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## Guideline to Select Appropriate Locations for Centre Median Openings

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### Abstract

Medians are paved or landscaped areas in the middle of roadways that separate traffic travelling in opposite directions. A raised median with well-designed median openings is one of the most important tools to create a safe and efficient highway system. Moreover, it reflects the degree of access management of the particular highway.

At the moment, it can be clearly identified that many urban roadways in Sri Lanka are being rehabilitated and improved to multi-lane facilities with introducing raised road centre medians. Therefore, the provision of centre median openings for right turns, cross traffic movement & “U” turns is essential.

However, at the moment, there is lack of proper guidelines or a methodology available within road agencies in Sri Lanka to follow when deciding the appropriate locations for median openings of a particular highway. Most of the time frequent changes occur to the initial designs of the centre median and median opening locations due to the unavailability of a proper guideline. Often, there are lots of public requests for new median opening locations and it is very difficult to handle public requests in the absence of a proper guideline resulting delays to the centre median construction, deviating the objective of safety and proper access management. Therefore, this study is focused on developing a suitable guideline for the median opening selection process.

The proposed guideline has been developed based on some of the international access management guidelines and incorporating local considerations. Decision making criteria when justifying median opening locations is somewhat complex in nature since there is no proper legal framework available in Sri Lanka for access management.

Road network connectivity, road safety, traffic efficiency, right turning traffic volume density, the positioning of road side developments is some of the factors which influence the decision for selecting a proper location for median opening. The PTV VISSIM microscopic simulation model was used to optimize the selected median opening locations with respect to travel time and total delay of the road network. Vissim model has been used intensively around the world for such kind of access management experiments.

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The median opening selection process is a complex process with regards to our country since we don't have an access management policy. Therefore, it is very important to note that the median opening spacing are site specific and we cannot recommend a general spacing value for a road or a road section. If we go for general spacing values, that may be incorrect to use with the uneven positioning of by roads and different turning movement densities. Therefore, it is very difficult to provide a constant spacing for median openings in our road network. However, we can practice a minimum spacing value depend on functional requirements and safety.

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