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Suitability analysis for locating transit-oriented development in Charlotte, North Carolina

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This paper addresses how current geographic information science (GIS)-based suitability analysis can be used in locating transit-oriented development (TOD). Suggestions are provided regarding how existing models can be improved upon through the use of location theory and socioeconomic data. Based on goals and concerns associated with TOD, the author identifies a rich set of criteria necessary in determining suitable locations for TOD in a case study area of Charlotte, North Carolina. Three models were created using GIS by means of weighing selected factors by determined rank to highlight suitable locations for TOD along the city's LYNX Silver Line, a proposed light rail transit system that has yet to be constructed. This research was completed to provide planners and certain developers of Charlotte areas most-suitable for TOD. The results of the models can be used in the future for implementing smart growth initiatives, encouraging sustainable development, and promoting a more equitable distribution of costs and benefits to different socioeconomic groups.

Biography

Robert M. Gooljar, Jr. is an economic geographer and career location analyst, providing GIS-based location services to public and private entities. He is a proponent of the importance of geography in economic theory and the socio-spatial dialectic, understanding the cyclical effects between human influence on the environment and location theory principles. His research interests include retail location, regional analysis, sustainability and gentrification processes. He is a graduate of the Florida State University, from which he holds a Master of Science in Geographic Information Science, and a graduate of The University of North Carolina at Charlotte, from which he holds a Master of Arts in Geography – Location Analysis after finishing in a record-breaking one calendar year.

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