
IMPORTANCE AND NEED OF WALK ABLE COMMUNITIES NAGPUR AS CASE STUDY

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Abstract: Walking was the main way to travel before cars and bicycles were available due to mass production. It was the only way to get from place to place for much of human history. In the early 1900, economic growth and industrial revolution led to increased automobile manufacturing. Cars and two wheelers were also becoming more affordable, leading to the rise of the automobile industry. The detrimental effects of automobile emissions soon led to public concern over pollution. Alternatives, including improved public transportation and walking infrastructure, have attracted more attention from planners and policymakers. Walkability is a measure of how friendly an area is to walking. Walkability has health, environmental, and economic benefits. It is an important concept in sustainable urban design. Walkability include the presence or absence and quality of footpaths, sidewalks or other pedestrian rights-of-way, traffic and road conditions, land use patterns, building accessibility, and safety, among others. India has become one of the most crowded countries in world and thus concept of walkability has become importance issue to think and act upon.

Walkability is the cornerstone and key to an urban area's efficient ground transportation. Every trip begins and ends with walking. Walking remains the cheapest form of transport for all people, and the construction of a walkable community in India will provide the most affordable transportation system any community can plan, design, construct and maintain. Nagpur city is developing in TOD (Transit Oriented Development) i.e Metro Project where maximum uses of Public transportation and minimize the use of private vehicles. To promote this type of development need to provide walkability & feeder system as a solution.

The paper talks about concept of walkability , its need and benefits in India.

Keywords: Walkability, Community, Urban Design.

Introduction: Over the past century pedestrian access has declined steadily in most cities. With some exceptions, such as underground metro systems, each advance in transportation technology—from horse-drawn streetcar, to electric streetcar, on-grade and elevated railways, automobile and superhighway, airplane and airport—has degraded the pedestrian environment. High-speed traffic broke up the pedestrian network and imposed barriers to free movement on foot. In ignoring the pedestrian experience, the street lost its intimate scale and transparency, and became a mere service road, devoid of public life. Modernist planning and design separated pedestrians from the automobile, shunting them off to raised plazas, skywalks, barren 'greenways', and sterile pedestrian malls.

For decades urban designers have advocated more walkable cities but without much success in most locations. Finally, with new health research, governmental incentives and new regulations, as well as increased activism by pedestrians and bicyclists, the situation has begun to change. The case for better design and planning of the pedestrian environment is strong.

Walkability is the foundation for the sustainable city. Like bicycling, walking is a 'green' mode of transport that not only reduces congestion, but also has low environmental impact, conserving energy

without air and noise pollution. It can be more than a purely utilitarian mode of travel for trips to work, school or shopping, and can have both social and recreational value. Walking can be done for many purposes such as transportation, exercise, and recreation.

Walkability Principles

- Create fine-grained pedestrian circulation
- Orient buildings to streets and open spaces
- Organize uses to support public activity
- Place parking behind or below buildings
- Address the human scale with building and landscape details
- Provide clear, continuous pedestrian access
- Build complete streets

Walkable Design Parameters: Barrier-free: A walkable environment is traversable, without major barriers. Walkability can be refined to mean traversable to children, elderly, handicapped or those wearing high heels.

Full Of Pedestrian Infrastructure And Destinations: A walkable environment visibly displays full pedestrian infrastructure such as sidewalks or separated trails, marked pedestrian crossings, street furniture and street trees.

Close: A walkable environment involves a short distance to a destination, particularly where driving is inconvenient or people are without cars—this is the perspective in transportation planning. This definition has a great deal to do with an individual's cost-benefits calculation—are the costs of driving or taking transit great enough to provoke an individual to walk?

Upscale, leafy, or cosmopolitan: A walkable place is somewhere that the pedestrian environment is pleasant for upper middle-class professionals, who have other choices for getting around.

Safe: A walkable environment is safe in terms of perceived crime or perceived traffic.

Nagpur Metro Project as Case Study: Urban design need to consider the many factors beyond physical components that come together to make a walkable place however it is defined. These include pricing of relevant alternatives (from automobile use to recreation centers), policies and programs supporting walking, and characteristics of the population (preferences, motivations, demographics, etc.). While the fields of health and transportation typically do consider these issues, they are not always prominent in urban design discussions.

Some of the Means For Creating Walkability:

- Traversable environments have the basic physical conditions to allow people to get from one place to another without major impediments, for example, relatively smooth paths.
- Compact places provide short distances to destinations for those who are walking for utility.
- Several different dimensions are key to places being safe for walking--perceived and actual crime and perceived and actual traffic safety. Both are about potential harm to the person.
- Physically-enticing environments have full pedestrian facilities such as sidewalks or paths, marked pedestrian crossings, appropriate lighting and street furniture, useful signage, and street trees. They may also include interesting architecture, pleasant views, and abundant services attractive to those who have other choices for getting around and getting exercise.

Pedestrians certainly walk, but many regulations define the term more broadly to include people in wheelchairs and even, in some cases, those standing and not moving

A walkable environment in terms of traffic safety has some combination of low traffic volumes or protection for pedestrians

Sustainable Transport Option: Walkability defined in terms of being a sustainable transportation option combines several key dimensions including economic, social, and energy use (Greenberg and Renne 2005). However the focus in this group of definitions is on transportation options.

“In A Walkable Community”: At the very beginning, in the statement of principle, it proposes that “In a walkable community, trips by bicycle or on foot are viable transportation alternatives to the car.” It goes on to mention several other dimensions including mixed use (compactness), safety, and infrastructure. However, it concludes its statement of this principle with “Walkable communities offer more transportation choices, higher levels of social interaction, greater opportunities for physical activity, and reduced emissions from automobile travel.

Holistic Solution: Finally, walkability can be a proxy for better environments that generate investment, are more sustainable (in economic and social terms as well as environmental), and that are generally good places to be. As Talen and Koschinsky (2013, 43) outline in their review of the walkable.

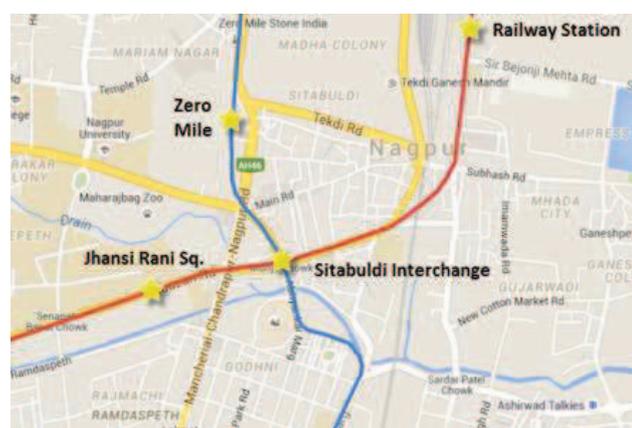
Walkability is the cornerstone and key to an urban area's efficient ground transportation. Walkable communities put urban environments back on a scale for sustainability of resources (both natural and economic) and lead to more social interaction, physical fitness, diminished crime and other social problems. Walkable communities are more livable communities that lead to whole, happy, healthy lives for the people who live in them.” (Downtown Wilmington 2013)

Nagpur city is presently pursuing the development of multi-modal transit systems, constructing and expanding light rail transit, expanding bus service and experimenting with bus rapid transit, and modern streetcars.

Urban planners have promoted compact and walkable urban forms and new models of land use and transportation . There is mounting evidence to suggest that a majority of the general public would prefer living in walkable urban environments where driving is not a necessity.



Pic: 1



Pic: 2



Pic: 3

Pic 1,2,3 shows the map and picture of Burdi flyover and metro junction is over crowded. The metro rail and existing over bridge is crossing each other at a junction. There are no efforts taken to consider the pedestrian or walkways. The Junction is busiet in all days and traffic congestion is high. The non avallibility of parking space and busy market further adds to traffic congestion. Here walkable streets along the road side is better solution.

They prefer walking as a mode of transportation over driving (National Association of Realtors 2015), are more likely to live in places with good public transportation (The Rockefeller Foundation 2014), and are less likely to have drivers licenses and own their own cars . The Nagpur city is developing on Transit Oriented Development which promotes Public transportation, mixed land use and high density neighbourhood. All these factors create its urban environment more walkable and encourage alternative modes of transportation.

Conclusion: The walkabilty can be achieved through Connectivity of different activity or land use. The movement path should be safe which gives a better experience while moving. Even for neighbourhood level movement path and street vendors can be incorporated. As street vendors or local shopping is essential part of urban life.

Urban Design objective i.e Ease of movement can be an accessible, well connected, pedestrian friendly environment can be achieved through complete pedestrianisation of the scheme and underground parking.

The mixed-use, transit-oriented approaches that cluster people and destinations close together. This is typically in a grid or small block street pattern lined with sidewalk.

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