APRIL 27, 2011 CTRMA BOARD OF DIRECTORS MEETING
Summary Sheet

AGENDA ITEM # 13

Presentation from representatives of Freight Shuttle Services and the Texas Transportation Institute concerning the request for proposals issued by the Texas Transportation Commission regarding possible proposal on freight transfer.

Department:

Associated Costs: None

Funding Source: None

Board Action Required: No

Attached documentation for reference: Presentation will be provided at the meeting.

Texas Transportation Institute

A member of The Texas A&M University System

http://tti.tamu.edu

Freight Shuttle System

Introduction

The Texas Transportation Institute (TTI) has developed a new freight transportation system: the Freight Shuttle System (FSS). The FSS was conceived to resolve freight transportation's most pressing deficiency: the lack of a system suitable for high volume traffic between two points located less than 600 miles apart. This situation occurs frequently at marine ports, border crossings (land ports), and congested freight corridors.

The Problem: The U.S. Lacks a Suitable Freight Transportation System

Currently, heavy-duty diesel trucks fill this gap. The most appealing attribute of these trucks is their flexibility. They use existing infrastructure (the highway system) to reach dispersed and scattered distribution locations. This flexibility comes at a high cost: infrastructure deterioration, congestion, traffic safety issues, and pollution. When flexibility is unnecessary—as in the case of moving a high volume of freight traffic between two points—other means of transportation with fewer adverse impacts should be used.

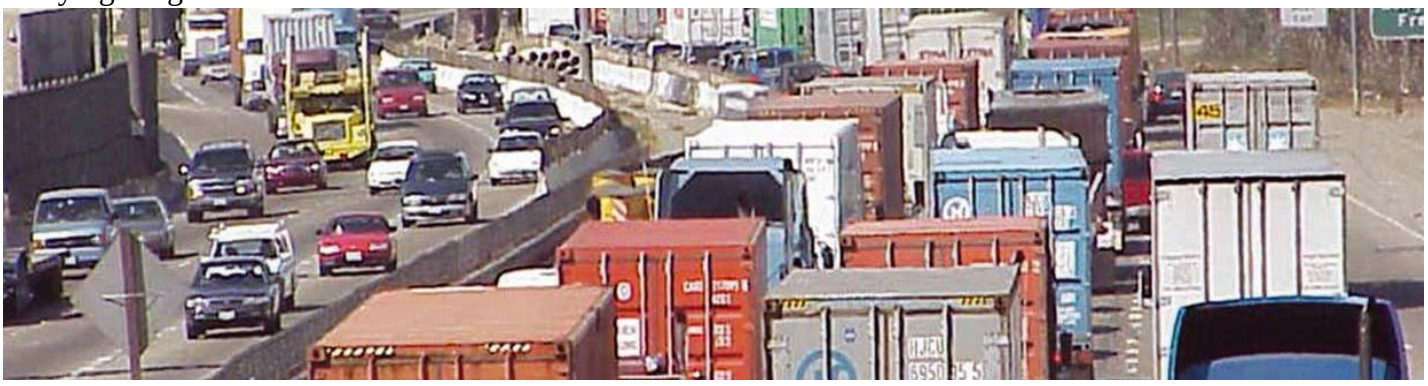
Railroads are a perfect choice for moving high volumes of freight traffic between two points. However, due to the length of time that locomotives and rail cars sit idle during loading and unloading, railroads tend to favor hauling freight over longer distances and refrain from carrying freight less than 600 miles.

The Solution: The Freight Shuttle System

The FSS is the ideal medium to connect two closely located points (within 600 miles) handling large volumes of freight traffic. By borrowing features from both heavy-duty diesel trucks and railroads, the FSS is economical for shorter distances and environmentally friendly. Much like trucks, the FSS's transporters are autonomous: each transporter has its own motor and travels independently of other transporters. Inspired by railroads, each FSS transporter can carry either a standard-size freight container or an over-the-road trailer. Moreover, the FSS runs on an elevated, dedicated right-of-way to avoid interfering with other transportation systems.

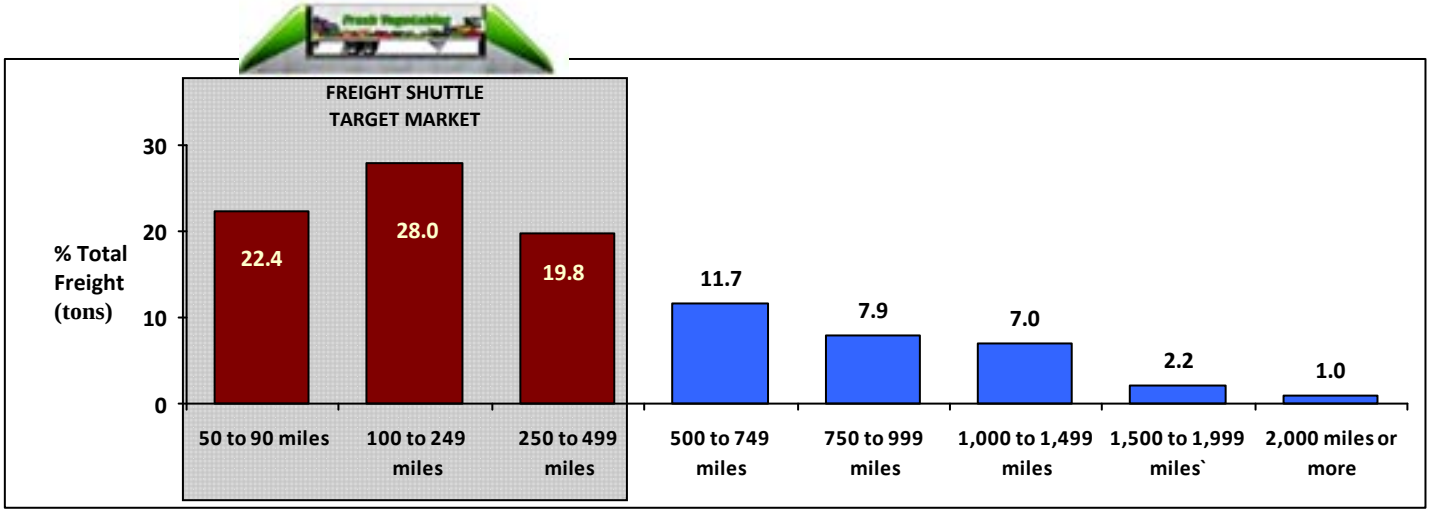
However, unlike railroads and heavy-duty diesel trucks, the FSS relies on efficient, linear induction motors. Because these motors are electrically powered, the FSS would not add to existing pollution and would advance the U.S.'s effort to achieve energy independence and allow more environmentally friendly energy choices.

Moreover, by taking unnecessary heavy-duty diesel truck traffic off the highway, the FSS indirectly reduces pollution and highway congestion, while improving traffic safety.



Business Model

The FSS is envisioned as a privately owned and operated system. With today's costs, its business model indicates profitability for traffic levels beyond a modest 2,000 daily trips for a typical 250-mile corridor. The FSS also fosters public-private partnerships, as it can operate on leased airspace from current highways or other public or private right of way. The revenue earned from leasing right of way can, for example, be reinvested to maintain or expand the current highway system.



FSS Technology

The FSS consists of automated transporters, an elevated guideway, high-efficiency terminals, and a communications, command, and control (C3) system that effectively manages shipments in facilities and while in transit. Three design guidelines have been followed throughout: simplicity, reliability, and the use of mature and proven technologies.

FSS transporters travel on a specially designed guideway, similar to the "people-movers" at major airports and cities. The propulsion system involves both the vehicle and the guideway as inherent components of the linear induction motor assembly and, as a result, has virtually no moving parts to wear out or fail. To support their load, transporters use flangeless steel wheels that run on a steel running surface, which reduces energy consumption. The FSS incorporates redundant safety measures and does not require an onboard driver.

The FSS at a Glance:

- Privately financed and operated as with the commercial nature of goods movement.
- Helps sustain the Highway Trust Fund.
- Reduces infrastructure deterioration by providing an alternative to over-the-road trucking.
- Reduces congestion on over-burdened roadways and improves safety.
- Enhances economic competitiveness by providing a more efficient goods movement system.
- Reduces dependence on foreign oil.
- Enhances community livability by creating far fewer emissions than other alternatives.
- Creates new industry and generates new jobs.

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