Transit Oriented Development

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Abstract- *Transit Oriented Development is the exciting fast-growing trend in creating vibrant, liveable, sustainable communities. Also known as TOD, is the creation of compact, walk able, pedestrian-oriented, mixed-use communities centred around high train system. This makes it possible to live a lower- stress life without complete dependence on a car for mobility and survival.*

Transit oriented development is regional planning, city revitalization, suburban renewal, and walk able neighbourhoods combined. TOD is rapidly sweeping the nation with the creation of exciting people places in city after city. The public has embraced the concept across the nation as the most desirable places to live, work, and play. Real estate developers have quickly followed to meet the high demand for quality urban places served by rail systems.

Transit oriented development is also a major solution to the serious and growing problems of climate change and global energy security by creating dense, walk able communities that greatly reduce the need for driving and energy consumption. This type of living arrangement can reduce driving by up to 85%.

Keywords- City revitalization, Regional planning, Suburban renewal, Transit oriented development.

I. INTRODUCTION

Transit Oriented Development (TOD) is a creation of compact, walk able, pedestrian-oriented, mixed use communities cantered around high quality train systems. It makes possible to live a lower stress life without complete dependence on car for mobility and survival and by using public transportation more. The interest in urban Design and the current discussing issue is about the raising urban density and pollution created in urban areas, thus it is a solution for these issues which attracted to the topic.

AIM:

The main aim is to analyze and take measures on how a city can be changed in being a complete transit Oriented.

SCOPE OF THE TOPIC:

Thus, Transit Oriented Development is been practical in other countries. But India is only in bring developing stage of this not yet developed in which this TOD measure is most needed for India due to its increasing urban density. So, my sim is to taking measures on India being a complete transit orient density.

LIMITATIONS:

The submission will be limited to the following:-

- Brief explanation of all India TOD will done.
- Study will only be bases on one or two two examples.
- Detail Diagrams will only be shown briefly.

METHADOLOGY:

The approach starts with the literature survey and study followed by developing tools that can help me in my research methodology.

The Literature survey includes an initial reading from library sources like books, journals and the internet

Paper 1 review – study of transit-oriented development and a brief note about upcoming TOD development in India.

Reconciliation of data and formulating a conclusion.

II. FACTORS DRIVING THE TREND TOWARD TOD

- Rapidly growing, mind-numbing traffic congestion nation-wide.
- Growing distaste for suburbia and fry-pit strip development.
- Growing desire for quality urban lifestyle.
- Growing desire for more walkable urban lifestyles away from traffic

"Traffic congestion has increased so much in virtually every metropolitan area that two-hour commutes now

are routine. Attempts to alleviate the problem by constructing more highways almost always have led to more sprawls and, eventually, more congestion." -- Jim Miara.

Fig - 1

III. COMPONENTS OF TRANSIT ORIENTED DEVELOPMENT

- Walkable design with pedestrian as the highest priority.
- Train station as prominent feature of town centre.
- Public square fronting train station.
- A regional node containing a mixture of uses in close proximity (office, residential, retail, civic).
- High density, walkable district within 10-minute walk circle surrounding train station.
- Collector support transit systems including streetcar, light rail, and buses, etc.
- Designed to include the easy use of bicycles and scooters as daily support transport.
- Large ride-in bicycle parking areas within stations.
- Bike share rental system and bikeway network integrated into stations.
- Reduced and managed parking inside 10-minute walk circle around town centre / train station.
- Specialized retail at stations serving commuters and locals including cafes, grocery, dry cleaners.

Fig – 2

BENEFITS OF TOD

- Higher quality of life with better places to live, work, and play.
- Greater mobility with ease of moving around.
- Increased transit ridership.
- Reduced traffic congestion, car accidents and injuries.
- Reduced household spending on transportation, resulting in more affordable housing.
- Higher, more stable property values.
- Increased foot traffic and customers for area businesses.
- Greatly reduced dependence on foreign oil, reduced pollution and environmental damage.
- Transit investment has double the economic benefit to a city than does highway investment.
- Transit can enable a city to use market forces to increase densities near stations, where most services are located, thus creating more efficient sub centres and minimizing sprawl.
- Transit enables a city to be more corridor-oriented, making it easier to provide infrastructure.
- Transit enhances the overall economic efficiency of a city; denser cities with less car use more transit use spend a lower proportion of their gross regional product or wealth on passenger transportation. – From Sustainability and Cities, Newman &Ken worthy.

IV. WHAT IS COMPLETE STREET?

Complete street for Pedestrians –

1. Safety:

Lower motor vehicle speeds

- Narrower lane widths
- Reduced turning radius
- Traffic calming measures

2. Less exposure to conflicts:

- Dedicated space
- Shorter crossing distance
- Improved sight lines and visibility
- Crossing island
- Appropriate signal timing and crossing treatment

3. Convenience:

Comfortable and inviting spaces

- Appropriate sidewalk widths for pedestrian volumes.
- Crossing that reflects pedestrian desire line.
- Transparent store fronts
- Street trees
- Amenities such as benches, recycling and public art, street cafes, etc.

4. Frequent opportunities to cross:

- Pre-times pedestrian signals
- Responsive pushbuttons

COMPLETE STREET:

Fig - 3

- Pedestrian Countdown Signals
- Crosswalk Markings
- Landscape Buffer
- Street Trees
- Bicycle Sharrows
- Bicycle Lane Safely Located
- Bicycle Intersection Design
- Bus and Service Vehicle Pull-Out Lanes
- Omni-directional Crosswalk (Barnes Dance)

V. CONCLUSION

This project discusses the need for an evaluation of Indian attempt sat producing TOD. It traces the advent of TOD in India and its progress over the year. It presents a comprehensive review of literature on TOD and identifies good practices. The current debates on TOD in India are presented as being cantered on the use of land as a financing mechanism for development. TOD plans in Delhi, Ahmadabad and are evaluated. While the right keywords are used in most TOD plans, not much is done to ensure the right mix of lands use and built form.

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