

PART-A

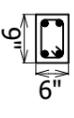
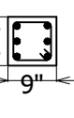
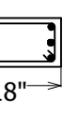
PROPOSED STRUCTURE DESIGN OF, PLOT#**SCHOOL BUILDING** CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

Foundation Plan

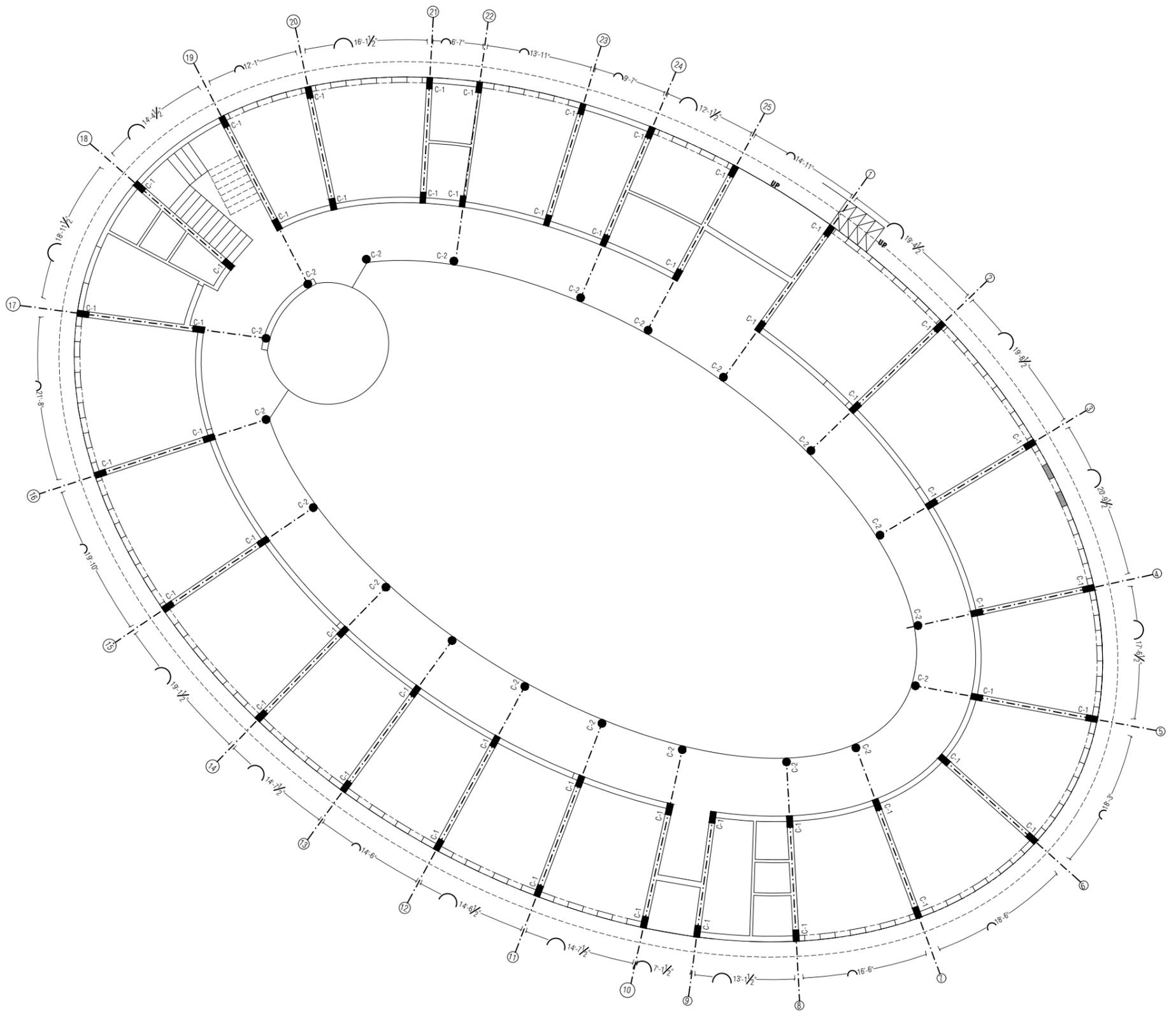
Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE:
DRAWING NO. S-00	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY. M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE
				CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR# 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Isd.  TETR S Design Studio Email: tetrisdesignstudio11@gmail.com

STRUCTURAL NOTES

- Class "A" kiln burnt brick with minimum crushing strength of 1500 PSI should be used & joint at end should be sloppy, Vertical toothed joint at corners are prohibited.
- A Steel ASTM A-615 G-60 deformed bars for all diameters.
- Concrete 3000 PSI compressive strength after 28 days for footings, beams, slabs columns and in water retaining structures, concrete 4000 PSI compressive strength after 28 days.
- Cement-sand mortar should be used as
 - In Foundation 1:6
 - Super Structure 9" thick 1:5
 - Super Structure 4 1/2" thick 1:4
- Concrete clear coverage should be followed as:-
 - Slab 3/4" Bottom.
 - Beams 1 1/2" All Sides.
 - Columns 1 1/2" All Sides.
 - Footing 2" All Sides.
- Lap length should be followed As:-
 - 3/4" $\phi = 45"$
 - 5/8" $\phi = 36"$
 - 1/2" $\phi = 30"$
 - 3/8" $\phi = 20"$
- Plinth beam should be provided at plinth level. The X-sec has shown on the attached drawing. The plinth level may not be more than two feet higher than the reference road.
- Dowels at corners & junctions should be provided at each 3'-0" height & 3'-0" on either side.
- The design is in accordance with seismic zone II-B.
- Footing has been designed for two stories plus munitly with Bearing capacity of 1.0 Tsf for Strip Footing at -3'-0" from RL. (As Reported by G.E.O CRUST), JULY 2025.
- It is mandatory for owner/contractor to keep the building safe from ingressing of water from U.G.W tank, Septic tanks OR Main Holes.
- Engineer will not responsible if damage occur due to entering of water in the building.
- Excavation should not go beyond the foundation level of adjacent Building/structure.

SCHEDULE OF R.C.C LINTELS						ABBREVIATION USED			
S/NO	SPAN	SIZE	REINFORCEMENT		RINGS	X-SECTION	S/NO	C/C	ABBREVIATION USED
			BOTTOM	TOP					
1	UP TO 4'	9"X6"	2#3	2#3	#3-4"C/C		1	C/C	Center to Center
2	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		2	E.S.L	Existing Surface Level
3	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		3	G.F.F.L	Ground Finish Floor Level
4	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		4	W.F	Wall Footing
5	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		5	C-1	Column No. 1
6	UP TO 8'	9"X9"	3#3	3#3	#3-4"C/C		6	C.B	Concealed Beam
7	UP TO 12'	9"X12"	3#4	3#4	#3-5"C/C		7	U.B	Upstand Beam
8	UP TO 12'	9"X12"	3#4	3#4	#3-5"C/C		8	B/W	Both Ways
9	UP TO 12'	9"X12"	3#4	3#4	#3-5"C/C		9	P.C.C	Plain Cement Concrete
10	UP TO 15'	9"X15"	4#4	3#4	#3-5"C/C		10	LBD	Lintel Beam At Door
11	UP TO 18'	9"X18"	5#4	3#4	#3-6"C/C		11	DB	Deep Beam

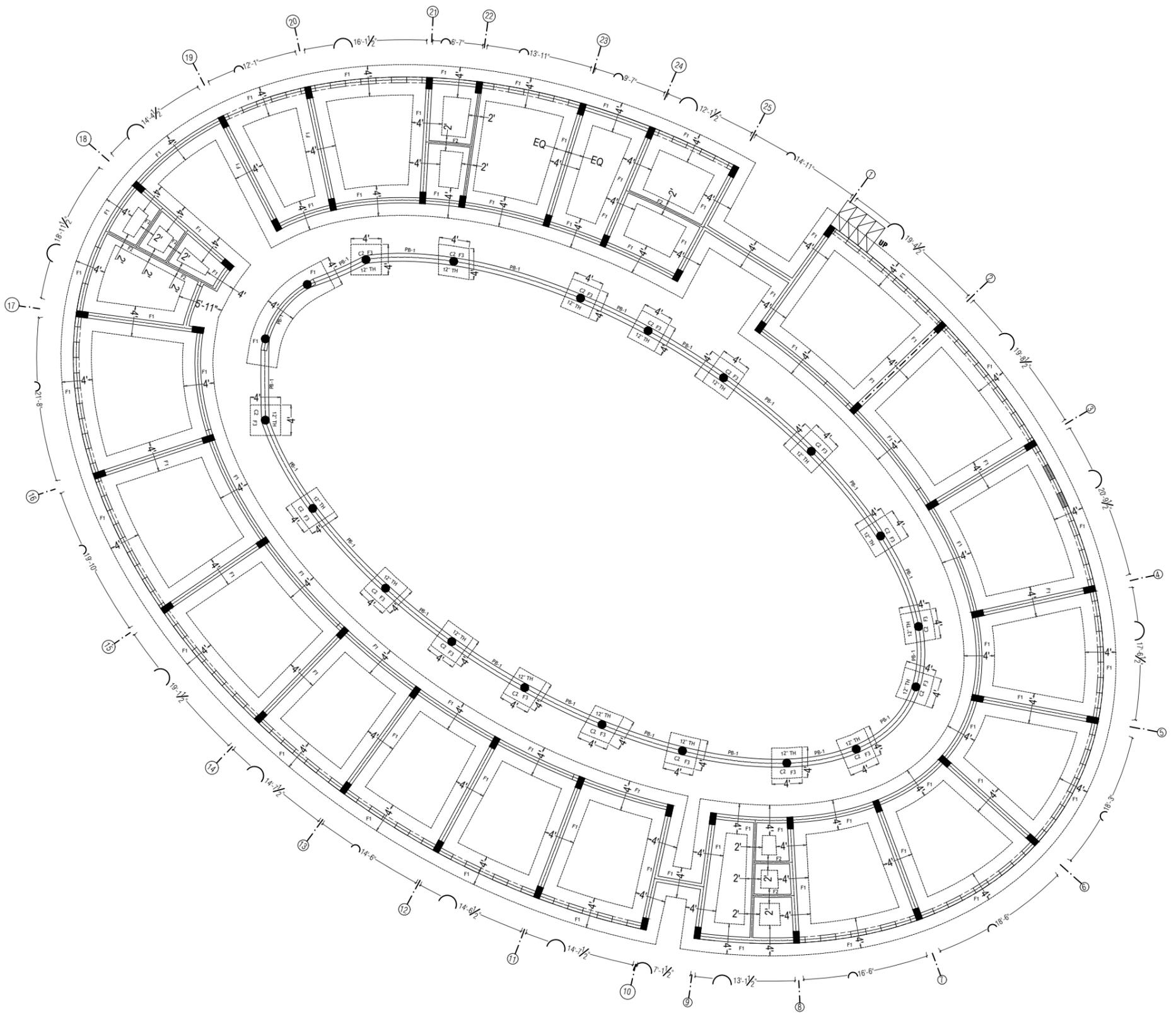
Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: STRUCTURAL NOTES	 CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN PHASE 4, ISLAMABAD BAHRIATOWN Rwp15dd. Email: tetrisdesignstudio1@gmail.com
DRAWING NO. S-01	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	



LAYOUT PLAN OF WALLS & COLUMNS AT GROUND FLOOR
CONFIRM SEWERAGE AND WATER SUPPLY
PIPES OF BUGTI BALOCHISTAN, FOR THEIR LEAKAGE.

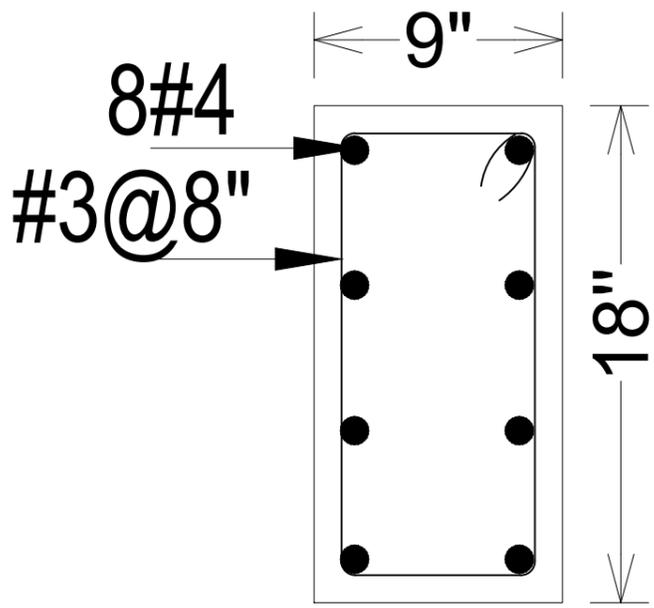
Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: LAYOUT PLAN OF WALLS & COLUMNS AT GROUND FLOOR
DRAWING NO. S-02	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE DRAWN BY. M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, B-Office 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/1bd.



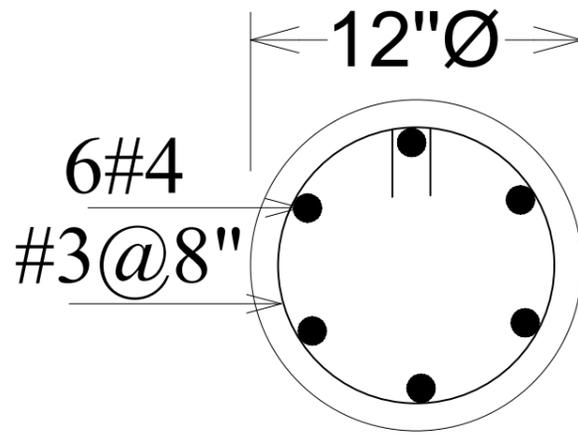


FOUNDATION LAYOUT PLAN OF GROUND FLOOR

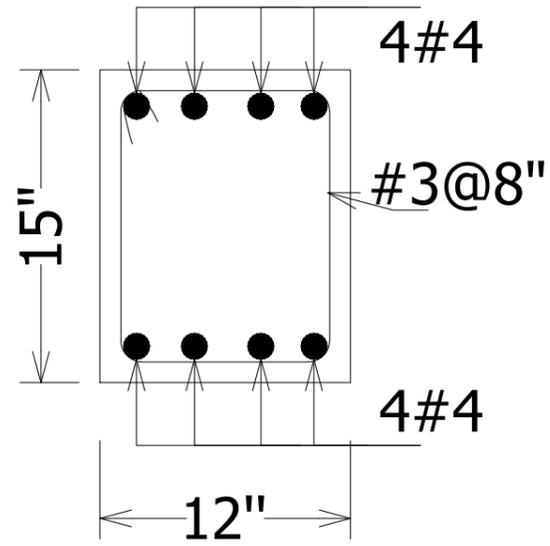
Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: FOUNDATION LAYOUT PLAN OF GROUND FLOOR	 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com
DRAWING NO. S-03	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	



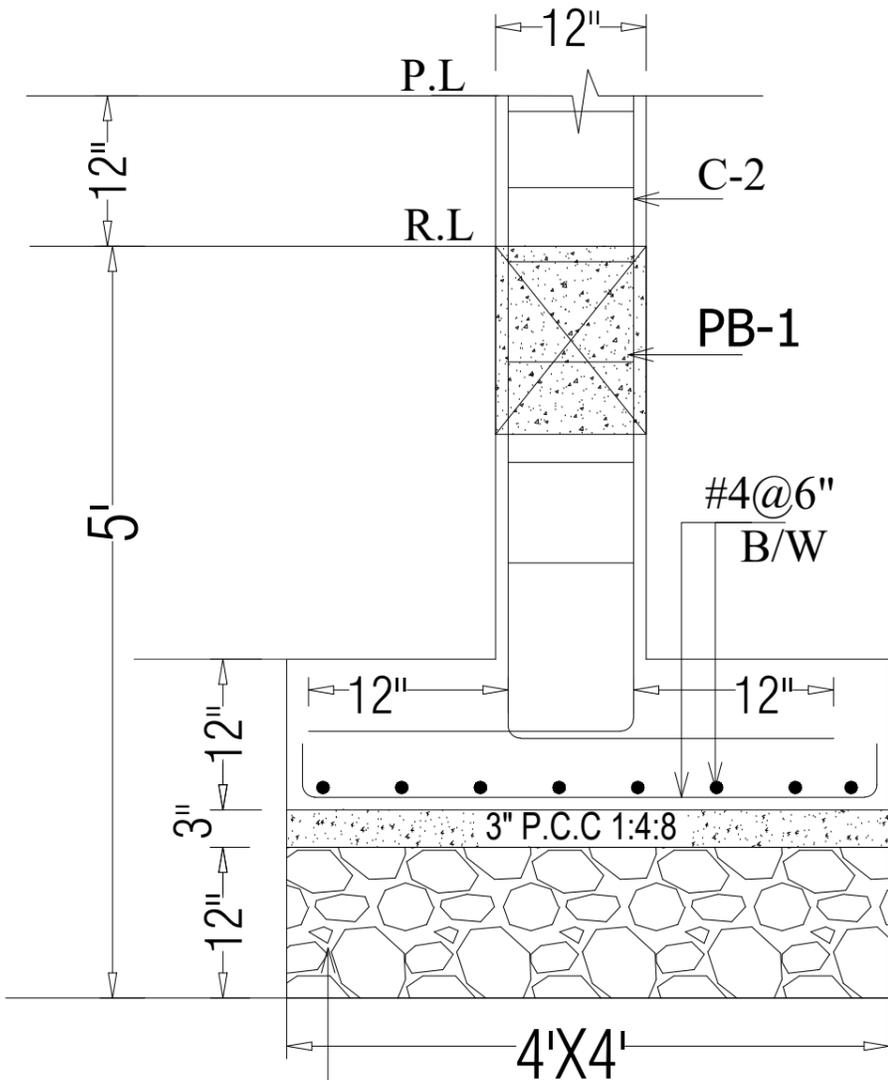
PLAN OF C1



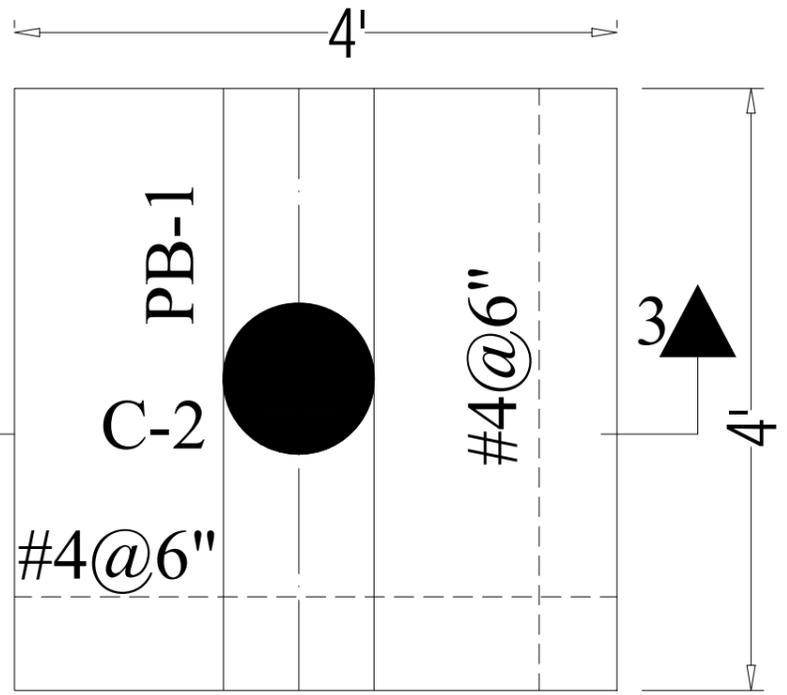
PLAN OF C2



X-SECTION PB-1



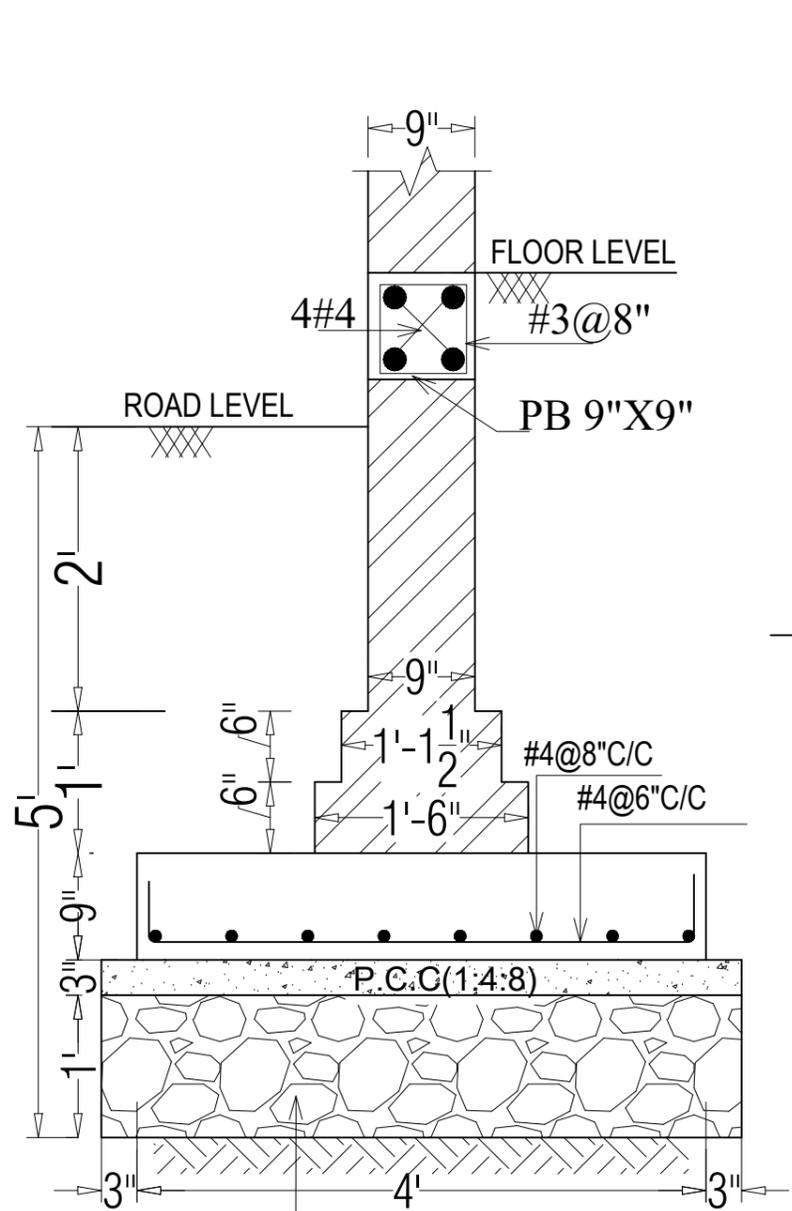
**12" GRANULAR MATERIAL
(COMPACTED UPTO 95%)
X-SEC AT 3-3
IN HARD STRATA**



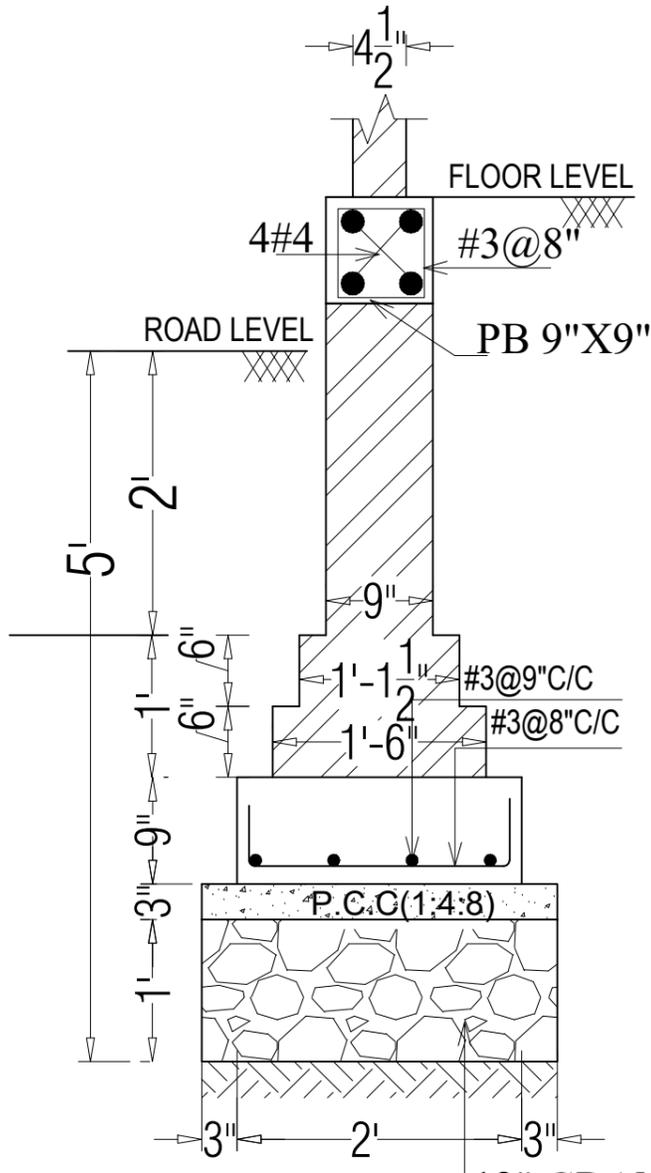
PLAN OF F-3

Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: COLUMNS SECTIONN
DRAWING NO. S-04	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, BLOFFICE & FLOOR PLAZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/td.

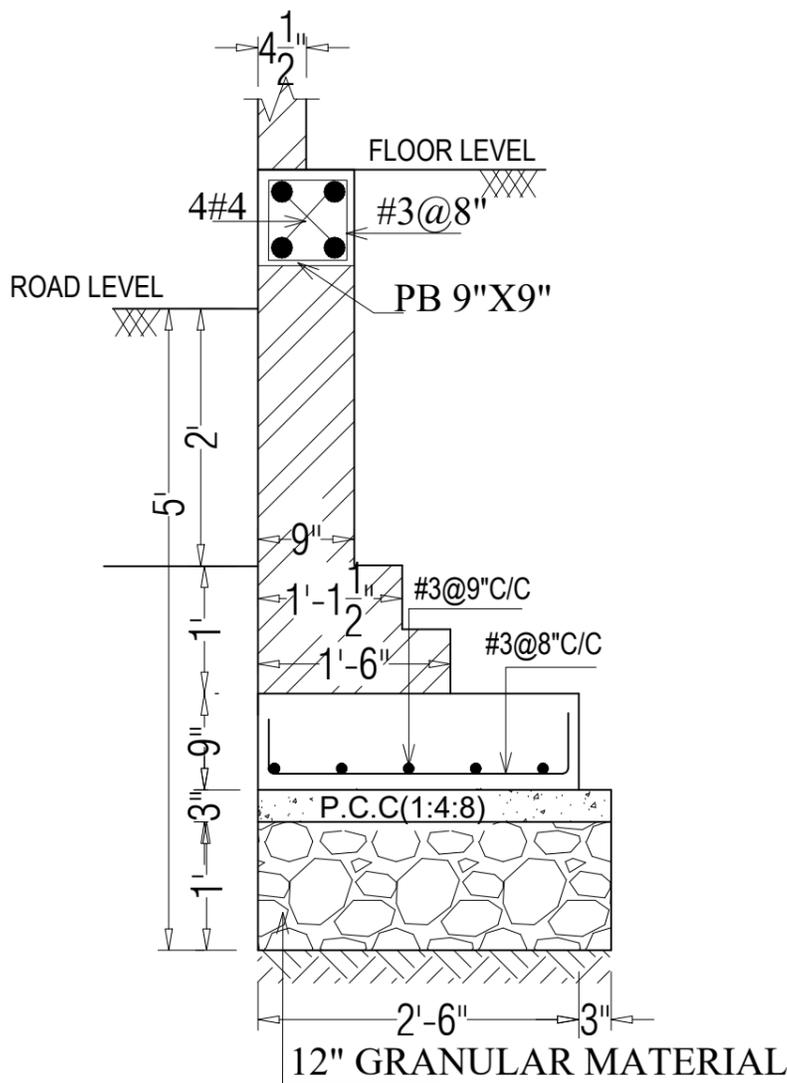




FOOTING F1
 12" GRANULAR MATERIAL
 (COMPACTED UPTO 95%)
IN HARD STRATA



FOOTING F2
 12" GRANULAR MATERIAL
 (COMPACTED UPTO 95%)
IN HARD STRATA



12" GRANULAR MATERIAL
 (COMPACTED UPTO 95%)
FOOTING BOUNDRY WALL
IN HARD STRATA

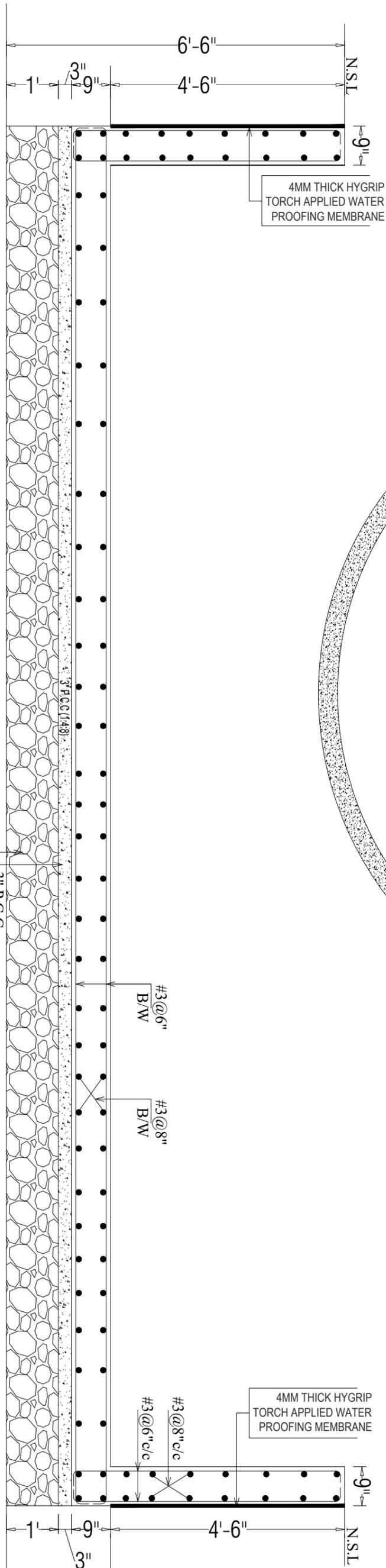
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Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr.Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SECTION DETAIL AT
DRAWING NO. S-05	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, BOffice & FLOOR PLAZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/tdl.



X-SEC AT 4-4
IN HARD STRATA

3" P.C.C
12" GRANULAR MATERIAL
(COMPACTED UPTO 95%)

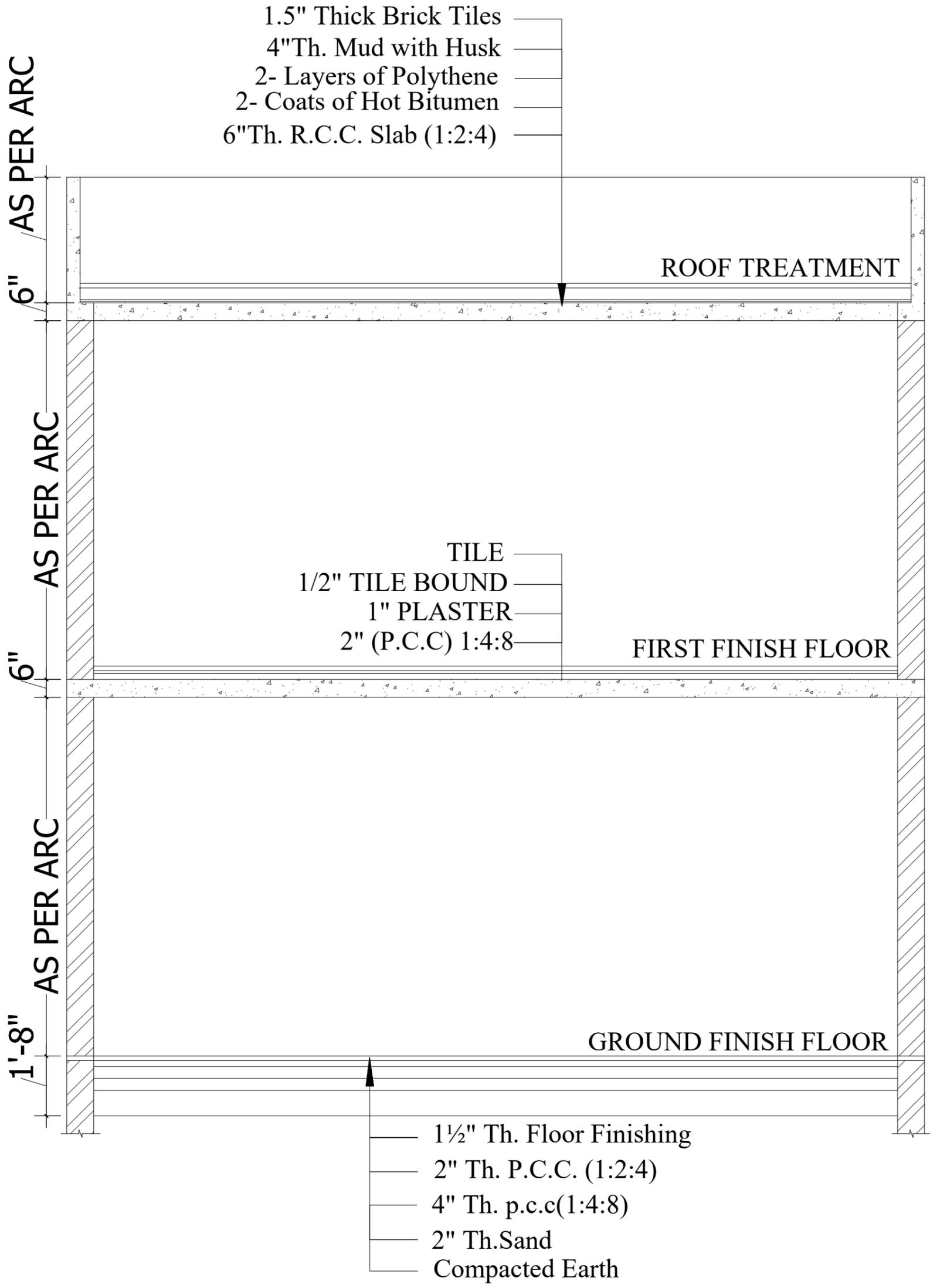


4MM THICK HYGRIP
TORCH APPLIED WATER
PROOFING MEMBRANE

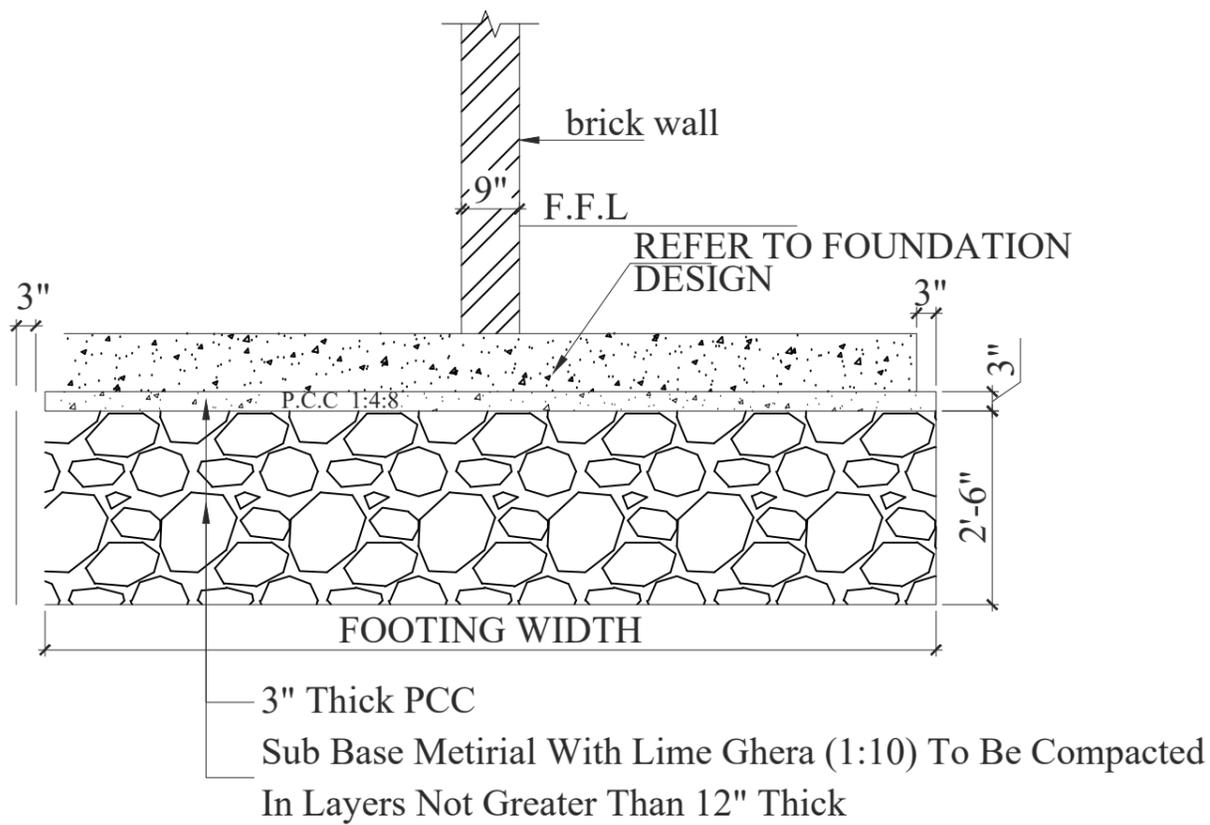
4MM THICK HYGRIP
TORCH APPLIED WATER
PROOFING MEMBRANE

RAIN HARVESTING POND

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SECTION DETAIL AT 4-4
DRAWING NO. S-06	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE
				CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6/FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/tdl. TETR S Design Studio Email: tetrisdesignstudio11@gmail.com

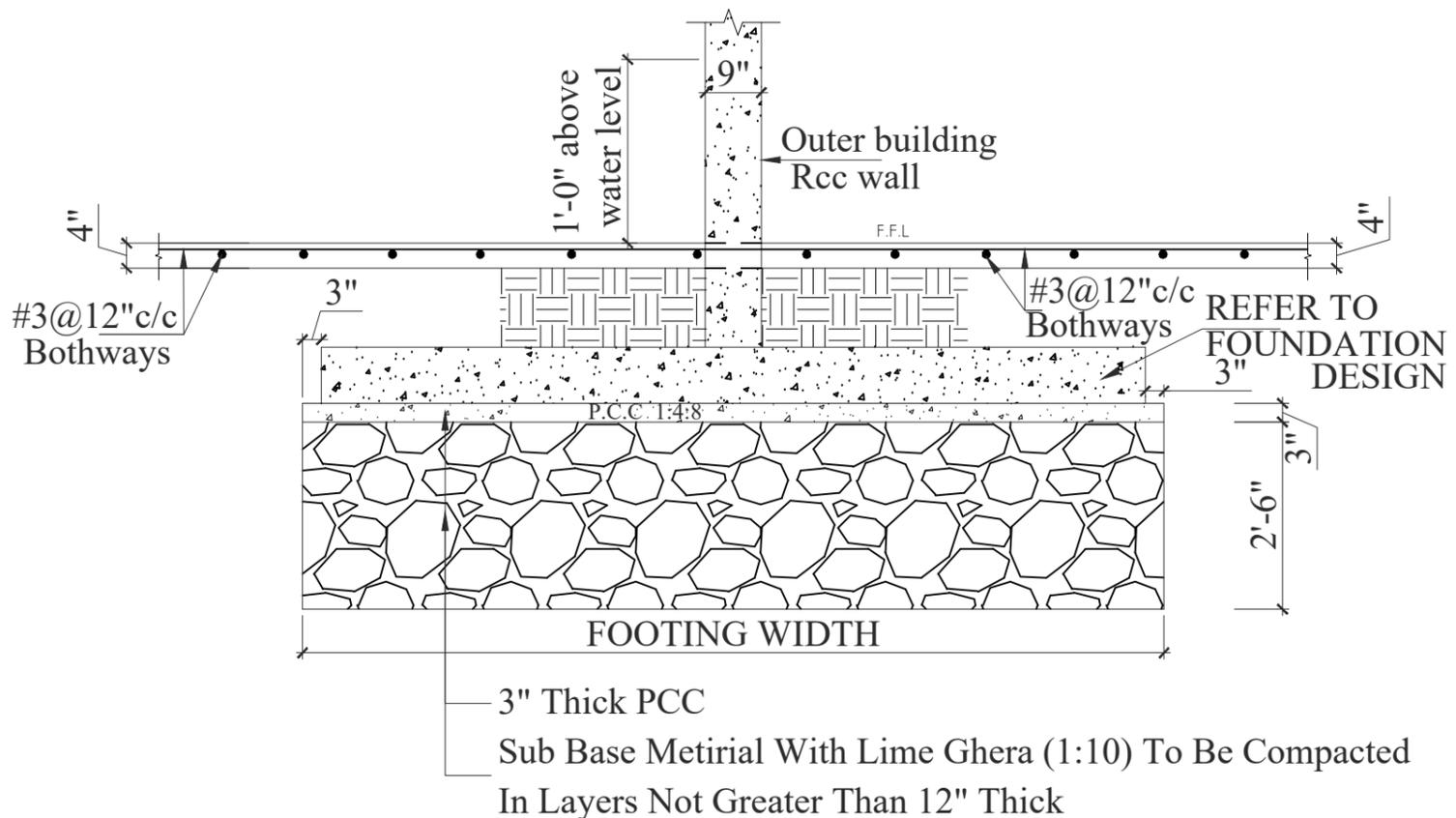


Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr.Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: TYPICAL DETAIL FOR TOP WATER PROOFING AND FLOORING
DRAWING NO. S-07	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp15dd. TETR S Design Studio Email:tetrisdesignstudio1@gmail.com



TYPICAL SECTION OF FOOTING FOR RESIDENTIAL BUILDING WHEN WATER LEVEL IS BELOW FFL BUT WITHIN 6'-0" BELOW FOOTING.

- 1- Where ever high ground water table will be encountered Footings shall be designed for a bearing capacity Treatment as mentioned above shall be provided beneath footings.
- 2- For basement, Rcc walls shall be designed for submerged earth pressure



TYPICAL SECTION OF FOOTING FOR RESIDENTIAL BUILDING WHEN WATER LEVEL IS ABOVE FFL

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DRAWING NO. S-08	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	

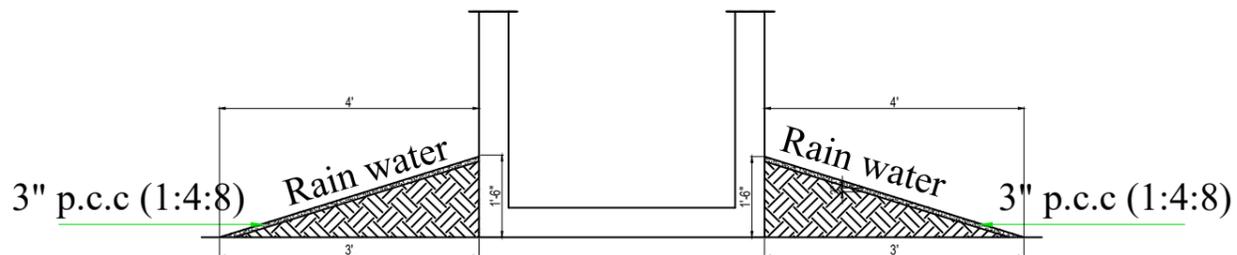
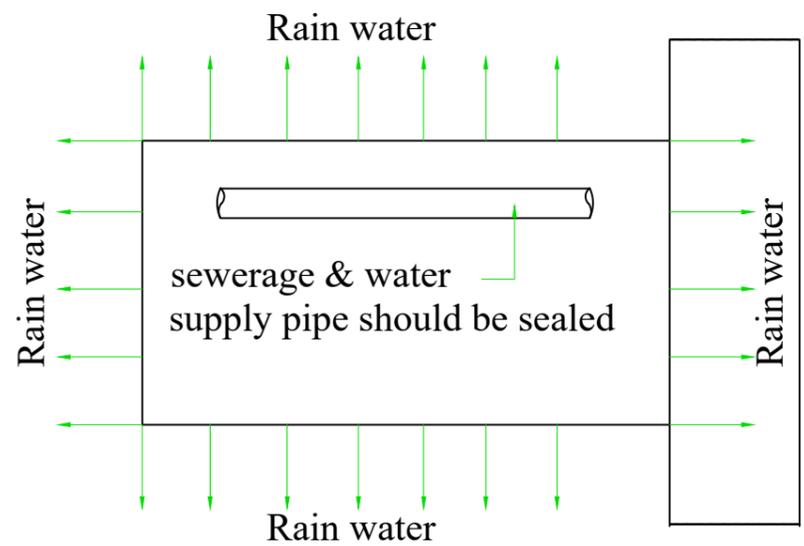
Prevention is better than cure

Prevent

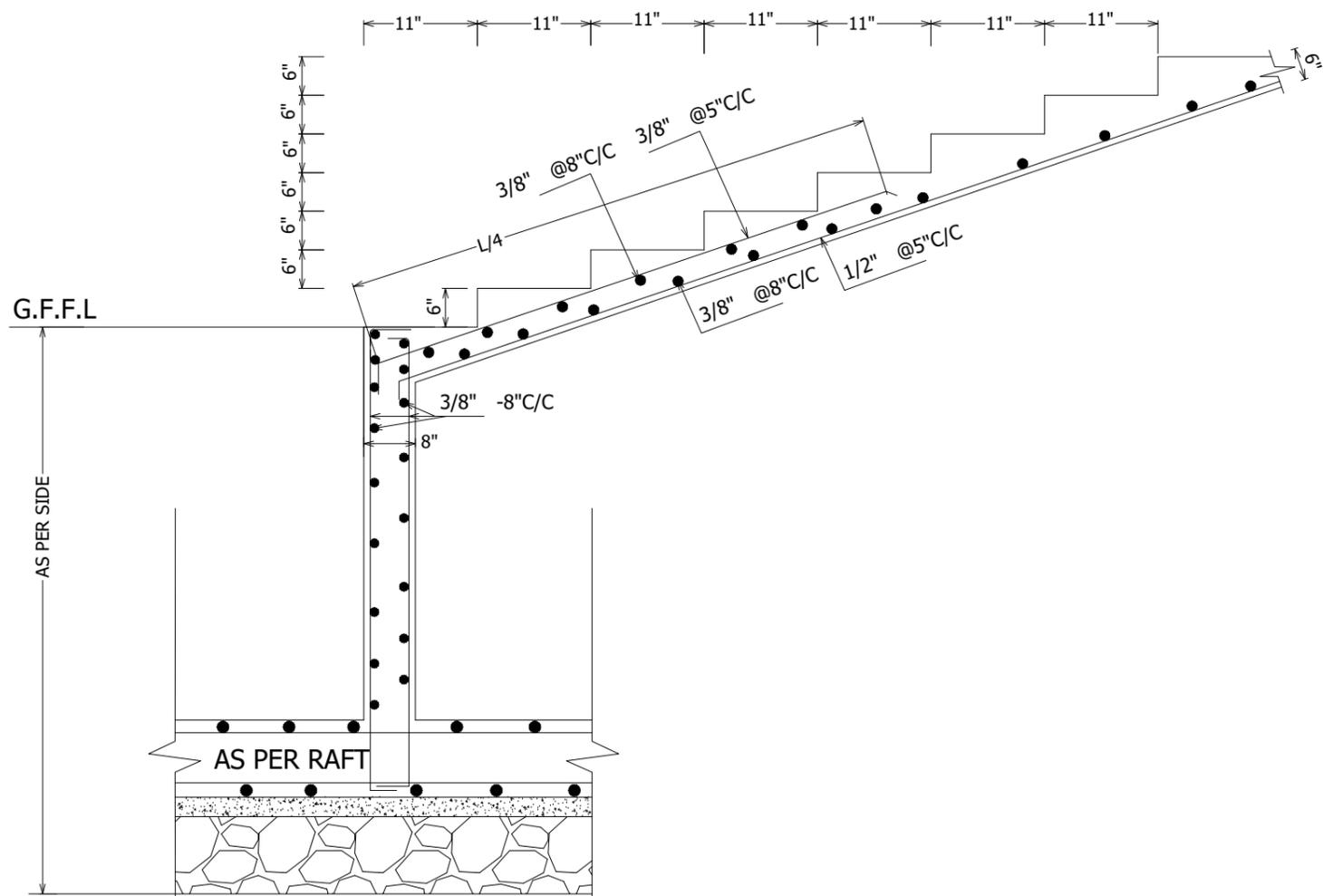
Penetration of water in your building foundation.
During construction & after completion.

1. In side leakage of sewerage & water supply system.
2. For out side rain water, make proper slope out side your building wall to move water away from you building.

It will protect your building from any damage.



Consulting Structural Engineers TETR S DESIGN STUDIO	DATE. 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT. TAALEEM FOUNDATION	TITLE. SECTION DETAIL AT 1-1 SECTION DETAIL AT 2-2	 TETR S Design Studio Email: tetrisdesignstudio1@gmail.com
DRAWING NO. S-09	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY. M Sabir Khan	PROJECT. PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	

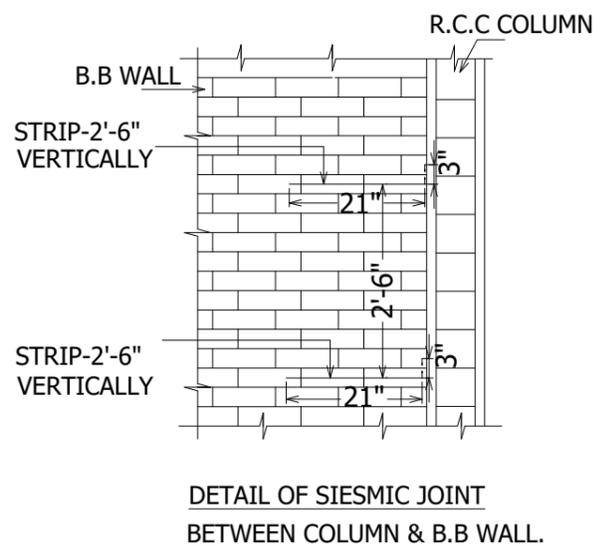
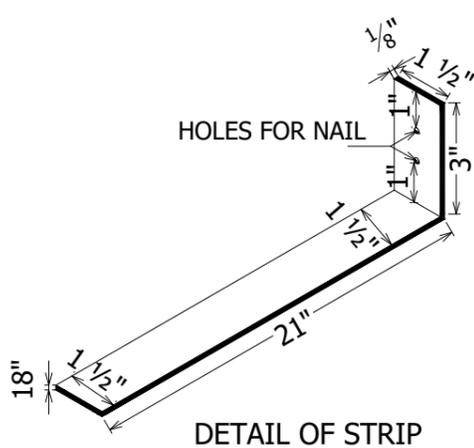
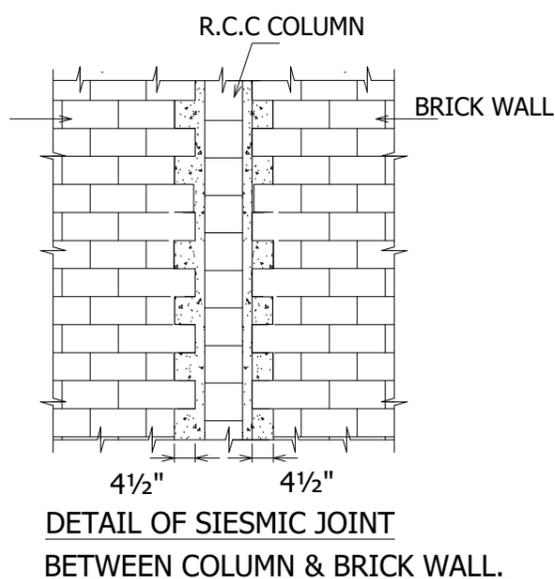
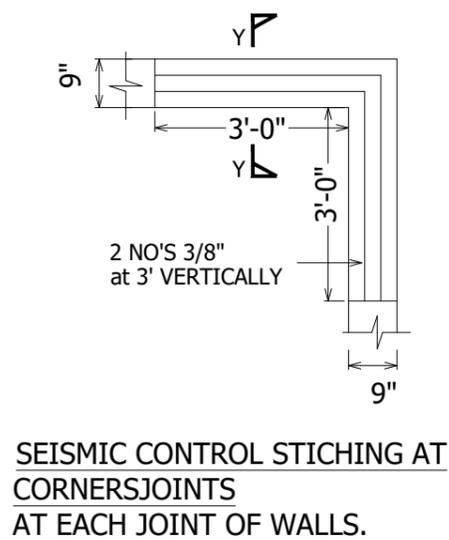
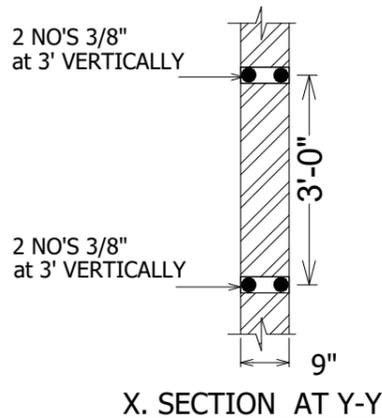


Note: Compact Soil up to 95° Before Starting the Footing Work.
Get Confirmation From FDT Test Of Any Approved Laboratory.

Note: Compact Soil up to 95° Before Starting the Footing Work.
Get Confirmation From FDT Test Of Any Approved Laboratory.

JOINTS DETAIL

Brick Masonry & RCC Work



Consulting Structural Engineers
TETR S DESIGN STUDIO

DATE:
02-11-2025

Designed By:
Engr. Bilal Ansari

CLIENT:
TAALEEM FOUNDATION

TITLE:
JOINTS DETAIL

DRAWING NO.
S-10

Checked By:
Engr. Liaqat Ali

THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE

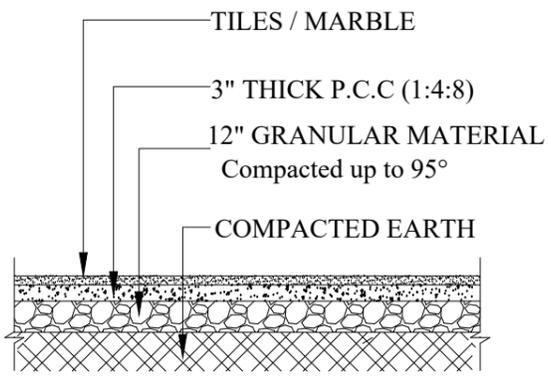
DRAWN BY:
M Sabir Khan

PROJECT:
PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

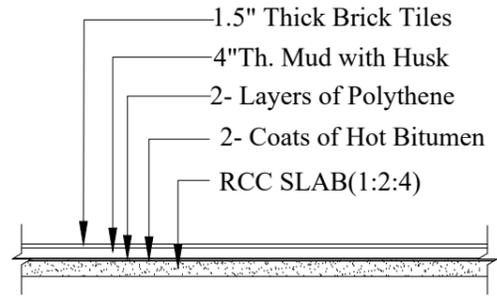
CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Isl.



TYPICAL DETAILS



FLOORING DETAIL

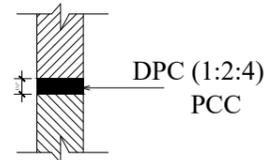


ROOF TREATMENT

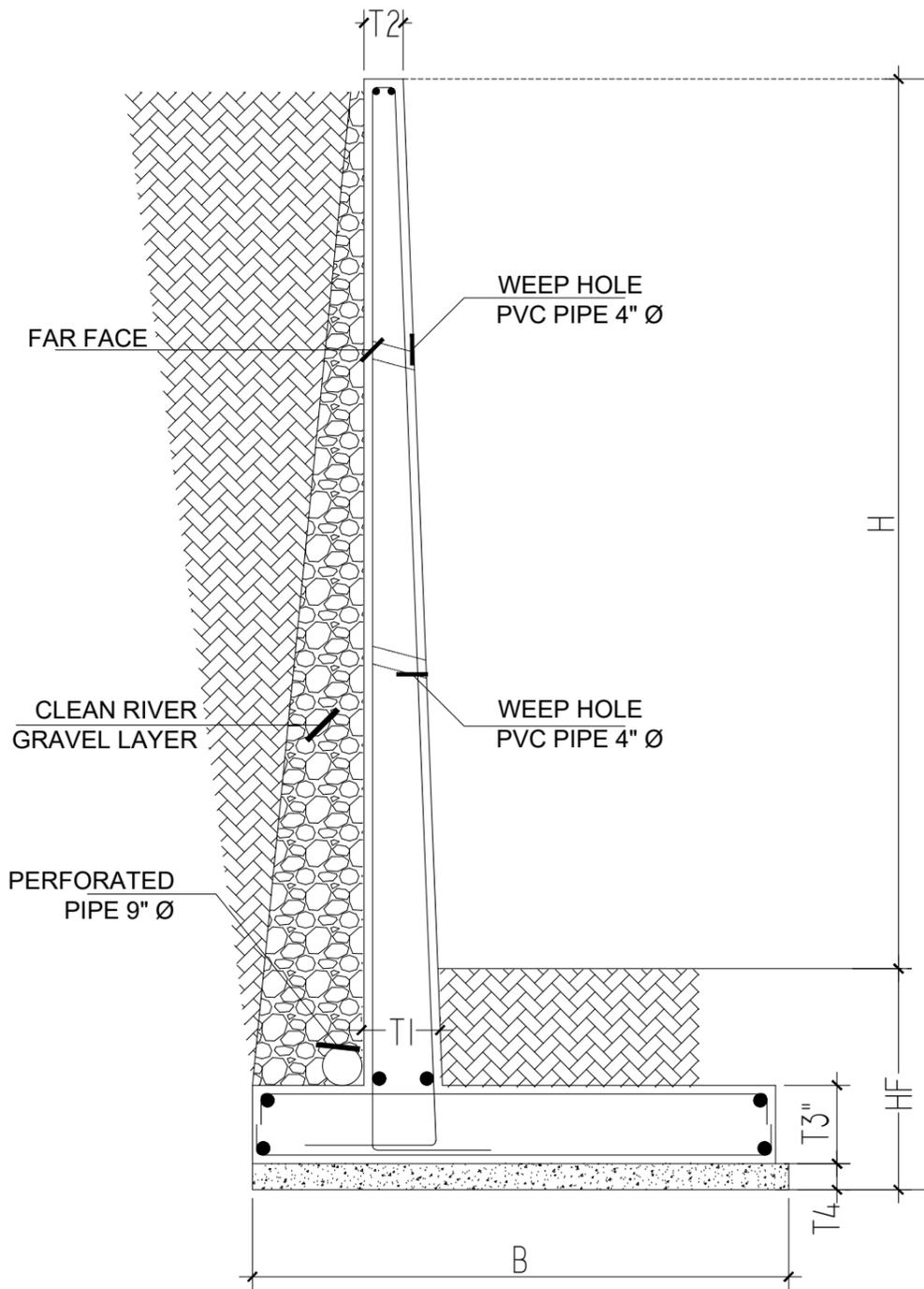
TERMITE CONTROL :

- #1. USE BIFLEX OR ANY APPROVED MATERIAL BY BAHRIA TOWN DESIGN WING.
- #2. THIS SHOULD BE DONE BEFORE LAYING OF PCC AT FOOTING LEVELS BY WETTING ALL SIDES OF EXCAVATED SOIL AND BEFORE FIXING OF TILES/MARBELS AT GROUND FLOOR LEVEL.

DPC DETAIL :



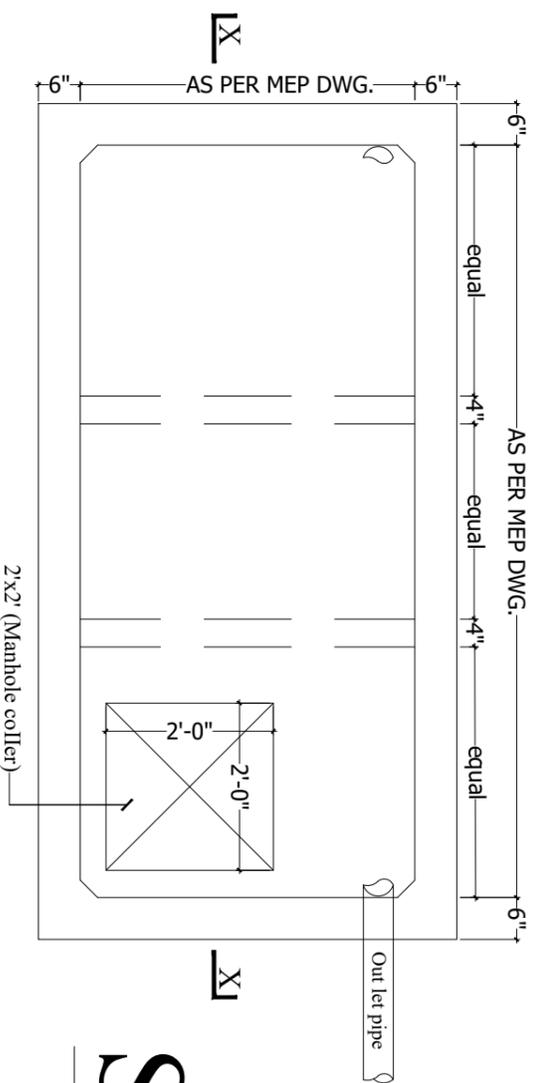
DPC 1½" THICK+ 2 COAT OF HOT BITUMEN AND ONE LAYER OF POLY THIENE SHEET OF 0.008" THICK



TYP SECTION OF RETAINING WALL

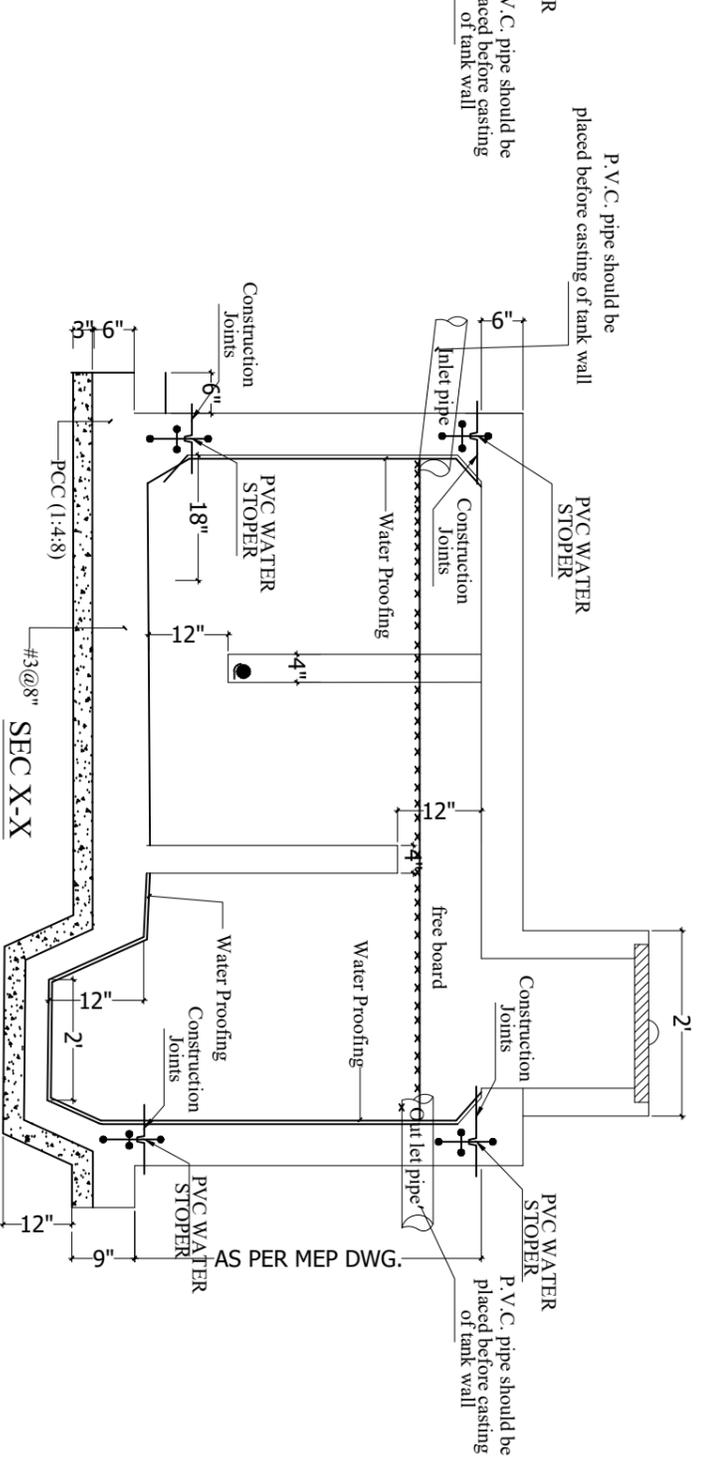
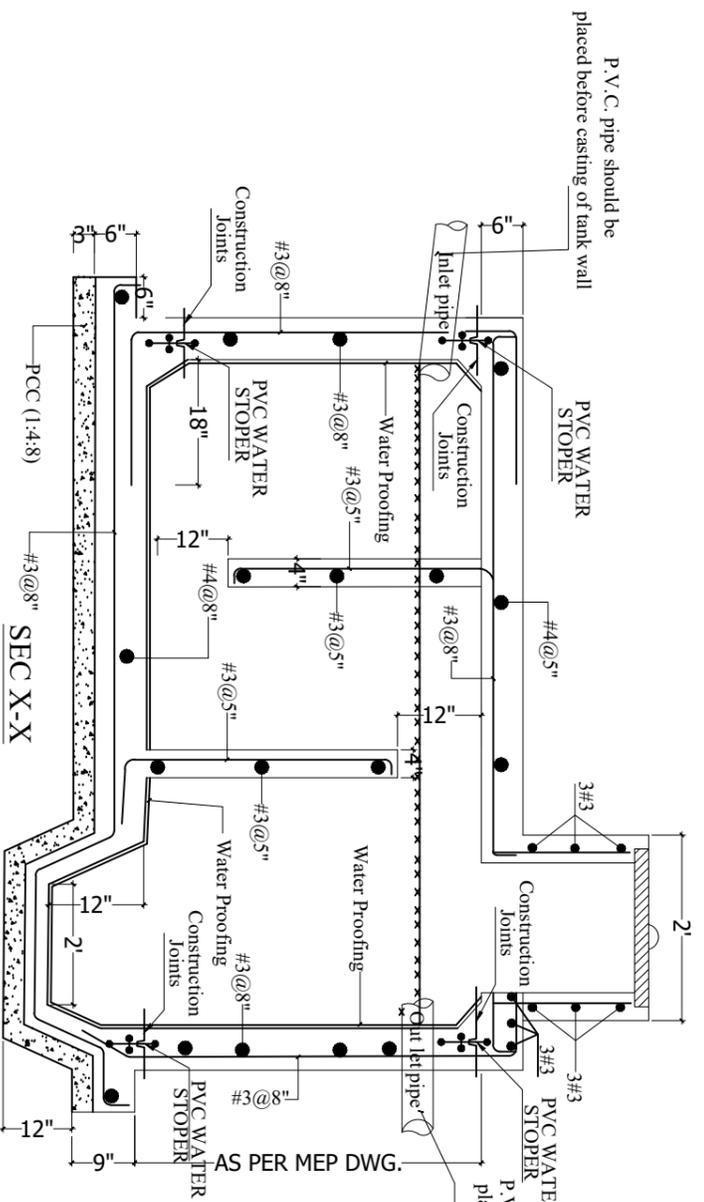
(ASK FOR ACTUAL DESIGN AS PER SITE REQUIRMENT)

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: TYPICAL DETAILS	 CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Idd.
DRAWING NO. S-11	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	



PLAN OF TYPICAL SEPTIC TANK

SEPTIC TANK



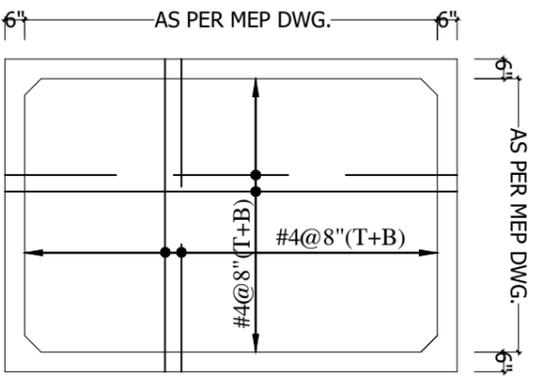
NOTE :- WATER PROOFING

(1Mr. Two coats of Water proofing chemical.
 (2Mr. Plaster with Chips (3/4" thick).

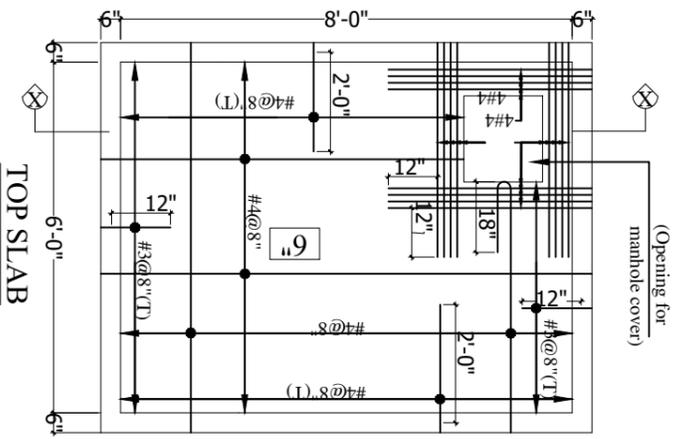
NOTE :- WATER PROOFING

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SEPTIC TANKS	 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com
DRAWING NO. S-12	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	

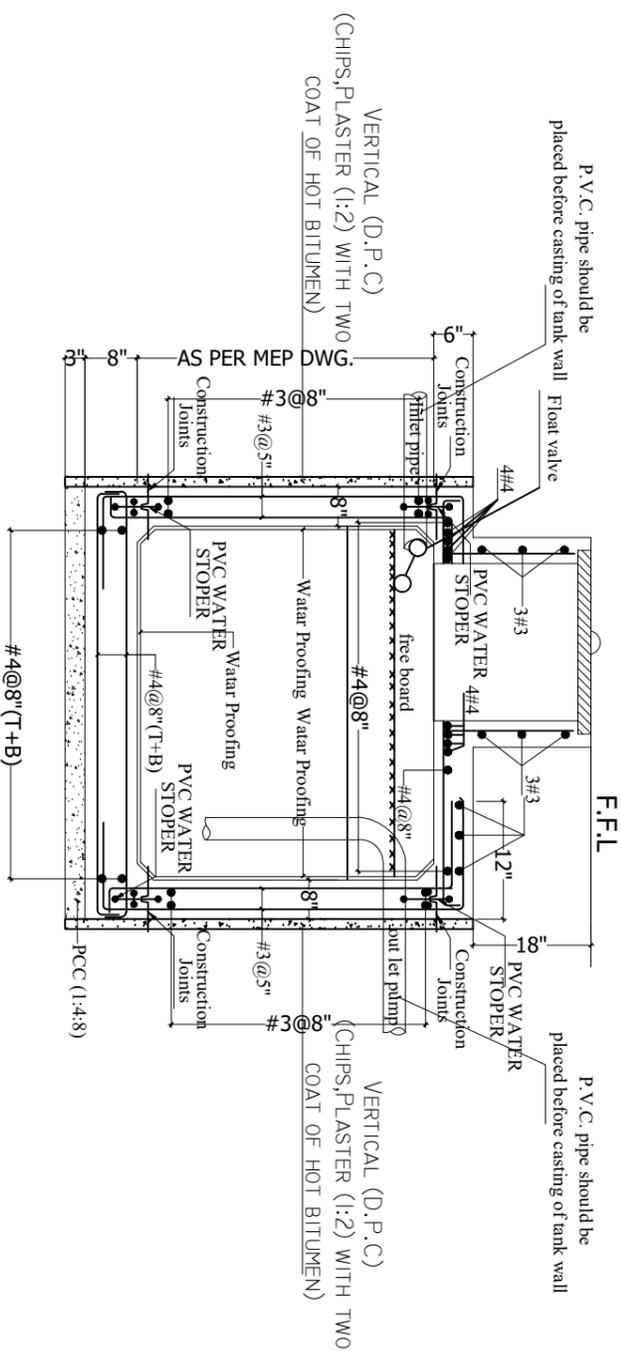
U.G.W. TANK



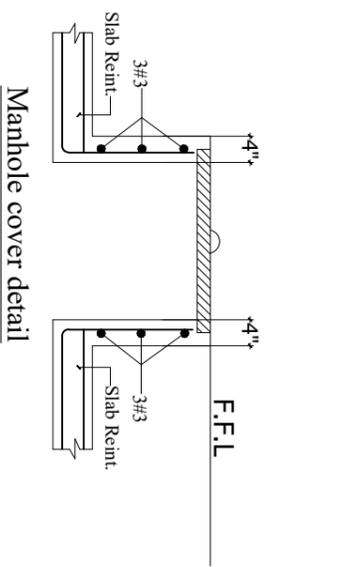
BASE SLAB



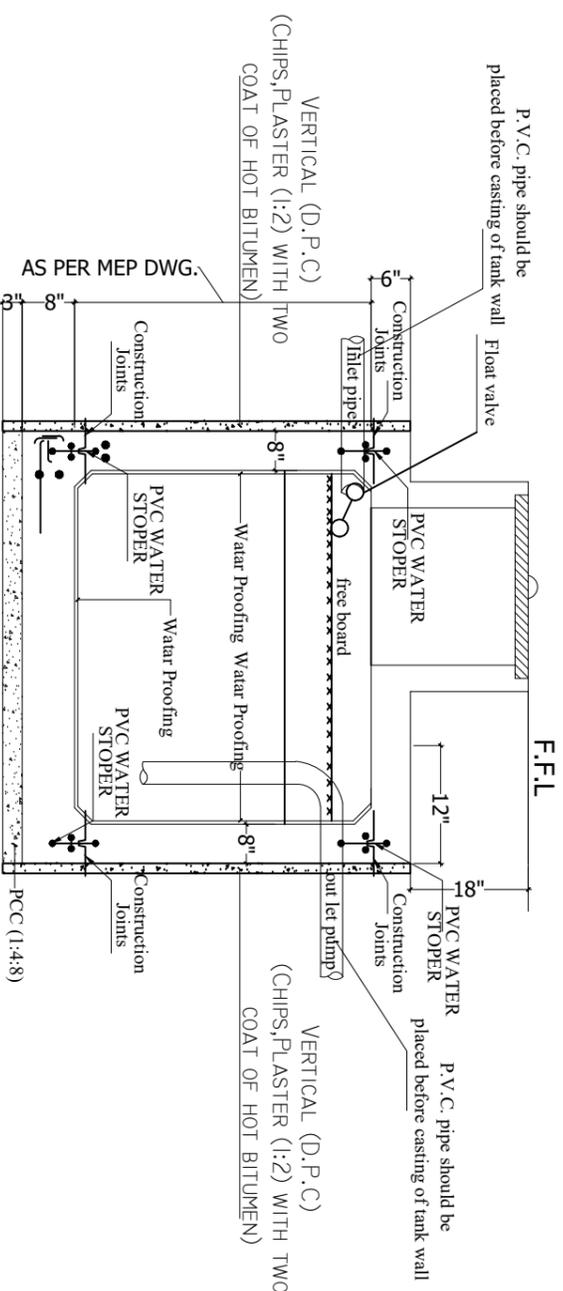
TOP SLAB



SECTION X-X



Manhole cover detail



SECTION X-X

NOTE :- WATER PROOFING
 (1Mr. Two coats of Water proofing chemical.
 (2Mr. Plaster with Chips (3" thick).

Consulting Structural Engineers
TETR S DESIGN STUDIO

DATE:
02-11-2025

Designed By:
Engr. Bilal Ansari

CLIENT:
 TAALEEM FOUNDATION

TITLE:
 U.G WATER TANKS

DRAWING NO.
S-13

Checked By:
 Engr. Liaqat Ali

THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE

DRAWN BY:
M Sabir Khan

PROJECT:
 PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6 FLOOR PLAZZA 55 CIVIC CENTER BARRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Idd.

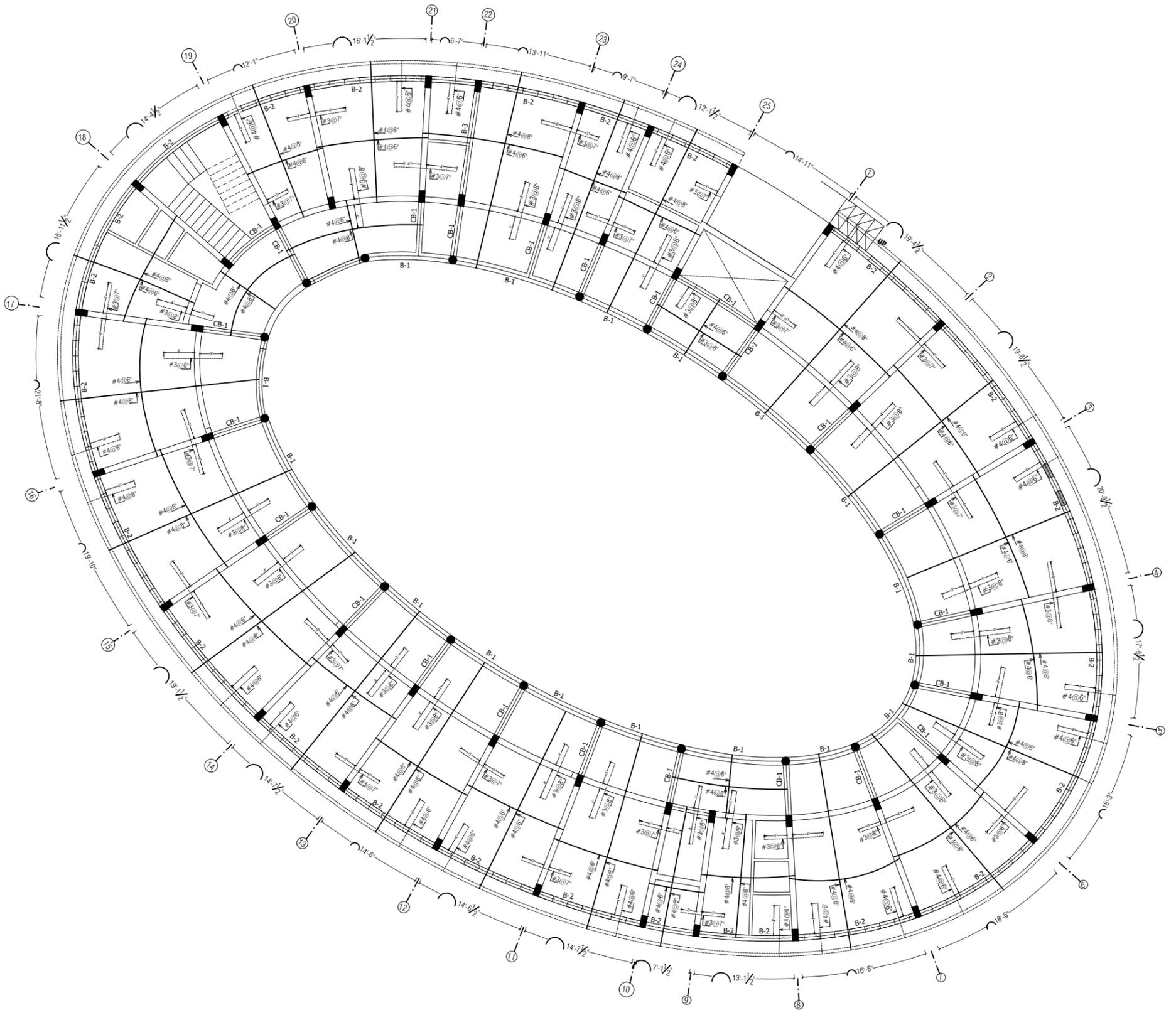


PART-B

PROPOSED STRUCTURE DESIGN OF, PLOT#**SCHOOL BUILDING** CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

SUPER STRUCTURE

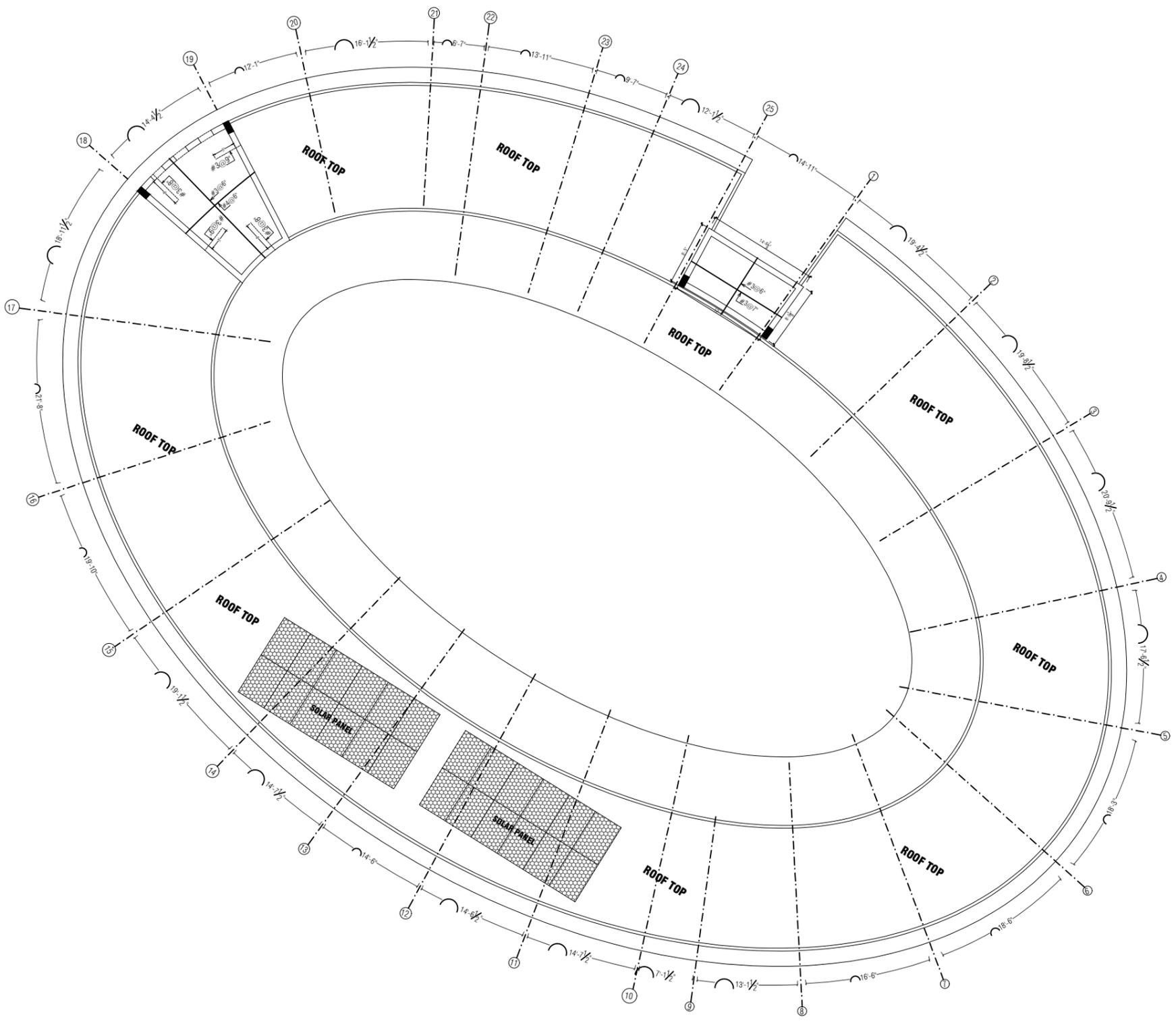
Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE:
DRAWING NO. S-14	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE
CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6 TH FLOOR PLAZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Isld.				 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com



SLAB REINFORCEMENT PLAN OF GROUND FLOOR
 ALL SLAB 6" TH OTHER WISE MENTIONED

Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SLAB REINFORCEMENT PLAN OF GROUND FLOOR
DRAWING NO. S-18	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY. M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 5 FLOOR PLAZZA 55 CIVIC CENTER BARRIX TOWAN, PHASE-4, ISLAMABAD BARRIATOWN Rwp/Itd.

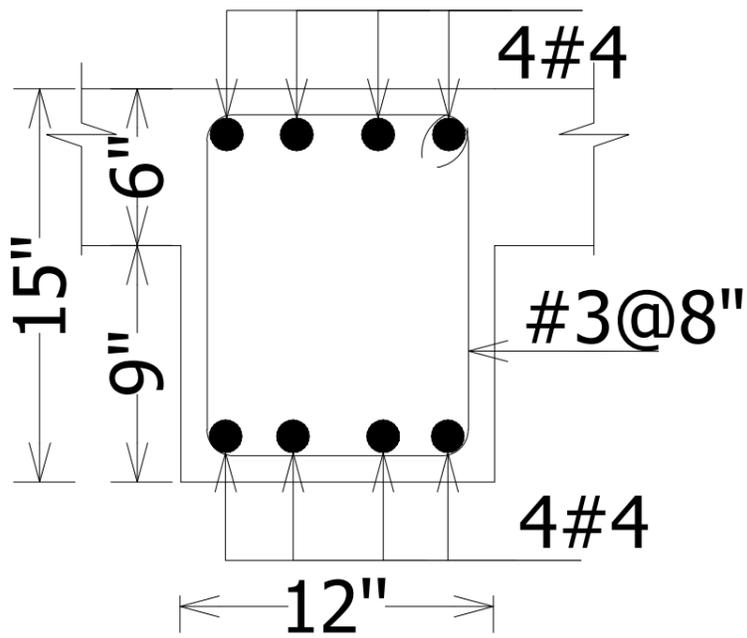




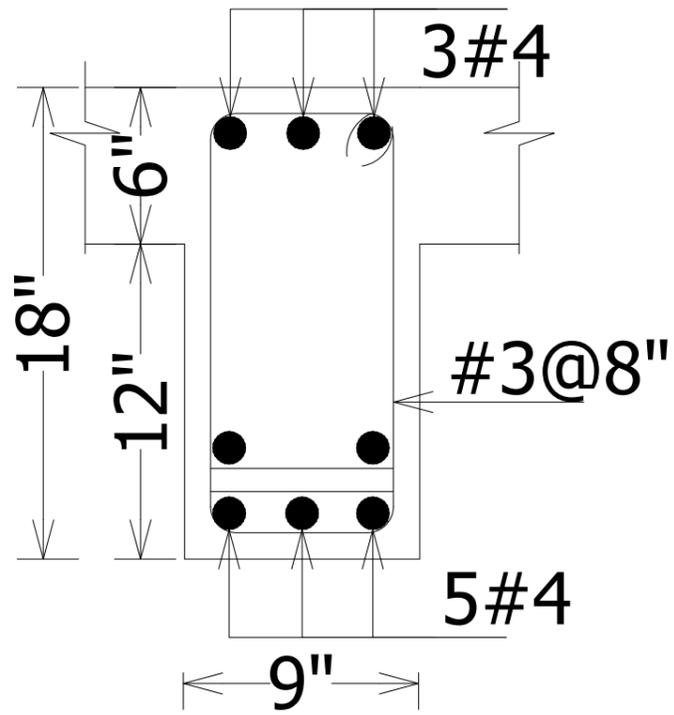
MUMTY FLOOR PLAN

Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SLAB 5TH TH REINFORCEMENT PLAN OF MUMTY FLOOR
DRAWING NO. S-19	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY. M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR# 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Idd.

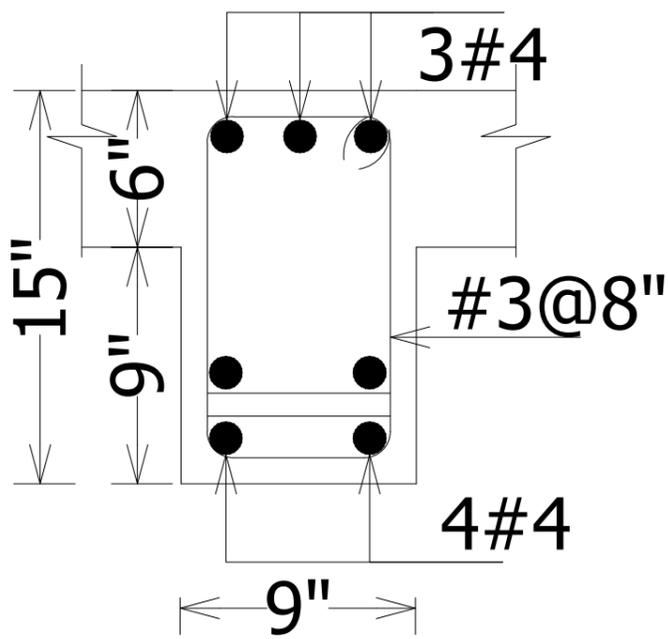




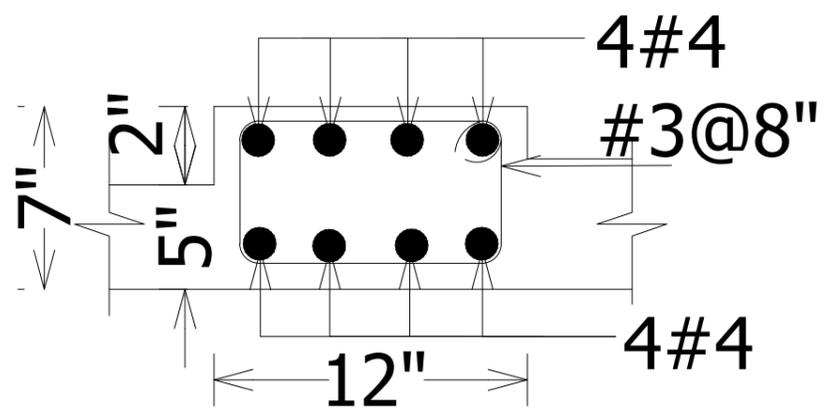
X-SECTION OF B-1



X-SECTION OF B-2



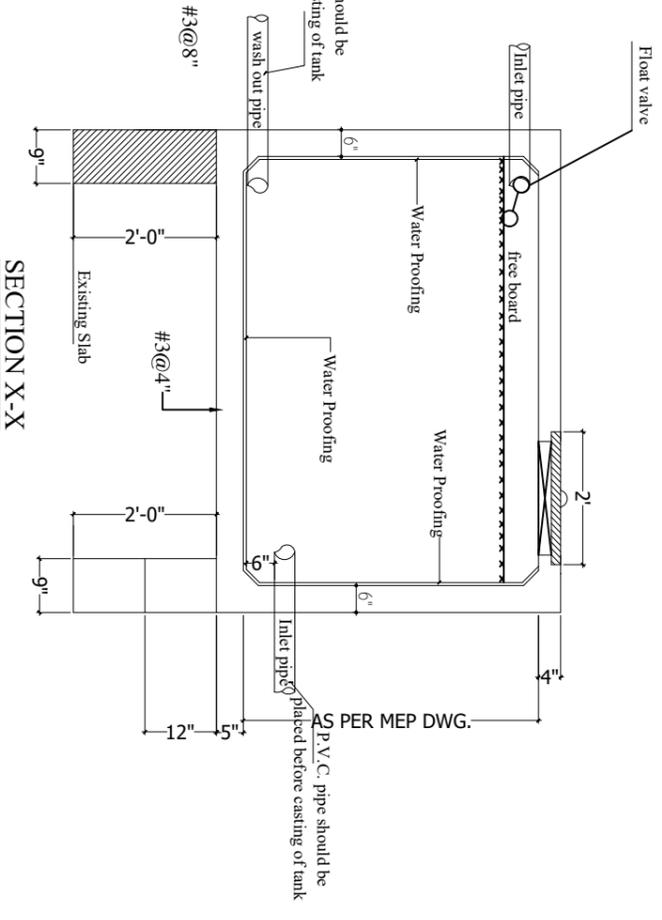
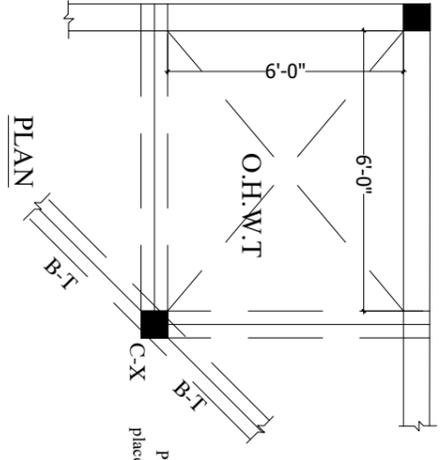
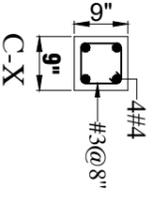
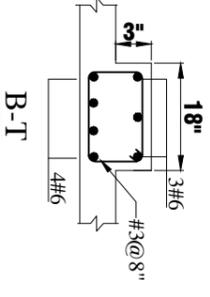
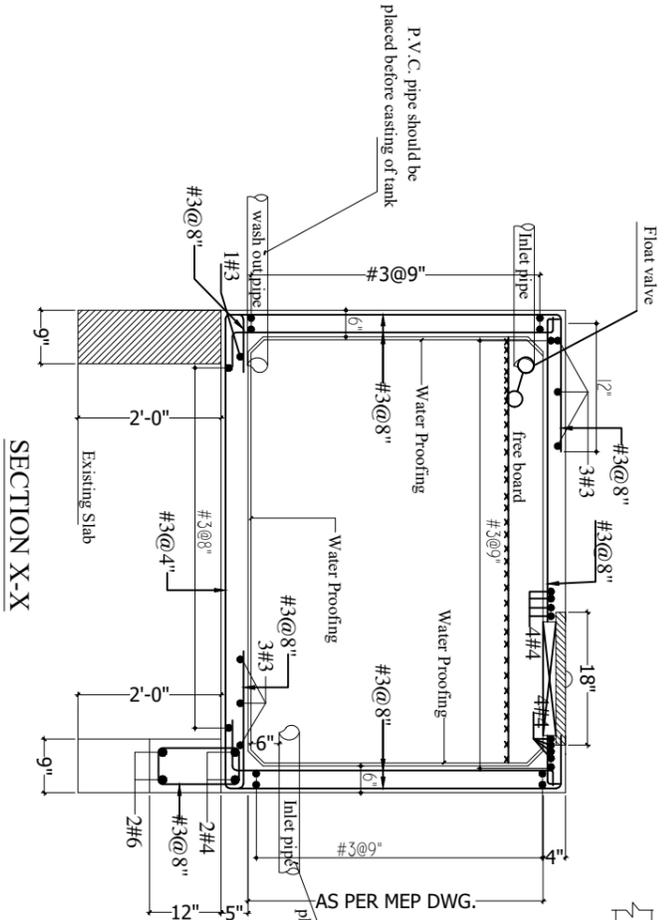
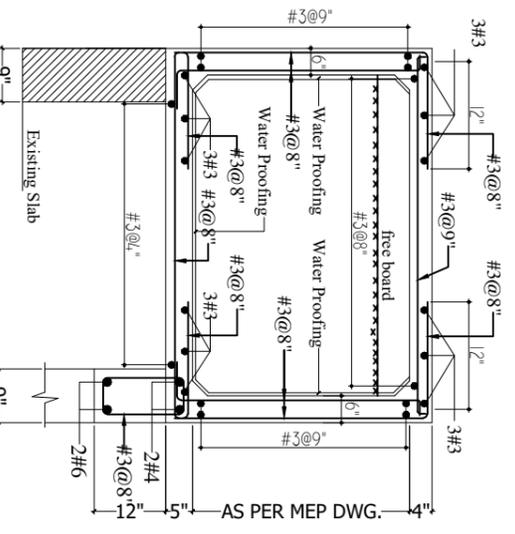
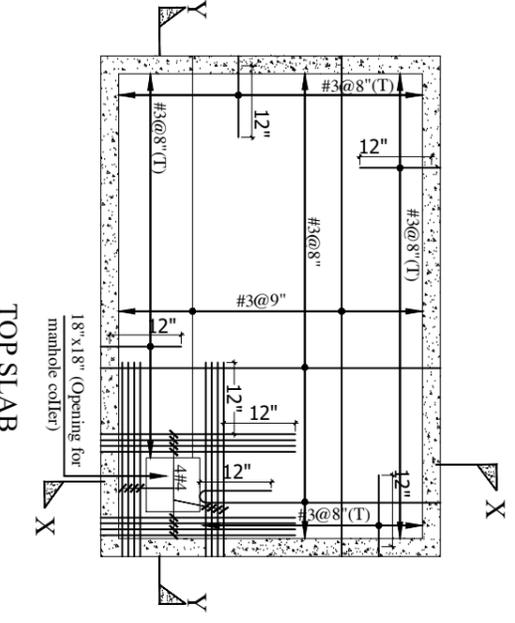
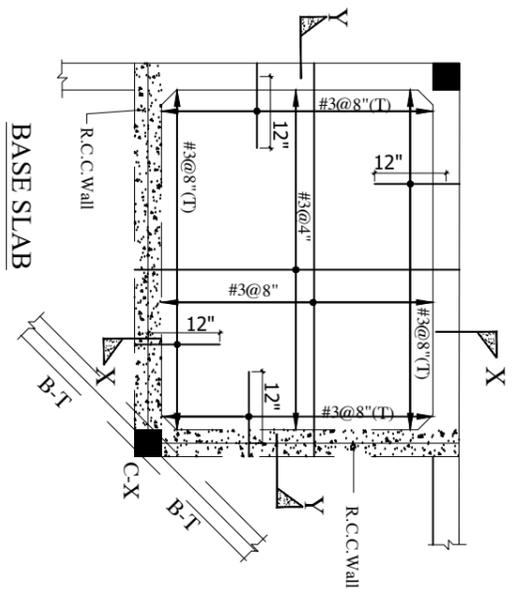
X-SECTION OF B-3



X-SECTION OF CB-1

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SECTION DETAIL OF BEAMS	 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com
DRAWING NO. S-20	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	

O.H.W. TANK



Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: O.H.W. TANK
DRAWING NO. S-21	Checked By: Engr. Liaqat Ali	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 8/FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWN, PHASE 4, ISLAMABAD BAHRIATOWN Rwp/td.



PART-C

PROPOSED STRUCTURE DESIGN OF, PLOT#**STAFF RESIDENCE** CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

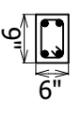
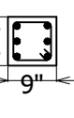
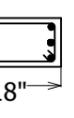
Foundation Plan

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE:
DRAWING NO. S-22	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE
				CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR# 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Isd.  TETR S Design Studio Email: tetrisdesignstudio11@gmail.com

STRUCTURAL NOTES

- Class "A" kiln burnt brick with minimum crushing strength of 1500 PSI should be used & joint at end should be sloppy, Vertical toothed joint at corners are prohibited.
- A Steel ASTM A-615 G-60 deformed bars for all diameters.
- Concrete 3000 PSI compressive strength after 28 days for footings, beams, slabs, columns and in water retaining structures, concrete 4000 PSI compressive strength after 28 days.
- Cement-sand mortar should be used as
 - In Foundation 1:6
 - Super Structure 9" thick 1:5
 - Super Structure 4 1/2" thick 1:4
- Concrete clear coverage should be followed as:-
 - Slab 3/4" Bottom.
 - Beams 1 1/2" All Sides.
 - Columns 1 1/2" All Sides.
 - Footing 2" All Sides.

- Lap length should be followed As:-
 - 3/4" $\phi = 45"$
 - 5/8" $\phi = 36"$
 - 1/2" $\phi = 30"$
 - 3/8" $\phi = 20"$
- Plinth beam should be provided at plinth level. The X-sec has shown on the attached drawing. The plinth level may not be more than two feet higher than the reference road.
- Dowels at corners & junctions should be provided at each 3'-0" height & 3'-0" on either side.
- The design is in accordance with seismic zone II-B.
- Footing has been designed for two stories plus munitly with Bearing capacity of 1.0 Tsf for Strip Footing at -3'-0" from RL. (As Reported by G.E.O CRUST), JULY 2025.
- It is mandatory for owner/contractor to keep the building safe from ingressing of water from U.G. W tank, Septic tanks OR Main Holes.
- Engineer will not responsible if damage occur due to entering of water in the building.
- Excavation should not go beyond the foundation level of adjacent Building/structure.

SCHEDULE OF R.C.C LINTELS						S/N/O ABBREVIATION USED			
S/NO	SPAN	SIZE	REINFORCEMENT		RINGS	X-SECTION	S/NO	C/C	ABBREVIATION USED
			BOTTOM	TOP					
1	UP TO 4'	9"X6"	2#3	2#3	#3-4"C/C		1	C/C	Center to Center
2	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		2	E.S.L	Existing Surface Level
3	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		3	G.F.F.L	Ground Finish Floor Level
4	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		4	W.F	Wall Footing
5	UP TO 6'	9"X6"	3#3	3#3	#3-4"C/C		5	C-1	Column No. 1
6	UP TO 8'	9"X9"	3#3	3#3	#3-4"C/C		6	C.B	Concealed Beam
7	UP TO 12'	9"X12"	3#4	3#4	#3-5"C/C		7	U.B	Upstand Beam
8	UP TO 12'	9"X12"	3#4	3#4	#3-5"C/C		8	B/W	Both Ways
9	UP TO 12'	9"X12"	3#4	3#4	#3-5"C/C		9	P.C.C	Plain Cement Concrete
5	UP TO 15'	9"X15"	4#4	3#4	#3-5"C/C		10	LBD	Lintel Beam At Door
6	UP TO 18'	9"X18"	5#4	3#4	#3-6"C/C		11	DB	Deep Beam

Consulting Structural Engineers
TETR S DESIGN STUDIO

DATE:
02-11-2025

Designed By:
Engr. Bilal Ansari

CLIENT:
TAALEEM FOUNDATION

TITLE:
STRUCTURAL NOTES

DRAWING NO.
S-23

Checked By:
Engr. Liaqat Ali

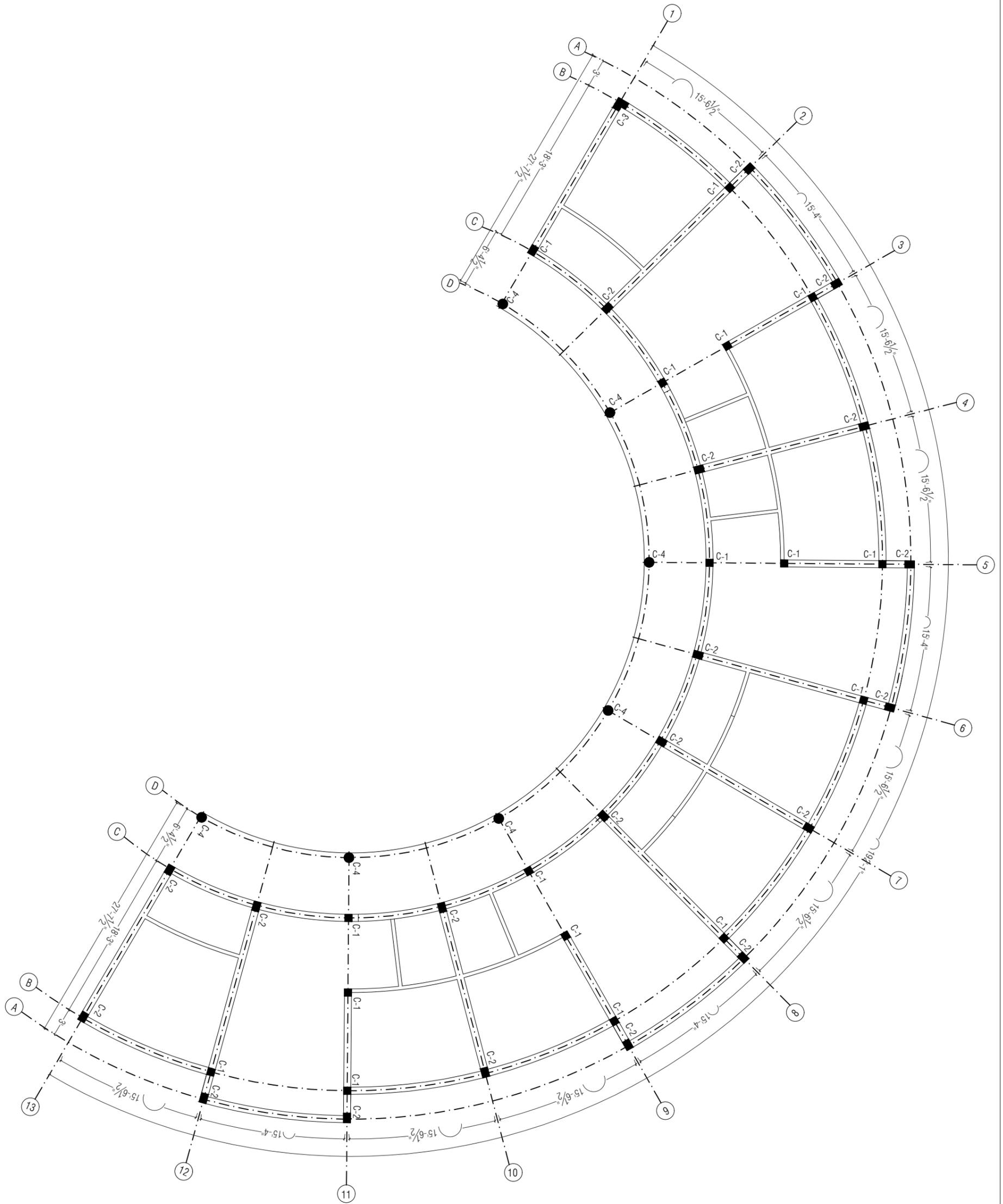
THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE

DRAWN BY:
M Sabir Khan

PROJECT:
PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

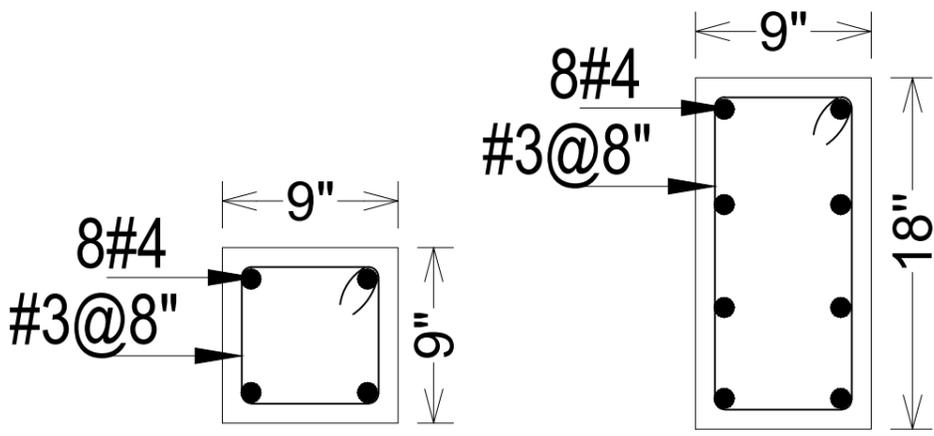
CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN PHASE 4, ISLAMABAD BAHRIATOWN Rwp15dd.





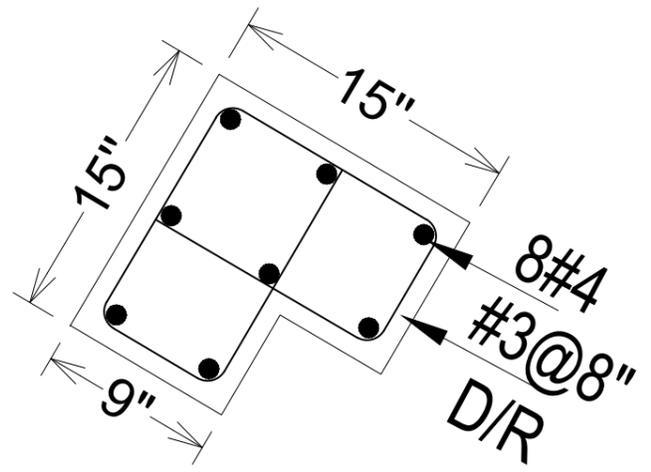
LAYOUT PLAN OF WALLS & COLUMNS AT GROUND FLOOR
CONFIRM SEWERAGE AND WATER SUPPLY
PIPES OF BUGTI BALOCHISTAN, FOR THEIR LEAKAGE.

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: LAYOUT PLAN OF WALLS & COLUMNS AT GROUND FLOOR
DRAWING NO. S-24	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE
CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, BLOTTOR & FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/td.				 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com

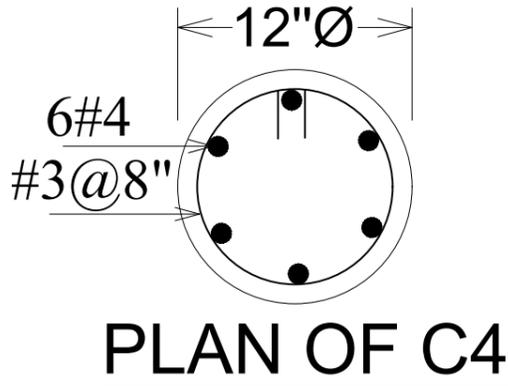


PLAN OF C1

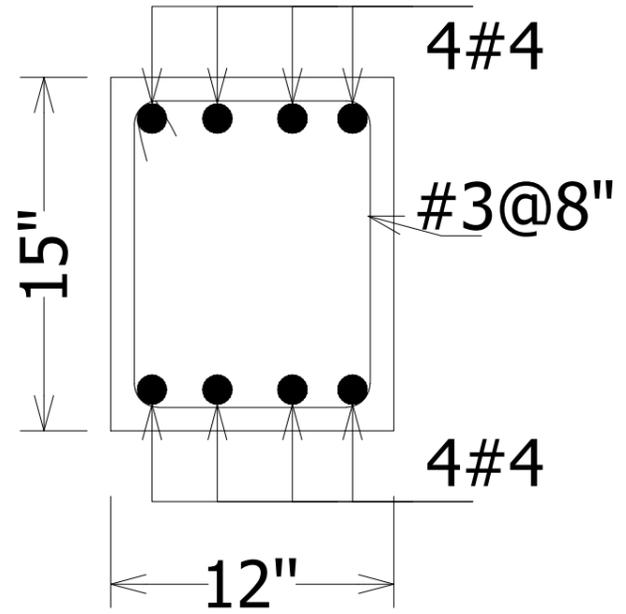
PLAN OF C2



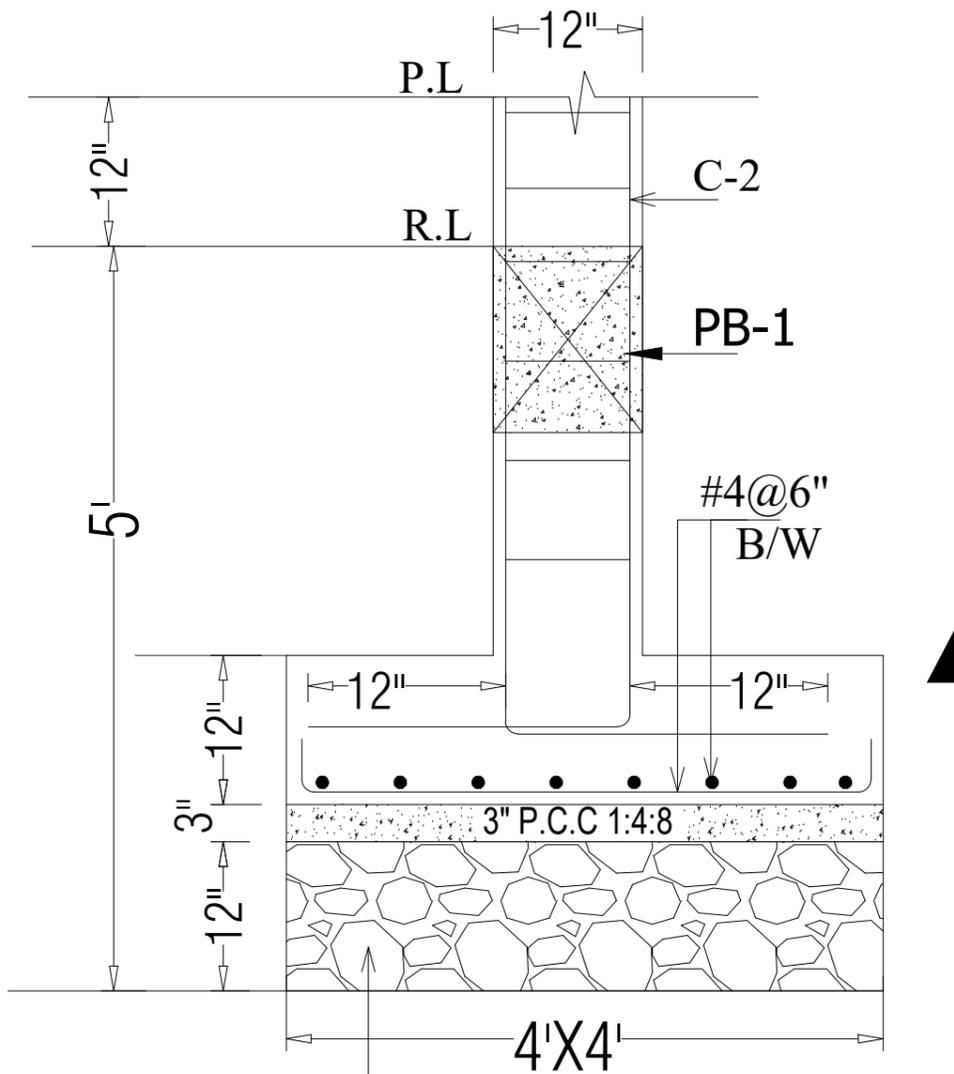
PLAN OF C3



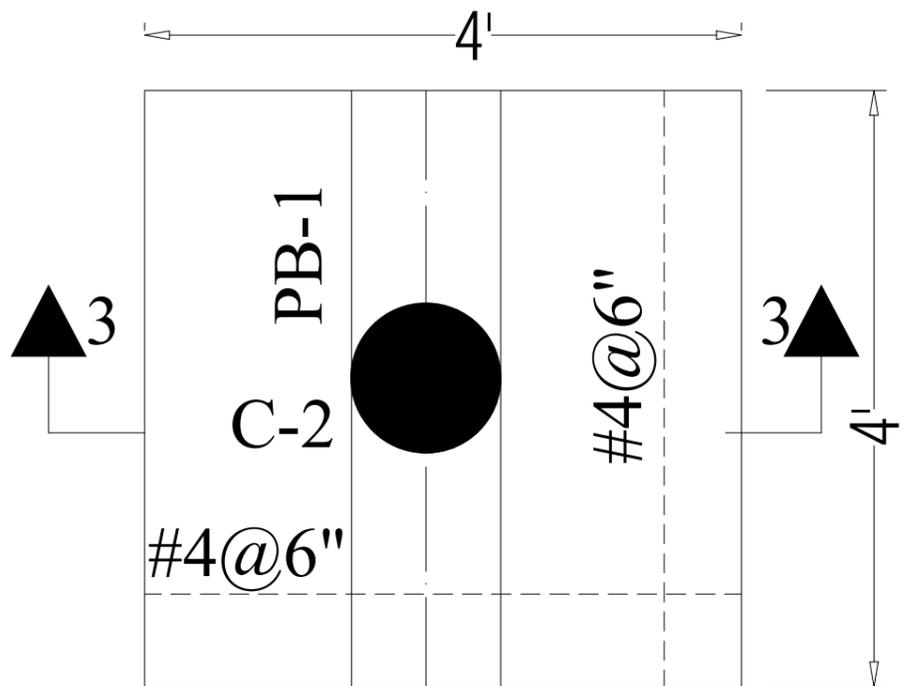
PLAN OF C4



X-SECTION PB-1

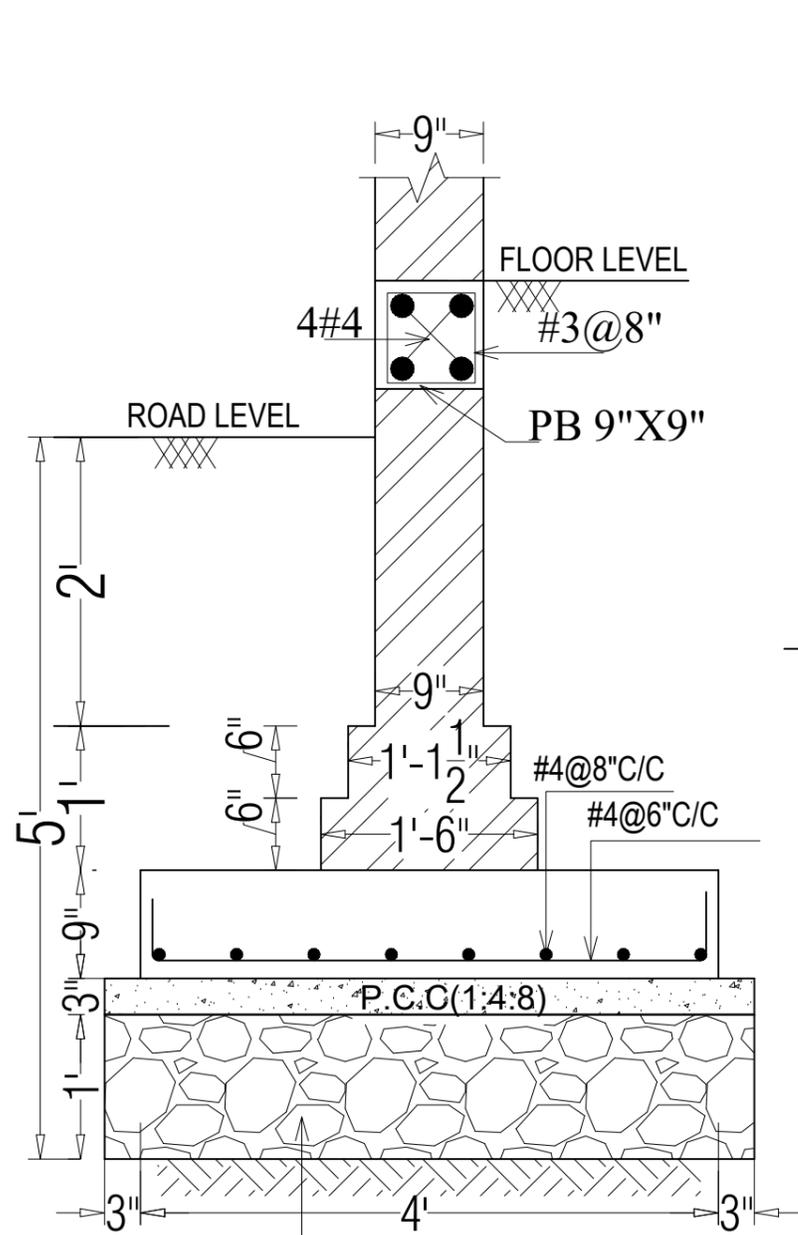


12" GRANULAR MATERIAL (COMPACTED UPTO 95%)
X-SEC AT 3-3

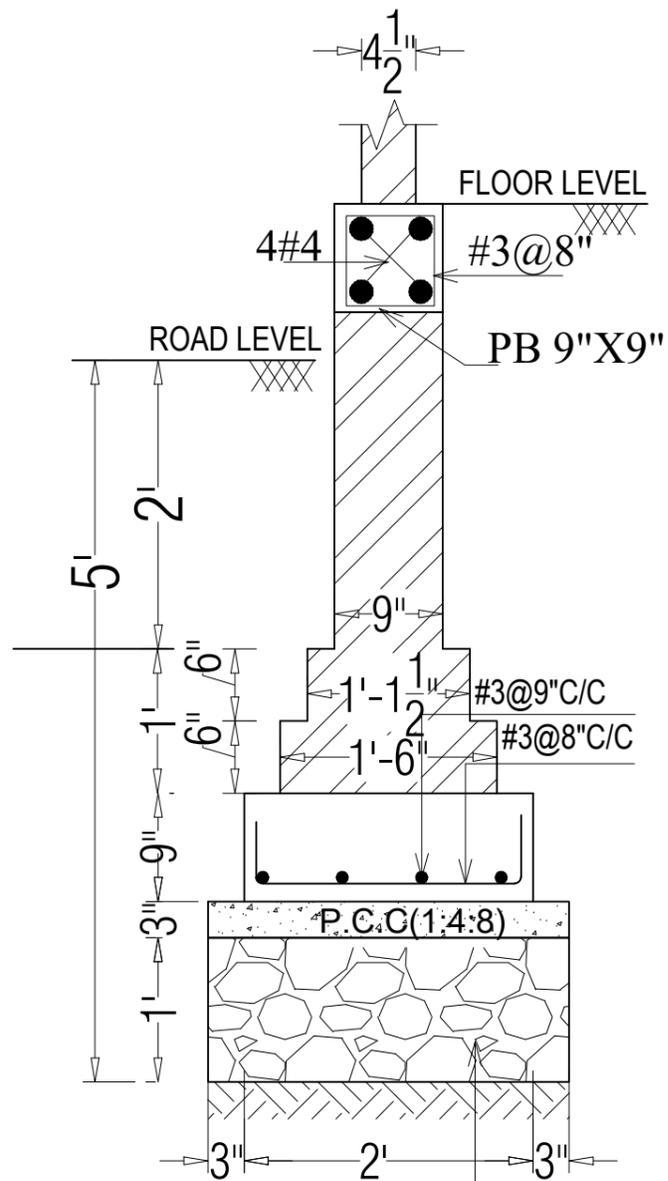


PLAN OF F-3

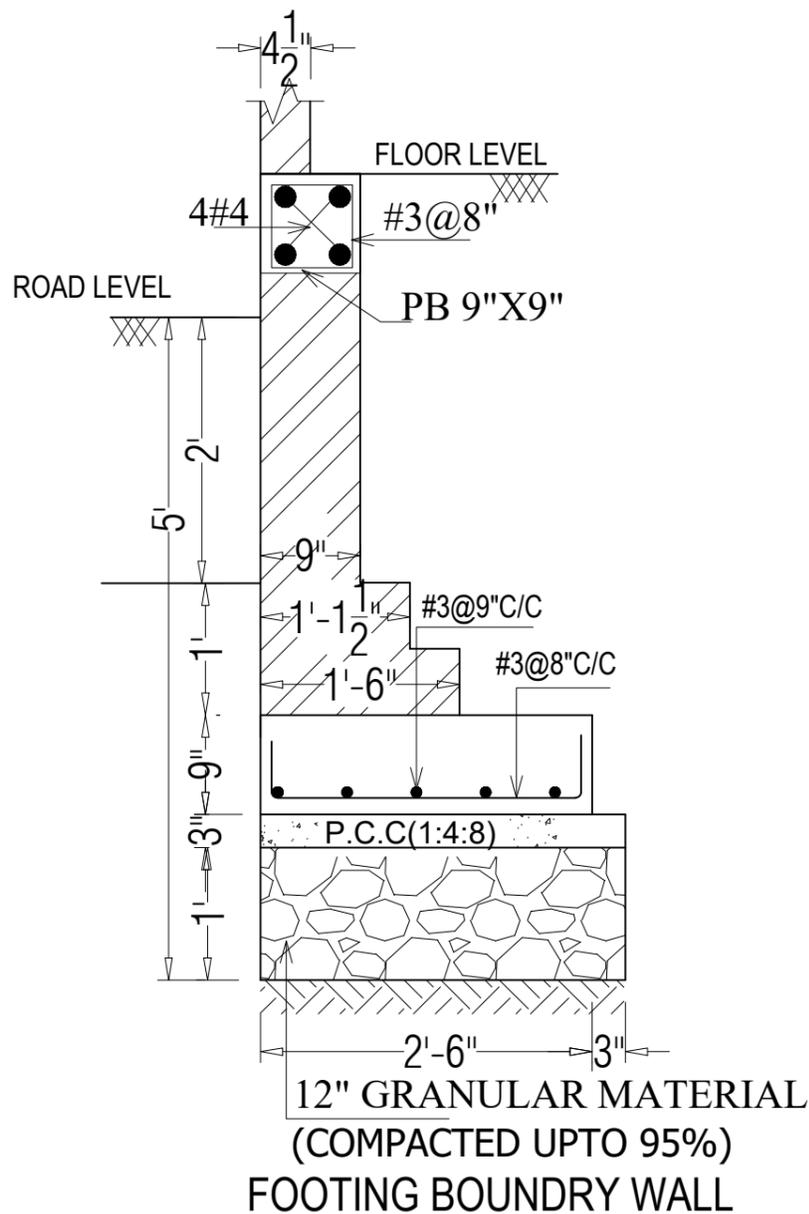
Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: COLUMNS SECTION	 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com
DRAWING NO. S-26	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	



FOOTING F1
12" GRANULAR MATERIAL
(COMPACTED UPTO 95%)
IN HARD STRATA



FOOTING F2
12" GRANULAR MATERIAL
(COMPACTED UPTO 95%)
IN HARD STRATA



12" GRANULAR MATERIAL
(COMPACTED UPTO 95%)
FOOTING BOUNDRY WALL

IAL

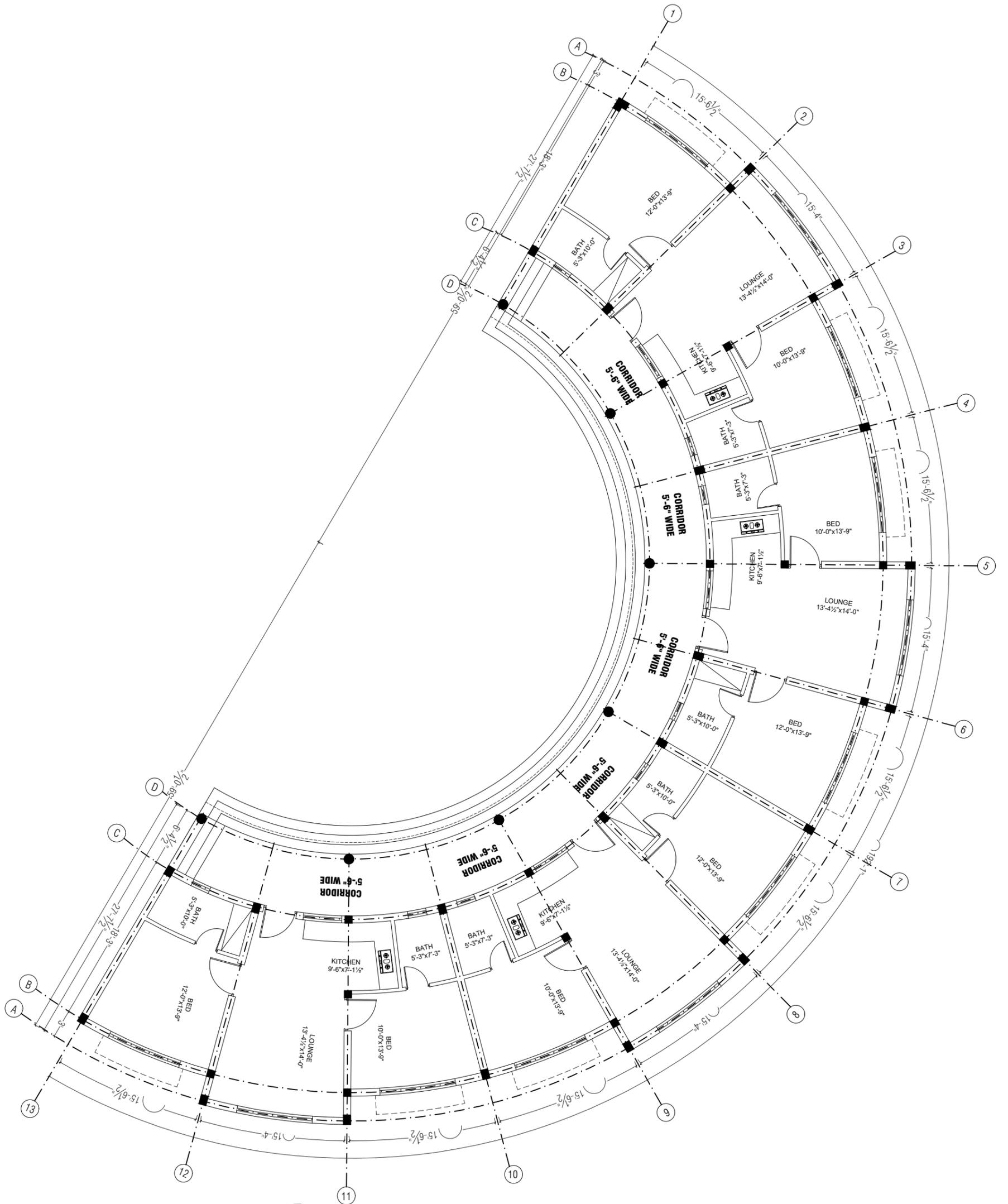
Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SECTION DETAIL AT
DRAWING NO. S-27	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/tdl. TETR S Design Studio Email: tetrisdesignstudio11@gmail.com

PART-D

PROPOSED STRUCTURE DESIGN OF, PLOT#**STAFF RESIDENCE** CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

SUPER STRUCTURE

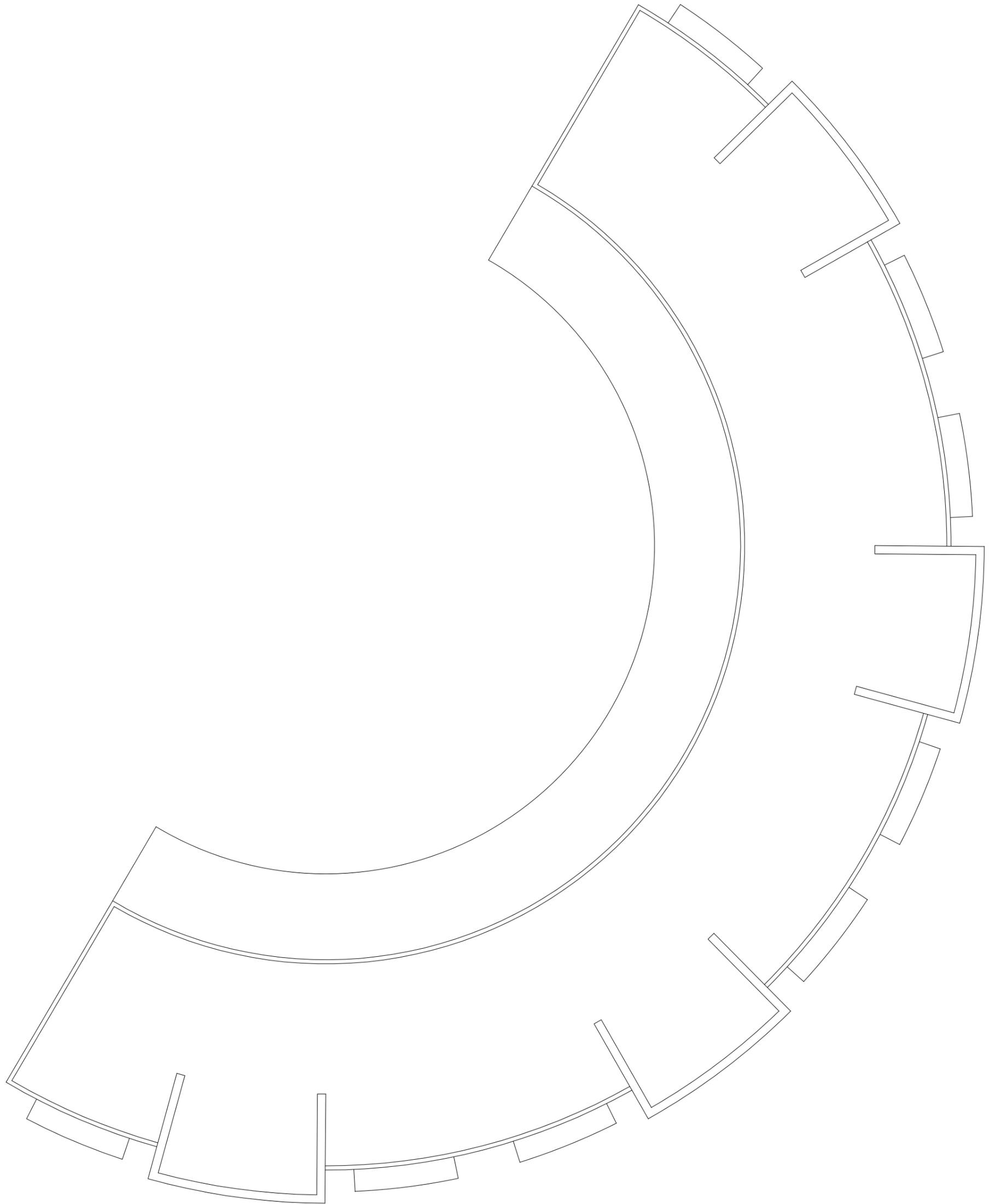
Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE:
DRAWING NO. S-28	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE
CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6 ^{FLOOR} & FLOOR PLAZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Isld.				 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com



**STAFF RESIDENCE
GROUND FLOOR PLAN**

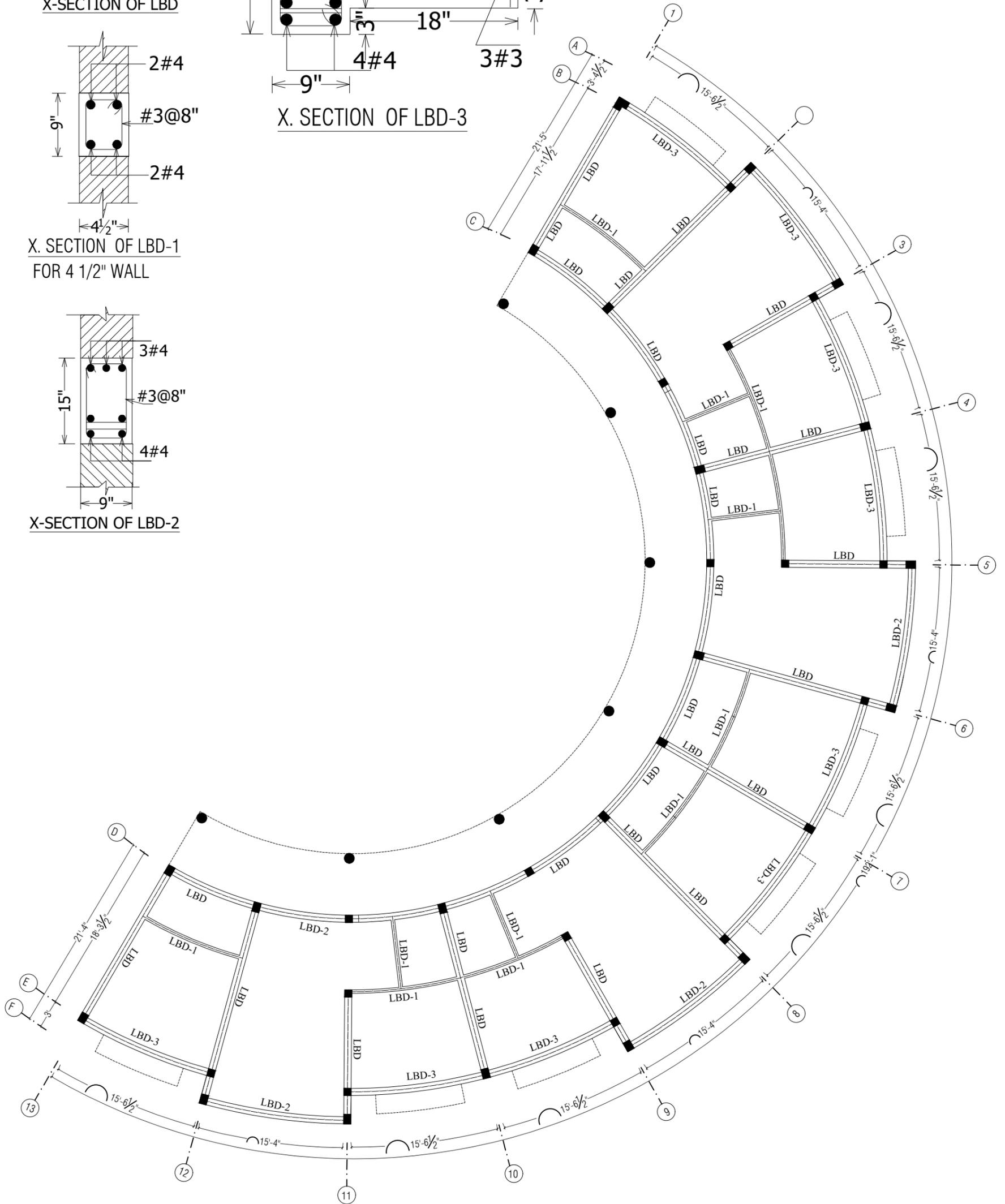
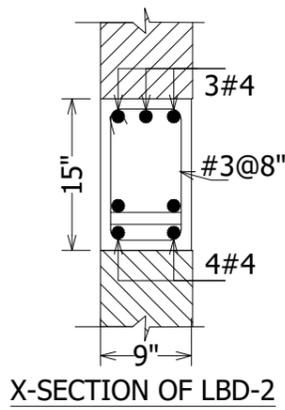
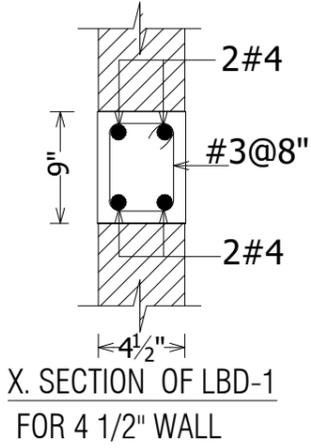
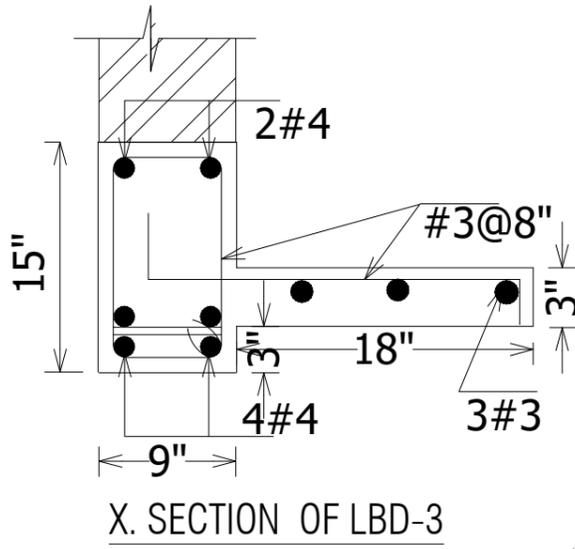
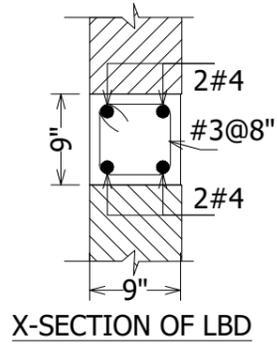
Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: STAFF RESIDENCE GROUND FLOOR PLAN
DRAWING NO. A-29	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY. M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR# 6 FLOOR PLAZZA 55 CIVIC CENTER BARRIA TOWAN, PHASE-4, ISLAMABAD BARRIATOWN Rwp, ISL.





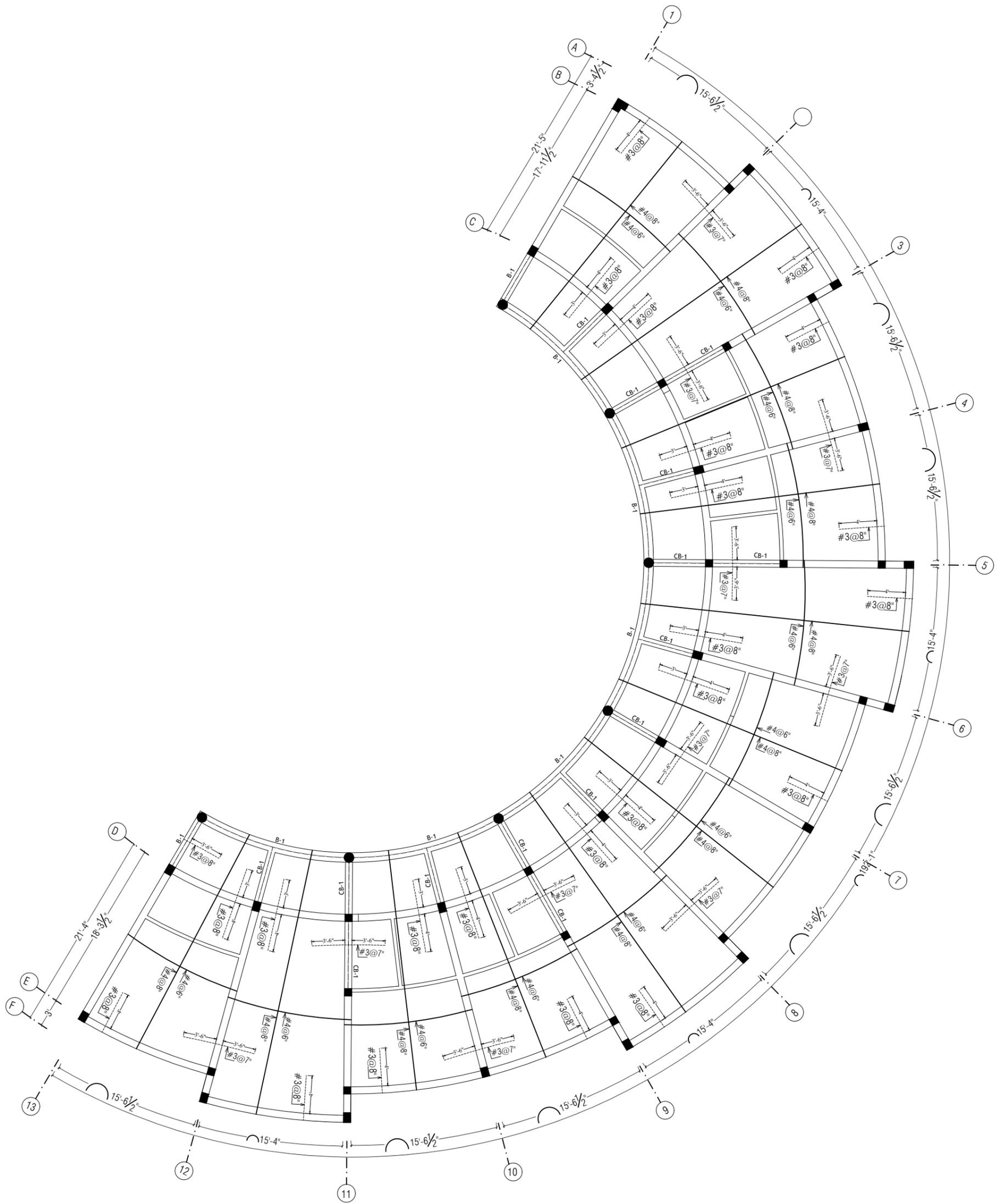
**STAFF RESIDENCE
TOP ROOF PLAN**

Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: STAFF RESIDENCE TOP ROOF PLAN	 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com
DRAWING NO. A-30	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY. M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/Idd.	



LINTEL BAND LAYOUT PLAN OF GROUND FLOOR

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: LINTEL BAND LAYOUT PLAN OF GROUND FLOOR
DRAWING NO. S-31	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE
				CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, FLOOR 6 FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWAN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp11dd. TETR S Design Studio Email: tetrisdesignstudio1@gmail.com



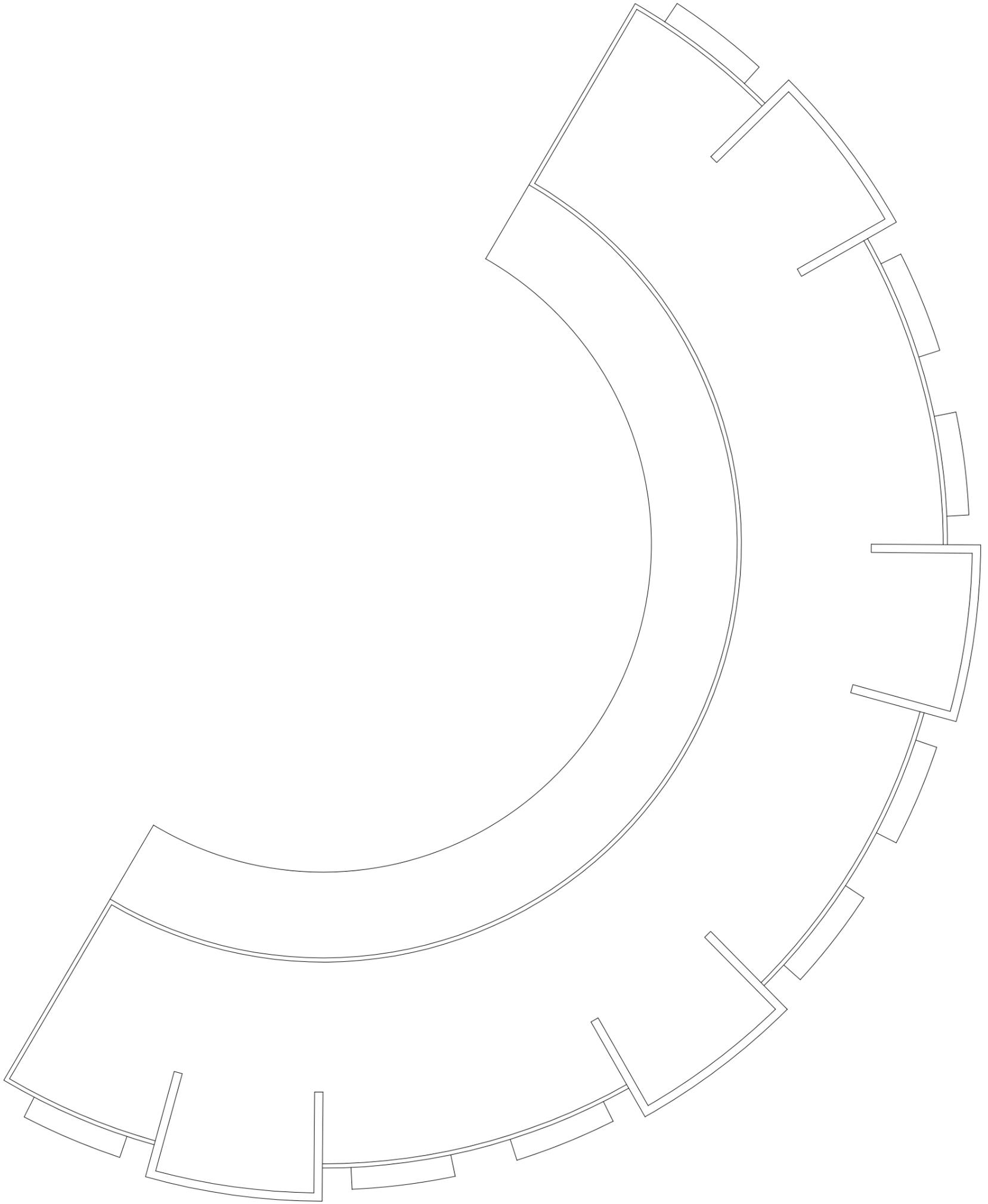
SLAB REINFORCEMENT PLAN OF GROUND FLOOR

ALL SLAB 6" TH OTHER WISE MENTIONED

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SLAB REINFORCEMENT PLAN OF GROUND FLOOR
DRAWING NO. S-32	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE

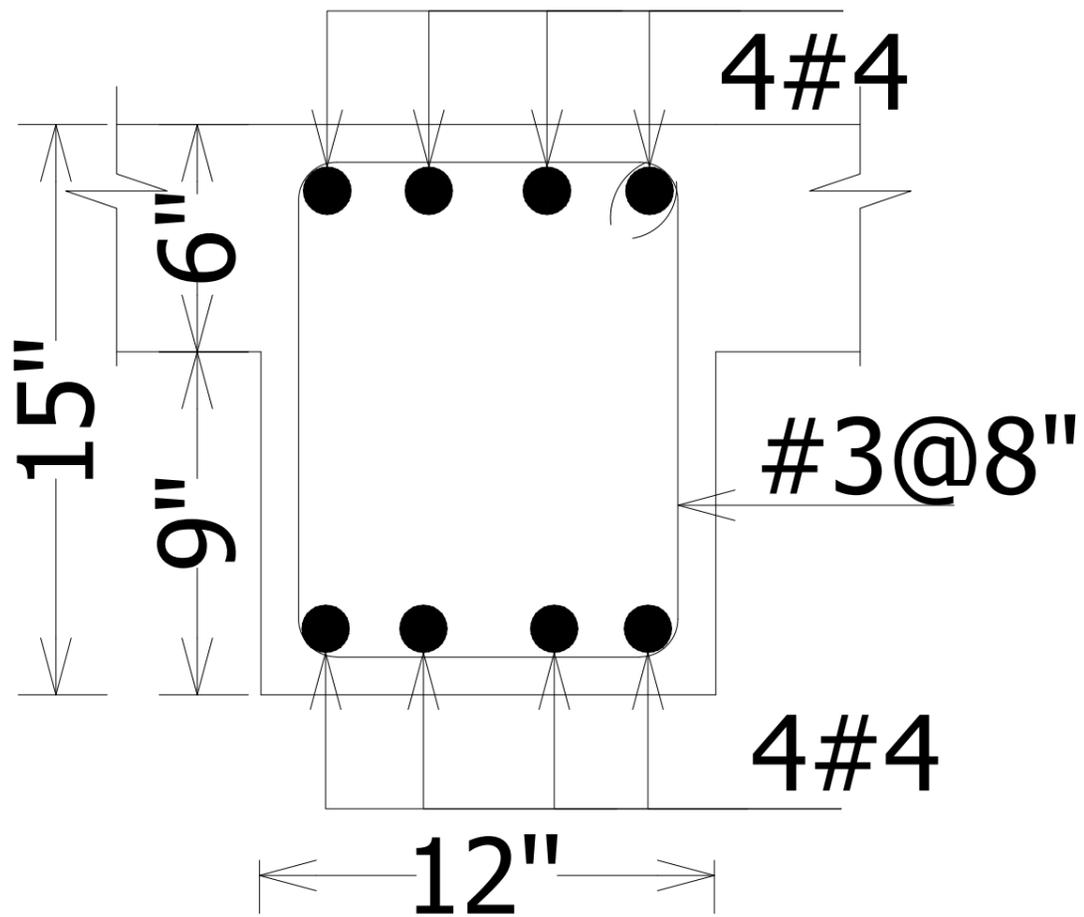


CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE,
 5 FLOOR PLAZZA 55 CIVIC CENTER
 BARRIA TOWAN, PHASE 4,
 ISLAMABAD BARRIATOWN Rwp/Itd.
 Design Studio
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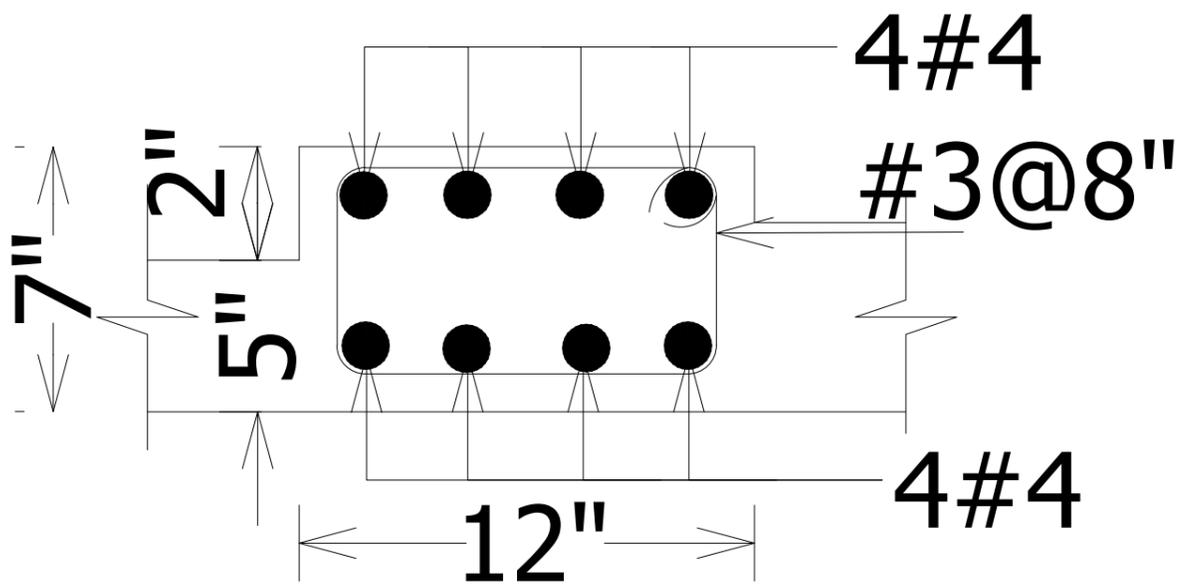


**STAFF RESIDENCE
TOP ROOF PLAN**

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE. 02-11-2025	Designed By: Engr.Bilal Ansari	CLIENT. TAALEEM FOUNDATION	TITLE. SLAB 5TH TH REINFORCEMENT PLAN OF MUMTY FLOOR	 TETR S Design Studio Email:tetrisdesignstudio11@gmail.com
DRAWING NO. S-33	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY. M Sabir Khan	PROJECT. PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	



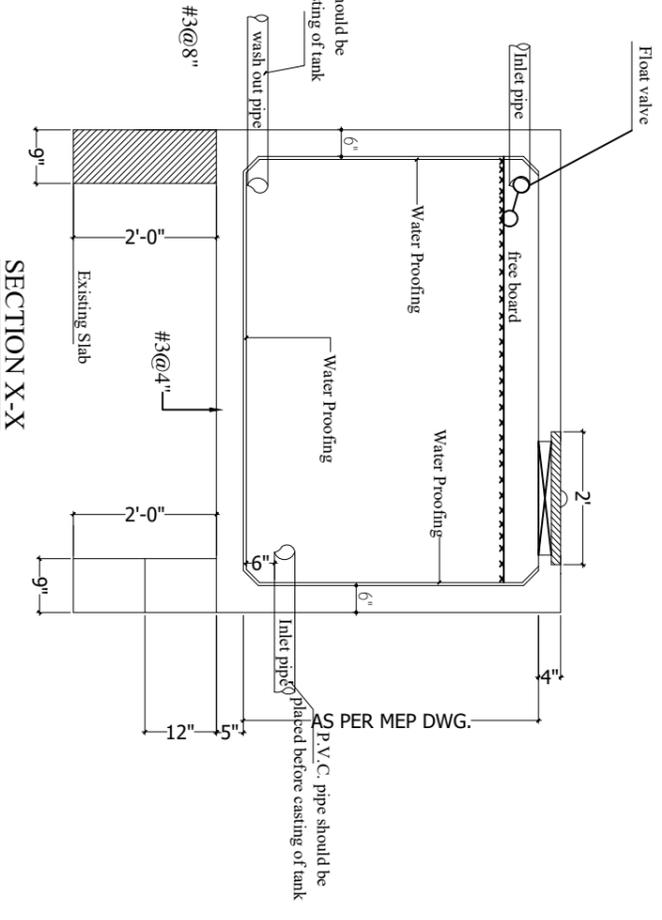
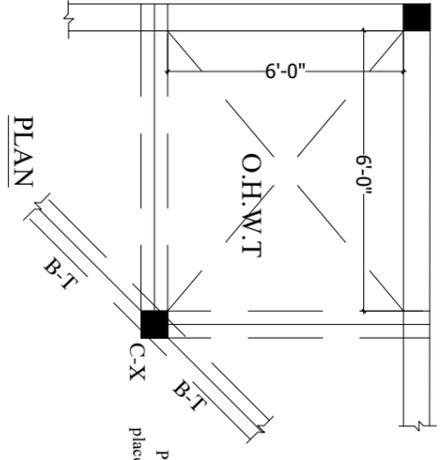
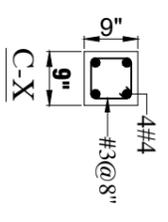
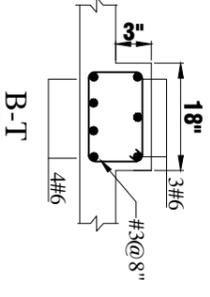
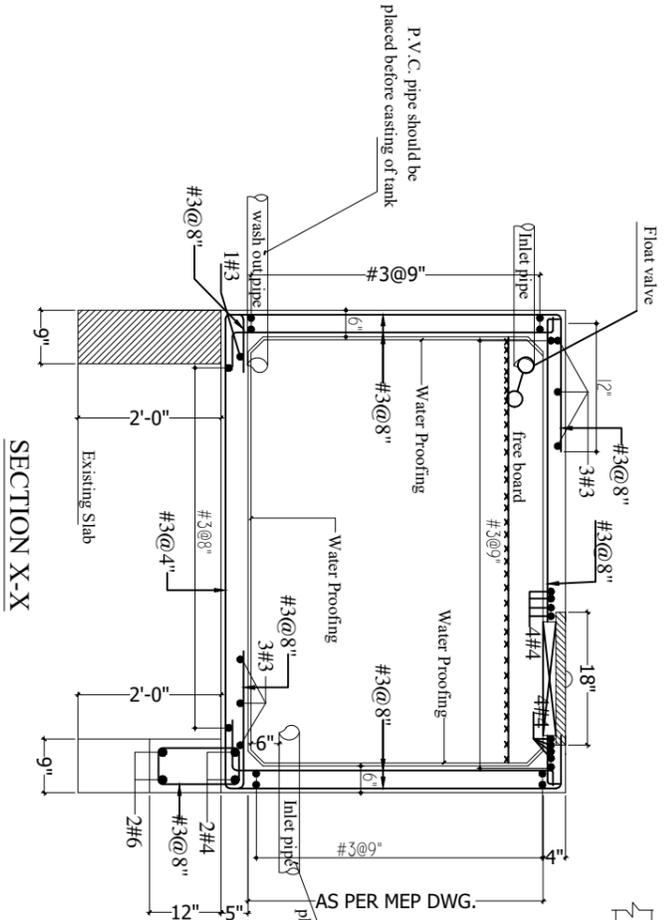
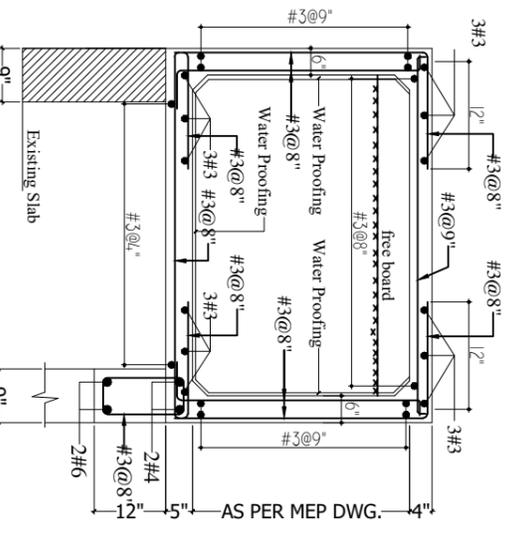
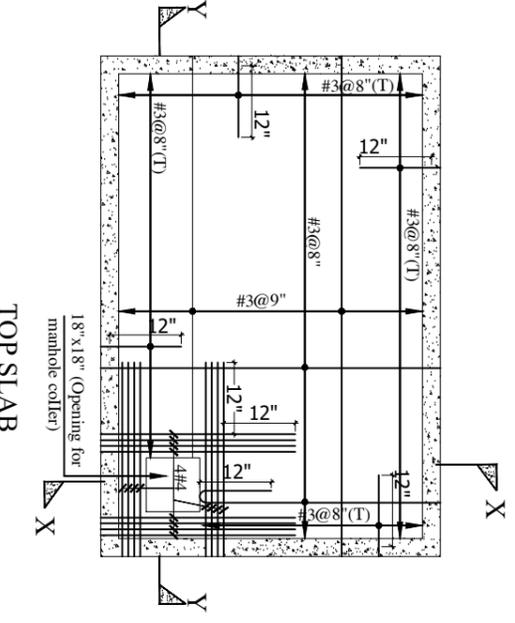
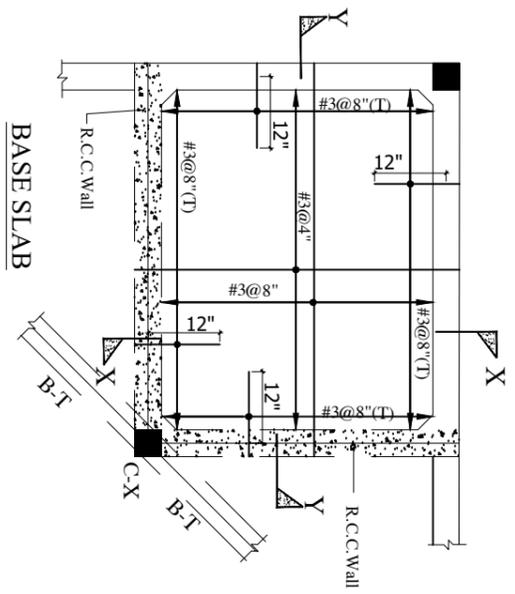
X-SECTION OF B-1



X-SECTION OF CB-1

Consulting Structural Engineers TETR S DESIGN STUDIO	DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: SECTION DETAIL OF BEAMS	 TETR S Design Studio Email: tetrisdesignstudio11@gmail.com
DRAWING NO. S-34	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	

O.H.W. TANK



Consulting Structural Engineers TETR S DESIGN STUDIO		DATE: 02-11-2025	Designed By: Engr. Bilal Ansari	CLIENT: TAALEEM FOUNDATION	TITLE: O.H.W. TANK
DRAWING NO. S-35	Checked By: Engr. Liaqat Ali	THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS OF THE SAME TITLE	DRAWN BY: M Sabir Khan	PROJECT: PROPOSED STRUCTURE DESIGN OF PLOT# CONSTRUCTION OF HEALTH CARE CENTRE & SCHOOL & SKILL CENTRE	CONSULTING STRUCTURAL & EARTHQUAKE ENGINEERS, BRANCH OFFICE, 6/FLOOR PLAZZA 55 CIVIC CENTER BAHRIA TOWN, PHASE-4, ISLAMABAD BAHRIATOWN Rwp/td.

