Develop an Evaluation Criterion to Assess Pedestrian Facilities in Urban Environments at Micro Level

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In urban design, facilities available for the pedestrians and the convenience of walking are the measure of the overall walking conditions in an area. The concept of walkability has been used to assess these factors. That is to measure the extent to which the built environment is friendly to the presence of people living, shopping, visiting, enjoying or spending time in an area. A walkability index is a method to evaluate the facilities available for walking. Evaluating walkability is challenging because it requires the consideration of many subjective factors. Some factors are; land use modal conflict, security, crossing safety, motorist behavior, pedestrian amenities, disability infrastructure, side walk width, obstructions, maintenance and cleanliness. There are some indices used internationally and all of them assess the effectiveness of the facilities qualitatively. In this paper it is proposed to develop a criterion to compare two roads at micro level to evaluate ease of walking with an improved walkability index. An attempt has been made to incorporate more quantitative parameters that will minimize individual biasness.

It is expected that having an evaluation criterion will generate awareness on walkability as an important issue in developing cities. This will help the relevant authorities to identify the areas where the pedestrian facilities are to be enhanced. Some of the walkability indices have been evaluated and their shortcomings and limitations are being identified.

For the current indices that are in use, roads environment need to be categorized in to specific types such as a high-income neighborhood with mostly housing; a low income neighborhood with mostly housing, a transport hub (e.g., rail station), and a commercial district. A survey was carried out in the Colombo city limits with a road length of 35 km. During that survey it was realized that a similar sampling method cannot be adopted and road stretches should not be greater than 500 m. to avoid loss of homogeneity since the land use is not much organized in developing country such as Sri Lanka. In order to accommodate different land use types along the road it is proposed to use the land use percentages. There is a need to incorporate

the height of the buildings or walls by the road side. The effects on weather on the walkability measures were not seen in any walkability index. Evaluation need consider both rain and sun shine. This paper summarizes the findings of the walkability survey carried out and highlight the improvements need to minimize biasness.

Key Words: Walkability, Pedestrian, Safety, Evaluation