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Brigade Alitus @ Chennai

(Residential building at Chennai)

DESIGN BRIEF REPORT

Client :

BRIGADE
Building Positive Experiences

Brigade Enterprises Limited,
29th & 30th Floors,
World Trade Center, Brigade Gateway Campus,
26/1, Dr Rajkumar Road,
Malleswaram-Rajajinagar,
Bangalore-560 055, Karnataka,
India.

Architects :

Nataraj & Venkat Architects

18, 3rd Seaward road, Valmiki nagar, Thiruvanmiyur, Chennai 600041

Structural Consultants :

esignTree
Service Consultants Pvt Ltd

DesignTree Service Consultants Pvt Ltd

7, Laxmi Narasimha Complex
100ft Ring Road, 4th Phase, JP Nagar
Bangalore - 560 078

DesignTree Service Consultants Pvt Ltd
Bangalore

November 2024

ISSUE RECORD

PROJECT : **Brigade Altius, Residential Development @ Chennai**

TITLE : **Preliminary Design Brief Report**

DOCUMENT NO : **DTSC-SMP - DBR/Rev-R0/403-C**

1. STRUCTURAL

DATE	ISSUE	PREPARED	CHECKED	REVISION
22.04.2024	Preliminary Report	ARUNKUMAR SR	PRUTHVIRAJ	R0



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1.1 FOREWORD

1.1.1 - Description of Project

The Proposed Residential development consists of 3 Towers with 2 Basement + GF + 43 floors + Terrace. The following will explain briefly about the individual floors.

Floors	Details
Lower Basement	Car parking
Upper Basement	Car parking , Utilities & Services
Ground to 3rd floor	Car parking.
4th and 5th floor	Residential floors, Entrance Lobbies, Multipurpose Areas, Badminton courts, Squash court, Swimming Pools, Gymnasium, Billiards and other Indoor Play areas,.
6th to 43rd floor	Residential floors.
17th, 26th, 27th and 35th	Refuge, Domestic and Flushing water OHT.
Terrace	Space for lift machine room, overhead tank & services

1.1.2 - Objective of the Report.

The objective of the report is to provide and furnish complete details related to Project for structural design calculations and considerations.

1.1.3 - Scope of the Report.

The Structural Report covers design calculation with model analysis.

1.2 CODES, STANDARDS AND REFERENCES

Statutory Requirements:

The design of structural and other building services will comply with the following requirements:

- National Building Code
- The Building Regulations
- The Environmental Protection Act in liaison with the Environmental Agency.
- Fire prevention and detection in compliance with the local Fire Regulation.

DESIGN STANDARDS:

Specific applicable codes and standards will be identified and adopted in the design philosophies as appropriate to the structural elements. The latest editions of the Codes and Standards will be used in designs. All design work shall be based on Indian Standards and Codes with latest revision, with amendments if any, as on date.

Loads:

IS:875 -1987 (Part - 1, 2, 4 & 5) Code of Practice for design loads (other than earthquake) for Buildings and structure

IS:875 -2015 (Part - 3) Code of Practice for design loads (other than earthquake) for Buildings and structure

IS:1893-2016 (Part-01) Criteria for Earthquake Resistant Design of structure.

Foundations:

IS:1080-1997 Code of Practice for design and construction of shallow foundations on soils (other than raft, ring and shell)
IS:1904-1995 Code of Practice for design and construction of foundations in soils general requirement
IS:2950-1998 Code of Practice for design and construction of raft foundations
IS:2974-1998 Code of Practice for design and construction of machine foundations (All parts)
IS:8009-1998 Code of Practice for calculation of settlement of foundations (All parts)

RCC:

IS:456 -2000 Code of Practice for plain and reinforced concrete
IS:458 -1988 Specification for precast concrete pipes
IS:3370-2009 Code of Practice for concrete structures for the storage of liquids: (All parts)
IS:4326-1993 Code of Practice for earthquake resistant design and construction of buildings
IS:5525-1999 Recommendation for detailing of reinforced concrete works
IS:1786-2008 Specification for high strength deformed steel bars and wires for concrete reinforcement
IS:10262-1999 Recommended guidelines for concrete mix design
IS:1893-2016 (Part-01) Criteria for Earthquake Resistant Design of structure
IS:16700-2023 Criteria for structural safety of Tall Concrete Buildings

Structural steel:

IS:800 -2007 Code of Practice for general construction in steel
IS:802 -1995 Code of Practice for use of structural steel in overhead transmission line towers: (All parts)
IS:806 -1996 Code of Practice for use of steel tubes in general building construction
IS:808 -1989 Dimensions for hot rolled steel beam, column channel and angle section
IS:816 -1998 Code of Practice for use of metal arc welding for general construction in mild steel
IS:1161-1998 Steel tubes for structural purposes
IS:4000-1998 High Strength bolts in steel structures - Code of Practice
IS:7215-1995 Tolerances for fabrication of steel structures

Miscellaneous:

IS: 432(part 2)-1995 Specification for mild steel and medium tensile steel bars and hard-drawn steel wire for concrete reinforcement
IS: 6313(part II)-2001 Standards for anti-termite treatment
IS:1905-1998 Code of Practice for structural use of unreinforced masonry
IS:3067-1995 Code of Practice for general design details and preparatory works for damp proofing and water proofing of buildings
SP:6 -1998 Handbook for structural engineers (all parts)
SP:7 -2016 National Building Code of India(NBC)
SP:16-1999 Design Aids for reinforced concrete to IS:456-1978
SP:22-1982 Explanatory handbook on codes for earthquake engineering (IS:1982-1975 and IS:4326-1976)
SP:24-1983 Explanatory handbook on Indian Standard code of Practice for plain and reinforced concrete
SP:34-1987 Handbook of concrete reinforcement and detailing (SCIP)

Wherever appropriate Indian Regulation does not exist for any particular item, appropriate British standards/ACI standards will be used.

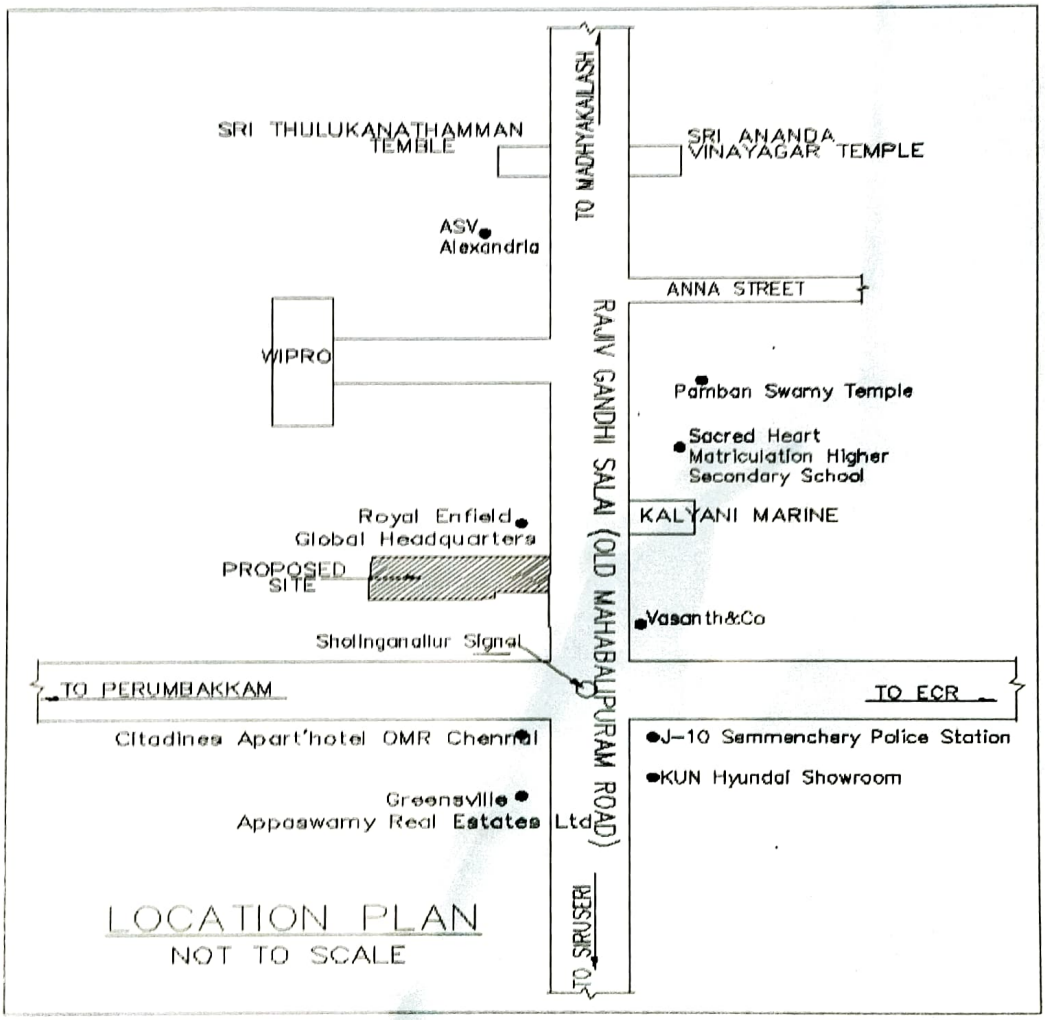
Material :

IS: 269 -1998 Specification for Ordinary, rapid hardening and low heat Portland cement.
IS: 455 -1995 Specification for Portland blast furnace slag cement.
IS: 1489-1991 Specification for Portland pozzolana cement
IS: 4031-1991 Method of physical tests for Portland cement.
IS: 383 - 1997 Specification for coarse and fine aggregates from natural sources for concrete.
IS: 516 - 1999 Method of test for strength of concrete.
IS: 1199-1999 Method of sampling and analysis of concrete.

IS: 1566-2000 Specification for plain hard drawn steel wire fabric for concrete reinforcement.
IS: 4990-1998 Specification for plywood for concrete shuttering works.
IS: 2645-1999 Specification for integral cement water proofing compounds.

1.3 - DESCRIPTION OF STRUCTURE:

1.3.1 - Location:





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Property Documentation & Workflow Tools

Forms & Templates, Document Generator, Document Translation, Dictionary

Vastu & Property Management Tools

Home Vastu Shastra, Plot Vastu Shastra, Property Management

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