

Exploring Form-Based Coding (For MG Road and Besant Nagar 2nd Avenue)

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Abstract: In India, towns and cities have a wide range of growth patterns and urban shapes, which are generally governed by Zoning and development control legislation. Now is the time to look into new alternatives for land development Regulation. FBC (Form Based Coding) can be used as an obligatory code, a hybrid code, or a parallel code in India. These codes can be implemented at the city, area/neighborhood, project, or site level.

Keywords: Form based coding, Development control regulations, Planning and zoning tool, high quality public realm.

1. Introduction

The purpose of this research article is to point out how in contrast to function that follows form, they are supported notions. It's because it emphasizes the importance of construction regulation instead of usage regulation." the looks and features of the general public realm, the spaces formed by buildings, are highlighted by Form-based design. It creates a formularized public realm by governing physical form first and foremost, with little Emphasis ashore use, through city or country regulations, with the goal of making a vibrant live, work, play environment and a High-quality public realm, also as economic, social, and environmental sustainability.

1) What are form-based codes? (FBC)

The following elements are typically found in FBC.

- **Regulating Plan:** The locations of various building form standards based on the physical nature of the region being are shown in this controlled area of the map. This plan or map of the regulated area depicts the locations where different Structures building form standards apply, as determined by the physical characteristics of the region being coded.
- **Building Form Standards:** Regulations govern the configuration, characteristics, and functions of buildings that define and shape the public realm. Minimum values are specified in addition to maximum values of measures for provision of various qualities in the regulating code in this context of establishing a public realm output as observed by various

- Stakeholders when the regulating plans are implemented.
- Public Space/Street Standards: Specifications for public realm elements including sidewalks, travel lanes, street trees, and street furniture are provided.
- Administration: An application and project review process that is well-defined
- Definitions: A glossary is used to verify that technical phrases are used correctly, and it may also include examples.
- Architectural Standards: Regulations govern the materials and quality of external architectural

2. Review of Literature

Table 1 Difference between Conventional Zoning and Form-Based Codes

S. No	Current Zoning/Development Control Regulations	Form - Based Codes
1	Focus on land use segregation as an organisational concept, with FAR as a criterion.	Focus on how development links to the local setting and community, as well as how it is based on the compatibility of uses.
2	A, broad-brush technique that can be applied throughout the city	At the district/local area level, a bottom-up strategy using area-specific codes in response to local context is used.
3	Excessive land consumption and automobile dependency are frequently encouraged, which is inefficient.	Encourages a diverse range of land uses, which reduces the need for substantial travel as part of one's daily routine. Efficient.
4	Rather of satisfying community needs, it focuses on what uses are not permitted.	It focuses on the assets of the community and what they demand.
5	Planning from a fragmented view - examines individual components (such as buildings, streets, and trees) independently.	Integrated 'Urban Design' approach looks at components as a whole and in relation to one another.

3. Review of Case Study

Ritchie Street, Chintadripet, Chennai, Tamil Nadu

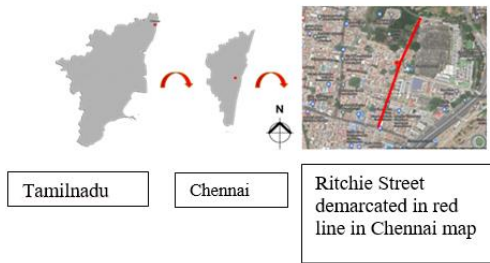


Fig.1. Map-Location Map of Ritchie Street

- Ritchie Street is the gray marketplace or unorganized buying hub for digital goods, mainly from china and Korea, in Chennai, India.
- The marketplace is focused in Ritchie Street and is unfold via many roads, all adjoining to Anna Salai (previously Mount Road).

A. The road is continually crowded, and little or no area is for motion of cars or pedestrians

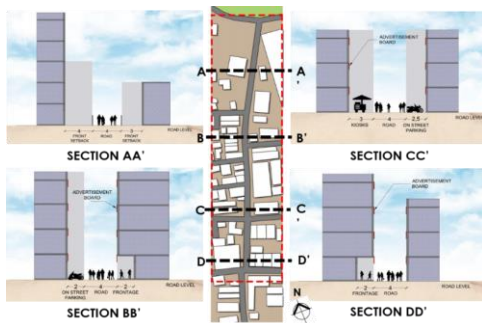


Fig. 2. Section of Ritchie Street

4. Methodology

A. Complete streets

Streets serve as the backbone of communities and account for a significant portion of public space in any Location. They serve as both vehicle and pedestrian corridors, as well as the community's principal public Areas and the layout of streets has a considerable impact on a place's urban character.



Fig. 3. Key plan of MG Road & Besant Nagar 2nd Avenue

1) Traffic and bicycle lanes

To maintain cyclist safety, bicycle lanes with a minimum width of 1.5 meters in each direction should be situated away from automobile lanes utilizing plant buffers or the curb edge.

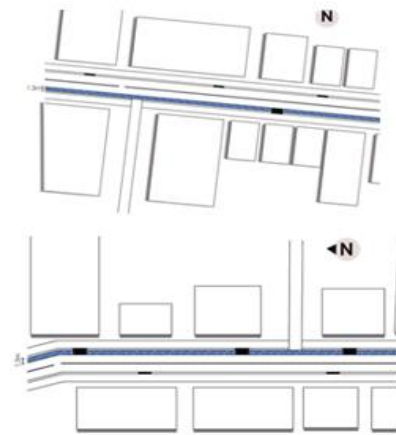


Fig. 4. Demarcation of Bicycle track for MG Road & Besant Nagar 2nd Avenue

2) Landscaping

Swales, hardscapes, and planters are tiny pieces that help to establish a buffer, increase the aesthetic. Quality of the space, and maintain an ecological balance.

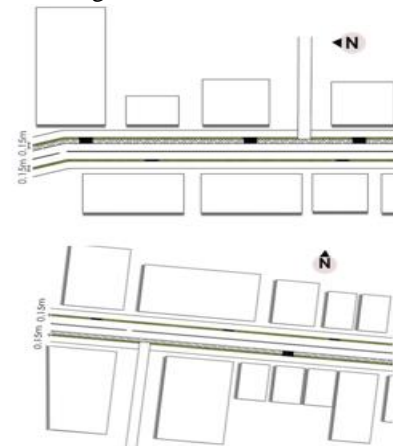


Fig. 5. Demarcation of Landscape strip for MG Road & Besant Nagar 2nd Avenue

3) Walk ways (sidewalks, footpaths)

The size and type of walkway can be selected based on the nature of the designated zone and the street typology, with a minimum width of 1.8m.

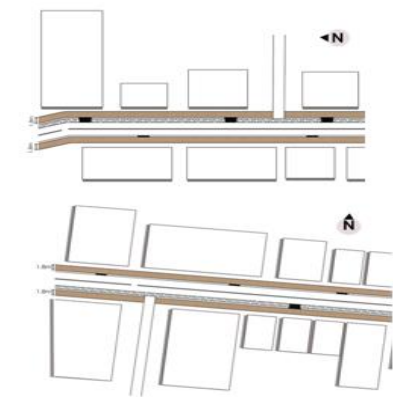


Fig. 6. Demarcation of Walkways for MG Road & Besant Nagar 2nd Avenue

4) Street furniture & lighting

These are all of the amenities and facilities that are offered to improve pedestrian and automobile safety and Walking

experiences. Lighting is one of the most important components for ensuring safety and, as a result, Encouraging social interaction on the streets.

5) *Universal access*

Universal access (access to users of all ages and abilities) is achieved by providing the appropriate set of features to assist in transitioning from one location to another. Ramps at property entrances, tabletop crossings to restrict speeds, tactile flooring, and other safety considerations are examples of these.

6) *Environmental and cultural inclusivity*

Every city has its own unique personality and characteristics, and historical and environmental factors play significant role in shaping this personality.

- Elliot's beach at Besant Nagar
- Elliot's beach, Theosophical society,
- Annai Vellankani church.

7) *Public space furniture*

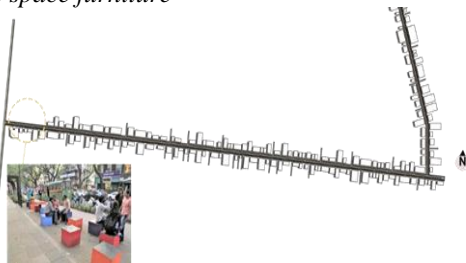


Fig. 7. Demarcation of usage of public space in MG Road

5. Site Background

1) Besant Nagar is a high-end, exclusive residential area in Chennai, India's south. The area is densely populated with Well-heeled residents and is home to a slew of upscale restaurants, cafes, and boutiques. Elliot's Beach, named for Edward Elliot, the former Governor of Madras, is a major attraction. It is scenic Place for the young and old to wander in the beach to a refreshing breeze from the Bay of Bengal.

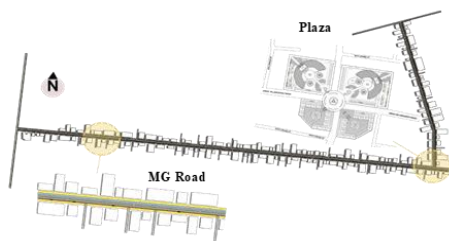


Fig.8: Master plan of MG Road & Besant Nagar 2nd Avenue



Fig. 9. Street plan of MG Road

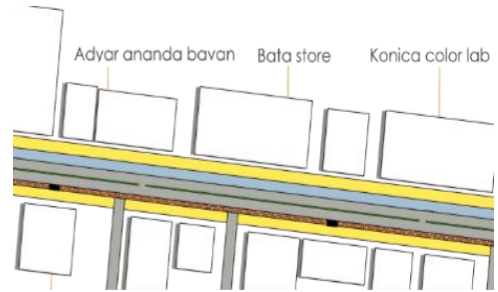


Fig. 10. Part plan of MG Road

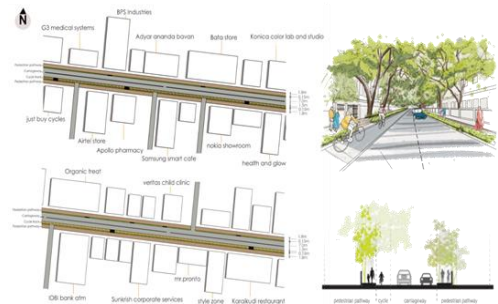


Fig. 11. Street plan of MG Road

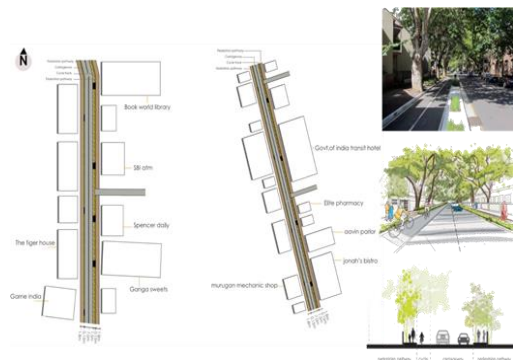


Fig. 12. Street plan of Besant Nagar 2nd Avenue

6. Design Considerations-Buildings

The following parameters were analyzed based on case study, and form-based standards

1. *Principal Buildings*: To maintain visual continuity with the back buildings, the initial layer of construction height along the main spine should be limited to 9m. Setbacks from the road's center line to the building's frontline should be 3 meters if vehicular access is limited to a continuous 1.5-meter-wide pedestrian route
2. *Inside Buildings*: Setbacks from the road's centerline to the building's frontline should be at least 3 meters. The structure should have aspects that draw people's attention as they pass by on the arterial highways.
3. *Neighboring Buildings*: In the event of stores sharing walls, a continuous verandah space can be maintained to provide a more active engagement with the public. If the height is up to 10m, the minimum space between two separated stores should be 3m to minimize crowded corridors.

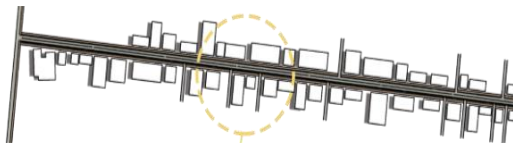


Fig. 13. Street plan of MG Road



Fig. 14. Street Elevation of MG Road



Fig. 15. Street Section of MG Road

7. Design Considerations-Open Spaces

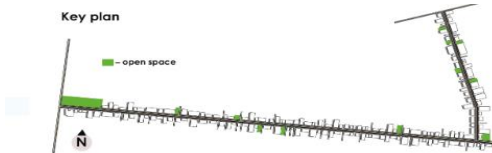


Fig.16: Demarcation of open spaces in MG Road

1) *Utilization of open spaces as Community garden*



Fig. 17. Views of Community garden in MG Road

2) *Utilization of open spaces as Lending Library*



Fig. 18. Views of Lending Library in MG Road

8. Findings

The initiative to design a form-based code for two streets: MG Road and Besant Nagar 2nd Avenue, rather than a more traditional zoning code, in order to fulfil the following specific goals: Build on the existing transportation infrastructure to encourage a highly integrated, multimodal system. Enhance Besant Nagar's distinct characteristics.

1. Preserve Besant Nagar's unique character.
2. Create transitions to outlying Neighborhoods that are acceptable.
3. Encourage favorable economic growth.

9. Conclusion

The implementation of any FBC venture (or any city venture) is not always the end, however a precedent for destiny initiatives. Each FBC venture designed and carried out with inside the town is a lot greater than truly a bodily entity. It triggers ability and units the tone for boom of the town. Each town at some stage in and put-up implementation of the FBC initiatives, have to set up a method for documenting the complete system in addition to the learnings. This will act as a factor of reference for different Initiatives and assist evolve techniques for development, particularly for destiny initiatives as a lot as it's Miles crucial to report the method of the carried out initiatives for destiny reference, it's also essential to Apprehend that various contexts and geographies of the vicinity form the actual ability of a success FBC Implementation.

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