



Freight Mobility Issues and Recommendations for the 1997 Baltimore Regional Transportation Plan

**Report of the
Transportation Steering Committee's
Freight Movement Task Force**

September 1997

Report BRTP-97-2

OUTLOOK 2020





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Outlook 2020: Freight Mobility Issues and Recommendations

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To the Transportation Steering Committee:

On behalf of the Baltimore Region Freight Movement Task Force, this report, *Freight Mobility Issues and Recommendations for the 1997 Baltimore Regional Transportation Plan*, is submitted for your consideration.

The report includes a comprehensive overview of the state of the region's freight movement system, with an emphasis on intermodal facilities.

The report also includes the Freight Movement Task Force's recommendations on key capital projects and programmatic actions to address the region's projected freight-related infrastructure needs. These projects and actions were developed primarily from Task Force discussions, interviews with industry experts, and analyses of existing and projected conditions on the region's freight movement system.

We intend for this report to be a working document, updated regularly to reflect current information and plans and help the freight movement community have access to innovative, cost-effective transportation services.

Thank you for your interest in this important matter and your consideration of these projects for the BRTTP.

Sincerely,



Arthur C. Kelly, Jr.

The Terminal Corporation

Terminal Transportation Services Div.

Acting Chairman, Baltimore Region Freight
Movement Task Force

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EXECUTIVE SUMMARY

Purpose

This report provides an overview of the freight movement system within the Baltimore region, with an emphasis on intermodal facilities, identifies key long-range issues, and proposes investments and actions for inclusion in the 1997 Baltimore Regional Transportation Plan.

Freight Movement in the Baltimore Region

The Baltimore region's freight movement system is comprised of surface, air, and port transportation systems, as well as intermodal facilities where goods are transferred from one mode to another.

The region's surface transportation system consists of highways and railroads. Public roads are used extensively by the trucking industry to access industrial, retail, and transportation facilities. Several railroads, including Class I, regional, and switching and terminal rail companies, serve the region.

The region also has a significant presence in the nation's air freight movement system. Baltimore-Washington International Airport (BWI) is the region's major air freight facility, providing both international and domestic air cargo services.

The Port of Baltimore is the region's major maritime freight facility. The Port includes a total of nineteen

public and private terminals as well as truck and rail intermodal facilities.

Freight transportation firms depend not only on the efficiency of the individual transportation modes and the effectiveness of the laws and regulations under which they operate, but also on the efficiency of intermodal facilities that connect one mode to another. These regionally-significant intermodal freight transportation facilities, those which use two or more transportation modes and which function as transfer points for seamless and continuous door-to-door freight movement, are identified.

Findings and Recommendations for the 1997 Baltimore Regional Transportation Plan

The Baltimore Regional Transportation Plan (BRTP), required to be updated every three years, ties transportation planning to air quality improvements, land use, and overall regional quality of life issues.

The process used to develop the freight mobility element of the BRTP flows from the initial identification of regional freight mobility needs to the development of a reasonable strategy for implementing recommended system improvements.

Analyses of survey and interview responses and information from industry experts have resulted in a set of key current regional infrastructure needs and potential

long-range projects listed below for consideration to the B RTP. Addressing these needs could provide future intermodal benefits and/or benefits to many modes or stakeholders within the regional freight movement transportation system.

Recommended Capital Projects:

- **High-Cube Double-Stacking Capability.** Increase clearances at Howard Street in Baltimore and Virginia Avenue in Washington D.C. (High Priority)
- **Specialized-Cargo Port Terminal.** Determine the scope and design for the Masonville Terminal and access routes. (Medium Priority)
- **Additional Container Cargo Storage.** Use dredge material to develop a 13-acre storage area for containerized cargo at Port of Baltimore. (Medium/Low Priority)

Recommended Programmatic Actions:

- **Truck Rest Areas.** Fund a study of rest areas and potential new locations. (High Priority)
- **Regional Freight Movement Subarea Studies.** Fund a study of regional generators of freight movement activities, such as newer, large manufacturing and distribution centers, to determine possible actions to improve efficiency. (Medium Priority)

- **Employee Reverse Commute Options.** Coordinate information-sharing among freight movement companies, transportation providers, and transportation management associations to help employees get to freight-related jobs. (Medium Priority)
- **Grade Crossing Improvements.** Fund a study to determine the impacts of grade crossings on efficient and effective freight movement. (Medium/Low Priority)
- **Air Cargo Capacity.** Fund a study to evaluate the environmental impacts of an air carrier runway and associated infrastructure. (Medium/Low Priority)

The Task Force recognizes that it does not have the ability to initiate or implement some of these transportation projects on their own; however, it can raise awareness and discussion of the issues through the MPO process and to industry leaders to profile freight movement issues and move important projects forward.

INTRODUCTION

Freight, goods, cargo... We often hear these words without realizing how much of an impact they have on our daily lives. The clothes you wear, the foods you eat, and the items you purchase from local stores most likely came from someplace else. They were manufactured or grown in another town, state or country and then transported to local stores. As we move into the 21st Century, the businesses that produce these items are competing globally and marketing their services worldwide. Therefore, it becomes more critical for them to have access to innovative, cost-effective freight transportation services in order to remain competitive.

Focus on Freight Mobility

In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which placed greater emphasis than ever before on the efficiency and effectiveness of the nation's overall transportation system and spotlighted accessibility, mobility, and linkages between modes. ISTEA also recognized the critical role of freight mobility in our economy and its impact on the overall transportation system and, thus, placed a major emphasis on transportation planning directed toward freight and goods movement.

Today, as Congress works to develop a successor to ISTEA, freight mobility and intermodal issues are expected to take on a larger role. Under the Administration's proposed National Economic Crossroads Transportation Efficiency Act (NEXTEA), intermodal connectors, private-sector railroads, publicly-owned freight facilities, and some intermodal facilities would be eligible for various sources of transportation funding. In addition, NEXTEA would try to increase the role of freight in regional planning.

Baltimore Region Freight Movement Task Force

To ensure that the region remains competitive, we need to address the key needs of freight transportation operators, shippers, and other interests. The Baltimore Metropolitan Planning Organization (MPO)¹ and the **Baltimore Region Freight Movement Task Force**, an advisory board of industry professionals, are actively involved in making the region a vital and prosperous player in the global marketplace of the 21st Century. The Task Force provides the freight movement community with a voice in regional transportation planning and works to maximize the region's freight movement capability in an efficient, cost-effective,

¹ The Baltimore Metropolitan Council (BMC) is staff to Baltimore's federally-mandated Metropolitan Planning Organization and is responsible for assessing and analyzing passenger and freight transportation planning issues in the Baltimore region.

safe, and environmentally-sensitive manner. This is achieved by sharing information and technology among public and private freight interests and promoting the region's freight transportation potential. Private industry members work with professionals from the Baltimore Metropolitan Council (BMC), Maryland Department of Transportation, Federal Highway Administration, Maryland Department of Business & Economic Development, Greater Baltimore Alliance, Morgan State University, and Johns Hopkins University.

From on-going dialogues to formal recommendations, the Task Force has been active. To date, the Task Force has had many successful endeavors, such as a workshop on the Intermodal Safe Container Act, co-sponsored with the Maryland Port Administration; a Distribution & Logistics Conference, co-sponsored with the Maryland Distribution Council; the identification of ways to gauge system performance; and input on issues affecting the proposed purchase of Conrail by CSX and Norfolk Southern.

Regional Freight Movement System

This report provides an overview of the freight movement system within the region, with an emphasis on intermodal facilities. In this report, **intermodalism is defined as the seamless and continuous door-to-door movement of goods via two or more modes**. The region's intermodal facilities are the connection points where goods are transferred from one mode to another. These public and private facilities can include commercial & general aviation airports, marine terminals, rail yards, selected warehouse & distribution centers, and truck terminals.

BMC staff, with oversight from the Task Force, have gathered and analyzed the report's information primarily using survey and interview data collection methods. Terminal managers, operators, Task Force members, and others were surveyed and interviewed to gain data specific to their mode or facility as well as general industry background information. This analysis is located in the next section. The following sections document the respondents' expert opinions about current regional infrastructure needs, potential long-range projects, and the Task Force's agenda for future action.

BMC and the Freight Movement Task Force intend for this report to be a working document, updated on a regular basis to reflect current information and plans.

FREIGHT MOVEMENT IN THE BALTIMORE REGION

The Baltimore MPO recognizes that the efficient movement of freight, intermodal connections, and the reliability of the transportation network and infrastructure have a profound effect on the region's economy. The firms involved in the manufacturing, distribution, and warehousing industries are generators of significant amounts of transportation activity in and out of the region, much of which is generated by trucks. Our freight transportation infrastructure is, therefore, a critical lifeline to the firms in these sectors.² This section, thus, describes the baseline components of the regional freight movement system.

Strategically located midway along the East Coast, Maryland provides an ideal base from which to serve the largest consumer and industrial markets in North America and beyond. The Baltimore region has one of the nation's most sophisticated freight and goods movement systems, consisting of an extensive highway system, two Class I and several smaller railroads, an international airport, and a major deepwater seaport. Further, there are thousands of firms in the Baltimore region engaged in the handling and transporting of freight cargo.

The Baltimore region's freight **surface transportation system** consists of highways and railroads. The region's more than 11,000 miles of public roads are used extensively for freight movement by the trucking industry to access industrial, retail, and transportation facilities. Several railroads, including Class I, regional, and switching and terminal rail companies, serve the region.

The region also has a significant presence in the nation's **air freight movement system**. Baltimore-Washington International Airport (BWI) is the region's major air freight facility, providing both international and domestic air cargo services.

The Port of Baltimore, a large, multi-terminal deepwater port for seagoing vessels, is the region's major **maritime freight facility**. The Port includes a total of nineteen public and private freight handling terminals and provides for truck and rail intermodal access.

The **regionally-significant intermodal freight transportation facilities**, those locations where goods are transferred from one mode to another, in the metropolitan area also fall within one or more of the modal systems noted above. Thus, this report considers several of these facilities both as single mode activity centers *and* as intermodal activity centers.

² **Appendix 1** presents major manufacturing/distribution activity centers and major manufacturing firms in the region. Future study and analysis will be conducted to assess the freight movement characteristics and needs associated with these facilities and companies.

Regional Roadway Freight Movement Transportation System

The Baltimore region is at the midpoint of north-south Interstate 95, and has a roadway and highway network of 11,243 miles of public roads, including five different functional types of roadways, freeways, principal arterials, minor arterials, collectors, and local streets, as pictured in Map 1. As shown in Map 2, there is an extensive network of major truck routes in the Baltimore region, on which wide and large trucks are required to operate.³ The state's designated routes for special overweight seaborne container movements are also included.

Current Activity Levels and Trends

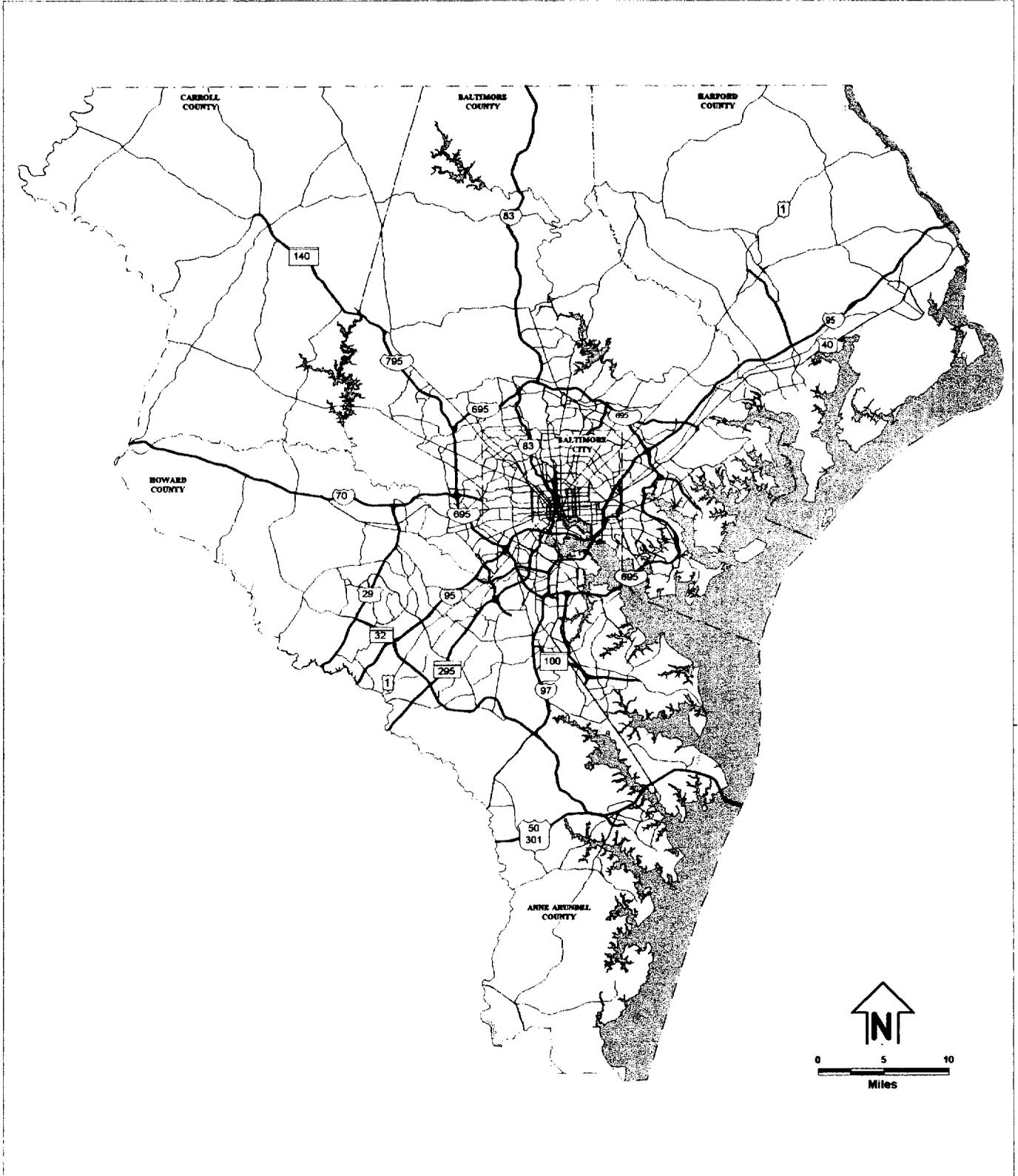
Because of the proprietary nature of trucking industry data, comprehensive information on trucking movements is not available. However, it is estimated that the trucking industry carries approximately 75 percent of the freight tonnage moved in the state.⁴ The U.S. Department of Transportation has also conducted a 1993 Commodity Flow Survey (CFS)⁵ to estimate what, how, and where goods are shipped nationally. Table 1 shows the CFS data for Maryland. In addition, BMC recently worked with the American Trucking Associations Foundation (ATA) to study regional motor carriers' freight movement operations and commodity flows.

³ According to the Maryland Trucking Handbook, all trucks wider than 96", all tractor-semitrailer-trailer combinations (doubles), and auto, boat, and containerized cargo carriers are required to operate on this system. Other roads may be used provided they are the shortest practical route between the truck route network and one of the following: a truck terminal; an origin or destination point; a food, fuel, repair or rest facility that is no more than one mile away; or the safest practical route and a state highway with four or more lanes.

⁴ Per the Maryland Motor Truck Association

⁵ The 1993 Commodity Flow Survey (CFS) measures the value and weight of commodities shipped by manufacturing, mining, wholesale trade, and selected retail and service industries. The CFS excludes establishments classified in the Standard Industrial Classification as farms, forestry, fisheries, oil and gas extraction, governments, construction, transportation, households, and some retail and service businesses. From a sample of 200,000 establishments, commodity flows were estimated for a universe of approximately 800,000 businesses in the 50 states and the District of Columbia.

Map 1
The Baltimore Region
Regional Arterial & Freeway Components



Map 2
The Baltimore Region
Designated Truck Routes

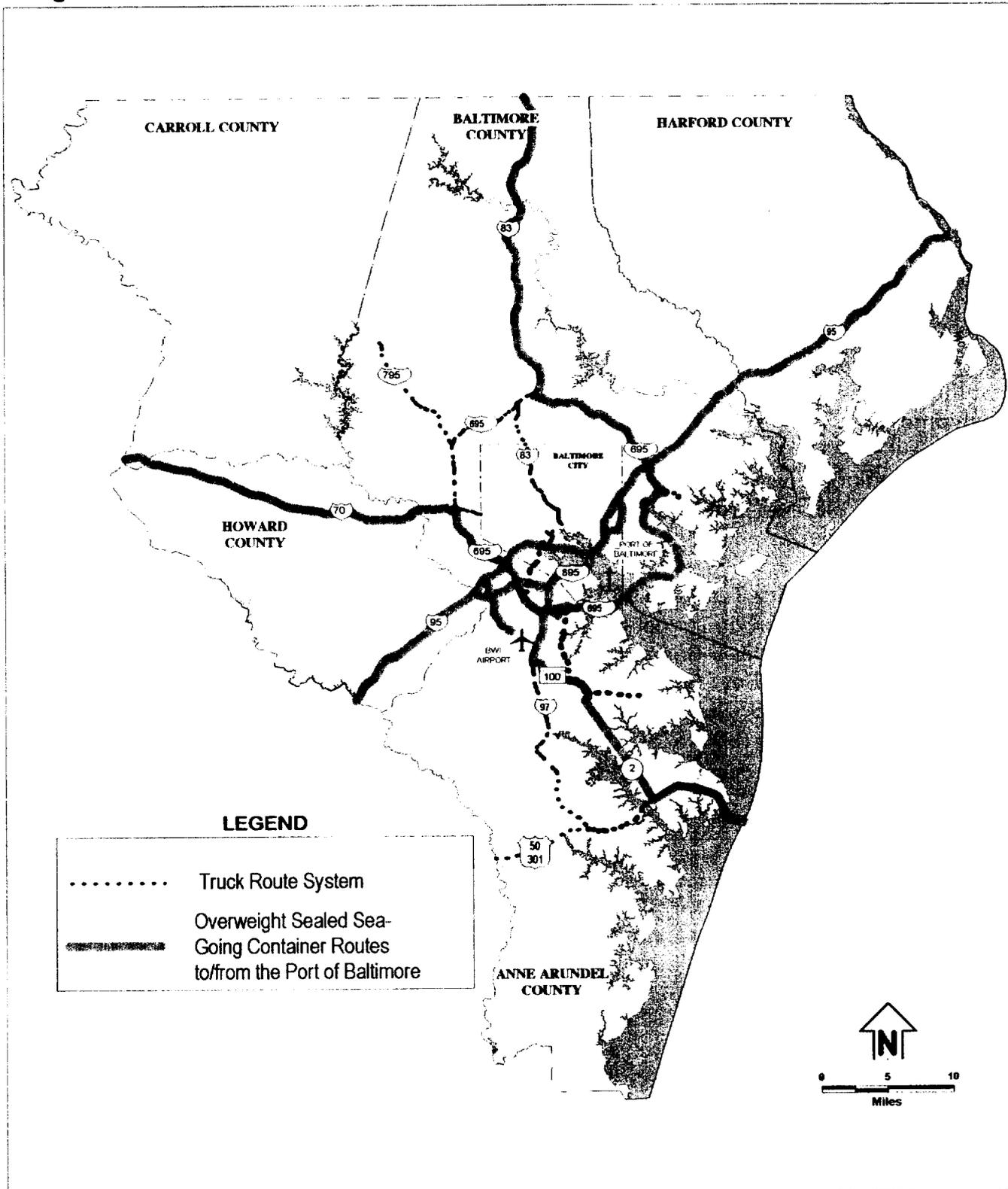


Table 1

**Truck Shipments in Maryland (in millions)
1993**

	Total	Within	To	From	Through
Ton-miles	8,870	1,523	1,860	1,873	3,613
Value	\$327,791	\$27,473	\$44,661	\$53,266	\$202,391

U.S. Department of Transportation, Bureau of Transportation Statistics

From this information, 8.9 million ton-miles of cargo traveled in Maryland by truck, valued at \$328 million. Approximately 40 percent of the total ton-miles passed through the state, while the remaining 60 percent was split amongst freight traveling within the state and to or from other locations. In relation to other states, Maryland ranks 39th in ton-miles moved and 15th in value of shipments.

For a regional perspective, truck activity at the following six toll facilities, pictured in Map 3, provides an indicator of the scale of truck movements, as shown in Table 2.

- Fort McHenry Tunnel (I-95)
- Baltimore Harbor Tunnel (I-895)
- Francis Scott Key Bridge (I-695)
- Chesapeake Bay Bridge (also known as the William Preston Lane Jr. Memorial, U.S. Routes 50 & 301)
- Hatem Bridge (I-95 & Susquehanna River)
- Tydings Memorial Bridge (I-95 & Susquehanna River)

Map 3
The Baltimore Region
Regional Toll Facilities

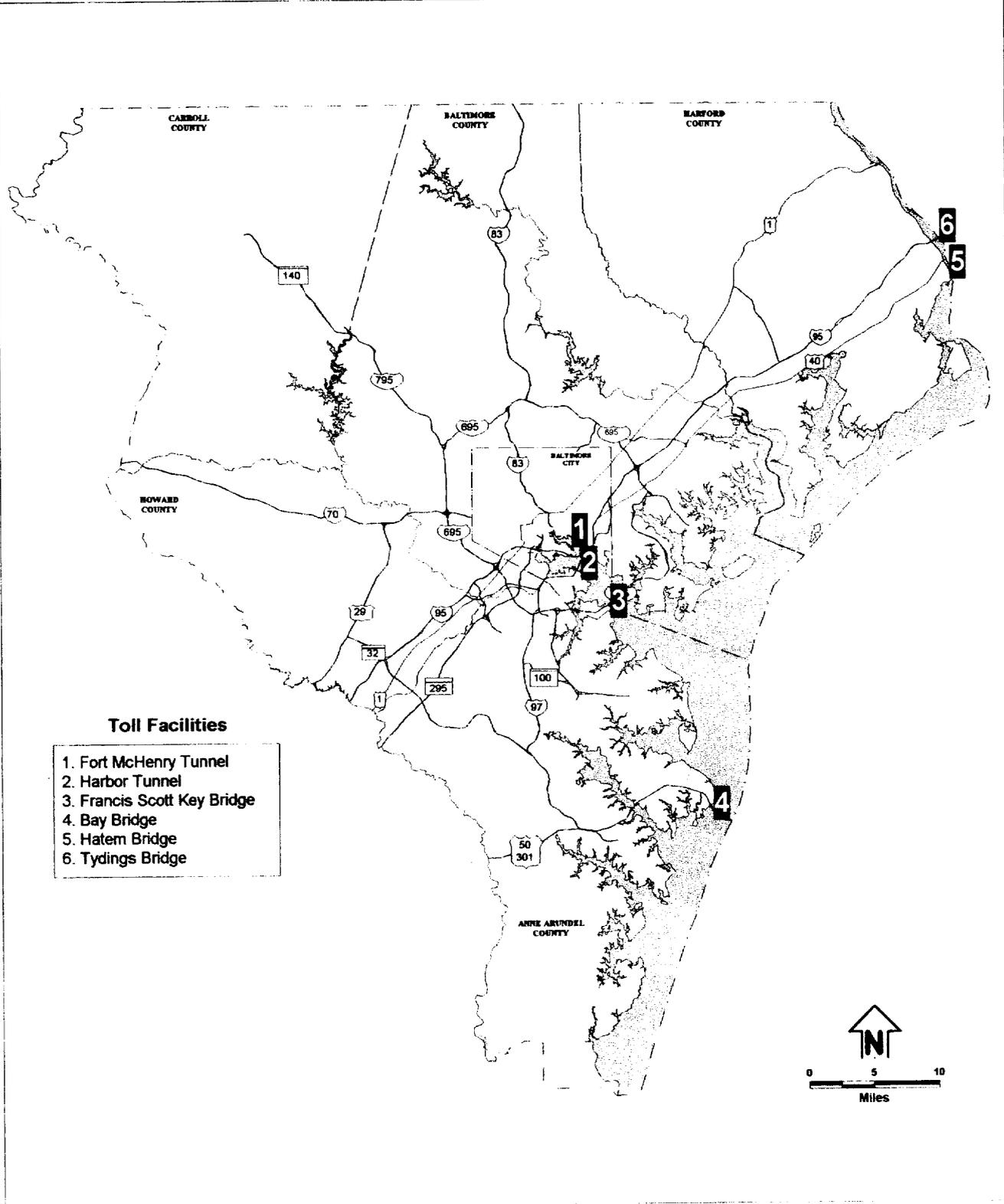


Table 2

**Regional Freight Movement Activity Indicator:
Truck Traffic Volume at Regional Toll Facilities⁶
Fiscal Years 1994 - 1996**

	FY 1996	FY 1995	FY 1994	% Change 94 - 96
Fort McHenry Tunnel				
3-axle	573,261	552,122	534,176	7.3%
4-axle	325,599	342,725	314,684	3.5%
5-axle	2,440,049	2,531,240	2,391,382	2.0%
6-axle	33,009	32,141	28,192	17.1%
Unusual size	535	498	359	49.0%
Total	3,372,453	3,458,726	3,268,793	3.2%
Percent of Total Vehicles	9.1%	9.6%	9.4%	
Baltimore Harbor Tunnel				
3-axle	318,416	352,959	335,385	-5.1%
4-axle	78,887	71,907	69,957	12.8%
5-axle	355,116	386,544	440,138	-19.3%
6-axle	7,522	7,644	8,925	-15.7%
Unusual size	50	78	47	6.4%
Total	759,991	819,132	854,452	-11.1%
Percent of Total Vehicles	3.8%	4.1%	4.5%	
Francis Scott Key Bridge				
3-axle	236,151	225,418	191,033	23.6%
4-axle	106,780	93,763	86,681	23.2%
5-axle	597,559	568,769	528,001	13.2%
6-axle	12,422	13,783	11,960	3.9%
Unusual size	1,976	4,580	3,933	-49.8%
Total	954,888	906,313	821,608	16.2%
Percent of Total Vehicles	10.0%	9.4%	9.0%	
Chesapeake Bay Bridge/Preston Lane Jr. Memorial Bridge				
3-axle	254,624	258,372	250,692	1.6%
4-axle	180,164	185,292	173,782	3.7%
5-axle	1,322,894	1,291,334	1,184,854	11.7%
6-axle	22,484	26,282	23,746	-5.3%
Unusual size	4,798	5,254	4,394	9.2%
Total	1,784,964	1,766,534	1,637,468	9.0%
Percent of Total Vehicles	8.7%	8.8%	8.6%	

⁶ The Hatem Bridge, Chesapeake Bay Bridge, Tydings Memorial Bridge have one-way tolls. For these facilities, two-way truck volumes were estimated by doubling the traffic counts.

Table 2 *continued*

**Regional Freight Movement Activity Indicator:
Truck Traffic Volume at Regional Toll Facilities
Fiscal Years 1994 - 1996**

	FY 1996	FY 1995	FY 1994	% Change 94 - 96
Hatem Memorial Bridge				
3-axle	100,798	95,968	116,192	-13.2%
4-axle	20,192	19,954	27,424	-26.4%
5-axle	91,406	82,520	99,936	-8.5%
6-axle	950	606	1,044	-9.0%
Unusual size	232	1,250	408	-43.1%
Total	213,578	200,298	245,004	-12.8%
Percent of Total Vehicles	2.6%	2.4%	3.0%	
Tydings Memorial Bridge				
3-axle	437,034	422,744	397,000	10.1%
4-axle	354,148	354,434	333,744	6.1%
5-axle	2,737,784	2,845,178	2,661,120	2.9%
6-axle	34,450	35,124	31,730	8.6%
Unusual size	10,216	9,726	9,450	8.1%
Total	3,573,632	3,667,206	3,433,044	4.1%
Percent of Total Vehicles	14.1%	14.8%	14.8%	
Total Truck Volumes at Regional Toll Facilities				
	10,659,506	10,818,209	10,260,369	3.9%
Percent of Total Vehicles	8.8%	9.1%	9.2%	

Source: Maryland Transportation Authority

Both the Tydings Memorial Bridge, in Harford County at the Susquehanna River, and the Fort McHenry Tunnel, near the Port of Baltimore, handle about one-third of the region's toll facility truck traffic. Truck volumes at the Tydings Memorial Bridge are traveling between the Baltimore region and other northern areas. Fort McHenry's truck traffic is both intra- and interregional, with much of it being port-related traffic. The third most active toll facility is the Chesapeake Bay Bridge, providing interregional southeastern truck activity. Approximately 70 percent of the total truck volumes have five axles.

Truck Study Results

Because significant amounts of freight are moved by truck, the BMC and ATA partnered to study a sample of the region's motor carriers' operations and

commodity flows to identify trucking freight movement system needs and suggested improvements.

Sixty-two private and for-hire motor carriers responded to a survey with questions about their major travel routes, impediments in freight flows, time-of-day travel, freight origins and destinations, and intermodal freight activities.

The following information highlights and summarizes the survey responses:

- Truck Routes. I-95, I-695, and I-83, each used by at least 80 percent of the respondents, are the principle freight transportation routes for the private and for-hire motor carriers in the Baltimore region. I-95 provides access within and out of the region, particularly to the Philadelphia and Washington, D.C. markets. I-695 provides access to the many business and industrial areas around Baltimore, as well as access to other major highways. I-83 provides access to and from the northern part of the region. Other major routes, I-70, I-97, I-895, and Route 50, are each used by 45 percent of the companies.
- Hours of Travel. Trucks are traveling throughout the day, with the majority of travel occurring between 6am and 3pm. Overall, 38 percent of the motor carriers' travel occurs between 6am and 10am, 34 percent of their travel occurs between 10am and 3pm, 16 percent between 3pm and 7pm, and 12 percent between 7pm and 6am.
- Origins, Destinations, and Commodity Flows. Respondents indicated that almost all of their truck trips originate (pick-ups) in the Baltimore region, with 71 percent of the pick-ups occurring in Baltimore City.⁷ About 75 percent of the truck trips are destined (deliveries) for the Baltimore region, with 53 percent of the deliveries going to Baltimore City. About half of the total trips, therefore, both originate and are destined for locations within Baltimore City. The major commodities moved in these trips include petroleum products, paper products, general freight, building materials, metal products/parts, refuse, and household products.
- Intermodal Activity. Forty-three percent of the respondents travel to intermodal facilities (rail, port, and air) to help move freight within and out of the region, with port facilities being the primary type used. More

⁷ The freight origin or destination location does not indicate the location of the motor carrier companies. For example, survey respondents indicated that 71 percent of the freight picked up is located in Baltimore City. The motor carriers may be established elsewhere and drive into the city to pick up the freight.

respondents connect with several facilities, such as the ports in Philadelphia and Norfolk, than just use the Port of Baltimore.

Current Issues

Analyses of information provided by Task Force members, other experts, and survey respondents, yielded the following highway and truck-related issues and concerns:

- Areawide Congestion. Sixty-nine percent of truck study respondents stated that congestion is one of the major impediments on regional freight movement routes. In addition to the typical traffic back-ups cited, lane reductions at highway interchanges were also mentioned as primary structural factors contributing to congestion.
- Truck Restrictions. Trucks are restricted from transporting various goods on certain roads. These restrictions include height clearances, bridge and pavement weight limits, and parking restrictions. Task Force members and truck study respondents also stated that highway ramp design, poor signalization, lack of signage, access, and narrow roads were major impediments in the truck routes traveled. These restrictions make it difficult for trucks to travel through downtown areas with narrower streets and to park at delivery/drop-off areas. These restrictions also make it difficult for trucks to travel to manufacturing and distribution centers and intermodal facilities.
- Intelligent Transportation Systems. Traffic congestion and truck restrictions help slow down truck movements and decrease efficiencies. The industry is, therefore, turning to computerized information or intelligent transportation systems (ITS) to help reduce the time to process information and keep trucks moving. Respondents from the truck study identified automated toll collection facilities as one mechanism to improve the roadway system. Currently, Maryland is part of a federal pilot project (Commercial Vehicle Information Systems Network, CVISN) to equip trucks with computer equipment providing safety information, electronic toll and border clearances, and the transfer of intermodal information.
- Truck Rest Areas. Based on a 1996 study by the Trucking Research Institute, truck rest areas in the region and nationally are full or overflowing with trucks nightly. The Laurel rest stop along I-95 was highlighted in a Washington Post article (2/12/97) as one of the busiest in the nation, with drivers parking illegally to get a few hours of sleep. The need for more rest areas was also mentioned by truck study

respondents. This need is, in part, being driven by the growing trend toward trucking companies making time-sensitive pick-ups and deliveries by appointment. An appointment can have a narrow window of time; thus, if a driver is late, the appointment may have to be rescheduled. Often, it is not cost-effective or practical for the driver to return to the main truck facility, but the driver does not always have a legal place to park or pull over to wait until the next scheduled run. Safety and congestion problems can, therefore, result from illegally parked trucks on area roadways.

Regional Rail Freight Movement Transportation System

Railroads are vital links in the Baltimore region's freight movement system, providing important long-haul connections between shippers and consignees. Class I railroads,⁸ one local railroad, and two switching and terminal rail companies serving the region are shown in Table 3. These companies' principal rail lines in the region are depicted in Map 4.

Table 3

Railroads Operating in the Baltimore Region

Class I Railroads	Regional Railroads	Switching & Terminal Railroads
<ul style="list-style-type: none"> • Consolidated Rail Corp. (Conrail) • CSX Transportation (CSXT) • CSX Intermodal (CSXI) 	<ul style="list-style-type: none"> • Maryland Midland Railroad 	<ul style="list-style-type: none"> • Canton Railroad • Patapsco & Back River Railroad

Source: Rail companies & Association of American Railroads

Consolidated Rail Corporation (Conrail)⁹ provides rail freight transportation throughout the Baltimore region. Conrail operates on 339 route miles in Maryland, including access to the Port of Baltimore and trackage rights over Amtrak's Northeast Corridor. The primary rail line serving the Baltimore area is the Northeast Corridor. The major freight facilities in the Baltimore region include its Bayview Intermodal yard and the Flexi-Flo Rail Transfer facility.

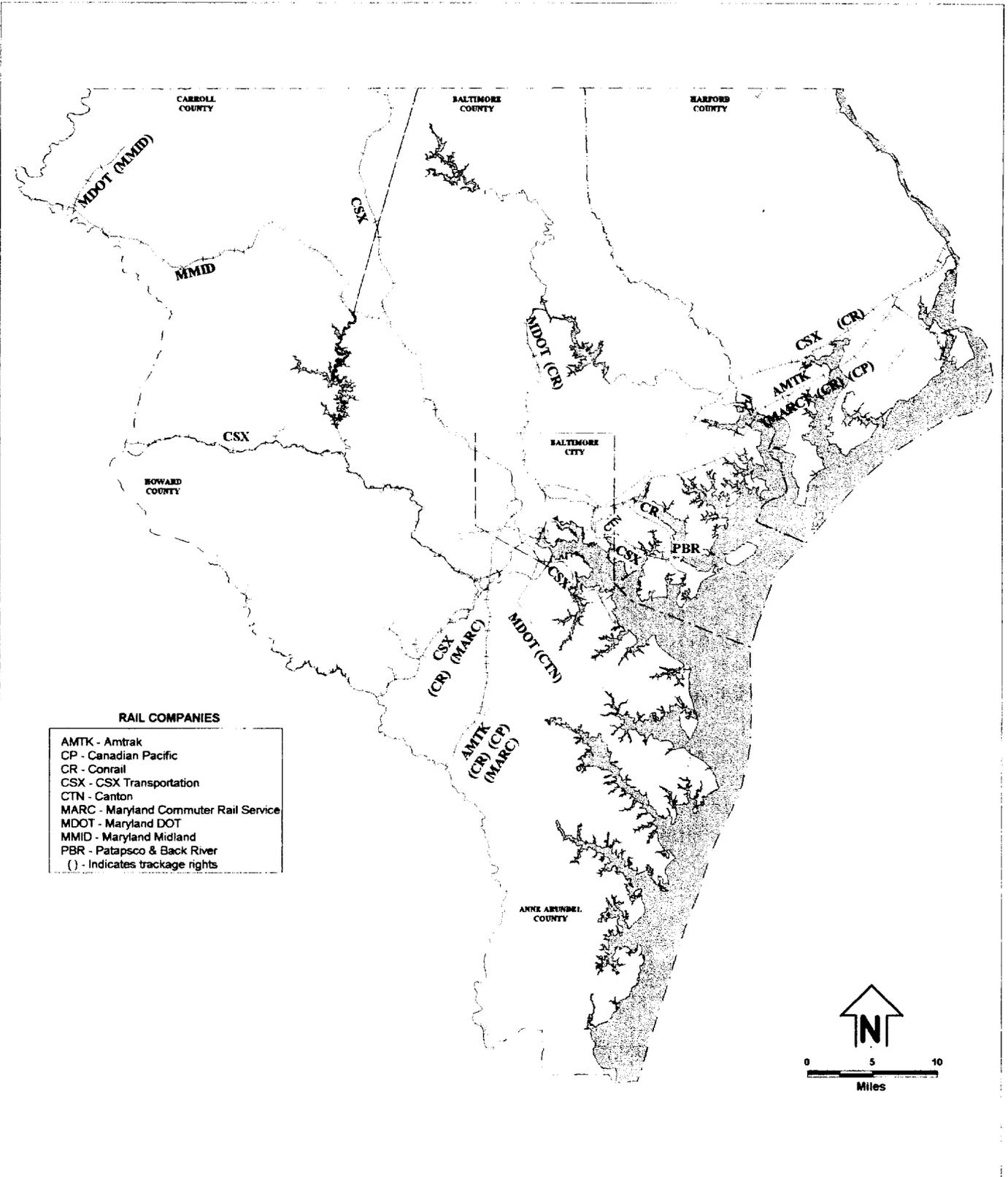
CSX Transportation (CSXT), the successor to the famous Baltimore and Ohio Railroad system, operates on approximately 423 route miles in Maryland. It has several major freight facilities in the Baltimore region, including the Bayside Coal and Ore Piers, the Pennmary rail switching yard, and several auto distribution centers. In addition, CSXT provides intermodal service to and from Port of Baltimore marine terminals through its sister firm, CSX Intermodal (CSXI).

Founded in 1988 by the CSX Corporation (parent firm for CSX transportation service companies), **CSXI** operates its own intermodal trains to and from intermodal terminals across North America over the tracks of CSXT and other

⁸ Class I railroad companies are defined as those with annual revenues in excess of \$255.9 million.

⁹ In June 1997, CSX and Norfolk Southern railroad companies applied jointly to acquire Conrail. The Surface Transportation Board (STB), the federal agency with the exclusive jurisdiction to review and rule on railroad mergers, will conduct a 350-day review process and will make a decision in the Summer of 1998.

Map 4 The Baltimore Region Regional Rail Lines



rail companies through trackage lease agreements. In Baltimore, CSXI operates the publicly-owned Intermodal Container Transfer Facility (ICTF) at the Seagirt Marine Terminal at the Port.

The **Maryland Midland Railroad (MMID)** is a small, private, regional railroad in Carroll, Frederick, and western Baltimore counties which operates on 67 miles of track. With a 200 car fleet, MMID primarily transports coal, raw materials, cement, and lumber products. MMID's major facilities include the Union Bridge Yard, the Cedarhurst Yard, and the Highfield and Glyndon interchange points with CSXT.

Two small switching and terminal railroads also serve the Baltimore region. The **Canton Railroad**, owned by the quasi-public Maryland Transportation Authority, operates on six miles of state-owned track in the eastern part of Baltimore City and Baltimore County from the Seagirt Marine Terminal to Eastpoint. The railroad serves companies in Baltimore City's Canton area and interchanges traffic with CSXT at the Pennmary rail yard and Conrail at the Consolidation Coal Marine Terminal. The region's other switching and terminal rail company, the privately-owned **Patapsco & Back Rivers Railroad**, primarily transports raw materials to and from the Bethlehem Steel plant at Sparrows Point along its ten miles of track. It also interchanges traffic with CSXT and Conrail.

Current Activity Levels and Trends

Because of the proprietary nature of rail industry data, comprehensive information on rail movements is not easily accessible.¹⁰ Tables 4 and 5 present statewide activity as an indicator of the regional rail traffic.

¹⁰ National-level rail data from the Association of American Railroads to analyze trends as indicators of the statewide and regional impacts is forthcoming. BMC will also continue to receive statewide data from the Mass Transit Administration's Freight Services Department, as information is updated.

Table 4

Regional Freight Movement Activity Indicator:

Statewide Originating and Terminating Rail Traffic by Rail Carrier,
1989/90 and 1992/93

	1992-1993		1989-1990		% Change 89/90 - 92/93
	Annual Carloadings (000)	Percent of Total	Annual Carloadings (000)	Percent of Total	Annual Carloadings (000)
Class I carriers					
CSXT	359.1	68.0	409.8	57.1	-12.4%
Conrail	116.3	22.0	251.0	35.0	-53.7%
Norfolk Southern	0.6	neg.	0.5	neg.	20.0%
Class I Subtotal	476.0	90.0	661.3	92.2	-28.0%
Other carriers					
Canton	5.5	1.0	4.6	0.6	19.6%
Patapsco & Back Rivers	35.7	6.8	41.2	5.7	-13.3%
Maryland Midland	6.2	1.2	4.8	0.7	29.2%
Other carriers outside of Baltimore region	5.0	0.9	5.6	0.8	-10.7%
Subtotal	52.4	10.0	56.2	7.8	-6.8%
Total Rail Traffic	528.4	100.0	717.5	100.0	-26.4%

Source: Mass Transit Administration

Table 4 shows that CSXT is the state's largest rail carrier, with approximately two-thirds of the total carloadings. Conrail accounts for about one-fifth of the state's total carloadings. Norfolk Southern's main activity in Maryland is interchanging carloads with other carriers and, therefore, does not originate or terminate a significant amount of traffic.

The table also shows that total rail carloadings declined from 1989/90 to 1992/93 by 26 percent. During the same time period, both Canton and Maryland Midland experienced significant increases in traffic, allowing the smaller rail carriers to account for a larger percent (from 7.8 to 10 percent) of the statewide total.

The overall decrease in carloads is due primarily to competition from other ports to export coal, resulting in a significant decline in coal handling by the major Class I railroads in Maryland, as seen in Table 5. Nonetheless, coal is a major rail commodity, accounting for about 30 percent of the state's rail traffic. Most

coal is shipped to nearby electric power plants or to port terminals for export. Intermodal/forwarder activity between rail and ship or rail and truck, accounts for about one-fifth of the 1992/93 rail traffic, a four percent increase over 1989/90. Automobile-related activity accounts for about ten percent of the 1992/93 rail traffic, driven by the production of vehicles in the region, the distribution of vehicles to local dealers, and import/export activities at the Port.

Table 5

Regional Freight Movement Activity Indicator:

**Statewide Originating and Terminating Rail Traffic by Commodity Type,
1989/90 and 1992/93**

	1992-1993		1989-1990		% Change 89/90 - 92/93
	Annual Carloadings (000)	Percent of Total	Annual Carloadings (000)	Percent of Total	Annual Carloadings (000)
	Coal	152.8	28.9	272.7	38.0
Intermodal/Forwarder	125.5	23.8	119.9	16.7	4.7%
Automobile-Related	45.2	8.6	48.7	6.8	-7.2%
Food Products	38.8	7.3	61.7	8.6	-37.1%
Ores	36.0	6.8	63.7	8.9	-43.5%
Primary Metals	31.1	5.9	56.0	7.8	-44.5%
Forest Products	25.9	4.9	37.5	5.2	-30.9%
Other	<u>73.1</u>	<u>13.8</u>	<u>57.3</u>	<u>8.0</u>	27.6%
Total Rail Traffic	528.4	100.0	717.5	100.0	-26.4%

Source: Mass Transit Administration

Current Issues

From analyses and discussions with task force members and other experts, the following rail issues and concerns were raised:

- **Double-Stacking.** To move freight more cost effectively, railroad companies need the ability to double-stack containers, allowing them to carry more containers for significantly less than twice the operating costs. In the Baltimore region, several tunnel clearances into the Port of Baltimore are not high enough for high-cube double-stack service (20'2" to 20'6"). Tunnels at Howard Street in Baltimore City cannot handle double-stack service for Conrail (Northeast Corridor track) and CSXT.

Part of the MMID track also does not have double-stack clearance. Without these clearances, the Baltimore Port is the only major East Coast port without high-cube service in place or under construction.¹¹

- Grade Crossings. Today's rail safety issues are primarily related to reducing the accidents that occur at grade crossings. Maryland's Mass Transit Administration (MTA) and the State Highway Administration (SHA) are working together to promote education and enforcement of crossing safety, through the federal Operation Lifesaver program. MTA and SHA also want to make improvements at some crossings that are not currently signalized. In addition to the safety impacts, the elimination of certain grade crossings may also reduce truck traffic congestion, cited as a major freight movement impediment. The reduced-congestion benefits at particular grade crossing locations may warrant further study.

¹¹ CSX and Norfolk Southern have indicated in their application to the STB that they intend to increase clearances at some locations in the Baltimore-Washington metropolitan area.

Regional Air Freight Movement Transportation System

The Baltimore region's major air freight facility is **Baltimore-Washington International Airport (BWI)**, located just south of Baltimore City in Anne Arundel County. Access to BWI along Maryland Route 170 is provided from I-95, I-695, and the Baltimore-Washington Parkway (Maryland Route 295) to I-195, I-97, Maryland Route 100, and Maryland Route 176 in Map 5.

BWI is owned and operated by the Maryland Aviation Administration (MAA). Air carriers operating through BWI provide both domestic and international air cargo services¹² and handle such specialized cargo as seafood, flowers, and other time-sensitive, high-value shipments.

As shown in Map 6, BWI's air cargo complex includes 300,000 square feet of warehouse space, divided into eight buildings, with cold storage, a designated U.S. Fish & Wildlife Administration port of entry, and a 70,000 square foot Foreign Trade Zone. A new 56,000 cargo building will open by the end of 1997.

As shown in Table 6, seven all-cargo airlines serve BWI, and an additional 14 passenger airlines provide freight movement services ("belly-freight"). These carriers provide direct air service to over 75 international destinations, including Europe, the Caribbean, and South America.

Table 6

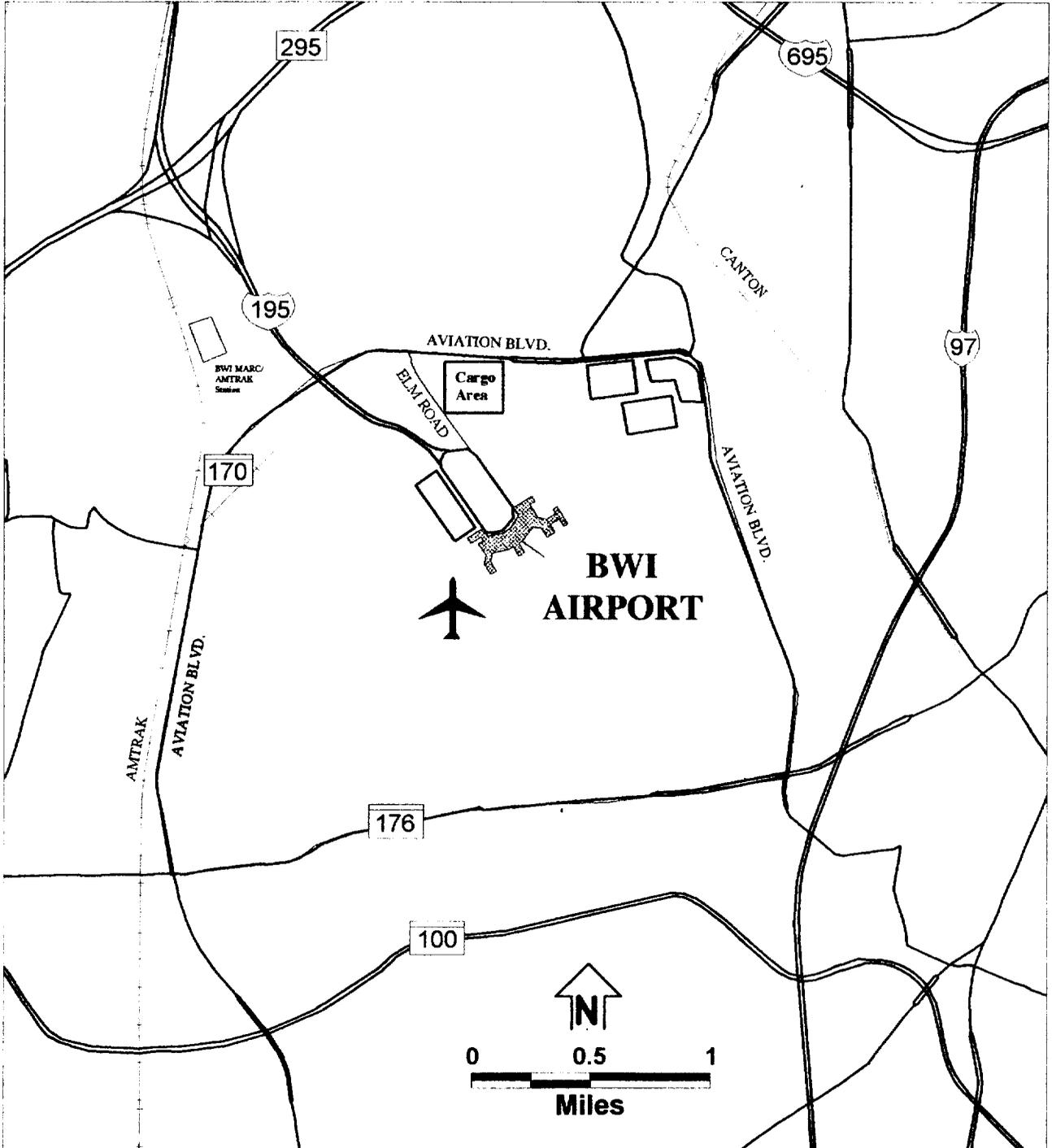
Airlines Providing Cargo Movement Services at BWI Airport

All-cargo Airlines	Passenger Airlines Providing Cargo Movement Services
<ul style="list-style-type: none"> • Airborne Express • American International • Burlington Air Express • DHL Worldwide • Emery Worldwide • Federal Express • United Parcel Service (UPS) 	<ul style="list-style-type: none"> • Air Aruba • Air Canada • Air Jamaica • America West Airlines • American Airlines • British Airways • Continental Airlines • Delta Airlines • Icelandair • Northwest Airlines • Southwest Airlines • TWA • United Airlines • USAirways

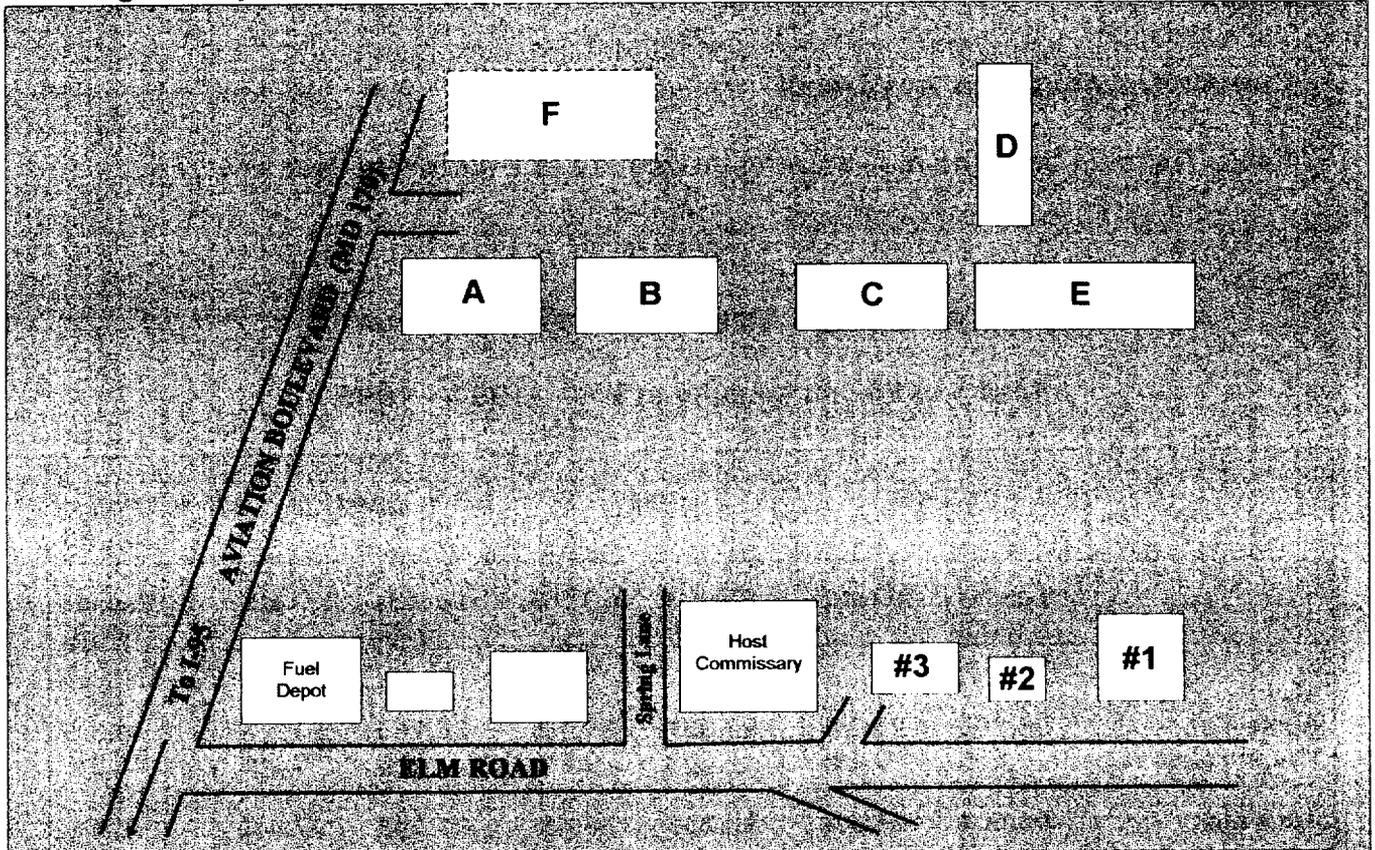
Source: Maryland Aviation Administration

¹² Air cargo includes freight, express, and mail shipments which utilize air transportation for some portion of its domestic or international transit. U.S. mail traffic consists of U.S. Postal Service-controlled shipments of envelopes and small packages, while express traffic refers to envelopes, documents, and small packages shipped domestically via express integrated carriers (e.g. FedEx) for time-definite delivery. Freight traffic includes larger package and shipment sizes (more than 80 pounds), as well as small shipments moving in international markets (under common definitions).

Map 5
BWI Airport
Major Access Routes



Map 6
BWI Airport
Air Cargo Complex



Building A

Airschott
 All Cargo Expediting Service
 Foreign Trade Zone #73

Building B

Air Aruba
 America West Airlines
 American Intl.
 Balt/Wash. Air Cargo Assn.
 BWI Cargo Development
 Cargo Specialist, Inc.
 Continental Airlines
 Delta Airlines
 John S. Connor, Inc.
 Northwest Airlines
 Southwest Airlines
 World Wide Refrigerated Cargo, Inc.

Building C

American Airlines
 U.S. Postal Service

Building D

United Parcel Service
 USAir Catering

Building E

Burlington Air Express
 Federal Express
 Miami Aircraft Support

Building F (under construction)

C.J. International
 Dynair Service, Inc.
 Emery Worldwide
 Glen Air Freight
 IMAAW
 Laing International
 Mid-Atlantic Trade Service
 Samuel Shapiro & Company
 U.S. Customs

Building #1

USAirways
 British Airways

Building #2

Ogden Aviation - Representing:
 Air Canada
 Air Jamaica
 Icelandair

Building #3

TWA
 United Airlines
 Signature Flight Support

Source: Maryland Aviation Administration, September 1997



Outlook 2020: Freight Mobility Issues and Recommendations

Two general aviation airports also serve the Baltimore region. **Carroll County Airport**, located near Westminster, and **Martin State Airport**, in Baltimore County, currently provide a very limited amount of air cargo service to the region.

Current Activity Levels and Trends

Table 7 shows both the mail and freight activity at BWI for the last few years.

Table 7

Regional Freight Movement Activity Indicator:

Mail and Freight Activity at BWI—1994 - 1996

	1996		1995		1994		% Change 94 - 96
	Pounds (000)	% Total	Pounds (000)	% Total	Pounds (000)	% Total	Pounds (000)
Mail							
Domestic	93,965	25.3%	92,591	28.4%	86,769	27.1%	8.3%
International	<u>536</u>	0.1%	<u>664</u>	0.2%	<u>780</u>	0.2%	-31.2%
Total Mail	94,501	25.5%	93,255	28.6%	87,549	27.4%	7.9%
Freight							
Domestic	248,502	67.0%	209,735	64.4%	210,262	65.8%	18.2%
International	<u>28,148</u>	7.6%	<u>22,689</u>	7.0%	<u>21,806</u>	6.8%	29.1%
Total Freight	276,650	74.5%	232,424	71.4%	232,068	72.6%	19.2%
Total Air Cargo	371,151	100.0%	325,679	100.0%	319,617	100.0%	16.1%

Source: Maryland Aviation Administration

For the past three years, approximately 75 percent of BWI's air cargo activity has been related to the movement of general freight, with the remaining 25 percent as mail activity. Most of this activity is domestic, with only seven percent traveling internationally.

Dulles and Washington National Airports, along with BWI, are part of the Baltimore-Washington regional airport system. Table 8 provides the three airports' 1996 freight activity and percentages of regional market share.

Table 8

Regional Freight Movement Activity Indicator:

1996 Regional Air Mail and Freight Activity

	Mail		Freight	
	Pounds (000)	% of Market	Pounds (000)	% of Market
BWI	94,501	31.3	276,650	32.0
Dulles (IAD)	122,371	40.6	559,528	64.8
National (DCA)	<u>84,714</u>	<u>28.1</u>	<u>27,759</u>	<u>3.2</u>
Total	301,586	100%	863,937	100%

Source: Maryland Aviation Administration

Regionally, BWI has a 30 percent market share of both the 1996 mail and freight activity. With regard to mail activity, the three airports split the regional activity fairly evenly, with the overall mail activity accounting for 25 percent. However, concerning general freight, Dulles Airport carries 65 percent of the region's activity. BWI carries about one-third and National carries very little freight.

Current Issues

From analyses and discussions with task force members and other experts, the following air cargo issues and concerns were raised:

- **Air Cargo Capacity.** With recent growth in BWI activity levels, MAA has determined that the BWI air cargo facilities are operating near capacity, resulting in the need to plan for more capacity to handle projected future growth. Current planning efforts are, therefore, underway for the construction of up to four 60,000 square foot cargo buildings, aircraft parking, and landside facilities. This cargo complex will be relocated to the midfield area of the airport and used by the all-cargo airlines. The current cargo buildings will serve the belly-freight operations of the passenger airlines.
- **Carroll County Airport.** Future expanded air cargo handling capabilities are planned for Carroll County Airport. The need for this expansion is

anticipated as Carroll County and the northwestern part of the region continue their commercial and industrial development.

Air Cargo Study Results

A recent study prepared for the Metropolitan Washington Council of Governments (COG) contains a review of current and projected cargo requirements for the Washington-Baltimore metropolitan region and the Washington Dulles International (IAD) and BWI Airports, including associated ground access/trucking activities.

The following information highlights some of the report's documentation:

- **Truck Services.** Air cargo trucking services link airports with regional shippers and consignees, and the availability and efficiency of these services is a major factor in determining market range and penetration for airports. In most cases, air cargo shipments do not originate or terminate at an airport location, but rather require some ground transfer to and from the origin and destination airports. In fact, many cargo shipments travel long distances by truck to connect with direct flight services, particularly for international markets (due to limited direct service) or where economies of scale create large cost advantages. The ability to utilize air cargo services from non-airport industrial locations has been a key factor in the immense growth in air shipment volumes.
- **Services at BWI.** Cargo activity at BWI is dominated by all-cargo domestic carriers, accounting for more than three-quarters of the total 1996 freight. The integrated carriers (e.g., UPS and FedEx) provide daily weekday direct flights to their national hub locations. In March 1996, there were a total of 45 scheduled all-cargo flights per week for an estimated one-way capacity of 2.6 million pounds. The top carriers were UPS, FedEx, Burlington, and Emery. Many of these carriers also have complementary truck services to their hubs for less time-critical shipments.

Currently, BWI has few international passenger services and, consequently, limited international freight capacity. One-third of the 1996 international traffic was provided through British Air. The new International Terminal is slated to open at the end of 1997.

Most air mail is transported via combination carriers (carrying both passengers and cargo), although the United States Postal Service (USPS) has a daily dedicated flight which carries Express Mail to and from its Indianapolis sort hub. USPS has 68 outbound and 87 inbound trucks daily, used primarily for priority and first-class mail. Trucks

dedicated to express mail service are operated separately. As with IAD, the majority of these vehicle trips occur during non-rush hours.

- Feeder Service. A specialized version of truck services are the airport-to-airport “peddle” runs which specialize in moving freight between major and secondary cargo airports. These services are mostly designated for international freight traffic and cover a large market region (e.g. the Northeast Corridor). A good example of these services are the nightly trucks scheduled from BWI and IAD to New York’s Kennedy Airport (JFK) to meet the next day’s international departures. These trucks gather freight at Philadelphia and Newark along the way and deliver local destination freight. The reverse trip picks up freight for distribution along the route.
- Cargo Forecasts. Total average weekday truck traffic for BWI is estimated at 298 round-trips in 1996 and 1,164 projected round-trips in 2020. The current level of air cargo-related vehicle traffic, however, is insignificant when compared with total airport traffic and traffic on major local and regional routes. The projected increase in truck traffic levels should not, therefore, have a significant impact on either congestion or expansion requirements at BWI. However, the projected increase in congestion on major access corridors in the metropolitan region could have a detrimental impact on the competitiveness of cargo services at both BWI and IAD due to increased access costs and diminished service levels relative to other airports.

In addition, BWI’s cargo facilities’ capacity is projected to be able to handle cargo growth through 2017, when it will reach full utilization. The horizon for the expected shortfall provides sufficient time for the planning, design, and construction of additional facilities to meet anticipated growth. There are also efficiency options which could increase capacity without new facility development or, at the very least, forestall the need for that development. These measures include a reduction in cargo terminal use through more direct transfer and off-airport handling, rehabilitation of older terminal areas, and more efficient use of truck services.

Regional Maritime and Port Freight Movement Transportation System

The **Port of Baltimore** is the region’s major maritime facility. Located on the Patapsco River near the northern end of the Chesapeake Bay, the Port is accessible from the Atlantic Ocean sea routes through Hampton Roads at the south end of the Chesapeake Bay and through the Chesapeake and Delaware Canal (C&D Canal). The Port’s location 150 miles inland provides overnight truck access to more than 30 percent of the nation’s population and a one-/two-day trip for rail traffic. As a result, the Port’s principal inland market areas are middle Atlantic and midwestern states. About 80 steamship lines currently call at the Port.

Major truck access routes are provided by I-95, I-895, and I-695. Roadways providing internal access around the port facilities include Broening Highway, Dundalk Avenue, Clinton Street, Keith Avenue, Key Highway, Hanover Street, Potee Street, and Patapsco Avenue.

The marine terminals at the Port of Baltimore include both publicly- and privately-owned and operated facilities. The Maryland Port Administration (MPA) is responsible for the overall management, safety, operation and marketing of the Port’s facilities.

As shown in Table 9, the Port of Baltimore has seven public marine terminals and eight private terminals. Map 7 shows the terminals and the surrounding road network.

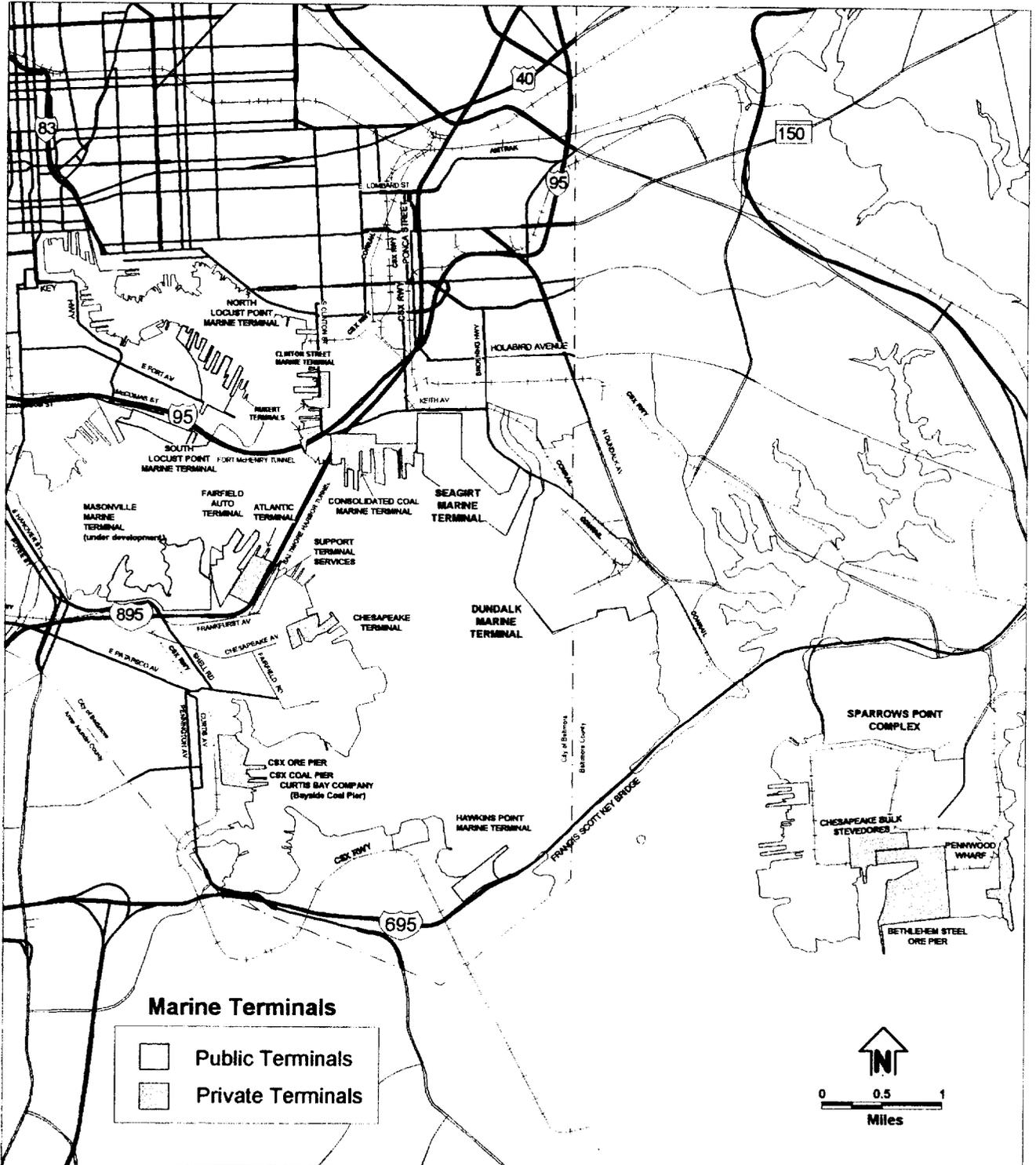
Table 9

Marine Terminals at the Port of Baltimore

Public Marine Terminals	Private Marine Terminals
<ul style="list-style-type: none"> • Clinton Street • Dundalk • Fairfield • Hawkins Point • North Locust Point • Seagirt • South Locust Point 	<ul style="list-style-type: none"> • Atlantic • Chesapeake Bulk Stevedores • Chesapeake • Consolidation Coal • CSX/Curtis Bay Coal & Ore Piers • Ruckert • Support Terminal Services • Pennwood Wharf

Source: Maryland Port Administration

Map 7 Port of Baltimore Access Routes and Terminal Facilities



In addition to the above terminals, MPA purchased the Masonville terminal for development as a vehicle-handling terminal.

The Port competes in the general cargo market—both containerized and break bulk cargoes. The break bulk market primarily consists of eight commodities:

- fruits and vegetables
- steel
- automobiles
- roll-on/roll-off, heavy transportation, and construction equipment
- paper
- pulp, and waste paper
- lumber and plywood
- other break bulk (coal, grain, iron ore, and dry & liquid bulk)

Current Activity Levels and Trends

Table 10 shows the activity at the public terminals from the last three years. The Port's two largest public marine terminals are Dundalk and Seagirt. Dundalk Marine Terminal is the second largest terminal on the North Atlantic coast and the largest general cargo facility in the Port. Seagirt Marine Terminal, which opened in 1990, is the newest and most modern container terminal. Over the last three years, activity at both terminals accounted for more than 80 percent of the total tonnage at the public terminals. From a commodity perspective, containerized cargo accounted for 73 percent of the Port's total 1996 public terminal tonnage. Private terminal operators will not typically divulge their operating information and, therefore, comprehensive data is not available.

Table 10

Regional Freight Movement Activity Indicator:

Activity at Public Marine Terminals—1994 - 1996 (in short tons)

	1996	1995	1994	% Change 94 - 96
Dundalk				
Containers	2,486,817	2,338,073	2,249,264	10.6%
Other Break bulk	226,465	214,001	203,400	11.3%
RO/RO	301,278	282,260	252,945	19.1%
Steel	108,117	77,670	115,532	-6.4%
Lumber	4,378	7,475	34	12,776.5%
Paper	14,713	33,512	35,221	-58.2%
Pulp	323,556	379,408	370,992	-12.8%
Automobiles	<u>198,921</u>	<u>214,269</u>	<u>227,431</u>	-12.5%
Total Dundalk	3,664,245	3,546,668	3,454,819	6.1%

Table 10 *continued*

Regional Freight Movement Activity Indicator:

Activity at Public Marine Terminals—1994 - 1996 (in short tons)

	1996	1995	1994	% Change 94 - 96
Seagirt				
Containers	1,260,002	1,733,485	1,763,679	-28.6%
Other Break bulk	<u>478</u>	<u>546</u>	<u>365</u>	31.0%
Total Seagirt	1,260,480	1,734,031	1,764,044	-28.5%
South Locust Point				
Containers	532,044	563,669	586,663	-9.3%
Other Break bulk	58,201	36,885	22,867	154.5%
RO/RO	65,201	99,553	129,351	-49.6%
Steel	7,590	1,194	32,501	-76.6%
Automobiles	<u>177</u>	<u>287</u>	<u>206</u>	-14.1%
Total South Locust Point	663,213	701,588	771,588	-14.0%
North Locust Point				
Containers	8,192	32,807	33,348	-75.4%
Other Break bulk	27,475	42,779	22,974	19.6%
RO/RO	0	0	160	-100.0%
Steel	137,412	202,211	190,140	-27.7%
Lumber	29,315	7,778	255	11,396.1%
Paper	10,870	10,764	16,546	-34.3%
Pulp	<u>10,442</u>	<u>1,961</u>	<u>0</u>	---
Total North Locust Point	223,706	298,300	263,423	-15.1%
Fairfield				
Automobiles	51,860	51,526	66,290	-21.8%
RO/RO	<u>284</u>	<u>0</u>	<u>628</u>	-54.8%
Total Fairfield	52,144	51,526	66,918	-22.1%
Total Tonnage at Public Terminals	5,863,788	6,332,113	6,320,792	-7.2%

Source: Maryland Port Administration

Current Issues

From analyses and discussions with task force members and other experts, the following port issues and concerns were raised:

- **Harbor Dredging.** During the last few years, Baltimore experienced declining containerized activity, the result of industry changes. Chief among these changes is the consolidation of the container industry. Worldwide container carriers are merging or forming alliances and concentrating their ship operations at fewer ports of call. In addition, container ships are getting larger, requiring deeper harbor channel depths.

According to the Maryland Port Administration's (MPA) 1996 Strategic Plan, maintaining and growing the container business is one of its main priorities. MPA, therefore, realizes that the relative shallowness of the C&D canal and the connecting harbor channels is a main obstacle to overcome in order to accomplish its focus on containerized cargo. The Army Corps of Engineers, working with MPA, is planning to widen and deepen the connecting harbor channels and place the 4.4 million cubic yards of dredged material at the Hart-Miller Island site. In addition, on-going dredging maintenance of the harbor channels is crucial to keep the channels at depths appropriate for larger vessels.

- **Rail Access.** Both CSXT and Conrail have rail lines into various port terminals; however, they provide a limited amount of reciprocal switching—allowing each other's carloads to be placed on their tracks for access to the terminals they do not serve. Some Task Force members and others have proposed that a single railroad company, such as the Canton Railroad, provide switching services into the port terminals, thereby allowing all terminals equal access to both rail companies. In addition, the inability to provide high-cube double stack service from the Port limits its ability to attract additional rail activity.
- **Market Niches.** The Port has a 15 percent share in both of the North Atlantic container and break bulk cargo markets. In the break bulk market, the market percentage varies greatly by commodity. The MPA plans to capitalize on the commodities with the higher market shares—roll-on/roll-off (RO/RO), automobiles, steel, and forest products (lumber, paper, pulp), per the Strategic Plan. Focusing on these commodities raises the need to develop future container and break bulk terminals and storage areas.

Regionally-Significant Intermodal Facilities

This report, with input from the Freight Movement Task Force, defines **“regionally-significant” intermodal facilities as those which use two or more transportation modes and which function as transfer points for seamless and continuous door-to-door freight movement.**

The productivity of freight transportation firms and their ability to provide timely and reliable service depends not only on the efficiency of the individual modes and the effectiveness of the laws and regulations under which they operate, but also on the **efficiency of intermodal facilities that connect one mode to another.** For example, freight may be initially imported into the region by ship, transferred onto rail for a long-haul trip, and finally placed onto trucks once the goods are in close proximity to their final destination.

These public and private intermodal facilities can include commercial & general aviation airports, marine terminals, rail yards, selected warehouse & distribution centers, and truck terminals that transfer cargo from one mode to another. Examples of the types of transfers that occur at these facilities are ship-to-rail, ship-to-truck, rail-to-truck or truck-to-air transfers. While most of these facilities have been discussed previously as single mode activity centers, they are discussed as intermodal activity centers in this section.

Because these facilities serve more than one mode, an assessment of them will aid the Task Force, BMC, and the region’s Metropolitan Planning Organization to direct attention and investment to freight projects that will potentially benefit many modes and system users.

Quantitative and Qualitative Criteria for “Regionally Significant” Designation

Due to the variety of standard measures of activity and difficulty obtaining private industry data, BMC is using the Federal Highway Administration’s (FHWA) intermodal facility criteria as a guideline to understand which facilities generate higher volumes of freight movement. FHWA developed these criteria, listed below, to identify facilities connected to the National Highway System. BMC uses these criteria as a baseline for comparison and potential project prioritization purposes. At this time, approximately half of the intermodal facilities included in Table 10 handle these higher volumes of freight movement.

- **Freight at commercial aviation airports:** 200 trucks per day or 100,000 tons per year

- **Freight at port terminals:** 50,000 TEUs¹³ per year or other units which convert to 200 trucks per day; bulk commodity terminals that handle 500,000 tons per year or 200 trucks per day
- **Freight at truck or rail terminals:** 50,000 TEUs per year or 200 trucks per day
- **Other factors:** intermodal facilities that handle more than 20 percent of freight volumes by mode within the State or region, facilities targeted for major investments to address existing deficiencies or anticipated expansions of traffic

In addition, expert advice, as reasonable, may be used to include facilities that do not meet the above quantitative guidelines. It is again noted that about half of the current facilities listed do not meet the strict quantitative criteria but still contribute significantly to the region's intermodal freight transportation network.

Regionally-Significant Intermodal Facilities' Inventory

The current inventory of regionally-significant intermodal facilities includes 18 facilities, as shown in Table 11 and Map 8. Each marine terminal is considered a separate entity and, therefore, the majority of the intermodal facilities (13) are located at the Port. The remaining facilities include three rail facilities, one airport, and an auto distribution center.¹⁴

Regionally-Significant Intermodal Port Facilities

The Port of Baltimore includes thirteen public and private intermodal facilities, which serve as transfer points for freight between ship and rail, ship and truck, and rail and truck.

- **Dundalk Marine Terminal** is the second largest marine terminal on the North Atlantic coast and the largest general cargo facility in the Port. Dundalk is located on the north side of the Patapsco River and has 13 berths, spanning 570 acres. The primary cargo handled at Dundalk includes automobiles and other roll-on/roll-off equipment. From information provided by the MPA, Dundalk generates a high volume of intermodal activity, per the FHWA guidelines.
- **Seagirt Marine Terminal**, which opened in 1990, is the newest and most modern container terminal at the Port. Located on the north side of the Patapsco River, Seagirt has three berths and covers 275 acres. It serves as the hub of the Port's intermodal container cargo, with some of

¹³ TEU is a measure of containerized cargo—Twenty-foot Equivalent Units

¹⁴ Appendix 2 contains additional information about each intermodal facility.

the world's most modern container cranes and technology. Seagirt's "ACCESS" (Automated Container Control and Equipment Support System) computer system allows it to operate a paperless data processing system through Electronic Data Interchange (EDI) and electronic tracking systems. Other special freight handling capabilities at Seagirt include single hoist and double-hoist 50-ton container cranes as well as tower and revolving gantry cranes. From information provided by the MPA, Seagirt generates a high volume of intermodal activity, per the FHWA guidelines.

- While Seagirt handles containerized cargo exclusively, the Port's other state-owned terminals are multi-use facilities. **North Locust Point**, which covers 90 acres and 10 berths, handles steel, forest products, grain, latex, roll-on/roll-off, and containerized cargoes. **South Locust Point**, which has 79 acres and 4 berths, is also a multi-use facility handling containers, break bulk, and roll-on/roll-off cargoes. **Fairfield Terminal** is leased to Toyota Motor Sales and has 50 acres for auto storage and processing. Fairfield has one berth and specializes in importing, exporting, and processing of automobiles. **Hawkins Point** is located on 111 acres with one pier. Most of the terminal is used by the Maryland Environmental Services as a hazardous waste site. Twenty acres is leased by the East Alco Aluminum Company to handle alumina, liquid fertilizer, and dry bulk products. **Clinton Street** is currently inactive. From information provided by the MPA, South Locust Point generates a high volume of intermodal activity, per the FHWA guidelines; however, North Locust Point, Fairfield, and Clinton Street do not meet the guidelines. Activity levels for Hawkins Point are not currently available.
- The **Atlantic and Chesapeake Terminals** are owned and operated by Hobelmann Port Services, Inc. Atlantic is located on 55 acres with one berth. Chesapeake covers 53 acres and has one berth. Both terminals service vehicles—autos, trucks and roll-on/roll-off. From information provided by the MPA, Atlantic does not generate high volumes of intermodal activity, per the FHWA guidelines. Activity levels for Chesapeake Terminal are not currently available.
- Multiple operators handle coal at the **Consolidation Coal Terminal** on a 100-acre, 2-berth facility. Located on 112 acres with three berths, CSX owns and operates the **CSX Coal and Ore Piers/Curtis Bayside Coal Pier**. **Ruckert Terminal** covers 70 acres and has four piers. It handles metals, ores, fertilizers, salt, cement, roll-on/roll-off, and dry and break bulk cargoes. **Support Terminal Services** handles liquid bulk products on 17 acres with one finger pier. From information provided by the MPA

terminal operators, and BMC analysis, these terminals generate high volumes of intermodal activity, per the FHWA guidelines.

Regionally-Significant Intermodal Rail Facilities

The following three rail facilities serve as transfer points for freight between rail and ship and rail and truck.

- Conrail's **Bayview Intermodal Container Terminal** facility is located three miles north of the Port of Baltimore. This facility covers 30 acres and has a trailer capacity of 600 units. In addition, Bayview has the capacity to hold 60 conventional cars, equivalent to 89 feet. This facility handles refrigerated (Reefer) units, trailers on flat cars (TOFC), containers on flat cars (COFC), hazardous materials, and high value products. From information provided by the Conrail, Bayview generates a high volume of intermodal activity, per the FHWA guidelines.
- Adjacent to the Seagirt Marine Terminal is the **Intermodal Container Transfer Facility (ICTF)** rail yard which brings trains within 1,000 feet of the berths. The ICTF, operated by CSXI, offers double-stack capacity and can handle 200,000 units annually. The ICTF features over 4.5 miles of track, with four loading tracks of 3,750 feet. From information provided by the MPA, ICTF generated a high volume of intermodal activity, per the FHWA guideline.
- Conrail's **Flexi-Flo Rail Truck Transfer Terminal** is a five-acre facility adjacent to the Jones Falls Expressway (I-83) and North Avenue located in Baltimore City. Flexi-Flo provides intermodal transfer of liquid and dry chemicals, oils, corrosive and hazardous materials. From information provided by Conrail, Flexi-Flo does not generate a high volume of intermodal activity, per the FHWA guidelines.

Regionally-Significant Intermodal Airport Facility

The **Baltimore-Washington International Airport (BWI)** is the region's intermodal air freight facility, serving as a transfer point for air and truck freight. Seven all-cargo airlines and six passenger airlines ("belly-freight") use the airport's air cargo handling complex. This eight-building complex includes 330,000 square feet of warehouse space. From information provided by the MAA, BWI handles more than 20 percent of the region's air freight volumes and, therefore, falls within the high volume designation, per the FHWA guidelines.

Regionally-Significant Rail-to-Truck Intermodal Facility

Total Distribution Services Inc. (TDSI), a subsidiary of CSXT, owns the **Automobile Distribution Center** in Jessup. This distribution center handles both domestic and international shipments of import and export vehicles via rail to truck and rail to ship. TDSI has other distribution centers at some of the port's terminals; however, the Jessup location is one of the largest in the U.S. This facility has 125 acres of land and a 13,000 vehicle capacity. Based on written information provided by TDSI, the Auto Distribution Center generates a high volume of intermodal activity, per the FHWA guidelines.

Current Issues

From analyses and discussions with task force members and other experts, the following issues and concerns were raised. Not only do these issues affect single modes of operation, but also affect the efficiency and effectiveness of the region's intermodal freight transportation system.

- **Double-Stacking.** In the Baltimore region, several tunnel clearances into the Port of Baltimore are not high enough for high-cube double-stack rail service (20'2" to 20'6"). Without these clearances, the Baltimore Port is the only major East Coast port without high-cube service in place or under construction. This service not only affects rail service in the region, but also port activity, where freight is transferred between ship and rail.
- **Harbor Dredging.** Worldwide container carriers are concentrating their ship operations at fewer ports of call and container ships are getting larger, requiring deeper harbor channel depths. The MPA, therefore, realizes that the relative shallowness of the C&D canal and the connecting harbor channels is a main obstacle to overcome in order to accomplish its focus on containerized cargo. The Army Corps of Engineers, working with MPA, is planning to widen and deepen the connecting harbor channels and place the dredged material at the Hart-Miller Island site. Dredging, including on-going maintenance, not only affects port activity, but also regional truck and rail activity. If fewer ships call on the Port, there will be direct impacts on the intermodal traffic between ship and truck and ship and rail.
- **Truck Impediments.** A majority of truck study respondents stated that congestion is one of the major impediments on regional freight movement routes. Traffic back-ups and lane reductions at highway interchanges were cited structural factors contributing to congestion.

In addition, trucks are restricted from transporting various goods on certain roads. These restrictions include height clearances, bridge and pavement weight limits, and parking restrictions. Task Force members and ATA truck study respondents also stated that highway ramp design, poor signalization, lack of signage, access, and narrow roads were major impediments to the truck routes traveled.

Traffic congestion and truck restrictions not only affect roadway activity, but can also impact the efficiency of intermodal connections where transfers between trucks and ships, rail, or airplanes occur.

Table 11

Regionally-Significant Intermodal Facilities

Facility	Modes Used	Owner(s)	Operator	Location	Cargo/Activities	Primary Unit(s) of Measurement	FHWA Intermodal Facility Guidelines ¹
1 Atlantic Terminal	rail, truck, ship	Hobelmann Port Services	Hobelmann Port Services	2901 Childs St., Baltimore City	autos, trucks, RO/RO	vehicles	does not meet guidelines
2 Bayview Intermodal Container Facility	rail, truck	Conrail	Conrail	E. Lombard St., Baltimore City	freight all kinds (FAK)	trailers, containers	meets guidelines
3 BWI Airport	truck, air	MD Aviation Administration	multiple users	Anne Arundel County	domestic & international	pounds	meets guidelines
4 Chesapeake Terminal	rail, truck, ship	Hobelmann Port Services	Hobelmann Port Services	2000 Chesapeake Ave., Baltimore City	autos, trucks, RO/RO	data not available	data not available
5 Clinton Street Marine Terminal	rail, truck, ship	Maryland Port Admin.	currently inactive	2000 Clinton St., Baltimore City	currently inactive	tons	does not meet guidelines
6 Consolidation Coal Marine Terminal	rail, ship	Consolidation Coal Sales Co.	multiple users	3800 Newgate Ave., Baltimore City	coal	tons	meets guidelines

¹ In addition, expert advice, as reasonable, may be used to add facilities that do not meet the above quantitative guidelines. It is again noted that about half of the current facilities listed do not meet the strict quantitative criteria but still contribute significantly to the region's intermodal freight transportation network.

Table 11 *continued*

Regionally-Significant Intermodal Facilities

Facility	Modes Used	Owner(s)	Operator	Location	Cargo/Activities	Primary Unit(s) of Measurement	FHWA Intermodal Facility Guidelines
7 CSX Coal & Ore Piers/Curtis Bay Co. Bayside Coal Pier	rail, ship	CSX	CSX	1501 E. Patapsco Ave., Baltimore City	coal, dry bulk	tons	meets guidelines
8 Dundalk Marine Terminal	rail, truck, ship	Maryland Port Admin.	Universal, I.T.O. Corp., Maryland International Terminals	2700 Broening Highway, Baltimore City & County	RO/RO, autos, steel, paper, break & liquid bulk, containers, project cargo	tons	meets guidelines
9 Fairfield Auto Terminal	rail, truck, ship	Maryland Port Admin.	Toyota Motor Sales	Foot of Childs St., Baltimore City	autos, RO/RO	tons	does not meet guidelines
10 Flexi-Flo Rail Transfer Facility	rail, truck	Conrail	Conrail	W. North Ave., Baltimore City	dry & liquid bulk, oils, corrosive & hazardous materials	tons, carloads	does not meet guidelines
11 Hawkins Point Terminal	rail, truck, ship	East Alco Aluminum Co.	East Alco	Hawkins Point Rd., Baltimore City	alumina, liquid fertilizer, dry bulk	data not available	data not available
12 Intermodal Container Transfer Facility (ICTF)	rail, truck, ship	Maryland Port Admin.	CSX	4801 Keith Ave., Baltimore City	FAK	trailers, containers	meets guidelines

Table 11 continued

Regionally-Significant Intermodal Facilities

Facility	Modes Used	Owner(s)	Operator	Location	Cargo/Activities	Primary Unit(s) of Measurement	FHWA Intermodal Facility Guidelines
13 North Locust Point Marine Terminal	rail, truck, ship	Maryland Port Admin.	multiple users	1430 Wallace St., Baltimore City	steel, forest products, RO/RO, latex, grain, containers	tons	does not meet guidelines
14 Rukert Terminals Corp.	rail, truck, ship	Rukert Terminals Corp.	Rukert Terminals Corp.	2021 S. Clinton St., Baltimore city	metals, ores, fertilizers, salt, cement, RO/RO, dry & break bulk	tons	meets guidelines
15 Seagirt Marine Terminal	rail, truck, ship	Maryland Port Admin.	Maryland International Terminals, I.T.O. Corp.	2600 Broening Highway, Baltimore City	containers	tons	meets guidelines
16 South Locust Point Marine Terminal	rail, truck, ship	Maryland Port Admin.	I.T.O. Corp.	2001 E. McComas St., Baltimore City	break bulk, RO/RO, containers	tons	meets guidelines
17 Support Terminal Services	rail, truck, ship	Support Terminal Services	Kaneb P/L, L.P.	1800 Frankfurst Ave., Baltimore City	liquid bulk	US barrels, tons	meets guidelines
18 Total Distribution Services, Inc. Auto Distribution Center	rail, truck	TDSI--CSX subsidiary	TDSI	8459 Dorsey Run Rd., Jessup, Howard County	autos, trucks	trucks	meets guidelines

FINDINGS AND RECOMMENDATIONS FOR THE 1997 BALTIMORE REGIONAL TRANSPORTATION PLAN

Baltimore Regional Transportation Plan

ISTEA requires that Baltimore’s Metropolitan Planning Organization set regional transportation policies and develop plans to implement them through cooperative efforts with local and state elected officials, and transportation, land planning, and air quality authorities. This **Baltimore Regional Transportation Plan (BRTP)**, required to be updated every three years, ties transportation planning to air quality improvements, land use, and overall regional quality-of-life issues. BRTP’s guiding principles are as follows:

- Link transportation to managing growth
- Increase transportation choices
- Improve life in our communities
- Maintain the current system

In addition, the Plan includes elements directed toward addressing ISTEA’s emphasis on freight and goods movement planning¹⁵. These goals and strategies seek to establish a foundation on which continuous freight mobility system planning, implementation, and evaluation can be pursued in the Baltimore region.

Goal	Policy	Strategies
Accessibility	Maintain and enhance access to freight movement facilities and market areas through the BRTP	<ul style="list-style-type: none"> • Establish freight movement performance measures and continuously assess the state of the regional freight movement system • Encourage investments and actions that enhance the efficiency of freight movement both within the region and between regions • Apply technological strategies designed to facilitate the efficient movement of freight
Economic Development	Support BRTP projects that can expand the regional market for labor and goods	<ul style="list-style-type: none"> • Improve access to business and employment opportunities in the region through cooperative public-private efforts • Encourage projects that support community revitalization efforts and help retain and expand businesses in these locations
Economic Development	Strengthen the contribution of the freight movement system to the regional economy in the BRTP	<ul style="list-style-type: none"> • Plan for efficient access to port, air, rail, and intermodal facilities • Coordinate planning among oversight authorities responsible for freight movement in the region • Maintain and support a Freight Movement Task Force to help identify options for addressing impediments to efficient freight movement

The process used to develop the freight mobility element involves the Metropolitan Planning Organization (MPO), the Freight Movement Task Force, key freight movement system operators and users, BMC staff, and federal, state, and local agencies. This process is designed to logically flow from initial identification of regional freight mobility objectives to the development of a reasonable strategy for implementing recommended system improvements.

Identification of Regional Freight Mobility Priorities

In addition to the overview of freight movement in Baltimore, analyses of survey and interview responses, information from industry experts, priority projects identified by the Maryland Department of Transportation, and concerns raised at regular Freight Movement Task Force meetings, have resulted in a set of key current regional infrastructure issues and needs and potential long-range projects for consideration to the BRTP. Addressing these needs could provide future intermodal benefits and/or benefits to many modes or stakeholders within the regional transportation system.

The Task Force recognizes that it does not have the ability to initiate or implement some of these transportation projects on their own without action and assistance from other agencies and the business community; however, it can raise awareness and discussion of the issues through the MPO process and to industry leaders to help profile freight movement issues and move important freight movement projects forward.

The capital projects and programmatic actions recommended by the Task Force to the MPO are prioritized below and shown in Table 12:

Recommended Capital Projects

- **High-Cube Double-Stacking Capability** High Priority
The ability to provide competitive high-cube double-stack capability into the Port of Baltimore is a high priority item that will enhance freight movement within the region and between regions. Not only does double-stack service allow railroad companies to reduce their costs and better compete with trucks, but it can also attract efficient intermodal access to the Port. Without higher clearances for double-stack service, Baltimore will be the only major East Coast port without high-cube service in place or under construction.
- **Specialized-Cargo Port Terminal** Medium Priority
The Port plans to focus resources on strengthening its competitiveness in vehicle handling—automobiles and roll-on/roll-off equipment. The Task

Force supports the Port's efforts to design and develop the Masonville Auto Terminal, adjacent to the Fairfield Terminal.

- Additional Container Cargo Storage Medium/Low Priority
The Port's strategic plan includes maintaining and/or growing its market share of the expanding container business. The container industry is undergoing change—worldwide container carriers are merging or forming alliances and concentrating their ship operations at fewer ports of call. Acting on these changes, the Port plans to develop additional warehouse and storage capacity at Seagirt Marine Terminal to handle the growing needs of container carriers. The Task Force supports these efforts.

Recommended Programmatic Actions

- Truck Rest Areas Study High Priority
Results from a national study and a survey of regional trucking firms indicate the need for more truck rest areas and parking spaces. The lack of available nighttime parking and the growing trend toward pick-ups and deliveries by appointment are driving the need for additional spaces. The Task Force has determined that this is a high priority issue requiring further study to identify locations for potential rest areas, in both the Baltimore and Washington D.C. areas.
- Regional Freight Movement Subarea Studies Medium Priority
The region is experiencing growth in the development of larger manufacturing and warehousing facilities that can generate high volumes of truck traffic. While these centers do not fall under the definition of "intermodal facilities," the Task Force wants to study and identify the locations of the newer "hot spots" generators of freight movement to coordinate and plan for efficient and effective surrounding roadways.
- Employee Reverse Commute Options Medium Priority
One of the identified impediments to freight movement is the difficulty of getting employees to the manufacturing and warehousing jobs outside of the Baltimore Beltway (I-695). Potential employees, often, do not have cars or public transportation available to get to suburban sites with work hours and shifts common in the freight movement industry. The Task Force recommends providing opportunities for information sharing between employers, transportation providers, and transportation management associations to address this issue.
- Grade Crossing Improvements Study Medium/Low Priority
Much of today's rail safety is focused on accidents at railroad grade crossings. In addition to safety concerns, grade crossings can impede the

flow of traffic, including truck and rail traffic. The Task Force, therefore, is interested in expanding on previous grade crossing studies to identify specific locations that could most benefit from improved signalization or the separation of rail and roadway.

- Air Cargo Capacity Study Medium/Low Priority
Current planning efforts are underway for the construction and relocation of new air cargo facilities for use by the all-cargo airlines. The current runways can handle both the air cargo and passenger flight demands; however, the need for additional runway capacity is projected for after the year 2000. The Task Force supports the airport's plans to study the environmental impacts of a new runway and the associated infrastructure.

Table 12
Baltimore Regional Transportation Plan
Recommended Freight Movement System Capital Projects

IDENTIFIED PROBLEM/ISSUE & PROJECT(S) TO ADDRESS	EVALUATION FACTORS				
	1 ASPECT OF RTS ¹ AFFECTED • Highway • Rail • Port/Maritime • Air • Intermodal • Systemwide	2 MPO's ABILITY • Possible • Possible with other non- MPO actions • Not Possible	3 SEVERITY OF PROBLEM/ISSUE • Severe • Moderate • Minor	4 TIMEFRAME • Short-range: 0-5 years • Mid-range: 6-10 years • Long-range: 11- 20 years	5 BRTP GOALS ADDRESSED
<p>HIGH-CUBE DOUBLE STACKING CAPABILITY</p> <p>Provide competitive high-cube double stack capability to Port of Baltimore and along regional rail lines</p> <p>PROJECT: Increase clearances at Howard Street Terminal in Baltimore City and Virginia Avenue in Washington D.C.</p>	Rail Port/Maritime Intermodal	Not Possible	Severe (High Priority)	Short-range	<ul style="list-style-type: none"> • Encourage investments that enhance freight movement within the region and between regions (3.C.2) • Improve access to business through cooperative public-private efforts (4.A.1) • Plan for efficient access to port, air, rail, and intermodal facilities (4.B.1)
<p>SPECIALIZED-CARGO PORT TERMINAL</p> <p>Maintain the Port's position as a major vehicle handling facility</p> <p>PROJECT: Determine the scope and design for the Masonville Auto Terminal and access routes (proposed by MDOT)</p>	Port Intermodal	Possible	Moderate (Medium Priority)	Mid-/Short-range	<ul style="list-style-type: none"> • Encourage investments that enhance freight movement within the region and between regions (3.C.2) • Plan for efficient access to port, air, rail, and intermodal facilities (4.B.1)

¹ Regional Transportation System (RTS)

Table 12 *continued*
Baltimore Regional Transportation Plan
Recommended Freight Movement System Capital Projects *continued*

IDENTIFIED PROBLEM/ISSUE & PROJECT(S) TO ADDRESS	EVALUATION FACTORS				
	1 ASPECT OF RTS AFFECTED • Highway • Rail • Port/Maritime • Air • Intermodal • Systemwide	2 MPO's ABILITY • Possible • Possible with other non-MPO actions • Not Possible	3 SEVERITY OF PROBLEM/ISSUE • Severe • Moderate • Minor	4 TIMEFRAME • Short-range: 0-5 years • Mid-range: 6-10 years • Long-range: 11-20 years	5 BRTP GOALS ADDRESSED
<p>ADDITIONAL CONTAINER CARGO STORAGE</p> <p>Provide additional container storage at Seagirt Marine Terminal to meet future demand</p> <p>PROJECT: Use dredge material to develop a 13-acre storage area for containerized cargo (proposed by MDOT)</p>	Port Intermodal	Possible with other non-MPO actions	Moderate/Minor (Medium/Low Priority)	Mid-range	<ul style="list-style-type: none"> • Encourage investments that enhance freight movement within the region and between regions (3.C.2) • Plan for efficient access to port, air, rail, and intermodal facilities (4.B.1)

Table 12 continued
Baltimore Regional Transportation Plan
Recommended Freight Movement System Programmatic Actions

IDENTIFIED PROBLEM/ISSUE & PROJECT(S) TO ADDRESS	EVALUATION FACTORS				
	1 ASPECT OF RTS AFFECTED • Highway • Rail • Port/Maritime • Air • Intermodal • Systemwide	2 MPO's ABILITY • Possible • Possible with other non-MPO actions • Not Possible	3 SEVERITY OF PROBLEM/ISSUE • Severe • Moderate • Minor	4 TIMEFRAME • Short-range: 0-5 years • Mid-range: 6-10 years • Long-range: 11-20 years	5 BRTP GOALS ADDRESSED
<p>TRUCK REST AREAS</p> <p>Need for more regional truck rest areas</p> <p>PROJECT: Fund a bi-regional (Baltimore and Washington) study of rest areas and potential new locations</p>	Highway--Safety	Possible	Severe (High Priority)	Short-range	<ul style="list-style-type: none"> • Foster information-sharing with public and private interests to improve understanding of the regional transportation system (1.C.2) • Continually assess the state of the regional freight movement system (3.C.1) • Implement programs to reduce highway accidents and fatalities (3.D.2)
<p>REGIONAL FREIGHT MOVEMENT SUBAREA STUDIES</p> <p>Understand regional "hot spot" freight movement locations, such as large manufacturing and distribution centers and assess ways to improve system performance</p> <p>PROJECT: Fund study of developing regional generators of freight movement activities to determine possible actions to improve efficiency</p>	Highway Intermodal Systemwide	Possible	Moderate (Medium Priority)	Short-range	<ul style="list-style-type: none"> • Foster information-sharing with public and private interests to improve understanding of the regional transportation system (1.C.2) • Continually assess the state of the regional freight movement system (3.C.1)

Table 12 *continued*
Baltimore Regional Transportation Plan
Recommended Freight Movement System Programmatic Actions *continued*

IDENTIFIED PROBLEM/ISSUE & PROJECT(S) TO ADDRESS	EVALUATION FACTORS				
	1 ASPECT OF RTS AFFECTED • Highway • Rail • Port/Maritime • Air • Intermodal • Systemwide	2 MPO's ABILITY • Possible • Possible with other non-MPO actions • Not Possible	3 SEVERITY OF PROBLEM/ISSUE • Severe • Moderate • Minor	4 TIMEFRAME • Short-range: 0-5 years • Mid-range: 6-10 years • Long-range: 11-20 years	5 BRTP GOALS ADDRESSED
<p>EMPLOYEE REVERSE COMMUTE OPTIONS</p> <p>Need additional transportation options to get employees to manufacturing/distribution jobs outside of Baltimore City</p> <p>PROJECT: Coordinate information-sharing among manufacturing/distribution companies, transportation providers, and transportation management associations</p>	Highway Commuter Rail Intermodal- Passenger	Possible	Moderate (Medium Priority)	Short-range	<ul style="list-style-type: none"> • Foster information-sharing with public and private interests to improve understanding of the regional transportation system (1.C.2) • Create an accessible integrated regional transportation system for all users (3.A) • Enhance mobility options for the young, elderly, disabled, and economically-disadvantaged (3.B) • Maintain and enhance access to freight movement facilities and market areas (3.C)
<p>GRADE CROSSING IMPROVEMENTS</p> <p>Need to eliminate freight movement impediments at and around railroad grade crossings</p> <p>PROJECT: Fund study to determine the impacts of grade crossings on efficient/effective freight movement</p>	Highway—Safety Rail—Safety Intermodal	Possible with other non-MPO actions	Moderate/Minor (Medium/Low Priority)	Short-range	<ul style="list-style-type: none"> • Foster information-sharing with public and private interests to improve understanding of the regional transportation system (1.C.2) • Continually assess the state of the regional freight movement system (3.C.1) • Implement programs to reduce highway accidents and fatalities (3.D.2)

Table 12 *continued*
Baltimore Regional Transportation Plan
Recommended Freight Movement System Programmatic Actions *continued*

IDENTIFIED PROBLEM/ISSUE & PROJECT(S) TO ADDRESS	EVALUATION FACTORS				
	1 ASPECT OF RTS AFFECTED • Highway • Rail • Port/Maritime • Air • Intermodal • Systemwide	2 MPO's ABILITY • Possible • Possible with other non-MPO actions • Not Possible	3 SEVERITY OF PROBLEM/ISSUE • Severe • Moderate • Minor	4 TIMEFRAME • Short-range: 0-5 years • Mid-range: 6-10 years • Long-range: 11-20 years	5 BRTTP GOALS ADDRESSED
AIR CARGO CAPACITY Provide additional air cargo service at BWI PROJECT: Fund a study to evaluate the environmental impacts of an air carrier runway and associated infrastructure (proposed by MDOT)	Air	Possible	Moderate/Minor (Medium/Low Priority)	Mid-/Long-range	<ul style="list-style-type: none"> • Encourage investments that enhance freight movement within the region and between regions (3.C.2) • Plan for efficient access to port, air, rail, and intermodal facilities (4.B.1)

Outlook 2020: Freight Mobility Issues and Recommendations

The projects and actions and their estimated costs are listed below.

Recommended Capital Projects	Estimated Costs and Funding Source(s)	Freight Movement Task Force Priority Rating
• High-Cube Double-Stacking Capability	\$40 million Private and possible Public funds	High
• Specialized-Cargo Port Terminal	\$158 million State funds	Medium
• Additional Container Cargo Storage	\$55 million State/MD Transportation Authority funds	Medium/Low

Recommended Programmatic Actions	Estimated Costs and Funding Source(s)	Freight Movement Task Force Priority Rating
• Truck Rest Areas Study	\$50,000	High
• Regional Freight Movement Subarea Studies	\$100,000	Medium
• Employee Reverse Commute Options	Action will be accommodated within programmed planning resources	Medium
• Grade Crossing Improvements Study	\$50,000	Medium/Low
• Air Cargo Capacity Study	Study: \$1.3 million Related construction costs: unknown State and Federal funds	Medium/Low

AGENDA FOR FUTURE ACTION

As we move into the 21st Century, there are more opportunities for manufacturing and distribution companies to compete globally and market their services worldwide. It, therefore, becomes critical for them to have access to innovative, cost-effective freight transportation services in order to remain competitive.

The Freight Movement Task Force plans to continue to be actively involved in the following action items to make the Baltimore region a vital and prosperous player in the global marketplace.

- The Task Force, along with BMC staff, will remain informed on the status of the capital projects identified for consideration in the BRTP and, as appropriate, to work with other agencies and private businesses to help implement these projects.
- The Task Force will direct attention to the programmatic actions and studies that can bring additional freight-related information to the forefront. This new information can lead to other improvements and recommendations for consideration in the year 2000 BRTP revision.
- The Task Force will work to maintain strong relationships with other agencies and organizations, such as the Maryland Distribution Council. Activities such as the co-sponsored Distribution & Logistics Conference help bring the freight movement community together to discuss and share information.

APPENDICIES

Appendix 1

Major Freight Movement Distribution & Activity Centers in the Baltimore Region

Major Manufacturing Firms in the Baltimore Region

In addition to the regionally significant intermodal facilities, the following manufacturing, distribution, and activity centers and firms have been identified as generators of freight movement activities in the region and are shown in Tables A1 and A2. These locations and firms generate truck, rail, port or air traffic volumes but do not serve as transfer points for intermodal activity. Future study and analysis will be conducted to assess the freight movement characteristics and needs associated with these and other facilities.

Table A1

**Major Freight Movement Distribution and Activity Centers
in the Baltimore Region (ranked by total acreage)**

Facility Name	Location	Freight Activity	Companies
White Marsh Business and Industrial Community	I-95 at White Marsh Boulevard Baltimore County	Trucking for commercial and industrial Services	SCM Chemical, Ikea, Warner Brothers
Gateway Commerce Center	Snowden River Parkway Howard County	Trucking for manufacturing warehouse, distribution	GATX Logistics, U.S. Coast Guard
Hunt Valley Business Community	I-83 at Shawan Road Baltimore County	Trucking for manufacturing warehouse, distribution	McCormick, Becton Dickinson, PHH Corp, FILA Distribution Center, UPS
Maryland Wholesale Food Center	Rt. 175 and Rt. 1 Howard County	Trucking for wholesale produce and seafood, Giant Food Distribution Center	Maryland Wholesale Produce and Seafood, Giant Food, Inc., SYSCO Foods.
Riverside Business Park	I-95 and Rt. 543 Harford County	Trucking for distribution and manufacturing	GE, Mercedes Benz of North America, Independent Can, Michelin Tires, McCormick
Rivers Corporate Park	I-95 and Rt. 32 Howard County	Trucking for distribution and manufacturing	data not available
Corridor Industrial Park	Rt.1 and Rt. 32 Howard County	Trucking for distribution and manufacturing	<i>Data currently unavailable</i>
Rutherford Business Center	Rutherford Rd. and I-695 Baltimore County	Trucking for distribution and manufacturing	Barre National, Giant Food
Parkway Center	Rt. 295 and Rt. 176 Anne Arundel County	Trucking for distribution and manufacturing	Westinghouse Electric Corp., S.W. Bell
Loveton Center	Loveton Circle and York Road Baltimore County	Trucking for manufacturing, warehousing	McCormick & Co., Becton Dickinson
Hickory Ridge Industrial Park	Rt. 175 and Rt. 40 Harford County	Trucking for distribution and manufacturing	Frito-Lay
Cromwell Business Park	Rt. 97 and Dorsey Road Anne Arundel County	Trucking for distribution and manufacturing	J.J. Haines

Sources: Baltimore Business Journal Book of Lists, 1995 and BMC analysis

Table A2

**Major Manufacturing Firms in the Baltimore Region
(ranked by number of area employees)**

Company Name	Baltimore Region Employees	Major Industries	Locations in Baltimore Region
Northrop Grumman Corp.	20,000 - 30,000 (estimate)	radar systems, aircraft, electronic equipment	Annapolis, Hunt Valley, Linthicum, Sykesville
Baltimore Sun	2,500 - 4,999	newspaper publishing & printing	Baltimore, Port Covington
Bethlehem Steel Corp.	5,000 - 9,999	blast furnaces, steel mills, cargo vessels	Sparrows Point
General Motors Corp.	2,500 - 4,999	motor vehicle parts & accessories	Baltimore
AAI Corp.	1,000 - 2,499	electronic equipment, ammunition	Hunt Valley
Arinc Inc.	1,000 - 2,499	transportation electronic devices, engineering services	Annapolis
Allied Signal Communications Systems	1,000 - 2,499	radio & tv communications equipment	Towson
Becton Dickinson Microbiology Systems	1,000 - 2,499	chemicals, medical instruments	Hunt Valley
Giant Food Inc.	1,000 - 2,499	food distribution & manufacturing	Jessup
Lockheed Martin Aerostructures	1,000 - 2,499	aircraft assemblies	Middle River
McCormick & Co.	1,000 - 2,499	seasonings, spices sauces, extracts	Belcamp, Hunt Valley
Procter & Gamble Cosmetic Products	1,000 - 2,499	cosmetics	Hunt Valley
Random House	1,000 - 2,499	book publishing	Westminster
Sweetheart Cup Co.	1,000 - 2,499	paper & plastics products	Owings Mills
Alpharma Uspsd Inc.	500 - 999	pharmaceutical products	Baltimore, Columbia, Woodlawn
Black & Decker Corp.	500 - 999	industrial/commercial tools & machinery, work benches, household electronics	Hampstead, Towson
Carr Lowrey Glass Co.	500 - 999	glass containers	Baltimore
Cloverland Farms	500 - 999	milk processing	Baltimore

Table A2 *continued*

**Major Manufacturing Firms in the Baltimore Region
(ranked by number of area employees)**

Company Name	Baltimore Region Employees	Major Industries	Locations in Baltimore Region
Domino Sugar Corp.	500 - 999	cane sugar refining	Baltimore
Dryden Oil Co. Inc.	500 - 999	petroleum refining, durable & non-durable wholesale goods, truck bodies	Baltimore
Genstar Stone Products Co.	500 - 999	construction & building materials	New Windsor, Towson
Grace Davison	500 - 999	chemical products	Baltimore
International Paper Decorative Products	500 - 999	plastics & marble products	Odenton
Lever Brothers	500 - 999	soap products	Baltimore
London Fog Industries	500 - 999	clothing	Sykesville
Poly-Seal Corp.	500 - 999	packaging closures	Dundalk
PTP Industries Inc.	500 - 999	paper products, packaging services	Baltimore
Schmidt Baking Co.	500 - 999	bread	Baltimore
SCM Chemicals	500 - 999	chemical products	Baltimore
Ward Machinery Co.	500 - 999	paper industries machinery	Hunt Valley

Sources: Dun & Bradstreet, June 1997; Baltimore Business Journal, 1995; and BMC analysis

Appendix 2

Regionally-Significant Intermodal Facilities

Atlantic Terminal

Address: 2901 Childs Street, Baltimore, MD 21226
410/355-9430

Contact: Hobelmann Port Services
Richard Geisendaffer, Terminal Director
William Haspel, Port Manager

Size: 55 acres

Cargoes: autos, trucks, RO/RO

Berth: 850-ft berth made up of concrete pier: 500-ft long X 114 ft wide with a 350-ft catwalk and mooring dolphins

Outside Storage: 53 acres

Inside Storage: 50,000 sq ft warehouse with rail access

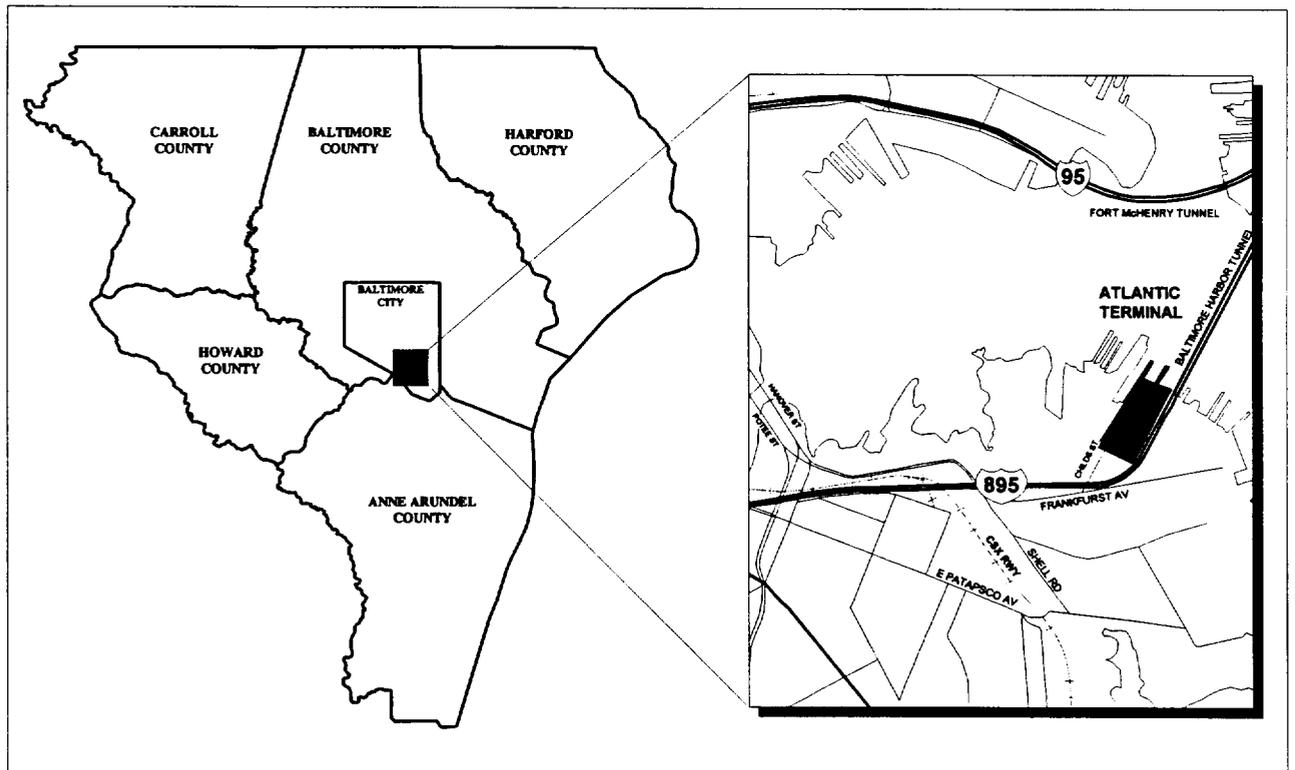
Equipment/Facilities: auto servicing facility with an accessory shop and vehicle wash

Railroad Connections: one rail spur served by CSX

Truck Connections: controlled gate entrance

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Patapsco Ave., Frankfurst Ave., Hanover St., Potee St.



Bayview Intermodal Container Facility

Address: 4800 East Lombard Street, Baltimore, MD 21224
410/558-1529

Contact: Conrail
Alan Puckett, Manager of Intermodal Operations

Size: 30 acres

Cargoes: freight all kinds (FAK)

Outside Storage: 20 acres

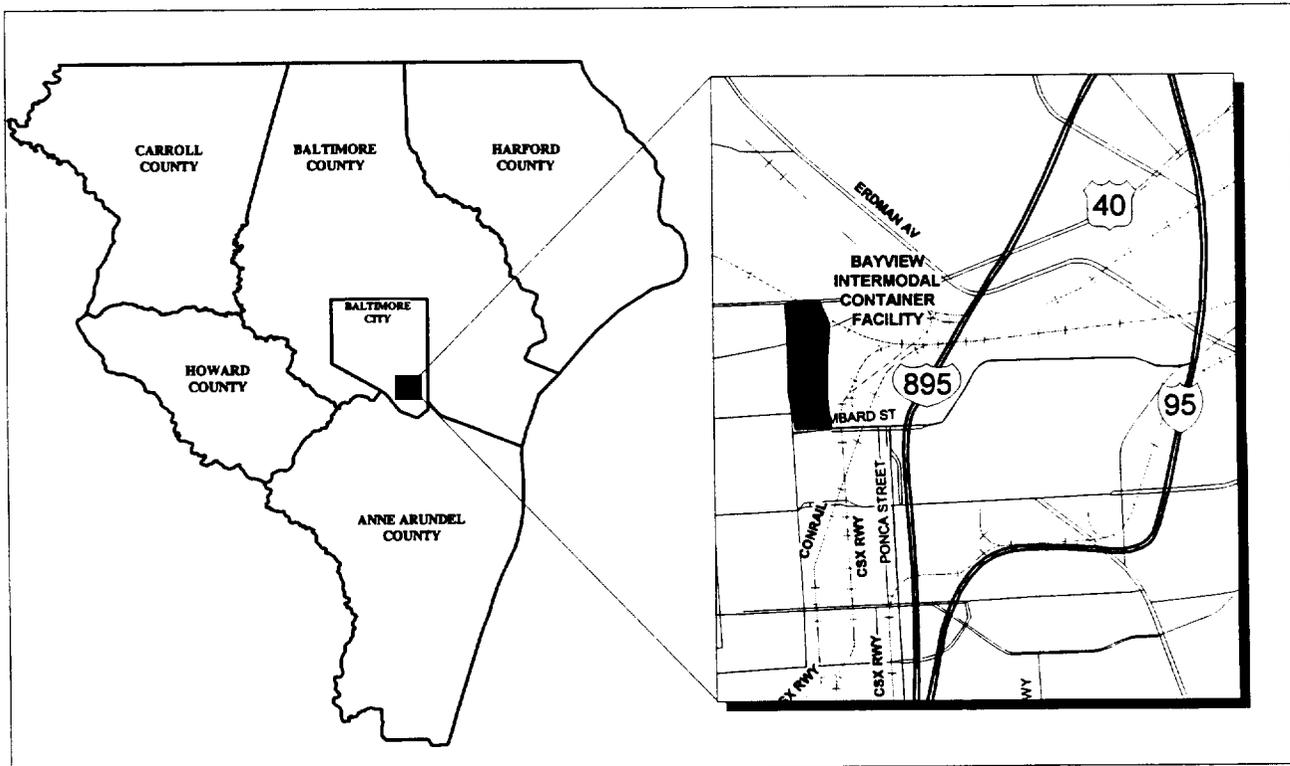
Equipment/Facilities: 5 loading tracks with 60-car capacity with fork lift, boom truck, yard Hostlers tractors

Railroad Connections: one track served by Conrail

Truck Connections: 2 inbound & outbound inspection lanes, 1 express lane

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Pulaski Hwy, Ponca St.



BWI Airport

Address: Office of Cargo Development, P.O. Box 8766,
BWI Airport, MD 21240
410/859-7030

Contact: Maryland Aviation Administration
Ernest Stevens, Manager Cargo Development

Size: 65 acres

Cargoes: freight all kinds (FAK)

Inside Storage: 300,000 sq ft warehouse space in 8 buildings, 24,000 sq ft cold storage

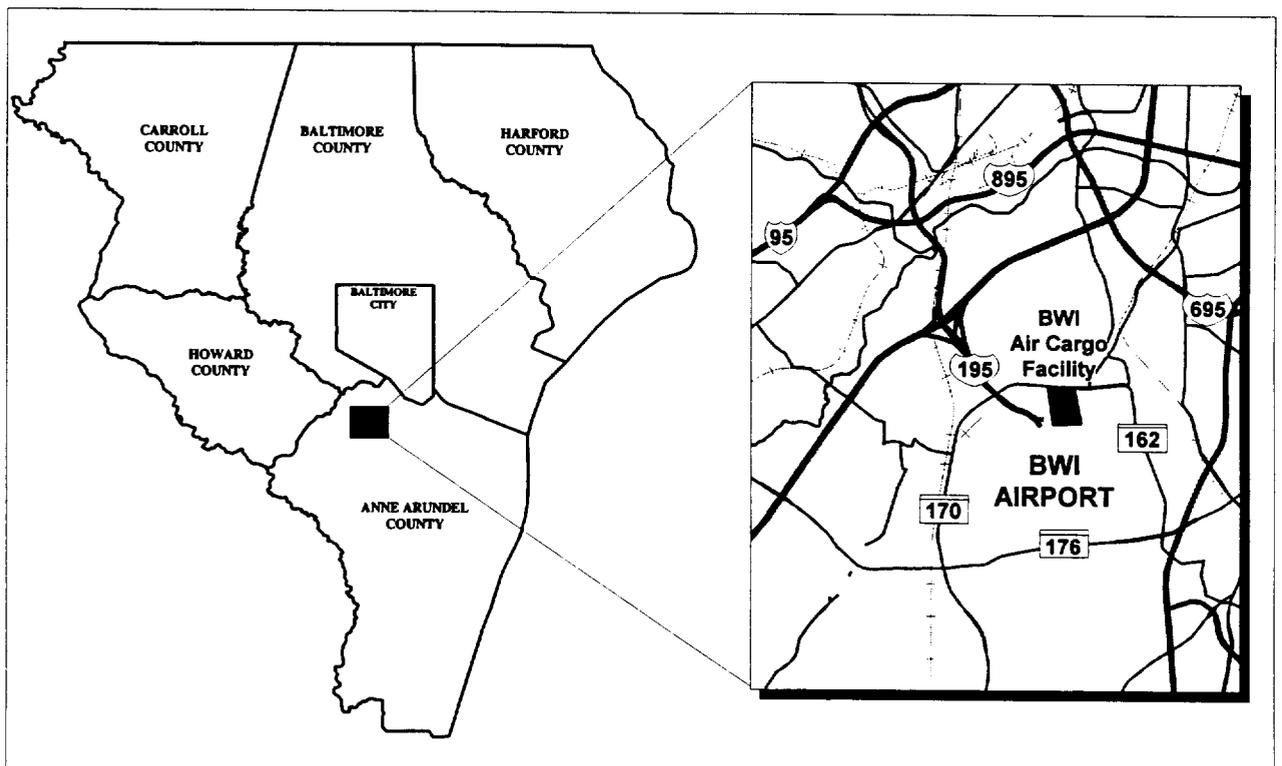
Equipment/Facilities: direct nose-in access for 8 freighter positions, deck loader available, foreign trade zone facility

Railroad Connections: N/A

Truck Connections:

National Highway System Connections: I-95, I-195, I-695

Other Roadway Connections: MD 162, MD 176, MD 170



Chesapeake Terminal

Address: 2000 Chesapeake Avenue, Baltimore, MD 21226
410/355-9430

Contact: Richard Geisendaffer, Terminal Director
William Haspel, Port Manager

Size: 53 acres

Cargoes: autos, trucks, RO/RO

Berth: 615-ft berth and pier, berth and mooring dolphins accommodate vessels up to 850 ft

Outside Storage: 51 acres

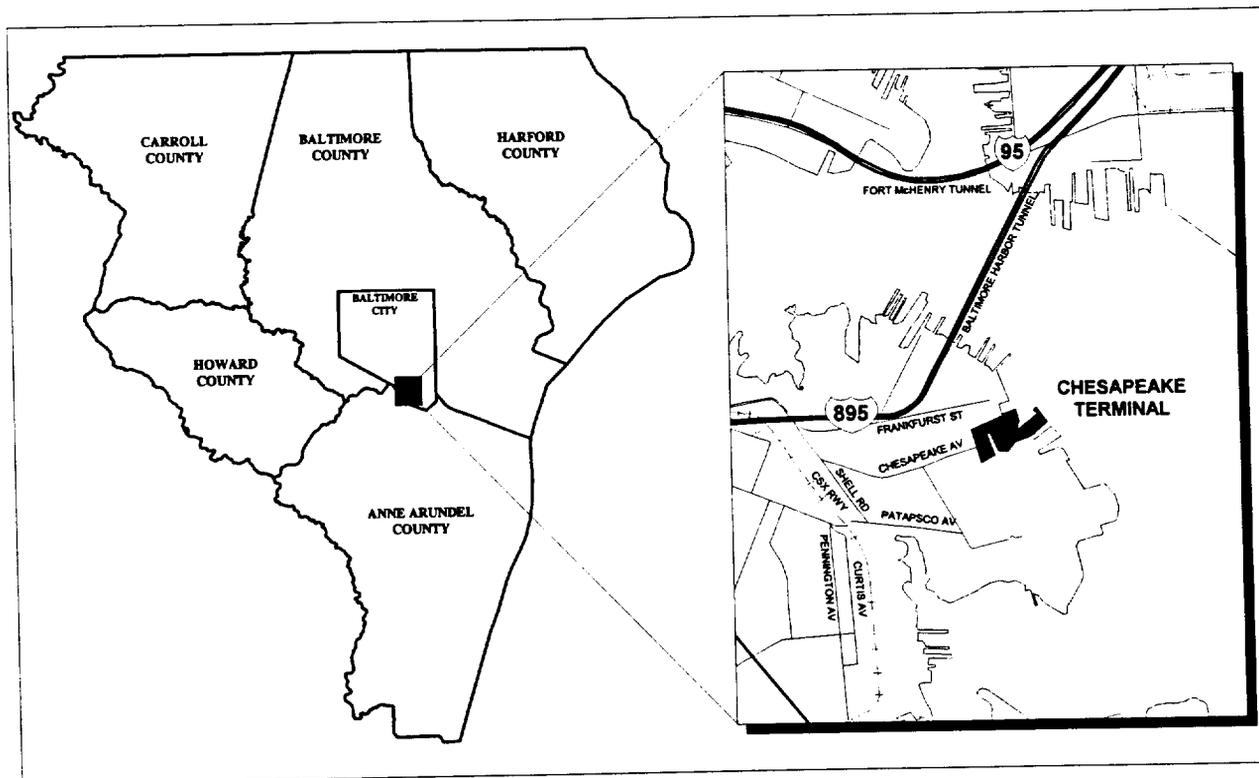
Equipment/Facilities: auto servicing facility, including accessory & homologation shop, combination vehicle wash & dewax facility, robotic coating operation, and body shop

Railroad Connections: four rail spurs served by CSX

Truck Connections: controlled truck entrance

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Pennington Ave., Frankfurst Ave., Shell Rd.



Clinton Street Marine Terminal

Address: 2000 S. Clinton Street, Baltimore, MD 21224
410/631-1200

Contact: Maryland Port Administration
Sam Azzarello, General Manager Sales
Richard Costello, Asst. Manager Terminal Operations

Size: 245,000 sq ft

Cargoes: break bulk

Berth: 1,100-ft finger pier with 32-ft draft

Outside Storage:

Inside Storage: warehouse

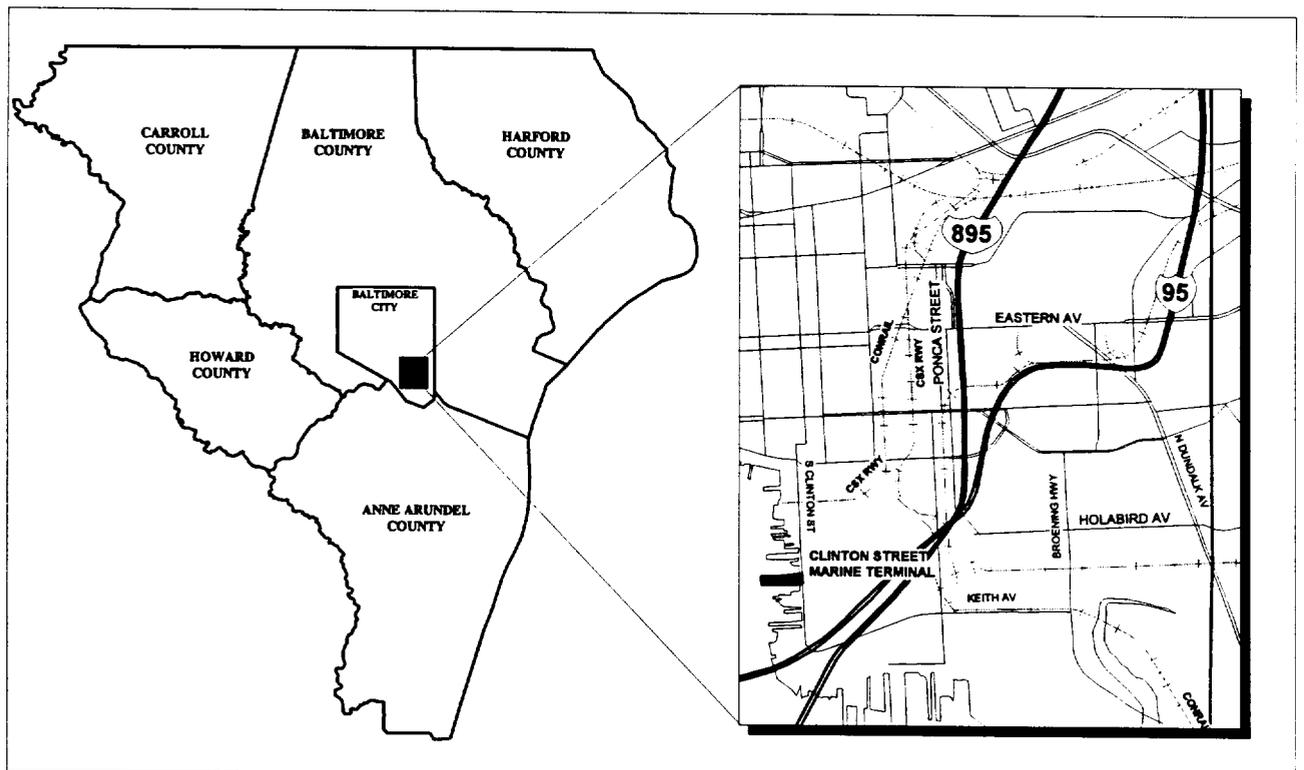
Equipment/Facilities:

Railroad Connections: Conrail

Truck Connections: truck service ramp provides access to second deck of warehouse

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Keith Ave., Broening Hwy., Ponca St.,
Dundalk Ave., Holabird Ave., Eastern Ave.



Consolidation Coal Marine Terminal

Address: 3800 Newgate Avenue, Baltimore, MD 21224
410/631-7000

Contact: Consolidation Coal Marine Sales Company
George McElroy, General Manager

Size: 100 acres

Cargoes: coal

Berth: 1150-ft berth and an auxiliary berth

Outside Storage: 40 acres

Inside Storage:

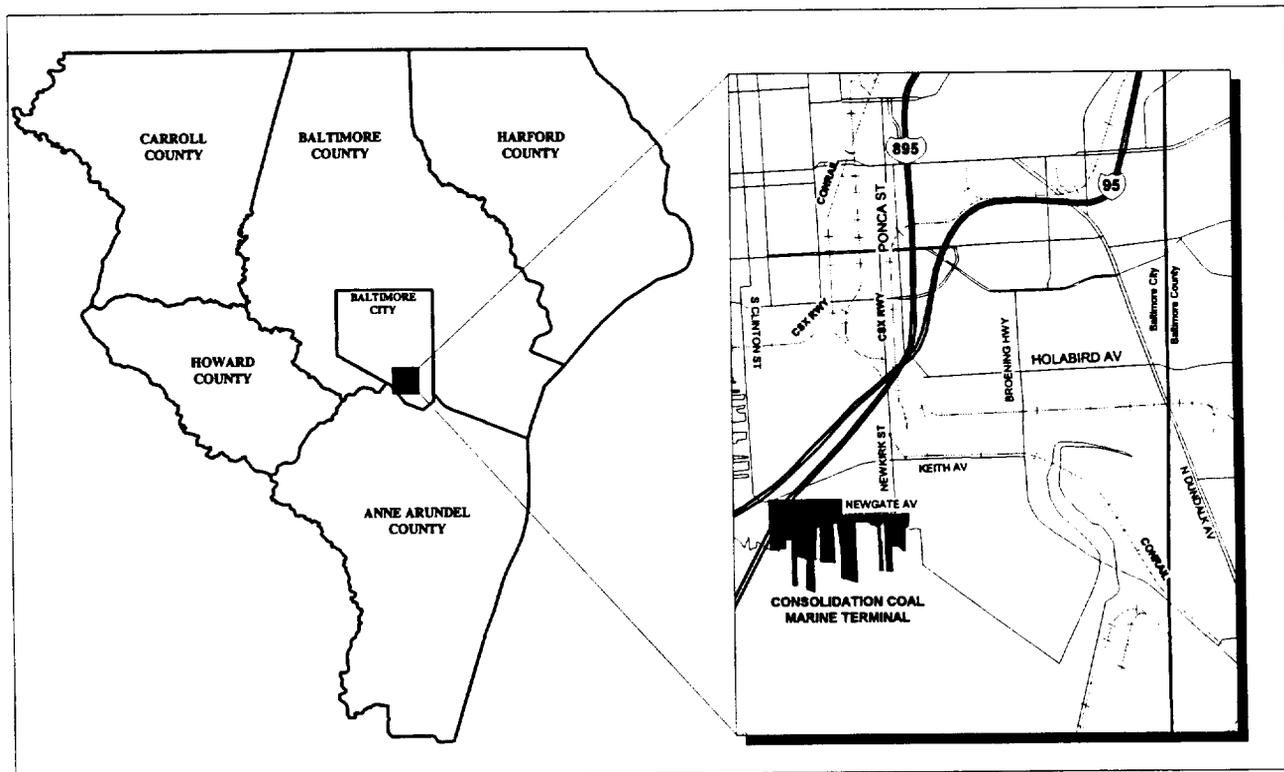
Equipment/Facilities: IHI shiploader, 2 IHI bucket-wheel stacker/reclaimers, Heyl Patterson tandem rotary railcar dumper

Railroad Connections: Conrail & CSX

Truck Connections:

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Clinton St., Keith Ave., Ponca St., Dundalk Ave., Holabird Ave., Newkirk St.



CSX Coal & Ore Piers/Curtis Bay Co. Bayside Coal Pier

Address: 1501 E. Patapsco Avenue, Baltimore, MD 21226
410/237-1857;
1919 Benhill Ave., Baltimore, MD 21226
410/355-3193

Contact: CSX
Guenter Kallwiet, Manager
Murray Valentine, General Manager

Size: 70 acres; 42 acres

Cargoes: coal, ore

Berth: 900 ft. X 117 ft coal pier with 42-ft draft, 650 ft X 150 ft ore pier with 42-ft draft; 909-ft coal pier with 50-ft draft

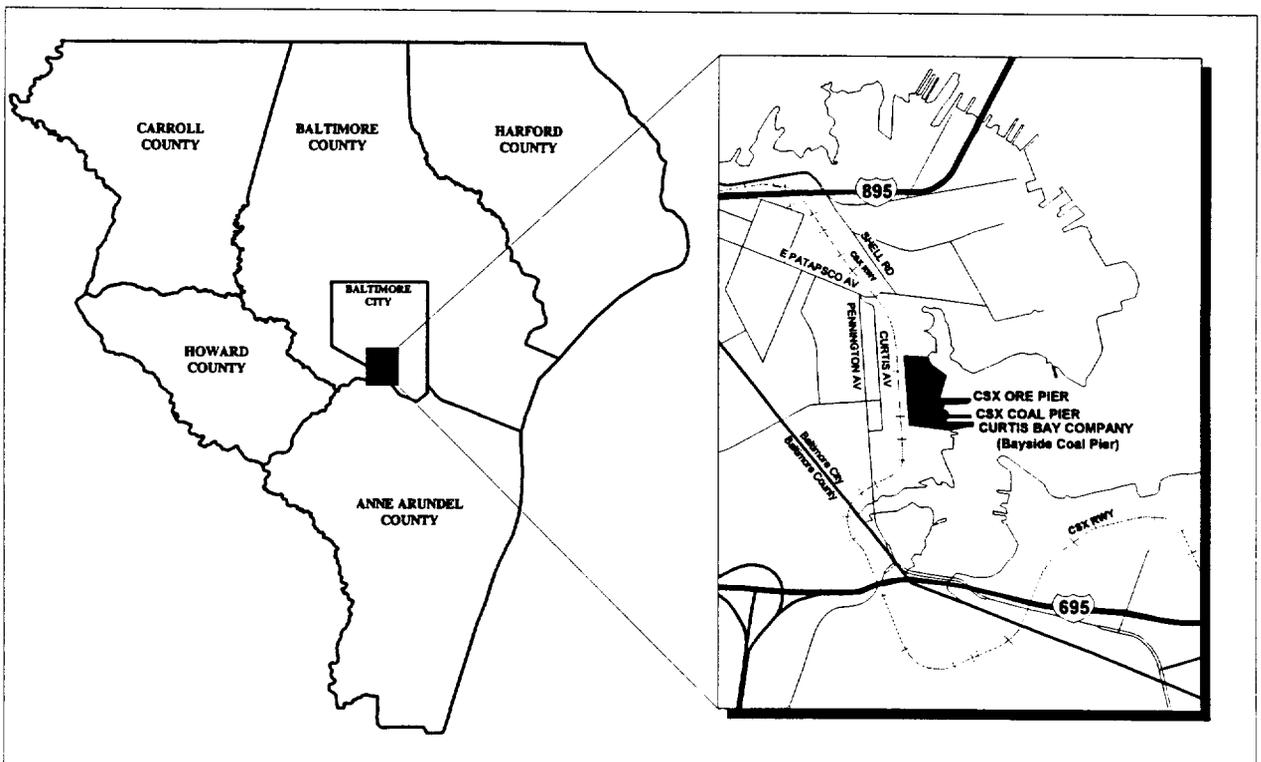
Storage: none; 350,000 tons

Equipment/Facilities: traveling ship & barge coal loaders, thawing sheds, 57 track yard with 3,100 rail capacity, mechanical sampler, 2 Dravo clamshell ore unloaders traveling covered hopper loader, screening services; Rotaside single car dumper, tunnel reclaim system, 84 inch belt conveyor, track-mounted traveling shiploader

Railroad Connections: CSX

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Curtis Ave., Pennington Ave., Shell Rd.



Dundalk Marine Terminal

Address: 2700 Broening Highway, Baltimore, MD 21224
410/631-1200

Contact: Maryland Port Administration
Eugene Bailey, Manager of Terminal Operations

Size: 570 acres

Cargoes: containers, break & liquid bulk, steel, paper, RO/RO, project cargo

Berth: 6 general cargo & 7 container berths; 34-ft draft at 10 berths & 38-ft draft at 3 berths

Outside Storage: 198 acres for containers, 20 acres for break bulk, 152 acres for automobiles,

Inside Storage: 9 covered shed totaling 631,450 sq ft

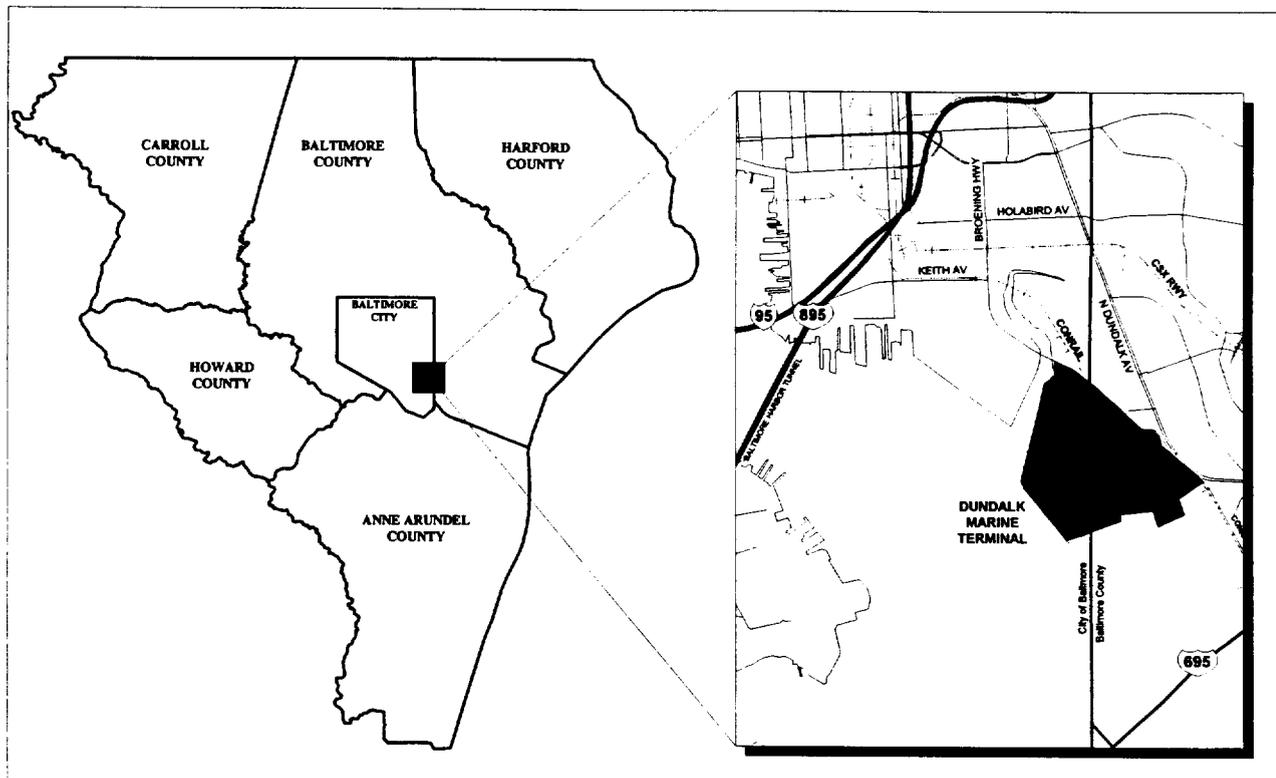
Equipment/Facilities: 9 40-long ton container cranes, 2 60-net tone tower gantry crane, 2-sided 160-ft long RO/RO platform between berths, RO/RO ramp

Railroad Connections: Conrail (direct service for break bulk & automobiles), Colgate Creek Bridge connects Dundalk to CSX at ICTF

Truck Connections: 14-lane, computerized gate complexes

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Keith Ave., Holabird Ave., Dundalk Ave.



Fairfield Auto Terminal

Address: Foot of Childs Street, Baltimore, MD 21226
410/631-1200

Contact: Maryland Port Administration
Eugene Bailey, Manager of Terminal Operations

Size: 50 acres

Cargoes: RO/RO

Berth: 832-ft finger pier with a 49-ft westside draft

Outside Storage: 36 acres on-site, 42 acres at undeveloped Masonville terminal

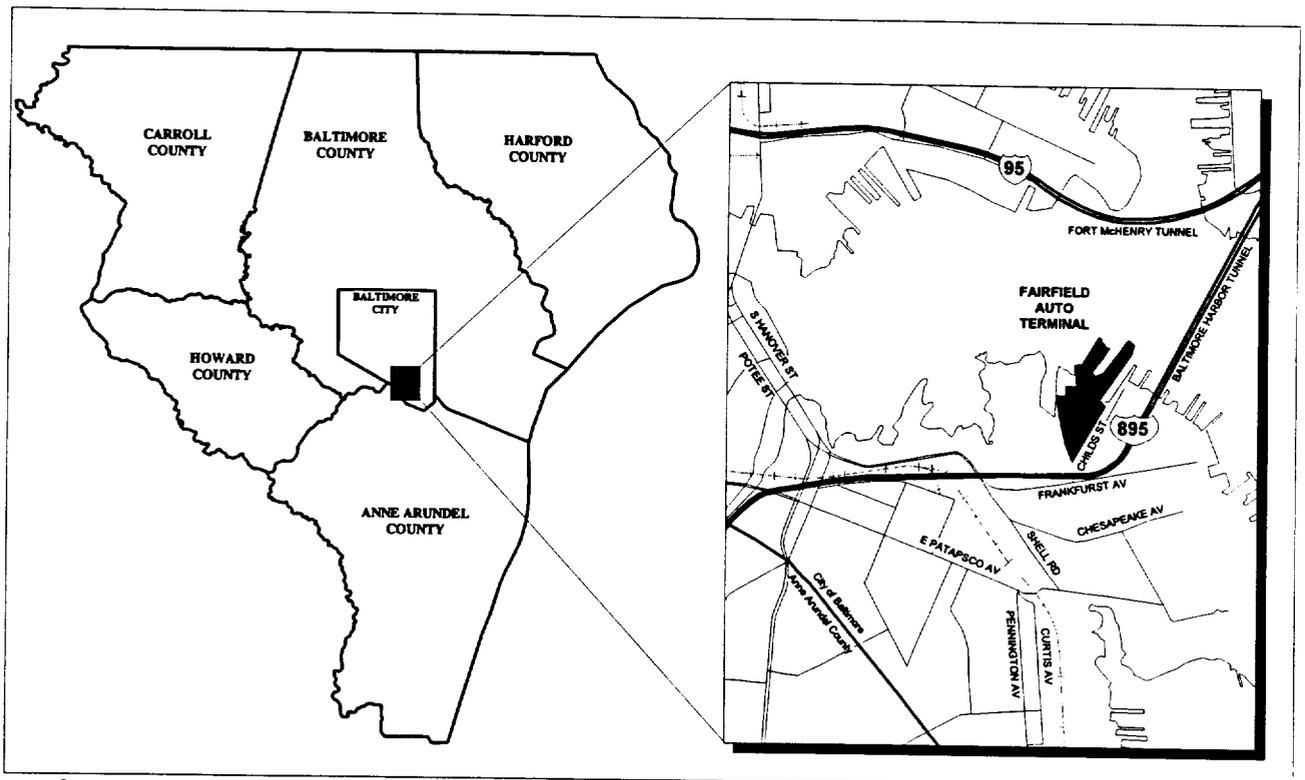
Equipment/Facilities: vehicle wash, body shop, accessory shop

Railroad Connections: CSX

Truck Connections:

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Frankfurst Ave., Patapsco Ave. Potee St., Hanover St.



Flexi-Flo Rail Transfer Terminal

Address: 340 W. North Avenue, Baltimore, MD 21217
410/558-1576

Contact: Conrail
Steven Swain, Terminal Manager

Size:

Cargoes: dry & liquid bulk, oils, corrosive & hazardous materials

Outside Storage:

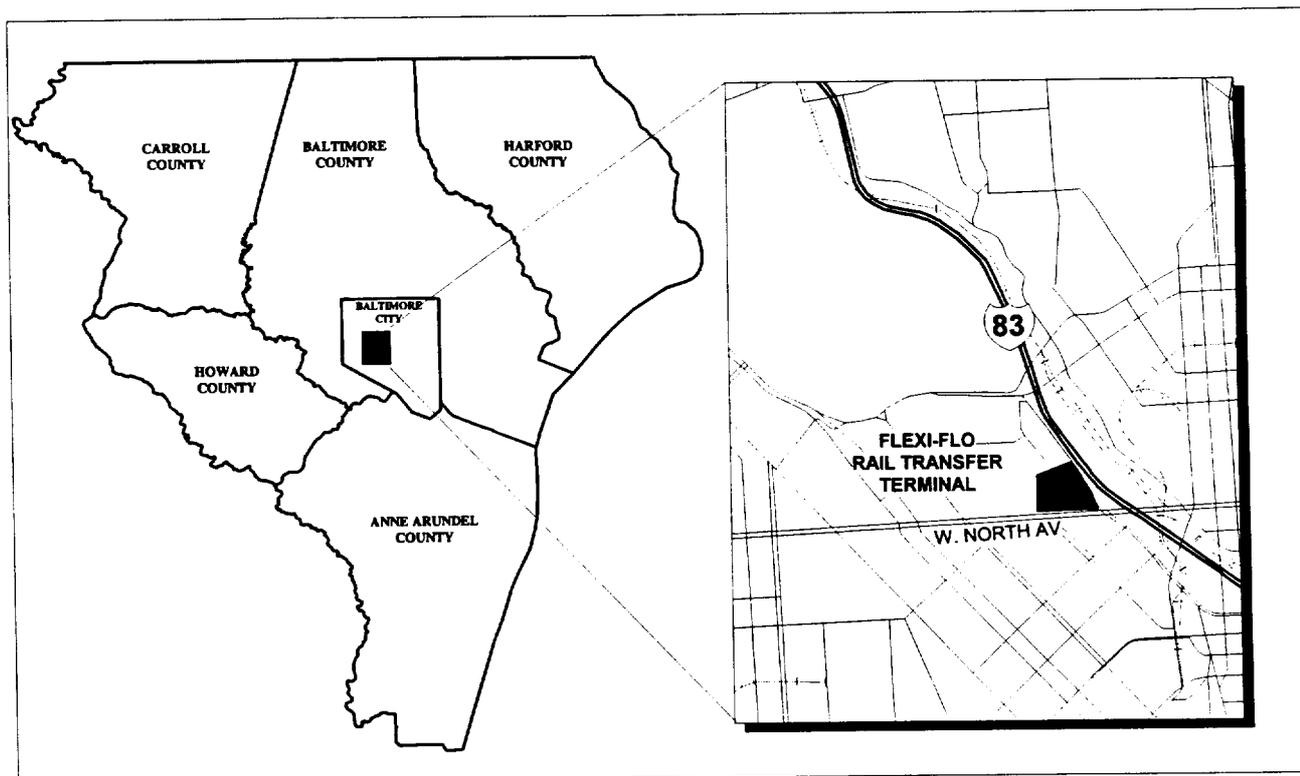
Equipment/Facilities: conveyors, electric pumps, boiler to heat products, pneumatic vacuum devices, thermometer, portable ramps, fork lift

Railroad Connections: Conrail

Truck Connections: truck scale

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections:



Hawkins Point Terminal

Address: 4000 Hawkins Point Road, Baltimore, MD 21226
410/354-1113

Contact: East Alco Aluminum Co.
Russell Creel, Pier Manager

Size: 111 total acres, 20 acres used by East Alco

Cargoes: alumina, liquid fertilizer, dry bulk, hazardous waste site under control of MD Environmental Services

Berth: 720 ft X 90 ft finger pier with northwest 36-ft draft & southeast 30-ft draft

Storage: storage tanks, bins, silos on-site

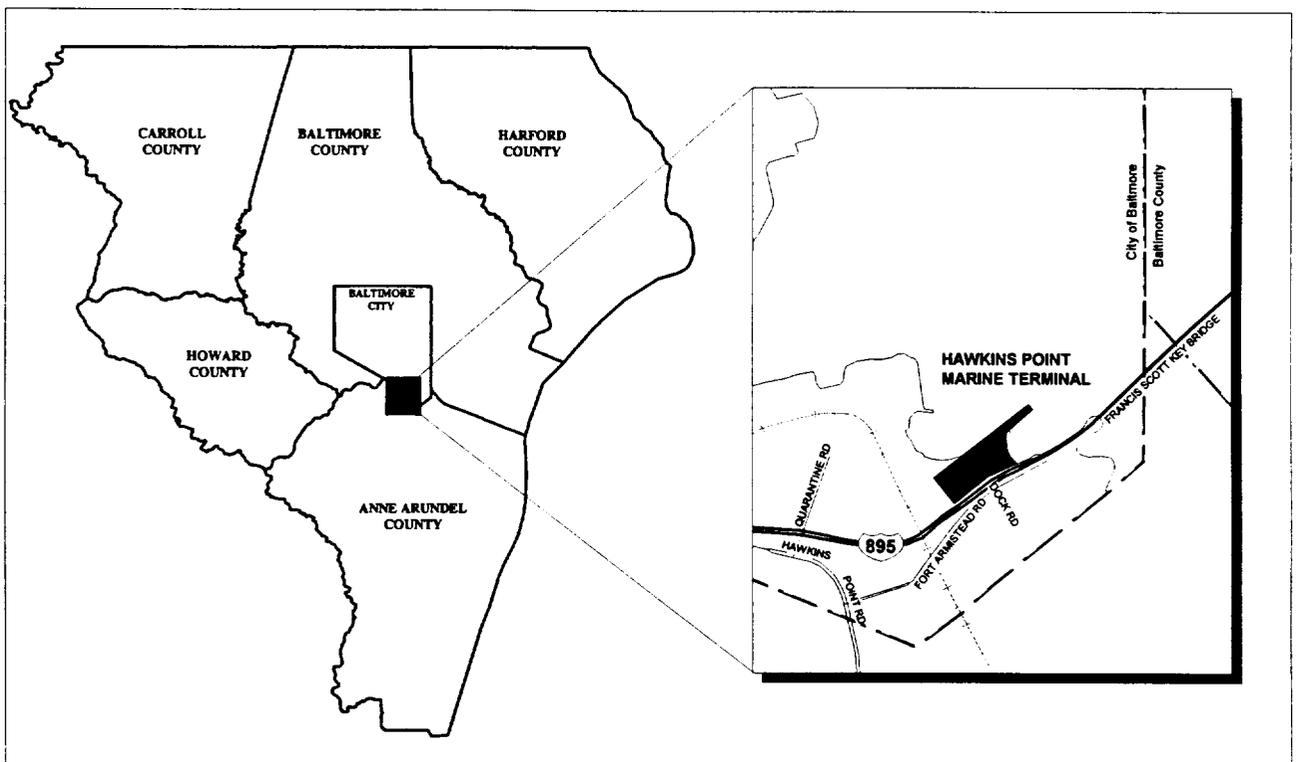
Equipment/Facilities: 30-ton traveling, gantry crane equipped with clamshell bucket, 56-inch electric belt conveyor extending to storage silos, 8-inch pipe to transfer liquid fertilizer to storage tanks, 10-inch pipe to transfer dry bulk cement to storage bins

Railroad Connections: CSX

Truck Connections:

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Dock Rd., Fort Armistead Rd.



Intermodal Container Transfer Facility

Address: 4801 Keith Avenue, Baltimore, MD 21224
410/237-3964

Contact: CSX
Morris Jones, Manager

Size: 70 acres

Cargoes: containers, trailers

Storage: 2 storage tracks

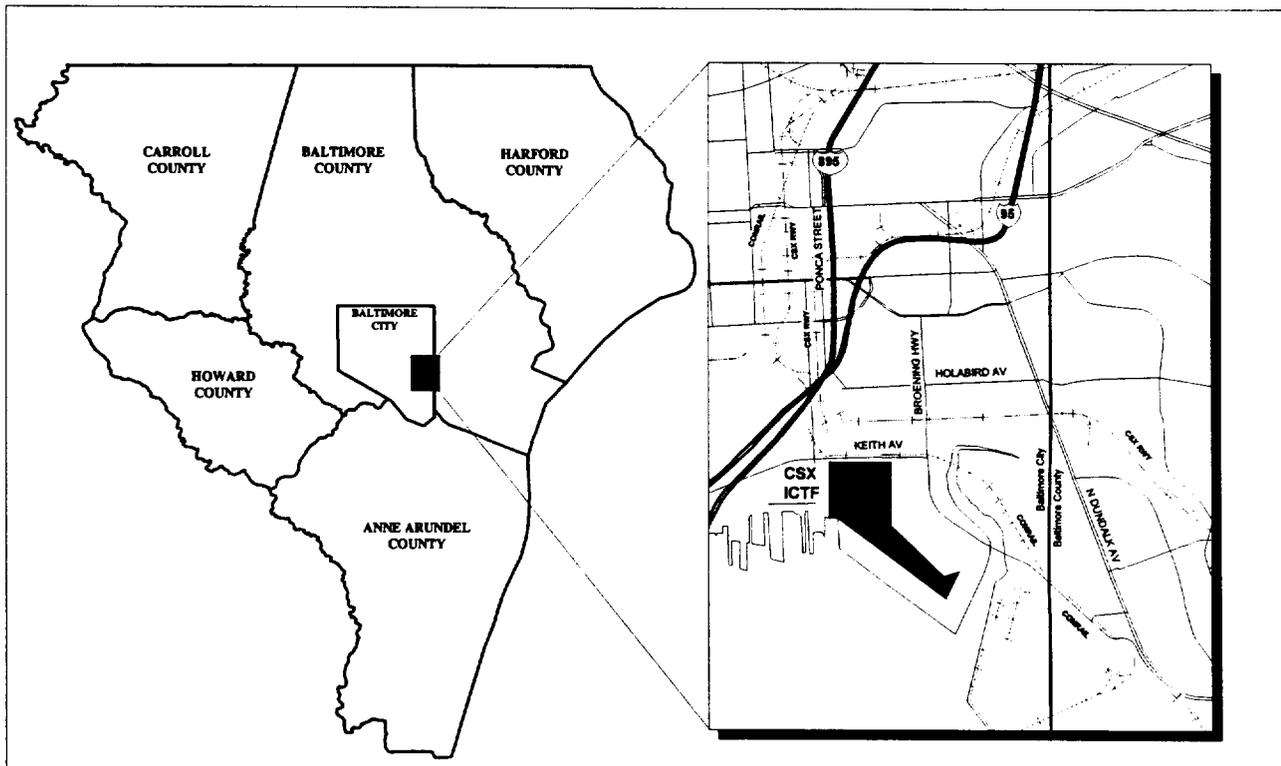
Equipment/Facilities: 4 3,750-ft loading tracks, 2 transtainers (rubber-tired gantry cranes), 2 toploaders

Railroad Connections: CSX

Truck Connections: truck entrance pre-check system

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Broening Hwy., Ponca St., Holabird Ave., Dundalk Ave.



North Locust Point Marine Terminal

Address: 1430 Wallace Street, Baltimore, MD 21230
410/631-1200

Contact: Maryland Port Administration
Eugene Bailey, Manager of Terminal Operations

Size: 89 acres

Cargoes: steel, forest products, RO/RO, latex, grain, containers

Berth: 700-ft, 1,000 ft, 3 1,200-ft finger piers with 34-ft drafts

Outside Storage: 25 acres

Inside Storage: 2 sheds with 308,000 sq ft

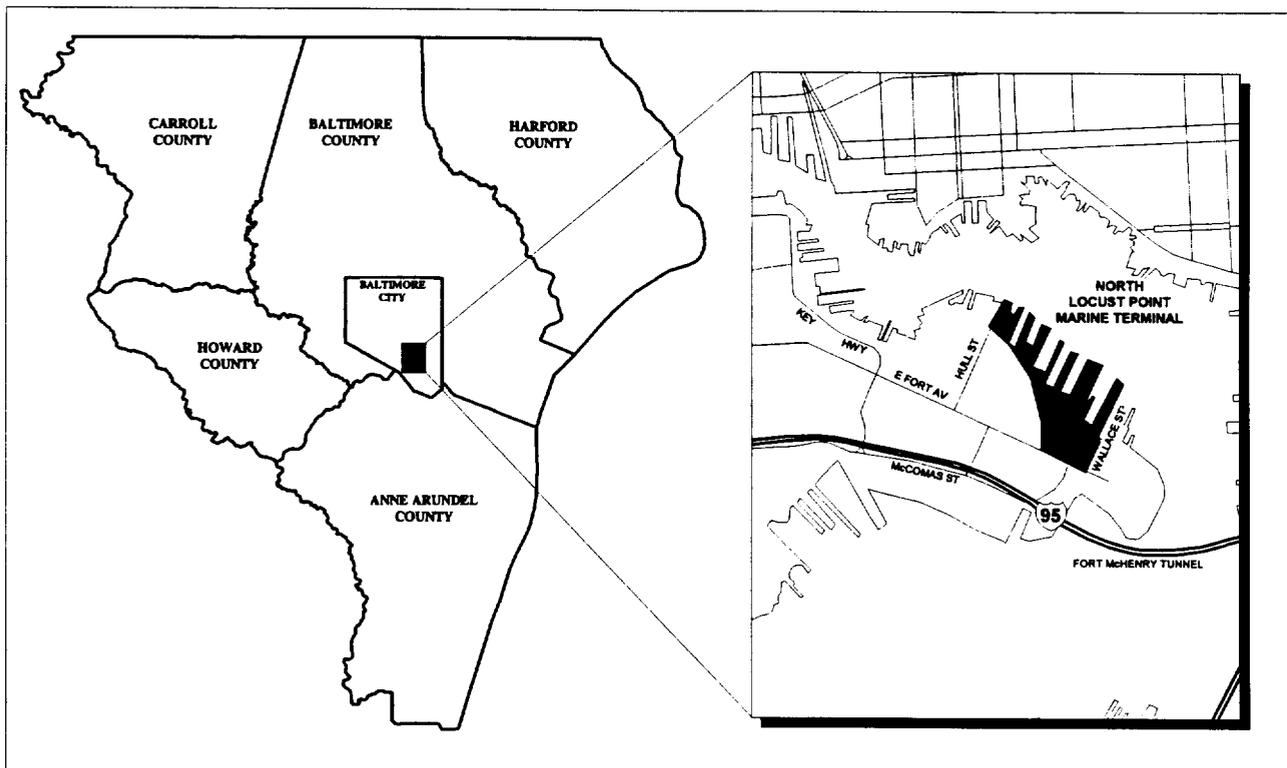
Equipment/Facilities: 45-long ton container crane with steel-handling capability,
2 75-ton gantry mounted whirly diesel electric cranes

Railroad Connections: CSX

Truck Connections:

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: McComas St., Key Hwy., Fort Ave.



Rukert Terminals

Address: 2021 S. Clinton Street, Baltimore, MD 21224
410/276-1013

Contact: Rukert Terminals Corporation
George Nixon, Jr., Executive Vice President

Size: 70 acres

Cargoes: metals, ores, fertilizers, salt, cement, RO/RO, dry & break bulk

Berth: 875-ft bulk cargo pier with 39.5-ft draft, 525-ft break bulk pier with 34-ft draft, 575-ft break bulk pier with 30-ft draft, 900-ft special project pier with 30-ft draft

Outside Storage: 30 paved acres

Inside Storage: 17 warehouses with 500,000 sq ft

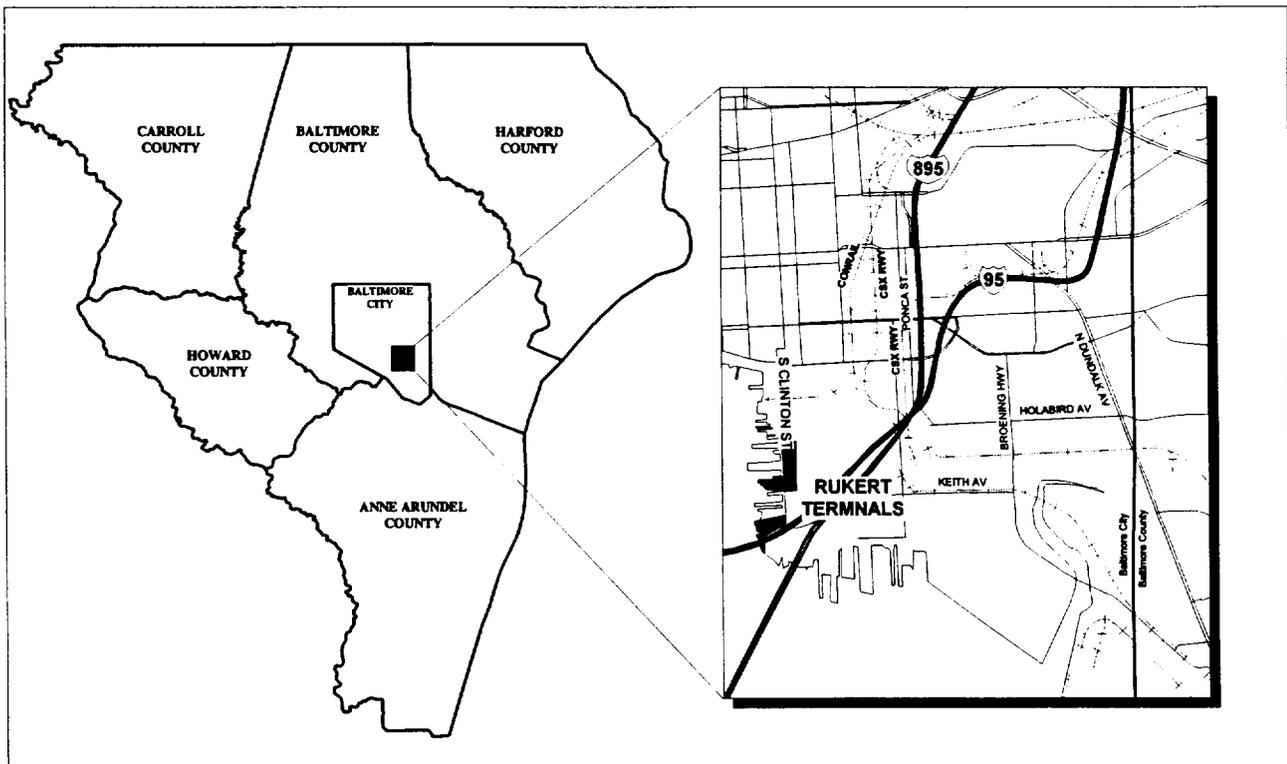
Equipment/Facilities: rapid discharge bulk unloader with 10-cu yd bucket for salt, 2 6-cu yd buckets for metals & ores, 4.5-cu yd tray bucket for alloys & heavy ores, 2 American crawlers

Railroad Connections: Conrail direct service for boxcar, covered hopper & ore jenny movements

Truck Connections: direct ship-to-truck discharge

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Keith Ave., Broening Hwy., Ponca St., Holabird Ave., Dundalk Ave.



Seagirt Marine Terminal

Address: 2600 Broening Highway, Baltimore, MD 21224
410/631-1200

Contact: Maryland Port Administration
Eugene Bailey, Manager of Terminal Operations

Size: 275 acres

Cargoes: containers

Berth: 1,071-ft & 2 1,028-ft berth with 42-ft drafts, barge berth with 32-ft draft

Outside Storage: 104 acres

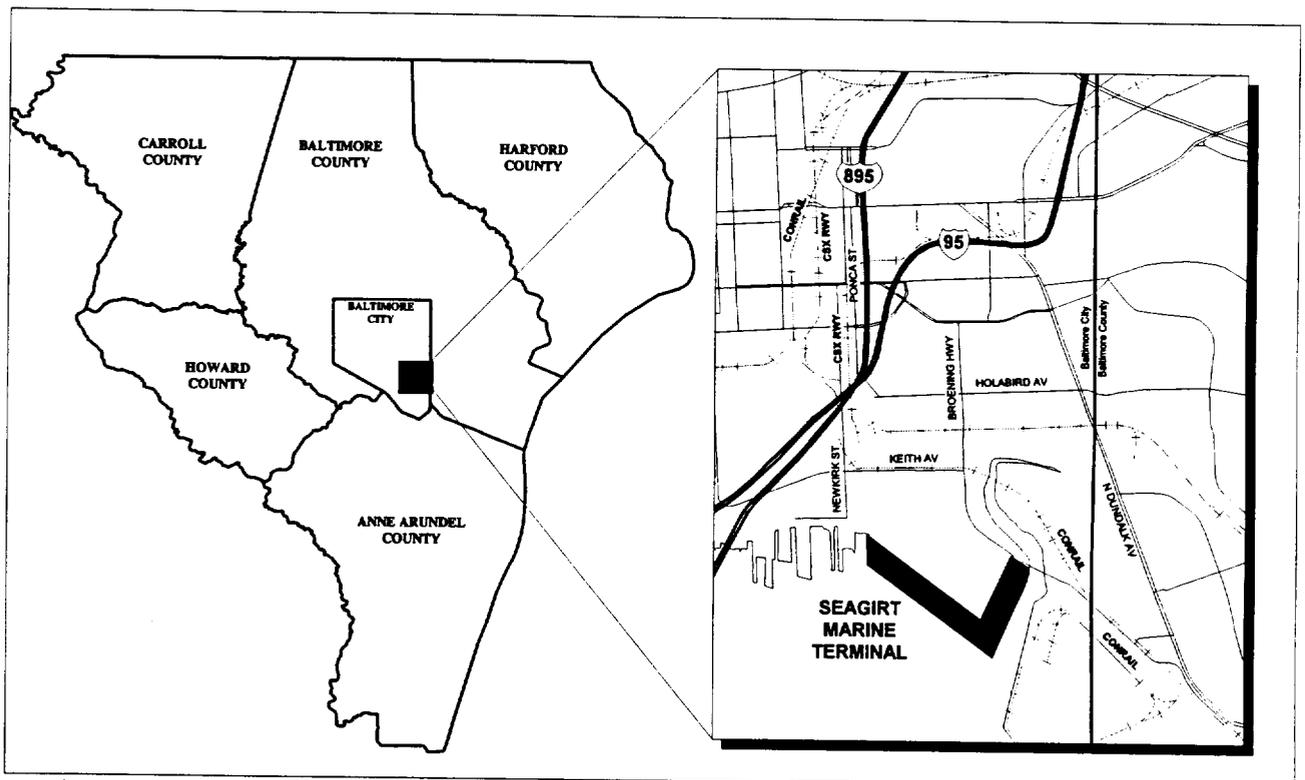
Equipment/Facilities: 4 single-hoist & 3 dual-hoist post-Panamax container cranes, 27.5-long ton container crane at barge berth

Railroad Connections: CSX (adjacent to ICTF)

Truck Connections: computerized truck gate complex

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Keith Ave., Ponca St., Holabird Ave., Dundalk Ave.



South Locust Point Marine Terminal

Address: 2001 E. McComas Street, Baltimore, MD 21230
410/332-8320

Contact: I.T.O. Corporation
Greg Ackerman, Terminal Manager

Size: 79 acres

Cargoes: break bulk, RO/RO, containers

Berth: 4 36-ft general cargo berths with 3 berths for containers

Outside Storage: 53 acres

Inside Storage: shed with 120,000 sq ft

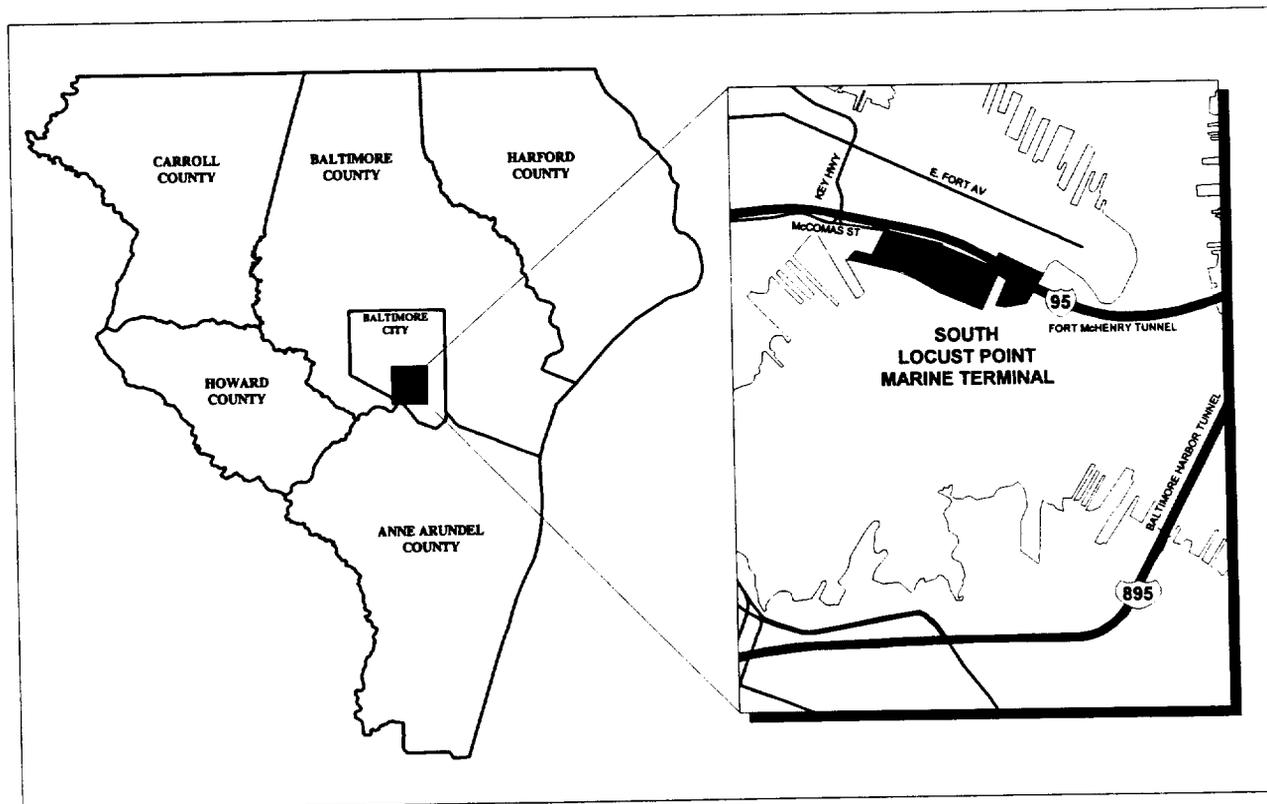
Equipment/Facilities: 3 40-long ton container cranes, 100-short ton revolving gantry crane

Railroad Connections: CSX for break bulk & special cargo service

Truck Connections:

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Key Hwy., Fort Ave.



Support Terminal Services

Address: 1800 Frankfurst Avenue, Baltimore, MD 21226
410/355-6262

Contact: Support Terminal Services
Alan Barclay

Size: 17 acres

Cargoes: liquid bulk

Berth: 900-ft finger pier capable of handling 1 vessel & 2 barges simultaneously, with 33-ft draft

Storage: 50 storage tanks with 826,000 bbls, sizes range from 1,000 to 80,000 barrels; refrigerated storage,

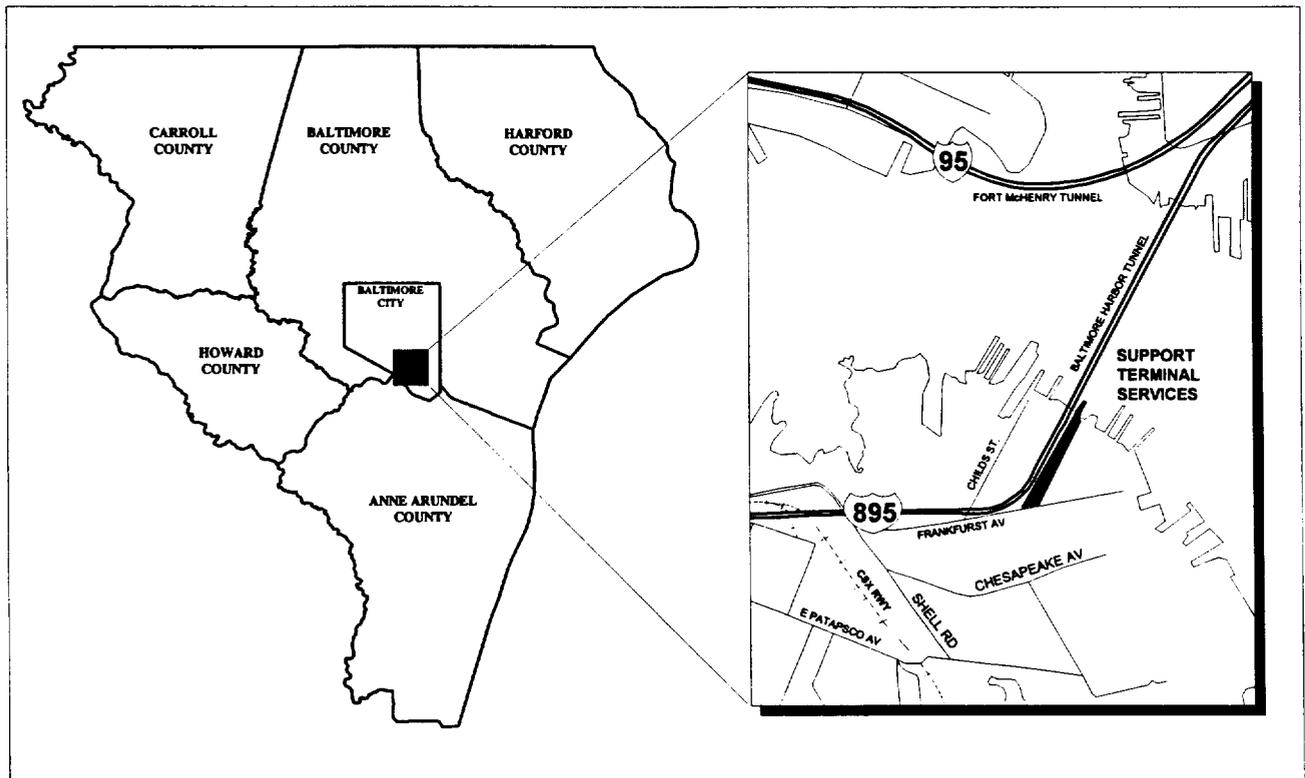
Equipment/Facilities: US Customs bonded warehouse, US BATF distilled spirits plant permit

Railroad Connections: CSX

Truck Connections: 3 truck platform scales

National Highway System Connections: I-95, I-695, I-895, I-83

Other Roadway Connections: Childs St., Patapsco Ave., Potee St., Hanover St., Shell Rd.



TDSI Auto Distribution Center

Address: 8459 Dorsey Run Road, Jessup, MD 20794
301/498-1723

Contact: Total Distribution Services, Inc., subsidiary of CSX
Dennis Kilar, Facility Manager

Size: 125 acres

Cargoes: automobiles, trucks

Outside Storage: 13,100-car capacity, 140-truck capacity

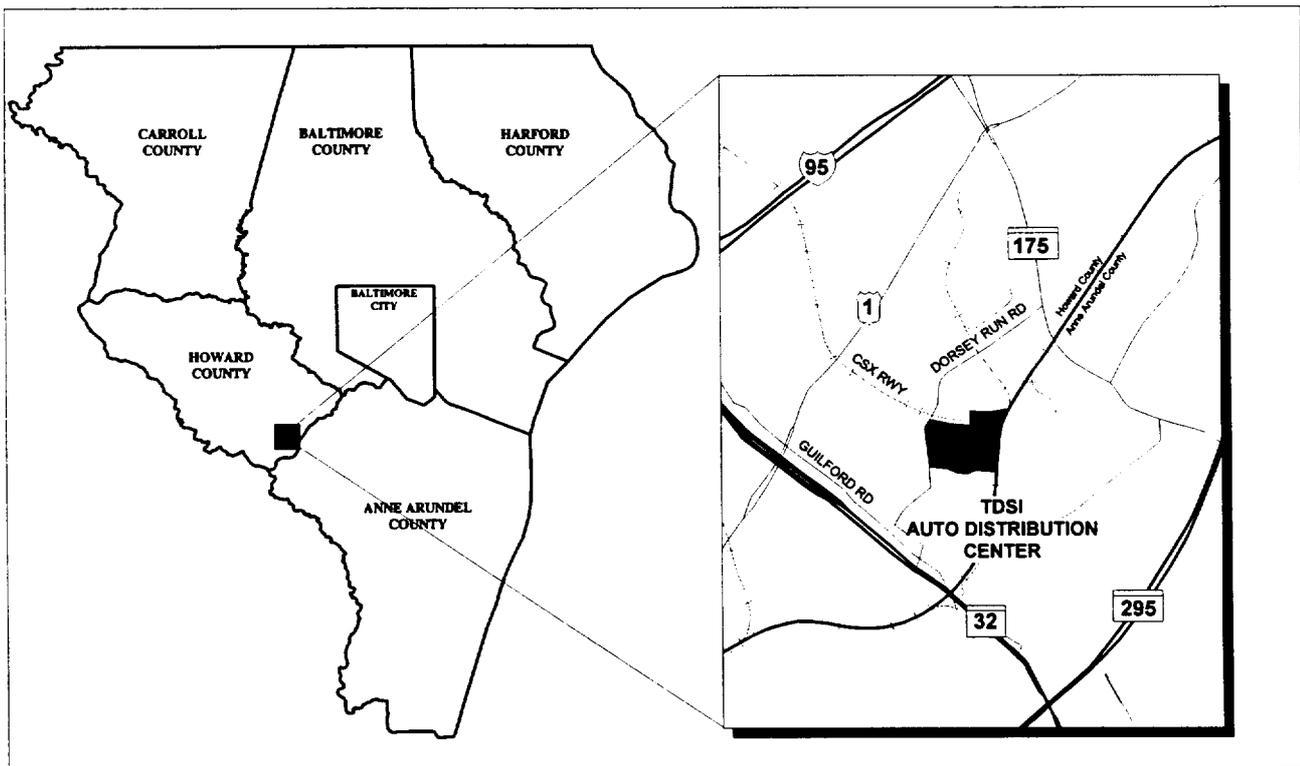
Equipment/Facilities: 7 porExhibit multi-level load/unload ramps

Railroad Connections: CSX

Truck Connections: 2 inbound/2 outbound gates

National Highway System Connections: I-95

Other Roadway Connections: US 1, MD 32, MD 175, MD 295



Appendix 3

Baltimore Regional Transportation Plan Statement of Goals, Policies & Strategies

Baltimore Regional Transportation Plan

Statement of Goals, Policies, and Strategies

Preface

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) requires the Transportation Steering Committee (TSC), as the Baltimore region's designated Metropolitan Planning Organization (MPO), to set regional transportation policies and develop plans to implement them through cooperative efforts with local and state elected officials, and transportation, land planning, and air quality authorities. This **Baltimore Regional Transportation Plan** is the TSC's articulation of long-range regional transportation priorities, policies, and actions. The Plan encompasses all transportation modes within the Baltimore metropolitan planning region, which consists of Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties, and the cities of Annapolis and Baltimore. Through this 1997 update of the Plan, required every three years under federal mandates tying transportation planning to air quality improvement, the TSC hopes to create a transportation system that will meet the needs of all its users -- commuters, families, business and industry, the disabled, and the elderly -- and ensure a high quality of life level for the region's citizens.

Guiding Principles

The **Baltimore Regional Transportation Plan** envisions a 21st Century transportation system that meets the region's emerging needs and moves people and goods in a manner that provides a livable and economically viable region. To these ends, the Plan is founded on four guiding principles:

- **Linking transportation to managing growth.** This means giving priority to transportation projects and programs planned by local jurisdictions for existing and designated growth areas. Projects and actions should support redevelopment and new growth through congestion and access management, community character, and the planned pattern of development.
- **Improving life in our communities.** This means giving priority to transportation projects that reduce air pollution, protect the scenic quality of the landscape, and serve the needs of pedestrians. Projects should contribute to the environmental and aesthetic quality of communities in both their scale and design.
- **Increasing transportation choices.** This means giving priority to projects that increase the number of options for making a trip, including bringing public transportation to more citizens and businesses, additional highway routes as appropriate, options for bicycling and walking, and trip-reducing options such as telecommuting.
- **Maintaining the current system.** This means giving priority to protecting the existing investment in the transportation system. Projects such as resurfacing, safety improvements, bridge rehabilitation and reconstruction, and new transit vehicles are important in this regard.

In addition, the Plan looks beyond the financial limitations that currently constrain the region. It considers needed investments to aim for improving the system to meet the needs of citizens and businesses.

1. Regional Process Goal

The BRTTP shall recognize the interdependence of the region’s jurisdictions and shall foster interjurisdictional cooperation and cohesion for the benefit of the region’s residents.

POLICIES	1.A. Coordinate transportation planning across all modes and jurisdictions in the region through the BRTTP.	1.B. Base the BRTTP on reliable assessments of demographic, travel, land use, fiscal, and technology trends.	1.C. Ensure the BRTTP encourages participation of the region’s transportation interests in public/private programming and provision of transportation improvements.
STRATEGIES	1.A.1. Coordinate regional transportation planning programs, modeling, activities, and technologies with state, local, and private partners.	1.B.1. Review and assess the transportation implications of key regional trends on a regular basis.	1.C.1. Maintain and support a Citizens Advisory Committee.
		1.B.2. Update and amend the BRTTP and related documents regularly in accordance with federal and state mandates and emerging regional trends.	1.C.2. Foster dialogue and information-sharing with public and private interests to improve understanding of the regional transportation system.
		1.B.3. Apply results of ongoing trend assessments to refine and update regional travel models and technical tools on a regular basis.	1.C.3. Use innovative methods to continuously solicit the input of the region’s citizens, interest groups, and private sector to the planning process.
			1.C.4. Conduct efforts to ensure disadvantaged and mobility-impaired persons have ample opportunities for input to the planning process.

2. Physical Form/Land Use Goal

The BRTTP shall establish regional transportation policies which encourage land use patterns that enhance community character, maximize transportation system efficiency, and provide for a linked mix of residential, commercial, employment, and recreational opportunities.

POLICIES	2.A. Ensure the BRTTP works in concert with local comprehensive plans and the Visions of the Economic Growth, Resource Protection, and Planning Act.	2.B. Concentrate upgrading and expansion of BRTTP transportation infrastructure and services within designated growth and redevelopment areas.	2.C. Encourage joint use of BRTTP transportation facilities and rights-of-way.	2.D. Ensure the design of the BRTTP's transportation system reinforces community character and identity as well as the system's relationship to the larger region.
STRATEGIES	2.A.1. Examine local comprehensive and state plans to ensure consistency with the BRTTP.	2.B.1. Support transportation improvements that help stabilize urban communities and employment areas.	2.C.1. Incorporate opportunities for sharing of transportation facilities into the regional transportation plan.	2.D.1. Support transportation improvements that foster the conservation of rural landscapes and public open spaces.
	2.A.2. Support projects that contribute to integrated land development patterns and pedestrian-oriented community design to provide transportation alternatives to solo driving.	2.B.2. Encourage population and employment stability or growth in designated urban and growth areas.	2.C.2. Support joint transportation facility development that encourages transit use.	2.D.2. Support transportation improvements that preserve and enhance communities as destinations with unique characteristics.
	2.A.3. Provide guidance for revisions to local comprehensive plans.	2.B.3. Encourage suburban growth in areas with adequate transportation infrastructure.		2.D.3. Encourage the integration of aesthetic considerations into transportation project planning.

3. Accessibility Goal

The B RTP shall strive to achieve a balanced transportation system that is accessible and reliable for all system users and that provides for enhanced connectivity among modes and places, modal choice, ease of use, service proximity, and user safety.

STRATEGIES	POLICIES				
	3.A. Create an accessible integrated regional transportation system for all users.	3.B. Enhance mobility options for the young, the elderly, the disabled, and the economically disadvantaged through the B RTP.	3.C. Maintain and enhance access to freight movement facilities and market areas through the B RTP.	3.D. Improve safety and security for all users of the B RTP's transportation system.	3.E. Increase the efficiency of the existing transportation system.
	3.A.1. Plan and incorporate intermodal connections and coordination.	3.B.1. Ensure components of the transportation plan comply with the provisions of the Americans with Disabilities Act and other appropriate mandates.	3.C.1. Establish freight movement performance measures and continuously assess the state of the regional freight movement system.	3.D.1. Ensure that public safety and security continues to be a component of transit system planning.	3.E.1. Give priority to the preservation needs of the existing regional transportation system.
	3.A.2. Ensure bicycle and pedestrian components and investments are included in the transportation plan.	3.B.2. Encourage land use and mixed-use development that is oriented to transit.	3.C.2. Encourage investments and actions that enhance the efficiency of freight movement both within the region and between regions.	3.D.2. Implement programs and initiatives to reduce highway accidents and fatalities.	3.E.2. Apply employer-based strategies to efficiently manage demand on the existing transportation system.
	3.A.3. Provide cost-effective mobility options to and within major activity centers.	3.B.3. Encourage and facilitate coordination of paratransit services.	3.C.3. Apply technological strategies designed to facilitate the efficient movement of freight.		3.E.3. Apply technological and telecommunication strategies to ensure efficient and cost-effective use of existing system.
3.A.4. Coordinate transportation improvement and investment plans within regional transportation corridors.	3.B.4. Prioritize transit service expansion proposals to best meet the region's mobility needs.			3.E.4. Develop strategies to efficiently manage off-peak travel growth.	

4. Economic Development Goal

The BRTTP shall serve the region’s economic development needs by promoting a balanced transportation system that provides efficient links between and among the region’s economic core, major regional growth and activity centers, communities and neighborhoods, and key national and international commerce locations.

POLICIES	4.A. Support BRTTP projects that can expand the regional market for labor and goods.	4.B. Strengthen the contribution of the freight movement system to the regional economy in the BRTTP.	4.C. Support enhanced access to the region’s key tourist attractions and recreation destinations in the BRTTP.
	4.A.1. Improve access to business and employment opportunities in the region through cooperative public-private efforts.	4.B.1. Plan for efficient access to port, air, rail, and intermodal facilities.	4.C.1. Encourage investments and actions intended to provide improved tourist and recreational access, as appropriate.
	4.A.2. Encourage projects that support community revitalization efforts and help retain and expand businesses in these locations.	4.B.2. Coordinate planning among oversight authorities responsible for freight movement in the region.	4.C.2. Examine how effectively the transportation network serves the region’s key tourist destinations.
		4.B.3. Maintain and support a Freight Movement Task Force to help identify options for addressing impediments to efficient freight movement.	

5. Environmental Quality Goal

The BRTP shall promote a sustainable regional environment by establishing policies to reduce single occupant vehicle travel, promoting alternative travel modes, and encouraging technological improvements that limit growth in emissions from mobile sources, reduce energy consumption, and conserve and protect natural resources.

POLICIES	5.A. Ensure the BRTP facilitates attainment of National Ambient Air Quality Standards.	5.B. Promote efficient use of energy in the BRTP.	5.C. Promote preservation of natural and cultural resources in the BRTP.
STRATEGIES	5.A.1. Develop programs focused on bringing the region into NAAQS attainment, such as those to reduce congestion and growth in solo driving.	5.B.1. Encourage use of alternative fuels, efficient transportation vehicles, and efficient transportation system and facility design concepts.	5.C.1. Encourage preservation of identified environmentally sensitive areas.
	5.A.2. Support technological initiatives designed to help improve regional air quality.	5.B.2. Promote integrated development in order to reduce trip-making and energy consumption.	5.C.2. Comply with the provisions of the Chesapeake Bay Compact and other environmental protection mandates.
	5.A.3. Support policies and projects that promote alternative transportation modes, including transit, ridesharing, and bicycle and pedestrian facilities.	5.B.3. Support projects designed to maximize operational efficiency of the existing transportation system.	5.C.3. Encourage preservation of cultural, historic, and scenic resources.
	5.A.4. Coordinate regional mobile source emissions reductions programs.		

Appendix 4

Freight Movement Task Force Members and Staff

Freight Movement Task Force Members

Michael Arendes
Director, Research & Policy
Intermodal Association of North
America

David Ganovski
Manager, Freight Services
Mass Transit Administration

Samuel Azzarello
Manager, Traffic & Intermodal
Services
Maryland Port Administration

James Hamlin
Account Manager
United Parcel Service

David Baird
Vice President, Marketing
Belt's Corporation

Fatimah Hasan
Transportation Planner
Maryland Department of
Transportation

Rita Bontz
President
Independent Truckers & Drivers
Association

Richard Higgins
Director, Marketing
John S. Connor

Charles Chadwick
Chairman & CEO
Maryland Midland Railway

Andrea Just
Manager, Communications Programs
Conrail

Ann Coscia
Director
Greater Baltimore Alliance

Arthur Kelly
Vice President
The Terminal Corporation

Donald Darnall
Executive Director
Maryland Food Center Authority

Dennis Kershner
Director, Transportation Program
Development
The Johns Hopkins University

Andrew Farkas
Acting Director, Center for
Transportation Studies
Morgan State University

Stephanie Kirby
Account Executive
CSX Intermodal

Frank Murphy
Engineering Supervisor
Baltimore City Department of Public
Works

Louis Pinkney
Director, Office of Real Estate &
Freight Services
Mass Transit Administration

Francis Smith
President
Omni Service Transportation

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