

# EVALUATING FREIGHT INTERMODAL CONNECTORS (FICs) IN TENNESSEE

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## PROJECT SCOPE

Intermodal connectors are public, short mile roads or rail tracks that connect intermodal terminals to national highway systems (NHS) mainline routes (primarily interstates and arterials). This project will evaluate Freight Intermodal Connectors (FICs) in Tennessee to identify deficiencies related to congestion, capacity, safety, and environmental and supply chain needs. The study will focus on “roadway connectors” that are segments, corridors, and intersections that connect Tennessee freight trucks to/from the major freeways from/to high-priority facilities such as truck hubs, airport terminals, freight rail terminals, passenger rail and intercity bus terminals, waterways, warehouses, depots, centers, etc. For efficient intermodal freight movement, these roadway connectors must be in a desired service conditions (operational, safety, and environmental) capable of accommodating truck and freight needs. If FICs have little capacity, they will cause traffic congestions that in turn will dramatically increase travel time, energy consumption, and air pollution. On the other hand, if FICs have too much capacity, their utilizations will be too low to justify monetary investment on them. In other words, FICs need to match operational and safety needs as well as the supply chain demand along the connectors.

## EXPECTED RESULTS

The study will provide technical analysis and summary of freight related deficiencies that exist along roadway connectors connecting freight especially trucks to known warehouses, depots, hubs and terminals. Expected are analyses of potential deficiencies warranting improvement needs which eventually will improve FICs such as connector’s access and connectivity, capacity, congestion, supply chain demand, safety, and environmental impacts. The study will also perform FICs route optimization on potential alternative connectors to the existing ones. The analysis will provide diverse recommendations on the improvement priorities among the analyzed FICs. FICs will be assigned scores on congestion, capacity, safety, supply chain, risk, and emission basis, relying on field review, data review, traffic analysis and simulation, model optimization, and stakeholders’ inputs. The following are some of the expected outcome deliverables:

- Comprehensive Literature Review
- Engaged Freight Stakeholders
- FICs Multimodal Inventory
- FICs Operations
- FICs Safety Deficiencies
- FICs Supply Chain Evaluation
- FICs Risk Evaluation
- Evaluated Emissions along FICs
- FICs Measures of Effectiveness