



Office of Executive Engineer,
Structural & Quality Control Cell,
Tamil Nadu Urban Habitat
Development Board,
No.5, Kamarajar Salai, Chennai – 5.

STABILITY CERTIFICATE

Dt: 12.12.2025.

1.The detailed engineering and structure design of the proposed construction of Group Development consists of additional 4 Blocks namely Block V: Stilt Floor part / Ground Floor part + 5 Floors Residential building with 66 dwelling units, Block – VI: Stilt floor part / Ground Floor part + 5 Floors Residential building with 90 dwelling units, Block – VII: Stilt floor part / ground floor part + 5 floors residential building with 90 dwelling units, Block -VIII: Stilt floor part / ground floor part + 5 floors residential building with 90 dwelling units, (336 Dwelling units) Affordable Housing (Height – 18.30m) and existing 4 Blocks namely Block No. I to IV each Blocks Ground Floors + 2 Floors (30 Dwelling Units) Totally 366 Dwelling units at village street, Thiruvottiyur Chennai, comprised in Old S.No. 237/1part, T.S.No.83/1, Block No.12, Ward – H Thiruvottiyur Village, within the limits of Greater Chennai Corporation., Tamil Nadu has been done by me/us based on the report of geotechnical investigation (soil test) done by Anna University, Chennai Report Job No.SM&FM 217/Consultancy/2022, Dated 27.02.2022 & Job No.SM&FM 217(a)/Consultancy/2022, Dated 15.12.2023 and considering the functional requirement of the building.

2. It is certified that among other factors, the proposed building has been designed to resist earthquake. I/We have checked various parameters and found that the proposed building would be safe.

3. I/We further certify that:

(i) The minimum grade of concrete is M30.

(ii) The design and analysis has been done using the code of practice for plain and reinforced concrete as per IS 456:2000, live load 2 kN/m^2 as per IS 875 Part II and designed for earthquake resistant structure as per IS Code 1893 (Part 1):2016.

4. The building will be safe and sound when used for the purpose for which it is designed.

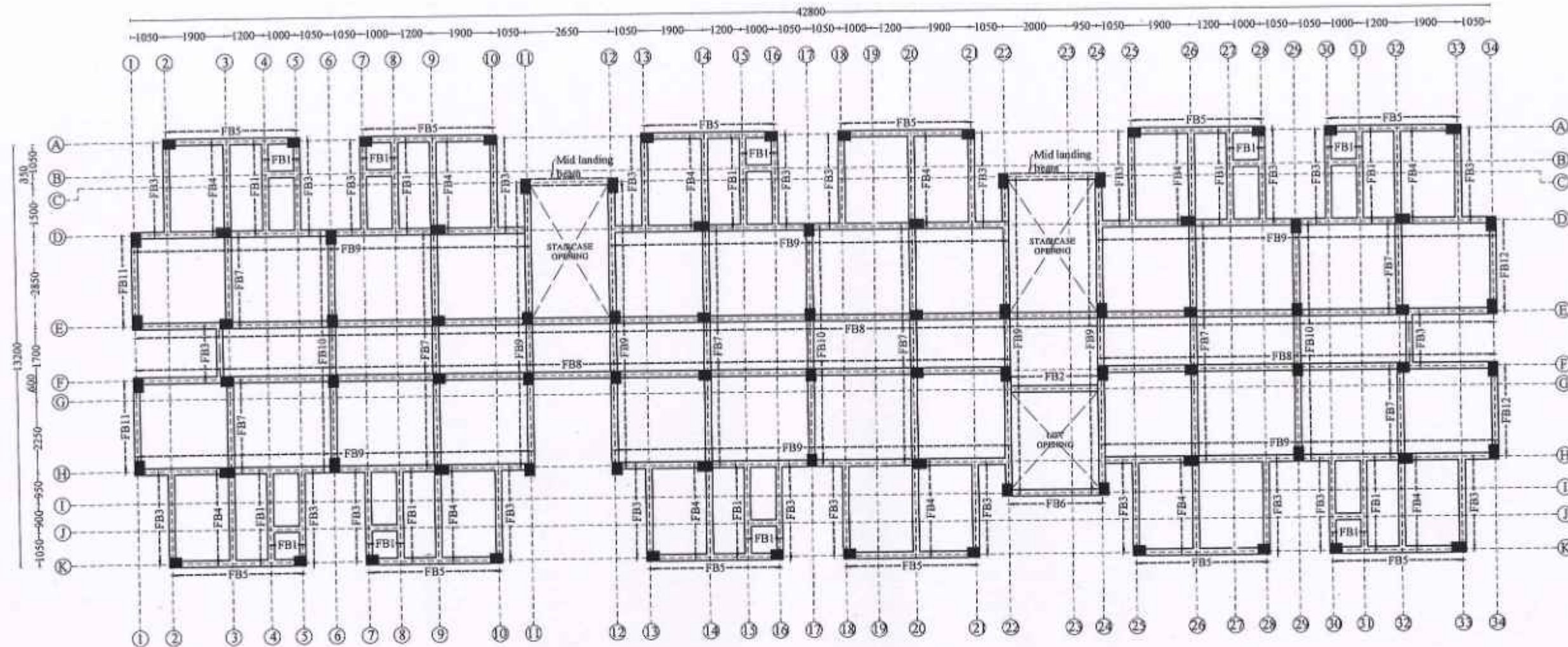

12/12/2025

R. VENKATESAN, M.E.,
Assistant Engineer

Registered Structural Engineer Grade-I (SE)
Registration No: SE/I/2024/4/0073
Tamil Nadu Urban Habitat Development Board
No. 5, Kamarajar Salai, Chennai-600 005.



STILT FLOOR BEAM LAYOUT



Note:
1. This Drawing shall be read along with TNUHDB/THIRUVOTTIYUR/GEN-01 & TNUHDB/THIRUVOTTIYUR/Block A/16

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
STILT FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/08.

REVISION NO.:

TRUE COPY

25/11/2024
EXECUTIVE ENGINEER (A/c)

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

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

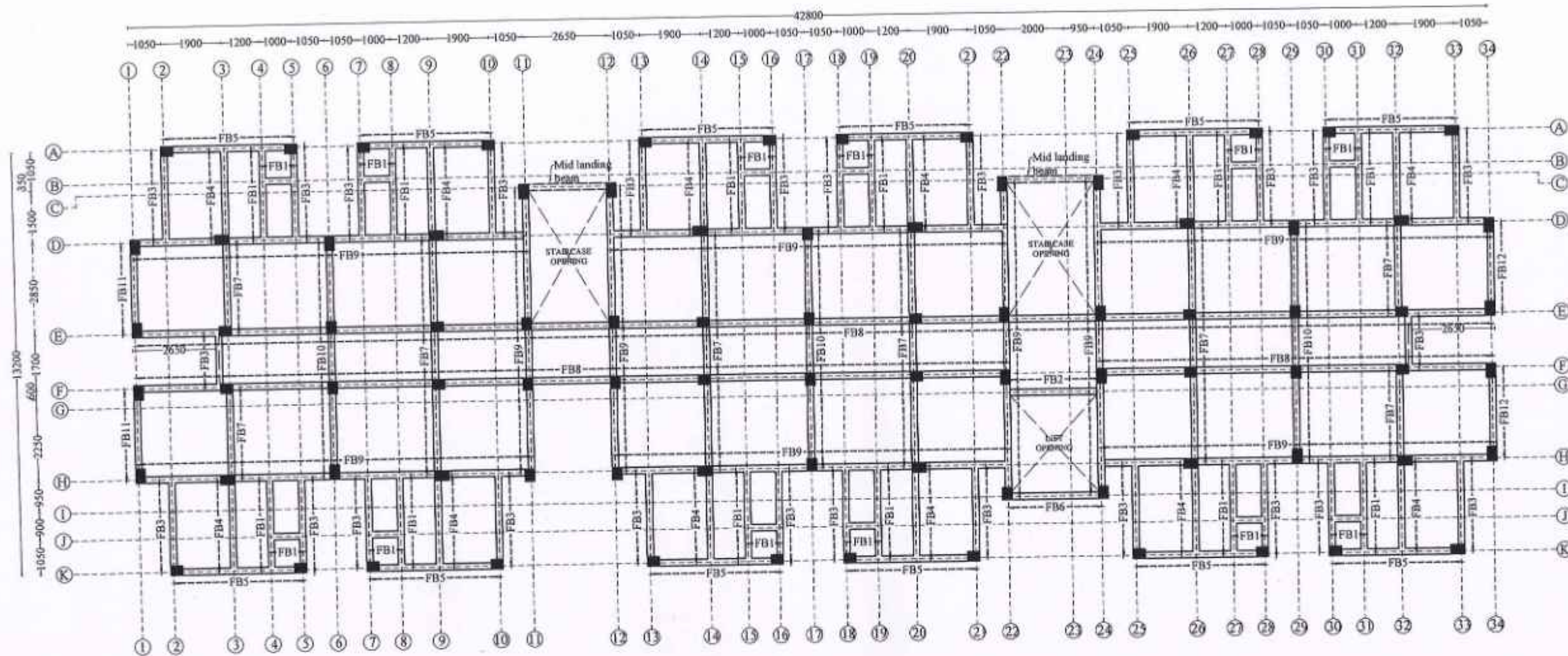
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

FIRST FLOOR BEAM LAYOUT



NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
FIRST FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/09.

REVISION NO.:

TRUE COPY

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

1000%
25/11/24

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

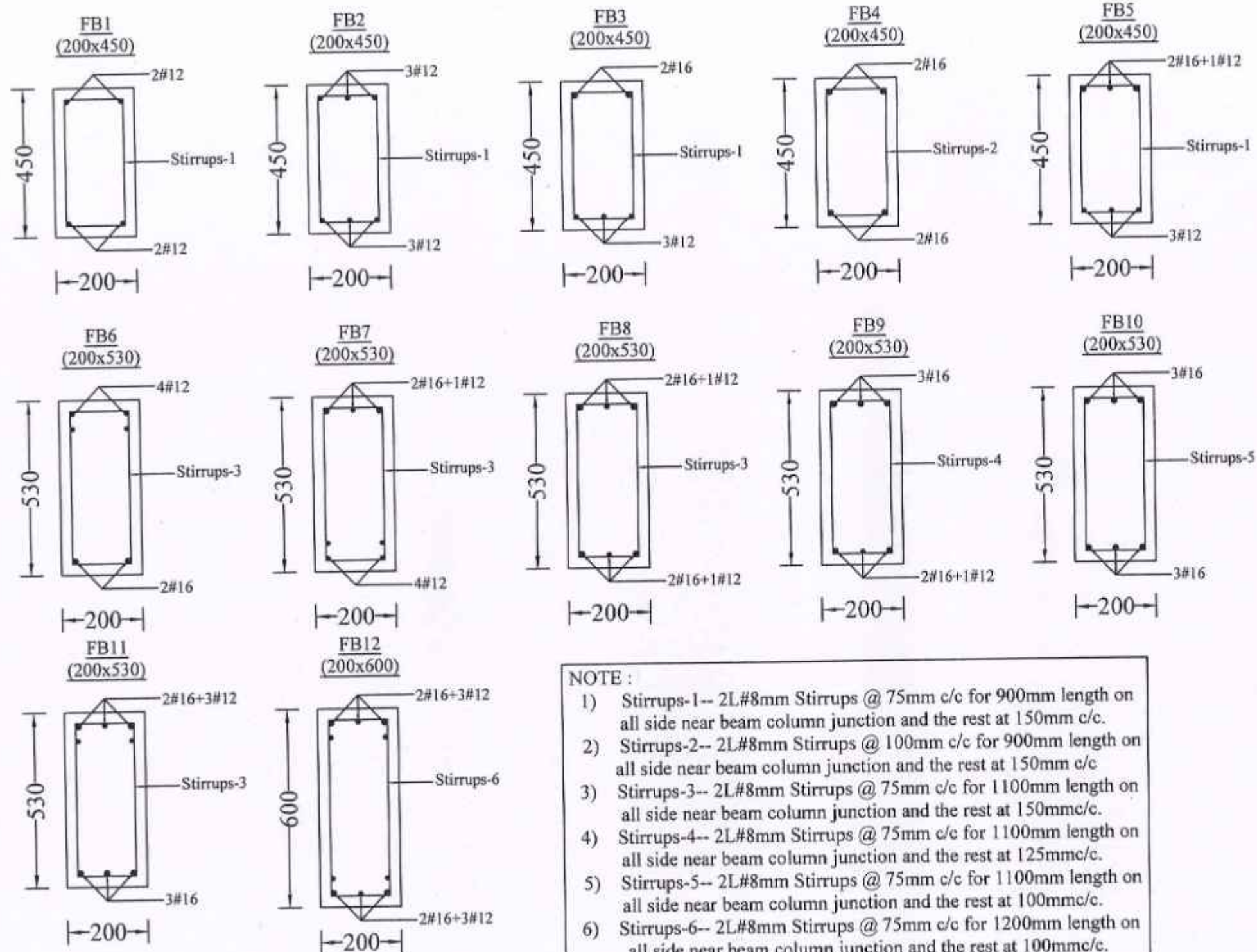
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

STILT AND FIRST FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1-- 2L#8mm Stirrups @ 75mm c/c for 900mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2-- 2L#8mm Stirrups @ 100mm c/c for 900mm length on all side near beam column junction and the rest at 150mm c/c
- 3) Stirrups-3-- 2L#8mm Stirrups @ 75mm c/c for 1100mm length on all side near beam column junction and the rest at 150mm c/c.
- 4) Stirrups-4-- 2L#8mm Stirrups @ 75mm c/c for 1100mm length on all side near beam column junction and the rest at 125mm c/c.
- 5) Stirrups-5-- 2L#8mm Stirrups @ 75mm c/c for 1100mm length on all side near beam column junction and the rest at 100mm c/c.
- 6) Stirrups-6-- 2L#8mm Stirrups @ 75mm c/c for 1200mm length on all side near beam column junction and the rest at 100mm c/c.
- 7) Beam Depth is inclusive of slab thickness.

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+S) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEB/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai, Job. No.: SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.: SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+S) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT AND FIRST FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 73/2022 (TYPE - A)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/10.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
sd,xxxx 23.11.2024 Chief Engineer- I	
STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI, CHENNAI - 600 005.	

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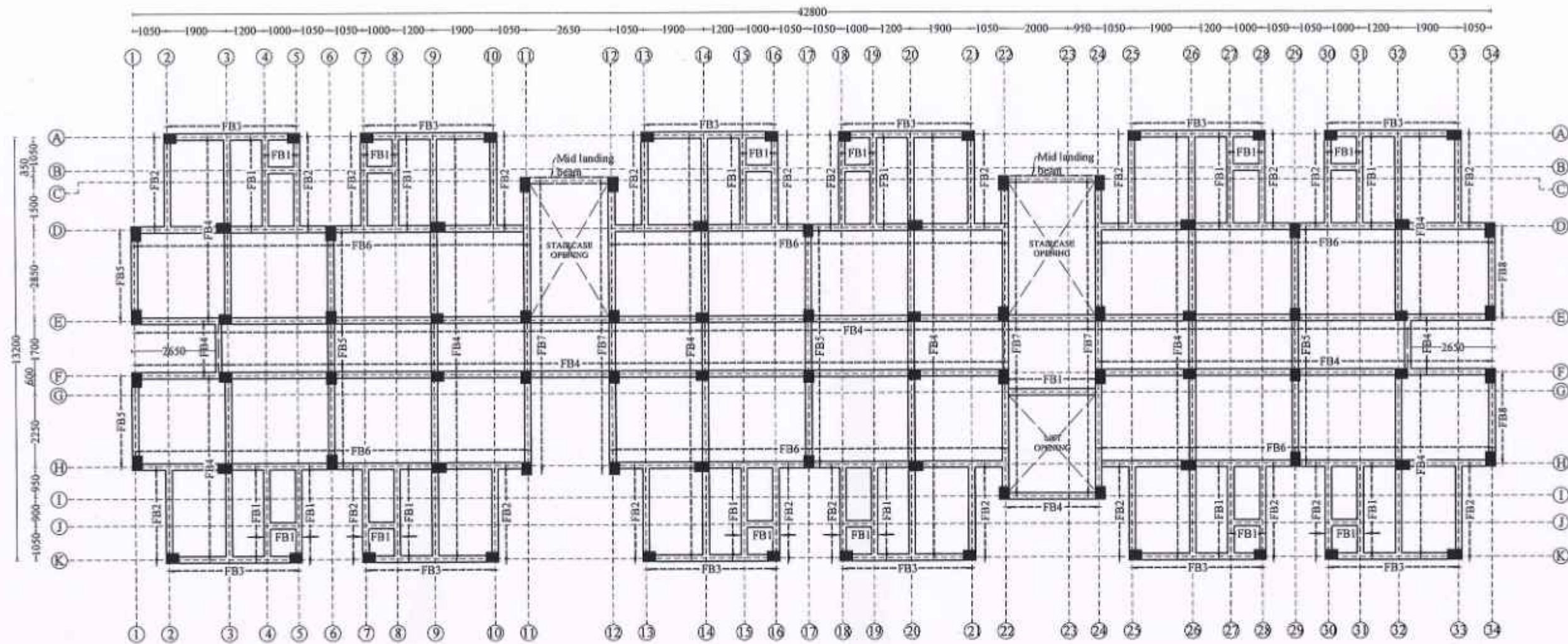
25/11/2024

EXECUTIVE ENGINEER (A/C)

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

25/11/24

SECOND FLOOR & THIRD FLOOR BEAM LAYOUT



Note:
1. This Drawing shall be read along with TNUHDB/THIRUVOTTIYUR/GEN-01 & TNUHDB/THIRUVOTTIYUR/Block A/12.

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
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- Structure is designed for (PS+5) floors only.
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- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
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- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
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- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
SECOND FLOOR AND THIRD FLOOR
BEAM LAYOUT

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/11.

REVISION NO.:

TRUE COPY

[Signature]
25/11/2024
EXECUTIVE ENGINEER (CA/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

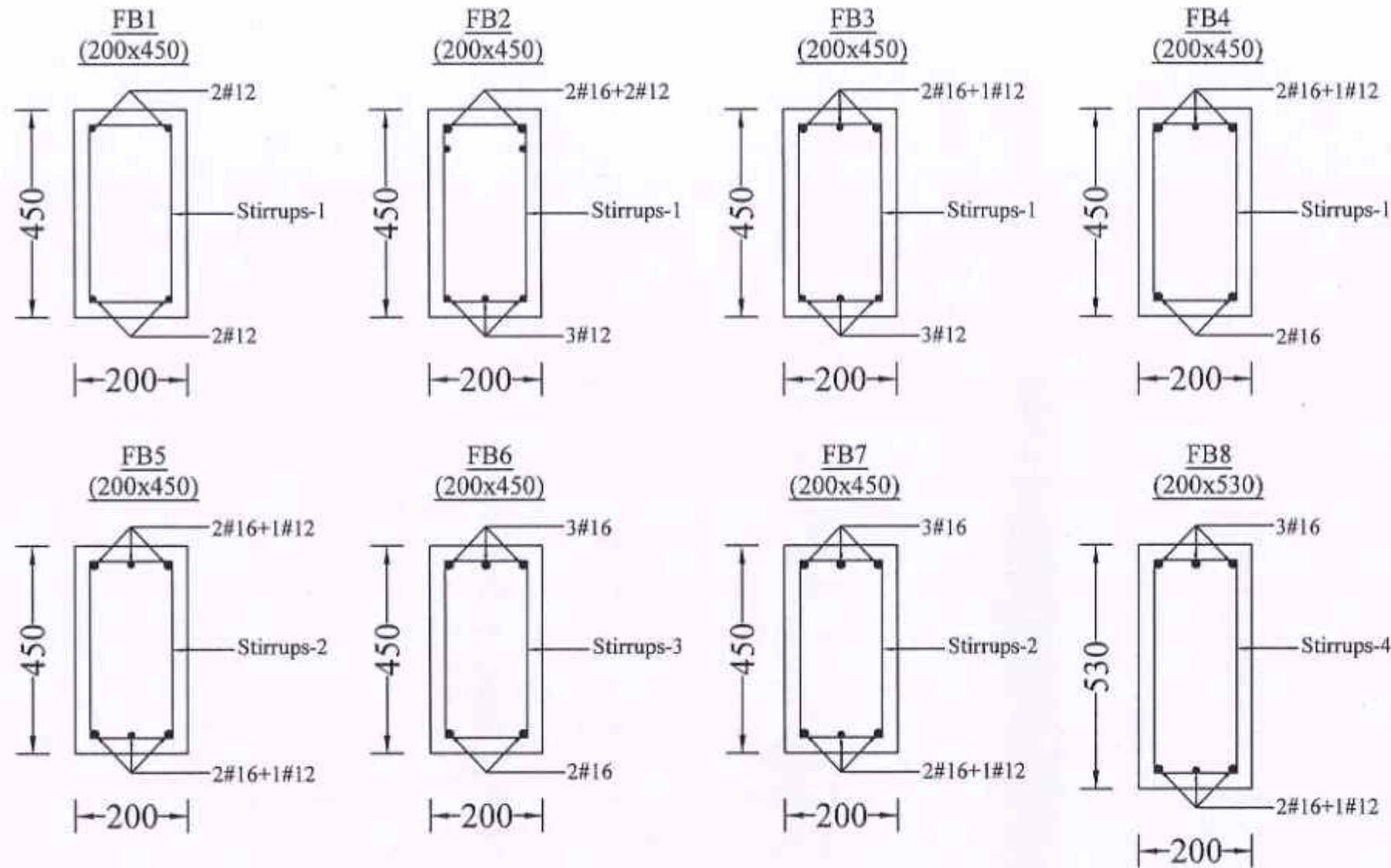
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

SECOND AND THIRD FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1-- 2L#8mm Stirrups @ 75mm c/c for 900mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2-- 2L#10mm Stirrups @ 75mm c/c for 900mm length on all side near beam column junction and the rest at 150mm c/c
- 3) Stirrups-3-- 2L#10mm Stirrups @ 75mm c/c for 900mm length on all side near beam column junction and the rest at 150mm c/c.
- 4) Stirrups-4-- 2L#10mm Stirrups @ 75mm c/c for 1100mm length on all side near beam column junction and the rest at 150mm c/c.
- 5) Beam Depth is inclusive of slab thickness.

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 IS 13920:2016.
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7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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/IT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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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18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND AND THIRD FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 73/2022 (TYPE - A)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/12.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
sd.xxxx 23.11.2024 Chief Engineer- I	

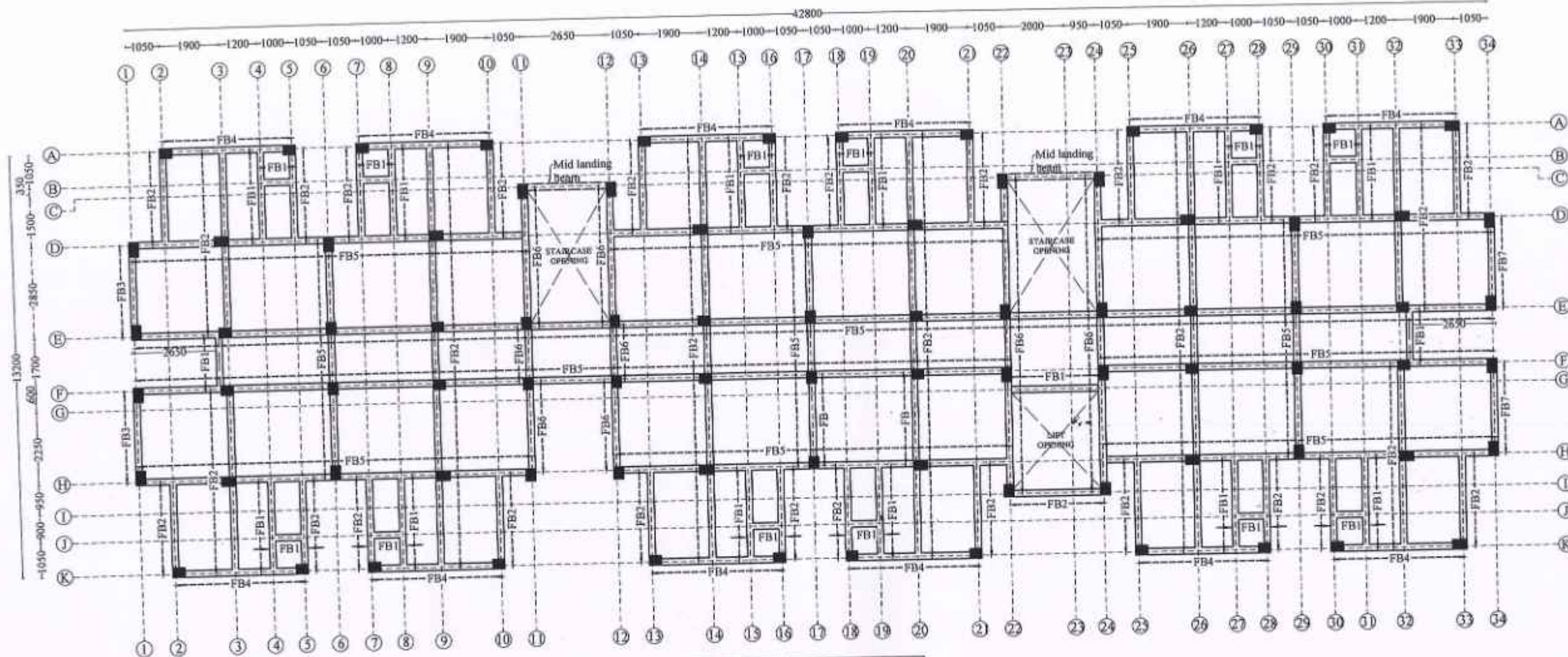
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI,
CHENNAI - 600 005.

TRUE COPY

25/11/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

25/11/24

FOURTH FLOOR BEAM LAYOUT



Note:
1. This Drawing shall be read along with TNUHDB/THIRUVOTTIYUR/GEN-01 & TNUHDB/THIRUVOTTIYUR/Block A/14.

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/13.

REVISION NO.:

TRUE COPY

25/11/24
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

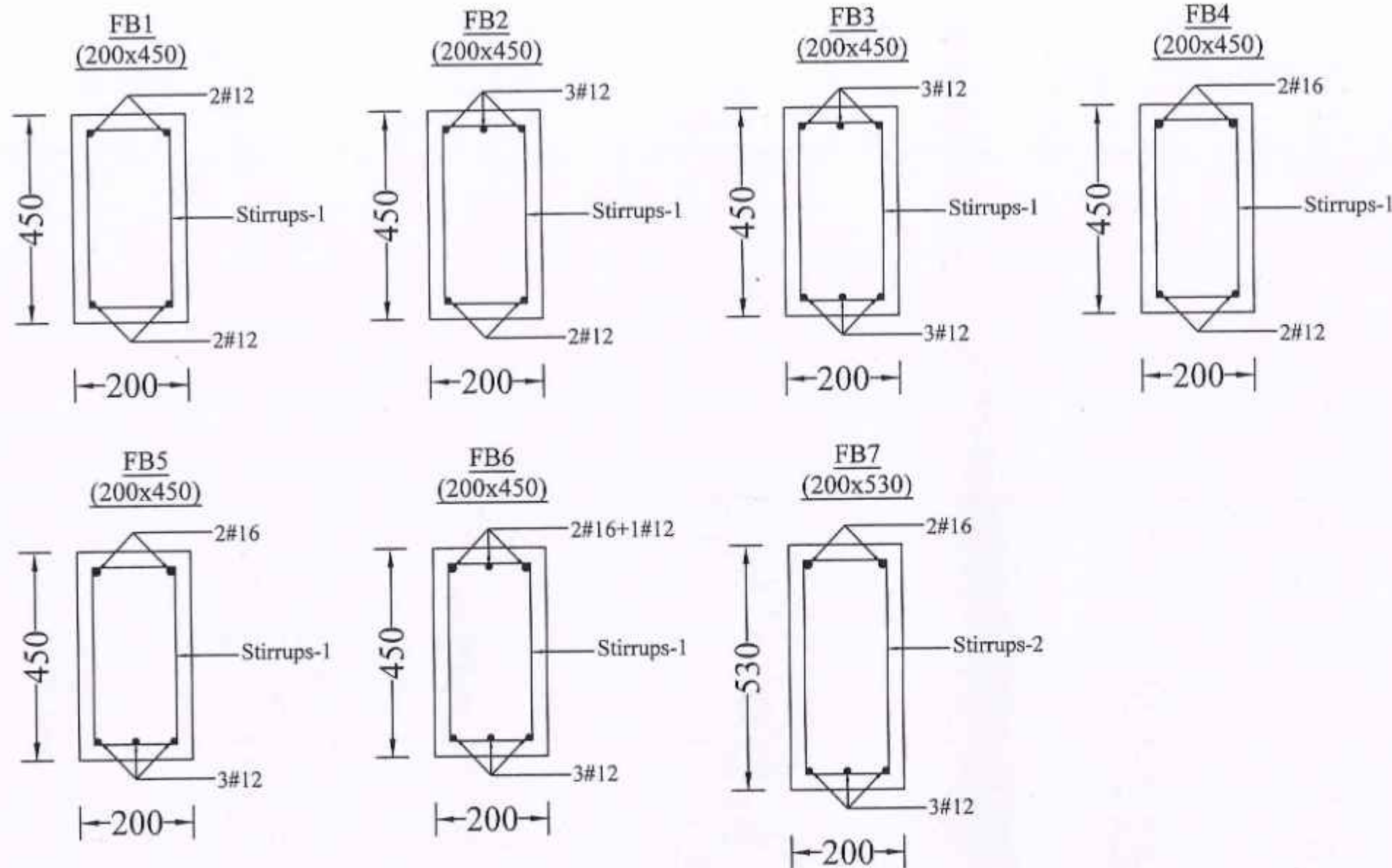
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

FOURTH FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1-- 2L#8mm Stirrups @ 75mm c/c for 900mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2-- 2L#8mm Stirrups @ 75mm c/c for 1100mm length on all side near beam column junction and the rest at 150mm c/c .
- 3) Beam Depth is inclusive of slab thickness.

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 IS 13920:2016.
6. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 73/2022 (TYPE - A)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/14.

REVISION NO.:

Assistant Engineer	Ant. Exe. Engineer
Executive Engineer	SE - North I
sd,xxxx 23.11.2024 Chief Engineer- I	
STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI, CHENNAI - 600 005.	

TRUE COPY

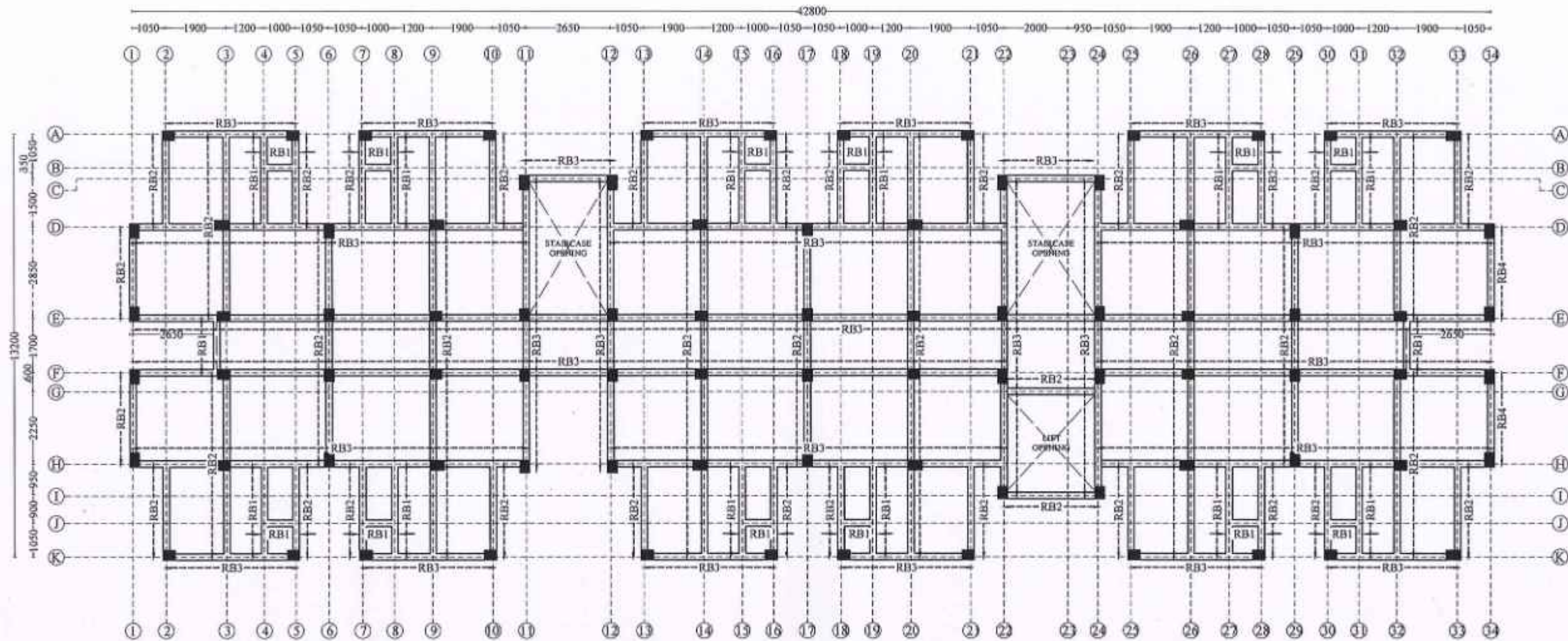
25/11/2024

EXECUTIVE ENGINEER (A/C)

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

25/11/24

TERRACE FLOOR BEAM LAYOUT



Note:
1. This Drawing shall be read along with TNUHDB/THIRUVOTTIYUR/ GEN -01 & TNUHDB/THIRUVOTTIYUR/Block A/16.

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of **M30** grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m, as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
TERRACE FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/15.

REVISION NO.:

TRUE COPY
25/11/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
6, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

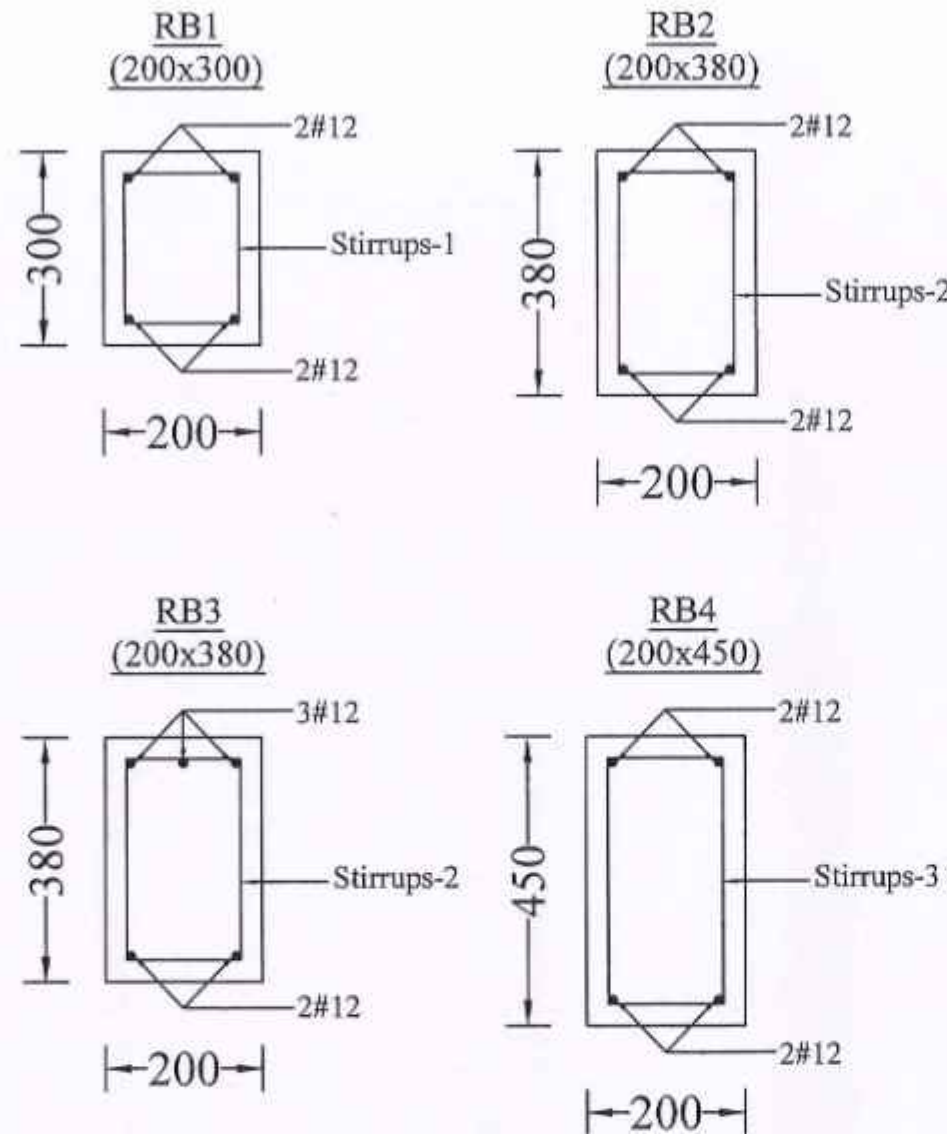
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

TERRACE FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1-- 2L#8mm Stirrups @ 65mm c/c for 600mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2-- 2L#8mm Stirrups @ 75mm c/c for 750mm length on all side near beam column junction and the rest at 150mm c/c
- 3) Stirrups-2-- 2L#8mm Stirrups @ 75mm c/c for 900mm length on all side near beam column junction and the rest at 150mm c/c.
- 4) Beam Depth is inclusive of slab thickness.

TRUE COPY

EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 006.

100005
25/11/24

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 Fe500 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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 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/IT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 73/2022 (TYPE - A)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/16.

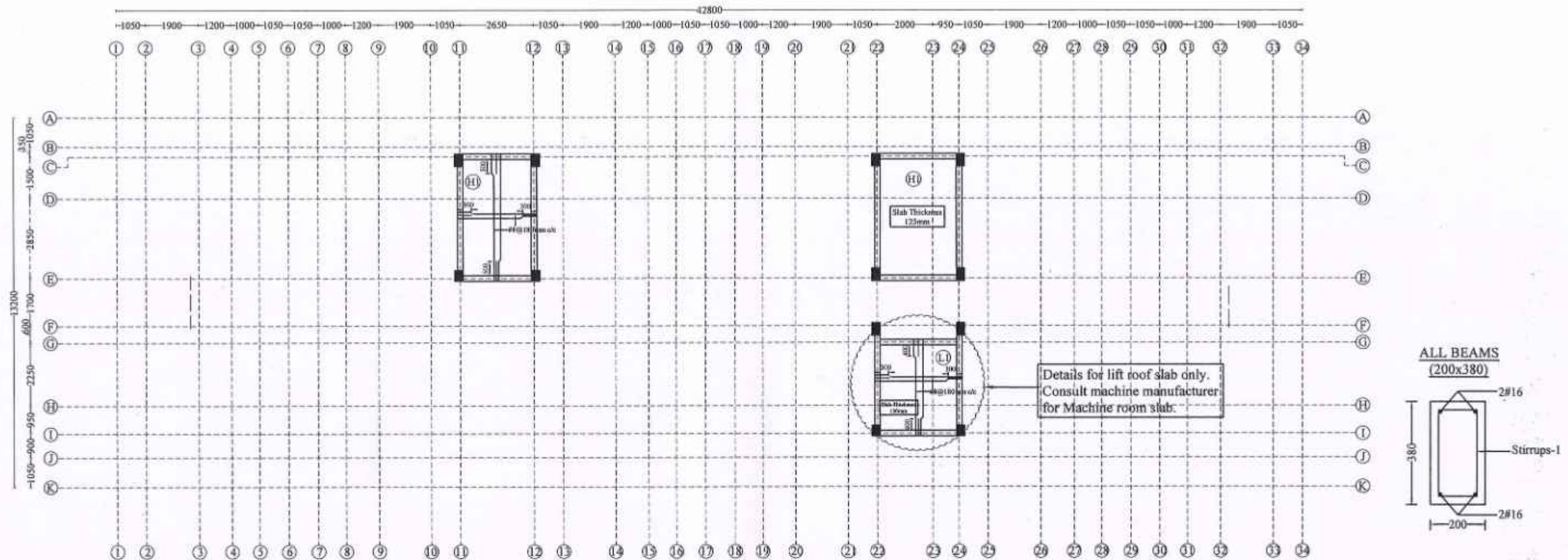
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
sd.xxxx 23.11.2024 Chief Engineer- I	



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

HEAD ROOM, LIFT ROOM BEAM LAYOUT & SLAB DETAILS



NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
HEAD ROOM & LIFT ROOM BEAM LAYOUT &
SLAB DETAILS.

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/17.

REVISION NO.:

TRUE COPY
25/11/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
6, KAMARAJAR SALAI, CHENNAI-600 005.

Accepted
25/11/24

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

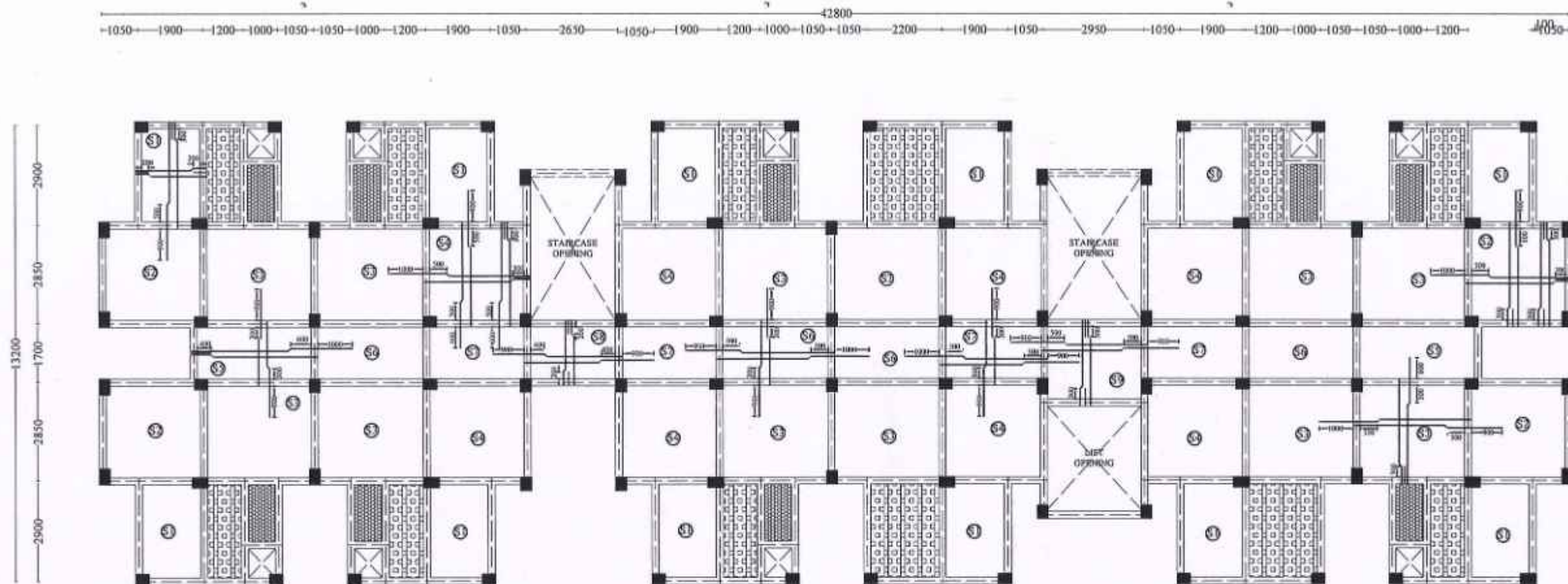
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

STILT FLOOR SLAB DETAILS



SLAB SUNKEN BY
200mm



SLAB SUNKEN BY
325mm

Note:

- 1.SLAB 125mm THICK
- 2.ALL SLAB REINFORCEMENT ARE #8@180mm c/c

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
STILT FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/18.

REVISION NO.:

TRUE COPY

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

10000
25/11/24

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

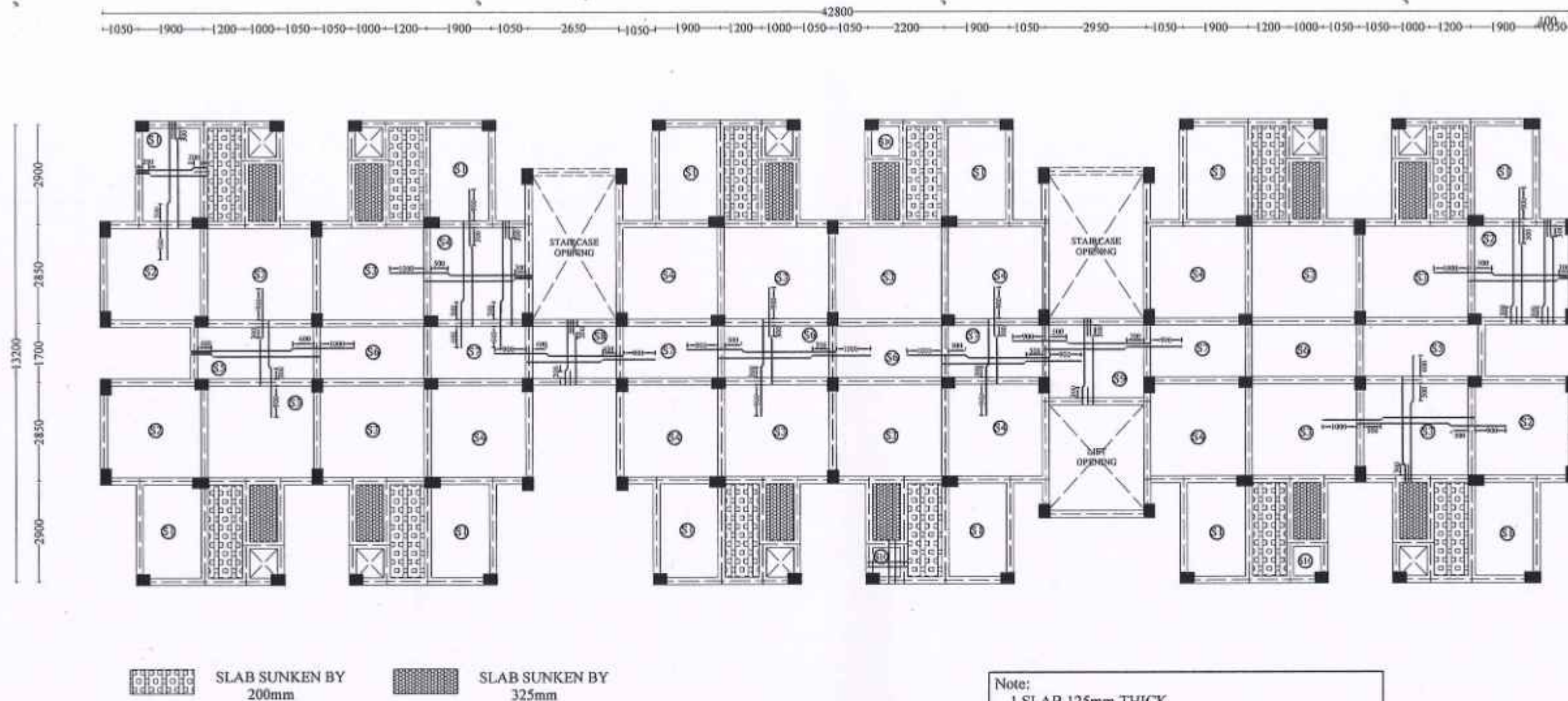
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

FIRST FLOOR SLAB DETAILS



Note:
1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
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- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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- The recommendations detailed in the soil investigation report done by Anna University, Chennai, Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FIRST FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/19.

REVISION NO.: 1 TRUE COPY

25/11/2024

EXECUTIVE ENGINEER (A/C)

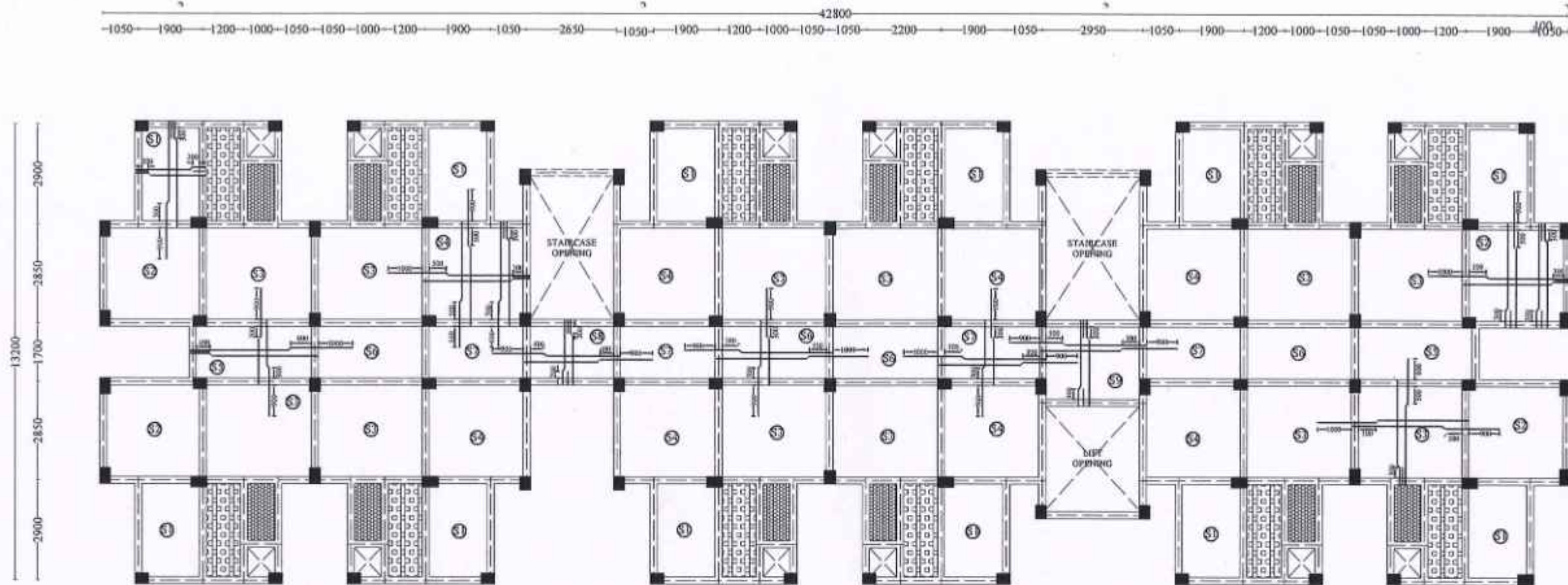
STRUCTURAL AND QUALITY CONTROL CELL

TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD

5, KAMARAJAR SALAI, CHENNAI-600 005

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
sd.xxxx 23.11.2024 Chief Engineer - I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

TYPICAL FLOOR SLAB DETAILS



SLAB SUNKEN BY
200mm



SLAB SUNKEN BY
325mm

Note:
1.SLAB 125mm THICK
2.ALL SLAB REINFORCEMENT ARE #8@180mm c/c

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes,coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job.No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
TYPICAL FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/20.

REVISION NO.: TRUE COPY

25/11/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI

10/20/24
25/11/24

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

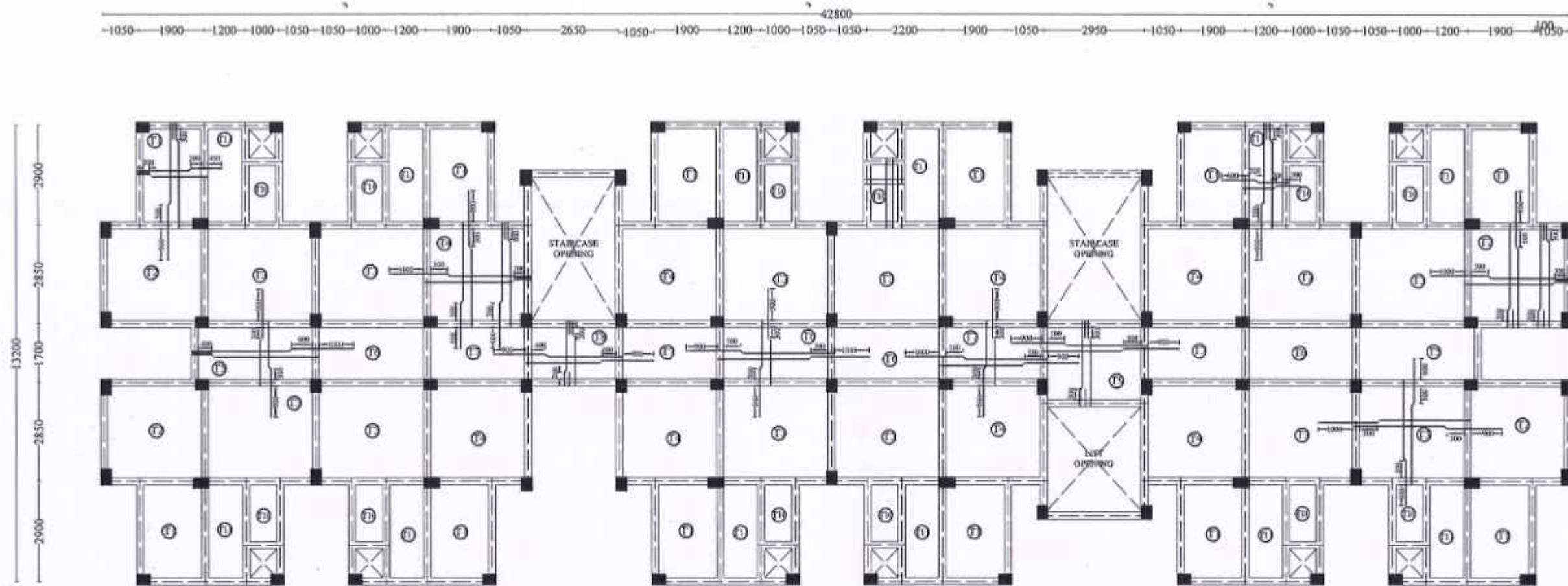
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I



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

TERRACE FLOOR SLAB DETAILS



Note:
1.SLAB 125mm THICK
2.ALL SLAB REINFORCEMENT ARE #8@180mm c/c

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
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- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m, as recommended in Soil Report.
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 - Foundation - 50 mm
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 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
TERRACE FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/21.

REVISION NO.:

TRUE COPY
25/11/24
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exc. Engineer

Executive Engineer

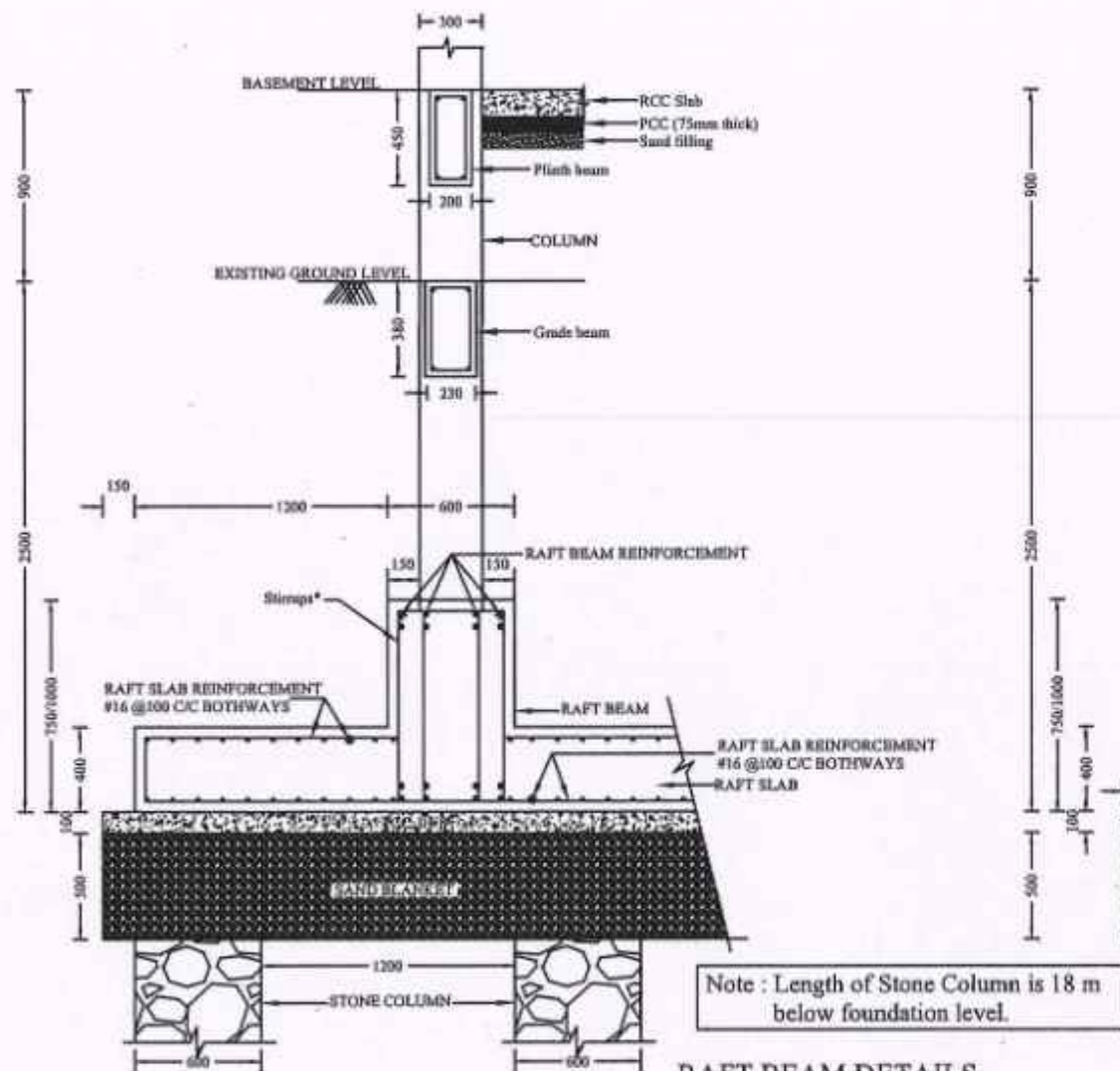
SE - North I

sd.xxxx 23.11.2024
Chief Engineer - I

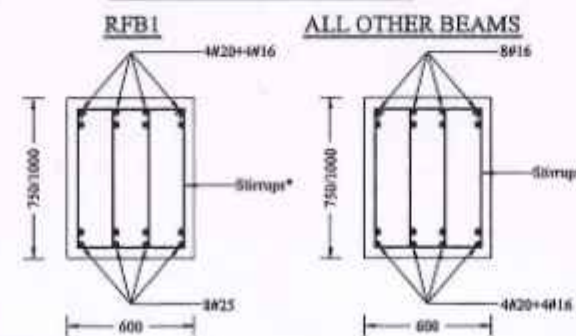


STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

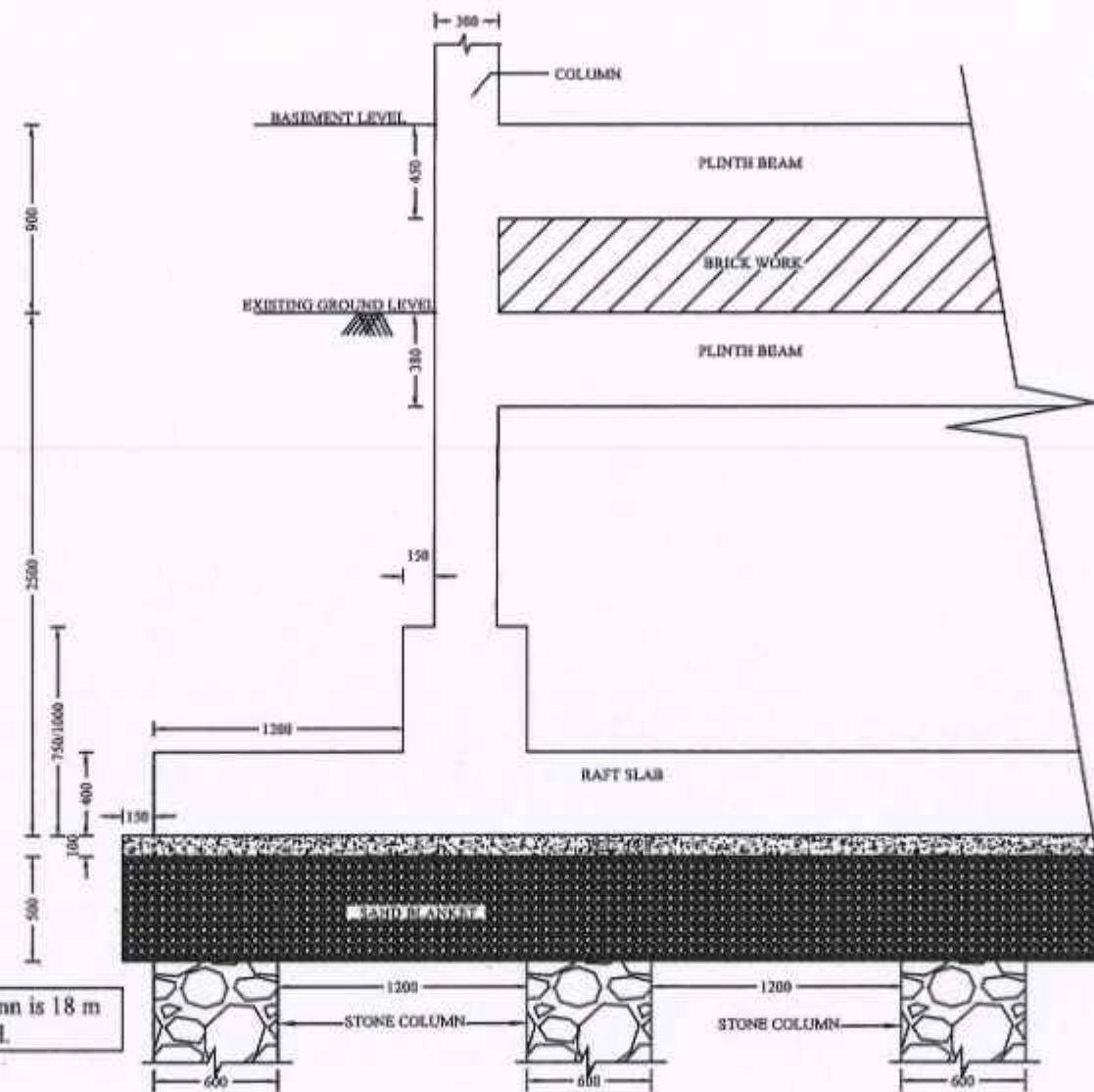
TYPICAL CROSS SECTION OF RAFT BEAM WITH SLAB DETAILS.



RAFT BEAM DETAILS



TYPICAL CROSS SECTIONAL ELEVATION OF RAFT BEAM WITH SLAB DETAILS.



NOTE:
1. For beam 750 mm depth - Stirrups* => 4 Legged # 10 mm stirrups at 100 mm c/c for 1.5 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.
2. For beam 1000 mm depth - Stirrups* => 4 Legged # 10 mm stirrups at 100 mm c/c for 2 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.

TRUE COPY

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

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TYPICAL CROSS SECTION & CROSS SECTIONAL ELEVATION OF RAFT BEAM WITH SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/R2/03.

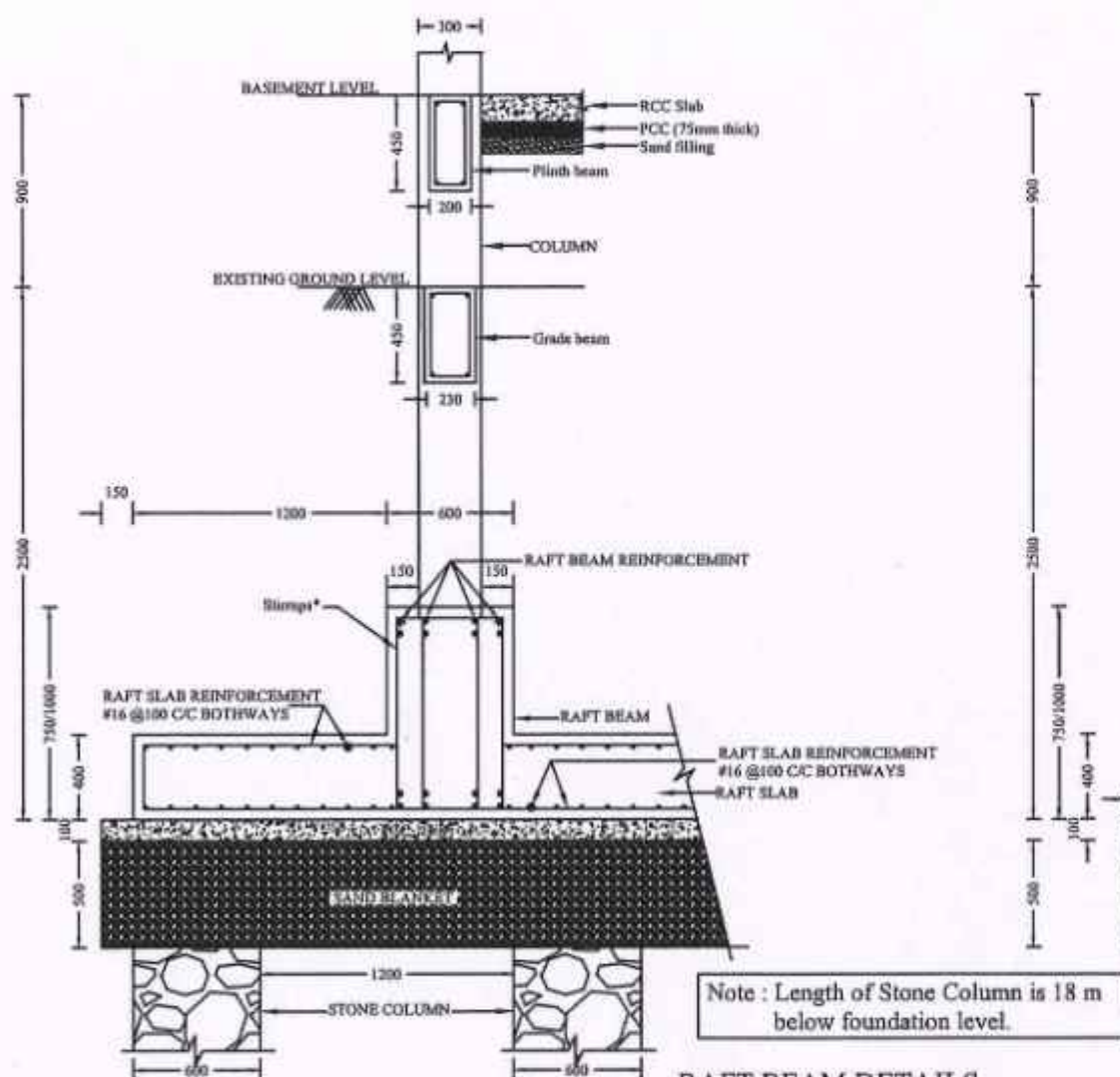
REVISION NO.: R2

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

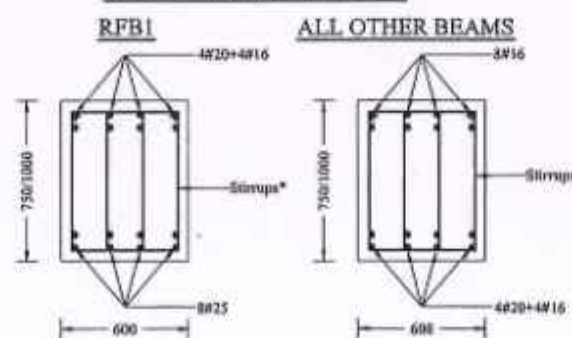
Sd. 18.06.2024,
Chief Engineer- I

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

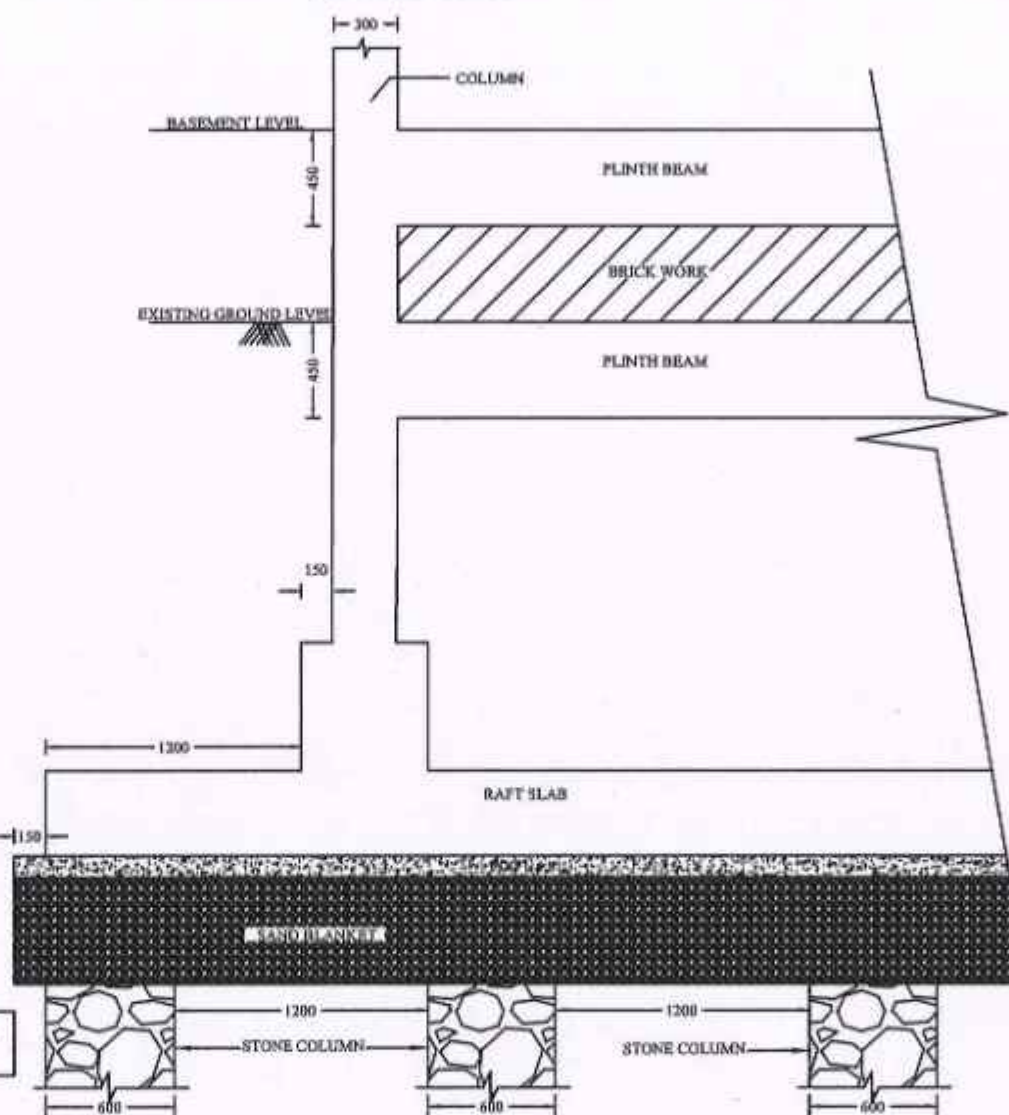
TYPICAL CROSS SECTION OF RAFT BEAM WITH SLAB DETAILS.



RAFT BEAM DETAILS



TYPICAL CROSS SECTIONAL ELEVATION OF RAFT BEAM WITH SLAB DETAILS.



NOTE:
1. For beam 750 mm depth - Stirrups* -> 4 Legged # 10 mm stirrups at 100 mm c/c for 1.5 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.
2. For beam 1000 mm depth - Stirrups* -> 4 Legged # 10 mm stirrups at 100 mm c/c for 2 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.

TRUE COPY

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

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS:13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AHB/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 stance for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TYPICAL CROSS SECTION & CROSS SECTIONAL
ELEVATION OF RAFT BEAM WITH SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/R1/03.

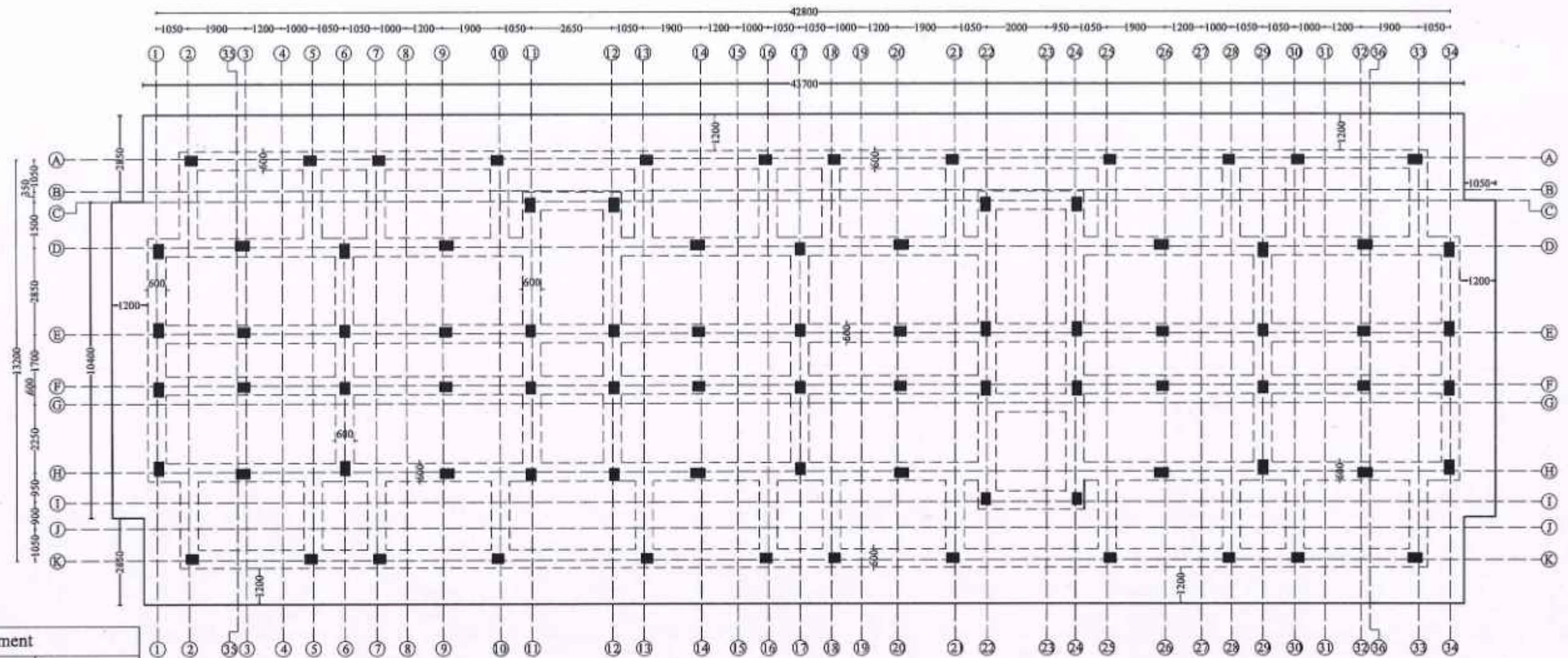
REVISION NO.: R1

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

Sd/xxxx 18.06.2024.
Chief Engineer- I

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

PLAN AT RAFT FOUNDATION LEVEL



Raft Reinforcement		
Along direction	Top	Bottom
X - Direction	#12@150 c/c	#16@100 c/c
Y - Direction	#12@125 c/c	#16@150 c/c

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of **M30** grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
PLAN AT FOUNDATION LEVEL.

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/01.

REVISION NO.:

TRUE COPY

20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

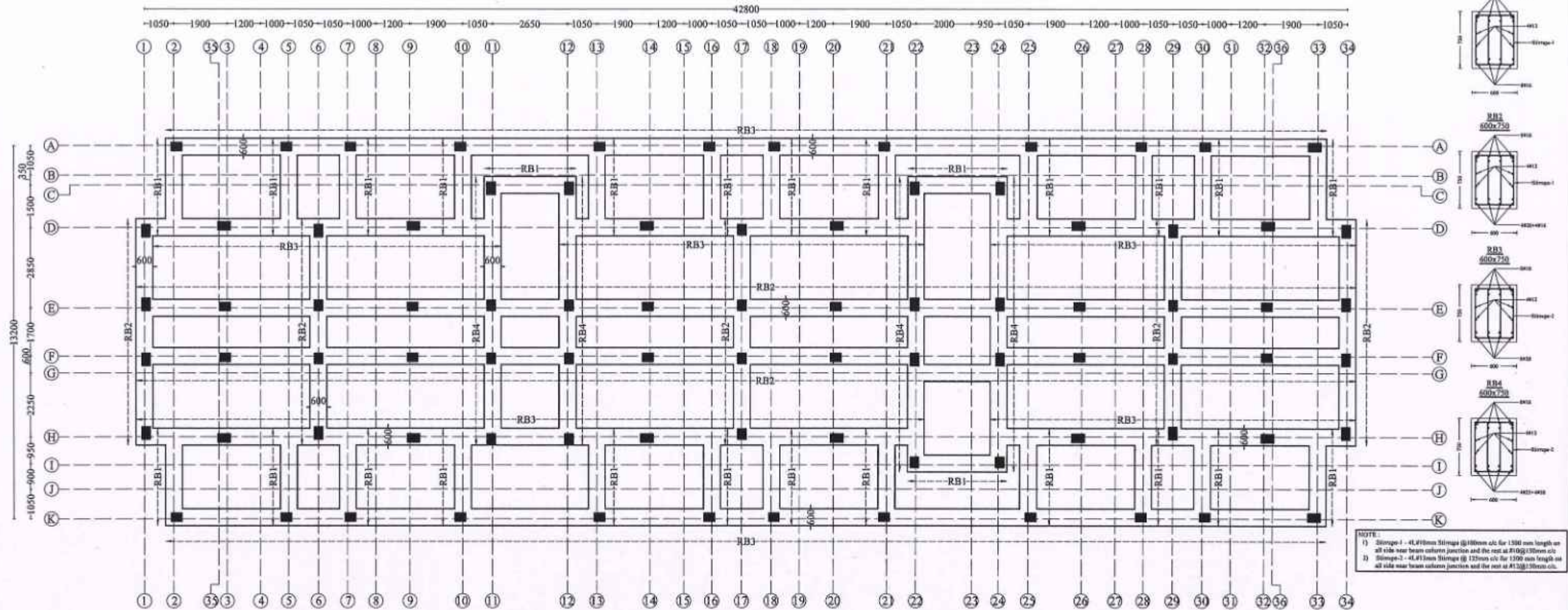
SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I



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

RAFT BEAM LAYOUT & DETAILS



NOTE:
1) Stirrups - 4L #10mm Stirrups @ 100mm c/c for 1500 mm length on all side near beam column junction and the rest at #10@150mm c/c
2) Stirrups - 4L #10mm Stirrups @ 125mm c/c for 1500 mm length on all side near beam column junction and the rest at #10@150mm c/c

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
RAFT BEAM LAYOUT & DETAILS

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/02.

REVISION NO.:

TRUE COPY

20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

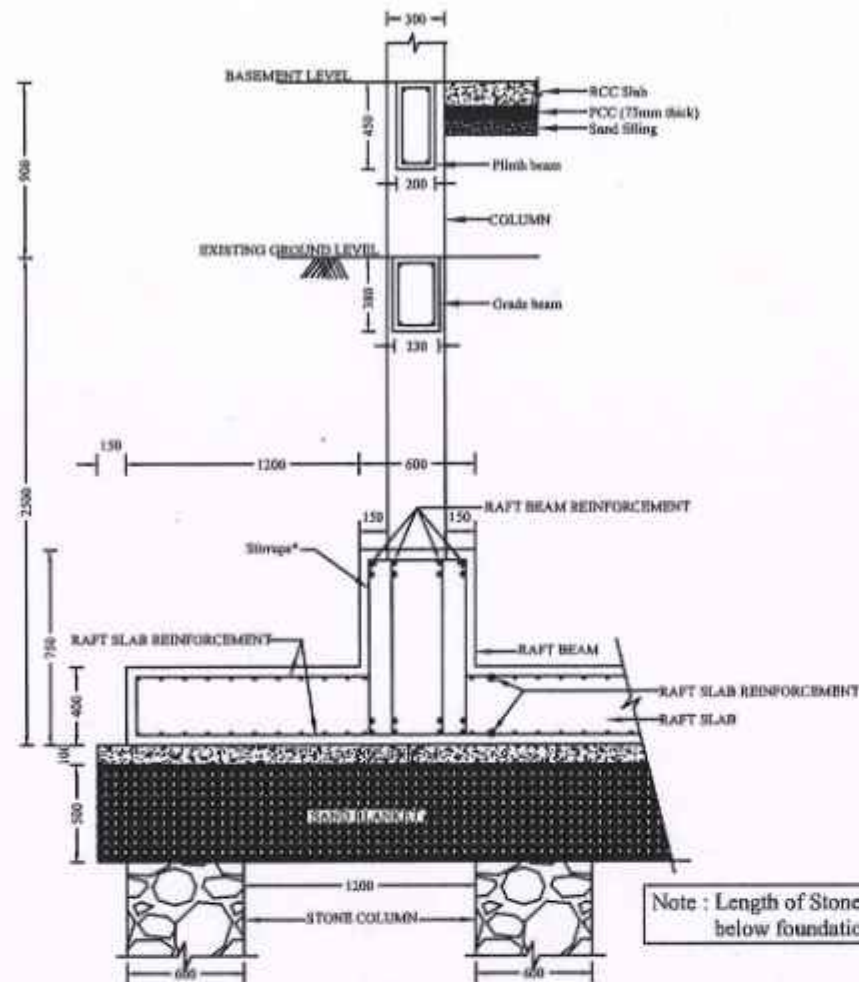
SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I

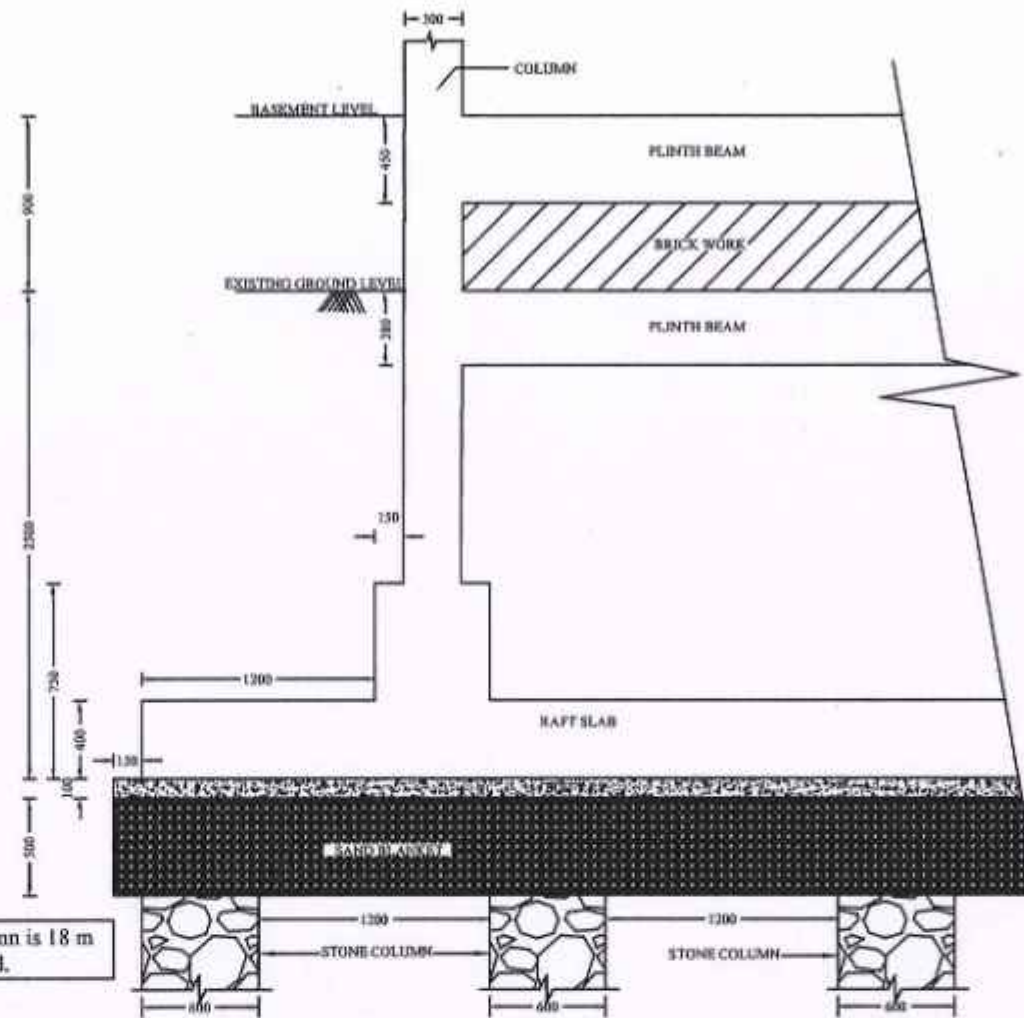


STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL CROSS SECTION OF FOUNDATION.



TYPICAL CROSS SECTIONAL ELEVATION OF RAFT BEAM FOUNDATION.

**NOTE :**

- All the dimensions are in mm unless noted otherwise.
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- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the BE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
TYPICAL CROSS SECTION & CROSS SECTIONAL
ELEVATION OF FOUNDATION.

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/03.

REVISION NO.:

TRUE COPY
20/06/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

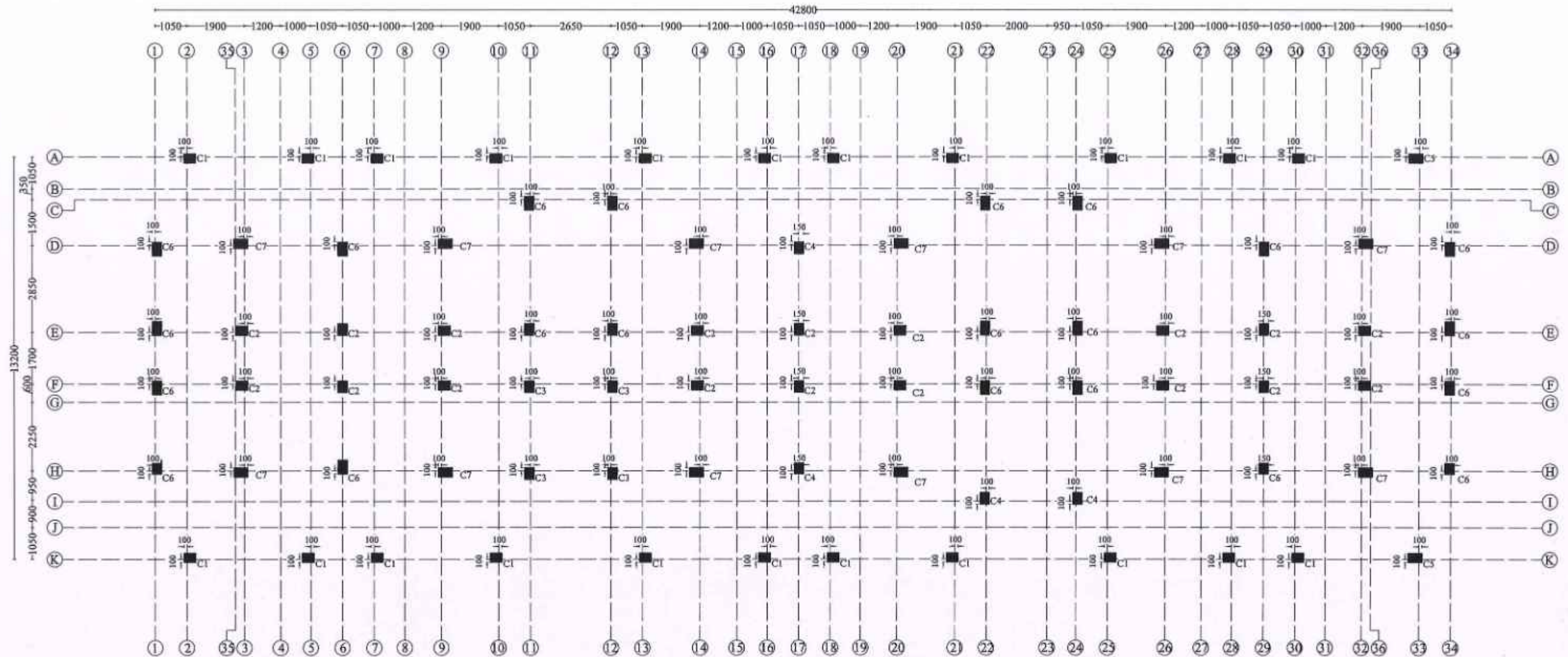
SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I



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

COLUMN LAYOUT



NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
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- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
COLUMN LAYOUT

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/04.

REVISION NO.:

TRUE COPY
20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I



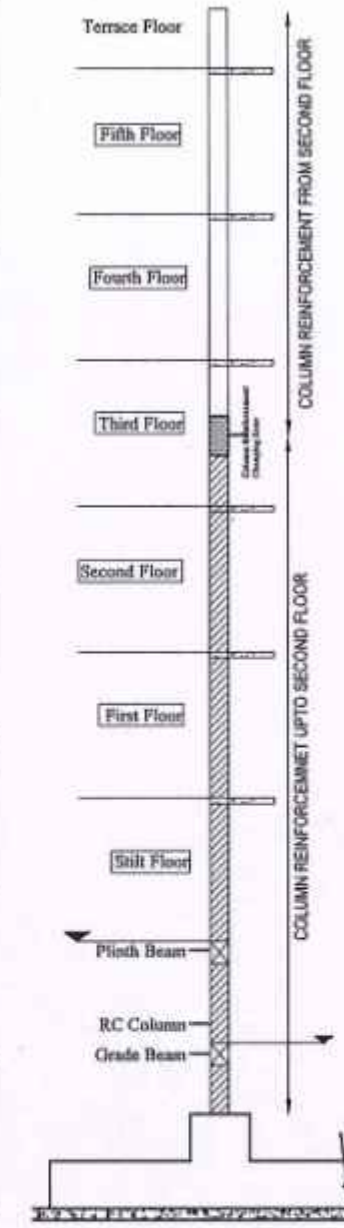
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

SCHEDULE OF COLUMNS



Sl.No	Column Marking	No of Columns	Size	Upto Second Floor Column Reinforcement Details			Above Second Floor Column Reinforcement Details			Ties Profile
				Column Verticals	Lateral Ties	Cross Section	Column Verticals	Lateral Ties	Cross Section	
1.	C1	22	300 x 380	# 12 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
2.	C2	18	300 x 380	# 16 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
3.	C3	04	300 x 380	# 16 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos + # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
4.	C4	04	300 x 380	# 20 - 4 Nos + # 16 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
5.	C5	02	300 x 450	# 16 - 4 Nos + # 12 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
6.	C6	22	300 x 450	# 16 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
7.	C7	12	300 x 450	# 20 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		

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



NOTE :

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- All the RCC works shall be as per design mix of **M30** grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of **Fe550D** grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and **Fly ash** Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

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- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/05.

REVISION NO.:

TRUE COPY

20/6/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

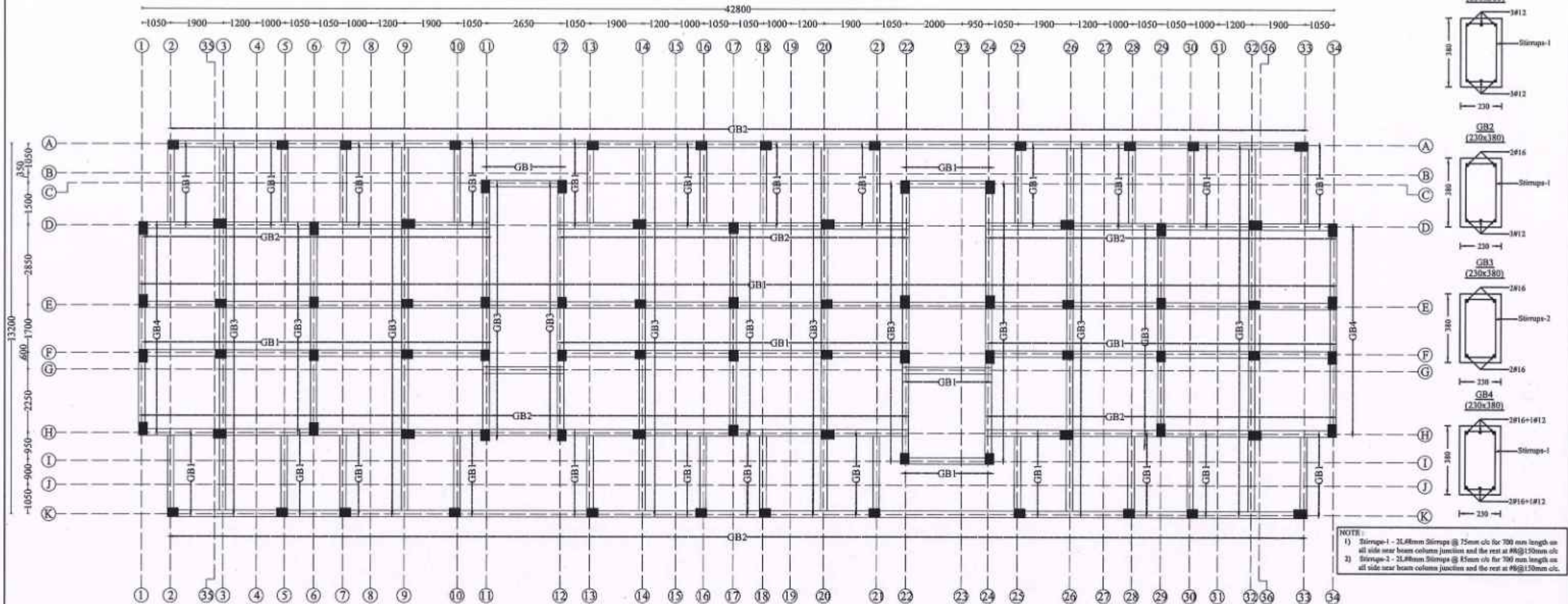
SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I



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

GRADE BEAM LAYOUT & DETAILS



NOTE:
1) Stirrups-1 - 2L40mm Stirrups @ 75mm c/c for 300 mm length on all side near beam column junction and the rest at #8@150mm c/c
2) Stirrups-2 - 2L40mm Stirrups @ 85mm c/c for 300 mm length on all side near beam column junction and the rest at #8@150mm c/c.

NOTE :

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- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
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- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
GRADE BEAM LAYOUT & DETAILS

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/06.

REVISION NO.:

TRUE COPY

20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

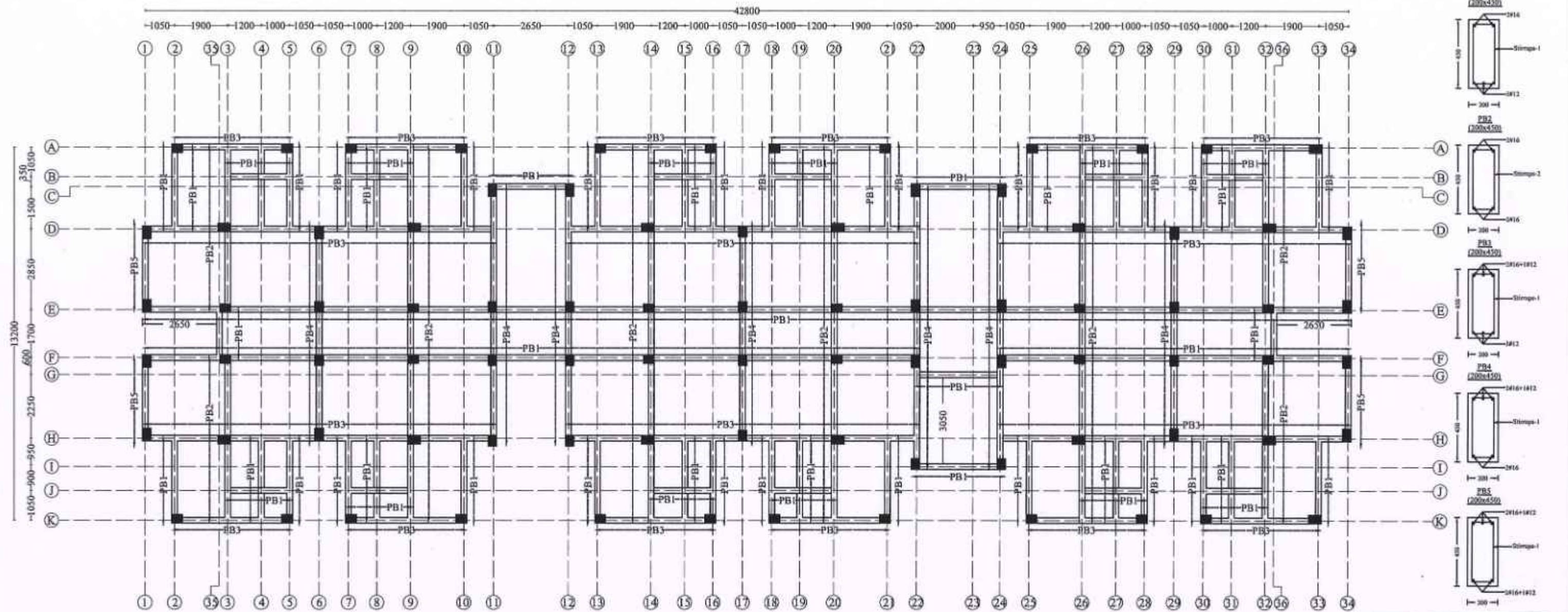
SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I



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

PLINTH BEAM LAYOUT & DETAILS



NOTE : For Plinth Floor Slab Details Refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/GEN/01.

NOTE:
1) Stirrups-1 - 1L Approx Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at #8@150mm c/c
2) Stirrups-2 - 1L Approx Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at #8@150mm c/c

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
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- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
PLINTH BEAM LAYOUT & DETAILS

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/Block A/07.

REVISION NO.:

TRUE COPY

20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

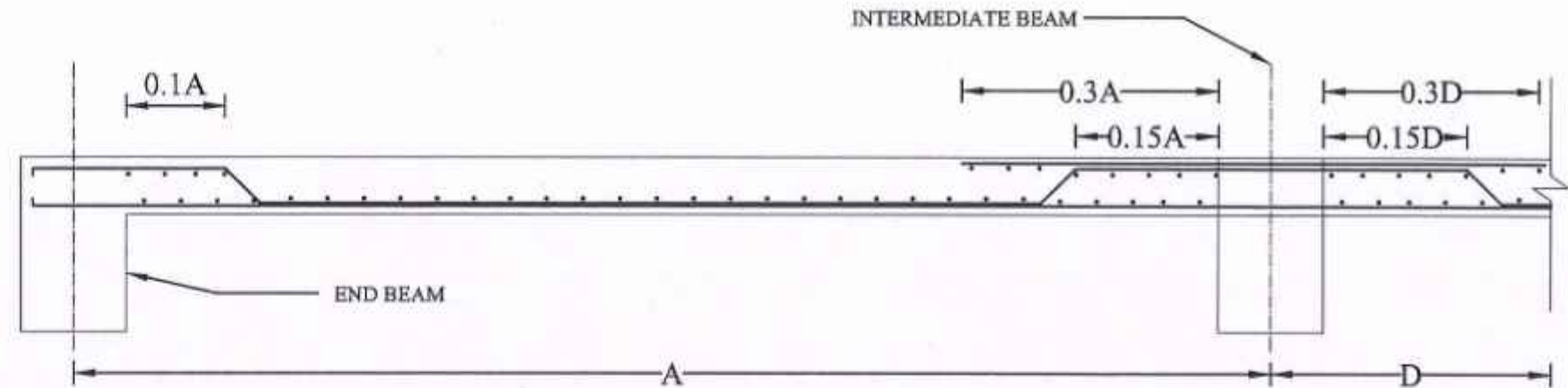
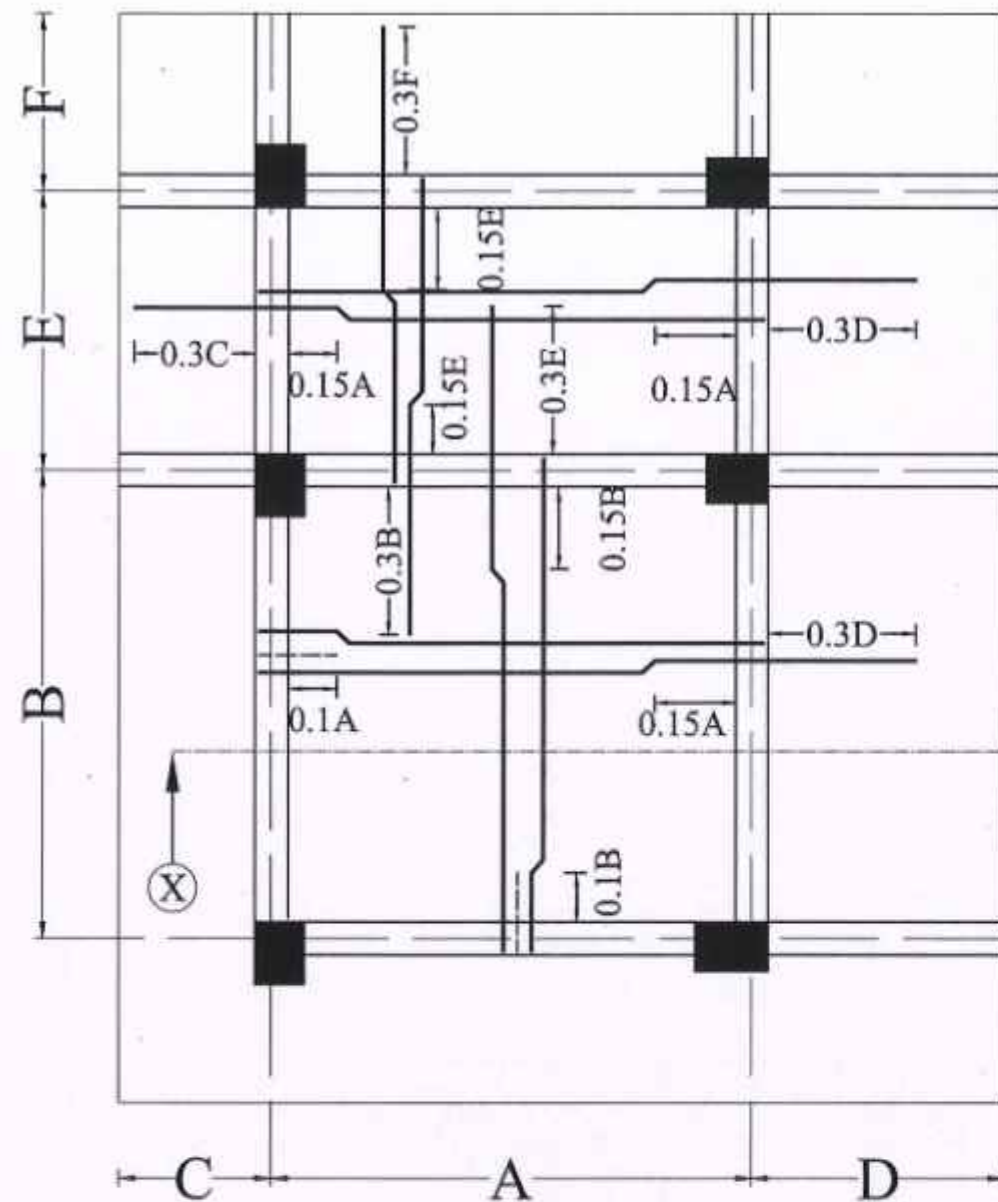
SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I



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

PLINTH LEVEL SLAB DETAILS - TYPICAL



SECTION X - X

1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@230mm c/c

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
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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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING
UNITS AT THIRUVOTTIYUR VILLAGE STREET
THIRUVOTTIYUR TALUK, GREATER CHENNAI
CORPORATION.

TITLE:
PLINTH LEVEL SLAB DETAILS - TYPICAL

TYPE DESIGN NO.:73/74/75/2022, TYPE A,B & C
DWG.NO.: TNUHDB/THIRUVOTTIYUR/GEN/01.

REVISION NO.:

TRUE COPY

20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

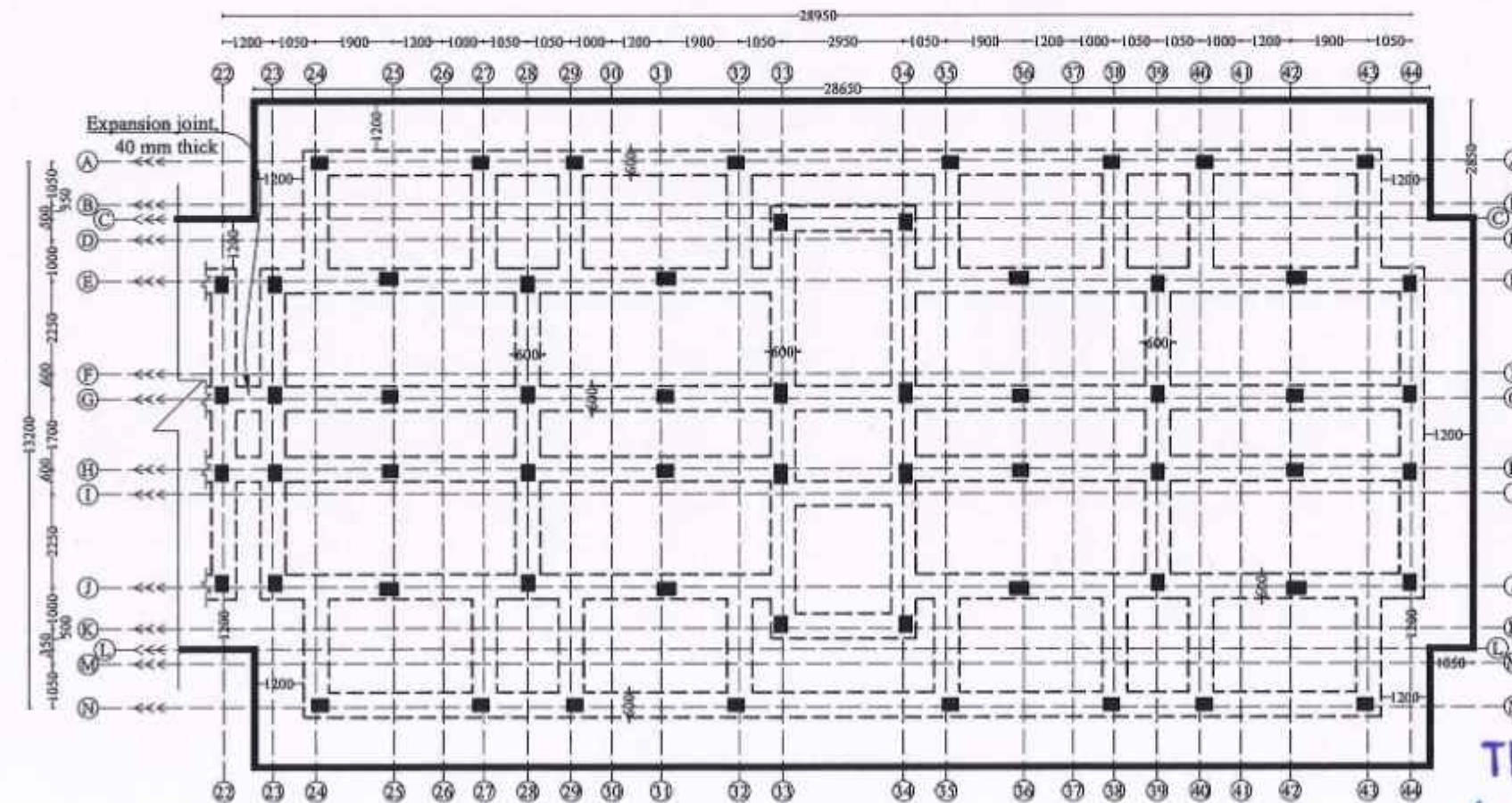
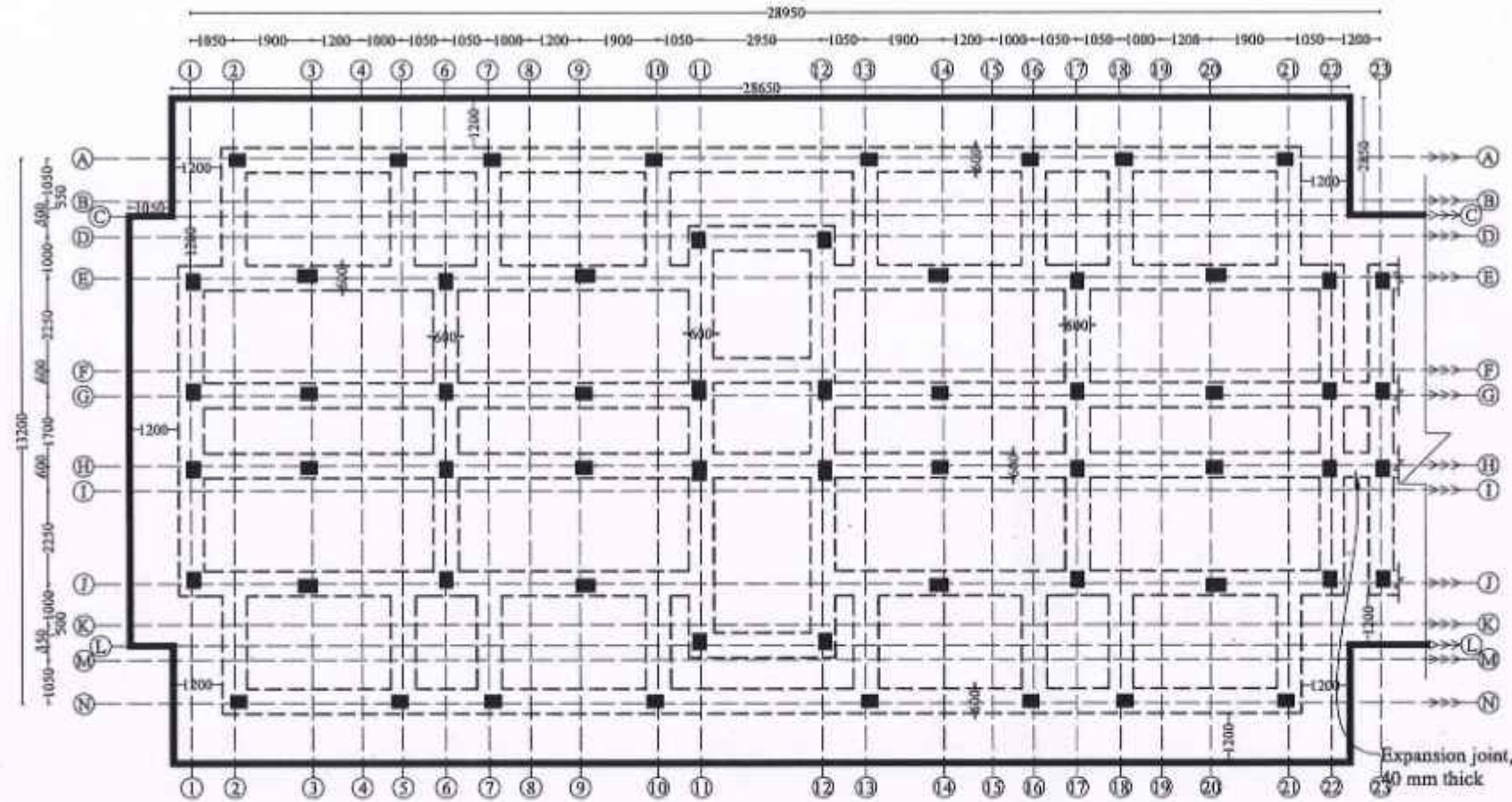
SE - North I

sd.xxxx 18.06.2024
Chief Engineer - I

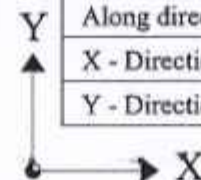


STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

PLAN AT RAFT FOUNDATION LEVEL



Raft Reinforcement		
Along direction	Top	Bottom
X - Direction	#12@150 c/c	#16@100 c/c
Y - Direction	#12@125 c/c	#16@150 c/c



NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lannels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
PLAN AT FOUNDATION LEVEL.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/01.

REVISION NO.:

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

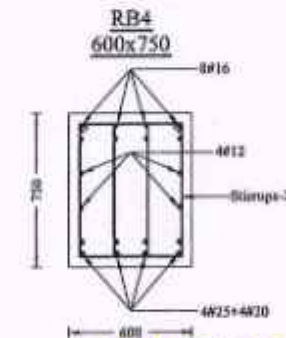
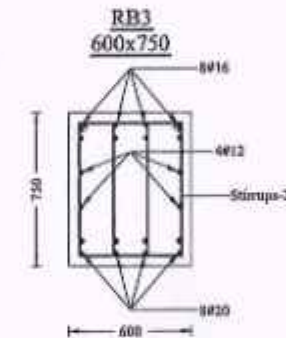
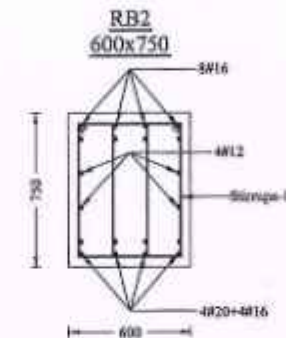
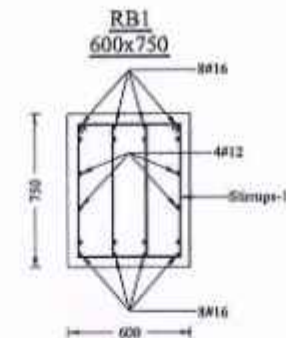
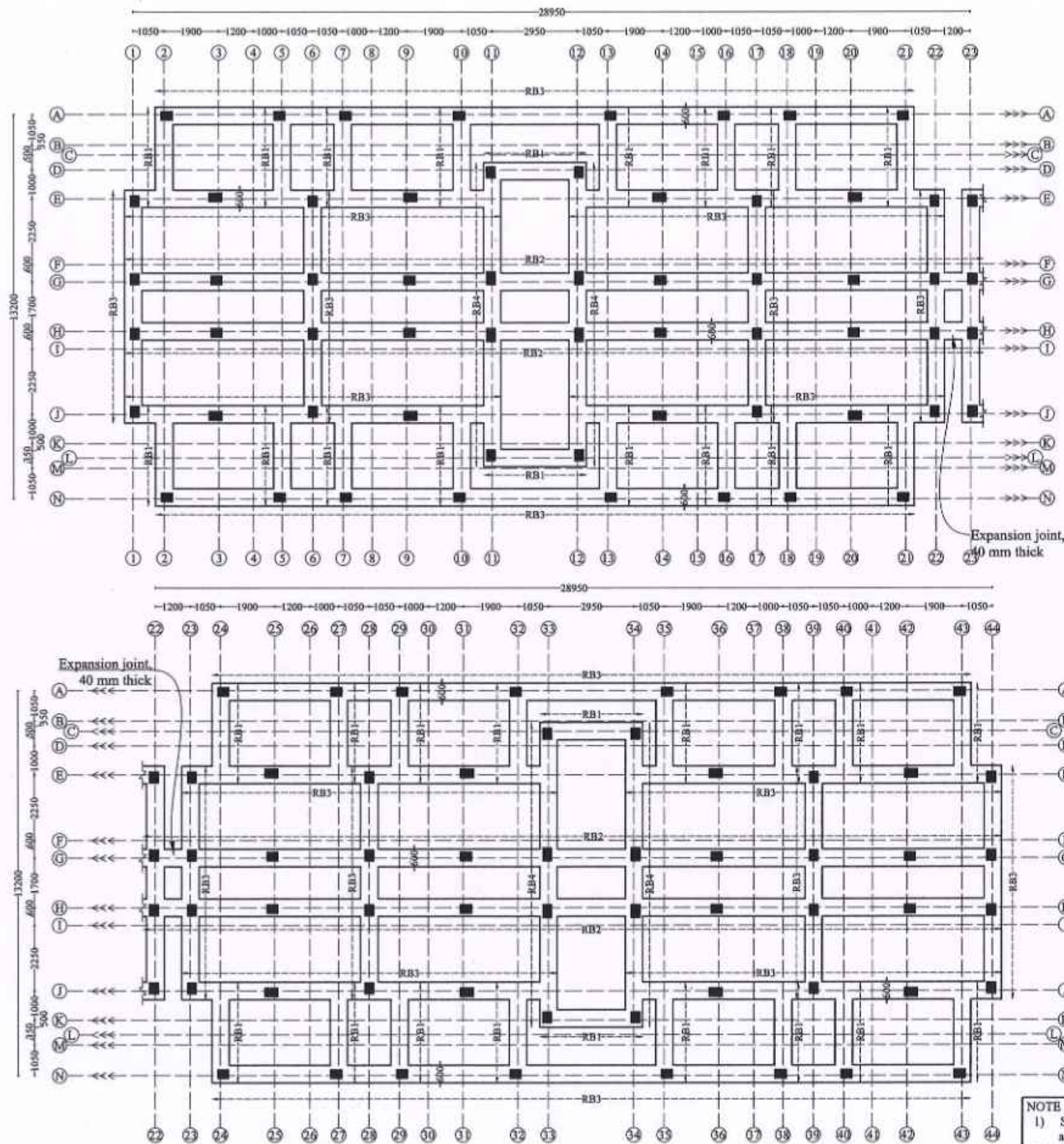
sd.xxxx 18.06.2024
Chief Engineer- I

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

TRUE COPY

20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

RAFT BEAM LAYOUT & DETAILS



- NOTE:**
- 1) Stirrups-1 - 4L#10mm Stirrups @100mm c/c for 1500 mm length on all side near beam column junction and the rest at #10@150mm c/c
 - 2) Stirrups-2 - 4L#12mm Stirrups @ 125mm c/c for 1500 mm length on all side near beam column junction and the rest at #12@150mm c/c.

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/7099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 stance for review.
19. Ground water quality has to be confirmed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to be unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
RAFT BEAM LAYOUT & DETAILS

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/02.

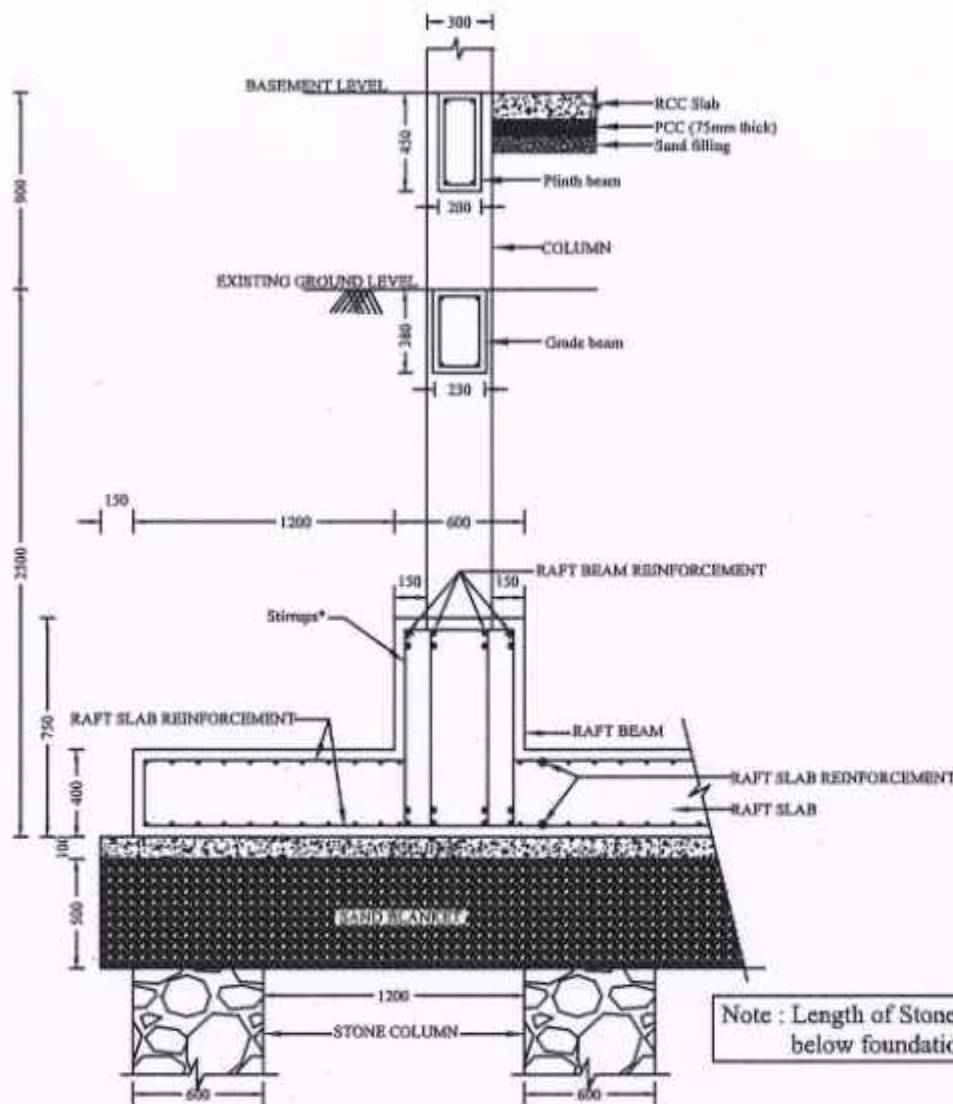
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North 1

sd,xxxx 18.06.2024
Chief Engineer- I

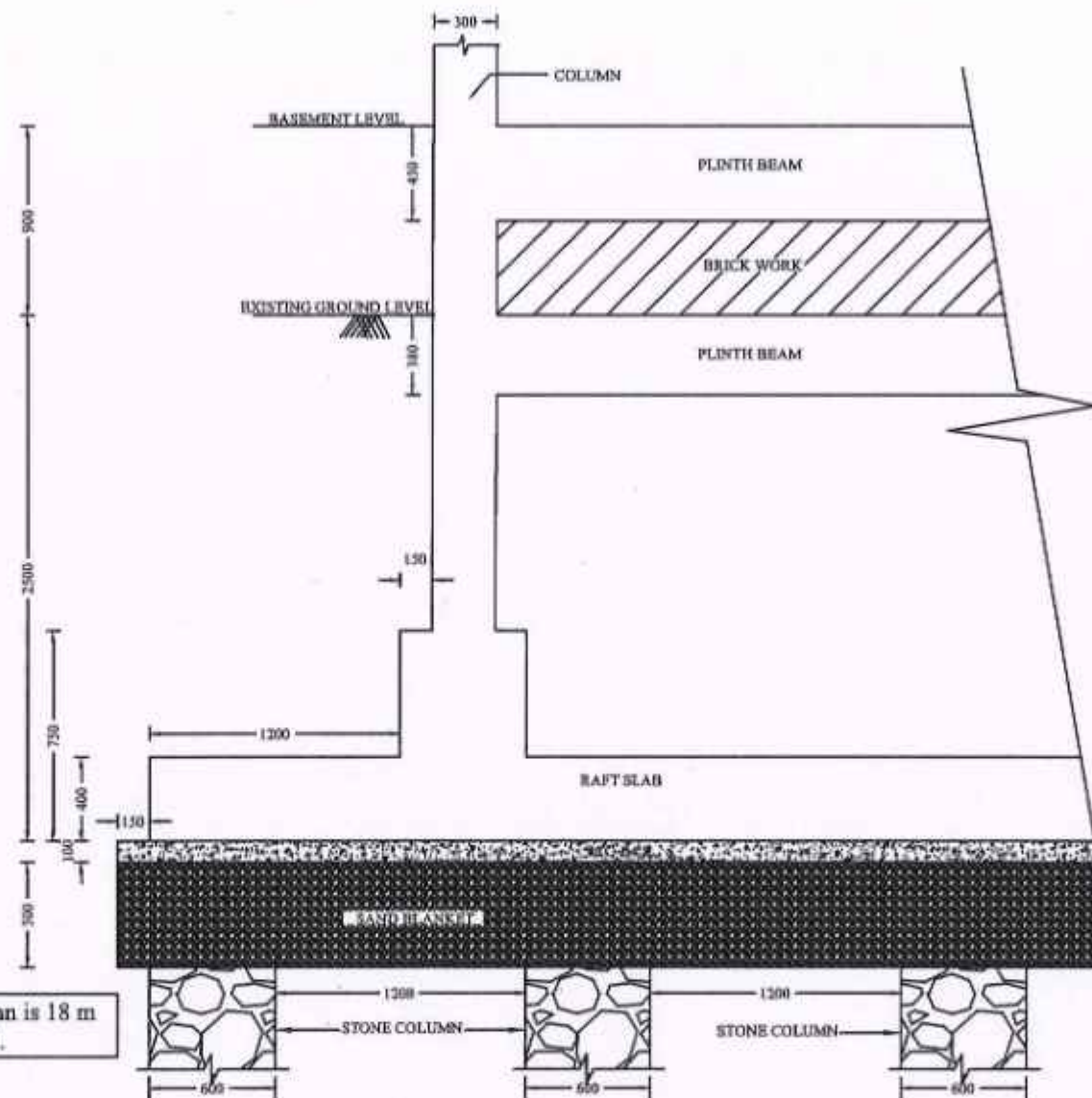
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL CROSS SECTION OF FOUNDATION.



Note : Length of Stone Column is 18 m below foundation level.

TYPICAL CROSS SECTIONAL ELEVATION OF FOUNDATION.



NOTE :

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- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TYPICAL CROSS SECTION & CROSS SECTIONAL
ELEVATION OF FOUNDATION.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/03.

REVISION NO.:

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

sd.xxxx 18.06.2024
Chief Engineer- I

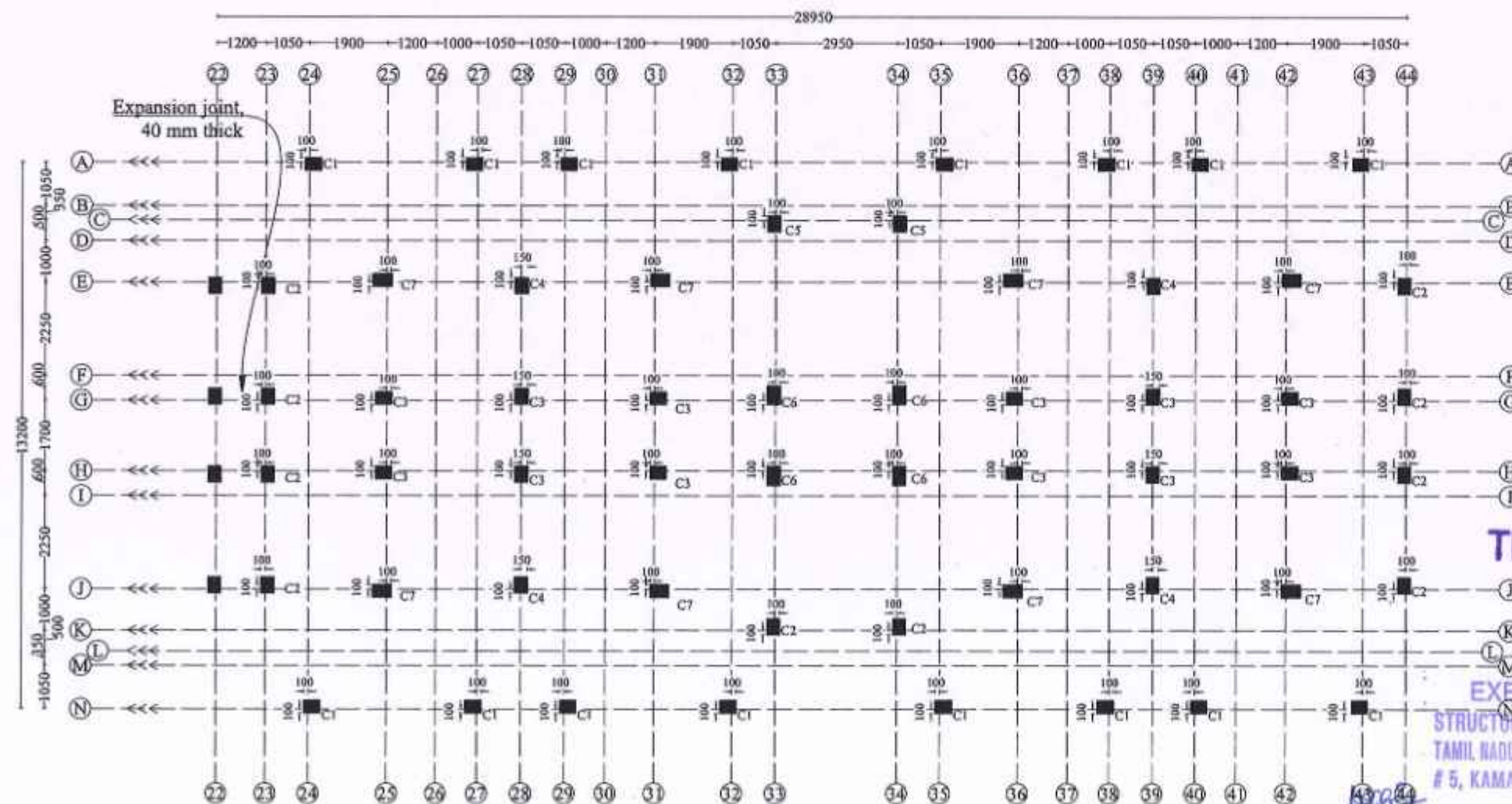
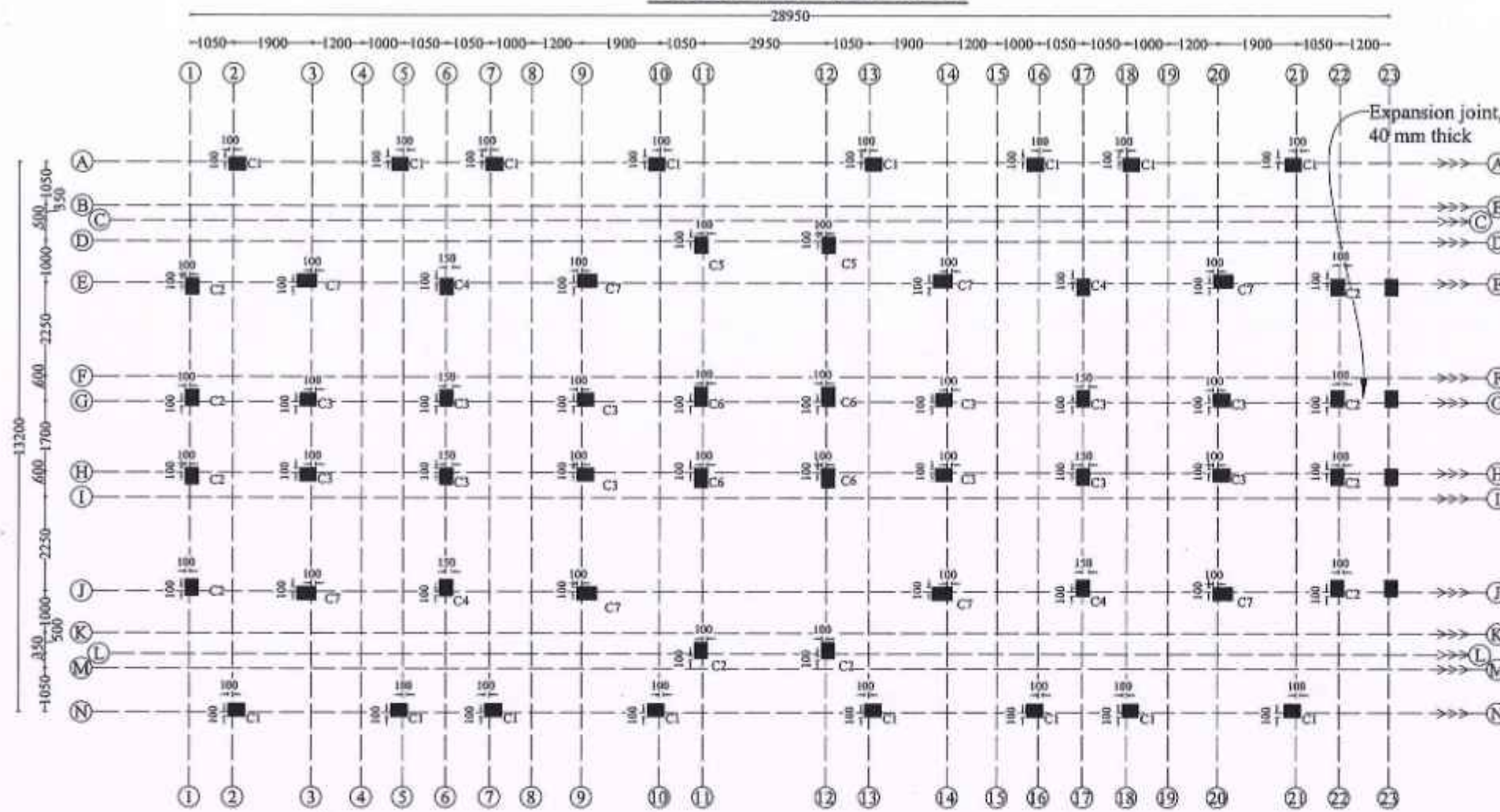
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

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20/6/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

20/06/24

COLUMN LAYOUT



NOTE:

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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
COLUMN LAYOUT

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/04.

REVISION NO.:

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

sd.xxxx 18.06.2024
Chief Engineer- I

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

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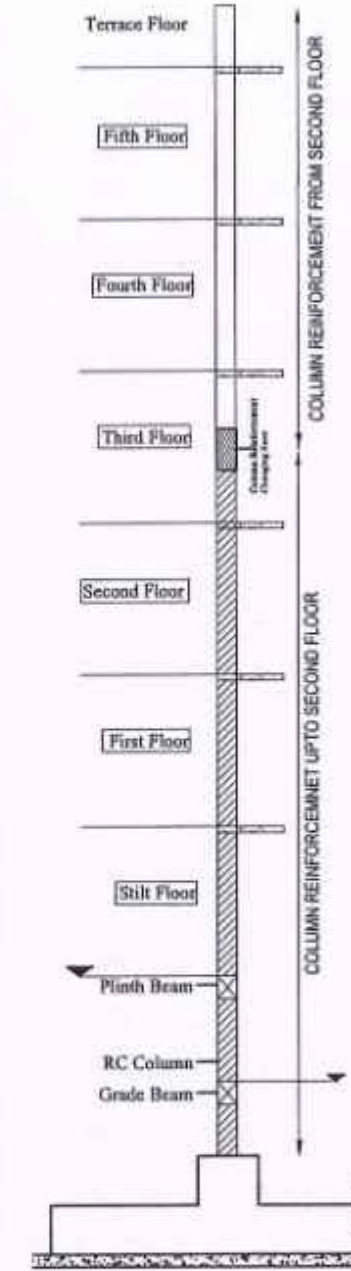
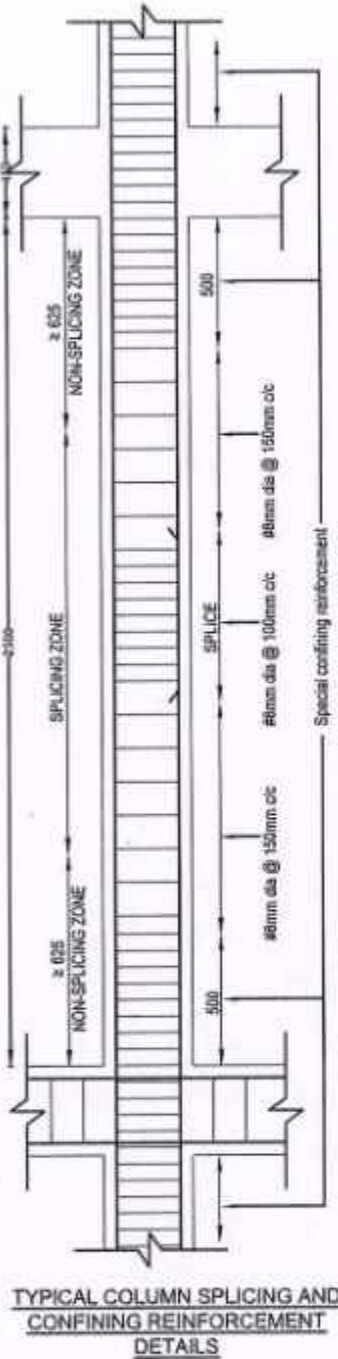
20/6/2024
EXECUTIVE ENGINEER (A/C)

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

SCHEDULE OF COLUMNS

Sl. No	Column Marking	No of Columns	Size	Upto Second Floor Column Reinforcement Details			Above Second Floor Column Reinforcement Details			Ties Profile
				Column Verticals	Lateral Ties	Cross Section	Column Verticals	Lateral Ties	Cross Section	
1.	C1	32	300 x 380	# 12 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c	- do -	
2.	C2	20	300 x 380	# 16 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
3.	C3	24	300 x 380	# 16 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
4.	C4	08	300 x 380	# 20 - 4 Nos # 16 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
5.	C5	04	300 x 380	# 20 - 4 Nos # 16 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
6.	C6	08	300 x 450	# 20 - 4 Nos # 16 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
7.	C7	16	300 x 450	# 20 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		

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



NOTE :

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- Clear cover for reinforcement are as follows:
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 - Column - 40 mm
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/05.

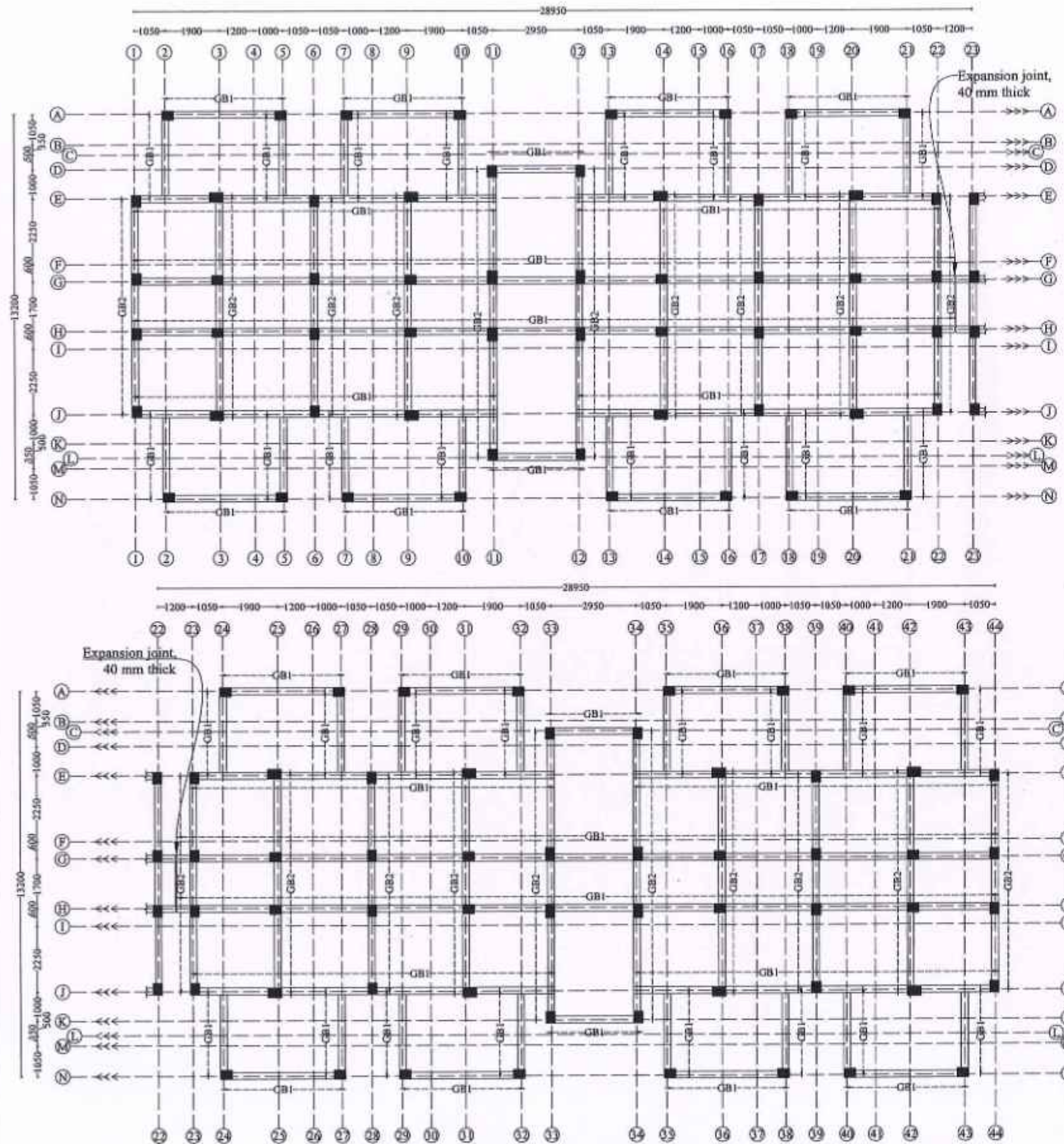
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
sd.xxxx 18.06.2024 Chief Engineer- I	
STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

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20/6/2024
 EXECUTIVE ENGINEER (A/C)
 STRUCTURAL AND QUALITY CONTROL CELL
 TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
 # 5, KAMARAJAR SALAI, CHENNAI-600 005

GRADE BEAM LAYOUT & DETAILS

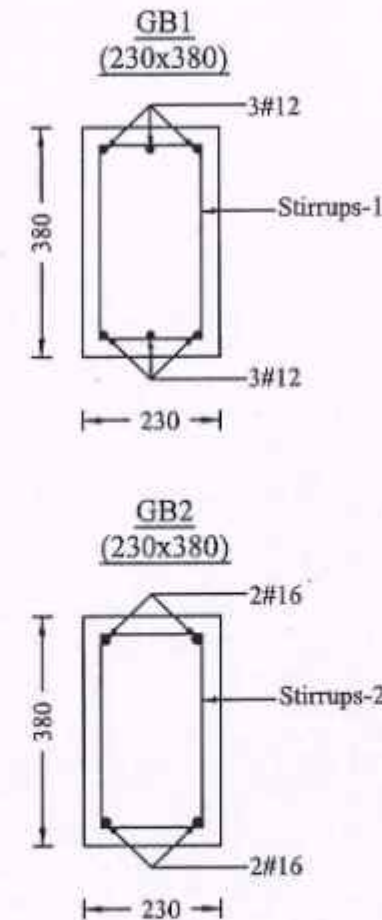


NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 700 mm length on all side near beam column junction and the rest at #8@150mm c/c
- 2) Stirrups-2 - 2L#8mm Stirrups @ 85mm c/c for 700 mm length on all side near beam column junction and the rest at #8@150mm c/c.

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 founding depth, then the same should be informed to the Chief Engineer at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.: SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.: SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.



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20/6/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

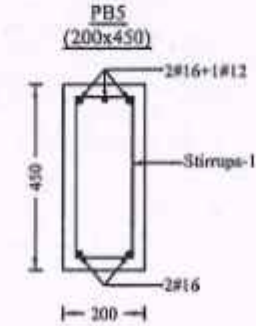
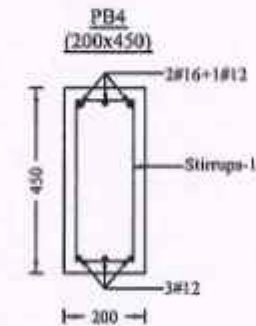
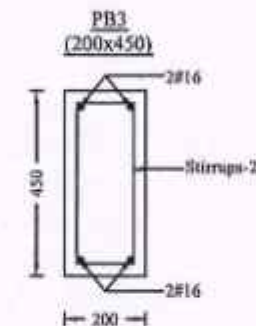
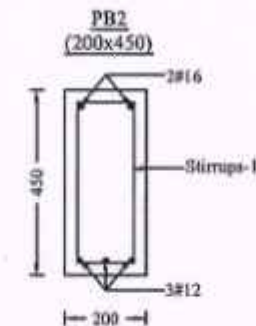
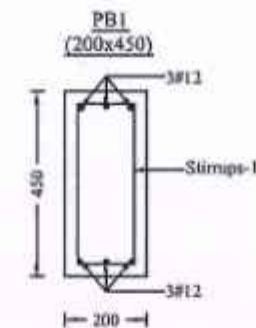
TITLE:
GRADE BEAM LAYOUT & DETAILS

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/06.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
sd.xxxx 18.06.2024 Chief Engineer- I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	




 20/6/2024
 EXECUTIVE ENGINEER (A/C)
 STRUCTURAL AND QUALITY CONTROL CELL
 TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
 # 5, KAMARAJAR SALAI, CHENNAI-600 005.

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at #8@150mm c/c
- 2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at #8@150mm c/c

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 IS 13920:2016.
6. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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19. Ground water quality has to be confirmed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/07.

REVISION NO.:

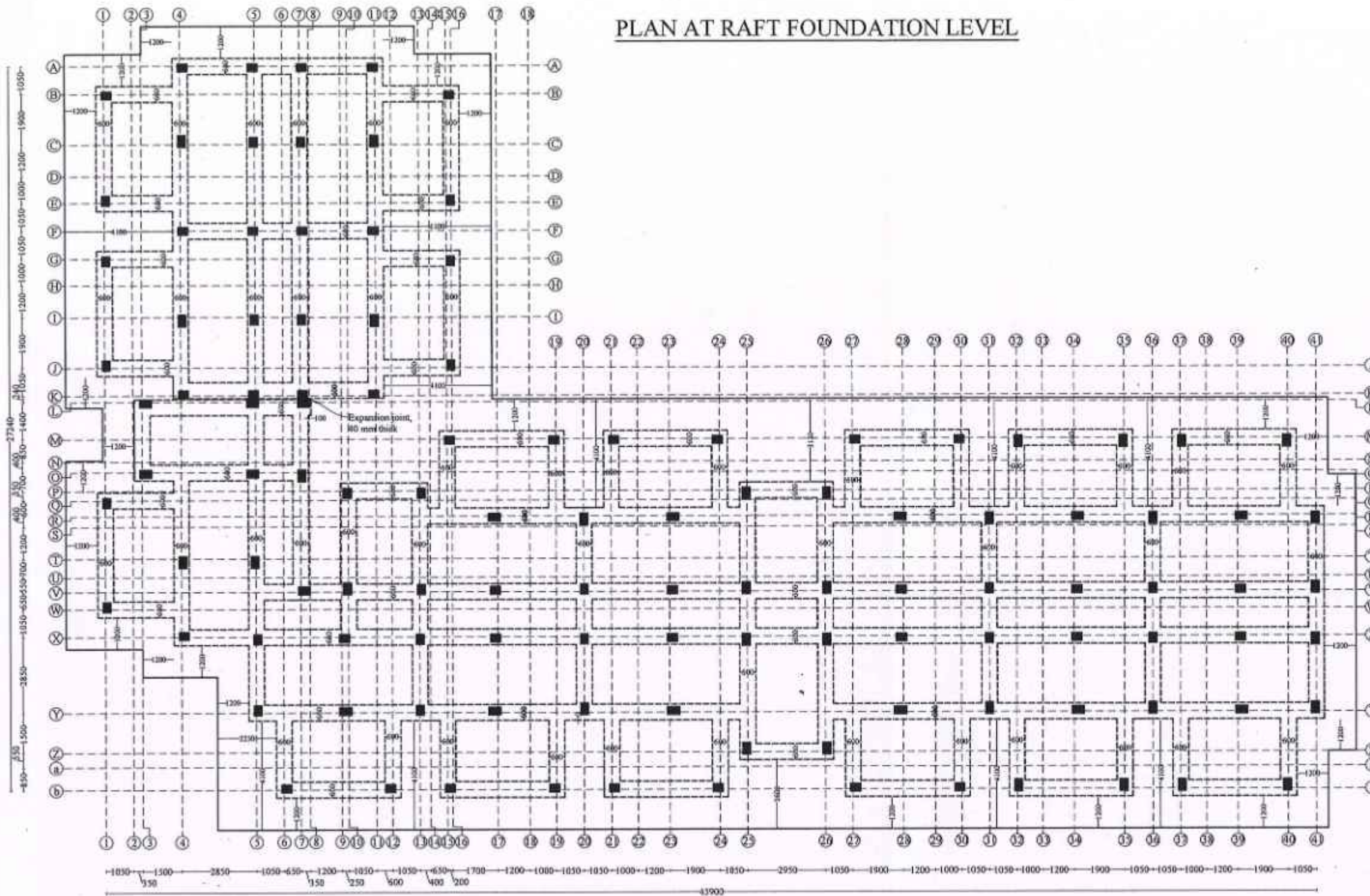
Assistant Engineer	Asst. Exc. Engineer
Executive Engineer	SE - North I

sd.xxxx 18.06.2024
Chief Engineer- I



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

PLAN AT RAFT FOUNDATION LEVEL



NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
PLAN AT FOUNDATION LEVEL.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/R1/01.

REVISION NO.: R1

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE (PMU)

5d.xxxx.
SE - North I

5d.xxxx 11.05.2024.
Chief Engineer- North

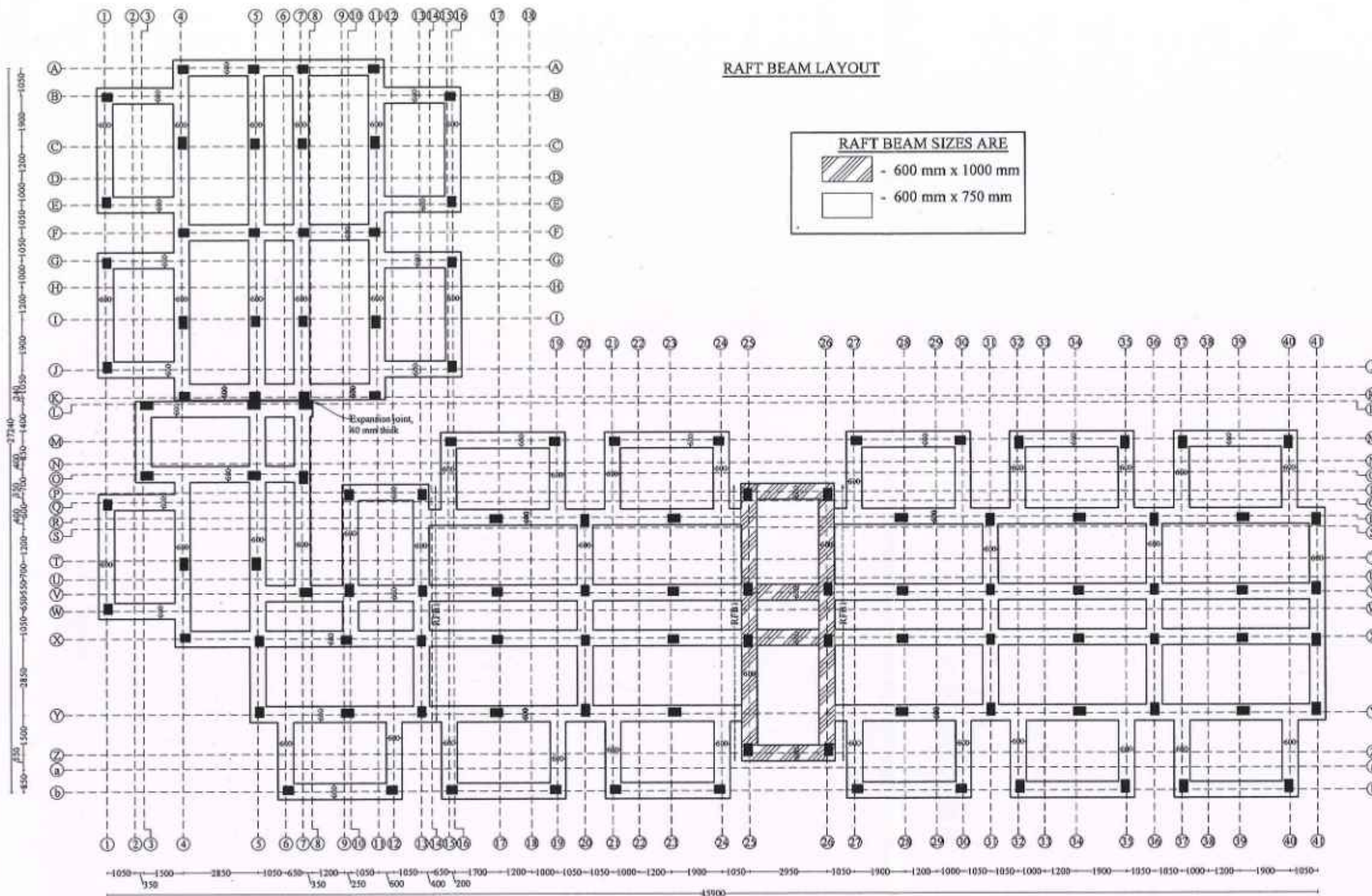


STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

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13/5/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

EP
11/05/24



NOTE:

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- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
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 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
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- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
RAFT BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/R1/02.

REVISION NO.: R1

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE (PMU)

Sd./xxxxx
SE - North I

Sd./xxxxx 11.05.2024
Chief Engineer- North



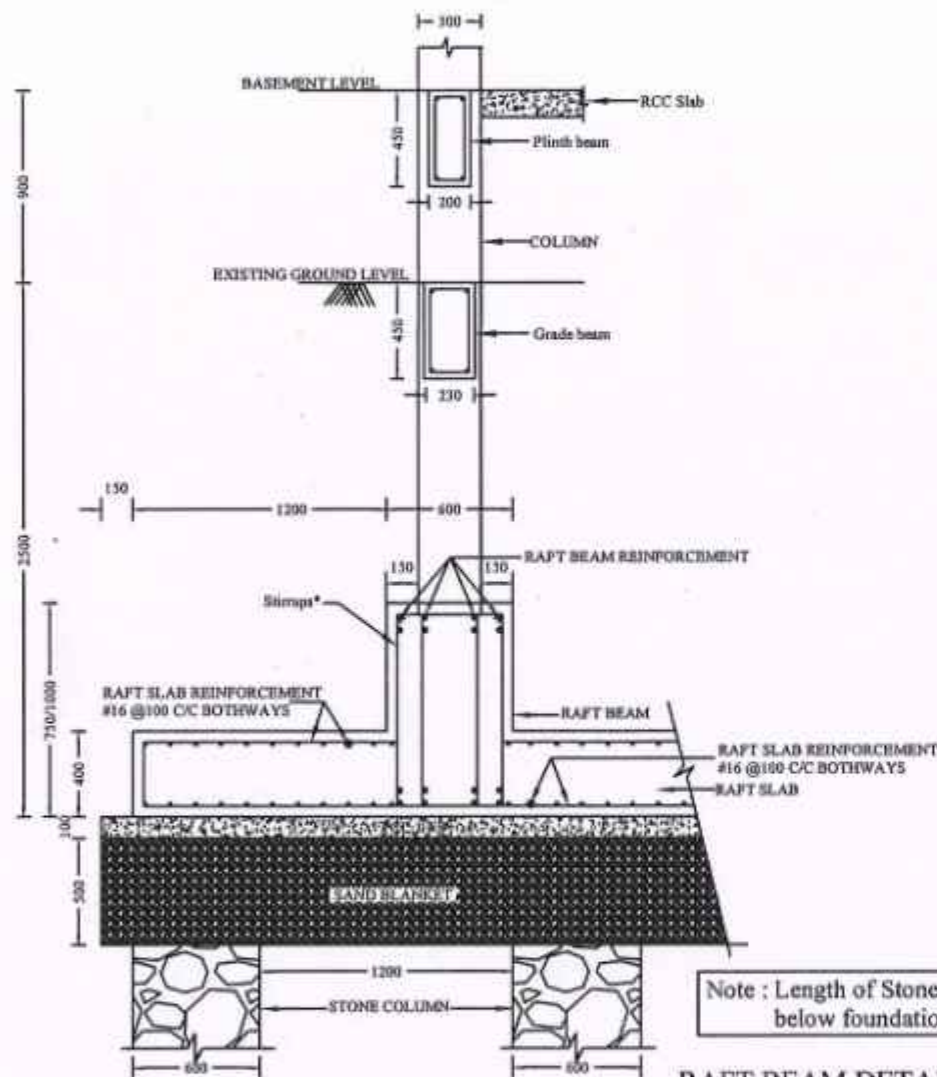
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI, CHENNAI - 600 005.

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13/5/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

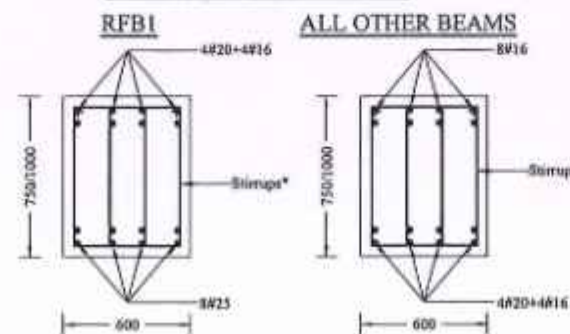
EV
11/05/24

TYPICAL CROSS SECTION OF RAFT BEAM WITH SLAB DETAILS.

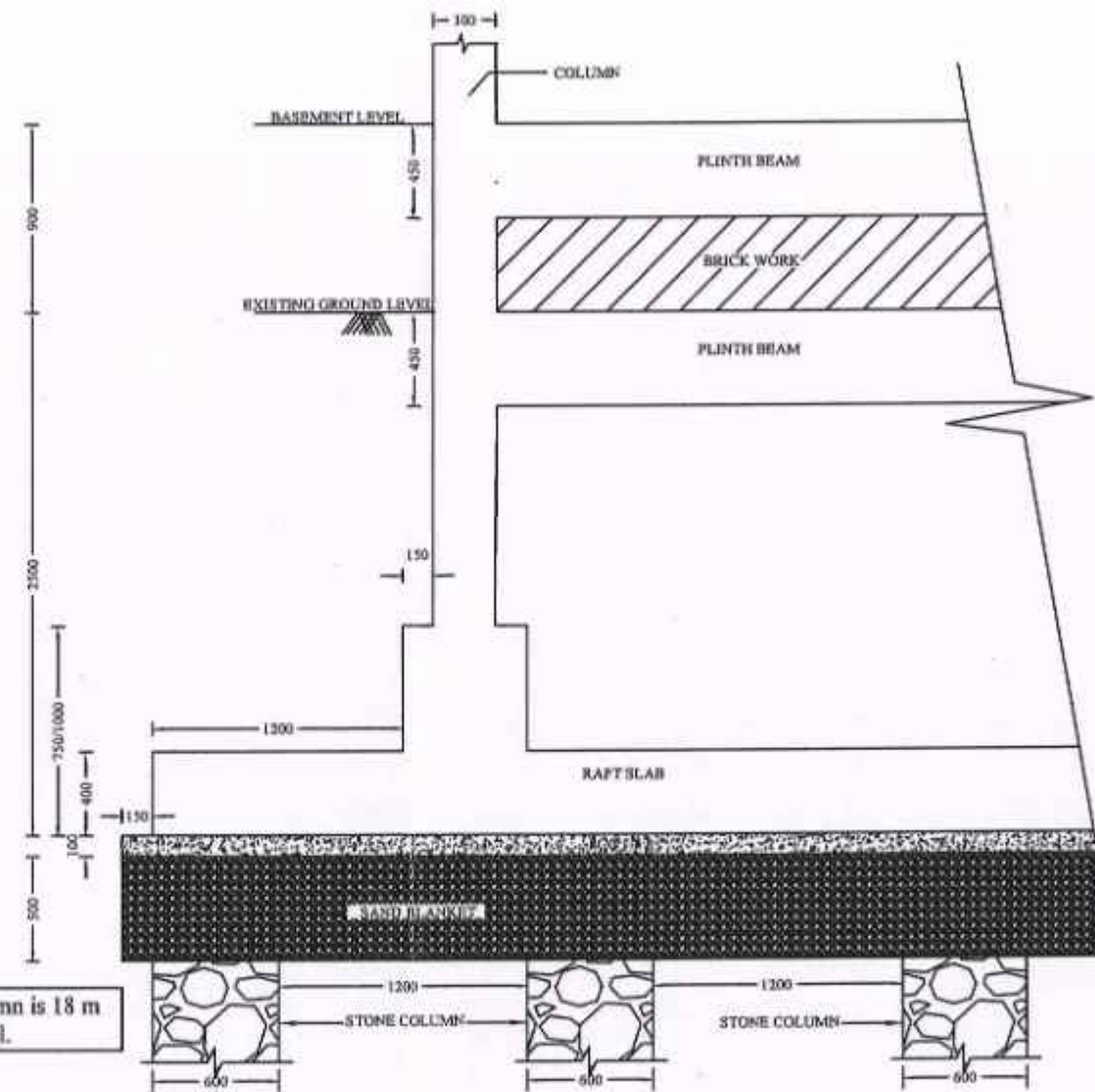


Note : Length of Stone Column is 18 m below foundation level.

RAFT BEAM DETAILS



TYPICAL CROSS SECTIONAL ELEVATION OF RAFT BEAM WITH SLAB DETAILS.



NOTE:
1. For beam 750 mm depth - Stirrups* -> 4 Legged # 10 mm stirrups at 100 mm c/c for 1.5 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.
2. For beam 1000 mm depth - Stirrups* -> 4 Legged # 10 mm stirrups at 100 mm c/c for 2 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.

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13/5/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m, as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TYPICAL CROSS SECTION & CROSS SECTIONAL ELEVATION OF RAFT BEAM WITH SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

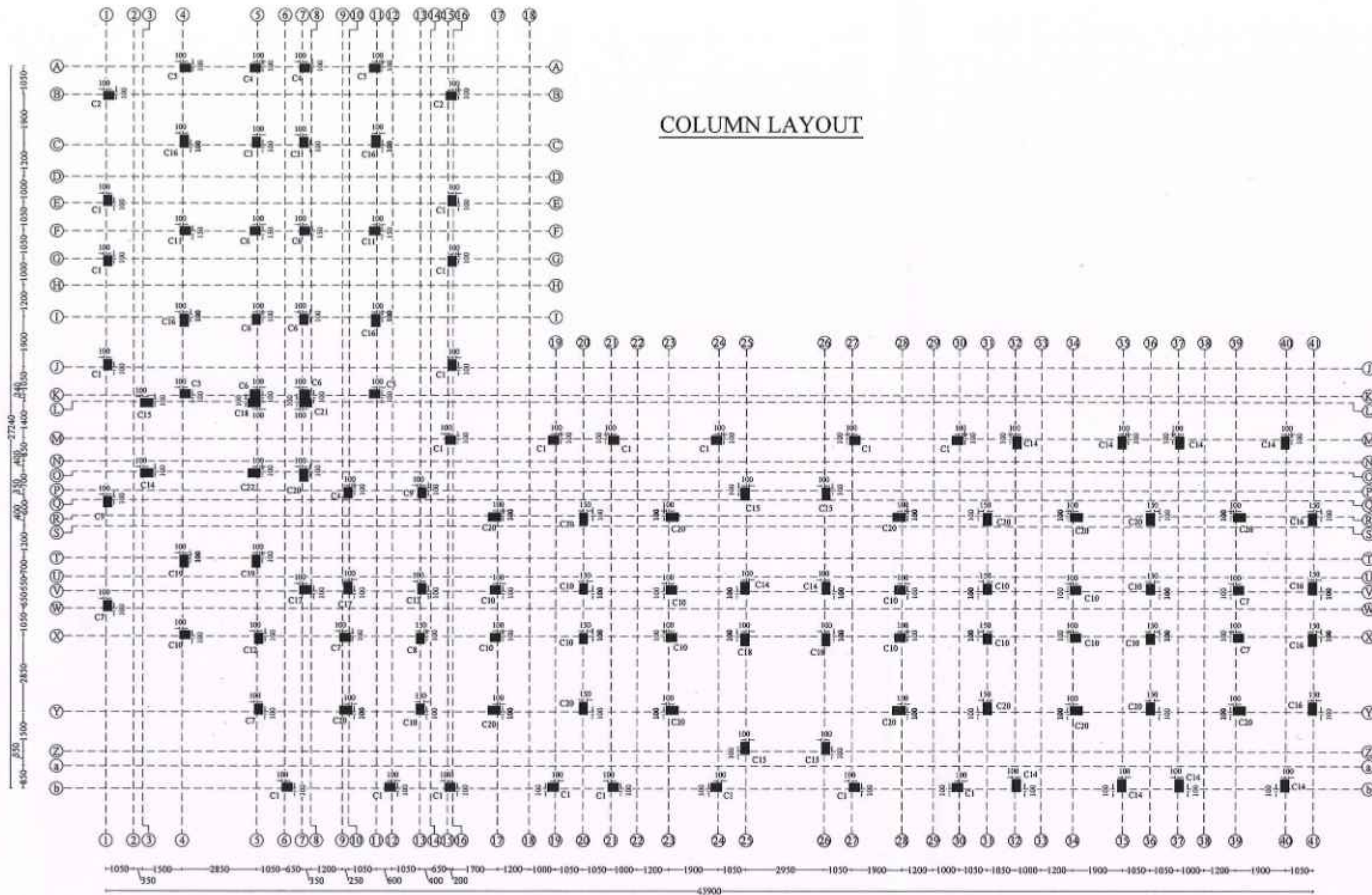
DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/R1/03.

REVISION NO.: R1

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE (PMU)
Sd..... SE - North I	Sd..... 11.05.2024. Chief Engineer- North



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



NOTE :

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- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
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- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
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- 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:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
COLUMN LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/R1/04.

REVISION NO.: R1

Assistant Engineer	Ast. Exe. Engineer
Executive Engineer	SE (PMU)
Sd..... SE - North I	Sd..... Chief Engineer- North



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

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[Signature]
13/5/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

[Signature]
11/05/24

SCHEDULE OF COLUMNS - 1

Sl.No	Column Marking	No of Columns	Size	Upto Second Floor Column Reinforcement Details			Above Second Floor Column Reinforcement Details			Ties Profile
				Column Verticals	Lateral Ties	Cross Section	Column Verticals	Lateral Ties	Cross Section	
1.	C1	20	300 x 380	# 12 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c	- do -	
2.	C2	02	300 x 380	# 16 - 4 Nos. + # 12 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c	- do -	
3.	C3	02	300 x 380	# 16 - 4 Nos. + # 12 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
4.	C4	03	300 x 380	# 16 - 8 Nos. + # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
5.	C5	04	300 x 380	# 16 - 8 Nos. + # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
6.	C6	06	300 x 380	# 16 - 8 Nos. + # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos. + # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
7.	C7	05	300 x 380	# 16 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
8.	C8	01	300 x 380	# 16 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 8 Nos. + # 12 - 2 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
9.	C9	02	300 x 380	# 20 - 4 Nos. + # 16 - 4 Nos. + # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
10.	C10	16	300 x 380	# 20 - 4 Nos. + # 16 - 4 Nos. + # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos.	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		
11.	C11	02	300 x 380	# 20 - 6 Nos. + # 16 - 4 Nos.	1) Upto Plinth Beam: #10 @ 95 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos. + # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam-column junction & lapping zone and the rest #8 @ 150mm c/c		

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

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS - 1.

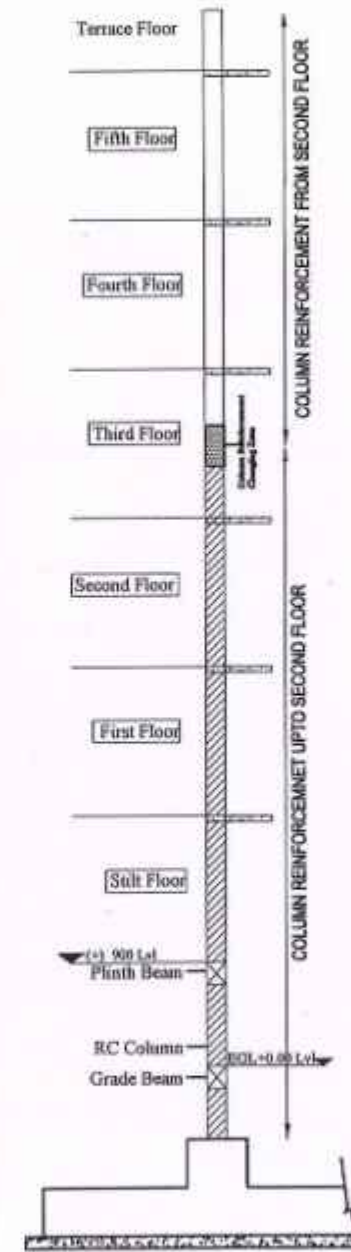
TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/R1/05.

REVISION NO.: R1

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE (PMU)
Sd..... SE - North I	Sd..... 11.05.2024. Chief Engineer- North

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



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13/5/2024
EXECUTIVE ENGINEER

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

11/05/24



TYPICAL COLUMN SPLICING AND CONFINING REINFORCEMENT DETAILS

SCHEDULE OF COLUMNS - 2

Sl.No	Column Marking	No of Columns	Size	Upto Second Floor Column Reinforcement Details			Above Second Floor Column Reinforcement Details			Ties Profile
				Column Verticals	Lateral Ties	Cross Section	Column Verticals	Lateral Ties	Cross Section	
12.	C12	01	300 x 380	# 20 - 6 Nos + # 16 - 4 Nos	1) Upto Plinth Beam: #10 @ 95 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
13.	C13	01	300 x 380	# 20 - 6 Nos + # 16 - 4 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
14.	C14	11	300 x 450	# 16 - 4 Nos + # 12 - 6 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
15.	C15	05	300 x 450	# 16 - 6 Nos + # 12 - 4 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
16.	C16	08	300 x 450	# 16 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
17.	C17	02	300 x 450	# 16 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos + # 12 - 4 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
18.	C18	03	300 x 450	# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
19.	C19	02	300 x 450	# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos + # 12 - 4 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
20.	C20	18	300 x 450	# 20 - 4 Nos + # 16 - 6 Nos	1) Upto Plinth Beam: #10 @ 95 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
21.	C21	01	300 x 450	# 20 - 4 Nos + # 16 - 6 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos + # 12 - 4 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
22.	C22	01	300 x 450	# 20 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		

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

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS - 2.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/R1/06.

REVISION NO.: R1

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE (PMU)

Sd./xxxxx
SE - North I

Sd./xxxxx 11.05.2024
Chief Engineer- North

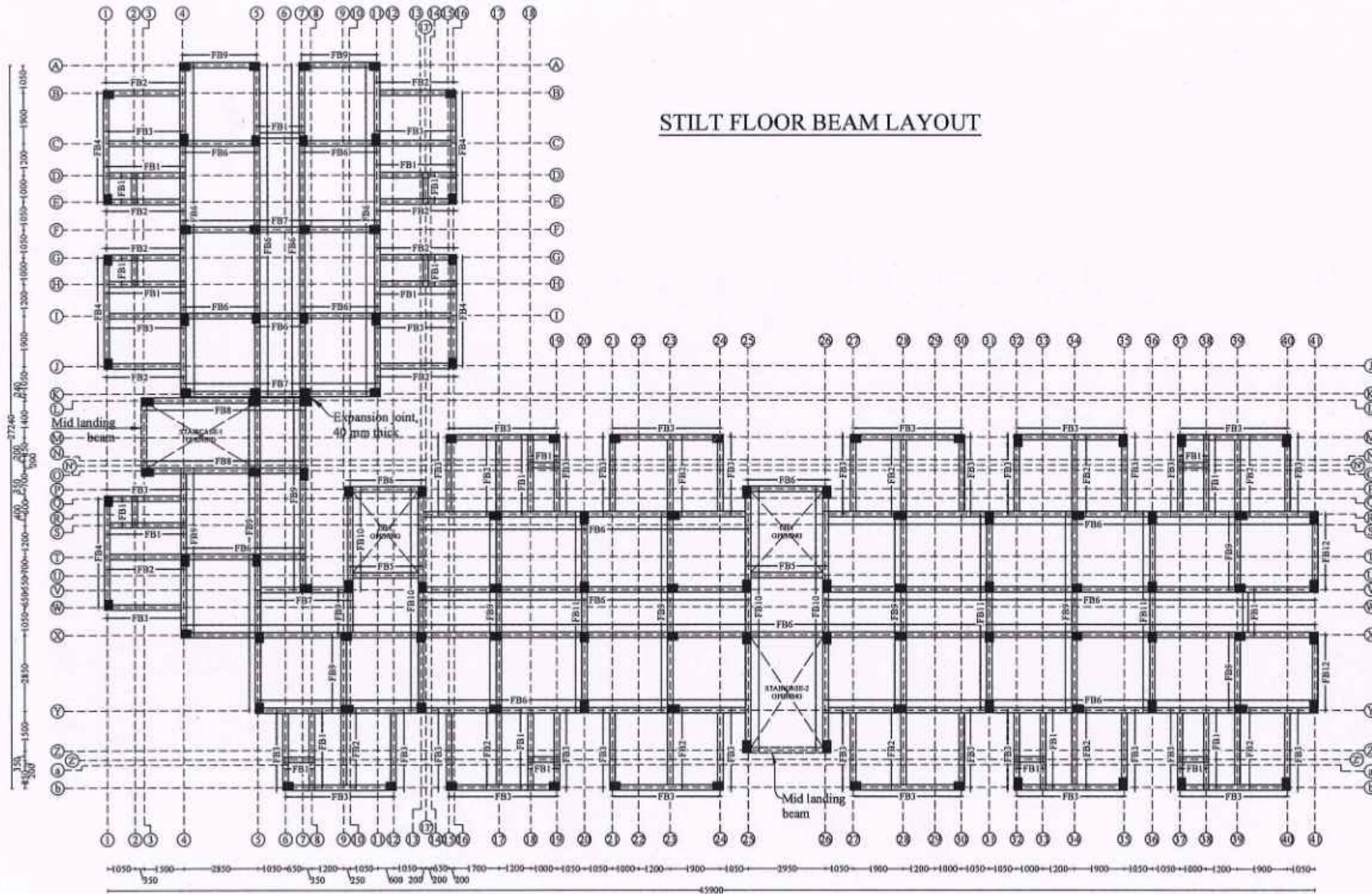
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13/5/2024
EXECUTIVE ENGINEER (A/c)

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



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



STILT FLOOR BEAM LAYOUT

NOTE :

- All the dimensions are in mm unless otherwise noted.
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- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
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 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/ITT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/09.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Sd./xxx 14.08.2024.
Chief Engineer - I

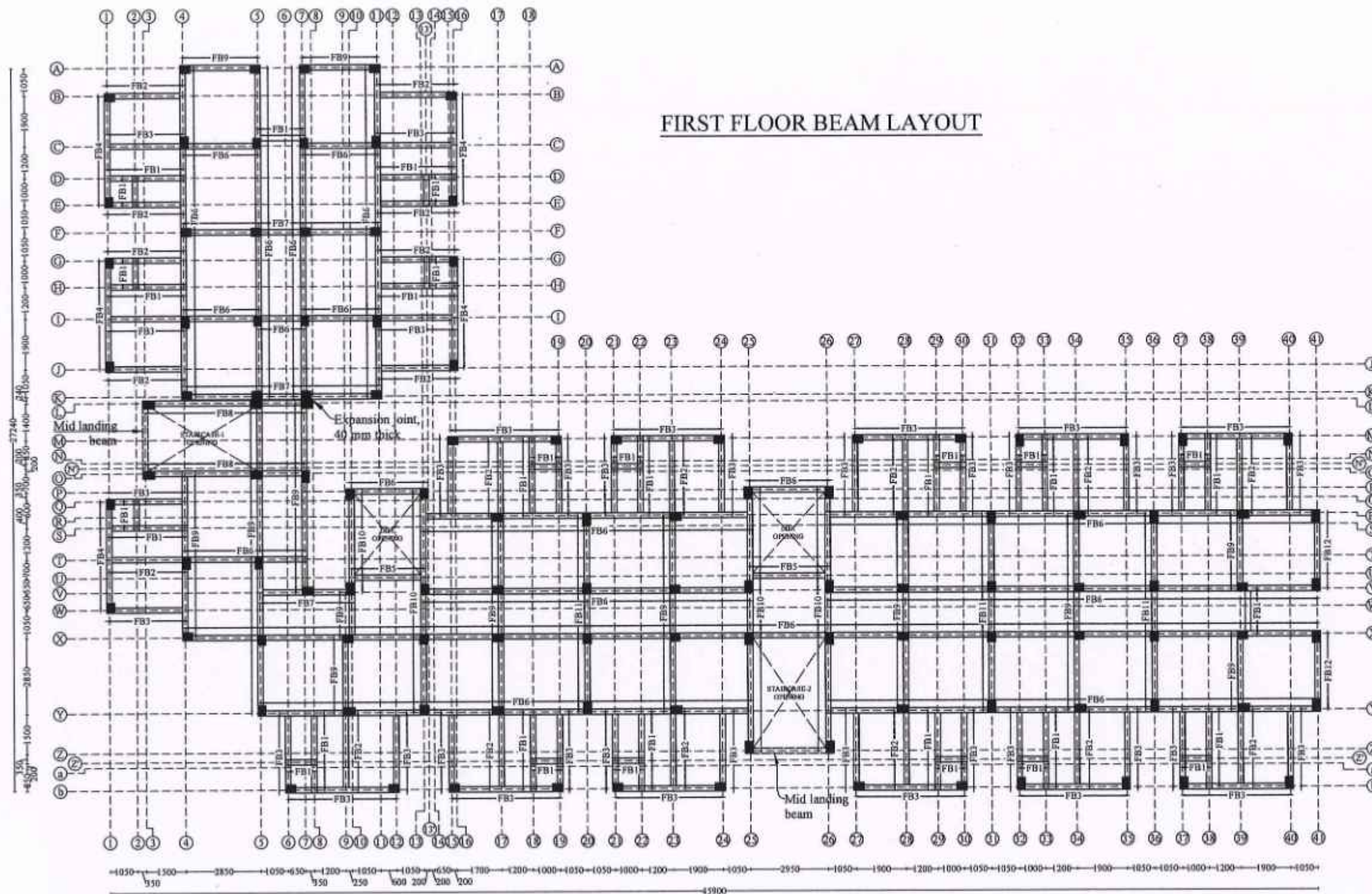


STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI, CHENNAI - 600 005.

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19/8/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

19/8/2024



FIRST FLOOR BEAM LAYOUT

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
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- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
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 - Columns - 40 mm
 - Floor and roof beam - 30 mm
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- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FIRST FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/10

REVISION NO.:

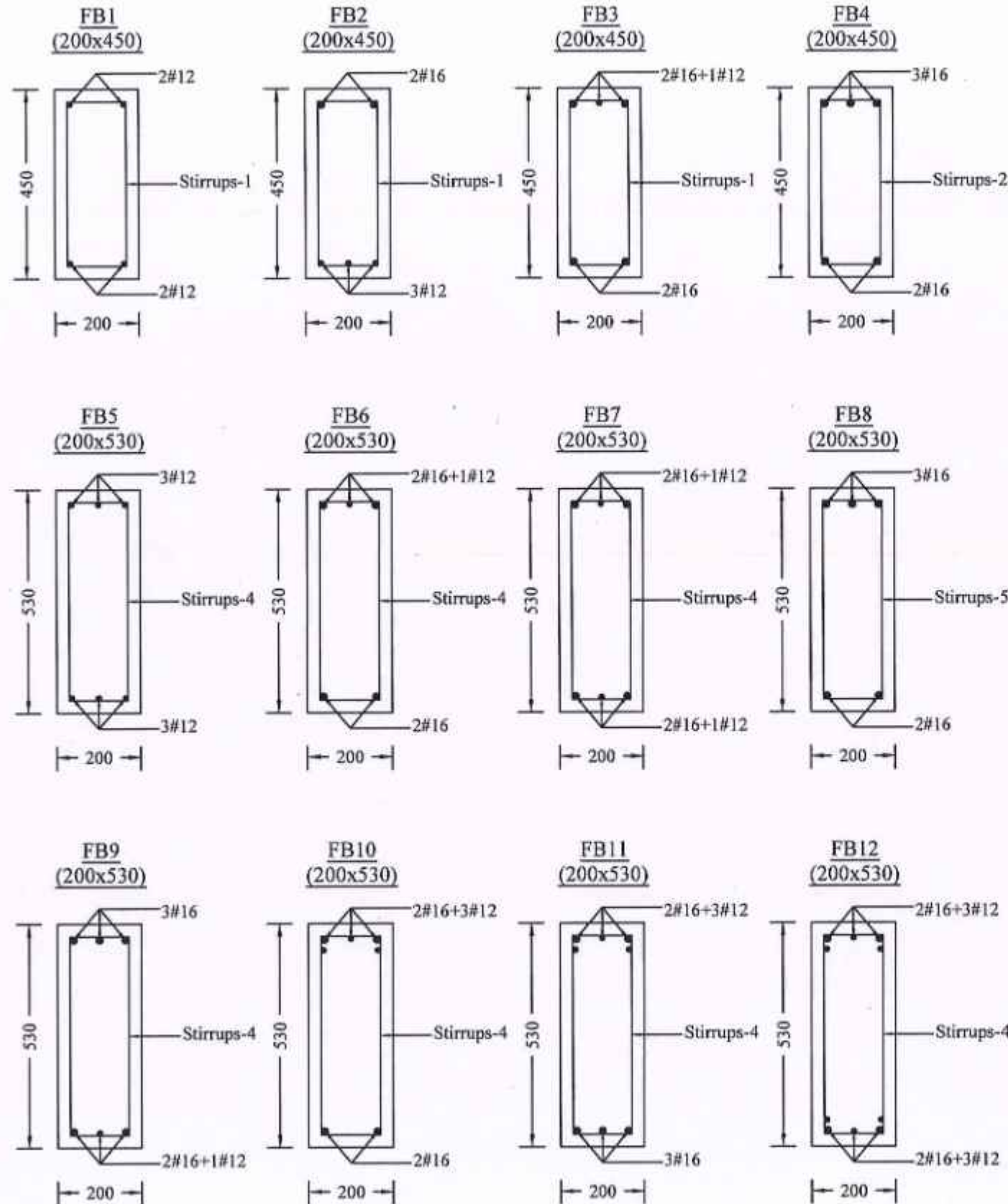
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North 1
Sd,xxxx 14.08.2024. Chief Engineer - I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

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19/8/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

19/8/2024

STILT FLOOR & FIRST FLOOR BEAM DETAILS



NOTE:

- All the dimensions are in mm unless otherwise noted.
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- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beams - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 stonce for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc, unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT FLOOR & FIRST FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/11.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd./xxx 14.08.2024. Chief Engineer - I	

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

NOTE:

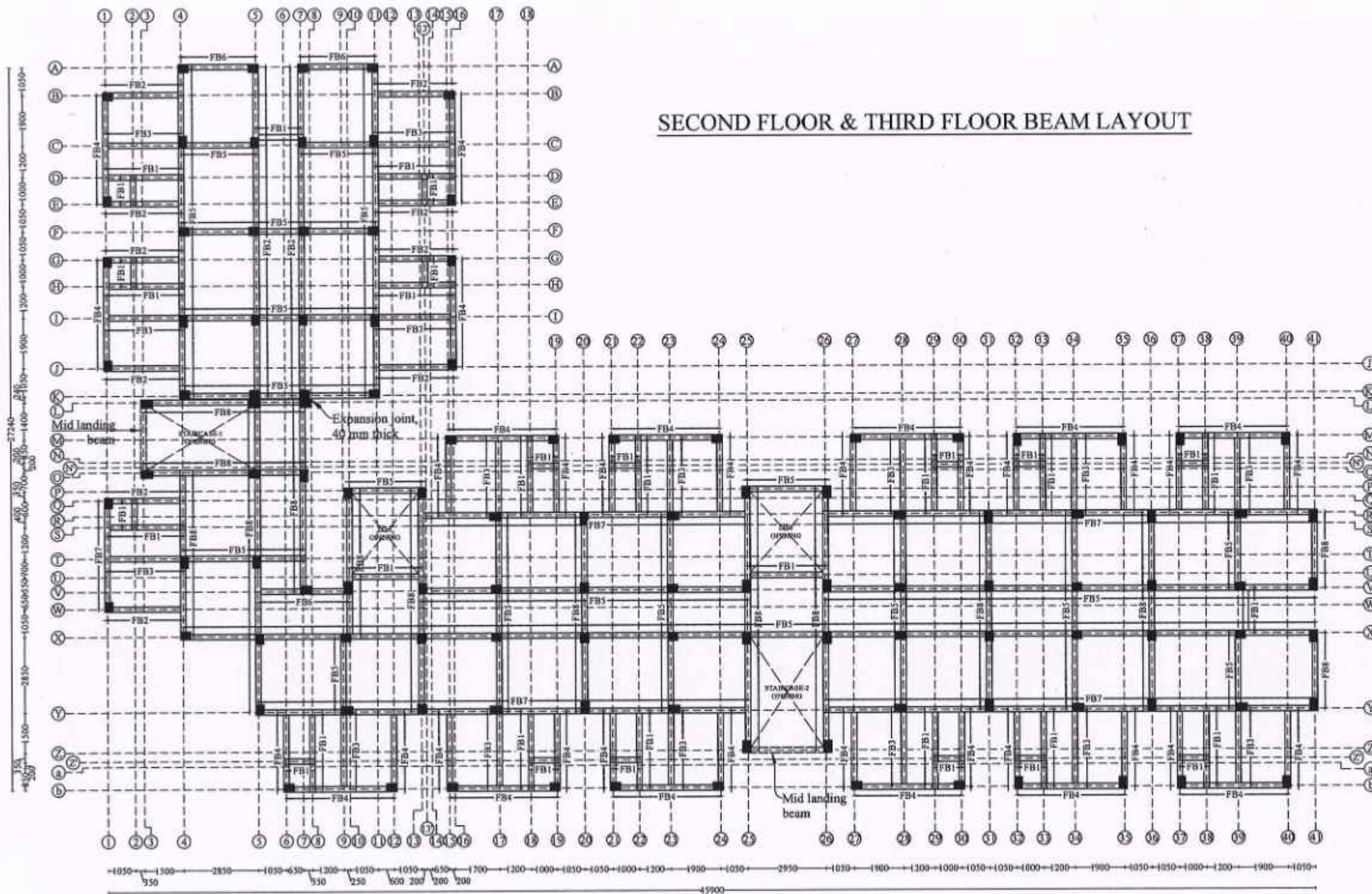
- Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-3 - 2L#8mm Stirrups @ 75mm c/c for 1100 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-4 - 2L#10mm Stirrups @ 75mm c/c for 1100 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-5 - 2L#10mm Stirrups @ 100mm c/c for 1100 mm length on all side near beam column junction and the rest at 150mm c/c.
- Beam Depth is inclusive of slab thickness.

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EXECUTIVE ENGINEER (A/c)

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

1000
19/08/24



SECOND FLOOR & THIRD FLOOR BEAM LAYOUT

Note:
For Second & Third floor beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/13.

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EXECUTIVE ENGINEER (A/C)

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

19/08/24

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Columns - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut list to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai, Job. No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.-SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR & THIRD FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/12.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

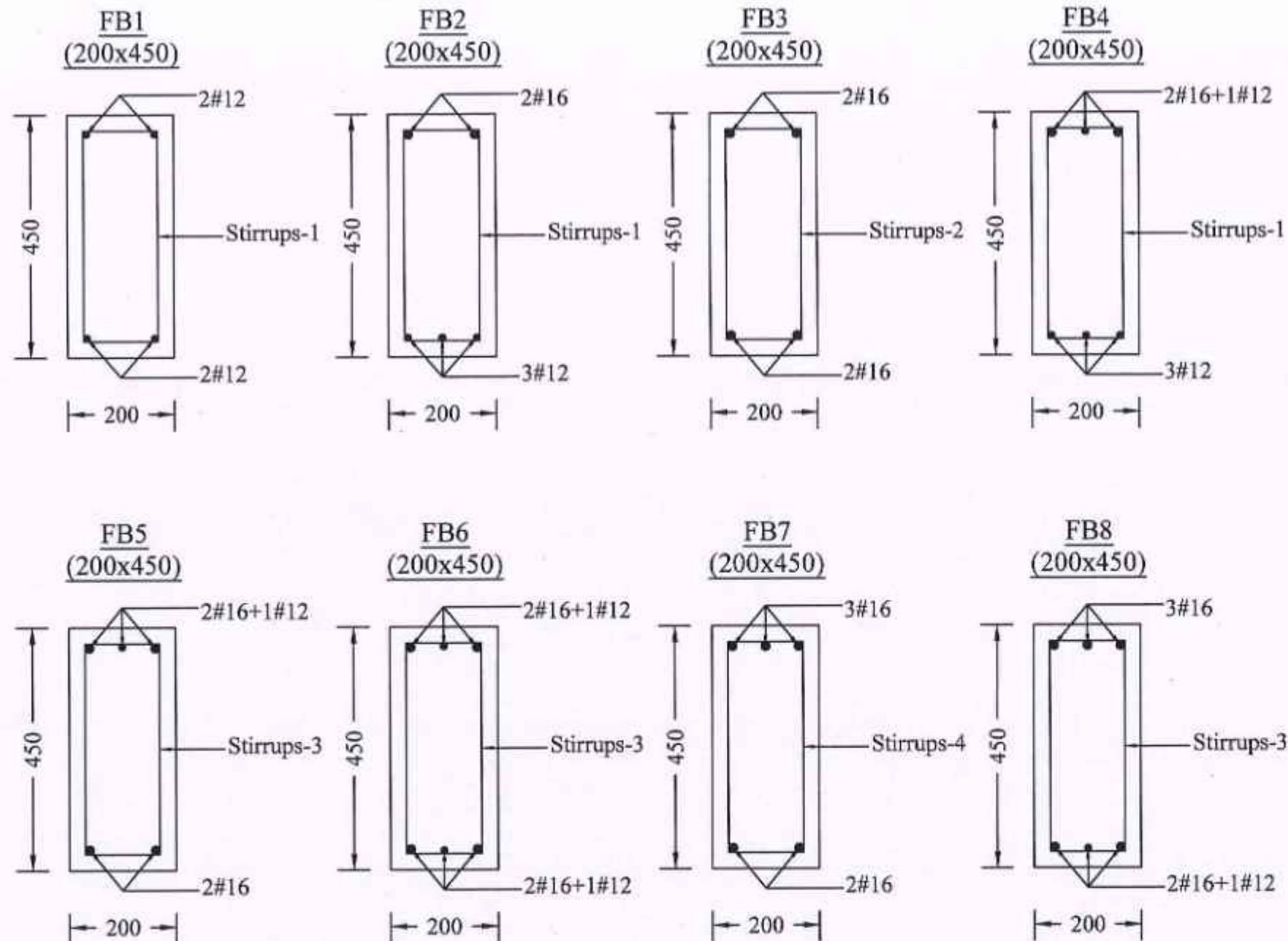
SE - North I

Sd./xxx 14.08.2024.
Chief Engineer - I



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

SECOND FLOOR & THIRD FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 3) Stirrups-3 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 4) Stirrups-4 - 2L#10mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 5) Beam Depth is inclusive of slab thickness.

NOTE :

1. All the dimensions are in mm unless otherwise noted.
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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be confirmed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR & THIRD FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/13.

REVISION NO.:

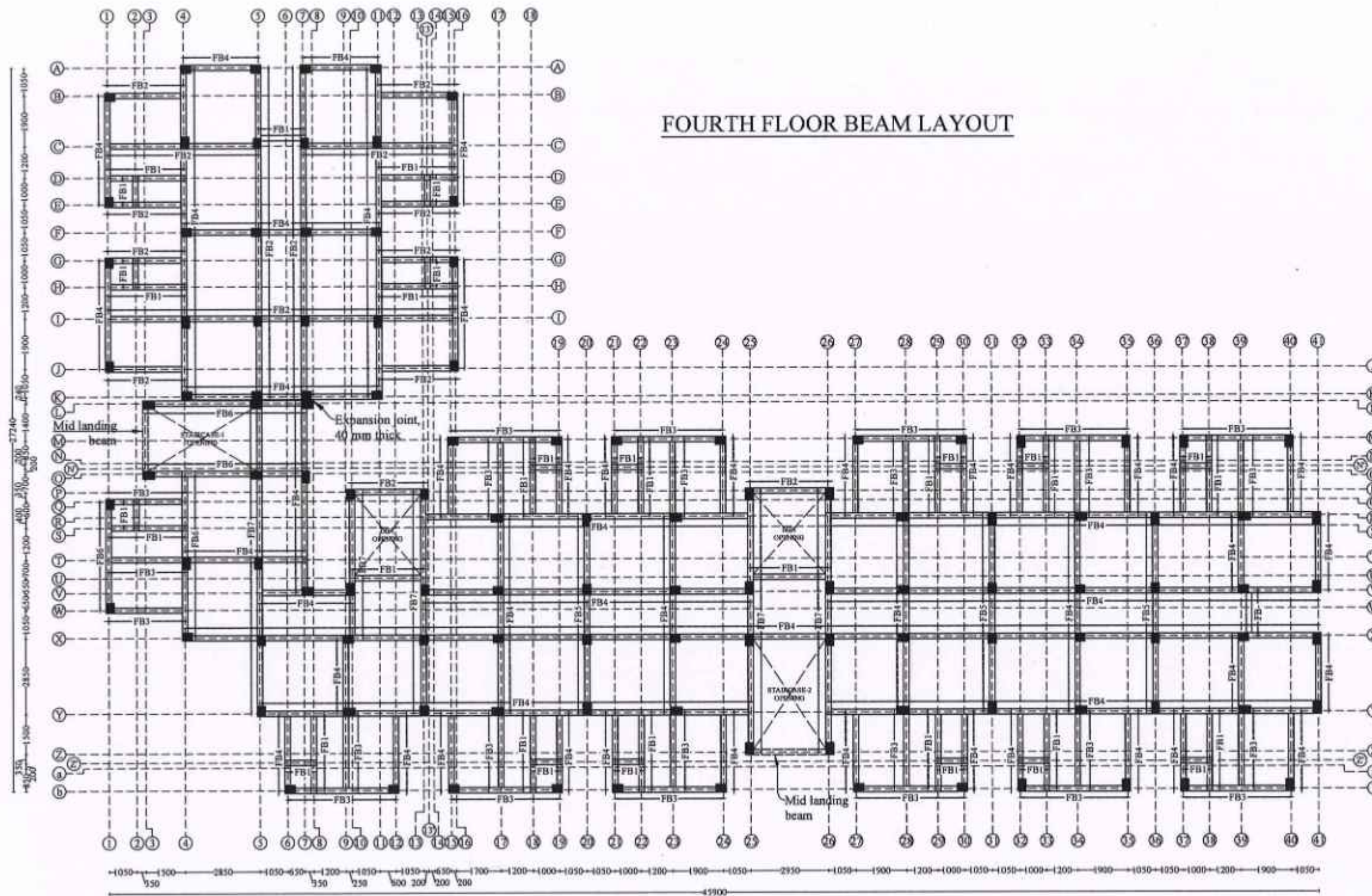
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
5d.xxxx 14.08.2024. Chief Engineer - I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

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EXECUTIVE ENGINEER (A/C)

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

19/08/24



FOURTH FLOOR BEAM LAYOUT

NOTE :

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 30 Ø.
- Anchorage of column bars into the footings shall not be less than 30 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/14.

REVISION NO.:

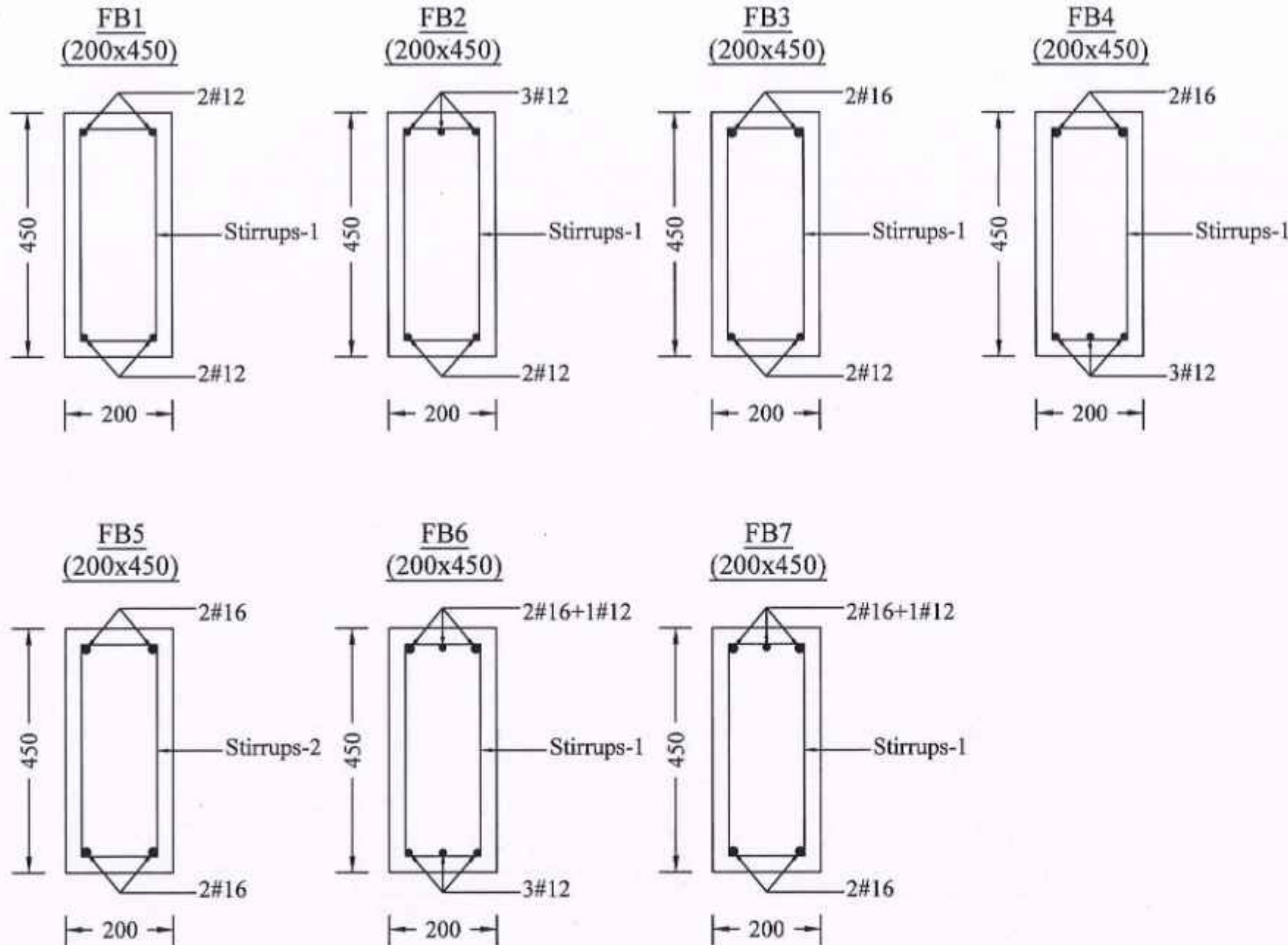
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd./xxxx 14.08.2024 Chief Engineer - I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

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17/8/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

19/08/24

FOURTH FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 3) Beam Depth is inclusive of slab thickness.

NOTE :

1. All the dimensions are in mm unless otherwise noted.
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 Fe500D 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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be confirmed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc, unless otherwise noted. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/15.

REVISION NO.:

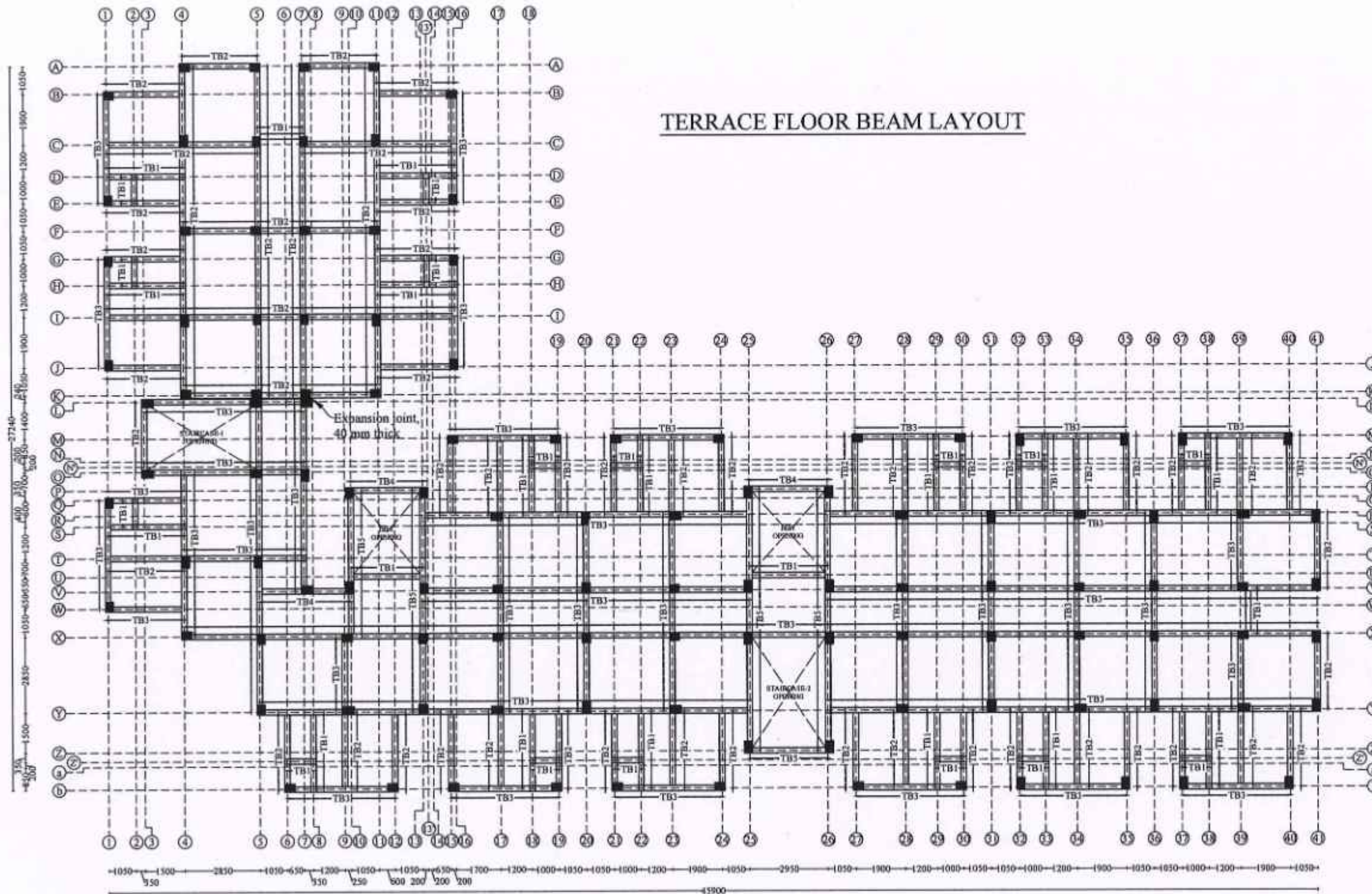
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd./xxxx 14.08.2024. Chief Engineer - I	

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

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19/08/2024
EXECUTIVE ENGINEER (CA/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

10000
19/08/24



TERRACE FLOOR BEAM LAYOUT

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500 grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/16.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Sd. 14.08.2024
Chief Engineer - I



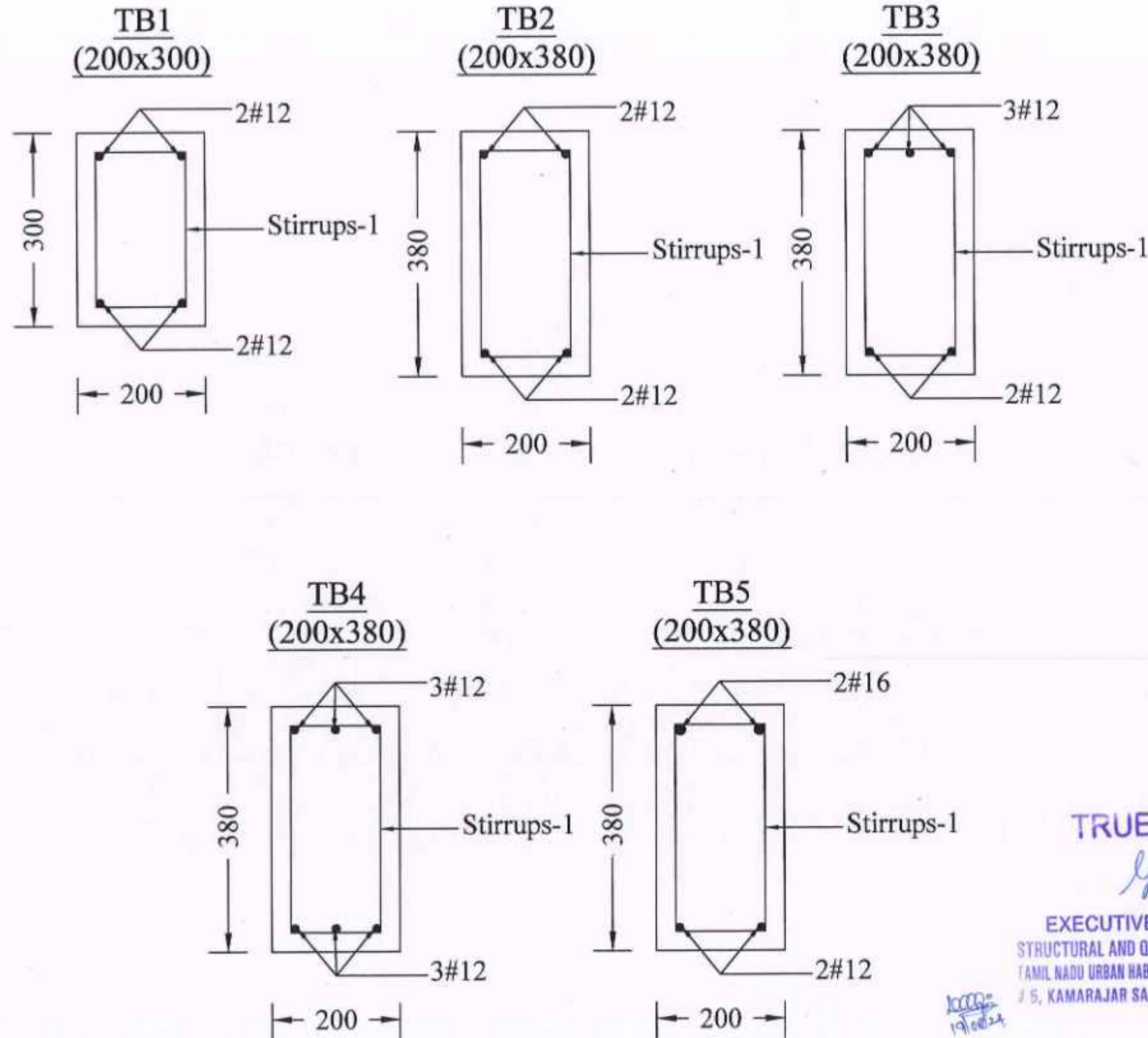
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TRUE COPY

19/08/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

19/08/24

TERRACE FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 800 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Beam Depth is inclusive of slab thickness.

NOTE :

1. All the dimensions are in mm unless otherwise noted.
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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the SE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be confirmed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/17.

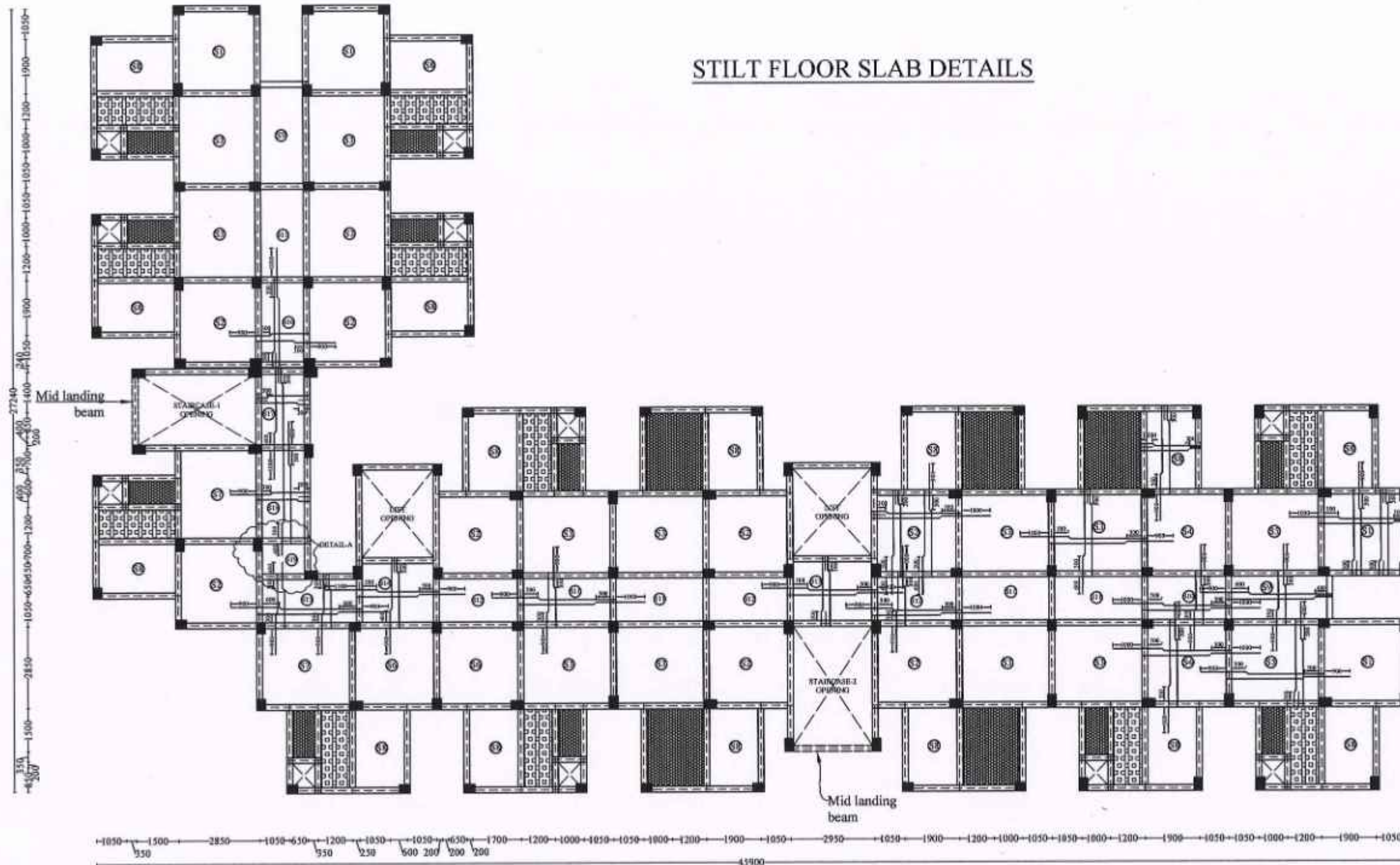
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd. xxxxx 14.08.2024. Chief Engineer - I	

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

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19/8/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI, CHENNAI-600 005.



NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/18.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Sd./xxx 14.08.2024.
Chief Engineer - I



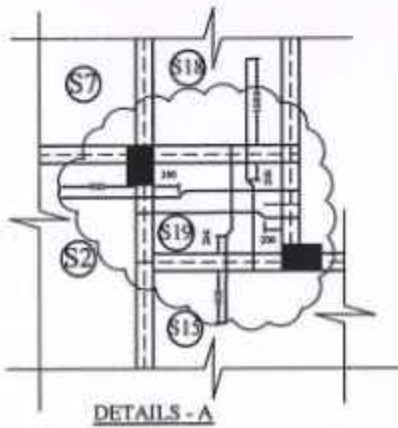
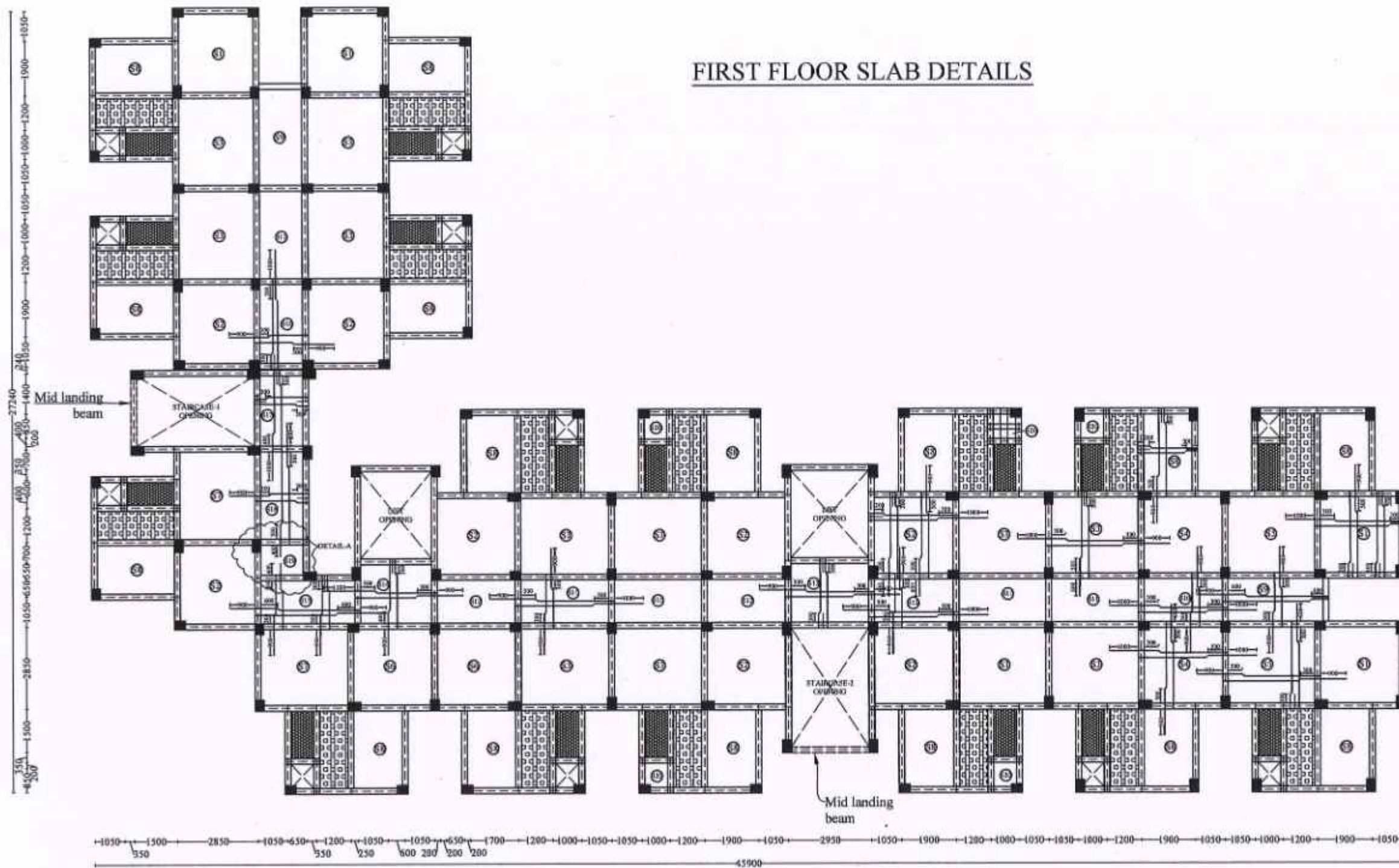
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

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19/8/2024
EXECUTIVE ENGINEER (A/C)

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

19/08/24



 SLAB SUNKEN BY 200mm
  SLAB SUNKEN BY 325mm

1.SLAB 125mm THICK
 2.ALL SLAB REINFORCEMENT ARE #8@180mm c/c

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19/08/2024
 EXECUTIVE ENGINEER (A/C)
 STRUCTURAL AND QUALITY CONTROL CELL
 TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
 # 5, KAMARAJAR SALAI, CHENNAI-600 005.

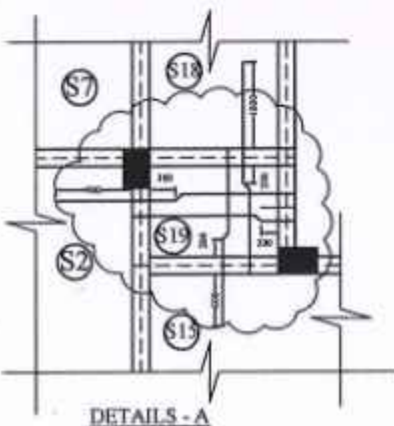
- NOTE:
1. All the Dimensions are in mm.
 2. M30 Concrete and Fe550D grade steel shall be adopted.
 3. Slab Thickness is 125mm.
 4. Clear cover to slab is 25mm.
 5. Crank point distances are as shown.
 6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS	
PROJECT: CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.	
TITLE: FIRST FLOOR SLAB DETAILS.	
TYPE DESIGN NO.: 74/2022 (TYPE - B)	
DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/19.	
REVISION NO.:	
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Dd. NO. 14.08.2024. Chief Engineer - I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

Architectural floor plan of a building, showing a grid system and various rooms. The plan includes dimensions along the top and bottom edges. Key features include:

- STAIRCASE-1 (OPENING)** and **STAIRCASE-2 (OPENING)**
- PORTAL-A**
- Mid landing beam** (indicated on the left side)

The plan shows a complex arrangement of rooms, corridors, and service areas, with dimensions ranging from 1050 to 1850 units.



SLAB SUNKEN BY
200mm

SLAB SUNKEN BY
325mm

- 1.SLAB 125mm THICK
2.ALL SLAB REINFORCEMENT ARE #8@180mm c/c

TRUE COPY

EXECUTIVE ENGINEER CA

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

100000
19 108 24

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR TO FOURTH FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/20.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Sd./xxx 14.08.2024.
Chief Engineer - I

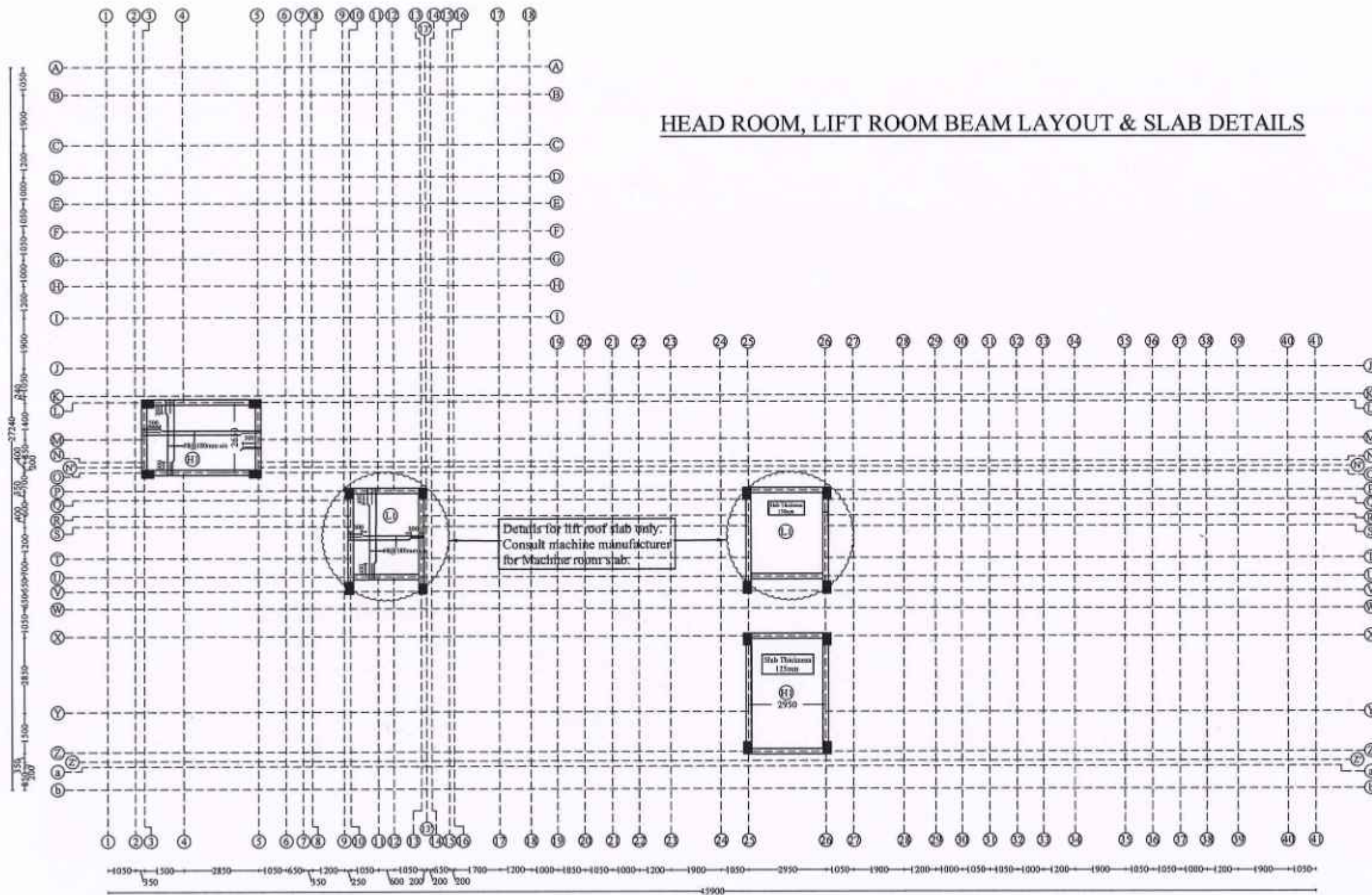


STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

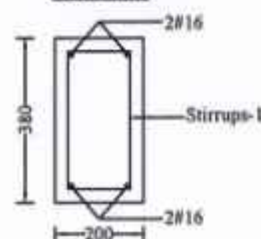
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19/08/20

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



ALL BEAMS
(200x380)



NOTE:

Stirrups-1 : 2 Legged # 8 mm stirrups at 100 mm c/c for 900 mm length on all sides near Beam - Column junctions and the rest at 150 mm c/c.

HEAD ROOM, LIFT ROOM BEAM LAYOUT & SLAB DETAILS

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
HEAD ROOM, LIFT ROOM BEAM LAYOUT & SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/22.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Sd./xxx 14.08.2024.
Chief Engineer - I



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

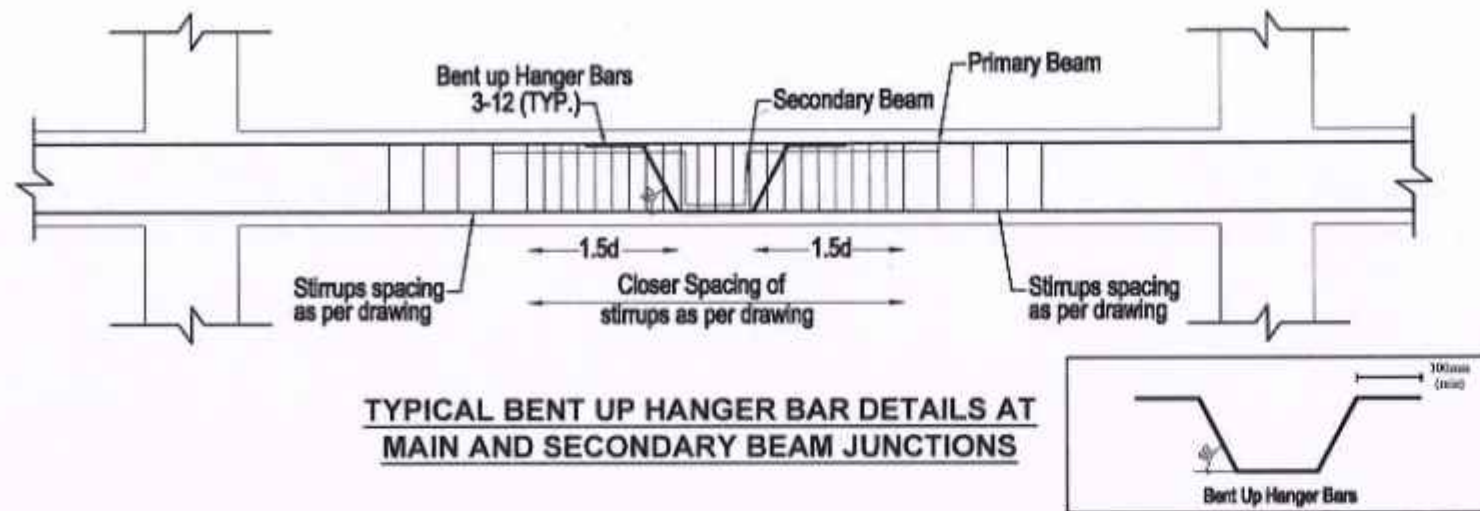
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EXECUTIVE ENGINEER

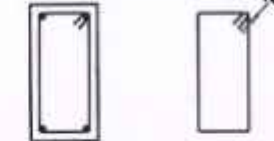
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

19/08/24

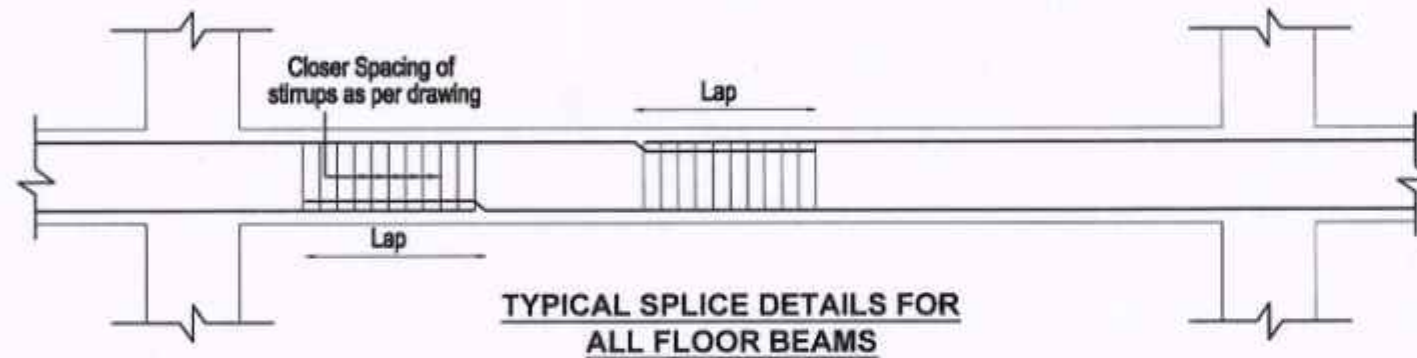
TYPICAL DETAILS FOR ALL THE FLOOR BEAMS



Hooks must be 135 degree

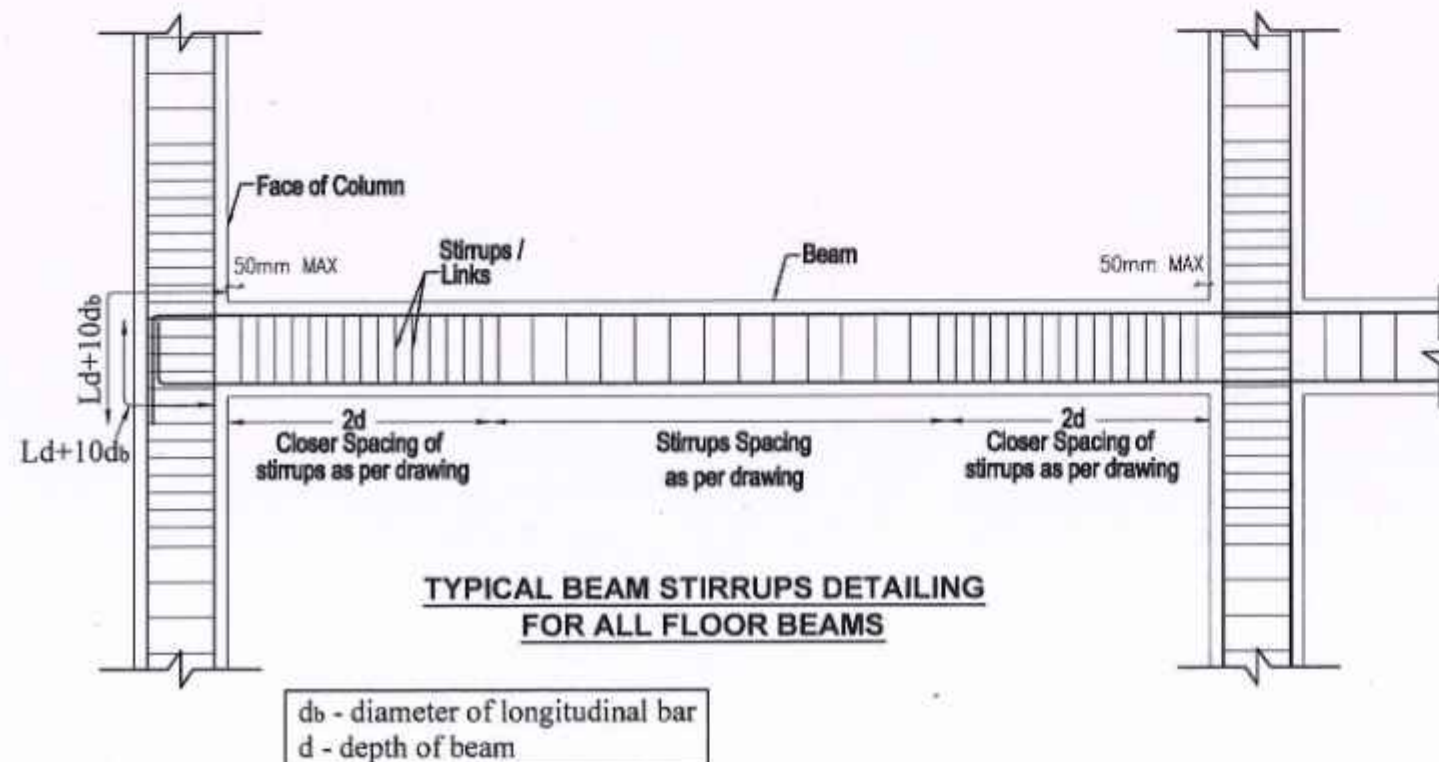


TYPICAL DETAILS OF TRANSVERSE REINFORCEMENT HOOKS IN BEAM.



Grade of Concrete	Development length of bars in Tension		Development length of bars in Compression	
	Grade of Steel		Grade of Steel	
	Fe 500	Fe 550	Fe 500	Fe 550
M20	57Ø	63Ø	46Ø	50Ø
M25	49Ø	54Ø	39Ø	43Ø
M30	46Ø	50Ø	37Ø	40Ø
M35	40Ø	44Ø	32Ø	36Ø
M40	36Ø	40Ø	29Ø	32Ø

Ø - Diameter of bar.



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17/8/2024
EXECUTIVE ENGINEER
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TYPICAL DETAILS FOR ALL THE FLOOR BEAMS

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/THIRUVOTTIYUR/GEN/01.

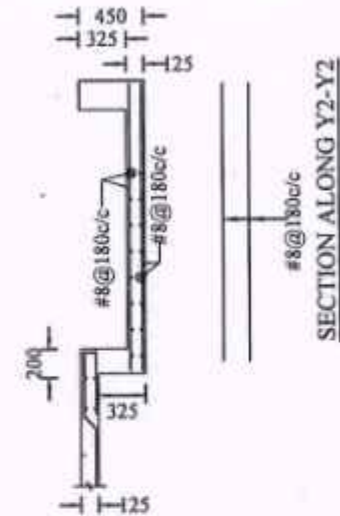
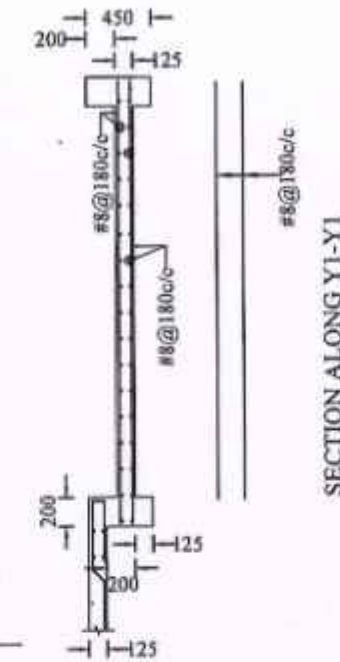
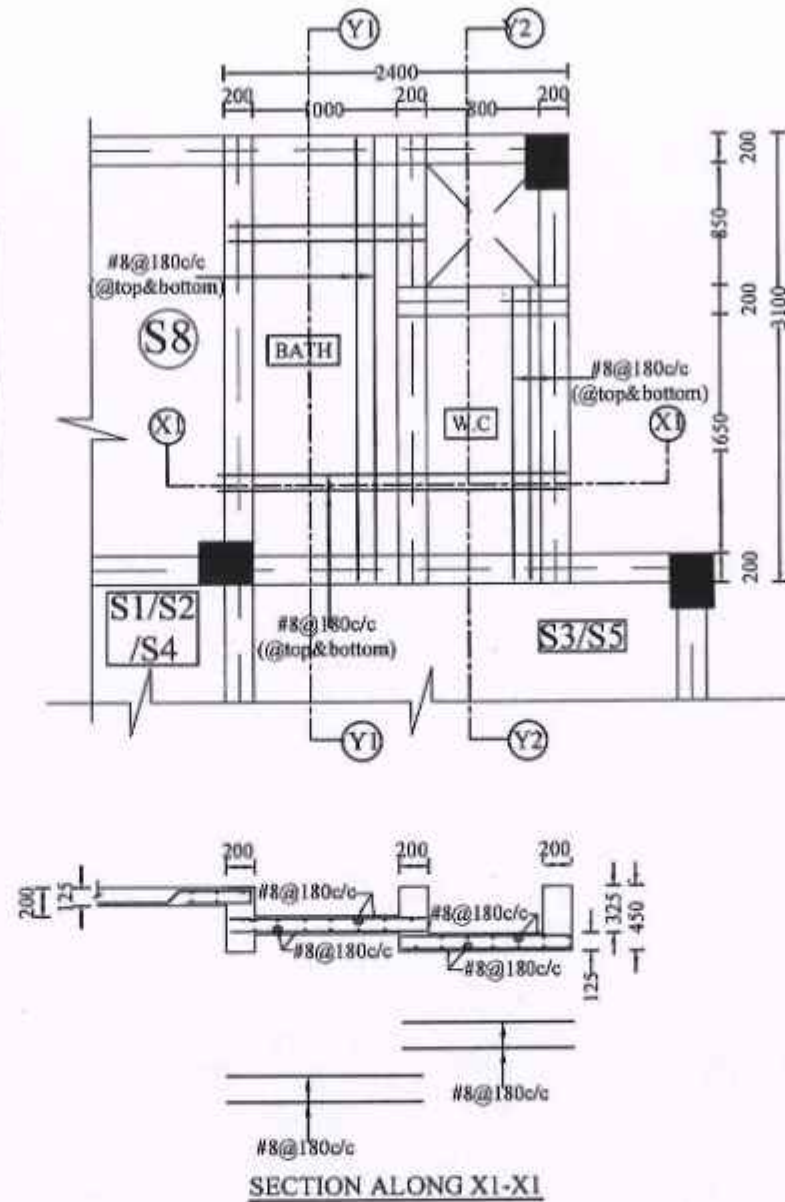
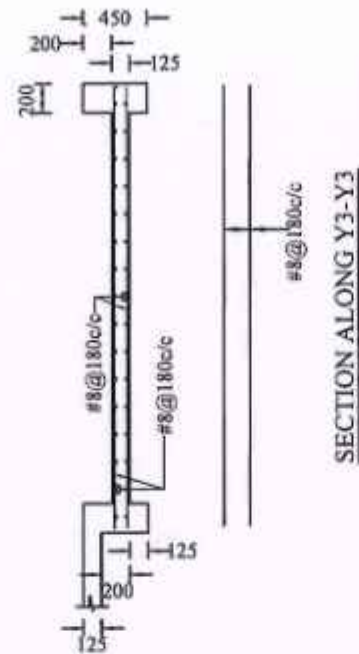
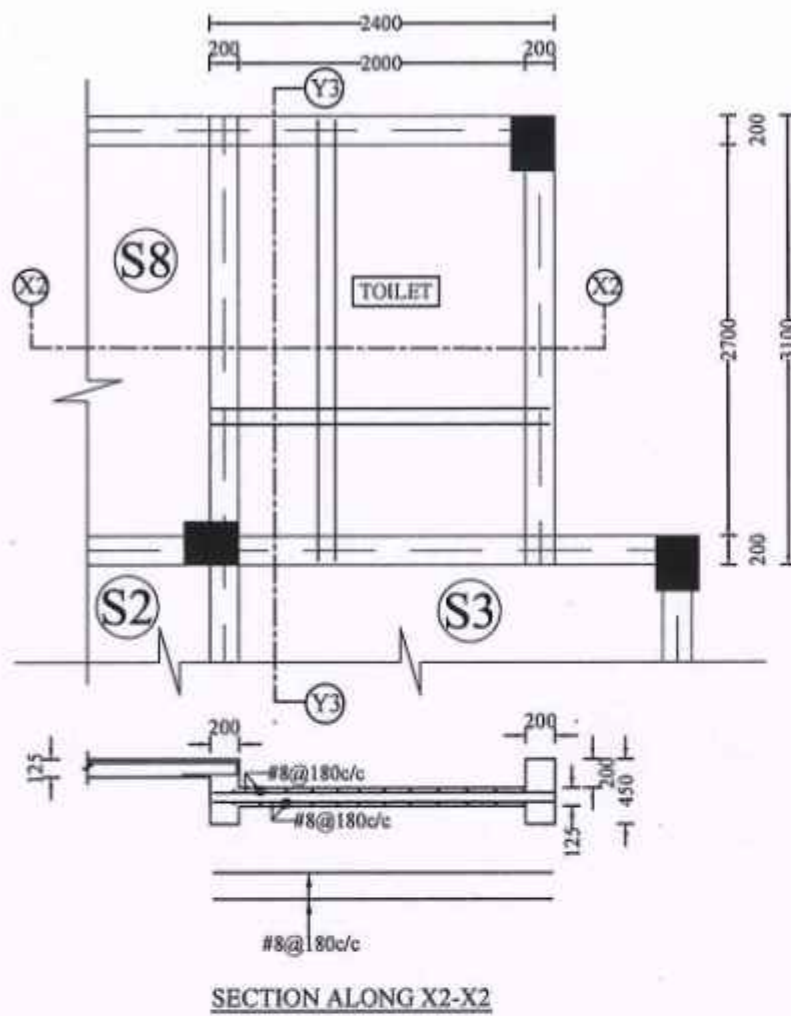
REVISION NO.:

Assistant Engineer	Asst. Exn. Engineer
Executive Engineer	SE - North

14.08.2024
Chief Engineer - I

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

SUNKEN SLAB DETAILS-TYPICAL



NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe500D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

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

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SUNKEN SLAB DETAILS-TYPICAL.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/THIRUVOTTIYUR/GEN/02.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

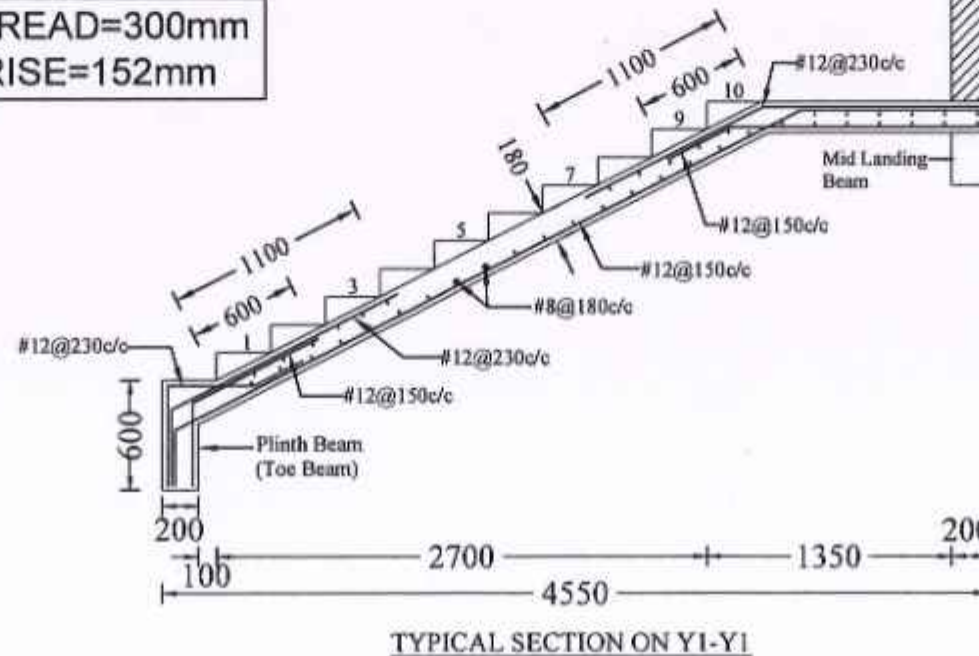
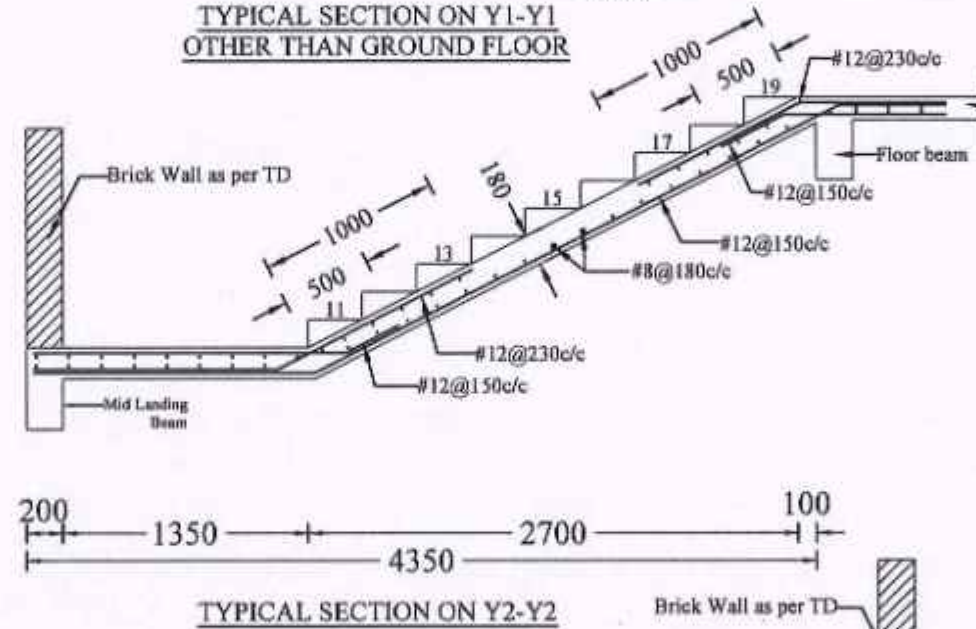
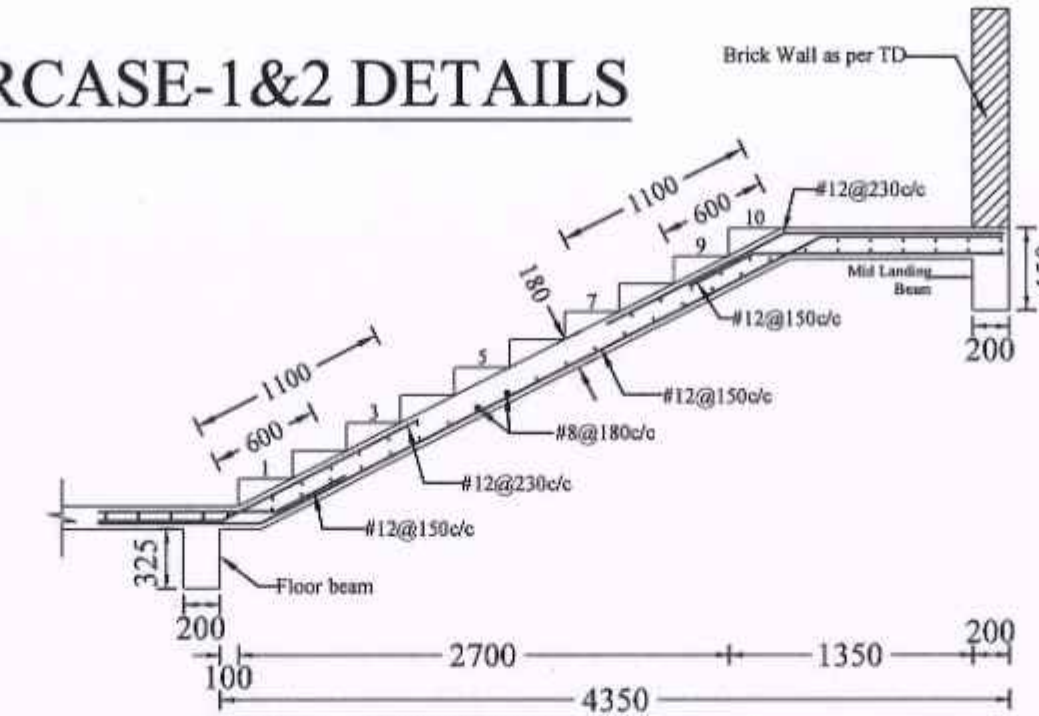
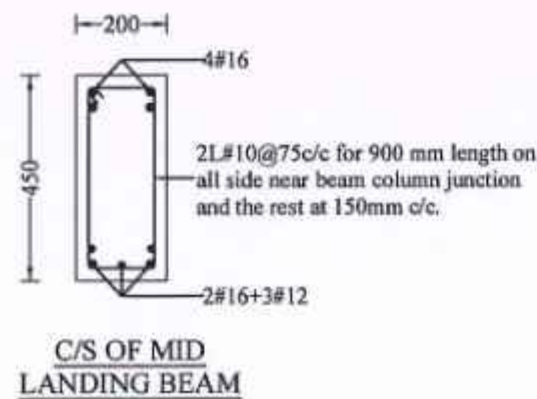
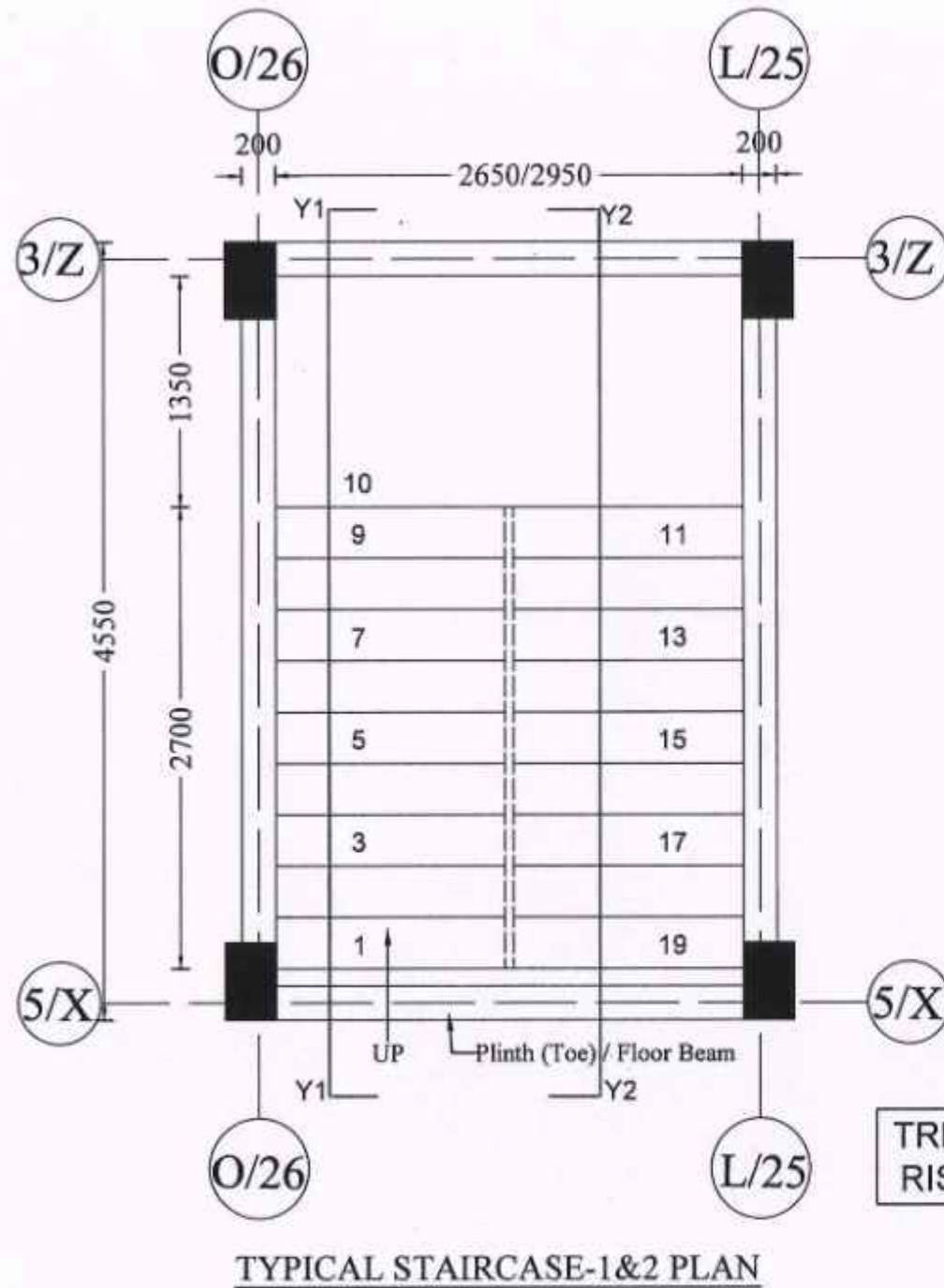
SE - North

Sd. 14.08.2024
Chief Engineer - I



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

TYPICAL STAIRCASE-1&2 DETAILS



TREAD=300mm
RISE=152mm

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Waist slab thickness 180mm
4. Clear cover to waist slab is 25mm.
5. Steps over the waist slab are considered made of concrete in analysis.

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19/8/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TYPICAL STAIRCASE-1&2 DETAILS

TYPE DESIGN NO.:

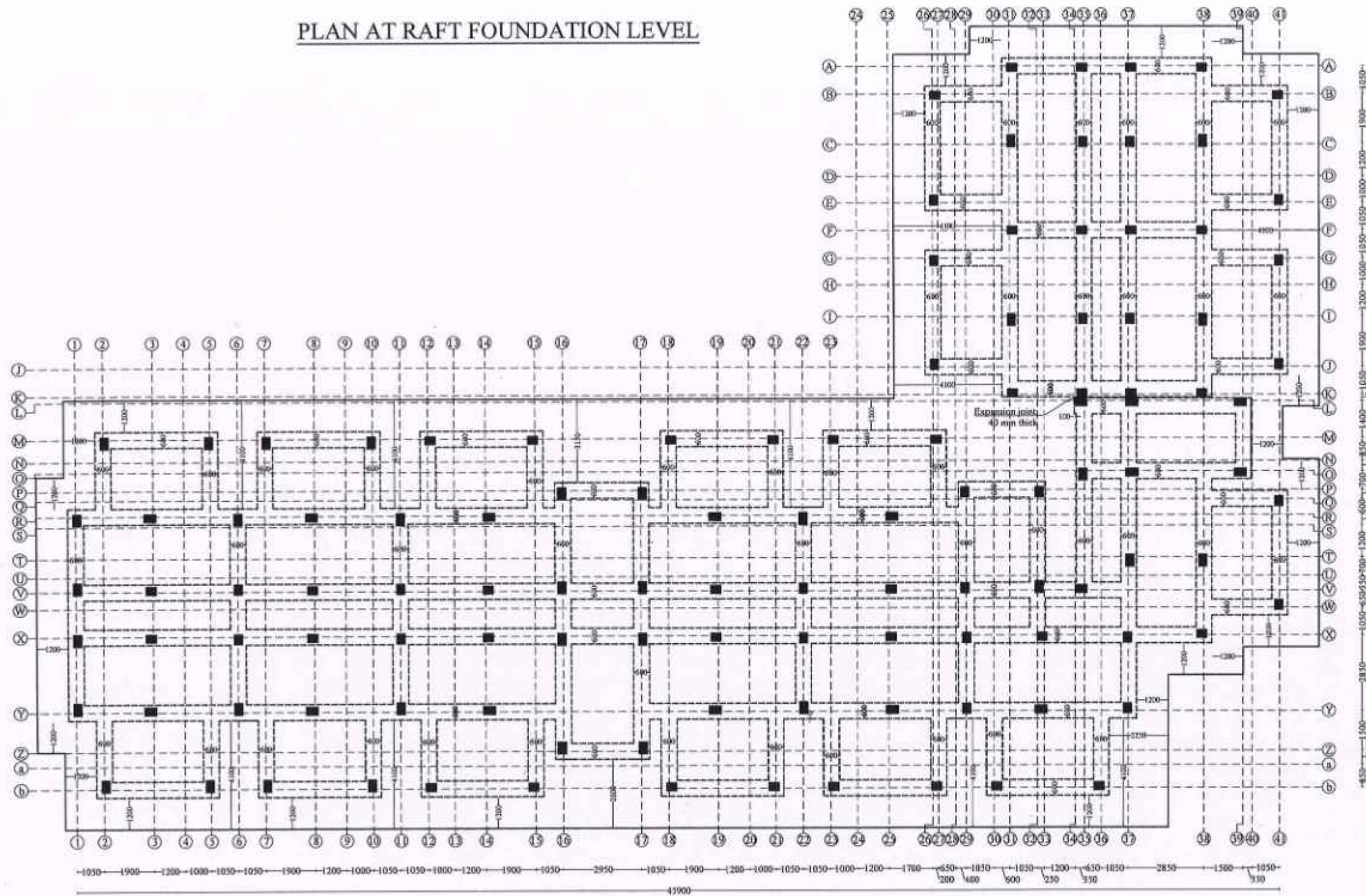
DWG.NO.: TNUHDB/THIRUVOTTIYUR/GEN/03.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd. XXXX 14.08.2024. Chief Engineer - I	

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

PLAN AT RAFT FOUNDATION LEVEL



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30/05/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

10000
30/05/24

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt: 09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt: 31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
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- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.: SM&FE 217/CONSULTANCY/2020, Dt: 27.02.2022 and Job No.: SM&FE 217(a)/CONSULTANCY/2022, Dt: 15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
PLAN AT FOUNDATION LEVEL.

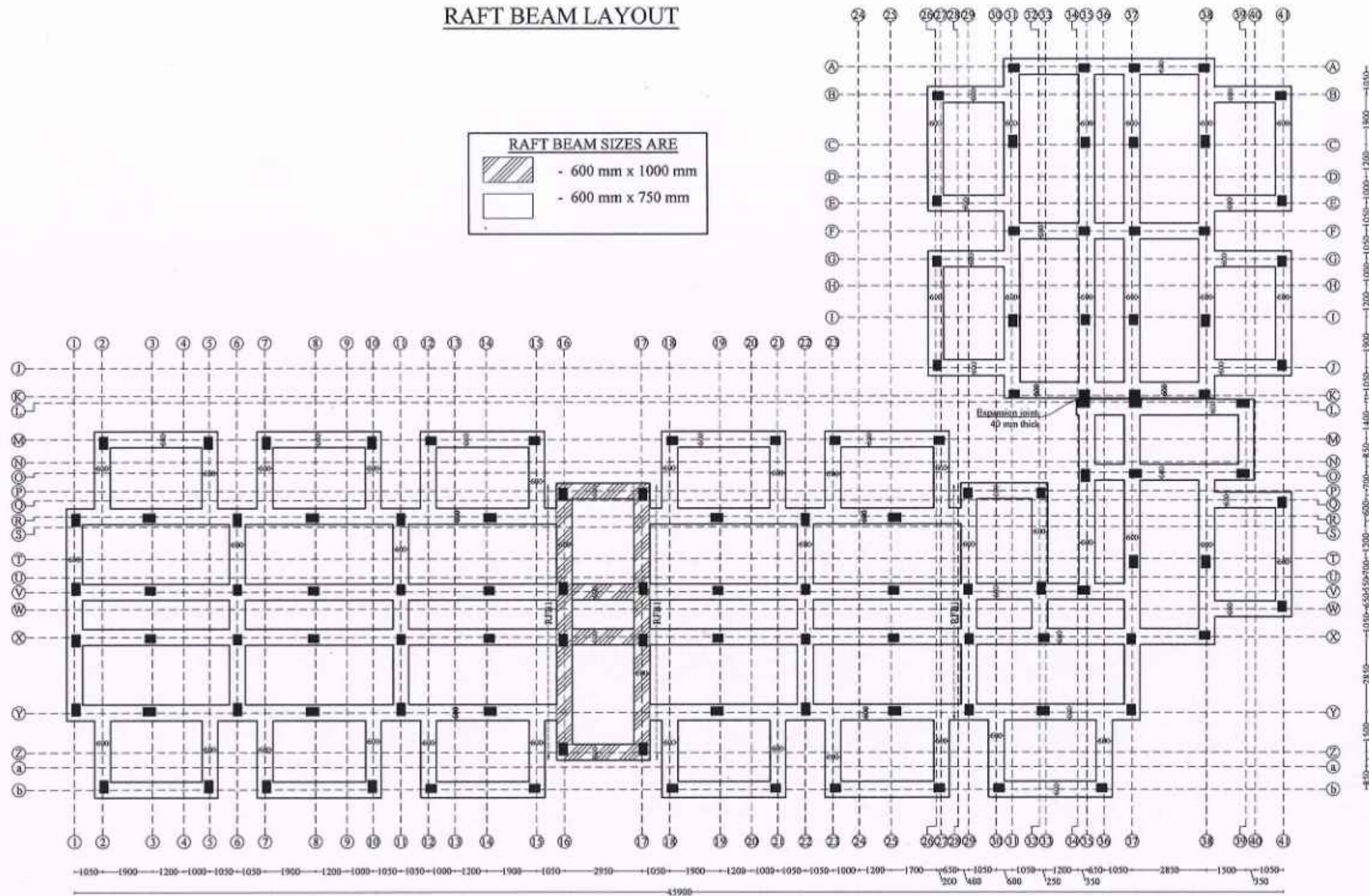
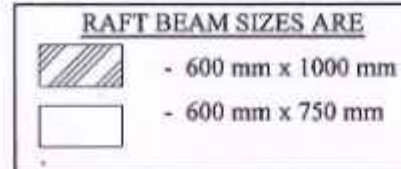
TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG. NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/01.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	Sd. xxxxx, SE - North I
Sd. xxxxx 29.05.2024, Chief Engineer- I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO. 5, KAMARAJAR SALAI CHENNAI - 600 005.	

RAFT BEAM LAYOUT



NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No. SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No. SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
RAFT BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/02.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	Sd. xxxxx. SE - North I
Sd. xxxxx 29.05.2024. Chief Engineer- I	

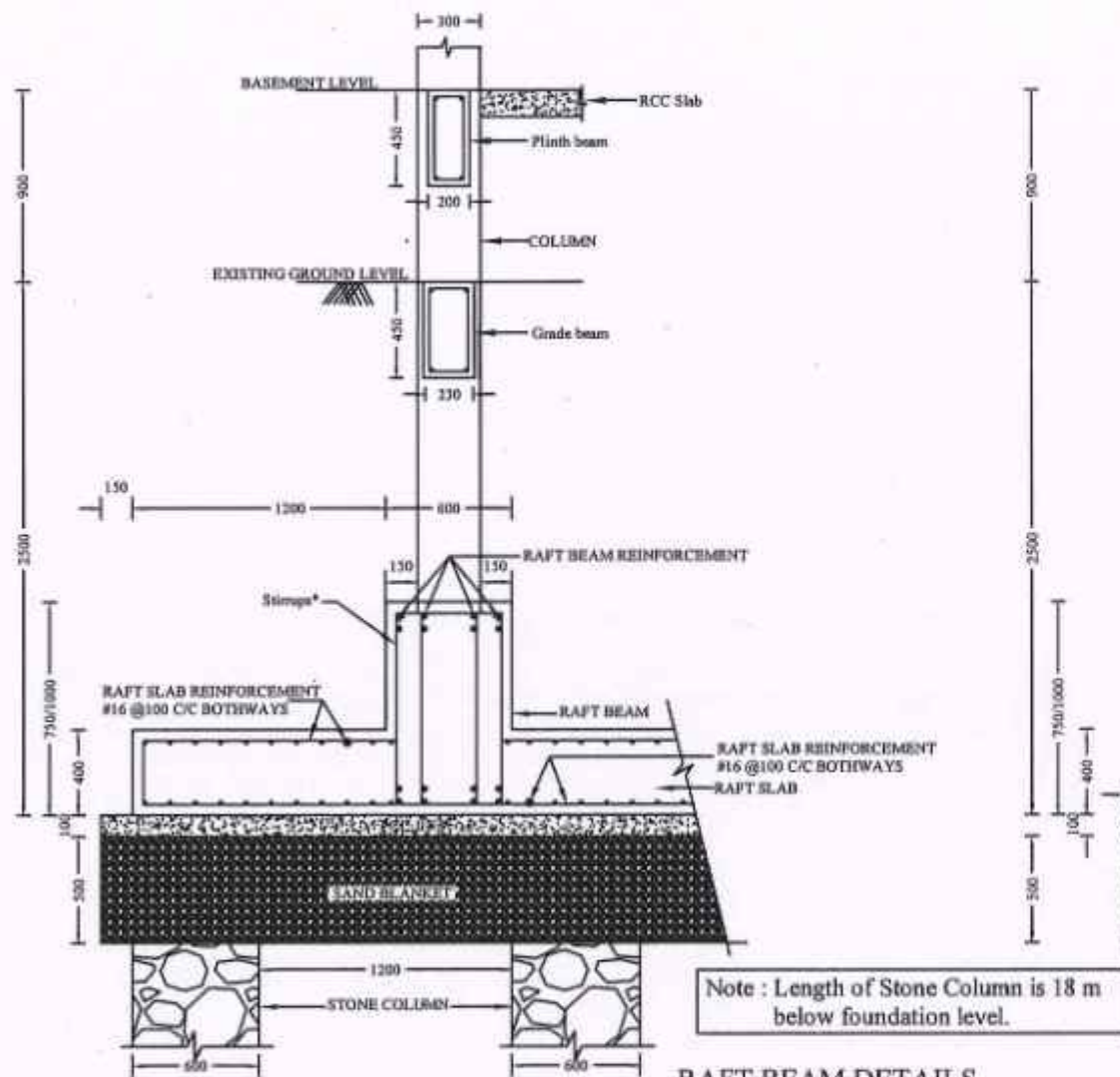
 **STRUCTURAL & QUALITY CONTROL CELL**
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TRUE COPY

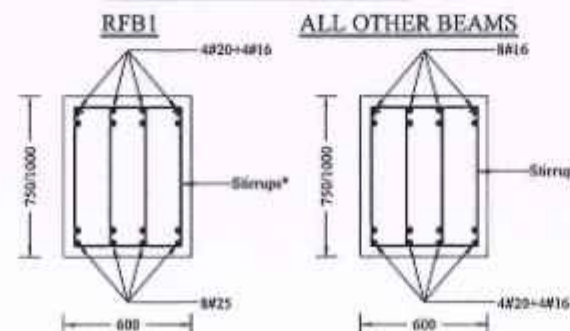
30/5/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

30/05/24

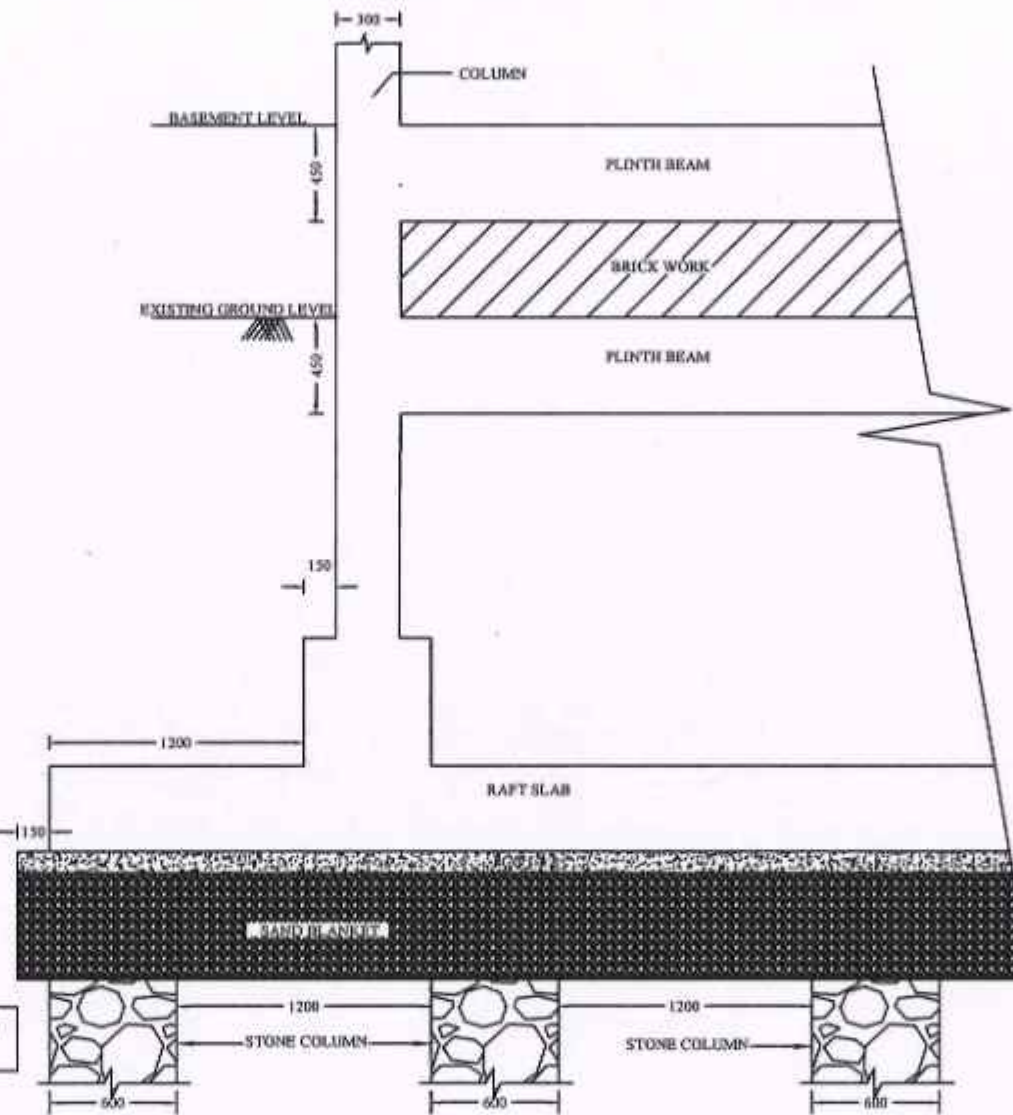
TYPICAL CROSS SECTION OF RAFT BEAM WITH SLAB DETAILS.



RAFT BEAM DETAILS



TYPICAL CROSS SECTIONAL ELEVATION OF RAFT BEAM WITH SLAB DETAILS.



NOTE:
1. For beam 750 mm depth - Stirrups* -> 4 Legged # 10 mm stirrups at 100 mm c/c for 1.5 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.
2. For beam 1000 mm depth - Stirrups* -> 4 Legged # 10 mm stirrups at 100 mm c/c for 2 metre length on all sides near beam-column junctions and the rest at 150 mm c/c.

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30/5/2024
EXECUTIVE ENGINEER (A/O)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TYPICAL CROSS SECTION & CROSS SECTIONAL
ELEVATION OF RAFT BEAM WITH SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/03.

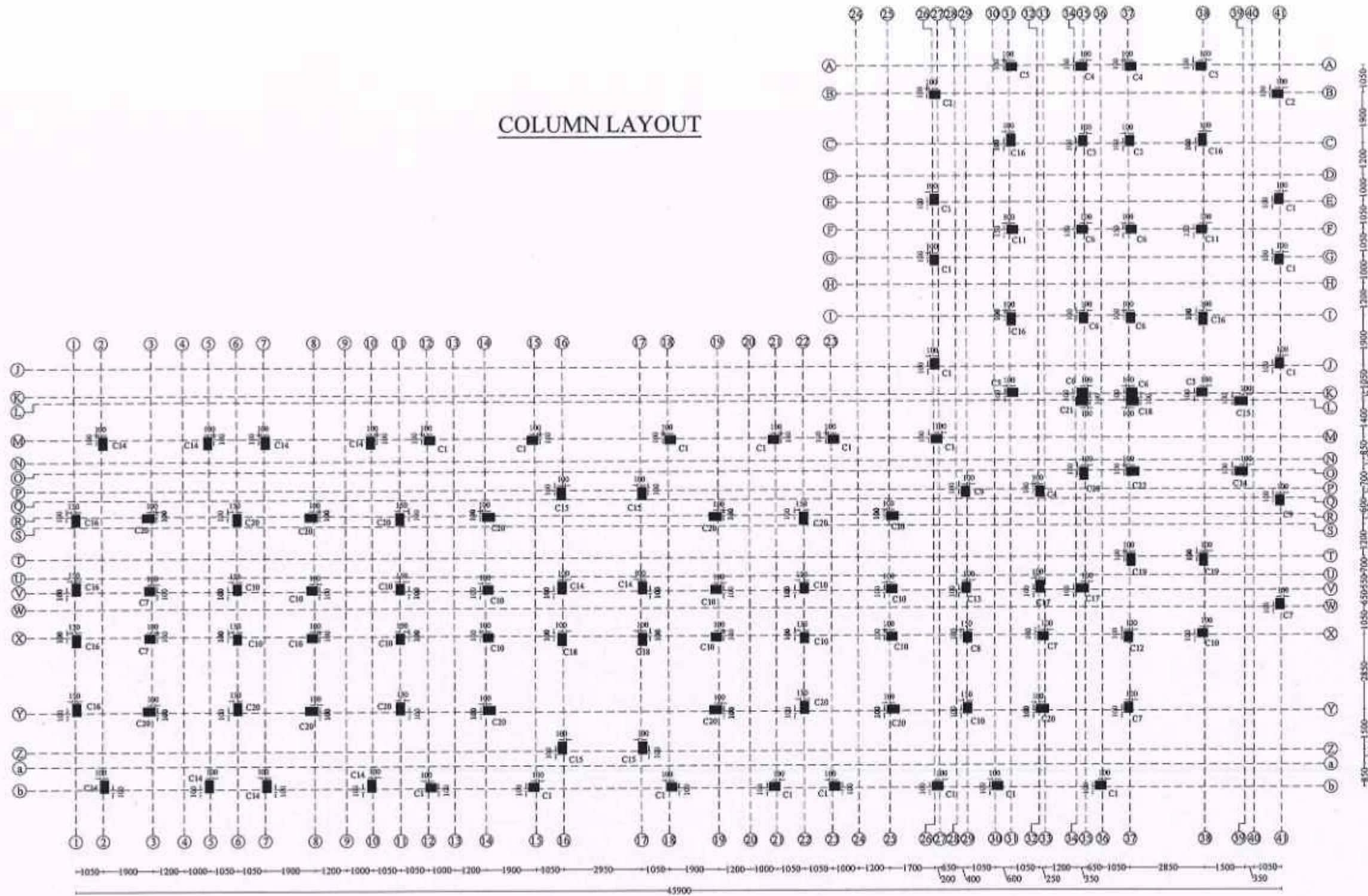
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	Sd.xxxx SE - North I

Sd.xxxx 29.05.2024
Chief Engineer- I

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

COLUMN LAYOUT



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30/5/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Loose
30/5/24

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.-SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
COLUMN LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/04.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd. XXXXX Chief Engineer- I	
STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

SCHEDULE OF COLUMNS - 1

Sl. No.	Column Marking	No of Columns	Size	Upto Second Floor Column Reinforcement Details			Above Second Floor Column Reinforcement Details			Tie Profile
				Column Verticals	Lateral Ties	Cross Section	Column Verticals	Lateral Ties	Cross Section	
1.	C1	20	300 x 380	# 12 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
2.	C2	02	300 x 380	# 16 - 4 Nos. # 12 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
3.	C3	02	300 x 380	# 16 - 4 Nos. # 12 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
4.	C4	03	300 x 380	# 16 - 8 Nos. # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 12 - 10 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
5.	C5	04	300 x 380	# 16 - 8 Nos. # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
6.	C6	06	300 x 380	# 16 - 8 Nos. # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos. # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
7.	C7	05	300 x 380	# 16 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
8.	C8	01	300 x 380	# 16 - 10 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 8 Nos. # 12 - 2 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
9.	C9	02	300 x 380	# 20 - 4 Nos. # 16 - 4 Nos. # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos. # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
10.	C10	16	300 x 380	# 20 - 4 Nos. # 16 - 4 Nos. # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos.	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
11.	C11	02	300 x 380	# 20 - 6 Nos. # 16 - 4 Nos.	1) Upto Plinth Beam: #10 @ 95 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos. # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		

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

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
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- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No. SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No. SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS - 1.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/05.

REVISION NO.:

Assistant Engineer

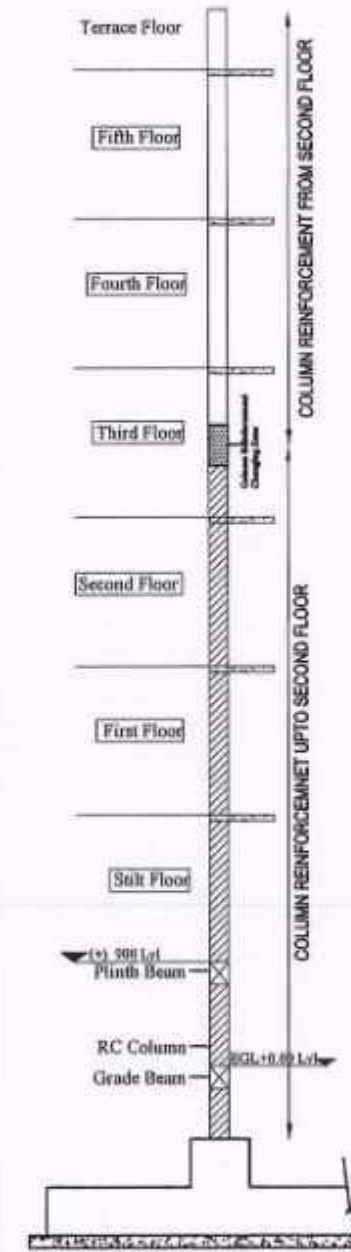
Asst. Exe. Engineer

Executive Engineer

Sd.....
SE - North I

Sd..... 29.05.2024.
Chief Engineer- I

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

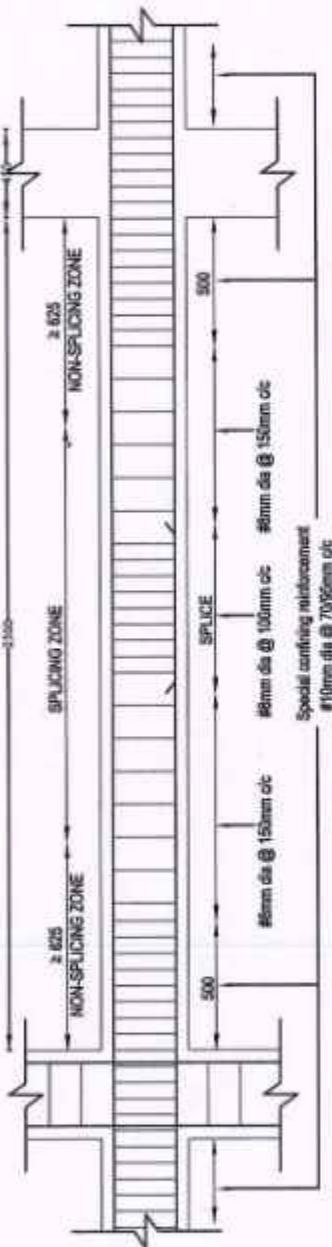


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30/5/2024
EXECUTIVE ENGINEER (A/c)

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

30/5/24



TYPICAL COLUMN SPLICING AND
CONFINING REINFORCEMENT
DETAILS

SCHEDULE OF COLUMNS - 2

Sl.No	Column Marking	No of Columns	Size	Upto Second Floor Column Reinforcement Details			Above Second Floor Column Reinforcement Details			Ties Profile
				Column Verticals	Lateral Ties	Cross Section	Column Verticals	Lateral Ties	Cross Section	
12.	C12	01	300 x 380	# 20 - 6 Nos + # 16 - 4 Nos.	1) Upto Plinth Beam: #10 @ 95 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos.	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
13.	C13	01	300 x 380	# 20 - 6 Nos + # 16 - 4 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
14.	C14	11	300 x 450	# 16 - 4 Nos + # 12 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
15.	C15	05	300 x 450	# 16 - 6 Nos + # 12 - 4 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
16.	C16	08	300 x 450	# 16 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 4 Nos + # 12 - 6 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
17.	C17	02	300 x 450	# 16 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos + # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
18.	C18	03	300 x 450	# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos.	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
19.	C19	02	300 x 450	# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos + # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
20.	C20	18	300 x 450	# 20 - 4 Nos + # 16 - 6 Nos.	1) Upto Plinth Beam: #10 @ 95 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 10 Nos.	Above Second floor slab: #10 @ 95 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
21.	C21	01	300 x 450	# 20 - 4 Nos + # 16 - 6 Nos.	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 16 - 6 Nos + # 12 - 4 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		
22.	C22	01	300 x 450	# 20 - 10 Nos	1) Upto Plinth Beam: #10 @ 70 mm c/c 2) Plinth Beam to Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		# 20 - 4 Nos + # 16 - 4 Nos + # 12 - 2 Nos.	Above Second floor slab: #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c		

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

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AIEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc, unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.: SM&FE 217/ay/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SCHEDULE OF COLUMNS - 2.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/06.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Chief Engineer- I

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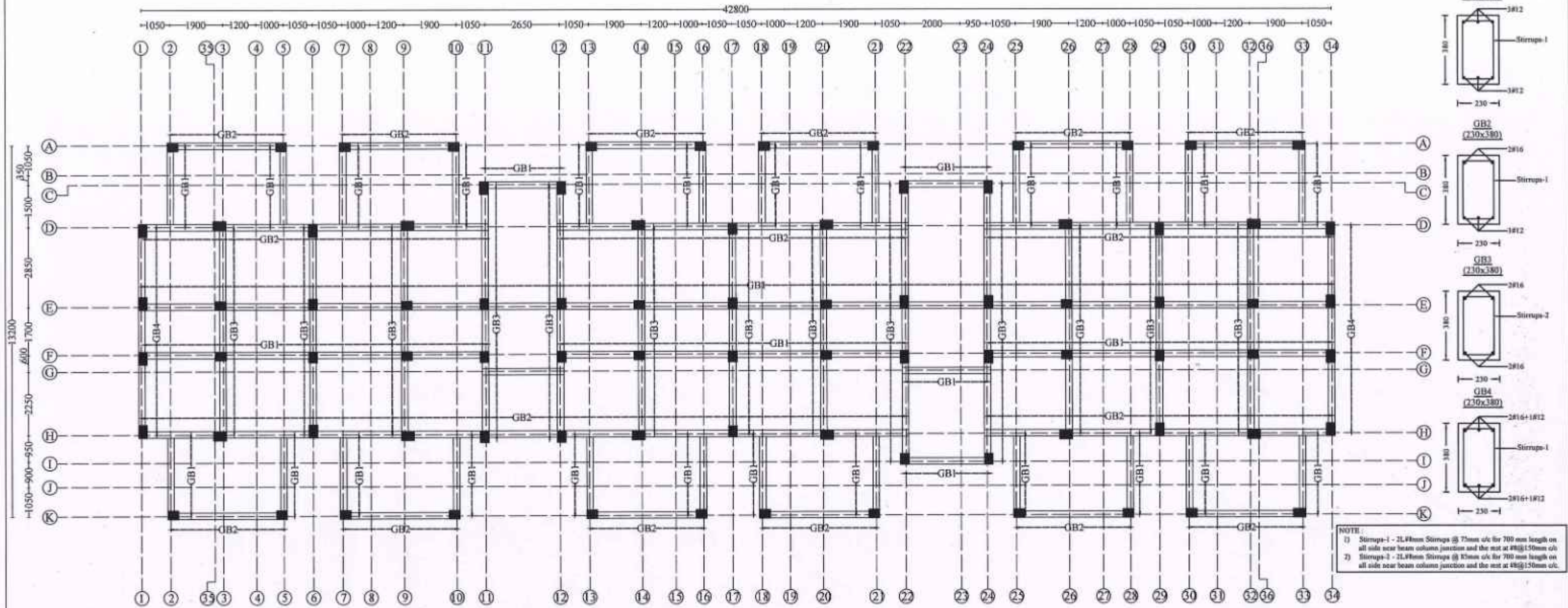
EXECUTIVE ENGINEER (A/c)

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



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

GRADE BEAM LAYOUT & DETAILS



NOTE:
1) Stirrups-1 - 2L/8mm Stirrups @ 75mm c/c for 700 mm length on all side near beam column junction and the rest at 48@150mm c/c
2) Stirrups-2 - 2L/8mm Stirrups @ 75mm c/c for 700 mm length on all side near beam column junction and the rest at 48@150mm c/c.

NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:

(a) Foundation	- 50 mm
(b) Column	- 40 mm
(c) Floor and roof beam	- 30 mm
(d) Slab	- 25 mm
(e) Water Tank Walls & Slab	- 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
GRADE BEAM LAYOUT & DETAILS

TYPE DESIGN NO.: 73/2022 TYPE A

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE A/06.

REVISION NO.: R1

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

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

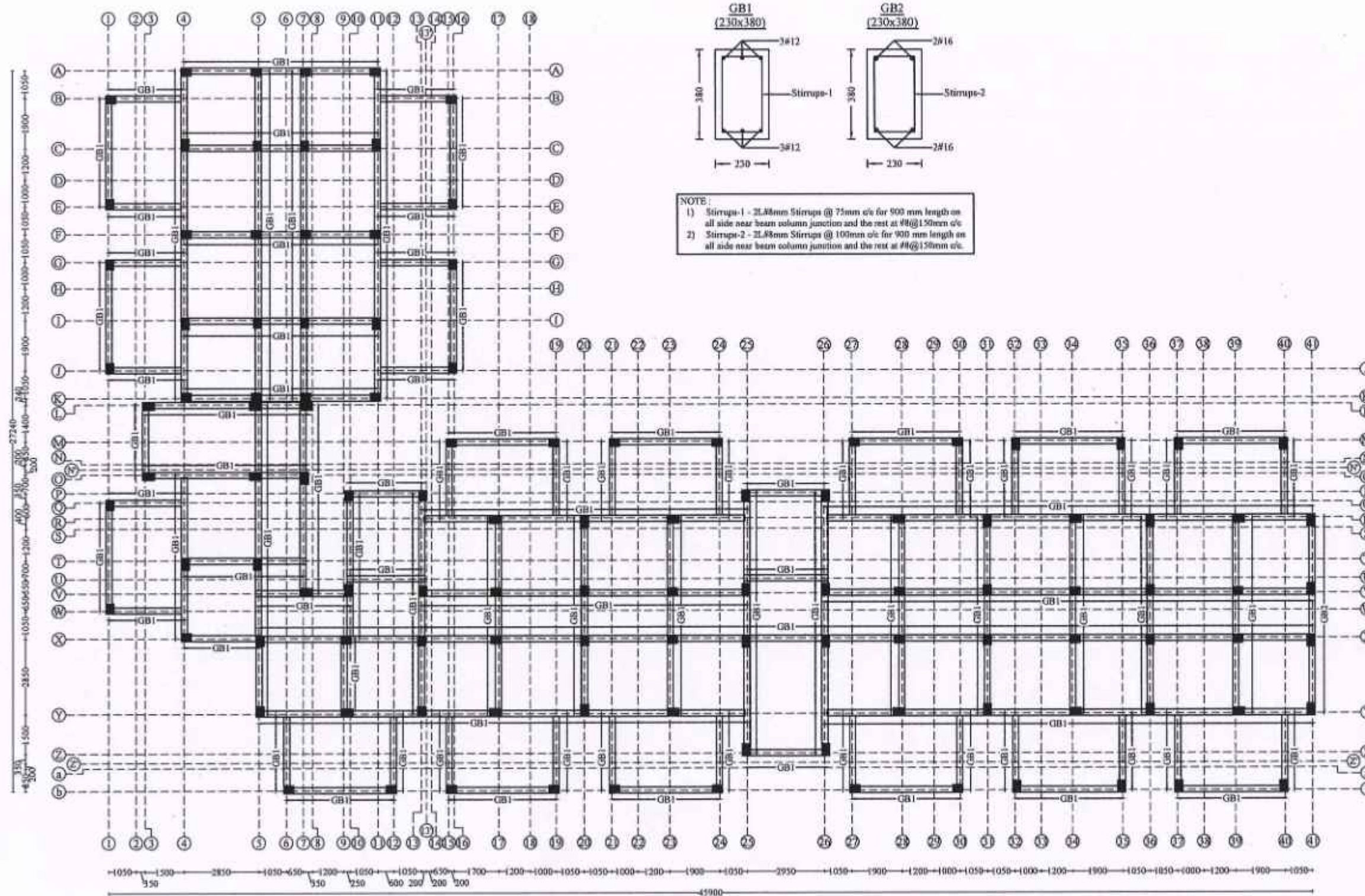
SE - North I

Sd. 04.09.2024.
Chief Engineer - I



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

GRADE BEAM LAYOUT & 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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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/ITT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job No.: SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.: SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
GRADE BEAM LAYOUT & DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B/07.

REVISION NO.: R1

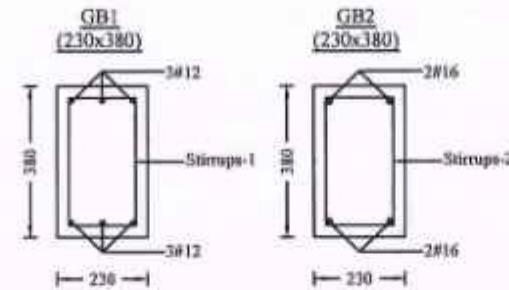
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Dd. XXXX 04.09.2024. Chief Engineer - I	
 STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

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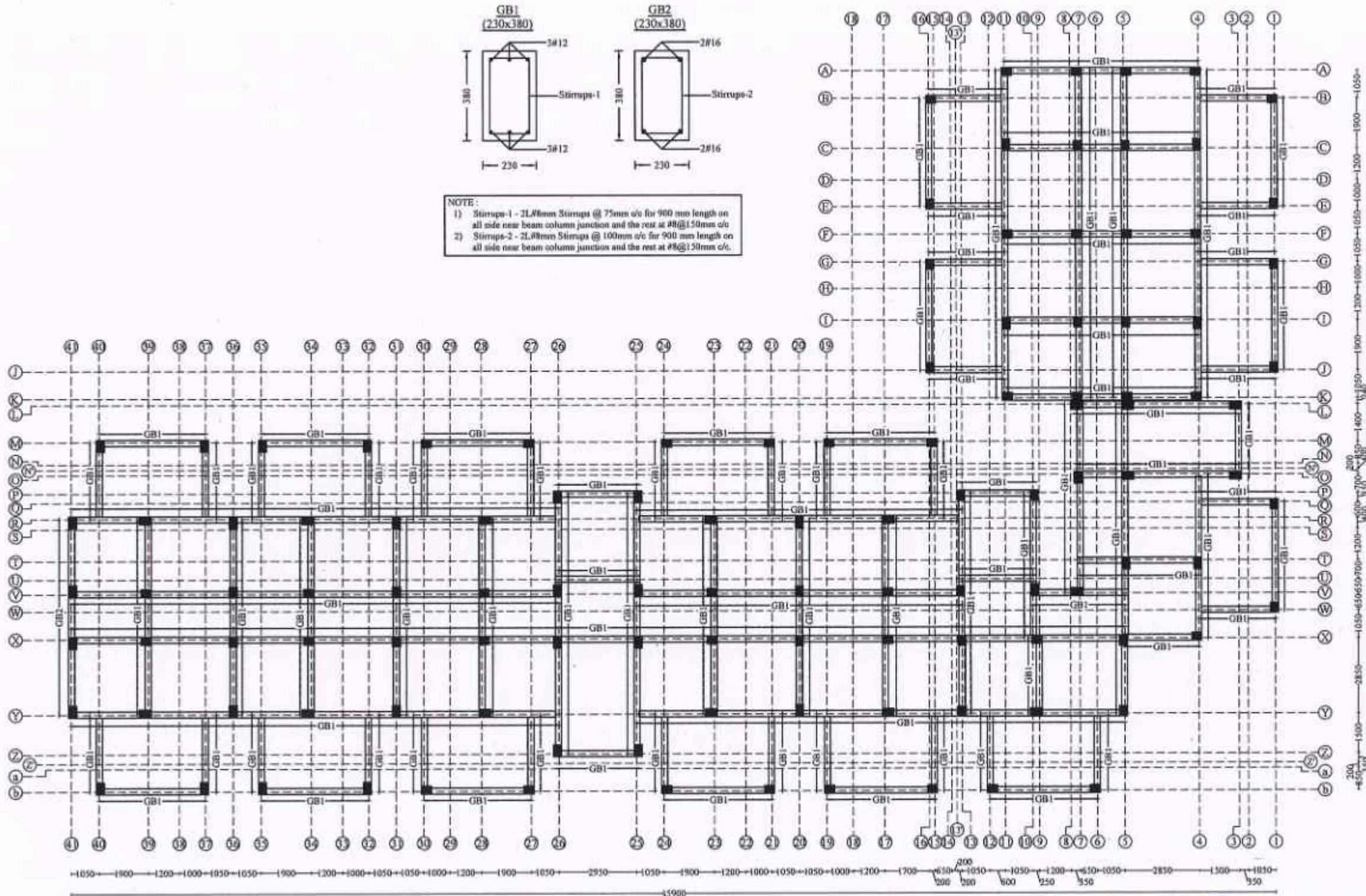
5/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

msb
05/09/24

GRADE BEAM LAYOUT & DETAILS



NOTE:
1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at #8@150mm c/c
2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at #8@150mm c/c.



NOTE:

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- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
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- 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:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
GRADE BEAM LAYOUT & DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/07.

REVISION NO.: R1

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Sd./xxx 04.09.2024.
Chief Engineer- I



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

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

hccgo
08/09/24

STILT FLOOR BEAM LAYOUT

Expansion joint 40 mm thick

STAIRCASE-1

STAIRCASE-2

Mid landing beam

Mid landing beam

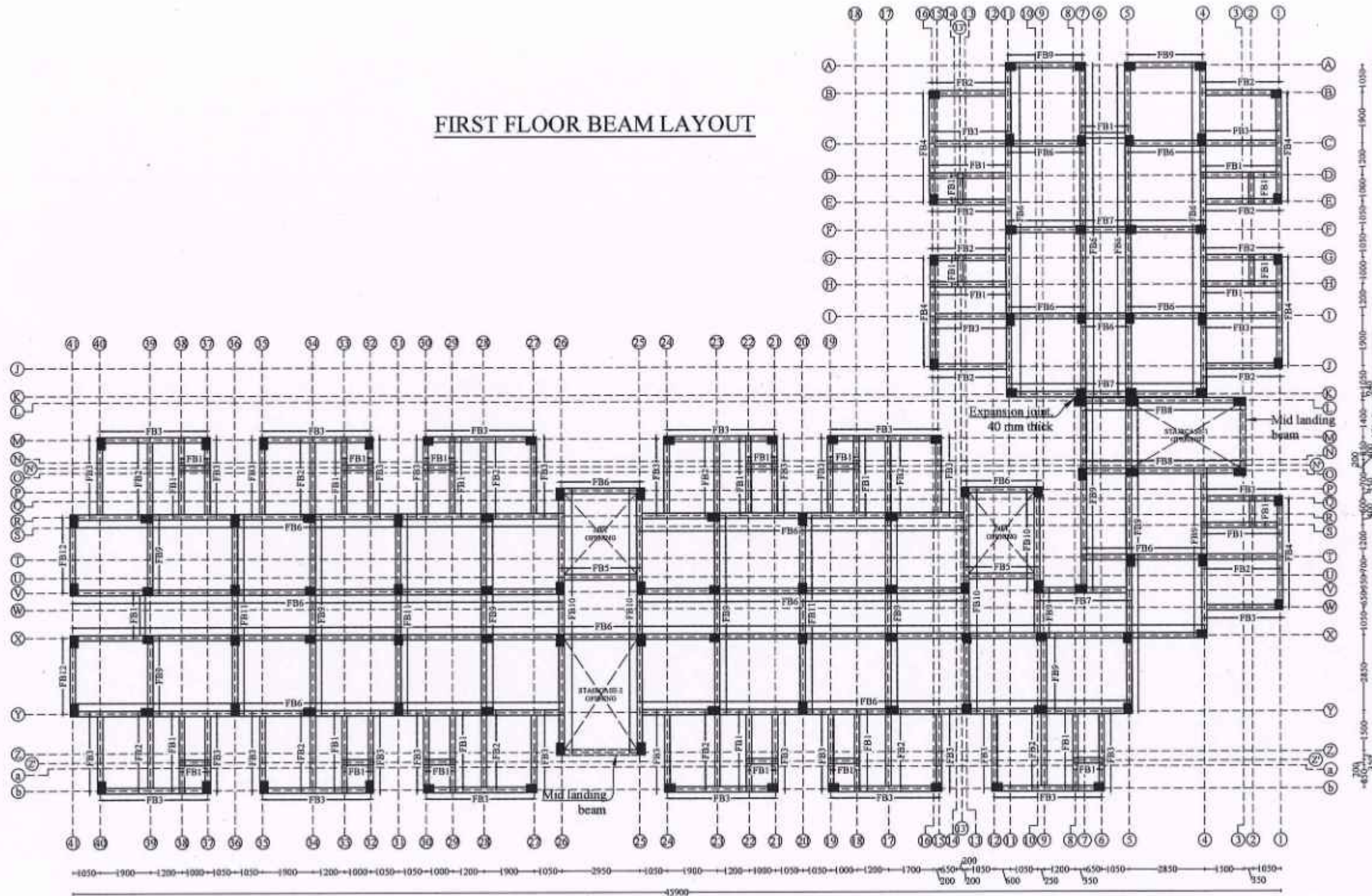
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05/09/20

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

FIRST FLOOR BEAM LAYOUT



Note:
For First floor beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/11.

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

NOTE:

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- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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- Anchorage of column bars into the footings shall not be less than 50 Ø.
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- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FIRST FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/10

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

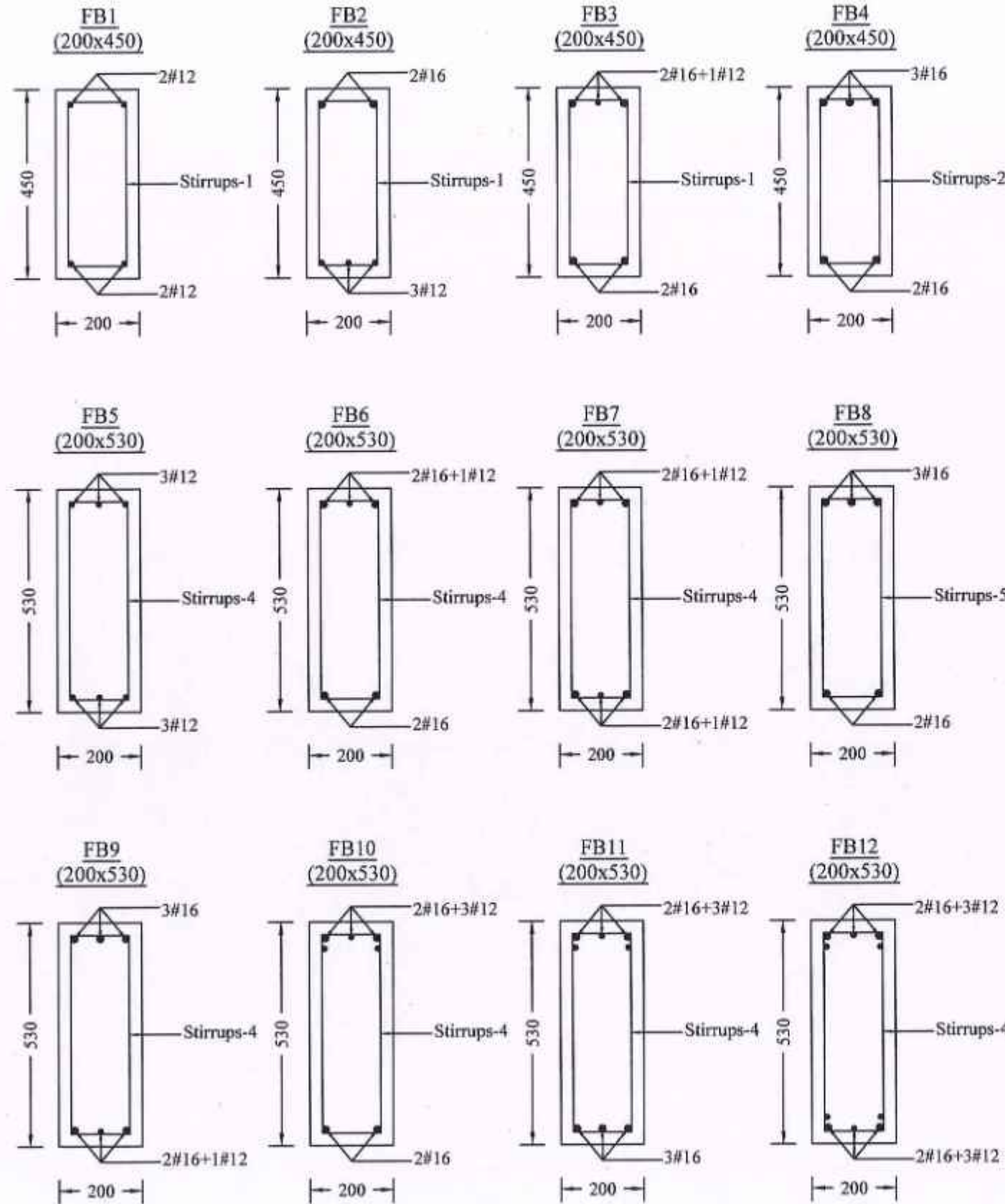
SE - North I

Sd. xxxxx 04.09.2024.
Chief Engineer - I



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

STILT FLOOR & FIRST FLOOR BEAM DETAILS



NOTE:

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- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
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 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT FLOOR & FIRST FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/11.

REVISION NO.:

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

Sd./xxx 04.09.2024.
Chief Engineer - I



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

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5/9/2024
EXECUTIVE ENGINEER (A/c)

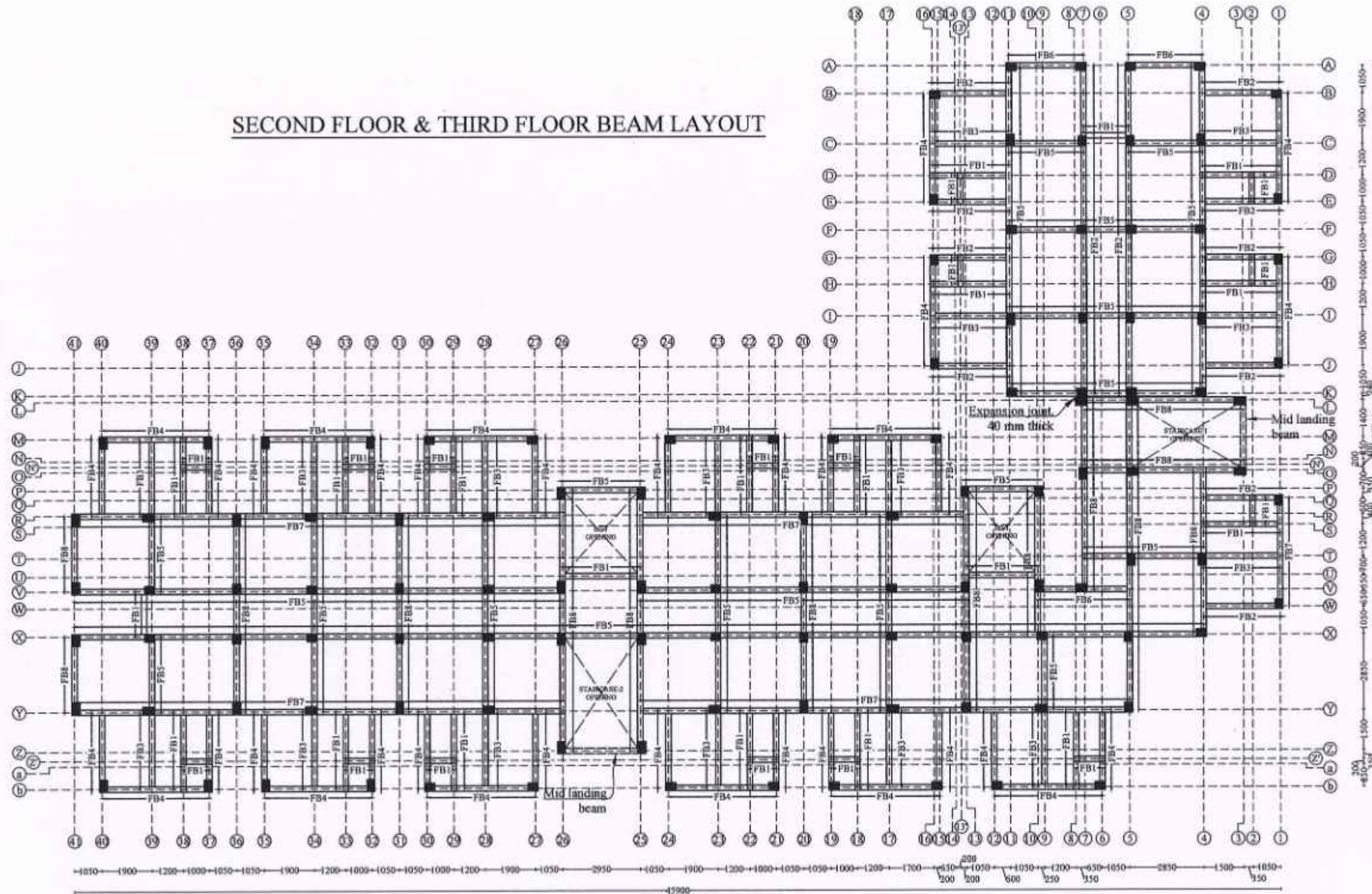
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

NOTE:

- Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-3 - 2L#8mm Stirrups @ 75mm c/c for 1100 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-4 - 2L#10mm Stirrups @ 75mm c/c for 1100 mm length on all side near beam column junction and the rest at 150mm c/c.
- Stirrups-5 - 2L#10mm Stirrups @ 100mm c/c for 1100 mm length on all side near beam column junction and the rest at 150mm c/c.
- Beam Depth is inclusive of slab thickness.

10/09/24
05/09/24

SECOND FLOOR & THIRD FLOOR BEAM LAYOUT



Note:
For Second & Third floor beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/13.

TRUE COPY

EXECUTIVE ENGINEER (A/C)

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

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR & THIRD FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/12.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

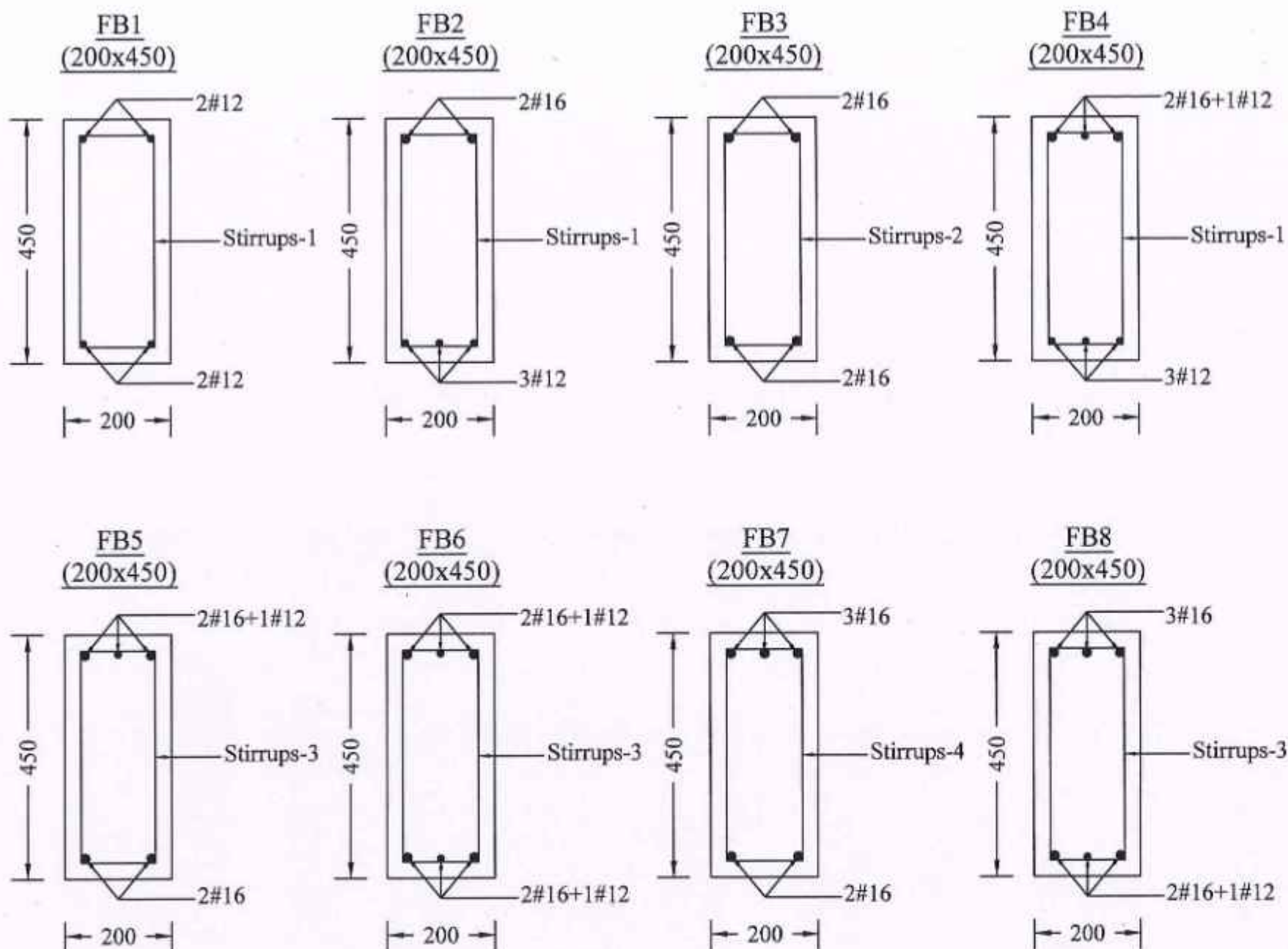
SE - North I

Sd./xxx 04.09.2024
Chief Engineer - I



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

SECOND FLOOR & THIRD FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 3) Stirrups-3 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 4) Stirrups-4 - 2L#10mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 6) Beam Depth is inclusive of slab thickness.

NOTE :

1. All the dimensions are in mm unless otherwise noted.
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 Fe500 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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be confirmed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR & THIRD FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/13.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd./xxxx 04.09.2024. Chief Engineer - I	

TRUE COPY

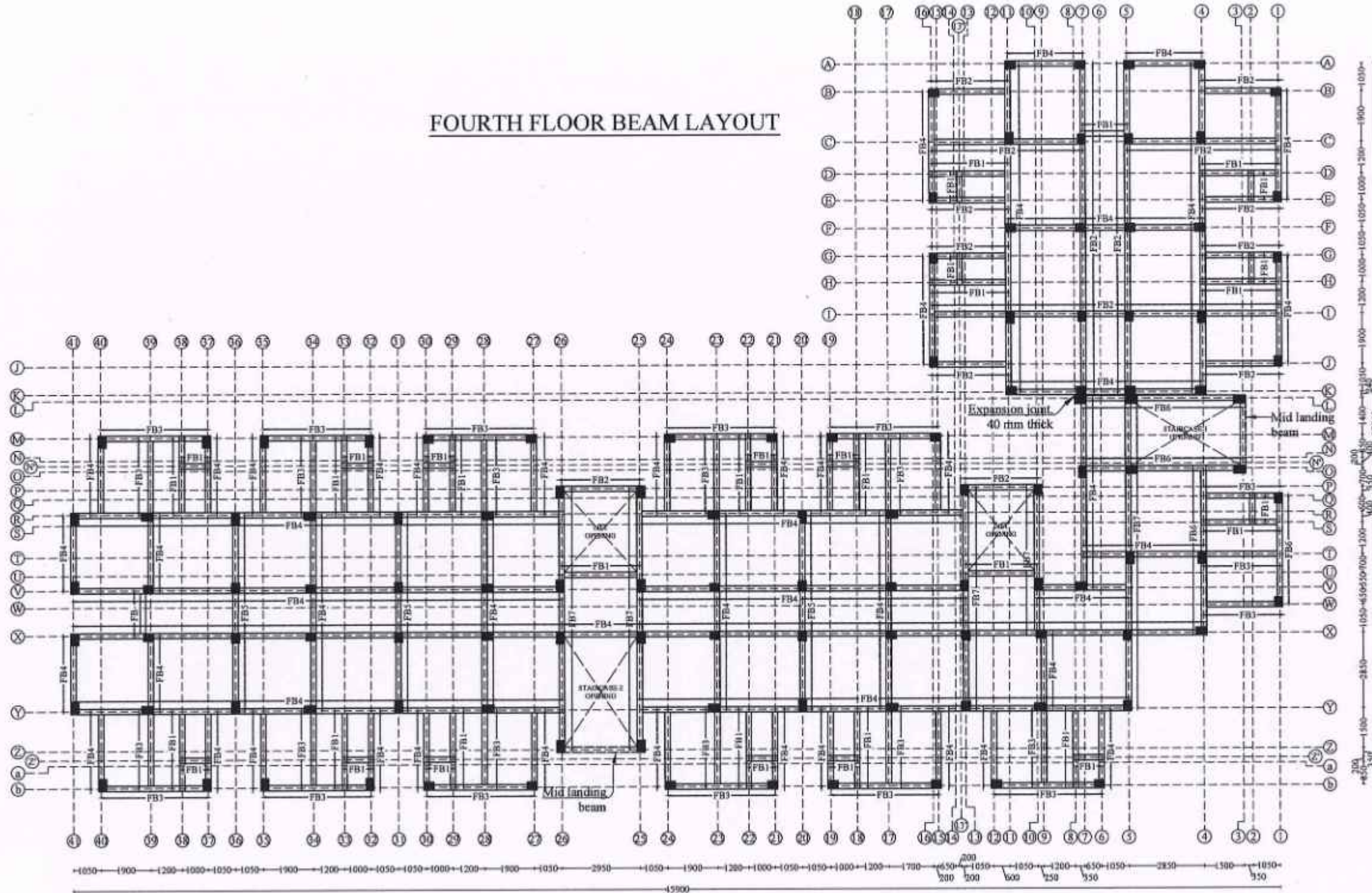
5/9/2024
EXECUTIVE ENGINEER CA/c

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



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

FOURTH FLOOR BEAM LAYOUT



Note:
For Fourth floor beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/15.

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EXECUTIVE ENGINEER (A/C)

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

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/14.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

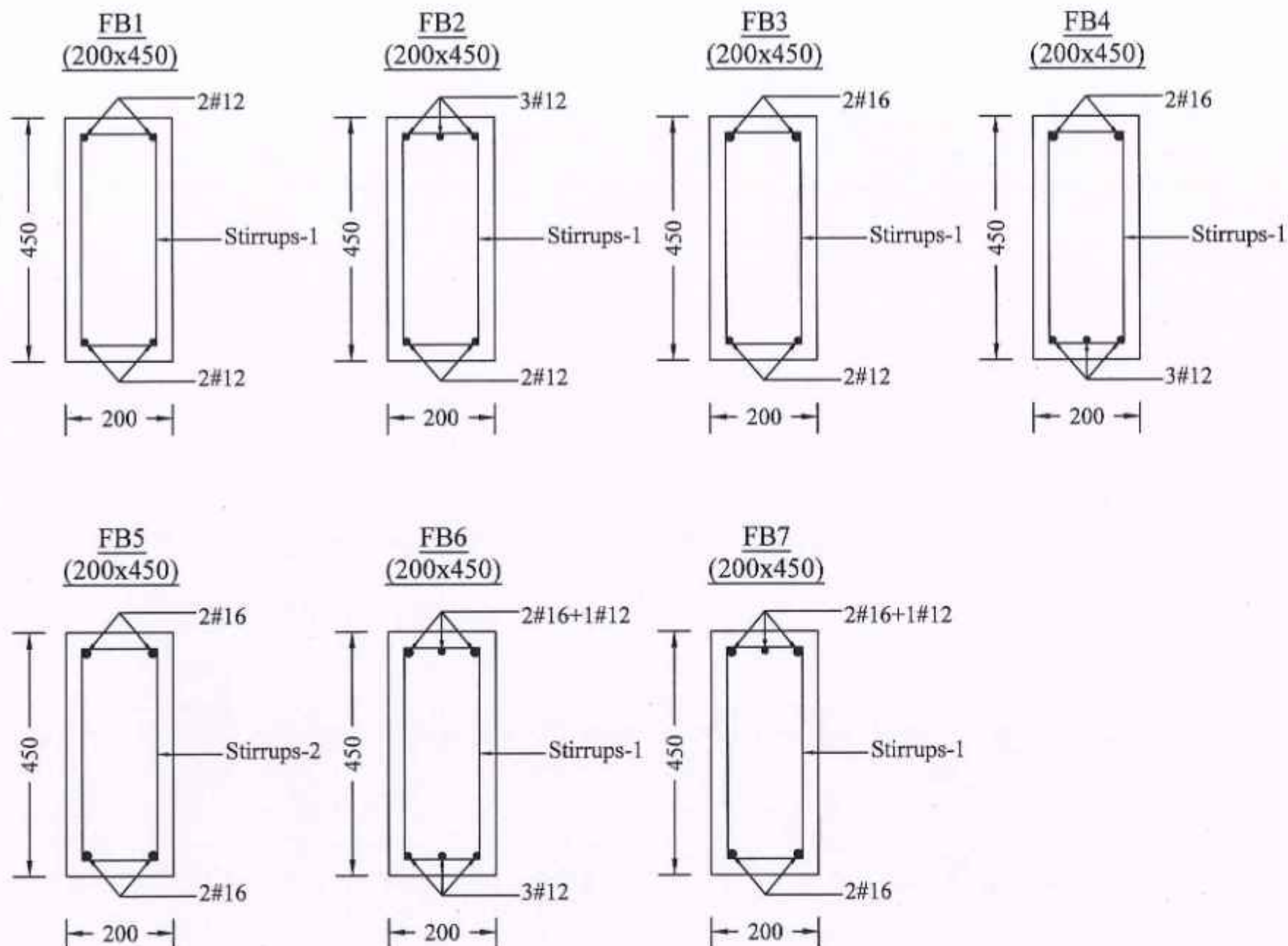
SE - North I

Sd. xxxxx 04.09.2024.
Chief Engineer - I



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

FOURTH FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 3) Beam Depth is inclusive of slab thickness.

NOTE :

1. All the dimensions are in mm unless otherwise noted.
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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai, Job. No.: SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.: SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/15.

REVISION NO.:

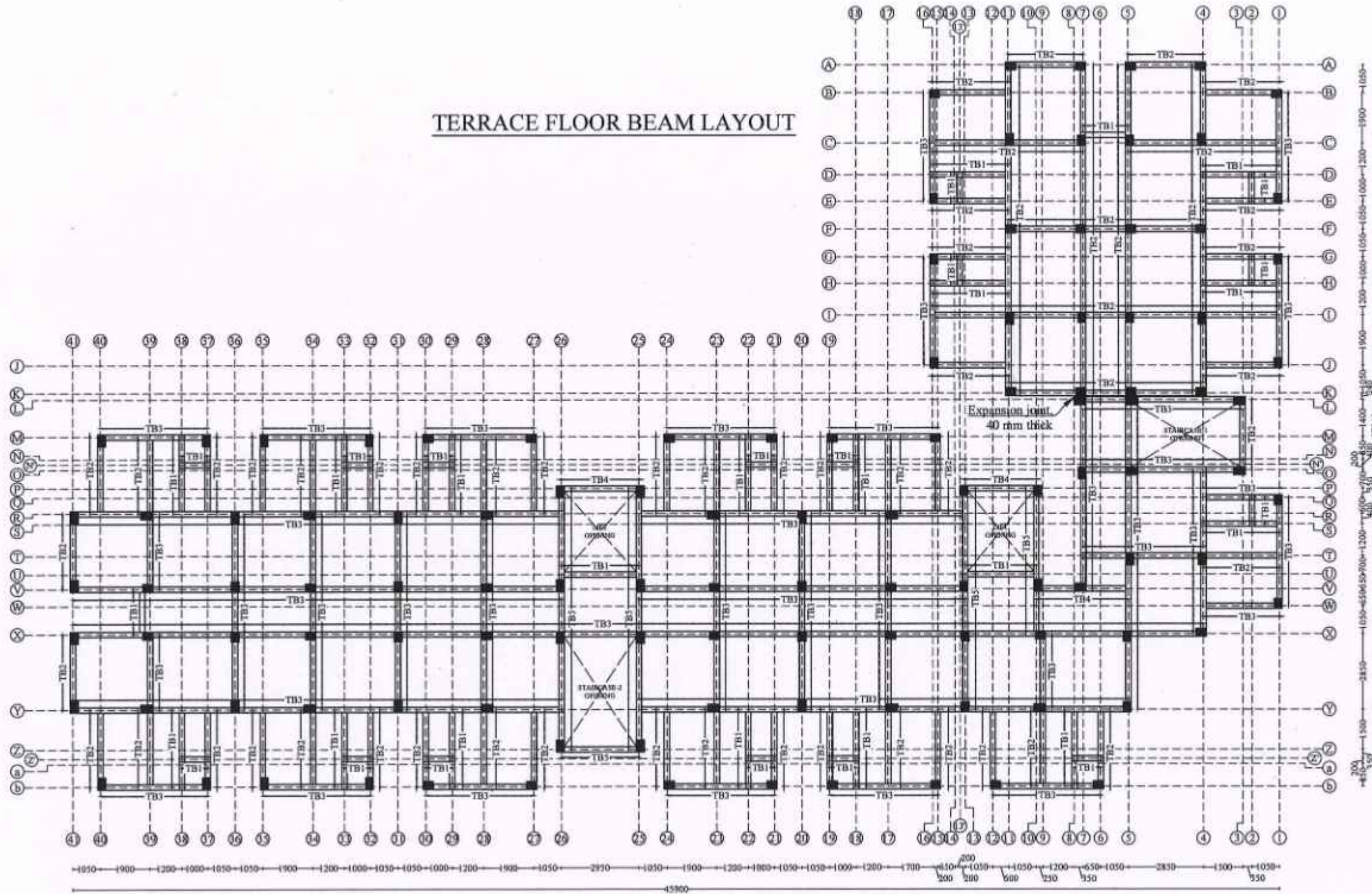
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Sd. XXXX 04.09.2024. Chief Engineer - I	
STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

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

10/09/24
05/09/24

TERRACE FLOOR BEAM LAYOUT



Note:
For Terrace floor beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/17.

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5/9/2024
EXECUTIVE ENGINEER (CAK)

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

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.: SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.: SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/16.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

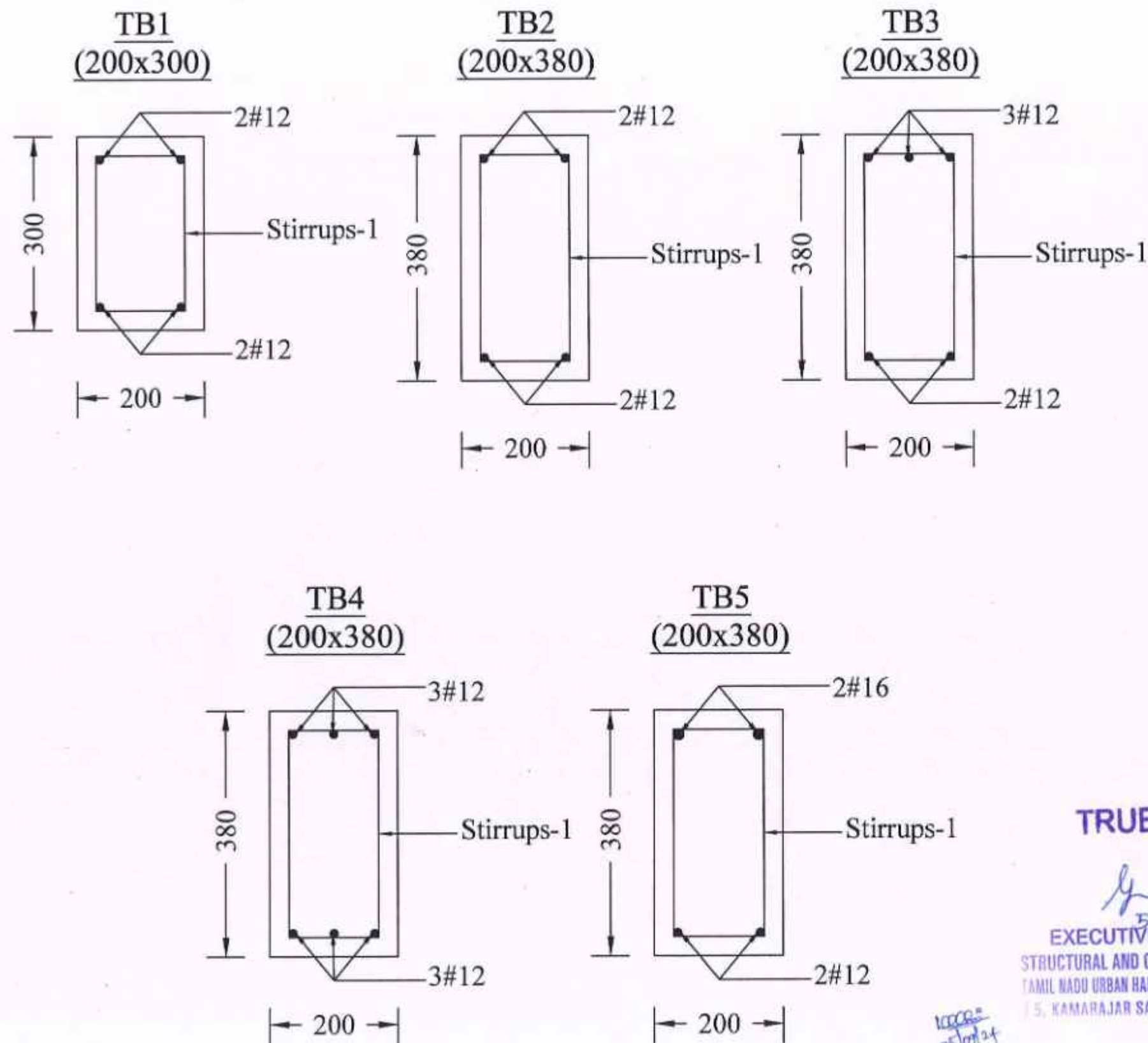
SE - North 1

Sd. xxxxx 04.09.2024
Chief Engineer - I



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

TERRACE FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 800 mm length on all side near beam column junction and the rest at 150mm c/c.
- 6) Beam Depth is inclusive of slab thickness.

NOTE :

1. All the dimensions are in mm unless otherwise noted.
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 IS 13920:2016.
6. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be confirmed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.: SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.: SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/17.

REVISION NO.:

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

Sd. xxxxx 04.09.2024.
Chief Engineer - I



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

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

100000
05/09/24

STILT FLOOR SLAB DETAILS

The drawing illustrates the structural layout of a stilt floor slab, showing two floor plans with dimensions and structural elements. The left plan shows a grid of rooms with dimensions ranging from 1050 to 1900. The right plan shows a similar grid with dimensions ranging from 1050 to 1900. Key features include:

- STAIRCASE-1** and **STAIRCASE-2** openings.
- Mid landing beam** and **Mid landing beam** labels.
- DETAIL** callout for a specific structural connection.
- Dimensions** in millimeters (mm) and meters (m).
- Room numbers** (e.g., 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200).

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/18.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

Chief Engineer - I



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

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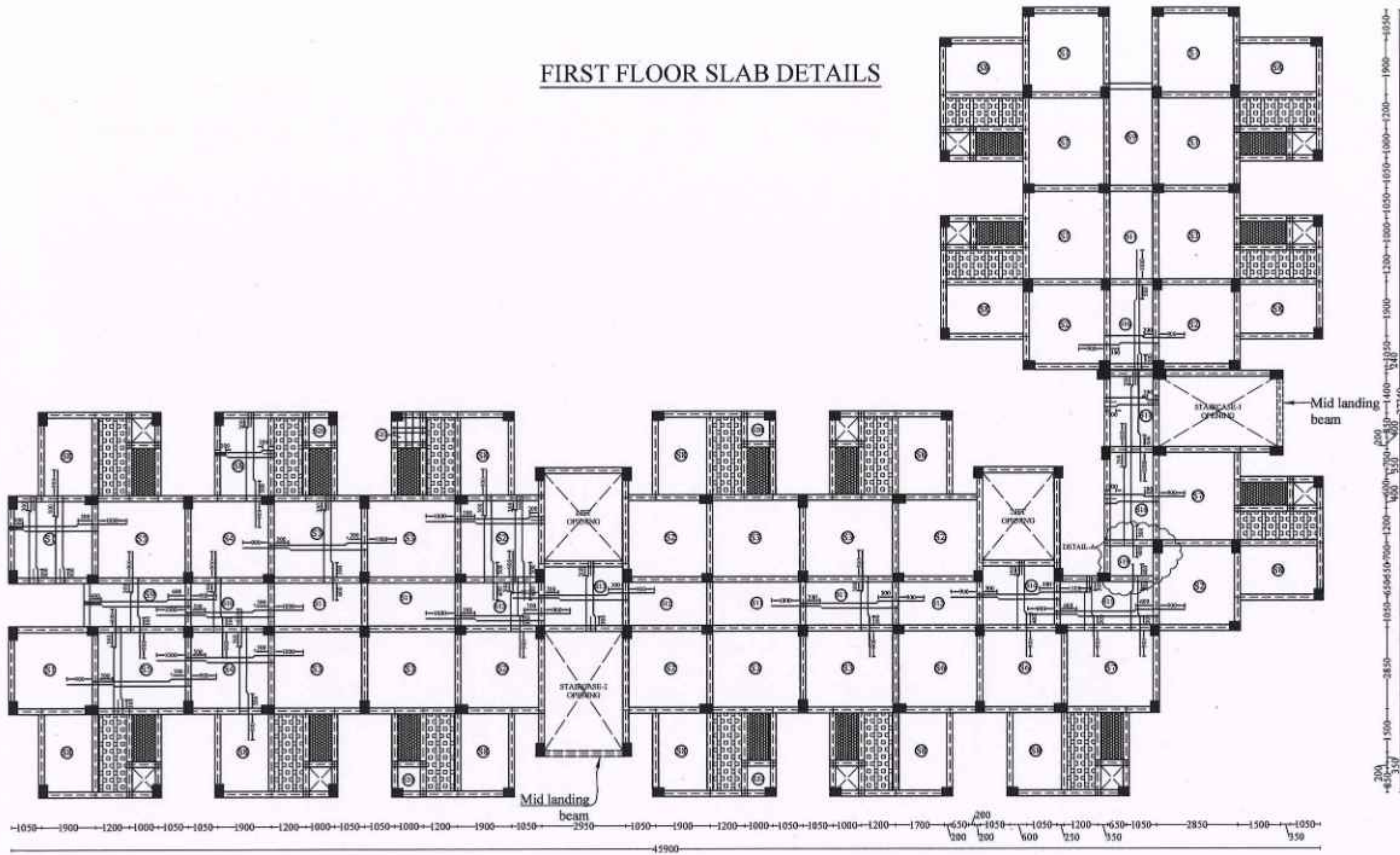
5/7/2024
EXECUTIVE ENGINEER (A/E)

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

1000000
- 1000000
05/09/12

DETAILS - A

FIRST FLOOR SLAB DETAILS



SLAB SUNKEN BY 200mm

SLAB SUNKEN BY 325mm

1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c

TRUE COPY

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

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FIRST FLOOR SLAB DETAILS.

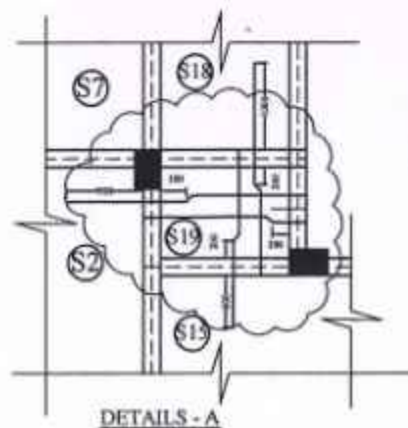
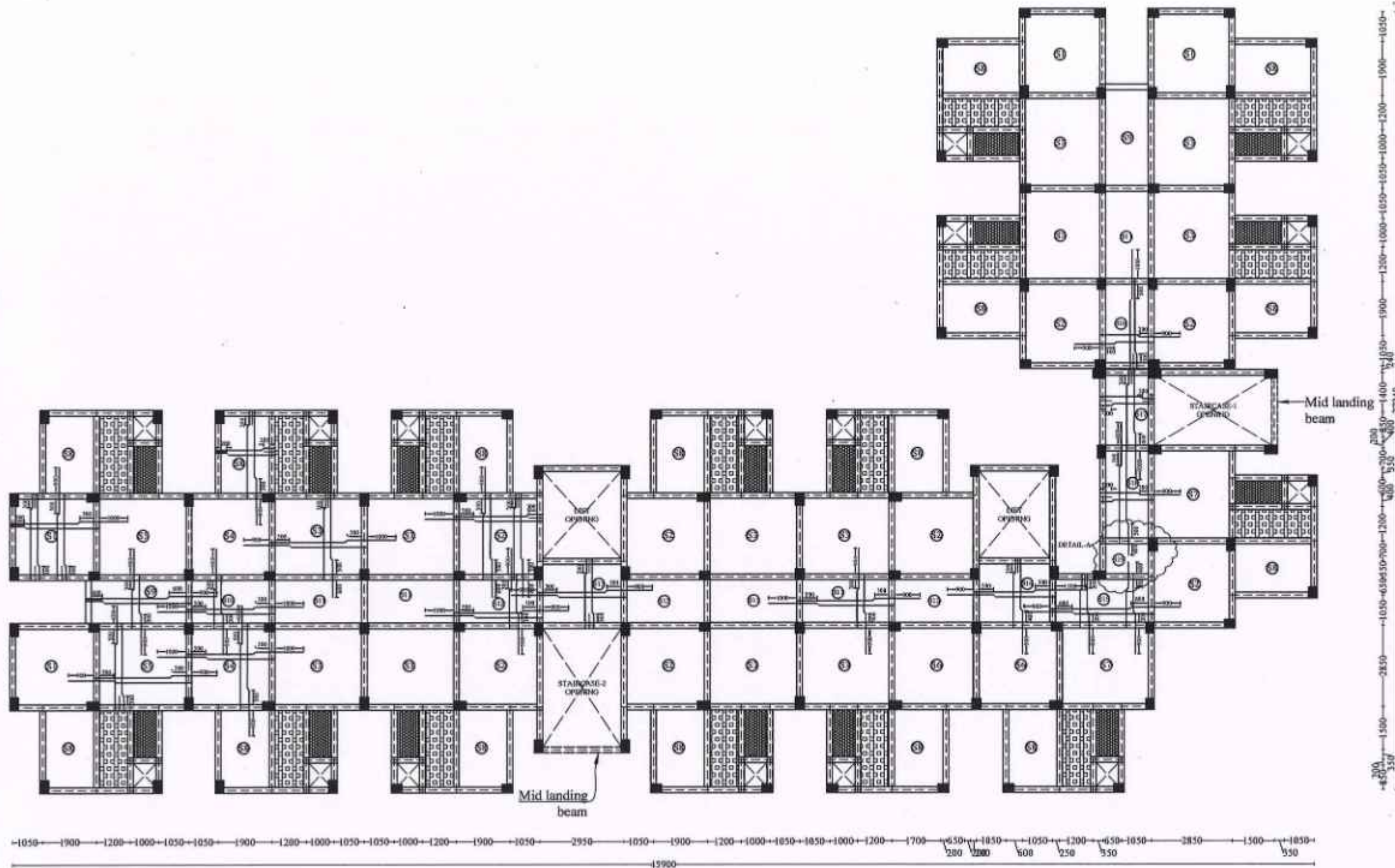
TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/19.

REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Chief Engineer - I	
STRUCTURAL & QUALITY CONTROL CELL TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD NO.5, KAMARAJAR SALAI CHENNAI - 600 005.	

SECOND FLOOR TO FOURTH FLOOR SLAB DETAILS



SLAB SUNKEN BY
200mm

SLAB SUNKEN BY
325mm

- 1.SLAB 125mm THICK
2.ALL SLAB REINFORCEMENT ARE #8@180mm c/c

TRUE COPY

EXECUTIVE ENGINEER C

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

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR TO FOURTH FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/20.

REVISION NO.:

Assistant Engineer

Asst. Elec. Engineer

Executive Engineer

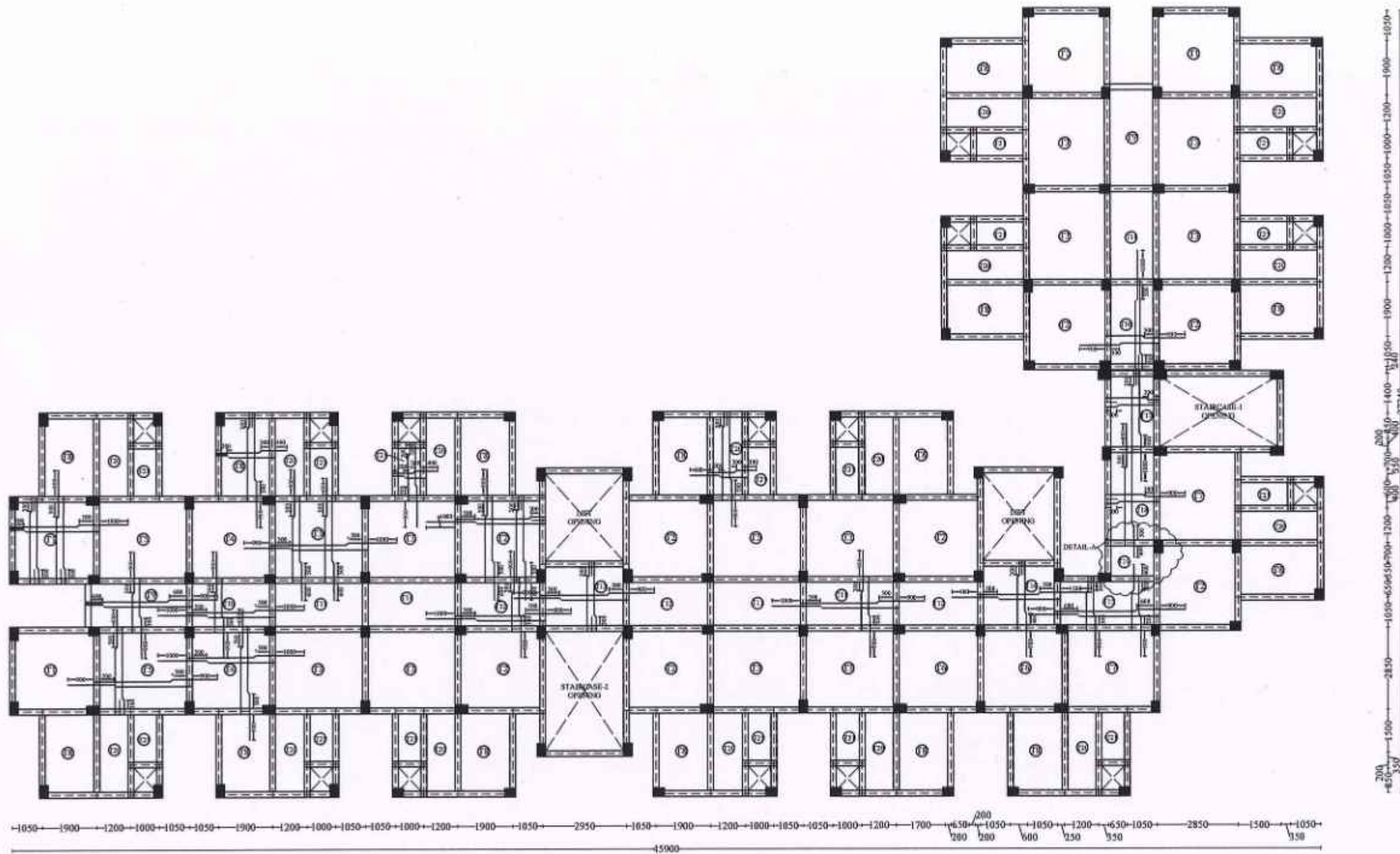
SE - North I

Chief Engineer - I



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

TERRACE FLOOR SLAB DETAILS



1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c

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5/7/2024
EXECUTIVE ENGINEER (A/K)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR TO TERRACE FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

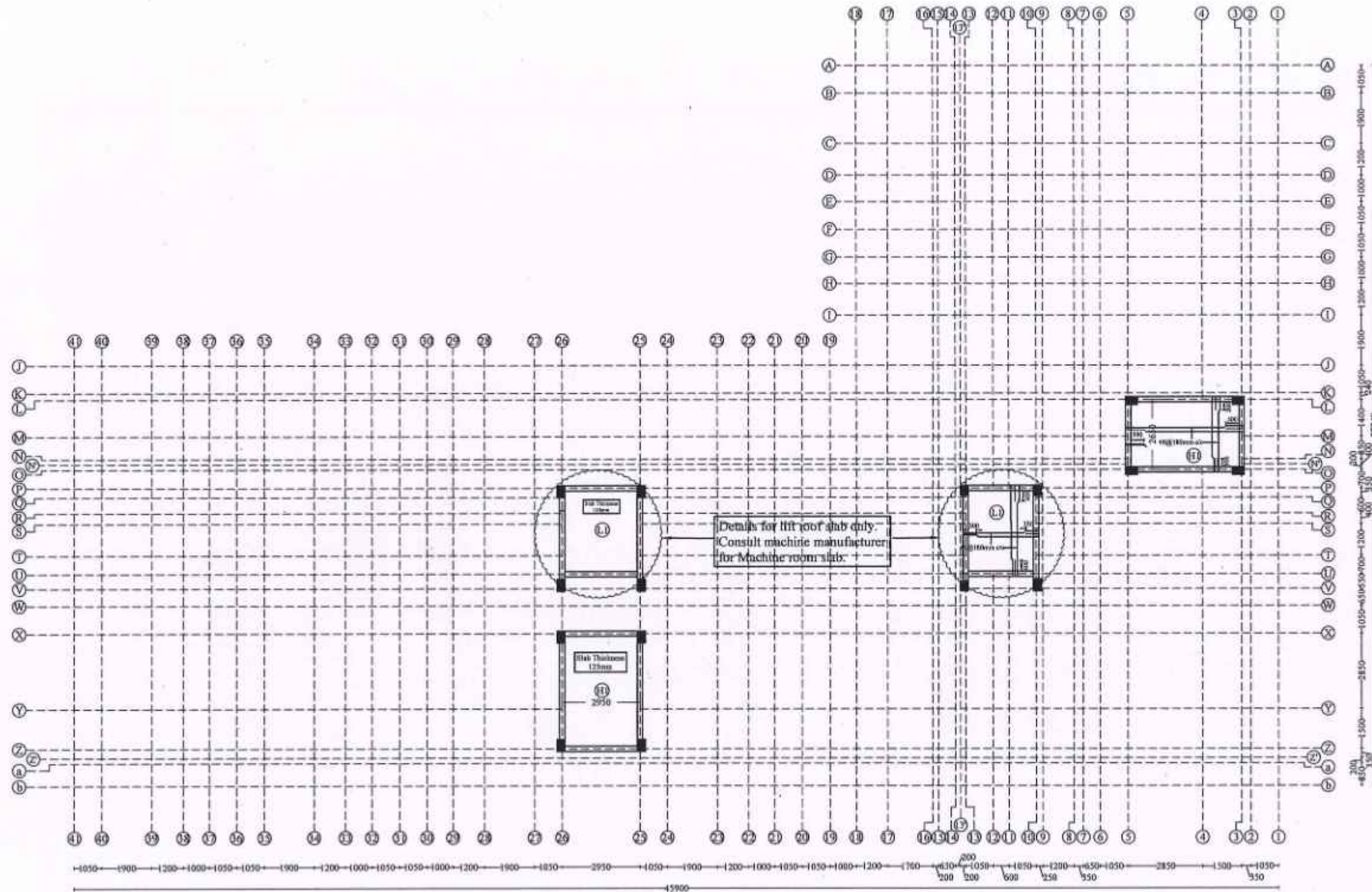
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REVISION NO.:

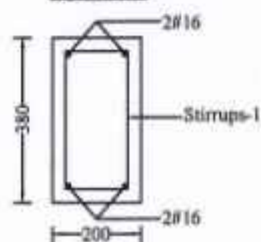
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Chief Engineer - I	

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

HEAD ROOM, LIFT ROOM BEAM LAYOUT & SLAB DETAILS



ALL BEAMS
(200x380)



NOTE:
Stirrups-1 : 2 Legged # 8 mm stirrups at 100 mm c/c for 900 mm length on all sides near Beam - Column junctions and the rest at 150 mm c/c.

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

NOTE:

- All the dimensions are in mm unless otherwise noted.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless otherwise noted. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
HEAD ROOM, LIFT ROOM BEAM LAYOUT & SLAB DETAILS.

TYPE DESIGN NO.: 74/2022 (TYPE - B (A))

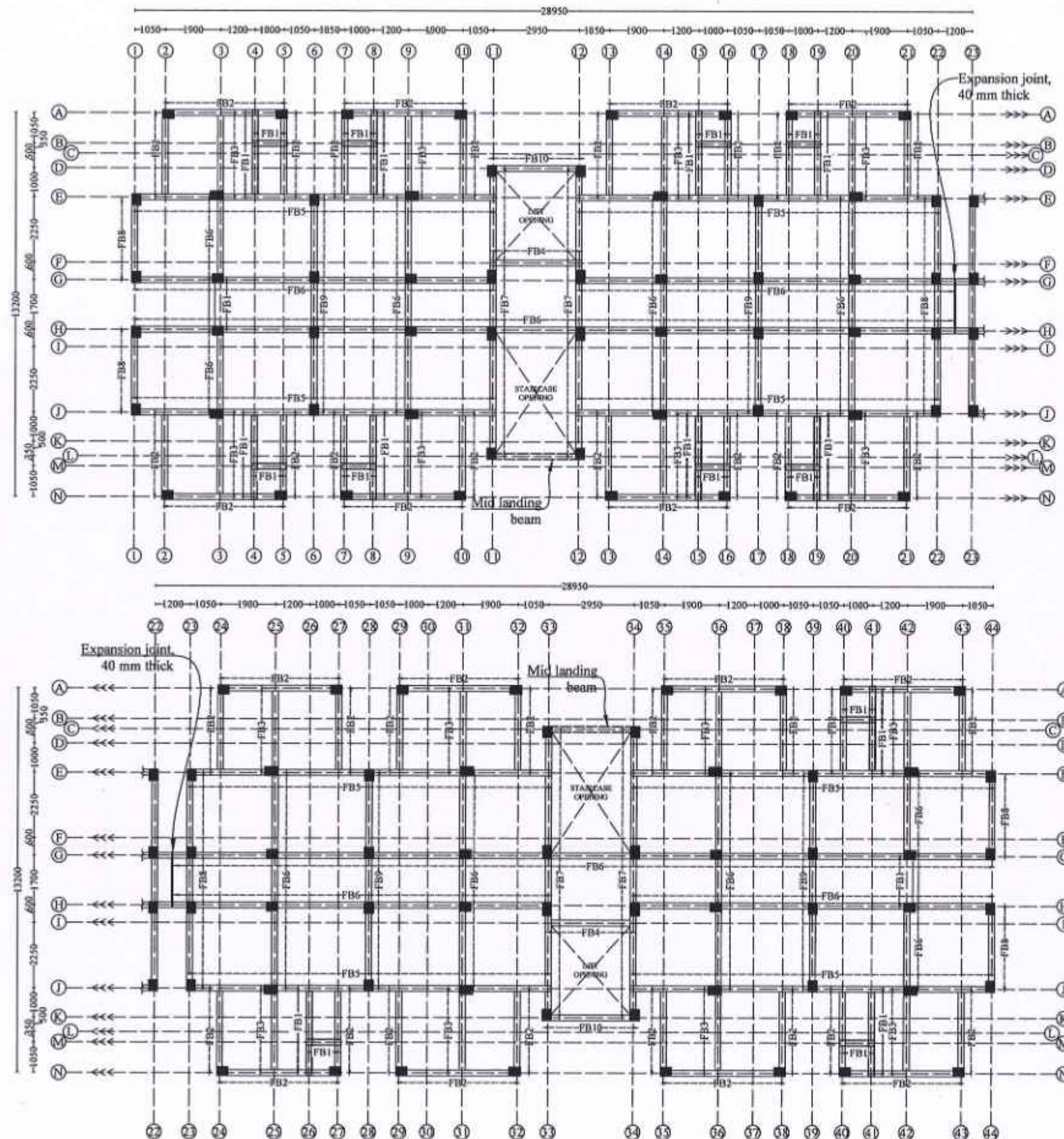
DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-B(A)/22.

REVISION NO.:

Assistant Engineer	Asst. Exc. Engineer
Executive Engineer	SE - North I
Sd. XXXX 04.09.2024. Chief Engineer - I	

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

STILT FLOOR BEAM LAYOUT



Note:
For STILT FLOOR beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/10.

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EXECUTIVE ENGINEER (A/C)

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

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
(a) Foundation - 50 mm
(b) Column - 40 mm
(c) Floor and roof beam - 30 mm
(d) Slab - 25 mm
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut listels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/08.

REVISION NO.:

Assistant Engineer

Asst. Exc. Engineer

Executive Engineer

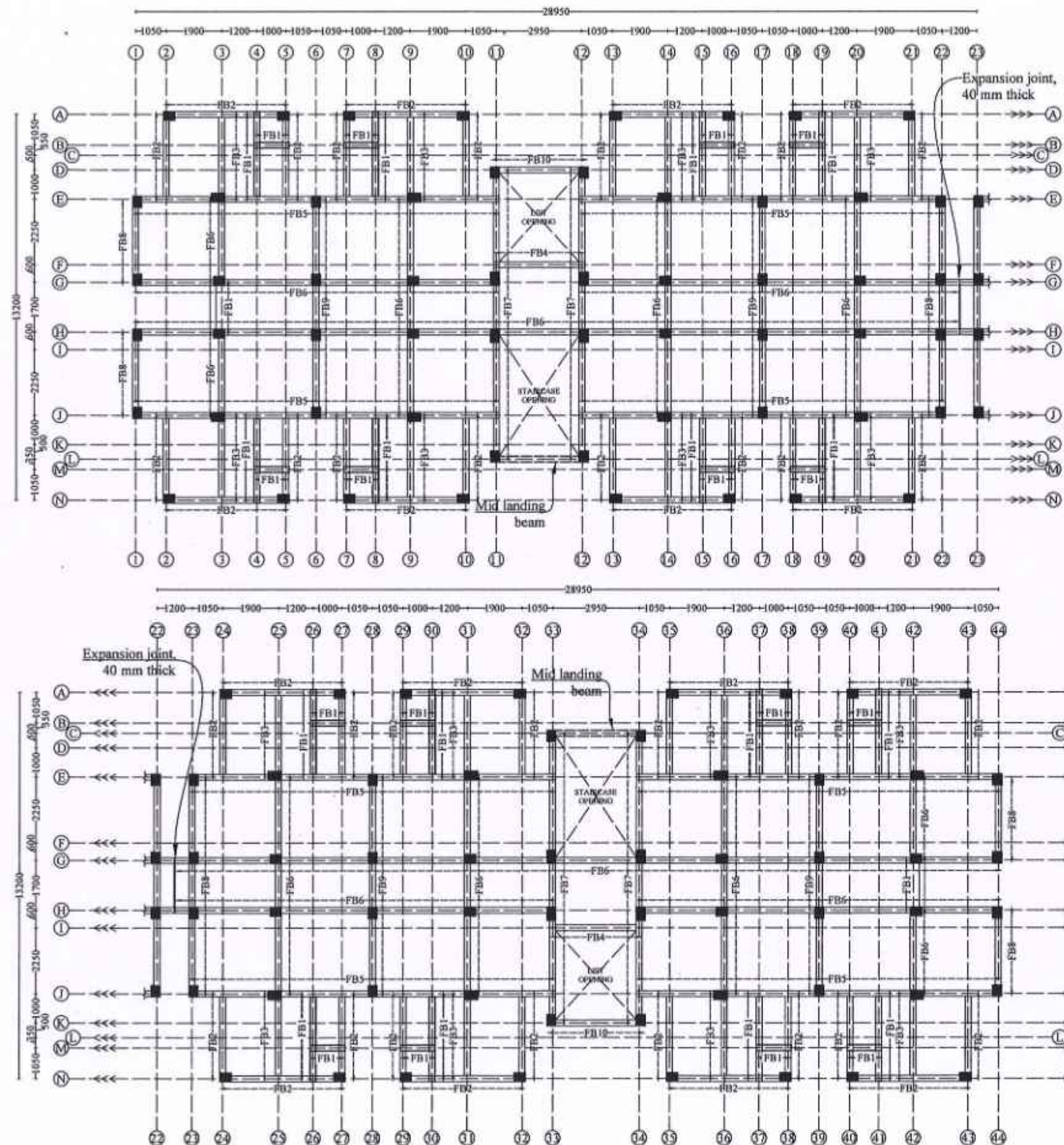
SE - North I

Sd./xxx 27.09.2024,
Chief Engineer- I



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

FIRST FLOOR BEAM LAYOUT



Note:
For FIRST FLOOR beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/10.

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FIRST FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/09.

REVISION NO.:

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

Sd./xxx 27.09.2024
Chief Engineer- I



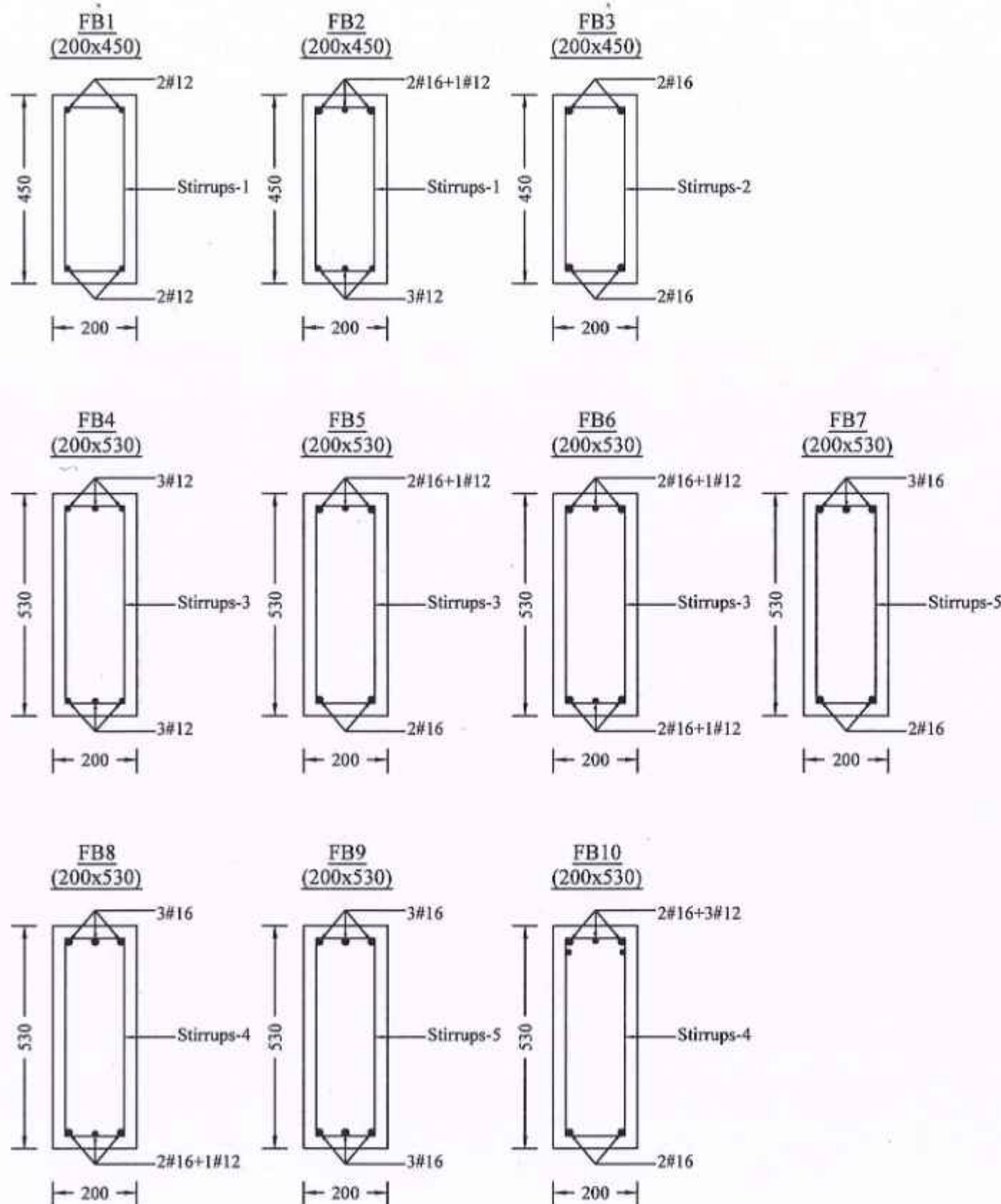
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

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1/10/2024
EXECUTIVE ENGINEER (A/C)

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

STILT FLOOR & FIRST FLOOR BEAM DETAILS



NOTE:

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 3) Stirrups-3 - 2L#8mm Stirrups @ 75mm c/c for 1100 mm length on all side near beam column junction and the rest at 125mm c/c.
- 4) Stirrups-4 - 2L#10mm Stirrups @ 75mm c/c for 1100 mm length on all side near beam column junction and the rest at 150mm c/c.
- 5) Stirrups-5 - 2L#10mm Stirrups @ 100mm c/c for 1100 mm length on all side near beam column junction and the rest at 125mm c/c.
- 6) Beam Depth is inclusive of slab thickness.

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT FLOOR & FIRST FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/10.

REVISION NO.:

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

Sd/-xxx 27.09.2024
Chief Engineer- I



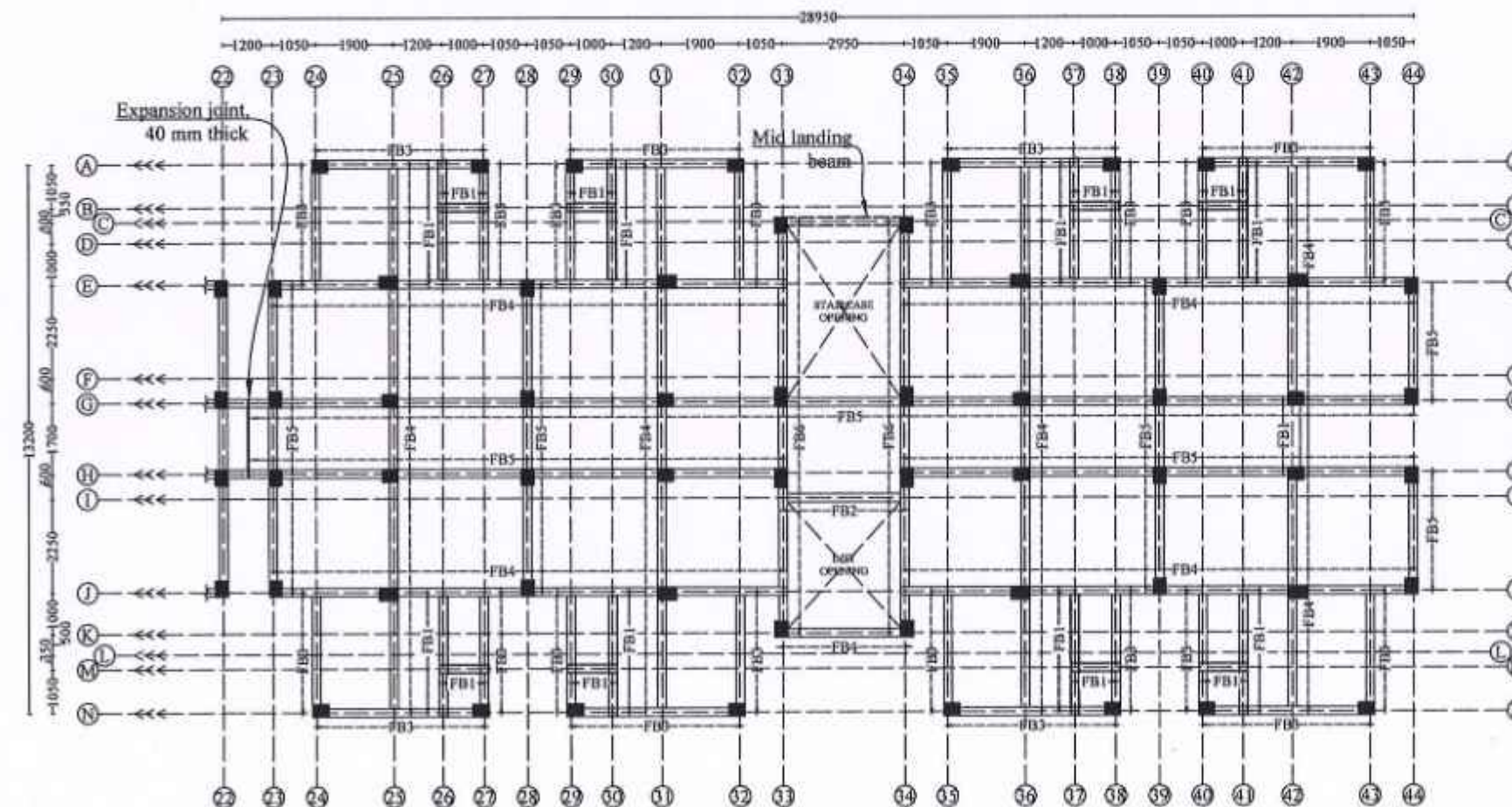
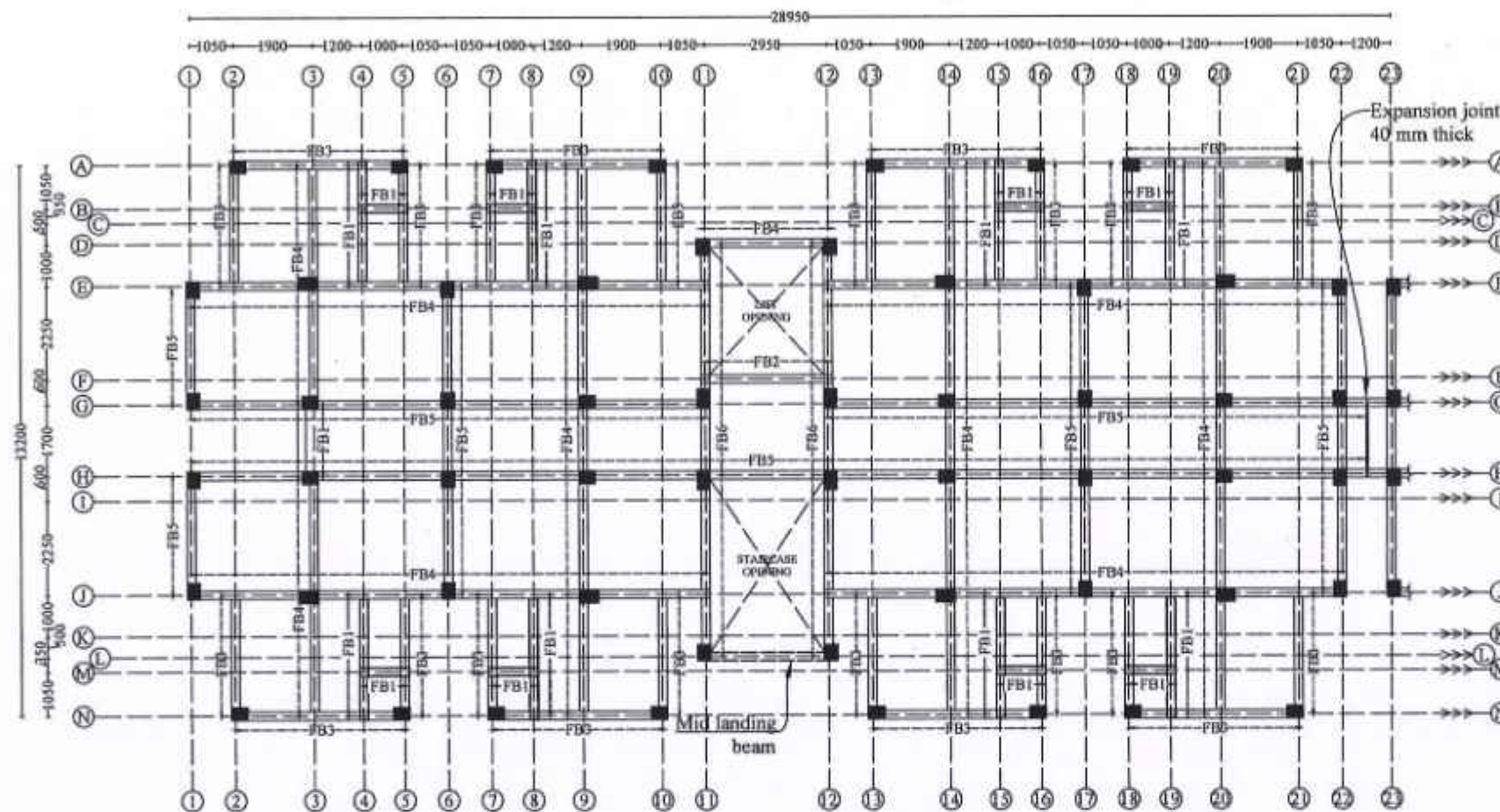
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI,
CHENNAI - 600 005.

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1/10/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

10020
01/10/24

SECOND & THIRD FLOOR BEAM LAYOUT



Note:
For SECOND & THIRD FLOOR beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/12.

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.:J/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut listels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND & THIRD FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/11.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North I

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1/10/2024
EXECUTIVE ENGINEER (A/E)

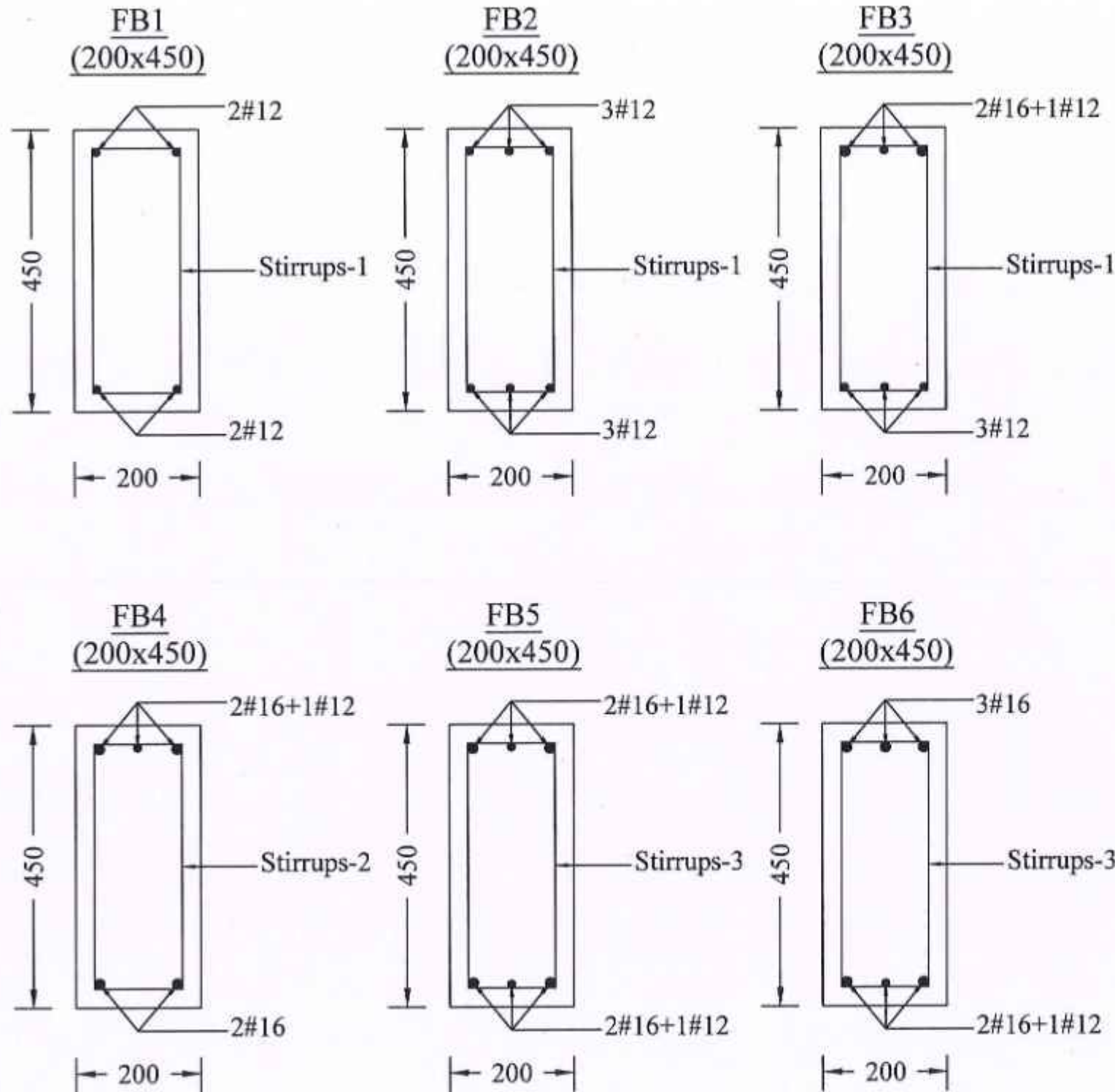
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Sd./xxxx 27.09.2024
Chief Engineer- I



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

SECOND FLOOR & THIRD FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 125mm c/c.
- 3) Stirrups-3 - 2L#10mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 125mm c/c.
- 4) Beam Depth is inclusive of slab thickness.

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No.-SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR & THIRD FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/12.

REVISION NO.:

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

Sd./xxx 27.09.2024.
Chief Engineer- I



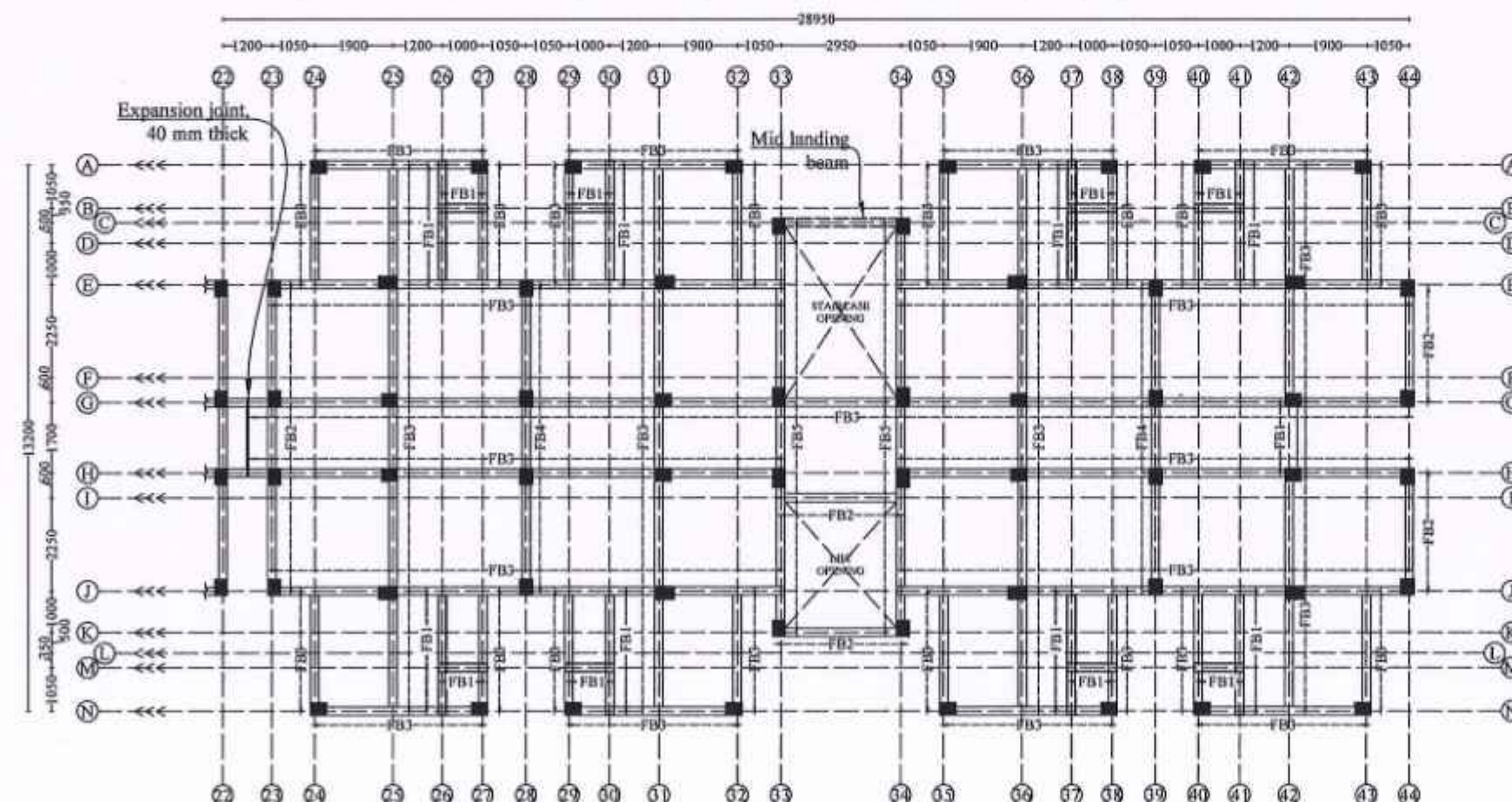
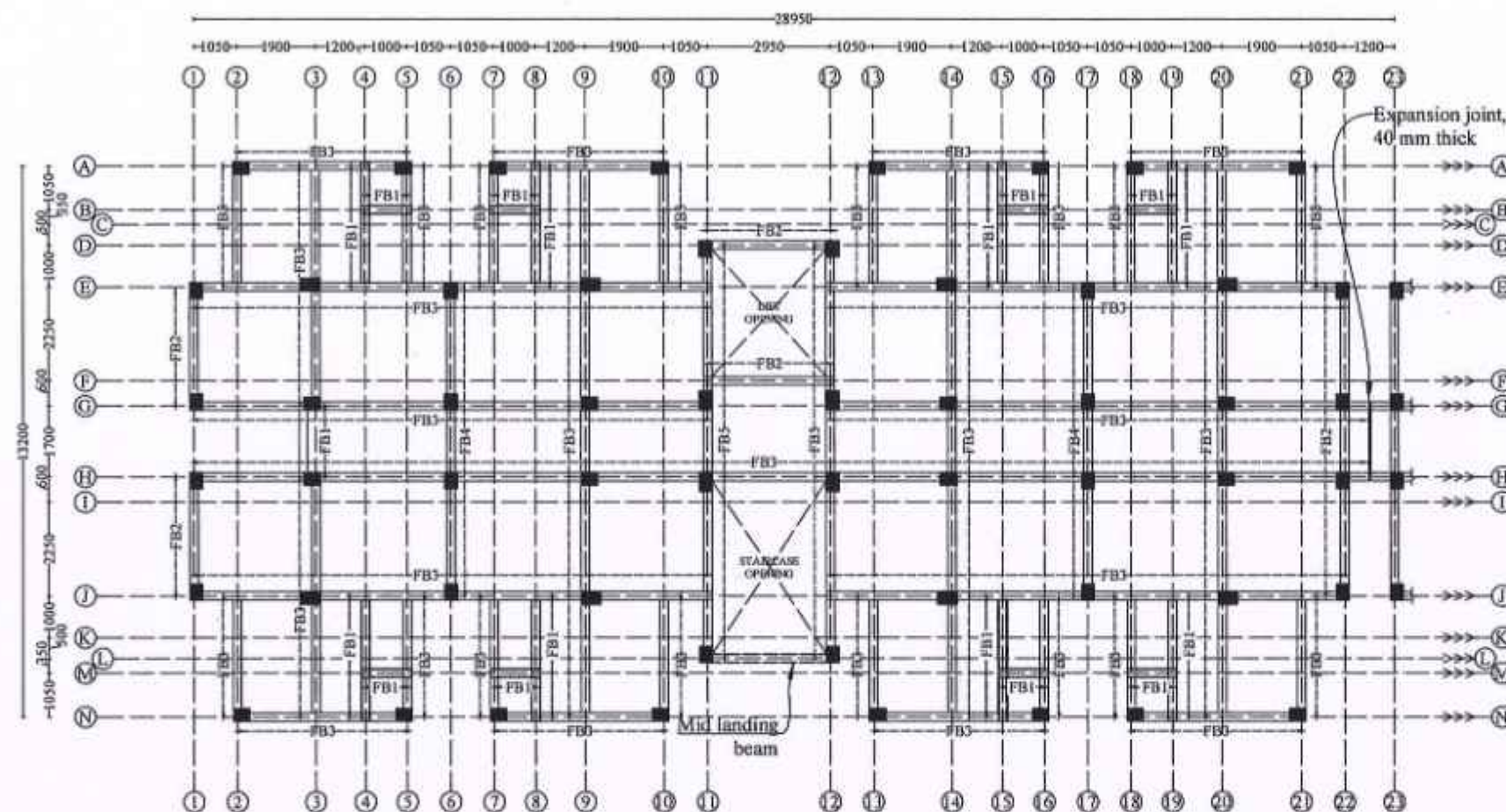
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

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11/10/2024
EXECUTIVE ENGINEER (A/E)

10/10/24

FOURTH FLOOR BEAM LAYOUT



Note:
For FOURTH FLOOR beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/14.

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11/10/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893.2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 30 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.-SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/13.

REVISION NO.:

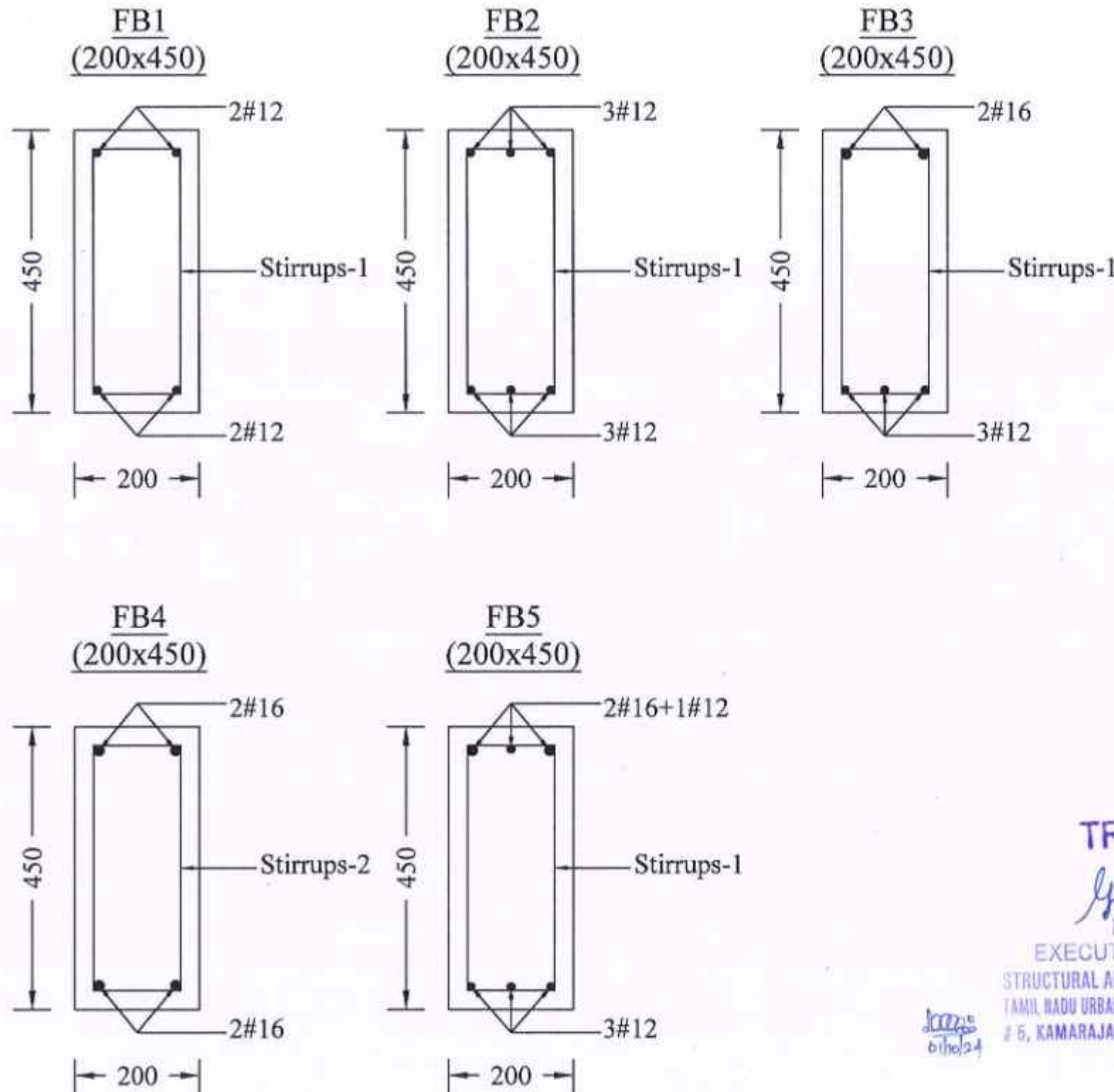
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I

Sd./xxx 27.09.2024
Chief Engineer- I



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

FOURTH FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Stirrups-2 - 2L#8mm Stirrups @ 100mm c/c for 900 mm length on all side near beam column junction and the rest at 150mm c/c.
- 3) Beam Depth is inclusive of slab thickness.

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
 - (a) Foundation - 50 mm
 - (b) Column - 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. The mix design of concrete should follow the circular issued vide, Circular No.3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.-SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FOURTH FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/14.

REVISION NO.:

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

Sd./xxx 27.09.2024,
Chief Engineer- I



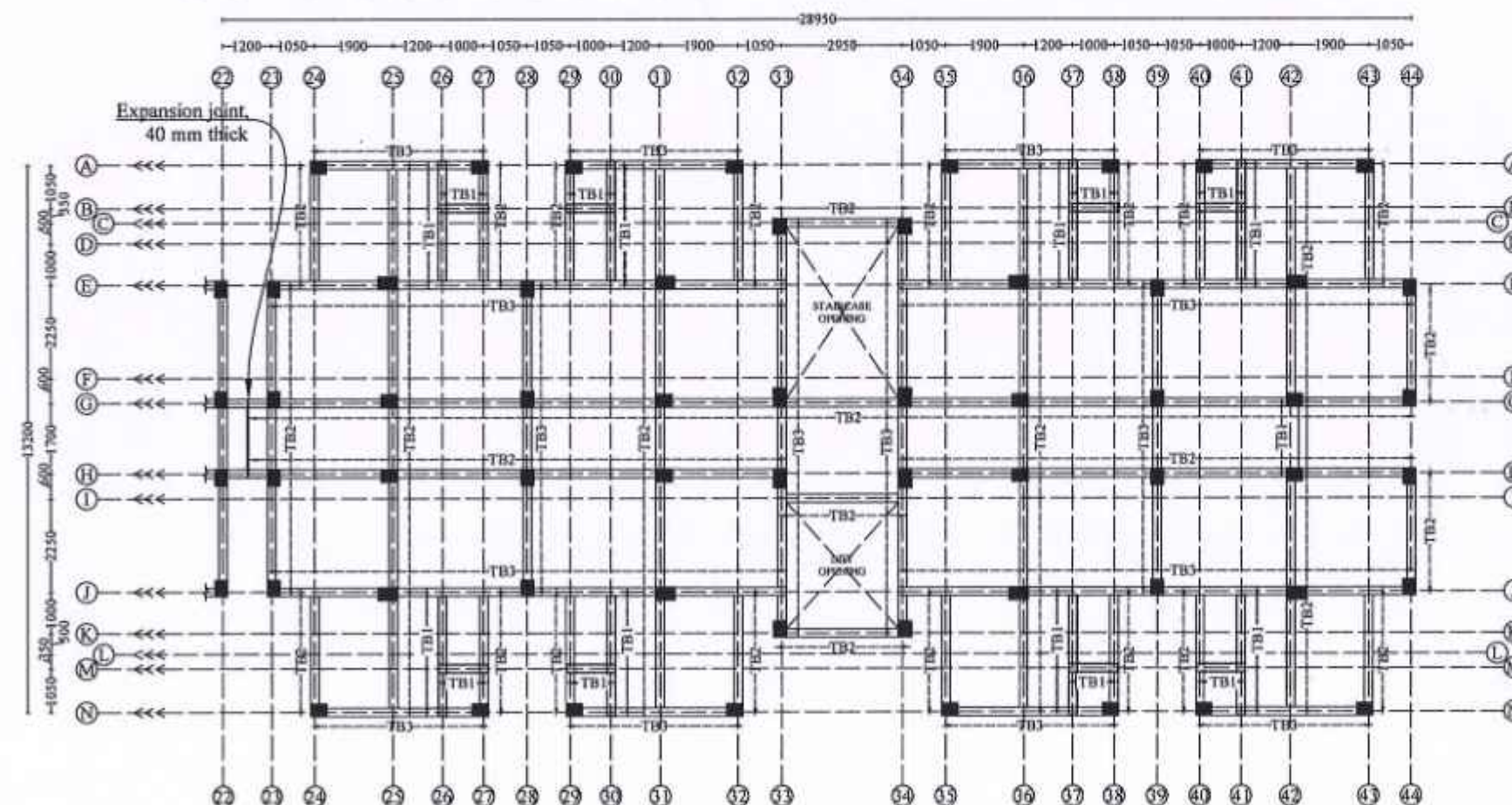
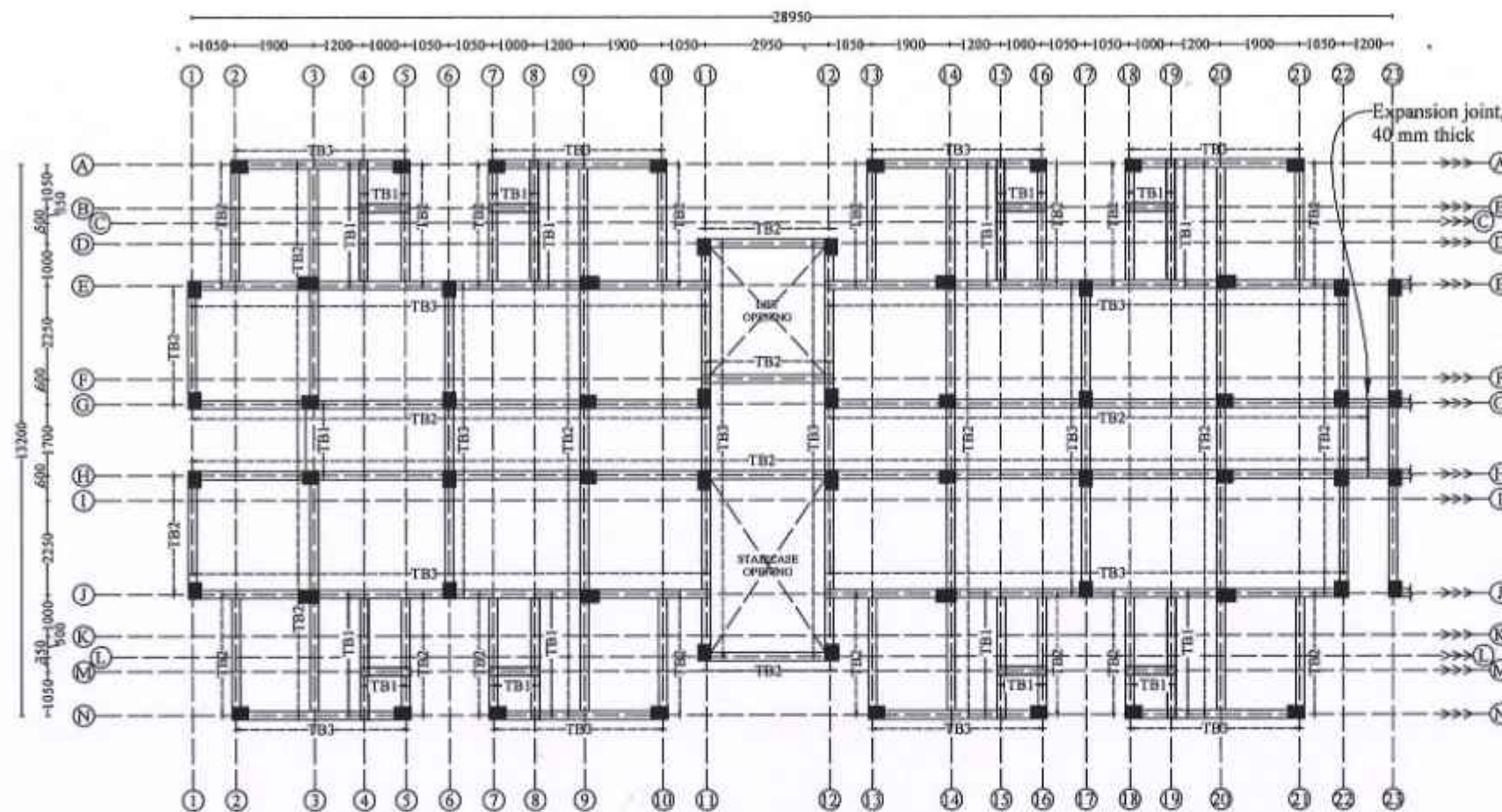
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI,
CHENNAI - 600 005.

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

1/10/2024
6/10/24

TERRACE FLOOR BEAM LAYOUT



Note:
For TERRACE FLOOR beam details refer DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/16.

NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 - Foundation - 50 mm
 - Column - 40 mm
 - Floor and roof beam - 30 mm
 - Slab - 25 mm
 - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt.09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt.31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut tiles to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same as a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No. SM&FE 217/CONSULTANCY/2020, Dt.27.02.2022 and Job.No. SM&FE 217(a)/CONSULTANCY/2022, Dt.15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR BEAM LAYOUT.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/15.

REVISION NO.:

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

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17/10/2024

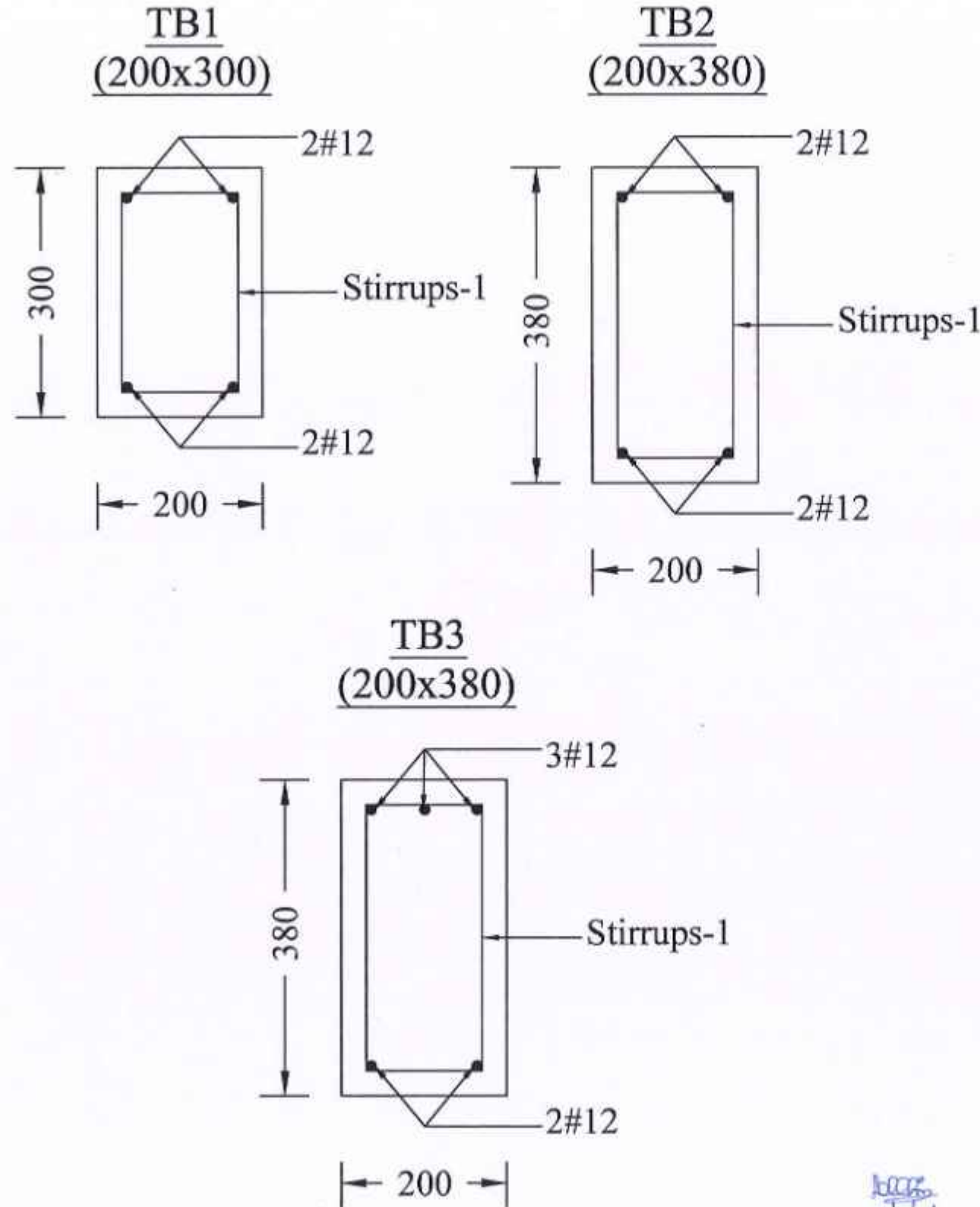
EXECUTIVE ENGINEER (A/E)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

Sd. XXXX 27.09.2024.
Chief Engineer - I



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

TERRACE FLOOR BEAM DETAILS



NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 75mm c/c for 800 mm length on all side near beam column junction and the rest at 150mm c/c.
- 2) Beam Depth is inclusive of slab thickness.

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. AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
7. Structure is designed for (PS+5) floors only.
8. Design of the structure carried out with Limit State Method.
9. Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
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 - (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. The mix design of concrete should follow the circular issued vide, Circular No.:3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No.AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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 at once for review.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No.:SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job.No.:SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/16.

REVISION NO.:

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

Sd./xxxx 27.09.2024.
Chief Engineer- I



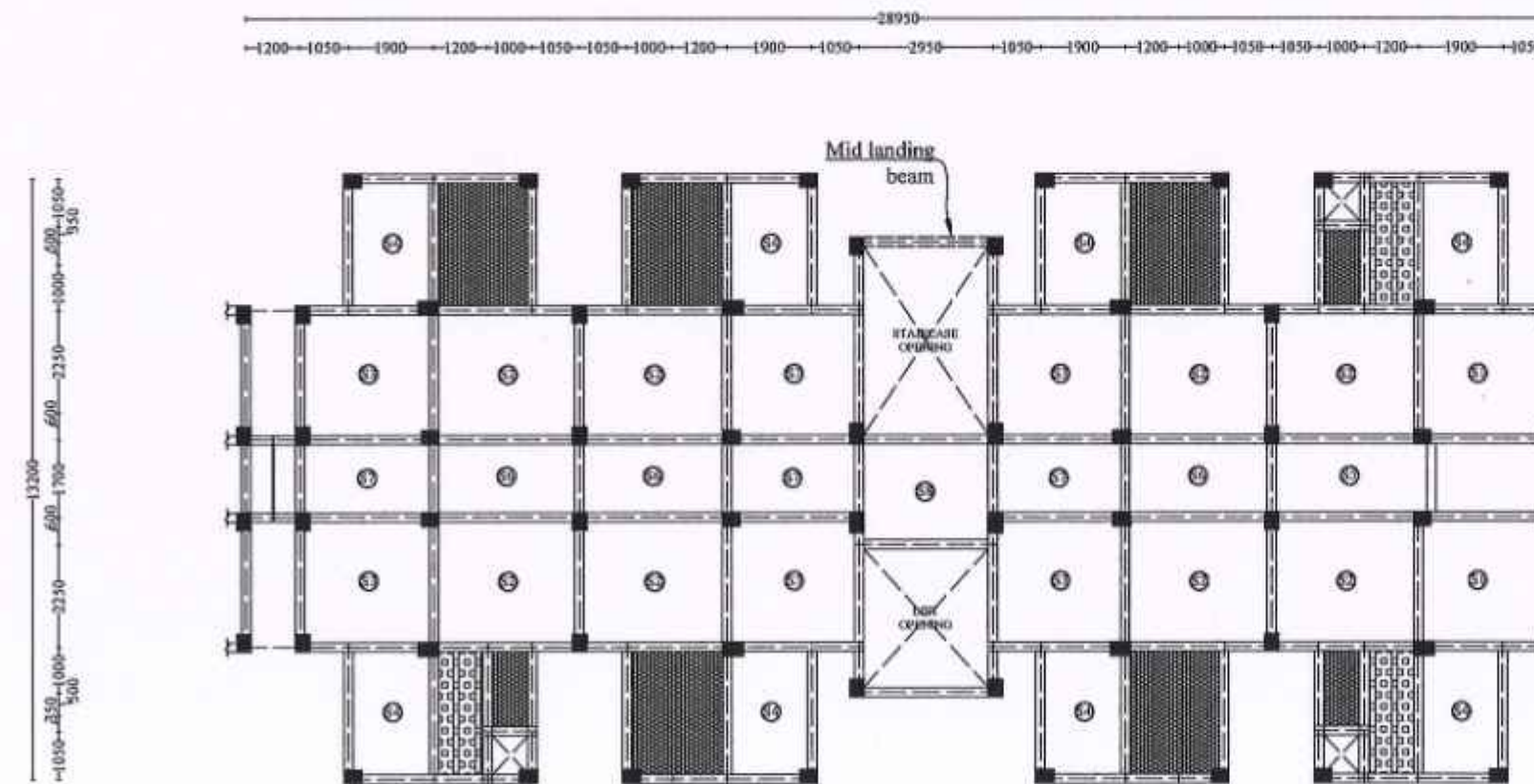
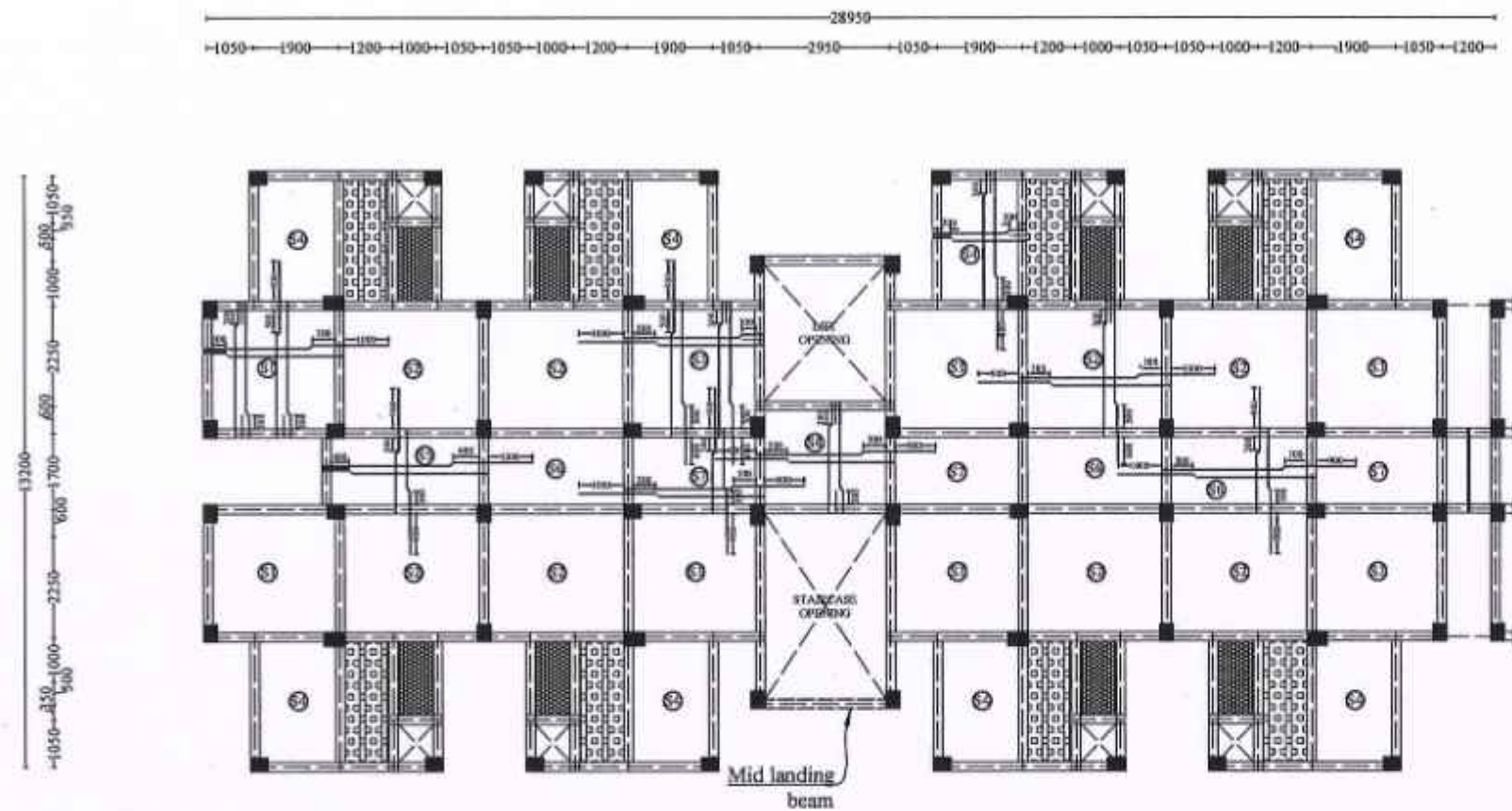
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

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11/10/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

10075
01/10/24

STILT FLOOR SLAB DETAILS



SLAB SUNKEN BY
200mm



SLAB SUNKEN BY
325mm

1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c

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1/10/2024

EXECUTIVE ENGINEER (A/c)

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

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
STILT FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/17.

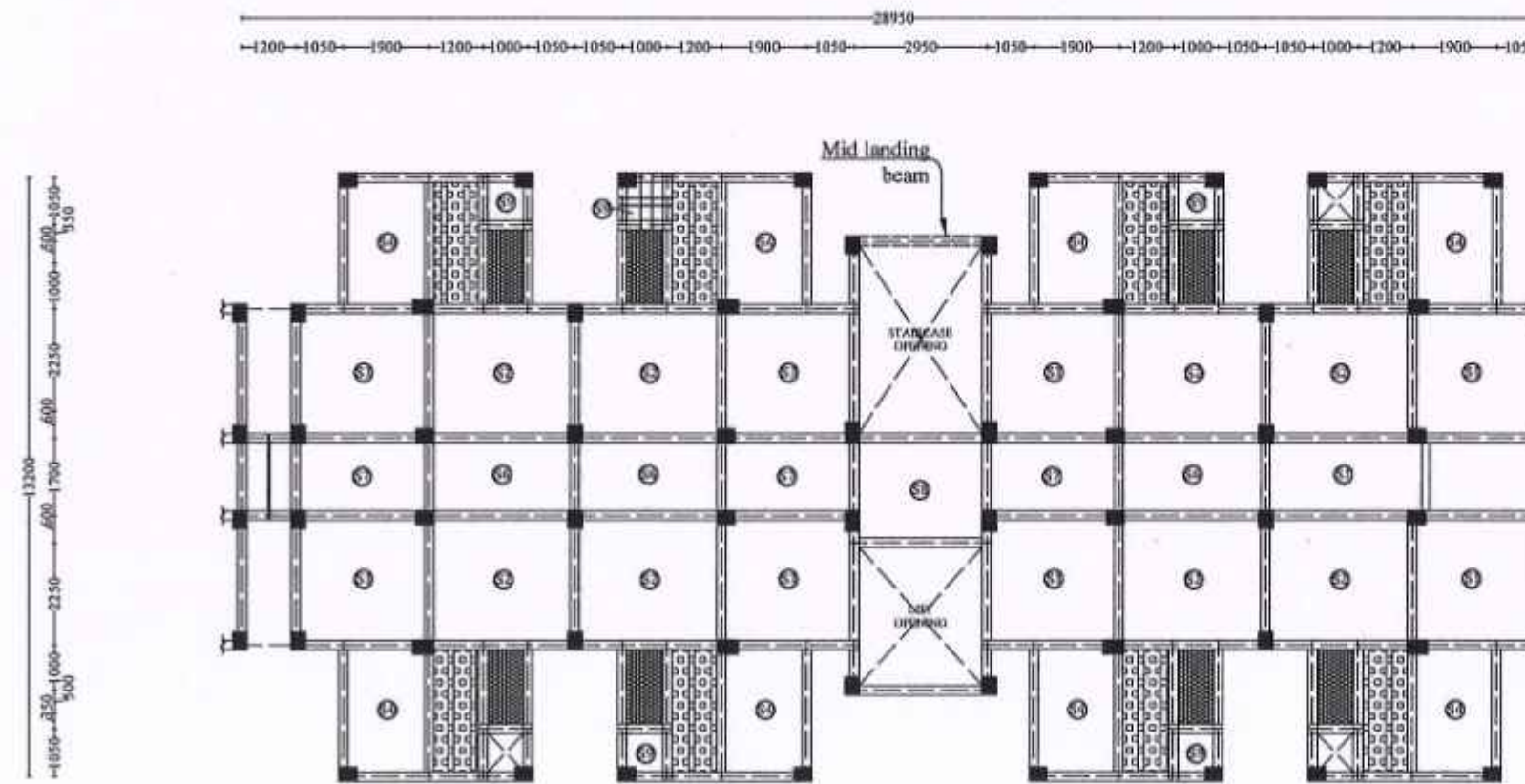
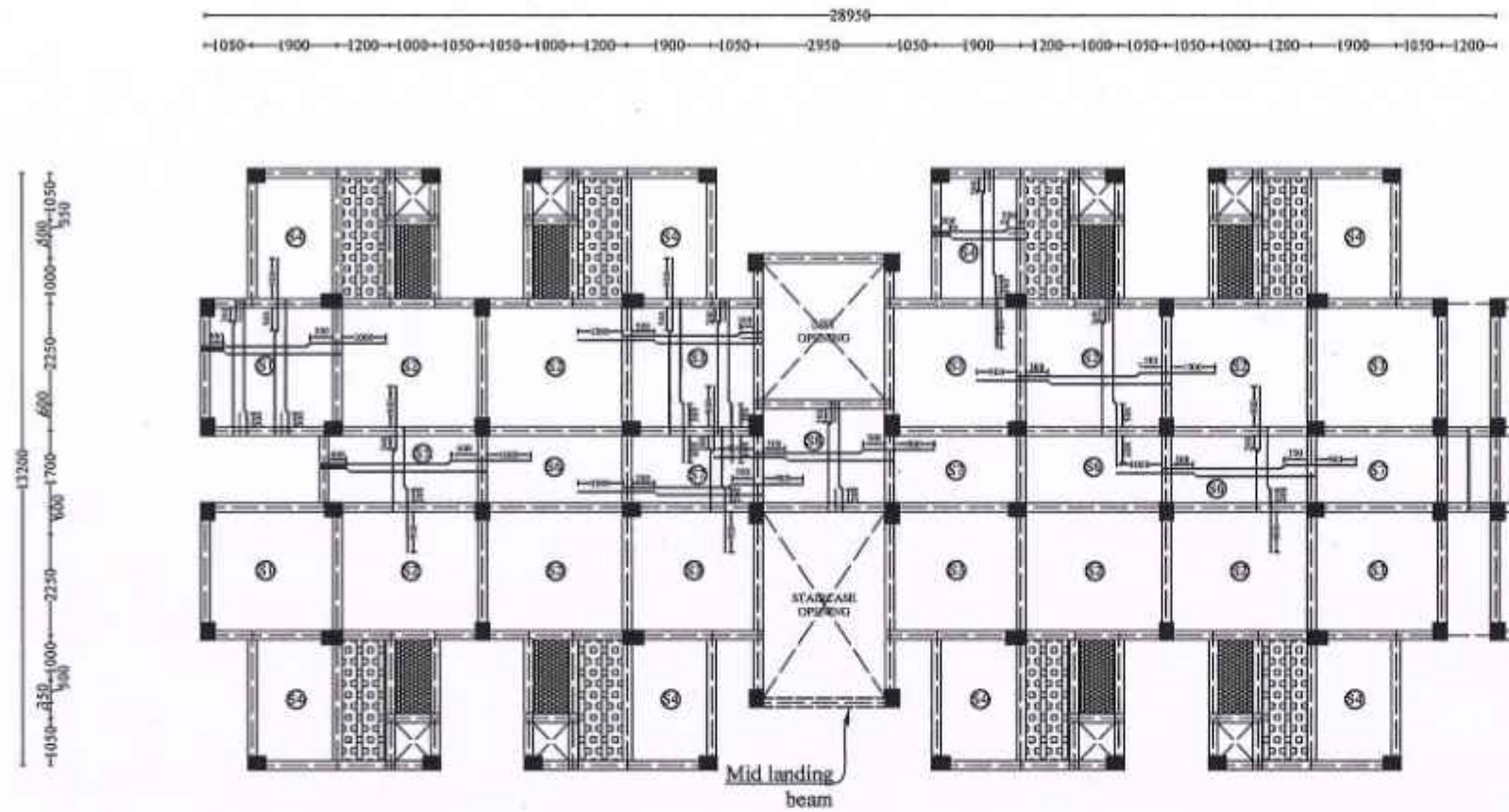
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Chief Engineer- I	



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

FIRST FLOOR SLAB DETAILS



SLAB SUNKEN BY
200mm



SLAB SUNKEN BY
325mm

1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c

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1/10/2024
EXECUTIVE ENGINEER (A/C)

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

1/10/24

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
FIRST FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/18.

REVISION NO.:

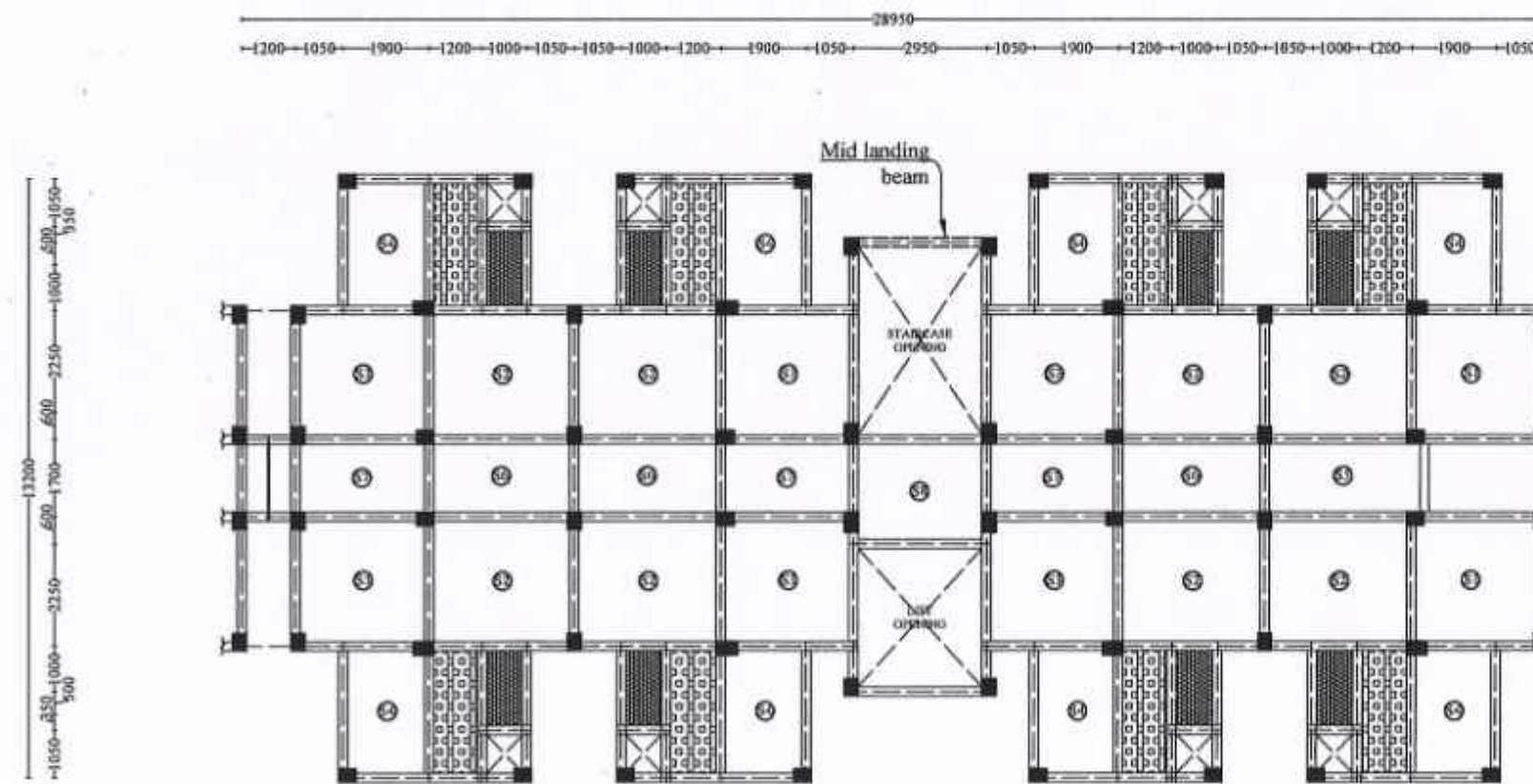
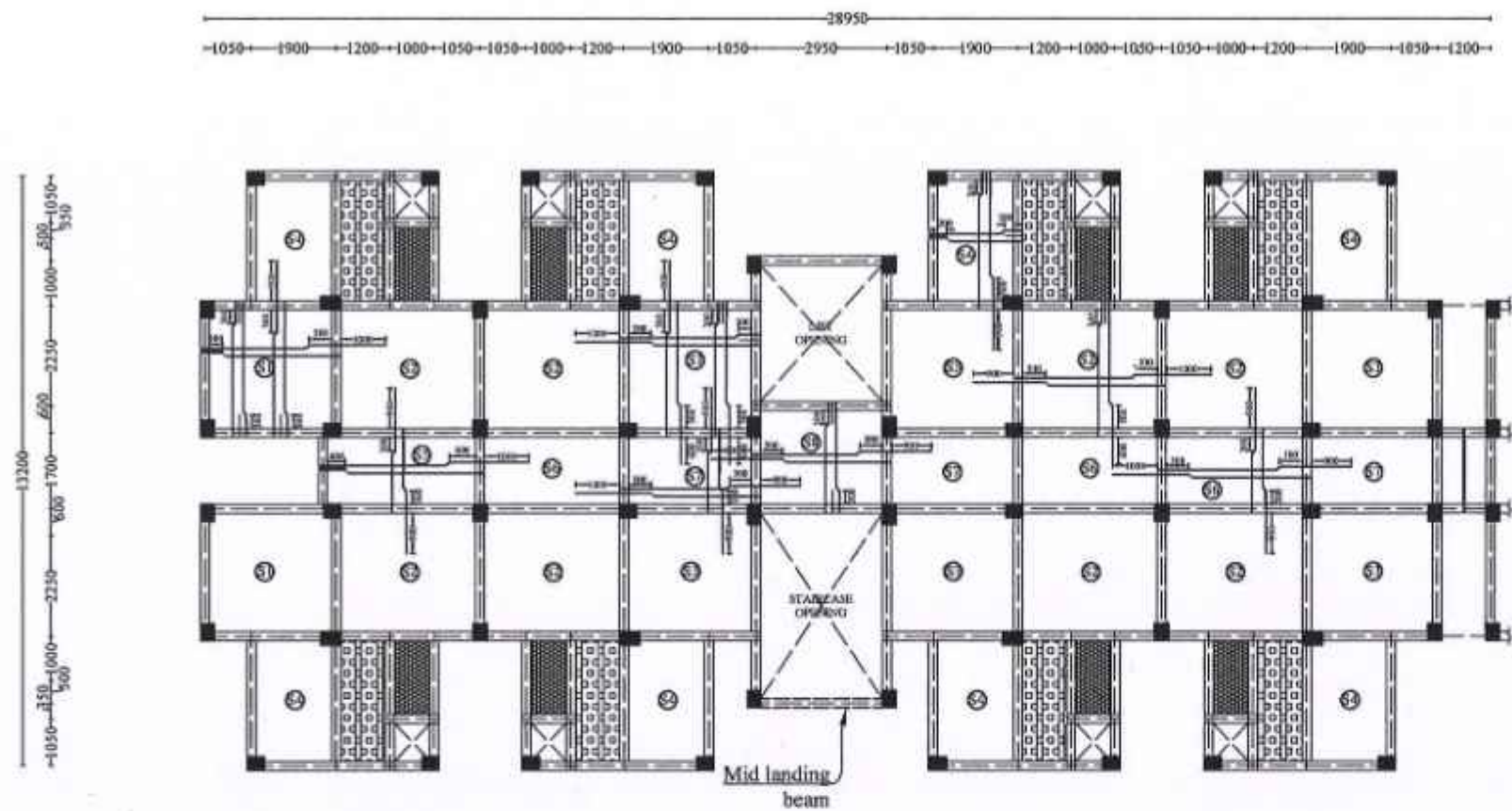
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I

Chief Engineer- I



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

SECOND FLOOR TO FOURTH FLOOR SLAB DETAILS



SLAB SUNKEN BY
200mm



SLAB SUNKEN BY
325mm

1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c

TRUE COPY

11/10/2024

EXECUTIVE ENGINEER (AK)

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

11/10/24

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
SECOND FLOOR TO FOURTH FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/19.

REVISION NO.:

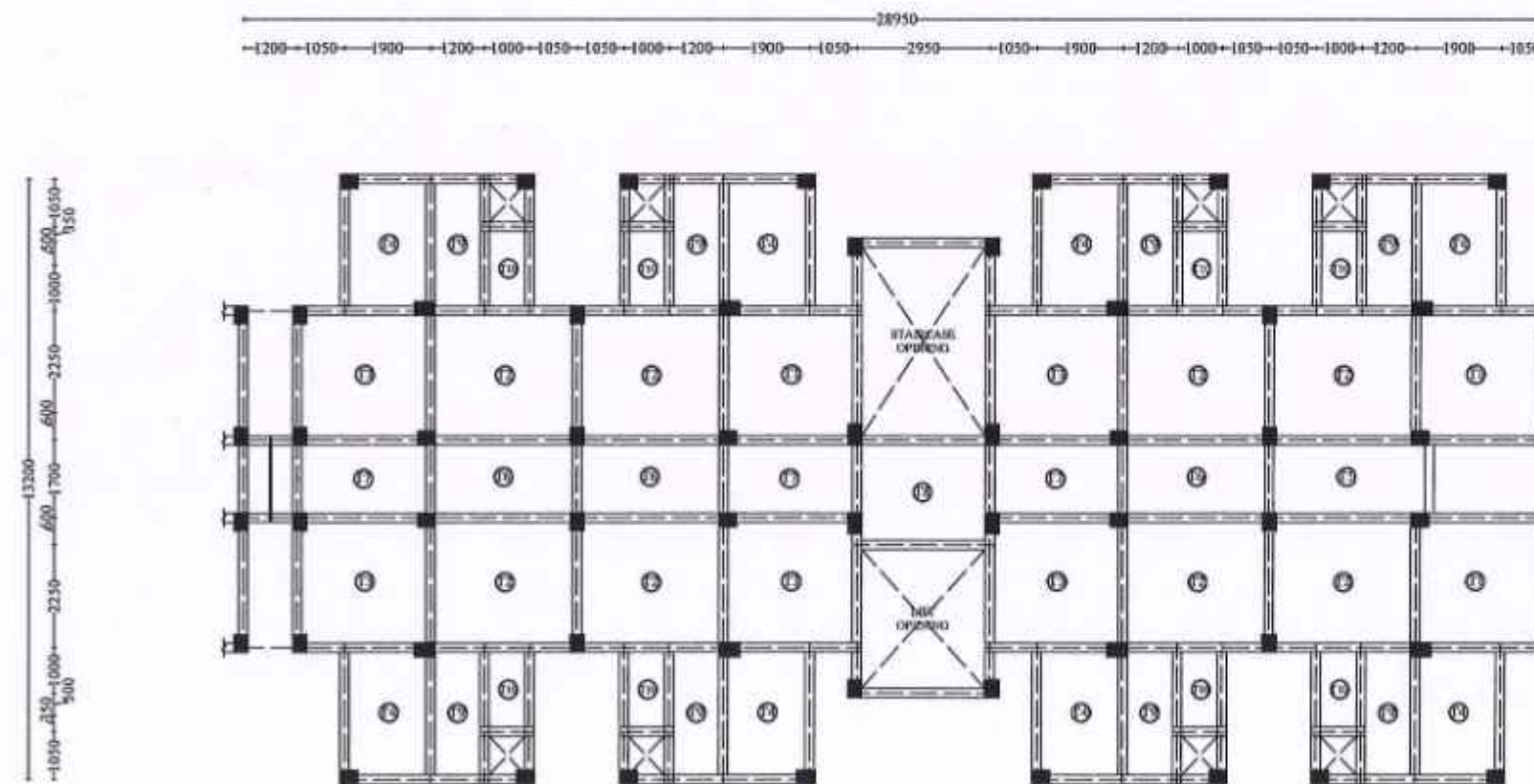
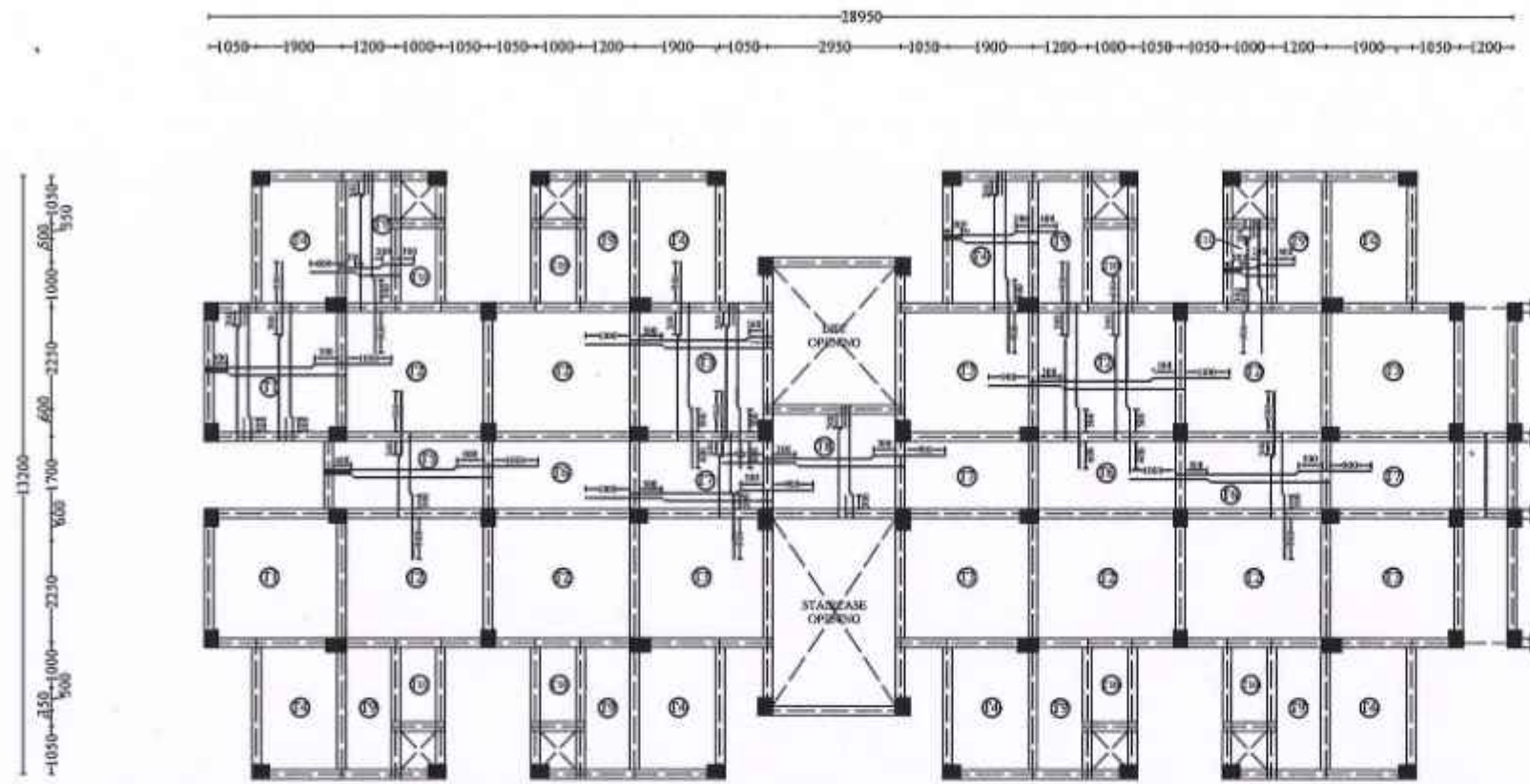
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I

Chief Engineer- I



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

TERRACE FLOOR SLAB DETAILS



1. SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c

TRUE COPY

1/10/2024
EXECUTIVE ENGINEER CA/C
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe550D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-----" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS
AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR
TALUK, GREATER CHENNAI CORPORATION.

TITLE:
TERRACE FLOOR SLAB DETAILS.

TYPE DESIGN NO.: 75/2022 (TYPE - C)

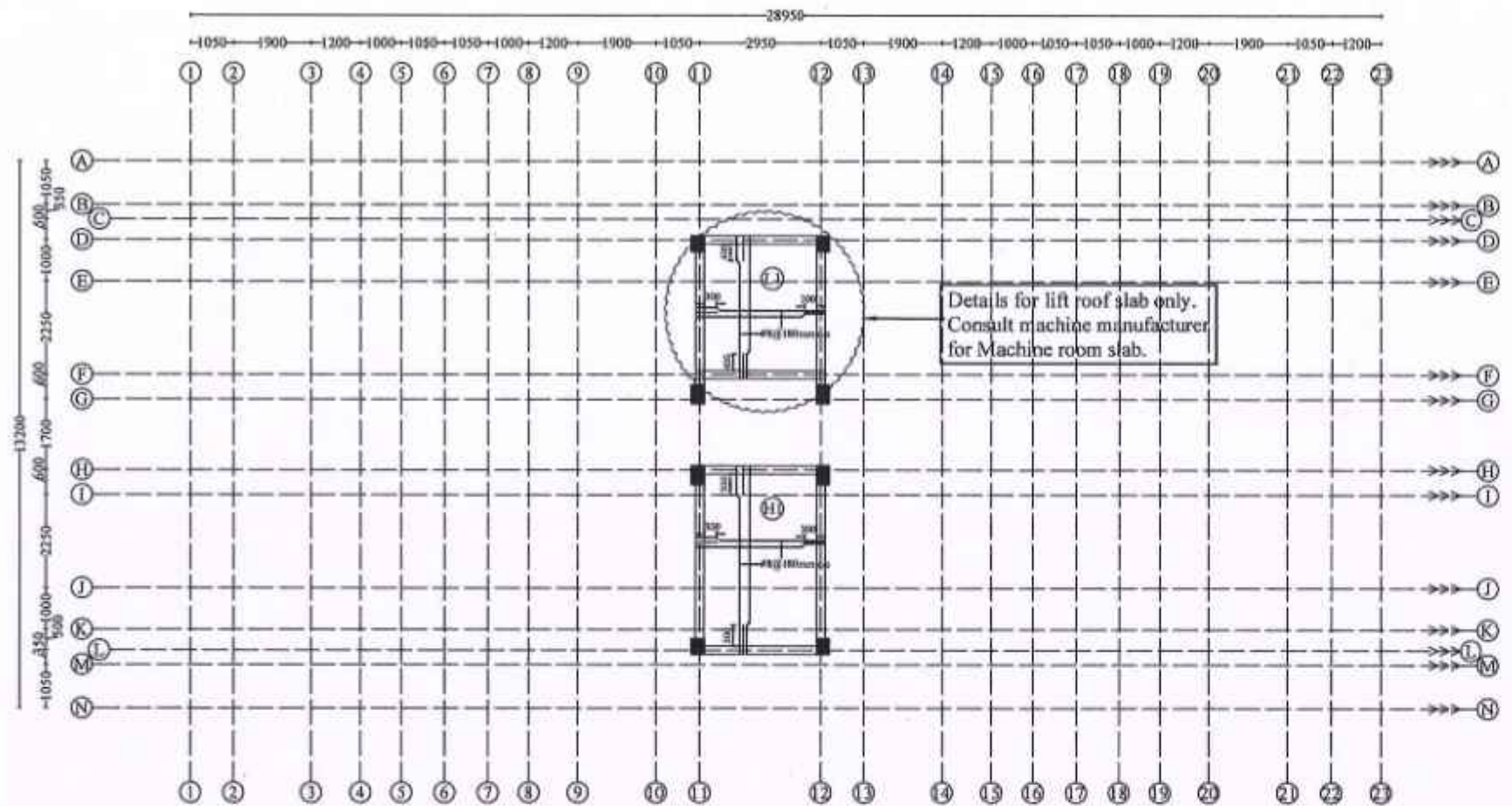
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REVISION NO.:

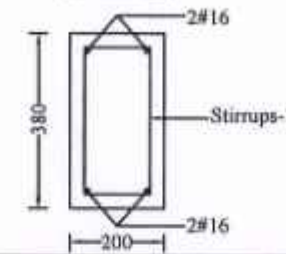
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - North I
Chief Engineer- I	

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

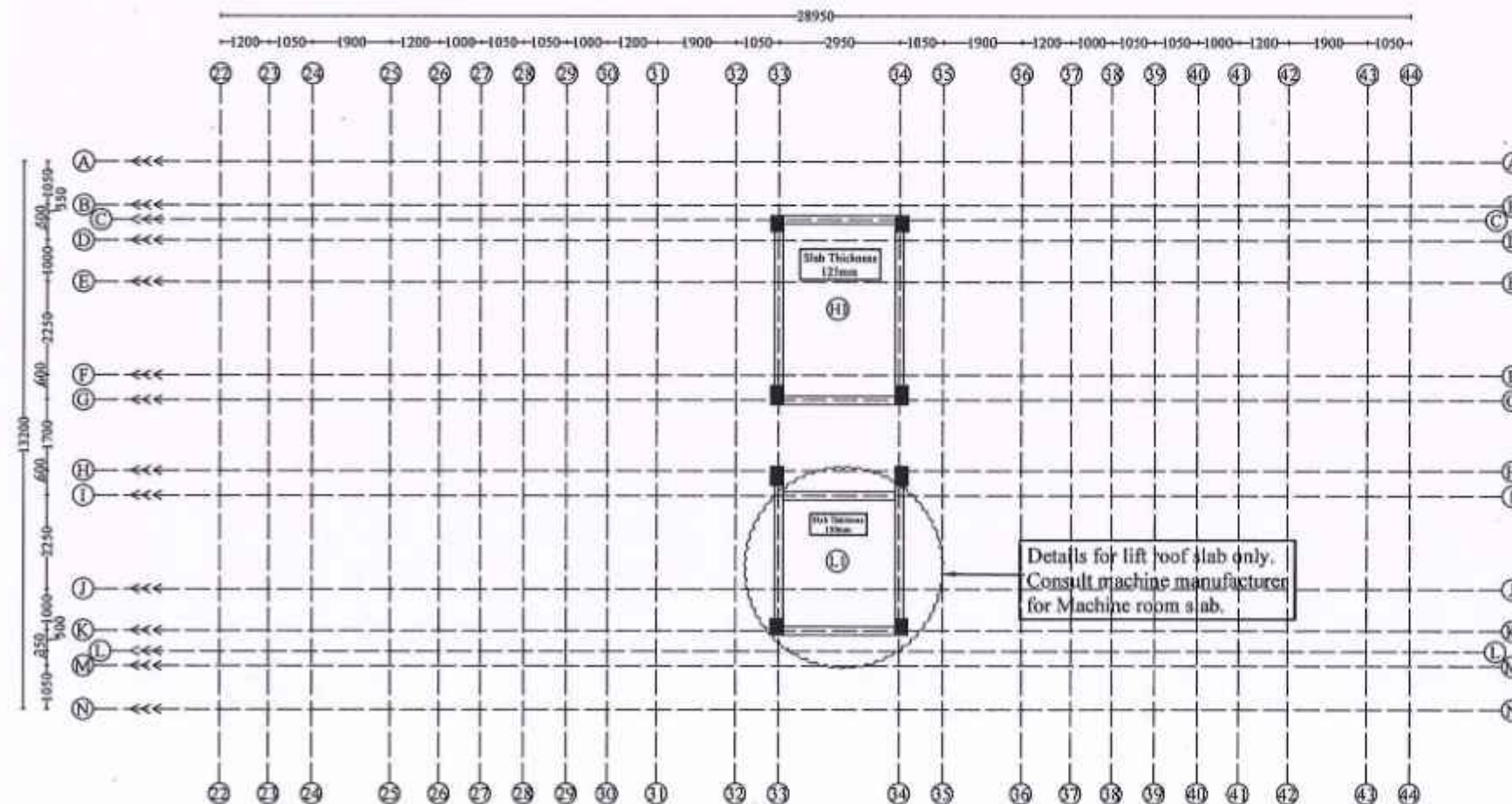
HEAD ROOM, LIFT ROOM BEAM LAYOUT & SLAB DETAILS



ALL BEAMS (200x380)



NOTE:
Stirrups-1 : 2 Legged # 8 mm stirrups at 100 mm c/c for 900 mm length on all sides near Beam - Column junctions and the rest at 150 mm c/c.



NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe550D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- AAC Bricks of density 650 Kg/m³ has been considered for masonry work in super structure and Fly ash Bricks has been considered for masonry work in sub structure.
- Structure is designed for (PS+5) floors only.
- Design of the structure carried out with Limit State Method.
- Raft foundation at a depth of 3.0 m from the existing ground level & bearing capacity at this level is 100 kN/sq.m. as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:

(a) Foundation	- 50 mm
(b) Column	- 40 mm
(c) Floor and roof beam	- 30 mm
(d) Slab	- 25 mm
(e) Water Tank Walls & Slab	- 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD. The mix design of concrete should follow the circular issued vide, Circular No. 3/19/SCB/17099/SQC/2018, Dt:09.05.2019 and also PWD/Technical Circular No. AEE/T10/33566/2017, Dt:31.03.2017 & 27.04.2017.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
- 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 stance for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The recommendations detailed in the soil investigation report done by Anna University, Chennai. Job. No. SM&FE 217/CONSULTANCY/2020, Dt:27.02.2022 and Job No. SM&FE 217(a)/CONSULTANCY/2022, Dt:15.12.2023 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF (PS+5) FLOORS 336 DWELLING UNITS AT THIRUVOTTIYUR VILLAGE STREET THIRUVOTTIYUR TALUK, GREATER CHENNAI CORPORATION.

TITLE:
HEAD ROOM, LIFT ROOM BEAM LAYOUT & SLAB DETAILS
TYPE DESIGN NO.: 75/2022 (TYPE - C)

DWG.NO.: TNUHDB/THIRUVOTTIYUR/TYPE-C/21.

REVISION NO.:

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

Sd. 27.09.2024.
Chief Engineer- I



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

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11/10/2024
EXECUTIVE ENGINEER (AK)

STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
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11/10/24