

# Short Sea Shipping

## The Next Mode of Transportation

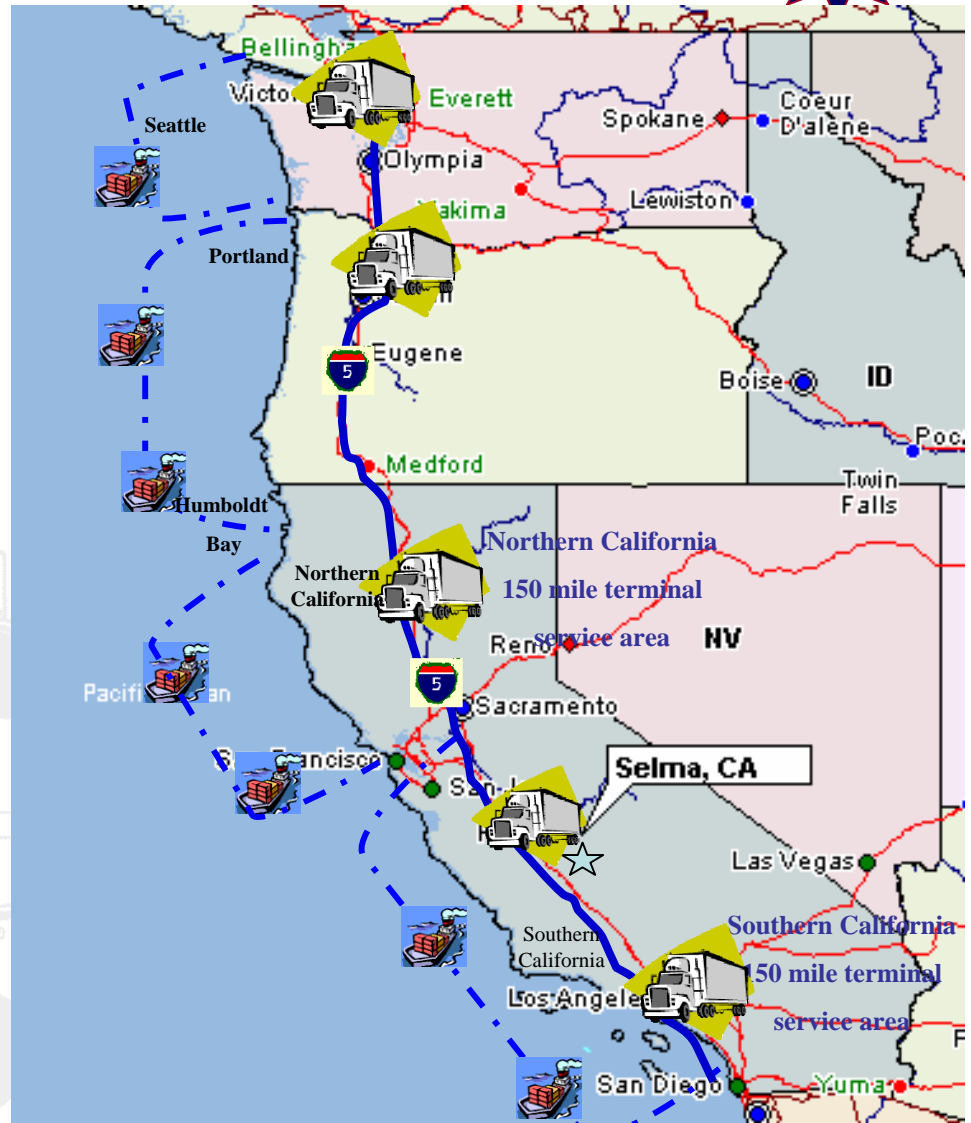


**Presented By:  
Ronald J. Silva  
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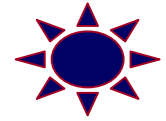
# What is Short Sea Shipping?



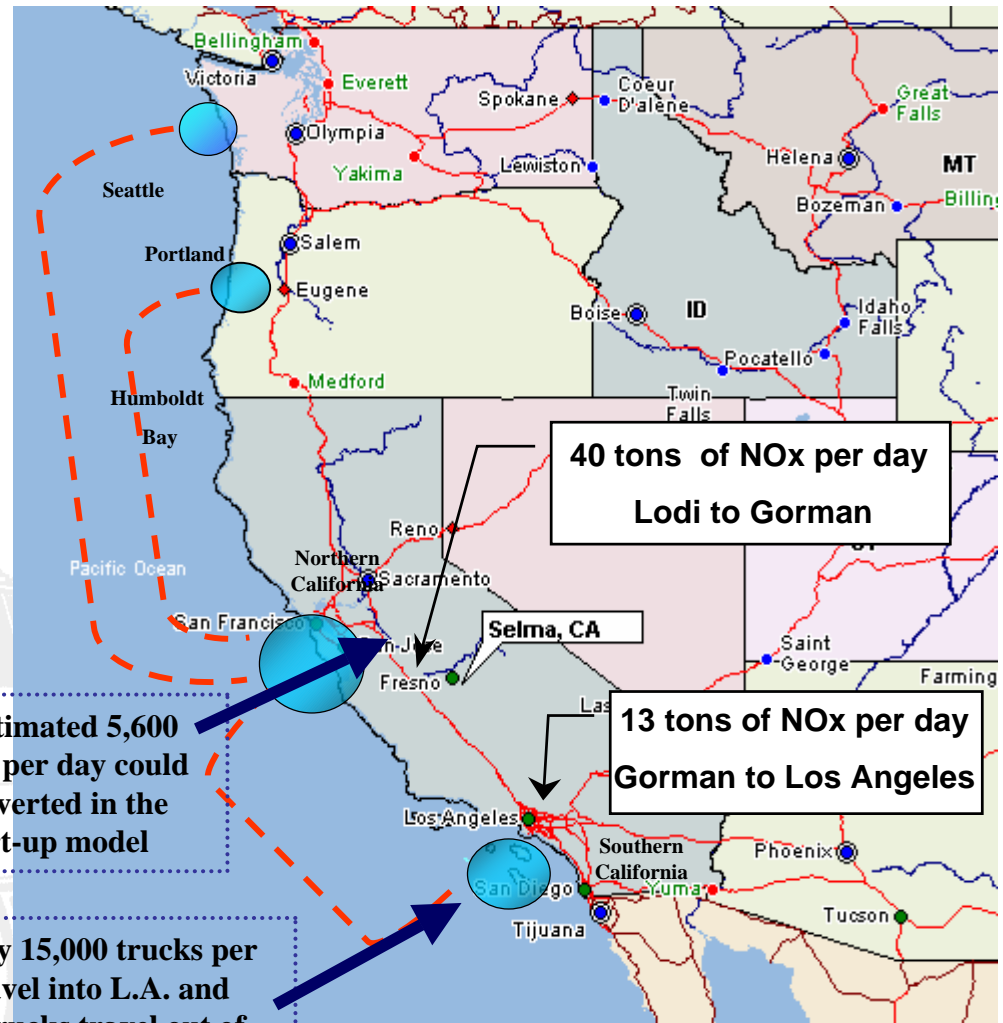
- Short Sea Shipping is the diversion of domestic and international cargos that move by highway from major metropolitan areas to major metropolitan areas by water along coastal routes.
- It is also the diversion of International cargos from large municipal ports to the smaller ports closer to the cargos final destination. This provides port congestion relief, faster through put, and takes trucks off the Highway between the ports.



# West Coast Short Sea Shipping Model



- Thousands of trucks that currently run on the Highway daily between these port service areas could be diverted off the Highways between them.
- Any type of trailer can be routed onto the ships or barges.
- This includes vans, reefer vans, tankers, flat beds, and international containers on chassis.
- Ships will provide next day service in 400 mile markets, matching today's truck service.
- Ships will carry 700 trailers each.
- Barges will carry 500 trailers each.



An estimated 5,600 trucks per day could be diverted in the start-up model

Currently 15,000 trucks per day travel into L.A. and 15,000 trucks travel out of L.A. each day.

40 tons of NOx per day  
Lodi to Gorman

13 tons of NOx per day  
Gorman to Los Angeles



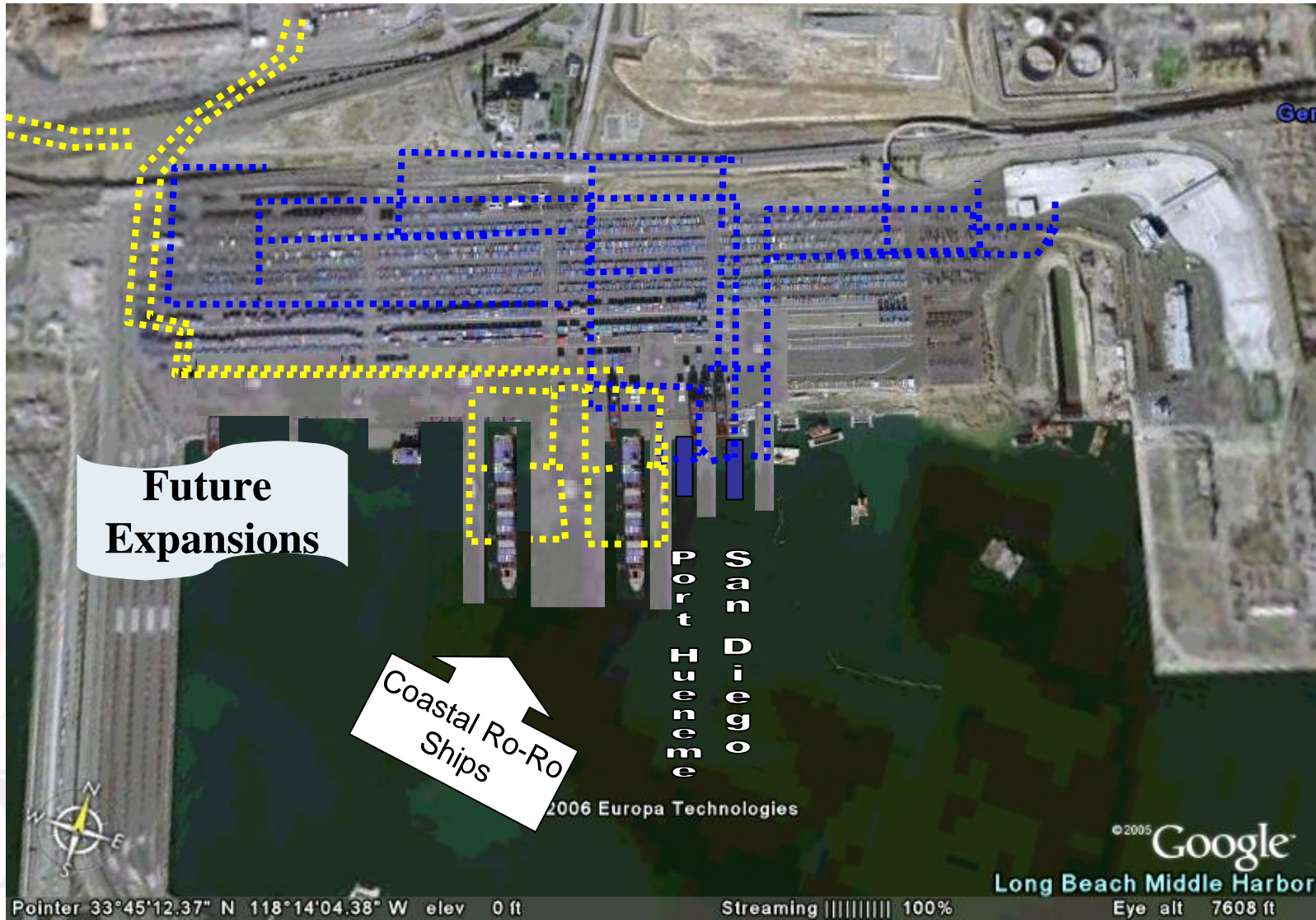
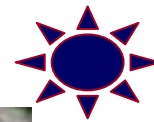
 Ships

 Barges

 Trucks



# Port of Long Beach



**Future Expansions**

**Coastal Ro-Ro Ships**

2006 Europa Technologies

© 2005 Google

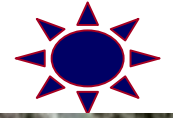
Long Beach Middle Harbor

Eye alt 7608 ft

Streaming 100%

Pointer 33°45'12.37" N 118°14'04.38" W elev 0 ft

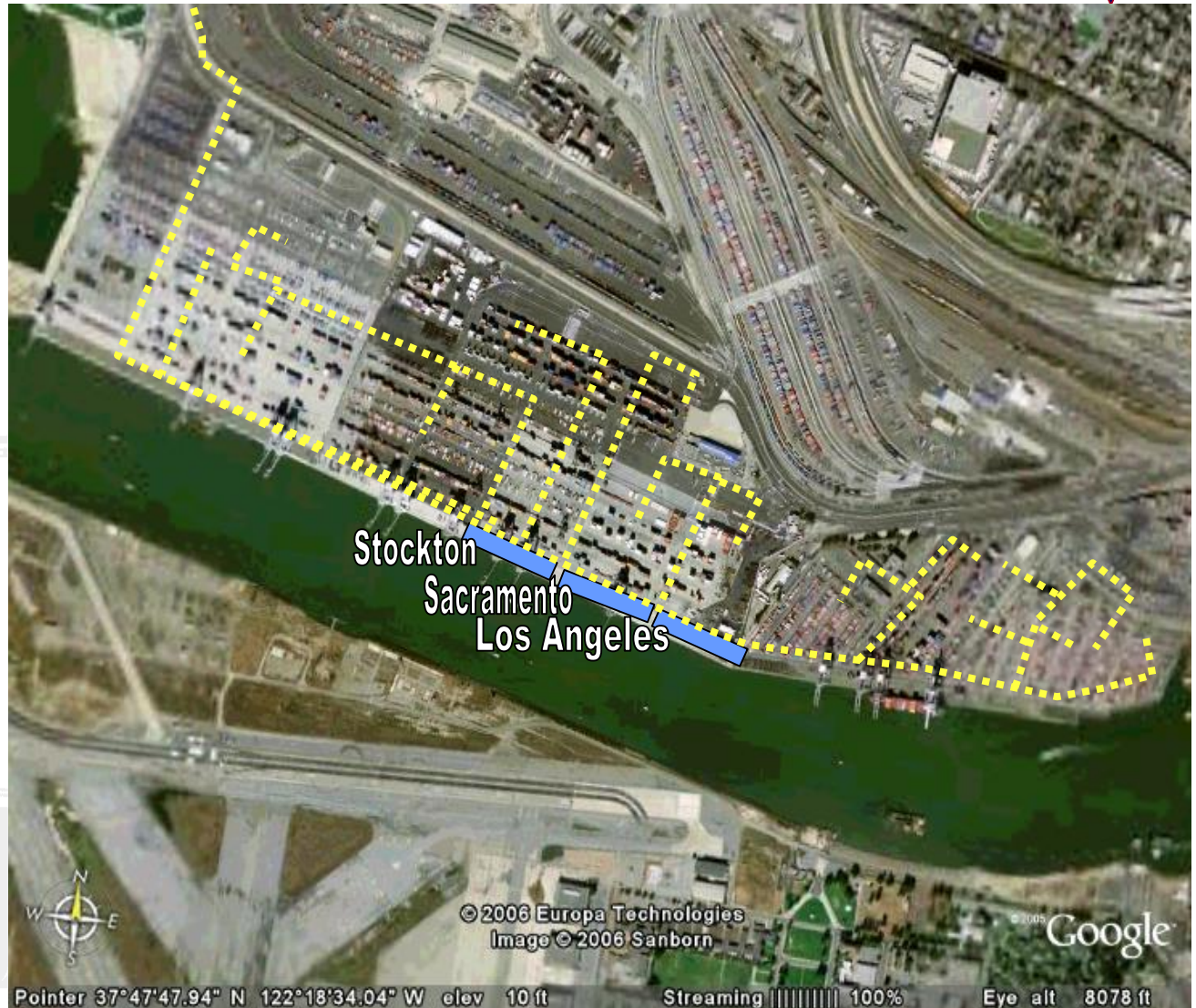
# How the barge feeder will pull containers from all terminals. At the Port of Oakland



- Containers may be consolidated by short haul trucks from all terminals and moved by barge to Sacramento and Stockton by ship to Los Angeles. This can be done using 2007 truck models with clean diesel or LNG.

- Dedicated water front for two barges and 1 ship will be required for the system to work properly.

- This system will move containers faster from the terminals, providing 10 to 20 percent better through put, and will provide increased capacity at the container terminals.





 Ships

 Barges

 Trucks





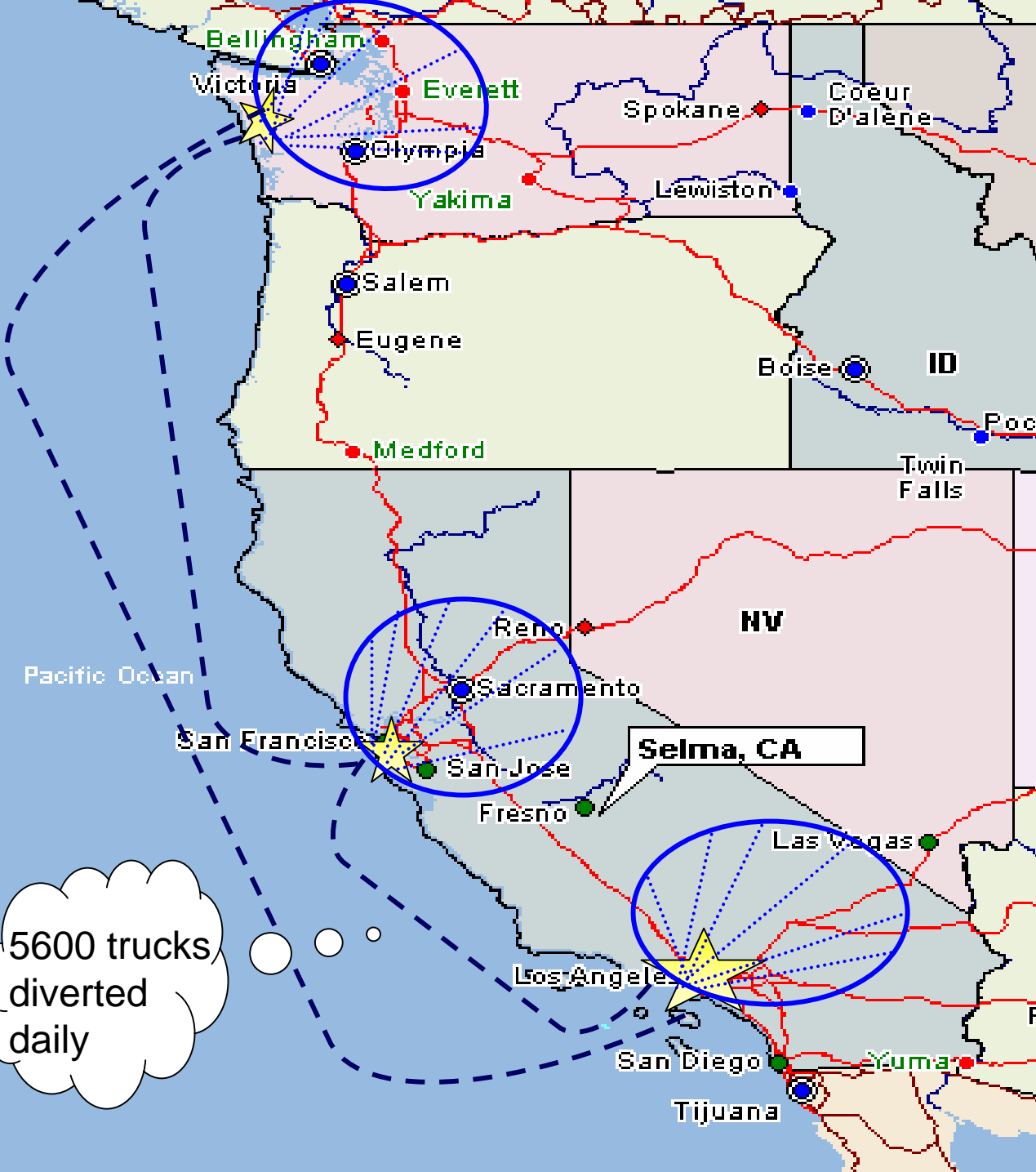
 Ships

 Barges

 Trucks

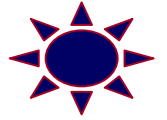


5600 trucks  
diverted  
daily





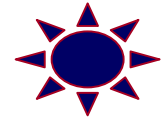
# Benefits of Short Sea Shipping



- Congestion
- Pollution
- Highway Safety
- The State and Federal Budget
- Home Land Security
- Ports Through-put
- Truck Driver's Quality of Life
- Future Freight Capacity Demands



# Dual-Use

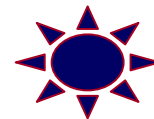


**Roll-on Roll-off vessels can be used in time of need and during peace time to move military cargo. Vessels can also move goods in and out of areas when natural disasters or terrorist attacks make roads inaccessible.**



**Ro-Ro Terminals are Strategic Terminals, and Ro-Ro Vessels Provide Benefits to the Military.**

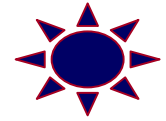




# Ro-Ro Operations Already Successful in Niche Markets



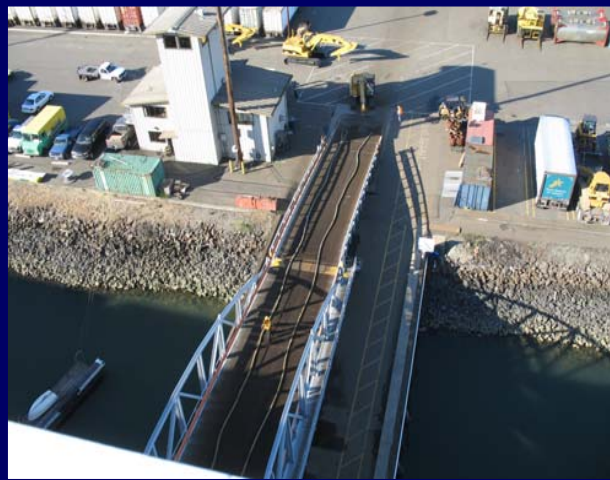
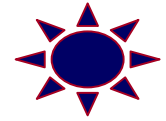
# TOTE'S Existing Roll-On/Roll-Off (Ro/Ro)



- Conventional displacement vessel
- Length Overall: 839' - 0"
- Beam: 118' - 0"
- Maximum Draft: 29' - 6"
- Speed 24 kts
- Trailer Capacity : 600 F.E.U.
- Auto Capacity: 200
- Cargo Deck Area: 360,000 sq. ft.
- Load/Unload time less than 9 hours
- Cost per vessel ~ \$175 M (2002 dollars)
- Two vessels, NASSCO, 2002/2003

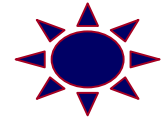
Short Sea Shipping is Already Successful in Niche Markets

# TOTE In-Port Ro-Ro Operations



Fast Turn-Around at Ports is Critical Ro-Ro Terminals are Simple and Efficient. In the study we will look at slips so both sides of the ship can be unloaded at the same time.

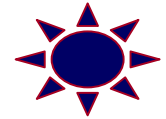
# Crowley and Trailer Bridge Ro-Ro Barges



- Largest Ro-Ro Barges in the World
- Triple-Deck
- 736' x 104'
- 512 FEU capacity
- 340 53' trailer
- Travel at 9 to 10 knots
- Serve Florida to Puerto Rico market



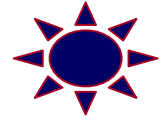
# What We Know So Far



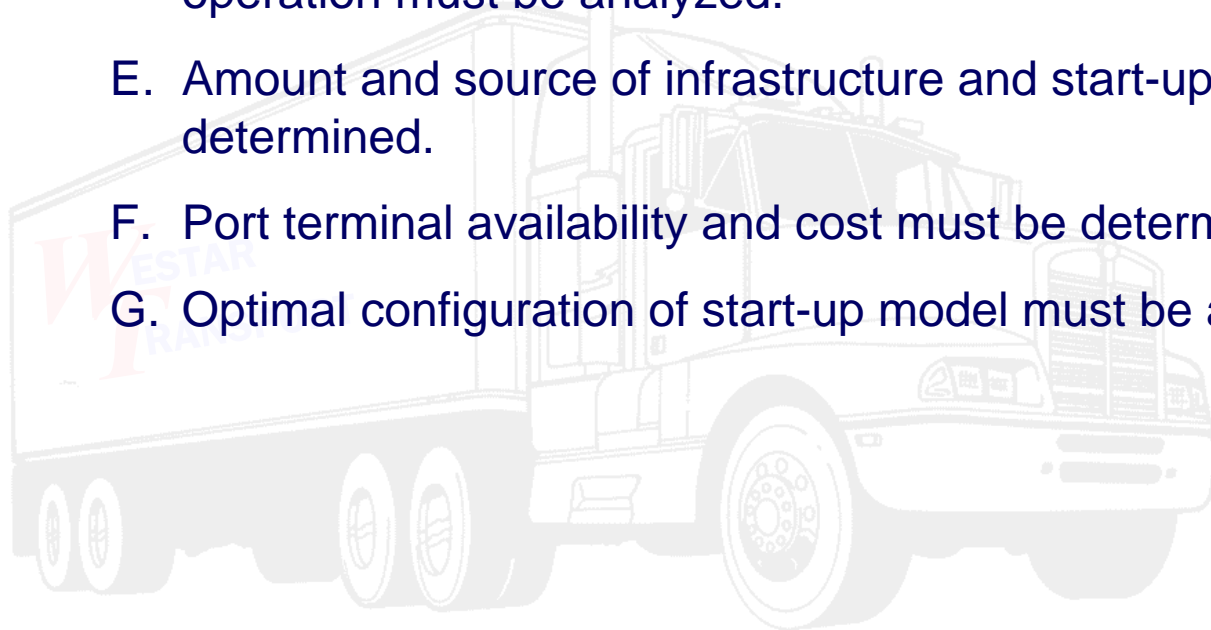
## CCDOT has completed Phase One Feasibility Analysis

1. There is sufficient market to support coastal ships.
2. Door-to-door service can compete with current truck delivery speeds.
3. The business model can be profitable at rates comparable to trucking rates.
4. Air quality benefits are significant for the Valley, probably also for the ports.
5. Freight will continue to grow faster than we can build highway lanes.
6. A comprehensive, State-wide approach is required to achieve economic and environmental optimization.
7. A public private partnership, similar to High-Speed Rail, will be required to build this new transportation system (public infrastructure, private operators).
8. The infrastructure required for Short Sea Shipping is less costly per container load than adding highway capacity.

# Questions yet to be Answered



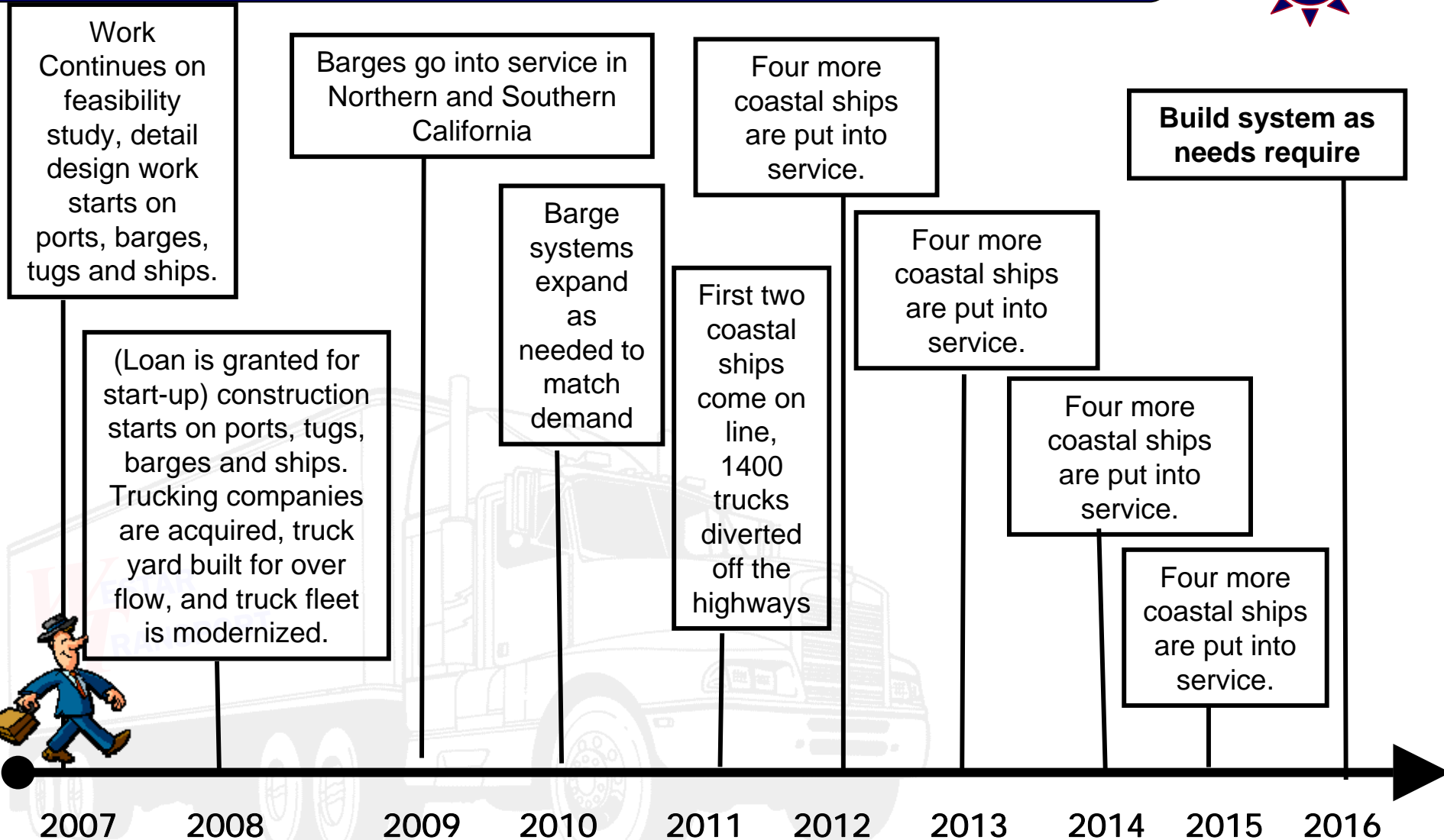
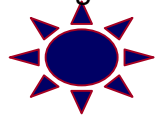
- A. Market data must be obtained to determine feasibility of the barge feeder operation.
- B. Costs of a door-to-door transportation system must be validated.
- C. Environmental impacts on all regions must be validated.
- D. System design considerations to guarantee cleanest and most efficient operation must be analyzed.
- E. Amount and source of infrastructure and start-up capital must be determined.
- F. Port terminal availability and cost must be determined.
- G. Optimal configuration of start-up model must be ascertained.





# Short Sea Shipping's Financial Plan

The below time line will be true if Short Sea Shipping's Study is funded, the ports are obtained and start-up capital is granted.



# Short Sea Shipping



**Any Questions?**

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