELECTRICAL DRAWINGS</b>	
1	GENERAL NOTES	E-01
2	APPROVED MANUFACTURE LIST	E-02
3	LEGEND	E-03
4	GROUND FLOOR PLAN	E-04
5	GROUND FLOOR DIMENSION PLAN	E-05
6	FIRST FLOOR PLAN	E-06
7	FIRST FLOOR DIMENSION PLAN	E-07
8	SECTION	E-08
9	EARTHING DETAIL PLAN	E-09
10	MAIN DISTRIBUTION BOARD	E-10
11	LOAD CALCULATION	E-11

CLIENT:



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SCHOOL NAME

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision	Prepared By	FARID KHAN KIANNABDER ELECTRICAL ENGINEER
	Designed By	Engr. HAMMAD AHMAD
	Checked By	
	Approved By	

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

LIST OF DRAWINGS

DATE	SCALE	DRG.NO.
SEP 2023		E-00

## ELECTRICAL SYSTEMS

FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL ELECTRICAL DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS STATED OTHERWISE.

1. THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS THE SITE CONDITIONS NECESSITARY ALTERATION OR DEVIATION OF THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.
2. DIMENSIONS / MEASUREMENTS IS GIVEN IN LAYOUT AND DETAILED DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE THE ACTUAL DIMENSIONS ACCORDING TO STRUCTURAL AND ARCHITECTURAL DRAWINGS.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL RELEVANT DETAILS TO THE ENGINEER FOR APPROVAL ACCORDING TO THE GENERAL CONDITION OF CONTRACT WELL IN TIME BEFORE COMMENCEMENT OF THAT WORK.
4. PROPER CO-ORDINATION OF ELECTRICAL WORKS WITH OTHER SERVICES SHALL BE CARRIED OUT AT SITE.
5. ALL NON CURRENT CARRYING PARTS i.e OUTER CASINGS OF EQUIPMENT SUCH AS H.T & IT PANELS DISTRIBUTION BOARDS, CABLE TRAYS, AUXILIARY CONSTRUCTION FOR EQUIPMENT ETC. SHALL BE CONNECTED TO THE GROUND-EARTHING SYSTEM AT REQUIRED NUMBER OF POINTS WITH SPECIFIED SIZES OF CONDUCTORS. WATER PIPES ALONG ELECTRICAL LINE SHALL BE BONDED TO THE EARTHING SYSTEM WITH TO 10MMsq SINGLE CORE COPPER CONDUCTOR PVC CABLE.
6. ELECTRICAL POINTS FOR EQUIPMENT SHALL BE INSTALLED IN CO-ORDINATION WITH THE RELEVANT DRAWINGS OF OTHER SERVICES SUCH AS COMMUNICATION SYSTEMS, HVAC, PLUMBING ETC. THE LOCATION ON ELECTRICAL DRAWINGS IS ONLY INDICATIVE.
7. ARRANGEMENT OF ELECTRICAL EQUIPMENTS ON ELECTRICAL DRAWINGS ARE TENTATIVE EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASY OF MAINTENANCE.
8. LOAD ON ALL PHASES SHALL BE MAXIMUM BALANCED AT THE TIME OF COMMISSIONING STAGE. IT IS RESPONSIBILITY OF CONTRACTOR
9. CONDUIT RUN UNDER FLOOR SHALL HAVE A MINIMUM COVER OF TWO INCHES FROM TOP TO CONDUIT TO FINISH FLOOR LEVEL.
10. ALL WIRING SHOULD BE CARRYOUT ACCORDING TO THE PHASES RED, YELLOW, BLUE CABLE COLOUR ARE AS PER PHASE DISTRIBUTION IN BUILDING.
11. RUN GREEN OR WHITE SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED SIZE AS PROTECTIVE EARTH CONDUCTOR (LCC) ALL ALONG LIGHT AND POWER WIRING WHEREVER THE SIZE IS NOT SPECIFIED THE FOLLOWING CRITERIA SHALL BE OBSERVED TO DETERMINE MINIMUM CROSS SECTIONAL AREA OF EARTH CONTINUITY CONDUCTOR (ECC) IN RELATION TO THE AREA OFFICE PHASE CONDUCTORS RUN SEPARATE ECC FOR EACH CIRCUIT.
  - ECC 2 PHASE CONDUCTOR OF SAVE SIZE FOR UPTO AND INCLUDING 16 MMSQ CABLES -FOR CABLES OF 50 MM SQ AND ABOVE SIZES IS HALF SIZE OF PHASE CONDUCTOR -MINIMUM SIZE ECC IS 70MM SQ.
12. ALL WIRING FOR CONTROLS SHALL BE CARRIED OUT WITH 1 CORE FLEXIBLE PVC CABLES OF SPECIFIED VOLTAGE GRADE AND SIZES.
13. THE MAXIMUM CAPACITY OF PVC CONDUITS FOR SMALL TONCOUS DRAWING OF PVC INSULATED CABLES SHALL BE DETERMINED AS PER BS 4607. THE FOLLOWING TABLE SHALL BE USED TO DETERMINE THE MAXIMUM NUMBER OF CABLES

NUMBER OF CABLE IN (CONDUIT)	SIZE OF CABLE		
	25 MM (1")	20 MM (3/4")	15 MM (5/8")
NEW STANDER SIZE MM sq			
1.5 MM sq	13	8	5
2.5 MM sq	10	6	4
4 MM sq	7	4	3
6 MM sq	5	3	2
10 MM sq	3	2	1

14. NORMAL & EMERGENCY CIRCUITS SHALL BE RUN IN SEPARATE CONDUITS.
15. THE WIRING SHELL BE CONTINUOUS LOOPING-IN TYPE AND NO JOINT IN WIRES SHELL BE ALLOWED.
16. THE WIRING SYSTEM SHELL BE CARRIED OUT ONLY AFTER THE CONDUIT SYSTEM IS COMPLETELY INSTALLED AND ALL OUTLET BOXES, ETC. ARE FIXED IN POSITION.
17. MOUNTING HEIGHTS OF ELECTRICAL FITTINGS WHEN MEASURED FROM FINISHED FLOOR LEVEL (ECC) TO THE BOTTOM OF FITTINGS SHELL BE AS UNDER UNLESS OTHER WISE SHOWN OR INSTRUCTED
  - > SWITCH BOARD 48 INCHES
  - > EXHAUST FAN REF TO ARCH DRAWING
  - > DISTRIBUTION BOARD 56 INCHES
  - > CONTROL PANEL 48 INCHES
  - > ON/OFF PUSH BUTTTON STATION 48 INCHES
  - > DIMMER CONTROL UNIT 48 INCHES
  - > LIGHT CONTROL SWITCH (ONE WAY/TWO WAY) 48 INCHES
  - > 5 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
  - > 15 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
  - > 20 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
  - > 16 AMP SOCKET OUTLETS IN KITCHEN (ABOVE COUNTER) 10 INCHES
  - > 16 AMP TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS 12 INCHES
  - > CEILING FAN ON SLAB 90 INCHES
  - > WALL BRACKET FAN 90 INCHES

11. RUN GREEN OR WHITE SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED SIZE AS PROTECTIVE EARTH CONDUCTOR (LCC) ALL ALONG LIGHT AND POWER WIRING WHEREVER THE SIZE IS NOT SPECIFIED THE FOLLOWING CRITERIA SHALL BE OBSERVED TO DETERMINE MINIMUM CROSS SECTIONAL AREA OF EARTH CONTINUITY CONDUCTOR (ECC) IN RELATION TO THE AREA OFFICE PHASE CONDUCTORS RUN SEPARATE ECC FOR EACH CIRCUIT.
 

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SCHOOL NAME

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision	Prepared By	Engr. HAMMAD AHMAD
	Designed By	
	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG. NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITS	SEP 2023	GENERAL NOTES	E-01

**APPROVED MANUFACTURE LIST**

S NO.	ITEM OR ACCESSORIES	BRAND
01	WIRING CABLE	PAKISTAN,NEW AGE,FAST, GM, COPPERGAT CABLE
02	POWER CABLE	PAKISTAN,NEW AGE,FAST, GM, COPPERGAT CABLE
03	LIGHT FIXTURES	PHILIPS,PIERLITE,CLIPSAL, OSAKA, FAST LIGHT
04	CEILING FAN	PAK, GFC, ROYAL, LAHORE FAN
05	PVC CONDUIT	POLO,BETA,POPULAR, GM, ADAMJEE
06	SWITCHES	PPL
07	LT SWITCHGEAR	SCHNEIDER, ABB, PEL,ELECTRECH
08	MOULDED CASE CIRCUIT BREAKER	SCHNEIDER, CHINT, LS, ABB
9	MINIATURE CIRCUIT BREAKER	SCHNEIDER, CHINT, LS, ABB

CLIENT:



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**SCHOOL NAME**

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Date of Revision	Prepared By	FARID KHAN KHANNAHAR ELECTRICAL ENGINEER :
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	Checked By	
	Approved By	







**PROJECT:**

PREPARATION OF DESIGN, DRAWINGS & BOQS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

**TITLE:**

APPROVED MANUFACTURE LIST

**DATE:** SEP 2023 **SCALE:** **DRG.NO.:** E-02

SYMBOL	DESCRIPTION	INSTALLATION HEIGHT
	SURFACE MOUNTED DOWN LIGHT WITH 17 WATT ENERGY SAVER	CEILING MOUNTED
	TMS 136	SLAB MOUNTED
	56" SWEEP CEILING FAN	SLAB MOUNTED
	SWITCH BOARD	56" FROM FFL
	DISTRIBUTION UNIT	60" FROM FFL
	EXHAUST FAN POINT	

CLIENT:



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**SCHOOL NAME**

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision

Prepared By

FAHID KHAN  
KHAN HANIDER  
ELECTRICAL ENGINEER :

Designed By

Engr. HAMMAD AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOOKS  
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

LEGEND

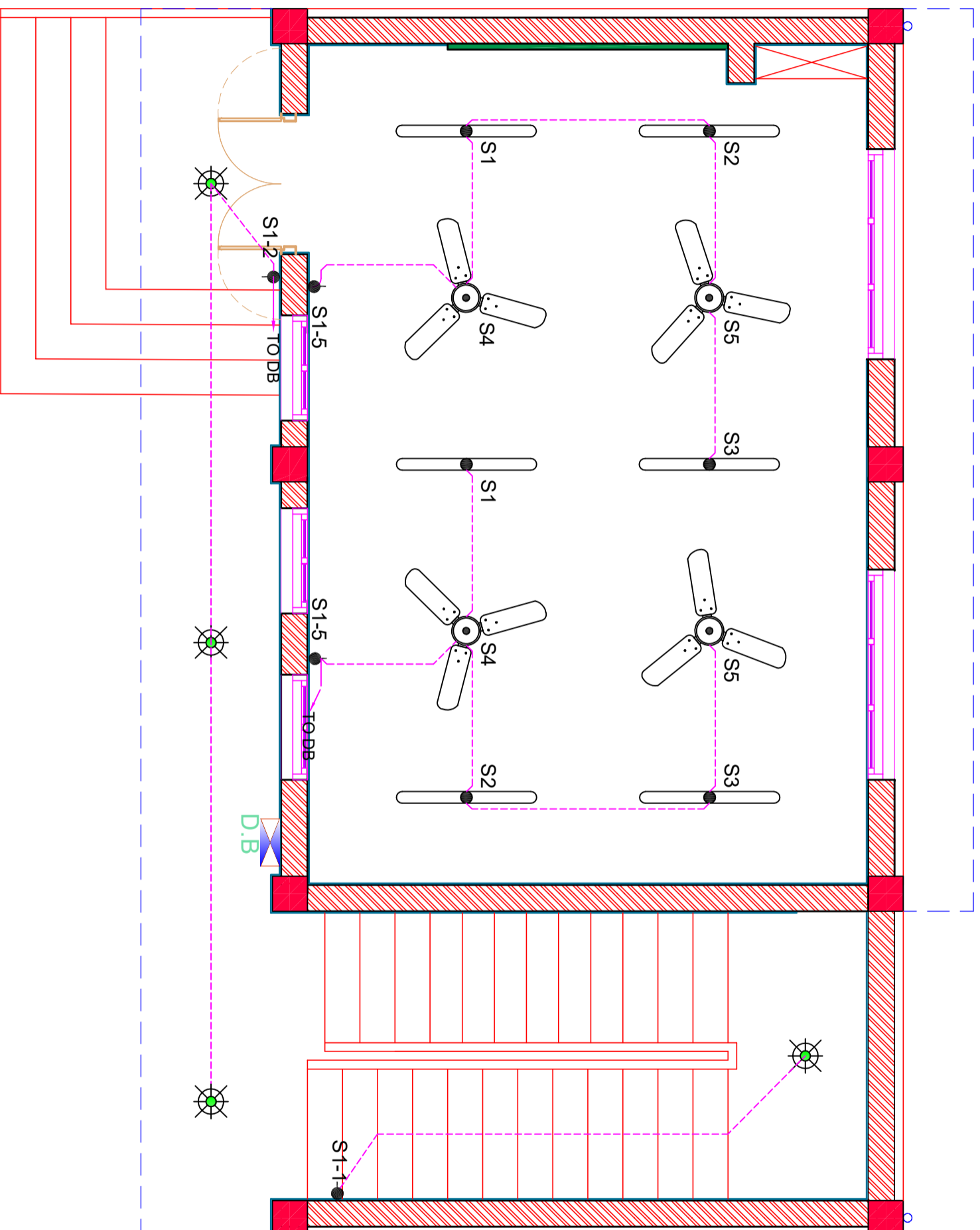
DATE

SEP 2023

SCALE

DRG.NO.

E-03



# GROUND FLOOR PLAN

CLIENT:



CONSULTANTS:



**PLANNERS CONSULTANTS ENGINEERS (PCE)**

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SCHOOL NAME

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision

Prepared By

FARID KHAN  
KHAN HABIBER

Designed By

Engr. HAMMAD AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

GROUND FLOOR PLAN

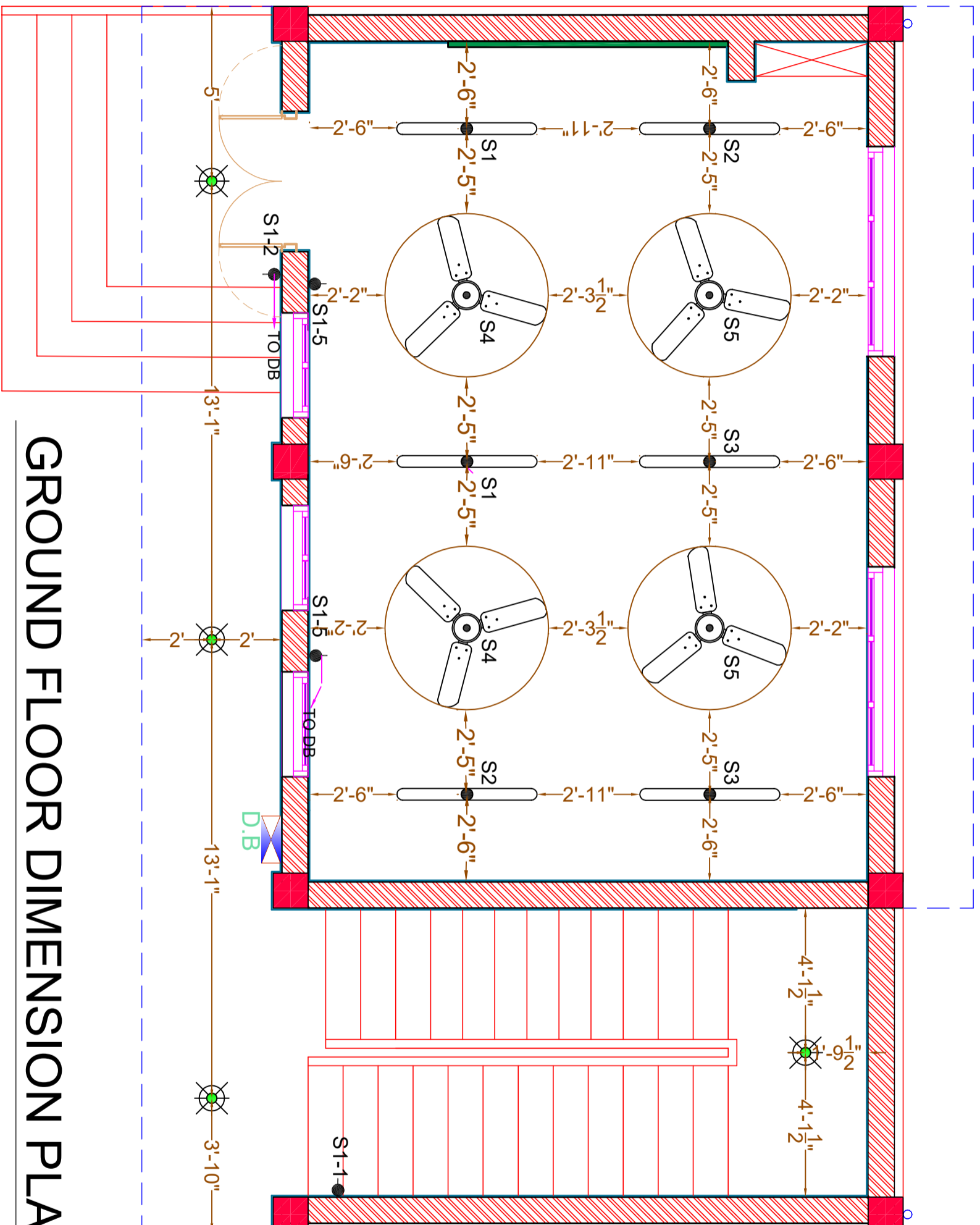
DATE

SEP 2023

SCALE

DRG.NO.

E-04



# GROUND FLOOR DIMENSION PLAN

CLIENT:



CONSULTANTS:

**PLANNERS CONSULTANTS ENGINEERS (PCE)**

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SCHOOL NAME

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision	Prepared By	ELECTRICAL ENGINEER:
	FARID KHAN KHAN HADDER	Engr. HAMMAD AHMAD
	Designed By	
	Checked By	
	Approved By	

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

GROUND FLOOR DIMENSION PLAN

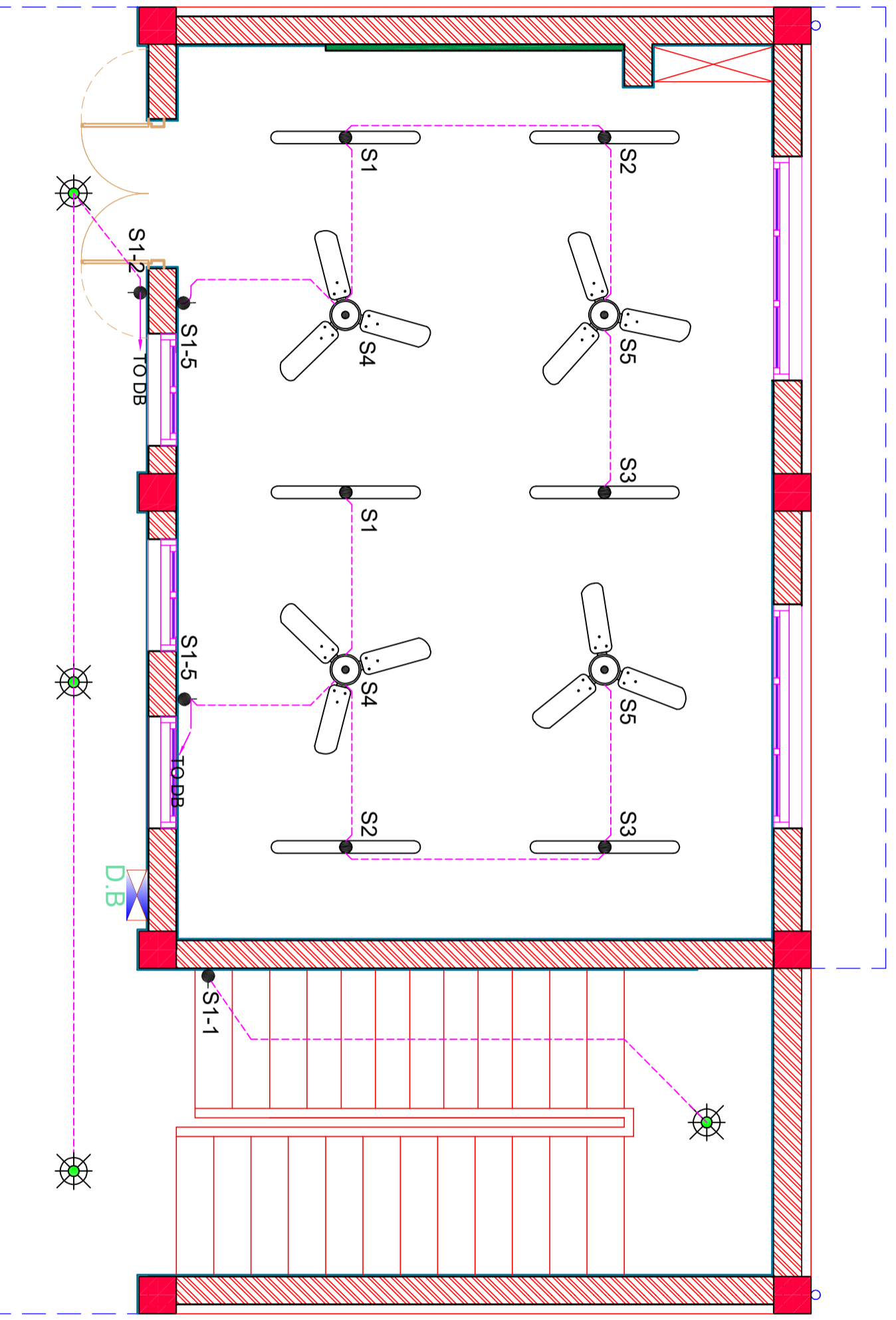
DATE

SEP 2023

SCALE

DRG. NO.

E-05



# FIRST FLOOR PLAN

CLIENT:



**CONSULTANTS:**  
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**SCHOOL NAME**  
 GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision	Prepared By	FARID KHAN KIANNHABER
	Designed By	Engr. HAMMAD AHMAD
	Checked By	
	Approved By	

**PROJECT:**  
 PREPARATION OF DESIGN, DRAWINGS & BOQS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

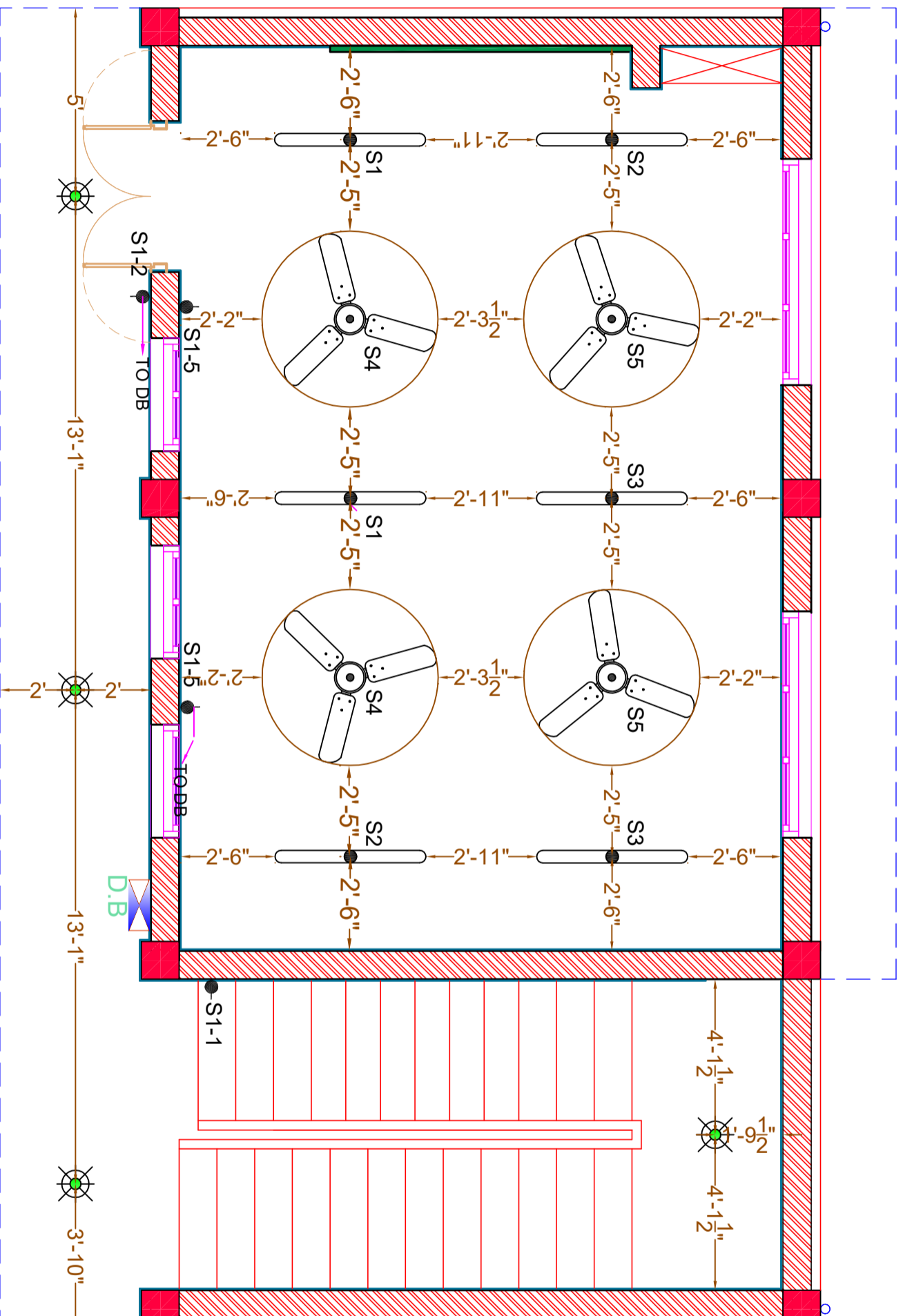
**TITLE:**  
 FIRST FLOOR PLAN

**DATE:** SEP 2023

**SCALE:**

**DRG.NO.:** A-06





# FIRST FLOOR DIMENSION PLAN

CLIENT:



CONSULTANTS:

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GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision

Prepared By

EABD KHAN  
KHAN HAIDER  
ELECTRICAL ENGINEER

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS  
FOR CONSTRUCTION/REHABILITATION OF SITES

DESIGNED BY

ENR. HAMDAD AHMAD

TITLE:

FIRST FLOOR PLAN

Checked By

Approved By

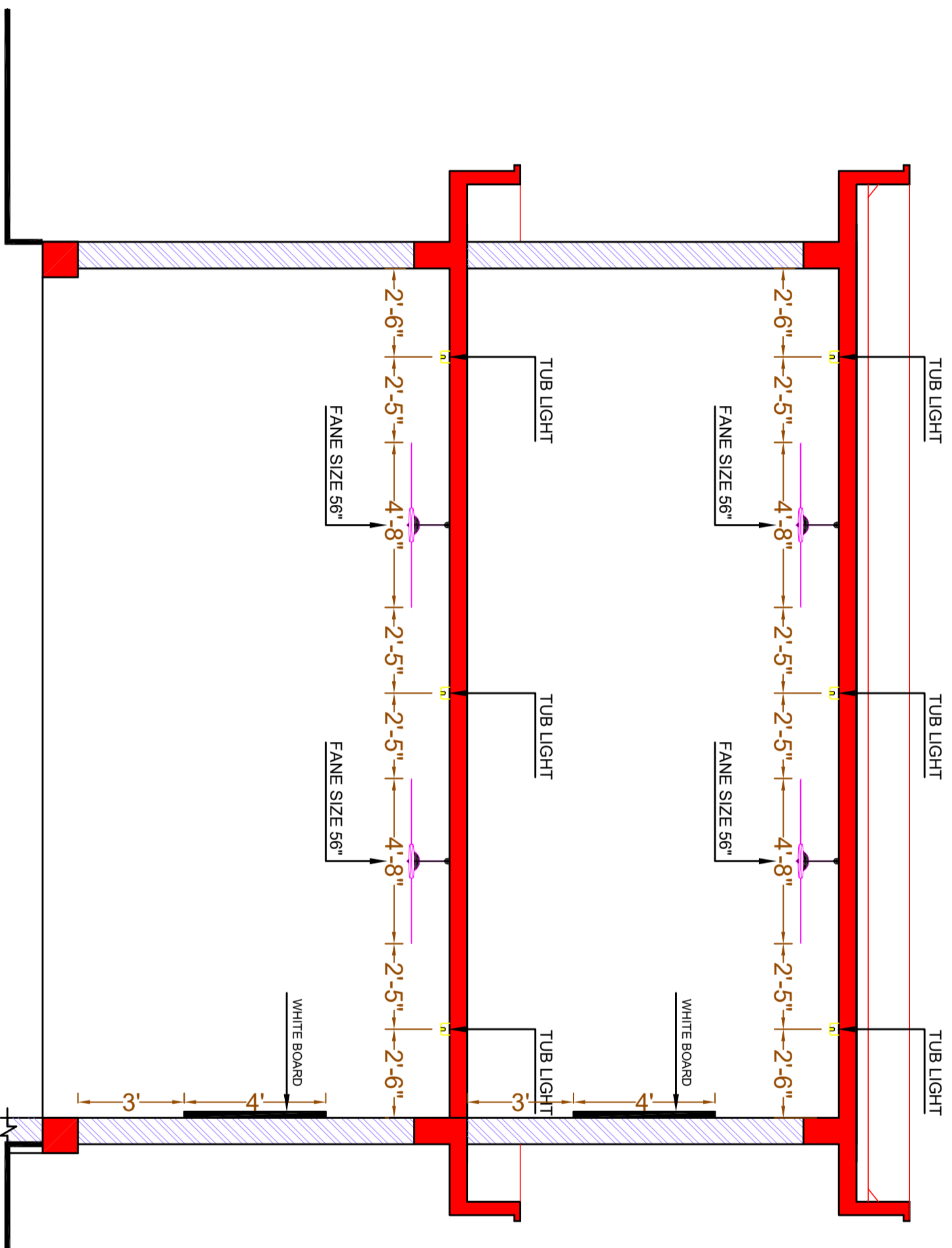
DATE  
SEP 2023

SCALE

DRG.NO.

A-07





# SECTION

CLIENT:



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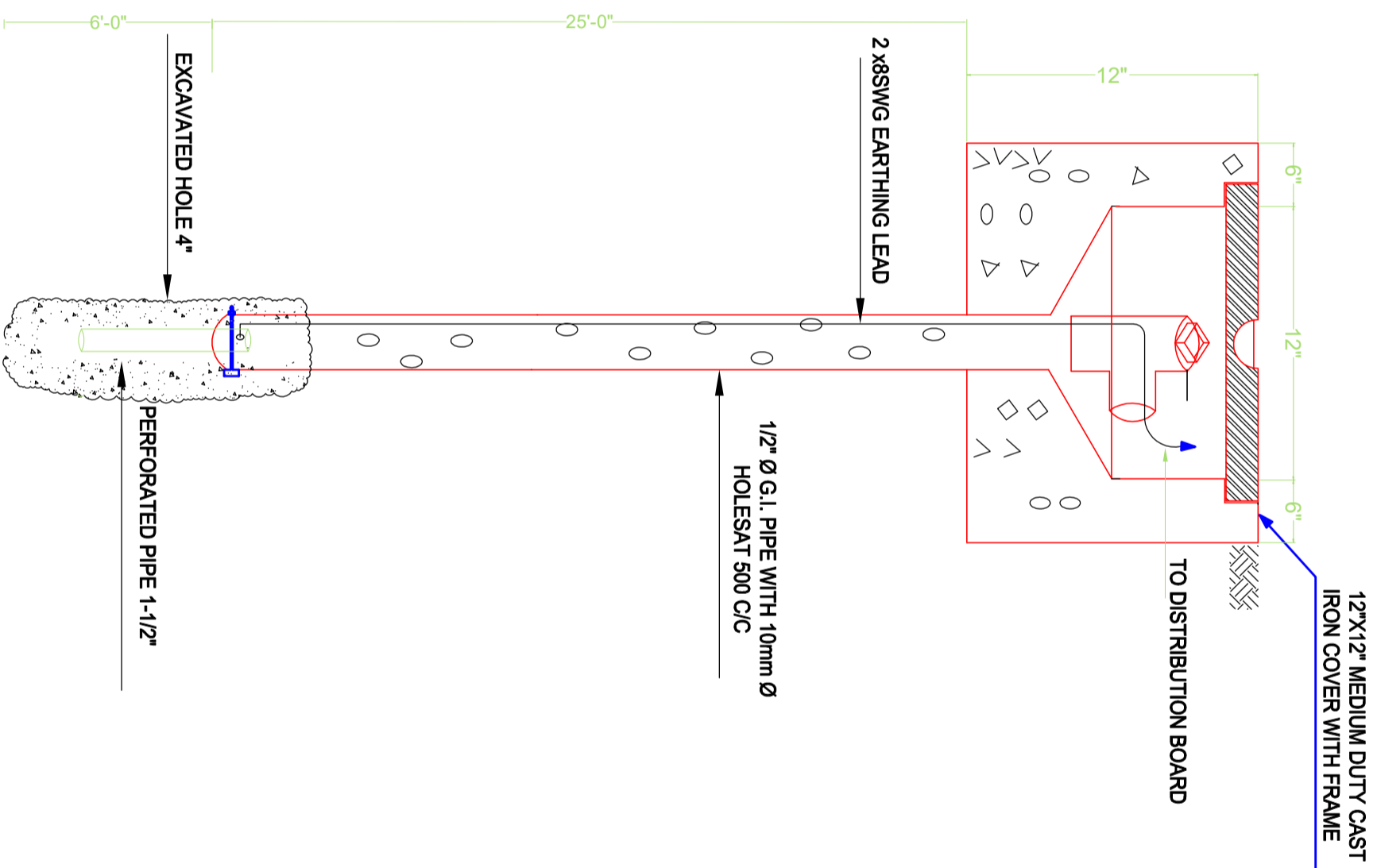
CONSULTANTS:

SCHOOL NAME

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision	Prepared By	ENGINEER
	Designed By	Engr. HAMMAD AHMAD
	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG. NO.
PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/ REHABILITATION OF SITES	SEP 2023		E-08
TITLE:			
SECTION			



CLIENT:



The UN Refugee Agency

CONSULTANTS:



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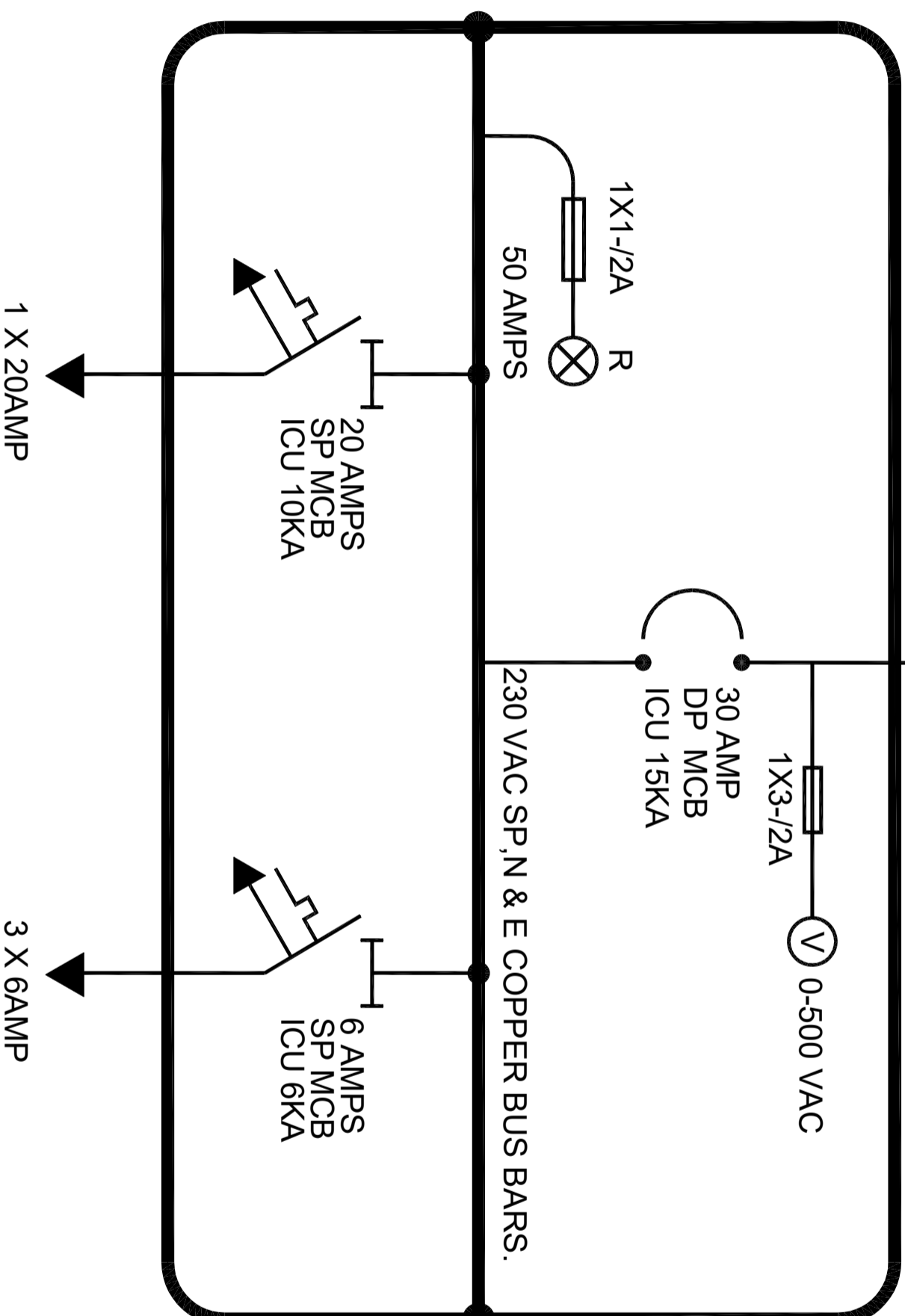
Date of Revision	Prepared By	FAKD KIAN KIAN HADIR
	Designed By	Engr. HAMMAD AHMAD
	Checked By	
	Approved By	

PROJECT:	PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES
TITLE:	EARTHING DETAIL PLAN
DATE	SEP 2023
SCALE	
DRG.NO.	E-09

# DISTRIBUTION BOARD

INCOMING FROM MAIN  
DISTRIBUTION BOARD  
2 X 7/0.044" SINGL CORE  
1X7/0.044" SINGL CORE AS EARTH

16 SWG SHEET STEEL POWDER  
PAINTED RECESSED IN WALL.



CLIENT:



**CONSULTANTS:**  
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SCHOOL NAME

GGPS JUGIAN TAXILA RAWALPINDI

Date of Revision

Prepared By

FAHAD KHAN  
KIAN HAIDER  
ELECTRICAL ENGINEER

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS  
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

MAIN DISTRIBUTION BOARD

Designed By

Engr. HAMMAD AHMAD

Checked By

DATE

SEP 2023

SCALE

DRG.NO.

E:10

Approved By

## LOAD CALCULATION

LOAD (W)	768
PEAK DEMAND LOAD (W)	768
25% FUTURE LOAD PROVISION (W)	960
TOTAL LOAD (W)	1067
CABLE SIZE (MM sq)	1.5

CLIENT:



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FARID KHAN  
KHAN ILLDAR  
ELECTRICAL ENGINEER:

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS  
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

LOAD CALCULATION

Designed By

Engr. HAMMAD AHMAD

DATE

SEP 2023

Checked By

Approved By

SCALE

DRG.NO.

E-11

REHAB WORKS  
OF  
GGPS JUGIAN TAXILA  
RAWALPINDI



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## LIST OF DRAWINGS

ARCHITECTURAL DRAWINGS			STRUCTURAL DRAWINGS		
SR.NO	DESCRIPTION	DRG. NO.	SR.NO	DESCRIPTION	DRG. NO.
1	PLAN OF BOUNDARY WALL	A-01	6	GENERAL NOTES	S-01
2	FRONT ELEVATION OF BOUNDARY WALL	A-02	7	GENERAL NOTES	S-02
3	SECTION AT A.A	A-03	8	FOUNDATION PLAN	S-03
4	DETAIL B.B	A-04	9	COLUMN LAYOUT PLAN	S-04
5	P.C.C FLOORING	A-05	10	COLUMN SECTION DETAIL	S-05

CLIENT:



**UNHCR**  
The UN Refugee Agency

CONSULTANTS:



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SCHOOL NAME

REHAB WORKS  
OF  
GGPS JUGIAN  
TAXILA RAWALPINDI

Date of Revision

Prepared By

ARCHITECT

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOOKS  
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

LIST OF DRAWINGS

Designed By

MARWAT KHAN ORAKZAI  
(B.Architect, Karachi)  
(M.Architect, Lahore)

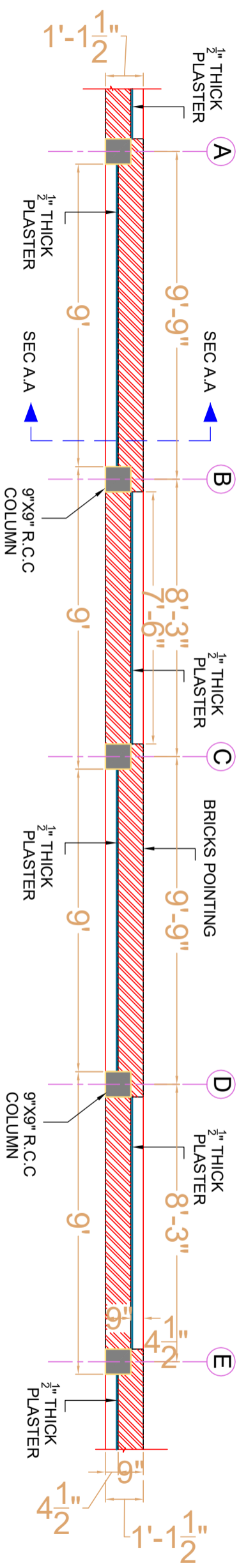
Checked By

Approved By

DATE  
SEP 2023

SCALE

DRG.NO.  
A-00



## PLAN OF BOUNDARY WALL (160 R FT)

CLIENT:



The UN Refugee Agency

CONSULTANTS:



**PLANNERS CONSULTANTS ENGINEERS (PCE)**  
 97-K Industrial Estate, Hayatabad Peshawar Pakistan  
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SCHOOL NAME

REHAB WORKS OF  
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Date of Revision

Prepared By

FARID KHAN  
 KHAN HANDBR

PROJECT:

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TITLE:

PLAN OF BOUNDARY WALL

Designed By

MARWAT KHAN ORAKZAI  
 (B.Arch D.C.E.T Karachi)  
 (M.Arch UET Lahore)

Checked By

Approved By

DATE

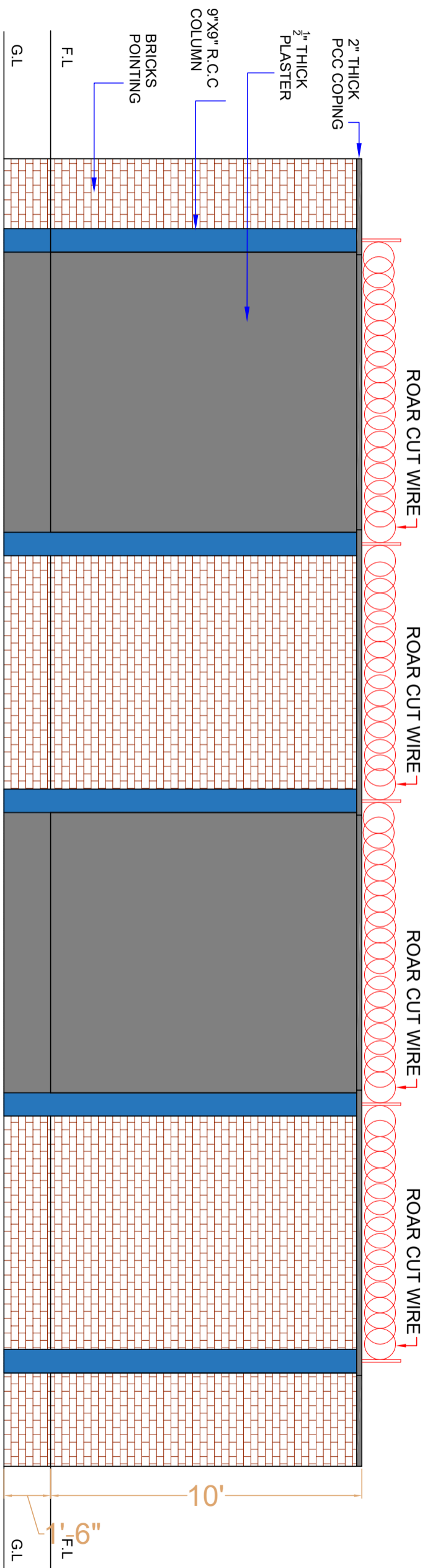
SEP 2023

SCALE

DRG.NO.

A-01





## FRONT ELEVATION OF BOUNDARY WALL

CLIENT:



CONSULTANTS:

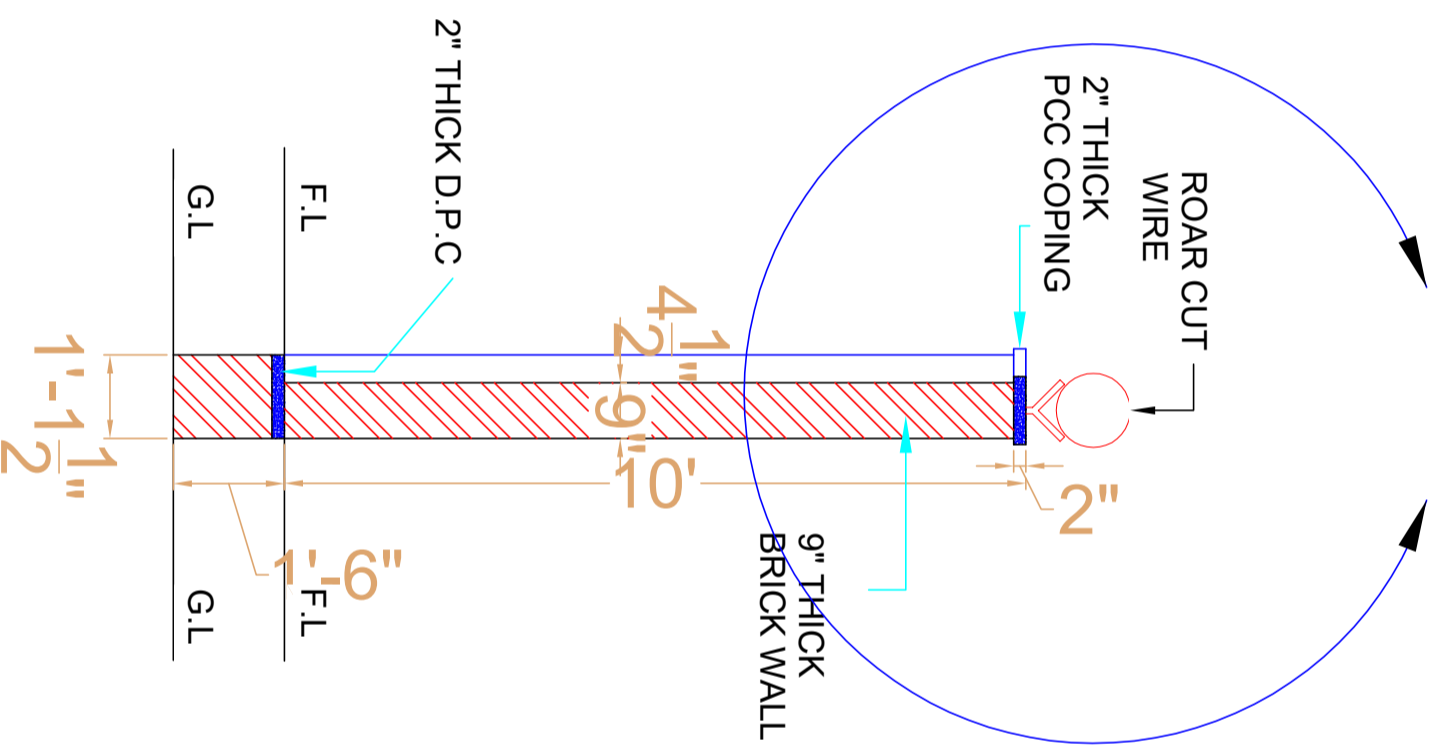


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SCHOOL NAME

REHAB WORKS OF  
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 TAXILA RAWALPINDI

Date of Revision	Prepared By	ARCHITECT	PROJECT:
			PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES FRONT ELEVATION OF BOUNDARY WALL
			DATE: <b>SEP 2023</b> SCALE: <b>1"=6"</b> DRG.NO.: <b>A-02</b>



# SECTION AT A.A

CLIENT:



CONSULTANTS:

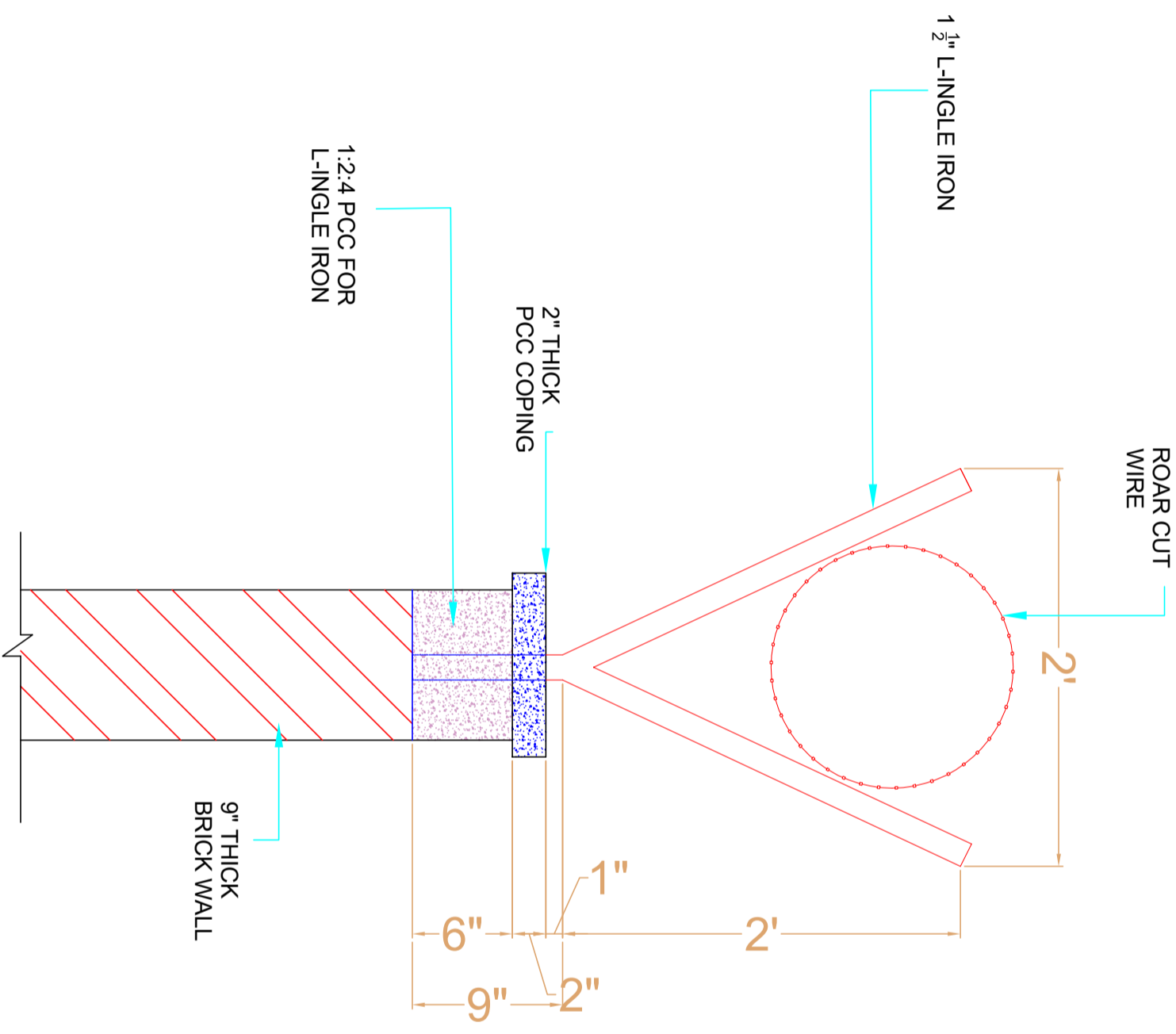
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SCHOOL NAME

REHAB WORKS OF  
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Date of Revision	Prepared By	ARCHITECT	PROJECT:
	Designed By	MARWAT KHAN ORAKZAI (B.Architect Karachi) (G.Architect Lahore)	PREPARATION OF DESIGN DRAWINGS & BOQ FOR CONSTRUCTION/REHABILITATION OF SITES
	Checked By		TITLE: SECTION AT A.A
	Approved By		DATE: SEP 2023
			SCALE
			DRG.NO. A-03



# DETAIL B.B

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS OF  
 GGPS JUGIAN  
 TAXILA RAWALPINDI

Date of Revision

Prepared By

ARCHITECT

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOOKS  
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

DETAIL B.B

Designed By

MARWAT KHAN ORAKZAI  
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 (RAWALPINDI Lahore)

Checked By

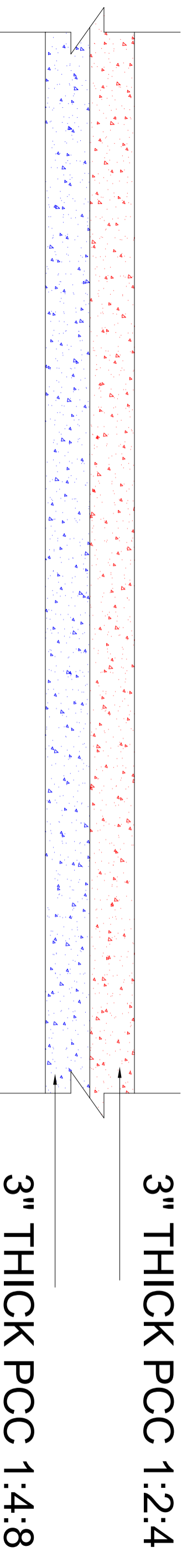
Approved By

DATE  
 SEP 2023

SCALE

DRG. NO.

A-04



# P.C.C FLOORING

## 2000.SFT

CLIENT:



CONSULTANTS:

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SCHOOL NAME

REHAB WORKS OF  
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 RAWALPINDI

Date of Revision

Prepared By

FARID KHAN  
 KHANHAIDER  
 ARCHITECT

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS  
 FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

P.C.C FLOORING

DATE

SEP 2023

SCALE

DRG.NO.

A-05

Approved By

Checked By

DESIGNED BY

ARCHITECT

DATE

SCALE

DRG.NO.

**STRUCTURE DRAWINGS OF  
(BOUNDARY WALL)  
GGPS JUGIAN TAXILA  
RAWALPINDI**

## 1. GENERAL

1. READ ALL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, GEOTECHNICAL, PLUMBING, MECHANICAL, ELECTRICAL & ANY OTHER RELEVANT DRAWINGS.
2. NOTES GIVEN IN THIS DRAWING ARE APPLICABLE TO ALL DRAWINGS UNLESS MENTIONED OTHERWISE. NOTES WRITTEN ON A DRAWING, SHALL BE APPLICABLE TO THAT PARTICULAR DRAWING ONLY UNLESS OTHERWISE CROSS-REFERRED.
3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE SPECIFICATIONS OF THE CONTRACT DOCUMENTS. IN ABSENCE OF ANY SPECIFICATIONS, ALL MATERIALS & WORKMANSHIP SHALL CONFORM TO RELEVANT AC/BRITISH CODES AND SHALL BE SUBJECTED TO APPROVAL OF THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURES DURING CONSTRUCTION. HE SHALL ALSO VERIFY ALL DIMENSIONS AND LEVELS BEFORE EXECUTION OF WORK. ANY DISCREPANCY, ERROR OR OMISSION, IF FOUND, SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR CORRECTION AND APPROVAL.
5. THE CONTRACTOR SHALL CO-ORDINATE WITH VARIOUS SERVICES DRAWINGS FOR SIZES & LOCATION OF ALL STRUCTURAL MEMBERS, FLOORS, WALLS, OPENINGS, FLOOR FINISHES, PIPES ETC.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXECUTION OF DEWATERING SYSTEM WHERE SO REQUIRED DURING CONSTRUCTION.
7. ALL DIMENSIONS & LEVELS ARE IN FEET & INCHES.
8. DO NOT SCALE THE DRAWINGS. DIMENSIONS, GIVEN ON THE DRAWING, SHALL GOVERN.
9. ALL FABRICATION, PAINTING, ERECTION AND QUALITY CONTROL IS TO BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE AC/BRITISH SPECIFICATIONS.
10. BACKFILLING AROUND FOUNDATIONS AND WALLS SHALL BE WELL COMPACTED LAYERS NOT EXCEEDING 6 INCHES IN THICKNESS.
11. IT IS STRONGLY RECOMMENDED TO RECONFIRM THE SITE PLAN BEFORE START OF EXECUTION AT SITE. THE SITE SHOULD BE EXAMINED FOR CLEARANCE WITH RESPECT TO LOCAL SEISMIC HAZARDS.
12. THE CONTRACTOR SHALL INFORM THE ENGINEER ABOUT ANTICIPATED CONSTRUCTION LOADS IN THE STRUCTURE AND OBTAIN ENGINEER'S APPROVAL THEREOF BEFORE COMMENCING THE WORK.
13. THE CONTRACTOR SHALL VERIFY LAYOUT, CONFIGURATION, ALL DIMENSIONS AND LEVELS PERTAINING TO EXISTING WORKS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ADOPT ADEQUATE AND APPROPRIATE MEASURES SO AS NOT TO DAMAGE THE EXISTING WORKS.
14. THE CONTRACTOR SHALL EXERCISE UTMOST CARE AND PRECAUTION DURING THE WORKS, AGAINST ANY MISHAPS OR ACCIDENTS, FOR WHICH THE CONTRACTOR SHALL BE WHOLLY AND SOLELY RESPONSIBLE. THE CONTRACTOR SHALL INDEMNIFY THE OWNER AGAINST ANY ACCIDENTS AND ANY LOSSES THEREFROM AND SHALL REPAIR AND RECTIFY THEM AT HIS OWN COST AND TIME.
15. ANY DEPARTURES/DEVIATIONS ENCOUNTERED FROM THE DESIGN OR SPECIFICATIONS, OR SOLUTIONS TO ANY PROBLEMS DISCOVERED, SHALL BE GOT APPROVED FROM THE ENGINEER PRIOR TO IMPLEMENTATION. UNAPPROVED DEPARTURES/DEVIATIONS MAY LEAD TO REJECTION/REPLACEMENT OF THE ENTIRE WORK AT THE CONTRACTOR'S COST.
16. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND BAR BENDING SCHEDULES. THE ENGINEER'S APPROVAL SHALL NOT RELIEVE THE APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF SHOP DRAWINGS AND BAR BENDING SCHEDULES FOR ENGINEERS APPROVAL AND OBTAIN HIS CONSENT FROM HIS RESPONSIBILITY.
17. The allowable bearing capacity of soil should be 1st.

## 2. SHORING AND BRACING

1. SHORE & BRACE ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION, TO THE EXTENT NECESSARY TO ENSURE COMPLETE SAFETY, STRENGTH & SERVICEABILITY OF ALL STRUCTURAL ELEMENTS UNDER ALL CONDITIONS OF LOADS WHICH MAY OCCUR DURING CONSTRUCTION, SUCH SHORING & BRACING IS THE CONTRACTOR'S SOLE RESPONSIBILITY AND IS NOT SHOWN ON STRUCTURAL DRAWINGS OR SPECIFIED IN THE PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND STABILITY OF THE SLOPES AND SHALL PROVIDE SHORING AND BRACING DURING EXCAVATION AND CONSTRUCTION, WHEREVER AND WHENEVER REQUIRED.
3. SEQUENCE OF REMOVAL OF FORMWORK SHALL BE APPROVED BY THE ENGINEER.
4. AT LEAST ONE LOWER FLOOR SHALL REMAIN PROPPED UNTILL THE UPPER FLOOR IS CAST AND CURED.

## 3. REINFORCED CONCRETE

1. STRUCTURAL DESIGN IS BASED ON THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OF AMERICAN CONCRETE INSTITUTE (ACI 318).
  2. ALL STRUCTURAL CONCRETE SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI) REQUIREMENTS.
  3. CONCRETE MIX TO BE DESIGNED ON THE BASIS OF ACI 211 OR EQUIVALENT. TRIAL STRENGTH RESULTS TO BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BEFORE CONCRETING.
  4. NO CONCRETING SHALL BE CARRIED OUT UNTIL PERMISSION IS GIVEN IN WRITING OR APPROVED BY STRUCTURE ENGINEER.
  5. ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM STANDARDS C31, C39, C119 & AS WRITTEN IN SPECIFICATIONS AND THE MINIMUM CYLINDER CRUSHING STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS. TESTING OF CLASS D & E CONCRETE SHALL BE PERFORMED IF SO SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.
- | CLASS | MIN. CYLINDER CRUSHING STRENGTH AT 28 DAYS (psi). |
|-------|---|
| A     | 4000  |
| B     | 3000  |
| C     | 2400  |
| D     | 1200  |
| E     | 800   |
6. CLASS OF CONCRETE FOR DIFFERENT COMPONENTS OF THE STRUCTURE SHALL BE AS FOLLOWS UNLESS NOTED OTHER WISE:
- | COMPONENT                | CONCRETE CLASS |
|--------------------------|----------------|
| COLUMNS                  | CLASS 'B'      |
| FOUNDATION               | CLASS 'B'      |
| LEAN / BLINDING CONCRETE | CLASS 'E'      |
7. ORDINARY PORTLAND CEMENT SHALL BE USED FOR ALL CONCRETE WORKS.
  8. AN INTEGRAL WATER PROOFING AGENT SHALL BE USED IN CONCRETE THAT IS CONSTANTLY OR INTERMITTENTLY IN CONTACT WITH WATER AS PER MANUFACTURERS RECOMMENDATIONS. (GENCON GENPRUF RMC OR PENETRON ADMIX OR EQUIVALENT).
  9. ALL DETAILING SHALL BE DONE AS PER ACI STANDARDS ACI-315, ACI-318 & ACI-308R.

## 4. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM-A615 GRADE 60 HAVING A MINIMUM YIELD STRENGTH OF 60,000 PSI. FOR STIRRUPS, TIES AND #3 BARS USE ASTM A615, GRADE 60 HAVING MINIMUM YIELD STRENGTH OF 60,000 PSI.
  2. THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED STRENGTH BY MORE THAN 18,000 PSI (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3000 PSI)
  3. THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25
- L-GREATER CLEAR SPAN, db-DIAMETER OF BAR, d-EFFECTIVE DEPTH
- THE FIRST HOOP SHALL BE LOCATED NOT MORE THAN 2" FROM THE FACE OF THE SUPPORTING MEMBER.
- WHERE:
7. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND HELD FIRMLY IN PLACE BEFORE & DURING THE PLACEMENT OF CONCRETE, BY MEANS OF WIRE AND SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
  8. LINTELS ARE EXTENDED AT 9 (INCHES) FROM BOTH SIDES OF OPENING.
  9. PROVIDE 135° HOOK IN ADJACENT STIRRUPS ON ALTERNATE SIDES.

## 5. CONCRETE CONSTRUCTION

1. ALL STRUCTURAL SURFACES, AGAINST WHICH EARTH IS TO BE FILLED, SHALL BE COATED WITH TWO COATS OF HOT BITUMEN OF 10/20 GRADE AT THE RATE OF 0.2 lbs/ft<sup>2</sup>/coat.
2. PROVIDE POLYTHENE SHEET OVER TWO COATS OF HOT BITUMEN AT TOP OF PLINTH BEAM/DPC FOR EXTERIOR WALLS.
3. BEFORE CASTING OF ANY STRUCTURAL MEMBER, THE CONTRACTOR SHALL ENSURE THAT ALL EMBEDDED ITEMS FOR ELECTRICAL, MECHANICAL, HVAC, PLUMBING, STRUCTURAL STEEL AND OTHER WORKS ARE PROPERLY LOCATED AND FIRMLY SECURED IN PLACE.
4. DURING CONSTRUCTION, STACKING OF CONSTRUCTION MATERIALS, BLOCKS, etc. SHOULD BE AVOIDED ON SLAB PANELS.

## 6. BRICK WORK

1. ALL BRICK WORK SHALL CONFORM TO SPECIFICATIONS GIVEN IN THE CONTRACT DOCUMENT.
2. ALL BRICK SHALL BE SOUND, HARD, WELL BURNT AND OF UNIFORM SIZE, COLOUR AND TEXTURE. DIMENSIONAL VARIATION IN SIZES SHALL NOT EXCEED 1/8". BRICKS SHOULD BE IN ACCORDANCE WITH SPECIFICATIONS AND SHOULD CONFIRM TO ASTM C82.
3. ALL BRICK WORK SHALL BE ERECTED PLUMB AND TRUE TO LINE AND LEVEL. THE MAXIMUM VARIATION IN ANY STOREY HEIGHT OR ANY LENGTH OF WALL SHALL BE 1/8" IN 10'-0".
4. MORTAR USED IN MASONRY CONSTRUCTION SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF NOT LESS THAN 12 MPa (1800psi) AND SHALL CONFORM TO ASTM C270.
5. COMPRESSIVE STRENGTH OF BRICK MASONRY AVERAGE OF 5 UNITS AT 28 DAYS SHALL NOT BE LESS THAN AS SPECIFIED IN SPECIFICATION AND SHALL CONFORM TO RELEVANT ASTM STANDARD.
6. ALL DESIGN, DETAILING, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT ACI, ASTM, AND UBC CODES AND STANDARDS.
7. BRICK SHALL BE LAID "FROG" UPWARD WITH MORTAR JOINT AND IN ENGLISH FLEMISH BOND OR AS SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.
8. BRICKS SHOULD BE SOAKED WITH WATER PROPERLY BEFORE USE.
9. VERTICAL JOINTS SHOULD BE STAGGERED.
10. ALL MASONRY WALLS SHALL BE ANCHORED TO STRUCTURAL FRAME WORK AS INDICATED ON THE DRAWINGS

STRUCTURAL ELEMENT	COVER (INCHES)
FOOTINGS	2"
BEAMS	1 1/2"
COLUMNS	1 1/2"
SLABS	3/4"
WALLS	3/4"

CLIENT:



UNHCR  
The UN Refugee Agency

CONSULTANTS:

**PLANNERS CONSULTANTS ENGINEERS (PCE)**

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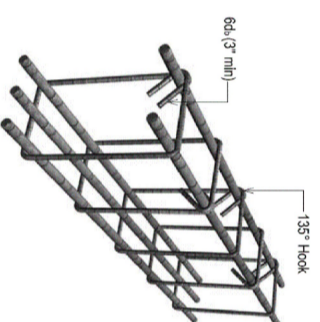
SCHOOL NAME

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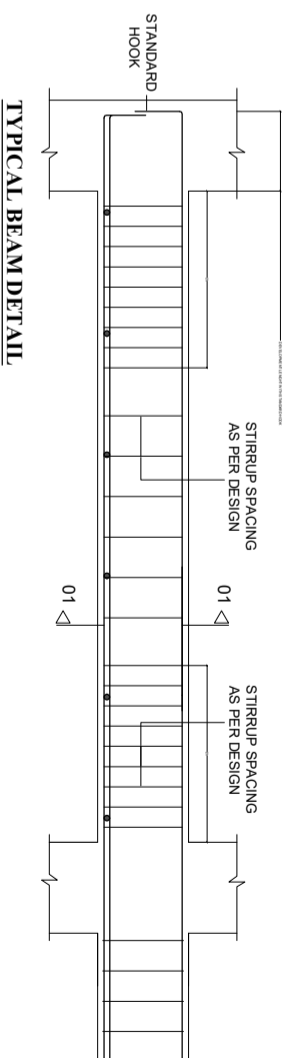
Date of Revision	Prepared By	FAHAD KHAN KIYAN KHANER STRUCTURE ENGINEER	PROJECT:
	Designed By	Eggr- HUMZA AHMAD	PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES
	Checked By		TITLE: GENERAL NOTES
	Approved By		DATE: SEP 2023
			SCALE
			DRG.NO.
			S-01

## 7. CONSTRUCTION JOINTS

1. JOINTS, NOT SHOWN ON THE DRAWING, SHALL BE SO MADE AND LOCATED AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND SHALL NEED PRIOR APPROVAL OF THE ENGINEER. THEY SHALL BE LOCATED NEAR THE MIDDLE OF THE SPANS OF SLAB & BEAMS. JOINTS IN WALLS & COLUMNS SHALL BE AT THE UNDER-SIDE OF FLOORS, SLABS OR BEAMS AND AT THE TOP OF FOOTINGS OR FLOOR SLABS.
2. JOINTS SHALL BE PERPENDICULAR TO MAIN REINFORCEMENT. ALL REINFORCING STEEL SHALL BE CONTINUED ACROSS THE JOINTS.
3. JOINTS IN BASE SLAB & WALLS AND ROOF SLAB, IN ADDITION TO THOSE SHOWN ON THE DRAWINGS SHALL BE BORNE BY THE CONTRACTOR. BEAMS & BRACKETS SHALL BE PLACED AT THE SAME TIME AS SLABS.



SEISMIC HOOK DETAILS



TYPICAL BEAM DETAIL

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 4,000$ psi	$f_y = 60,000$ psi
3/8"	18	7.5
1/2"	24	9.5
3/4"	30	14.5
1"	48	19

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

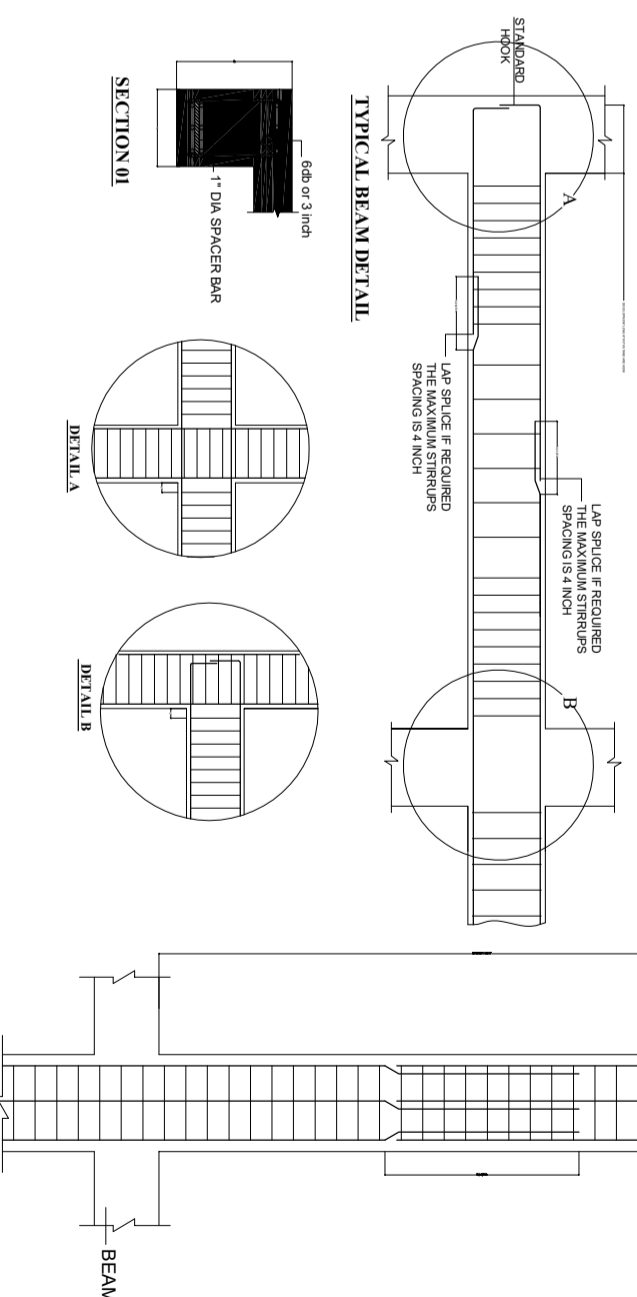
BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	TENSION	COMPRESSION
3/8"	15	-
1/2"	20	9
3/4"	30	15
1"	48	18

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 3,000$ psi	$f_y = 60,000$ psi
1/2"	22	11"
5/8"	30	14"
3/4"	34	17"
1"	55	22"

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	SLAB	BEAM / COLUMN
1/2"	25	35
5/8"	-	44
3/4"	-	55
1"	-	70



TYPICAL BEAM DETAIL

SECTION 01

DETAIL A

DETAIL B

TYPICAL COLUMN DETAIL

CLIENT:



CONSULTANTS:

**PLANNERS CONSULTANTS ENGINEERS (PCE)**

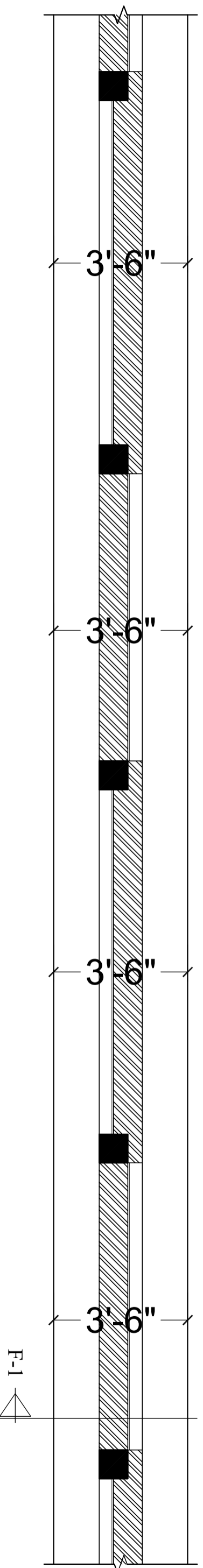
97-K Industrial Estate, Hayatabad Peshawar Pakistan  
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E-Mail: pce.pesh@yahoo.com

SCHOOL NAME



GGPS JUGIAN TAXILA  
RAWALPINDI

Date of Revision	Prepared By	STRUCTURE ENGINEER:
	Engr. HUMIZA AHMAD	
	Checked By	
	Approved By	

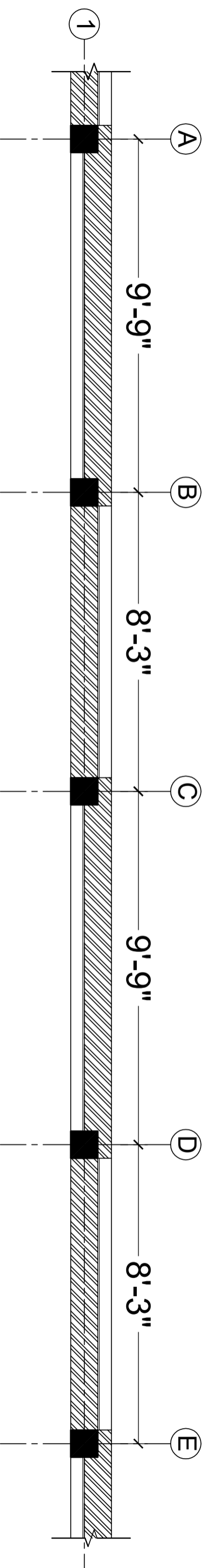
PROJECT:		
PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE: GENERAL NOTES		
DATE	SCALE	DRG.NO.
SEP 2023		S-02





# FOUNDATION PLAN

<b>CLIENT:</b>  		<b>CONSULTANTS:</b> <b>PLANNERS CONSULTANTS ENGINEERS (PCE)</b> 97-K Industrial Estate, Hayatabad Peshawar Pakistan Ph: 0092-91-5816017, 5891661-4, Fax: 5891845 E-Mail: pce.pesh@yahoo.com	
<b>SCHOOL NAME</b> GGPS JUGIAN TAXILA RAWALPINDI		Date of Revision	Prepared By FARID KHAN KIANI JABDIR STRUCTURE ENGINEER
Designed By Engr. HUMZA AHMAD	Checked By	Approved By	<b>PROJECT:</b> PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES
<b>DATE</b> SEP 2023	<b>SCALE</b>	<b>DRG.NO.</b> S-03	<b>TITLE:</b> FOUNDATION PLAN

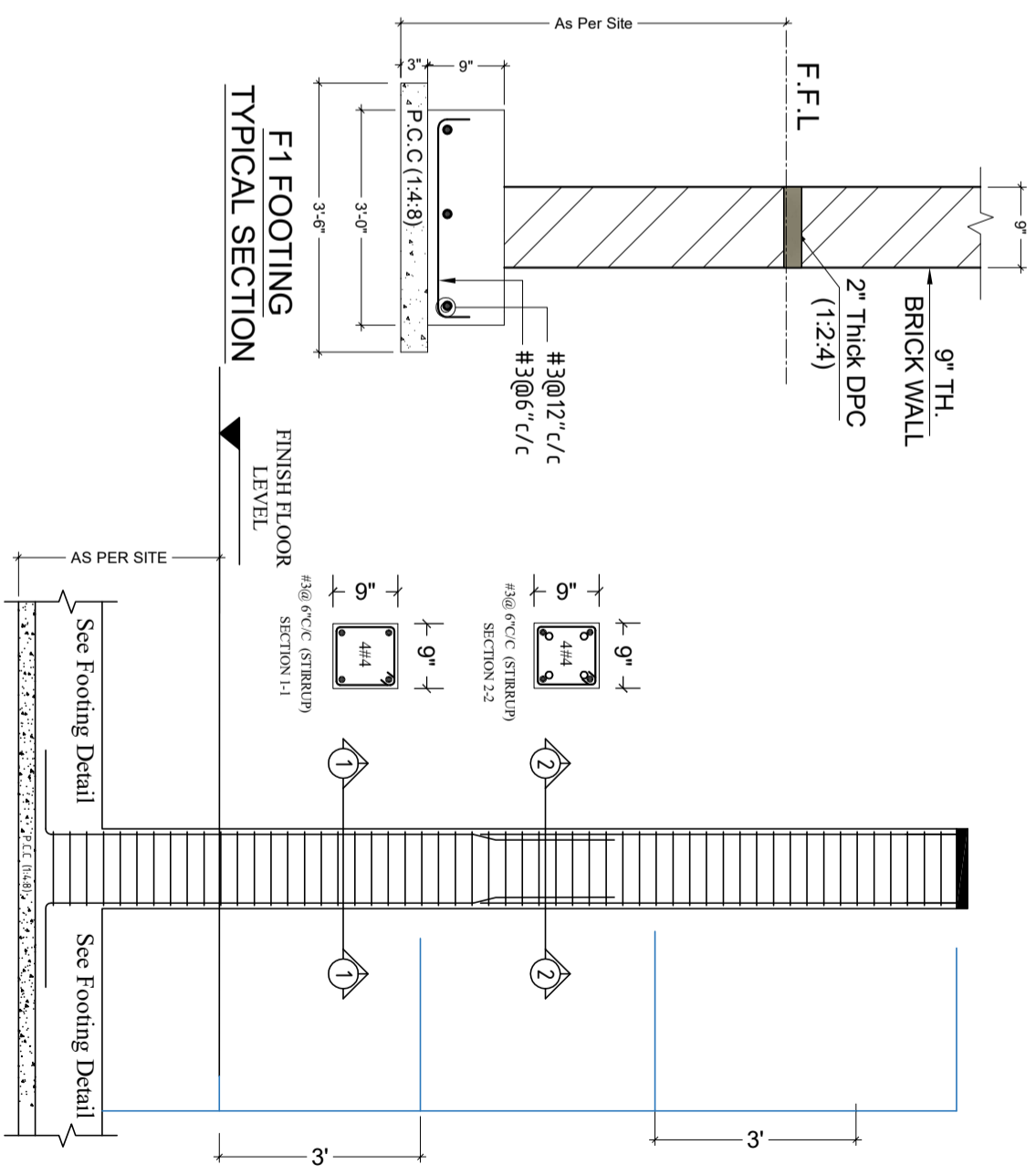




**COLUMN LAYOUT PLAN**

<b>CLIENT:</b>  		<b>SCHOOL NAME</b> GGPS JUGIAN TAXILA RAWALPINDI	
<b>CONSULTANTS:</b> <b>PLANNERS CONSULTANTS ENGINEERS (PCE)</b> 97-K Industrial Estate, Hayatabad Peshawar Pakistan Ph: 0092-91-5816017, 5891661-4, Fax: 5891845 E-Mail: pce.pesh@yahoo.com		Date of Revision	Prepared By Designed By Checked By Approved By
<b>PROJECT:</b> PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES		FARD KHAN KHAN HADDER STRUCTURE ENGINEER: Engr. HUMZA AHMAD	DATE SEP 2023
TITLE: COLUMN LAYOUT PLAN		SCALE	DRG.NO. S-04

<b>SCHEDULE OF COLUMNS</b>	
<b>COLUMN TYPES</b>	<b>COL. C-1</b>
<b>GROUND FLOOR LEVEL</b>	



**COLUMN LONG SECTION C-1**

**CLIENT:**

**CONSULTANTS:**

**PLANNERS CONSULTANTS ENGINEERS (PCE)**

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**SCHOOL NAME**

**GGPS JUGIAN TAXILA RAWALPINDI**

Date of Revision	Prepared By	FARID KHAN KHAN HADDER STRUCTURE ENGINEER	PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By	Engr. HUMZA AHMAD	
	Checked By		TITLE: COLUMN SECTIONS DETAIL
	Approved By		DATE: SEP 2023
			SCALE
			DRG.NO. S-05

