Appendix A

RESEARCH & CONSULTING



Maritime Industrial Zoning Overlay District Study

Prepared in conjunction with Hentschel Real Estate Services

1.0 Executive Summary

Project Overview

The Abell Foundation has tasked RESI of Towson University in conjunction with Hentschel Real Estate Services with conducting a survey of companies located in Baltimore City's Maritime Industrial Zoning Overlay District (MIZOD) and completing an analysis of the survey. The main objectives of this study are to collect and analyze information regarding companies located in the MIZOD as well as the determination of MIZOD's economic impact.

The survey was designed by RESI and Hentschel Real Estate Services and administered by Hentschel Real Estate Services in August 2008. A database of 186 companies located in the MIZOD was utilized. The firms were contacted by phone and asked to participate in the survey. Only the firms that agreed to take the survey were sent one via facsimile. Of the 186 firms that were contacted, only 53 (28%) of the firms were sent the survey forms¹. A total of 16 completed surveys were returned. While this is a small representation of the total number of companies contacted, the response rate among participants was roughly 30%.

The surveys were designed to elicit a range of information regarding the nature of the companies' business, extent of property utilization, projected growth, workforce characteristics, tax and revenue range.

Survey Results

Results of the survey are summarized below.

- On average, 89.5% of the respondents' business is port-related.
- About 56.3% of the surveyed companies are registered in the state of Maryland.
- The plurality of firms (46.7%) has less than 10,000 square feet of buildings property.
- Port-related activity has increased since 2004 for around 62.5% of companies.
- Overwhelming majority of respondents (81.3%) operate at the MIZOD location at least at 75% of full capacity with over a third of companies operating at 100% of capacity.
- Fully, 87.5% of surveyed companies project an increase in business in the next five years.
- Average annual salary in 2007 for all employees whose work was physically located within MIZOD was \$59,946.
- Approximately 96.7% of employees whose work was physically located within MIZOD were Maryland residents.

¹ Seventeen percent (33) of the firms contacted by the surveyors outright declined to participate in the survey, 19% (37) did not answer their phones and the remaining 33% (63) of the firms contacted had either moved from the MIZOD, had their phones disconnected or did not return messages left for them.



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- Employment that is physically within MIZOD location has increased since 2004 for about two-thirds of surveyed companies.
- About 62.5% of companies reported that encroaching, non-industrial development activity has occurred (or is occurring) in the vicinity of their MIZOD facility.

2.0 General Characteristics of MIZOD Companies

2.1 Distribution of Respondent Companies by the NAICS Code

The plurality (around 43.8%) of respondent companies belongs to the Manufacturing industry. Firms which identified themselves as Construction or Transportation and Warehousing companies are 18.8% and 12.5% of the surveyed, respectively. Companies specializing in Mining, Wholesale Trade, Professional, Scientific and Technical Services, as well as Administrative and Support and Waste Management and Remediation Services are 6.3% of respondents, each.

2.2 Port-related Business

For the majority of surveyed companies (around 62.5%), over 90% of their business is port-related. According to RESI estimations, on average, 89.5% of the respondents' business is port-related.

2.3 Length of Operation

More than half of the companies have operated for more than 30 years at the MIZOD location. Almost a fifth of the respondents were relatively new to the MIZOD site with less than 10 years of operation there.

2.4 State of Registration

The majority (about 56.3%) of the surveyed companies are registered in the state of Maryland. Delaware and Florida are home to 12.5% of respondents each, while New York, New Jersey and Pennsylvania are states of registration for 6.3% of companies each.

2.5 Ownership

According to the results of RESI's survey, approximately three-fourths of the companies own the MIZOD property, while a quarter of respondents lease all or part of the property from the owners.

2.6 Operation Description

Over half of the companies (approximately 56.3%) maintain a single, self-contained operation at the MIZOD location. For the balance of companies, the MIZOD location is one of multiple locations, some of which are operated outside of the MIZOD.



2.7 Terminals

Majority of the surveyed companies (approximately 81.8%) do business through private terminals.

3.0 Extent of MIZOD Property Utilization

3.1 Size of the Property

The survey revealed that approximately 37.5% of respondents' property is less than 5 acres. Additionally, about a quarter of companies operate on a property that is in the range from 6 to 20 acres. Moreover, another 37.5% reported that their property occupies over 20 acres with the largest property being 230 acres.

A multitude of firms (around 46.7%) has less than 10,000 square feet of buildings property, while around 13.3% have over 1 million square feet of buildings property.

3.2 Waterfront and Access to Deep Water

Waterfront property is occupied by approximately 81.3% of the respondents. Surveyed companies can be divided almost evenly into three large groups: first group has access to water that is less than 25 feet deep, second group has access to water with depth ranging from 26 feet to 45 feet, and third group has access to water over 46 feet deep.

3.3 Other Purposes of MIZOD Property

A vast majority of surveyed companies (around 85.7%) does not use any portion of their property for purposes other than maritime or port-related business. The rest of respondents reported using MIZOD site property for other purposes, such as manufacturing of chemicals, recycling and storage.

3.4 Port-related Activity Changes Since 2004

Port-related activity has increased since 2004 for around 62.5% of companies. About a quarter of respondents reported that port-related activity either decreased or remained the same during this time period. Approximately 12.5% of the surveyed identified that they do not engage in port-related activities. RESI estimated that an average increase in the port-related activity for surveyed companies was around 51.8% during the time period since 2004.

3.5 Capacity

The overwhelming majority of respondents (81.3%) operate at their MIZOD location at least at 75% of full capacity with almost a third (around 31.3%) of companies operating at 100% of capacity. For the surveyed sample of companies an average of 86.6% of full capacity is estimated by RESI.



3.6 Daily Use of Property

Approximately 60.0% of respondents reported using 100% of their property on a daily basis. The balance of companies uses less than 100% (but over 75%) of their property daily. Average percentage of the MIZOD property used on a daily basis is estimated to be around 94.0%.

4.0 Projected Growth

Fully, 87.5% of surveyed companies project an increase in business in the next five years. No companies anticipate a decrease, although around 12.5% of the surveyed estimate that business will remain constant for the next five years.

The majority of companies (around 57.1%) plan to accommodate expected growth by increasing through-put by adding shifts, employees, and/or reconfiguring and retooling the operation on site. For about 14.3% of the firms their current location has sufficient capacity to accommodate the anticipated increase. Around 14.2% of companies plan to either relocate the entire operation to another site or to remain on-site and expand capacity at an additional location. Other growth accommodation plans revealed by the survey participants included remaining on site and investing in expanding on current land, as well as encouraging through-put with financial penalties for extended cargo storage.

About three-fourths of the companies that are planning to relocate or add additional locations plan to do so within the city of Baltimore, while the rest are taking their operations outside of Maryland.

5.0 Workforce Characteristics of the MIZOD Companies

The surveyed companies vary widely in the number of employed workers and the structure of labor organization. However, on average, firms in the MIZOD employ seventy-two workers (two executives, five professionals, nine managers, fifty hourly workers, and six part-time workers).

5.1 Personal Wage and Salary Income

Average annual salary in 2007 for all employees whose work was physically located within MIZOD was \$59,946, based on RESI's survey answers. The survey found that in 2007 the highest average salary was commanded by executives (\$113,684), while the lowest average salary was paid to hourly workers (\$56,360). Average annual salary reported in the Martin Associates' study (2008)² is \$47,780 in 2006 dollars, which translates into \$49,141 in 2007 dollars. In the 2002 version of Martin Associates report, annual average salary was reported to be \$50,874 (\$58,634 in 2007 dollars).

² "The economic impacts of the port of Baltimore" by Martin Associates, revised January 28, 2008.



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Based on the average annual salary and the number of employees, RESI estimated that total personal income for companies that answered the survey was about \$48 million in 2007. If extrapolated to all MIZOD companies, total personal income is estimated to be approximately \$635 million. Martin Associates (2008) report \$788 million in total direct personal income (in 2006 dollars), or \$810 million in 2007 dollars.

5.2 Distribution of Jobs by Residency

Approximately 96.7% of employees whose work was physically located within MIZOD were Maryland residents. Just over a quarter of employees were Baltimore City residents, about a fifth of employees were Baltimore County residents, and around 14.3% were identified as Anne Arundel County residents.

For comparison, Martin Associates study (2008) found that around 96.4% of the MIZOD employees were Maryland residents with Baltimore City, Baltimore County, and Anne Arundel County being home to 50.9%, 17.9%, and 11.6% of workers, respectfully.

5.3 Employment Changes Since 2004

Employment that is physically within the MIZOD location has increased since 2004 for about two-thirds of surveyed companies, while decreased or stayed the same for the other third. RESI estimated that an average increase in employment for surveyed companies in the MIZOD amounted to about 16.0% since 2004.

5.4 Employment Projections

Approximately 68.8% of companies foresee an increase in employment in the next five years, while the balance of respondents expects that employment will not change. An average projected increase in employment is estimated to be around 14.8% of the total work force for the surveyed companies in the next five years.

6.0 Economic Impacts of MIZOD Companies

6.1 Revenue

The majority of firms which answered RESI's survey (around 57.1%) generated under \$10 million in revenue in 2007, while on the other side of the spectrum of MIZOD companies, about a fifth of companies generated over \$50 million in revenue. Average revenue in 2007 was estimated to be approximately \$25 million for companies in the surveyed sample. The total revenue generated by respondent companies is estimated to be \$350 million³.

Martin Associates (2008) found that the total revenue from all port activities was around \$1,851 millions in 2006 or \$1,906 millions in 2007 dollars.

³ The respondents comprise about 7.5% of the companies located within MIZOD.



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6.2 Taxes

An overwhelming majority (around 87.5%) of the surveyed companies has not received any enterprise zone or other Maryland tax credits and/or tax abatements and incentives for their operations within MIZOD.

Most respondents (about 71.4%) paid under \$3 million in local taxes (i.e. property tax, corporate income taxes, personal business property taxes, etc.) inside MIZOD in 2007. On average, surveyed companies paid approximately \$2.5 million in local taxes in 2007.

6.3 Capital Improvements

Since 2004, a little over two-thirds of the companies have made capital improvements to their company's MIZOD location in order to increase the capacity or efficiency of the facilities operations.

All surveyed companies (with a single exception) can be split evenly into two large arrays depending on the cost of capital improvements that they have made since 2004. Capital improvements' level in the first array was relatively low (under \$200,000), while companies in the second array maintained a relatively high level of improvements (over \$10 million).

6.4 Number of Vessel Arrivals

The companies are split evenly (42.9% in each group) between those which receive less than 100 vessels annually transporting goods to or from their firm and those which receive more. The balance (14.3%) of respondents does not receive vessels at their MIZOD location.

6.5 Foreign Cargo Volume

The respondent companies can be divided into two large clusters based on their foreign cargo volume with each of the clusters comprised of around 40.0% of companies. The first cluster's foreign cargo volume is comparatively low – under 0.3 million ton annually, while the second cluster has a high annual foreign cargo volume – over 1.8 million ton.

7.0 Encroaching Activity

About 62.5% of companies reported that encroaching, non-industrial development activity has occurred (or is occurring) in the vicinity of their MIZOD facility. Fully, half of the respondents has taken (or is planning to take) steps to mitigate issues arising from encroachment at the MIZOD location, such as reduced or changed operating hours, improved security or landscaping, changed processes or procedures.



APPENDIX B

Economic Impact of Alternative Land Uses – Additional Assumptions

Arguably, many residential, commercial, and mixed-use projects developed around the Baltimore waterfront have applied for and been granted assistance in the form of Payments in Lieu of Taxes (PILOT); other tax abatements and/or incentives; property tax credits (such as those for new residential construction); or government grants and/or contributions for public works to bolster the project's economic feasibility. Although requested in conjunction with this study, the Department of Planning, Department of Finance, and the Baltimore Development Corporation reported that they could not readily assemble or provide any information about prior assistance granted to industrial and/or mixed-use development projects because they do not track over time or compile and maintain data bases of such information. As a result, the tax payments presented in the matrix are stabilized and do not consider the effects of PILOTs; Enterprise Zone Tax Credits; new residential construction tax credits; or any other incentives, inducements, grants, or other offsets, contributions, or concessions to encourage and support development of any sort, any or all of which might be substantial.

During the interviews, port officials questioned, especially in light of current economic conditions, whether adequate demand exists to warrant mixed-use development that would supplant working industrial waterfront land, as well as whether the occupants of the new offices would merely represent a reshuffling of existing firms rather than an introduction of "new" jobs to the city economy.

The accompanying chart presents information obtained from the 2006 Housing Market Demand Study Update Downtown Baltimore Outlook 2012 performed by Zimmerman/Volk Associates on behalf of The Downtown Partnership of Baltimore (DPOB). Housing demand estimates are presented in the lower portion of the exhibit, while the housing supply pipeline data compiled by the DPOB are presented in the upper portion of the exhibit. Housing demand projections reflect 2006 estimates which, in the current housing environment, are most likely optimistic with realization most likely to be delayed pending recovery in the housing market.

Downtown Housing Supply Pipeline and Demand Estimate

		MIXED USE		MIX EDUSE		MIXED USE
	RESID FOR	RESID FOR	RESID	RESID	OFFICE	OFFICE
	SALE	SALE	RENTAL	RENTAL		
SUPPLY PIPELINE UNDER	UNITS	UNITS	UNITS	UNITS		SQUARE FT.
CONSTRUCTION	564	155	119	550		977,000
PLANNING	211	1,425	266	2,042		910,000
TOTAL	775	1,580	385	2,592		1,887,000
		TOTAL SALE		TOTAL RENTAL	CURRENT ABSORPTION OFFICE	HISTORIC ABSORPTION OFFICE
		SALE		KENTAL	OFFICE	OFFICE
		2,355	UNITS	2,977		
YEARS SUPPLY		5.35		4.99	9 YRS.	3 YRS
DEMAND						
DECIDENTIAL	5.VD0	PER				
RESIDENTIAL	5 YRS	YR				
TOTAL DEMAND MULTIFAMILY	7,430	1,486	UNITS			
RENTAL MULTIFAMILY	2,980	596	UNITS			
CONDO	2,200	440	UNITS			
TOWNHOUSE	2,250	450	UNITS			
OFFICE	REGION		2,000,000	SQ. FT		
	CITY		650,000	SQ.FT		

Source: Downtown Partnership of Baltimore

Housing permit activity and Maryland Association of Realtors (MAR) sales statistics are also presented in the accompanying exhibits. Downtown Partnership of Baltimore demand projections represent approximately 15 percent of the city total estimated by MAR and approximately 75 percent of average annual permit activity for the period 2003 to 2006.

Housing Permit Data

PERMIT DATA	2007	2006	2005	2004	2003	2002	2001	2000	2000-07	2003-06	2003-06 AVG	2000-07 AVG
PERMITS MF CITY	97	730	592	501	1,044	102	80	38	3,184	2,867	717	398
PERMITS MF REGION	1,428	2,312	3,227	2,979	3,603	1,987	1,528	1,973	19,037	12,121		
	7%	32%	18%	17%	29%	5%	5%	2%	17%	24%		
TH PERMITS CITY	243	190	491	338	179	224	52	69	1,786	1,198	300	223
TH PERMITS REGION	1,813	1,597	2,870	2,227	2,225	2,025	1,876	2,157	16,790	8,919		
	13%	12%	17%	15%	8%	11%	3%	3%	11%	13%		
TOTAL PERMITS CITY	449	1,081	1,243	945	1,273	368	216	212	5,787	4,542	1,136	723
TOTAL PERMITS REGION	6,029	7,929	10,874	9,903	11,315	10,779	11,533	11,116	79,478	40,021		
	7%	14%	11%	10%	11%	3%	2%	2%	7%	11%		
CITY MF PERMITS/CITY												
TOTAL	22%	68%	48%	53%	82%	28%	37%	18%	55%	63%		
REGIONAL MF PERMITS/TOTAL	24%	29%	30%	30%	32%	18%	13%	18%	24%	30%		
CITY PERMITS/CITY SALES	6%	11%	11%	9%	15%	4%	3%	3%				
CITY PERMITS/REGIONAL SALES	1%	3%	3%	2%	3%	1%	1%	1%				
REGIONAL PERMITS/REG SALES	19%	21%	25%	23%	29%	29%	32%	35%				

House Sales By Jurisdiction

	2007	2006	2005	2004	2003	2002	2001	2000	2000-07	2003-06
MAR HOUSING STATISTIC	S									
BALTIMORE CITY	8,086	10,181	11,539	10,253	8,685	8,543	7,876	6,954	72,117	40,658
BALTIMORE COUNTY	8,505	10,307	11,741	11,534	10,588	10,107	9,776	8,563	81,121	44,170
HARFORD COUNTY	3,064	3,646	4,103	4,065	3,506	3,360	3,160	2,720	27,624	15,320
AA COUNTY	6,502	7,857	9,347	9,405	8,734	8,068	7,964	7,006	64,883	35,343
CARROLL COUNTY	1,698	2,019	2,377	2,484	2,561	2,365	2,337	1,990	17,831	9,441
HOWARD COUNTY	3,467	4,057	4,866	4,993	4,760	4,701	4,489	4,209	35,542	18,676
REGION TOTAL BALTO CITY % OF	31,322	38,067	43,973	42,734	38,834	37,144	35,602	31,442	299,118	163,608
REGION	26%	27%	26%	24%	22%	23%	22%	22%	24%	25%

The final chart combines Maryland Department of Planning jobs data with Maryland Association of Realtors Housing Sales Data. It is particularly interesting to note the inverse relationship between jobs and house sales in the city during the period 2001 to 2006. Despite the loss of 23,203 jobs during that time, city housing sales rose each year and averaged 9,513 per year, in comparison with Baltimore County's annual average of

10,676 home sales amidst a gain of 41,665 jobs over the same period. Obviously, some of this heightened sales activity could have been attributable to investor speculation.

Comparison of Housing Sales to Jobs

			HOUSE	HOUSE	JOBS	JOBS PER	JOBS PER
	JOBS	JOBS	SALES/	SALES/	PER PERMIT	HOUSE SALE	HOUSE
	CITY	COUNTY	JOB CITY	JOB CO	CITY	CITY	SALE CO
2001	429,282	468,712	0.018	0.021	1,987	55	48
2002	424,656	469,699	0.020	0.022	1,154	50	48
2003	417,265	473,170	0.021	0.022	328	48	45
2004	407,271	487,014	0.025	0.024	431	40	42
2005	404,987	499,857	0.028	0.023	326	35	43
2006	406,079	510,377	0.025	0.020	376	40	50
DIFF	-23,203	41,665					

Historically, Baltimore City has captured approximately one-third of the total regional office space absorption, or approximately 650,000 per year. However, in 2007, regional office space absorption declined to 650,000 square feet inferring city absorption of a little more than 200,000 square feet.

As illustrated by the following exhibit, which presents Maryland Department of Planning data for the city for jobs in those fields that typically fuel demand for office space, from 2003 to 2006 while the city was absorbing approximately 600,000 square feet of office space per year, suggesting an annual gain of 2,400 jobs (at 250 square feet per job), the city was actually losing approximately 2,000 jobs each year. Although a rudimentary analysis and far from being clear evidence, the foregoing would suggest that space absorption occurring during that period of time was mostly by firms that were trading up or relocating from other buildings.

Change in Baltimore City Jobs

BALTIMORE CITY	0004	2000	0000	0004	2225	TOTAL
JOBS	2001	2002	2003	2004	2005	TOTAL
	2002	2003	2004	2005	2006	
FINANCE & INSUR	-1,325	-1,531	-887	-1,064	-552	-5,359
REAL ESTATE	-654	262	-68	-93	209	-344
PROF SVCS	-899	-1,318	-1,012	-670	518	-3,381
COMPANY MGMT	17	-97	141	114	-45	130
INFORMATION	-2,313	-970	148	-50	-174	-3,359
ADMIN SVCS	1,677	-436	-1,120	-58	524	587
EDUC SVCS HEALTH & SOC	1,472	-389	966	484	-1,134	1,399
SVCS	1,874	2,258	-1,961	623	1,763	4,557
OTHER SVCS.	522	-391	-72	-234	281	106
SUBTOTAL						-5,664
GOVT	-409	-1,520	-3,856	158	376	-5,251
GRAND TOTAL						-10,915
TOTAL ALL JOBS	-4,626	-7,391	-9,994	-2,284	1,092	-23,203

The information presented suggests that the existing pipeline of residential projects represents an approximate five to seven year supply. Current office projects reflect a three to nine year supply depending upon how soon absorption could be expected to return to historic patterns. While the foregoing analysis is indeed rudimentary and no substitute for a detailed market analysis, it would appear that mixed residential and commercial use projects could anticipate adequate levels of demand to warrant their development upon the expiration of the existing MIZOD legislation. What is not clear is whether such demand would be diverted from other areas of the city that would be considered less desirable than the waterfront, or whether the waterfront location itself would attract incremental demand over and above that projected.

APPENDIX C

Pro Forma Land Use Analysis

Property Tax
Property Tax
Property Tax

Harbor East vs. CBD Existing Stock as of 11/07 Housing/Hotel/Office/Retail

Harbor East Breakdown		City Center Breakdown	
Residential (Apt/Condo) Spinnaker Bay, Condos Spinnaker Bay, Apartments Harbor East Parcel B (The Vue) The Promenade	32 315 122 113 582	Residential (Apt/Condo) The Breco Condos 300 N. Charles Apartments 403 N. Charles Charles Towers Munsey Building Park Charles Apartments	32 36 1 434 146 252
Hotels Marriott Waterfront Harbor East Marriott Courtyard Harbor East Hilton Garden Inn Harbor East Homewood Suites	750 207 180 165 1,302	Saratoga Court The Standard Apartments Waterloo Place	77 201 196 1,375
Class A & A-2 Office - 1000 Lancaster	RSF 125,082	Class A & A-2 Office -	8,778,992
650 Exeter Street 1001 Fleet 720 Aliceanna	190,000 163,000 27,769 505,851	Retail	1,833,303
Retail 1000 Lancaster 1001 Fleet 720 Aliceanna 650 Exeter	17,154 33,959 21,106 94,478 166,697		
Successful Ratios		CBD Ratios	
115 Residential Units for every 100,000 RSF of office 257 Hotel Rooms for every 100,000 RSF of office Retail should be 33% of Office Space	115:100,000 RSF 257:100,000 RSF 33%	16 Residentail Units for every 100,000 RSF of office 57 Hotel Rooms for every 100,000 RSF of office Retail should be 33% of Office Space	21%

Source: Colliers Pinkard

APPENDIX D

MIZOD Study Scope of Work Funded by The Abell Foundation John J. Hentschel of Hentschel Real Estate Services

The study will analyze the costs and benefits of the MIZOD extension and the effect of the extension of the MIZOD on Baltimore City's tax base, economy, and employment. The study shall include the following tasks and analyses:

- Review existing studies and reports related to the MIZOD and the Port of Baltimore:
- Interview key city officials, Maryland Port Administration representatives, and property and business owners affected by the MIZOD;
- Conduct survey of all firms located in the MIZOD on employment, place of residence of employees, and future plans and use of site, and establish the proportion of city employees working within the MIZOD;
- Analyze whether the indicators currently used to state the benefits of the MIZOD
 adequately and completely measure the benefits to Baltimore City and
 recommend alternate indicators if appropriate;
- Define how an industrial buffer is currently determined and what is an appropriate buffer:
- Determine if the boundaries are sufficient, deficient, or excessive to allow/protect/buffer industrial uses (Are there properties outside the MIZOD boundaries that should be included for deepwater access or additional buffer? Are there properties within the MIZOD boundaries that should be exempted?);
- Determine the estimated employment growth and growth in tax revenue expected from an extension of the MIZOD, including growth in employment for city residents and emerging markets/employment sectors that residents can be prepared for through job training programs, apprenticeships, etc.;
- Analyze the benefits of the extension of the MIZOD on city tax revenues;
- Explain the potential effect of proposed property opt-outs from the MIZOD:
- Calculate the opportunity costs of the MIZOD extension for properties that are susceptible to change in use;
- Analyze the benefit of port activities to the city and the region, verify the total
 acreage of state-owned land exempt from taxation, and determine to what extent
 the surrounding jurisdictions benefit from and share responsibility for port
 activity; and
- Analyze the extent to which changes to the MIZOD term and/or boundaries affect Homeland Security efforts and protection of the city's waterfront.