

FREIGHT SHUTTLE SYSTEM

Description

The privately-financed Freight Shuttle System (FSS), developed by the Texas A&M Transportation Institute (TTI), resolves one of freight transportation's most pressing issues: the lack of a suitable system for high-volume freight traffic in already-congested corridors. These include marine ports, border crossings (land ports), and congested roads.

Heavy-duty diesel trucks carry most of today's freight load. They use public roadways to reach scattered distribution locations, but this flexibility comes at a cost: congestion, infrastructure deterioration, traffic safety issues, and pollution. Many freight corridors in Texas are becoming congested to the point that alternatives with fewer adverse impacts need to be developed.

The FSS is ideal to connect two markets (within 600 miles) generating large volumes of freight traffic. The FSS combines the best features of heavy-duty diesel trucks and railroads. Like trucks, FSS vehicles are autonomous, traveling independently, each with its own motors. And inspired by railroads, FSS transporters use steel wheels to carry either a standard-size freight container or an over-the-road trailer. The FSS uses efficient, linear induction motors to individually power the carriages. Because these motors are electrically powered, the FSS will not add to existing pollution. Moreover, the FSS runs on an elevated, dedicated right-of-way to avoid interference with and from other transportation systems.

Target Market

- Highly congested freight corridors of 50 to 600 miles in length.
- Congested port facilities to inland terminals.
- International ports of entry that have a combination of trade volume and security requirements.

How Will This Help?

- The system is privately financed, built, and operated—a mobility solution without public expense.
- The FSS will remove thousands of trucks per day from congested highways.
- The FSS will occupy the unused airspace above existing highways, paying lease fees to the public sector for the opportunity to move freight.

Economic Development Potential

In Texas on IH 35 alone, the FSS would:

- Provide more than 20,000 construction jobs.
- Introduce more than 600 permanent jobs.
- Provide a total economic impact to the State of over \$9 billion.
- Save more than \$60 million per year in pavement damage.



Cost:	●●●●○
Time:	Moderate
Impact:	Regional
Who:	Public/Private
Hurdles:	Right-of-Way

Implementation Issues

The FSS is predicated on a new form of public-private partnership: private financing coupled with leasing of airspace on public highway rights-of-way. The FSS is so efficient that it can offer customers both lower-cost and improved efficiency, thereby creating a commercially sustainable solution for increasing volumes of commercial truck traffic.