Indian Journal of Transport Engineering (IJTE)
ISSN: 2582-9300 (Online), Volume-1 Issue-1, May 2021

Case Study of Urban City of India

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Abstract: ***The "City of Diamond: Surat" is looking to enhance the quality of life in its cities by making the cities livable places. But in urbanized Surat, lack of open spaces or public places, pose a block in developing as a smart city. The solution? Reclaiming the streets. The impression of street as gathering place and relaxation area has been revolving around since the dawn of ages. Apart from providing mobility, streets act as a connection between people and place will be understood with 'Link and Place' concept. This thesis highlights the importance of aesthetics, accessibility, safety and walkability, which needs to be considered during street design. The analytical study uses examples from around the world of applying the 'Link and Place' concept in order to develop the 'Complete street' approaches and recommendations at 'L.P.Savani Road', Adajan, Pal, West Zone of Surat. This study will try to create a model of 'Complete Street' for Indian streetscapes, where the streets serve a multipurpose network focusing on its activeness and inclusiveness; With observational surveys and design tools.***

Keywords: ***Complete Urban Street, Link and Place, Quality of life, Human-centered design, Walkable communities***

I. INTRODUCTION

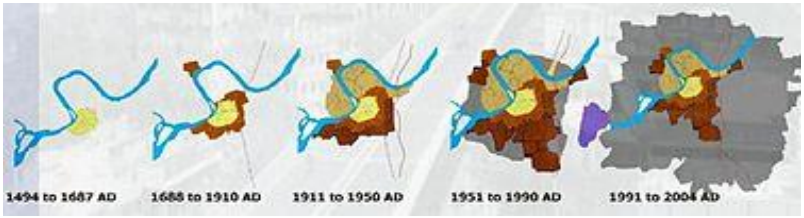
Streets are the reflection of every city's personality and impression. The pattern of the street network adds to the definition of the city and it also makes each city unique. It is also considered as an essential need in day to day life because "the one public service we all use every day is the streets where we live". Streets are an important element of the city and must cater variety of functions.

Jane Jacob said "Think of the city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting; if streets look dull, the city looks dull."

Surat's Growth as a City

Surat, renowned as a diamond processing and trading hub in Gujarat, would be the world's fastest growing city in the 2019-35 periods, according to a global economic research report. **Surat** will be the world's fastest **growing city** from 2019 to 2035, according to a study conducted by Economic Times. The **city** registered an annualized GDP **growth** rate of 11.5% over the seven fiscal years between 2001 and 2008.

Surat was awarded "best **city**" by the Annual Survey of India's **City**-Systems (ASICS) in 2013.



II. METHODS

Results

Design Considerations

- The street layout can revolve around promoting walkable and Cyclable route. This will require a planned network of highly connected roads. Focus can be placed on parking and management plans.
- An easy transition between street and road need to be designed. This transition zone can be treated by changed surface material, narrowing of carriageways and plantation of large trees.
- Street can have differential surface treatments for ease of use and for further highlighting traffic flow and importance of a place. This will also help in improving mobility of differently abled.
- Principal of design can focus of making street more legible for users. This can be achieved by use of 'Link & Place' concept that is easily recognized by people.
- Balanced approach to design self-regulating streets that not only help in controlling both vehicular and pedestrian traffic, but also maintains the ambience of place and makes transition a better experience.
- Activated street edges can help in providing passive surveillance of place. These can be achieved by providing various activities such as controlled street markets, plantations of appropriate size, user friendly and aesthetically sound street furniture.
- Integrated approach to design with detailed emphasis on various components of street such as use of footways, verges, sitting, lighting, cycle parking etc. accounts for easy usability.

Although planners are trying to include essential components while redesigning streets, it is important to have an overall plan so that planning can take place in a coordinated manner.

Manuscript received on 06 May 2021 | Revised Manuscript received on 09 May 2021 | Manuscript Accepted on 15 May 2021 | Manuscript published on 30 May 2021.

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There is also a need to understand current demands of users and provide solutions that will take care of user needs in future ensured by forecasting future trends.

Technology Advances

With coming up of technological advances, new and integrated street furniture can be developed which were either not required in past or wasn't possible because of technological constraints. This furniture in integration with minimum energy consuming utilities will help in development of efficient streets. Smart travel services facilitating sustainable travel patterns and environmental monitoring techniques together will contribute in designing streets that are at par with requirements.

Analysis of future street strategies and their applicability at 'L. P. Savani Road', Surat are as under:

No.	Future Street Strategies	Applicability in Surat
1	Multi modal	Easy Identification & access to public
2	Safety	1. Integrated CCTV's 2. Multifunctional street 3. Balancing the user need with a self-regulating environment
3	Street Management	1. Creation of walkable, Cyclable and public transport oriented communities 2. Signage and line marking for self-guided regulations
4	Aesthetics	1. Planned transition zones 2. Gateways demarcate the movement from one area to another, also they help in traffic calming 3. Sensible streetscapes
5	Universal Accessibility	1. Compact and connected neighborhood with emphasis on street pattern ensures compact development.

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