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DESIGN CRITERIA FOR PUBLIC REALM IN TRANSIT ORIENTED DEVELOPMENT(TOD)

A Thesis

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II. ABSTRACT

A developed country is not a place where the poor has cars. It's where the rich use public transport, So Transit Oriented Development (TOD) is essentially whether the development is macro or micro. TOD focuses on the area around the transit stop and the facilitates which provide complete ease of access to the transit facility, thereby inducing people to prefer to walk and use public transportation over personal modes of transport. The research aimed to create a good station public realm which provide a balance of movement and placement.

First the research discussed reviewed many cities problems which are currently growing with a "3D" model of development such as distant, dispersed, and disconnected. Expansion without proper planning leads to spatial and social segregation, while also increasing congestion, pollution, and daily travel times. So, the research explained the Transit-oriented development (TOD) as approach for planning sustainable urban communities, then the research divided the principles of TOD into five elements which are; location of station, high population densities, mixed used and community diversity, abundant public realm around station nodes and parking around stations.

Then, the research focused on main principle of TOD which is public realm and its elements which are street, sidewalk, open spaces, station stop location and streetscape. The public realm presents a lifestyle option for citizens, in another meaning it promotes complete communities. Generally, people who are living and working in TODs walk more, use transit more and own fewer cars than the rest of the larger community. Therefore, the research studied the relation between the public realm and the station considering the different types of destination, transit users, local uses around transit stop and access from station internal to external. In addition, the research referred to the impact challenges and opportunities of station levels, stations architecture and commercial opportunities in stations.

After that, research studied three examples at three different scales of TOD. The first example was Denver city at TOD regional scale, the second one was improving the University and Colorado Stations connectivity network in the stations area and surrounding neighborhoods at TOD corridor scale and the last one was Denver union station at TOD station area scale. All of them were analyzed through the public realm elements and principles of TOD and were evaluated by TOD principle checker list.

Finally, the research discussed the design criteria of public realm in transit-oriented development (TOD) achieving the main goal of public realm which ensures the balance between movement and placement by creating a great station public realm.