

# Living with Freight

Jacquelyn Magness Seneschal, AICP

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# Getting the Beer to the Bar

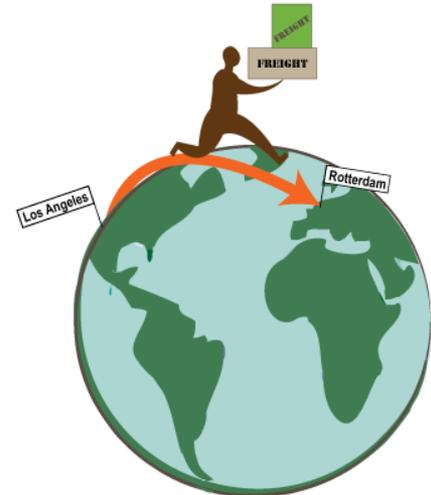
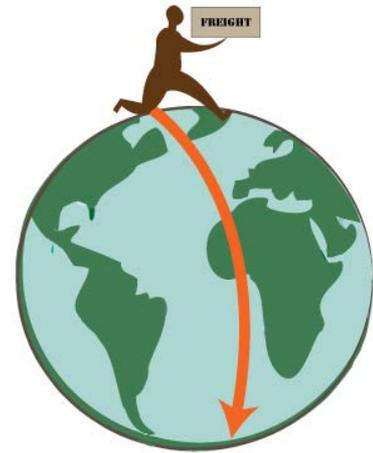
## Goals

- Improving community safety
- Designating and protecting freight rail and truck routes
- Integrating freight corridors into established communities



# Why Plan for Freight?

- Freight = Jobs and revenue
- Freight growth – “Getting Me My Stuff”
  - On average 42 tons of freight worth \$39,000 was delivered to EVERY PERSON in U.S. in 2007
  - Distance in transporting this freight, is an average of 11,000 ton-miles for every person in U.S.
  - This is equal to carrying almost one ton of freight between the North Pole and the South Pole for every man, woman, and child in the U.S, or almost two tons between LA and Rotterdam
    - 2007 US Commodity Flow Survey Data



# Why are Freight Issues Increasing?

- Freight Growth past 20 years
  - Increases in port, truck and train activity close to residential areas
- Population Growth and Residential Development
  - Often close to freight corridors and facilities
  - Infill policies and gentrification of industrial areas
- Environmental Justice
  - Community awareness has grown

# Issues Around Freight Corridors

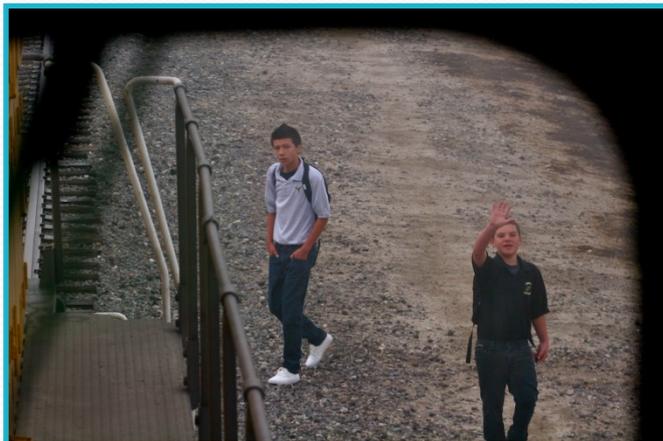
	<p><b>Noise Sensitive Uses</b></p>	<p>Dwelling units (residential, motels, etc.); educational uses (childcare, schools, colleges, etc.); libraries; hospitals and other residential health care providers; playgrounds.</p>
	<p><b>Light Sensitive Uses</b></p>	<p>Dwelling units (residential, motels, etc.); and hospitals and other residential health care providers.</p>
	<p><b>Vibration Sensitive Uses</b></p>	<p>Dwelling units; educational uses; vibration sensitive industries (such as precision high-tech industry); all buildings not constructed to withstand the fatigue caused by rail vibrations.</p>
	<p><b>Pollution/Air Quality Sensitive Uses</b></p>	<p>Dwelling units (residential, motels, etc.); medical (hospitals and other residential health care providers); educational (childcare, schools, colleges, etc.); park and recreational facilities.</p>
	<p><b>Uses Requiring Potentially Incompatible At-grade Crossings</b></p>	<p>Dwelling units; educational uses; libraries; hospitals and other residential health care providers; commercial uses; emergency services; park and recreational facilities.</p>
	<p><b>Uses Associated with the Potential for Dangerous Trespass</b></p>	<p>Dwelling units; education uses (especially childcare facilities and schools); libraries; playgrounds; commercial uses.</p>
	<p><b>Time Sensitive Uses</b></p>	<p>Night-time sensitive uses*; dwelling units, hospitals and residential care facilities.</p>
	<p><b>Traffic and Congestion Sensitive Uses</b></p>	<p>Dwelling units; emergency service provider uses; residential health care facilities.</p>
	<p><b>Height Sensitive Uses</b></p>	<p>Residential and commercial uses that may impact approach and landing flight paths.</p>

\* Nighttime sensitive uses are those types of uses that may cause disruption in the sleep pattern of an individual. The Day night average noise level that was developed by the Department of Housing and Urban Development recognize the heightened community annoyance caused by late-night or early-morning operations of certain industries and transportation uses. Where nighttime sensitive uses is utilized, it specifically refers to freight activities that may create noise that impacts residential land uses.

# Safety and Trespass



- Children crossing UP line in Anaheim CA to get to Ball Jr. High School



Source: Jon Waide  
FRA Region 7 Law  
Enforcement  
Liaison Officer

# How close is close?



Foundation  
8.5 feet  
from rail

Heighs Blvd Houston - 2008

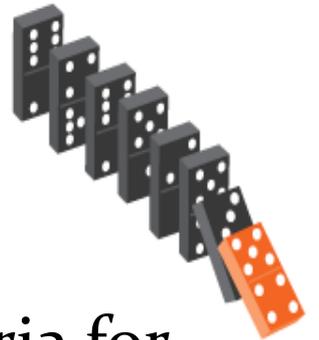
Source: Dale Hill Union Pacific

Unit facing: listed at \$350k  
Unit behind closer to rail:  
listed at \$380k



# Freight Movement in Local Planning

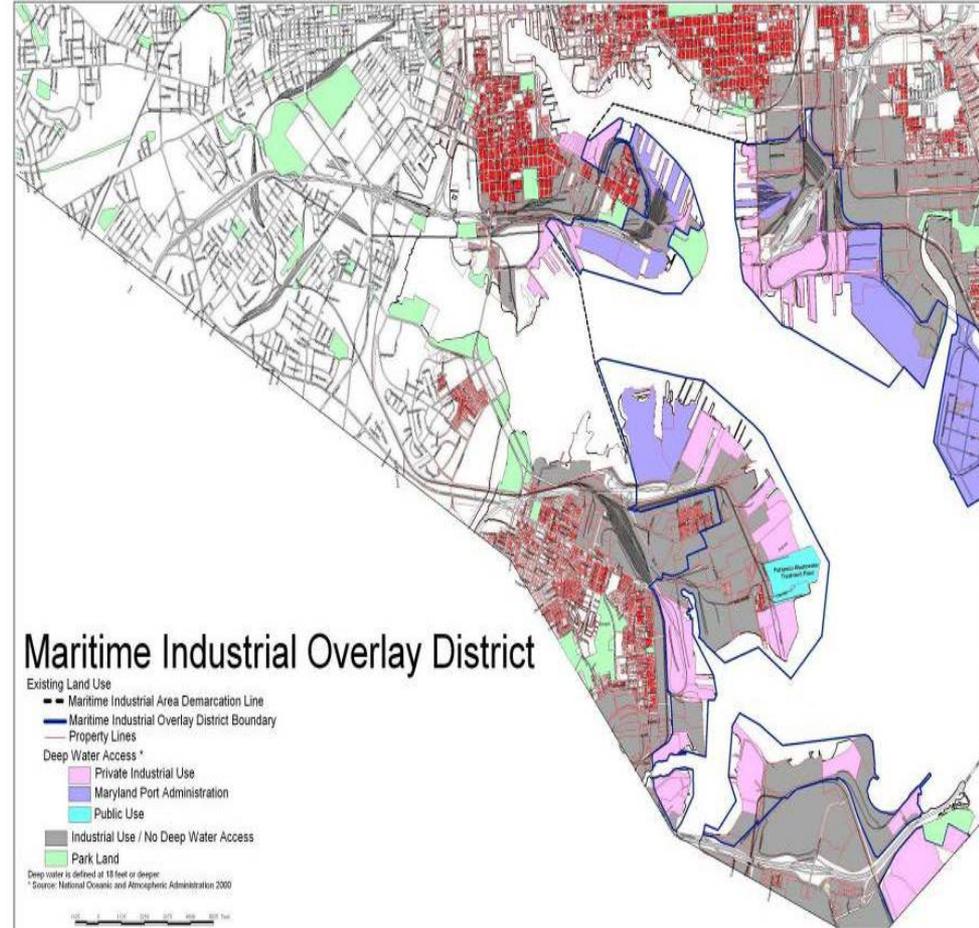
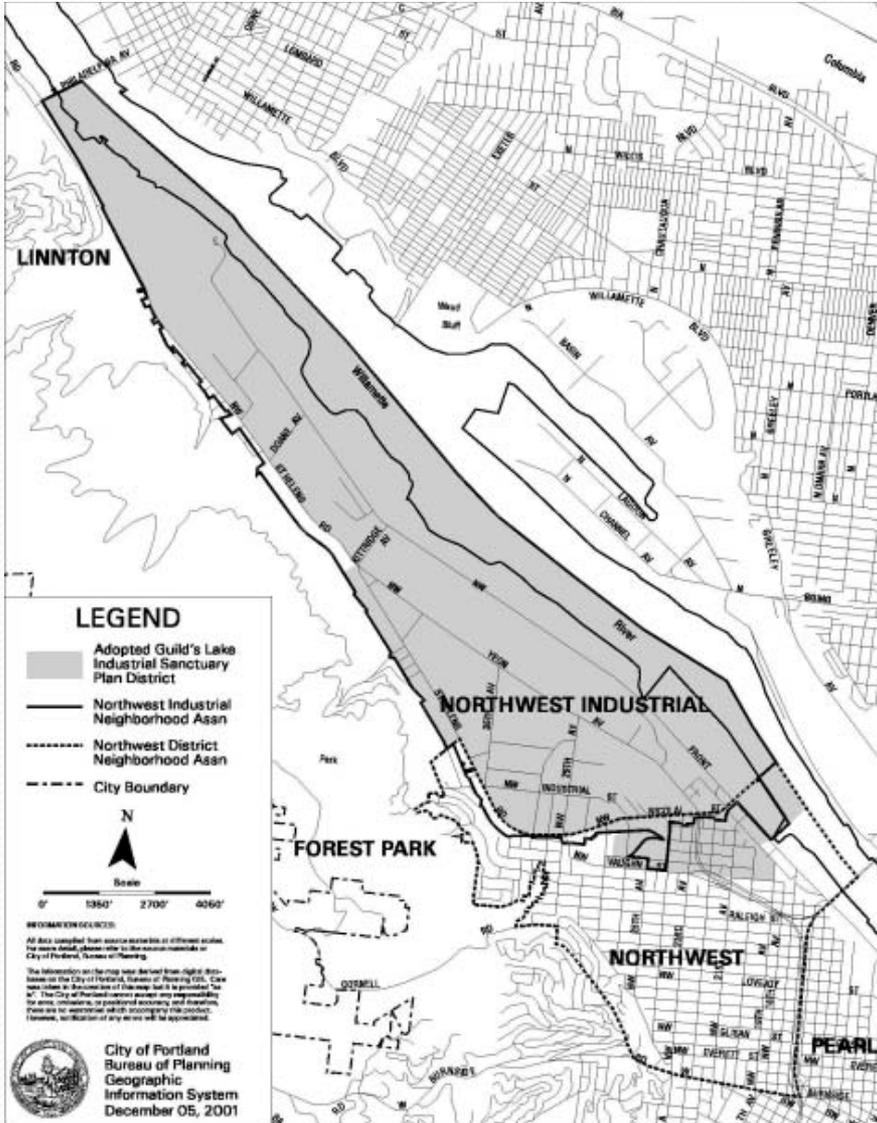
- Include freight in regional visions
- Incorporate regional long-range plans into local comprehensive plans
- Plan for freight in local comprehensive plans
- Identify local freight routes and corridors
- Create zoning ordinances that set design criteria for freight-compatible development



# Protection/Mitigation Strategies

Long-Range Planning	Zoning and Design	Mitigation	Education and Outreach
State Enabling Acts	Zoning Standards	Buffer Areas	Informal Negotiations
Regional Visioning	Buffer Areas	Noise and Vibration Treatment	Public Involvement
Comprehensive Plans	Development Permitting	Track Treatment	Multi-Jurisdictional Agreements
Freight Facility Inventories	Overlay Districts	Yard Re-alignment	Public Outreach and Education
Official Maps	Lot Orientation	Grade Crossing Management	Stakeholder Roundtables and Freight/Community Committees
Purchase and Advance Acquisition	Property Design	Port Gate Management	Include freight in community and regional planning syllabi
Land Swaps	Construction Standards	Environmental Measures	
Protective Condemnation	Sound Proofing Standards	Zoning Measures	
Permit Development		Public Outreach and Education	
Access Rights		Relocation	

# Zoning: Overlay Zones



Comprehensive Rezoning Project

9/13/04

Baltimore City Department of Planning

Martin O'Malley, Mayor



Chris Riley, Director

# Typical Setbacks Around Freight Facilities (in feet)

Type of Freight Corridor *	Type of Land Use	Residential	Mixed Use	School Hospital Residential Day Care Facility **	Commercial	Industrial
<b>Primary freight corridor</b>		250	200	250	100	15
<b>Secondary lines (rail) and major arterials (trucking)</b>		150	150	250	50	10
<b>Passing spurs/small branch lines (rail)</b>		100	100	150	50	10
<b>Rail yard</b>		150	150	150	50	-
<b>Intermodal facility</b>		100	100	150	50	-
<b>Port facility</b>		150	150	250	50	-
<b>Air Cargo facility***</b>		10,000	10,000	10,000	10,000	-

# Website guide to facilitate process



**ENVISION  
FREIGHT**  
*A ROADMAP TO FREIGHT COMPATIBILITY*

[Gallery](#) [Contact](#) [About](#)

**Home**

**The Value of Freight**

**Freight Modes**

**Freight Issues**

**Tools**

A smoothly functioning freight transportation network is essential to the operation of the U.S. economy. Efficient freight transportation is a very important part of producing products and getting them to consumers. However, population growth, rising incomes and other aspects of economic growth have all led to increased competition for the land resources underlying the freight transportation infrastructure. In this context, *encroachment* refers to some form of interference or cost imposed by one type of land use on another nearby land use.

Encroachment and the potential it creates for conflicts between freight transportation activity and other land uses can occur in numerous ways and have numerous possible causes. The most obvious type of conflict people might think of is physical interference—for example, bridge interference with the vertical clearance of railroad corridors or other shipping lanes. Other types of conflict may not be as apparent, such as noise and vibration caused by freight activities. Encroachment issues faced by the community at large and freight interests include:

Community Issues include:	Shipper Issues include:
<ul style="list-style-type: none"> <li>Light pollution</li> <li>Noise</li> <li>Vibration</li> <li>Safety</li> <li>Congestion</li> <li>More...</li> </ul>	<ul style="list-style-type: none"> <li>Speed restrictions</li> <li>Limitations on hours of operations</li> <li>Height and clearance issues</li> <li>Size and weight limitations</li> <li>Corridor design impacts</li> <li>More...</li> </ul>

All stakeholders (e.g., government agencies, community interests, freight groups, developers) can be involved in preventing or solving these issues, maximizing the value of freight to all. The following strategies are available to solve or prevent encroachment issues between freight and other land uses:

- [Long-Range Planning](#)
- [Zoning and Design](#)
- [Mitigation](#)
- [Education and Outreach](#)

*"...if you wear it, eat it, drink it, drive it, or talk or text on it, it came by freight..."*

—Les Findeisen,  
Legislative Affairs  
Director for the  
Texas Trucking  
Association

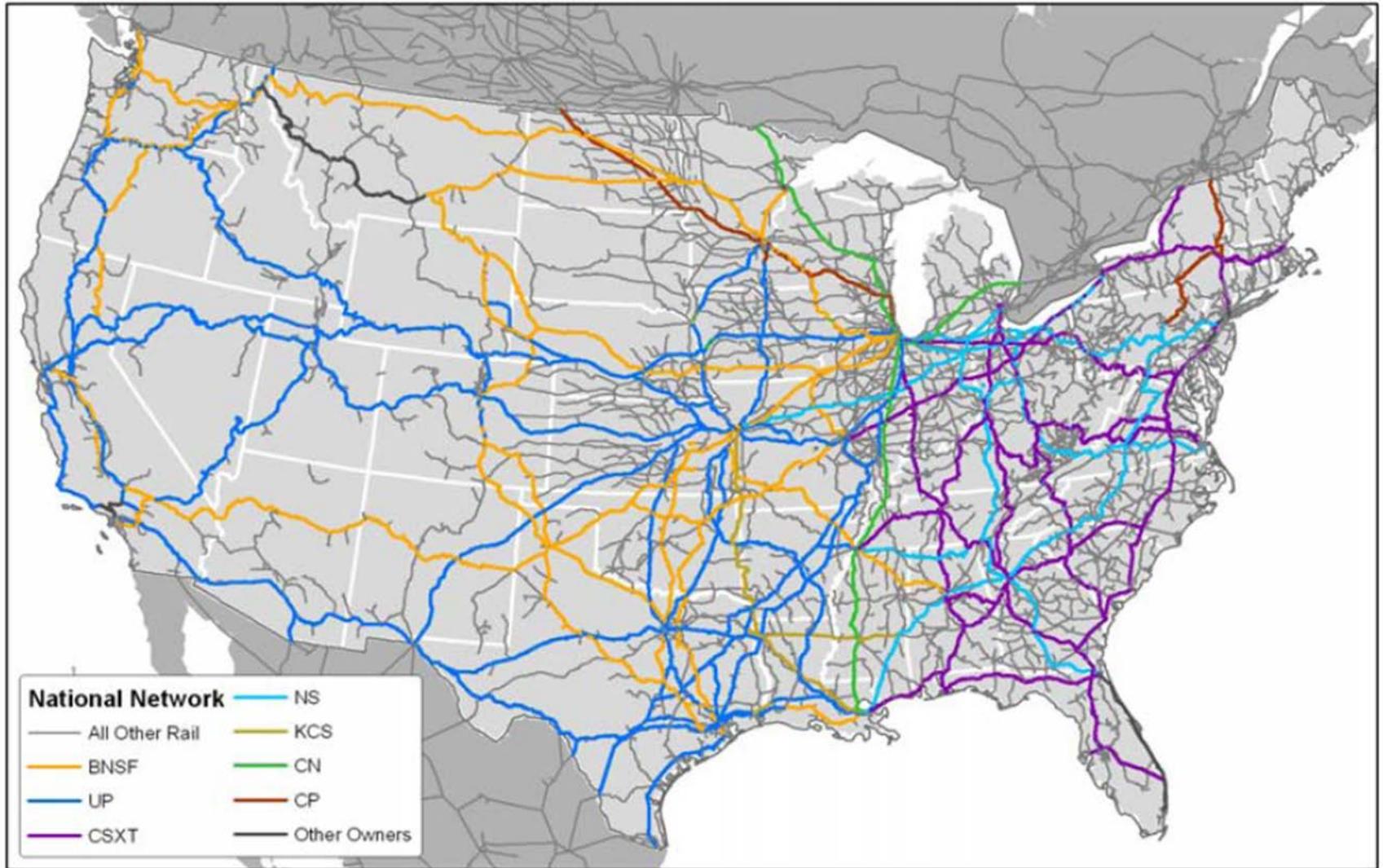
©2010 [Laurits R. Christensen Associates, Inc.](#),  
[University of Texas Center for Transportation Research](#), and  
Grow & Bruening, P.C.

# Understanding Rail Freight

Sharon Daboin

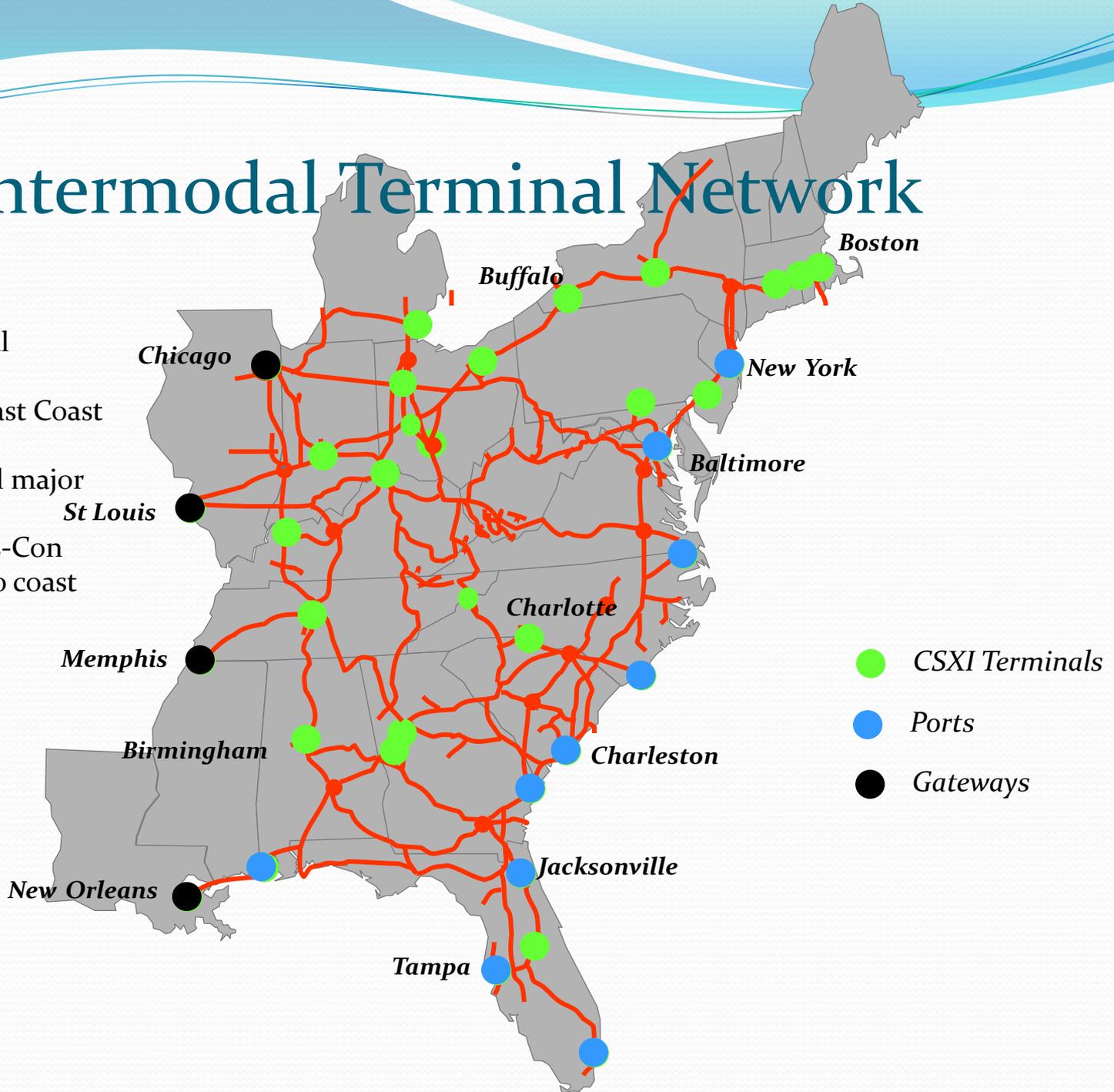
Consultant

State Government and Community Affairs



# CSX Intermodal Terminal Network

- 30+ intermodal terminals
- Every major East Coast port
- Connects to all major Class I carriers
- Provides Trans-Con service coast to coast



# Rail - Moving Everyday Products

- How much beer is moved by rail?
  - Class I's originated 24,324 carloads of beer ale weighting 1.1 million tons in 2011
    - **UP:** 147,915,000 cases of import & domestic beer in 2011
    - **BNSF:** 4,187 carloads in 2011
      - Average of 72 tons per unit
    - **CSX:** Extends western carriers to move beer and wine to eastern U.S. Markets
      - Alcoholic beverages account for 25% of food and consumer market
      - Wine represents 24% of alcoholic beverage volume



# Residential uses adjacent to freight uses

## Silo Point Baltimore



# “I Heard the Railroad is a Dying Industry”

- Communities across America built up around railroads
- Presents real challenges when mixing railroad industrial use with commercial or residential
- Railroads getting more proactive in identifying conflicts BEFORE they occur

# Rail Renaissance – Moving Goods

- Increased highway congestion, fuel and labor costs – longer haul freight moves to rails
- Increased focus on environmentally-friendly transportation solutions
- Increased population = Increased Consumption
- Changed global trade patterns

WE WANT OUR STUFF

# Rail Renaissance – Moving People

- Safety
- Adequate Freight Capacity that Envisions Growth
- Liability
- Compensation for Use of Private Property



# The Rail Advantage

- One train can carry the load of more than **280 trucks**.
- On average, railroads are **3 or more times** more fuel efficient than the alternative and emit **three times less** nitrogen oxides and particulates than alternate modes of transportation.
- A train can move a ton of freight **nearly 500 miles** on a single gallon fuel. If just 10% of the freight that currently moves by truck were diverted to rail instead, fuel savings would approach **1 billion gallons** per year.
- **Freight rail creates jobs:** every freight rail job supports an additional 4.5 jobs elsewhere in the economy.

# Railroad Information/Contacts

- Websites

- American Association of Railroads (AAR): [www.aar.org](http://www.aar.org)
- Corporate websites for CSX, Norfolk Southern (NS), Union Pacific (UP), BNSF, Kansas City Southern (KCS), etc.
- Federal Railroad Administration (FRA): [www.fra.dot.gov](http://www.fra.dot.gov)

- Telephone

- CSX: 1-877-TellCSX

- Federal, State and Local Legislators



# Planning for Truck Movements

Valorie LaCour, RLA

Chief, Division of Transportation Planning

Department of Transportation

City of Baltimore

# Truck Routes Plan

- Purpose
  - Balance truck traffic through all city neighborhoods
  - Provide clear concise information to truck drivers
  - Enable the city agencies to enforce truck routes
  - Foster better relationships between neighborhoods and industrial, institutional, non-profit, and commercial entities

# Process

Started with the Residents as  
initial audience



Residents: end-user affected by  
driver behavior

Convened an Interagency  
task force of State, County,  
City, & associated agencies to  
review routes



Buy-in from State Agencies  
and shared knowledge

Public Meetings – 40  
Community meetings



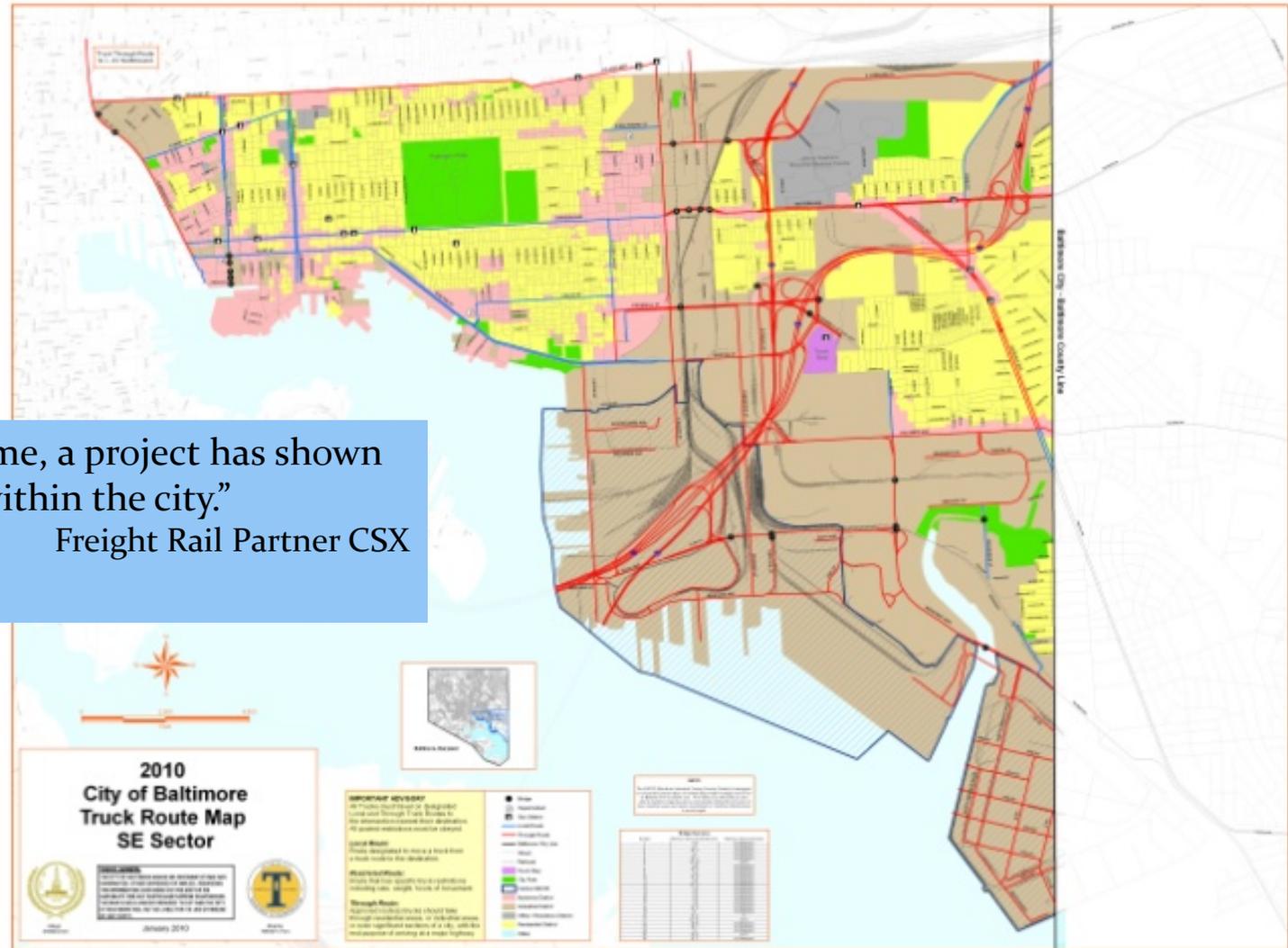
Gained understanding of  
resident's concerns with trucks  
city-wide

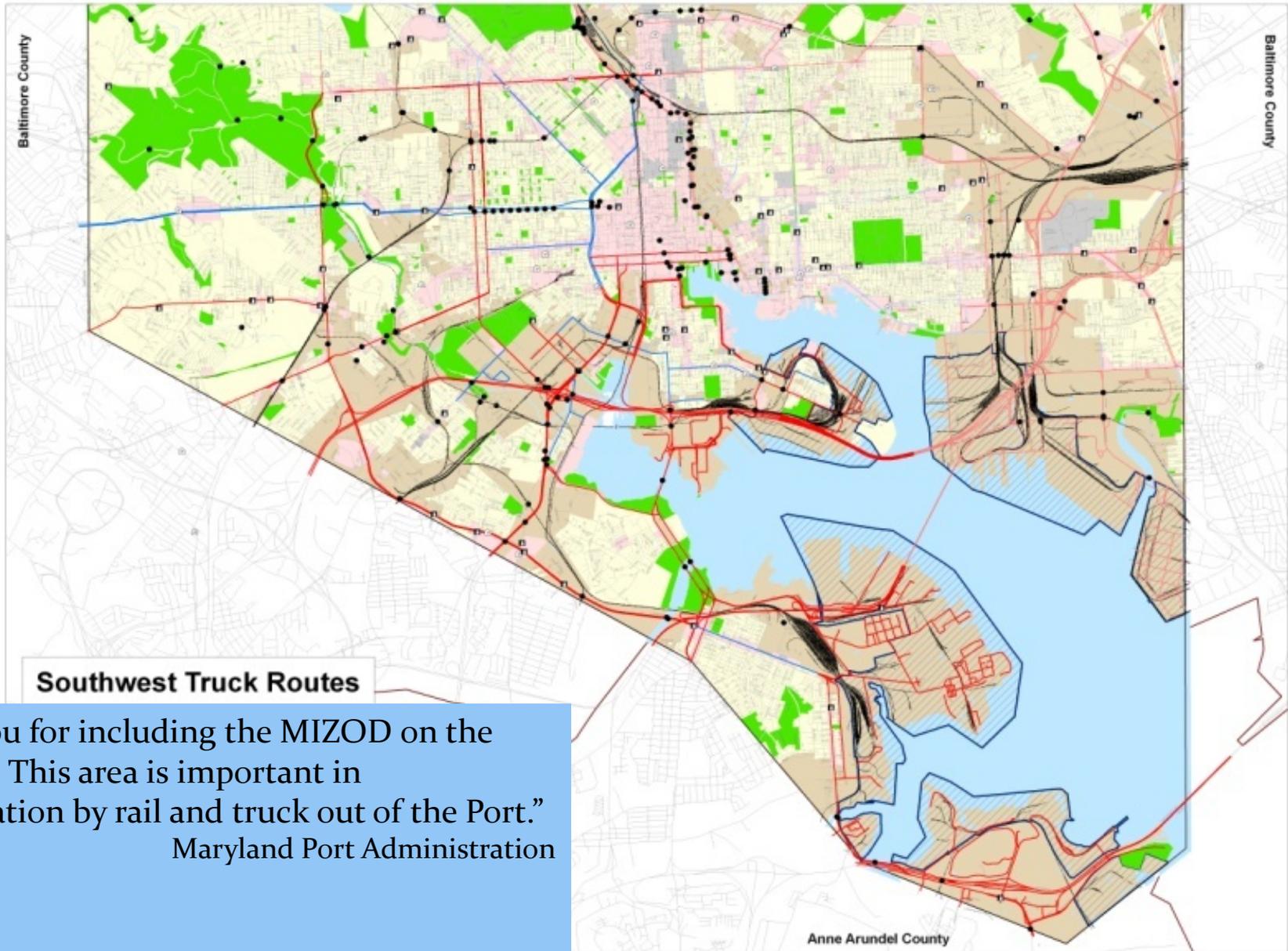
# Strategy

- Divide City into 4 quadrants
- Focus on one quadrant at a time, then city-wide
- Take revised quadrant maps to neighborhood / community meetings for review and comment
- Engage community for final map
- Brief City Council throughout the process
- Brief Mayor's Office
- Present in interagency development forums
- Prepare State and City legislation

# Feedback

“This is the first time, a project has shown all the rail tracks within the city.”  
Freight Rail Partner CSX



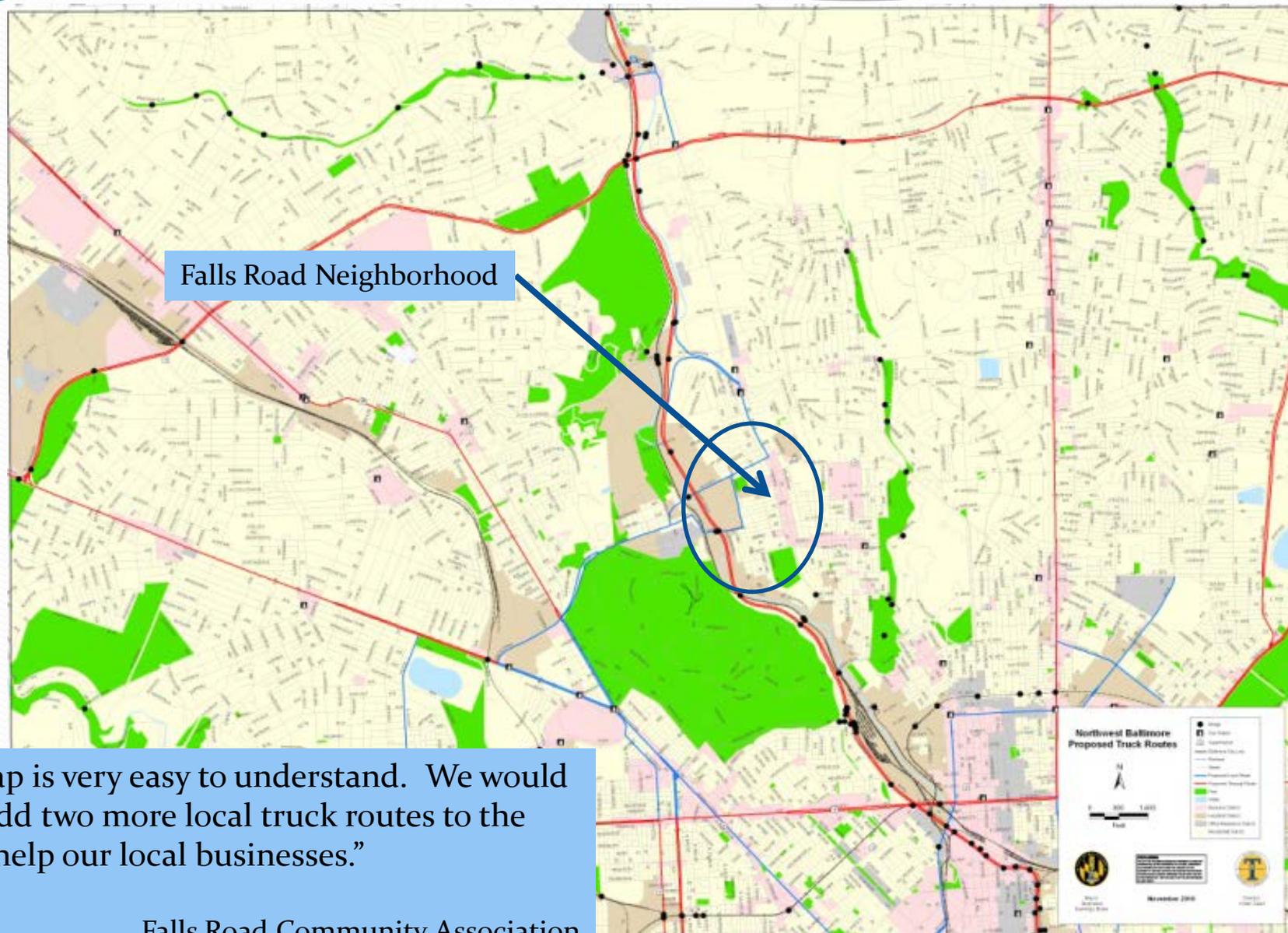


“Thank you for including the MIZOD on the mapping. This area is important in transportation by rail and truck out of the Port.”  
Maryland Port Administration



“I can live with the routes located in my neighborhood. Can you also help with other related issues of truck parking, speeding, and noise?”

Resident in the Frankfort Neighborhood



Falls Road Neighborhood

“The map is very easy to understand. We would like to add two more local truck routes to the map to help our local businesses.”

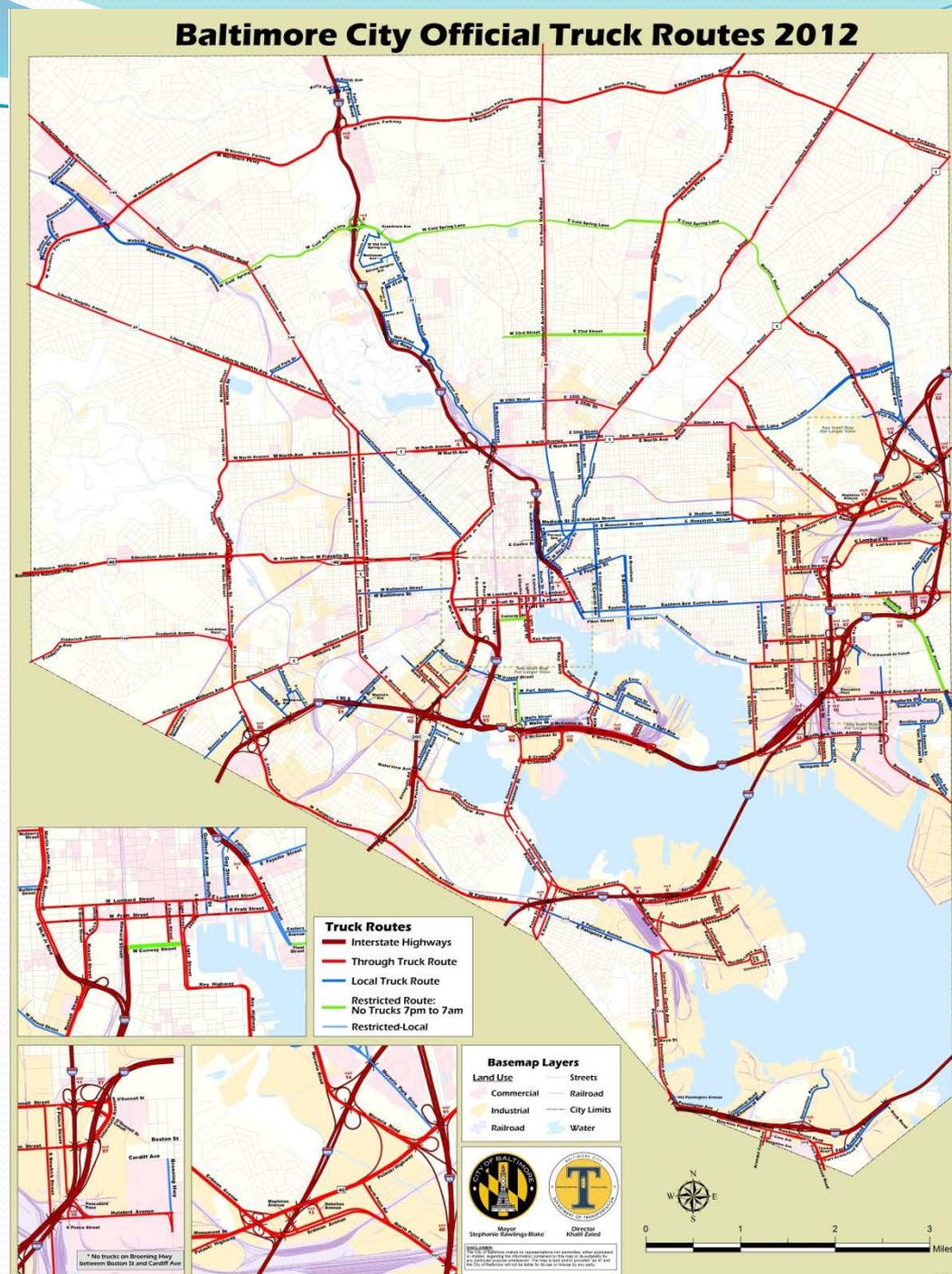
Falls Road Community Association

# Outcomes

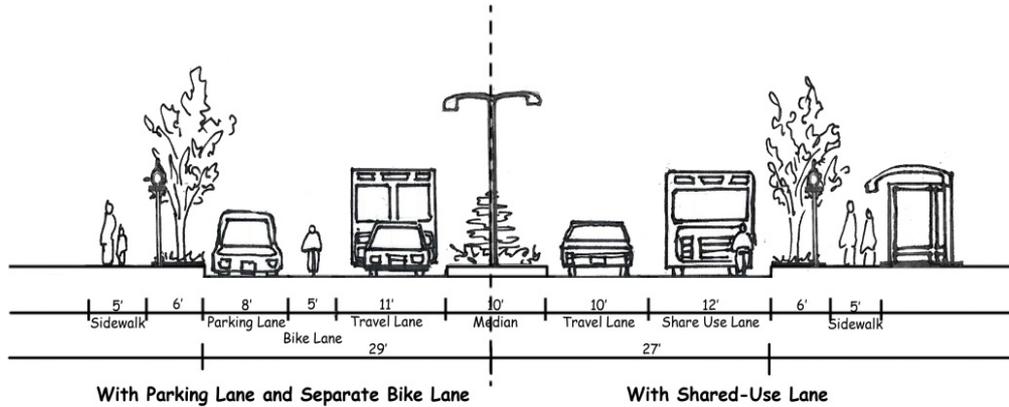
- Tiered system of truck routes based on types of movements
- Wide acceptance of proposed routes from residents
  - Community Engagement –60+ community meetings
  - Six task force meetings over 15 months
- Approval from City Council and Mayor
  - Individual briefings on proposed routes
  - Minor changes
- Legislation passed in General Assembly 2012
  - Testimony and support from industry associations
  - Letters of support from City Delegation
  - County delegates supported City Legislation

# Participation

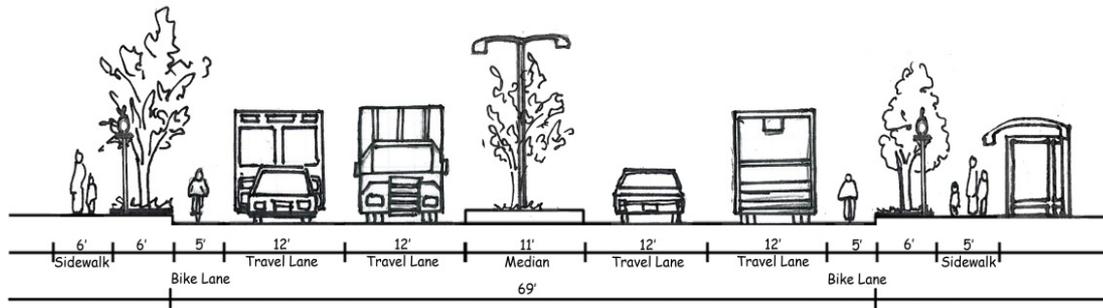
- Constructive feedback
- Thought-provoking questions
- Identification of related issues
- Trust established with stakeholders and DOT
- Comfortable and candid conversations
- Stakeholders continuing to work collaboratively on freight issues



# Complete Streets with Trucks



Example of Complete Street without  
Truck Accommodation



Example of Complete Street with  
Truck Accommodation

# Case Study: Baltimore

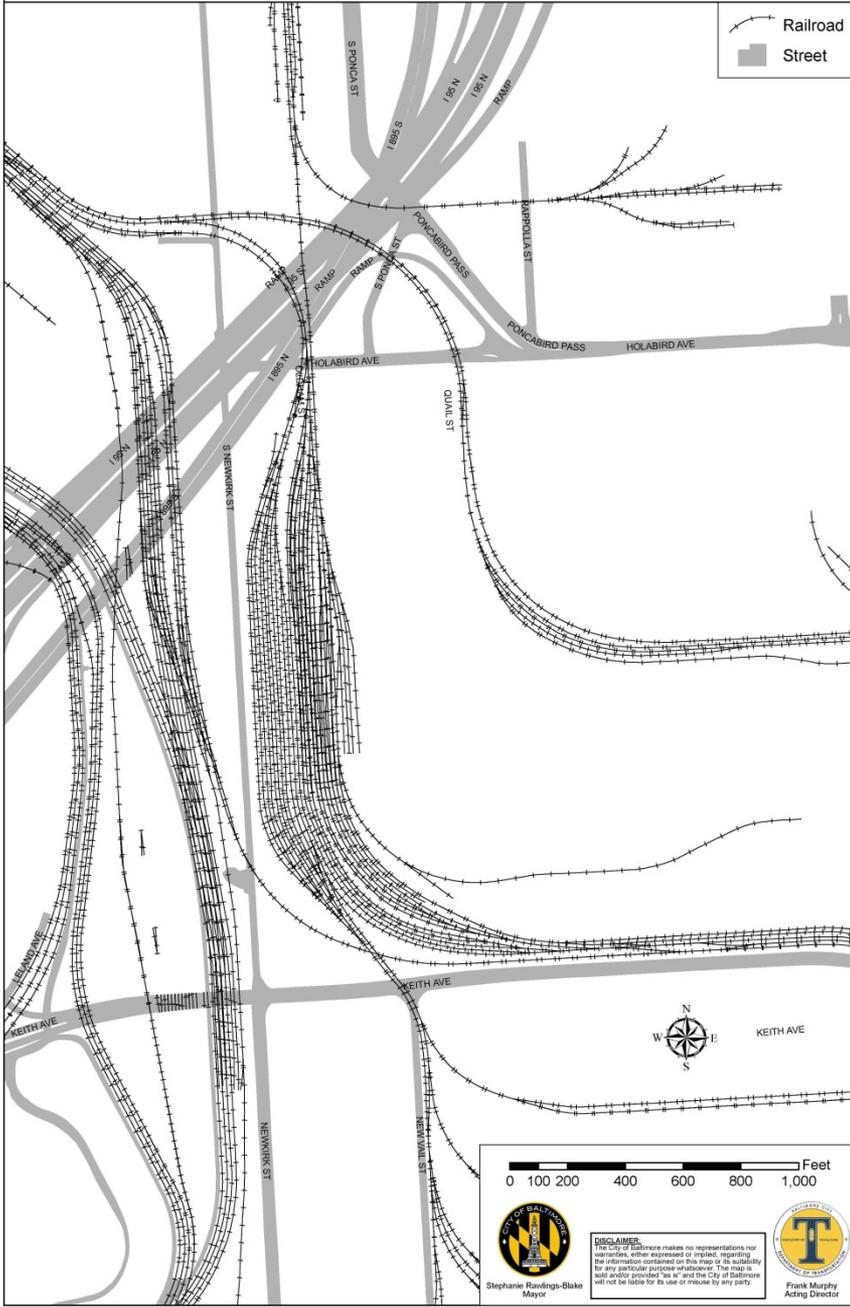
- Baltimore founded as a port in colonial times
- Baltimore is home to the oldest railroad in America – the Baltimore & Ohio (B&O)
- Port / industrial complex increasingly being replaced by commercial and residential – e.g. Camden Yards, Inner Harbor, etc.
- Railroads seeking **full disclosure in property sale contracts** as to railroad and industrial activities in order to address, **pro-actively and pre-emptively**, the juxtaposition of industrial, railroad and residential uses



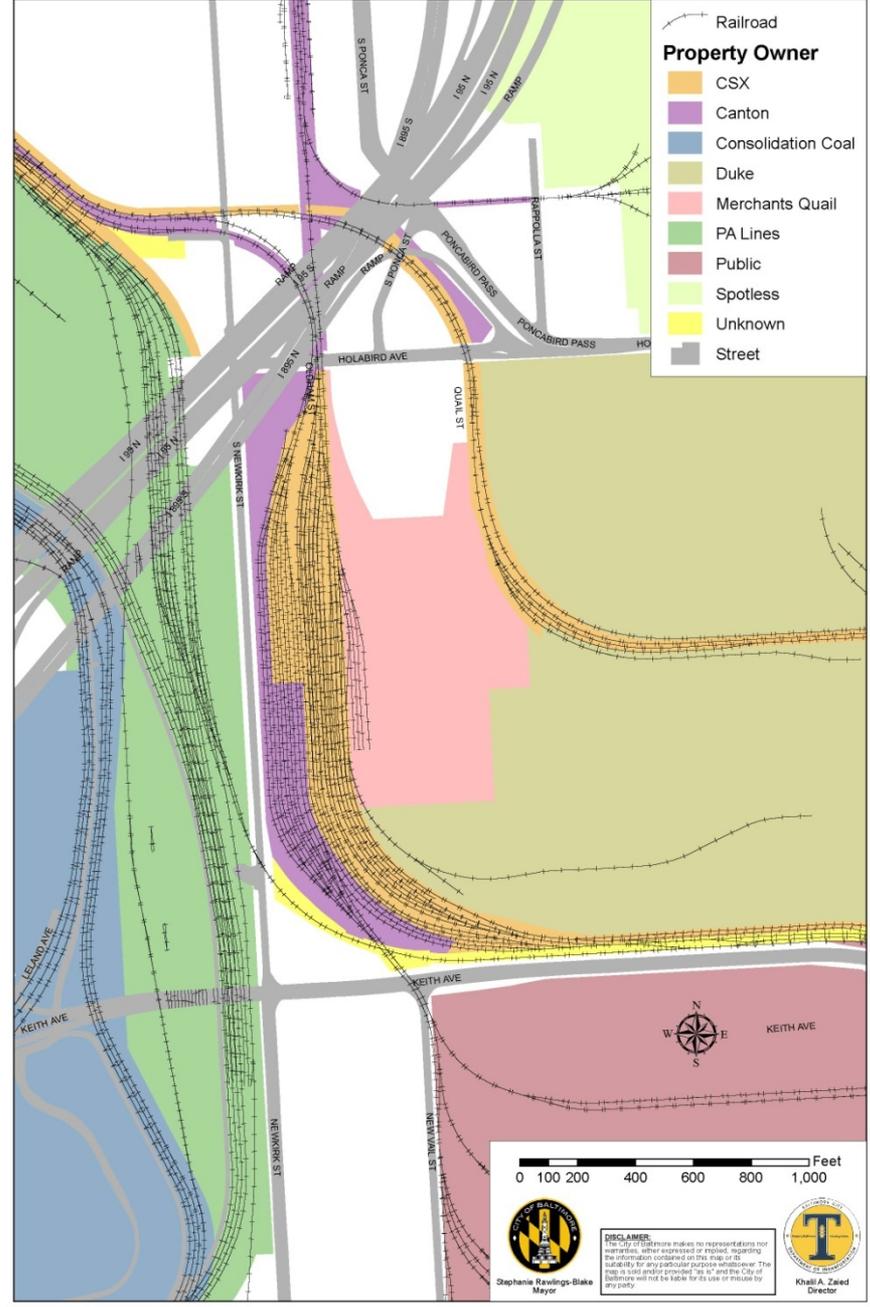




# RAILROAD PROPERTY OWNERS

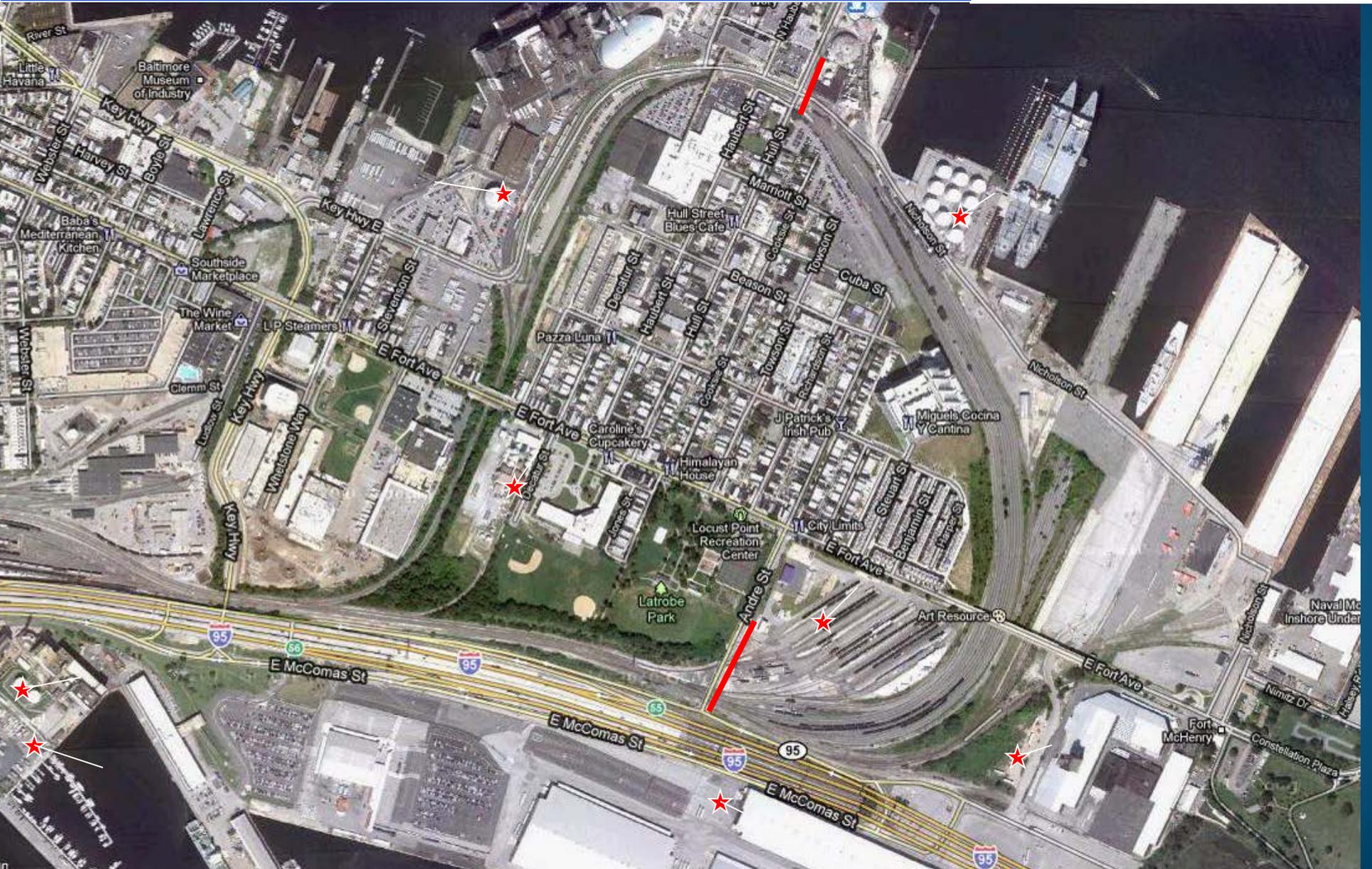


# RAILROAD PROPERTY OWNERS

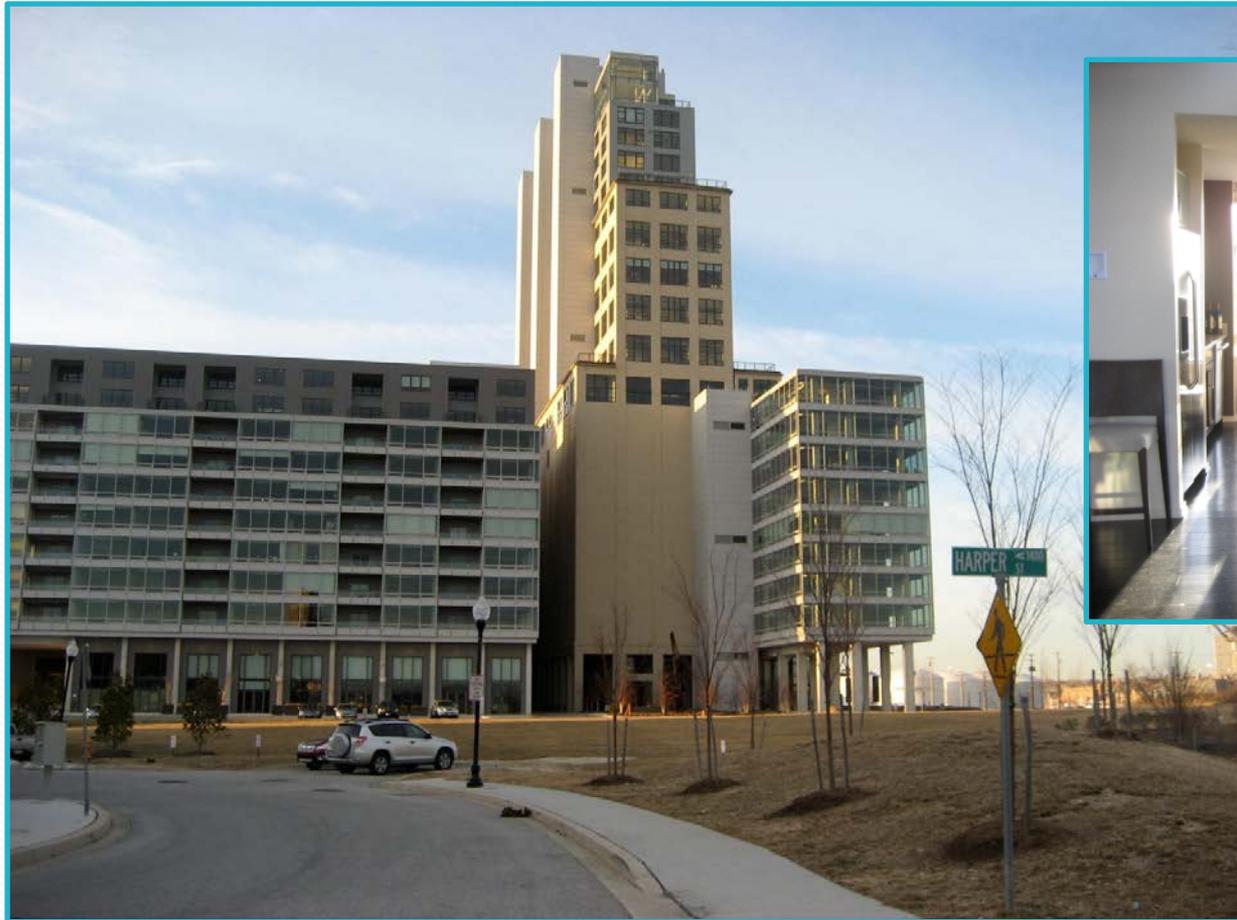


# CSX Locust Point Operations

- 10 Yard Jobs
- 24 Active Customers
- 2 Originating Freight Trains
- 2 Terminating Freight Trains
- 1 Transfer Job
- 1 Local



# Silo Point Baltimore



# Silo Point Baltimore



# Preferred Lot Orientation and Depth

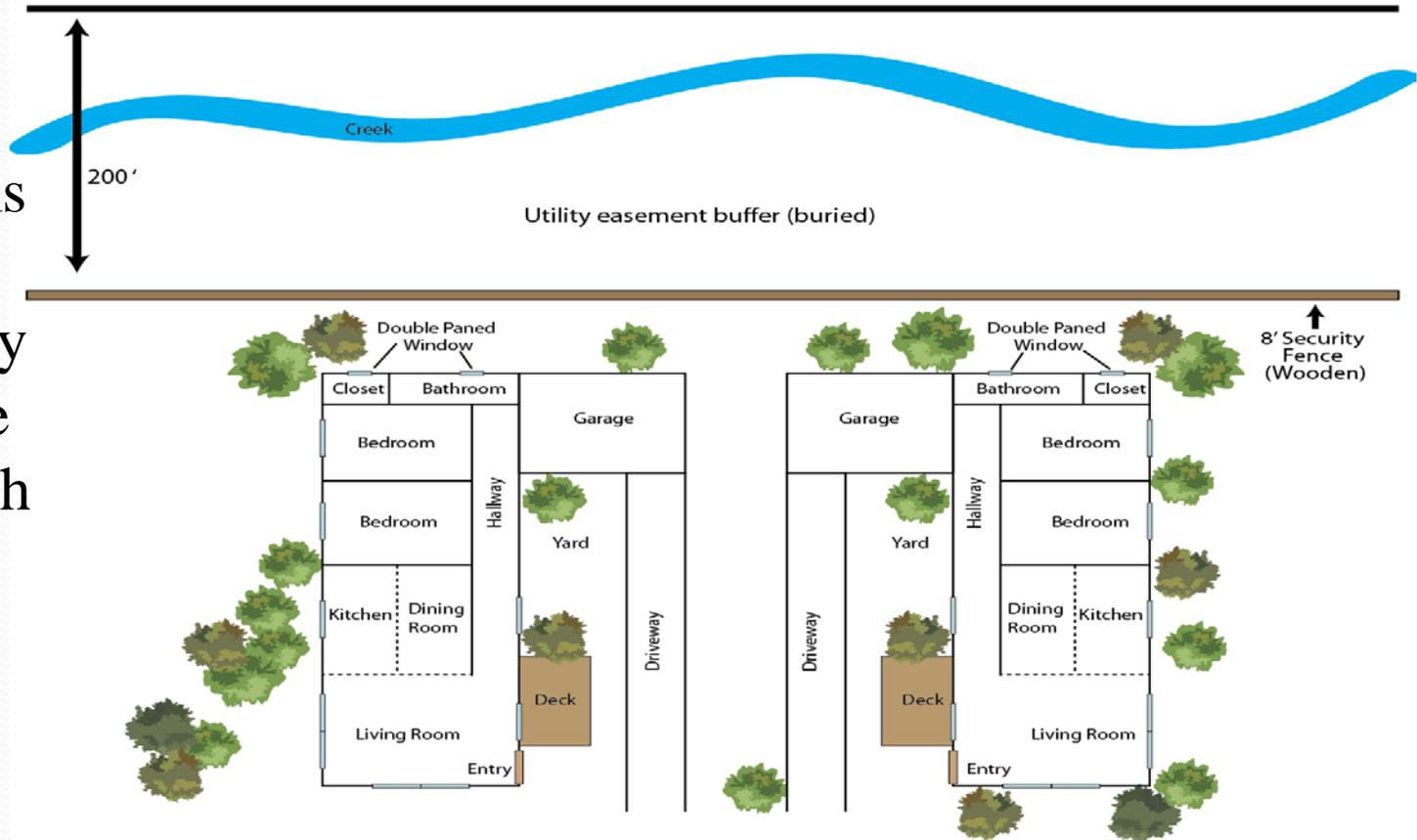


- Deeper lot depth and non access easement
- Better development orientation
- Rooms where noise is not a critical issue placed closer to freight facility

# Preferred Building Layout

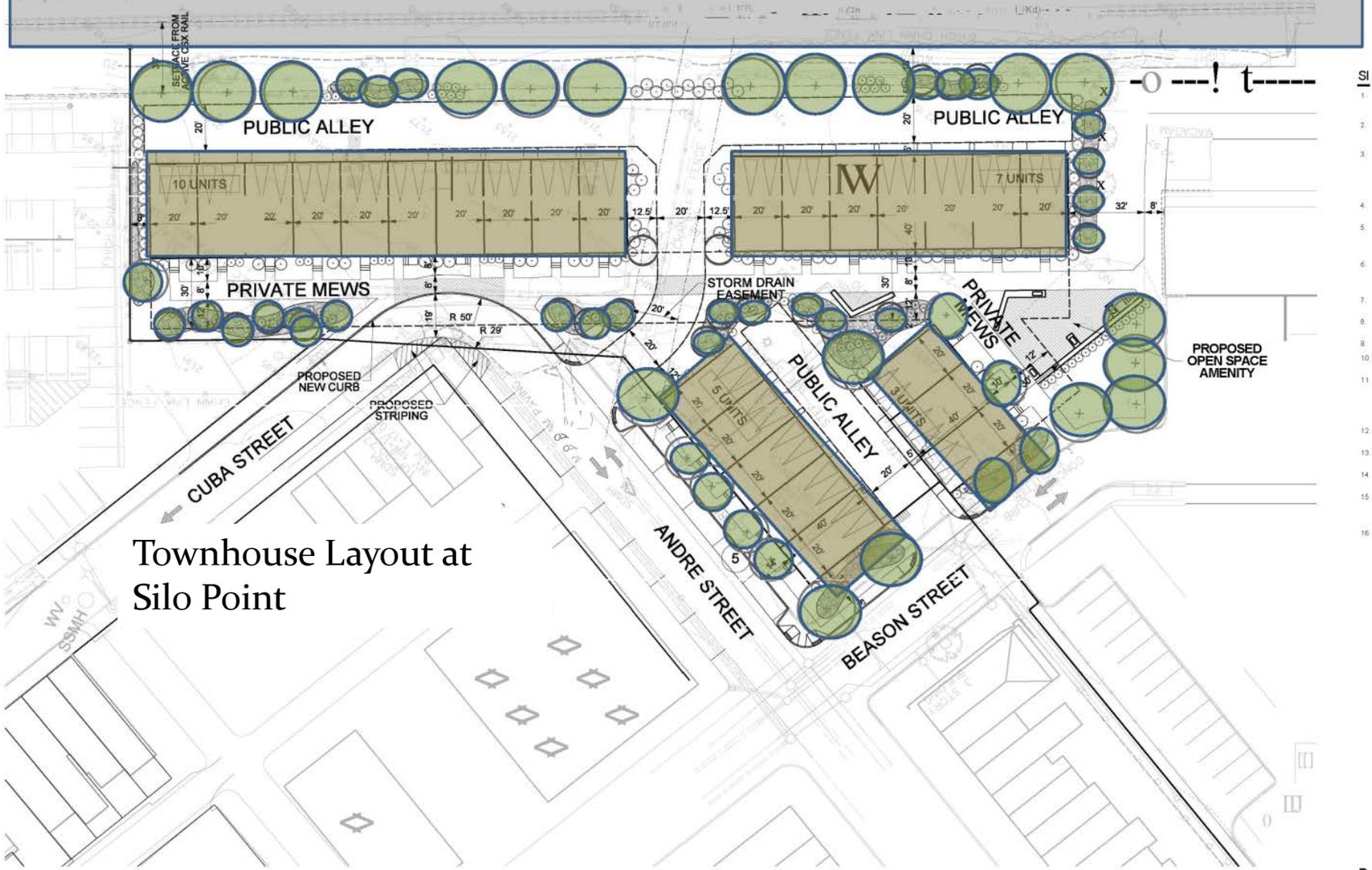
Freight Facility

- Place under-utilized rooms closer to the freight facility
- Creates space through which noise and vibration diminishes



Source: Adapted from a discussion with Scott Rogers, AICP, CarmaDevelopers.com, Austin, Tx

Multiple Railroad Tracks



Townhouse Layout at Silo Point

SI  
1.  
2.  
3.  
4.  
5.  
6.  
7.  
8.  
9.  
10.  
11.  
12.  
13.  
14.  
15.  
16.

# Freight, Land Use and Planning

- Use complete truck route and railroad mapping
- Include freight rail, truck, and ship businesses in planning efforts
- Invite all stakeholders to the table throughout the planning process
  - Consistent periodic meetings
  - Meetings at all milestones (decision points)
  - Follow-up and communication
- Develop, maintain, and grow relationships among stakeholders, partners, customers, and decision makers
  - Networking
  - Professional Organization involvement
  - Serving on Committee and Boards

# Panelists

Jacquelyn (Jackie) Seneschal

[seneschaljm@pbworld.com](mailto:seneschaljm@pbworld.com)

Sharon Daboin

[sdaboin73@gmail.com](mailto:sdaboin73@gmail.com)

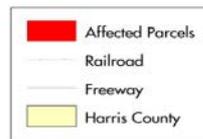
Valorie LaCour

[Valorie.Lacour@baltimorecity.gov](mailto:Valorie.Lacour@baltimorecity.gov)

# Residential Parcels – Harris County, Tx



**Locations of Residential Parcels  
Within 500 feet of Active Rail Lines,  
Central and SW Harris County, 2008**



0 2 4 8 Miles



Donovan Johnson  
December 2010  
Datum: North American 1983  
Projection: NAD 1983 State Plane Texas South Central FIPS 4204 Feet



*Block of Townhouses in East End, November 2010*



*Townhouse construction near railyard, October 2011  
Thanks to Donovan Johnson*

# Why Does Land Use Planning Matter to Freight?

- Land use planning and approvals lead to projects that could:
  - Block or otherwise impact freight corridors
  - Put incompatible uses near, or encroaching on, freight corridors or facilities
  - Reduce industrial land available near freight facilities (e.g., ports)
- Freight facilities often require land use approvals

# Freight Movement

- Dundalk & Seagirt Marine Terminals
- Trucks
  - 11% Maryland-registered, 62% of trips
  - 60% of trip destinations in Maryland
  - 60% make one or more trips per day, average 3.5 trips per day
- Rail
  - Two national, one short-line railroad
  - No double-stack access -physical constraints
- Intermodal facility
  - Serves both port and landside movements



# Purpose of Study and Plan

- Assess the impacts of freight movements from Seagirt and Dundalk Marine Terminals upon Southeast Baltimore
- Offer strategies to mitigate those impacts
- Provide for continued and expanded operations at the terminals and near-by port-related businesses

The Port of Baltimore generates

14,630 direct jobs

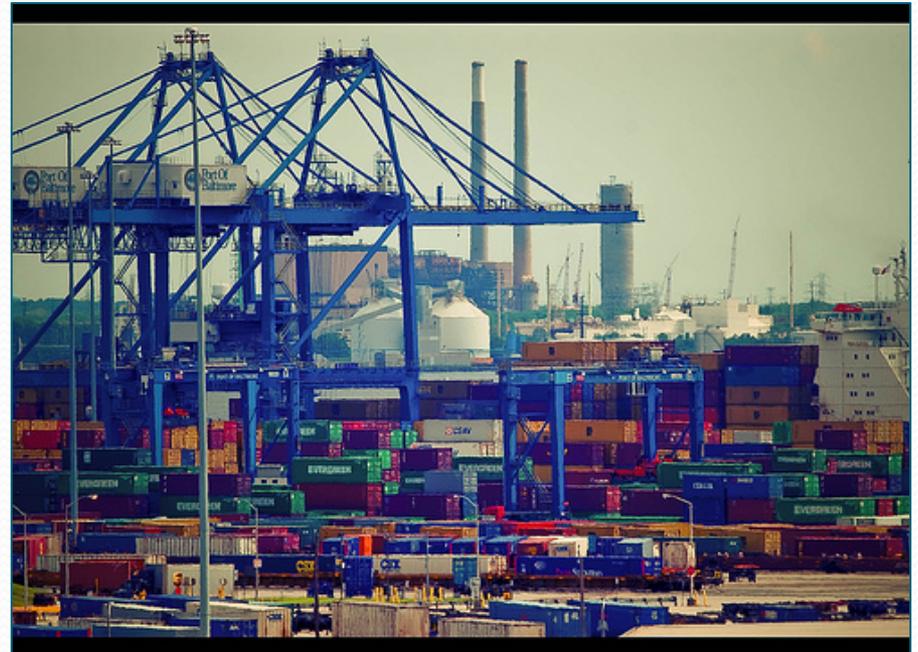
108,000 port-related jobs

\$3 billion in wages

\$300 million in state and local taxes

# Ports and Freight

- First mile of Port trips occurs in City neighborhoods
- Most businesses require some freight shipment
- Most goods are imported from overseas
- Exports are rising
- Ships are getting larger



# Neighborhood Plans with Freight

Jackie Seneschal  
Senior Supervising Planner  
Parsons Brinckerhoff

*Port Communities Study*



# Land Use and Zoning

- Protect sites with deep port and rail sidings
  - MIZOD
  - Freight rail access study
- Waterfront sites compete with residential uses
- Rail lines and redevelopment
- Rail crossings and retail access

# Ongoing Efforts

- Air quality improvements over the past 30 years
- Truck routes adopted
- Permits and escorts for over-sized vehicles
- Roadway improvements
- Bike lanes, bus service
- Zoning restrictions near Port

# Freight Routes

- Upgrade Broening Highway to a freight corridor from the Boston Street/I-95 interchange to I-695
- Further develop the truck route network using complete streets
- Discourage through truck movements on low-volume residential streets

# Ongoing Truck Issues

- Overnight truck movements
- Truck volumes on Main Street
- Trucks on residential streets
- Conflicts between redevelopment (residential & retail) and expansion of freight movement and port activities

