Mind the Gap

Beryl T. Johnsen-Seeberger

Syracuse University

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CONTENTION

CONTEXT: HISTORY OF CONGESTION

Los Angeles county is a site that has long been plagued with transportation difficulty. Since the 1920s cars began to overtake trains in popularity as primary transportation in the city, resulting in overcrowded freeways as the personal vehicle has taken its place in Los Angeles culture as the main mode of transportation.

This continued reliance on a single mode of transportation could be the result of Los Angeles’s individualist culture, as well as the cities polycentricity. "With each decade, it gets harder to distinguish the culture of the automobile from the culture of the city." (Schwarzer 72)

To combat the congestion, Los Angeles has implemented a number of changes, ranging from updating some metro stops and the Long Beach bus depot. However, these changes deal each with one mode of transportation and do not attempt to tap into any other aspect of Los Angeles culture.

Amongst the individualists is a Los Angeles community revolving around entertainment, theatre and play. As the entertainment capital of the west coast, this aspect of the city’s culture has tremendous potential to unite Los Angeles. I propose that this love of the theatrical can be turned on the transportation.

ROLE OF ARCHITECTURE:

Architecture, specifically that of transportation as a densifier for communities is tried and true. However, the type I wish to associate with the culture of Los Angeles is the transportation architecture of entertainment. Transportation often creates theatrical moments as outlined in this book, and it is these types of moments I hope to recreate.

I intend to create these appreciative moments in the context of desired program in the Long Beach Area. Long Beach offers a unique opportunity of density of modes of transportation, and types of people by touching on a major highway, the Port of Long Beach, and an active riverfront. The highway in question, Interstate 710, is one of the most clogged roads in Los Angeles. A major commuter route, it starts at the proposed site.

The Port of Long Beach also has a rail yard and loading docks, as well as the start of its major freight train corridor on the site. The port expects traffic to increase, but is also being held back by the congestion in surrounding channels.

By tapping into the rich diversity of transports, and taking inspiration from Los Angeles love of theatre, I hope to draw attention to the community of the city.

TRANSPORTATION
= COMMUNITY

Since the advent of anything other than your own two feet, transportation has had a profound effect on people and the dynamic of the cities in which we live. Los Angeles is a city where this is particularly evident. Increase in congestion and decrease in public transport is shown to be a result of the state of Los Angeles's community culture...or lack thereof.
POLYCENTRICITY

A SHRINKING CITY OF INDIVIDUALS

The advent of cars in Los Angeles has produced a culture of individuals. A polycentric metropolis with disconnected communities and transportation equally as disparate.
2002, Long Beach completes an expansion of its rail line system from the Port to the Alameda Corridor, a major shipping vein in the U.S.

As of 2005, the Port of Long Beach was the second busiest seaport in the United States and the tenth busiest in the world, shipping some 66 million metric tons of cargo worth $95 billion in 2001.

2008
- Measure R for $40 million to transportation

2010
- Density in the region has increased by all time lows of 0.2%

2011
- Long Beach Transit Mall Completed

2012
- Long Beach imports decreasing, putting it below Los Angeles port.

“THE HISTORY OF CONGESTION IN LA

This book is the result of the passage in 2008 of Measure R, a ballot initiative in Los Angeles County, whereby citizens, faced with climbing gas prices and a declining economy, realised that public transit was the only way to assure mobility in this vast region.

Unwilling to rely on the commitment of the Federal or State governments to serve a demonstrated need with sustained consistency, they voted by a majority greater than 67% to tax themselves an additional .5 percent on sales tax for the next 30 years to raise $40 billion to build out a comprehensive public transit system of rapid buses, light rail, subway, and heavy metro rail trains.”
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ADDRESSING LONG BEACH

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**EXISTING UNSUCCESSFUL INTERVENTIONS**
In Los Angeles, the Port of Long Beach offers a unique opportunity for studying multiple modes of transportation in the interest of redensifying an area and tapping into a community closely tied to the port.
TRANSPORTS AT PLAY

The modes of transport I’ve chosen to deal with are the port freight trains and trucks, as well as the interstate and the water taxis the port and opposite bank use to shuttle.

<table>
<thead>
<tr>
<th>Vehicles per day</th>
<th>People per day</th>
<th>Main Active Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>120,000</td>
<td>6AM to 7PM</td>
</tr>
<tr>
<td>Freight Truck</td>
<td>35,000</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>12AM to 12AM</td>
</tr>
<tr>
<td>Aquabus</td>
<td>16</td>
<td>49 per boat</td>
</tr>
<tr>
<td></td>
<td>75 per boat</td>
<td>11AM to 7:10PM</td>
</tr>
<tr>
<td></td>
<td>784 per day</td>
<td></td>
</tr>
<tr>
<td>Cargo Ship</td>
<td>13</td>
<td>75 per boat</td>
</tr>
<tr>
<td></td>
<td>975 per day</td>
<td>10:30AM to 8:15PM</td>
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<tr>
<td></td>
<td>N/A</td>
<td>12AM to 12AM</td>
</tr>
</tbody>
</table>
THE PORT OF LONG BEACH
The port of Long Beach is looking to expand its rail. With still half of the imports being shipped via truck, the port is looking to increase the %40 of its cargo shipped intermodally.

"Development of on-dock/near-dock facilities and supporting rail will improve intermodal efficiencies and reduce local and regional truck traffic."

RAILYARD TO BE EXPANDED BY MY PROJECT

The Port of Long Beach expects to increase its traffic exponentially in the coming years. One of their current projects is to expand the Pier B’s on-dock rail facilities to better facilitate transfer to 8,000 to 10,000 foot long freight trains, rather than trucks to keep congestion off the interstate and make easier the transition from the port rail to the Alameda Corridor to the Transcontinental connections farther inland.

I-710 CORRIDOR PROJECT

The stretch of interstate heading north along the Los Angeles rive is the most congested interstate in Long Beach, and the corridor project completed a report in 2011 to assess possible solutions. One of the causes of this congestion is the trucks leaving Long Beach Port for an inland distribution facility and the transcontinental rail connections. (Choi 9)

TOUR DEPARTURE

Depart from and return to Shoreline Village in downtown Long Beach. The boat departs from Dock 9.
4 TOURS A MONTH
1 SUNSET CRUISE A MONTH

POLB: THE FACTS

4 TOURS A MONTH
1 SUNSET CRUISE A MONTH

[Tours and Departure Details]
IMPORT CARGO
CONTAINER ROUTES

UNLOADING THE SHIP:
When a ship arrives at the port, the marine terminal operator will arrange for unionized longshore workers to unload the vessel. The terminal operator directs the longshore workers to place the cargo containers on the proper transport.

FREIGHT FORWARDER:
The freight forwarder will provide directions to the marine terminal operators and contact a trucking company or train operator to move the container out of the port.

ON-DOCK RAIL YARD:
Cargo can be placed directly onto trains at the marine terminal’s “on-dock” railyards. This method of transportation is the most environmentally friendly, as it reduces truck traffic and air pollution generated by goods movement.

DIRECT DELIVERY: via truck

DESTINATION

OFF-DOCK RAIL YARD:
Off-dock railyards are used to coordinate rail deliveries to non-local destinations. Containers are delivered here by truck, then sorted and grouped by final destination.

TRANSLOAD OR STORAGE:
Shipping containers are often moved to a transload facility. Workers unload the cargo from the container, repackage it onto larger truck trailers. Then to regional distribution centers.

MOST EFFICIENT/ENVIRONMENTALLY FRIENDLY METHOD:
ON-DOCK RAIL YARD:
Long Beach Port is aiming to expand this option, not only for efficient reasons, but because one double-stacked freight train can eliminate up to 730 separate trucks, eliminating pollution as well as the tremendous congestion on the freeway I-710.
PORT FACILITIES SPECIFICS

Figure 1.1 Alameda Corridor

All images from The Port of Long Beach
LONG BEACH IMPORTS

Shipments received from these locations during October 2012.

Including:
- Container Ships,
- Bulk Carriers,
- Oil Tankers,
- General Cargo Ship
PORT COMMUNITY TOURS/OUTREACH
INCREASE IN RAILYARD USE

Currently, the Port of Long Beach sends most of its imports locally via truck, or trucks goods to an off-dock railyard to be put on trains. The Port desires to increase its on-dock rail facilities to increase efficiency, decrease truck traffic on highways, and decrease its need for outside facilities.

CURRENT NUMBER OF TRAINS PER DAY:
58

NUMBER OF TRAINS PER DAY IN 2020:
154
THE NEIGHBORHOODS OF LONG BEACH
PLAUSABILITY OF SITE WALKABILITY
THE SITE

Site Sizing Concerns:
Loading railtracks in six lengths, up to 5000 feet.
Proximity to existing railyard and congested interstate.
RAIL YARD EXPANSION:
80,000 feet of track
8,000 to 10,000 feet of track to load a unit train

COMMUNITY/TEACHING CENTER:
Long Beach West Community Center is 9,000 square feet.

PIER B OPERATIONS BUILDING
Based on the other piers and the expected increased in pier B’s traffic, an operations building would be at least 30,000 square feet.

PROGRAM AND SPATIAL REQUIREMENTS
SCHEDULE
OVERLAP
PRECEDEENTS

TRANSPORTATION AS THEATRE
Simply by literally framing the street from above, the highline created a theatre simply by drawing attention to the immediate environment, to the perspective created by the location of the park - above the street. It allows us to view the patterns and dance at work in traffic that otherwise we find ourselves to be embroiled in to appreciate.
Stephen Koplowitz and dancers perform "Fenestrations" along the glass enclosed catwalks, using one of Grand Central's most dramatic spaces as the setting for this imaginative dance piece as part of Grand Central Dances 1987. Courtesy of MTA/Metro-North Collection, Frank English photographer.

The catwalks in Grand Central about how the human motion at work in transportation hubs can be an entertaining thing to experience and view.

Fig 3.1 The Catwalks in the main hall of Grand Central Station, New York City
GRAVELY POINT PARK

Gravely point park has a unique location on a peninsula directly north of the Kennedy airport in Washington D.C. The area is populated by spectators to watch planes taking off from the runway perpendicular to the park.
Created by the channels of moving trains, the space of a subway station can seem like a theatre. The lighting of a platform, the changing view based on moving obstructions and the structure of the space, as well as the ‘performers’ across the way.
PROPOSAL
In respect to the necessary proximity of program, the blue highlighted zones represent where the building would be.
Across this span, the proposed program will form an integrated experience.
THE SITE:
MAIN TRANSPORT ZONES

Interstate 710
Major north-south commuter and trucking route.

Los Angeles River
Active riverfront to house Port Tour boats as well as Aquabus and Aqualink.

Port of Long Beach Dock and Rail.
The port cranes and main rail used by Rail yard B.

The orange highlighted areas represent the paths of the main types of the transportation the building will be dealing with.

1/32” = 1'-0”
The Site: Main Possible Massing

Main traffic flows.

Combined proposed massing.

Proposed massing in 3D.

Main objectives to bridge one waterfront to the other and integrate port functions into a highway rest stop and waterfront tourist activity.