PRESENTATION TO:

FORT BEND COUNTY, PORT FREEPORT, BRAZORIA COUNTY, TEXAS

SH 36A DEVELOPMENT CORRIDOR FEASIBILITY STUDY FINAL PRESENTATION

Presentation By

TEMS

Transportation Economics & Management Systems, Inc.

OCTOBER 27, 2015

FREEPORT'S MARKET OPPORTUNITY

Background on the Project

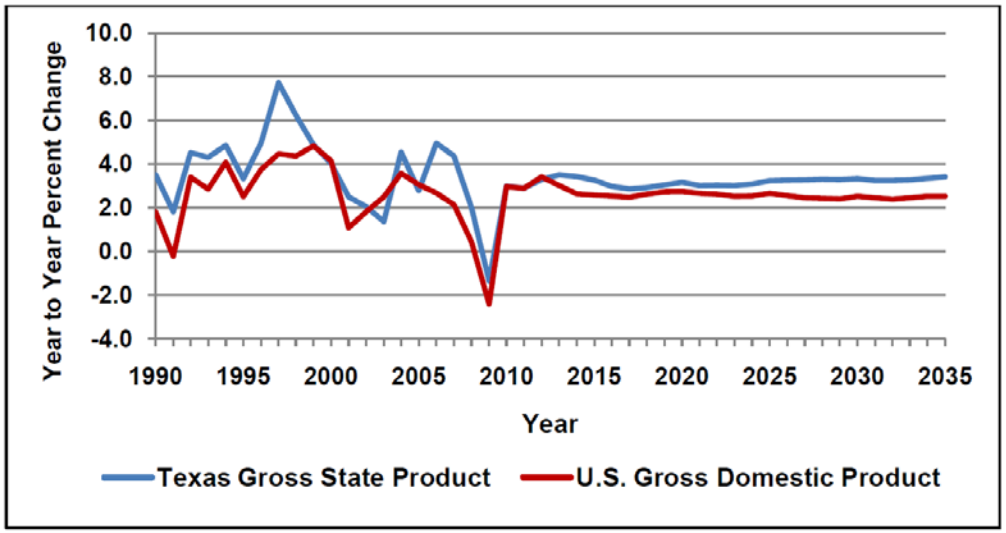
- Texas GDP has been growing by 7 percent each year
- Texas added 1.3 million people from 2010 to 2013
- Population to grow from 26 million today to 40 million by 2050.

Texas Transportation System needs increase efficiency and capacity to meet future needs.

Minimal Change in Growth from Previous Study Assumption

Historically, Texas GDP growth rate has been significantly higher than US growth Rate. "Forecasts from the Texas Comptroller of Public Accounts predict that the U.S. and Texas economies will rebound from the current recession (in terms of GSP and GDP), and grow at 2.6 percent and 3.37 percent, respectively, on average, per year between 2010 and 2035 (Figure 2-1).[7] An efficient and well-maintained transportation system is vital to the state's ability to remain economically competitive at home and abroad."

Figure 2-1: Comparative Annual Economic Growth, 1990 to 2035



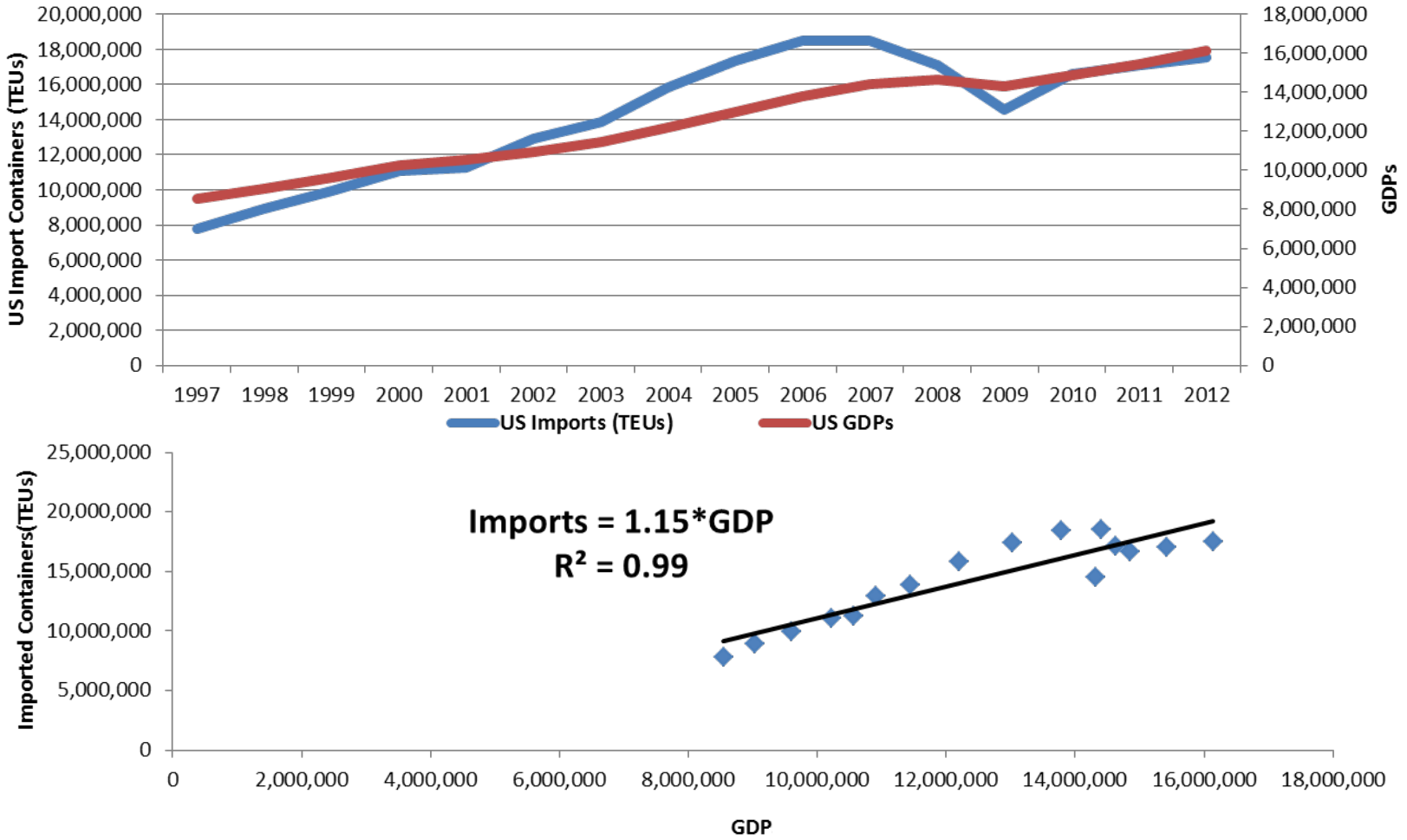
* Source: Texas Statewide Long-Range Transportation Plan 2035 at: http://ftp.dot.state.tx.us/pub/txdot-info/tpp/rural_2035/report/slrtp_final_ch2.pdf

The Texas Comptroller Forecast is in **REAL DOLLARS**

Adding a 2% annual inflation gets us right back into the 5+% range.

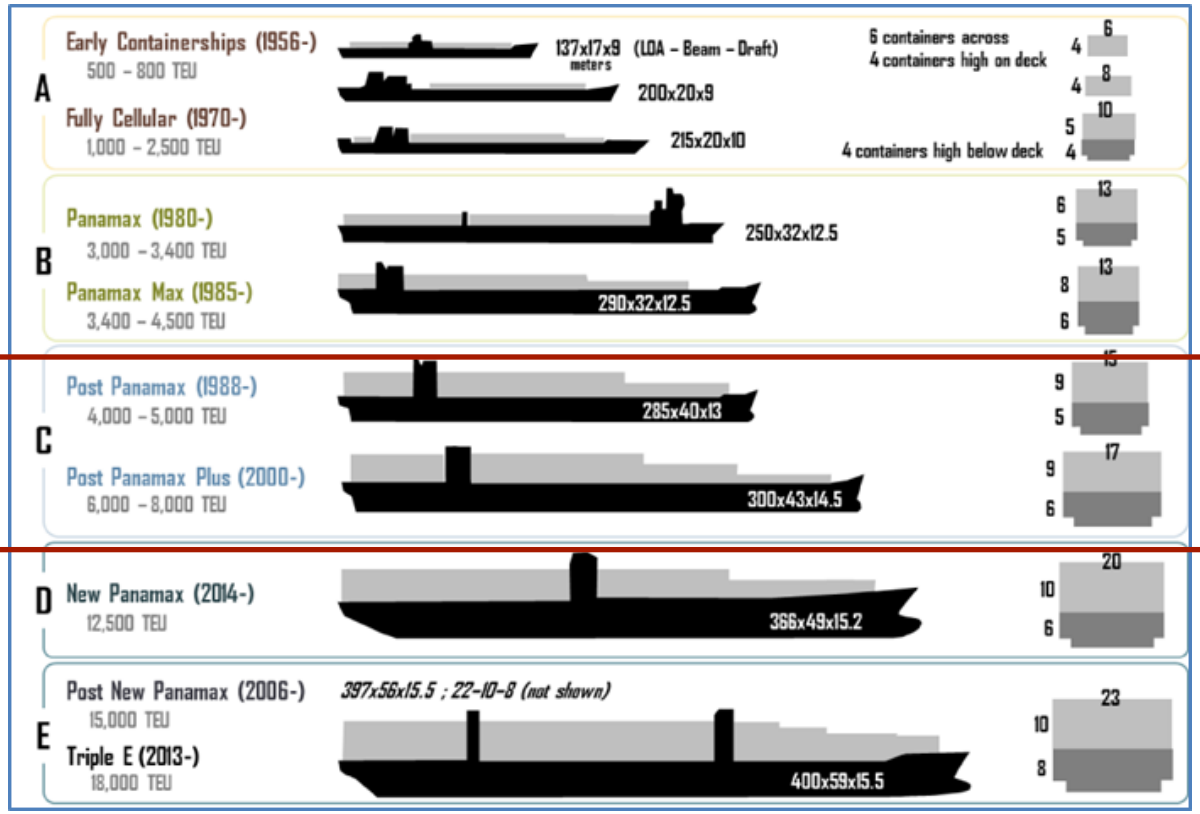
Average growth rate will be 5.4% (NOMINAL DOLLARS) for the Texas market area

Container Imports vs Nominal GDP -National Trend



Imports are closely related to GDP nominal, which is used to forecast imports in the future. Growth rate has been moderated by recent recession.

Ship Size and Required Depth



Water Depth(ft)

33

41

43

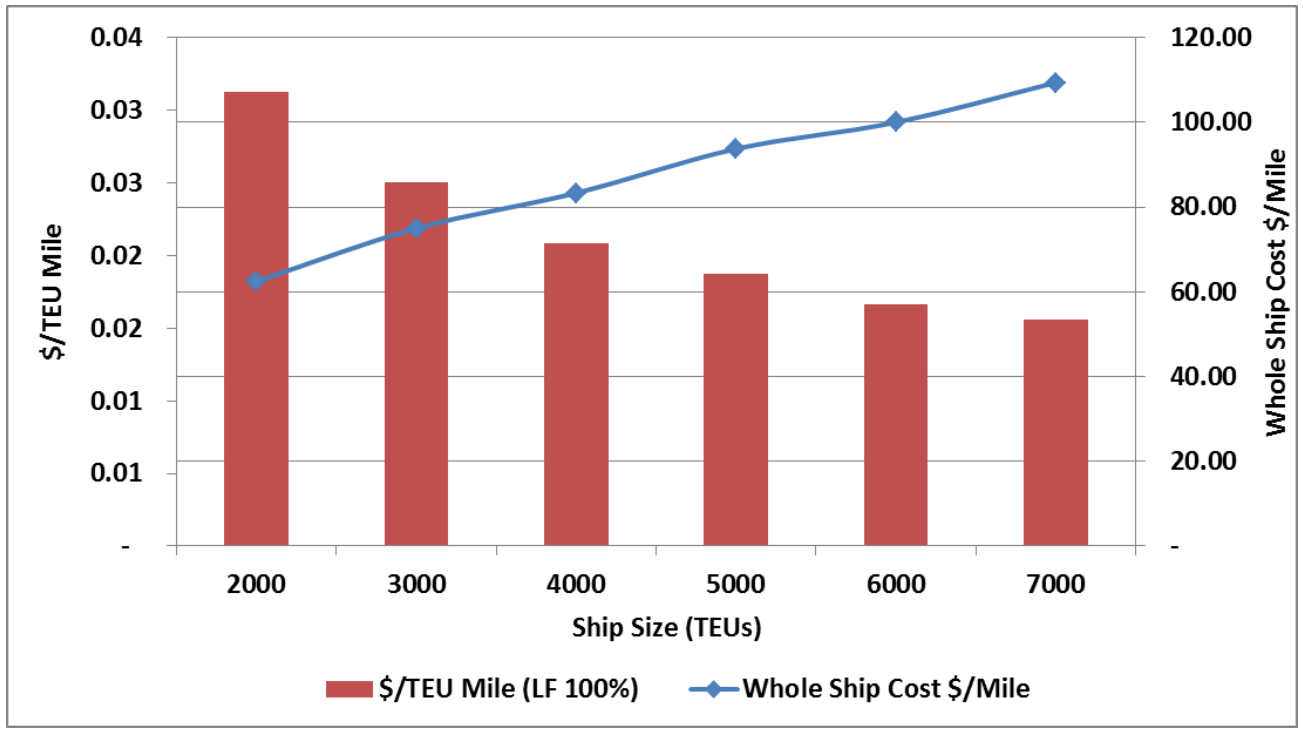
48

50

51

Capacity of New Panamax ship will increase 2-3 times, but requires 48-51 feet draft. Only a few Gulf and East Coast ports can support this, but in the long term Freeport will be able to accommodate these larger ships.

Economies of Scale for Bigger Ships



Source: Reproduced based on Figure 4.3 Impacts of Containership Size, Service Routes, and Demand On Texas Gulf Ports , TXDOT, 2001

- 2015 Shipping cost will decrease from $0.04/TEU·Mile to $0.02/TEU·Mile (70% loading factor and inflation since 2001).
- ***This cuts shipping line-haul costs in half.***
- East Coast Ports are expanding their capabilities, so Big Ships will be used in both Pacific and Atlantic (e.g. Suez) trade lanes.

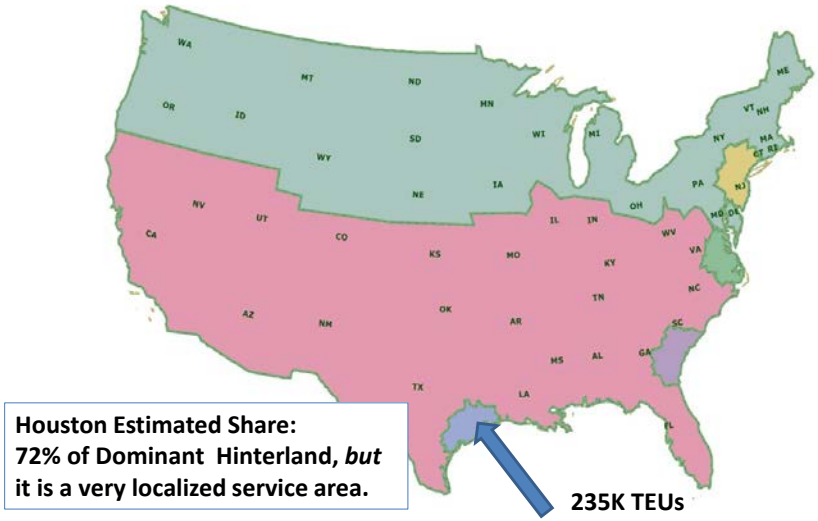
PANAMA CANAL STRATEGY

"BUILD" A NEW PORT IN TEXAS: FREEPORT

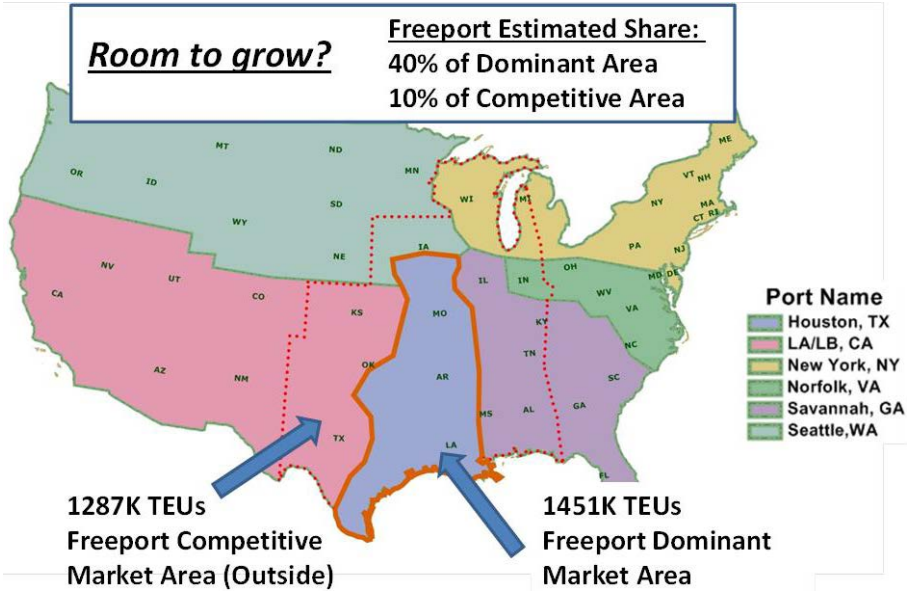
- Freeport can be fully developed as a container terminal that can handle big ships (56' main channel) Houston however remains at 45' channel.
- Effective intermodal links will be needed (rail links and inland ports) for Freeport to serve the key market areas of Dallas, Fort Worth, San Antonio and beyond.
- Intermodal linkages such as a Container on Barge/COB service are proposed, but not required to maintain connectivity between Freeport and the traditional Houston Ship Channel area, since the ocean cost savings are sufficient to support even high cost trucking from Freeport to Houston Ship Channel area.

Bigger Ships Expand Freeport's Natural Hinterland for Asia and European Traffic

Asia Port Hinterlands Today



After Panama Canal Expansion

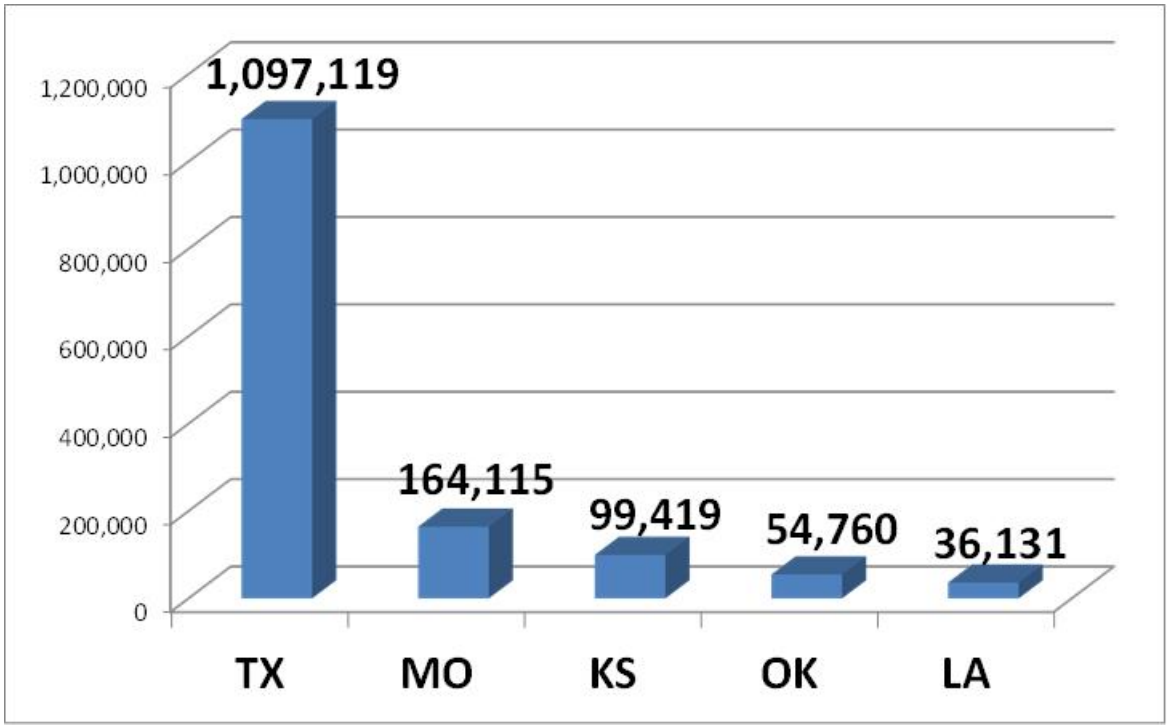


Currently, there is a strong West Coast advantage with small ships, but Houston fares no worse than Eastern Ports. Big ships cut line-haul costs in half, resulting in a huge (7X) increase in potential Freeport Hinterland Total Market TEUs

THE ASIA MARKET WITHIN THE 5-STATE SERVICE AREA IS HEAVILY SKEWED TOWARDS TEXAS (PARTICULARLY DFW)

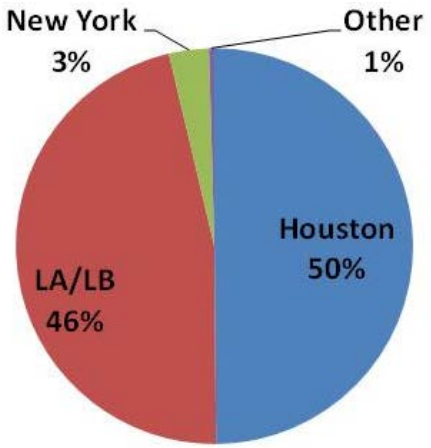
FEASIBILITY

ASIA 2014 TEU DISTRIBUTION WITHIN THE DOMINANT MARKET AREA

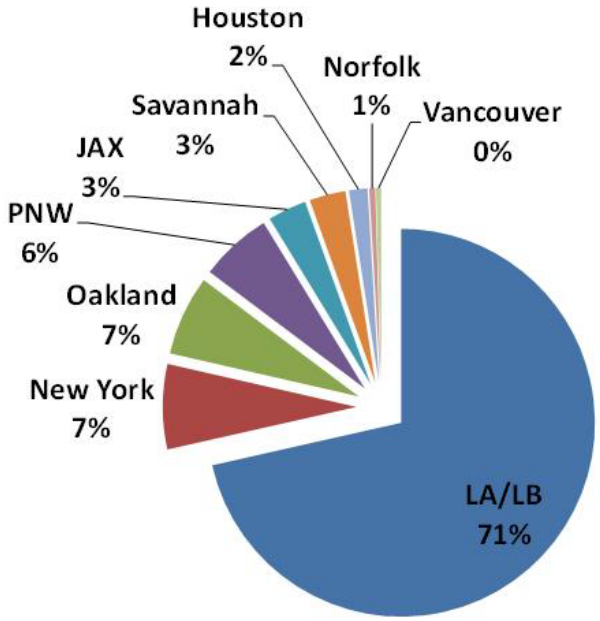


This Supports an Increase in the Freeport Modal Share Projection

CURRENTLY HOUSTON'S SHARE IS 22% OF TEXAS MARKET



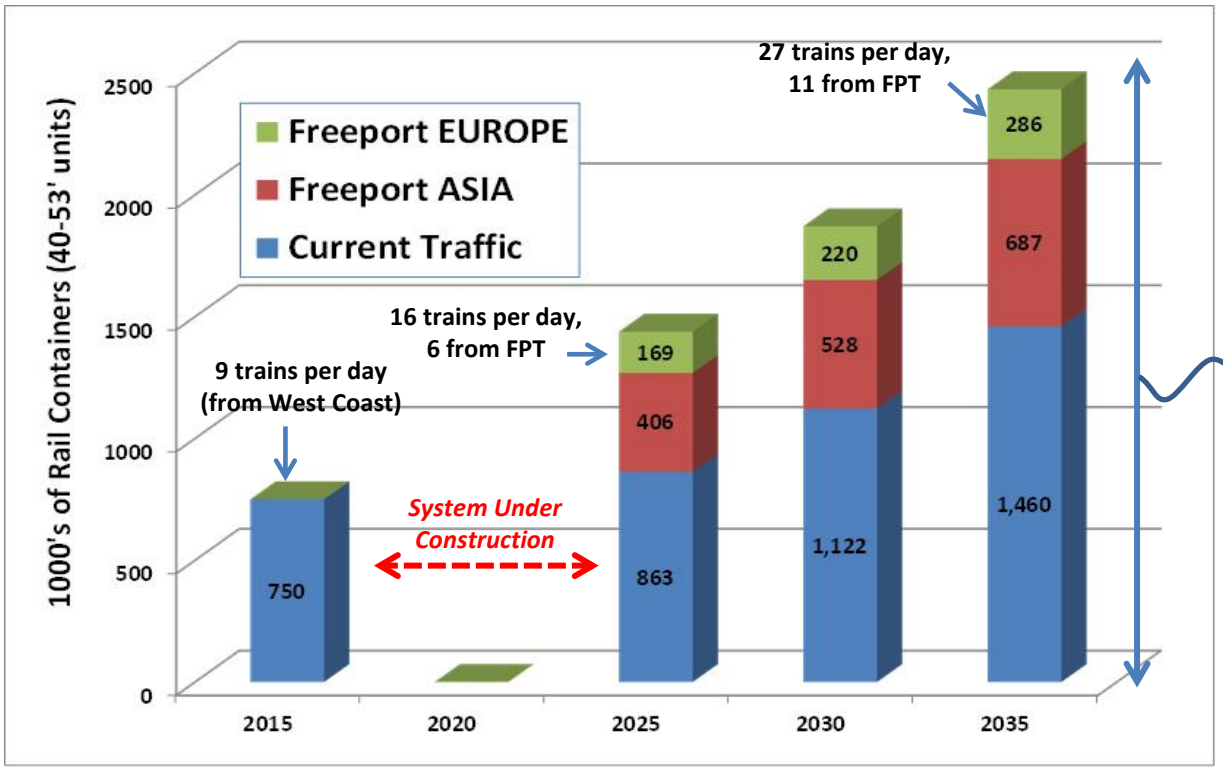
HOUSTON



DALLAS-FORT WORTH

This results from the economics of small ships, where small vessels currently hold more than 50% market share vs. the West Coast in Houston. Houston currently has only a negligible share of DFW market, but Texas ports share will increase with large ships provided they have effective access to the DFW market.

Rail Container Forecast for DFW Market with Port Freeport and Big Ships



With Large-Vessel economics and a rail connection, Freeport can compete at DFW.

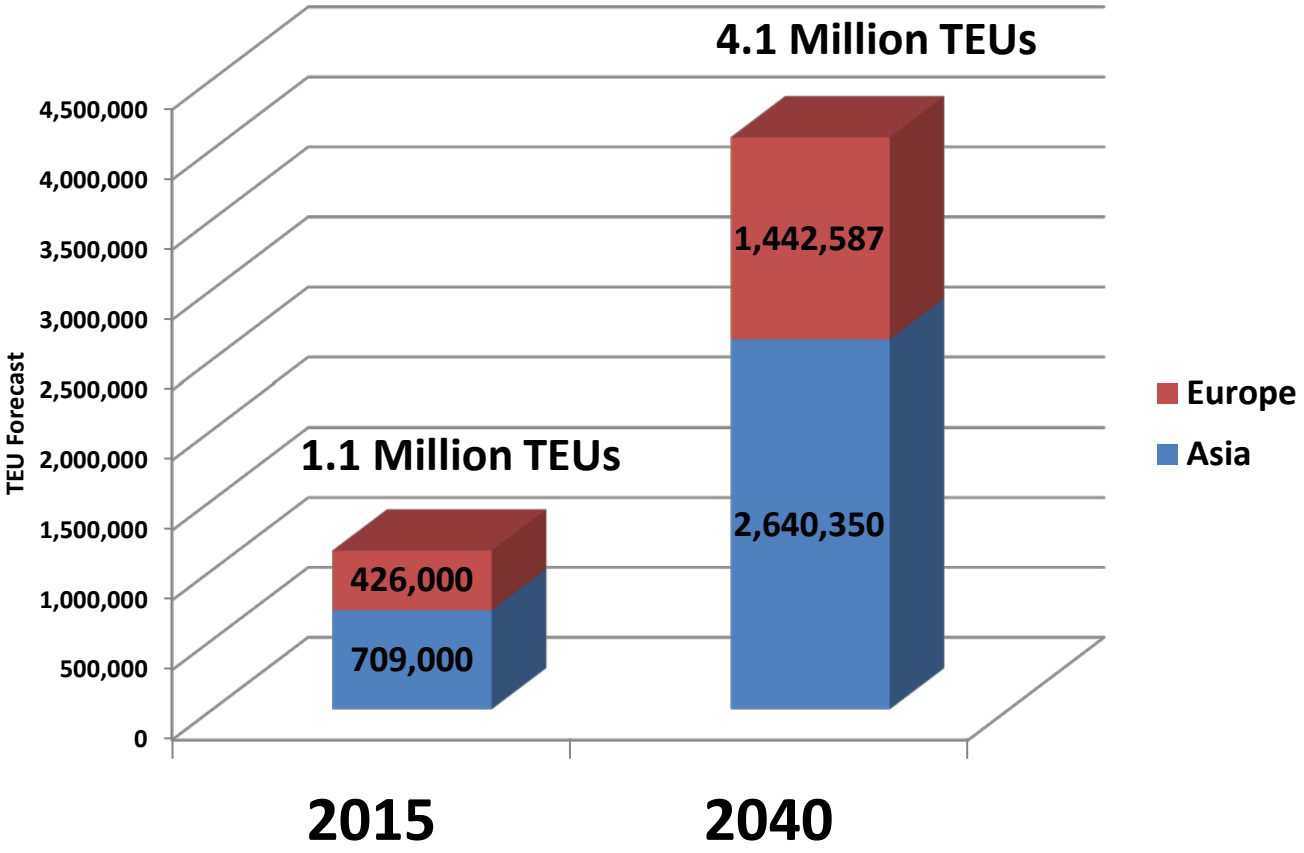
A forecasted more than tripling of rail intermodal demand by 2035 will put considerable pressure on both rail line and terminal capacity in Texas

- Freeport Europe FEU
- Freeport Asia FEU
- Existing Rail FEU

Notes:

1. *Estimate approx. 750,000 containers total IMX market in and out of DFW today.*
2. *Freeport will come online between 2020 and 2025. By 2025 fully operational.*
3. *Freeport would add rail European boxes that are currently trucked which results in an immediate boost in rail traffic*

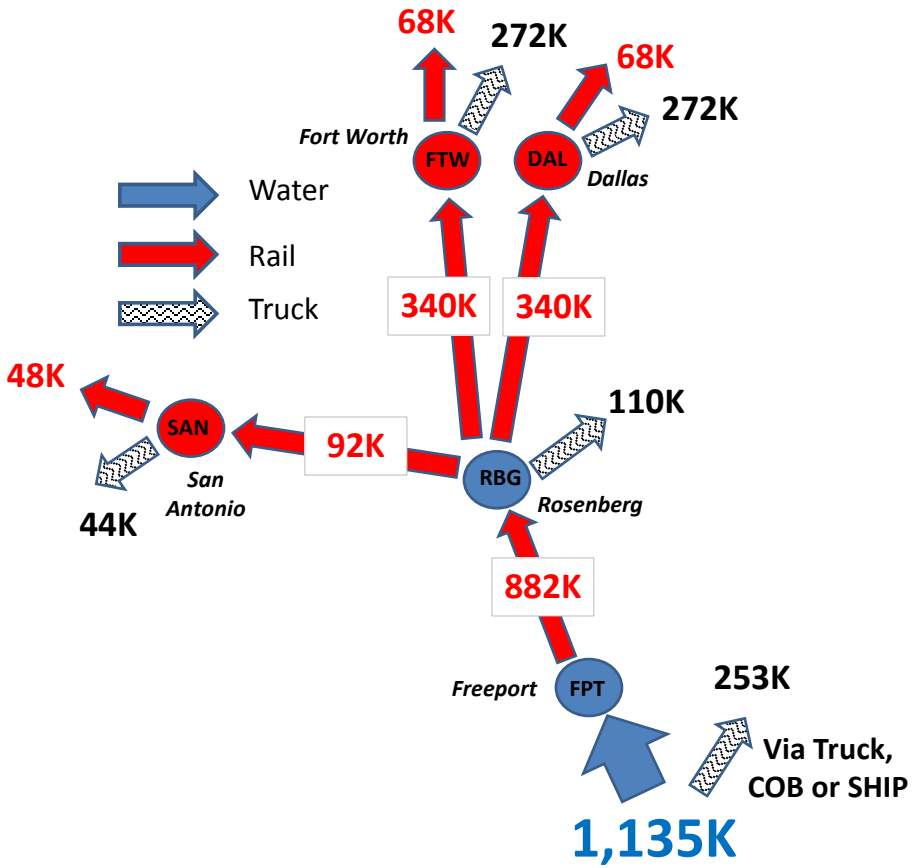
Overall Freeport Container Market Forecast*



* There are an additional 60k South American and Caribbean containers at Freeport (Great White Fleet) and 185K more at Houston, not included in the above totals.

FORECASTED INLAND DISTRIBUTION

2015 DETAIL



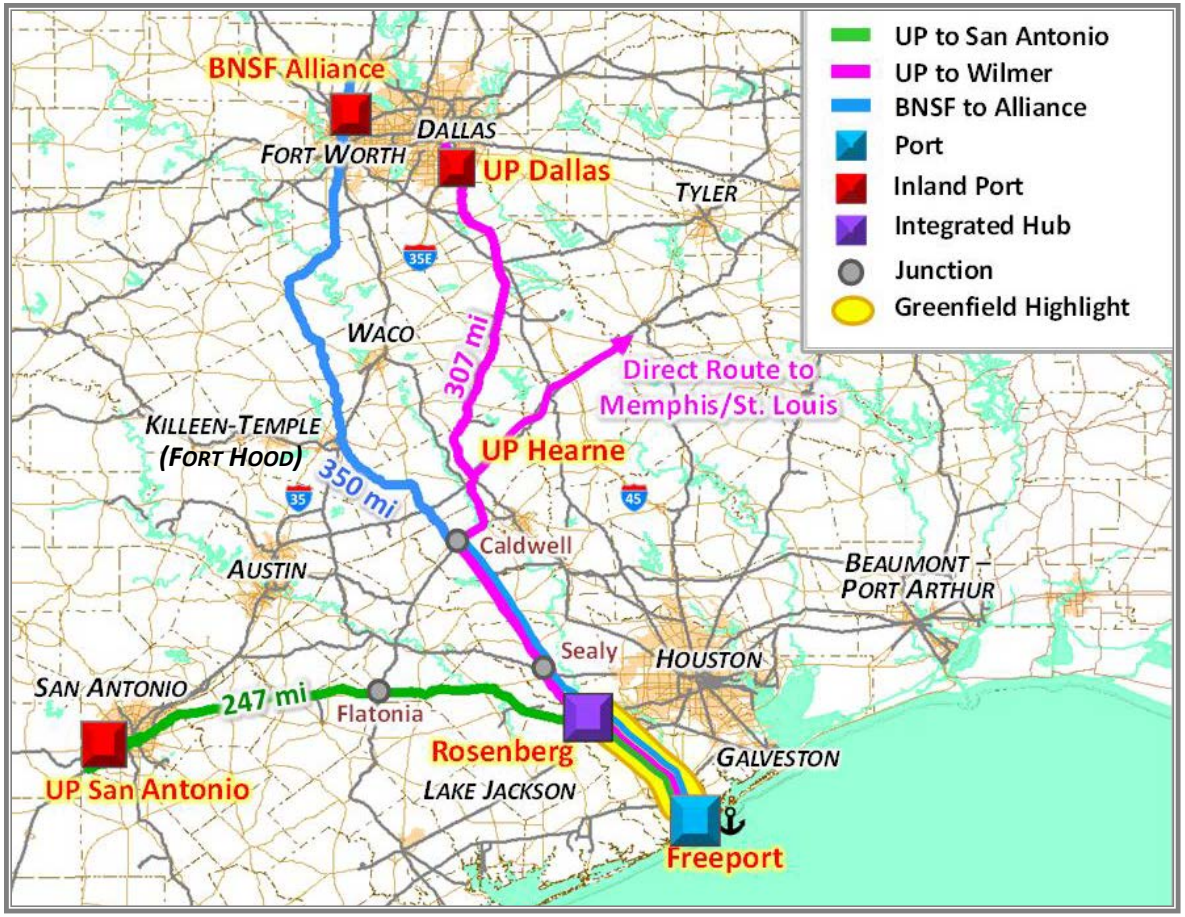
Dallas/Fort Worth logistics centers serve an extended market area <u>even beyond Texas</u> extending all the way to Kansas, Missouri and the Mississippi River. Ocean containers are brought by rail into these logistics centers and repacked for final delivery by truck. There is a great deal of market concentration at the DFW hubs and not many ocean containers move far beyond the metropolitan areas.

THE PROJECT AS ENVISIONED

CONTEXT FOR RAIL INTEGRATION

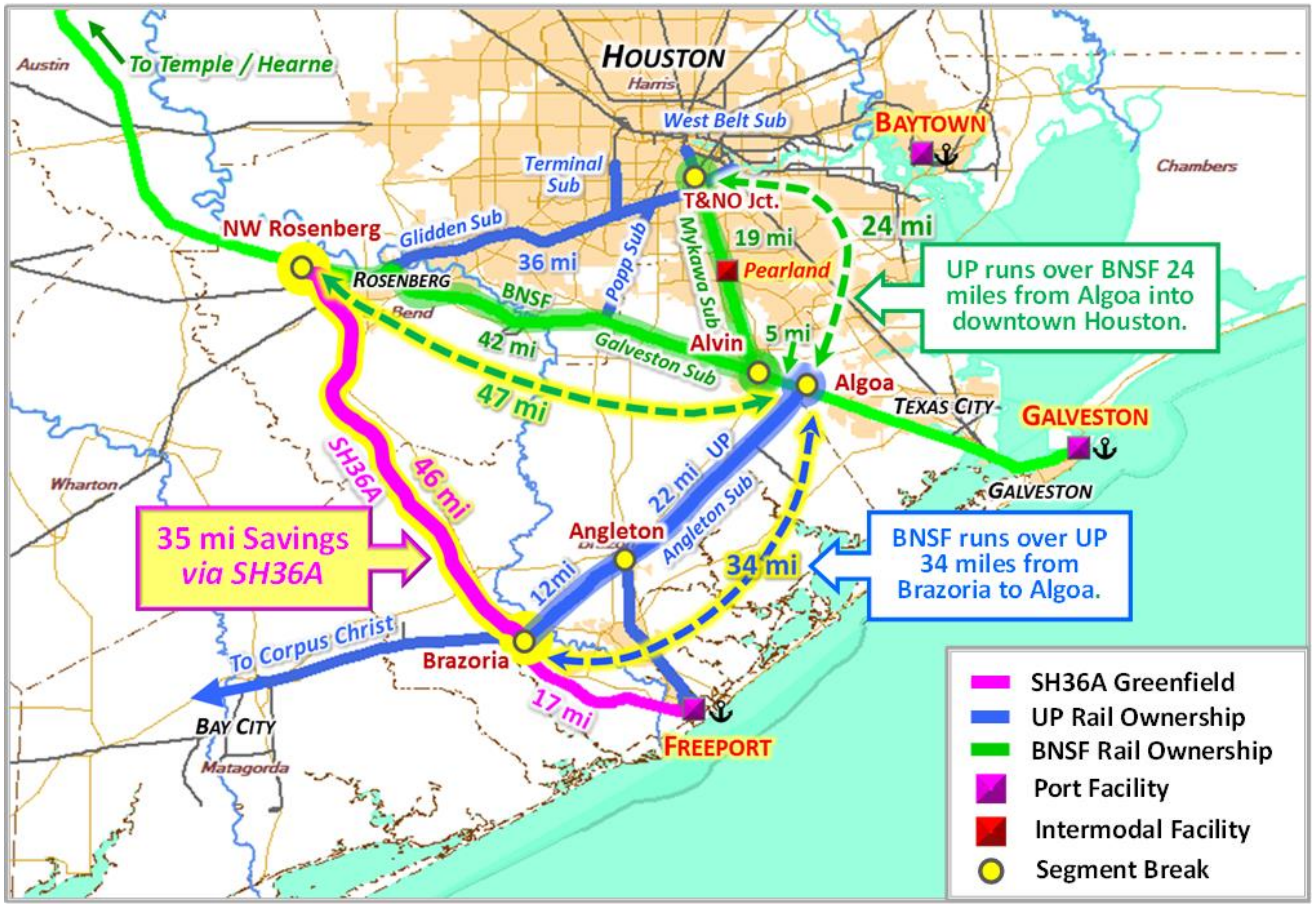
Concept Study envisioned

- *Port Freeport Improvements*
- *Rail Link to Inland Ports at:*
  - *Dallas*
  - *Fort Worth*
  - *San Antonio*
- *Integrated Hub at:*
  - *Rosenberg*



New Route is 35 miles shorter and reduces the Need for Trackage Rights

FEASIBILITY



CURRENT SCENARIO:

Each railroad must pay the other for every train they run, but railroads don't like making payments to direct competitors

Railroads don't like making investments in their own lines that benefit direct competitors without cost sharing

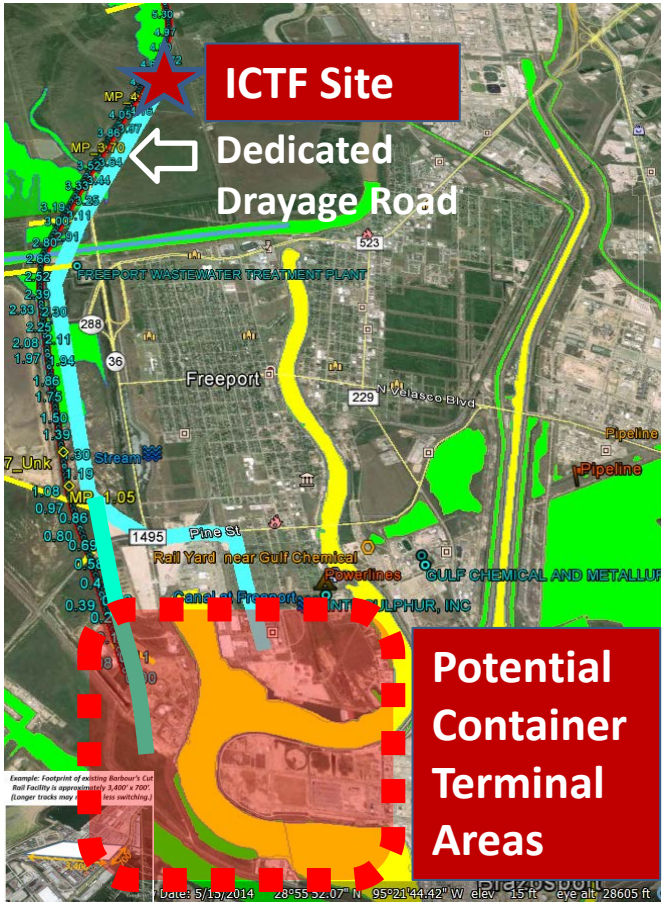
Railroads don't like investing in competitor's rail lines

The current institutional structure of rail ownership in South Texas creates disincentives to private investment

PROPOSED SCENARIO:

With development of Port Freeport, efficiency can be improved by development of a new direct route from Freeport to Rosenberg to Caldwell. The project would be developed as a PPP by the Brazoria Fort Bend Rail District

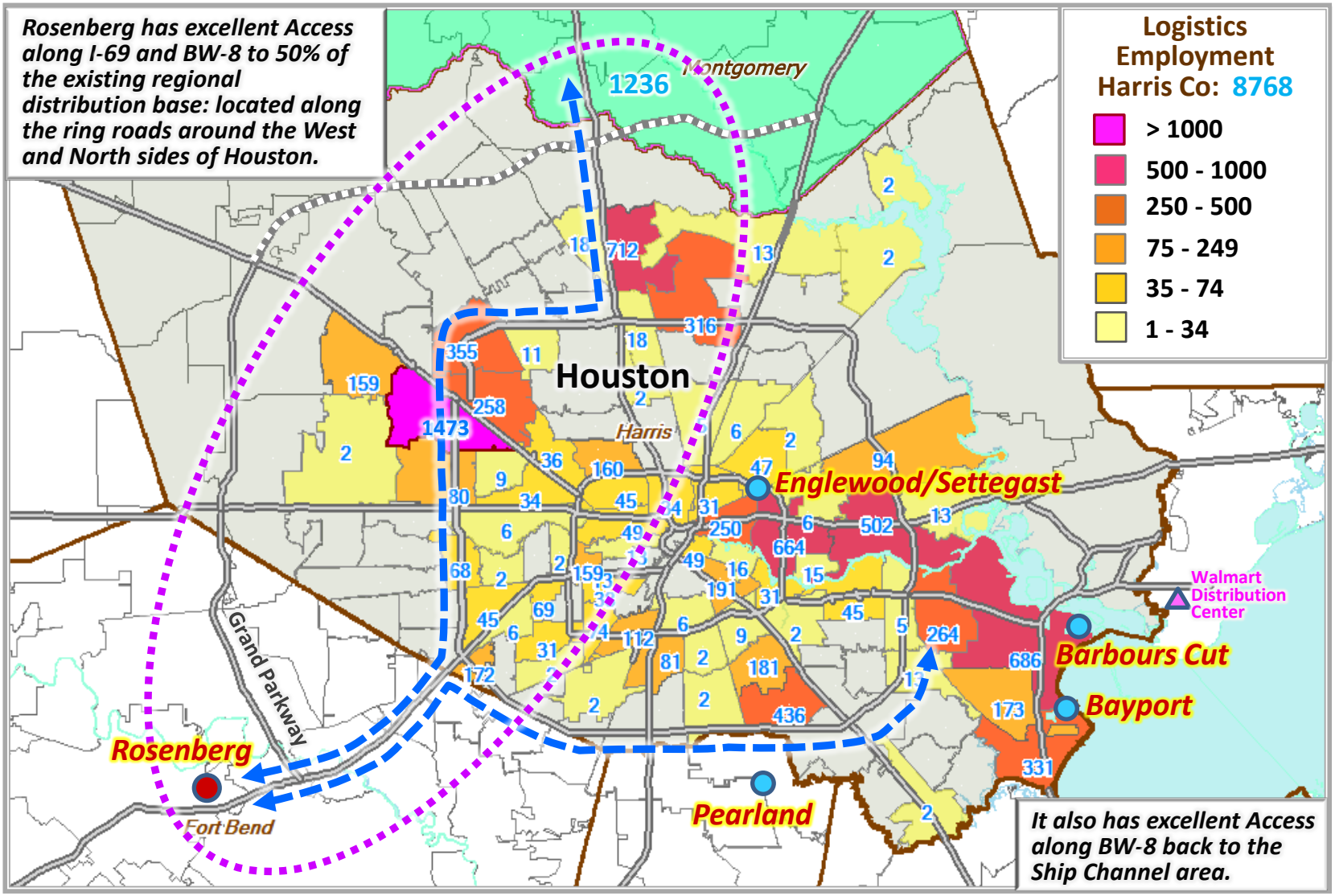
Starting point for the Rail Route: Freeport Intermodal Container Yard (ICTF)



- ***Freeport ICTF site for providing on-dock rail capability has ample land and would be linked by a dedicated drayage road.***
- ***Currently, SH36 has a very lightly-used 4-lane bridge over the Brazos River connecting on both ends to a 2-lane highway facility. It is assumed that the existing northbound lanes would be repurposed to serve the port drayage. The existing southbound lanes should suffice for a 2-way public SH36 highway.***

The Case for Rosenberg Distribution

FEASIBILITY



EXAMPLE: CSX WINTER HAVEN FACILITY

- *318 Acres rail facility, surrounded by 930 acres reserved for development of up to 7.9 million square feet of warehouse distribution centers*
- *Projected at full build-out, the Winter Haven ILC will create 8,500 annual jobs with a total annual payroll of $282.2 million.*

References:

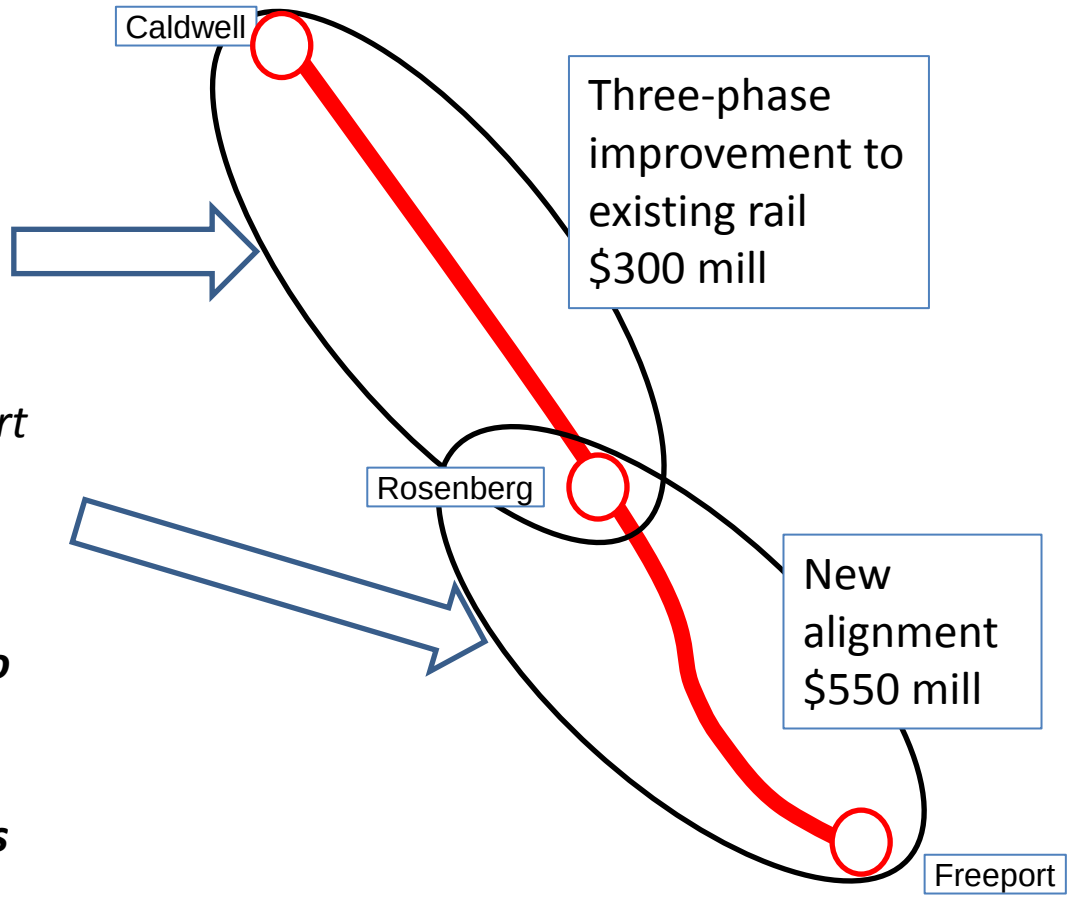
http://railtec.illinois.edu/RREC/presentations/A/04/19_Brinker.pdf
http://www.bizjournals.com/tampabay/news/2014/07/29/csx-intermodal-facility-in-winter-haven-getting.html
http://www.myfoxtampabay.com/story/26807665/2014/10/16/csx-hub-in-winter-haven-expected-to-boost-local-economy
http://www.flgov.com/2012/11/08/governor-scott-breaks-ground-on-winter-haven-intermodal-rail-terminal/
http://www.railwayage.com/index.php/intermodal/csx-winter-haven-intermodal-terminal-up-and-running.html
http://www.tbrta.com/tbag-issues/tbag-2008-10_csx-winter-haven.pdf

PROPOSED SH 36A RAIL CORRIDOR

FEASIBILITY

The proposed rail corridor includes:

- ***A shared and upgraded existing rail segment*** *Rosenberg to Caldwell where UP trains would diverge to Hearne.*
- ***A greenfield segment*** *Freeport to Rosenberg eliminates 35 mile "dog leg" via Algoa.*
- ***This provides dual access to the Port of Freeport, and also an effective bypass of the Houston area for both the BNSF and UP railroads that is shorter than UP's existing route through the city.***



BENEFITS, FINANCING AND INSTITUTIONAL FRAMEWORK

KEY FINANCIAL ASSUMPTIONS

- *Utilize public financing at low interest rates to develop the route*
- *Purchase any needed ROW and tracks at fair market value.*
- *Use container fees to cover operating expenses, cyclic capital needs, capacity expansions and repay debt service so the system is financially self-supporting*
- *Set access fees at minimum compensatory levels to incentivize maximum use of the bypass rail corridor, where possible relieving rail congestion in downtown Houston*

Proposed Financial Framework for Brazoria Fort Bend Rail District

Modeled after Alameda Corridor (ACTA) PPP. A two-tiered pricing strategy is proposed for the Freeport Rail Corridor. Current pricing targets are:

- ***An affordable price for Container traffic to/from Freeport (20-30¢ per TEU-mile)***
- ***An even lower price for carload and non port related traffic (35-45¢ per Car-mile)***

ACTA Rate History

	Loaded WB Per TEU	Empty or NWB Per TEU	Other Railcar	CPI Increase %
2002	15.00	4.00	8.00	Base
2003	15.45	4.12	8.24	3.0
2004	15.79	4.21	8.42	2.2
2005	16.26	4.34	8.67	3.0
2006	16.75	4.47	8.93	3.0
2007	18.04*	4.57	9.13	2.2
2008	18.67	4.73	9.45	3.5
2009	19.31	4.89	9.77	3.4
2010	19.60	4.96	9.92	1.5
2011	19.89	5.03	10.07	1.5
2012	21.60**	5.17	10.35	2.8
2013	22.25	5.33	10.66	3.0
2014	22.58	5.41	10.82	1.5
2015	22.92	5.49	10.98	1.5

* *Includes additional permanent RR settlement increase*
** *Includes additional temporary RR settlement increase*

WB = Waterborne
NWB = Non-waterborne

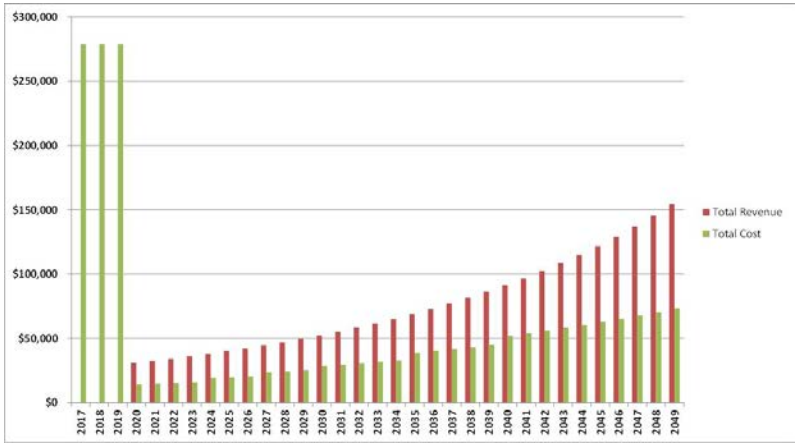
See: http://www.acta.org/gen/ACTARate%20History.pdf

Current ACTA Average Rate: $22.92 + $5.49 = $28.41 per TEU (40 mile round trip) or 71¢ per TEU-mile

ACTA Carload rate about 55¢ per car mile (20 mile one way trip) . If 1 Railcar = 4 TEU then the carload rate is just 12% of the container rate. In Los Angeles, this low rate is intended to encourage carload traffic to use the trench instead of using the old non-grade separated lines.

PRELIMINARY FINANCIAL ANALYSIS

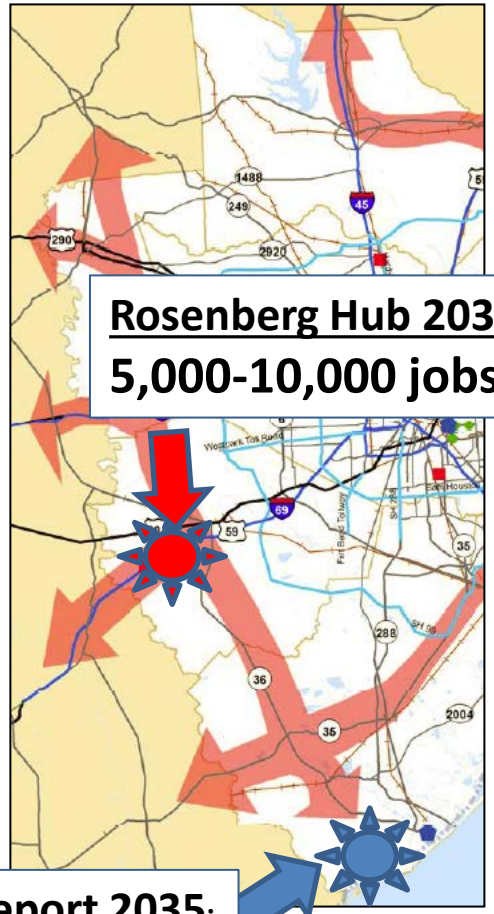
	NPV
IMX Revenues	$579,551
Car Revenues	$789,581
Total Revenue	**$1,369,132**
GF Capital Cost	$768,238
Track Mtce Cost Oper	$290,569
Track Mtce Cost Cap	$145,422
Admin Cost	$38,722
Total Cost	**$1,242,951**
NET	**$126,181**



- ***With 4.4% Revenue Bond interest rate and 1.4% inflation forecast, the NPV is $126 million positive.***
- ***This suggests that an infrastructure authority could fully service its Bonds from fees without needing subsidy or grant assistance. RRIF loan or Revenue Bonds could be used as a low-cost financing vehicle for developing needed infrastructure improvements.***

SH 36A Rail Corridor Job Creation

- *Current modeling suggests rail traffic volumes will continue to increase and UP and BNSF will need to develop additional rail yard capacity in the Houston area.*
- *Rosenberg is well positioned in the future to become a major rail logistics hub. Shifting intermodal activity from UP Englewood and BNSF Pearland to Rosenberg would reduce rail congestion in downtown Houston.*
- *Overall, potential is 15,000 - 30,000 jobs likely in the SH 36A corridor, mostly consisting of distribution and industrial jobs.*

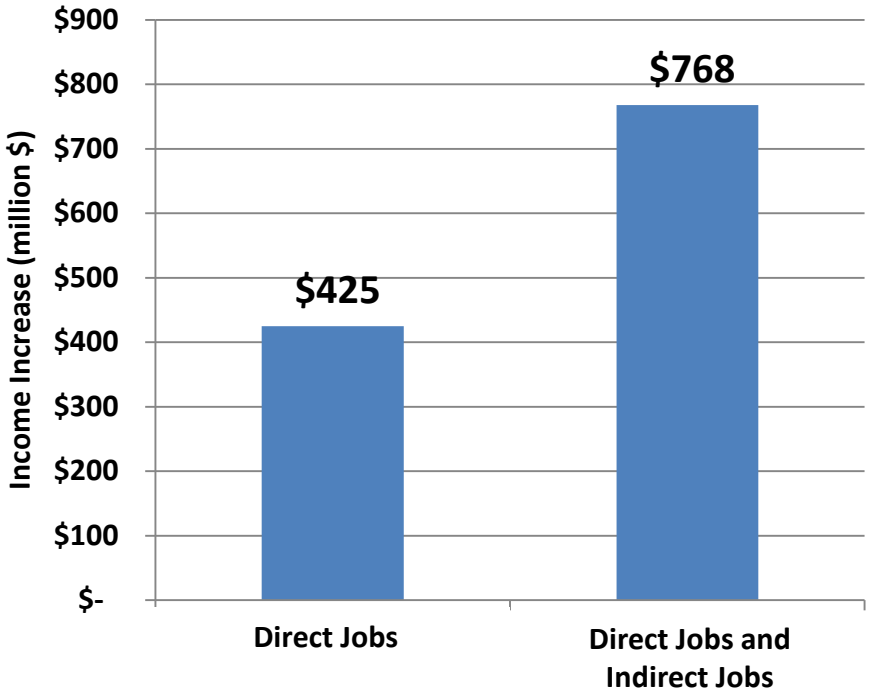


Rosenberg Hub 2035:
5,000-10,000 jobs

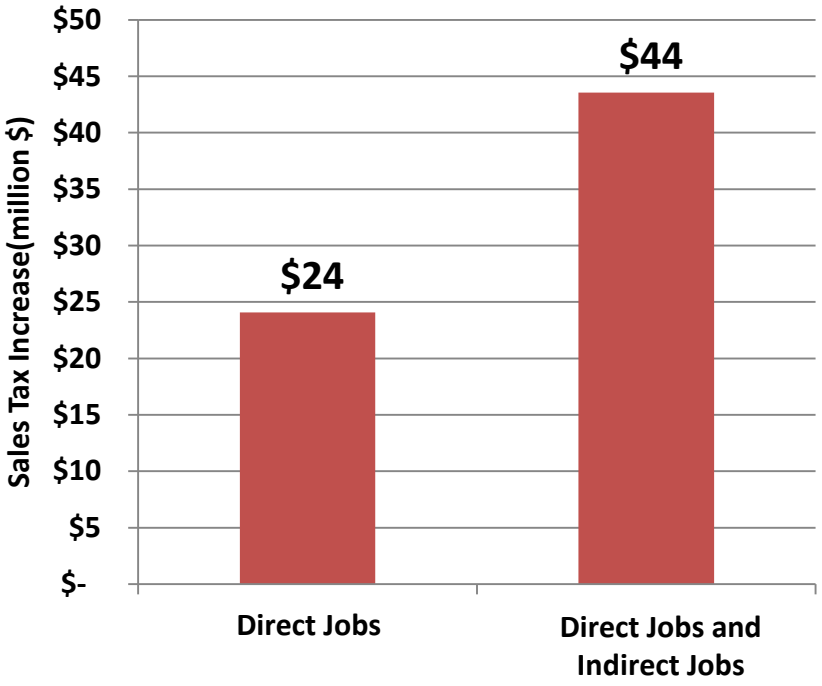
Port of Freeport 2035:
10,000-20,000 jobs.

SH 36A Rail Income Impacts – Income and Sales Tax Revenues by 2035

Total Income Increase (million $ per Year)



Total State Sales Tax Increase (million $ per Year)



NEXT STEPS

Done! 

- Institutional: Set up Brazoria Fort Bend Rail District with bonding authority
- Rail program to immediately follow development of related Port Freeport improvements
- Environmental Assessment and Engineering
  - Investment Grade Container Forecast
  - Financial Planning
  - Rail Capacity Analysis
  - Environmental Studies
  - Preliminary and Final Engineering
- Railroad engagement is now needed to make this process a success!

THANK YOU

FOR MORE INFORMATION CONTACT

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