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Travel Demand Modeling

MODELING A SNAPSHOT OF HILTON HEAD ISLAND IN 2015

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The Town of Hilton Head Island continues to attract new residents (2% per year between 2010 and 2014), tourists (2.5+ million visitors per year), and businesses (Shelter Cove Towne Centre, Harbor Town Golf Course, Zipline Hilton Head, etc.). This growth indicates a greater demand for mobility which has a tremendous impact on maintaining the Town's roadways. The makeup of tourism activity has changed in recent years for this resort Island with increased occupancy in hotels and villas, additional timeshare developments, more people making day visits to the island, and second homes becoming more like permanent residences. This has resulted in traffic growing at a faster pace than population growth and peak traffic conditions being spread out throughout the day instead of the typical morning and evening peaks.

This study uses the existing travel demand model for this area, the Lowcountry Regional Model (LRM), as a starting point to assess the impacts of the changing socio-economic and tourism activity on traffic congestion. The LRM covers a four county region of Beaufort, Colleton, Hampton and Jasper County, where Hilton Head Island is part of Beaufort County. Enhancements are made to the tourism model of the LRM where tourism trips are a function of occupancy rates, seasonal dwelling units and seasonal daily visitors for peak season months of June, July and August. Further, a time of day model is developed to assess peaking characteristics for the Island which may differ from the rest of the Lowcountry region.

This presentation will discuss the updates made to the Lowcountry Regional Model to develop a 2015 snapshot with a focus on the updates to the land use and tourism data. The discussion will expand upon the development of future planning scenarios to capture the impacts of various planned development and evolving tourism activity. The future planning scenarios will include land use, capacity, and modal policy scenarios. These policy scenarios are important as the Town considers acceptable levels of service and the impacts of potential infrastructure improvements on the resort Island's natural character, including the availability and distribution of parking access for public beaches and other attractions as well as other modes of access that can help to accommodate this increased demand.