

# POLICY STUDIES

## Intermodal Transportation and Inventory Costing Model State Tool (ITIC-ST)

The Intermodal Transportation and Inventory Costing Model State Tool (ITIC-ST) examines the commodity attributes and transportation characteristics for annual shipments between origination and destination pairs. Then ITIC –ST estimates the transportation and inventory costs of alternative freight transportation modes.

The ITIC-ST provides users with the same powerful tool developed for the DOT Comprehensive Truck Size and Weight Study in a more user friendly environment. The user can choose a national analysis or limit the analysis to a few States. The user can then select among 5 alternative truck configurations listed in the table below.

### Configuration Options Included in ITIC-ST

Trailer Length (feet)	Number of Axles	Maximum Gross Vehicle Weight
Single 53	5	80,000
Single 53	6	90,000
Single 53	6	97,000
Twin 33	8	124,000
Twin 53	9	140,000
Triple 28	7	110,000

In addition, the user can test the impact on truck operations from a relative improvement in rail intermodal operations. The model estimates the impact on vehicle miles traveled for each truck configuration and the transportation and inventory costs.

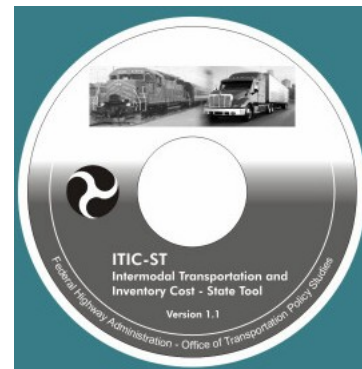
ITIC-ST is a deterministic model using: truck annual shipment data from FAF 1, truck rate data from the North American Truckload Rate Index, Federal Railroad Administration’s intermodal station location identification, and county-to-county mileage estimates from the Oakridge National Laboratory (ORNL) highway network. Through an agreement with Global Insight, the model includes a summarized version of the 1998 FAF database that prevents county identification but includes State identification with origin-destination distance grouped into 25-mile increments. Also through an agreement from Trans-Research Int’l Inc, the 2004 North American Truckload Rate Index is utilized to estimate market truck

rates for approximately 1,500 market Origination-Destination pairs.

Although the ITIC model has been extensively used by Federal Highway Administration, Federal Railroad Administration and Office of the Secretary of Transportation, a general use model **with data** has not previously been released. The goal of ITIC-ST is to provide State users with a quick and easy tool for an initial estimation of the freight impacts of truck or rail productivity improvements. The model includes only the potential impacts to vehicle miles traveled and shipper costs. Before considering any change to truck size and weight rules it is important to consider the impacts on pavements, bridges, safety, roadway geometry, traffic operations, energy and the environment and rail revenues.

Some highlights of the software include:

- Preloaded with a comprehensive set of data, or you can import your own data
- User’s can select a state or group of states to analyze
- Model allows alternative truck configurations to chose from, including rail intermodal diversion
- Summary table can be produced to summarize the analysis results for each truck configuration or rail intermodal.



A CD copy of the ITIC-ST model, user’s manual and technical documentation is available at <http://www.fhwa.dot.gov/policy/otps/iticstfrm.htm>