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DIGITALLY VERIFIED RECORD

6/12/2024

OFFICE OF THE EXECUTIVE ENGINEER,
STRUCTURAL AND QUALITY CONTROL CELL,
TAMIL NADU URBAN HABITAT
DEVELOPMENT BOARD,
KAMARAJAR SALAI, CHENNAI-05.

STABILITY CERTIFICATE

This is to certify that the scheme "Reconstruction of 168 tenements Consisting 02 Blocks, Prakasam Salai, Badrikarai Scheme, Comprised in S.No. 4828/3 (Part), 4830/4 (Part), 4830/9 (Part), Block No. 110 of T.Nagar Village, Greater Chennai Corporation Division No.113 Chennai district, Tamil Nadu is Structurally designed for Stilt + 6 Floors adopting loads according to IS 875 part 1, 2 & 3 and IS 1893 Part 1 2016 considering Seismic Zone-III and designed as per IS 456:2000 and detailed as per IS 13920:2016, M30 grade of concrete and Fe 550D grade of Steel are assumed for the design. The structure design is safe, Good and Sound.

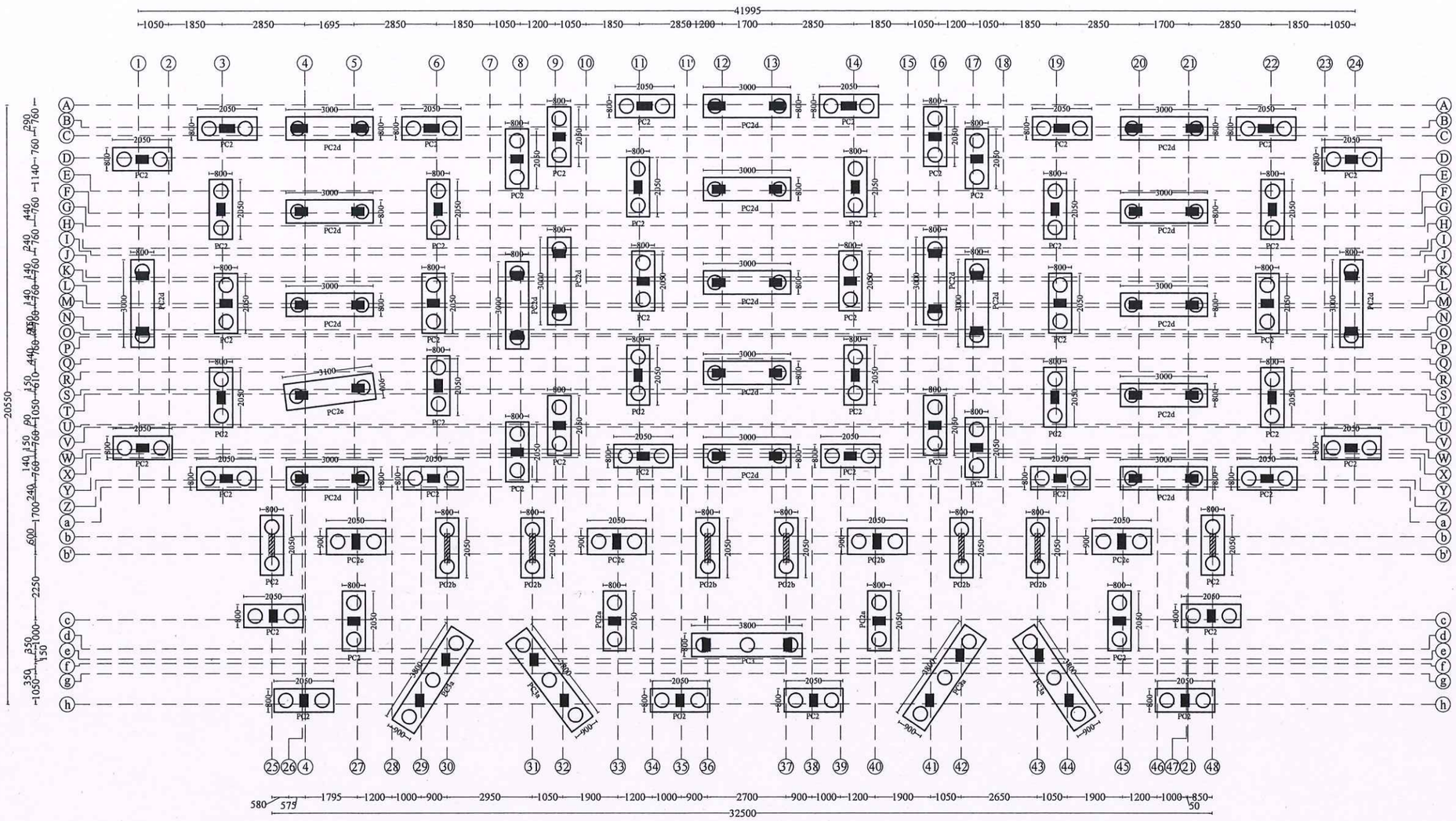
Yours faithfully

6/12/2024

G. MAHENDIRAN, M.E.,
ASSISTANT EXECUTIVE ENGINEER
REGISTRATION No: SE/I/2024/4/0071
Registered Structural Engineer Grade-I
Tamil Nadu Urban Habitat Development Board
No. 5, Kamarajar Salai, Chennai-600 005.

Scanned with OKEN Scanner

PLAN AT PILE CAP LEVEL



NOTE :

1. All the dimensions are in mm unless noted otherwise.
2. All structural drawings shall be read in conjunction with the relevant Architectural drawings.
3. All the RCC works shall be as per design mix of **M30** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
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7. Structure is designed for (**S+6**) floors only.
8. Design of the structure carried out with Limit State Method.
9. Bored Cast-in-situ piles of 500 mm diameter shall be adopted with the minimum length of pile of 23 m to 26 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1200 KN and the lateral capacity is 103.7 KN (Fixed) as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Pile & Pile Cap - 60 mm
    (b) Column/Shear Wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lintels to be provided in all floors.
15. Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
16. Anchorage of column bars into the footings shall not be less than 50 Ø.
17. Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer atonce for review.
18. Ground water quality has to be conformed for suitability to construction work.
19. The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
20. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. Since the site is located at a distance of 5 Km from the sea shore & there are no details about Chloride & Sulphate content in the soil report this should be checked and suitable remedial measures should be taken accordingly.
21. The Recommendations in the Soil Report done by College of Engineering, Guindy, Anna University, Chennai. Job No:SM&FE217/Consultancy/2022, Dt: 18.05.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
PLAN AT PILE CAP LEVEL.

TYPE DESIGN NO.: 80/2022 (BLOCK - 1)

DWG.NO.: TNUHDB / BADRIKARAI / 01.

REVISION NO.:

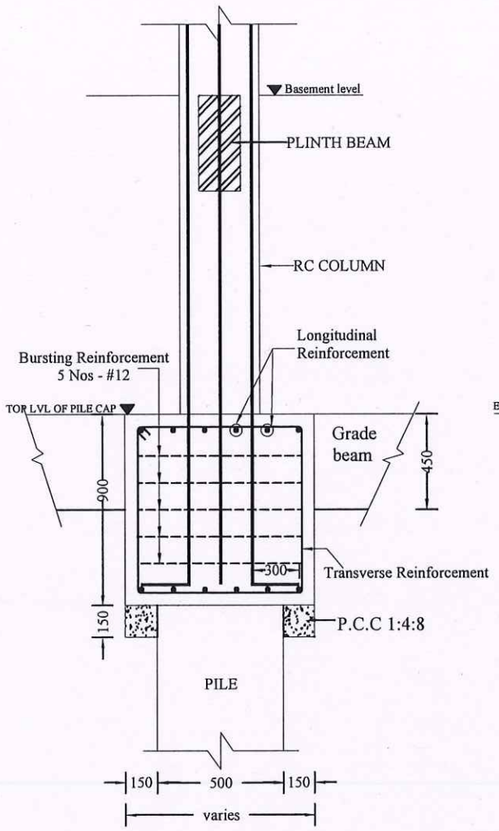
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10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
EE 10/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

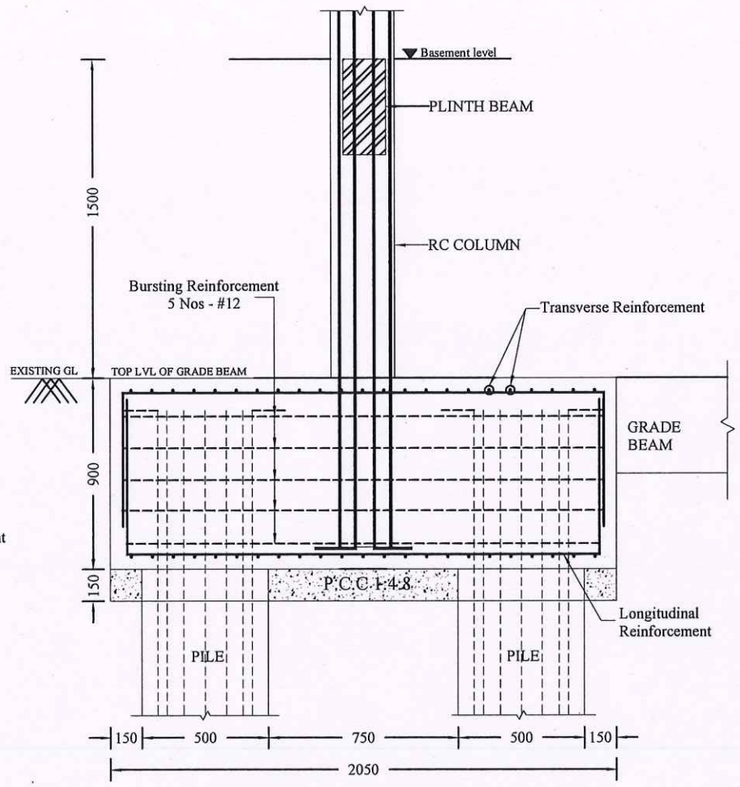
sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

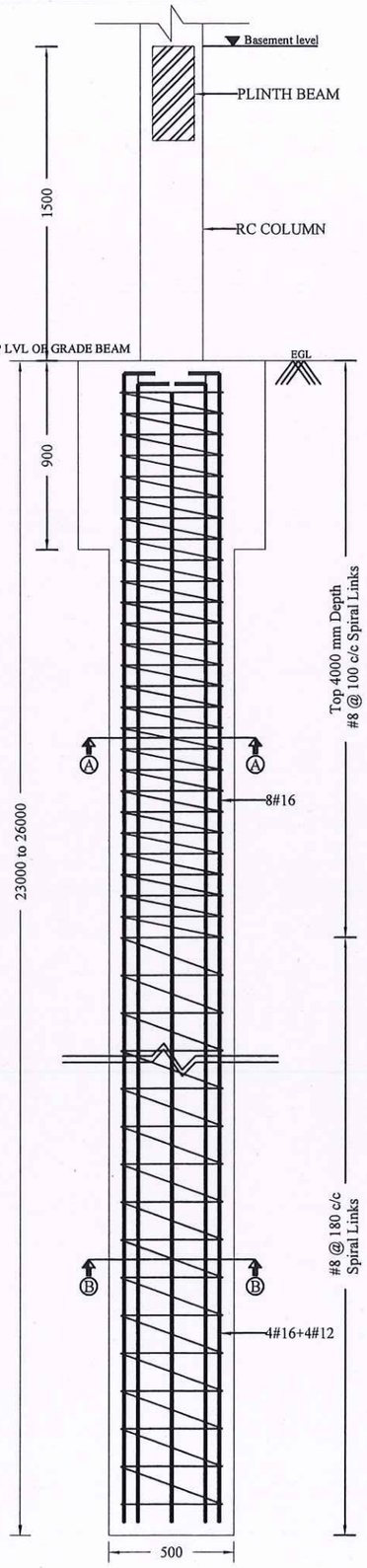
PILE CAP CROSS SECTIONAL DETAILS (TYPICAL) & DETAILS OF PILE.



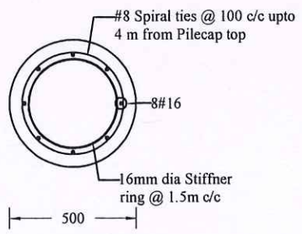
TYPICAL CROSS SECTION



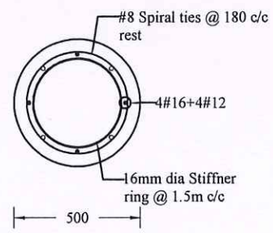
TYPICAL LONGITUDINAL SECTION



DETAILS OF PILE (P1)



CROSS SECTION A-A



CROSS SECTION B-B

TRUE COPY

10/9/2024

EXECUTIVE ENGINEER (A/c)

STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
KAMARAJAR SALAI, CHENNAI-600 005.

10/9/24

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
PILE CAP CROSS SECTIONAL DETAILS(TYPICAL) & DETAILS OF PILE.

TYPE DESIGN NO.: 80/2022 (Block - 1)

DWG.NO.: TNUHDB / BADRIKARAI / 02.

REVISION NO.:

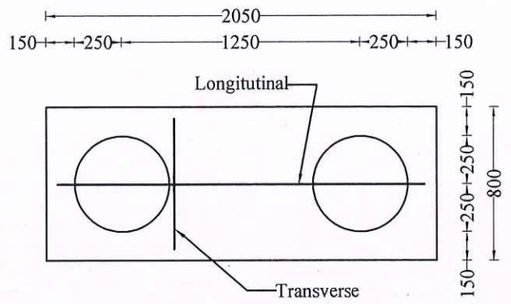
Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

sd.xxxx 09.09.2024
Chief Engineer - I

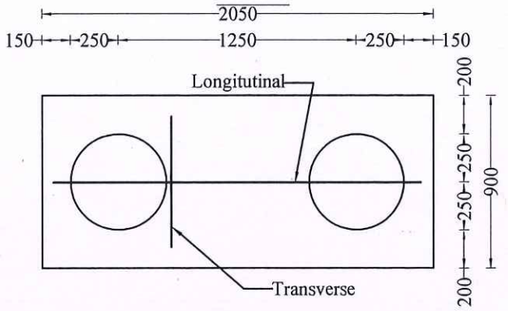
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

PILE CAP DETAILS

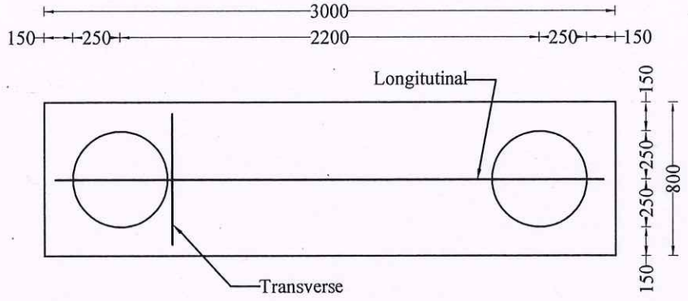
PC2 , PC2a & PC2 b



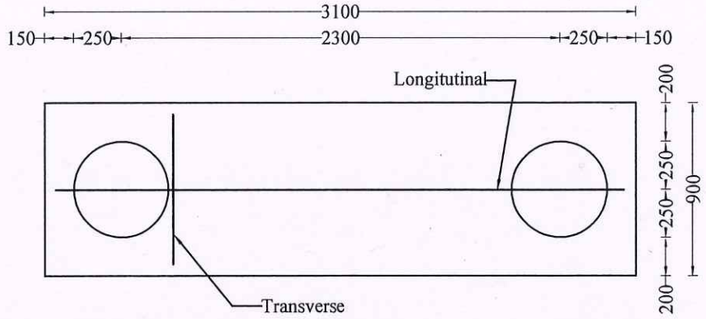
PC2c



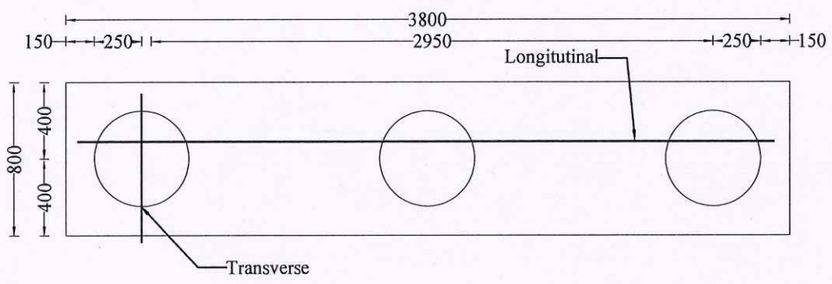
PC2d



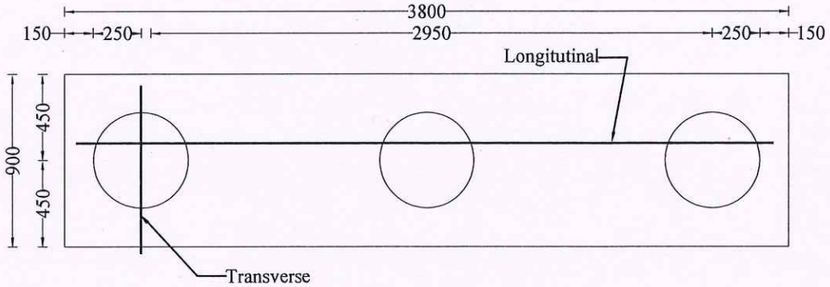
PC2e



PC3



PC3a



PILE CAP SCHEDULE

PILE CAP ID	PILE CAP SIZE (mm)			LONGITUDINAL REINFORCEMENT		TRANSVERSE REINFORCEMENT	BURSTING REINFORCEMENT
	LENGTH	BREATH	DEPTH	TOP	BOTTOM		
PC2	2050	800	900	7-Nos #16	6-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2a	2050	800	900	6-Nos #16	7-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2b	2050	800	900	6-Nos #20	7-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2c	2050	900	900	7-Nos #16	8-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2d	3000	800	900	6-Nos #16	6-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2e	3100	900	900	7-Nos #16	8-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC3	3800	800	900	6-Nos #20	6-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC3a	3800	900	900	7-Nos #16	7-Nos #20	2L- #16 @120 c/c	5-Nos #12

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
PILE CAP DETAILS & SCHEDULE.

TYPE DESIGN NO.: 80/2022 (Block - 1)

DWG.NO.: TNUHDB / BADRIKARAI /03.

REVISION NO.:

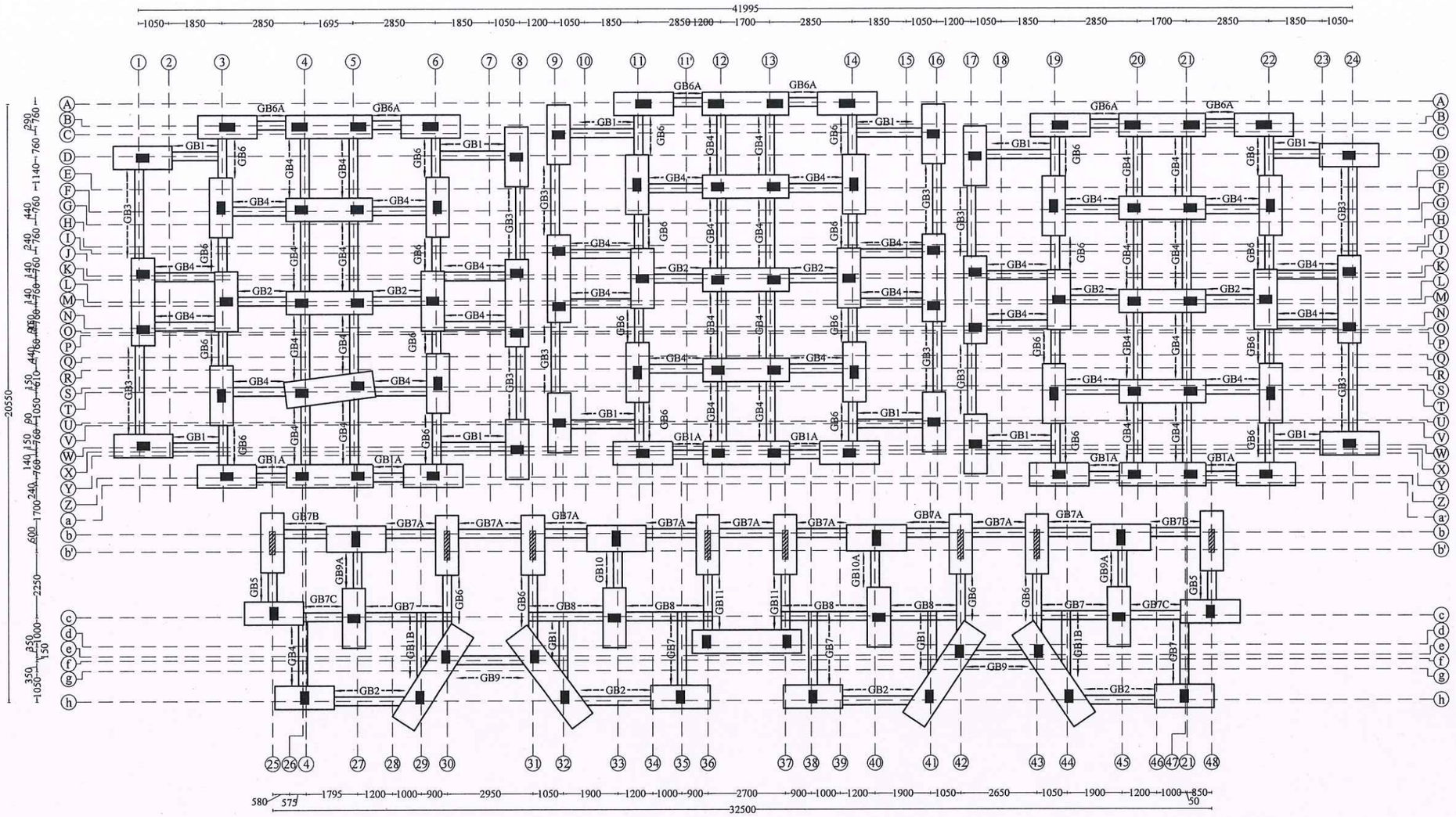
Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

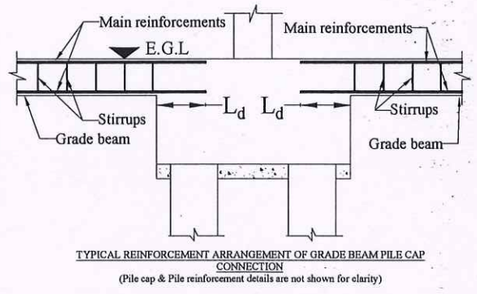
sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

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10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
#5, KAMARAJAR SALAI, CHENNAI-600 005.
10/9/24

GRADE BEAM LAYOUT





TYPICAL REINFORCEMENT ARRANGEMENT OF GRADE BEAM PILE CAP CONNECTION

(Pile cap & Pile reinforcement details are not shown for clarity)

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
GRADE BEAM LAYOUT.

TYPE DESIGN NO.: 80/2022 (BLOCK - 1)

DWG.NO.: TNUHDB / BADRIKARAI/ 04.

REVISION NO.:

TRUE COPY
10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E-10
10/9/24

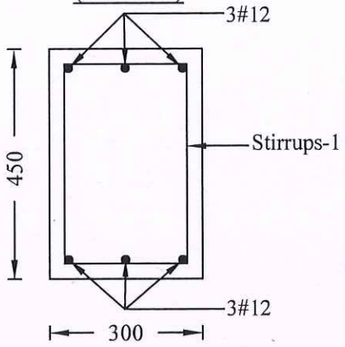
Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

sd.xxxx 09.09.2024
Chief Engineer - I

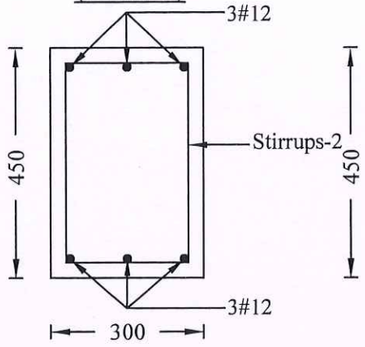
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

GRADE BEAM DETAILS-1

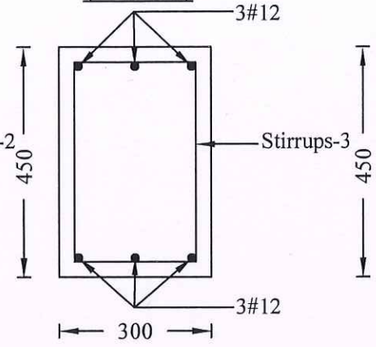
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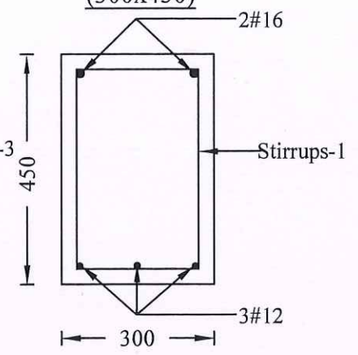
GB1A (300x450)



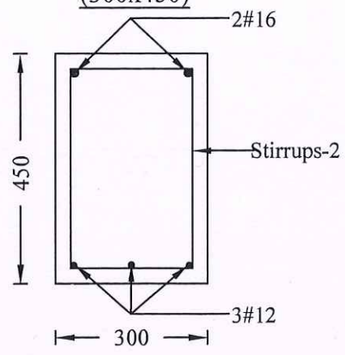
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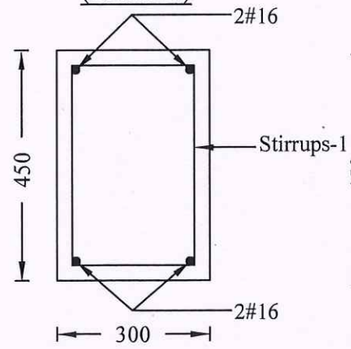
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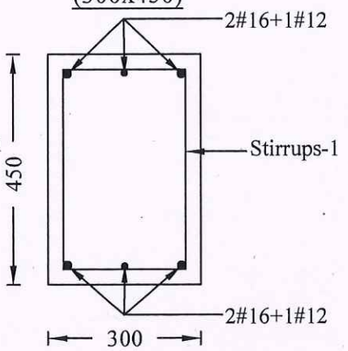
GB2A (300x450)



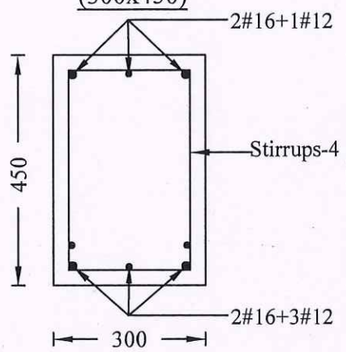
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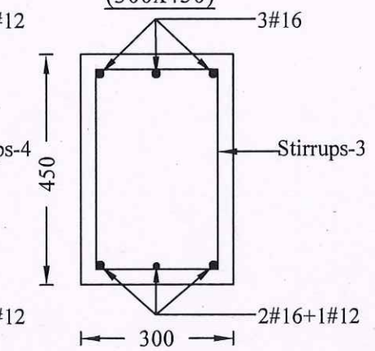
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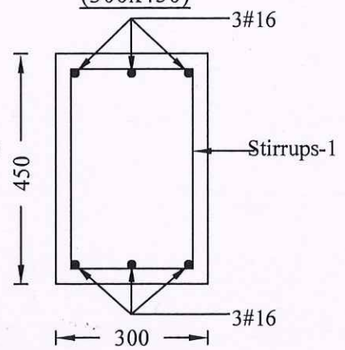
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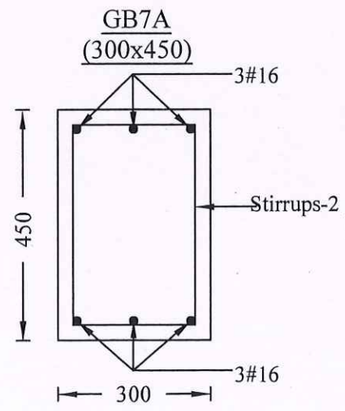
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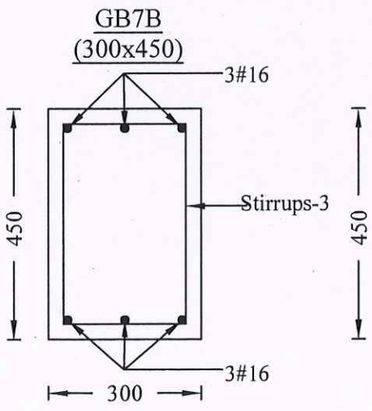
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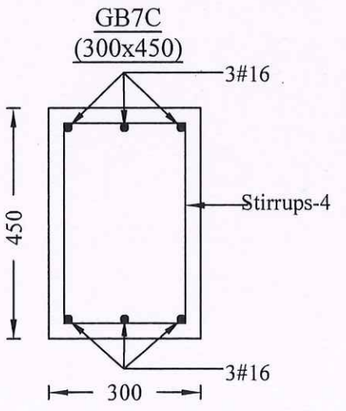
GB7A (300x450)



GB7B (300x450)



GB7C (300x450)



NOTE :

1) Stirrups-1 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 150mm c/c.
2) Stirrups-2 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 120mm c/c.
3) Stirrups-3 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 90mm c/c.
4) Stirrups-4 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 60mm c/c.

TRUE COPY

10/9/2024

EXECUTIVE ENGINEER (A/c)

STRUCTURAL AND QUALITY CONTROL CELL

TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD

5, KAMARAJAR SALAI, CHENNAI-600 005.

EO 10/9/24

NOTE :

1. All the dimensions are in mm unless noted otherwise.
2. All structural drawings shall be read in conjunction with the relevant Architectural drawings.
3. All the RCC works shall be as per design mix of **M30** grade, conforming to IS:456 - 2000.
4. All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
5. The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
6. Fly ash bricks has been considered for masonry work in sub structure & AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (S+6) floors only.
8. Design of the structure carried out with Limit State Method.
9. Bored Cast-in-situ piles of 500 mm diameter shall be adopted with the minimum length of pile of 23 m to 26 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1200 KN and the lateral capacity is 103.7 KN (Fixed) as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Pile & Pile Cap - 60 mm
    (b) Column/Shear Wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lintels to be provided in all floors.
15. Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
16. Anchorage of column bars into the footings shall not be less than 50 Ø.
17. Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer atonce for review.
18. Ground water quality has to be conformed for suitability to construction work.
19. The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
20. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. Since the site is located at a distance of 5 Km from the sea shore & there are no details about Chloride & Sulphate content in the soil report this should be checked and suitable remedial measures should be taken accordingly.
21. The Recommendations in the Soil Report done by College of Engineering, Guindy, Anna University, Chennai. Job No:SM&FE217/Consultancy/2022, Dt: 18.05.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
GRADE BEAM DETAILS -1.

TYPE DESIGN NO.: 80/2022 (Block - 1)

DWG.NO.: TNUHDB / BADRIKARAI/05.

REVISION NO.:

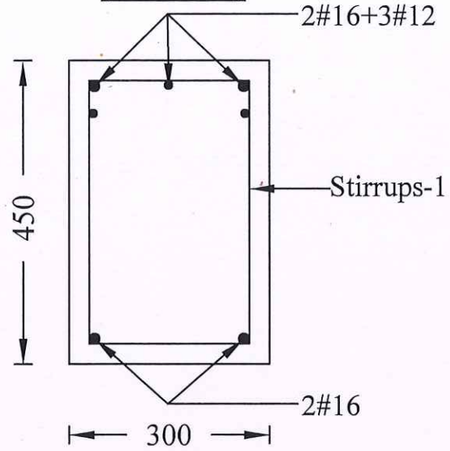
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

sd.xxxx 09.09.2024
Chief Engineer - I

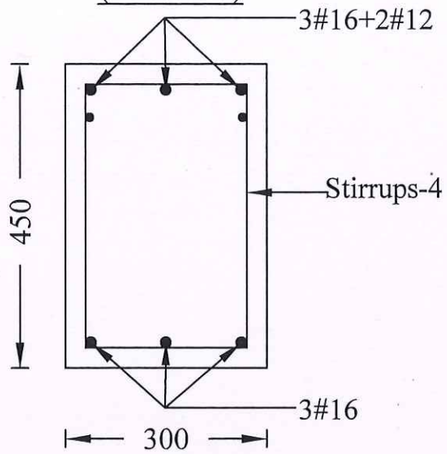
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

GRADE BEAM DETAILS-2

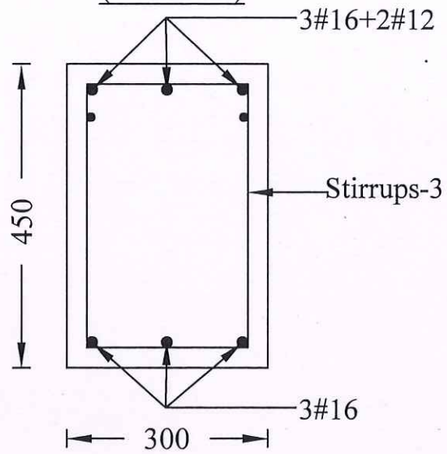
GB8 (300x450)



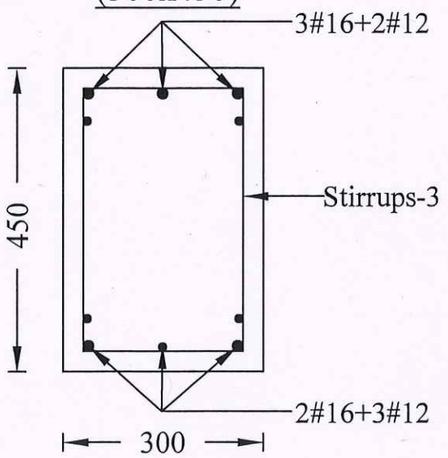
GB9 (300x450)



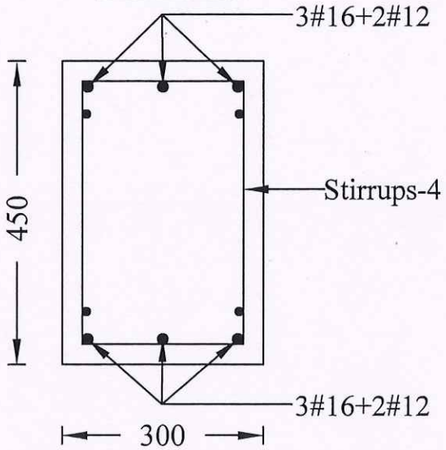
GB9A (300x450)



GB10 (300x450)



GB11 (300x450)



NOTE :

1) Stirrups-1 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 150mm c/c.
2) Stirrups-2 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 120mm c/c.
3) Stirrups-3 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 90mm c/c.
4) Stirrups-4 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 60mm c/c.

TRUE COPY

10/9/2024

EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

E.E 10/9/24

NOTE :

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2. All structural drawings shall be read in conjunction with the relevant Architectural drawings.
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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
GRADE BEAM DETAILS -2.

TYPE DESIGN NO.: 80/2022 (Block - 1)

DWG.NO.: TNUHDB / BADRIKARAI/06.

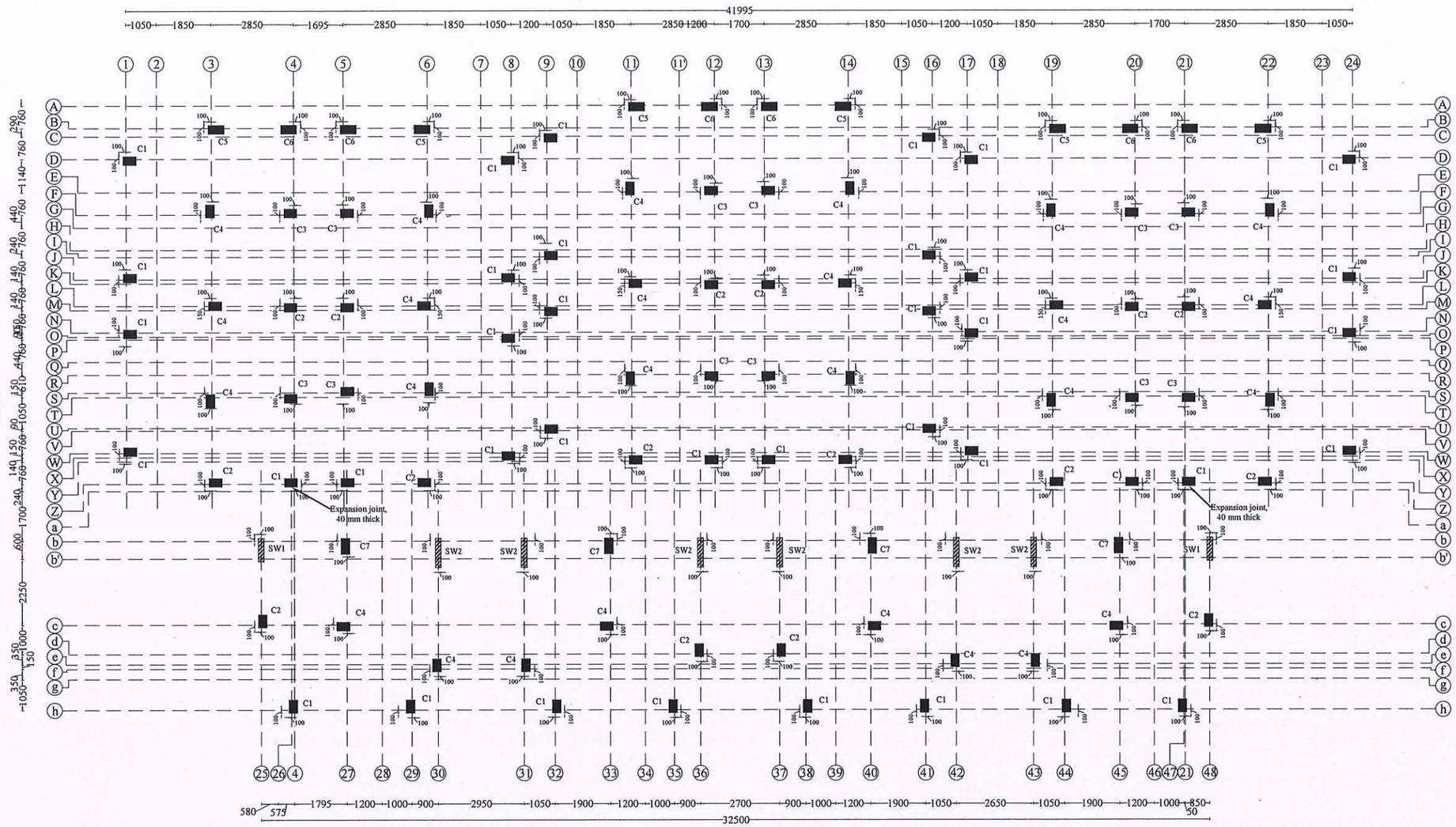
REVISION NO.:

Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

COLUMN & SHEAR WALL LAYOUT



NOTE :

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
COLUMN & SHEAR WALL LAYOUT.

TYPE DESIGN NO.: 80/2022 (BLOCK - 1)

DWG.NO.: TNUHDB / BADRIKARAI / 07.

REVISION NO.:

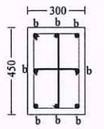
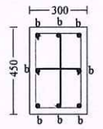
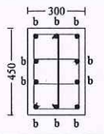
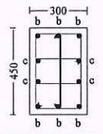
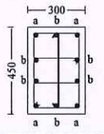
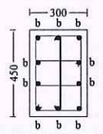
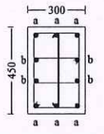
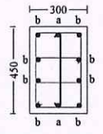
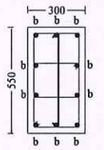
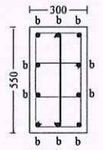
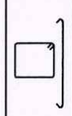
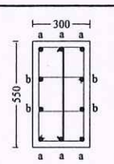
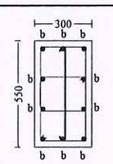
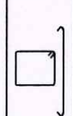
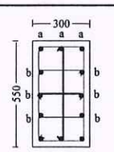
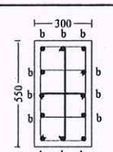
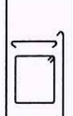
TRUE COPY
10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E 10 10/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

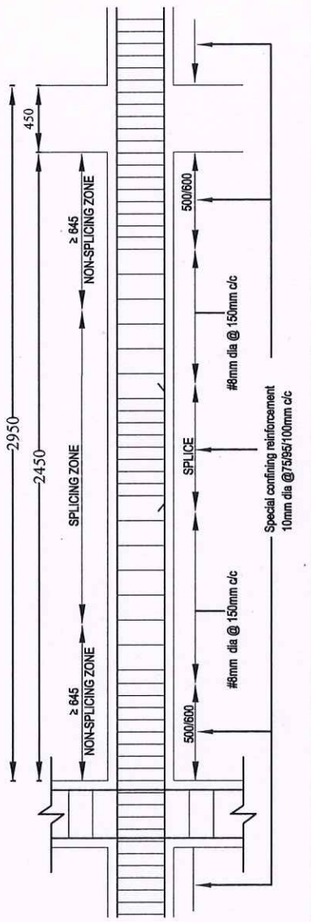
sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

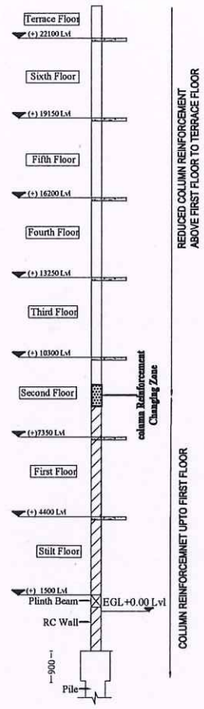
SCHEDULE OF COLUMNS

Sl. No.	Column Marking	No. of Columns	Size (mm x mm)	Upto First Floor		Above First Floor		Lateral Ties	Ties Profile	
				Column Verticals	Cross Section	Column Verticals	Cross Section			
1.	C1	38	300 x 450	#16 - 8 Nos		#16 - 8 Nos		1) Upto Plinth Beam: # 10 @ 75 mm c/c 2) Above Plinth Beam: # 10 @ 75 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
2.	C2	16	300 x 450	#16 - 10 Nos		#16 - 6 Nos + #12 - 4 Nos.		1) Upto Plinth Beam: # 10 @ 75 mm c/c 2) Above Plinth Beam: # 10 @ 75 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
3.	C3	12	300 x 450	#20 - 4 Nos + #16 - 6 Nos		#16 - 10 Nos		1) Upto Plinth Beam: # 10 @ 100 mm c/c 2) Above Plinth Beam: # 10 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
4.	C4	26	300 x 450	#20 - 6 Nos + #16 - 4 Nos		#20 - 2 Nos + #16 - 8 Nos		1) Upto Plinth Beam: # 10 @ 100 mm c/c 2) Above Plinth Beam: # 10 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
5.	C5	06	300 x 550	#16 - 10 Nos		#16 - 10 Nos		1) Upto Plinth Beam: # 10 @ 95 mm c/c 2) Above Plinth Beam: # 10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
6.	C6	06	300 x 550	#20 - 6 Nos + #16 - 4 Nos		#16 - 10 Nos		1) Upto Plinth Beam: # 10 @ 95 mm c/c 2) Above Plinth Beam: # 10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
7.	C7	04	300 x 550	#20 - 6 Nos + #16 - 6 Nos		#16 - 12 Nos		1) Upto Plinth Beam: # 10 @ 100 mm c/c 2) Above Plinth Beam: # 10 @ 100 mm c/c for 600 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		

Notes: In Cross Section a - # 20 mm b - # 16 mm c - # 12 mm



TYPICAL COLUMN SPLICING AND CONFINING REINFORCEMENT DETAILS



NOTE :

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3. All the RCC works shall be as per design mix of **M30** grade, conforming to IS:456 - 2000.
4. All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
5. The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
6. Fly ash bricks has been considered for masonry work in sub structure & AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (**S+6**) floors only.
8. Design of the structure carried out with Limit State Method.
9. Bored Cast-in-situ piles of 500 mm diameter shall be adopted with the minimum length of pile of 23 m to 26 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1200 KN and the lateral capacity is 103.7 KN (Fixed) as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Pile & Pile Cap - 60 mm
    (b) Column/Shear Wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lintels to be provided in all floors.
15. Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
16. Anchorage of column bars into the footings shall not be less than 50 Ø.
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10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E-10 10/9/24

STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS.

TYPE DESIGN NO.: 80/2022 (Block - 1)

DWG.NO.: TNUHDB / BADRIKARAI /08.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

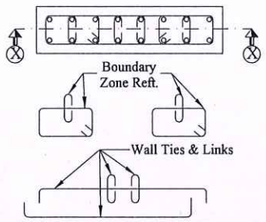
sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

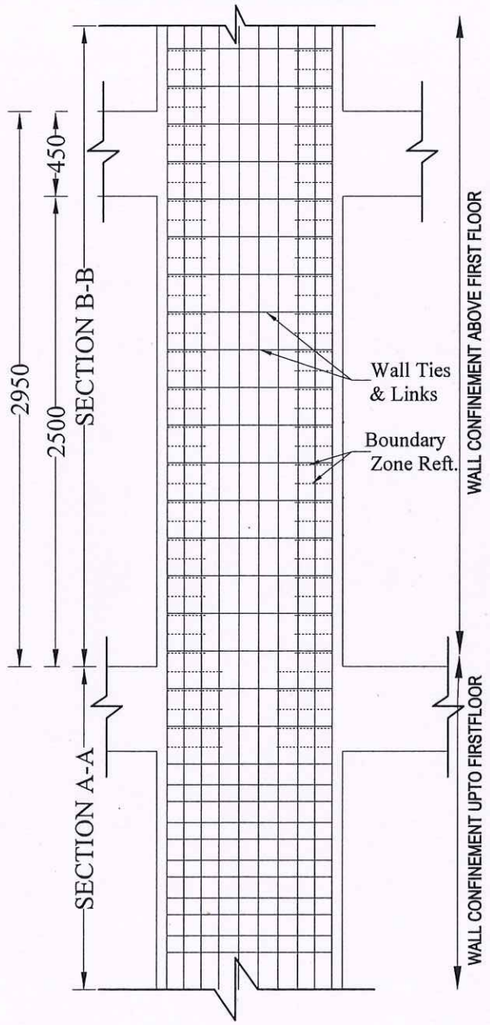
SHEAR WALL REINFORCEMENT DETAILS

TYPICAL SHEAR WALL CONFINING REINFORCEMENT DETAILS

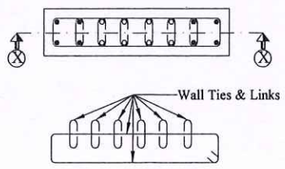
SECTION B-B



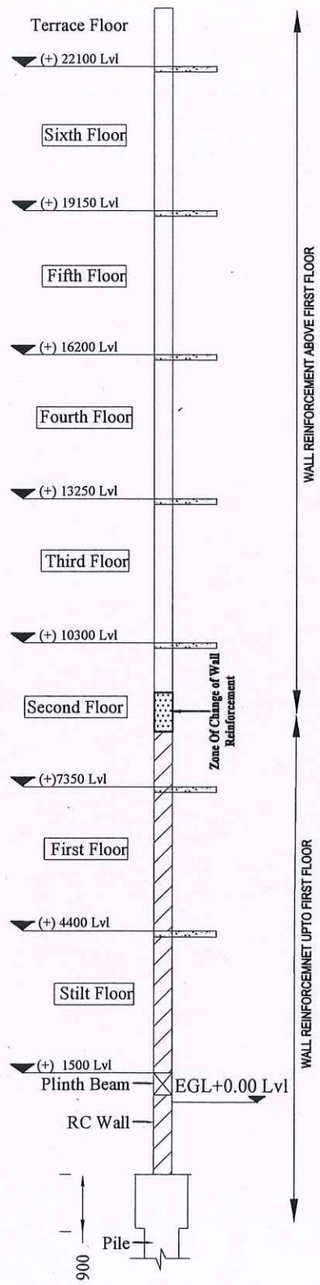
DETAILS @ SECTION X-X



SECTION A-A



Curtailments Levels	SW1 (2 Nos)	SW2 (6 Nos)
Above 1st Floor level (Bar Curtailment at mid height of 2nd floor)	800, 120, 120, 200 ○ - 12mm (16 Nos) 8@65 c/c 8@130 c/c	1000, 120, 120, 200 ○ - 12mm (20 Nos) 8@65 c/c 8@130 c/c
Upto 1st Floor level (Bar Curtailment at mid height of 2nd floor)	800, 200 ● - 16mm (8 Nos) ○ - 12mm (8 Nos) 10@70 c/c	1000, 200 ● - 20mm (16 Nos) ○ - 16mm (4 Nos) 10@95 c/c



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8. Design of the structure carried out with Limit State Method.
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    (d) Slab - 25 mm
    (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
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21. The Recommendations in the Soil Report done by College of Engineering, Guindy, Anna University, Chennai. Job No:SM&FE217/Consultancy/2022, Dt: 18.05.2022 should be followed scrupulously.

TRUE COPY
10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E.10 10/9/24

STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
SHEAR WALL REINFORCEMENT DETAILS.

TYPE DESIGN NO.: 80/2022 (Block - 1)

DWG.NO.: TNUHDB / BADRIKARAI /09.

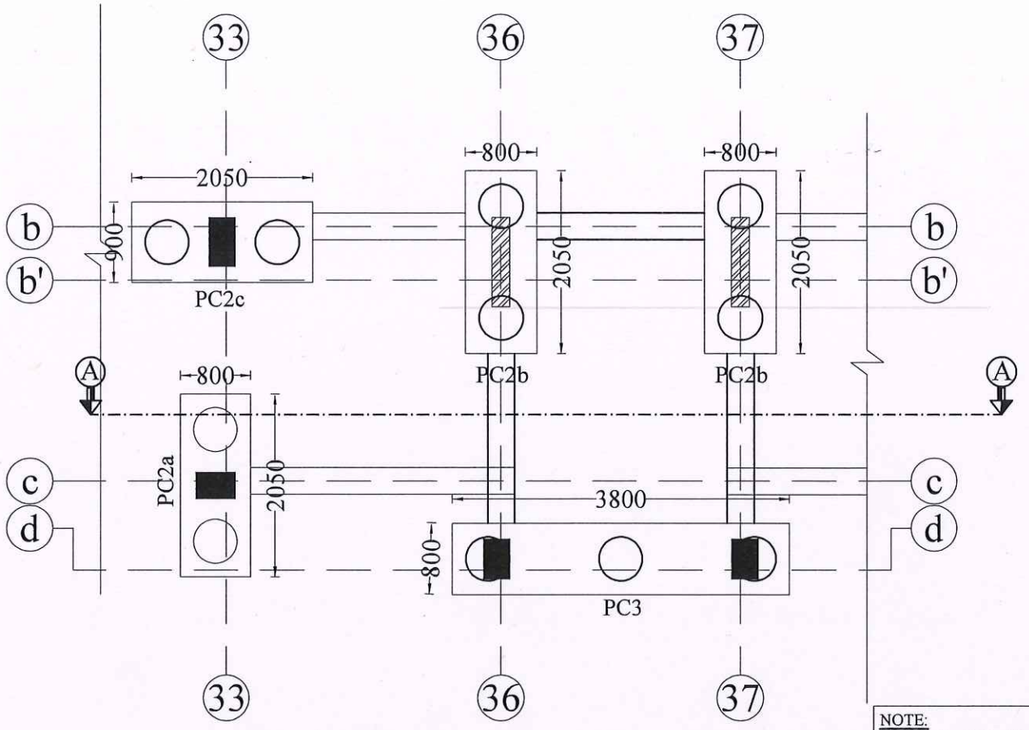
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

sd.xxxx 09.09.2024
Chief Engineer - I

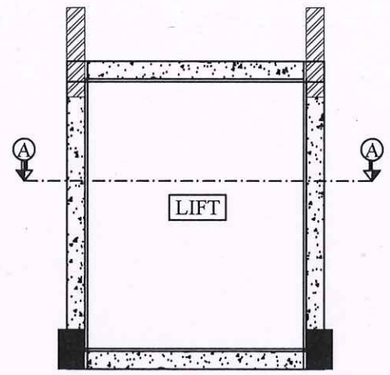
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

LAYOUT AND RC DETAILS OF LIFT WELL

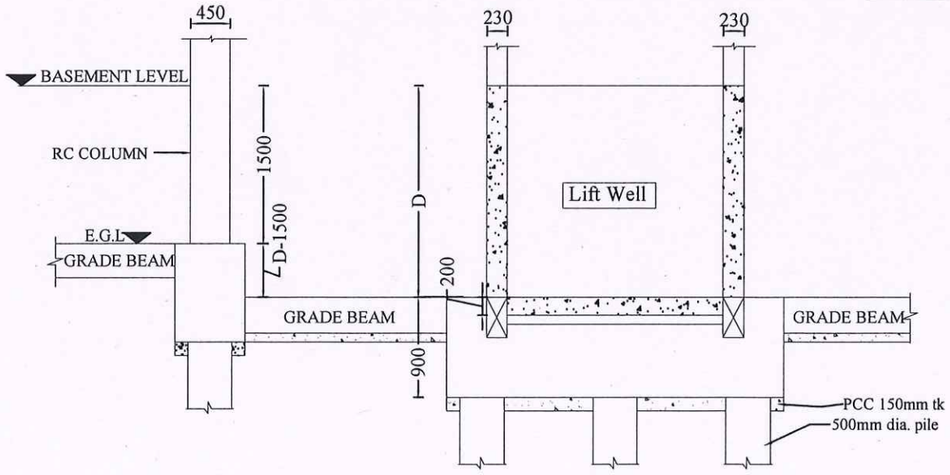


GENERAL PILECAP & GRADE BEAM LAYOUT BELOW THE LIFT PIT AREA - LIFT

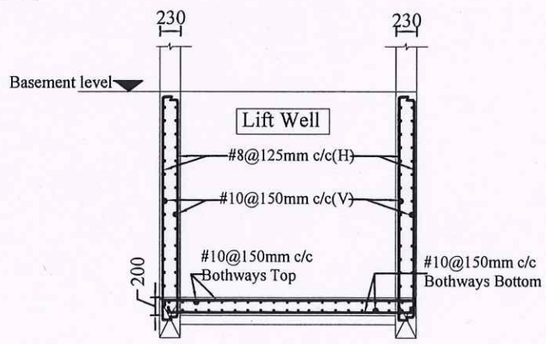
NOTE:
*D - Depth of lift pit below Finished Floor level should be confirmed with manufacturer. If D exceeds 2m,inform the undersigned to revise the drawing.



PLAN OF LIFT WELL-TYPICAL



SECTION ON A-A (GENERAL ARRANGEMENT)



SECTION ON A-A (REINFORCEMENT DETAILS)

TRUE COPY
10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
EE
10/9/24

NOTE :

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
LAYOUT & RC DETAILS OF LIFT WELL.

TYPE DESIGN NO.: 80/2022 (Block - 1)

DWG.NO.: TNUHDB / BADRIKARAI/10.

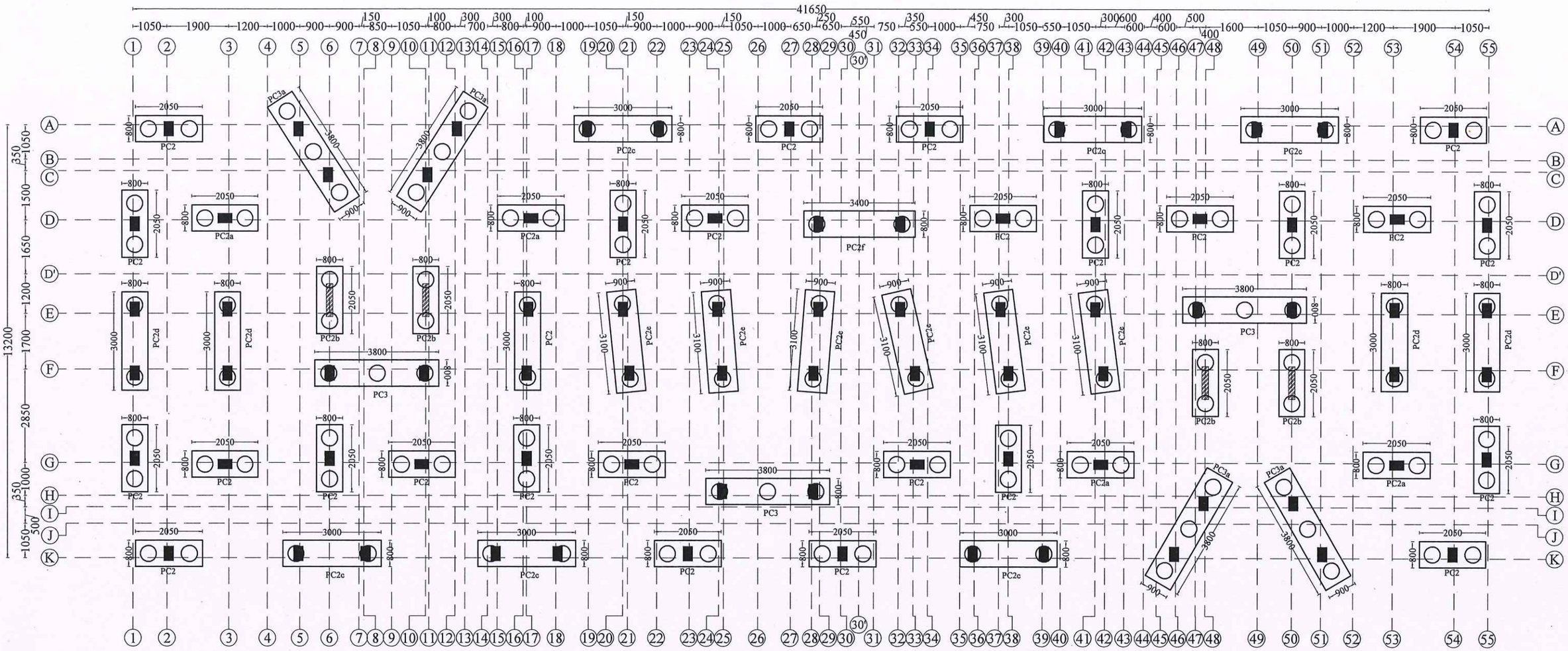
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

PLAN AT PILE CAP LEVEL



NOTE :

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9. Bored Cast-in-situ piles of 500 mm diameter shall be adopted with the minimum length of pile of 23 m to 26 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1200 KN and the lateral capacity is 103.7 KN (Fixed) as recommended in Soil Report.
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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX, CHENNAI CORPORATION.

TITLE:
PLAN AT PILE CAP LEVEL.

TYPE DESIGN NO.: 81/2022 (BLOCK - 2)

DWG.NO.: TNUHDB / BADRIKARAI/ 01.

REVISION NO.:

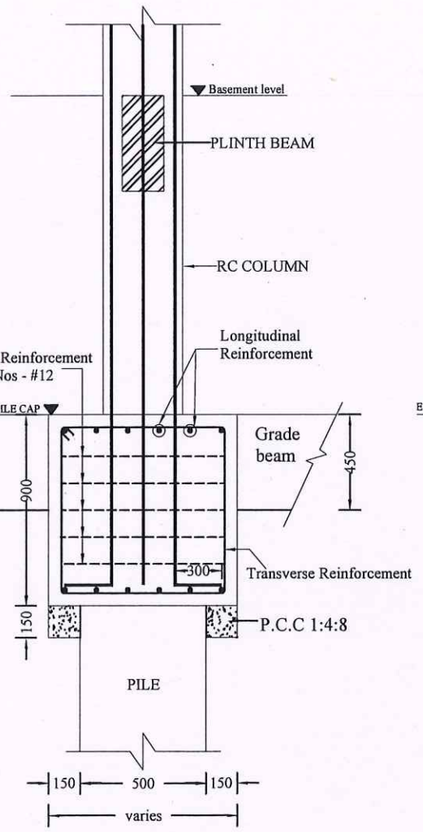
TRUE COPY
10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E.E
10/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

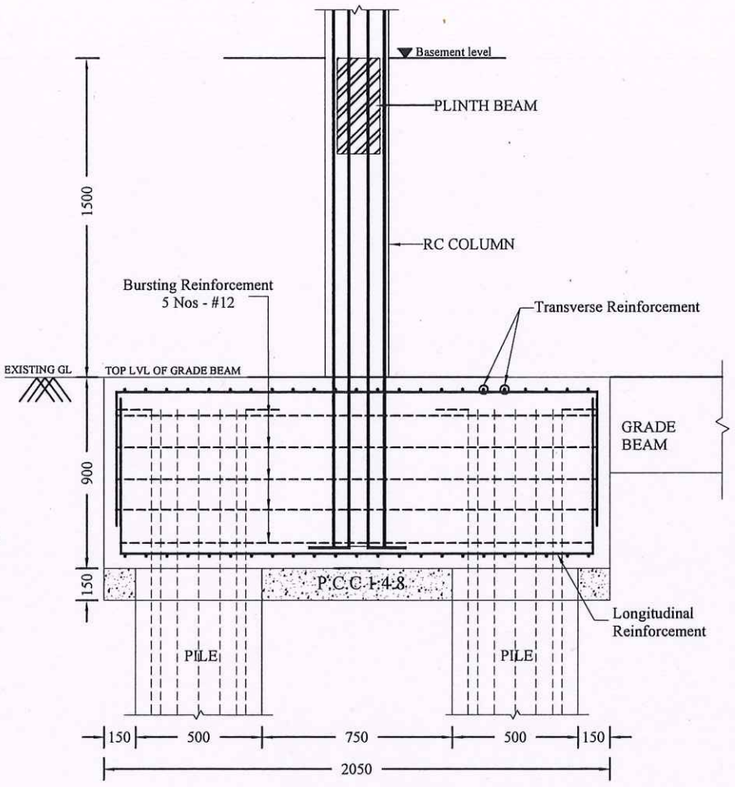
sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

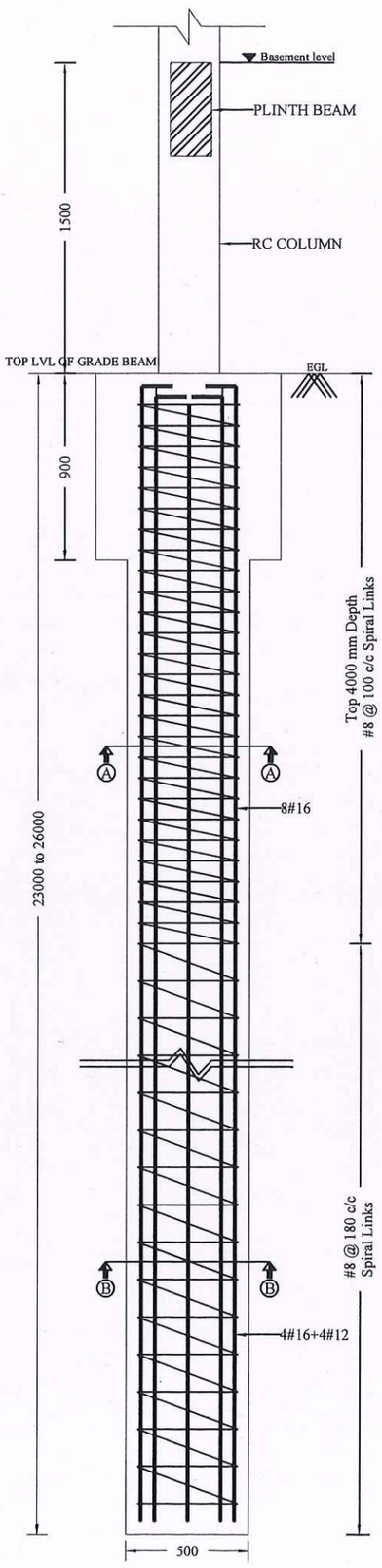
PILE CAP CROSS SECTIONAL DETAILS (TYPICAL) & DETAILS OF PILE.



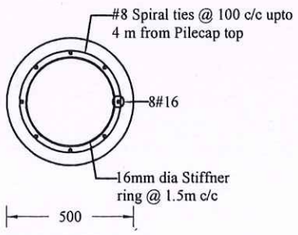
TYPICAL CROSS SECTION



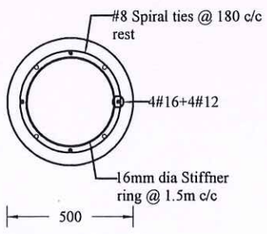
TYPICAL LONGITUDINAL SECTION



DETAILS OF PILE (P1)



CROSS SECTION A-A



CROSS SECTION B-B

TRUE COPY

10/9/2024

EXECUTIVE ENGINEER (A/c)

STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

E.10 10/9/24

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
PILE CAP CROSS SECTIONAL DETAILS(TYPICAL) & DETAILS OF PILE.

TYPE DESIGN NO.: 81/2022 (Block - 2)

DWG.NO.: TNUHDB / BADRIKARAI /02.

REVISION NO.:

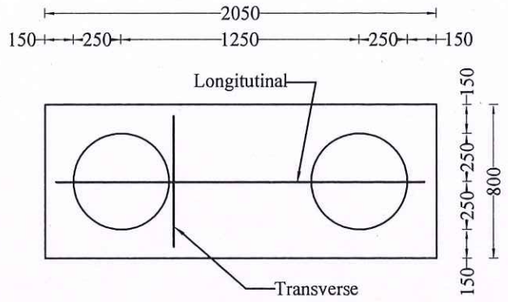
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

sd xxxx 09.09.2024
Chief Engineer - I

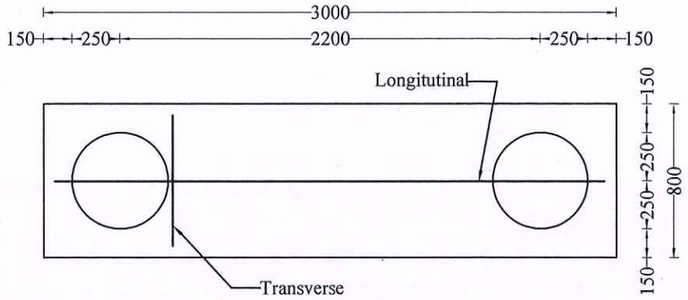
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

PILE CAP DETAILS

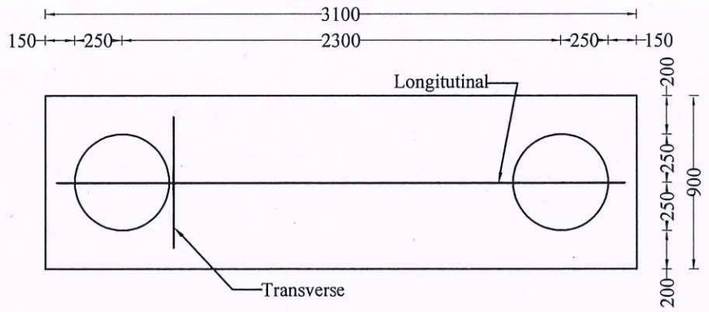
PC2 , PC2a & PC2b



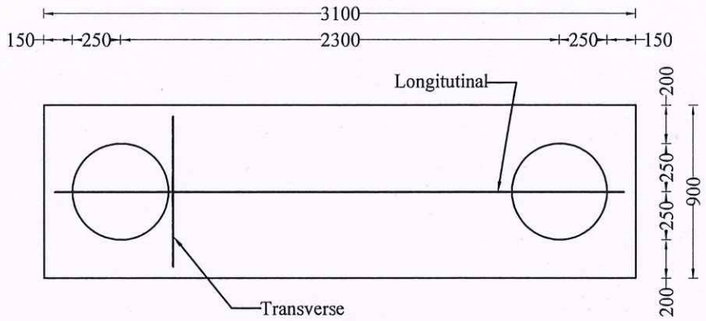
PC2c,PC2d



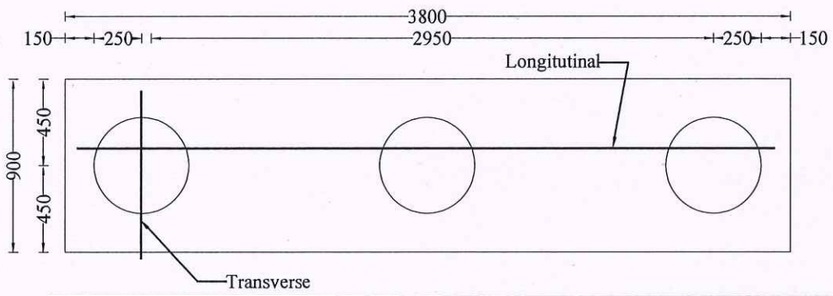
PC2e



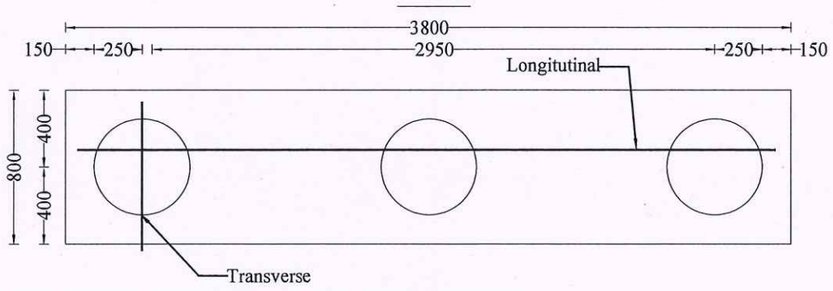
PC2f



PC3



PC3a



PILE CAP SCHEDULE

PILE CAP ID	PILE CAP SIZE (mm)			LONGITUDINAL REINFORCEMENT		TRANSVERSE REINFORCEMENT	BURSTING REINFORCEMENT
	LENGTH	BREATH	DEPTH	TOP	BOTTOM		
PC2	2050	800	900	7-Nos #16	6-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2a	2050	800	900	6-Nos #16	7-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2b	2050	800	900	7-Nos #20	8-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2c	3000	800	900	6-Nos #16	6-Nos #16	2L- #16 @120 c/c	5-Nos #12
PC2d	3000	800	900	6-Nos #16	7-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2e	3100	900	900	7-Nos #16	6-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC2f	3400	800	900	6-Nos #16	6-Nos #16	2L- #16 @120 c/c	5-Nos #12
PC3	3800	900	900	6-Nos #16	6-Nos #20	2L- #16 @120 c/c	5-Nos #12
PC3a	3800	800	900	7-Nos #16	8-Nos #20	2L- #16 @120 c/c	5-Nos #12

TRUE COPY

10/9/2024

EXECUTIVE ENGINEER CA/c

STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

E-10 10/9/24

NOTE :

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3. All the RCC works shall be as per design mix of **M30** grade, conforming to IS:456 - 2000.
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    (b) Column/Shear Wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Walls & Slab - 30 mm
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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
PILE CAP DETAILS & SCHEDULE.

TYPE DESIGN NO.: 81/2022 (Block - 2)

DWG.NO.: TNUHDB / BADRIKARAI /03.

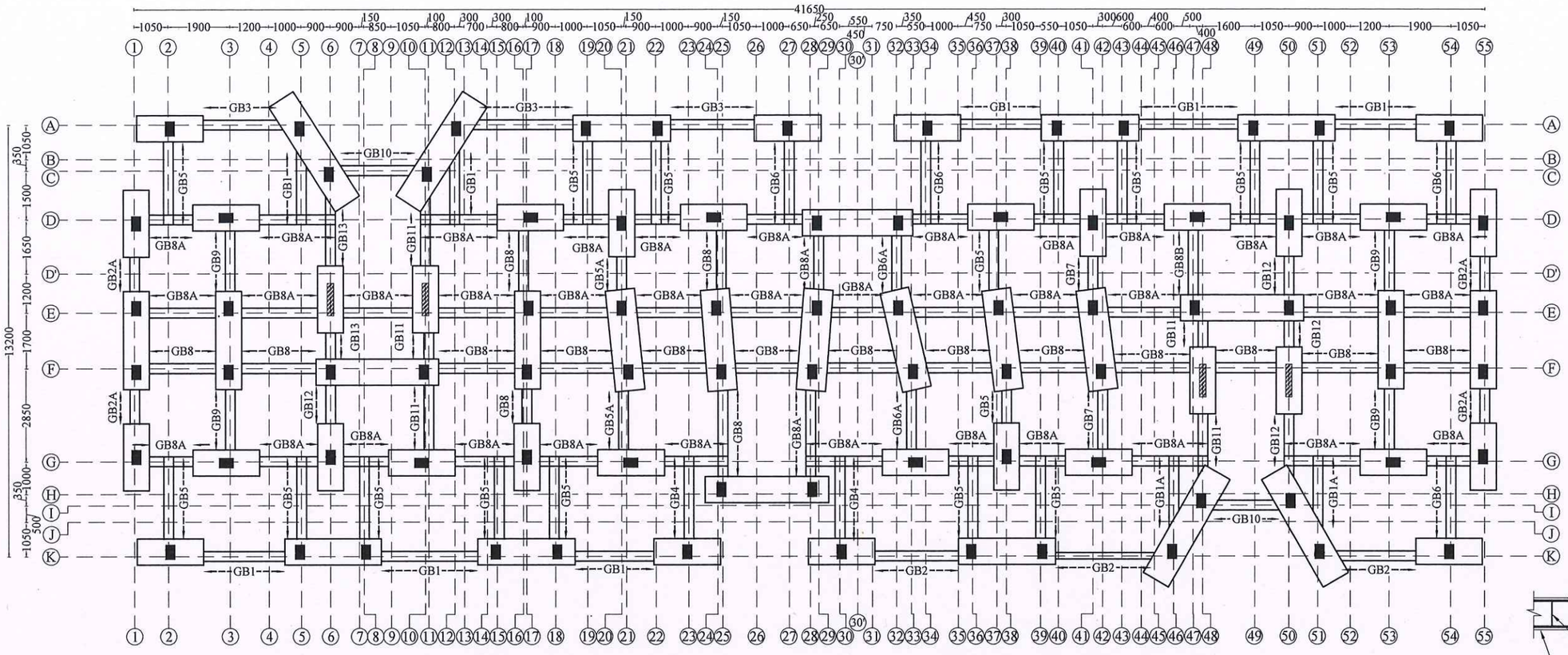
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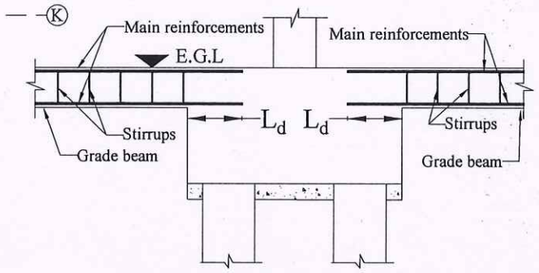
Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

sd xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

GRADE BEAM LAYOUT





TYPICAL REINFORCEMENT ARRANGEMENT OF GRADE BEAM PILE CAP CONNECTION

(Pile cap & Pile reinforcement details are not shown for clarity)

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX, CHENNAI CORPORATION.

TITLE:
GRADE BEAM LAYOUT.

TYPE DESIGN NO.: 81/2022 (BLOCK - 2)

DWG.NO.: TNUHDB / BADRIKARAI / 04.

REVISION NO.:

TRUE COPY
10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E.NO 10/9/24

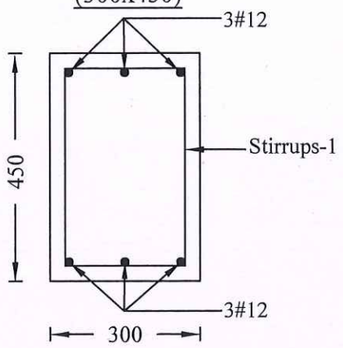
Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

sd.xxxx 09.09.2024
Chief Engineer - I

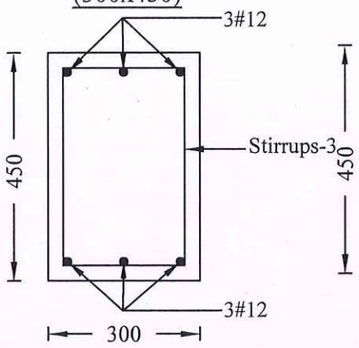
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

GRADE BEAM DETAILS

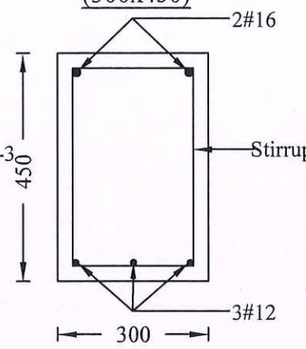
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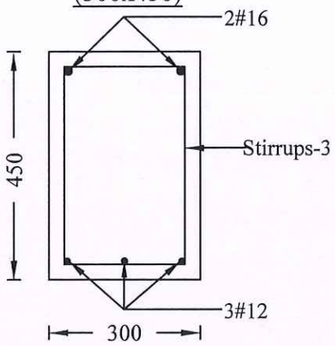
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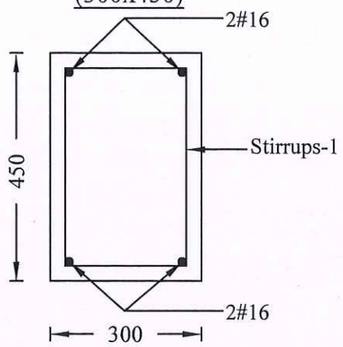
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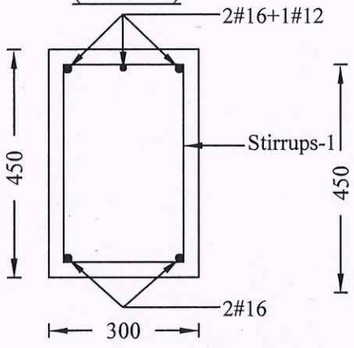
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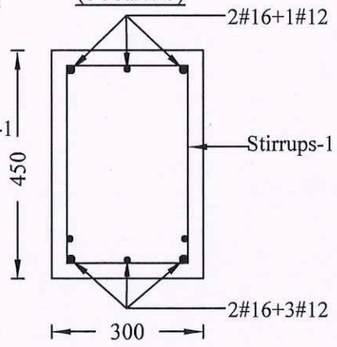
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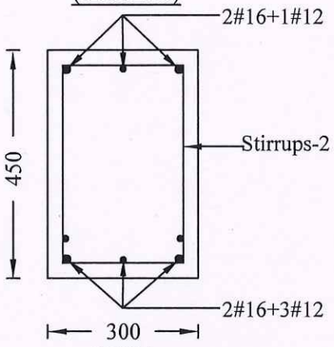
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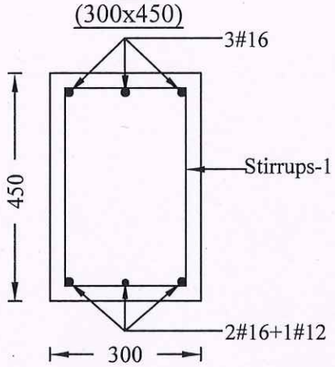
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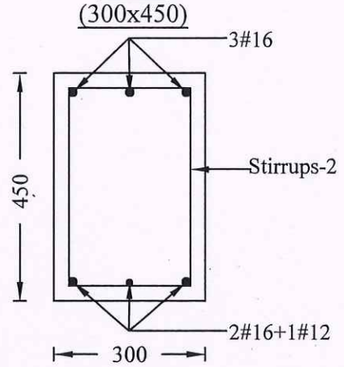
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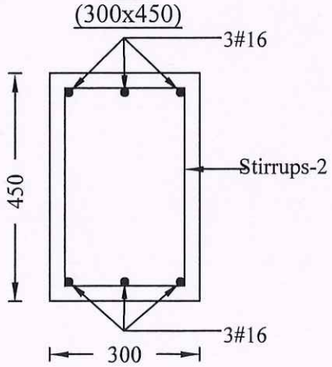
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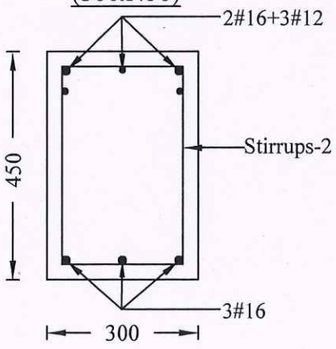
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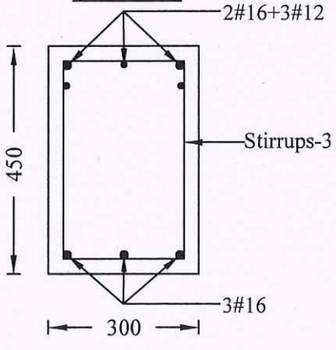
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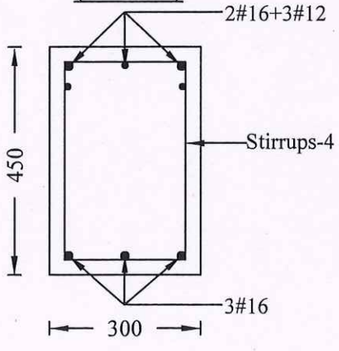
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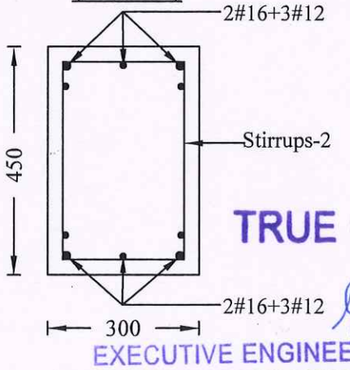
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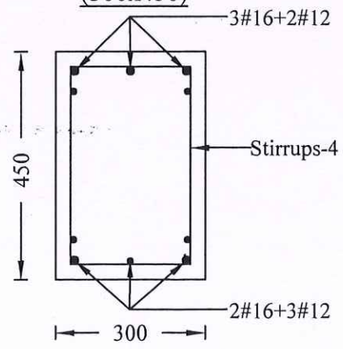
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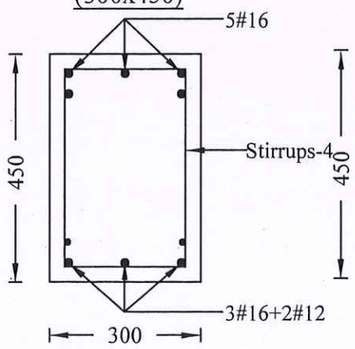
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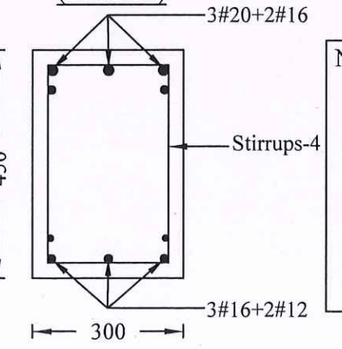
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GB11 (300x450)



GB12 (300x450)



NOTE :

1) Stirrups-1 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 150mm c/c.
2) Stirrups-2 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 120mm c/c.
3) Stirrups-3 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 90mm c/c.
4) Stirrups-4 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side from pilecap face and the rest at 2L#10 @ 60mm c/c.

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
GRADE BEAM DETAILS.

TYPE DESIGN NO.: 81/2022 (Block - 2)

DWG.NO.: TNUHDB / BADRIKARAI /05.

REVISION NO.:

TRUE COPY

10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

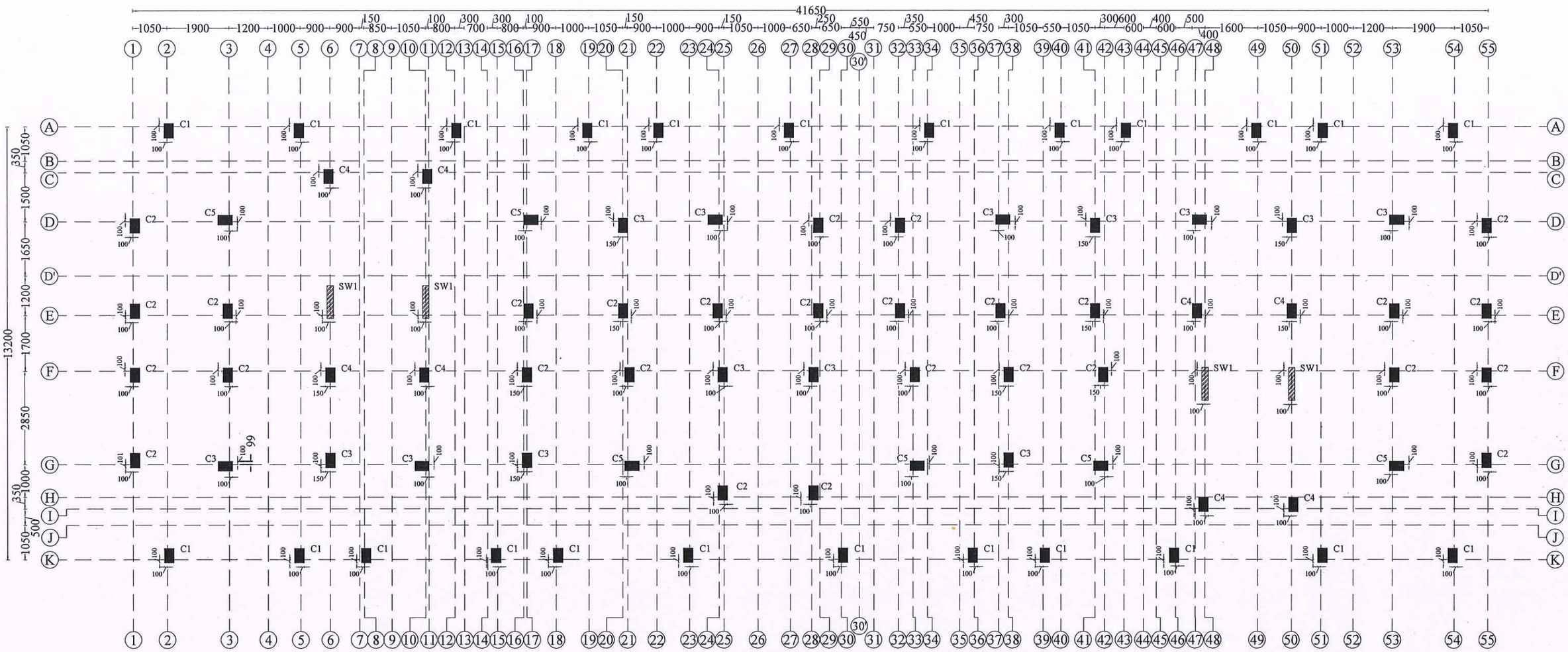
E.E 10/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

sd xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

COLUMN & SHEAR WALL LAYOUT



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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX, CHENNAI CORPORATION.

TITLE:
COLUMN & SHEARWALL LAYOUT.

TYPE DESIGN NO.: 81/2022 (BLOCK - 2)

DWG.NO.: TNUHDB / BADRIKARAI / 06.

REVISION NO.:

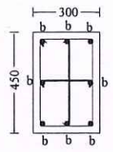
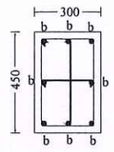
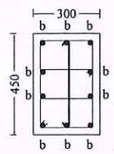
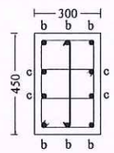
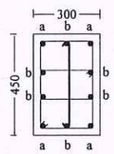
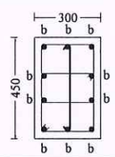
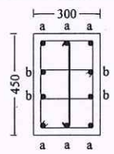
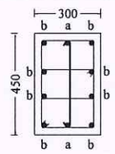
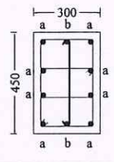
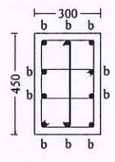
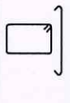
TRUE COPY
10/9/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E-IR 10/9/24

Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

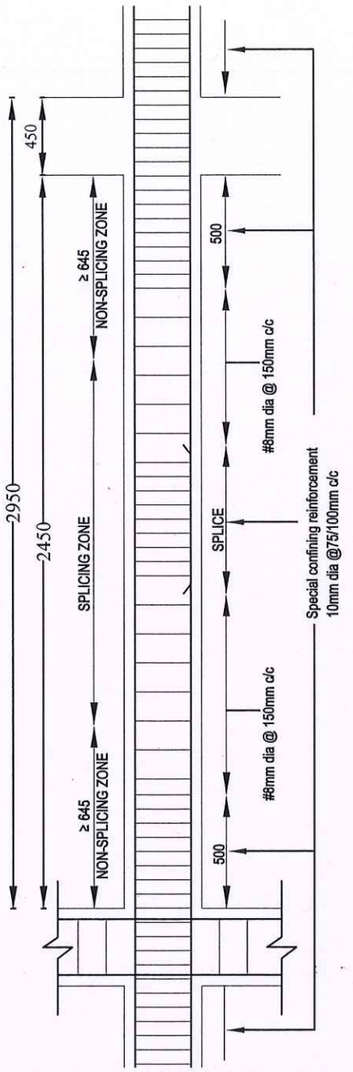
sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

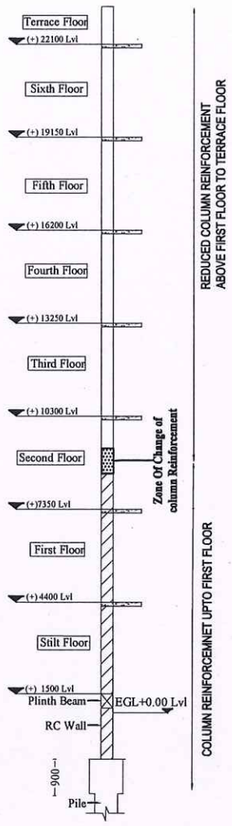
SCHEDULE OF COLUMNS

Sl. No.	Column Marking	No. of Columns	Size (mm x mm)	Upto First Floor		Above First Floor		Lateral Ties	Ties Profile	
				Column Verticals	Cross Section	Column Verticals	Cross Section			
1.	C1	24	300 x 450	#16 - 8 Nos		#16 - 8 Nos		1) Upto Plinth Beam: # 10 @ 75 mm c/c 2) Above Plinth Beam: # 10 @ 75 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
2.	C2	28	300 x 450	#16 - 10 Nos		#16 - 6 Nos + #12 - 4 Nos.		1) Upto Plinth Beam: # 10 @ 75 mm c/c 2) Above Plinth Beam: # 10 @ 75 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
3.	C3	14	300 x 450	#20 - 4 Nos + #16 - 6 Nos		#16 - 10 Nos		1) Upto Plinth Beam: # 10 @ 100 mm c/c 2) Above Plinth Beam: # 10 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
4.	C4	08	300 x 450	#20 - 6 Nos + #16 - 4 Nos		#20 - 2 Nos + #16 - 8 Nos		1) Upto Plinth Beam: # 10 @ 100 mm c/c 2) Above Plinth Beam: # 10 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		
5.	C5	06	300 x 450	#20 - 8 Nos + #16 - 2 Nos		#16 - 10 Nos		1) Upto Plinth Beam: # 10 @ 100 mm c/c 2) Above Plinth Beam: # 10 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction at Splice and the rest #8 @ 150mm c/c		

Notes: In Cross Section a - # 20 mm b - # 16 mm c - # 12 mm



TYPICAL COLUMN SPLICING AND CONFINING REINFORCEMENT DETAILS



NOTE :

1. All the dimensions are in mm unless noted otherwise.
2. All structural drawings shall be read in conjunction with the relevant Architectural drawings.
3. All the RCC works shall be as per design mix of **M30** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
5. The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
6. Flyash bricks has been considered for masonry work in sub structure & AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (**S+6**) floors only.
8. Design of the structure carried out with Limit State Method.
9. Bored Cast-in-situ piles of 500 mm diameter shall be adopted with the minimum length of pile of 23 m to 26 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1200 KN and the lateral capacity is 103.7 KN (Fixed) as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Pile & Pile Cap - 60 mm
    (b) Column/Shear Wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lintels to be provided in all floors.
15. Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
16. Anchorage of column bars into the footings shall not be less than 50 Ø.
17. Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer atonce for review.
18. Ground water quality has to be conformed for suitability to construction work.
19. The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
20. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. Since the site is located at a distance of 5 Km from the sea shore & there are no details about Chloride & Sulphate content in the soil report this should be checked and suitable remedial measures should be taken accordingly.
21. The Recommendations in the Soil Report done by College of Engineering, Guindy, Anna University, Chennai. Job No:SM&FE217/Consultancy/2022, Dt: 18.05.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX, CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS.

TYPE DESIGN NO.: 81/2022 (BLOCK - 2)

DWG.NO.: TNUHDB / BADRIKARAI / 07.

REVISION NO.:

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10/9/2024
EXECUTIVE ENGINEER (I/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E.10
10/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

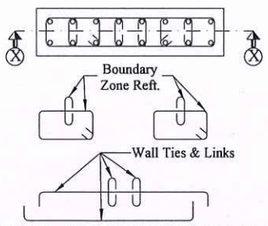
sd.xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

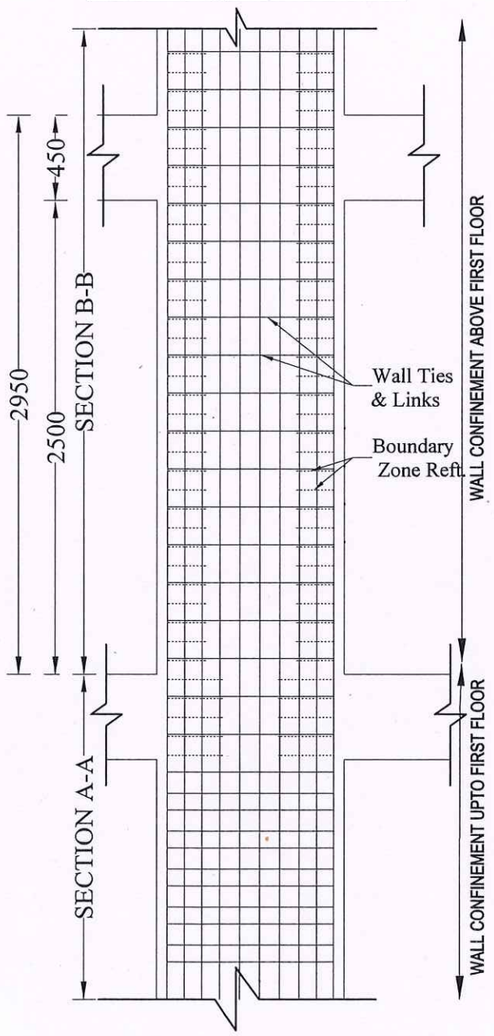
SHEAR WALL REINFORCEMENT DETAILS

TYPICAL SHEAR WALL CONFINING REINFORCEMENT DETAILS

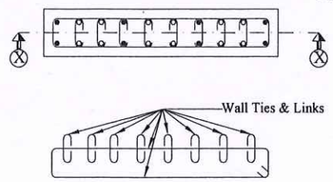
SECTION B-B

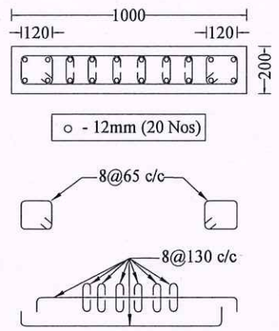
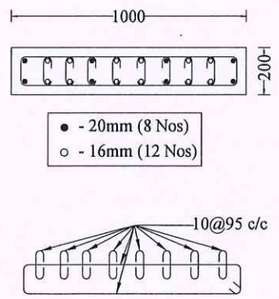


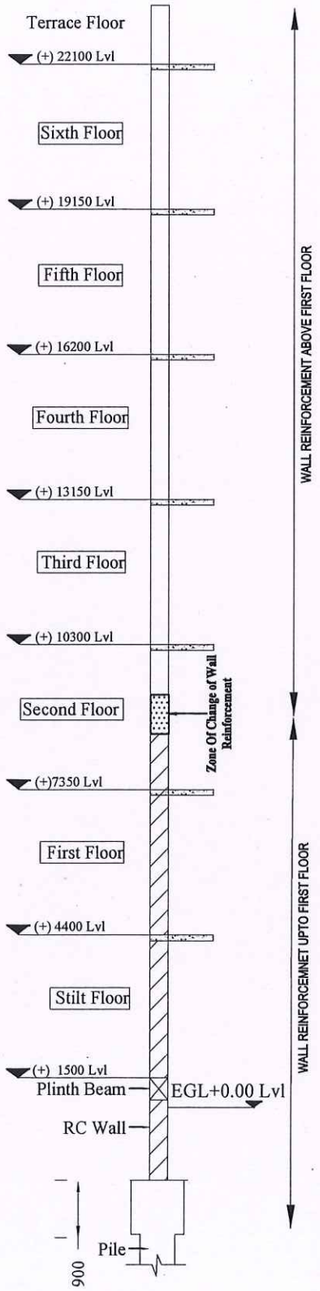
DETAILS @ SECTION X-X



SECTION A-A



Curtailments Levels	SW1 (4 Nos)
Above 1st Floor level (Bar Curtailment at mid height of 2nd floor)	
Upto 1st Floor level (Bar Curtailment at mid height of 2nd floor)	



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10/9/2024

EXECUTIVE ENGINEER (A/c)

STRUCTURAL AND QUALITY CONTROL CELL

TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD

5, KAMARAJAR SALAI, CHENNAI-600 005.

10/9/2024

NOTE :

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2. All structural drawings shall be read in conjunction with the relevant Architectural drawings.
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4. All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
5. The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
6. Flyash bricks has been considered for masonry work in sub structure & AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for **(S+6)** floors only.
8. Design of the structure carried out with Limit State Method.
9. Bored Cast-in-situ piles of 500 mm diameter shall be adopted with the minimum length of pile of 23 m to 26 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1200 KN and the lateral capacity is 103.7 KN (Fixed) as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
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    (b) Column/Shear Wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lintels to be provided in all floors.
15. Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
SHEAR WALL REINFORCEMENT DETAILS.

TYPE DESIGN NO.: 81/2022 (Block - 2)

DWG.NO.: TNUHDB / BADRIKARAIPURAM/08.

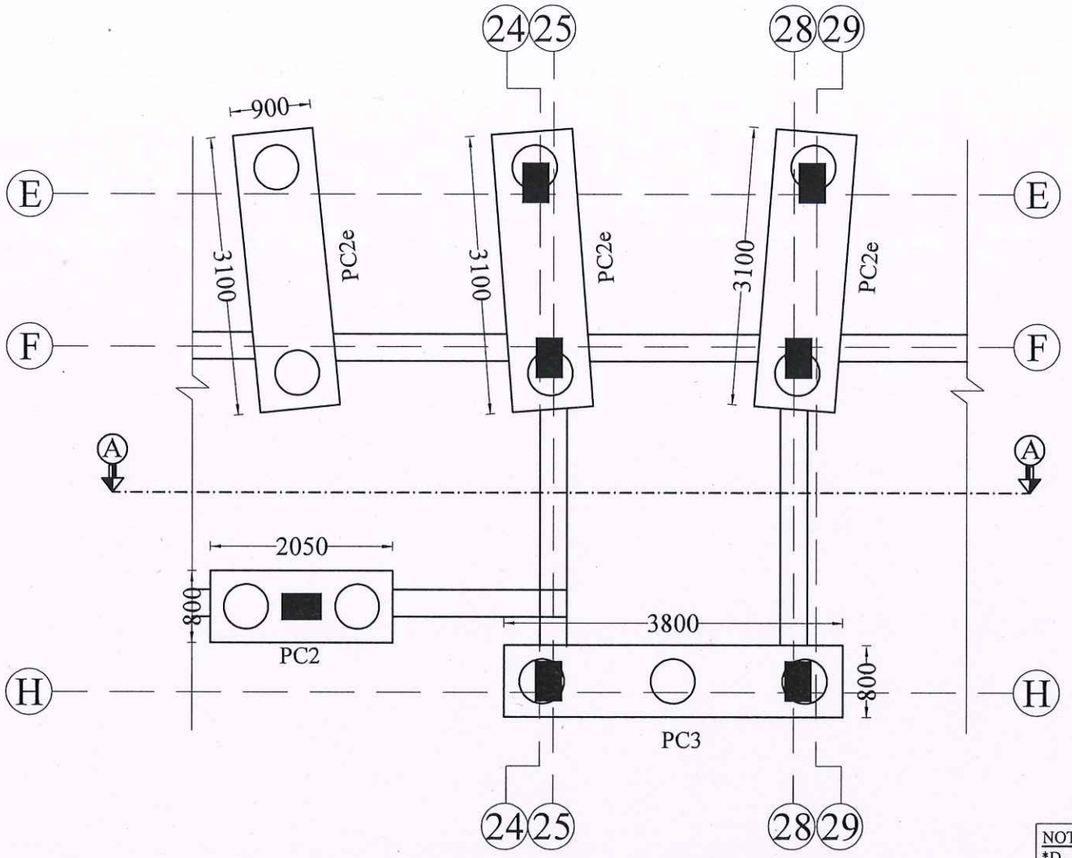
REVISION NO.:

Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - North II**

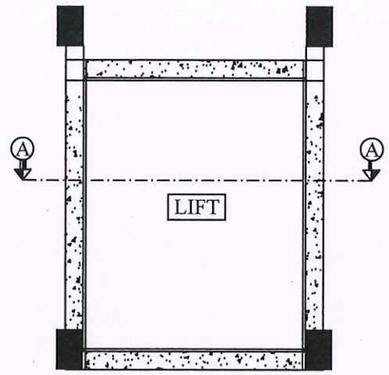
sd xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

LAYOUT AND RC DETAILS OF LIFT WELL

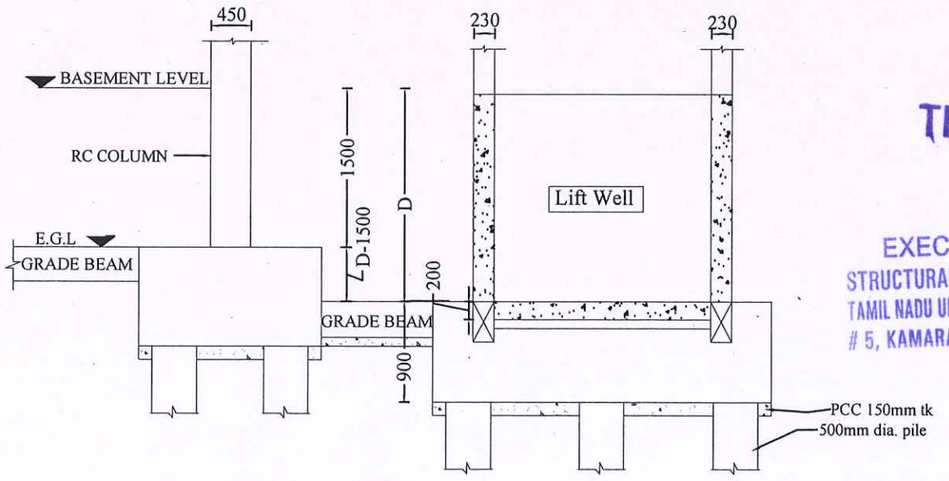


GENERAL PILECAP & GRADE BEAM LAYOUT
BELOW THE LIFT PIT AREA - LIFT

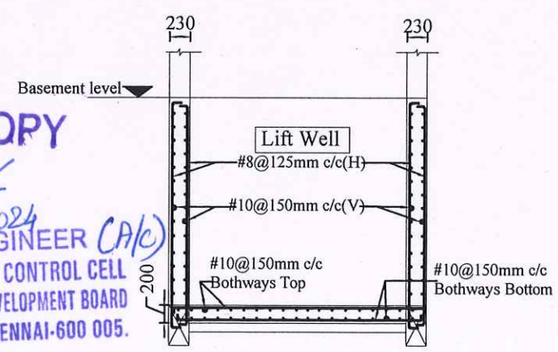


PLAN OF LIFT WELL-TYPICAL

NOTE:
*D - Depth of lift pit below Finished Floor level should be confirmed with manufacturer. If D exceeds 2m,inform the undersigned to revise the drawing.



SECTION ON A-A (GENERAL ARRANGEMENT)



SECTION ON A-A (REINFORCEMENT DETAILS)

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10/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
E.NO
10/9/2024

NOTE :

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STRUCTURAL DETAILS

PROJECT:
RECONSTRUCTION OF 168 NOS OF (S+6) TENEMENTS AT BADRIKARAI, CORPORATION DN.113 ZONE IX OF CHENNAI CORPORATION.

TITLE:
LAYOUT & RC DETAILS OF LIFT WELL.

TYPE DESIGN NO.: 81/2022 (Block - 2)

DWG.NO.: TNUHDB / BADRIKARAI/09.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North II

sd xxxx 09.09.2024
Chief Engineer - I

STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

THE LANDLENS SUITE

Eight ways to know a piece of land before you pay for it.

This report covers one part of the picture. These cover the rest, drawn from the same government records, for any property in Tamil Nadu.

LandLens One
Ask anything about a property and get an answer grounded in live government records, with the sources shown.
/landlens/one

Verify My Land
Every record check run on one property and returned as a single report.
/landlens/verify-my-land

Legal Opinion
An advocate's written opinion on the title, built on the records we pull for it.
/landlens

One Map
Every layer on one map: the parcel, its boundary, zoning, water bodies and what sits around it.
/landlens/one/map

PriceMap
What land actually changed hands for around this plot, taken from the registered deeds.
/landlens/pricemap

Build Scope
What you are allowed to build here: floor space, height, coverage and setbacks.
/landlens/build-scope

Property Tracker
Watch a property and hear about it when something new is registered against it.
/landlens/property-tracker

Deal Room
Run the transaction in one place: documents, stamping, signatures and the parties.
/landlens/deal-room

FREE TOOLS · NO ACCOUNT NEEDED

Twenty-four checks you can run yourself, at no cost.

Records and verification

The registers themselves, read for you.

- Encumbrance Certificate
- Patta and Chitta
- Field Measurement Sketch
- EC Analyzer
- Bank charge check
- Court case search
- Seller background check
- Approval check by survey

Value and duty

What it is worth and what it costs to register.

- Guideline value by street
- Guideline value by survey
- Stamp duty and registration fees
- Capital gains
- Floor space index
- Area unit converter

Zoning and land use

What the plan says can happen on this land.

- Land use zone finder
- CMDA land use check
- Coastal regulation zone
- Master plan check
- Water bodies finder
- Airport height clearance

Registers and directories

Who holds it, and which office keeps the record.

- Find your registering office
- Temple property check
- Waqf property check
- RERA register

Every free tool
/tools

Services we run for you
/services

The LandLens suite
/landlens/one

Verified RealEstate™

Every claim in this document traces back to a government record.

- Legal opinions, due diligence and title verification
- Building plan, layout and sub-division approvals
- Completion and occupancy certificates, regularisation
- Escrow, negotiation and NRI property management
- Land survey, soil testing, architecture and construction

Verified RealEstate
3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai 600 097, India
hello@verified.realestate
+91 9996 12 9996

Prepared from the registers named on the page each finding sits on. Where a register could not be read, this document says so in its place rather than leaving the gap to be read as a clean result.