Project Title: A Multimodal Network Approach to the Inland and Coastal Waterway System

Project Abstract (Brief Description): The national marine highway initiative intends to position waterways in the context of multimodal transportation system. Maintenance and capacity of each element of the waterway system has its implication to the multimodal network. This project will develop a multimodal freight network model that includes both waterway land side components in order to analyze the impact of waterway operations. The goal is to enhance the entire network efficiency. Algorithms will be proposed. The model will accommodate delay/congestion and other network restraints. This research will build on earlier work of the PI that studied the Ohio River network system. The difference is that this proposed work will focus on the network efficiency.

Describe Implementation of Research Outcomes: The finding of this research will become a quantitative tool to aid in decision making on waterway operations such as dredging and other maintenances.

Impacts/Benefits of Implementation: Users of the tool will be able to know the multimodal transportation system benefits of waterway operations.

Web Links: https://martrec.uark.edu/

Budget (Funding) Amounts & Source(s) (US DOT +Match(s) =Total Costs): $90,000 from MarTREC and $45,000 from matching funds for a total of $135,000.

Project Start and End Dates: July 1, 2017. End: November 30, 2018

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