

**PROPOSED DESIGN
OF
GBHS NO. 02 HAZRO
DISTRICT ATTOCK**



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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CLIENT:



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SCHOOL NAME

GBHS NO. 02 HAZRO
DISTRICT ATTOCK

Date of Revision

Prepared By

FARID KHAN
KHAN HABIBER

PROJECT:

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

TITLE:

LIST OF DRAWINGS

Designed By

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

Checked By

Approved By

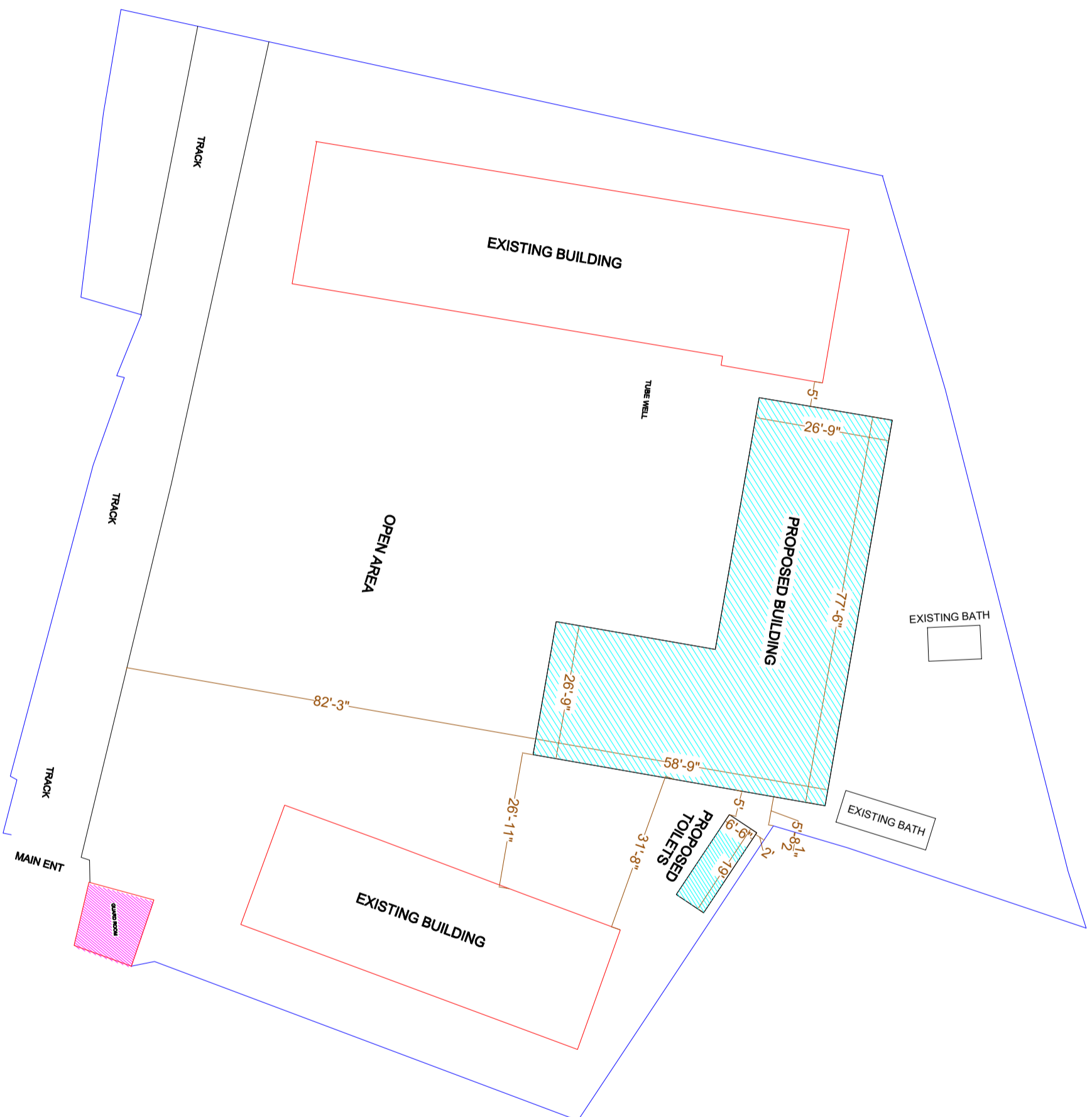
DATE

SEP 2023

SCALE

DRG.NO.

A-00



SITE PLAN

CLIENT:



CONSULTANTS:

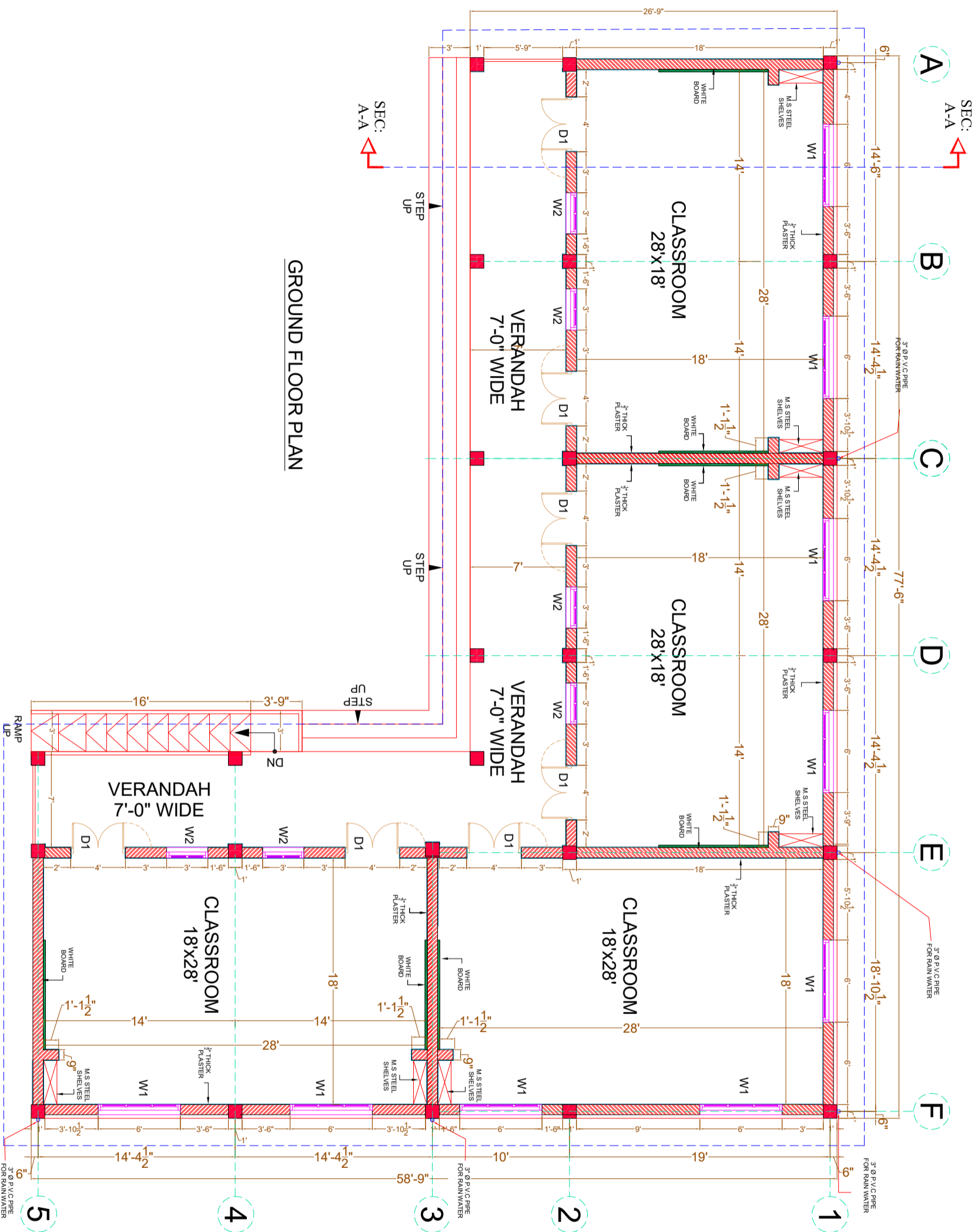
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Date of Revision	Prepared By	ARCHITECT	PROJECT:
	FARID KHAN KHANHAIDER	MARWATI KHAN ORAKZAI (B.Arch, D.C.E.T Karachi) (M.Arch, UET, Lahore)	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By		TITLE:
	Checked By		SITE PLAN
	Approved By		DATE: SEP 2023
			SCALE
			DRG.NO. A-01



GROUND FLOOR PLAN

CLIENT:



CONSULTANTS:

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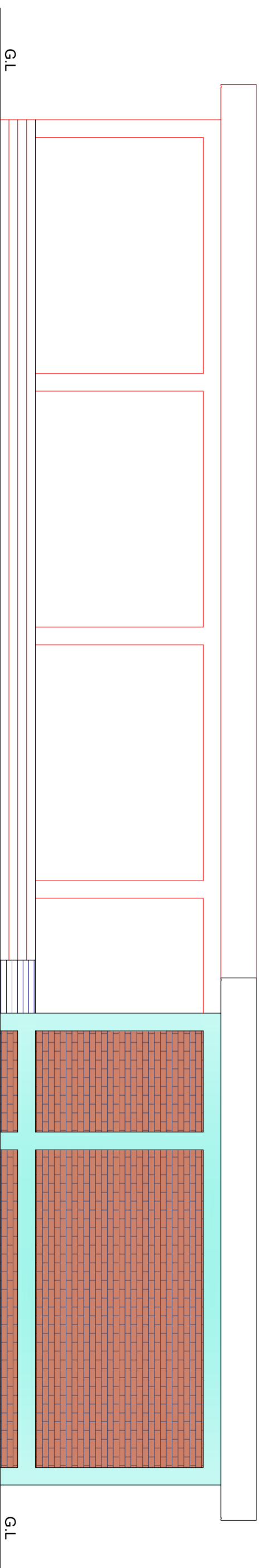
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	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG. NO.
PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		A-02
TITLE:			
GROUND FLOOR PLAN			



FRONT ELEVATION

CLIENT:



CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

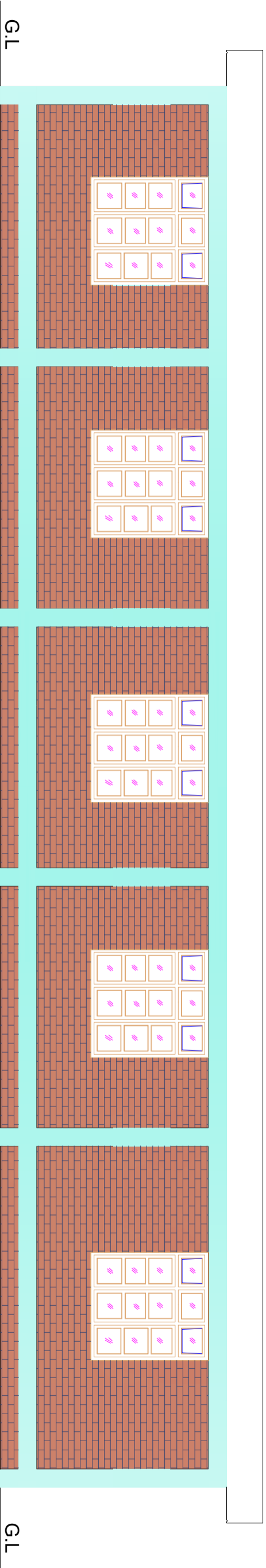
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	Checked By	(B.Arch, UET, Lahore)
	Approved By	

PROJECT:		
PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE:		
DATE	SCALE	DRG.NO.
SEP 2023		A-03



REAR ELEVATION

CLIENT:



CONSULTANTS:



PLANNERS CONSULTANTS ENGINEERS (PCE)

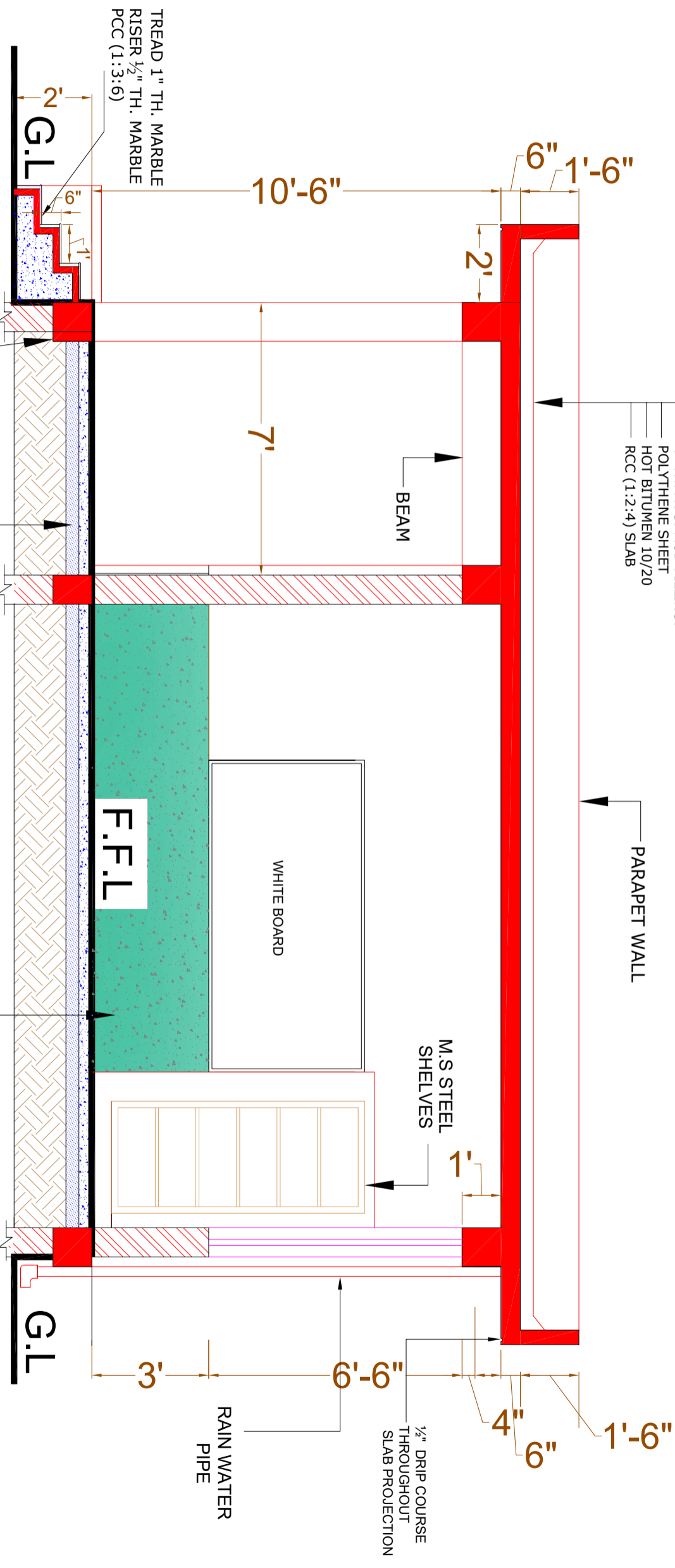
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	Designed By	MARWAT KHAN ORAKZAI (B. Arch, D. Cert Karachi)	
	Checked By	(M. Architect Lahore)	
	Approved By		DATE: <i>SEP 2023</i>
			SCALE
			DRG. NO. A-04

- 1.25" TH. BRICK TILES
- SET & GROUDED IN C/S (1:2)
- 4" TH. AVG. MUD FILLING.
- POLYTHENE SHEET
- HOT BITUMEN 10/20
- RCC (1:2:4) SLAB



SECTION AT A-A

CLIENT:

CONSULTANTS:

SCHOOL NAME

Date of Revision

Prepared By

ARCHITECT

PROJECT:

TITLE:



PLANNERS CONSULTANTS ENGINEERS (PCE)
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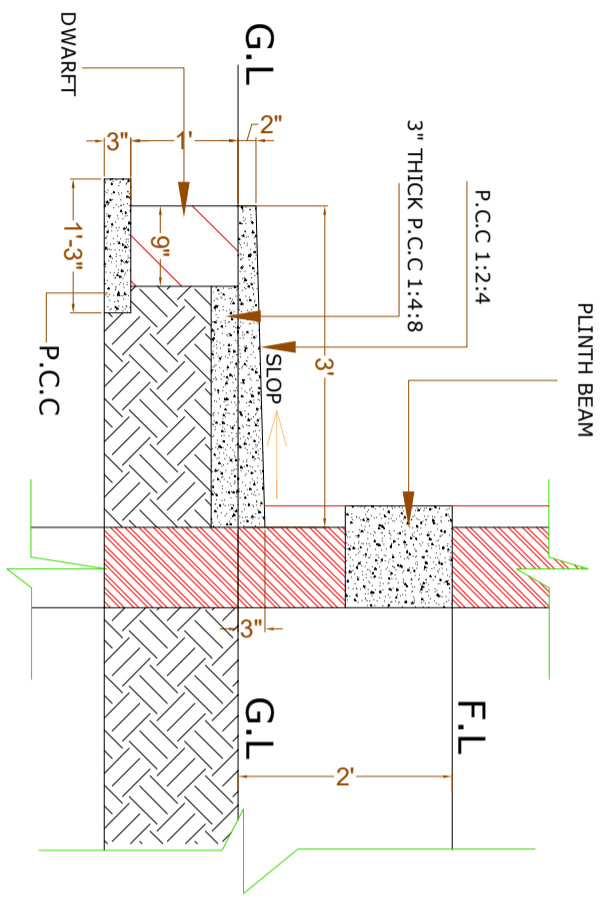
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SCALE

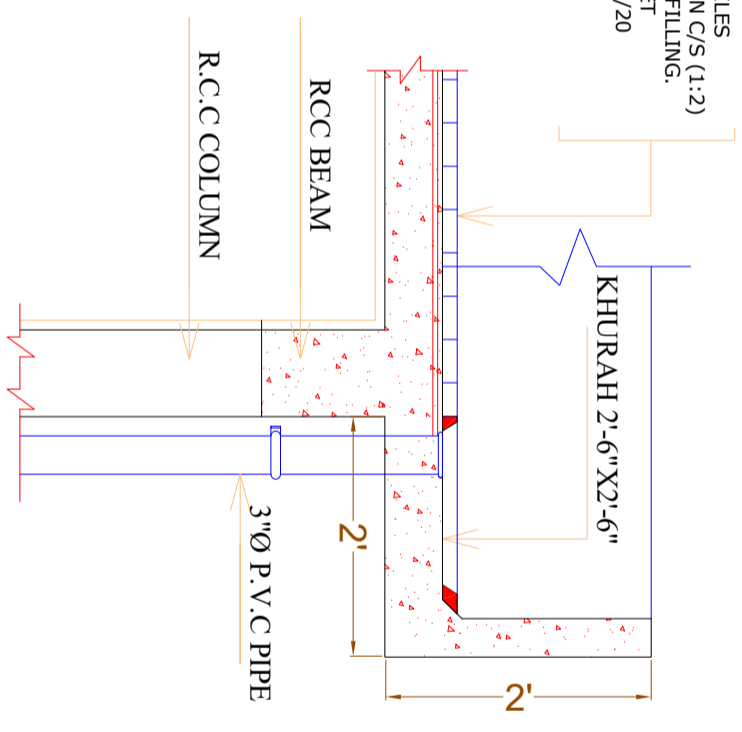
DRG.NO.

A-05

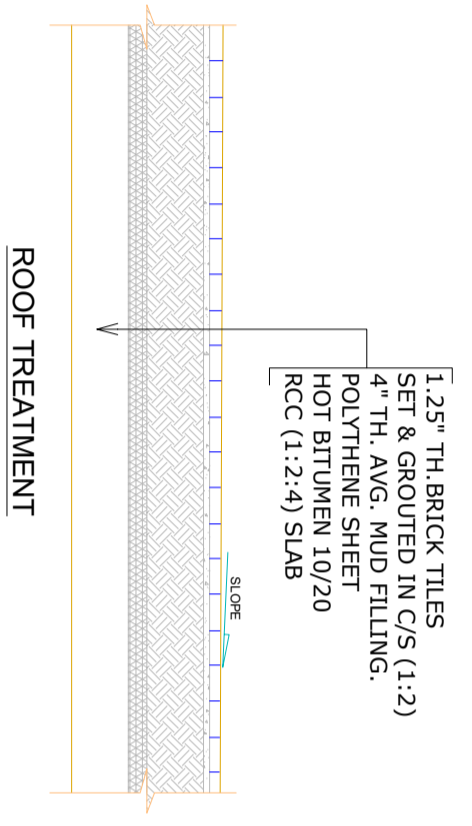
1.25" TH. BRICK TILES
SET & GROUTED IN C/S (1:2)
4" TH. AVG. MUD FILLING.
POLYTHENE SHEET
HOT BITUMEN 10/20
RCC (1:2:4) SLAB



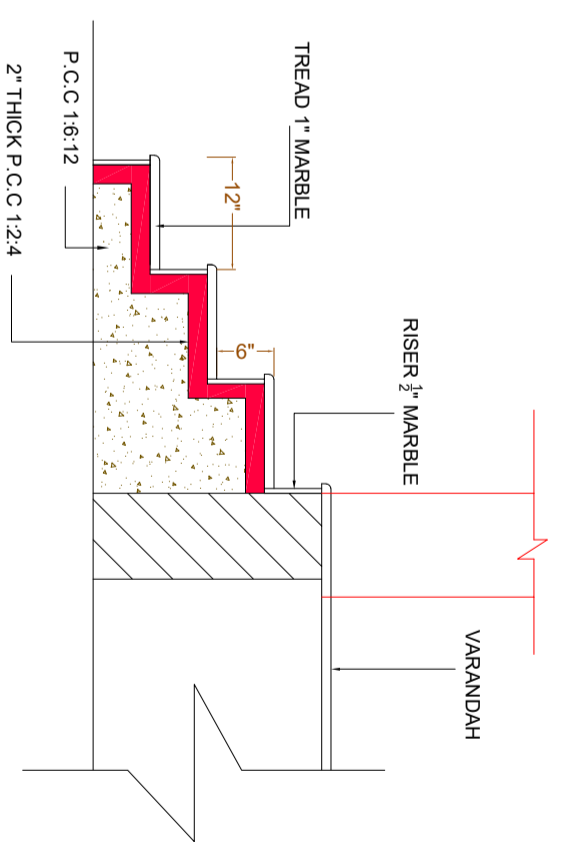
PLINTH PROTECTION



RAIN WATER PIPE DETAIL



ROOF TREATMENT



VERANDAH STEPS DETAILS

CLIENT:



CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

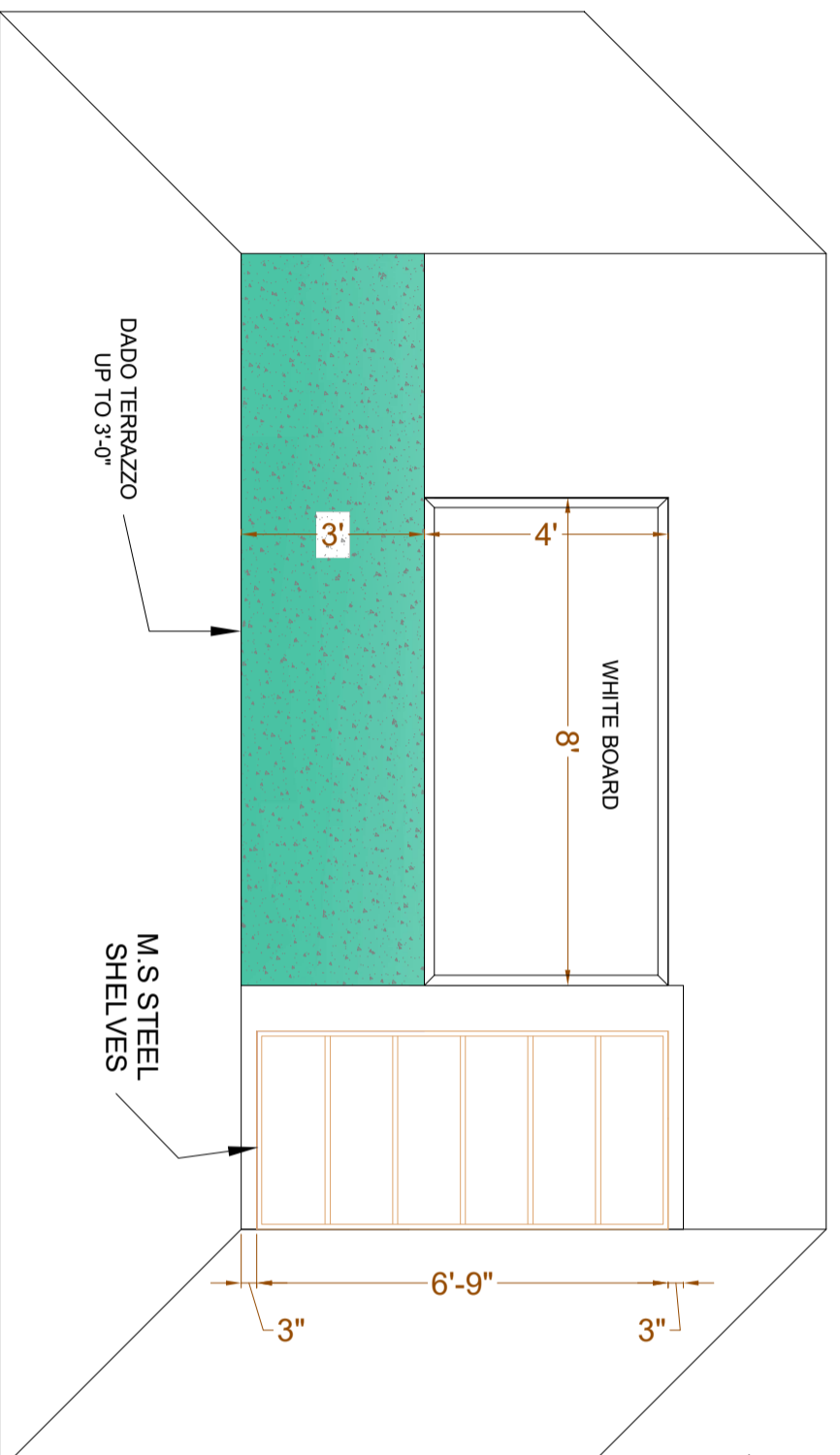
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SCHOOL NAME

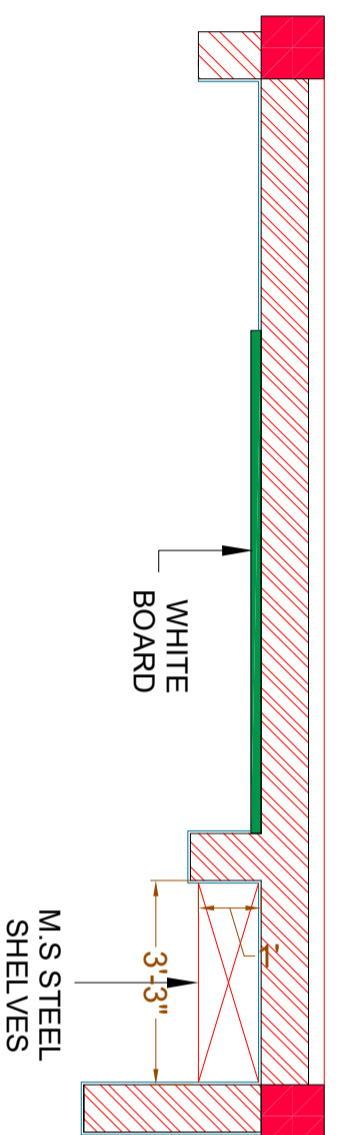
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Date of Revision	Prepared By	ARCHITECT
	FARID KHAN KHAN HADDER	
	Designed By	MARWAT KHAN ORAKZAI (B.Arch.D.CET Karachi)
	Checked By	(M.Arch.UJET Lahore)
	Approved By	

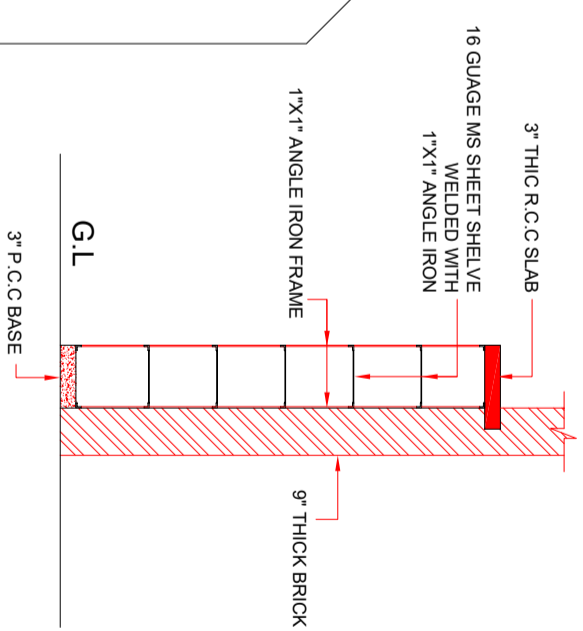
PROJECT:	TITLE:	DATE	SCALE	DRG. NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	PLINTH PROTECTION, RAIN WATER PIPE, AND ROOF TREATMENT DETAILS	SEP 2023		A-06



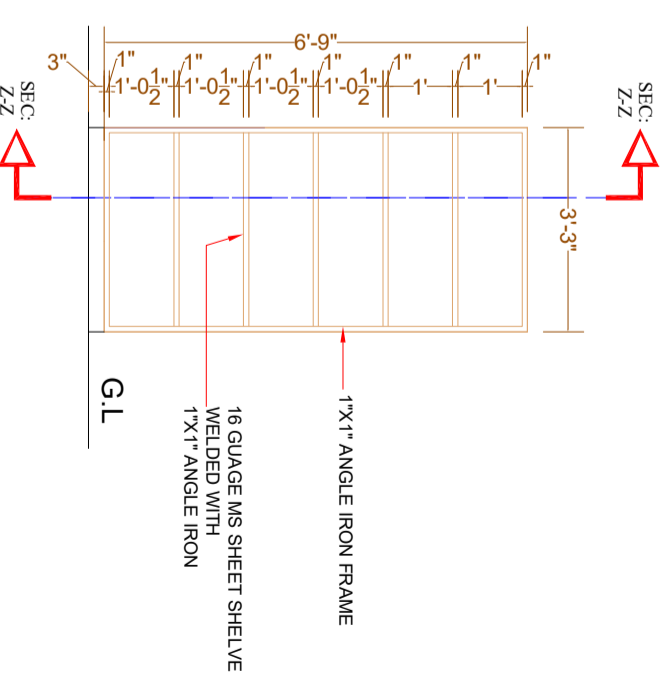
ELEVATION OF WHITE BOARD & CUPBOARD



PLAN OF WHITE BOARD & M.S STEEL SHELVES



SHELVES SECTION AT Z-Z



CLIENT:



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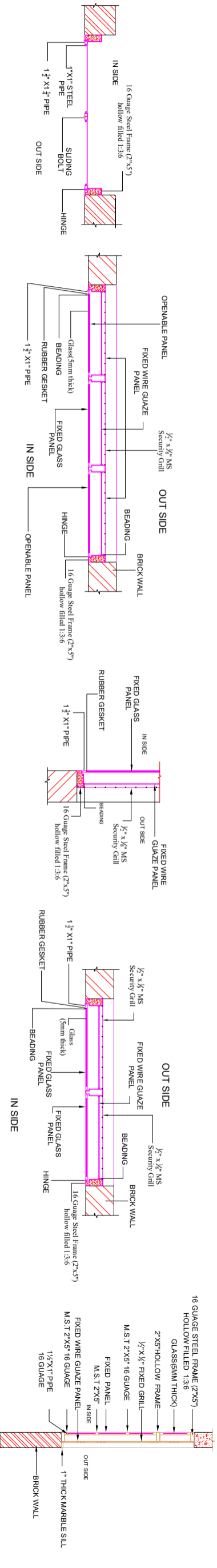
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Date of Revision	Prepared By	ARCHITECT
	FAHAD KHAN KHANHABIB	MARWAT KHAN/ORANZAI (R.Arch/DCEET/Karachi) (M.Arch/UEET/Lahore)
	Designed By	
	Checked By	
	Approved By	

PROJECT:		
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE: PLAN OF WHITE BOARD & M.S STEEL SHELVES		
DATE	SCALE	DRG.NO.
SEP 2023		A-07

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:



The UN Refugee Agency

CONSULTANTS:



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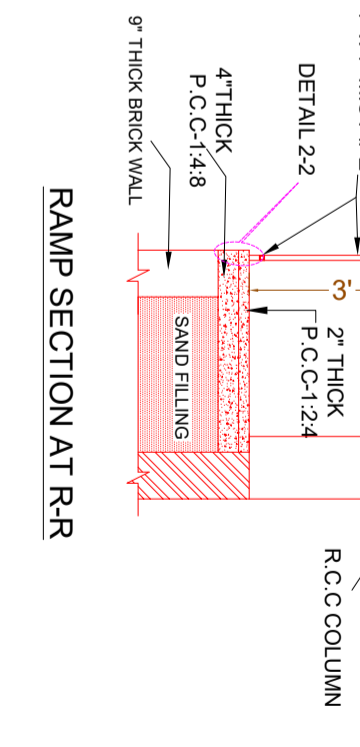
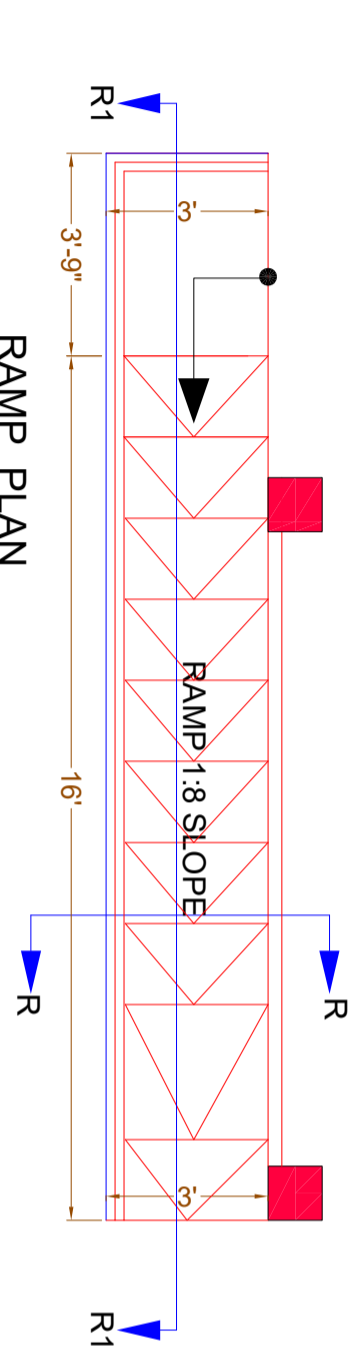
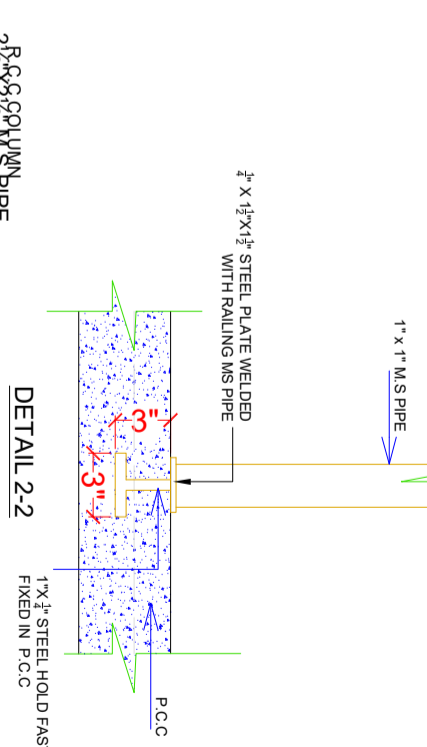
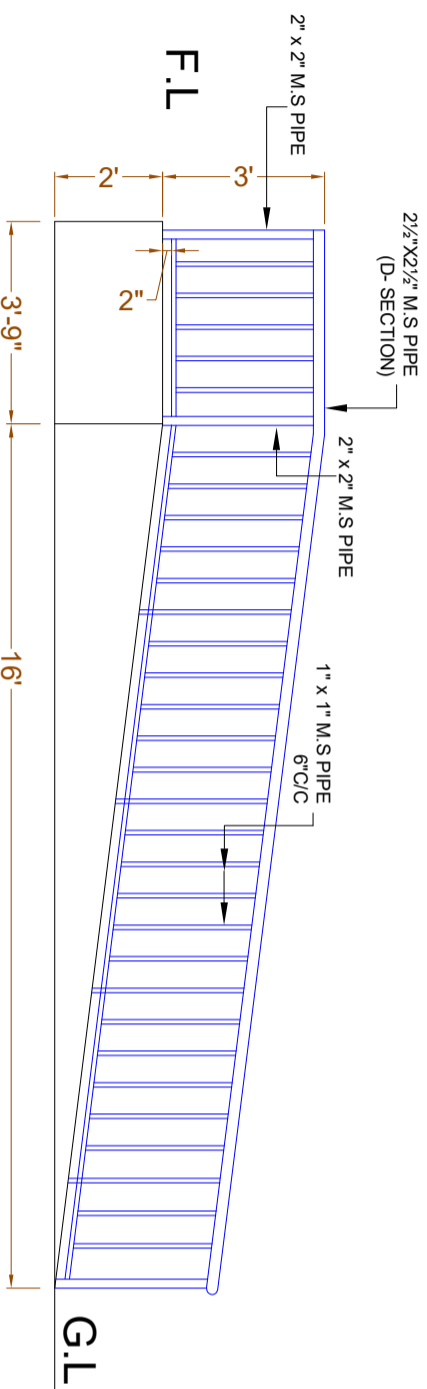
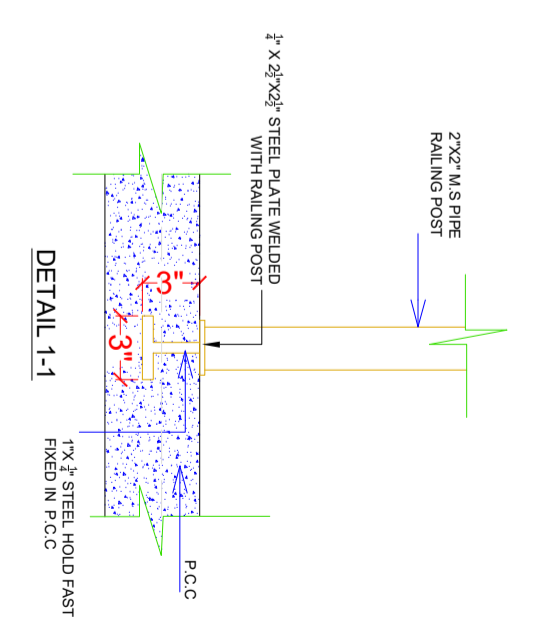
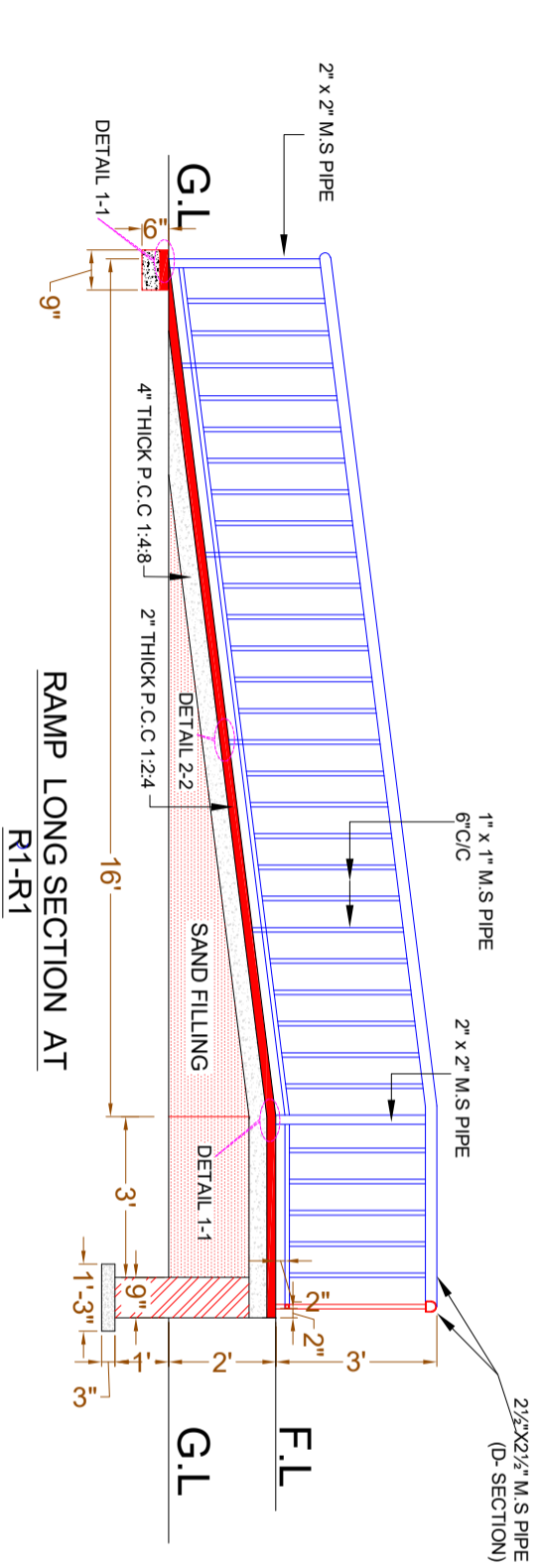
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	FARID KHAN KHAN HANIDER	MARWAT KHAN ORAKZAI (B.Arch D.C.E.T Kanab) (M.Arch D.E.T Lahore)
	Designed By	
	Checked By	
	Approved By	

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

TITLE: DOOR WINDOW DETAILS

DATE	SCALE	DRG. NO.
SEP 2023		A-08



CLIENT:



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Date of Revision

Prepared By

ARCHITECT

PROJECT:

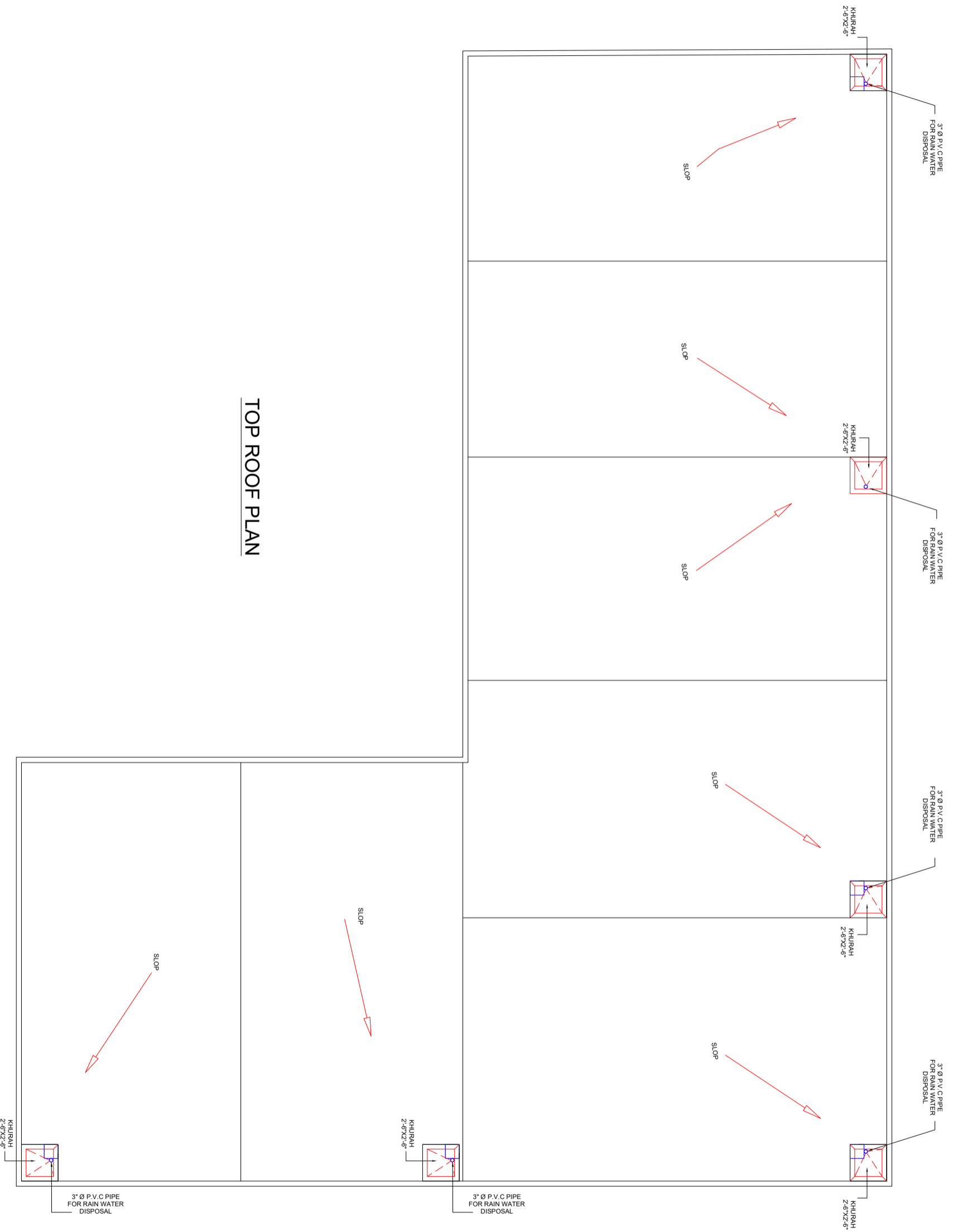
PREPARATION OF DESIGN, DRAWINGS & BOQS
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:
 RAMP DETAILS

DATE
 SEP 2023

SCALE

DRG. NO.
 A-09



TOP ROOF PLAN

CLIENT:



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Date of Revision	Prepared By	ARCHITECT
	Designed By	MARWAT KHAN ORAKZAI (B.Archd C.E.T Karachi) (M.Arch(HTF. Lahore)
	Checked By	
	Approved By	

PROJECT:		
PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE:	TOP ROOF PLAN	
DATE	SCALE	DRG.NO.
SEP 2023		A-10

**PROPOSED STRUCTURAL DESIGN
OF
GBHS NO. 02 HAZRO DISTRICT
ATTOCK**

1. GENERAL

1. READ ALL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, GEOTECHNICAL, PLUMBING, MECHANICAL, ELECTRICAL & ANY OTHER RELEVANT DRAWINGS. 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.
2. 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 ACI/BRITISH CODES AND SHALL BE SUBJECTED TO APPROVAL OF THE ENGINEER.
3. 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.
4. THE CONTRACTOR SHALL CO-ORDINATE WITH VARIOUS SERVICES DRAWINGS FOR SIZES & LOCATION OF ALL STRUCTURAL MEMBERS, FLOORS, WALLS, OPENINGS, FLOOR FINISHES, PIPES ETC.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXECUTION OF DEWATERING SYSTEM WHERE SO REQUIRED DURING CONSTRUCTION.
6. ALL DIMENSIONS & LEVELS ARE IN FEET & INCHES.
7. DO NOT SCALE THE DRAWINGS. DIMENSIONS, GIVEN ON THE DRAWING, SHALL GOVERN.
8. ALL FABRICATION, PAINTING, ERECTION AND QUALITY CONTROL IS TO BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE ACI/BRITISH SPECIFICATIONS.
9. BACKFILLING AROUND FOUNDATIONS AND WALLS SHALL BE WELL COMPACTED LAYERS NOT EXCEEDING 6 INCHES IN THICKNESS.
10. IT IS STRONGLY RECOMMENDED TO RECONFORM THE SITE PLAN BEFORE START OF EXECUTION AT SITE. THE SITE SHOULD BE EXAMINED FOR CLEARANCE WITH RESPECT TO LOCAL/SEISMIC HAZARDS.
11. THE CONTRACTOR SHALL INFORM THE ENGINEER ABOUT ANTICIPATED CONSTRUCTION LOADS IN THE STRUCTURE AND OBTAIN ENGINEER'S APPROVAL THEREOF BEFORE COMMENCING THE WORK.
12. 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.
13. 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.
14. 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.
15. 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.
- 16.

STRUCTURAL ELEMENT	COVER (INCHES)
FOOTINGS	2"
BEAMS	1½"
COLUMNS	1½"
SLABS	3/4"
WALLS	3/4"

2. 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, C172 & 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 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'
SLABS, BEAMS, FOUNDATION RCC WALLS (&)	CLASS 'B'
RCC STEPS	CLASS 'D'
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 RMC OR PENETRON ADMIX OR EQUIVALENT).
9. ALL DETAILING SHALL BE DONE AS PER ACI STANDARDS ACI-315, ACI-318 & ACI-350R.

3. 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. AT LEAST ONE LOWER FLOOR SHALL REMAIN PROPPED UNTILL THE UPPER FLOOR IS CAST AND CURED.
- 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 (RETTESTS 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
4. CLEAR COVER TO REINFORCEMENT SHALL BE: (inches)

L-GREATER CLEAR SPAN, db-DIAMETER OF BAR,d-EFFECTIVE DEPTH THE FIRST HOOP SHALL BE LOCATED NOT MORE THAN 2" FROM THE WHERE:
FACE OF THE SUPPORTING MEMBER.

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. LINTELS ARE EXTENDED AT 9 (INCHES) FROM BOTH SIDES OF OPENING. PROVIDE 135° HOOK IN ADJACENT STIRRUPS ON ALTERNATE SIDES.

5. CONCRETE CONSTRUCTION

1. ALL STRUCTURAL SURFACES, AGAINST WHICH EARTHS 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.²/coat.
2. PROVIDE POLYETHENE 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. DURING CONSTRUCTION, STACKING OF CONSTRUCTION MATERIALS, BLOCKS, etc. SHOULD BE AVOIDED ON SLAB PANELS.
- 4.

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 C62.
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. BRICK SHALL BE LAID "REG" UPWARD WITH MORTAR JOINT AND IN ENGLISH FLEMISH BOND OR AS DIRECTED BY THE ENGINEER.
7. BRICKS SHOULD BE SOAKED WITH WATER PROPERLY BEFORE USE.
8. VERTICAL JOINTS SHOULD BE STAGGERED.
9. ALL MASONRY WALLS SHALL BE ANCHORED TO STRUCTURAL FRAME WORK AS INDICATED ON THE DRAWINGS
- 10.

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.

CLIENT:



CONSULTANTS:
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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	ENGINEER	PROJECT
	Designed By	HUNZA AHMAD	PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Checked By		
	Approved By		
			TITLE: GENERAL DESIGN & TECHNICAL SPECIFICATIONS
			DATE: <i>SFP 2023</i> SCALE: DRG. NO. S-01

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR D/A	DEVELOPMENT LENGTH (INCHES) $f_c' = 4,000 \text{ psi}$ $f_y = 60,000 \text{ psi}$	WITH STANDARD HOOK
3/8"	18	7.5
1/2"	24	9.5
3/4"	30	14.5
1"	48	19

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

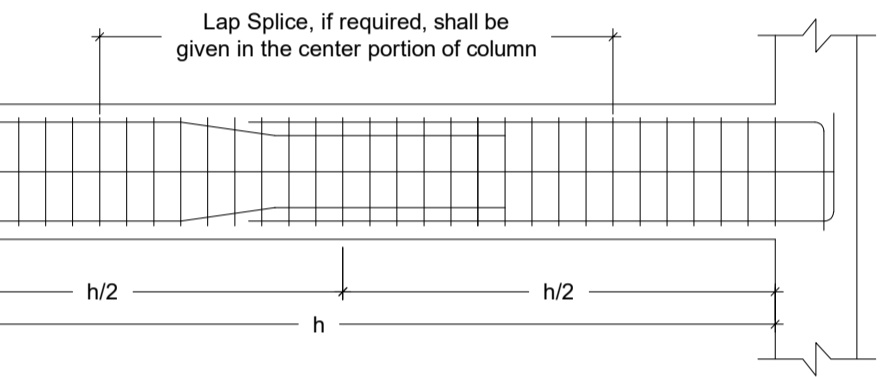
BAR D/A	DEVELOPMENT LENGTH (INCHES) $f_c' = 3,000 \text{ psi}$ $f_y = 60,000 \text{ psi}$	WITH STANDARD HOOK
1/2"	22	11"
5/8"	30	14"
3/4"	34	17"
1"	55	22"

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

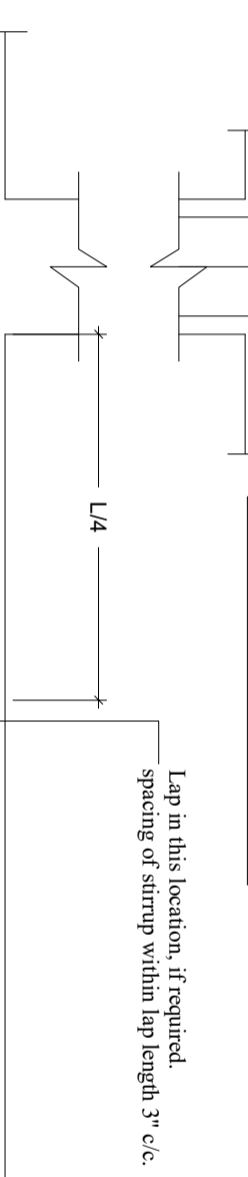
BAR D/A	MINIMUM SPLICE LAP LENGTH (INCHES) $f_c' = 3,000 \text{ psi}$ $f_y = 40,000 \text{ psi}$	TENSION	COMPRESSION
3/8"	15	-	-
1/2"	20	9	9
3/4"	30	15	15
1"	48	18	18

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

BAR D/A	MINIMUM SPLICE LAP LENGTH (INCHES) $f_c' = 3,000 \text{ psi}$ $f_y = 60,000 \text{ psi}$	SLAB	BEAM / COLUMN
1/2"	25	35	35
5/8"	-	44	44
3/4"	-	55	55
1"	-	70	70



TYPICAL COLUMN DETAIL



TYPICAL BEAM DETAIL



SEISMIC HOOK DETAILS

Standard Hook

CLIENT:



CONSULTANTS:



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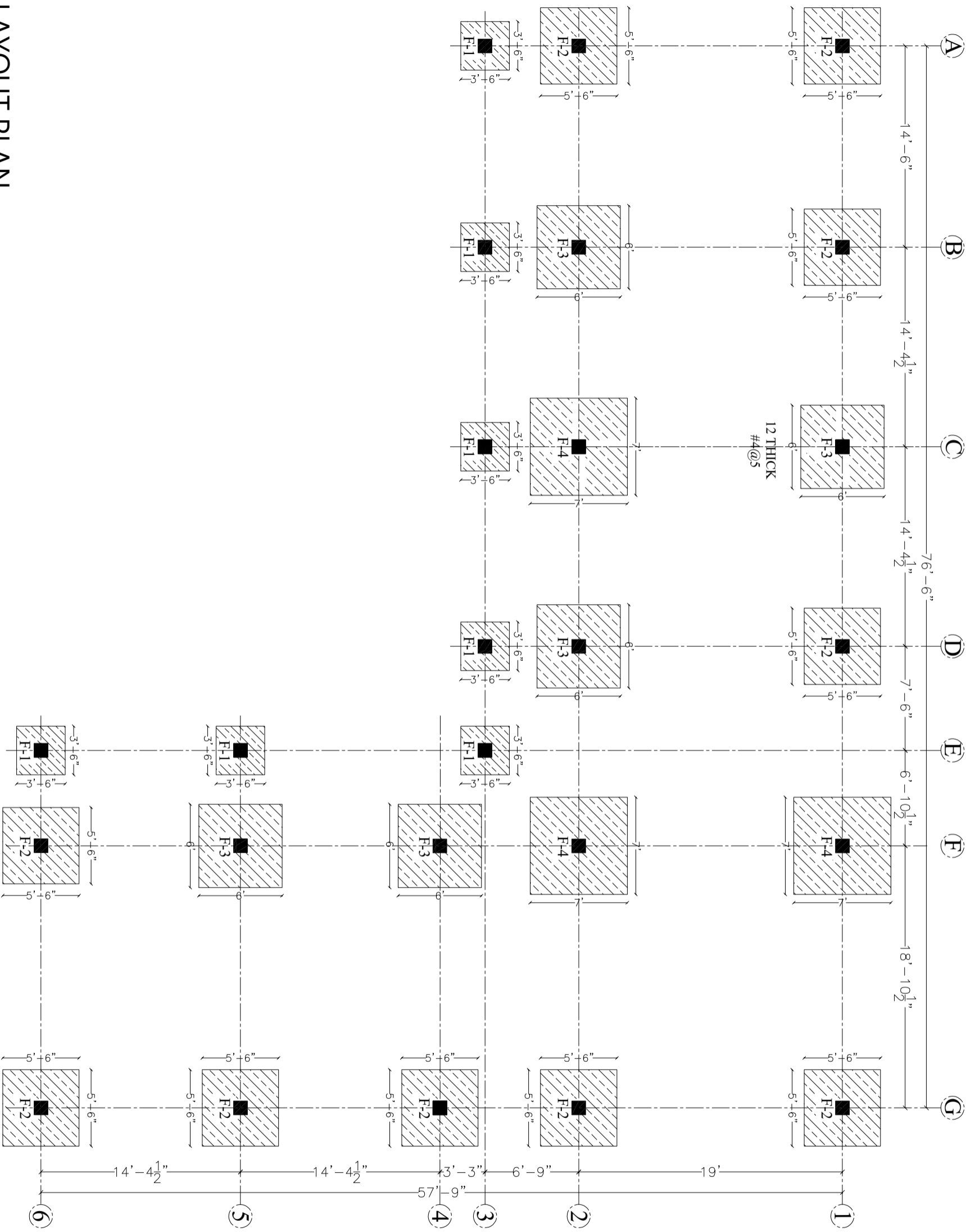
SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision
Prepared By
Designed By
Checked By
Approved By

PROJECT:
PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
TITLE:
GENERAL DESIGN & TECHNICAL SPECIFICATIONS

DATE: SEP 2023
SCALE:
DRG.NO.: S-02



FOUNDATION LAYOUT PLAN

CLIENT:



CONSULTANTS:
PLANNERS CONSULTANTS ENGINEERS (PCE)

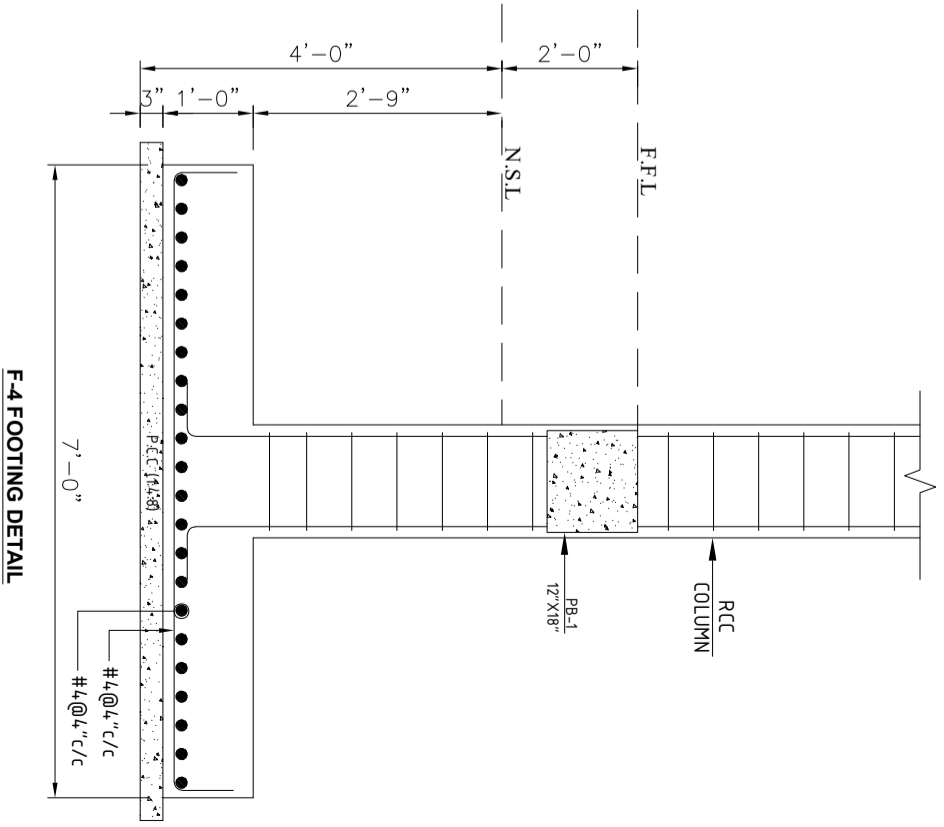
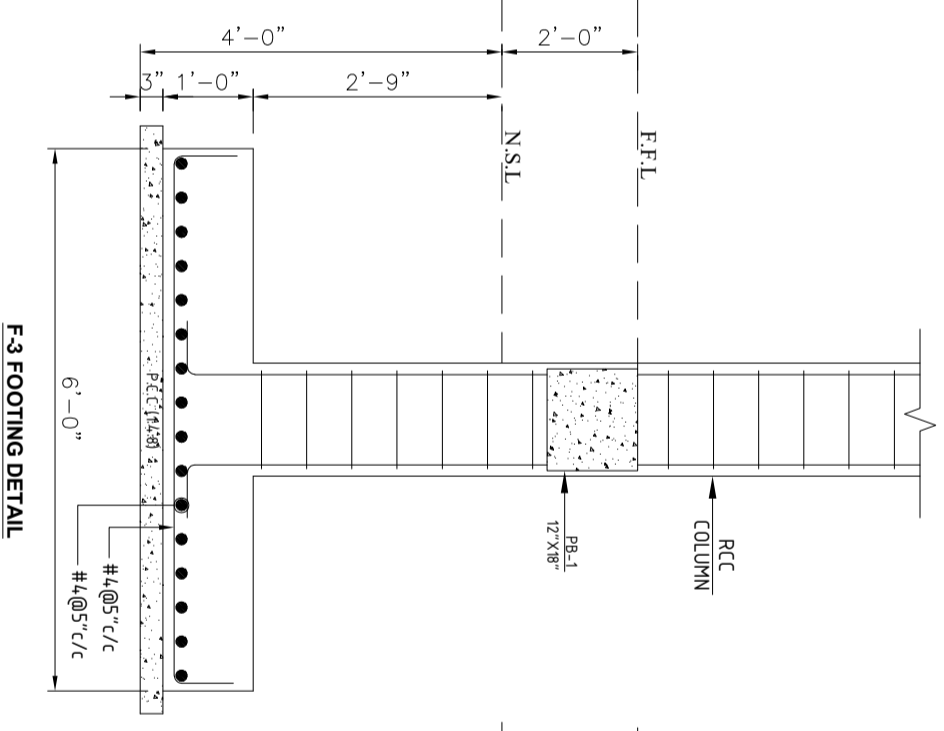
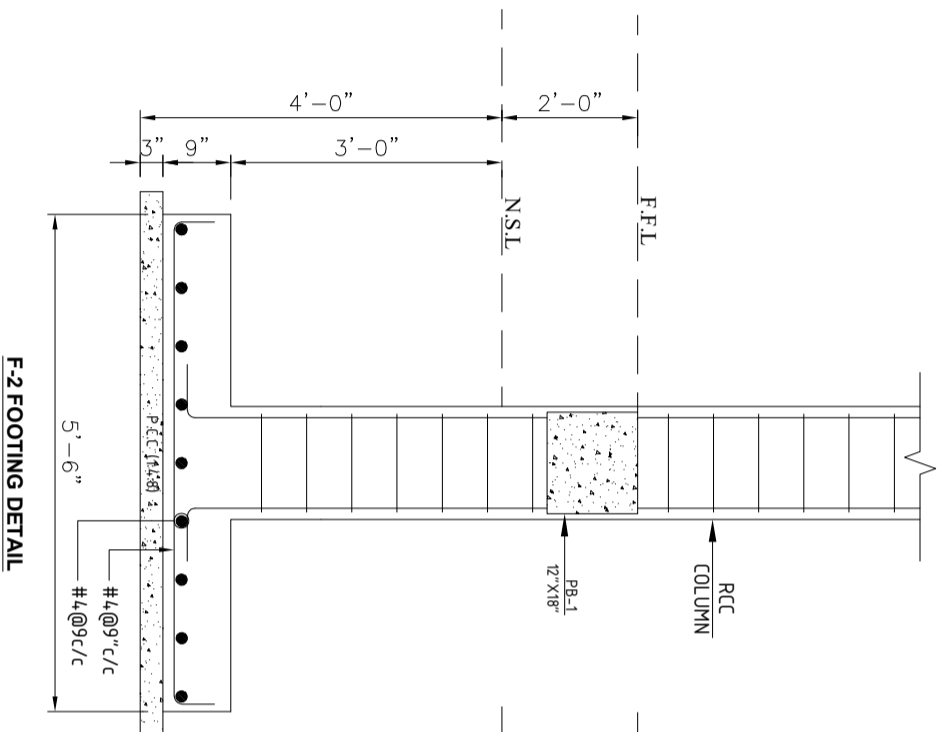
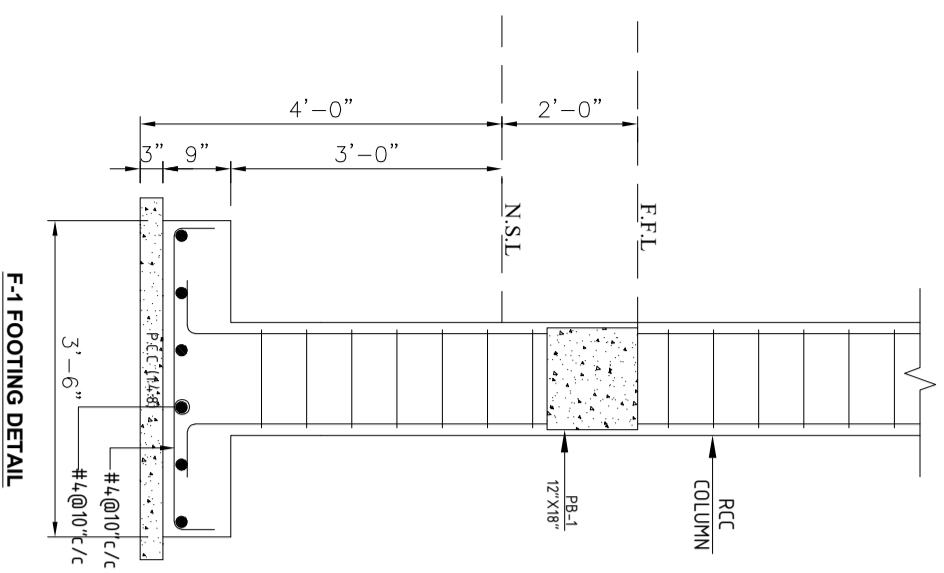
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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	SYED BASHIR MUHAMMAD
	Designed By	ENGINEER HUNZA AHMAD
	Checked By	
	Approved By	

PROJECT:		
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE:		
FOUNDATION LAYOUT PLAN		
DATE	SCALE	DRG.NO.
SEP 2023		S-03



CLIENT:



CONSULTANTS:
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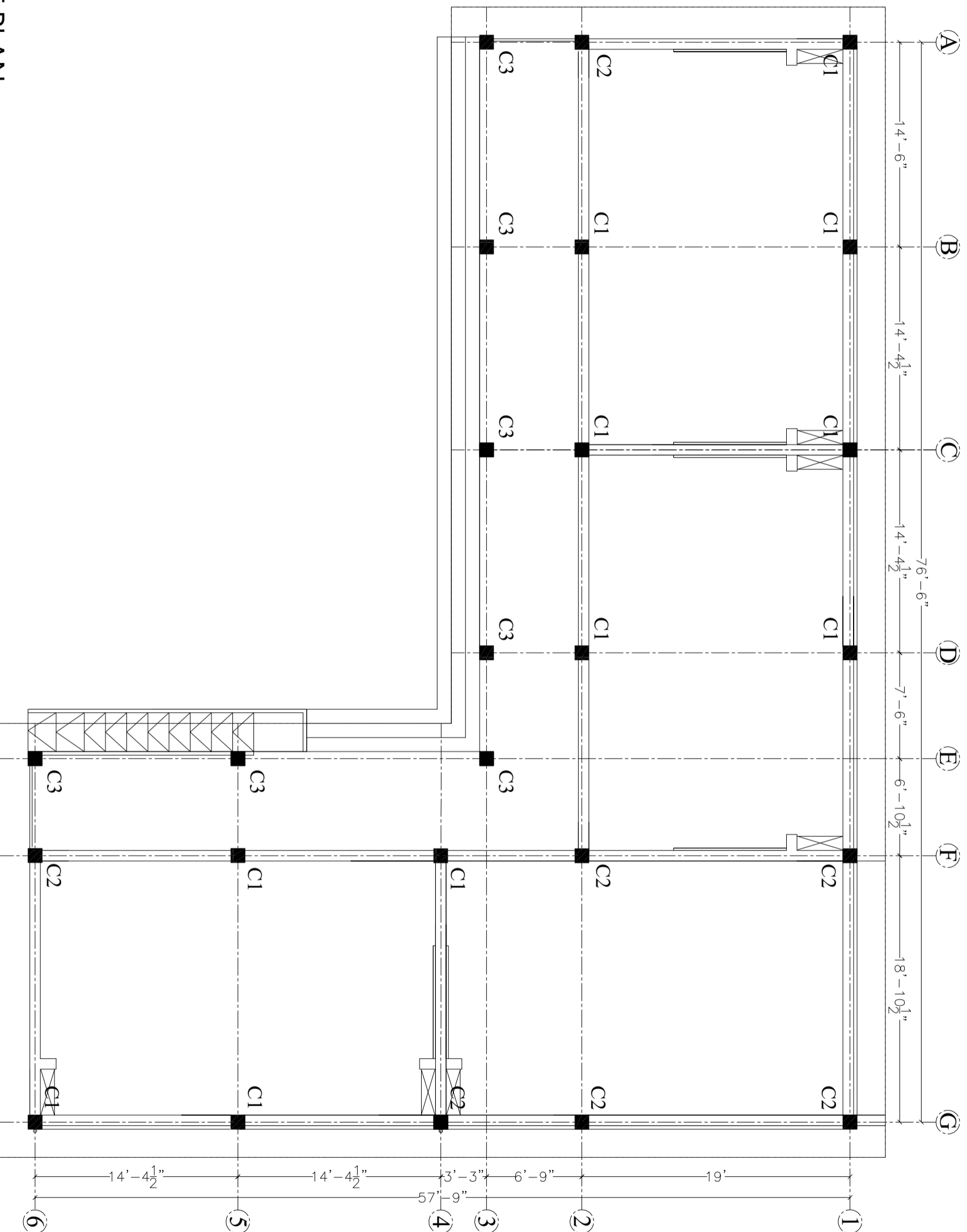
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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	ENGINEER
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	Designed By	
	Checked By	
	Approved By	

PROJECT:		
PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE: FOUNDATION SECTIONAL DETAIL		
DATE	SCALE	DRG.NO.
SEP 2023		S-04



COLUMN LAYOUT PLAN

CLIENT:



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CONSULTANTS:

SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

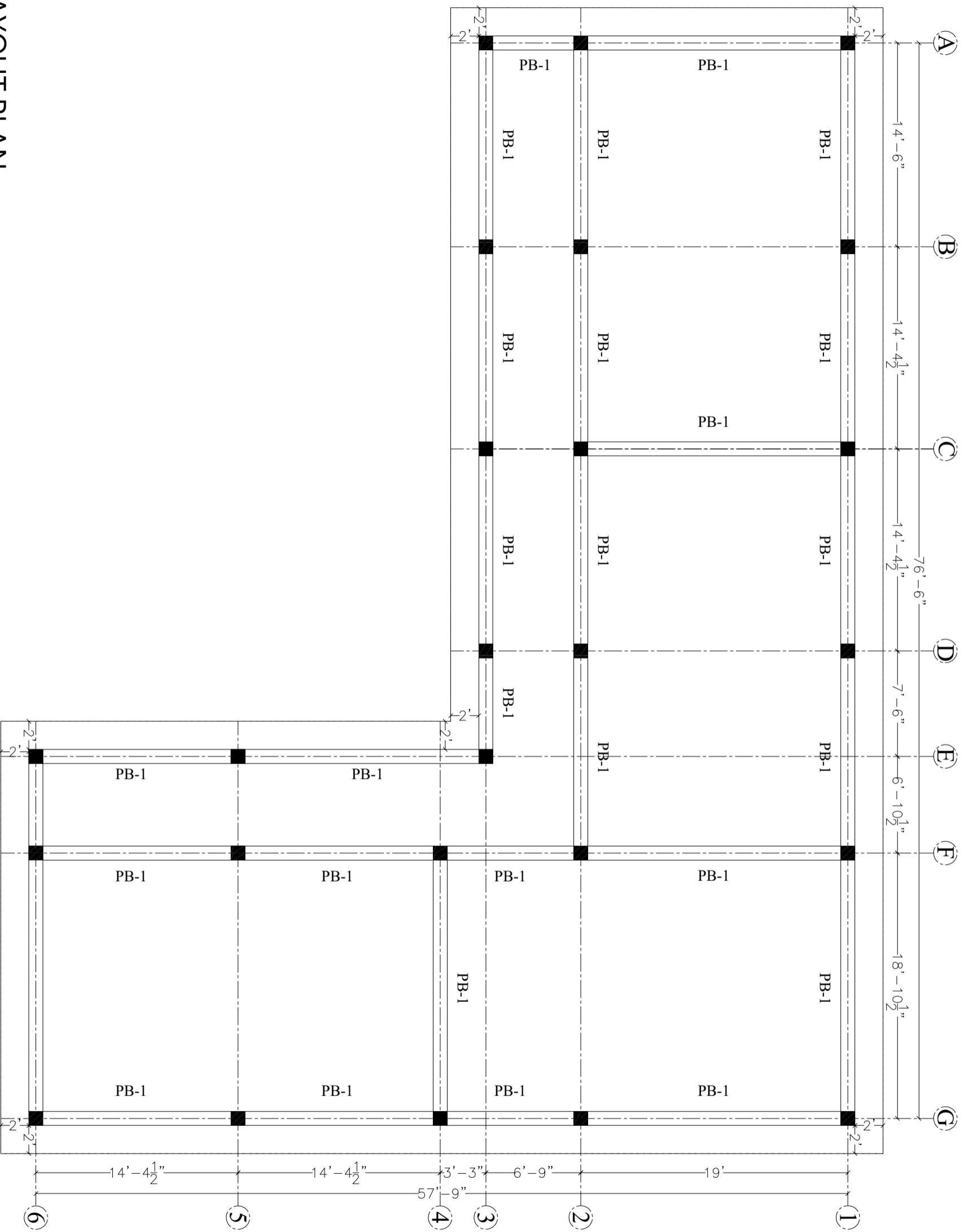
Date of Revision	Prepared By	SYED BASHIR MUHAMMAD
	Designed By	ENGINEER HIMZA AHMAD
	Checked By	
	Approved By	

PROJECT:

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

TITLE:
 COLUMN LAYOUT PLAN

DATE	SCALE	DRG. NO.
SFP 2023		S-05



PLINTH BEAM LAYOUT PLAN

CLIENT:



CONSULTANTS:



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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	ENGINEER
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	Approved By	

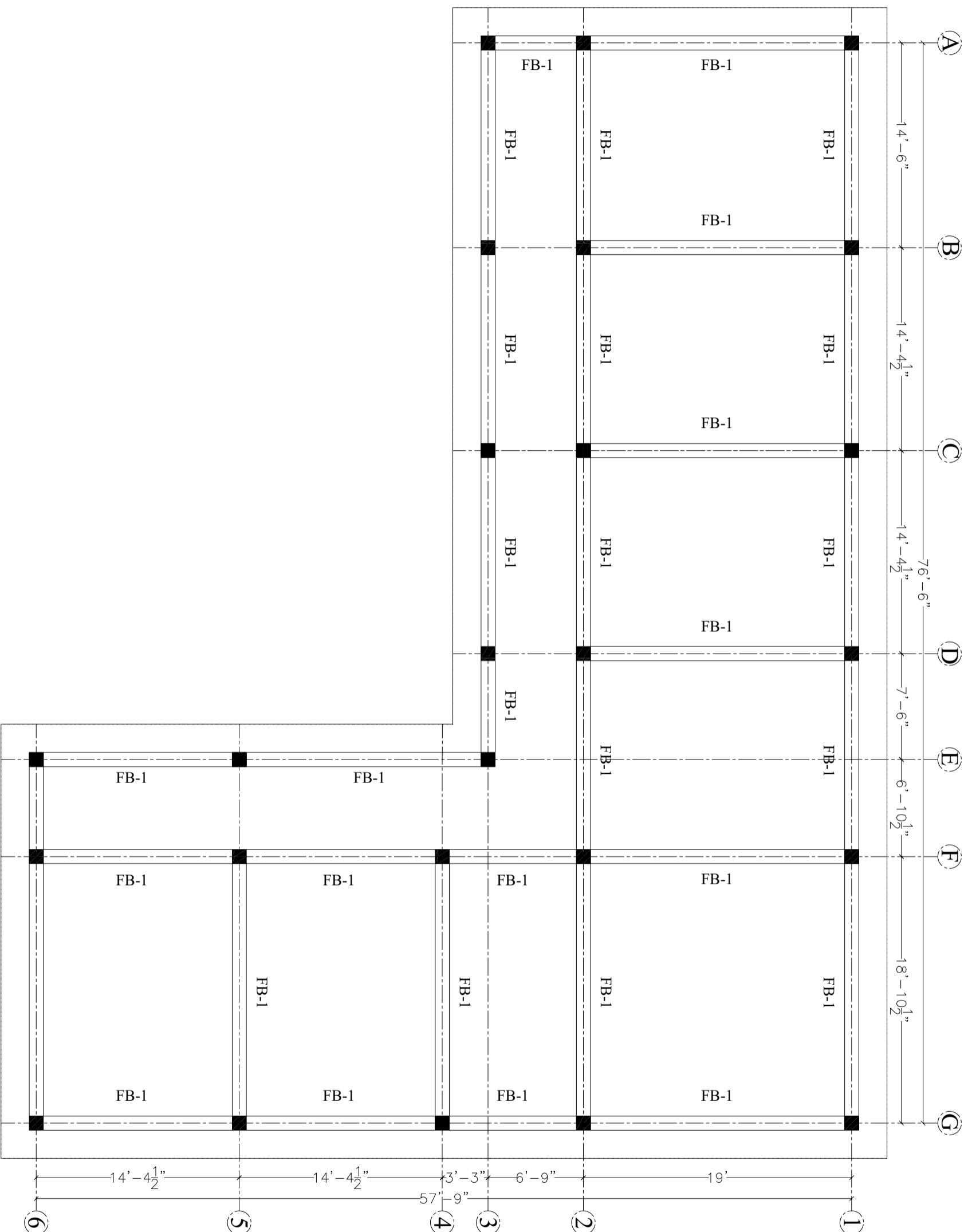
PROJECT:

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

TITLE:

PLINTH BEAM LAYOUT PLAN

DATE	SCALE	DRG.NO.
SEP 2023		S-06



GROUND FLOOR BEAM KEY PLAN

CLIENT:



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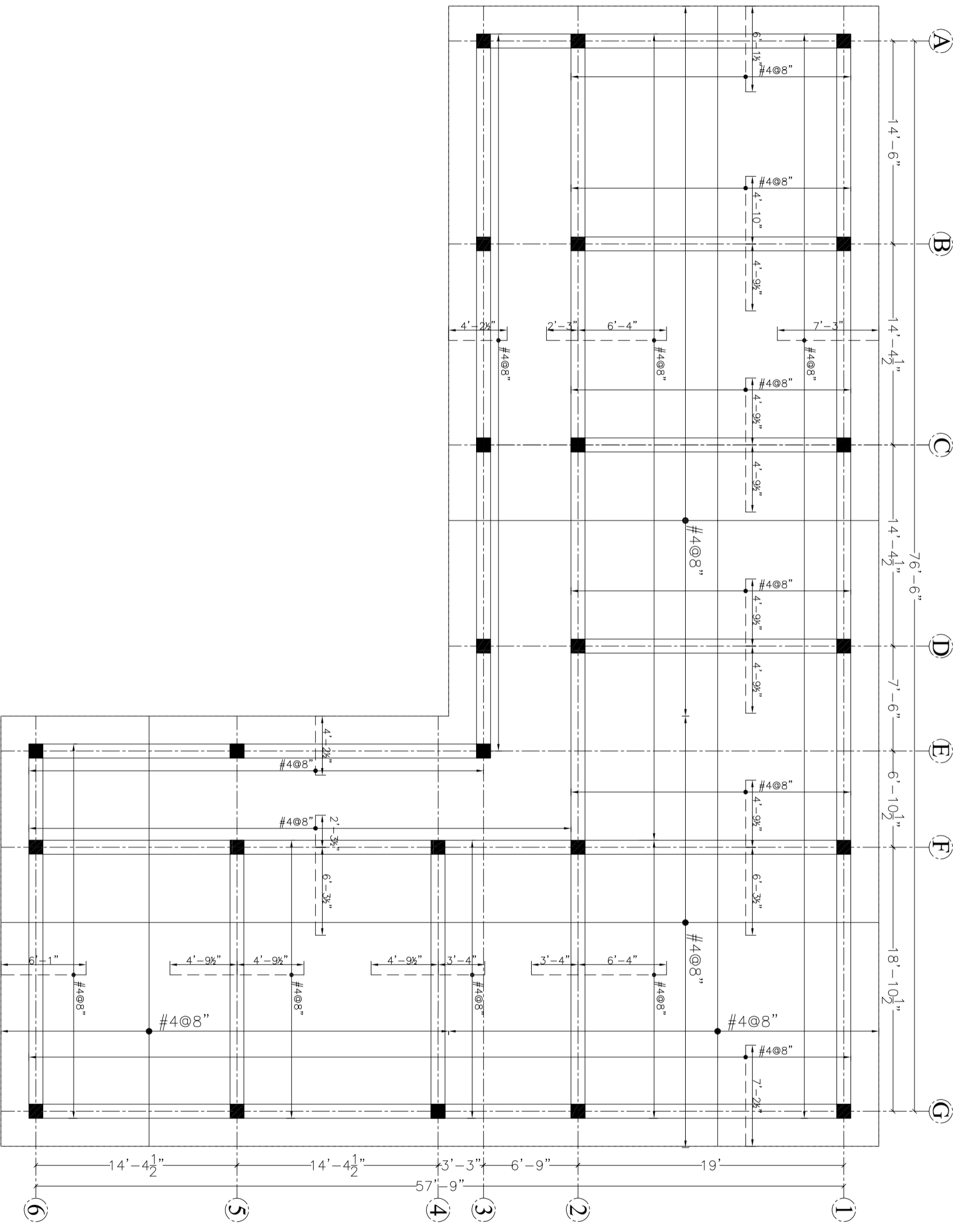
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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	SYED BASHIR MUHAMMAD
	Designed By	ENGINEER
	Checked By	HUMZA AHMAD
	Approved By	

PROJECT:	DATE	SCALE	DRG. NO.
PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		S-07
TITLE:			
GROUND FLOOR BEAM KEY PLAN			



GROUND FLOOR SLAB REINFORCEMENT PLAN

CLIENT:



CONSULTANTS:



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SCHOOL NAME

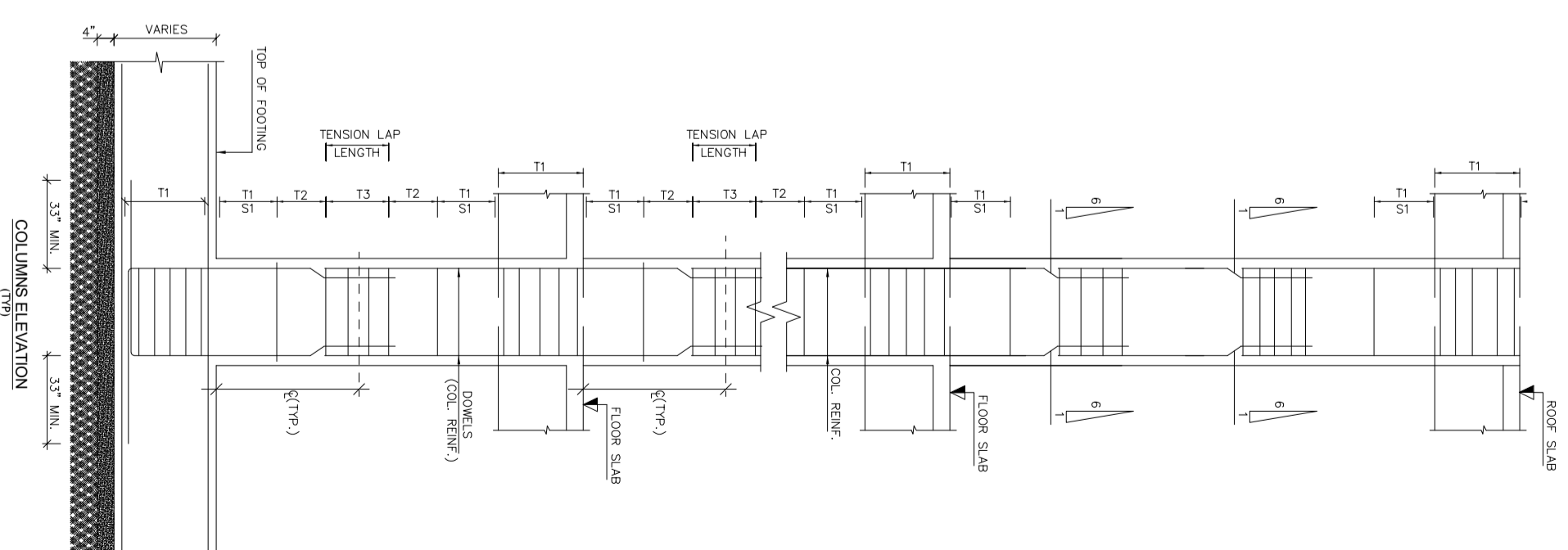
GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	ENGINEER
	SYED BASHIR MUHAMMAD	
	Designed By	HOJZA AHMAD
	Checked By	
	Approved By	

PROJECT:	
PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES	
TITLE: GROUND FLOOR SLAB REINFORCEMENT PLAN	
DATE	SEP 2023
SCALE	
DRG. NO.	S-08

SCHEDULE OF COLUMNS

COLUMN TYPE	COL C-1	COL C-2	COL C-2
GROUND FLOOR			
	1 # 3 @ 6" C/C	# 3 @ 6" C/C	# 3 @ 6" C/C
	2 # 3 @ 6" C/C	# 3 @ 6" C/C	# 3 @ 6" C/C
TIES			
3	# 3 @ 6" C/C	# 3 @ 6" C/C	# 3 @ 6" C/C



CLIENT:



CONSULTANTS:



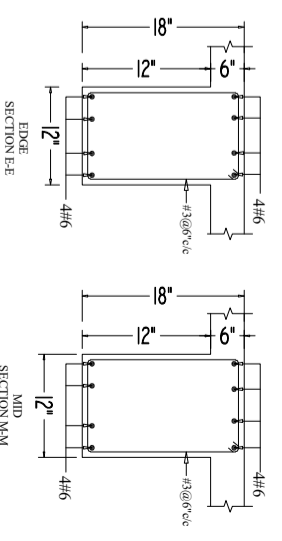
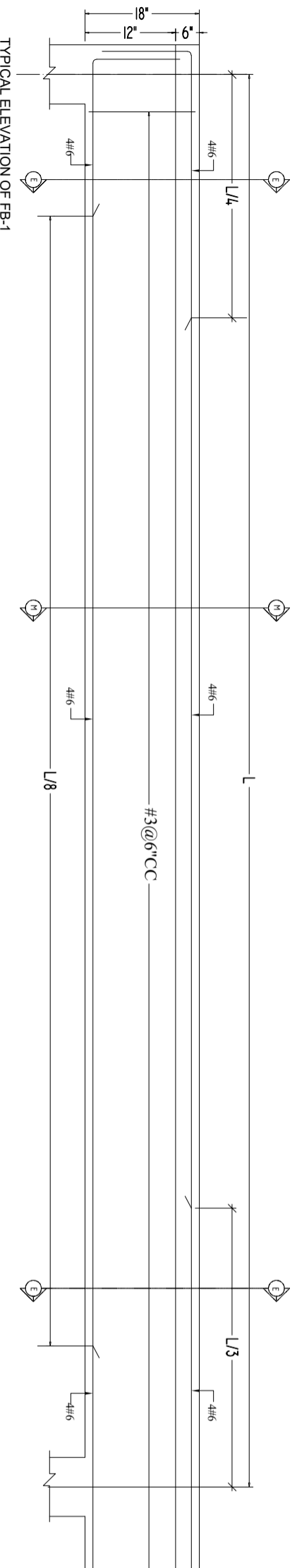
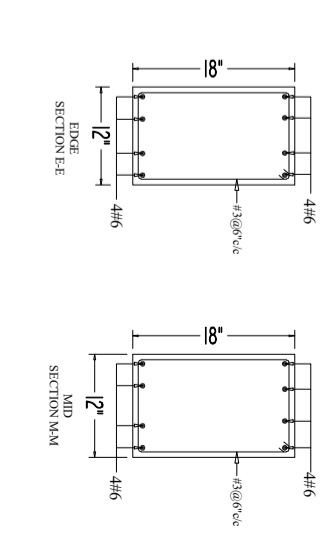
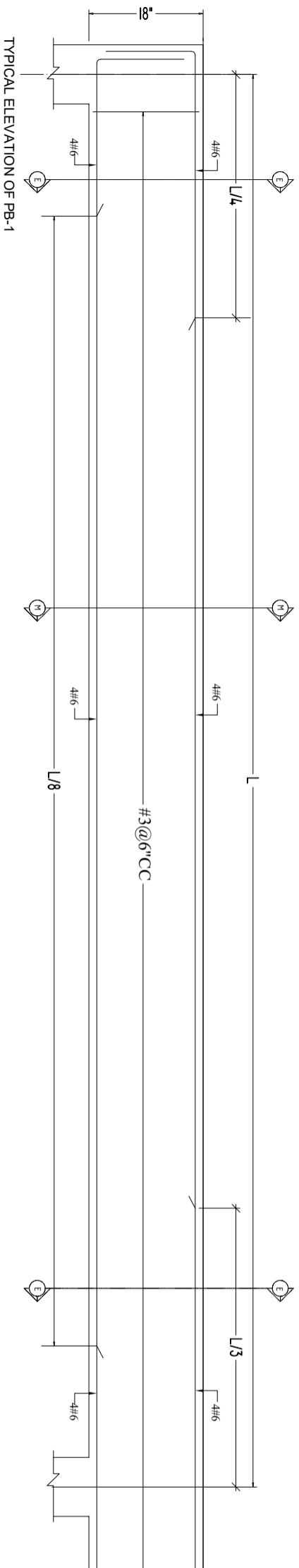
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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	PROJECT:
	SYED BASHIR MATHANMAD	PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By	TITLE:
	HUMZA AHMAD	COLUMNS SECTIONAL DETAIL
	Checked By	DATE
	Approved By	SEP 2023
		SCALE
		DRG.NO.
		S-09



CLIENT:



CONSULTANTS:



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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision

Prepared By

ENGINEER

PROJECT:

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

DESIGNED BY

CHECKED BY

APPROVED BY

HIMZA AHMAD

TITLE: BEAMS SECTIONAL DETAIL

DATE: SEP 2023

SCALE

DRG. NO.

S-10

**ELECTRIFICATION DRAWINGS
OF
GBHS NO. 02 HAZRO DISTRICT
ATTOCK**

ELECTRICAL DRAWINGS		
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	SECTION	E-06
7	EARTHING DETAIL PLAN	E-07
8	MAIN DISTRIBUTION BOARD	E-08
9	LOAD CALCULATION	E-09

CLIENT:



CONSULTANTS:
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SCHOOL NAME

GBHS NO. 02 HAZRO
DISTRICT ATTOCK

Date of Revision	Prepared By	FARID KHAN KHAJANJADAR ELECTRICAL ENGINEER: Engr. HAMMAD AHMAD
	Designed By	
	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 NECESSITATE ALTERATION OR DEVIATION OF THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.
2. DIMENSIONS / MLASURMENTS 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 VADE IN VIEW OF ITS PHYSICAL DIMENTIONS 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 WHITE 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 OR ILLERIA SHELL 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 SIMAL TONCOUS DRAWING OF PVC INSULATED CABLES SHALL BE DETERMINED AS PIN 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 (3/8")
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 BUTTON 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 5PIN INDUSTRIAL SOCKET OUTLETS IN LABS 12 INCHES
- > CEILING FAN 12 INCHES
- > WALL BRACKET FAN 90 INCHES

CLIENT:



CONSULTANTS:

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SCHOOL NAME

GBHS NO. 02 HAZRO
DISTRICT ATTOCK

Date of Revision	Prepared By	FAKID KHAN KHAN HADDER ELECTRICAL 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-01
TITLE:		GENERAL NOTES	

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:



CONSULTANTS:

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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT
ATTOCK

Date of Revision

Prepared By

FAHAD KHAN
KHAJAN KHAN
ELECTRICAL ENGINEER

PROJECT:

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

TITLE:

APPROVED MANUFACTURE LIST

Designed By

Eg: HAMMAD AHMAD

Checked By

Approved By

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:



CONSULTANTS:



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E-Mail: pce.pesh@yahoo.com

SCHOOL NAME

GBHS NO. 02 HAZRO
DISTRICT ATTOCK

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

PROJECT:

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

TITLE:

LEGEND

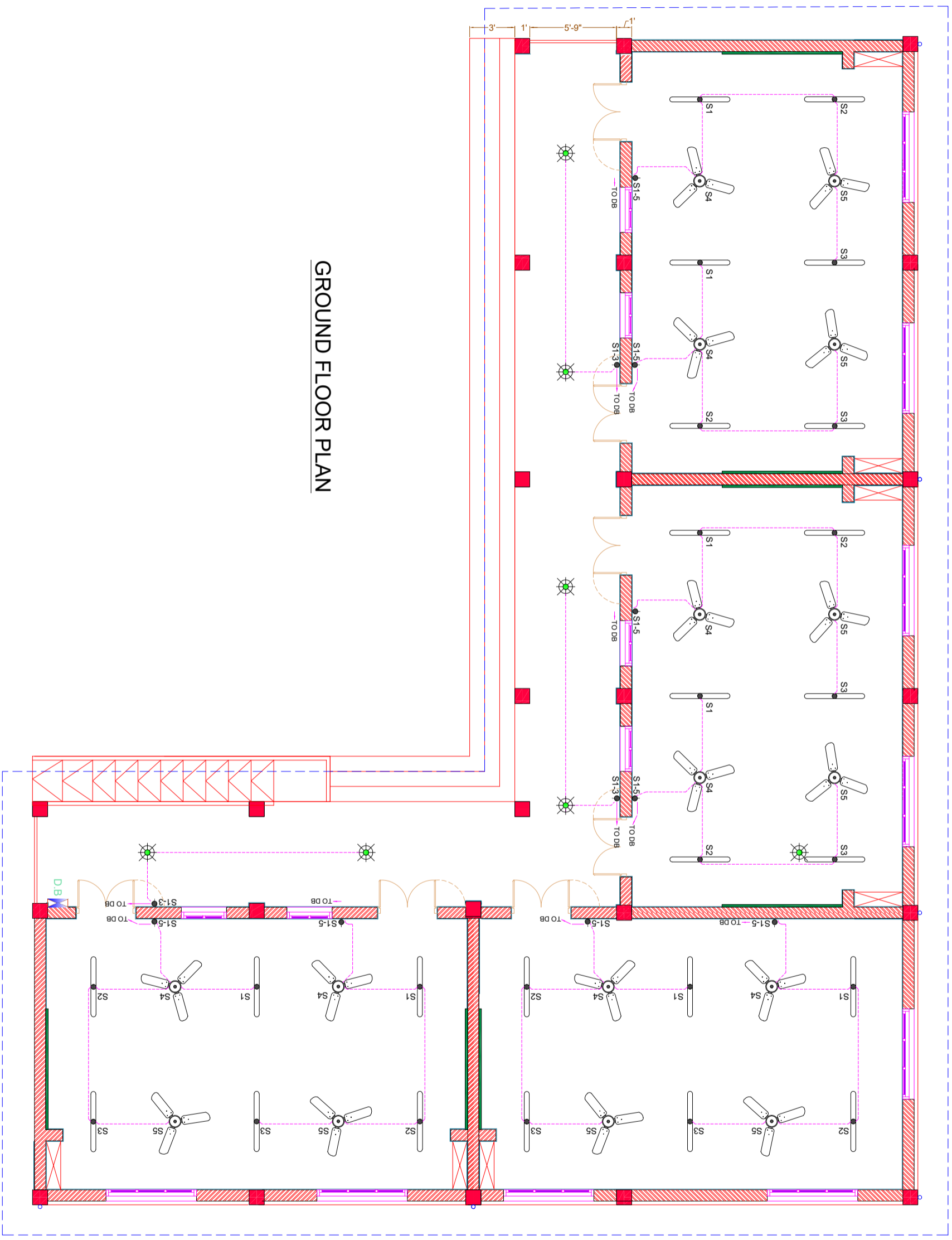
DATE

SEP 2023

SCALE

DRG.NO.

E-03



GROUND FLOOR PLAN

CLIENT:



CONSULTANTS:

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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

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

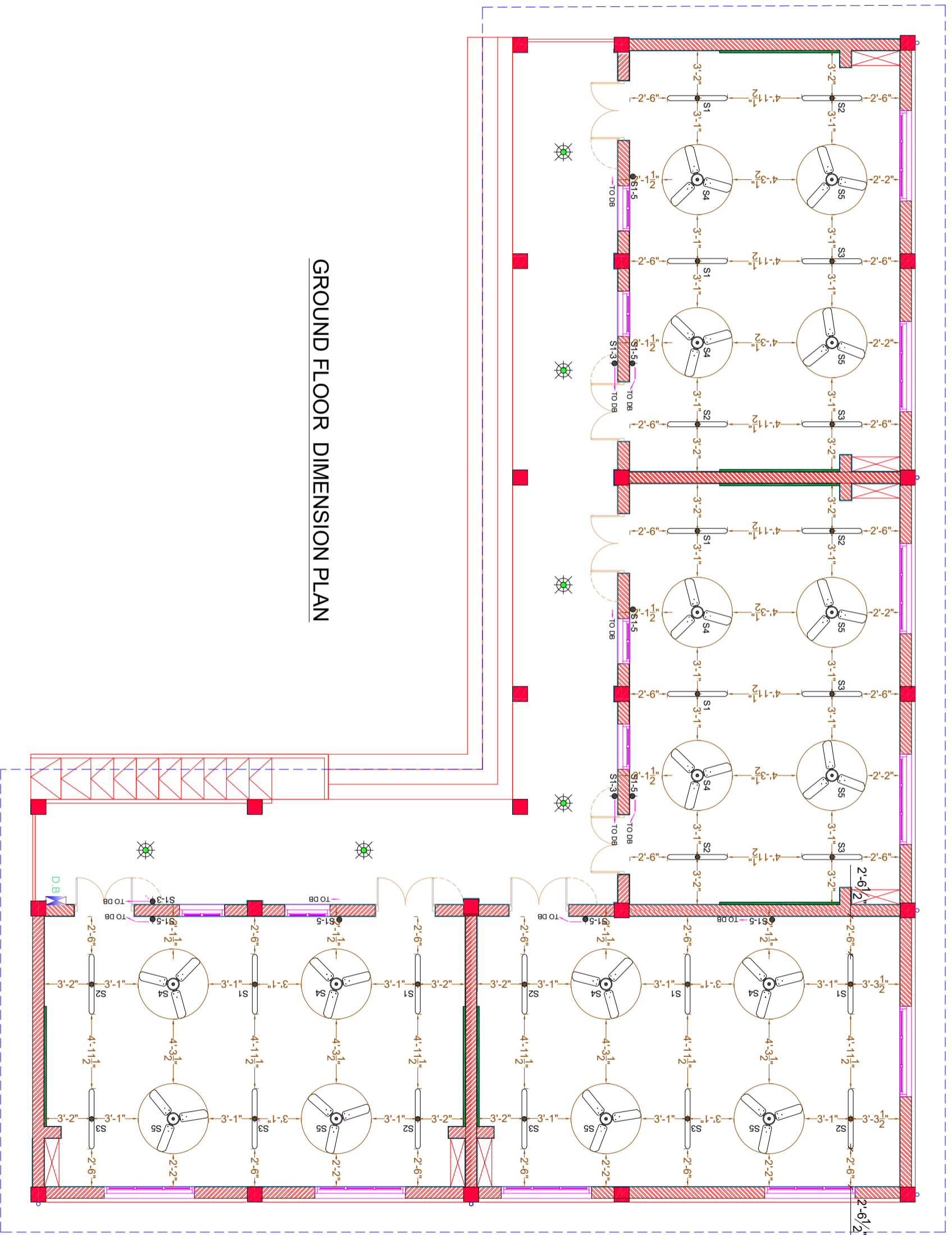
PROJECT:

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

TITLE:

GROUND FLOOR PLAN

DATE	SCALE	DRG. NO.
SEP 2023		E-04



GROUND FLOOR DIMENSION PLAN

CLIENT:



CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT ATTOCK

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

PROJECT:

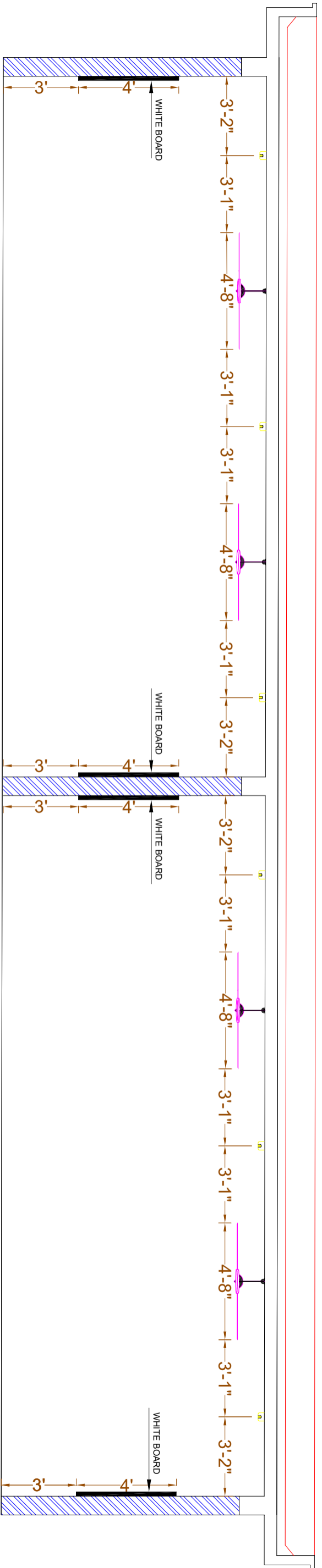
PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

GROUND FLOOR DIMENSION PLAN

DATE	SCALE	DRG. NO.
SEP 2023		F-05





SECTION

CLIENT:



CONSULTANTS:

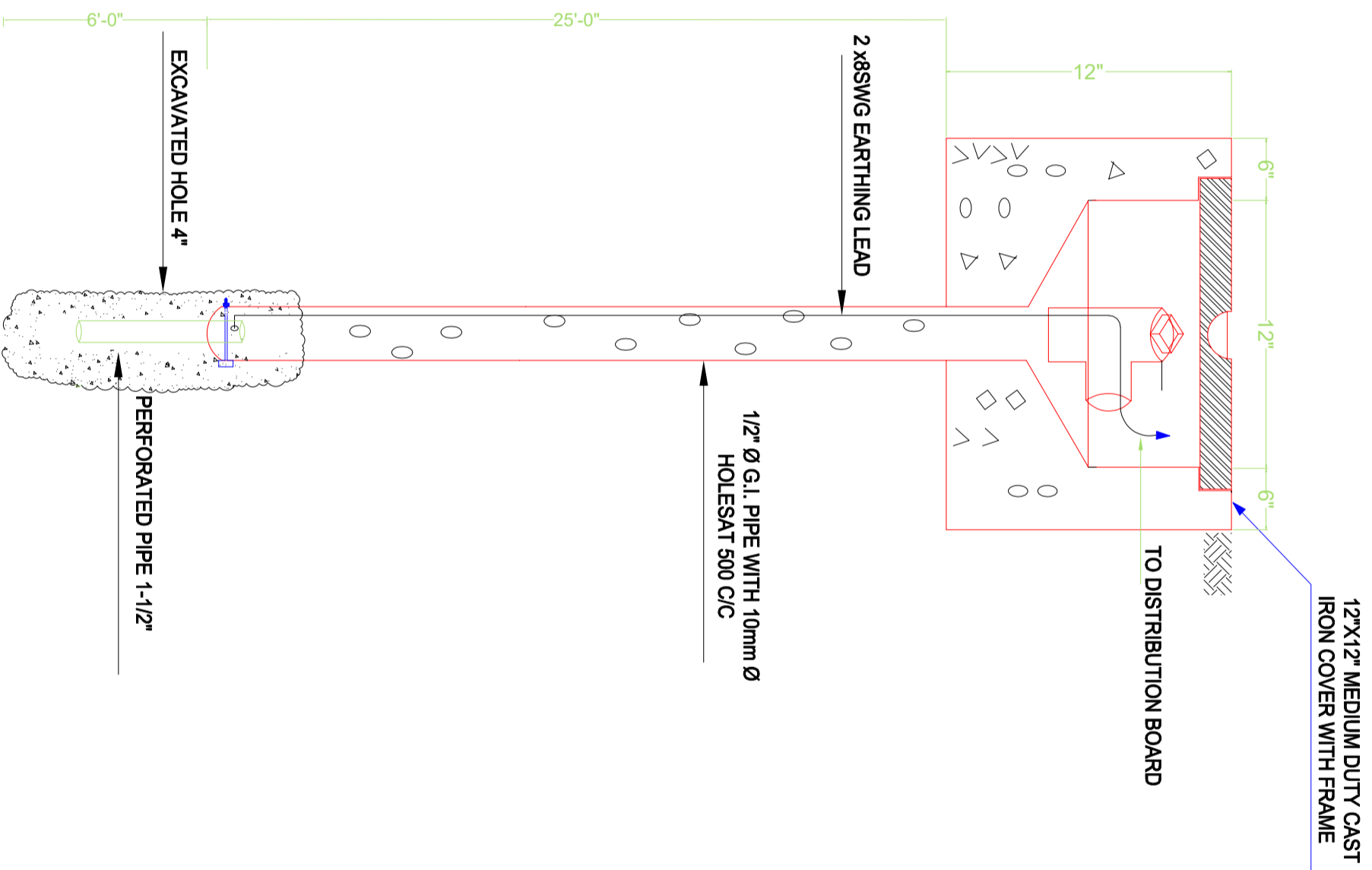


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SCHOOL NAME

GBHS NO. 02 HAZRO
 DISTRICT ATTOCK

Date of Revision	Prepared By	FAHIM KHAN KHAIS HANIDER ELECTRICAL ENGINEER	PROJECT:
	Designed By	Engr. HAMMAD AHMAD	PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES
	Checked By		TITLE:
	Approved By		SECTION
			DATE: SEP 2023
			SCALE
			DRG.NO. E-06



CLIENT:



CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

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 E-Mail: pce.pesh@yahoo.com

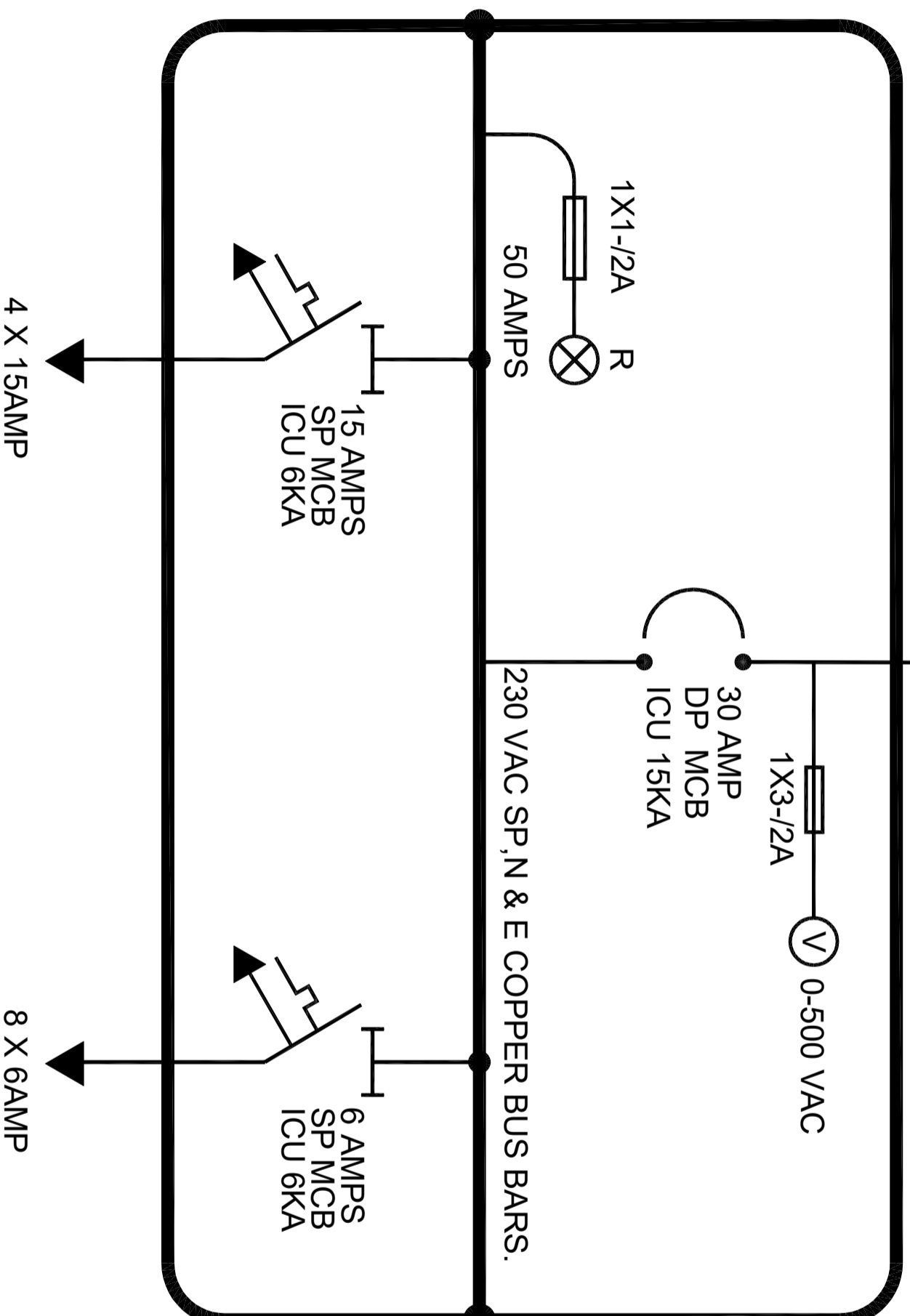
SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

Date of Revision	Prepared By	FARID KHAN KHAN HADIR ELECTRICAL ENGINEER	PROJECT:
	Designed By	Engr. HAMMAD AHMAD	PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/ REHABILITATION OF SITS
	Checked By		EARTHING DETAIL PLAN
	Approved By		DATE: SEP 2023 SCALE: DRG.NO. E-07

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

DISTRIBUTION BOARD
16 SWG SHEET STEEL POWDER
PAINTED RECESSED IN WALL.



CLIENT:



CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT
ATTOCK

Date of Revision

Prepared By

DESIGNED BY

Checked By

Approved By

PROJECT:

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

TITLE:

MAIN DISTRIBUTION BOARD

DATE

SEP 2023

SCALE

DRG.NO.

E-08

LOAD CALCULATION

LOAD (W)	1536
PEAK DEMAND LOAD (W)	1536
25% FUTURE LOAD PROVISION (W)	1920
TOTAL LOAD (W)	2133
CABLE SIZE (MM sq)	2.5

CLIENT:



CONSULTANTS:



PLANNERS CONSULTANTS ENGINEERS (PCE)

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SCHOOL NAME

GBHS NO. 02 HAZRO DISTRICT
ATTOCK

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

PROJECT:

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

TITLE:

LOAD CALCULATION

DATE

SEP 2023

SCALE

DRG. NO.

E-09

PROPOSED DESIGN
OF
REHAB WORKS
AT
GBHS NO. 02 HAZRO DISTRICT
ATTOCK



PLANNERS CONSULTANTS ENGINEERS (PCE)
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LIST OF DRAWINGS

ARCHITECTURAL DRAWINGS		PLUMBING DRAWINGS		
SR.NO	DESCRIPTION	DRG. NO.	SR.NO	
1	GROUND FLOOR PLAN	A-01	16	
2	FRONT ELEVATION	A-02	17	
3	SECTION AT C-C	A-03	18	
4	SCHEDULE OF OPENING	A-04	WATER SUPPLY DRAWINGS	
5	VENTILATOR PROJECTION	A-05	19	
6	RAMP DETAIL	A-06	20	
STRUCTURAL DRAWINGS		ELECTRICAL DRAWINGS		
8	GENERAL NOTES	S-01	21	
9	GENERAL NOTES	S-02	22	
10	FOUNDATION PLAN	S-03	23	
11	SECTION AT 1-1	S-04	24	
12	GROUND FLOOR LINTEL BEAM PLAN	S-05	25	
13	GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN	S-06		
14	GROUND FLOOR SLAB TOP REINFORCEMENT PLAN	S-07		
15	LINTEL BEAM DETAIL	S-08		

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

Date of Revision

Prepared By

FARID KHAN
 KHAN HAIDER

PROJECT:

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

TITLE:

LIST OF DRAWINGS

DATE

SEP 2023

SCALE

DRG.NO.

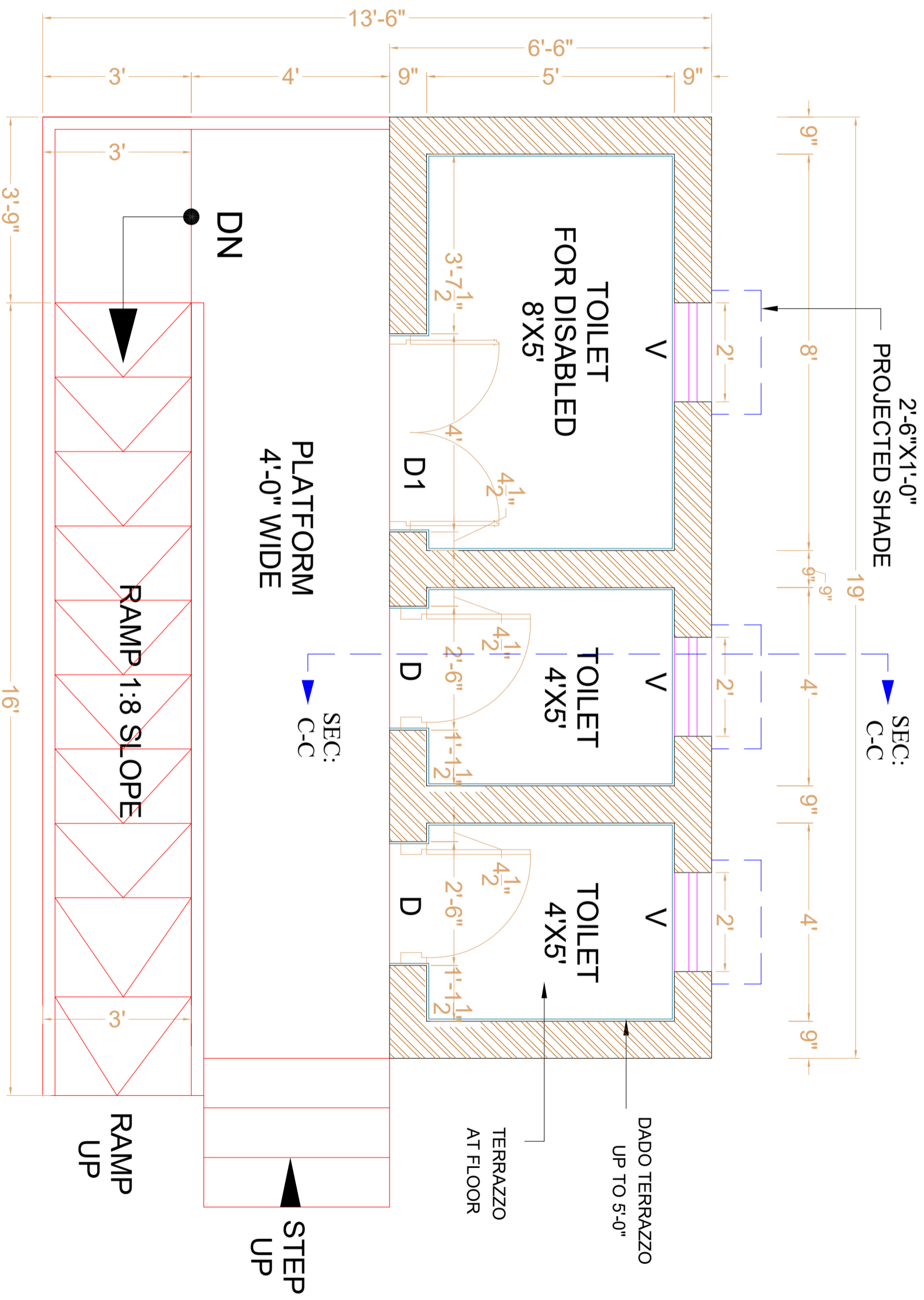
A-00

Designed By

MARVAT KHAN ORAKZAI
 (B. Arch, D. CEIT Karachi)
 (M. Arch, UET, Lahore)

Checked By

Approved By



GROUND FLOOR PLAN

CLIENT:



PLANNERS CONSULTANTS ENGINEERS (PCE)

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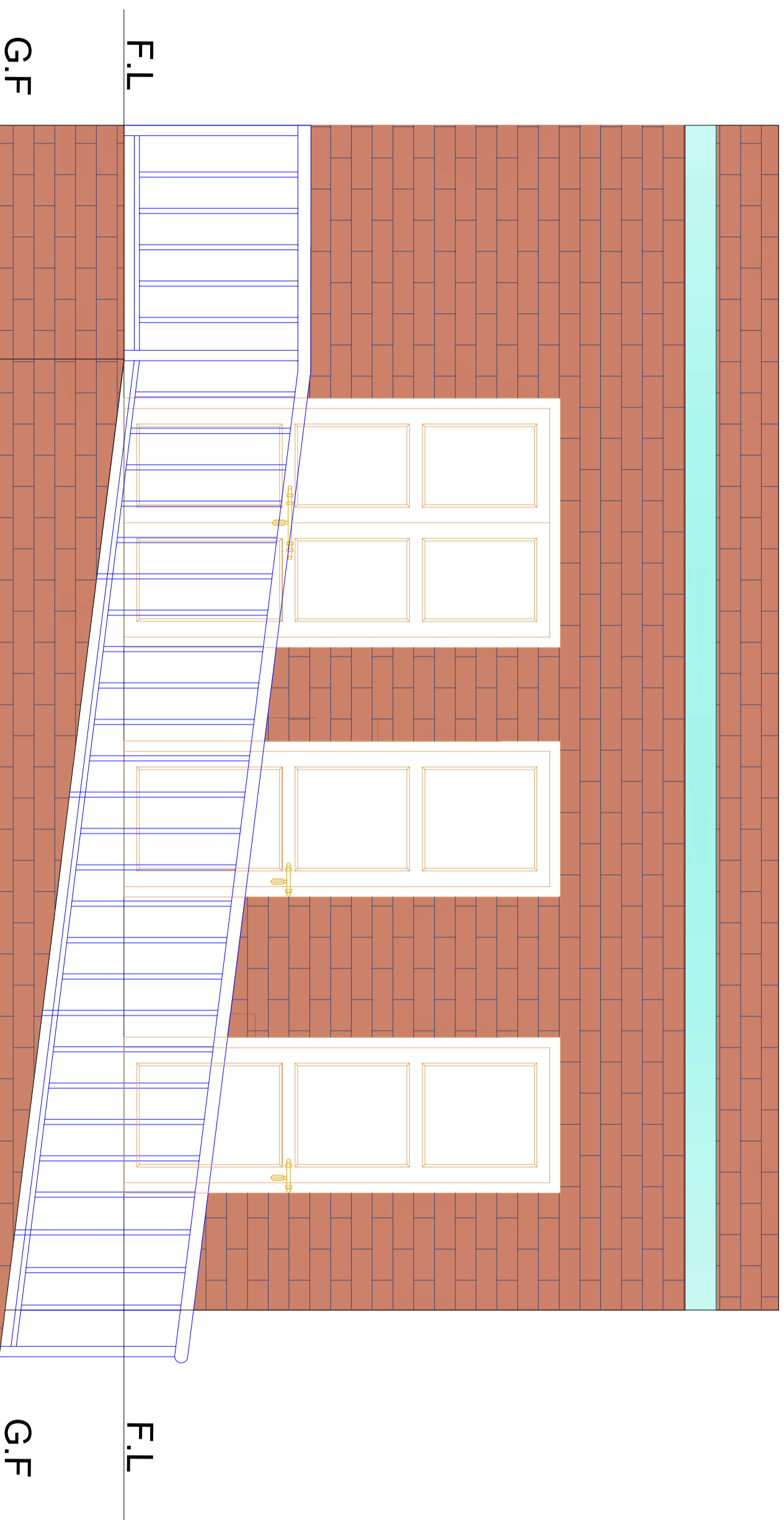
CONSULTANTS:

SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

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

PROJECT:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		A-01
TITLE:			
GROUND FLOOR PLAN			



FRONT ELEVATION

CLIENT:



CONSULTANTS:
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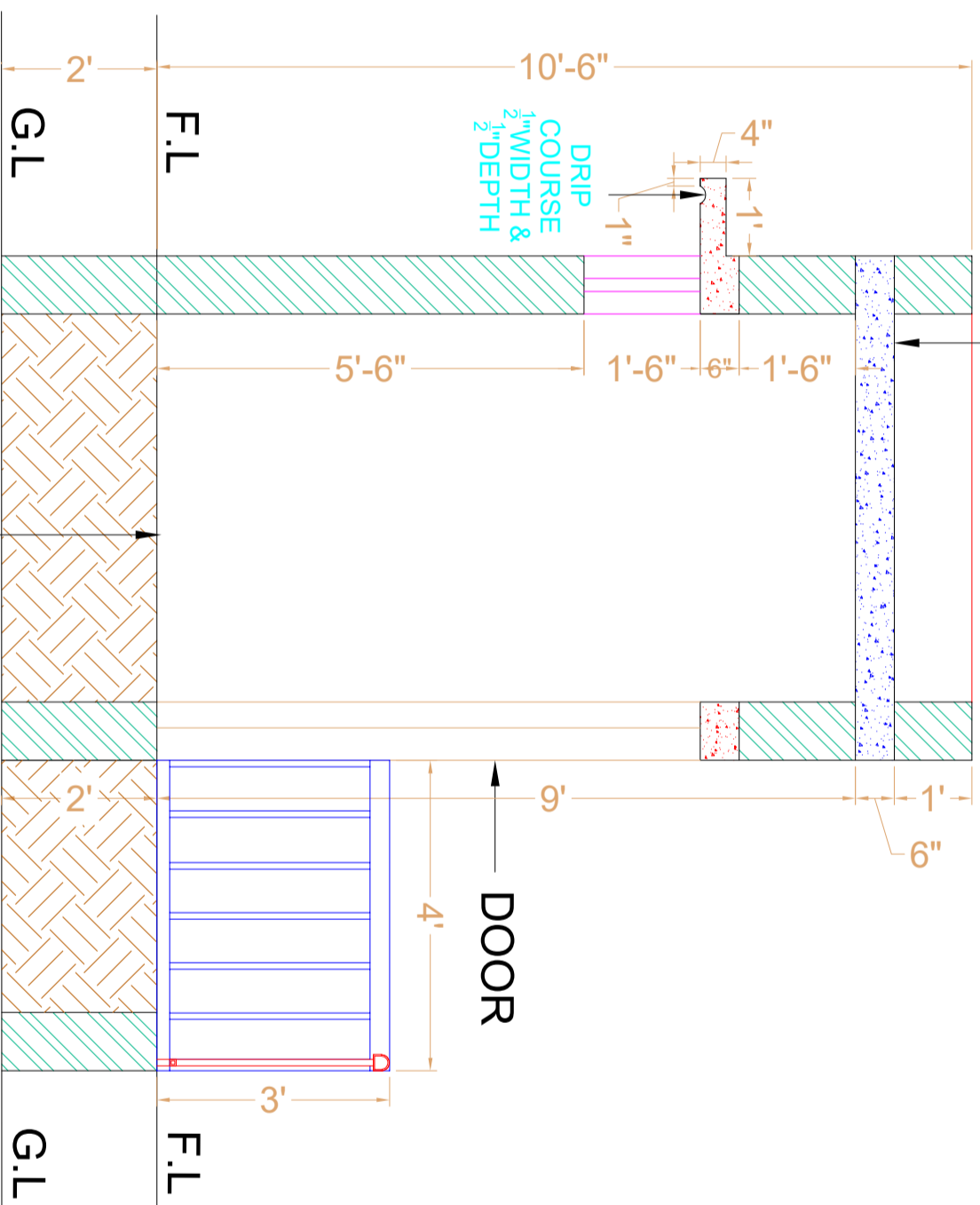
SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

Date of Revision	Prepared By	ARCHITECT
	Designed By	MARKAT RIYAN ORAKZAI (M.Arch, UET Lahore)
	Checked By	
	Approved By	

PROJECT:		
PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE: FRONT ELEVATION		
DATE	SCALE	DRG.NO.
SEP 2023		A-02

- 1.25" TH. BRICK TILES
- SET & GROUTED IN C/S (1:2)
- 4" TH. AVG. MUD FILLING.
- POLYTHENE SHEET
- HOT BITUMEN 10/20
- RCC (1:2:4) SLAB



SECTION AT C.C

MARBLE TOPPING
 3" PCC 1:3:6
 4" SAND FILLING
 COMPACTED EARTH

CLIENT:



The UN Refugee Agency

CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

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SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

Date of Revision

Prepared By

ARCHITECT

PROJECT:

TITLE:

DATE

SCALE

DRG. NO.

FARID KHAN
 KHAN HABIBER

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

SECTION AT C.C

SEP 2023

A-03

Designed By

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

SECTION AT C.C

SEP 2023

A-03

Checked By

Approved By



PLANNERS CONSULTANTS ENGINEERS (PCE)

SCHEDULE OF OPENING

TYPE	SIZE	S-LEVEL	DESCRIPTION
D1	4'-0" X 7'-0"	0"-0"	STEEL
D	2'-6" X 7'-0"	0"-0"	STEEL
V	2'-0" X 1'-6"	5'-6"	STEEL

CLIENT:



CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

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SCHOOL NAME

REHAB WORKS OF
GBHS NO. 02 HAZRO DISTRICT
ATTOCK

Date of Revision

Prepared By

FARID KHAN
KHANHAIDER
ARCHITECT

Designed By

MARWAT KHAN ORAKZAI
(B.Arch.D.C.E.T.K. arch)
(M.Arch.(H.E.L. Lahore)

Checked By

Approved By

PROJECT:

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

TITLE:

SCHEDULE OF OPENING

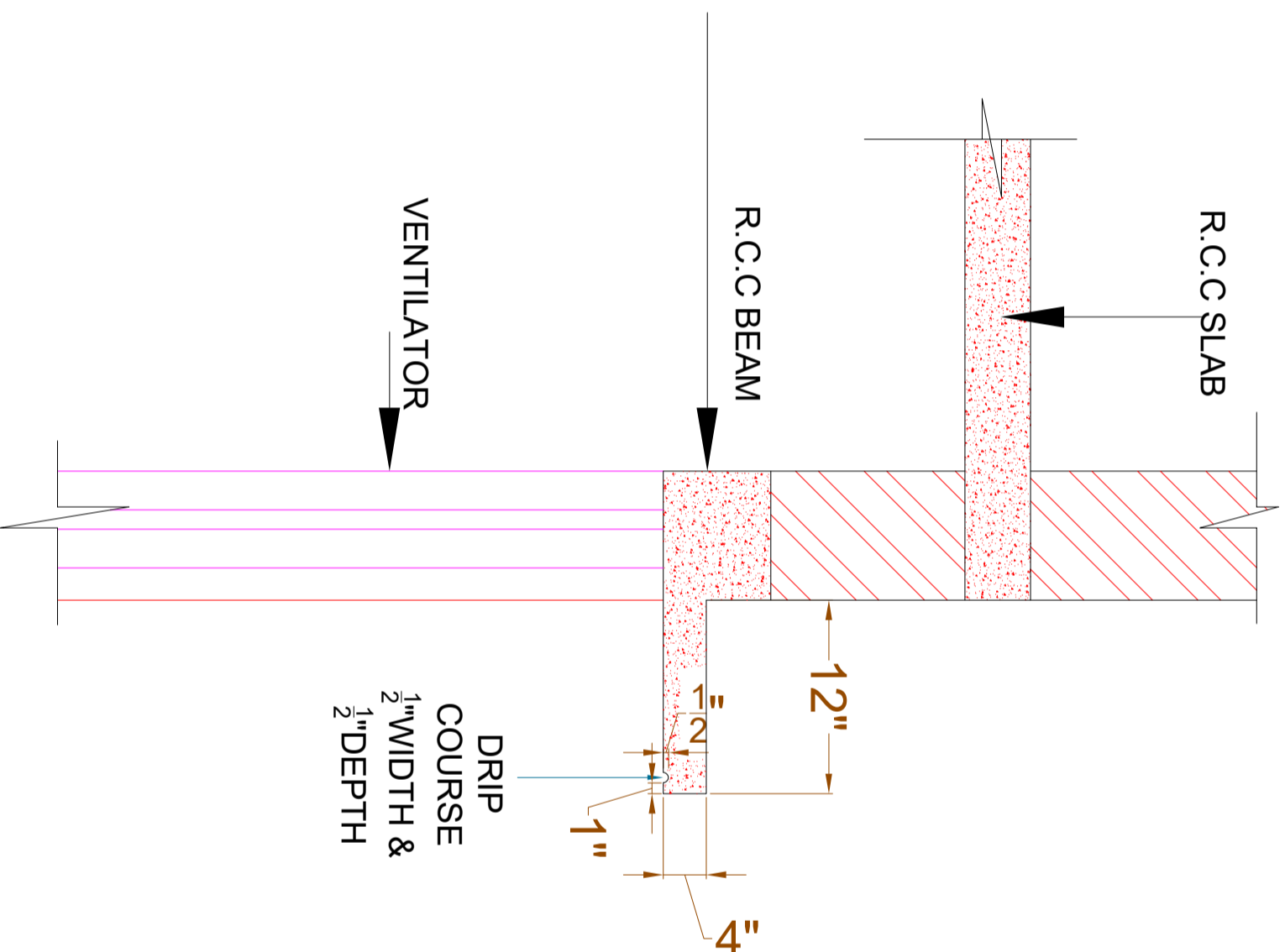
DATE

SEP 2023

SCALE

DRG.NO.

A-04



**VENTILATOR
PROJECTION &
DRIP COURSE DETAIL**

CLIENT:



CONSULTANTS:

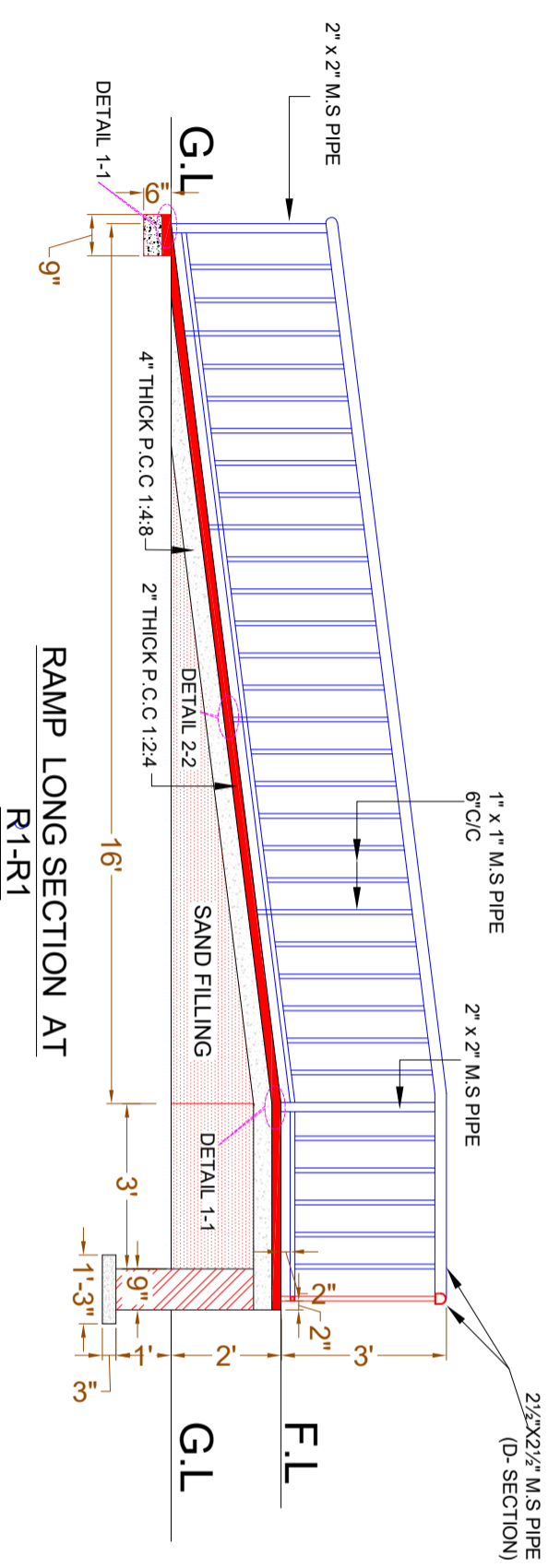
PLANNERS CONSULTANTS ENGINEERS (PCE)

97-K Industrial Estate, Hayatabad Peshawar Pakistan
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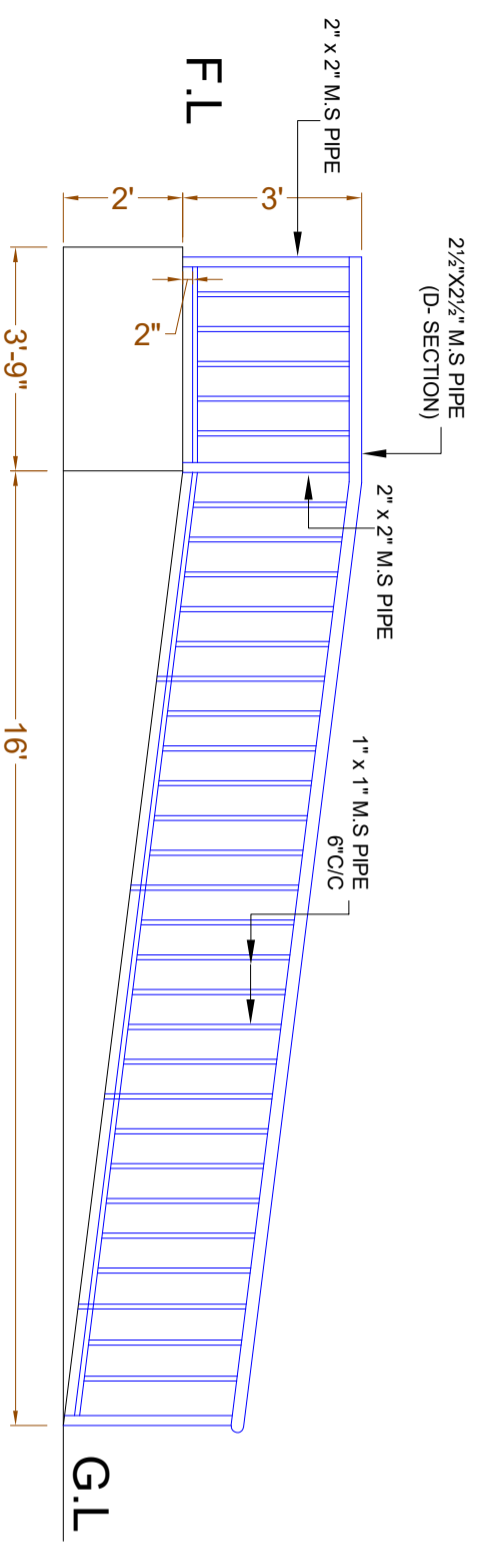
SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

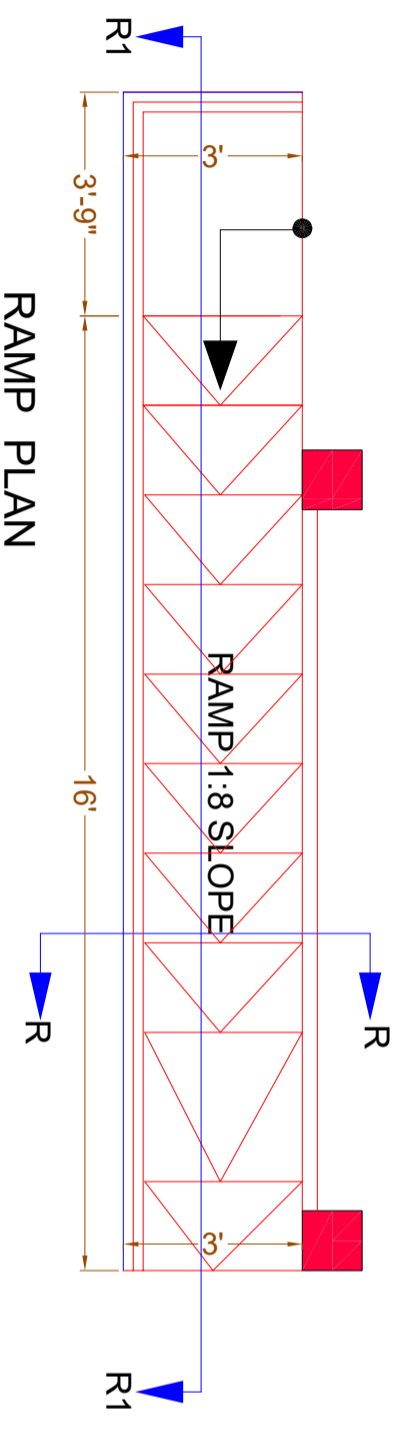
Date of Revision	Prepared By	ARCHITECT	PROJECT:		
	Designed By	FAKIR KHAN KHAN IADDER ARCHITECT MARWAT KHAN ORAKZAI (B.Arch, D. Arch, Karachi) (M.Arch, UET, Lahore)	PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES		
	Checked By			TITLE: VENTILATOR PROJECTION & DRIP COURSE DETAIL	
	Approved By			DATE SEP 2023	
			SCALE	DRG. NO.	A-05



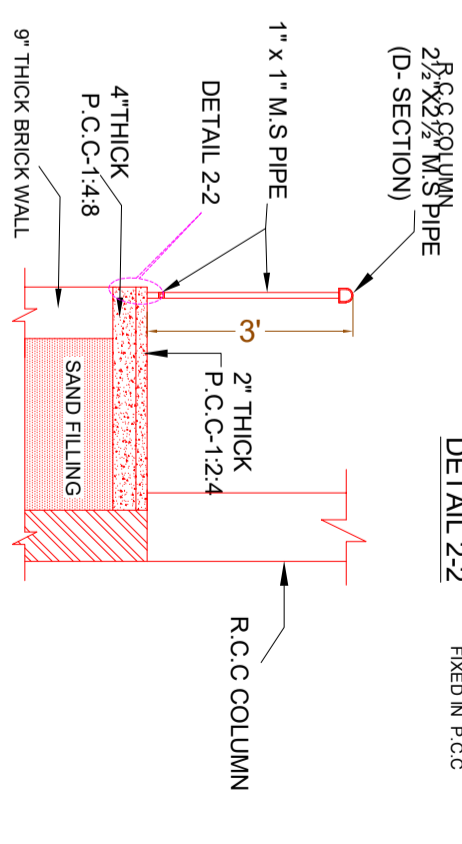
RAMP LONG SECTION AT R1-R1



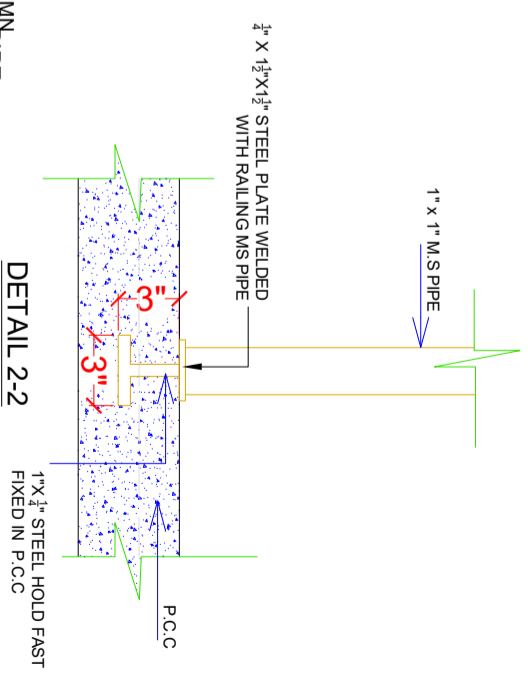
RAMP ELEVATION



RAMP PLAN



RAMP SECTION AT R-R



DETAIL 1-1

DETAIL 2-2

CLIENT:



UNHCR
The UN Refugee Agency

CONSULTANTS:



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SCHOOL NAME

REHAB WORKS OF
GBHS NO. 02 HAZRO DISTRICT
ATTOCK

Date of Revision

Prepared By

ARCHITECT

PROJECT:

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

TITLE:

RAMP DETAIL

DATE

SEP 2023

SCALE

DRG.NO.

A-06

**STRUCTURE DRAWINGS
OF
REHAB WORKS AT
GBHS NO. 02 HAZRO DISTRICT
ATTOCK**

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 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 ENGINEERS APPROVAL AND OBTAIN HIS CONTRACTOR FROM HIS RESPONSIBILITY.
17. The allowable bearing capacity of soil should be 11sf.

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 AS APPROVED BY STRUCTURE ENGINEER.
5. ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM STANDARDS C31, C39, C172 & AS WRITTEN IN SPECIFICATIONS AND THE MINIMUM CYLINDER CRUSHING STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS. TESTING OF CLASS D & 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 RMC OR PENETRON ADMIX OR EQUIVALENT).	
9. ALL DETAILING SHALL BE DONE AS PER ACI STANDARDS ACI-315, ACI-318 & ACI-350R.	

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
4. CLEAR COVER TO REINFORCEMENT SHALL BE: (Inches)
L-GREATER CLEAR SPAN, db-DIAMETER OF BAR, DEFECTIVE 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 (NINCHES) 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. /coat.
2. PROVIDE POLYETHENE 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. 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 C62.
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	1½"
COLUMNS	1½"
SLABS	3/4"
WALLS	3/4"

CLIENT:



UNHCR
The UN Refugee Agency

CONSULTANTS:

PLANNERS CONSULTANTS ENGINEERS (PCE)

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SCHOOL NAME

REHAB WORKS AT
GBHS NO. 02 HAZRO
DISTRICT ATTOCK

Date of Revision

Prepared By

STRUCTURE ENGINEER:

PROJECT:

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

TITLE: GENERAL NOTES

Designed By

Checked By

Approved By

DATE

SEP 2023

SCALE

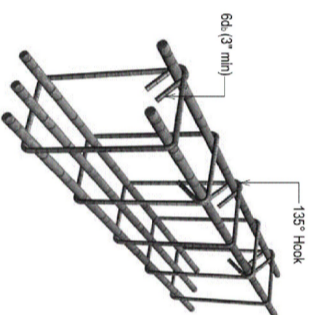
DRG.NO.

S-01

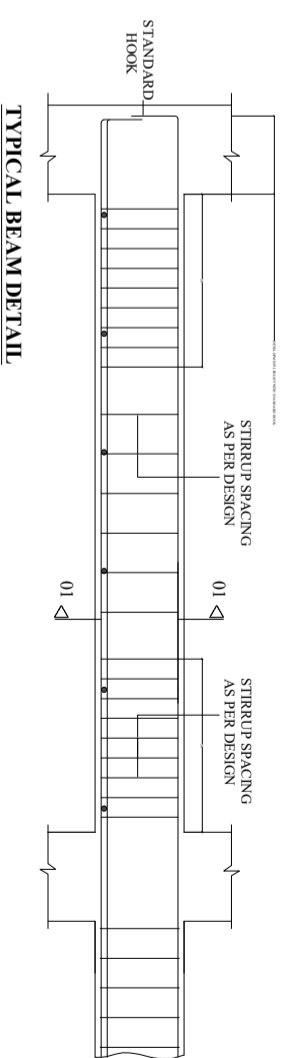


7. CONSTRUCTION JOINTS

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)

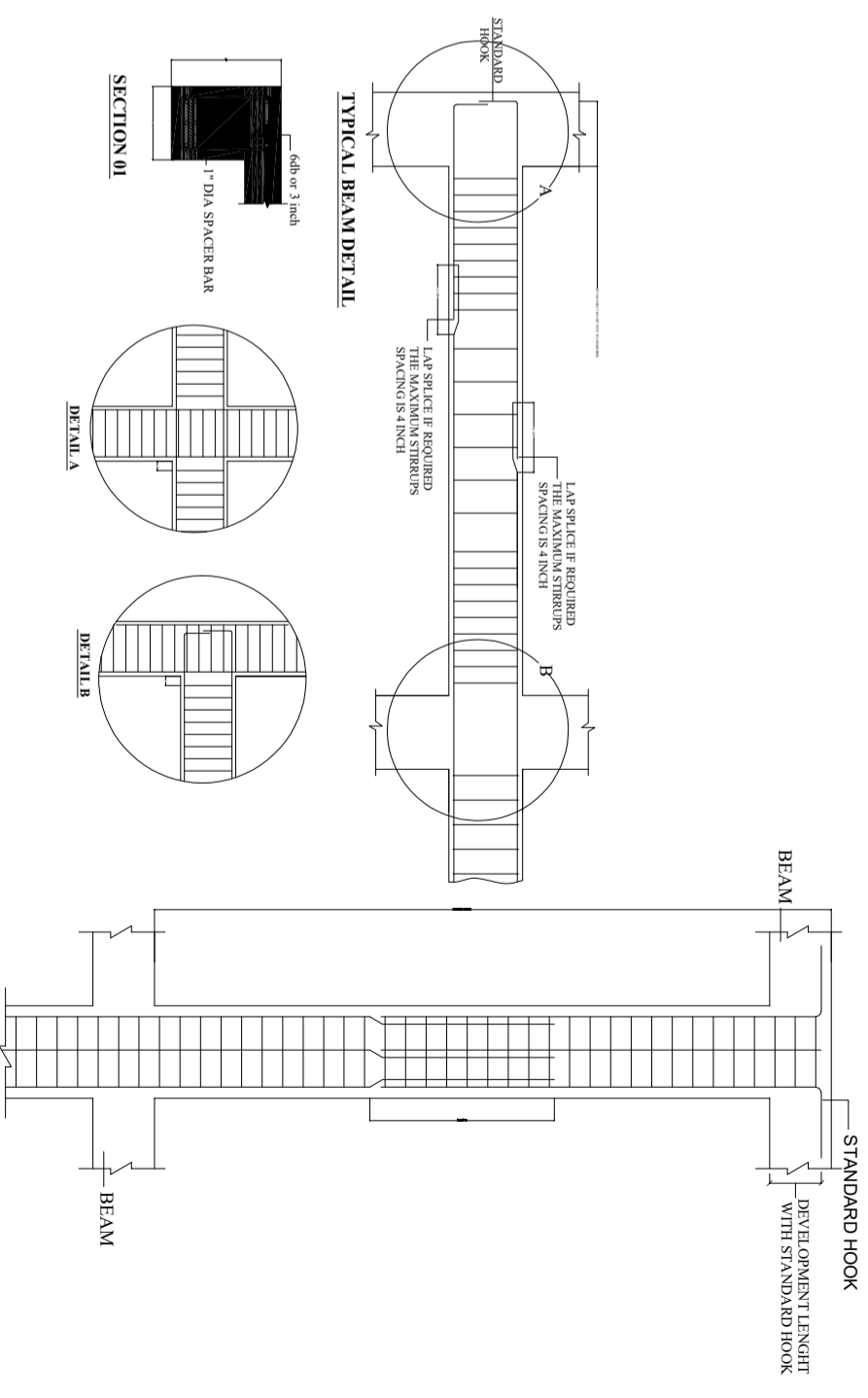
BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	TENSION	COMPRESSION
3/8"	15	-
1/2"	20	9
3/4"	30	15
1"	48	18

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 COLUMN DETAIL

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS AT
GBHS NO. 02 HAZRO
DISTRICT ATTOCK

Date of Revision

Prepared By

FAHID KHAN
KHAN HADDER
STRUCTURE ENGINEER

PROJECT:

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

Designed By

Engr. HUMZA AHMAD

TITLE:

GENERAL NOTES

Checked By

Approved By

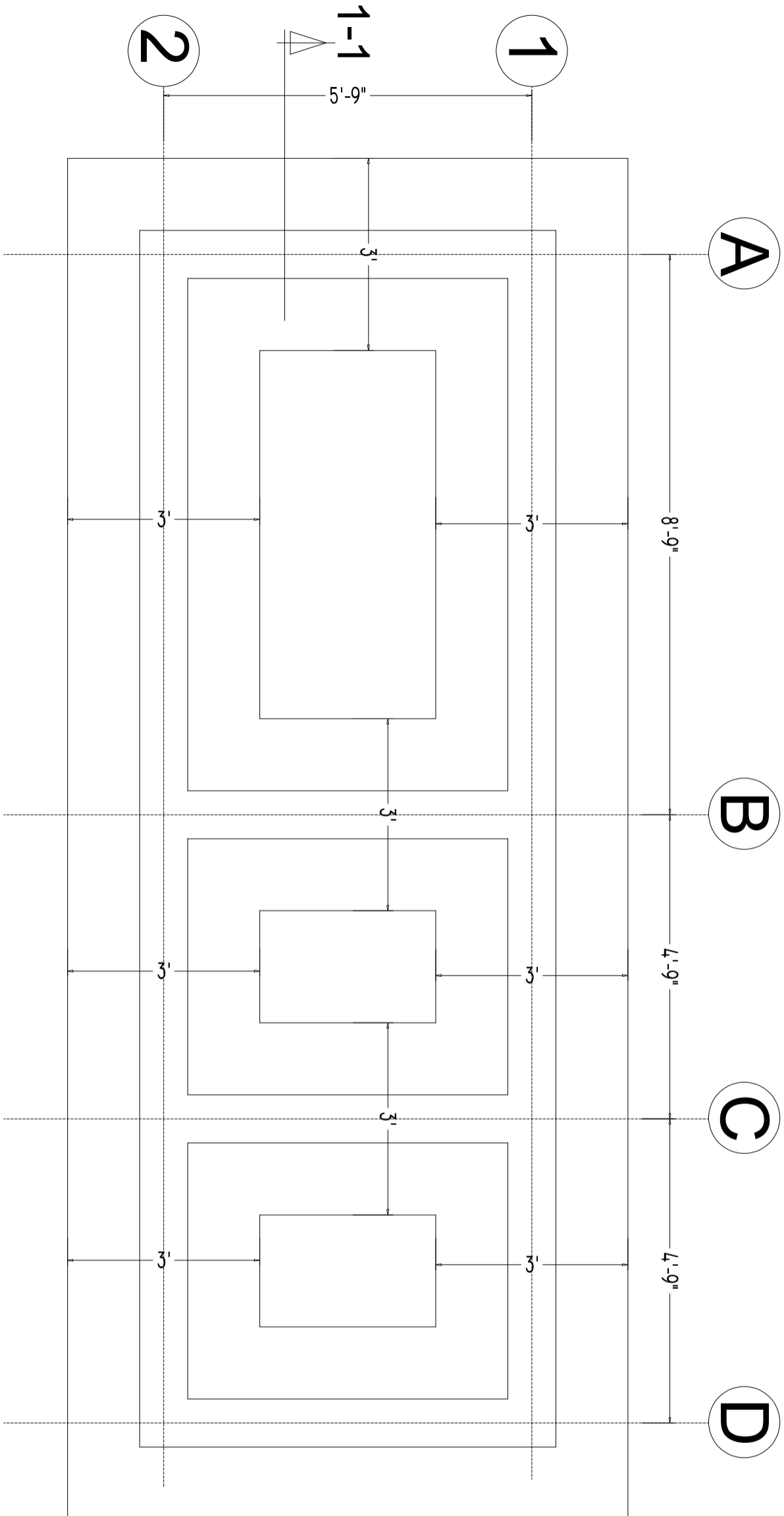
DATE

SEP 2023

SCALE

DRG.NO.

S-02



FOUNDATION PLAN

CLIENT:



CONSULTANTS:

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Date of Revision

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 FOR CONSTRUCTION/REHABILITATION OF SITES

Designed By

Checked By

Approved By

TITLE:

FOUNDATION PLAN

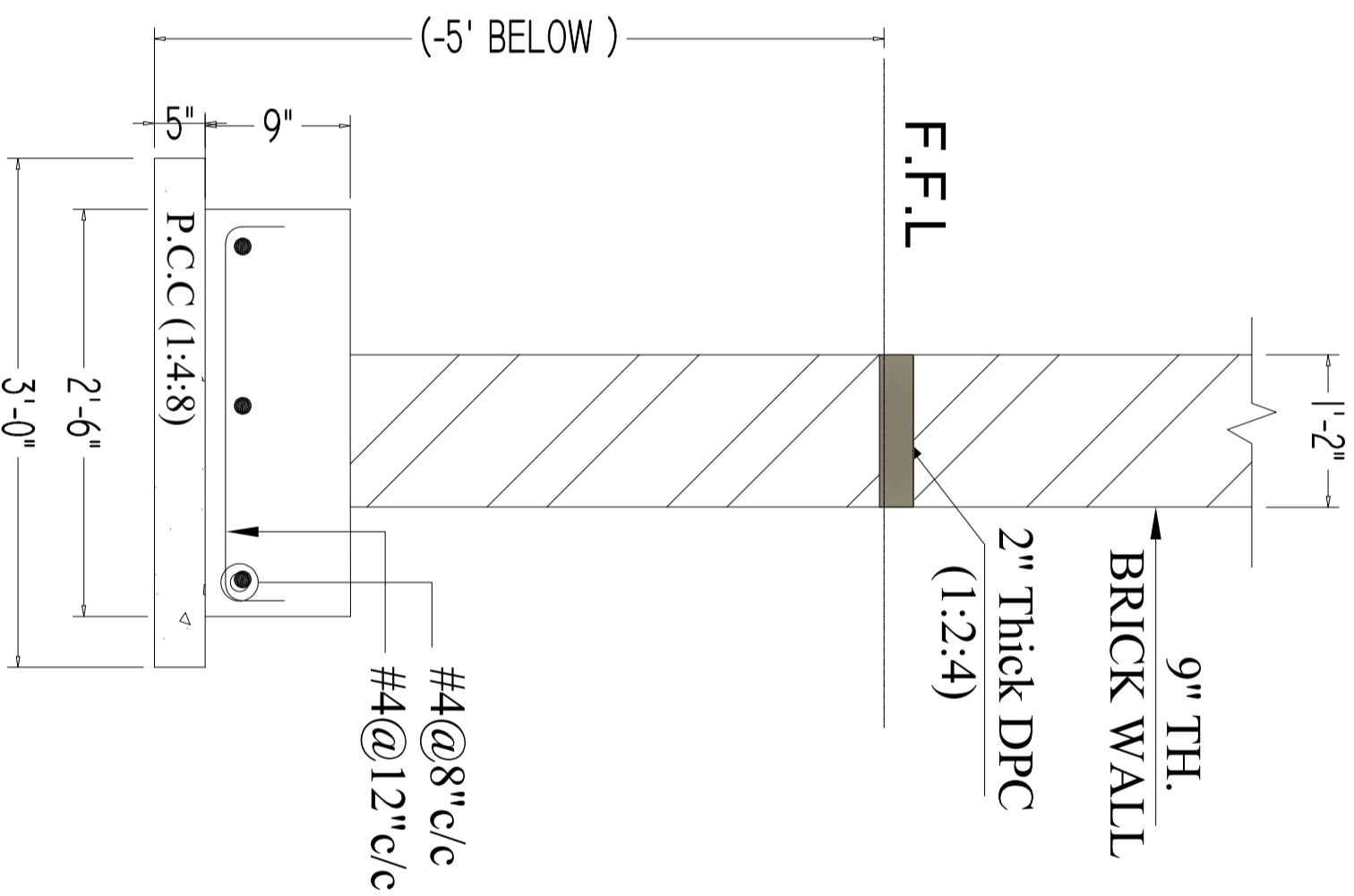
DATE

SEP 2023

SCALE

DRG. NO.

S-03



SECTION 1-1

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS AT
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FAHD KHAN
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PROJECT:

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

TITLE:

SECTION AT 1-1

DATE

SEP 2023

SCALE

DRG.NO.

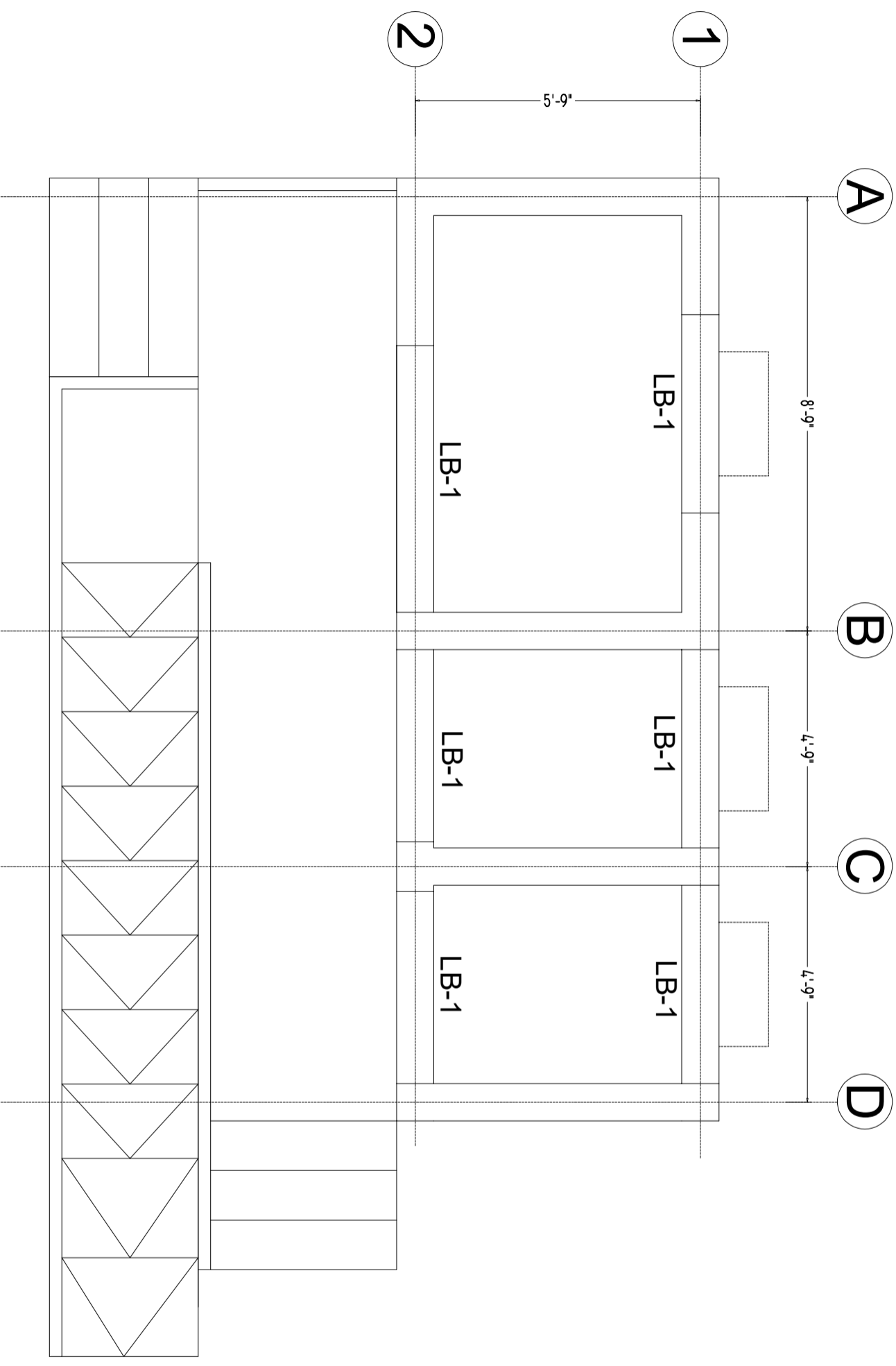
S-04

Designed By

Engr. HUMZA AHMAD

Checked By

Approved By



GROUND FLOOR LINTEL BEAM PLAN

NOTE
 LINTEL BEAM WILL BE EXTEND
 ON BOTH SIDE UP TO 1'

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS AT
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 DISTRICT ATTOCK

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

PROJECT:

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

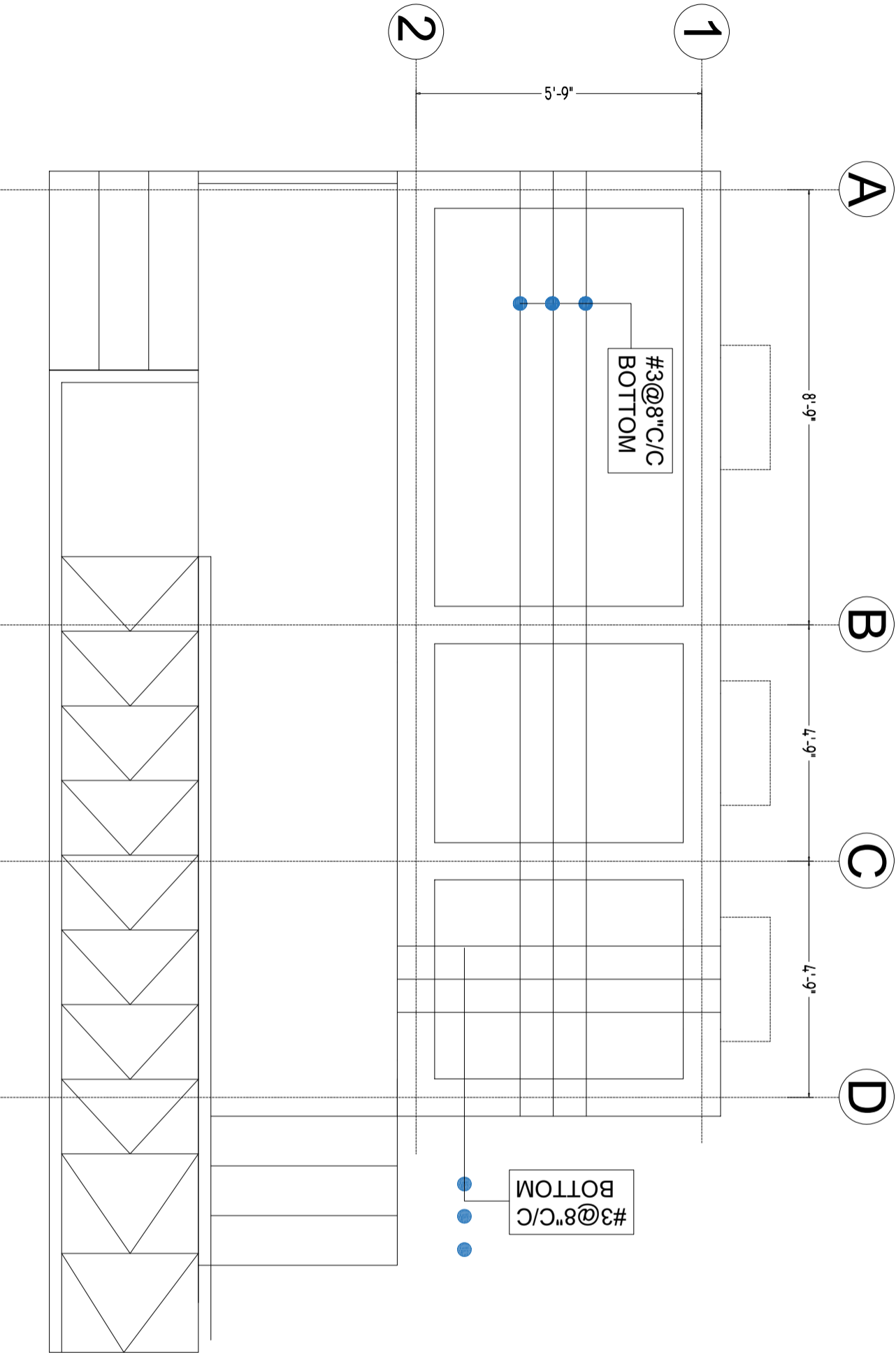
TITLE:

GROUND FLOOR LINTEL BEAM PLAN

DATE
 SEP 2023

SCALE

DRG.NO.



GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN

NOTE :
SLAB THICKNESS = 5"

CLIENT:



The UN Refugee Agency

CONSULTANTS:



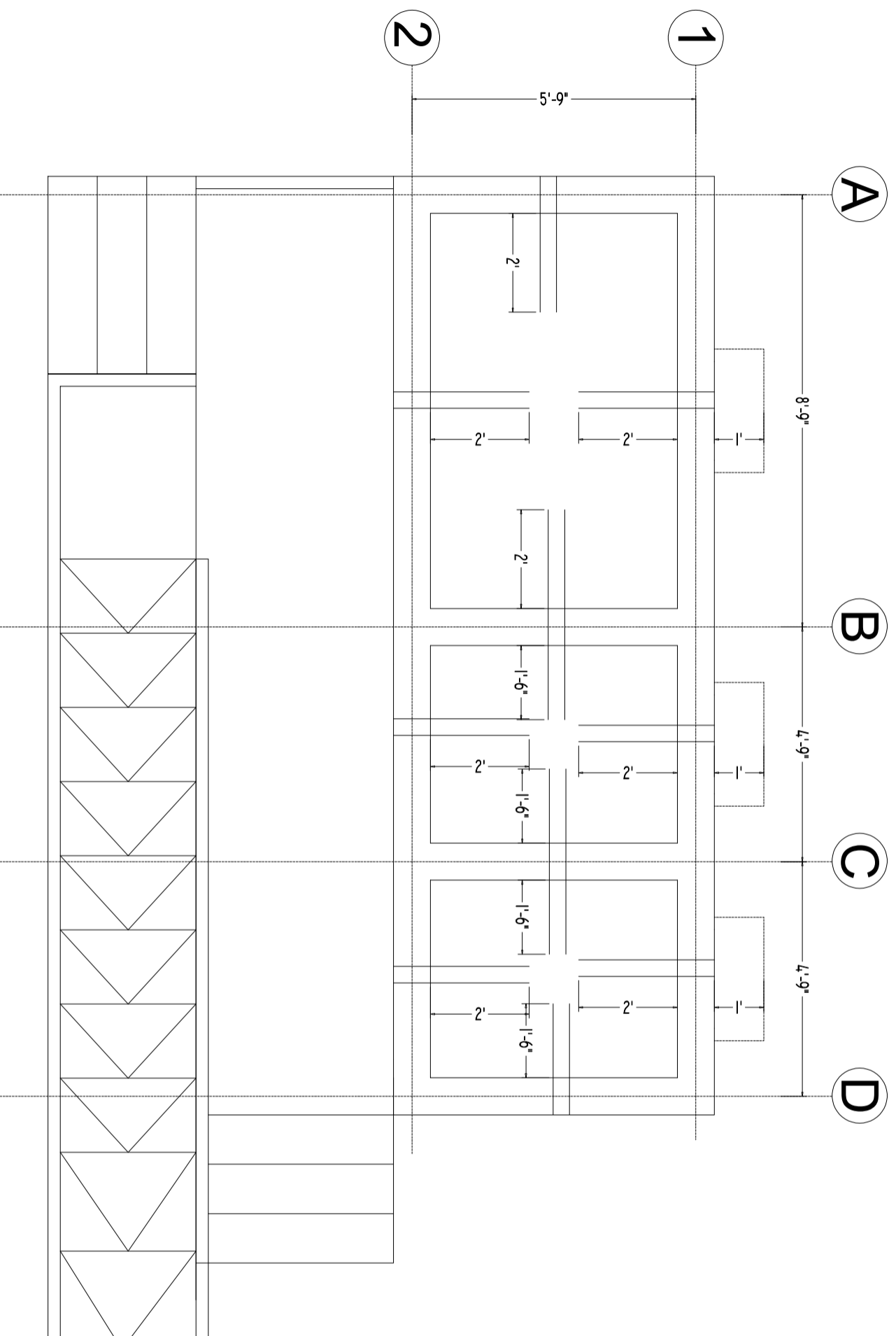
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SCHOOL NAME

REHAB WORKS AT
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 DISTRICT ATTOCK

Date of Revision	Prepared By	FAHD KHAN KHAN HADDER STRUCTURE ENGINEER:
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	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		S-6
TITLE:			
GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN			



GROUND FLOOR SLAB TOP REINFORCEMENT PLAN

NOTE :
 SLAB THICKNESS = 5"
 TOP REINFORCEMENT = #4@8"C/C

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS AT
 GBHS NO. 02 HAZRO
 DISTRICT ATTOCK

Date of Revision

Prepared By

STRUCTURE ENGINEER:

PROJCT:

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

Designed By

Egr. HUMZA AHMAD

TITLE:
 GROUND FLOOR SLAB TOP
 REINFORCEMENT PLAN

Checked By

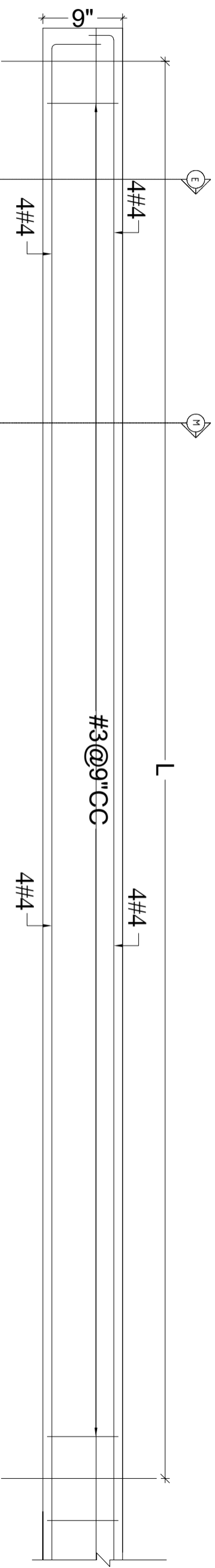
Approved By

DATE
 SEP 2023

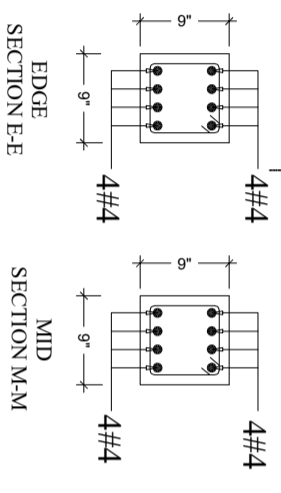
SCALE

DRG.NO.

S-7



TYPICAL ELEVATION OF PB-1



CLIENT:

 The UN Refugee Agency

CONSULTANTS:

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SCHOOL NAME
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Date of Revision	Prepared By	FARID KHAN KHAN HAIDER STRUCTURE ENGINEER
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	Approved By	

PROJECT:
 PREPARATION OF DESIGN, DRAWINGS & BOOKS
 FOR CONSTRUCTION/REHABILITATION OF SITES
 TITLE:
 LINTEL BEAM DETAIL
 DATE: SEP 2023
 SCALE:
 DRG.NO.: S-8

PLUMBING DRAWING















GENERAL NOTES

ALL UNDER GROUND SEWAGE PIPES SHALL HAVE A MINIMUM SLOPE OF 1%.
 ISOLATING VALVES SHALL BE PROVIDED TO SEPARATE THE INDIVIDUAL TOILETS, GATE VALVES SHALL BE PROVIDED TO/ FROM WATER HEATERS
 EXACT LOCATION OF WATER PIPE WORK SHALL BE DETERMINED ON SITE.
 PROVIDE ISOLATING VALVE ON ALL MAIN AND BRANCH LINES FOR MAINTENANCE.
 IN PLUMBING WATER SUPPLY SYSTEM THE PIPE DIAMETER INDICATED ARE NET FLOW AREAS (i.e. INTERNAL DIAMETERS) AND THE CONTRACTOR SHALL USE ADEQUATE PIPES SIZE, SPECIALLY WHEN USING PLASTIC PIPES TO ACCOUNT FOR PIPE WALL THICKNESS.
 CONTRACTOR TO PROVIDE OVERFLOW, TEST PIPE, WARNING LEVEL AND DRAIN CONNECTION.

FOR COLD WATER SUPPLY PPR PN-20 PIPES SHALL BE USED.
 ALL EXPOSED COLD AND HOT WATER PIPING SHALL BE PPR.
 ALL HOT WATER PIPES SHALL BE PPR PN-20.
 ALL HOT WATER PIPES SHALL BE INSULATED.
 PPR PIPE INTERNAL CLEAR DIA.
 ALL SUI GAS PIPE SHALL BE G.I PIPE BEST QUALITY

LEGEND FOR PLUMBING

1	MAIN HOLE
2	2" Ø u.P.V.C VENT PIPE ABOVE

LEGEND	
	CW COLD WATER SUPPLY & MAKEUP WATER
	HW HOT WATER SUPPLY
	WMH WASTE WATER MANHOLE
	SMH SOIL WATER MANHOLE
	HWG HOT WATER GEYSER
	W/C WATER CLOSET (ENGLISH)
	W/C WATER CLOSET (INDIAN)
	W/B WASH BASIN
	F.T FLOW TRAP
	T.R TOWEL RAIL (ROD)
	SH SHOWER
	TAP
	OHWT OVER HEAD WATER TANK
	UGWT UNDER GROUND WATER TANK

CLIENT:



CONSULTANTS:

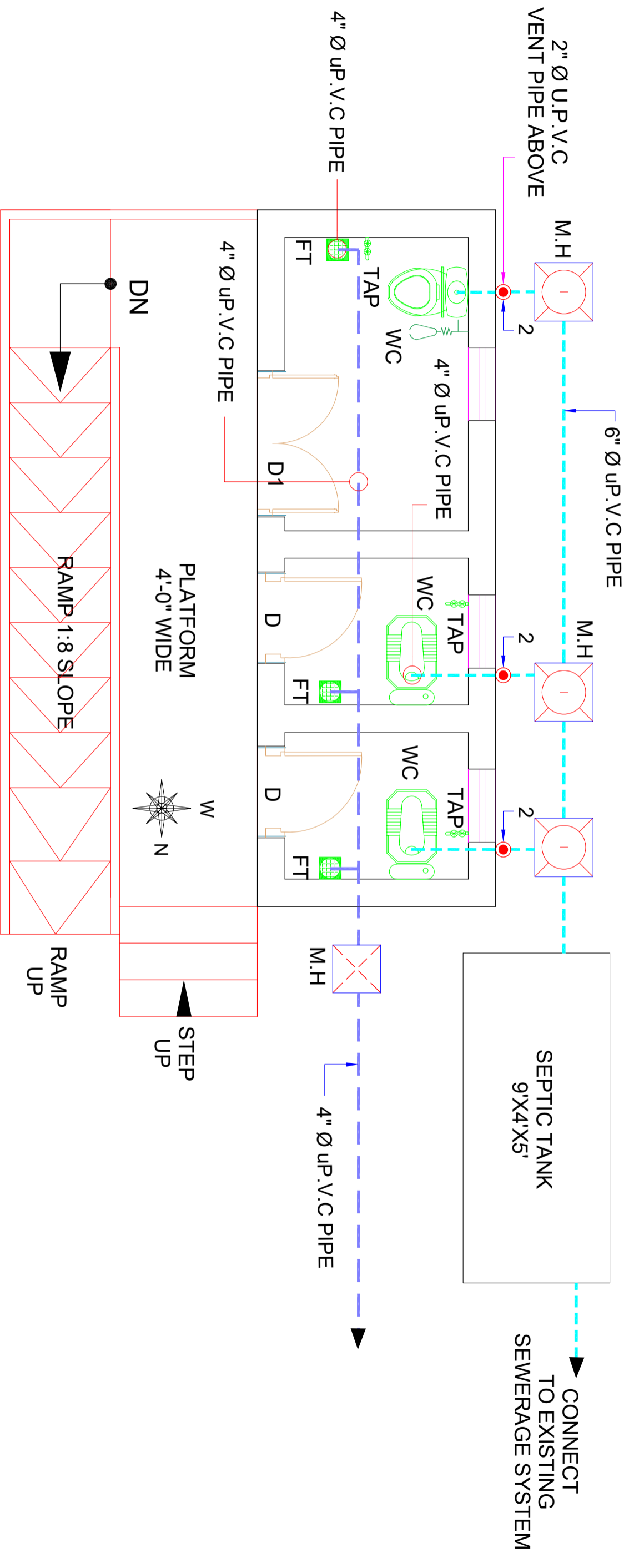
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SCHOOL NAME

REHAB WORKS OF
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 ATTOCK

Date of Revision	Prepared By	ARCHITECT	PROJECT:
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	Designed By		TITLE:
	Checked By		GENERAL NOTES
	Approved By		DATE
			SCALE
			DRG.NO.
			P-01



GROUND FLOOR PLUMBING PLAN

CLIENT:



CONSULTANTS:



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SCHOOL NAME

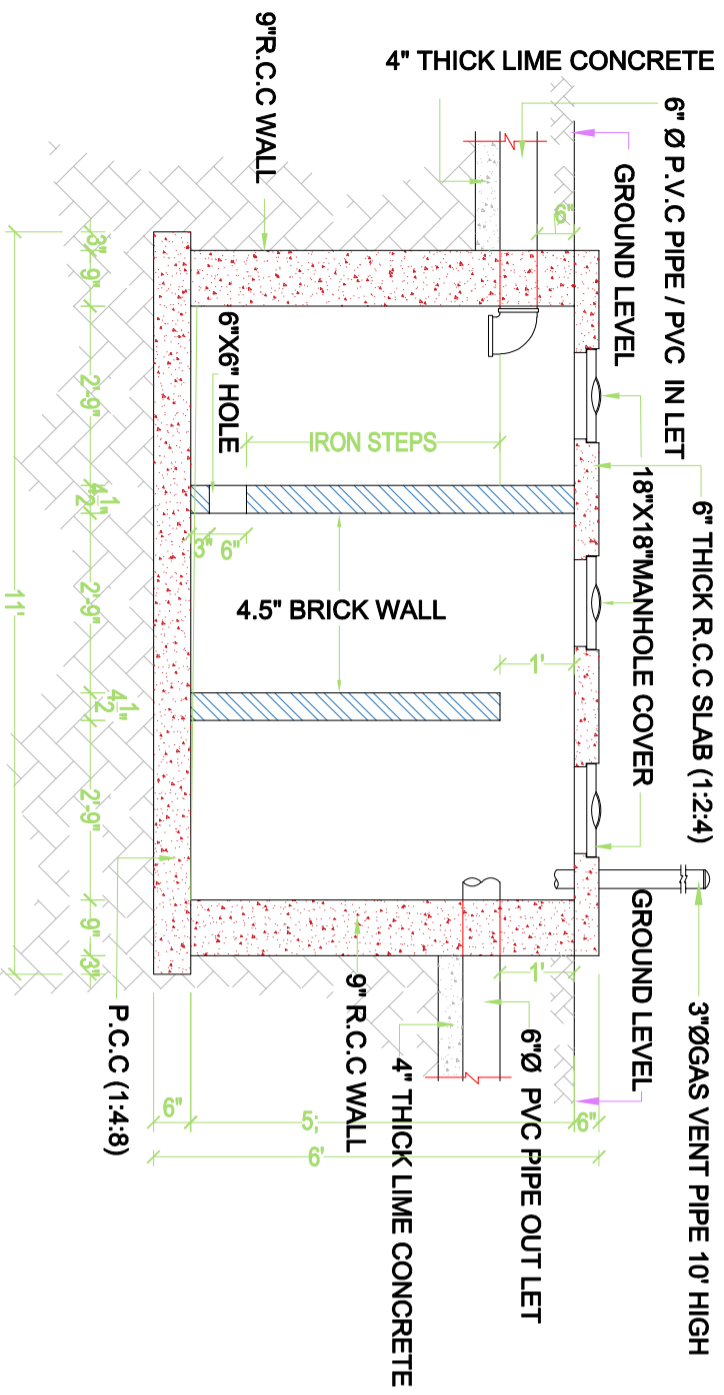
REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

Date of Revision	Prepared By	ARCHITECT
	FARID KHAN KHANHAIDER	
	Designed By	MARWATI KHAN ORAKZAI (B.Archd C.E.T Karachi) (M.Archd UET Lahore)
	Checked By	
	Approved By	

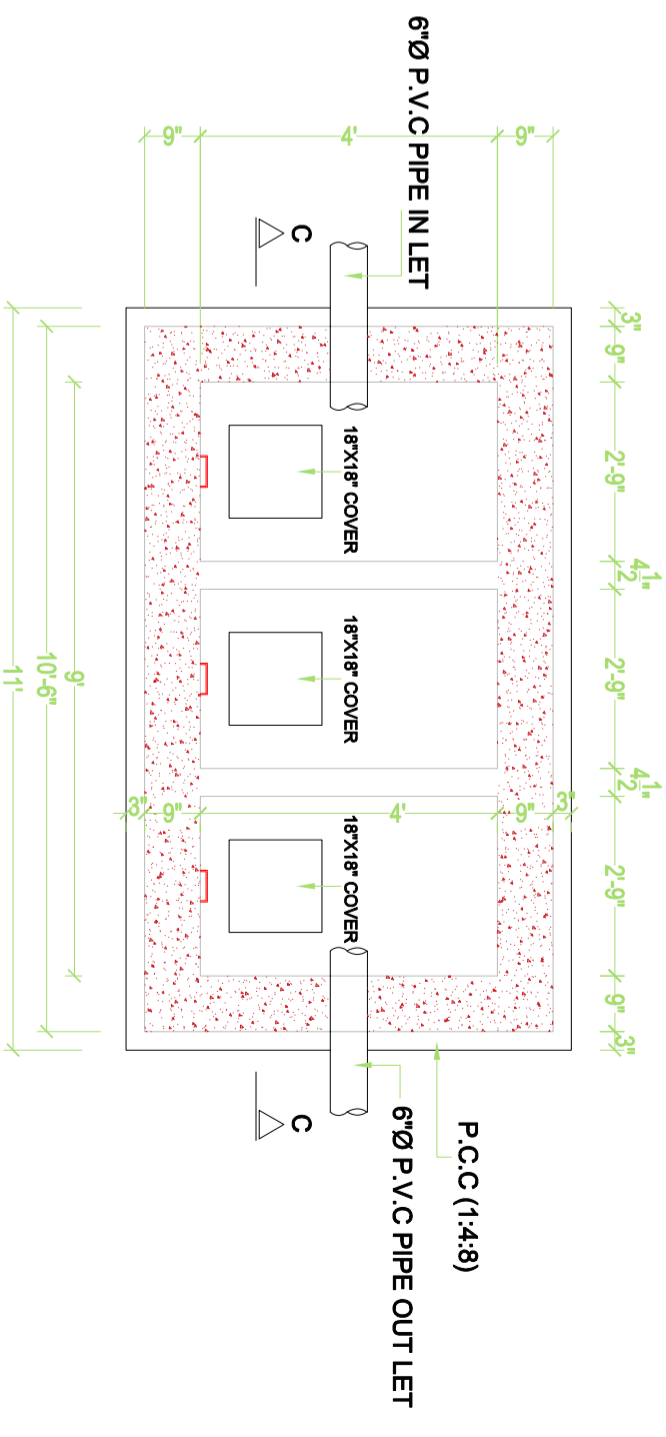
PROJECT:

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

TITLE:	DATE	SCALE	DRG.NO.
GROUND FLOOR PLUMBING PLAN	SFP 2023		P-02



SEPTIC TANK SECTION



SEPTIC TANK PLAN

CLIENT:



CONSULTANTS:

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







SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

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

PROJECT:	DATE	SCALE	DRG. NO.
PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		P-03
TITLE:			
SEPTIC TANK PLAN			

**WATER SUPPLY
DRAWING**

<u>LEGEND</u>	
	CW COLD WATER SUPPLY & MAKEUP WATER
	HW HOT WATER SUPPLY
	WMH WASTE WATER MANHOLE
	SMH SOIL WATER MANHOLE
	HWG HOT WATER GEYSER
	W.C WATER CLOSET (ENGLISH)
	W.C WATER CLOSET (INDIAN)
	W.B WASH BASIN
	F.T FLOW TRAP
	T.R TOWEL RAIL (ROD)
	SH SHOWER
	TAP
	OHWT OVER HEAD WATER TANK
	UGWT UNDER GROUND WATER TANK

CLIENT:



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REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT
 ATTOCK

Date of Revision

Prepared By

FARID KHAN
 KHANHAIDER
 ARCHITECT

PROJECT:

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

Designed By

MARWAT KHAN ORAKZAI
 (B. Archd. C.E.T Karachi)
 (M. Archt. Lect. Lahore)

TITLE:

LEGEND

Checked By

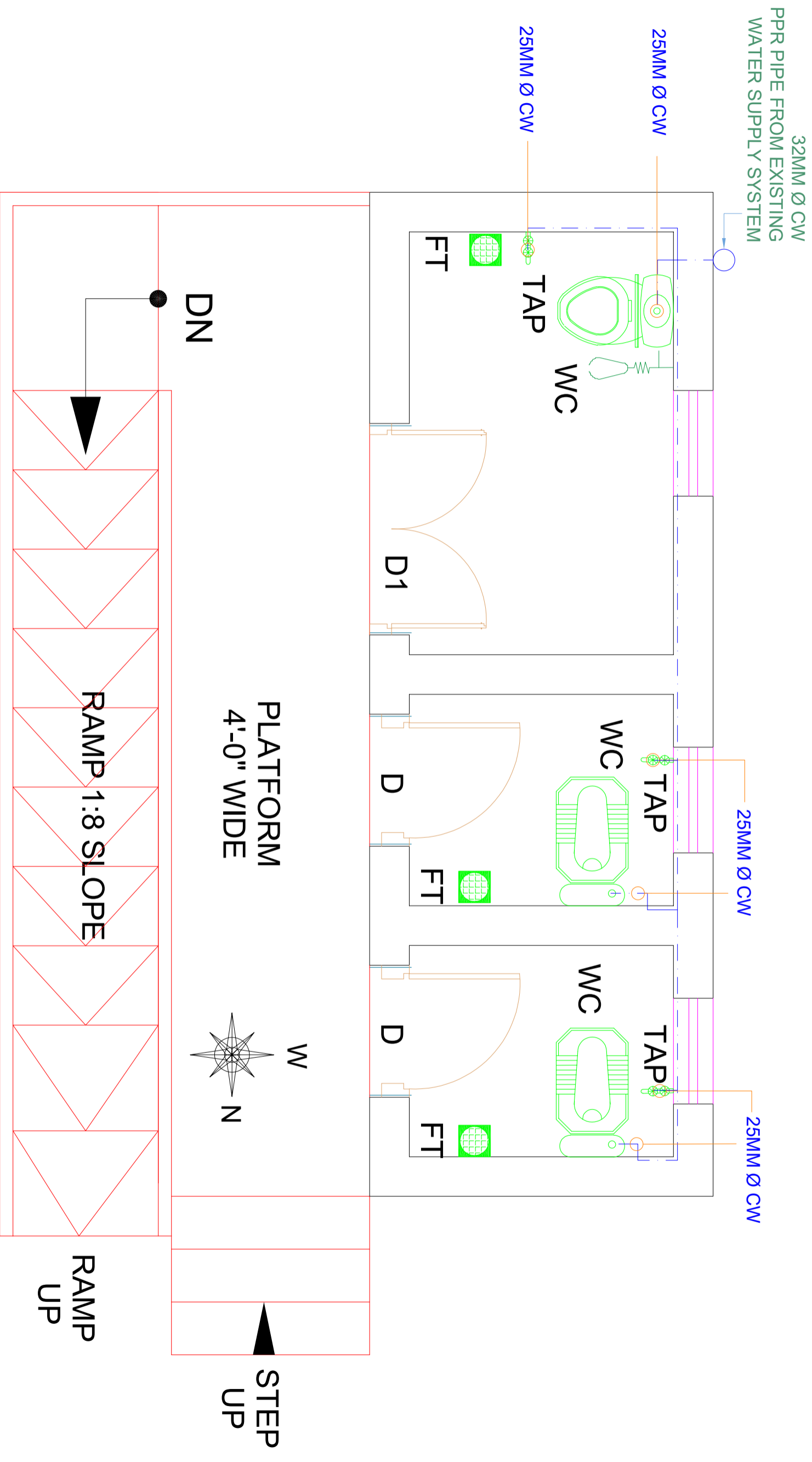
Approved By

DATE
 Sep 2023

SCALE

DRG. NO.

WS-01



GROUND FLOOR WATER SUPPLY PLAN

CLIENT:



The UN Refugee Agency

CONSULTANTS:



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REHAB WORKS OF
GBHS NO. 02 HAZRO DISTRICT
ATTOCK

Date of Revision

Prepared By

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

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.

WS-02

**ELECTRIFICATION DRAWINGS
OF
TOILET AND REHAB WORKS
AT
GBHS NO. 02 HAZRO DISTRICT
ATTOCK**

ELECTRICAL DRAWINGS		
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

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	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
 SEP 2023

SCALE

DRG. NO.

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 NECESSITATE 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 CARRIED OUT 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 OR ILLERIA SHELL 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 SAME SIZE FOR UP TO 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 SHELL BE CARRIED OUT WITH 1 CORE FLEXIBLE PVC CABLES OF SPECIFIED VOLTAGE GRADE AND SIZES.
13. THE MAXIMUM CAPACITY OF PVC CONDUITS FOR SIMIL TONCOUS DRAWING OF PVC INSULATED CABLES SHALL BE DETERMINED AS PIN 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 (3/8")
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 OTHERWISE 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
 - > WALL BRACKET FAN 90 INCHES

CLIENT:



CONSULTANTS:

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



SCHOOL NAME

REHAB WORKS OF
 GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	FAKID KIAN KIAN HADDER ELECTRICAL ENGINEER	PROJECT:
	Designed By	Engr. HAMMAD AHMAD	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Checked By		TITLE:
	Approved By		GENERAL NOTES
			DATE: <i>SEP 2023</i>
			SCALE
			DRG. NO. 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:  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 E-Mail: pce.pesh@yahoo.com	
SCHOOL NAME REHAB WORKS OF GBHS NO. 02 HAZRO DISTRICT ATTOK		Date of Revision	Prepared By FARD KHAN KHAN HADIR ELECTRICAL ENGINEER
PROJECT: PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES		Designed By Engr. HAMMAD AHMAD	TITLE: APPROVED MANUFACTURE LIST
DATE	SCALE	DRG.NO.	E-02
SEP 2023			

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:



CONSULTANTS:



PLANNERS CONSULTANTS ENGINEERS (PCE)

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SCHOOL NAME

REHAB WORKS OF
GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision

Prepared By

EBAD KIYAN
KIYAN HANIDER
ELECTRICAL ENGINEER

PROJECT:

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

TITLE:

LEGEND

Designed By

Engr. HAMMAD AHMAD

Checked By

Approved By

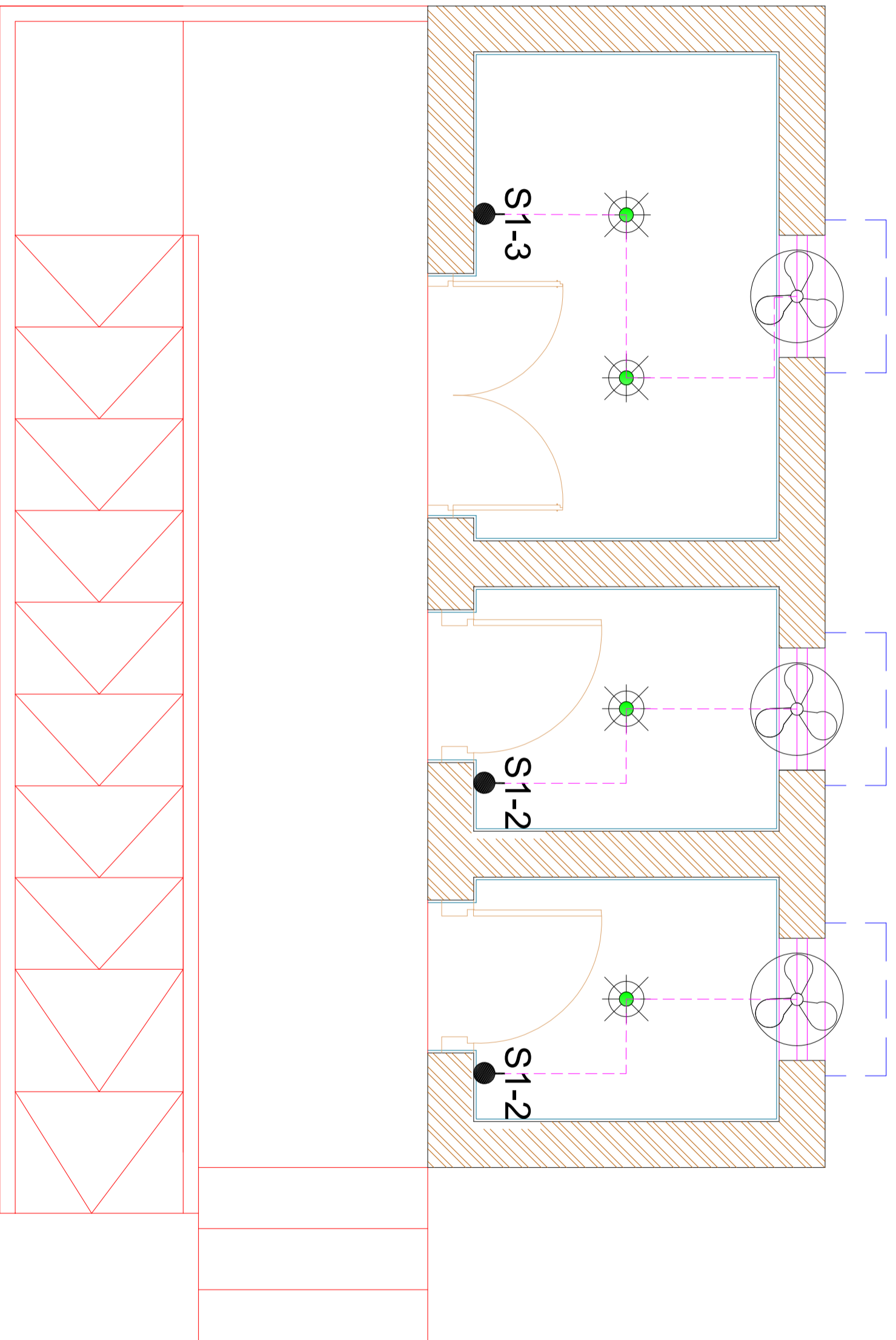
DATE

SEP 2023

SCALE

DRG. NO.

E-03



GROUND FLOOR PLAN

CLIENT:



CONSULTANTS:
PLANNERS CONSULTANTS ENGINEERS (PCE)

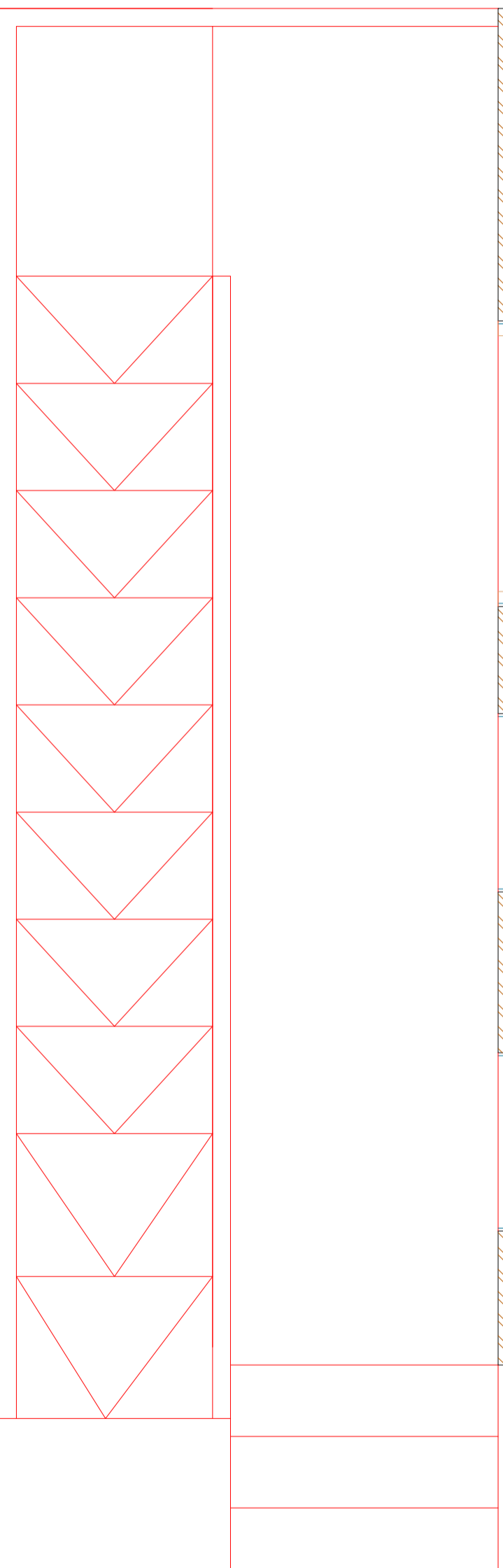
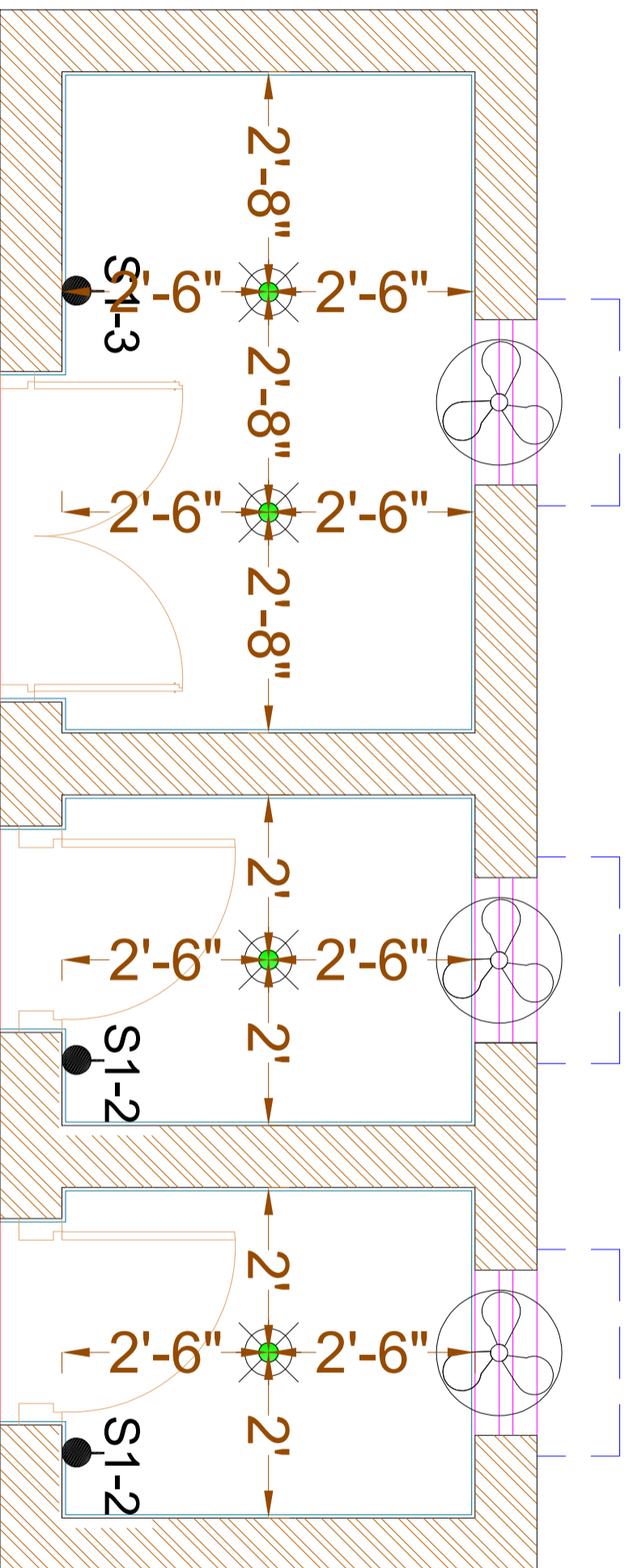
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 GBHS NO. 02 HAZRO DISTRICT ATTOCK

Date of Revision	Prepared By	DESIGNED BY
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	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		E-04
TITLE:			
GROUND FLOOR PLAN			



GROUND FLOOR DIMENSION PLAN

CLIENT:



CONSULTANTS:



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SCHOOL NAME

REHAB WORKS OF
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Date of Revision	Prepared By	Designed By	Checked By	Approved By
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PROJECT:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		E-05

TITLE:
GROUND FLOOR DIMENSION
PLAN