

Cleveland Waterfront Market Demand and Development Options

**Evaluating the Strategic Options for Waterfront
Development on the Site of the Cleveland-Cuyahoga
County Port Authority**

15 October 2009



Cleveland Waterfront Market Demand and Development Options

Evaluating the Strategic Options for Waterfront
Development on the Site of the Cleveland-Cuyahoga
County Port Authority

15 October 2009

© PA Knowledge Limited 2009

Prepared by:

PA Consulting Group
4601 N. Fairfax Drive
Suite 600
Arlington, VA 22203
Tel: +1-571-227-9000
Fax: +1-571-227-9001
www.paconsulting.com



In association with

RebelGroup, The Netherlands
www.rebelgroup.com

REBEL

Kahr Real Estate, New York
www.kahrrealestate.com

KAHR
REAL ESTATE GROUP

FOREWORD

International experience shows that it is possible to revitalize an area or even a city using intelligently planned and executed catalytic waterfront developments. In such developments human energies are well directed; natural and financial resources are efficiently deployed; innovation is encouraged; and new technologies take root. International experience also shows that high rates of strategic investment are the means by which strong, enduring growth and social progress are achieved.

During the last decade Cleveland has shown its economic resilience, particularly in healthcare and professional services development, and has sufficiently strong and capable human and financial capital sources to continue evolving into a regional economic hub. A thriving, attractive, well-integrated and exciting mixed-use waterfront development can help that evolution continue.

This report was developed during the first half of 2009 through intensive market research, stakeholder workshops, and analyses of international trends and best practice in the fields of waterfront development and catalytic real estate investment. Research provided information on economic trends, the city's performance in attracting investment, relevant international benchmarks, and stakeholders' expectations.

The Cleveland-Cuyahoga County Port Authority coordinated preparation of this report, under the guidance of its senior staff. This work has been supplemented by investigative and analytical work that has been undertaken by the CCCPA's consultants, PA Consulting Group, RebelGroup and Kahr Real Estate. They have relied heavily on the experience and advice of many of the city's leading experts in the fields that touch on real estate investment, economic development, and growth.

The authors would like to recognize the special contributions made by the staff at the Maxine Goodman Levin College of Urban Affairs, TeamNEO, Colliers International, and numerous real estate professionals who graciously gave their time and insights to us. The report takes into account their advice on strengthening Cleveland's urban fabric, creating a winning waterfront development and bringing a long-wished-for project closer to fruition. Their support and assistance is gratefully acknowledged.

Disclaimer

The forecasts, recommendations and opinions (together "Forecasts") made by PA in this report are made in good faith on the basis of information available at the time. Forecasts are not a representation, undertaking or warranty as to outcome or achievable results.

TABLE OF CONTENTS

Foreword	i
Executive summary	4
1. Similar successful redevelopment examples worldwide show what is possible in Cleveland	18
2. Cleveland’s economy, population, and real estate market appear strong enough to support the development of the Port site	30
2.1 The local economy and population are diverse and attractive market segments are growing	30
2.2 Recent successful developments are transforming Cleveland’s downtown	35
2.3 The real estate market offers opportunities for profitable development	41
3. The development options for the Port site are supported by location advantages, demand projections and financial analysis	63
3.1 The port site presents unique development opportunities with solvable barriers to development	63
3.2 Our market demand model projects development potential for the Port site to grow as it establishes itself	68
3.3 The economics of the Development Options are positive and provide strong ground-lease cashflows	80
4. The recommended development plan should be built on local demand, existing infrastructure and an independent implementation vehicle	91
4.1 Strategic phasing built upon local demand drivers will create sustainable value	92
4.2 Build upon existing infrastructure to create a unique extension of Downtown	97
4.3 Financial results for the development plan and associated infrastructure provide an adequate return to deployed capital	102
4.4 An implementation vehicle may help to coordinate financing, project development and risk management	104
5. Conclusion: A successful waterfront development will strategically contribute to Cleveland’s future growth	111

Appendices:

APPENDIX A: Our Approach to Real Estate Planning

APPENDIX B: Case Study Details

APPENDIX C: Port Relocation Roadmap

APPENDIX D: Real Estate Definitions

APPENDIX E: Selected Bibliography

EXECUTIVE SUMMARY

The Cleveland Cuyahoga County Port Authority (CCCPA) manages the Port of Cleveland, and plans to move port activities to a new location at East 55th street. The exact timing of the move is not yet finalized, but is expected to occur in future years in line with the incremental availability of the new port site. Meanwhile, the CCCPA would like to develop portions of the industrial land on the current Port site (owned by both the CCCPA and the City of Cleveland) to offset a portion of the costs of the port move. As this development would be one of (if not the) largest development in Cleveland for a number of years – perhaps as long as thirty – the underlying demand for new real estate development on the site must be positive to move forward.


Our analysis reveals that Cleveland can take on a successful, large scale waterfront development based on three compelling reasons. First, cities around the world have successfully undertaken large scale waterfront redevelopments while facing similar depressed local real estate and economic markets. Second, even under conservative assumptions about the future growth potential in the local economy, there is sufficient demand on the Port's current waterfront site over the coming twenty-years to support development. Last, a detailed financial analysis of potential development of the site based on results of a demand model reveals positive yields for the Port and other related stakeholders.

We recommend that the development should be a mixed-use waterfront development rich in public spaces and uses that strategically connects the waterfront to the city's downtown and vice-versa. The Port should develop a human-scale, vibrant, mixed-use waterfront neighborhood that brings downtown Cleveland to the water's edge, while also bringing water users to the city through water-based activities. The development plan calls for roughly 2,100 residential units, 1.8 million square feet of commercial property (principally Class A, supported by at least three anchor tenants), 1.6 million square feet of retail space and around 3,000 hotel rooms (likely as three-four star boutique hotels, plus two to four star larger properties), which can be absorbed by the market under our twenty-year demand projections.



Similar successful redevelopment examples worldwide show what is possible in Cleveland

Several cities around the world– many of which are similar in size or facing similar economic challenges to Cleveland– have undertaken successful city and waterfront redevelopment projects. This worldwide experience shows the typical characteristics of these strategically-focused, mixed-use, waterfront-premium developments. Importantly, these projects have been viable real estate developments in their own right, but have also contributed strongly to wider city regeneration. Further, these projects have shown that where new developments are linked to their cities' urban core there is a lift in demand for real estate that has revitalized lackluster areas. These worldwide experiences strongly suggest what is possible in Cleveland, and provide practical lessons of how this can be achieved. A few examples are as follows (Exhibit 1):

Exhibit 1: Summary of case studies examined for this report

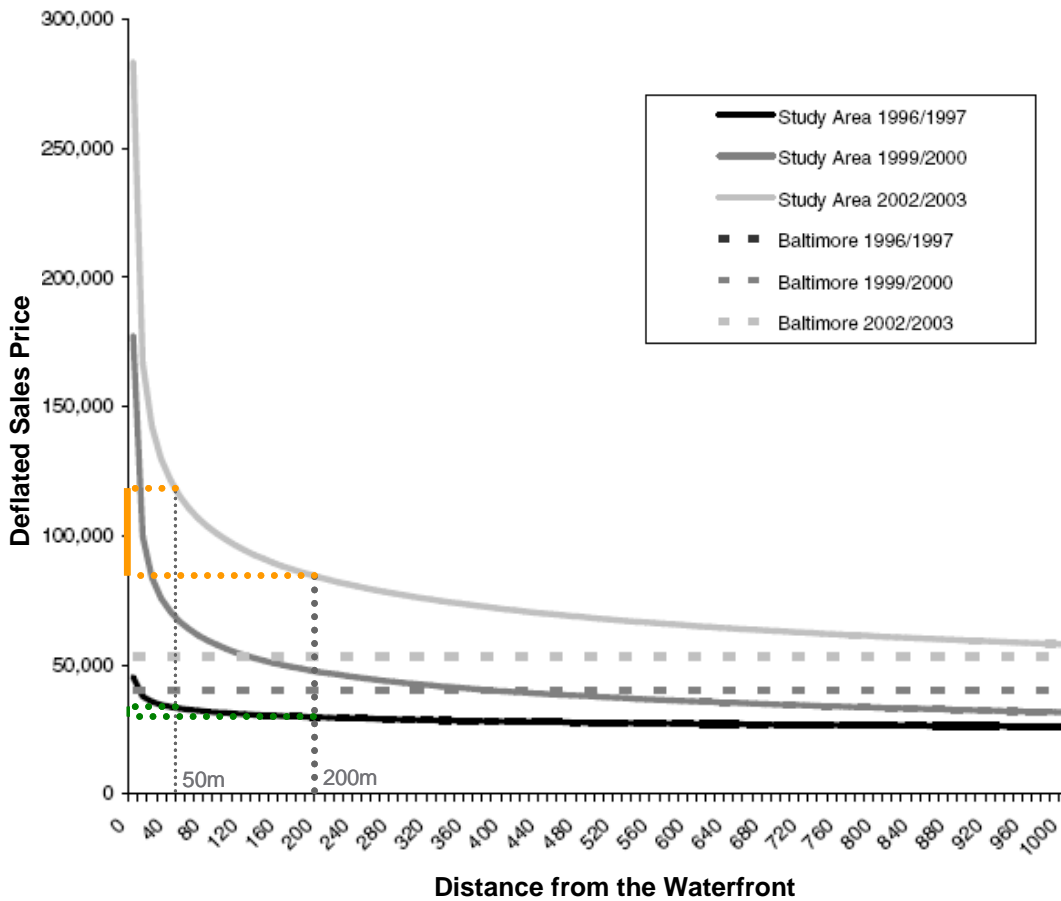
No.	Development	Success Stories
1	<p>Victoria & Alfred Waterfront, Cape Town, South Africa</p> 	<p>One of the world’s most successful waterfront developments, the V&A Project covers a disused 300 acre port site that was divided from the CBD by an infrastructure belt of railways and highways (almost identical to Cleveland).</p> <p>A new slip and a canal between the waterfront and CBD were used to create valuable waterfront space and to reconnect the CBD to its waterfront. V&A retains elements of a working harbor with constant boat and ship activity, and has built upon the areas heritage characteristics, with a classic mix of residential, office, retail and public uses.</p>
2	<p>HafenCity, Hamburg, Germany</p> 	<p>This 388 acre development is Europe’s flagship port redevelopment. It will increase the size of Hamburg’s city center by 40% and extend it to the waterfront. The large development area is divided into self-sufficient “Quarters” which are being developed in phases. High-quality public spaces, dramatic architecture and energy efficiency are important defining elements of the area.</p>
3	<p>Kop van Zuid, Rotterdam, The Netherlands</p> 	<p>Kop van Zuid features the redevelopment of underutilized docklands into a dramatic new mixed-use area of the city. The area is developed so as to connect the poorer southern and wealthier northern parts of the city, with strategic use of infrastructure playing an important role. High-quality public spaces and architectural design make the area attractive for companies, residents and visitors. Integration of some shipping activities and the constant traffic of small boats, barges, water taxis, pilot and tug boats, give the area a unique dynamism.</p>

No.	Development	Success Stories
4	Abandoibarra, Bilbao, Spain 	<p>The 87 acre Abandoibarra area is emblematic of the city of Bilbao's regeneration. In this previously declining industrial town, the redevelopment of vacant industrial areas into attractive public and mixed-use spaces, with the stunning Guggenheim Museum at the visible forefront, has benefited both the city and the wider region.</p>
5	Euralille, Lille, France 	<p>The declining textile town of Lille managed a successful economic recovery based on culture, services and tourism. One central project of this recovery was the 175 acre Euralille development of offices, apartments, a shopping mall, hotels and a congress center adjoining the high-speed railway station serving London, Paris and Amsterdam. The strong cooperation of regional and local authorities was key to the turnaround.</p>
6	Harbor East, Baltimore 	<p>This successful development partnership focuses on 65 acres on the eastern Inner Harbor of Baltimore. Harbor East is the most vibrant area of the Inner Harbor. Original plans were for a low-density residential, office and marina development. However, in response to market demand, the area has developed as a much denser, up-market residential area with flagship hotels. Connectivity and pedestrian accessibility are critical to the area's appeal.</p>
7	South Street Seaport, New York 	<p>The South Street Seaport is a small, historic area in the New York City borough of Manhattan, located where Fulton Street meets the East River, and adjacent to the Financial District. The original mercantile buildings, former Fulton Fish Market and surrounding derelict docklands were transformed into modern tourist malls featuring food, shopping and nightlife, with a view of the Brooklyn Bridge. Tourism and offering urbanites a pedestrian environment to escape the city are important aspects of the area.</p>

No.	Development	Success Stories
8	<p>Bellingham, Washington State</p> 	<p>Port of Bellingham, a small county-wide port, is at the early stages of a major waterfront district development project covering 220 acres. The mixed-use development is constructed mainly on an old industrial site, and extends from the existing neighborhoods to the waterfront. A development vision and master plan for the development are currently being passed, and an implementation body established. This is to become one of the first LEED designed developments in the country.</p>
9	<p>Millennium Park, Chicago</p> 	<p>Millennium Park is located in the heart of downtown Chicago (bordering Michigan Avenue) and is the city's main public space devoted to art, music, architecture, and landscape design within easy access of the CBD. Once an unsightly space dominated by commuter rail lines and surface parking lots, the 24.5-acre park now features the work of world-renowned architects, planners, artists and designers. This unique public space has dramatically driven up surrounding residential values in the city, and supported a re-imagining of Chicago.</p>
10	<p>Three Rivers Park, Pittsburgh</p> 	<p>Similar in size and heritage to Cleveland, Pittsburgh's rejuvenation efforts have paid off – the city topped the list of America's most desirable places to live, and ranked 26th globally in 2005. Three Rivers Park is a major project to redevelop 13 miles of city waterfront, much of which had been abandoned, underused and environmentally compromised. The project integrates the city with its waterfront, creating high-quality public spaces and uses that enhance the city's livability and attractiveness.</p>

Further details of international cases are presented in Appendix B. Most of these waterfront (re)developments have reconnected downtowns to waterfronts, catalyzed positive economic change, brought new investments, increased on-site and adjoining property values, and increased property taxes. Large-scale redevelopments typically lift property values in adjacent and surrounding areas by between 5-10% depending on distance from the water (Exhibit 2). In some cases the increase in property values have reached 25%. As indicated below, these developments have geared up the real estate premium associated with waterfront space and thematic mixed-use development.

Exhibit 2: Waterfront premiums decrease logarithmically away from the water



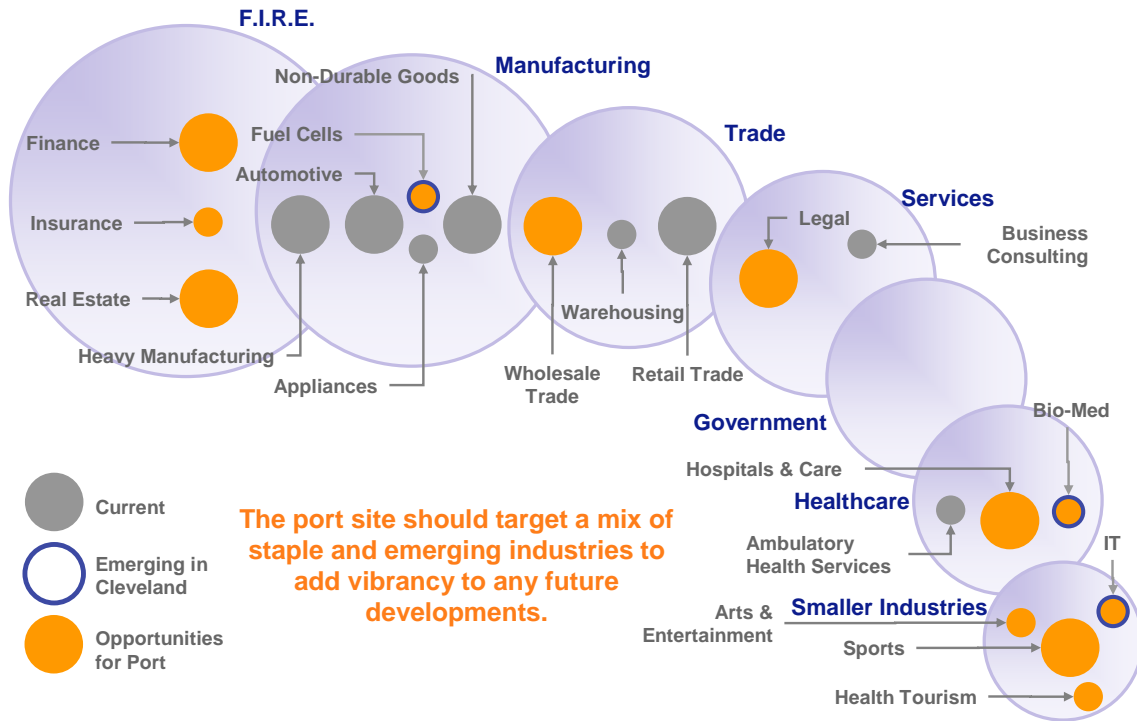
Cleveland’s economy, population, and real estate market appear strong enough to support development of the Port Site

The local economy and population are diverse and attractive market segments are growing

Cleveland’s economy and population provide a foundation for a large-scale real estate waterfront development, despite concerns of economic stagnation and suburban sprawl. The city is currently in the middle of a gradual transition away from traditional smokestack manufacturing industries into a services, knowledge and technology-focused economy. Business and investment promotion entities have helped to increase the area’s visibility regionally and nationally, and their efforts are stabilizing the economic shocks of a shrinking manufacturing base.

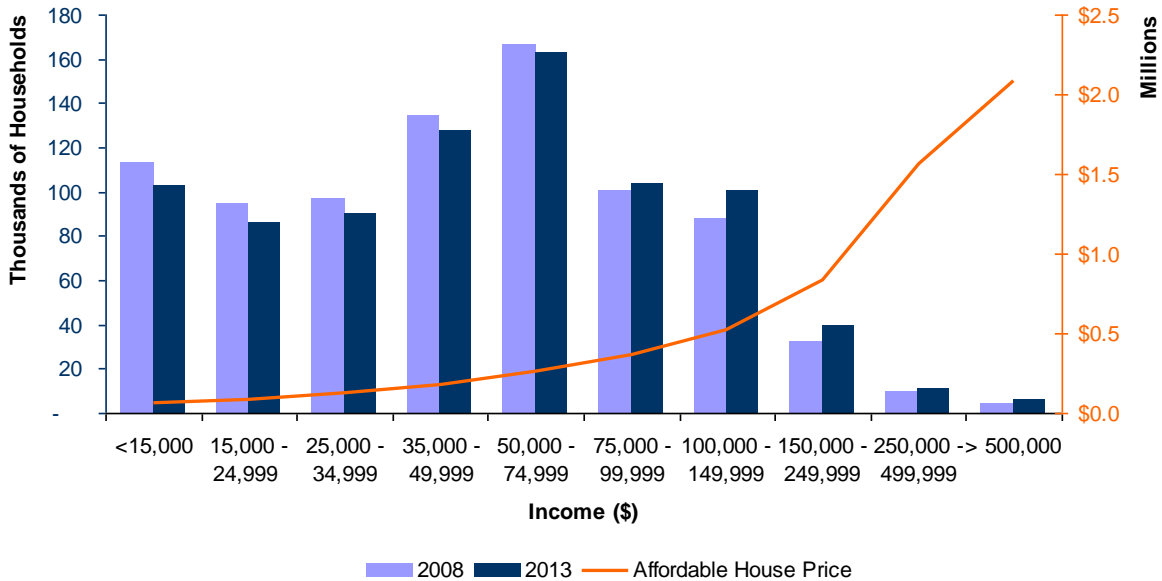
Underneath the lackluster economic growth numbers, knowledge and service-based industries are growing. In fact, of eleven categories of employment, only four have declined over the past five years, while the other seven have grown steadily. In particular, ICT, transportation, financial services and professional services firms have grown more than their peers: these industries are providing ever-greater numbers of jobs and business in the MSA.

Exhibit 3: Based on current MSA Gross Regional Product (GRP) and employment trends, the waterfront can attract a variety of commercial tenants from current and emerging industries



Cleveland's MSA is home to large numbers of well-educated residents with income levels sufficient to support robust consumption in housing, entertainment and retail. Personal income by industry shows that residents earn on average almost \$42,000 annually. This average individual income creates a very large pool of households with incomes higher than \$50,000 per year. In fact, 48% of the households in the Cleveland MSA earn more than \$50,000, representing approximately 400,000 households able to afford a \$200,000 home or higher. Employment too is holding up in Cuyahoga County better than in Ohio as a whole, largely because of the area's stable employment base in value-adding industries, which are increasing as a percent of all employment locally.

Exhibit 4: Cleveland MSA’s households represent significant untapped buying power

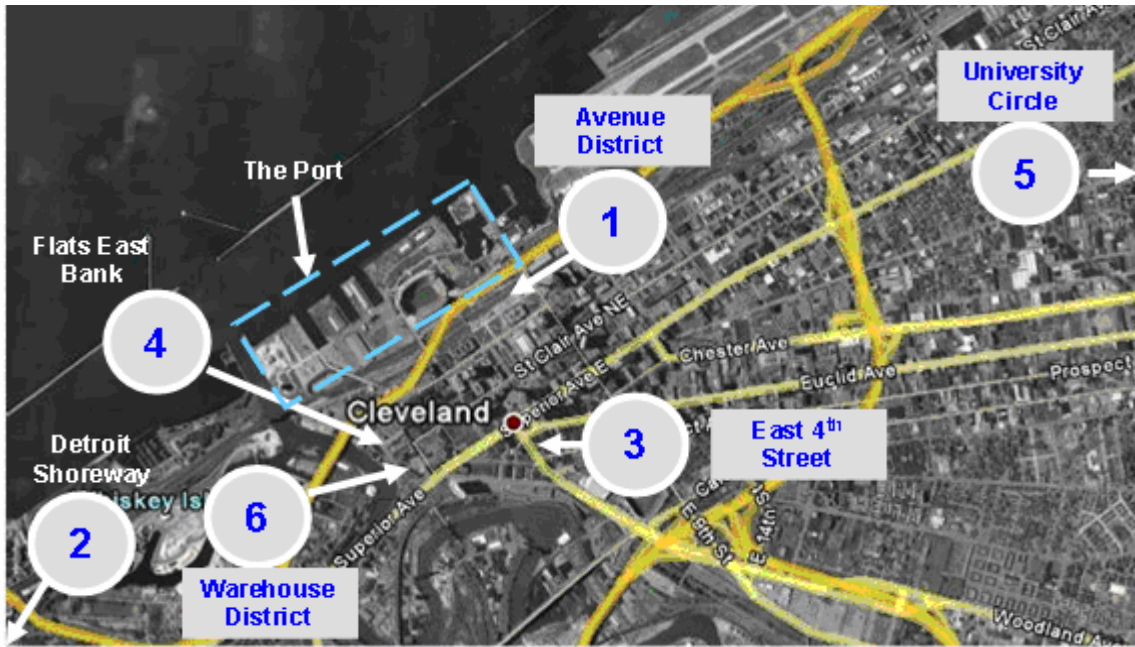


Recent successful developments are transforming Cleveland’s downtown

Downtown Cleveland is the central business district of the City of Cleveland and Northeast Ohio. Reinvestment in the area in the mid-1990s spurred new development that continues to this day, with over \$2 billion in capital projects slated to involve the downtown area over the next few years. While Cleveland has experienced much residential emigration from the city to its surrounding suburbs, Downtown Cleveland is currently one of the few city neighborhoods to gain population. Cleveland's downtown population grew from 7,261 in 1990 to 9,599 as of the 2000 Census. In 2005, downtown Cleveland was rated by the Brookings Institution as one of America's "Emerging Downtowns", due to its 32.2% growth rate over this period. There are 14 planned and ongoing developments of over \$100 million each (including infrastructure-related development), with mixed residential, commercial, and retail uses planned for downtown.

Many of Cleveland’s developments are helping to change the face and character of downtown. However, some major real estate developments are being scaled back and put on hold, or have stalled before groundbreaking. The largest mixed-use real estate developments in Cleveland are the \$230 million Avenue District, and the scaled back Flats East Bank development. However, many Clevelanders are also realizing the advantages of moving back into the city. These competitive downtown developments are not flooding the market with property. Rather, they are revitalizing the downtown area and are attracting a larger percentage of those willing to live, play, and work in the city.

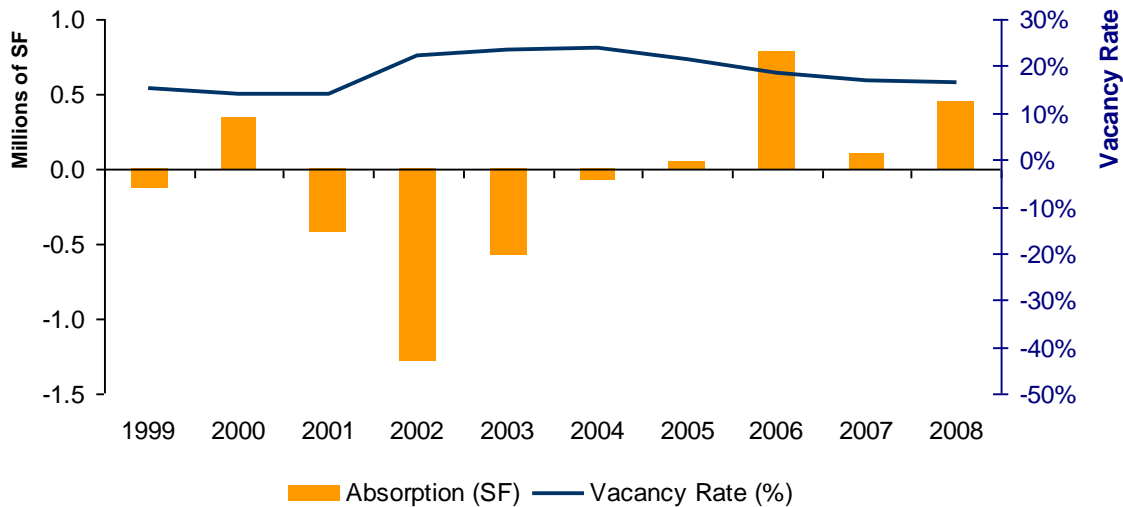
Exhibit 5: Development activity clusters near the Port site



The real estate market offers opportunities for profitable development

Class A commercial space in the CBD is needed because the current inventory is shrinking and absorption trends for commercial property are becoming supportive for new development. Office leasing rates are falling below competitors, but are set to recover in 2013. The industrial market is growing slowly, with increasing absorption as rental prices fall, but the flex market shows even stronger supply and demand fundamentals.

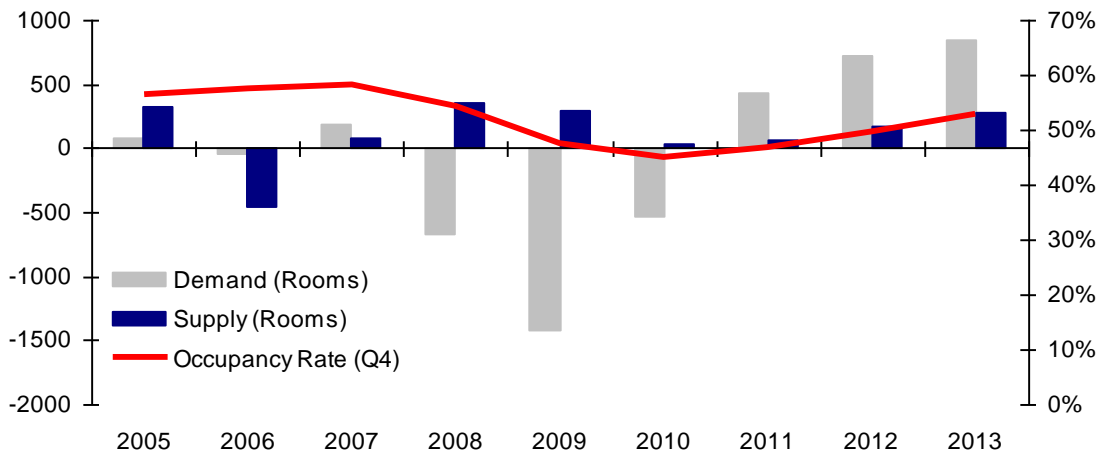
Exhibit 6: Recent Class A commercial absorption downtown has helped lower vacancy rates



Hospitality demand has held up well, and distinct leisure and business niches are developing across the city. The retail property environment in the MSA is under stress from the economic recession, but the CBD appears to be stronger than the regional average with lower vacancy

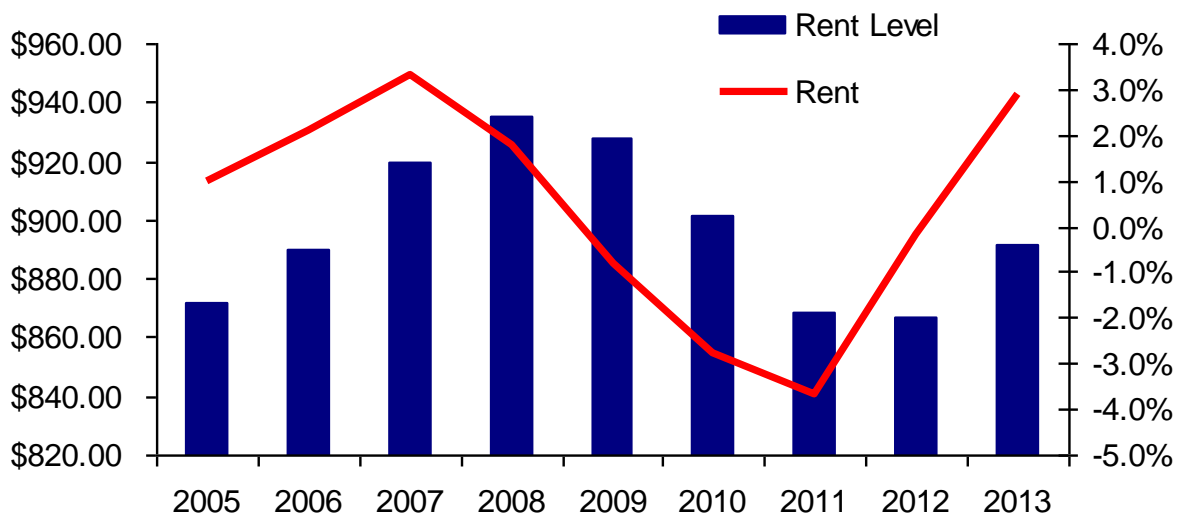
rates and higher lease prices.

Exhibit 7: Hospitality demand is rebounding to pre-financial crisis levels



Residential property is suffering from the recession (deliveries are slowing as construction permits and starts drop) but interest in living downtown remains high within the MSA. Rates of home ownership are falling even as prices show increasing volatility, while rental rates remain reasonably stable. The CBD apartment demand forecast is one of the brightest spots in the MSA's residential market. Thus it is the focus for many recent successful developments.

Exhibit 8: Downtown Cleveland residential rental rates show increased demand and stagnant deliveries are stabilizing vacancy rates



The development options for Port site are supported by location advantages, demand projections and financial analysis

The port site presents a unique development opportunity with solvable barriers to development

The Port site is an attractive area for development because of its connectivity, size and location. It comprises prime waterfront real estate in a high-traffic metropolitan area. The plot is unique; being undeveloped and adjacent to major city arteries, nationally recognized tourist attractions, and Lake Erie. Logistically, the site's relatively large size gives developers flexibility during the first phases of the development. It is possible to concentrate existing port activities on the site, and to phase the relocation of these activities to a new facility in such a way that the real estate development can proceed. The port may retain (part of the) port functions on an interim or longer term basis as an important and defining element that provides character to the waterfront development. Connectivity to the city and land ownership complications present barriers to development, but can be easily solved.

Our market demand model projects development potential for the site to grow as it establishes itself

Our demand-led analysis shows that demand for waterfront development in particular exists over the next twenty years despite a weak real estate market at the MSA level. Demand model results show limited demand initially during development eventually giving way to much stronger demand over time, supported by regional economic diversity and relatively large numbers of high-income households. Maximizing this potential will require the synergistic pull of several mixed uses that will not only create sustainable growth on site, and help revitalize the entire downtown Cleveland area. The model's Aggressive demand option assumes strong market absorption and would allow for 7.3 million square feet of mixed use BUA. Under all development scenarios, the build out on the site would be on average around 3 stories high.

These development options' are profitable and provide strong ground-lease cashflows

Using results from the demand model and development intensity options, we calculated the financial returns over the twenty-year projected period to be positive for all scenarios analyzed. We evaluated different levels of risks along with each development option, to understand various timing, density, and mix options available. The demand-led results were modified to limit the risk of over-supplying the site with built-up area with BUA.

The recommended development plan is built on local demand, existing infrastructure and an independent implementation vehicle

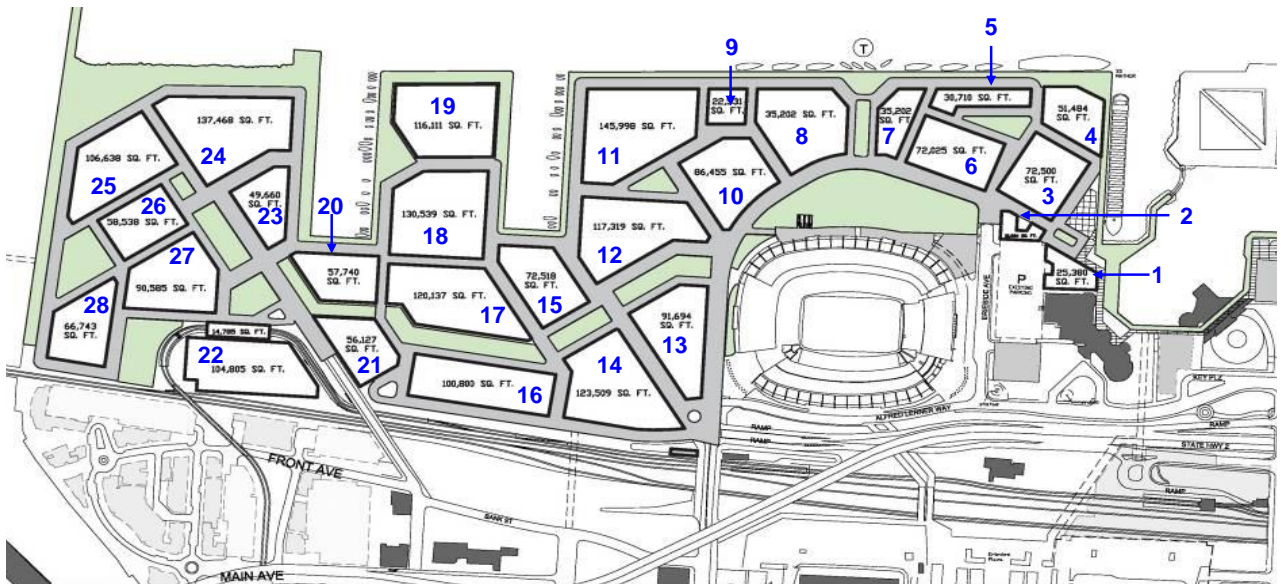
Strategic phasing of development built around local demand drivers will create sustainable value

We recommend that the Port's development efforts use a human-scale, vibrant neighborhood theme to bring the city to the water's edge, and bring the water to the city with activities that draw water-users to the area. This development theme should be based on local demand drivers (in preference to focusing on distant markets initially), and should follow a flexible, phased development approach. Within the overall vision of the site's development character, each phase should contain a mix of uses and one or more catalytic demand drivers that attract and retain users to the site. These catalytic projects can be targeted to market segments, such as an aquarium focused on the family market, or an older adult themed music and recording center. But in each case these projects should increase the site's uniqueness and pique the public's curiosity

to see and explore what is available there. One important lesson seen worldwide with waterfront developments is the need to maintain flexibility with regard to market trends and responses.

Development will occur in phases, each potentially conducted either by a single private sector developer or, depending on the scale, a number of developers. To maintain focus, each phase will have a unique theme or overarching goal consistent with the overall vision for the waterfront site. Ideally, there will be a common architectural language and style across the site. The development plan and theme will have to evolve as the community's needs change over time. The recommended development phasing considers demand, waterfront allure and mix synergy when allocating built-up area across the site over the twenty-year timeframe. These phases will fall under a single theme of a new, vibrant, human-scaled, and distinct but well integrated new neighborhood that is unique because of the synergy of its diverse mixed uses, its location on the water, with views of and easy access to downtown, and with interesting attractions that are available on site. Each phase will have unique focuses under the project theme, with the focus coming in part from catalytic demand drivers that are designed to attract and maintain interest in the site.

Exhibit 9: The current physical plan call for a number of development blocks that will be completed over time



The 113 acre master plan includes integrating with adjacent developments and the Browns stadium which will require linking infrastructure. The development footprint will be roughly 50% of the site (2.4 million square feet), requiring approximately 1.17 million square feet (or 25% of the site) for streets, and leaving the last quarter of the port site available for parks and open space. These parks and public spaces will help provide the foot traffic and local visitor spaces needed to sustain vibrancy in the development.

Exhibit 10: Development blocks by phase

Phase	One	Two	Three	Four	Five
Block numbers	1-4	5-7*	8-15	16-21	22-28
* Note that Phase two includes a portion of the Browns Stadium lot					

The development plan’s development blocks, phasing considerations and average floor-area-ratio (FAR) are blended with our demand-led analysis in Exhibit 11, showing how 6.7 million square feet of BUA are delivered over the first twenty years of the project’s life.

Exhibit 11: The twenty-year development plan (demand-led BUA blended with the physical development blocks)

* Approximate square feet	BASE					
Phase	1	2	3	4	5	Project
Residential	-	206,906	570,938	348,908	645,159	1,771,911
Commercial	102,052	103,453	570,938	610,590	460,828	1,847,861
Retail	170,087	103,453	525,263	436,136	368,662	1,603,601
Hotel	213,824	-	365,400	-	368,662	947,887
Special Purpose	-	-	251,213	348,908	-	600,121
TOTAL (SF)	485,964	413,811	2,283,753	1,744,542	1,843,311	6,771,381

By Units	BASE					
Phase	1	2	3	4	5	Project
Residential Units	-	243	672	410	759	2,085
Hotel Rooms	679	-	1,160	-	1,170	3,009

* Sums are rounded

Geographically, development should begin from the already established tourism cluster on the site’s eastern edge, adjacent to the Rock and Roll Hall of Fame, Brown’s Stadium and the Great Lakes Science Center. This phase should develop a retail, hospitality, entertainment and tourism identity that can be built on in later phases. Another phase with immediate market attractiveness is the area near the current RTA loop, which can support a mixture of up-scale residential, retail and entertainment options. Attention should be paid to possible market interest to undertake development on this western edge of the site at a relatively early stage. The rest of the site can be filled in with commercial, residential and retail and entertainment options that should be (ideally) unique within the region. Across the entire site, park lands and open common areas should act as linkage points that tie the site together as an identifiable neighborhood. Once completed, the site’s 113 acres should be developed at low densities, reflecting the 6.7 million square feet of BUA to be placed on only 50% of the total site (with the remainder being open areas).

The development plan's costs and revenues are shown in Exhibit 12. This development plan's costs and revenues are shown in exhibit 73 below. The project level revenues are estimated to be in excess of \$4.18 billion over the twenty-year development period on development expenditures of \$1.34 billion. The port's nominal ground-lease receipts are projected to be \$1.088 billion, of which \$365.6 million is actual payments made to the land owners, and the remaining \$722.9 million represents the capitalized value of future cash flows. These lease revenues are stable at \$15.36 million per year as of year twenty, giving a present value to the site of nearly \$376.8 million. The site would then be valued at \$6.85 million per developable acre, or \$3.56 million per acre for the total 113 acres site.

below. The project level revenues are estimated to be in excess of \$4.18 billion over the twenty-year development period on development expenditures of \$1.34 billion. The land owners' nominal ground-lease receipts are projected to be \$1.088 billion, of which \$365.6 million is actual payments made to the land owners, and the remaining \$722.9 million represents the capitalized value of future cash flows. These lease revenues are stable at \$15.36 million per year as of year twenty, giving a present value to the owners of the site of nearly \$376.8 million. The site would then be valued at \$6.85 million per developable acre, or \$3.56 million per acre for the total site (on 113 acres).

Exhibit 12: Development costs and revenues

Nominal Development Revenues (unless otherwise noted)	
Project level revenues (not including ground lease payments)	\$4,180,000,000
Total ground lease payments(to the land owners)	\$1,088,600,000
Of which, Ground leases during first twenty-years	\$365,600,000
Capitalized future revenues after year twenty	\$723,000,000
Annual lease payments (at year twenty)	\$15,360,000
Site level value calculations (present values includes residual)	
PV of total lease payments discounted at 6.0%	\$376,800,000
PV of total lease payments per each acre (113 acres)	\$3,560,000
PV of total lease payments per each developable acre (55)	\$6,850,000

Build upon existing infrastructure to create a unique extension of downtown Cleveland

The ability for the development to stay vibrant hinges on fluid integration into its surrounding area. First, being vibrant and unique may bring people initially to the site. However, high levels of accessibility will be instrumental in attracting and retaining the numbers of people to live, work and enjoy themselves that are needed for success. Secondly, the site must be able to draw on the success of the Cleveland Rock and Roll Hall of Fame and Science Center and maintain the prestige of the central business district. Development must take advantage of current linkages into the city to create a successful development.

The infrastructure investments required to develop the site will cover sub-surface and surface development issues, including roadways, bus and rail extensions, utilities, and hardscaping the site. The estimated costs of this infrastructure are approximately \$162 million.

As part of developing the site, current port operations could be condensed onto a smaller footprint and moved to the new port site or alternate locations. The details, timing and operational impact of that move should be considered and approved within a reasonable time after launching the development.

An implementation vehicle may be required to coordinate financing, project development and risk management

Specific risks and project goals should be evaluated prior to selecting the appropriate implementation approach for the Cleveland waterfront development. Governance of the project and of the wider stakeholder world will change and each change may increase the risk of commitment to the project (be that commitment time, capital, support or something else). Vocal stakeholder groups can increase the risk that an entire project is mired in legal, political or public relations battles because of narrow interests. Market changes may also require substantial alterations to the development plan's timing and scale. Finally, failure to achieve the benefits that each stakeholder group expects raises the risk of project delays. Each of these issues should be considered when planning the implementation approach and model.


Waterfront (re)developments are complex, multi-use and multi-faceted development projects. Successful projects have strategically mobilized public stakeholders, communities, the private sector and investors around a unifying development vision. To achieve this, most projects have established for-purpose development and management bodies that are able to undertake complex development projects of this nature, and to steer the development in phases over 20 year implementation periods. Similarly, CCCPA will need to determine what the most appropriate organizational vehicle is for undertaking the waterfront development successfully and delivering the benefits promised to stakeholders.

A development-focused implementation entity can help to secure finance for the development. The development body tasked to manage this venture could be staffed by development professionals and experienced outsiders who know how to raise and deploy finance for large-scale developments. The staff's skills and experience would also be useful in demonstrating to lenders and other developers that the site's development planning strategy is being carefully considered to preserve and maximize the value of the available assets.




1. SIMILAR SUCCESSFUL REDEVELOPMENT EXAMPLES WORLDWIDE SHOW WHAT IS POSSIBLE IN CLEVELAND

Several cities around the world that are similar to Cleveland – principally in terms of having demand-constraints – have undertaken successful city and waterfront redevelopment projects. Ten such projects are described in this section to illustrate the important lessons that CCCPA can use to craft its strategy for redeveloping Cleveland’s waterfront. These projects have shown that where new developments are linked to their cities’ urban core, a wider lift in demand for real estate can be achieved that has revitalized lackluster areas.

Figure 1: Case studies examined for this report

No.	Development	Success Stories
1	<p>Victoria & Alfred Waterfront, Cape Town, South Africa</p> 	<p>One of the world’s most successful waterfront developments, the V&A Project covers a disused 300 acre port site, that was divided from the CBD by an infrastructure belt of railways and highways (almost identical to Cleveland).</p> <p>A new slip and a canal between the waterfront and CBD were used to create valuable waterfront space and to reconnect the CBD to its waterfront. V&A retains elements of a working harbor with constant boat and ship activity, and has built upon the areas heritage characteristics, with a classic mix of residential, office, retail and public uses.</p>
2	<p>HafenCity, Hamburg, Germany</p> 	<p>This 388 acre development is Europe’s flagship port redevelopment. It will increase the size of Hamburg’s city center by 40% and extend it to the waterfront. The large development area is divided into self-sufficient “Quarters.” which are being developed in phases. High-quality public spaces, dramatic architecture and energy efficiency are important defining elements of the area.</p>
3	<p>Kop van Zuid, Rotterdam, The Netherlands</p> 	<p>Kop van Zuid features the redevelopment of underutilized docklands into a dramatic new mixed-use area of the city. The area is developed so as to connect the poorer southern and wealthier northern parts of the city, with strategic use of infrastructure playing an important role. High-quality public spaces and architectural design make the area attractive for companies, residents and visitors. Integration of some shipping activities and the constant traffic of small boats, barges, water taxis, pilot and tug boats, give the area a unique dynamism.</p>

No.	Development	Success Stories
4	Abandoibarra, Bilbao, Spain 	<p>The 87 acre Abandoibarra area is emblematic of the city of Bilbao's regeneration. In this previously declining industrial town, the redevelopment of vacant industrial areas into attractive public and mixed-use spaces, with the stunning Guggenheim Museum at the visible forefront, has benefited both the city and the wider region.</p>
5	Euralille, Lille, France 	<p>The declining textile town of Lille managed a successful economic recovery based on culture, services and tourism. One central project of this recovery was the 175 acre Euralille development of offices, apartments, a shopping mall, hotels and a congress center adjoining the high-speed railway station serving London, Paris and Amsterdam. The strong cooperation of regional and local authorities was key to the turnaround.</p>
6	Harbor East, Baltimore 	<p>This successful development partnership focuses on 65 acres on the eastern Inner Harbor of Baltimore. Harbor East is the most vibrant area of the Inner Harbor. Original plans were for a low-density residential, office and marina development. However, in response to market demand, the area has developed as a much denser, up-market residential area with flagship hotels. Connectivity and pedestrian accessibility are critical to the area's appeal.</p>
7	South Street Seaport, New York 	<p>The South Street Seaport is a small, historic area in the New York City borough of Manhattan, located where Fulton Street meets the East River, and adjacent to the Financial District. The original mercantile buildings, former Fulton Fish Market and surrounding derelict docklands were transformed into modern tourist malls featuring food, shopping and nightlife, with a view of the Brooklyn Bridge. Tourism and offering urbanites a pedestrian environment to escape the city are important aspects of the area.</p>

No.	Development	Success Stories
8	Bellingham, Washington State 	<p>Port of Bellingham, a small county-wide port, is at the early stages of a major waterfront district development project covering 220 acres. The mixed-use development is constructed mainly on an old industrial site, and extends from the existing neighborhoods to the waterfront. A development vision and master plan for the development are currently being passed, and an implementation body established. This is to become one of the first LEED designed developments in the country.</p>
9	Millennium Park, Chicago 	<p>Millennium Park is located in the heart of downtown Chicago (bordering Michigan Avenue) and is the city's main public space devoted to art, music, architecture, and landscape design within easy access of the CBD. Once an unsightly space dominated by commuter rail lines and surface parking lots, the 24.5-acre park now features the work of world-renowned architects, planners, artists and designers. This unique public space has dramatically driven up surrounding residential values in the city, and supported a re-imagining of Chicago.</p>
10	Three Rivers Park, Pittsburgh 	<p>Similar in size and heritage to Cleveland, Pittsburgh's rejuvenation efforts have paid off – the city topped the list of America's most desirable places to live, and ranked 26th globally in 2005. Three Rivers Park is a major project to redevelop 13 miles of city waterfront, much of which had been abandoned, underused and environmentally compromised. The project integrates the city with its waterfront, creating high-quality public spaces and uses that enhance the city's livability and attractiveness.</p>

These case studies clearly show that the redevelopment of (old) port or industrial sites can contribute greatly to the revitalization of a city. In comparable cities, waterfront (re)developments have reconnected downtowns to waterfronts, catalyzed positive economic change, brought new investments, increased on-site and adjoining property values, and increased property taxes.

The table below provides an overview of the key elements of these development cases, including their size, development theme, city integration, uses, infrastructure, duration, financing and implementation approach. Detailed descriptions of each case are provided in Appendix B.

Figure 2: Key features of development cases

Case	Victoria & Alfred Waterfront	Hafencity	Kop van Zuid	Abandoi-barra	Euralille	Harbor East	South Street Seaport	Bellingham	Millennium Park	Three Rivers Park
Location	Cape Town, South Africa	Hamburg, Germany	Rotterdam, The Netherlands	Bilbao, Spain	Lille, France	Baltimore, Maryland	New York City, New York	Bellingham, Washington State	Chicago, Illinois	Pittsburgh, Pennsylvania
Size (acres)	300	388	309	87	175	65	3.5	220	25	13 miles
Development Themes	<ul style="list-style-type: none"> Working harbor and water-related activities Heritage architecture Mixed-use, with strong tourism and commercial component High-quality public space 	<ul style="list-style-type: none"> Highly urban expansion of Hamburg as maritime city High quality design, architecture, space Sustainability and energy efficiency Mixed use 	<ul style="list-style-type: none"> Working harbor High quality architecture Converting old buildings to new uses 	<ul style="list-style-type: none"> Culture and art Greenery Flagship projects Extraordinary architecture and landscape 	<ul style="list-style-type: none"> Shopping and tourism Culture and art Central hub in the high speed railway network 	<ul style="list-style-type: none"> “The most prominent mixed-use urban waterfront development on the east coast” Self contained, mixed amenities Upscale residential and office Live and work in the area walking on foot 	<ul style="list-style-type: none"> Historical preservation Tourism and retail Escape for urbanites 	<ul style="list-style-type: none"> “Connecting Bellingham with the Bay” Sustainable and environmentally-friendly Eliminate town’s legacy of environmental pollution LEED Design, high tech fiber optics Lead economic redevelopment of city Incorporation of educational institutions 	<ul style="list-style-type: none"> Dramatic public space for arts, culture and open / green space 	<ul style="list-style-type: none"> Development of more than 10 miles of public and private property along the riverfronts into continuous accessible park system, serving as public commons for the city
City Integration	<ul style="list-style-type: none"> Reconnect CBD to its waterfront New canal dug from waterfront to CBD 	<ul style="list-style-type: none"> Energize the city economy, culture, society Opens waterfront while not 	<ul style="list-style-type: none"> Strategic development on Maas river to connect ‘wealthy north’ and ‘poor south’ 	<ul style="list-style-type: none"> One of several projects to revitalize Bilbao Revitalization approach 	<ul style="list-style-type: none"> One of several projects within the revitalization strategy for the entire 	<ul style="list-style-type: none"> Planned low-density street-level not competing with Inner Harbor, but developed 	<ul style="list-style-type: none"> Part of large-scale redevelopment of Lower Manhattan and NYC as a whole 	<ul style="list-style-type: none"> Catalyst for economic development of the city Extend the CBD, University 	<ul style="list-style-type: none"> Transform unsightly railyard and open parking Create exceptional attraction to 	<ul style="list-style-type: none"> Linking places and destinations through publicly accessible riverfront

Case	Victoria & Alfred Waterfront	Hafencity	Kop van Zuid	Abandoi-barra	Euralille	Harbor East	South Street Seaport	Bellingham	Millennium Park	Three Rivers Park
		covering city skyline <ul style="list-style-type: none"> Flagship expansion to catalyze retail, entertainment, leisure, culture and tourism 	of Rotterdam	also consists of environment clean-up, economic restructuring and social programs.	Metropolitan area of Lille.	high density due to market demand <ul style="list-style-type: none"> Differentiated from Inner Harbor by less tourism and more business and residential 		and residential units to the waterfront (rather than create a new independent area)	position Chicago <ul style="list-style-type: none"> Generate high quality lifestyle pull to the downtown 	<ul style="list-style-type: none"> Public commons for the city
Public Use / Activities	<ul style="list-style-type: none"> Aquarium Maritime Museum University Business School Ferry terminal 	<ul style="list-style-type: none"> Concert Hall Maritime Museum Science Centre University Elementary School Cruise terminal 	<ul style="list-style-type: none"> Port Authority Offices Cruise Terminal Regional Court Tax office University Student Housing Theatre Schools Museums 	<ul style="list-style-type: none"> Guggenheim Bilbao museum Congress and Concert Centre Library University auditorium Maritime Museum Park area 	<ul style="list-style-type: none"> Conference centre Pluralist religious centre 	<ul style="list-style-type: none"> Marina 	<ul style="list-style-type: none"> Historic Warehouses South Street Seaport Museum 	<ul style="list-style-type: none"> Western Washington University Terraquarium Marinas Beaches Parks and trails 	<ul style="list-style-type: none"> Parks and open space Galleries Concert venues Theaters Plaza and ice rink Cycle facility 	<ul style="list-style-type: none"> Parks and open space Public art Recreational opportunities Hosting major events
Key Infrastructure	<ul style="list-style-type: none"> New Basin (to increase waterfront space) Canal from waterfront to CBD Raised pedestrian crossing to CBD Connecting roads and junctions 	<ul style="list-style-type: none"> Subway connection and 2 stations Connecting roads Flood protection measures Energy efficient district heating system 	<ul style="list-style-type: none"> Erasmus Bridge Metro Station and underground line Tram lines and stations Access road infrastructure Port facilities and cruise terminal Viaduct 	<ul style="list-style-type: none"> New subway system, consisting of two lines Tram line Pedestrian walkway 	<ul style="list-style-type: none"> Railway station Subway station Tram station Eastern section of ring road 	<ul style="list-style-type: none"> Marina Roads Waterfront Promenade Pedestrian Walkways Free Shuttle Services 	<ul style="list-style-type: none"> Easy pedestrian access to public transportation 	<ul style="list-style-type: none"> Series of multi-modal streets extending from CBD Extensive high speed bikeway Pedestrian and bike bridges 	<ul style="list-style-type: none"> Decking the commuter railyard Underground parking BP bridge combining pedestrian connectivity with exceptional architecture 	<ul style="list-style-type: none"> Three Rivers heritage Trail Pedestrian bridges Boat ramps and marinas Promenades

Case	Victoria & Alfred Waterfront	Hafencity	Kop van Zuid	Abandoi-barra	Euralille	Harbor East	South Street Seaport	Bellingham	Millennium Park	Three Rivers Park
Duration	18 years (1989 – 2007)	20 – 25 years (2004 -)	20 years (1990 – 2010) Slower pace due to lower current demand	20 years (1992-2012)	18 years (1992- 2010) Slower pace due to lower current demand	20+ years	6+ years	30+ years	6 years (1998 – 2004)	20 years (2000-2020)
Financing	~ \$800 m total investment Initial \$50m catalytic financing, thereafter self-financing	~\$ 1.8 billion public infrastructure Public facilities paid by city ~\$ 7 billion private	~ \$3 billion total investment	~ \$900 million total investment, of which ~ \$400 million public investment in redevelopment of the area, the Guggenheim museum and the Congress and Concert Centre.	~ \$1 billion total investment	~ \$1 billion estimated total investment		Public ~ \$347 million for site clean-up, prep, infra	~ \$475 million from city for infrastructure (\$175 million bond; \$95 million TIF) \$220 million from individual, foundation and corporate donors	~ \$3.5 billion total investment in various waterfront developments (also including casino, office buildings, residential projects, new stadiums along the riverfront)
Implementation Body	Publically-owned SPV SPV sold privately in 2006 for ~\$1 billion	City-owned SPV	Special purpose public development body	Publically owned SPV, owned in equal parts by the central State administration and Basque administration	SPV, owned by public sector parties (54%) and private sector parties (46%)	Baltimore Development Corporation	P3 Body	City and Port Authority Waterfront Advisory Group	Public Building Commission of Chicago, with donors	Independent, nonprofit Public-Private Partnership

These project experiences show that successfully linking of waterfronts (re) developments with established urban cores (often CBDs or downtown areas) can enhance the success of the project itself, and spread benefits more widely in the city. There are several key lessons regarding the successful planning and implementation of these projects, including:

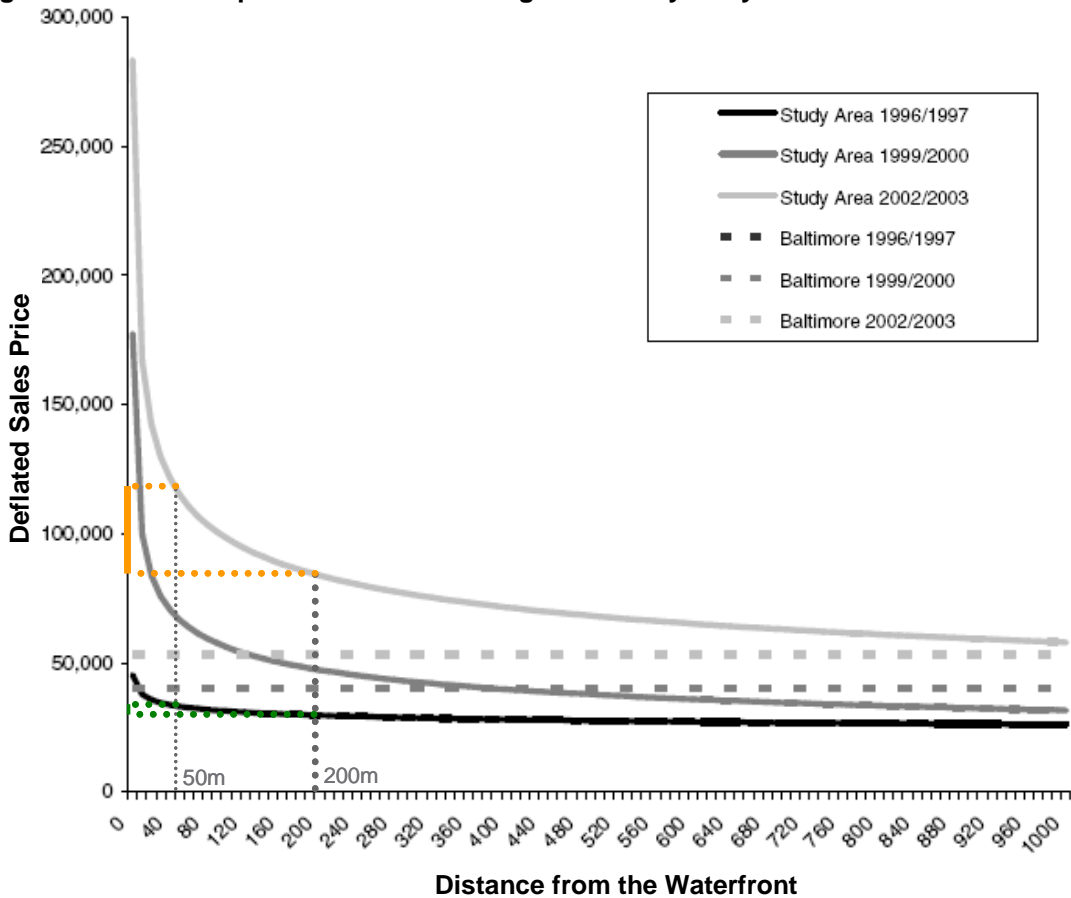
- **Waterfront and other demand premiums** – the use of the waterfront and other drivers of demand to develop pricing premiums
- **Development theme** – use of a theme to give focus and help structure developments
- **Market mix and tenancy** – development of a real estate product mix that is attractive to the targeted tenants
- **City integration** – links from the project site to the existing city that helps show the project achieves wider city objectives
- **Key infrastructure** – on-site and connecting infrastructure
- **Public uses and activities** – the public uses that are incorporated in the development
- **Port aspects** – issues regarding the site's port activities
- **Financing** – overall investments made and information regarding the financing of the project
- **Implementation body** – the approach and vehicle used to implement the project
- **Duration** – the duration of time the project has taken

Waterfront and other demand premiums Research on the impacts of large-scale city redevelopments shows that property values in adjacent and surrounding areas rise on average by 5% to 10%, and in some cases even 25%.¹ Successful new developments alter the demand for the land and buildings on their sites. For waterfront developments, one of the most often noted demand measures is the waterfront premium, or the increase in price that a buyer would willingly pay for a property that is on (or with views of) the water. Research shows that this pricing premium falls very quickly the farther one is from the water. Thus, developers attempt to manage their products to maximize this effect by providing water views and access from as many places in a development as possible (think of the Palm Islands in Dubai, with long stretches of beachfront for each house). Parks, too, exhibit similar behavior in terms of adding a premium to market pricing in their areas, but with a less pronounced fall in value the farther one travels from the park.²

¹ De Sousa, Wu and Westphal, 2009: Assessing the Effect of Publicly Assisted Brownfield Redevelopment on Surrounding Property Values; Oliva, 2006: The Effects of Waterfront Development on Housing Prices: The Case of Eastern Baltimore; City of Chicago, 2005: Millennium Park Economic Impact Study; Ding, Simons and Baku, 2000: The Effect of Residential Investment on Nearby Property Values: Evidence from Cleveland, Ohio.

² It can be noted, that anything that satisfies a particular group's needs or is intrinsically unique (such as an iconic building, the world's largest anything, or public art installations) can generate demand to live, work, shop or just play next to it. This demand can translate into higher property and land prices. While the waterfront premium is highest immediately adjacent to the water, it still provides higher average prices across the development site.

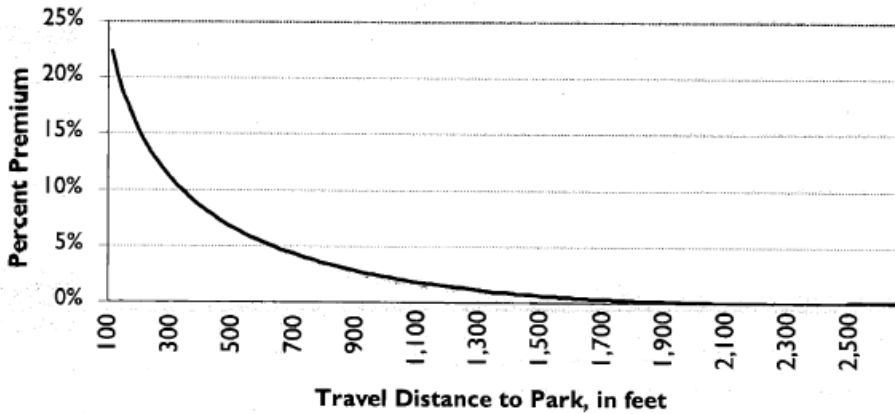
Figure 3: Waterfront premiums decrease logarithmically away from the water



Key insights from studies made on the waterfront effect are that

- Waterfront property values drop logarithmically with distance, but still have helped to drive up municipal property values.
- The waterfront premium on property values increases with time in successful developments in Baltimore (as seen in Figure 3):
 - In 1996, the difference (green, visible on the lower left of the graph) in house prices between houses sold 50 meters and 200 meters from the waterfront are negligible
 - By 2002, the difference (orange) represents a 30% premium on the house located 200 meters from the waterfront.
- Other studies done in Britain show that:
 - The prices of houses on the waterfront were 3-5% higher than houses further away
 - A corollary study indicates that other factors (e.g., access to waterfront views, canals) can be equally significant to the waterfront location.

**Figure 4: Park premiums are similar, although less steeply curved
Impact of Proximity to Park**



Parks too can provide this land value increase. For example, studies of parks in residential neighborhoods of Chicago show that community parks may provide adjacent houses with a 20% premium over similar houses not near a public park. But the park must meet residents' needs or it will not produce any premium over nearby houses. The property's market premiums tend to occur as expectations of a market turnaround become manifest (i.e., when the public sees the development as a success).

Strategic development theme and focus: The current port site will have to develop a theme that initially builds on the current demand drivers, and then introduces new businesses and destination attractions that bring attention and visitors to the site. Each case study had a development theme that created this attention and eventually a demand for real estate on the site. Often the cases showed that linking water uses with the urban core or simply extending the city to the water's edge and giving residents and visitors new cultural and entertainment options provided sufficient focus to bring in successful development options.

From the case studies, four strategic parameters can be distinguished that are crucial for the success of a redevelopment:

1. Proximity to the water has value for many people that translates into increased demand for the site's products: successful developments capitalize as much as possible on this waterfront premium.
2. Public spaces and high-quality architecture attract visitors and patrons.
3. The right mix of uses is important: uses should be complementary and reinforce each other. Public facilities and functions, retail and hospitality make the area exciting while residential and office uses can capture this extra value (which in return can be used to finance the additional investments required).
4. Most of the cases examined had a development theme that created attention and eventually demand for real estate on the site. Cleveland's current Port site will need to develop such as "... a modern lifestyle that is on the water, but in the heart of the city."

Additional insights for the Port site's development that came from analyzing the development themes are that:

- Waterfront developments created unique urban places (hence a unique offer in local real estate markets): waterfront space is a limited commodity, the harbor and water-related uses add character to the development, and working harbors can contribute economic value.
- Success can be achieved in many ways. The main focus or theme varies for the different projects: some introduced new culture or leisure functions, while others create an exciting public space or expanded the existing CBD (emphasizing urbanity). Each waterfront should, however, be developed around its unique location, character and local circumstances.
- In many cases the waterfront development was greeted with a sense of liberation: the city had been cut off from its waterfront for a long time and would now be reconnected to it.
- In all of the projects examined, the waterfront was clearly utilized to create added value. Old port buildings were integrated in the project, some harbor functions were retained, extra waterfront was created in some cases, views of the waterfront were maximized, and the waterfront was used for recreational activities and major events.
- The most successful projects paid particular attention to the quality of architecture and public spaces, often by involving leading international architects and designers.
- In many projects sustainability and energy efficiency are an integral part of the whole development, which is also used to differentiate the project.

Market mix and tenancy: Successful mixed-use developments depend on sufficient market demand for individual constituent uses, be they housing, retail, office, or others. However, there can and should be a market premium generated from the interdependency of these uses. Otherwise, the effort that is required to plan and design the master development will not be repaid. In the waterfront projects examined, developers realized that effective urban design and architectural solutions must take advantage of the complementarities while minimizing potential conflicts between uses. For example, while office and residential uses are generally complimentary, this does not mean that they should share the same lobby.

- Mixed uses are the best means to built vitality, but there can be different concentrations of the mix across a given development site.

Integration of the development within the city: Redevelopment of the waterfront is never an isolated event. It is usually part of a wider set of initiatives to revitalize a city or region. Integration of the waterfront project with the CBD needs to be well thought out, and coordination with other initiatives that are taking place is crucial.

- Successful waterfront redevelopment projects were also part of a broader strategy to revitalize the whole city.
- Integration of the project with the existing city can take place in multiple ways: realizing connecting infrastructure, creating attractive and easy passages, and reinforcing the identity of the existing city and buildings through the spatial and architectural design.
- Integration with the city not only takes place on a physical level, but also on the economic, environmental and social levels.

Key infrastructure: Integration between the Port and the central business district depends on the expansion of existing infrastructure, especially transportation options and corridors. A three-fold approach addressing road, rail, and pedestrian options will be needed to create a feeling of integration with the existing city. The cases also show that on-site infrastructure, especially for green technologies and advanced ICT backbones can seed the site for modern industries to take root.

- Linking infrastructure connecting the development to the rest of the city and the wider region is critical. Accessibility draws demand: infrastructure and high-quality urban spaces draw demand by providing easy accessibility and increasing the likelihood patrons would stay on the waterfront.
- In some cases a powerful impulse is given to the revitalization process by new infrastructure connecting the city to a wider network of cities (e.g., a new high-speed railway line, a bridge, etc)
- Think modern and modular: the infrastructure demanded over the coming decade will be green, ICT-enabled and flexible. Plan to develop these ideas into implementation concepts so that new industries and urbanites want to locate on the Port site.

Public functions and land use mixes: An important insight from the cases is that waterfronts are often used as sites for public functions and gatherings such as concerts, live outdoor theater performances, sporting, and other events that are usually held elsewhere. Cleveland’s weather permits the operation of outdoor events during much of the year. The lake provides an idyllic backdrop that cannot be replicated anywhere else in the city.

- (Re)locate public functions to the area to create development momentum – e.g., Port Authority offices, museums, public functions.
- Public access to the waterfront is of great importance, as it plays an important role in the identity of a city, can provide many recreational opportunities, and can serve as a public commons.

Port aspects: In a number of the cases examined, existing port operations had been integrated in the development to create visual activity along the waterfront. The most valuable land on the site will include sweeping views of the water and downtown skyline. In most cities, waterfront views have a premium; there is no reason to believe that this experience cannot be replicated in Cleveland. An operating port thus potentially becomes an economic driver for development. Early development near the river could create a venue where visitors and residents can experience the economic activity and views at the mouth of the river. Particular emphasis can be placed on the impressive spectacle of the ore ships navigating the Cuyahoga River’s bends.

- Some harbor functions may be retained to keep a working harbor atmosphere, which adds character and vitality to the area.

Financing: Successful waterfront developments tend to have innovative and sometimes complicated financial structures. These are usually designed for the specific development, and often with large up-front investments in infrastructure and tax-incentives to attract developers and businesses to the area. The Port site’s development may require similar innovations in terms of asset financing, tax abatements and infrastructure investment to maximize profitability to public and private providers of capital.

- Most projects are a combination of public and private financing. The public sector usually pays for site preparation, infrastructure investments, public facilities, and public spaces, while private sector parties pay for the construction of real estate. In some cases, however, private stakeholders may also contribute to the financing of public facilities and spaces.
- Waterfront developments require upfront public financing, especially of infrastructure and leading public facilities. So substantial investments and involvement by national, state and local governments and public bodies is usually needed to gain momentum. Future development will build on the successes of the initial stages, so after a point developments can proceed with rolling financing.

- Tax abatements and tax incentives may be instrumental in helping to make developments feasible and attract tenants from cheaper alternatives in the suburbs. As markets mature, less government subsidy will be required.

Development models and implementation strategies: Developments are built and managed by multiple entities, public and private. In most cases of successful waterfront developments, the lead entity is empowered by (or is a privately managed portion of) the government charged with overseeing the development process. This separation of management from a purely public entity often exists to provide continuity to the development process as parties inevitably change power in local and state elections. Also, the institutional memory and single-purpose mandate of the development entities help them remain focused on creating successful developments.

- Waterfront developments are long-term urban projects, and are typically phased over 20 to 25 years. Such development phasing has been critical with a view to “seed” the initial phase, often with public support.
- Establishing anchor tenants and developments – whether public or private – in the area is critical early in the development stage, as they create momentum for further development stages.
- An openness and welcoming attitude to private sector ideas and contributions are important. Public and private sector stakeholders must come together in the earliest phases of the development to discuss the future of the city and work out a revitalization strategy.
- In later phases of the project competitive forces can be used in such a way that they work to enhance the quality of the overall spatial design and architecture, e.g., by requiring design competitions for developments within the Port area.
- Flexibility is key: waterfront developments have been driven by a strong development vision, but must be flexible in responding to changing market needs.
- The most prominent part of the project should be marketed at the start to position the project as important and exclusive, and signal the seriousness of the development.
- Random growth should be avoided.
- Develop the site’s phasing using a plan that connects latent demand with the site’s natural characteristics (e.g. waterfront before main portion of land).
- Maintaining some reserve portions of land for later development may be acceptable.
- Creating interim uses for undeveloped property can enhance the site’s look and feel.

Duration of the project: Each project examined had a different duration from the time it was planned to the time that development could be considered completed. In every case, though, the proper measure of time was years (and more often decades). Thus, especially for large sites, the focus should be on creating development plans that are flexible and long-term in nature. There are very few examples of overnight redevelopment successes.

- Plan for the long term.

2. CLEVELAND'S ECONOMY, POPULATION, AND REAL ESTATE MARKET APPEAR STRONG ENOUGH TO SUPPORT THE DEVELOPMENT OF THE PORT SITE

Cleveland's economy and population provide a foundation for a large-scale real estate waterfront development, despite concerns of economic stagnation and suburban sprawl. Underneath the lackluster economic growth numbers, knowledge- and service-based industries are growing. In fact, of eleven categories of employment, only four have declined over the past five years, while the other seven have grown steadily. In particular, ICT, transportation, financial services and professional services firms have grown more than their peers: these industries are also providing ever-greater numbers of jobs and business in the MSA.

Cleveland's MSA is home to large numbers of well-educated residents with income levels sufficient to support robust consumption in housing, entertainment and retail. Personal income by industry shows that residents earn on average almost \$42,000 annually. This average individual income creates a very large pool of households with incomes higher than \$50,000 per year. In fact, 48% of the households in the Cleveland MSA earn more than \$50,000, providing a pool of approximately 400,000 households able to afford at least a \$200,000 home. Employment too is holding up in Cuyahoga County better than in Ohio as a whole, largely because of the area's stable employment base in value-adding industries, which are increasing as a percent of all employment locally.

Residents continue to move from the city to other parts of the MSA, but an increasing number are choosing to move downtown. This group is among the most attractive for developers, in terms of education levels and upward mobility. Finally, Cleveland area residents are well educated, but are not finding sufficient job opportunities at their skill and experience level to remain in the MSA (especially among the 35-44 year old age bracket). This group's desire for new employment opportunities represents an opportunity to retain these worker's skills and experience with jobs in bio-tech, healthcare and professional services.

Class A commercial space in the Central Business District (CBD)'s is needed because the current inventory is shrinking and absorption trends for commercial property are becoming supportive for new development. While office leasing rates are falling below competitors, they look to recover in 2013. The industrial market is growing slowly, with increasing absorption as rental prices fall, but the flex market shows even stronger supply and demand fundamentals.

Hospitality demand has held up well, and distinct leisure and business niches are developing across the city. The retail property environment in the MSA is under stress from the economic recession, but the CBD appears to be stronger than the regional average with lower vacancy rates and higher lease prices.

Residential property is suffering from the recession (deliveries are slowing as construction permits and starts drop) but interest in living downtown remains high within the MSA. Rates of home ownership are falling even as prices show increasing volatility, while rental rates remain reasonably stable. The CBD apartment demand forecast is one of the brightest spots in the MSA's residential market. Thus it is the focus for many recent successful developments.

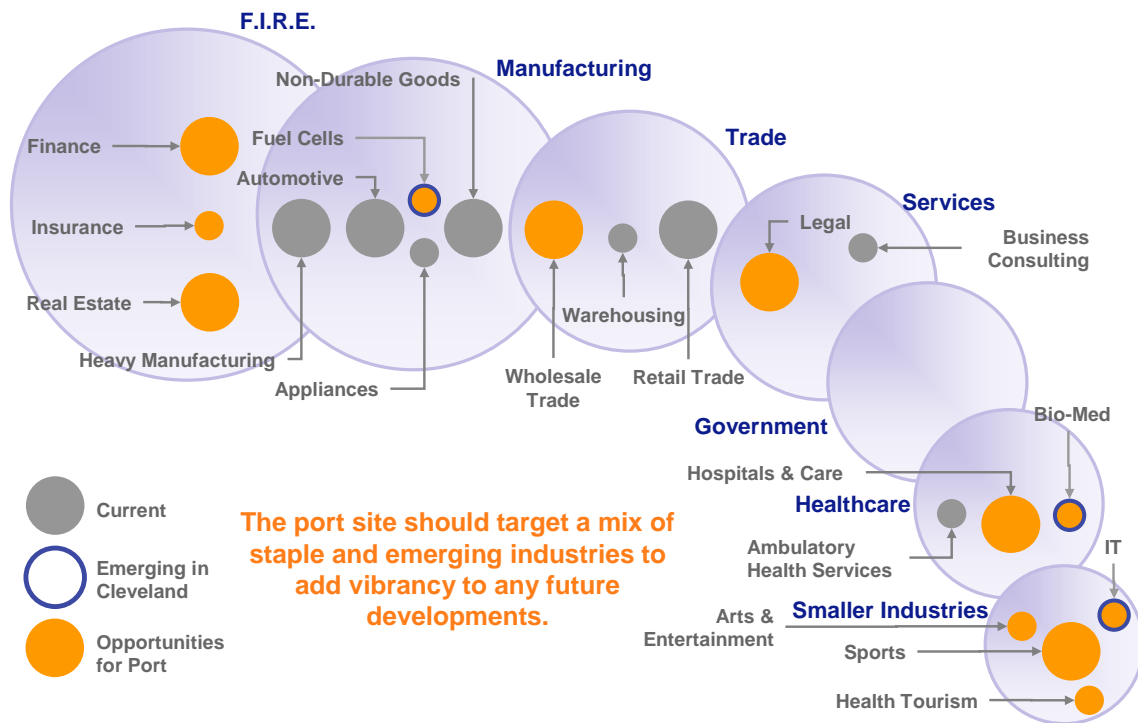
2.1 THE LOCAL ECONOMY AND POPULATION ARE DIVERSE AND ATTRACTIVE MARKET SEGMENTS ARE GROWING

The Cleveland-Elyria-Mentor (CEM) MSA's economy is in the middle of a gradual transition away from traditional smokestack manufacturing industries into a services, knowledge and technology-

focused economy. Business and investment promotion entities have helped to increase the area’s visibility regionally and nationally, and their efforts are stabilizing the economic shocks of a shrinking manufacturing base.

The Port site can target tenants in both established and emerging industries who are likely to seek premium Class A office space. Large established firms in finance, insurance and real estate (F.I.R.E.) firms, (see Figure 5), which represent the largest consumers of office space per employee, have significant buying power. The site may also be attractive as a corporate park for high tech emerging industries poised for significant growth.

Figure 5: Based on current MSA Gross Regional Product (GRP) and employment trends, the waterfront can attract a variety of commercial tenants from current and emerging industries³



The MSA economy grew at a modest 6% between 2001 and 2006 compared to a national growth rate of 14%. Overall, Gross Regional Product (GRP) growth remained fairly stagnant with the exception of 2 years of 3% growth from 2002-2004. The expansion of service, knowledge, and technology-based industries has helped to keep the Cleveland economy steady despite a 3.4% loss in the manufacturing sector.

Industry growth varies dramatically. The ICT industry, though small, saw a robust compound annual growth rate (CAGR) of 8.2% between 2001 and 2006. Transportation, utilities and financial services, the remainder of the top industries in the MSA, each grew at CAGR rates between 3-5%. Though a staple of Cleveland’s economy, education and healthcare services (of which healthcare accounts for over 85% of this measure), grew more slowly than the financial services

³ Based on GRP (BEA), employment projections (BLS), and investment trends (BEA).

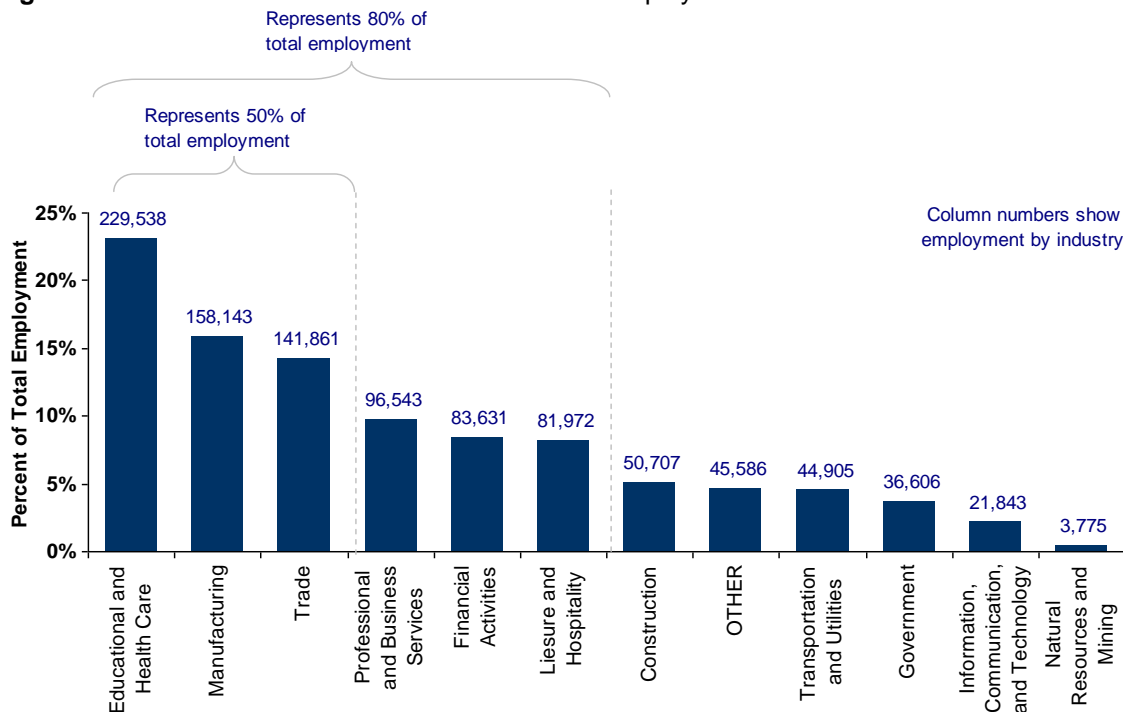
industry, at a 1.7% annual compound rate. The biomedical industry (categorized within professional and business services) is becoming significant within the MSA as well. Each of these business sectors has suitable tenants for any commercial space planned for the Port site.

Employment

The economic base supporting Cleveland’s population is diversifying, but output measured in gross regional product (GRP) continues to be concentrated in financial activities and private goods producing industries. Education and health services, which many believe to be the city’s core economic activity, are strong contributors to the area’s GRP, but are not the most important component, or its fastest growing segment. In fact, the city’s information, communication, and technology (ICT) and transportation and utilities sectors show the fastest growth of all sectors. Perhaps not coincidentally, those two sectors also show the highest median rates of pay among all sectors. Yet, the health and education sector, together with manufacturing and trade, provides nearly 50% of all employment within the MSA and continues to account for a larger portion of regional GDP and employment.

Industry composition by employment reveals two major noteworthy issues regarding a low industrial mix (skewed towards jobs that require less education) and median industry incomes that provide a strong base for consumption and economic growth. The healthcare industry remains the backbone of employment and accounts for 20% of Cleveland’s gross payroll (Figure 6).⁴ Three sectors – education/healthcare, manufacturing, and trade – account for over 50% of total employment, while the six largest sectors account for 80%.

Figure 6: Three industries account for over half the employment in Cleveland⁵



⁴ 79,785 jobs in education and 149,753 jobs in healthcare

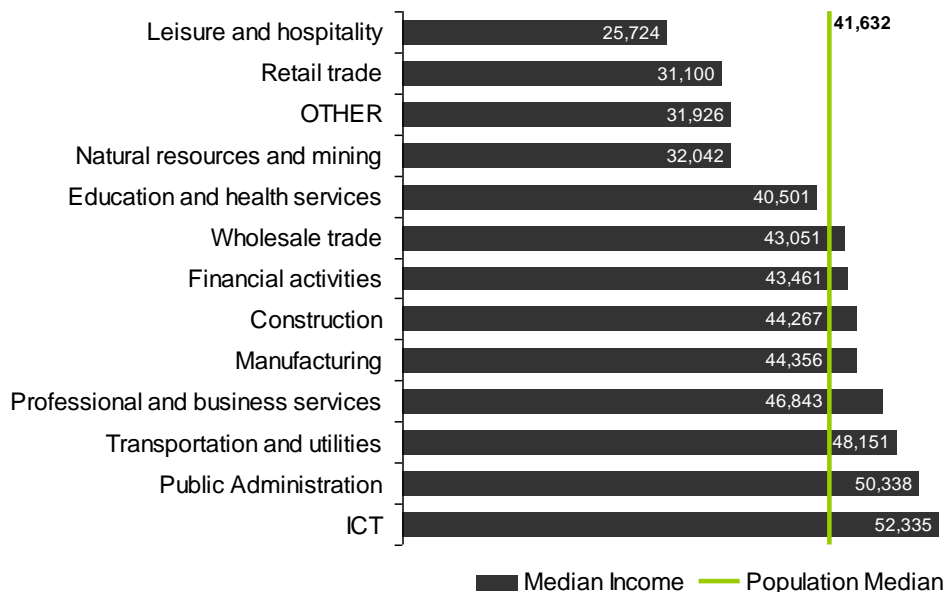
⁵ U.S. Census Bureau, 2005-2007 American Community Survey.

The Bureau of Labor Statistics estimates that technology, service, and knowledge-based jobs will continue to grow and diversify the Cleveland economy. These jobs will help offset losses by the manufacturing sector. Of the current heaviest employers, manufacturing will fall out of the top three, to be replaced by an 11.4% increase in professional business services. This increase coincides with growth in industries (bio-med, fuel cells) brought in by Northeast Ohio business development. Education and health services and trade, transportation and utilities will round out the top three positions by 2016. These figures indicate that suitable office space, especially Class A and high-end Class B, will be needed over the coming decade.

Personal and household income

Cleveland’s MSA is home to large numbers of well-educated residents with income levels that can support robust consumption in housing, entertainment and retail. Forty-eight percent of its households earn more than \$50,000, providing a pool of about 400,000 households that can afford a \$200,000 home or higher. In addition, employment in Cuyahoga County higher than in Ohio as a whole, largely because of the area’s stable employment base in value-adding industries, which are increasing as a percent of all employment locally.

Figure 7: MSA median personal incomes by industry indicate avenues for economic growth⁶



While the personal income for the MSA stands at \$41,632, the median household income for the City of Cleveland is just \$27,007.⁷ This lower average salary level reflects many factors, but may improve as more high-earning suburban dwellers move back to the city. Also, some of the city’s high-growth industries may provide job opportunities with higher average salary levels than those currently available. For example, the education and healthcare segment, with high median income and large numbers of workers, may be an important demand driver for any new developments in the waterfront area. As the manufacturing sector continues to shrink in output, wages will likely experience some change as workers retrain for newer, service led jobs or skilled manufacturing

⁶ Ibid.

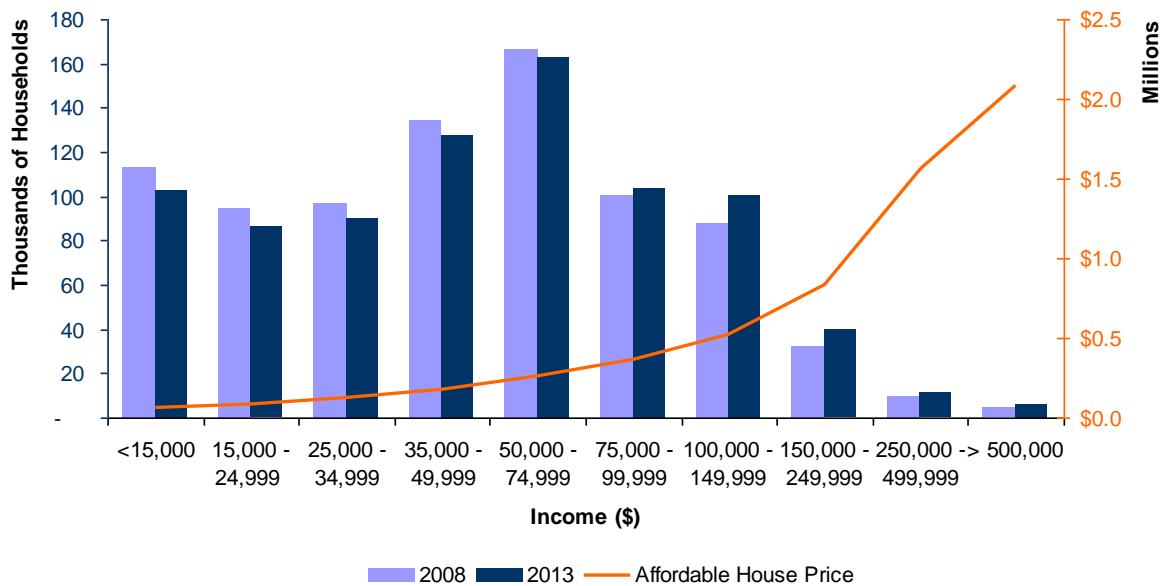
⁷ Center for Housing Policy, Paycheck to Paycheck Analysis, May 7, 2009, <http://www.nhc.org/chp/p2p/>

niches. Developers must pay close attention to how Cleveland responds to this shock in buying power.

Affordability

The annual income required to purchase an average priced house in Cleveland’s MSA in 2008 was a little over \$32,000, well below the MSA’s median personal income of \$41,632. This fact underlines the weakness of the Cleveland housing market: a sprawling population base and low employment growth has flooded the market with cheap housing (residential, office and retail). Yet, to focus on that fact alone would be ignore the sub-market strength that has been apparent in the Western suburbs and parts of Downtown. Figure 8 further supports that argument by showing that 230,000 households can afford housing at over \$360,000, and 130,000 households at over \$500,000. Metropolitan residents have the income and buying power to sustain development, but the real question is whether the waterfront can match the needs of residents and draw them out of the suburbs.

Figure 8: The CEM MSA’s households represent significant untapped buying power⁸



Structural unemployment and a generally stagnating economy have skewed the wage diagram of Figure 8 to the left, with a significant portion of the population earning less than \$15,000 per year. However, 2013 projections reveal that the population as a whole should become wealthier and the diagram’s distribution should shift to the right. In 2008, 52% of households made less than \$50,000 per year, but by 2013 this percentage will drop to just 47%. This wealth shift reflects the belief that job losses in the manufacturing sector are being replaced by higher waged jobs in emerging industries.

Overall, the affordability of homes in the suburbs (as low as \$100,000 per dwelling) and light traffic are drawing residents from all backgrounds (save a small portion of educated 35-44 year olds moving into the downtown area) out of the city. Since neither of these factors will change until the demand for real estate shifts upwards substantially and Cleveland’s population increases (or

⁸ Team NEO and Claritas.

roadways are eliminated to increase congestion), the implication for the Port’s redevelopment is that demand for businesses, residents and retailers to locate on the Port site will likely have to be induced. Typically, induced demand takes one of two forms: lower costs or differentiated products. This issue will be discussed in more detail during the evaluation of strategic options for the Port site.

2.2 RECENT SUCCESSFUL DEVELOPMENTS ARE TRANSFORMING CLEVELAND’S DOWNTOWN

Downtown Cleveland is the central business district of the City of Cleveland and Northeast Ohio. Reinvestment in the area in the mid-1990s spurred new development that continues to this day, with over \$2 billion in capital projects slated to involve the downtown area over the next few years. While Cleveland has experienced much residential emigration from the city to its surrounding suburbs, Downtown Cleveland is currently one of the few city neighborhoods to gain population. Cleveland’s downtown population grew from 7,261 in 1990 to 9,599 as of the 2000 Census, and in 2005 was rated by the Brookings Institution as one of America’s "Emerging Downtowns", due to its 32.2% growth rate over this period. There are 14 planned and ongoing developments of over \$100 million each (including infrastructure-related development), with mixed residential, commercial, and retail uses planned for downtown (see Figure 9).

Figure 9: Planned and ongoing Cleveland developments by cost

Number	Development	Millions	Number	Development	Millions
1	Cleveland Clinic Expansion	+1000	18	Cleveland Institute of Art	54
2	Innerbelt Reconstruction	1000	19	West Shoreway Reconstruction Phase I	50
3	UH Vision 2010 Plan	1000	20	St. Lukes Hospital Renovation	49
4	Flats East Bank	522	21	Cleveland Institute of Music	40
5	MedMart & Conv. Ctr.	400	22	RTA Transit Related Improvements	40
6	CSU Master Plan	350	23	Gordon Square Arts District	30
7	Cleveland Art Museum	250	24	John Hartness Brown Bldg	30
8	Avenue District	230	25	Park Lane Villa	30
9	Euclid Corridor	208	26	Playhouse Sq. Theatre District	30
10	University Arts & Retail District	200	27	Hanna Theatre	30
11	Veterans Administration Hosp	150	28	Terminal Tower Restoration	26
12	Stonebridge Plaza & Condo’s	130	29	Tudor Arms	25
13	Steel Yard Commons	120	30	Opportunity Corridor	25
14	East 4th Street Neighborhood	100	31	Pinnacle Building	21
15	Battery Park Housing	90	32	Upper Chester Phase I	15
16	668 Euclid Building	65	33	United Bank Building	15
17	Global Cardiovascular Innovation Ctr.	56	34	College Town	10

Many of Cleveland’s developments are helping to change the face and character of downtown. However, some major real estate developments are being scaled back and put on hold, or have stalled before groundbreaking. The largest mixed-use real estate developments in Cleveland are the \$230 million Avenue District and the scaled back Flats East Bank. These developments are the primary competition for the Port site’s development efforts.

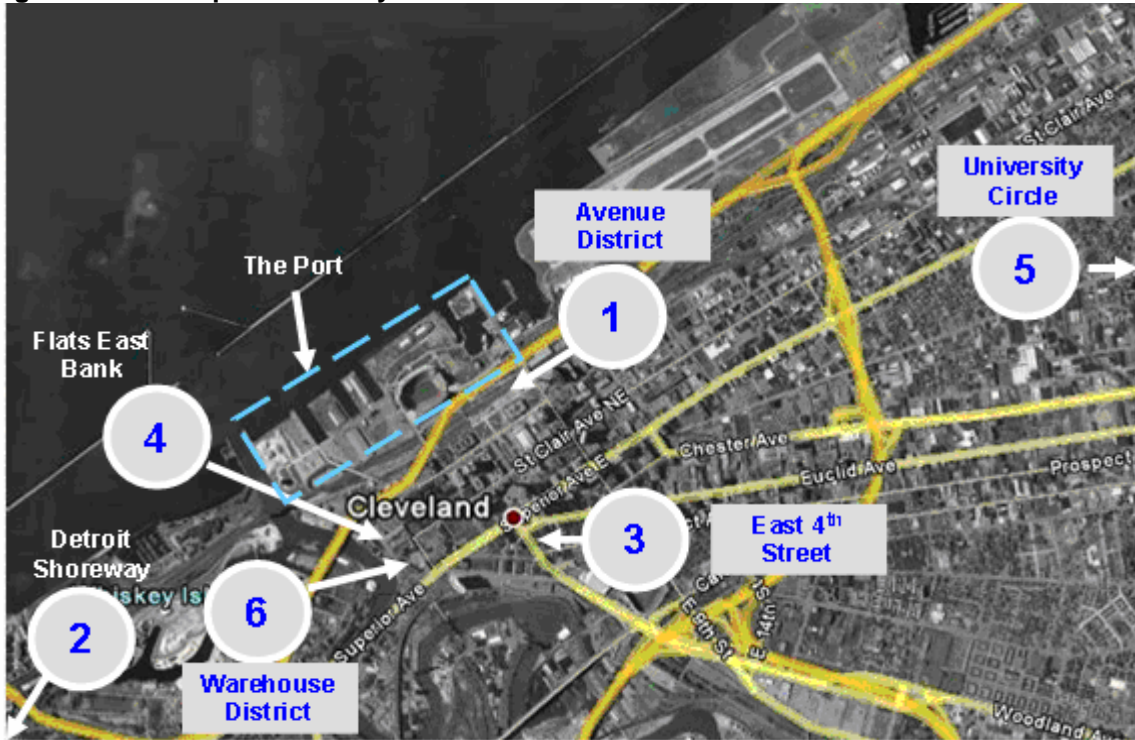
Real estate development projects in Cleveland are similar in size: the average mixed-use development will typically include roughly 400 residences. Downtown real estate developments have relatively little diversity, focusing on residential units and allowing retail to tailor to the needs of tenants. The larger more ambitious developments generally include a wide variety of mixes. The \$300 million Uptown Development located in University Circle, for example, has over 58,000 square feet of commercial space, 150,000 square feet in retail, and 90,000 square feet of hotel space.

Figure 10: Size and magnitude of current and planned developments

Project	Residential	Commercial	Retail (SF)	Hotel (SF)	Cost	Developer
	(Units)	(SF)				
668 Euclid	240		65,000		\$65	K&D Group
Avenue District	400		30,000		\$300	Zaremba, Inc
Battery Park	327				\$100	Vintage Development Group
CSU College Town	378	134,000 SF Mixed				CSU
Flats East Bank	400	525,000	30 Tenants	120 rooms	\$522	Wolstein Group
Steelyard Commons			1,000,000		\$125	First Interstate Properties, Ltd
Plaza at Stonebridge	108		120,000		\$28	K&D Group
Tremont Pointe	190				\$18+	McCormack Baron Salazar
Tyler Village		1,200,000				Graystone Properties
Upper Chester	840			20,000	\$25+	Developers
Uptown	434	58,000	150,000	90,000	\$300	Zaremba, Inc

Even in a weak housing market, developers are carefully planning and delivering mixed-use luxury and mid-market developments (see Figure 11). Now developments, such as the Avenue District, are bringing entertainment, shopping, and outdoor restaurants together in a pedestrian friendly and safe environment. Clevelanders are also realizing the advantages of moving back into the city. These competitive developments are not flooding the market with property. Rather, they are revitalizing the downtown area and are attracting a larger percentage of those willing to live, play, and work in the city.

Figure 11: Development activity clusters near the Port site



Such developments may drive up property values throughout the downtown area just south of the Port. From the East Flats Banks to Euclid, developments are filling niche markets with different mixes of quality and unit sizes, leaving only the waterfront area of the port undeveloped. This

should create a profitable opportunity for the port to create a sustainable development with careful capture of the target market and use.

Figure 12: The Avenue District and Detroit Shoreway



The Avenue District

Downtown Cleveland is one of the few neighborhoods in Cleveland where net population inflows are positive. The new Avenue district, situated between the financial district and the Euclid corridor, hopes to take advantage of its prime location there.

Located immediately east of Erievue Tower on the site of several parking lots on East 12th Street, the development is slated to include over 400 condominiums, including lofts, townhomes, penthouses, street-level retail, garage parking, and pedestrian-friendly sidewalks and streets. The developer is touting this as downtown's new upscale, quiet neighborhood with easy access to the attractions and amenities of downtown. The development is a project of Zaremba, Inc. The Avenue District will be built in phases, with future surface lot development based on market demand.

The development consists of upscale residential and retail units, but includes no commercial space because it is within walking distance of the CBD. Residential units include lofts and upscale penthouses mixed between retail venues. Housing prices in this neighborhood may extend to over \$1 million for penthouses to closer to \$250,000 for smaller lofts. Penthouses on 1211 St. Claire Avenue feature hardwood floors, marble showers, granite tops, and other luxury amenities that are on par with expectations at this price level. The developer, Zaremba, expects to open most of the development by 2010-2011, although some developed units, including 1211 St. Claire Avenue have been put on the market. The first phase will be complete in 2009 and includes 30 townhouses, 54 lofts, 8 penthouses, and 7,000 square feet of retail.

A major Zaremba development theme is walkability. Ample green space and proximity to vibrant areas encourage foot traffic around retail establishments. The Avenue District is located within ½ of a mile of the Cleveland Rock and Roll Hall of Fame, Browns Stadium, and a quarter of the CBD. CSU, the Warehouse District, and the Euclid Corridor are also within walking distance. The neighborhood served as the primary sponsor for Cleveland's second annual restaurant week in 2008. Unobstructed views of the city skyline and proximity to public transit also add to its allure. Parking garages are also under development. Rent-to-own options are also available.

The Avenue District has one clear advantage over any development on the waterfront: its integration in the City cannot be matched. It is within walking distance to the tourism-focused waterfront area, Euclid, and the CBD. The port, however, is physically separated by a large

highway and railroad track that will eliminate foot traffic (even automobile traffic) from the CBD into the port development.

Detroit Shoreway

The Detroit-Shoreway is located between Lake Erie and I-90, from West 85th to West 45th Streets. The area has been known throughout its history as pedestrian friendly, once having the highest percentage of people commuting to work by foot of any US city.

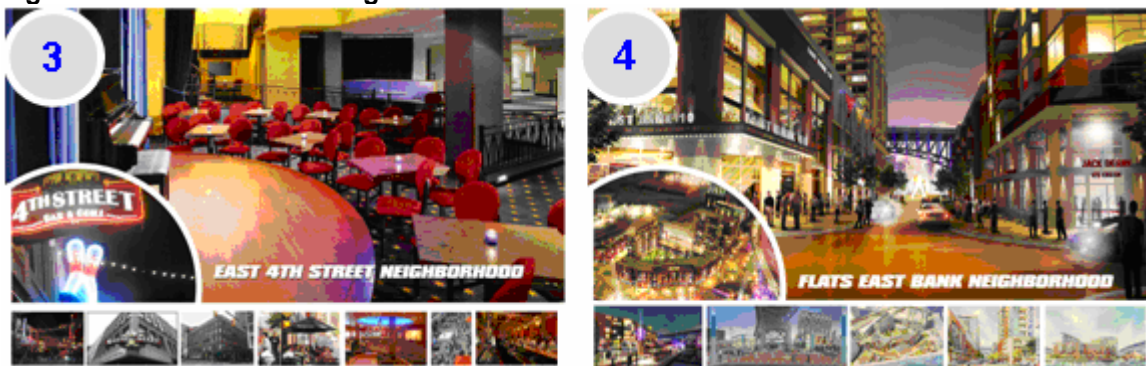
The Greater Cleveland Regional Transit Authority, in conjunction with the City of Cleveland and the Cleveland EcoVillage, is working on plans for transit-oriented development in the area around the station, and Detroit-Shoreway is additionally the site of a brownfield redevelopment of an old Eveready Battery Plant, known as Battery Park. The city is working with the Ohio Department of Transportation on plans to rebuild the limited access West Shoreway (SR-2) as a low-speed, 35 mph boulevard, reconnecting the long-split neighborhood with access to the lake.

Of the two slated developments, only the \$100 million Battery Park was delivered with 328 condos, townhouses and single family units near the lakefront. Vintage Development Group priced homes from \$160,000 to \$315,000 (as of late 2008); lofts are below \$200,000. Two bedroom, 2.5 bath houses were selling above \$300,000 for 2,300 square feet of space.

The development will take advantage of the waterfront by adding green space along the lake shore in addition to Edgewater Park. Green space and new bike/hiking trails aim to integrate the neighborhood as much as possible to the waterfront park and lake area. Two bike paths already make the area well suited for recreation. Nearby, a \$30 million improvement of the Gordon Square Art District will enhance the booming historical arts and theatre district. Residents should be able take advantage of the historical theatres, booming restaurants, coffee shops, and art galleries already located in the area.

The development is currently less than 2 miles from the port site. Being a waterfront community, the Detroit Shoreway should serve as an important proxy for pricing and development mix. However, the port's centralized location should allow for commercial integration that is not possible in the Detroit Shoreway.

Figure 13: East 4th Street Neighborhood and the Flats East Bank



East 4th Street Neighborhood

The East 4th Street neighborhood sits between Euclid and Prospect near downtown Cleveland. MRN Ltd anchors the development with high-end retail stores, restaurants and coffee shops. Outdoor seating in restaurants and coffee shops create a lively feel that attracts entertainment

venues to the street. The East 4th street is one of the more established developments mentioned in this study.

Sprinkled above and between the commercial spaces sit over 200 lofts and condos for rent and sale. MRN Ltd has five buildings for rent in the surrounding area and many other properties for sale. The developer now owns most of the buildings along the street and is working to add more entertainment venues there. Two-bedroom apartment rents on any of the five residential buildings range from \$900-\$1700 per month depending on size. All apartments are within the \$1 per square foot range. Underground building parking is available at each site.

East 4th Street is becoming the second entertainment hub of Cleveland. Its high concentration of restaurants and entertainment venues sets it apart from other developments in the area. Noteworthy businesses along the street include: Hilarities 4th Street Theatre, Lola Bistro (owned by an Iron Chef America winner), View Nightclub, and high-end ethnic restaurants.

Flats East Bank Neighborhood

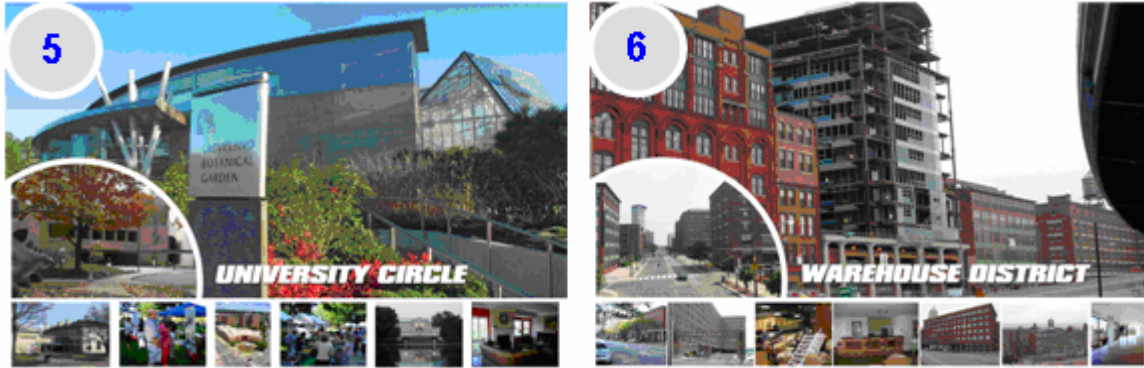
The Flats East Bank is a historical mixed-use industrial, commercial, and residential area. It is located on the banks of the Cuyahoga River, adjacent to the port. The area was given its name due to its mostly flat appearance and is defined by the lower lying areas that line the banks of the Cuyahoga River. The Flats have had significant historical influence on the city and greater region. The \$522 million development has been scaled back because market conditions are impacting financing. It was originally planned to have over 400 high-end housing units, 500,000 square feet of office space, 300,000 square feet of retail, a hotel with 150 guest rooms and 50 conference rooms, and a boardwalk.

The development had originally accumulated almost \$147 million in public funding, though details have since changed. The plan called for pedestrian access along the river, together with dining and entertainment options there. A gourmet food market, a boutique hotel and a public park were also included in the plans.

The Flats was once the entertainment hub of Cleveland, but it died out in the early 2000s. A string of deaths in 2000 forced the city to shut down most of the bars and restaurants in the area. Since then, the area has been mostly industrial and commercial, with residential making a recent comeback. The developer Scott Wolstein intends to finish Flats East development project, though the slated mid-2010 opening date may not be possible. Once finished, the site should help revitalize the area around the port. However, it is equally as likely that this development may not be resuscitated until further development downtown or on the Port site commences.

The West Bank has fared better than the East since 2000. While not anywhere near its pre-2000 peaks, it still has many establishments open, and has been home to the majority of housing developments in the Flats. New upscale condominiums have been constructed along the old Irishtown Bend and at the remains of the Superior Viaduct, which was the first high-rise bridge to span the river. New shopping destinations have been constructed, like the Steelyard Commons, which is located on lands previously occupied by the steel mills and the new East Bank Redevelopment project which has begun demolition work. The canal's towpath trail, part of the Ohio & Erie Canal Corridor, is also being restored to provide jogging and bike trails for city residents and to preserve part of the Flats history. Whiskey Island has also been purchased by Cuyahoga County in hopes of making it more accessible to residents in the form of a waterfront park.

Figure 14: University Circle and the Warehouse District



University Circle

University Circle is the educational, artistic and medical center of Greater Cleveland. It is located on the east side of Cleveland and occupies 550 acres around the campus of Case Western Reserve University and the adjacent Wade Park Oval. It borders Cleveland's Little Italy, and it is home to many private art galleries and restaurants, as well as the neighborhoods of Hough, Glenville, Buckeye-Shaker, and Fairfax (also known as Midtown). The current development focus is on retail and commercial, to take advantage of businesses moving into the area and 2.5 million yearly visitors. This focus is to add onto an already sizeable workforce of over 30,000.

Over 13,000 undergraduate, graduate, and professional students attend area institutions, and approximately 2.5 million people visit the Circle each year. University Circle Incorporated, a not-for-profit corporation established in 1957, fulfills many administrative and quasi-governmental functions for the area, including security, transportation administration, and marketing. Nearly 50 cultural, medical, educational, religious, and social service institutions are based in the University Circle area, the largest of which is Case Western Reserve University.

The "Uptown Initiative" provides the area with \$150 million to finance medicinal and technological research and rejuvenate the surrounding neighborhoods. Developers Zaremba and MRN Ltd partnered with Case Western University to develop the triangle area of Euclid, Ford, and Mayfield anchored around the Museum of Contemporary Art move. The \$120 million project will be a mixed-use development bringing in entertainment venues, bars, restaurants, coffee shops, retail, and 400+ residential and office units next to the existing residential tower.

Case Western University will continue to expand and invest in the area beyond the proposed initiative. The university is involved with a large amount of planning in the area, including the creation of a large medical and technological research center, known as the "West Quad," which is to be built on the campus of the former Mt. Sinai Hospital. Future plans for the area include large apartment and condominium towers, and other housing for residents, with projections of 20,000 people living within the University Circle area.

Overall, these plans will continue to strengthen the area as a research hub and prepare for the population inflows resulting from economic growth. The focus will remain on high technology.

Warehouse District

Cleveland's first neighborhood, the Warehouse District, was originally a residential area, then became a warehousing and shipping neighborhood, and has morphed into an entertainment, dining, and downtown living hub. The Warehouse District is the largest downtown neighborhood

by population, and continues to grow with a vast assortment of shops, clubs, bars, and loft condos/apartments. This most recent transformation from empty, run-down warehouses to hip, happening clubs and restaurants is only the latest in a long life cycle for this historic area.

It was announced at the end of 2005 that local developer Robert L. Stark, of Stark Enterprises, was planning a \$1 billion redevelopment of what are currently surface parking lots in the Warehouse District. The plan was to add retail, office, housing, and structured parking in a series of buildings from the lakefront to Public Square. Stark was to build on 21 acres of surface parking lots that prevented the area from becoming a true urban neighborhood. On the largest area of parking, measuring 8 acres within the block bounded by Superior Avenue, West 3rd Street, St. Clair Avenue and West 6th Street, Stark was to build Phase I. Phase I would have been a \$1 billion multi-building, mixed-use development of retail, offices, housing, and structured parking.

Cleveland's Warehouse District was the largest potential development in Cleveland. After four years of advocacy, Stark Enterprises dropped plans for the development at the end of 2008, citing a difficult market and the inability to find financing. Currently residential units do exist, but the area is best known for an entertainment hub and its ample parking lots. Phase I of the proposed plan was to have first plugged in holes in the retail and office areas before redeveloping residential and hotels.

However, the liveliness of the restaurant and entertainment district has attracted another, smaller development project. Westin Inc. and Gilbane Development Company aim to add 700,000 square feet of office space, 2,400 parking spots, a 150 room hotel, 250 condos, 150 apartments, and 100,000 square feet of restaurants and entertainment on top of an existing parking lot. The 10-12 story building is located within walking distance to towers in the rest of the downtown area.

The new proposed development is much smaller and more focused than that of Stark Enterprises. However, the relatively small size of the new development should not compete significantly with any development in the port. In fact, the vicinity of the development to the port may ultimately give developers the confidence to strike more deals and revitalize downtown Cleveland. Any development that raises the overall value of the downtown area will increase the value of a port development.

2.3 THE REAL ESTATE MARKET OFFERS OPPORTUNITIES FOR PROFITABLE DEVELOPMENT

Class A commercial space in the Central Business District (CBD)'s is needed because the current inventory is shrinking and absorption trends for commercial property are becoming supportive for new development. While office leasing rates are falling below competitors, they look set to recover in 2013. The industrial market is growing slowly, with increasing absorption as rental prices fall, but the flex market shows even stronger supply and demand fundamentals.

Hospitality demand has held up well, and distinct leisure and business niches are developing across the city. The retail property environment in the MSA is under stress from the economic recession, but the CBD appears to be stronger than the regional average with lower vacancy rates and higher lease prices.

Residential property is suffering from the recession (deliveries are slowing as construction permits and starts drop) but interest in living downtown remains high within the MSA. Rates of home ownership are falling even as prices show increasing volatility, but rental rates remain reasonably stable. The CBD apartment demand forecast is one of the brightest spots in the MSA's residential market, and is the focus for many recent successful developments.

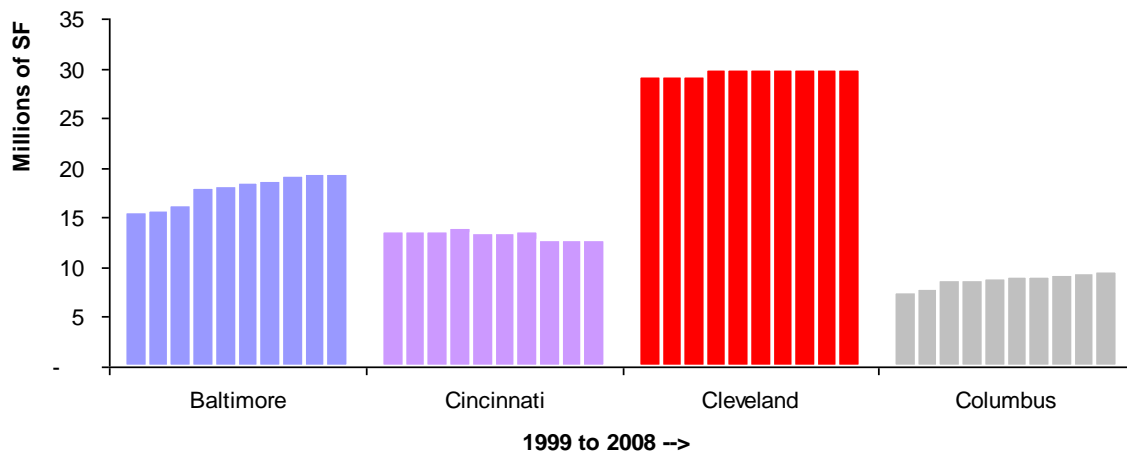
Commercial Property

New Class A commercial space is needed in the Central Business District

Despite relatively higher levels total office inventory (across Class A, B and C) than competing cities, Cleveland's CBD has shown downward trending vacancies and increasing absorption. Leasing rates have fallen and may account for some of the recent absorption, but longer-term structural factors may also be helping to drive demand, such as lease expirations, growth in selected sectors and the search for better quality buildings downtown. Evidence points to a prevalence of untapped demand for Class A office space, some of which can be absorbed even with a waterfront premium added to the lease prices.

Class A commercial inventory in the Cleveland market is shrinking: The total commercial inventory in metropolitan areas of Cincinnati and Columbus is smaller than Cleveland's, likely reflecting the size differences in the comparative economies. But while Cleveland has avoided commercial property inventory demolitions that Cincinnati was unable to avoid, it has not grown its inventory as fast as Columbus. Baltimore's office inventory (to choose a comparator with strong growth fundamentals) has grown and been absorbed quickly, partly because of a downtown revitalization anchored by the waterfront's redevelopment.

Figure 15: Cleveland's CBD office inventory has not grown in six years⁹



Cleveland has not seen a new Class A commercial real estate product in six years, indicating a weak commercial market (Figure 15). Yet pockets of market strength and latent demand do exist and will get stronger over the coming decade. As the current inventory of Class A real estate ages, some of it will migrate down into the B space, leaving a dearth of available high-end Class A space. Figure 16 estimates that only 25-30% of office space in the CBD is currently listed as Class A, and 10-20% as Class C, with the remainder (50%) as B space. A few older buildings are being renovated in order to keep up with the demand for high-end Class A product, but it is unlikely that these renovations (similar to those in the Euclid Corridor) can offset Class A inventory loss. Cleveland will face a large deficit in high-end Class A office inventory.

⁹ Ibid.

Figure 16: Cleveland’s commercial market is dominated by Class B property¹⁰

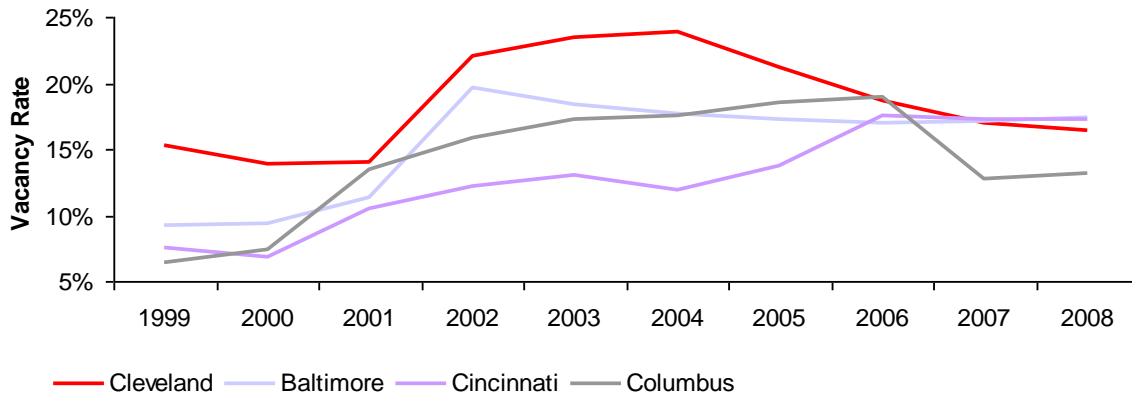
Class	Colliers CBD Office Market by Class			CoStar Downtown* Office Market by Class		
	Buildings	Inventory (SF)	Inv (% of total)	Buildings	Inventory (SF)	Inv (% of total)
A	14	8,142,965	30%	20	9,934,560	25%
B	81	16,142,947	60%	125	21,320,046	54%
C	58	2,589,894	10%	201	7,993,336	20%
Total	153	26,875,806	100%	346	39,247,942	100%

*Downtown includes CBD and Midtown

The demand for commercial space in Cleveland’s CBD may strengthen as macro-economic conditions stabilize and downward trending vacancies continue. Given the proximity of the waterfront site to the CBD, a waterfront development will likely cannibalize much of its tenants from the CBD. Initial demand will likely be high given that any new commercial building may become among the most prestigious in the city and be the first delivery in nearly a decade.

Absorption trends for commercial property are becoming supportive of new development: Stagnant construction deliveries over the past ten years have helped to bring vacancy rates in the CBD down to levels on par with similar cities in the area. Aging buildings and a low level of economic growth have helped to push rent rates down enough to drive vacancy rates lower than many competing markets. Expiring leases and industries that require high-quality office space may drive potential demand for new commercial development, especially in the higher tiers of the Class A market, over the coming decade.

Figure 17: Commercial vacancy rates in downtown Cleveland are on par with competing cities¹¹



Cleveland had a higher vacancy rate than its Ohio counterparts until 2006. High vacancy rates (+20%) drove rent prices down enough for firms to move back into the CBD. Now vacancy rates in the Cleveland CBD are much closer to those of competing Ohio cities. The downward trend in vacancy rates indicates that demand is reaching a point where new Class A offices may be absorbed profitably. At around 18%, Cleveland’s vacancy rates are on par with Baltimore’s CBD, which will deliver a 500,000 square foot waterfront tower to serve as corporate headquarters for Legg Mason in 2010. This development is already in addition to the other well established developments in the original Inner Harbor. Cleveland’s Port site should be able to absorb similar tenants willing to pay a premium for new development in a prestigious location.

¹⁰ Costar “Cleveland Office Market”, First Quarter 2009 and Colliers International “U.S. Real Estate Review 2009”

¹¹ Colliers International, *US Real Estate Review*.

Figure 18: Recent absorption downturn has helped lower vacancy rates¹²

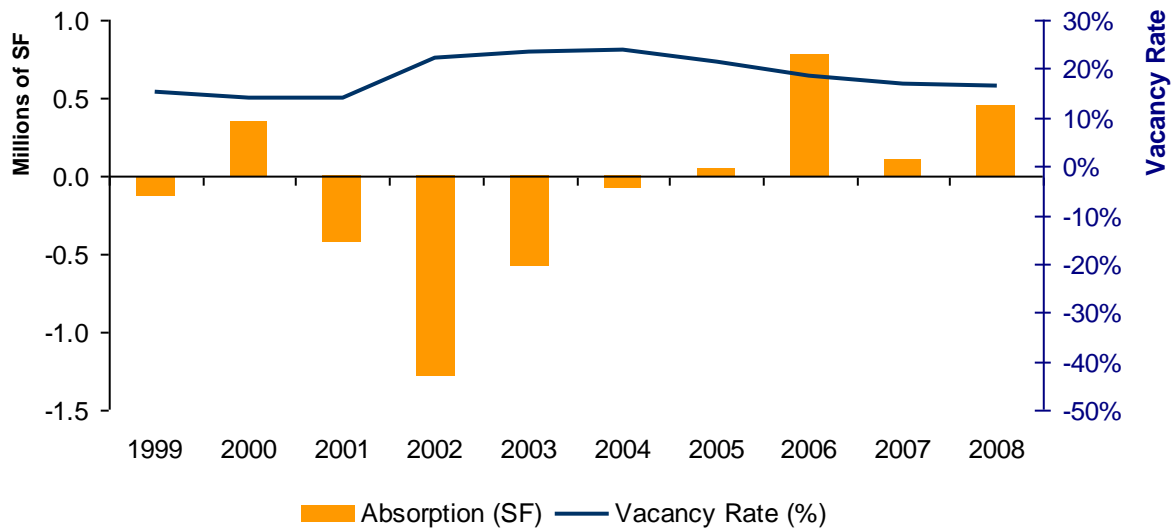
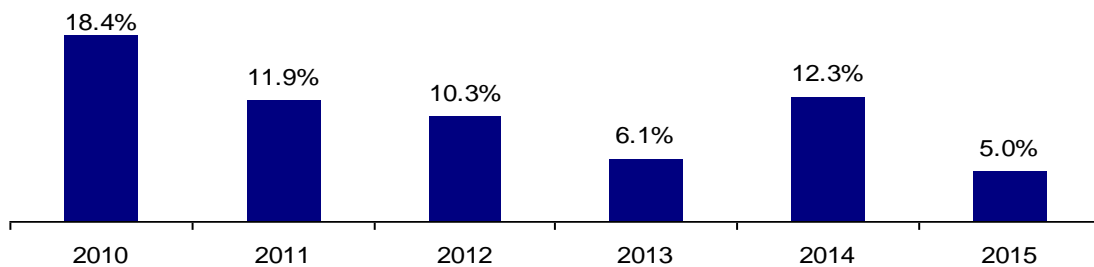


Figure 18 indicates that the recent drop in the commercial vacancy rate comes as downtown absorption increased. Market participants say that this absorption is likely the result of firms exploiting relatively cheaper rates and expanding their Class A space downtown. But those same market participants also noted that some of the firms that left Cleveland’s downtown area are unlikely to have moved back in. The absorption then may have come from existing businesses downtown and new entrants to the market. All of the factors mentioned above (the growing demand for office space, no deliveries in the past six years, and a falling vacancy rate) indicate pent up demand will likely absorb new office space, if the right development is available.

The next six years will be characterized by large movements in Cleveland’s real estate market, as more than 64% of leases are set to expire. These expirations offer the Port a window of opportunity to position the site to attract these tenants.

Figure 19: 64% of the total tenant square footage is expected to expire over the next six years

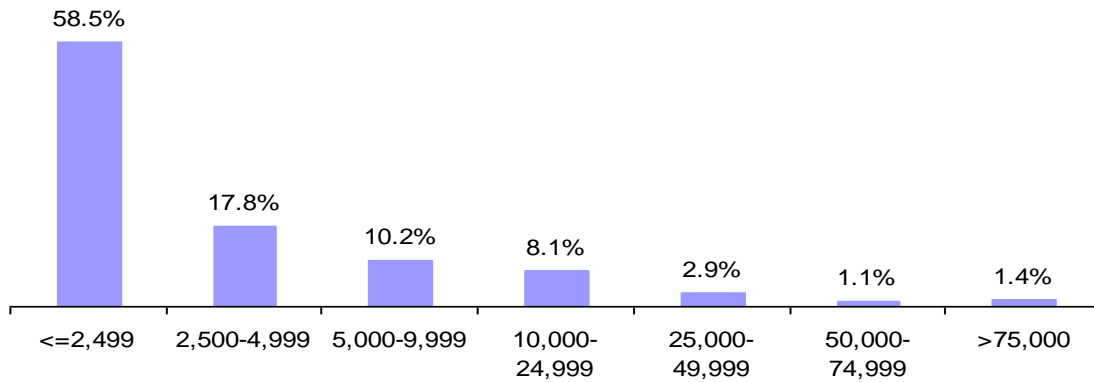


Current data on downtown commercial demand point to a variety of potential tenants for the waterfront site. Since Greater Cleveland’s office market is primarily composed of small tenants

¹² Ibid.

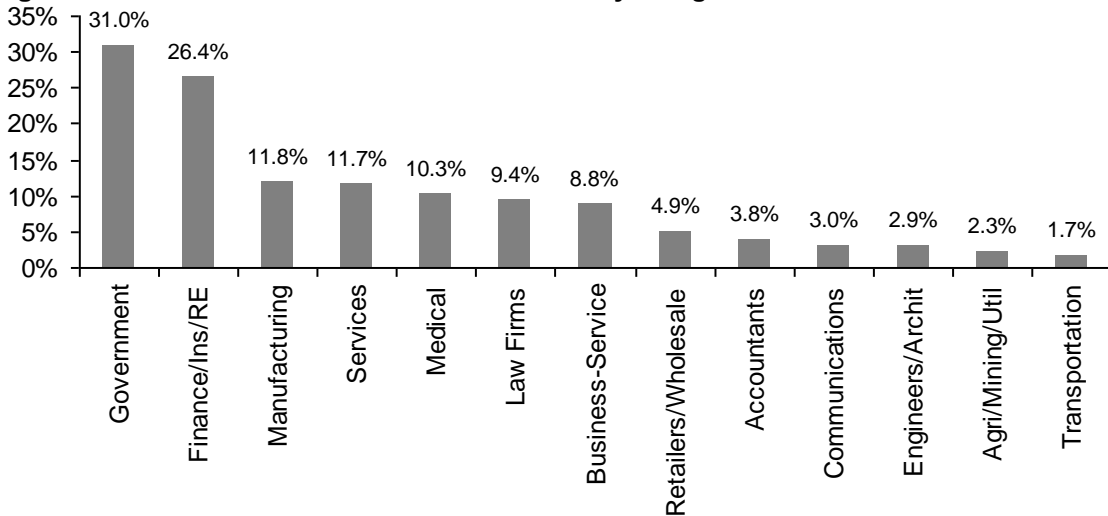
taking less than 5,000 square feet with one, three, and five-year leases (See Figure 20), these groups should not be overlooked as solid tenants for the Port site.

Figure 20: Smaller firms are abundant and are the seeds of future growth



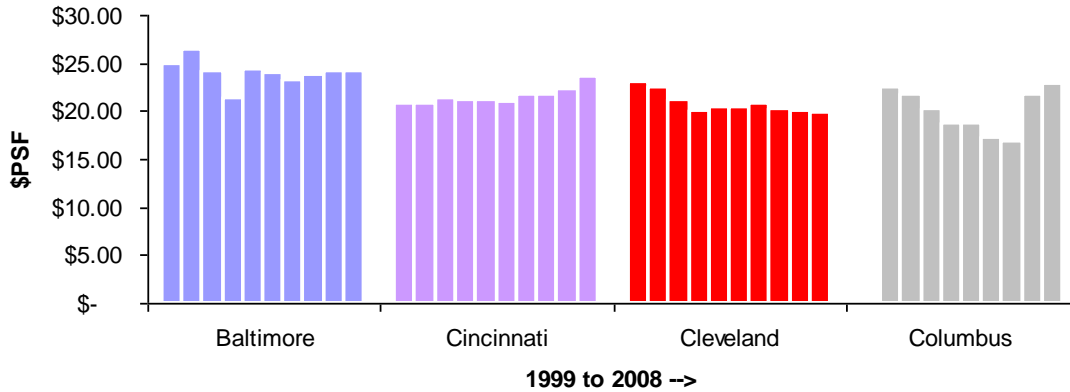
Despite the probability of layoffs in banking sector, the finance/insurance/real estate industry is second only to government in terms of occupied square feet (see Figure 21) in the city. However, other industries exhibit more promising growth rates, and when considered with the average space a given employee occupies, other opportunities emerge, particularly within the medical/health services industry.

Figure 21: Government and FIRE firms are the city's largest tenants



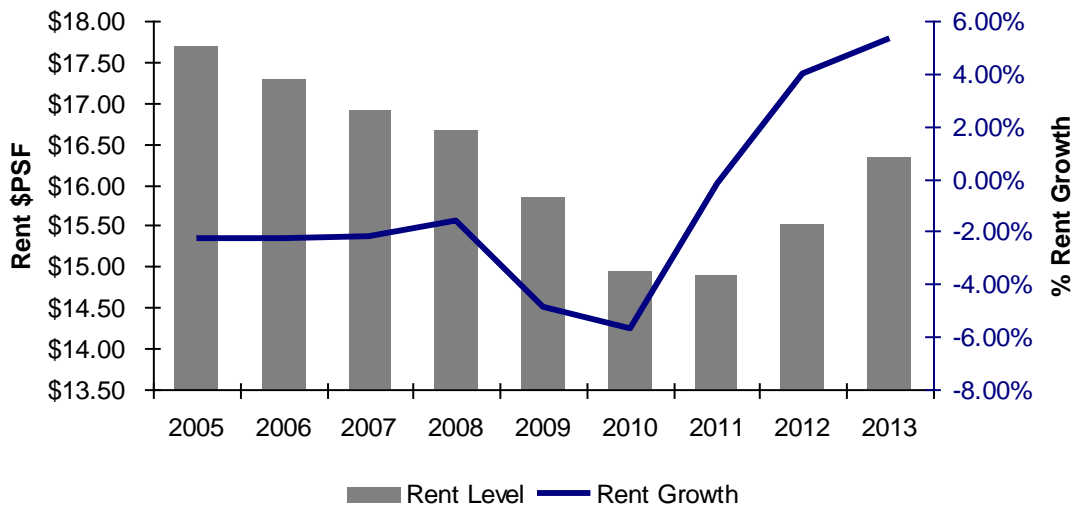
Cleveland's office leasing rates are falling below those of competitors, but are set to recover: Aging buildings and a sluggish national economy are pushing Class A rental rates lower across the CEM MSA. The market is now nearly \$3 per square foot lower than in 1999. The drop in leasing rates has helped to lower vacancies and increase absorption, but current prices may have to rise again before most developers are willing to build new office inventory in the CBD. Cleveland's commercial lease rates are now less expensive than Baltimore, Cincinnati and Columbus. Given Cleveland's population and economic size, rents there may now represent real value for money.

Figure 22: Class A office rents are declining despite no new inventory deliveries¹³



Nevertheless, Cleveland’s CBD rents are expected to decline through most of 2010 as vacated space continues to outpace absorption. Once vacant space is absorbed, however, average CBD rents across all classes should begin to grow again in 2011. From a low of \$14.90 per square foot in early 2011, average rents may climb over 10% through the end of 2013 to \$16.33.14 This growth is somewhat slower than in Columbus and Cincinnati, where rents are already climbing.

Figure 23 Rents are projected to recover in 2010¹⁵



A waterfront development on the Port site may be able to command a premium for its unique location and under-developed context, which could conceivably be sufficient to make new development profitable. Rent levels on the development could realistically garner \$33 per square foot based on a 10% premium to the recent rent price negotiated by the Flats East Bank development.

¹³ Colliers International, *US Real Estate Review*.

¹⁴ Property and Portfolio Research, *Cleveland Office CBD Fundamentals 1Q2009*.

¹⁵ Colliers International, *US Real Estate Review*.

Industrial Property

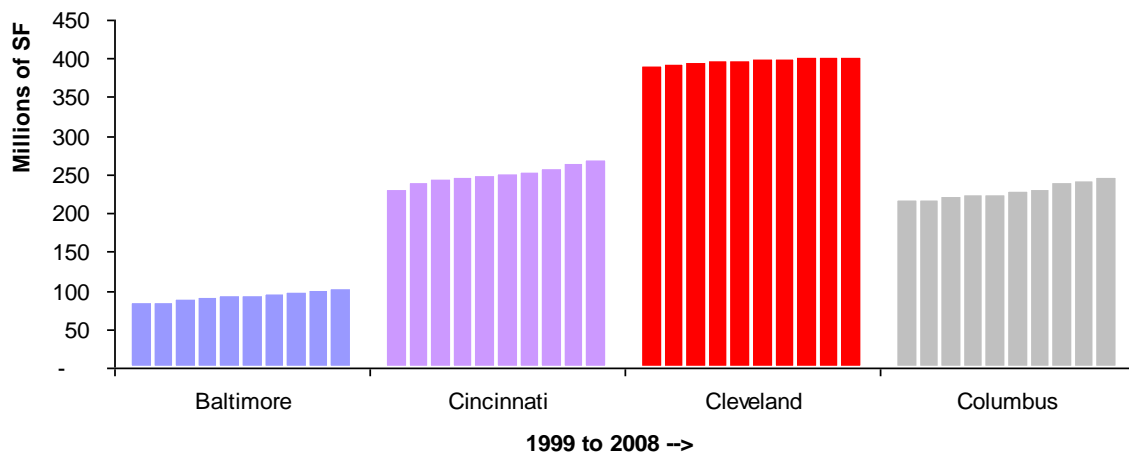
The industrial market is growing slowly as rental prices fall, but the flex industrial sub-market shows strong fundamentals.

Available industrial inventory in the MSA is trending upwards and vacancy rates are at their lowest level in ten years. Absorption since 2004 has also been trending upwards because rental rates have dropped over 40% since 1998, allowing firms to lease warehouse space without increasing their operating costs. Within the various types of industrial real estate sub-markets, the flex industrial's submarket fundamentals look well positioned for continued growth.

Cleveland has much more industrial inventory than its competitors: Cleveland remains the largest industrial hub in Ohio because of its regionally significant port and large blue-collar workforce. This industrial base is reflected in the large industrial property inventory that exists there (in contrast with Cincinnati, Columbus and Baltimore).

Cleveland's industrial space inventory may be at its peak, though, as the manufacturing sector is expected to shrink over the coming years. For older industrial inventory in second or third-tier locations, any loss of businesses may mean that demolition is likely. For prime locations with modern linkages into the rail and road networks that cross Cleveland, the loss of industrial businesses may be less severe, as owners may simply reposition the assets for new sectors.

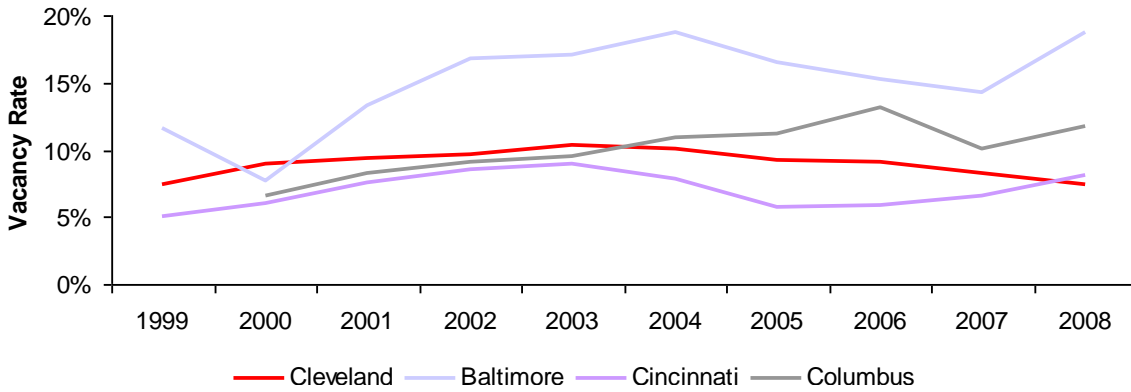
Figure 24 Cleveland's Growing Industrial Inventory Leads its Ohio Neighbors¹⁶



But its industrial vacancy rates have been very low since the late 1990s: In spite of the large amount of inventory, Cleveland's industrial vacancy rates are low, continuing a trend seen since at least 1999. The vacancy rate trend is downward, too, ending 2008 at 7.4%. The historical and current vacancy rates reflect the underlying strength of the manufacturing base, even as it is projected to shrink (though not disappear). Future deliveries into the industrial market will likely be modern replacements of older facilities and will not increase market inventory.

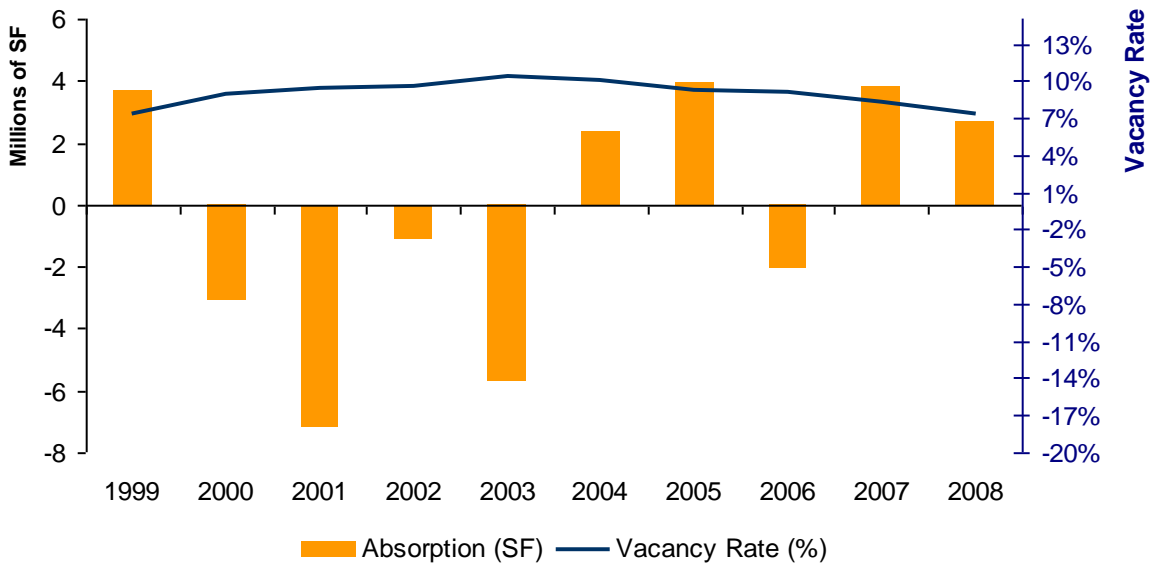
¹⁶ Ibid.

Figure 25: Industrial vacancy rates remain low despite high supply¹⁷



Absorption has been increasing recently: The current state of the market is reasonably healthy, and supply and demand factors appear to be largely in balance. Four of the past five years showed net increases in absorption (between two to four million square feet, enough to mostly offset the 12 million square feet shed during the fallout from the recession of the early part of the decade). Absorption has been trending higher since then as well. While this absorption has helped to bring down vacancy rates, it has not led to an expansion in industrial inventory. New absorptions appear to be mostly expansions into more modern facilities within the Northeast Ohio region.

Figure 26: Net positive absorption has been increasing over the past five years¹⁸



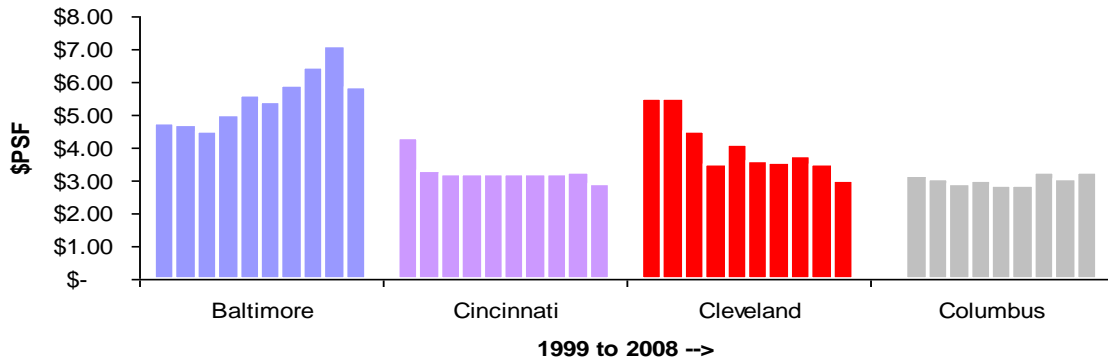
Cleveland’s industrial and office rental rates are similar competing cities: Average warehouse rent prices in the MSA have dropped 46% since 1999 (Figure 27), which partially explains why inventory growth has been flat and vacancy rates have improved. Companies are

¹⁷ Ibid.

¹⁸ Ibid.

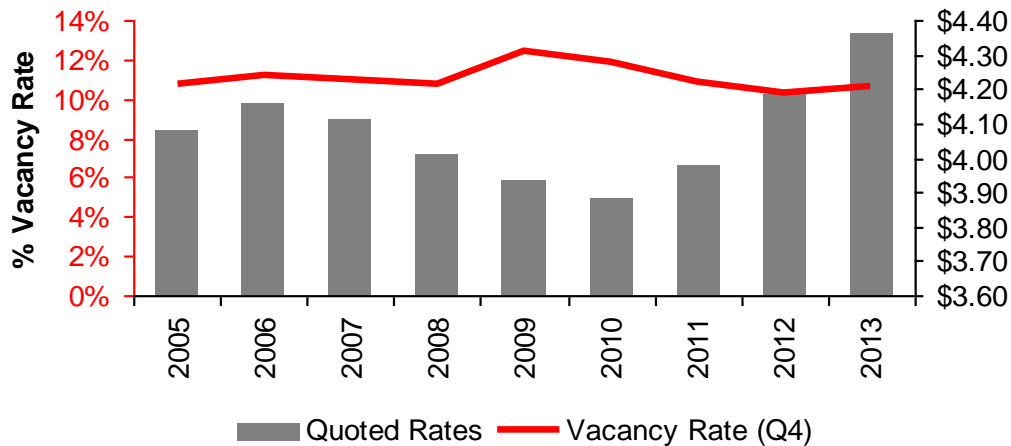
able to rent more warehouse space at the same cost. Manufacturing jobs in 2016 are expected to be 18% less than in 2006. This job loss may set the stage for lower leasing prices as tenants aggressively negotiate with current lessors over escalating rents amid increasing vacancies.

Figure 27 Industrial rent prices are trending downwards¹⁹



Relative to other property types, Cleveland’s industrial property market is not likely to experience dramatic peak-to-trough swings in vacancy. Vacancies changed little over the last few years, hovering near 10.8%. A forecasted increase to 12.4% will occur by 2010, before reverting back to near 10.8% by 2013 (Figure 28). These factors make general purpose industrial space a less attractive use of the current Port site than other uses. Further, industrial tenants would not pay premium prices to be on the waterfront.

Figure 28: Warehouse vacancy rates and rent prices are poised for recovery in 2012

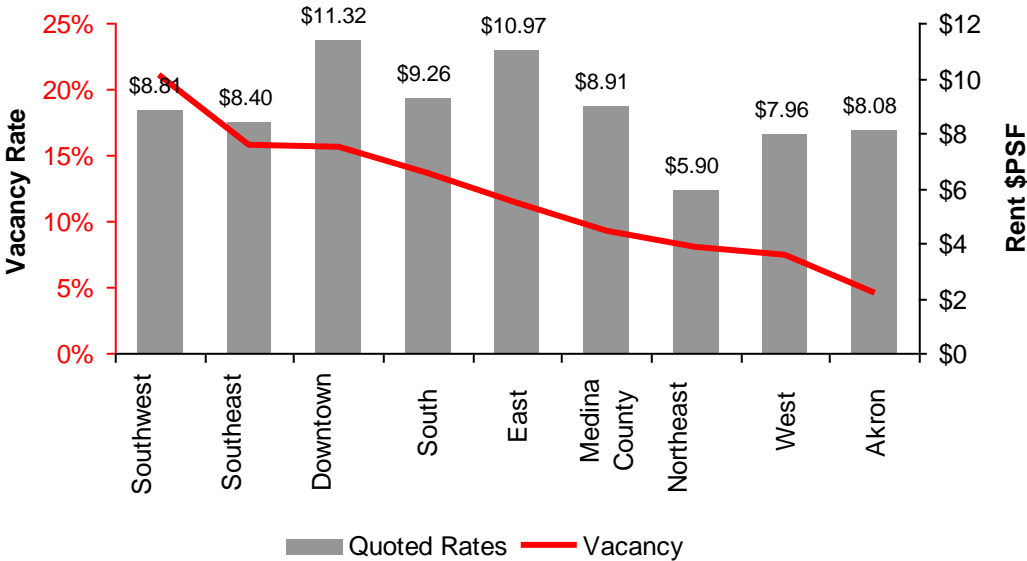


Cleveland warehouse yields remain high despite pessimistic outlooks for other property types. Capital values did not inflate here as much as in many other markets, making for a less severe value decline now. Strong leasing over the past three years (despite a declining local employment base and a crippled housing market) and the metro area’s reputation among national real estate investors keep developers away and yields high.

¹⁹ Ibid.

Cleveland’s industrial flex submarket forecast is a much better story, though: Flex vacancy stood near 12.1% at the end of the first quarter of 2009. Downtown flex lease prices are the highest in the MSA region, perhaps causing a somewhat high regional vacancy rate. Unlike traditional warehousing, flex space users are willing pay locale premiums. A port development could seek to lease space higher than the almost \$12 per square foot in the downtown area.

Figure 29: Downtown flex space commands the highest rates in the MSA



Cleveland faces strong competition from Columbus, a national warehouse market with strong distribution infrastructure. Locally manufactured auto parts and machine goods, and local consumption drive industrial property absorption in Cleveland. Given the state of the US auto market, predicted demand will decline until 2010. The flex building market specifically recorded net absorption of -215,282 square feet in the first quarter 2009, compared to +27,874 square feet in the fourth quarter 2008.

Only 300,000 square feet came into the market in 2008 (older property redevelopment, primarily), and as with other property types (excepting retail), this construction constraint helps fundamentals. Generally demand for flex space comes from tenants that are well distributed over available size ranges, with most taking under 25,000 square feet of space.²⁰

Rents are poised for an encouraging rally, pending any negative market news. The forecasted 2.6% drop is well below the 6.5% PPR54 average, and is expected to grow 12.6% by 2013.²¹ The average quoted rate within the flex sector was \$9.05 per square foot at the end of the First Quarter 2009, while warehouse rates stood at \$3.69 over the same period. Consequently, PPR actually recommends buying into this submarket after mid-2010. Flex development on the Port might be considered useful for a portion of the site’s BUA, especially as an inducement to firms that are involved in technical or advanced manufacturing for fast-growing ICT or health segments.

²⁰ CoStar 1Q2009 Cleveland Industrial Report.

²¹ Property and Portfolio Research Cleveland Warehouse Market Performance.

Hospitality Property

Hospitality demand is strong, and distinct niches are developing across the city

Hoteliers recognize the strength of the local tourism market and plan on increasing the number of hotels in the city (and expanding some of the current hotels). In both cases, the Port's adjacent tourism cluster of the Rock and Roll Hall of Fame and Science Center provides a strong foundation for waterfront area tourism development. Waterfront hotel rooms would be strong competitors against hotels located farther away from the area's tourist attractions. As the site develops and matures, additional demand support will come from business travelers to the waterfront and wider CBD.

Cleveland's tourism economy generates substantial revenue for the region: Cleveland is a culturally-rich city offering numerous natural, recreational, and cultural attractions for visitors to explore and enjoy. In 2007, visitors to Northeast Ohio generated \$13.9 billion in tourism sales and sustained 170,728 tourism-related jobs. Cuyahoga County brought in 45% of Northeast Ohio's tourism sales, accounting for roughly 14 million visitors.

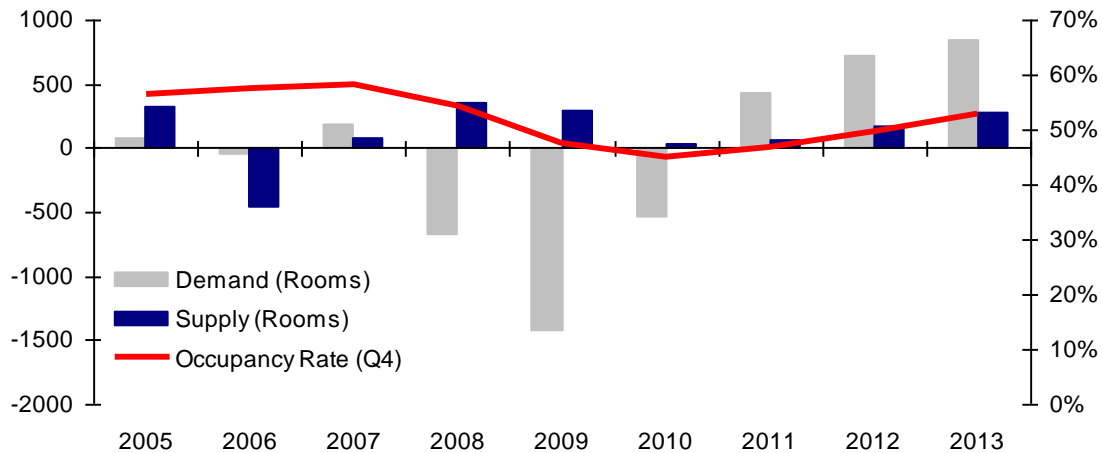
Figure 30: Visitor numbers show strong sales, overnight visitor and RevPAR (revenue per available room) growth²²

	2005	2006	2007
Cuyahoga County Economic Impact			
Total Sales	\$5.72 Billion	\$6.05 Billion	\$6.36 Billion
Total Employment	63,783	64,109	63,721
State Tax Receipts	N/A	N/A	\$258.5 Million
Local Tax Receipts	N/A	N/A	\$198 Million
Northeast Ohio Visitor Volume			
Day Trip Visitors	N/A	51.7 Million	50.9 Million
Overnight Trip Visitors	11.2 Million	11.4 Million	12.1 Million
Cleveland Area Hotels			
Occupancy	57%	58%	58%
Room Demand	4,530,029	4,513,721	4,519,140
Revenue Per Available Room (RevPAR)	\$44.13	\$48.85	\$51.58

Since the early 1990s, Cleveland has added and improved many cultural and recreational amenities appealing to tourists and residents. These include the development of Quicken Loans Arena (the Cleveland Cavaliers' home arena and 20,500-seat concert venue); development of Progressive Field (home field of the Cleveland Indians); development of Cleveland Browns Stadium; addition of the Rainforest to the Cleveland Metroparks Zoo; development of the Rock and Roll Hall of Fame and Museum (host of an annual induction ceremony every third year beginning in 2009); development of the Great Lakes Science Center; restoration of the Playhouse Square Theater District; and the six-year, \$258 million expansion and renovation of the Cleveland Museum of Art.

²² http://www.positivelycleveland.com/media_center/industry_stats/

Figure 31: Hospitality demand is rebounding to pre-financial crisis levels



The availability of these unique attractions will be a strong selling point to groups holding meetings in Cleveland’s new convention center, once constructed. As Northeast Ohio continues to attract new industries and developments, the area’s numerous tourism venues, restaurants, and lodging facilities will benefit from the increase in visitors. The recent fall in room demand will rebound beginning in 2011, which will outpace hotel deliveries and drive vacancy rates higher.

The Cleveland MSA includes hotels located in Cuyahoga, Ashtabula, Geauga, Lake, Lorain, and Medina counties. The Cleveland MSA has recorded increases in occupancy each year since 2005, while average daily rates (ADRs) has increased steadily over the last four years. The following chart shows the Cleveland MSA’s historical and year-to-date lodging performance through July 2008 along with projections by Hotel & Leisure Advisors.

Figure 32: Cleveland MSA Hotel Market Operating Performance²³

Year	Occupancy	% Change	ADR	% Change	RevPAR	% Change
2004	57.1%		\$74.98		\$42.81	
2005	56.6%	-0.9%	\$78.01	4.0%	\$44.15	3.1%
2006	57.6%	1.8%	\$84.90	8.8%	\$48.90	10.8%
2007	58.2%	1.0%	\$88.59	4.3%	\$51.56	5.4%
YTD July 2007	58.6%		\$88.39		\$51.80	
YTD July 2008	55.1%	-6.0%	\$90.54	2.4%	\$49.89	-3.7%
2008	55.0%		\$91.00		\$50.05	
2009	57.0%	3.6%	\$94.00	3.3%	\$53.58	7.1%

Year to date, Cleveland area hotels have recorded a -3.5 point decrease in occupancy as compared to 2007, although the ADR has increased by 2.4%. In 2007 both the Cavaliers and the Indians were in playoff competitions, which boosted demand. The drop in 2008 is due to reduced business travel because of the economic downturn as well as reduced leisure travel due to fewer major sporting events.

²³ Smith Travel Research (historic) and Hotel & Leisure Advisors (forecast).

The Cleveland market contains 187 hotels with 21,439 rooms according to Smith Travel Research and is divided into 7 submarkets. The following chart shows the Cleveland submarkets' historical lodging performance in 2007.

Figure 33: Cleveland Submarket Operating Performance 2007²⁴

Market	Occupancy	ADR	RevPAR
Akron/South	50.4%	\$56.10	\$28.27
Downtown	61.0%	\$118.32	\$72.18
East	57.2%	\$85.46	\$48.88
South	59.1%	\$89.32	\$52.79
Southeast	39.9%	\$61.16	\$24.40
Southwest	64.6%	\$73.61	\$47.55
West	58.9%	\$76.63	\$45.14

In 2007, the strongest market in terms of occupancy was the Southwest market with occupancy of 64.6%. The strongest market in terms of ADR and RevPAR is the Downtown market with an ADR of \$118.32 and RevPAR of \$72.18. While an occupancy rate of 61.0% would not be considered by most hoteliers to be strong, it's not a particularly weak market, especially when compared to the other six submarkets.

New hotels are being planned to take advantage of unique opportunities: As a result of the forthcoming development of a new convention center and Medical Mart in downtown Cleveland, an 800 to 1,200-room convention headquarters hotel has been proposed as well as a possible 300 to 400 room expansion of the existing 491-room Renaissance Cleveland Hotel (both in the preliminary planning stages). Additionally, the Inter-Continental Hotel Group has signed an agreement with K&D Group to redevelop the Ameritrust Tower on East 9th Street and Euclid Avenue into a Hotel Indigo. The new hotel would be part of a mixed-use development including a 140-suite boutique hotel, 165 to 180 apartments, and 200,000 square feet of office space. A new 126-room Staybridge Suites hotel has been proposed at the former Channel 3 building on the corner of Rockwell Avenue and East 6th Street. Additionally, Charter One Bank is financing the renovation of the Tudor Arms Hotel near the Cleveland Clinic. The developer is proposing a mixed-use development containing a 157-room hotel and 53,000 square feet of office space. University Hospitals has begun seeking proposals from hotel developers to construct a new 160- to 200-room hotel on the corner of Euclid Avenue and Cornell Road. Additional smaller hotel projects are proposed for suburban areas. As is often the case in development, each of the aforementioned lodging projects is speculative in nature. However, if the Medical Mart and convention center proceed, it will drive the occupancy and new construction of hotels.

Hotel development forecasts are more speculative than forecasts for other property types. With hotel development, much depends upon broader economic issues. So much so that it is common for real estate professionals to consider hotel development separate from traditional real property development.

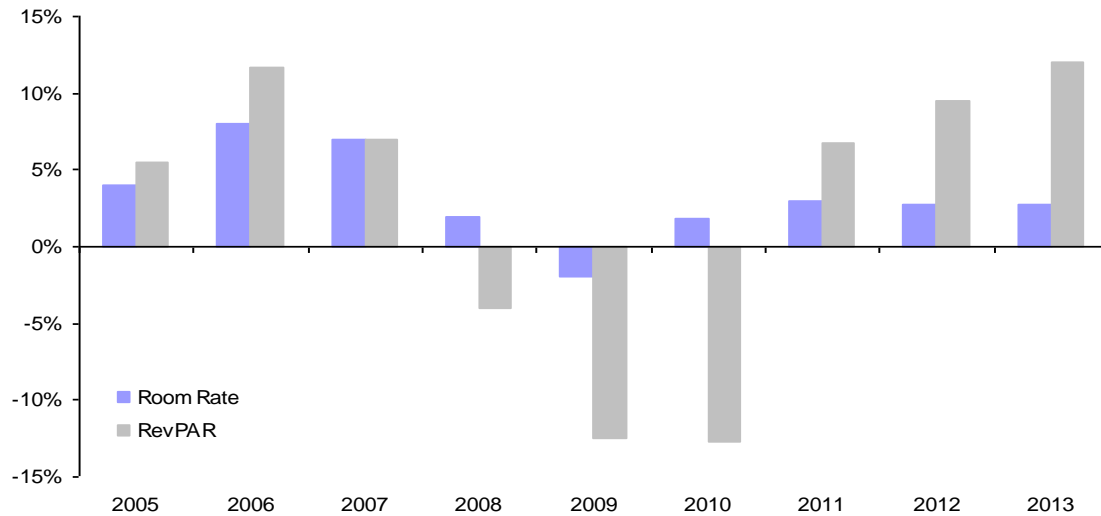
While forecasts project a continuing decline in hotel demand until the end of 2010, a net absorption for hotel rooms is predicted with overall economic recovery.²⁵ This bodes well for new hotel development at the Port site. Since the submarkets of Cleveland are so unique, it is possible

²⁴ Smith Travel Research.

²⁵ Property and Portfolio Research, Cleveland Hotel Market Fundamentals 1Q2009.

for the Port site to support new hotel development, even if the Cleveland MSA does not.

Figure 34: Increased demand for hotel rooms feeds growth in the room rates and RevPAR²⁶



Finally, new hotel construction and increased occupancy tend to drive employment. Hotels are intense users of relatively low-cost labor, and can provide many people a first rung on the economic ladder.²⁷ This employment growth may help to increase the city's relative wealth and contribute to rising prosperity (that in turn attracts people to the Port site and the city generally).

Retail and Entertainment Property

The retail environment in the MSA is under stress from the economic recession, but the CBD appears to be stronger.

Over time, we estimate that the residential, office and tourism populations of the wider Port area (including Downtown and the CBD) will grow sufficiently in size to support precisely the types of retail amenities that suburban shoppers take for granted (such as grocery stores, big-box retail and various entertainment options). But the city's attraction to artists, musicians and independent thinkers has also brought non-chain options that add to the area's character. Even though Cleveland MSA level retail market has not fared well during this recession (estimates of retail vacancy differ by very large amounts, but generally all agree that rates above 20% are possible), the CBD's retail submarket has performed better than the rest of the MSA.

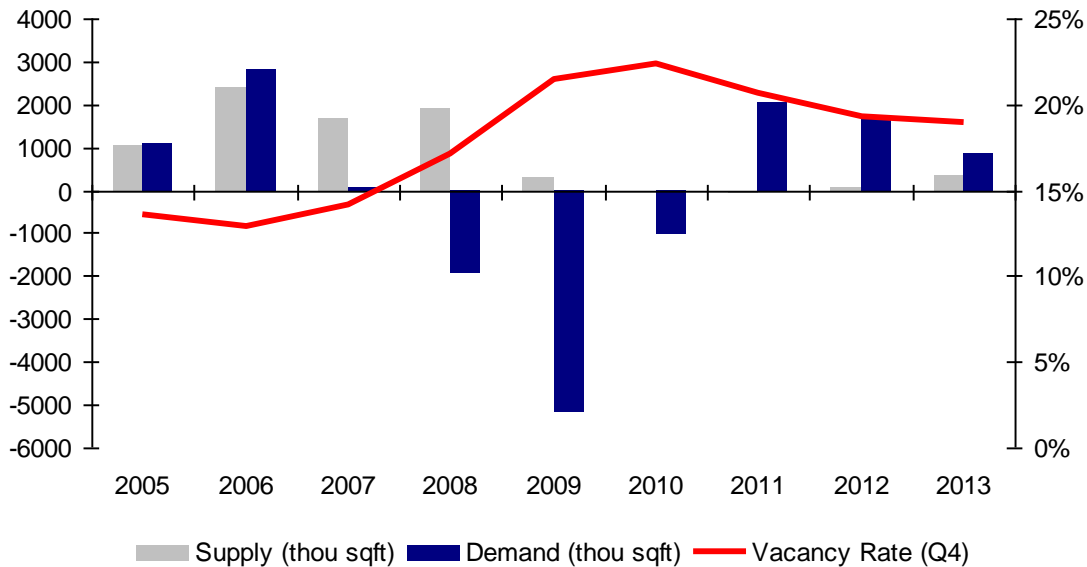
While insufficient demand currently exists in the CBD for large anchor tenants in the supermarket or big-box segments (roughly 10,000 households are needed for those tenants to be successful), entertainment providers and retailers focused on the tourism sector (initially) may fare well, as will restaurateurs and bar-owners that can deliver unique experiences on the waterfront.

²⁶ Ibid.

²⁷ Ibid.

The Cleveland MSA’s retail submarket is slumping: Vacancies within the CEM MSA retail market are high (18.3% at the end of the first quarter) and will only experience a moderate recovery in the coming quarters (Figure 35). Reduced consumer spending and overbuilt capacity across the MSA are driving vacancies upward, and the vacancy rate may even be as high as 22.4% in 2010 before moderating to a still relatively high 18.9% by 2013. Unlike other product types, MSA retail inventory is not held in by supply constraints. A glut of product that accumulated due to new construction during the last few years will reduce the potential for a substantial recovery. When coupled with greatly decreased demand, local economic woes, and Cleveland’s historic retail market rent volatility, a bleak outlook emerges. Fortunately for existing landlords, only 310,000 square feet will come onto the market in 2009. As customers have pared back on almost all discretionary spending, smaller, value-oriented retailers that provide lowest-cost alternatives are expected to be among the only retailers shopping for space this year.²⁸

Figure 35: Increased demand and stagnant deliveries are stabilizing vacancy rates



Predictably, rents are expected to fall by 15-20% (Figure 30)²⁹ and will not rebound with the same tenacity as other metro areas, regaining only 5.4% compared to 8% for the PPR54 metropolitan areas.³⁰ Cleveland’s population and unemployment woes preclude positive retail sales predictions.

²⁸ CB Richard Ellis, Northeast Ohio Retail Report.

²⁹ Ibid., Property and Portfolio Research, Cleveland Retail Market 1Q2009.

³⁰ Property and Portfolio Research, Cleveland Retail Market 1Q2009.

Figure 36: Projected rent prices will remain stable through 2013



Greater Cleveland’s retail difficulties are shared by other major metropolitan areas.³¹ However, some forecasters expect Cleveland’s rebound to trail national averages significantly: forecasted Net Operating Income (NOI) for retail property is 10% (outpacing Cincinnati and Detroit, but below the 19% national average). Similarly, cap rates are expected to rise roughly 3.3%, but this is insufficient to boost annual returns above average in 2012 and 2013. This rate of return is similar to Cincinnati but lower than Columbus.

Figure 37: Forecast summary as of 2009 Q1 for the retail market

	Average Annual Growth Rates			
	Historical		Forecast	
	Metro	PPR54	Metro	PPR54
Supply	1.90%	2.30%	0.10%	0.70%
Demand	2.00%	2.50%	0.00%	1.10%
Net Demand	0.10%	0.10%	(0.1%)	0.40%

Finally, data collected for the retail property segment vary quite a lot, with Cleveland’s first quarter 2009 retail vacancy estimates at 18.3%,³² 7.1%,³³ and 11.5%.³⁴ This variance reflects the different sampling methodologies used to understand this relatively opaque market.

Cleveland’s CBD retail market is in considerably better shape than the MSA: In stark contrast to high vacancy rates at the MSA level, CBD vacancy is in much better shape with vacancy rates at 3% compared to the MSA’s 22.4% (Figure 38). Yet rent prices are not

³¹ Ibid.

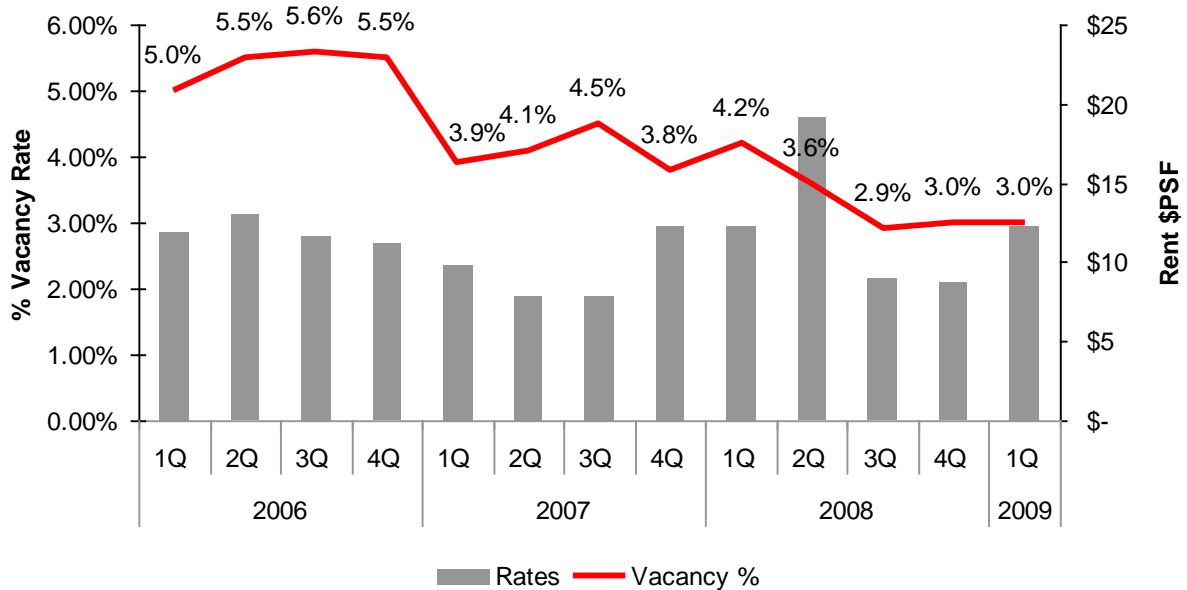
³² Ibid.

³³ CoStar Cleveland Retail Report 1Q2009.

³⁴ Marcus & Millichap Cleveland Retail Research 2Q2009.

significantly different than at the MSA level. Volatility in rent prices could reflect weak retail demand. The market lacks high-profile anchor tenants, but rather is filled with general retailers that are unlikely to pay high rent prices. Weaknesses in the CBD retail market may, therefore, be a sign that retail property investment would need to be grounded on local demand drivers that justify any premiums paid.

Figure 38: Downtown Cleveland vacancies point to a notably healthier market than the MSA overall³⁵



The CBD currently hosts only retail classified as General Retail and Mall Market (generally single purpose retail buildings or the typical multi-tenant mall). This is a benefit, as other types of retail have been more hard-hit during the recession. Nonetheless, across all classes of retail property in the CBD, deliveries, absorption, and vacancies fell simultaneously from 2006 through 2008. As a result of these trends, CBD rents did not drop substantially. Other cautiously optimistic statistics show rents creeping upward, and vacant space increasing only modestly. However, the CBD is not immune to the surrounding area’s difficulties. While the Port site’s development could represent a very attractive retail opportunity, at least one developer cautioned against a “if you build it, they will come” strategy. Any new retail will need to rely on solid fundamentals: on-site residential and office tenants, and a good connection to local tourism attractions.

Residential Property

Residential property is suffering from the recession, but interest in living downtown remains high

Cleveland’s residential housing market is the weakest segment in this analysis from an MSA perspective, but is not representative of the residential market over all submarkets. A good indication of the relative supply of houses at the MSA level compared to demand is that the median sales price for single family homes in the MSA dropped below \$100,000 in 2008, continuing a trend of declining prices that began in 2006. Presaging this slowdown, construction

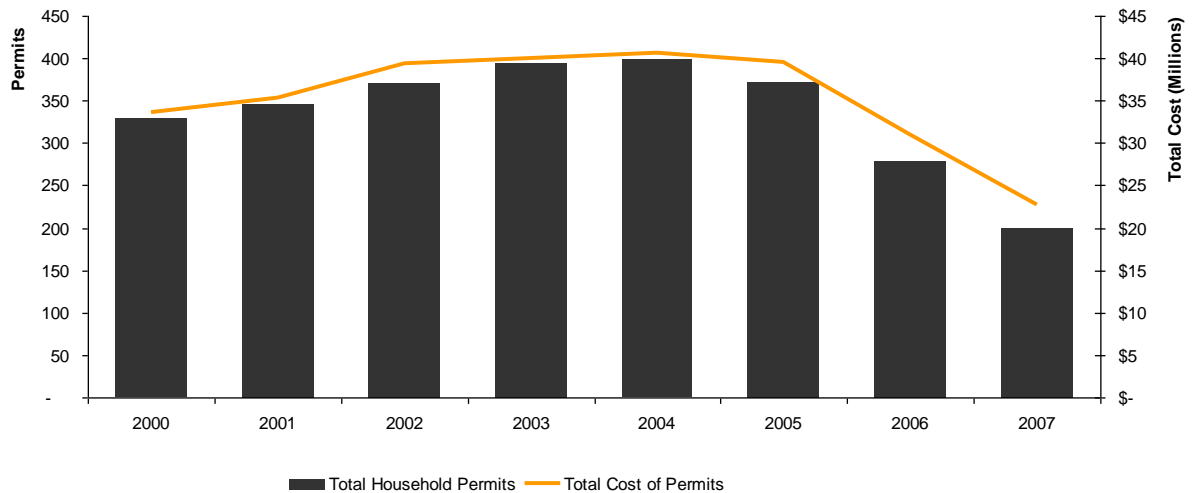
³⁵ CoStar Cleveland Retail Report 1Q2009.

permits had begun to decline in 2004 and had continued through 2007. Only selected submarkets, particularly in Western Cleveland, have bucked this trend strongly.

The impact of the recession is also visible in the home ownership rate. Foreclosures have taken this rate lower, even as rental rates fall from the increasing supply of homes converted to rental use. If the real estate cycle were nearing its bottom, then the volatility in pricing would be narrowing to a small band. As of Q1 2009, this volatility was growing, indicating continuing difficulty within the Cleveland MSA’s residential property market.

Amid the gloom in the residential market, residential demand in the CBD is forecast to grow, and this growth is before a number of planned developments there begin spending money on marketing and generating additional demand for downtown living. As the residents of the downtown apartments and condos are also includes some of the city’s highest average incomes and educations, the growth in downtown residential demand supports additional residential development there.

Figure 39: The volume and value of city of Cleveland residential construction permits are well below average levels³⁶

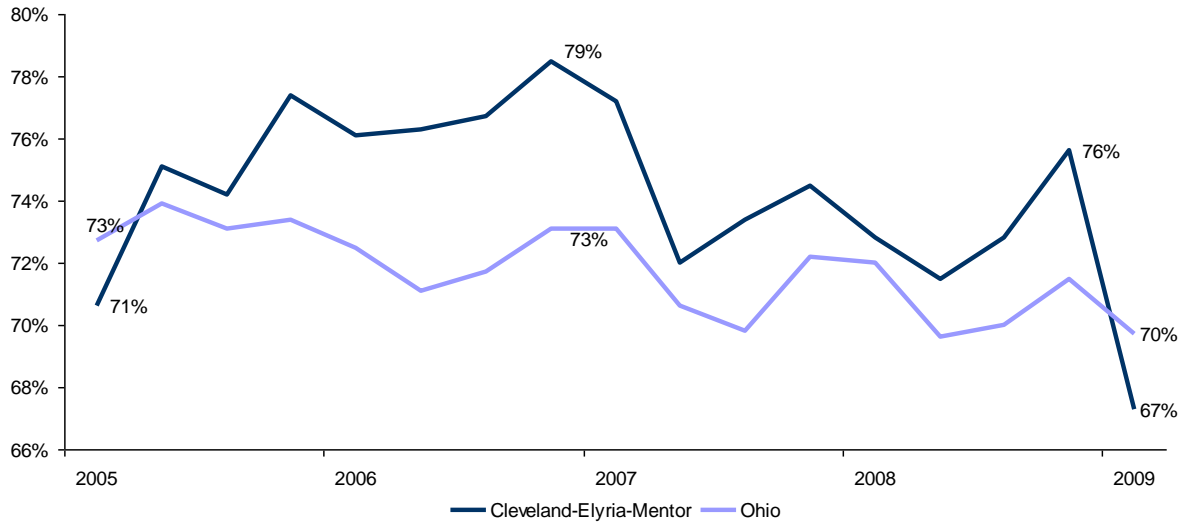


Residential deliveries are slowing as construction permits and starts are dropping: Housing permits are a key indication of future growth expectations for any housing market and the volume of housing permits halved between 2004 and 2007. The total value of potential housing starts has also dropped to a low of \$20 million. There have been no major shifts toward higher, mid, or lower-cost housing in the Cleveland MSA area. Figure 39 plainly shows the drop in residential permits prior to the 2006 real estate bust.

Rates of home ownership are falling along with prices, while rental rates are stable: Although the Cleveland real estate market did not participate strongly in the recent real estate boom, home ownership rates and rental prices at the MSA level have fallen. A combination of rising unemployment, foreclosures, and the availability of land has kept rental rates low.

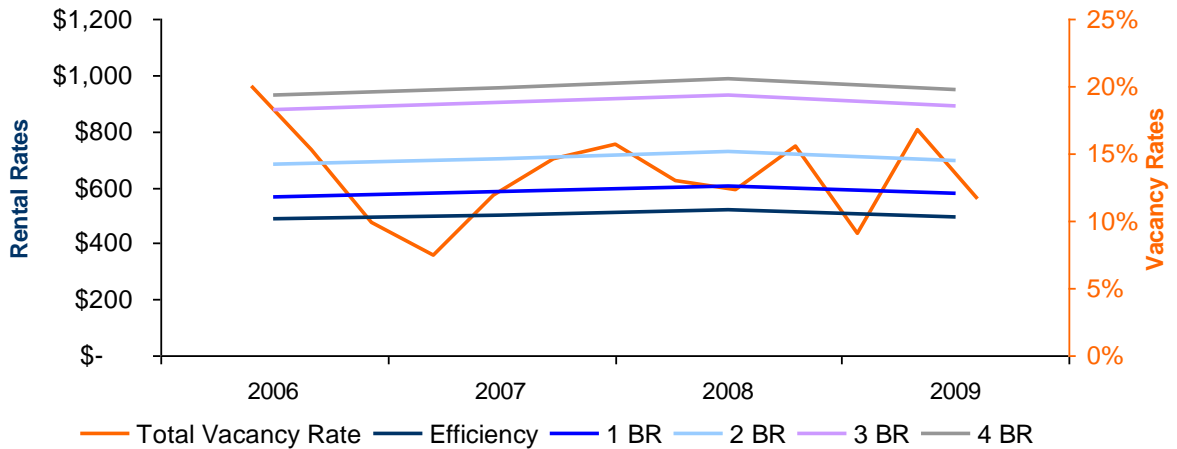
³⁶ Census Bureau.

Figure 40: Home ownership rates are declining³⁷



Cleveland-Elyria-Mentor historically has had higher rates of home ownership than the state of Ohio until the recent economic meltdown. High homeownership rates were a result of low housing prices as the population sprawled further away from the city. However, recent economic troubles in the manufacturing sector have amplified weaknesses in the housing market, causing a cascade of foreclosures. Between Q4 2008 and Q1 2009, the MSA saw an 8% reduction in home ownership rates after nearly returning to levels seen at the beginning of the real-estate bubble bust from 2001-2006.

Figure 41: Cuyahoga County residential vacancy rates are dropping, along with rental rates³⁸



Stagnant rises in real estate prices have also kept fair market rental prices low. After peaking in the middle of 2008, rental prices are falling steadily to 2006 levels. Average rental rates for a two bedroom apartment remain relatively low at under \$800 per house. The median price of a single-

³⁷ U.S. Census Bureau, 2005-2007 American Community Survey.

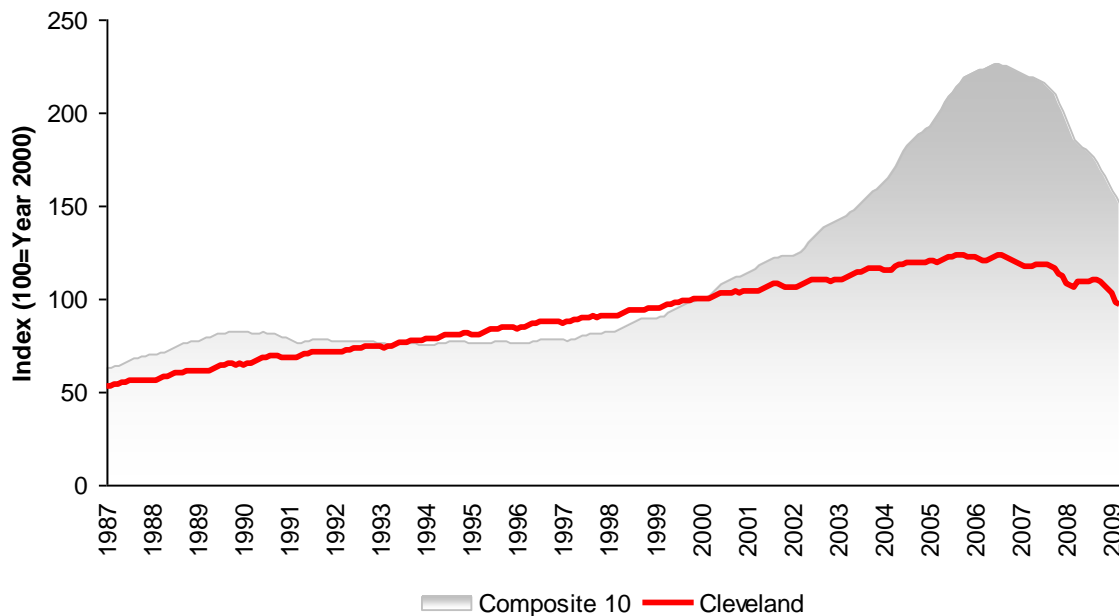
³⁸ HUD, HUDUSER.

family home in Cleveland was roughly \$105,400 in the first quarter, down 6% from one year earlier. Job losses leading to more foreclosures are maintaining pressure on home prices, helping to keep them from growing. The median price of an apartment property in Cleveland increased 6% to \$36,900 per unit year over year. Some of the appreciation is due to the mix of assets trading, as more Class A properties changed hands during that time. The drop in prices has helped to keep vacancy rates steady at over 10% over the past 3 years.

Residential real estate volatility is growing: Cleveland real estate prices have historically been cyclical with growth trending linearly upwards, unaffected by the housing boom in the late 80s, the slump in the mid 90s, and the recent real estate boom. However, losses in the manufacturing sector and financial instability have sent the Cleveland housing market into a period of extreme uncertainty.

Figure 42 reveals that the Cleveland market has had strong steady growth, but has suffered since 2006. Unlike the rest of the country, its historical growth has been steady, as the Cleveland market, marked in red, missed the boom in the late 80s and 2000s and missed the recession during the mid-90s. Overall growth during growth periods did not see nearly the growth seen in the aggregate US market. In the recent slowdown, the Cleveland market has suffered more than the US market, despite seeing a smaller percentage drop from peak levels. Housing prices in the Cleveland area are down to the lowest level since 2001, while the rest of the country only dropped to 2004 price levels. With increasing foreclosures and houses already as cheap as \$20,000, the Cleveland market may be nearing the bottom.

Figure 42: Housing prices are dropping, but less steeply than at the national level³⁹

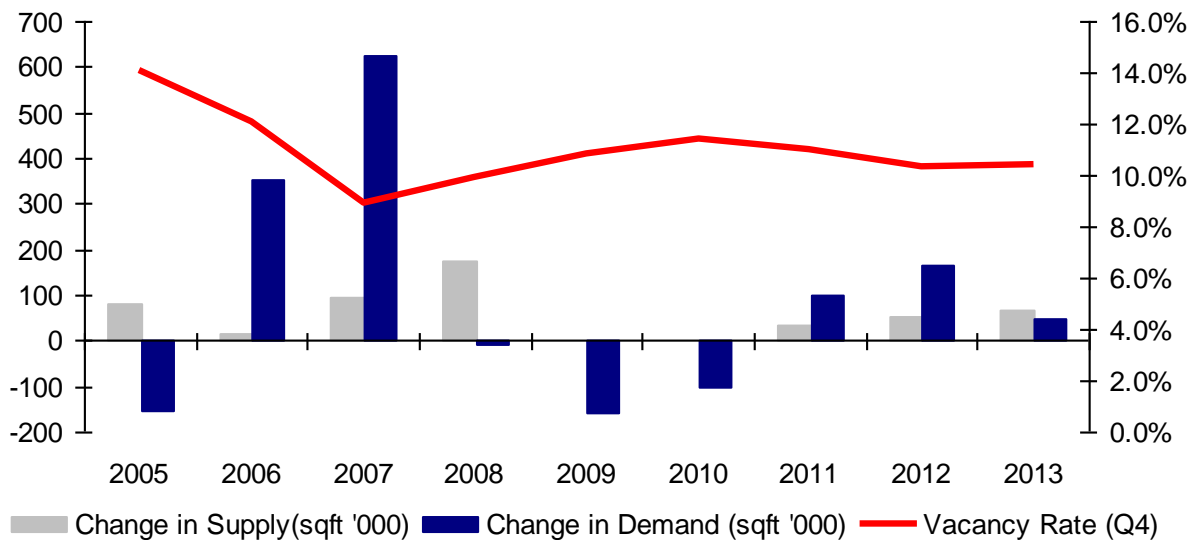


Negative yearly growth rates started in the beginning of 2005, before the country-wide bust began. Since then, price shocks have gotten deeper but have been softened by a brief period of recovery. With growth rates volatility increasing, the residential market may yet be weak at the MSA level for some time.

³⁹ Case Schiller Index.

Apartment demand in the CBD is forecast to grow: In spite of the regionally weak residential market, there are bright spots in the picture. The CBD hosts 11% of Cleveland’s apartment supply (most of the residential property supply in the CBD in condo or apartment) and is one of the best residential markets in the city. Vacancy rates are low, average rents are high and attractive segments of the MSA population wish to live there. Figure 42 shows the vacancy rate together with the residential supply and demand changes in the CBD.

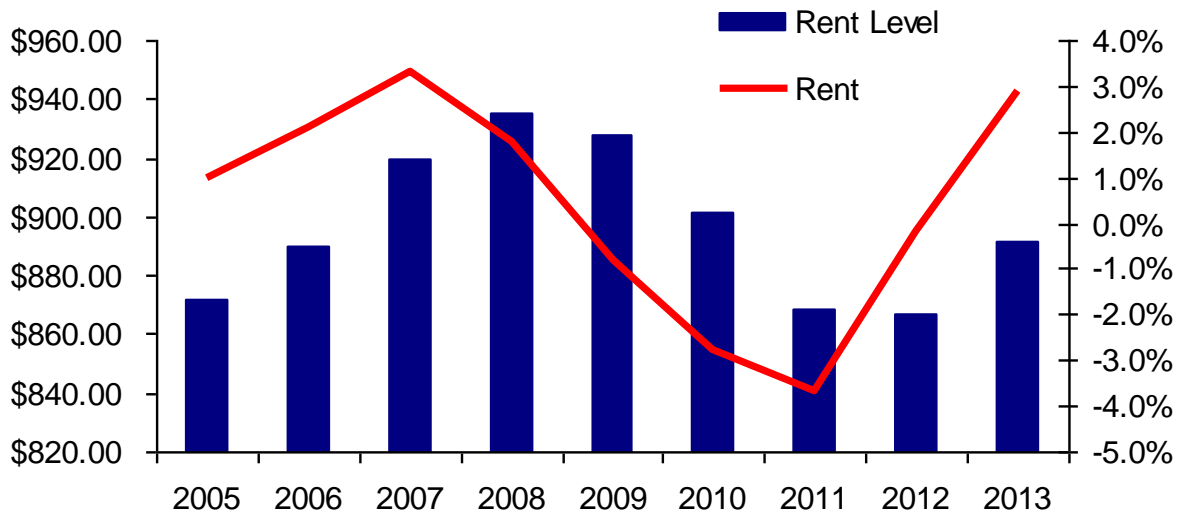
Figure 43: Modest movement will characterize CBD residential development⁴⁰



CBD residential vacancies fell until 2007, and then rose through 2009 (with estimates of a stable 10% vacancy rate until 2013). Currently, greater Cleveland’s apartment vacancy rate is close to that of other major Ohio metro areas. A waterfront development would increase supply and shift demand from the CBD and the suburbs onto the waterfront. This demand may be translated into higher average rents than are available in the CBD as well.

⁴⁰ PPR

Figure 44: Current economic conditions are hurting rent prices, but will begin to rebound in 2012



Rents are expected to improve again in 2011, following a decline in that began in 2007. Reportedly, lower-end one bedroom units in the CBD will currently rent within 48 hours at \$0.87 – \$0.90 per square foot, while high-end one-bedroom units will rent similarly quickly at \$1.45 – \$1.50 per square foot. Sale units vary by CBD location and building type: historic conversions generally fall between \$190 – \$250 per square foot, new construction is slightly more expensive at \$285 – \$300 per square foot, and product located in the Theater District or University Circle will command a slight premium of \$300 – \$325 per square foot. Despite 700 – 1,100 units coming off Cleveland’s condominium tax abatement and onto the tax rolls for the first time, these units are still selling, although at a discount relative to units still under abatement. One example listed two very similar units changing hands for \$256,000 and \$285,000 for the expired abatement and exempt unit, respectively.⁴¹

If the Port site can be developed within these pricing parameters, then absorption within levels seen in the CBD may be expected. Should the Port’s residential development need to identify other sources of demand that can supplement standard apartment or townhouse leasing arrangements, then the local university market may also be attractive. Cleveland State University reportedly suffers from a scarcity of dormitory housing. 400 units are supposedly absorbed in two days, leaving a waiting list twice as long as the available units. Since nearly 75% of students commute, housing on the Port site may be an attractive residential solution (although the rates would have to be evaluated in light of development costs).

⁴¹ Greater Cleveland Partnership.

3. THE DEVELOPMENT OPTIONS FOR THE PORT SITE ARE SUPPORTED BY LOCATION ADVANTAGES, DEMAND PROJECTIONS AND FINANCIAL ANALYSIS

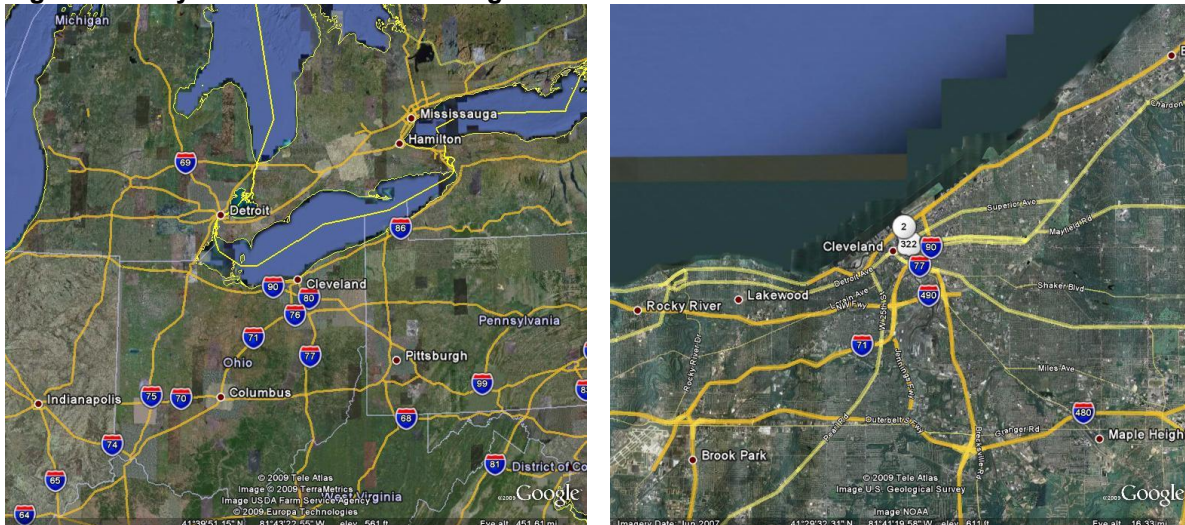
The Port site presents unique development opportunities supported by emerging local demand and financials. The site sits on prime waterfront real estate in a high-traffic metropolitan area with the area's tourism icons near its perimeter. Legal complications in the port's land ownership structure are potentially limiting, but reconcilable. Despite a currently weak real estate market, demand model projections indicate sustainable demand for a unique waterfront development with a mixed use product. The demand-led options for development plan options each result in positive financial returns for the capital providers.

3.1 THE PORT SITE PRESENTS UNIQUE DEVELOPMENT OPPORTUNITIES WITH SOLVABLE BARRIERS TO DEVELOPMENT

The Port site is an attractive area for development because of its connectivity, size and location. It comprises prime waterfront real estate in a high-traffic metropolitan area. The plot is unique; being undeveloped and adjacent to major city arteries, nationally recognized tourist attractions, and Lake Erie. Logistically, the site's relatively large size gives developers flexibility during the early stages of development for a longer period. The port may retain (part of the) port functions as an important and defining element that provides character to the waterfront development. Connectivity to the city and land ownership complications present barriers to development, but can be easily solved through negotiation with the relevant stakeholders.

Port site is well positioned to exploit regional connectivity: The Port's proposed development in Cleveland places it along a network of land, road, rail and air connections with other large population centers in the north-central and much of the Eastern – Mid-Atlantic United States. This location is estimated to be accessible by at least 20% of the entire US population within a day's drive.

Figure 45: City's location within the region is attractive



The city is not only accessible to Americans. As Figure 45 shows, Cleveland's position at the southern end of Lake Erie means that Canadians too can visit easily. It has access to transport options via waterways, rail or land routes along the lake. It counts itself among a select group of large cities that border Lake Erie, including: Buffalo, New York; Erie, Pennsylvania; Toledo, Ohio; and (somewhat indirectly) Detroit, Michigan. Interstate highways facilitate land access through I-

77 and I-90, with reasonably easy access to I-75, I-79, I-80 and I-86. Cleveland's location at or near so many large highways positions it as a potential aggregator of local and long-haul tourists who travel on the aforementioned roadways. These links help to make Cleveland a regional hub for businesses, trade, and tourism.

The waterfront site is unique and links into wider city development trends: The current size of the Port site is 99-acres with an additional 14 acres near the Browns Stadium that are potentially available for development, visible from the downtown area behind the port. Taller buildings in the downtown area have clear views of the port, stadium, and Rock and Roll Hall of Fame. Aesthetically, the site itself is austere with no historical structures, as the port was built for functional use: as a place to load and unload bulk cargo ships. The railway, large areas of storage space, warehouses, and overall lack of green space add to the industrial setting of the site. However, the site's waterfront developmental potential is becoming increasingly apparent. A development would take advantage of sunsets on the lake, and unobstructed views of the cityscape to attract new residents, visitors and businesses.

Figure 46: The port has a prime location within the city

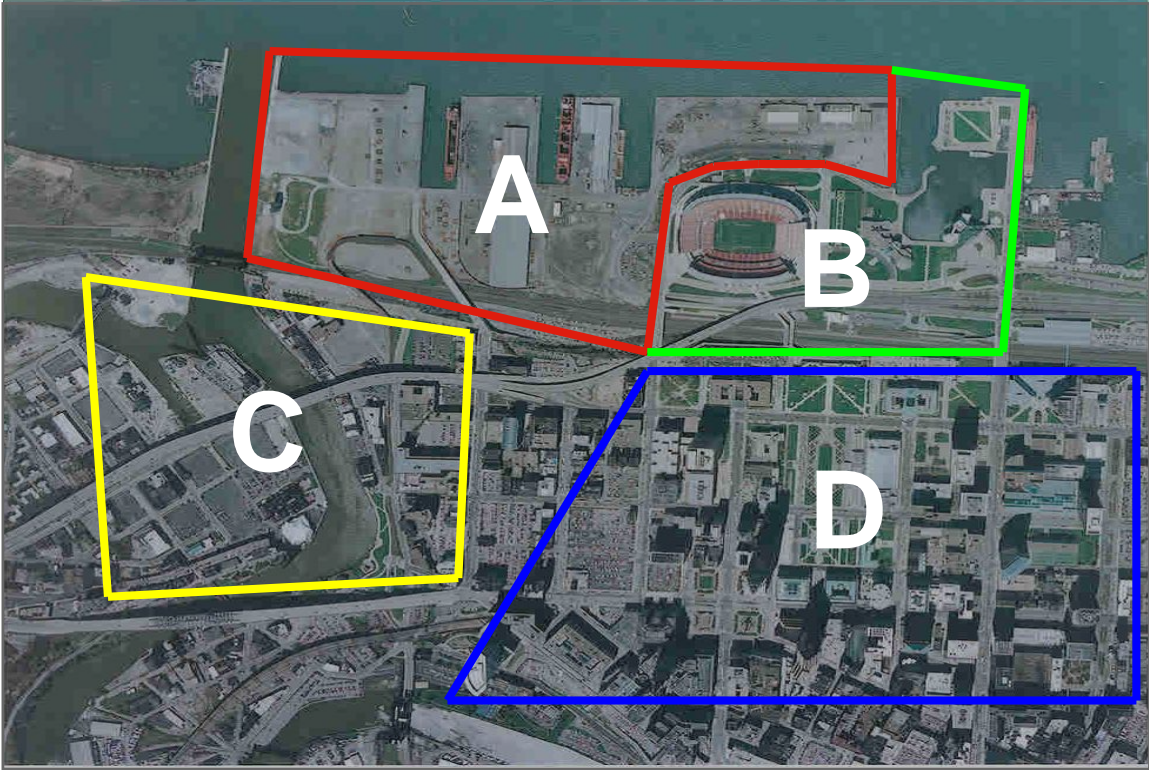


Figure 46 reveals that the site is in close proximity to some of Cleveland's busiest areas. The port site (Zone A) is adjacent to the tourism epicenter (Zone B) of Cleveland, with the Rock and Roll Hall of Fame and Science Center, which attract nearly 500,000 tourists annually, and Browns' Stadium, which fills with 80,000 people more than 10 times a year. A link from the eastern corner of Zone A to Zone B would connect the port's site with the tourist attractions and Browns' Stadium. It would make a strong base from which to develop a retail, entertainment, hospitality and dining area on the port's site to seed its later development.

The port site borders the developing Flats district (Zone C) to the south. The western end of the port site is conveniently located along the mouth of the Cuyahoga River, just north of the former Flats entertainment district. Developing Zone A's western edge with a mixed-use development

zone would complement the live-work-shop-entertainment theme headlined by the Zone C's downtown development mix. The site also borders the CBD (Zone D) to the east of the Flats. Office use and the planned medical mart in Zone D would tie together with commercial and retail development on the waterfront site's southern periphery up to the commercial slips.

Current transportation infrastructure can be adapted and connectivity improved: The area has some on-site transport infrastructure, primarily related to ongoing port activities. On the eastern side of the site, relatively more infrastructure is in place for Browns Stadium and public use during game days. Importantly, the site is already connected to the city's Rapid Transit System (RTA) with an existing commuter rail line bridging the Amtrak railways and running along the entire southern edge of the site. This carries the RTA's Waterfront Line which connects directly to the Tower City – Public Square downtown hub station. There is also a reasonable level of existing road access between the downtown and the Port area, with three existing roads crossing the railway corridor: W 9th Street, W 3rd Street, and E 9th Street. Additionally, there is site access on the eastern side from Highway 2, as well as from the N Marginal Road. There is a double pedestrian bridge over the railway lines connecting The Mall and the Browns Stadium area.

Despite its proximity to the most vibrant areas of downtown Cleveland, the current site's accessibility is still problematic. Road and pedestrian access is blocked by the Port's fencing. Any development plan would have to improve accessibility and enhance the public's ability to get to the Port easily. Access to and from the site is best from the west side of the city, but the rail and road links act as a physical barrier between the downtown area and the waterfront site. Outside of the Waterfront Line the Port area remains separated from the city: the railway run across the entire southern perimeter of the site adjoining the downtown, and the elevated Highway 2 affects the eastern side of the southern perimeter. The railroad and roadway effectively serve as a barrier to natural pedestrian circulation to the Port site. The area is bounded on its western perimeter by the Cuyahoga River, with an Amtrak bridge present. Connectivity is not an issue on the East side, with few physical barriers disconnecting the Port with the stadium area. Here, the site would benefit from direct access to the Memorial Shoreway, the Amtrak Station, and other public transport access servicing the tourist area.

Current port operations provide opportunity to add value waterfront development: As seen in the international and US case studies, many waterfront developments retain all or part of the port functions that helped to define the area's maritime character as an as an active, working waterfront. A panorama with port functions (cranes, ships, tugs, dockings and departures, shipping and boat activities) can add value to a real estate project by adding vibrancy, activity and character to the site for residential, tourism, office and leisure functions.

The waterfronts with 'living port' functionality often include stimulating shipping and water related activities (fishing, diving, boat tours, ferries, boat repair or even some small cargo handling are appealing port activities). Similarly, it is possible to attract forward agencies, shipping lines, and others to locate in offices close to the active port activity to create "a port cluster" within the adjoining development area. However, the nature and manner of port functions and the nature of the adjoining waterfront real estate development need of course to be considered to effectively 'nest' the port functions as a complement to the waterfront development.

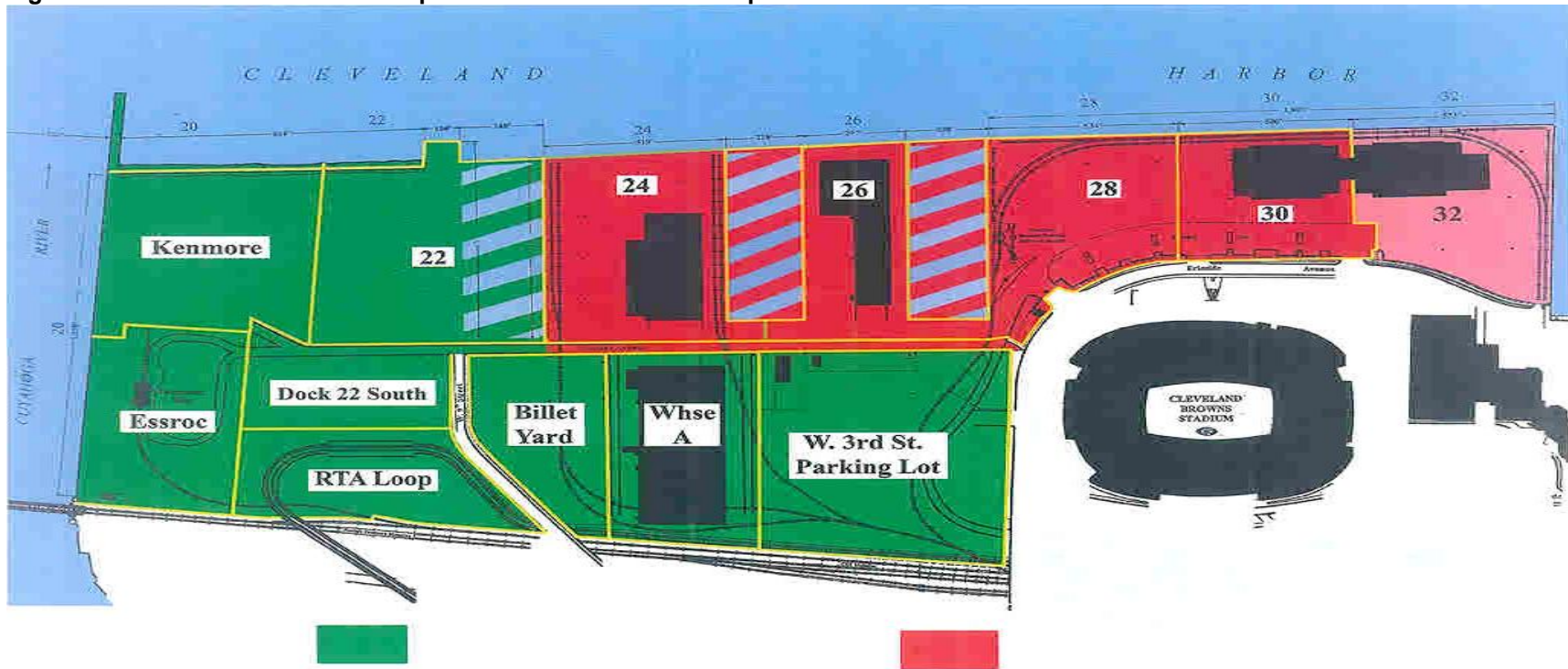
Land ownership complications are solvable: The complex ownership structure of the port site may limit development options if a solution is not agreed upon early in the planning process. But given the stakeholders involved (primarily all government entities with an interest in ensuring the best possible public outcome for the Port site) a successful development is nonetheless feasible. The Port authority owns the majority of the site and leases the rest from the City. However,

neither entity directly owns their land. Instead, the Port and the City own land (which was created using dredged fill) that sits on top of the State of Ohio's land, which extends up to the original shoreline. This legal fact means that the Port and the City pay a ground lease to the State of Ohio for using the land that the Port currently occupies. As Figure 47 shows (with red denoting city ownership and green port ownership), there are additional nuances to the ownership issue.

Land owned by the CCCPA (in green) comprises eight parcels of approximately 59 acres, mainly to the site's south and west. Presently, the city owns the portion of land that is adjacent to the Browns' Stadium and the Rock and Roll Hall of Fame (Zone B in Figure 46 and plots 28 and 30 in Figure 47) and the port has a lease on that land until 2028. This land is roughly 48 acres in total. Further, the city also owns the land surrounding two of the commercial slips (plots 24 and 26 in Figure 47) that the port uses for its primary operations and 350,000 square feet of warehouse space. The port has purchase options for these latter two plots of land, but currently leases them from the city until 2043. The terms of the purchase have not been discussed, but may be favorable considering the potential economic impact of the new development on the city's tax base.

The port itself also leases land to two other companies, Kenmore and Essroc. Kenmore leases land adjacent to plot 22, which is at the intersection of the lakefront and riverfront; while Essroc leases land on the riverfront that is adjacent to plot Dock 22 South and the Rapid Transit Authority (RTA) loop. The Port Authority is in a long-term contract with the Essroc cement factory that is set to expire in 2027, with options to be extended for another 20 years. Kenmore currently operates on a year to year agreement.

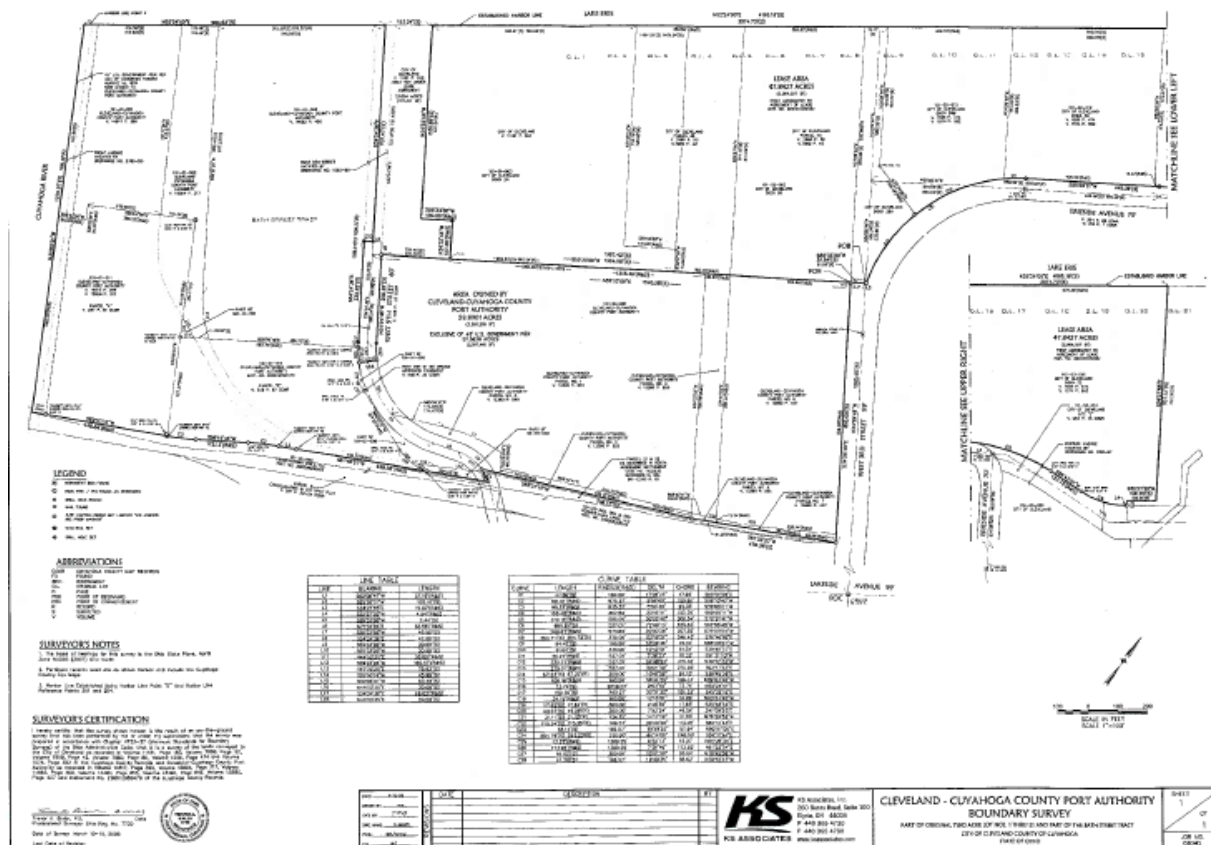
Figure 47: The Port's land ownership and lease structure is complicated



Neither area should prove to be a major stumbling block for any future developments, as the port has the right to renegotiate any leases on their site. To the East of the two leased parcels, the RTA loop was built in preparation for a waterfront development but does not currently run full time because of a lack of riders. Further east sits Warehouse A; it is the largest of the warehouses on the port site and is active. The West 3rd Street Parking Lot is owned by the Authority, but is under contract with the Browns' Stadium to extend parking by over 2000 spaces in 2010 and will likely be the most difficult area to redevelop.

Figure 48 shows the site's numerous rights of way, parcels and easements. These, too, will have to be taken into consideration when planning for development. The most likely course of action will be to subdivide the site, rezone it and negotiate easements with relevant officials to create a simplified plat. Transportation infrastructure, such as rail lines and connecting roadways, may also require changes to the site's current legal status.

Figure 48: Numerous parcels and rights of way exist on the Port site



3.2 OUR MARKET DEMAND MODEL PROJECTS DEVELOPMENT POTENTIAL FOR THE PORT SITE TO GROW AS IT ESTABLISHES ITSELF

Our twenty-year analysis shows that demand for waterfront development exists despite a somewhat weak real estate market. Demand model results show initial demand leading to higher demand numbers over time, supported by the availability of a unique product, continued regional economic development in key sectors, and attracting buyers from the

relatively large numbers of high-income households in suburban areas and from outside the MSA. Maximizing this potential requires the synergistic pull of several mixed uses that will not only create sustainable growth, but also different, unique attractions that bring people to the site for multiple purposes (living, working, playing, shopping, and relaxing).

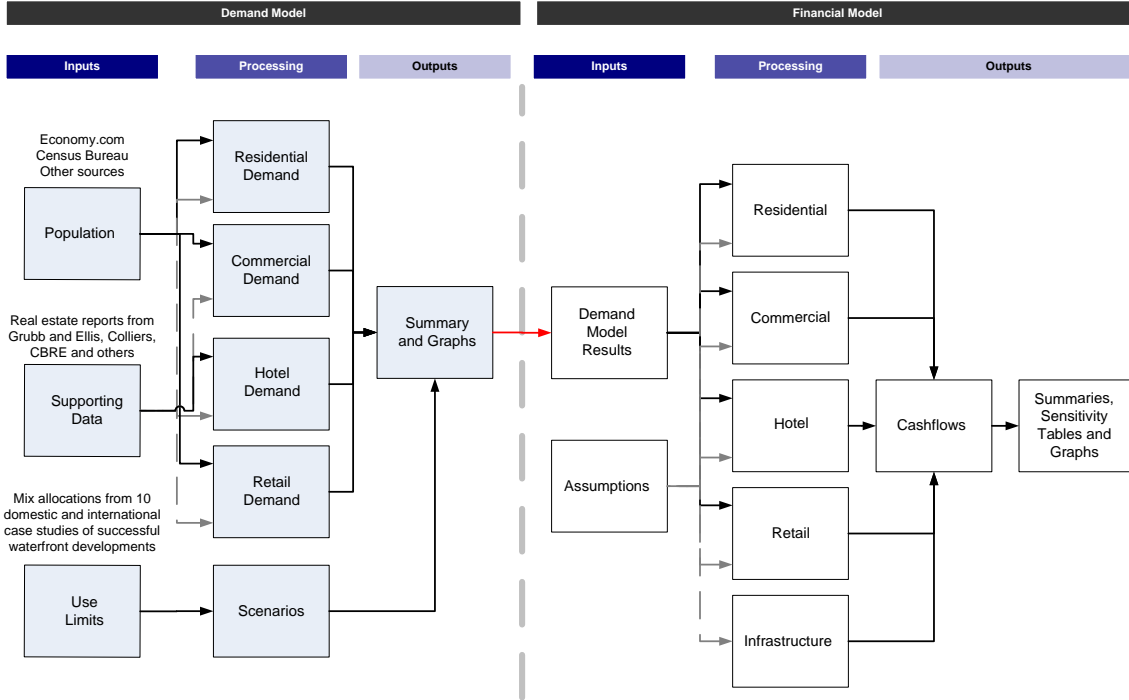
Our demand modeling approach is pragmatic and conservative to minimize overbuilding risks: We approach modeling the CCCPA's waterfront development in a responsible, fact-driven and pragmatic way to arrive at a development that has the most likely absorption potential given current and predicted economic, demographic, competitive, and social parameters. The model is limited to producing a framework of what a successful real estate mix might look like and, along with lessons learned from other developments in terms of product mix and total built-up area size, phases a development scenario that will most effectively penetrate the market. The model is not intended to be the sole guide to development scenario planning, but to help formulate discrete development options that are directionally correct in terms of how much development built-up area (BUA) can be supported by demand at particular periods in time.

Inputs into the demand model are products of an iterative process with data from case studies, anecdotes from the current Cleveland market, and, most importantly, the development focus, combine with factual trend data of the user populations (residents, office workers, shoppers and visitors) to shape the development theme and mix. These inputs shape realistic demand growth curves and determine phasing buildup which ultimately feeds the financial model. The inputs are also, by necessity, are limited to those numbers which are collectable and as such cannot capture the complexity of the real world, fully.

The result supports a strategic development theme and built-up-area estimate which should result in a profitable development plan. The demand model is not designed to specifically link particular points on the waterfront site with specific uses at particular prices to determine demand. Instead, the model links user populations for different types of real estate products over twenty-years to estimates of site-level attraction to determine demand over time. Should additional evidence qualitative or quantitative arise during the planning or execution phases of the development such as unexpected economic turnarounds, increased developer interest in certain product types, unforeseen micro or macroeconomic events, then the model's results may be adjusted account for these factors.

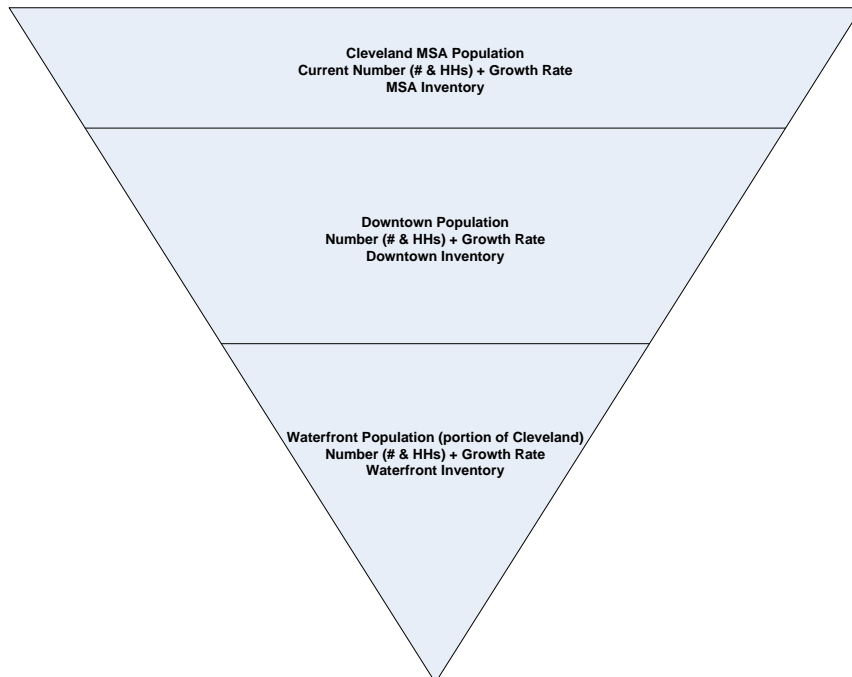
The demand model's results are fed into a bespoke financial model to determine the net present value (NPV) of the total development, as well as the NPV of the lease payments to the land owners by developers. In Figure 49 the linkage between the demand and financial models can be seen, together with the inputs, processing and outputs portions of each model. We have attempted to account for mix synergies in the demand and financial models by incrementally increasing demand and revenues for each use over time.

Figure 49: Demand model in context



Within each of the processing tabs in the demand model, a funnel was constructed to move from the MSA level (typically) to the downtown and then the CCCPA’s waterfront site. Each real estate product uses a version of the funnel that is specific to it. Figure 50 shows an example of the residential demand funnel, which filters the MSA residential population down to the downtown level, then to the waterfront level. These results were assessed against the real estate inventory to form product-specific satisfied and unmet-demand calculations.

Figure 50: Demand funnel example



The model's results show initial demand estimates growing stronger over time: Our demand results start with the current real estate situation in Cleveland's MSA, in which the aggregate picture of real estate demand in Cleveland as of the middle of 2009 is of a soft market despite individual submarkets (particularly in the western portions of the MSA) which are not feeling intense pressures from residential and commercial foreclosures and bankruptcies. Homeowners may be trapped by negative equity or an inability to secure new financing for home purchases. Renters may find their income growth constrained by job losses and macro-economic weakness. Businesses, suffering from the same macro-economic weaknesses, may not be eager to expand their premises or enter new leases at higher rates than they currently pay. Visitors may be budget-conscious and looking for values and deals for the whole family. Shoppers, nervous about the economy and debt, may not be as eager to spend money on non-essential goods. This combination of economic factors is occurring together with an oversupply of many types of real estate that will require at least two, if not four, years before demand reasserts itself forcefully.

Yet, as discussed above, a number of bright spots in the economic and demographic landscape exist. The regional economy is diverse, health and ICT jobs are growing, household income is relatively high, and Cleveland ranks well on quality of life indices.

With this picture of the current state in mind, we examined three potential growth scenarios for waterfront real estate demand:

- A base case with average growth levels and moderate peak-to-trough volatility that assumes a successful development within reasonable bounds
- A lower-than-expected demand picture that is less volatile than our base case
- A high case with much better long-term growth and correspondingly higher volatility.

Each of these demand growth scenarios was evaluated against three development options, *Cautious*, *Moderate* and *Aggressive*, reflecting different amounts of BUA in the development plan. These results are summarized below by users and products.

The primary drivers of demand relate to particular populations: The primary users of real estate determine demand for each product. Hence, total residents within the catchment area determine demand for residential property. Office worker numbers (and by extension, the number and size of the businesses that employ them) determine demand for new office space. Visitors to the city determine the hotel rooms and tourism-related entertainment options that can be supported. Foot-traffic from all three of the prior populations creates demand for retail space. In the following section, we explain our estimates of growth in these populations. For almost all cases we assume an initial jump in demand during the earliest phase of development, followed by progressive growth. Note that our growth estimates are S-curves that show growth and decline, not simply annual growth because the markets can go down as well as up. We do not know when market declines will occur or how deep they will be, but we attempt to account for their existence in our growth estimates. The population drivers reflect our best projections of growth for each segment, but may be modified or adjusted as the project development planning period continues. Well planned places magnify their inherent demand, and that demand magnification effect maybe seen here as well, although it is difficult to quantify.

Residents

Our analysis of residential migration patterns in Cleveland's MSA and downtown led us to the conclusion that there is potential for substantial residential real estate absorption on the waterfront. Given the supply overhang in residential property, however, and the probability of further downtown supply coming onto the market over the projection period, we have used a more cautious base level of unmet demand on the waterfront that would equal 7,000 households by year 20, if no development occurred on the site. The high demand growth case raises the unmet demand for residential housing to nearly 11,000 households. This scenario assumes a successful waterfront early phase delivery that is subsequently managed on a phase-by-phase basis to add elements to the waterfront development that are strongly demanded, such as unique entertainment or quality-of-life options. The low case for unmet demand equals just 3,400 households and assumes that while the site is attractive, it is not able to generate sufficient interest in the products developed to attract larger numbers of residents to relocate (the reasons could be financial or product-specific).

Office workers

For the projection of office worker demand, the initial assumption is that offices will want to move into a development that has established itself and begun the process of connecting with the rest of the city. Initially, the site's open areas, lack of connectivity and likely development from the eastern periphery make the probability of delayed office absorption high. Once established, however, the base case assumes that over twenty-years the waterfront site will become, if not the most attractive, then among a small number of trophy areas for professional service firms to locate in Cleveland. The base and low cases vary the intensity of that demand, from a low of 9,000 professional employees, base of 10,000 to a high of 11,000 employees.

To generate the demand shown here for commercial real estate, we assume that high-end, campus-like buildings will be developed for established tenants. We also assume that three anchor tenants will be involved with seeding the area as a trophy location within Cleveland, and that each of these three comes within the first six years of development. These three tenants serve as the backbone of the projected demand in our scenarios. Further, we assume that business incubators, venture capitalists and startup businesses will also want to locate here, as will think tanks and university research facilities, as well as additional small support business.

Overnight visitors

Our demand estimates for hotel rooms come from estimated visitor numbers to the Waterfront. Since tourism tends to be based on attractions, whether natural or manmade, and since the manmade elements that will be developed on the site have not been decided yet, these projections make the following assumptions. The first assumption is that an aquarium or other large-scale addition to the tourism landscape on the eastern edge of the site is built early in the project's development. Second, we assume that (like many successful tourism developments) the site will face a period of decline after its rapid rise as initial curiosity fades. This decline will then give way to one of three longer-lasting, more intrinsically interesting tourism demand scenarios. In the base case, the site's later phases recover from its slowdown to grow to a respectable 416,000 overnight visitors annually by 2028. This recovery could be as high as 510,000 overnight visitors under the high demand

case, or as low as 303,000 per annum in the low case. What differentiates the success levels of these options are the attractions that will be developed (and they are not yet known).

In all cases, the site's location next to Cleveland's most established tourism draw, the Rock and Roll Hall of Fame, and the Science Center too, provide substantial numbers of visitors that can be attracted to the adjacent waterfront site for lodging, retail, dining and entertainment options. We assume that the quality of those options will determine which demand case is most likely.

Demand for each real estate product grows as the site matures: Using the prior population drivers, we developed distinct demand scenarios for products to be built on the site. The numbers in this section do not show what will be built on the site, but what the notional unmet demand for each real estate product on the site may be, given the population estimates made previously.

Commercial real estate demand scenarios

Waterfront commercial real estate demand scenarios range from 2.3 million square feet of space over twenty-years to 2.8 million under the most aggressive option. Base commercial demand is 2.6 million square feet. Should the core anchor tenants presupposed in our model not materialize, then these numbers could fall much lower.

Given the demand for flex industrial space (which is essentially less well fit out commercial space), we also expect that some portion of the commercial space will be allocated to flex use. Among the ideas that we've heard for tenancing such space are advanced, clean manufacturers of specialty parts, venture capitalists (with attendant technology incubators), medical device researchers and others with similar space and pricing needs.

This demand reflects our belief in demand for commercial space on the site as well as the need to drive commercial activity on the site separate from retail and entertainment options. As we have seen in numerous case studies worldwide, commercial space and concomitant jobs help to seed an area with relatively high-earning (and hence spending) people who are linked into the wider economy and attract additional tenants and users to the area.

Residential real estate demand scenarios

Residential real estate is currently under substantial stress, but the stresses are concentrated in particular neighborhoods and submarkets, rather than across the city of Cleveland. Interviews with a number of stakeholders show that interest among residents and developers for downtown (including waterfront) residential options is high. These stakeholders have noted caveats to their level of interest that center around the costs of development against the leasing rates available in the market. Assuming that the financing can be made to work using whatever combinations of tax credits make the development profitable, the demand for residential housing appears to be high enough to justify a relatively large amount residential development in the first two phases, followed by additional development in later phases.

The difference between the base and the high scenarios is dramatic. Our base estimate for units demanded is 7,200 over a twenty-year projection period versus 11,000 in the high case. The difference in projected units comes from the as-yet unknown success of the aesthetic aspects of the development being able to create distinctive mixed-use zones that

drive demand for housing. The high case further assumes that the housing options on the site are varied and able to support different types of residents (not only from an income point of view) who require residential options that are highly diverse. For example, initial residents to the waterfront may come from distinct niche markets, such as young urbanophiles, singles and yuppies; later phases should include families with children and even retirees. Each of these groups has a different decision calculus at work when determining what prices and amenities will entice them to relocate to a given area. Our high case scenario assumes that the waterfront site's development builds on these trends to create sustainable demand.

The low demand case assumes just 3,400 full time residences will be demanded on the waterfront because of pricing and supply pressures in the market, especially from planned downtown developments. Also, the low case assumes that the site's development never fully generates the type of synergistic mix between its uses that the high case does.

Retail space demand scenarios

Retail space demand is essentially built on foot-traffic from residents, office workers and visitors. Typically retailers would prefer to follow foot traffic than commit to untested markets (unless it was as part of a new, heavily-promoted retail destination, such as the Mall of the Americas or even Cleveland's own Legacy Village or Eton Shopping Center). In our demand models results, the demand cases assume cyclical expansion and contraction of the local economy with direct impacts on the retail sector's demand for retail space. Given this cyclicity, we use the final numbers of the projection period as the final demand, rather than the peak figures. Also, each demand case has a different volatility – with more aggressive cases showing greater volatility – built into its estimates to reflect that impact of larger booms and busts on the retail environment.

In the base case, retail demand is built initially on the strong flows of visitors to the adjacent Rock and Roll Hall of Fame and Science Museum. These visitors are likely to be easily transitioned to shopping, entertainment and dining options nearby. Football fans will swell these numbers during home games as well. Later phases of development in the demand model were assumed to be supported by increasing numbers of residents and office workers on site, as well as local residents.

In the high case, the retail space demanded (nearly four million square feet) is roughly twice as high as in the low case (two million), reflecting the different success levels of the visitor, resident and office attraction plans. For the base case, however, we assume that almost three million square feet could be developed over twenty-years, primarily for the tourist and game markets, with an increasing focus on positioning the site for local residents' enjoyment during summer months and for fine dining on the water.

Hotel rooms demand scenarios

Tourism demand appears to be strong and growing with the success of Cleveland+ in attracting visitors to the city. Our demand model assumes that this growth is reasonably stable and that our waterfront site can become an established lodging destination within the city. Our base case uses the assumption that the eastern portion of the Waterfront site's location immediately adjacent to the city's top tourist attractions should not have too much difficulty achieving this goal. We also assume that when residential and office uses are functioning at stabilized occupancy, then additional hotel room demand will be generated by business travelers and visitors to the site's residents. As explained previously, the model

also incorporates an S-curve approach where the Waterfront will experience a mild downturn in demand as it manages the transition from its initial success into a sustainable multi-use destination within the NEO region. This downturn is assumed to be near 2019, followed immediately by a period of recovery.

In the high demand case, hotel room demand grows faster and more strongly than for the other two cases (to a high of 2,300 rooms over the projection period) because of underlying strength in the residential and commercial functions, strong and continuing attraction in the city's tourism draws, development of real estate clusters in the flats and medical corridor and carefully chosen hotel management companies that appeal to the types of visitors who will come to the site.

The base case demand, 1,879 rooms, assumes success on these fronts, but also has the assumption that at least some portion of the site's potential is underdeveloped or not optimally exploited (such as having higher than average room rates in the accommodation options, thereby driving down occupancy and demand). In the low demand case (at just 1,369 rooms demanded on the site), we assume substantial difficulty attracting visitors to anywhere except the eastern portion of the waterfront site. It shows the hotel room demand that would result from primarily tourist and game day visitors.

Summary of real estate demand scenarios

Figure 51 shows our low, base and high demand scenarios for the waterfront site over a twenty-year horizon (around 2010 to 2030). The differential between the low and high demand scenarios is large for each property type (50 - 100% for retail and hotel, 200% for residential, and just 20% for commercial because of the large emphasis placed on securing anchors), covering the relatively larger number of unknown factors that influence property attraction and decision calculus by discrete user segments.

Our three demand scenarios simulate demand growth based on the ability for the development to gain traction: We assume three levels of demand growth as the basis for our three scenarios:

- *Low Case*, assumes initial demand for the development does not gain traction and remains flat for the remainder of the project.
- *Base Case*, assumes sustained demand growth for 20 year development time frame, while
- *High Case*, assumes high demand growth for waterfront property as the development matures and new development blocks can build off the success of previous developments.

Figure 51: Summary of ultimate unmet demand for the Port site at year twenty

	Low	Base	High
Commercial sq ft	2,297,382	2,581,706	2,762,134
Residential units	3,442	7,260	10,939
Retail sq ft	1,962,780	2,759,929	3,980,020
Hotel rooms	1,369	1,879	2,304

Our three development options capture progressively more of the projected real estate product demand: We use the demand calculations as the basis for our three development options (the amount of real estate inventory to be built on the site), which capture different build-out scenarios for the waterfront:

- *Cautious*, captures approximately one-third of the total demand for each real estate product.
- *Moderate* captures roughly one-half of the total demand by product, while
- *Aggressive* captures roughly seventy to one-hundred percent of product demand.

Since these three development options cover three separate demand curves, there are a total of nine scenarios (the intersections of demand and build-out options).

As the amount of inventory developed approaches the notional total demand outstanding for a given real estate product, the potential for over-building or pricing softness becomes imminent. Building under the assumed demand ceiling removes some of the risk and may even support an above-market pricing strategy if demand is much higher than available supply on the site.

Residential development options

Residential build-out options range from a low of 513 units in a low-demand environment where a *Cautious* development program is planned, to a high of 4,485 units for a high-demand environment and aggressive development. The intersection of the base demand case and the *Moderate* development program shows 1,846 units. The ceiling and floor development of residential units under the base demand case range from 1,174 to 2,863.

Figure 52: Residential build-out options (square feet / units)

Development option / Demand Level	Low		Base		High	
	Sq ft	units	Sq ft	units	Sq ft	units
Cautious	359,223	513	704,365	1,174	1,110,500	1,851
Moderate	573,463	819	1,107,609	1,846	1,729,968	2,883
Aggressive	883,931	1,263	1,717,980	2,863	2,691,262	4,485

Commercial development options

Commercial build-out ranges from 1.1 million square feet under the low demand and build-out scenario to 2.5 million under the most optimistic scenario. In all cases we assume that three key anchor tenants are attracted to the site and that these anchors are suitably large to attract other businesses to the area. Our base demand and build-out estimates call for 1.8 million square feet of commercial space over twenty-years, with an upper and lower limit of 1.3 and 2.3 million square feet, respectively.

Figure 53: Commercial buildout options

Development option / Demand Level	Low		Base		High	
	Sq ft	units	Sq ft	units	Sq ft	units
Cautious	1,148,691		1,290,853		1,381,067	
Moderate	1,608,167		1,807,194		1,933,494	
Aggressive	2,067,644		2,323,535		2,485,920	

Retail development options

The total twenty-year retail build-out ranges from 714,000 square feet under the low demand and *Cautious* build-out scenario, to a high of 3.0 million square feet under the most *Aggressive* build-out and high demand. The base case assumes 1.6 million square feet of retail will be developed on the site (ignoring special-purpose retail establishments, such as an aquarium), though even within the base case, build-out ranges from a low of 1.0 million square feet to a high of 2.1 million.

Figure 54: Retail buildout options

Development option / Demand Level	Low		Base		High	
	<i>Sq ft</i>	<i>units</i>	<i>Sq ft</i>	<i>units</i>	<i>Sq ft</i>	<i>units</i>
Cautious	714,100		1,015,003		1,481,811	
Moderate	1,122,158		1,595,005		2,328,560	
Aggressive	1,469,007		2,088,007		3,048,297	

Hotel development options

Hotel rooms on the site range from our lowest estimate of 958 rooms to our high estimate of 2,288 rooms. Our base case assumptions range from 1,315 to 1,865 rooms, with our most likely figure at 1,597 rooms. Should a significant tourism destination be attracted to the waterfront, then these numbers could easily grow by anywhere between 10-50%.

Figure 55: Hotel buildout options

Development option / Demand Level	Low		Base		High	
	<i>Sq ft</i>	<i>rooms</i>	<i>Sq ft</i>	<i>rooms</i>	<i>Sq ft</i>	<i>rooms</i>
Cautious	239,592	958	394,646	1,315	483,784	1,613
Moderate	290,933	1,164	479,213	1,597	587,453	1,958
Aggressive	339,185	1,357	559,525	1,865	686,500	2,288

Summary of build-out options

The development options that flow from the demand model’s projections of product demand are summarized in Figure 56. These options show the difference in scale between the *Cautious*, *Moderate* and *Aggressive* development options, with three times the built-up area being developed for the most aggressive option compared to the most cautious.

Figure 56: Summary base case development options

Buildout	Cautious		Moderate		Aggressive	
	Sq ft	Rooms / units	Sq ft	Rooms / units	Sq ft	Rooms / units
Commercial	1,290,853		1,807,194		2,323,535	
Residential	704,365	1,174	1,107,609	1,846	1,717,980	2,863
Retail	1,015,003		1,595,005		2,088,007	
Hotel	394,646	1,315	479,213	1,597	559,525	1,865
Total	3,404,868	2,489	4,989,021	3,443	6,689,046	4,728

The model's base development option (the one with the most likely absorptive characteristics at a moderate level of risk) would allow for almost 1,850 residential units, 1.8 million square feet of commercial (assuming three key anchors are located on the site), 1.6 million square feet of retail and entertainment and nearly 1,600 hotel rooms (likely as three-four star boutique hotels, plus two to four star larger properties).

Next steps for the demand analysis focus on refining our market knowledge: The demand model's results are predictive over the long term and cannot incorporate the sentiment of market players and limitations. As new information becomes available, the model can be rerun. If the Port's risk profile or internal capture rate assumptions are more aggressive than those used in the model, then demand-constrained development options will grow in terms of square footage built.

Until those updates are made, the following list of next steps is recommended to take the market demand modeling through its next iteration.

1. A formal survey should be conducted among people within the Cleveland MSA and neighboring cities (such as Akron) to identify:
 - a. The number of likely waterfront residents in the MSA
 - i. Taste and amenity preferences
 - ii. Dislikes and hygiene factors for living conditions
 - iii. Interest in living on the waterfront site
 - iv. Their income levels
 - b. The interest level among commercial and flex tenants
 - i. Their pricing thresholds
 - ii. Requirements for amenities and connectivity
 - iii. Industry cluster importance
 - iv. Interest in working on the waterfront site
 - c. Preferences for retail, dining, entertainment and hotel options among current Rock and Roll Hall of Fame and Science Center visitors
 - i. Their age and income levels

- ii. Preferences: likes and dislikes
 - iii. Pricing thresholds
 - iv. Interest in staying on the waterfront site
- d. Retailer interest in the waterfront site
- i. Foot-traffic (demographic mix) needed
 - ii. Co-location interests
 - iii. Interest in opening on the waterfront site
 - iv. Pricing thresholds

3.3 THE ECONOMICS OF THESE SITE DEVELOPMENT OPTIONS ARE POSITIVE AND PROVIDE STRONG GROUND-LEASE CASHFLOWS

Using BUA results from the demand model and inputs from stakeholders, the urban planning firm and the Cleveland Waterfront Development Plan 2004, we built a financial model to estimate financial returns at the project level and for the Port’s ground lease receipts. These financial returns are positive for a twenty-year projected development period, and include both operating and capitalized terminal year cashflows. The financial model estimates between \$289 million and \$539 million in nominal ground lease revenues for the land owners, depending on the development option evaluated. Given the different levels of risks involved with the development options, simply selecting the option with the highest potential ground lease revenues may not be the best when weighted against its corresponding risk of over-supplying the site with BUA.

The site’s development options reflect the vision of a human-scaled, vibrant waterfront: The financial model estimates financial returns for a 113 acre site, of which 50% is developable in line with a vision for the site of a human-scaled, vibrant, mixed use development, linked by parks and public spaces.

Figure 57: Total land size and development parameters

Number of acres of site	113
Square feet per acre	43,560
Square feet footprint of site	4,922,280
Percent of footprint to develop vertically	50%
Square feet to develop vertically upon	2,461,140
Square feet left for open space (<i>estimated</i>)	1,290,140
Square feet for streets (<i>estimated</i>)	1,171,000

The site’s acreage has been increased in the proposed master plan to 113 acres from 99 acres because of integration into adjacent developments and the Browns stadium which includes expansion of fourteen additional acres for development and linking infrastructure. The development footprint will be roughly 50% of the site (2.3 million square feet), requiring approximately 1.17 million square feet (or 25% of the site) for streets, and leaving the last 25% of the port site available for parks and open space. These parks and public spaces will help provide the foot traffic and local visitor spaces needed to sustain vibrancy in the development.

The demand model's results have been filtered to reflect the three development options best suited for the assumed base demand and absorption: a *Cautious*, *Moderate*, and *Aggressive* build-out option. Assumptions in Figure 57 effect built-up densities (the floor area ratio, or FAR) for the development.

Figure 58: Buildable Square Feet and unit estimate for the Base Demand Case, sorted by use

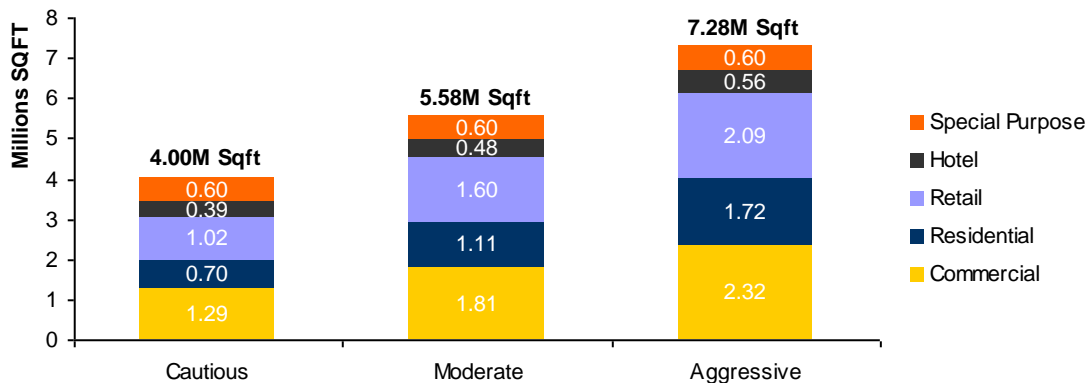
Development option (as of 2028)	Cautious		Moderate		Aggressive	
	Sq ft	units	Sq ft	units	Sq ft	units
Commercial	1,290,853		1,807,194		2,323,535	
Residential (apts)*	704,365	1,174	1,107,609	1,846	1,717,980	2,863
Retail	1,015,003		1,595,005		2,088,007	
Hotel (rooms) **	394,646	1,315	479,213	1,597	559,525	1,865
Special Purpose	600,000		600,000		600,000	
Total	4,004,868	2,489	5,589,021	3,443	7,289,046	4,728

* Residential apartments built at an average size of 600sf/unit

** Hotel rooms built at an average size of 300sf/unit

While the above figures show a substantial amount of BUA square footage under the *Cautious*, *Moderate*, and *Aggressive* development options, this is not the case when considering the site's size. In fact, the overall density of the site is relatively low. This underscores the need for carefully considered development and intelligent, attractive use of open space. At the projected buildable square feet under *Cautious*, *Moderate*, and *Aggressive* development options, we are building a floor area ratio of 1.7 to 3.1. Thus, the buildings will be, on average, no higher than three stories. Differences between the three development options are shown below and reflect the different supporting demand curves and development intensities of each option.

Figure 59: Total square footage of moderate development intensity under each demand option



In each case, office, being the most profitable use, represents the highest and best single use. However, a wholly office development would not represent the highest and best use for the entire development. Rather, a mixed-use approach encompassing all of the above uses will much more effectively drive value and increase the overall site attractiveness-critical for long-term success. Retail establishments will command the second or third-largest portion of the site's BUA, supporting office, residential, and tourism related shopping and entertainment options. To effectively take advantage of the waterfront premium, the residential and hotel uses also represent a sizable component of the site's BUA as well.

Phasing

To spread the total development BUA over our twenty-year time frame, we phased the *Cautious*, *Moderate* and *Aggressive* options over five phases with each phase covering four years across the entire land area of the site (meaning that our demand-led phasing was not tied to particular portions of ground, but the site overall). These five phases are used for simplification purposes during this stage of planning. We expect that the phasing details will change. When we describe the recommended option for developing the site, we overlay our demand-led BUA on the development blocks in the physical plan, representing an alignment of the supply and demand portions of the planning.

The following phases, though, reflect only the demand model results for all uses. Here development peaks in the second phase and trails off in the final phases. Each real estate product build-out follows a similar pattern with the exception of retail and special use: retail has a large component built in the first phase while special purpose builds out evenly throughout the four phases. Retail establishments are frontloaded to provide convenience retail, restaurants and entertainment, with a mixture of theme, casual, and luxury retail to absorb tourism spending and future residential and commercial build-outs. Special purpose tenants tend to be aquariums, stadiums, concert spaces and the like, whose development we assumed to be evenly distributed across the phases.

Figure 60: Cautious, Moderate, and Aggressive Development Options by Phase (2009-28)⁴²

Sq. Ft.	CAUTIOUS					MODERATE					AGGRESSIVE				
Phase	1	2	3	4*	Project	1	2	3	4	Project	1	2	3	4	Project
Commercial	375,000	804,023	81,375	30,456	1,290,854	525,000	1,125,632	113,925	42,638	1,807,195	675,000	1,447,241	146,475	54,820	2,323,536
Residential	185,852	257,583	165,660	95,271	704,366	343,084	407,507	229,990	127,028	1,107,609	514,626	611,261	401,552	190,542	1,717,981
Retail	392,799	238,127	223,342	160,735	1,015,003	617,256	374,199	350,967	252,584	1,595,006	808,044	489,861	459,447	330,655	2,088,007
Hotel	135,562	146,651	51,952	60,481	394,646	164,611	178,076	63,084	73,441	479,212	189,405	209,501	74,217	86,402	559,525
Special Purpose	150,000	150,000	150,000	150,000	600,000	150,000	150,000	150,000	150,000	600,000	150,000	150,000	150,000	150,000	600,000
TOTAL (SF)	1,239,213	1,596,384	672,329	496,943	4,004,869	1,799,951	2,235,414	907,966	645,691	5,589,021	2,337,075	2,907,864	1,231,691	812,419	7,289,046

Units	CAUTIOUS					MODERATE					AGGRESSIVE				
Phase	1	2	3	4	Project	1	2	3	4	Project	1	2	3	4	Project
Residential Units	310	429	276	159	1,174	572	679	383	212	1,846	858	1019	669	318	2,864
Hotel Rooms	452	489	173	202	1,316	549	594	210	245	1,598	631	698	247	288	1,864

* Four phases were used for simplicity and may not match the supply side view. The five phase master plan rendering was not complete at the time of this analysis.

⁴² Table shows development that begins in the phase. Numbers may not total precisely because of rounding.

Financial results and ground lease estimates show positive returns to invested capital: Our financial model's results for the three selected development options are at two levels: the Total Net Project Income (meaning all returns from land and buildings on the site) and Total Lease Payments (ground lease revenues to the land owners). For the base case the land owners can expect nominal ground lease revenues ranging between \$289-539 million, depending on the development scenario selected. These results simulate the commercial analysis undertaken by prospective developers and estimate their ability to pay the land owners under certain revenue, cost and site development conditions. The ground lease figures provide an indicative range and scale that the land owners can expect to achieve; however, these are highly dependent on market conditions, developer sentiment, regulatory and other issues and will need to be refreshed as the development plan evolves into a Phase One operational plan for the site.

Financial model results for the selected development options are positive: We present two key quantifiable metrics in this section that support the development options presented previously in the report: the Total Project Income, and Total Lease Payments.

Net Project Income

The financial model tracks net income (income less operating expenses less development costs) for the total project, the private developer, the land owners, and the outside agency (who pays for the infrastructure costs not covered by a private developer). The development, construction and operating costs as well as the income assumptions are described in more detail below.

Ground Lease Payments

We calculate annual lease payment projections for use of the underlying land (paid by the private developer to the land owners) by determining the approximate payment that a developer could afford to pay and still be within their financial return target for the property. Our estimates assume that the developers must reach a 15% IRR unleveraged to be interested in development. We thus set the Port's lease payments each year to the number that gives a notional developer a 15% IRR (arrived at subtracting it from their net income to get to 15%).⁴³ Within the *Cautious*, *Moderate*, and *Aggressive* development options we used this methodology on a phase by phase basis to arrive at projected lease payments, and if within any of the phases under those three scenarios the developer was below a 15% IRR without payments, we collected no lease payments for that period. The lease payments in Figure 61 are totals of all of the phases in nominal dollars. (Note changes to the required 15% IRR will significantly impact the total lease payments over the life of the project.)

⁴³ It is our determination that a general rule for development is that a developer will want to reach a 20% - 30% IRR. If they can afford lease payments that get them to a 15% IRR they will most likely be able to achieve the 20% - 30% IRR by using debt to finance their individual developments on the site.

Figure 61: Projected waterfront development incomes for different demand-led development options (nominal and present values using the Base Case of demand)

	Total Project Net Income (all sources)	Total Lease Payments* (to the land owners)	Annual Lease Payments (at year 20)	Value Per Buildable Acre Per Year (113 acres at 50%)
Cautious	\$1,663,433,615	\$289,176,471	\$10,640,000	\$188,319
Moderate	\$2,380,270,398	\$412,635,294	\$15,080,000	\$266,903
Aggressive	\$3,114,526,307	\$539,576,471	\$20,160,000	\$356,814

* Does not include residual values

	PV of Total Lease Payments at 6.00%	PV of Total Lease Payments per each acre (113)	PV of Total Lease Payments per each developable acre (55)
Cautious	\$124,702,906	\$1,133,663	\$2,207,131
Moderate	\$173,844,729	\$1,580,407	\$3,076,898
Aggressive	\$230,053,268	\$2,091,393	\$4,071,739

The total project net income for the Base demand-led development options ranges (on a nominal basis) from \$1.6-3.1 billion, with the land owners capturing between \$289-539 million of that amount as nominal ground lease payments (does not include residual value). These ground leases equal between \$10-20 million per year by the projection period’s terminal year (year twenty), or \$193,000-366,000 per developable acre. It is important to note that there is also significant income not captured in Total Lease Payments. The above projections are based on development of the buildable area (50% of the 113 acres). The Port may be able to generate income from developing, leasing, or offering concessions on the open spaces and parks.

The present value of the total ground lease payments to the land owners for these demand-led development options, discounted at 6%, range from \$124-230 million. On a per acre basis for the whole site, that equates to between \$1-2 million per acre. On a developable acre basis (or the portion of ground on which income will be produced), the value then increases to between \$2.3-4.1 million per acre. While this range can be considered to be a proxy for the sales value, it should be borne in mind that these values may be ceilings for the sales value, as a developer who would pay exactly the present value of a desired development option for the land would have to generate more profit than we project or else earn an economic return of zero (which is not realistic for any investment). Therefore, for each present value of the development options, the actual sales price may be somewhat less than is forecast here.

The financial model’s projections are based on conservative and reasonable inputs: All inputs into the model are based on demand model results and generally accepted development, construction and operating costs tailored to the Cleveland market for each real estate product type. Income assumptions are based on rental rates that begin with average CBD market rates,

include waterfront and development premiums, third party projected rent values, and estimates from similar large scale real estate developments. The model also accounts for different types of costs, expenses, and projected annual growth rates for these product types, which are discounted to the present value.

The project’s cost basis includes different real estate products: Based on typical cost estimates for mixed use, low-rise development, total development costs for each real estate development scenario are summarized as follows.

Figure 62: Total Investment Costs by development option (nominal)

Development Costs	Cautious	Moderate	Aggressive
Non-Infrastructure Development Costs	\$652,865,857	\$1,111,112,479	1,141,918,009
Infrastructure Development Costs	\$162,500,000	\$162,500,000	162,500,000
Total Development Costs	\$815,365,857	\$1,273,612,479	1,304,418,009
As percentage of total	Cautious	Moderate	Aggressive
Non-Infrastructure Development Costs	80%	87%	84%
Infrastructure Development Costs	20%	13%	12%
Total Development Costs	100%	100%	100%

Generally, project costs are calculated by starting with an initial cost per square foot and a growth factor applied to each subsequent year. Next, income, expense, and development cost assumptions are presented and these drive financial results. Also, infrastructure costs, and capitalization rates are estimated, using proxy data from similar developments and investor rules of thumb. In the lowest development intensity option, non-infrastructure development costs are approximately \$815 million, ranging to a high of just over \$1.3 billion for the most aggressive development option. Infrastructure costs are held constant in our model as much of the costs for streets, sewerage, lighting, connectivity and the like will apply regardless of which of our three development options is selected. The Figure 63 show values by real estate segment, the starting points and growth rates for the above mentioned items.

Infrastructure costs are reasonable, relative to the size of the total assumed development investment cost: The overall infrastructure costs covering seven major cost categories are estimated at \$162,500,000 in 2009. The breakout of those costs is summarized in the table below. These cost estimates from discussions with industry experts, rules of thumb for large scale developments, and assessment of similar developments locally and regionally.

Figure 63: Estimated site infrastructure investments in 2009 (for the high case)

Infrastructure Costs	Total Costs	Paid by Port	\$ Paid by Port
Transport	\$25,000,000	0%	\$0
Connection Infrastructure	\$15,000,000	0%	\$0
Water/Wastewater	\$15,500,000	0%	\$0
Public Parking Garage	\$10,000,000	0%	\$0
Public Space	\$48,000,000	0%	\$0
Electric and Gas Connections	\$20,500,000	0%	\$0
Site Preparations	\$28,500,000	0%	\$0
Total	\$162,500,000	0%	\$0

At \$162 million, infrastructure costs are approximately 20% of total development costs based on the *Cautious*, 15% of the *Moderate*, and 12% of the *Aggressive* development options. At this time, we do not assume that the Port pays for these improvements (both in this report and in the financial model). Transport improvements are \$25 million and include new streets, an RTA bus extension and harbor line station rehabilitation. The connection infrastructure estimate of \$15 million covers the pedestrian improvements over the railway and linkages to existing roadways. Water and wastewater investment of \$15.5 million is for the water and sewer systems, and a grey water recycling system. The \$10 million for public parking garage(s) covers the construction costs for the physical multi-story parking structures. Public space funds of \$48 million are for parks, any canal or ground-level waterworks, sidewalks and art installations. Electric and gas connections are estimated to cost \$20.5 million and cover network installation. Finally, site preparation costs of \$28.5 million are for demolition, environmental remediation and similar efforts. Note that these infrastructure improvements do not include building specific infrastructure improvements do not include building specific infrastructure needs such as onsite utility linkages and structural investments.

Construction costs reflect the scale and intensity of development: At a lower level of detail than the development costs are the construction costs of the different real estate products to be built on the Port site. Estimates for each product’s construction costs come from historical data for the local market and are linked to current commodity prices and labor. Construction cost estimates are conservative and escalation rates are modest at 3% per year for each segment. Office construction costs (assumed to be for low-rise, campus style buildings) are estimated to be \$130 per gross square foot area. Residential costs (low-rise, mid-level finishings) are estimated at \$105 per gross square foot of built up area. Retail costs are \$115, reflecting ground-level retail and some specialty operations. Hotel construction costs are somewhat higher, at \$150 per gross

square foot, given the average of two, to low four star properties that could be built on the site. Special purpose construction costs are estimated at \$125 per gross square foot, although a broad range of buildings that can fit under this heading. Development costs vary dramatically with some venues, such as aquariums, requiring a much higher development cost than venues similar to an outdoor amphitheatre.

Figure 64: Construction cost estimates by product type

Construction Costs	\$/square foot	Annual Growth Rate
Commercial	130	3.0%
Residential	105	3.0%
Retail	115	3.0%
Hotel	150	3.0%
Special Purpose	125	3.0%

In recent years, forward estimates of development costs became increasingly subject to swings in commodity prices. Therefore, these estimates attempt to strike a mean value. Considering the commodity bubble only broke somewhat recently, it is unlikely (though not impossible) for prices to spike again.

Income is increased because of waterfront and development premium: To account for the premium associated with views of or immediate access to waterfront and as the novelty and attractiveness of the master plan to be developed (the development premium), we increased starting rents approximately 10 - 47% from current CBD or MSA average market rates, and also grew rents at 3.5% instead of 3.0% which we are using for growth of operating expense and development costs projections. Attractive properties without a waterfront premium can expect growth in good years of 2.0 - 3.0%, and 3.5% represents an average over the life of the project-particularly the years beyond 2013, when real recovery in real estate lease rates across many property types has been forecast to begin.

Figure 65: Projected income per SF by use

Income	Today - \$/square feet	Annual Growth Rate
Commercial	30.00	3.5%
Residential	20.00	3.5%
Retail	18.00	3.5%
Hotel (ADR)	125.00	3.5%
Special Purpose	18.00	3.5%

Office rent of \$30 per foot reflects a 47% premium on average downtown Class A rent prices and is the current rate for most of Key Tower. Since we will have the newest Class A office space in

the CBD area, and we will have a well-designed development with retail and other amenities on site, it is likely we can at least match current Class A rates in high-end buildings. Residential lease prices reflect rents approximately \$1000 per month rent for a typical 600 square feet apartment, which is on par with the high-end CBD residential market and at least 10-20% higher than MSA average rents for an equivalent unit. Retail space is currently not attracting market premiums across the CBD and MSA. Even though the newly developed space on the Port site should be intrinsically interesting to retailers as a new neighborhood with attractive demographic segments, we have nonetheless used reasonable starting rate of \$18/square feet/year to ensure absorption. Hotel average daily rates (ADR) have been priced at 10% above current levels in the CBD, reflecting some premium pricing ability, but also the price sensitivity of many tourists to Cleveland. Because Special Purpose buildings cover a range of businesses, we've estimated the lease income from their buildings to be similar to retail businesses with a \$300,000 monthly rent for a typical 200,000 square feet venue.

Operating Expenses for each product support development: Our rental expense assumptions begin with current operating expenses averages as percentage of income by product type and build in an annual growth rate of 3.0%. In some cases, the expense levels are based on average levels in case studies and others reflect assumed expense levels for the levels of development planned for the Port site.

Each product type's expenses reflect average levels across the site over the twenty-year time frame. Office and retail expenses are estimated at 25% of lease income, with many costs of operations directly (or indirectly, but reimbursed) paid by the users of the space, leading to lower operating expense projections for those categories. Residential expenses are estimated at 40% of income to cover moderate levels of services on site in the residential buildings. Hotels and special purpose buildings have the highest operating expenses of each product, reflecting both high staffing levels and utilities and running costs associated with many types of specialized service businesses.

Figure 66: Expenses as percentage of income by use

Expenses	As a % of Income	Annual Growth Rate
Commercial	25%	3.0%
Residential	40%	3.0%
Retail	25%	3.0%
Hotel	50%	3.0%
Special Purpose	50%	3.0%

As mentioned above, the expenses as a percentage of income is based upon general industry experience. It is not expected that the Port site demands significant adjustment of or deviation from normal expense percentages. Expenses generally grow at roughly the same rate as income, less 25-100 basis points or so.

Capitalization rates are conservative and market-based: Since we are using a discounted cash flow financial model to make financial projections for this project, it is necessary to use a

capitalization rate to determine a sales or terminal value for real estate assets and ground lease cash flows at the end of our twenty-year time horizon.⁴⁴ We have applied an 8.5% capitalization (cap) rate to determine a sales value for the buildings and leases. This number has a substantial impact on the scale of financial returns, as it values the cashflows assumed to come from the assets as if they are perpetuities, which can create large year twenty income figures. Based upon stakeholder research and historical market cap rates, 8.5% represents a reasonable estimate of our development's cap rates in twenty-years. This number also represents an average across the property types, as different uses generally command different cap rates across similar ages for different investors. For our model, the cap rate generates \$180 million in total returns to the project in addition to the cashflow-only value of \$232 million, for a total return of just over \$410 million.

⁴⁴ For example, if 200 hotel rooms were to be developed in year 19 then there would only be one year of income compared to the full amount of development costs that are required to build out the rooms, leading to numbers that don't reflect the actual anticipated value of the future cashflows. The terminal value calculation attempts to account for this value, allowing for better investment decision-making.

4. THE RECOMMENDED DEVELOPMENT PLAN SHOULD BE BUILT IN PHASES USING EXISTING INFRASTRUCTURE AND LED BY AN INDEPENDENT IMPLEMENTATION VEHICLE

We recommend that the Port Authority adopt a human-scale (development plan that emphasizes open, green spaces and low-rise buildings over excessive density or tall buildings), and vibrant neighborhood to bring the city to the water's edge, while also bringing water users to the city through water-based activities. This development theme should be built on local demand drivers and incorporate factors such as:

- Green Technologies
- Public Spaces and venues
- Keeping the port activity visible
- Mid-upper market product

Each phase should contain a mix of uses and one or more catalytic demand drivers that attract and retain users to the site, such as a signature space or attraction. These catalytic projects can be targeted to market segments, such as an aquarium focused on the family market, or music and recording center. But in each case these projects should increase the site's uniqueness and pique the public's curiosity to see and explore what's available there.

Using both the demand-led analysis of supportable development area and the supply side view of appropriately sized and phased development blocks across the entire site, we recommend developing roughly five million square feet of mixed-use built-up area over the project's first twenty years. Development should begin from the current established tourism cluster on the site's eastern edge, adjacent to the Rock and Roll Hall of Fame, Brown's Stadium and the Great Lakes Science Center. This phase should develop a mixed-use retail, hospitality, entertainment and tourism identity that can be built on in later phases. Another phase option that appears to have high development potential is the area near the current RTA loop, which can be developed with a mixture of residential, retail, entertainment and commercial options. The remaining phases may fill in the rest of the site with commercial, residential and some retail options. Across the entire site, park lands and open common areas should act as linkage points that tie the site together as an identifiable neighborhood. Once completed, the site's 113 acres should be developed at low densities, reflecting the 5-6 million square feet of built-up area to be placed on only 50% of the total site (with the remainder being open areas and streets).

Infrastructure will cover sub-surface and surface development issues, including roadways, bus and rail extensions, utilities, and hardscaping the site. The estimated costs of this infrastructure are approximately \$162 million, which may be excluded from the site's development costs if outside parties provide the infrastructure finance.

The recommended development scenario (which applies the demand-led BUA estimates to the current physical plan's development blocks over the first five phases [twenty years] of development) estimates the development costs of developers to be just under \$1.324 billion for the site. The estimated project level real estate returns from this development are estimated at \$4.18 billion, with ground lease payments to the land owners over twenty years of around \$1.09 billion (or a \$376.6 million present value, discounted at 6%).

Site development must consider port relocation to maximize value creation. As part of developing the site, current port operations could be condensed onto a smaller footprint. The details, timing and operational impact of that move should be considered and approved within a reasonable time after launching the development entity.

A development-focused organization can help to secure finance for the development. The development body tasked to manage this venture would be staffed by experienced persons with experts at in state and local government, real estate development and finance, especially knowing how to raise and deploy finance for large-scale developments. The staff's skills and experience would also be useful in demonstrating to lenders and other developers that the site's development planning strategy is being carefully considered to preserve and maximize the value of the available assets.

Risks to the project are internal and external and may be considerable. Internal risks involve management and independence of the development entity, its contractors and subcontractors. External risks involve permitting, land transfer, environmental issues, political considerations, demand and economic shifts, and vocal stakeholders.

4.1 STRATEGIC PHASING BUILT UPON LOCAL DEMAND DRIVERS WILL CREATE SUSTAINABLE VALUE

The recommended development option is built on the demand-led evaluation explained in the last chapter as well as the current physical plan as developed by the architects, associated phasing and desired average density of 3 FAR. While total BUA is within the ceiling established by the demand model, subsequent conversations with investors and market participants have led to slight modifications of the actual BUA mix. The phasing considers demand, waterfront allure and mix synergy when allocating built-up area across the site over the twenty-year timeframe. Each phase will have unique focuses under the project theme, with the focus coming in part from catalytic demand drivers that are designed to attract and maintain interest in the site. The product mix recommendations show links to projected demand, and a flexible approach to allocating each product to maximize the synergies that can be captured from each use. Figure 67 shows the current physical plan and development blocks (as we have annotated them).

Figure 67: Current physical plan (with identifying markings for each development block)

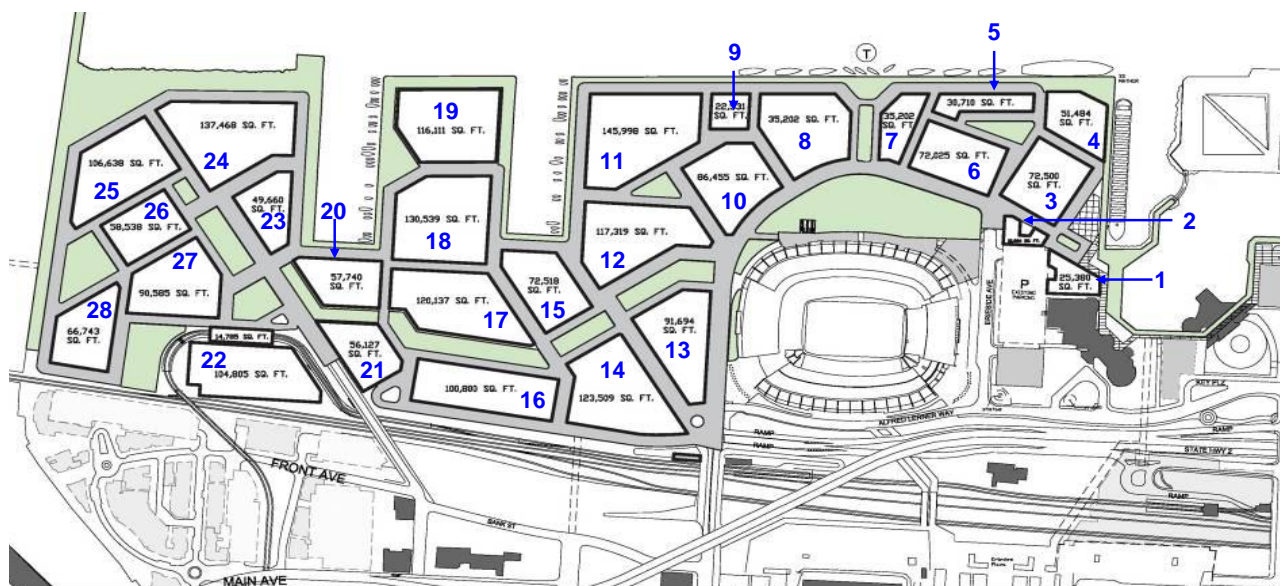


Figure 68: Development blocks by phase

Phase	One	Two	Three	Four	Five
Block numbers	1-4	5-7*	8-15	16-21	22-28
* Note that Phase two includes a portion of the Browns Stadium lot					

The development blocks are currently listed in the phases shown above (Figure 68). The first two phases are relatively small, but occupy choice parcels on the eastern portion of the site. Phases three and four complete the eastern half's development by encompassing the Brown's stadium. Phase five develops the western portion of the site, which as noted earlier, is another attractive site for development because of the water views, RTA loop and proximity to downtown. These five phases are assumed to be completed within the twenty-year period of this analysis. For phase six we anticipate being developed beyond our analysis period and is excluded from the financial and valuation analysis that follows. Yet it is important to note that almost 1.1 million square feet of BUA is anticipated to be developed during that phase and it will be a large development in its own right.

Development phasing considers demand, waterfront allure and mix synergy: Building on our demand-led analysis, we have spread the development's built-up area over the twenty-year timeframe in five year increments. Under this plan, the first phase delivers 486,000 square feet of commercial, retail and entertainment, and hotel facilities to seed the site on four development blocks. The second phase delivers 414,000 square feet of commercial (office), residential, retail and hotel properties. The third phase delivers 2.3 million square feet, with a heavy residential and commercial emphasis. The fourth phase is 1.7 million square feet of commercial and retail, primarily. The fifth phase is 1.8 million square feet of commercial, retail, residential and special purpose products, in that order of importance.

Figure 69: The twenty-year development plan (demand-led BUA blended with the physical development blocks)

* Approximate square feet	BASE					
Phase	1	2	3	4	5	Project
Residential	-	206,906	570,938	348,908	645,159	1,771,911
Commercial	102,052	103,453	570,938	610,590	460,828	1,847,861
Retail	170,087	103,453	525,263	436,136	368,662	1,603,601
Hotel	213,824	-	365,400	-	368,662	947,887
Special Purpose	-	-	251,213	348,908	-	600,121
TOTAL (SF)	485,964	413,811	2,283,753	1,744,542	1,843,311	6,771,381

By Units	BASE					
Phase	1	2	3	4	5	Project
Residential Units	-	243	672	410	759	2,085
Hotel Rooms	679	-	1,160	-	1,170	3,009
* Sums are rounded						

These phases are flexible and can be shifted in time (by extending a phase forward or shrinking it backward) to account for actual absorption on the site. Similarly, should demand projections prove to be too conservative – especially for the later phases – then additional BUA can be delivered to meet the demand. The implementing entity for the development will have to review and evaluate the site’s absorption against estimates to determine the actual build-out speed and scale annually.

Phases will have unique focuses under one project theme: The project will aim to produce a vibrant, human scaled, and distinct but well integrated neighborhood within Cleveland. The successful development would be a new, unique neighborhood because of the synergy of its diverse mixed use, its location on the water, with views of and easy access to downtown, and with interesting attractions that are available on site. Integrated residential and commercial spaces will be an extension of the downtown area, but retail establishments, tourism, current port operations, and the waterfront allure well help create the feel of a new neighborhood . Similar mixed use waterfront developments have succeeded because well integrated mixes create the vibrancy needed to sustain demand.

As noted previously and further supported by the key lessons from the case studies, new development should initially be focused along the waterfront, where the market is strongest. This does not mean the development needs to be built immediately adjoining the waterfront (i.e. the most prime location), but they do need to have waterfront views and have easy access to the waterfront. In subsequent phases, one might consider filling in undeveloped waterfront sites as a way to maximize profits from the increase in land values once the site is seeded. The key is to use the waterfront initially as the most important free amenity on the site to attract and retain users. Later, as amenities such as park space, greenways, restaurants and entertainment options, and retail uses that take money and time to develop are added, demand will increase for housing and other uses that are located away from the waterfront. This will increase opportunities for additional new investment and profitable development across the area.

Development should occur in phases, using one or many developers (as needed) for each phase’s requirements. Each phase should have a unique theme or overarching goal that supports the development theme. Ideally, there would also be a common architectural language and style across the site that can and should remain flexible enough to change with the community’s needs over time. For example, a public amenity (such as a park) may be built over time and in phases. What may begin as simple open and unplanned green space may evolve into a planned space (such as a sculpture garden) or a community venue. Similarly, interim uses like the aforementioned community venue will be critical to generate activity. The designation of otherwise vacant space as fairgrounds, for example, can create limited economic activity until more permanent and valuable development takes place. Examples of projects elsewhere indicate that permanent development should include an initial cluster that includes residential uses. Having people present every day and night helps to keep activity on-site and creates demand for convenience retail and transportation. Tenants and owners will add retail and office uses to the site and help to absorb and drive additional demand for services and entertainment.

Phases 1 and 2 will focus on the tourism corridor: The first phases will solidify the tourism base and lay the foundation for residential and commercial uses. The most logical development would start in the northeastern portion of the site, near established tourism venues with connecting infrastructure. Easy access to the site and at least one or more boutique hotels (almost 700 rooms total) will help to maintain traffic along the waterfront and draw demand from activity created by the 200,000 square feet of commercial space and 270,000 square feet of retail and entertainment space planned for this phase. Retail space in these early phases supports convenience shopping and entertainment options for tourists, residential and commercial tenants and then specialized shopping and restaurants which will draw demand from all uses. Residential units (estimated at roughly 250 in the second phase) will round out the uses by bringing people to the site twenty-four hours per day, with all of the needs for convenience retail and hygiene factors that accompany habitation.

A key development theme for the first phase will be on creating a comfortable yet diverse environment in which people would want to stay on the waterfront for as long as possible, working, living, visiting, shopping and enjoying the special use parks and public places. Unique venues can be developed as well to further increase traffic. The undeveloped portions of the site can be converted to public parks until they are needed for development.

Phase 3 will focus on delivering a balance of all uses: The third phase delivers 2.2 million square feet of residential, commercial, retail, hospitality and special purpose products, but with a much greater emphasis on commercial (office) and residential properties. We envision that commercial tenants, especially the three key anchors described in Section 3.2, will be signed during one of the earlier phases, but that they will want to locate in a portion of the site that is away from the tourism center and be nearer to downtown or closer to the river. For this reason, the commercial space will be substantially built during the third through fifth phases. Another 670 residential units and 1160 hotel rooms will each be built in higher numbers than in the first phase, reflecting higher demand for the site’s offerings.

Phases 4-5 will focus on filling in the site with commercial uses: The fourth phase delivers 1.7 million square feet, with a commercial emphasis, while the fifth phase will deliver an additional 1.8M square feet of BUA significantly bolstering all uses. Both phases are assumed to be infilling portions of the site, particularly the western middle and central areas. Residential units (410 in the fourth and 759 in the fifth phase) are limited to higher-end, boutique residences suitable for families and retirees.

Product mix recommendation details show links to projected demand: There are five potential uses that we consider for the site: office, residential, retail, hotel and special purpose.

Office (sq ft)

Phase	1	2	3	4	5	Project
Office (SF)	102,052	103,453	570,938	610,590	460,828	1,847,861

Office demand should be considered on two intervals: current and post-recovery (2013 or thereabouts). Currently, medical office demand is strong within Cleveland. Cleveland Clinic and University Health Systems employ 44,400 locally and should grow 2-3% through the recession; nearly 1,200 new jobs per year. Separately, a major international financial services firm was prepared to anchor the Stark Development at \$30 per square foot (PSF). It is not unreasonable, then, to expect interest for a large amount of Class A space on the Port site within the first and second phases. From 2013 and thereafter, economic recovery should easily fill space and drive

rents higher. Also since the city’s largest group of Class A tenants takes up less than 5,000 square feet each, a targeted outreach program will need to be created to introduce them to the development and secure lease agreements. From these tenants a general range of businesses such as accounting, law, high tech, and other industries can be expected.

Although it will be difficult to finance projects without having at least 50% of the building pre-leased, interest from credit-rated or shadow-rated tenants (strong regional non-credit rated tenants, such as a law firm) may push development forward.

If office space demand supports additional bulk, buildings may be taller than the current plan of low rise structures. As high rise structures are more expensive to build, higher rent will be required to pay for them. As with all developments, the developer will have to make a decision as to what the appropriate development is that the market demands at the time of committing to new construction.

Residential (sq ft)

Phase	1	2	3	4	5	Project
Units	0	243	672	410	759	2,085
(SF)	0	206,906	570,938	348,908	645,159	1,771,911

For simplicity’s sake, and because the development would be built on long-term leased land, the analysis assumes all of the residential units would be built as rental units. Generally, Americans do not buy condominium units on leased land. The preference is so strong that in some states, it is given the force of law and one may not build condominium units on leased land. This differs from many countries, such as the United Kingdom, which have many condominium developments on leased land. Much of downtown London is built on long term (i.e., 99 years) leased land.

The envisioned typical residential project will target upper middle income consumers who prefer urban lifestyles. The average household will consist of single or newly married individuals without children or with young children who do not attend school because of their age. Later phases may target families with school-age children and retirees. In time, and depending on the size of the residential community, there may be a demand for education on site or in close proximity. This could potentially be served by pre-existing facilities.

Retail (sq ft and units)

Phase	1	2	3	4		Project
SF	170,087	103,453	525,263	436,136	368,662	1,603,601

The on-site retail and entertainment options would support the local residents with convenience retail (such as dry cleaners and restaurants) as well as provide services for the expected waterfront users (e.g., specialty retail for boaters). The site can support retail and entertainment options that compete with the larger suburban shopping malls, but the retail experience on the Port site is not expected to provide intense competition for those malls, given the vastly different scale of retail offered to shoppers. The number of downtown workers that the project could attract for after-hours entertainment such as restaurants, bars, night clubs, and related retail is high and relatively stable. Perhaps the largest initial target for the site’s retail and entertainment options are the city’s visitors, who would have time and money available for relaxing and enjoying new experiences after visiting the nearby tourism cluster. Some portions of the demand model BUA

estimates for retail has been shifted to hospitality use greater levels of optimism for that use on the site.

Hotel (sq ft and units)

Phase	1	2	3	4	5	Project
Unit	679	0	1,160	0	1,170	3,009
SF	213,824	0	365,400	0	368,662	947,887

Hotel projects are often built in the final or later phases of mixed-use developments, but the waterfront site’s demand drivers support hotel development during the early phases of the project. As stated above, optimism about the potential for increased hospitality attractiveness on the site from stakeholder interviews has led to some of the retail BUA estimates to this use. At a minimum, two-three hotel types appear to be feasible: high-end boutique hotels of approximately 100-150 rooms, and more leisure-oriented hotels of roughly 200-400 rooms each. Phasing should be flexible enough to accommodate hotel development in any order – the organic nature of development may create a more favorable environment for the boutique product before the leisure product, or vice versa. Walking proximity to such magnetic attractions as the lake, stadium, and Rock and Roll Hall of Fame are significant positive factors for Port area hotels. As the Port site is adjacent to primary leisure tourism destinations within the city, it should be possible both to become part of a wider tourism destination and for tourists to prefer staying onsite to enjoy the waterfront amenities as opposed to staying downtown. Business tourists will not come to the site initially, but will be more receptive once there is a development and some commercial amenities in place. Additional hotel options are for extended-stay facilities or all suites products.

Special Purpose (sq ft)

Phase	1	2	3	4	5	Project
Special Purpose	0	0	251,213	348,908	0	600,121

Arguably the most critical aspect of port development is one or more compelling, unique attractions beyond the four uses outlined above. While these places could be as simple as parks, a more unique experience, such as an aquarium, would generate significantly more interest from the public. Other possible attractions include extensions of the Cleveland Museum of Art or Rock and Roll Hall of Fame, outdoor concert venues, skate parks and perhaps an international cruise terminal and shopping district to attract Canadian tourists. Special purpose venues should be careful to avoid redundancy: amusement park and football related venues would likely compete with neighboring cities. The special venue will likely be placed within walking distance to the current tourist area at the northeast corner of the development site. This will help to help bring the retail and restaurant uses next to the current tourism uses.

4.2 BUILD UPON EXISTING INFRASTRUCTURE TO CREATE A UNIQUE EXTENSION OF DOWNTOWN

The ability for the development to stay vibrant hinges on fluid integration into its surrounding area. First, being vibrant and unique may bring people to the site, but high levels of accessibility will be instrumental in attracting and retaining the numbers of people to live, work and enjoy themselves that are needed for success. Secondly, the site must be able to draw piggyback on the success of the Cleveland Rock and Roll Hall of fame and Science Center and maintain the prestige of the

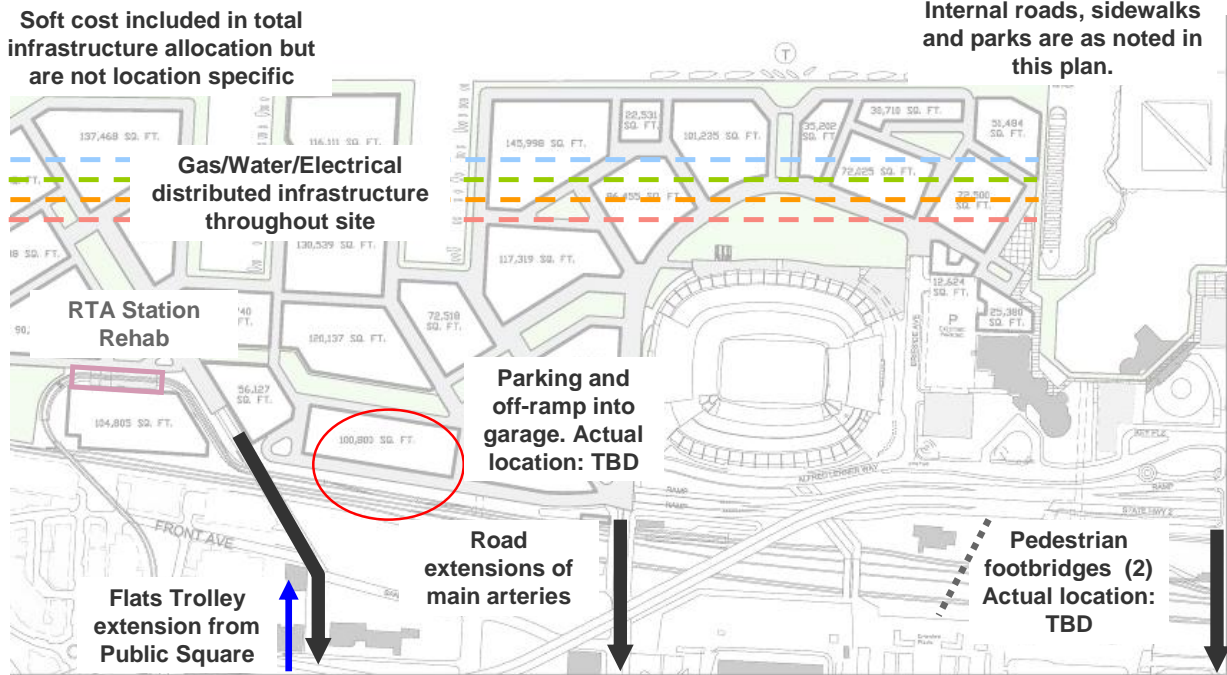
central business district. Development must take advantage of current linkages into the city and port operations to provide sufficient return on investment for the level of risk undertaken.

Infrastructure requirements may be large, but can be linked into existing systems: The US and international cases highlighted the importance of site and connecting infrastructure for successful waterfront redevelopments. This was an especially significant way in which the public sector is able to lever private investment and the market. Several infrastructure aspects were seen to be important, including:

- Providing infrastructure to effectively and physically connect the waterfront area to the surrounding city and vice versa is critical, inter alia:
 - Connecting the area into wider transport networks (trains, trams, busses)
 - Providing good road access (often in combination with innovative approaches to vehicle use in the area, parking and so on)
 - Creating physical connections (e.g. bridges, extending canals and waterways)
- Site specific infrastructure and related public spaces are usually of high quality, contributing to a high quality overall physical character of the area
- Infrastructure can be used as flagship development statements (such as spectacular bridges, transport stations designed by renowned architects, prominent pedestrian bridges and paths)
- Many waterfront areas were blocked by infrastructure corridors (especially railways lines, highways). Bridging these infrastructure corridors to reconnect the waterfront and city is important (examples include the decking of railway lines, sinking transport corridors below ground, creating pedestrian crossings, innovative uses of the space over rail lines, .)
- Some infrastructure interventions focused on increasing the amount of premium waterfront space (e.g. digging new slips and canals)

For the purposes of determining the potential returns of the waterfront development, it is necessary to identify and cost the connecting and site infrastructure that will be required for the development. A preliminary infrastructure estimate has been prepared and is outlined below. This presents a rapid inventory of site infrastructure, and connecting infrastructure, required for the basic development of the site. These preliminary infrastructure estimates have been used in the financial model to determine site investment costs (and are shown below in relation to the site's development plan). The impacts of infrastructure on available land are also included in the financial model.

Figure 70: Infrastructure expenditure mapping shows mostly site-wide connective improvements and green space



While there are several existing roadways serving the port, planned infrastructure will extend access via new roadways and public transport, e.g., extending the flats trolley service. Clevelanders prefer automobile transportation, and a number of roads can be extended across the rail yards to serve the Port area. Additionally, highway access will be improved, which should be considered simultaneously with the existing highway bridge issue. However, site connectivity to the business district and flats is generally quite good. A long-term plan of placing platforms over the rail yards for pedestrian access has been discussed, but this only partially addresses what could be a costly and lengthy solution.

Figure 71: Infrastructure costs allocated by phase

	Est. Cost (\$m)						Estimated Total Cost (\$M)
	1	2	3	4	5	6	
1 Transport							
a Flats Trolley Extension - Efficient transport linked to Public Square	\$ -	\$ -	\$ 0.8	\$ 0.8	\$ 0.8	\$ 0.8	\$ 3.0
b RTA harbour line station rehab	\$ -	\$ -	\$ -	\$ -	\$ 5.0	\$ -	\$ 5.0
c Internal Roads - linear miles	\$ 1.2	\$ 1.2	\$ 1.2	\$ 1.2	\$ 1.2	\$ 1.2	\$ 7.0
d Off Ramp into parking structure/roadway	\$ -	\$ -	\$ 3.3	\$ 3.3	\$ 3.3	\$ -	\$ 10.0
2 Connection Infrastructure - Direct Port Site Works							
a Pedestrian decking of railway	\$ -	\$ -	\$ 1.7	\$ 1.7	\$ 1.7	\$ -	\$ 5.0
b Roads extension (of 3 main arteries)	\$ -	\$ -	\$ -	\$ 3.3	\$ 3.3	\$ 3.3	\$ 10.0
3 Water/ Wastewater							
a Potable water connections	\$ 0.8	\$ 0.8	\$ 0.8	\$ 0.8	\$ 0.8	\$ 0.8	\$ 5.0
b Sewerage connections_ storage tanks	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 3.0
c CSO infrastructure	\$ -	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6	\$ 3.0
d Grey water reuse system	\$ -	\$ -	\$ 1.5	\$ 1.5	\$ 1.5	\$ -	\$ 4.5
4 Parking							
a Public parking garage	\$ -	\$ -	\$ 2.5	\$ 2.5	\$ 2.5	\$ 2.5	\$ 10.0
5 Public Space							
a Parks	\$ 2.3	\$ 4.5	\$ 4.5	\$ 4.5	\$ 4.5	\$ 6.8	\$ 27.0
b Sidewalks	\$ 3.5	\$ 3.5	\$ 3.5	\$ 3.5	\$ 3.5	\$ 3.5	\$ 21.0
6 Elec and Gas Connections							
a New connections	\$ 0.7	\$ 0.7	\$ 1.4	\$ 1.4	\$ 1.4	\$ 2.8	\$ 8.5
b Distribution system	\$ 1.2	\$ -	\$ 2.4	\$ 2.4	\$ 2.4	\$ 3.6	\$ 12.0
7 Site Preparations							
a Strengthening slips for construction	\$ -	\$ 0.7	\$ 0.7	\$ 0.7	\$ 0.7	\$ 0.7	\$ 3.5
b Environmental remediation	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 2.0
c Demolition and relocation	\$ 1.5	\$ -	\$ 3.0	\$ 3.0	\$ 3.0	\$ 4.5	\$ 15.0
d ODNR Stat 43 Mitigation	\$ -	\$ -	\$ 0.8	\$ 0.8	\$ 0.8	\$ 0.8	\$ 3.0
e Solid waste remediation	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 2.0
f EIA	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 3.0
TOTAL	\$ 12.8	\$ 13.7	\$ 30.3	\$ 33.6	\$ 38.6	\$ 33.5	\$ 162.5

As noted previously, emphasis in the provision of infrastructure should be placed on providing high quality infrastructure can contribute to the special character of the development.

Figure 72: General Site and Connecting Infrastructure Requirements

Infrastructure Type	Estimated Required Infrastructure	Comments
Site Preparation	<ul style="list-style-type: none"> ▪ Strengthening slips for construction ▪ Environmental remediation ▪ Demolition and relocation port facilities ▪ ODNR Stat 43 Mitigation ▪ Solid waste remediation ▪ EIA 	Site preparation influenced by phasing of project development.
On-Site Transport	<ul style="list-style-type: none"> ▪ Bus RTA Extension ▪ RTA harbor line station rehab ▪ Internal Roads ▪ Off Ramp into parking structure/roadway 	Consider designing rail stations to build character of area; Extend RTA bus service onto site.
Connecting Transport	<ul style="list-style-type: none"> ▪ Pedestrian decking of railway ▪ Roads extension (of 3 main arteries) 	Possibly wide railway decking, combining pedestrian and open/park space; Potential to combine pedestrian crossing with parking facilities over railway deck; Western site pedestrian connection to new Warehouse Development possible.
Water and Wastewater	<ul style="list-style-type: none"> ▪ Potable water connections ▪ Sewerage connections and storage tanks ▪ CSO infrastructure ▪ Grey water reuse system 	Integration of runoff water and drainage into innovative park system possible.
Electricity and Gas	<ul style="list-style-type: none"> ▪ New connections ▪ Distribution system 	
Parking	<ul style="list-style-type: none"> ▪ Public parking garage (1000 cars) 	Possible communal parking facilities integrated area development; Possibility to provide parking facilities decking over the railway lines.
Public Space	<ul style="list-style-type: none"> ▪ Parks ▪ New river/canal connection ▪ Sidewalks 	Combined park and water runoff system connecting to wider city park system.

Total investment in the above infrastructure is estimated to be in the range of \$160 million. It is important to emphasize that these are preliminary infrastructure estimates, and that a detailed infrastructure costing is required to develop a more accurate investment estimate.

The general site and connecting infrastructure outlined above is considered necessary for the basic development of the site under most of the realistic, mixed-use development scenarios. A more detailed infrastructure plan is required for the site, which will include:

- Any specific additional infrastructure related to the chosen development vision for the site
- More detailed costing of required infrastructure
- An infrastructure financing plan, to determine how the required infrastructure will be financed and by whom
- Detailed infrastructure planning related to the first phase of site development

The port already has substantial benefits in place due to the existing infrastructure improvements. Graded land, roads, and rail capacity are all in place and can be liberally taken advantage of. Likewise, piers are already in-place that can support development and help to maximize water views and access which is so valuable in kick-starting development. This means that with regard to infrastructure and connectivity, the starting position of the redevelopment is quite favorable when compared to similar waterfront developments in other places.

The definition of existing infrastructure should also be expanded to include the area improvements such as the stadium and museums. Improving and integrating access to this adjacent area will benefit both developments. More broadly, other nearby developments' successes will positively impact the site in terms of demand, rates and in terms of overall development. In general, successful developments help other developments succeed. While it is possible to have overbuilding, demand can beget demand and if other developers make infrastructure improvements in the neighboring blocks, this will benefit the Port site.

Site development must consider port relocation to maximize value creation: The operating port contributes to the waterfront attraction in the form of uniqueness, to say nothing of the economic activity and generation that more directly supports the Port's operations.

Following the complete move of the port to the new site, some of the port's old equipment could be displayed in a historical aspect, much like the docked ship to the east. Examples of this abound in other waterfront redevelopments. This does not mean that the former equipment needs to be restored; in some developments the old port equipment has been left to rust in place and the old docks to rot. The goal is not restoration. The goal is to give visitors something to look at and to have the feeling that they have experienced something unique.

Waterfront developments of this size (113 acres) typically take in excess of 10 – 15 years to move from initial development concept to having more than 50% of the site successfully developed. Port functions in Cleveland, although involving bulk cargo – specifically steel plates, coils, rods and billets – involve relatively light traffic volumes. There is potential to concentrate existing port activities on the site until such time as the new port facilities are available. Given these conditions, it is considered generally feasible to match the port relocation with the site real estate development process.

4.3 FINANCIAL RESULTS FOR THE DEVELOPMENT PLAN AND ASSOCIATED INFRASTRUCTURE PROVIDE AN ADEQUATE RETURN TO DEPLOYED CAPITAL

This development plan's costs and revenues are shown in exhibit 73 below. The project level revenues are estimated to be in excess of \$4.18 billion over the twenty-year development period on development expenditures of \$1.34 billion. The port's nominal ground-lease receipts are projected to be \$1.088 billion, of which \$365.6 million is actual payments made to the land

owners, and the remaining \$722.9 million represents the capitalized value of future cash flows. These lease revenues are stable at \$15.36 million per year as of year twenty, giving a present value to the site of nearly \$376.8 million. The site would then be valued at \$6.85 million per developable acre, or \$3.56 million per acre for the total 113 acres site.

Figure 73: Development costs and revenues

Nominal Development Revenues (unless otherwise noted)	
Project level revenues (not including ground lease payments)	\$4,180,000,000
Total ground lease payments(to the land owners)	\$1,088,600,000
Of which, Ground leases during first twenty-years	\$365,600,000
Capitalized future revenues after year twenty	\$723,000,000
Annual lease payments (at year twenty)	\$15,360,000
Site level value calculations (present values includes residual)	
PV of total lease payments discounted at 6.0%	\$376,800,000
PV of total lease payments per each acre (113 acres)	\$3,560,000
PV of total lease payments per each developable acre (55)	\$6,850,000
Nominal Development Costs	
Non-Infrastructure Development Costs	\$867,000,000
Office (commercial)	339,000,000
Residential	268,000,000
Retail	251,000,000
Hospitality (hotel)	196,000,000
Special purpose	107,500,000
Infrastructure Development Costs	\$162,500,000
Total Development Costs	\$1,324,500,000
<i>Numbers may not total exactly because of rounding</i>	

These projections represent the likely scale of development costs, revenues and ground-lease receipts that the project can sustain. Any changes to the phasing, mix, density or financing structure (such as cost of capital) will create changes to these figures. As the development plan is set and refined, these numbers should be run again to validate their acceptance to the development entity.

Figure 74 gives a generalized view of the contribution made to the present value of the ground lease receipts to the land owners by each product's BUA delivered by phase. Commercial (office) property is the largest contributor of ground lease revenues to the development, with retail, residential, hotel and special purpose following in declining order. Since the site's BUA components will likely have different profitability patterns in different phases, this analysis should be repeated once actual revenues by product are known and can be extrapolated over the site's future development.

In addition, because the financial model has a definitive time horizon (twenty-years), we include a capitalization rate of 8.5% to determine a residual value for the streams of ground lease payments coming into the land owners once all the phases are complete. That number is included in "Total Lease Payments" below. While lease payment values are nominally large, a substantial portion of the "Total Lease Payments" includes residual value that comes from valuing the remaining life of the ground lease cashflows at the end of the twenty-year time horizon.

Figure 74: Generalized spread of ground lease revenues (present value) by BUA by product by phase

PV of ground lease revenues	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	TOTAL
Residential	-	11,500,000	31,800,000	19,400,000	35,900,000	98,600,000
Office	5,800,000	5,800,000	31,800,000	34,000,000	25,600,000	102,900,000
Retail	9,500,000	5,800,000	29,200,000	24,300,000	20,500,000	89,200,000
Hotel	11,900,000	-	20,300,000	-	20,500,000	52,700,000
Special Purpose	-	-	14,000,000	19,400,000	-	33,400,000
Totals	27,200,000	23,100,000	127,100,000	97,100,000	102,500,000	376,800,000

The recommended development plan may be attractive to outside (private) developers, but because they do not have tax advantages or exemptions and they have higher profit expectations than the port, they will discount the development's future cashflows at a higher rate than the port. For this reason, as Figure 75 shows, they will likely pay less for the land than the port can generate in ground lease payments.

Figure 75: Land valuation estimates by discount rate

Total site value (PV)	Disc. Rate	Whole Site		Per Acre		Per Developable Acre	
		Nominal	Present value	Nominal	Present value	Nominal	Present value
Land owners	6%	1,089,000,000	376,700,000	9,630,000	3,330,000	19,790,000	6,850,000
Developer	10%		195,800,000		1,730,000		3,560,000
	12%		143,500,000		1,270,000		2,610,000

4.4 AN IMPLEMENTATION VEHICLE MAY HELP TO COORDINATE FINANCING, PROJECT DEVELOPMENT AND RISK MANAGEMENT

Specific risks and project goals should be evaluated prior to selecting the appropriate implementation approach for the Cleveland waterfront development: To implement the development, CCCPA will need to investigate how the waterfront development project will be operated, and key risks planned for and mitigated. In doing so, the Port should assess whether implementation arrangements being considered are sufficient or require changes. The principal risks that might impede effective and efficient implementation of the project include (from most to least important): lack of political will to create the proper implementation governance, exogenous market shifts, blockage by minority interests, and failure to realize expected benefits investments.

Managing these risks is best accomplished through the implementation of an effective Program Management Office within the development's implementation entity, together with effective stakeholder engagement, regular and consistent communication, public outreach and early identification and dialogue with alternative points of view. Effective coordination of government entities via an empowered implementation body charged with implementation and reporting progress to the Port and other stakeholders via regular progress reports would help to increase transparency and accountability for progress. Finally, both the Port and the city will have strong roles to play in endorsing the project and engaging the many interests needed for its implementation.

Governance Risk

The first and most important risk is associated with the complexity of the initiative and therefore, the comprehensive governance that will be needed to implement it. In any initiative of this scale and scope, some will perceive themselves as winners and others will see themselves as losers. This development will be no different. It would be a mistake to underestimate the collective resolve of the sponsorship that will be needed to endorse and steward its implementation.

Coordination of the various entities involved in implementation will require attention to task responsibility and to the actual time needed for reforms, rather than on artificial timescales (such as "by the beginning of next year"). Changes in government add uncertainty to the timelines for implementation because there will be periods of reassessing resource priorities and plans when the new government enters office. Among the governance risks that should be examined are

- the need for focused, concentrated and dedicated organizational capacity to drive the development forward
- creating stability of development management over the full development phasing
- the balance of public and private involvement in governing and steering the development that is desired
- the potential to provide strong market signaling and to increase confidence in the developer and investor community
- the role and level of involvement the CCCPA intends to adopt with regard to the development
- key city, country, state and wider public sponsors and role players required to effectively implement the development
- the full range of managerial and functions required to initiate and successfully manage a development of this nature

- relevant legal issues and legal basis for development management by either the CCCPA or an alternative development management vehicle
- The need for clear senior management and ownership and leadership, and effective engagement with stakeholders
- The senior leadership's skills and proven approach to project management and risk management

Changes in Market Conditions

The second type of risk that the project faces comes during market downturns, when some groups or commercial entities may question the project's viability. Current economic conditions, for example, may well pose a challenge to initiating implementation among skeptical audiences. During such times, some may be tempted to ignore the positive, attractive aspects of the site's development potential because of fear or vested interest in the status quo. While the current market slowdown and recession might reduce the area's short-run growth prospects or moderate investment flows, the underlying rationale for the development remains sound.

To support implementation and to avoid short-sighted decisions that have long-term repercussions on the project, the Port can prepare communications plans that stress the importance of the project during challenging economic environments as helping to position the city competitively in the wider economy. Among the market condition risks that should be examined are

- the opportunity to strengthen the development's branding and position across the real estate business cycle
- the potential to streamline the development process during implementation (a 'one-stop-shop' approach)
- the possible involvement of private stakeholders, civic organizations, and others who will support the development over its twenty-year phasing
- financing issues for the development (how and how much to finance for each phase and product) during both high and low points in the economic cycle

Vocal Minority

The third type of risk for the development comes from providing the right strategic direction, but finding that this direction conflicts with a vocal minority of stakeholders who are able to effectively block implementation. Even a modest watering down of recommendations to streamline and simplify the regulations and institutions responsible for investment attraction would reduce substantially its ability to deliver expected benefits to the myriad interested stakeholders. Among the risks that come from vocal minorities are

- possible land ownership issues, and whether alternative vehicles can alleviate any related obstacles to development
- environmental issues that are unforeseen prior to the environmental impact assessment's completion
- local stakeholders with ideologically-driven or parochial interests using the courts or media to delay the project (or any phase thereof)

Benefits Realization

Finally, the recommendations must yield results to both providers of capital and average citizens. Sustained investment is contingent on investors realizing the returns they have anticipated. Should adequate returns not materialize, both the quantity and quality of investment could decline below levels needed to meet the development's objectives. Were this to occur, the site's benefits would be unlikely to grow as predicted in our models, citizens would not experience the neighborhood they expected, and they could become disillusioned with the development planning. This could lead to demands for unplanned physical changes and further erosion of confidence in the development's success. Among the risks around benefits realization to be examined are

- the level of managerial and technical capacity required and how this can best be developed, retained and located
- the process of defining the appropriate development management approach and project management plan, which includes risk assessment and mitigation measures
- creating clear links between the project and the sponsoring organization's key strategic priorities, including agreed measures of success
- evaluating proposals driven by initial price rather than long term value for money (especially securing delivery of business benefits)
- focusing attention on breaking development and implementation into manageable steps
- securing sufficient high quality resources with the skills to deliver the total development portfolio over the long time scale envisioned

Waterfront (re)developments are complex, multi-use and multi-faceted development projects. Successful projects have strategically mobilized public stakeholders, communities, the private sector and investors around a unifying development vision. To achieve this, most projects have established for-purpose development and management bodies that are able to undertake complex development projects of this nature, and to steer the development in phases over twenty-year implementation periods. Similarly, CCCPA will need to determine what the most appropriate organizational vehicle is for undertaking the waterfront development successfully and delivering the benefits promised to stakeholders, especially an open and unique neighborhood for the public and a return of capital to its providers.

A development-focused implementation body can help to secure finance for the development. The development body created to manage this venture would be staffed by experienced outsiders who know how to raise and deploy finance for large-scale developments. The staff's skills and experience would also be useful in demonstrating to lenders and other developers that the site's development planning strategy is being carefully considered to preserve and maximize the value of the available assets.

Specific risks and project goals should be evaluated prior to selecting the appropriate implementation approach for the Cleveland waterfront development. Governance of the project and of the wider stakeholder world will change and each change may increase the risk of commitment to the project (be the commitment time, capital, support or something else). Vocal stakeholder groups can increase the risk that an entire project is mired in legal, political or public relations battles because of narrow interests. Market changes may require substantial alterations to the development plan's timing and scale. Finally, failure to achieve the benefits that each stakeholder group expects raises the risk of project delays. Each of these issues should be considered when planning the implementation approach and managing implementation body.

An appropriate implementation body for the waterfront’s development helps deliver

success: As noted previously, waterfront developments are relatively complex and long-term real estate development projects. As such and similar to any large real estate project, from an organizational and operational implementation perspective, these developments are confronted by a number of challenges. Some of the main challenges include:

- Need for an effective structure for the development to reassure investors
- Potentially fragmented or mixed land ownership on the waterfront site
- Need to raise significant upfront financing with long term returns
- The need for multiple public stakeholders to be involved in the development
- Need to structure and phase the release of the development to the market in phases over a long period to maximize value
- Need to coordinate and sequence investments of a number of different public and private parties
- Need to retain the main development vision for the development, while being flexible to market circumstances
- Need to reduce administrative procedures and transaction costs
- Need for a core of skilled expertise to drive forward the development
- Need for dedicated focus in project implementation

In almost all of the ten waterfront development cases, a dedicated organization was established to undertake the development. These have different legal bases, ownership structures, balance of public and private involvement, and activities undertaken. A short overview of implementation models is provided in the table below.

Figure 76: Case study implementation models

	Victoria & Alfred Waterfront	Hafencity	Kop van Zuid	Euralille	Abandoi-barra	Harbor East	South Street Seaport	Bellingham	Millennium Park	Three Rivers Park
Special Project Body Established	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Name of Special Project Body	V&A Waterfront Holdings Ltd.	HafenCity Hamburg GmbH	Kop van Zuid Project Organization	SAEM Euralille	Bilbao Ria 2000	Baltimore Development Corporation	South Street Seaport Museum	Waterfront Futures Group	Public Building Commission	Riverlife Task Force
Nature of the project body	Limited Liability Company	Limited Liability Company	Project Office of City Government	Limited Liability Company	Not-for-Profit Entity	Already existing Development Corporation	Public Private Partnership	Organization	Already existing Public Building Commission	Organization
Participants / owners of the body	<ul style="list-style-type: none"> • 100% Public: • Transnet 26% • Transnet Pension Funds 74% • Implementation on body and all assets sold to private parties after development completed 	<ul style="list-style-type: none"> • Public • City of Hamburg 100% 	<ul style="list-style-type: none"> • Public • Rotterdam City Development Corporation • Municipal Departments • Port Authority • Neigh'hood Organizations also involved 	<ul style="list-style-type: none"> • Public (54%) / Private (46%) • City of Lille and Regional Governments (54%) • Regional, national and International Banks, Rail Company and Chamber of Commerce (46%) 	<ul style="list-style-type: none"> • 100% Public: • Spanish State • Regional Government • City Government • Port Authority • Public Rail Companies 	<ul style="list-style-type: none"> • Contracted by city of Baltimore • Private Directors 	<ul style="list-style-type: none"> • Public Private Partnership with the: • South Street Seaport Museum • Rouse Company • City of New York 	<ul style="list-style-type: none"> • Citizens Reps • Port of Bellingham • City of Bellingham • Planning Commission 		<ul style="list-style-type: none"> • Board comprising wide range of public, citizen and private bodies • RTF funded by public, private and endowments
General Role	Full land and asset ownership, vision, master planning, marketing, financing, development management, ownership and operation	Master Planning, project implementation, trustee of "City and Harbor" Fund, marketing, development management, coordination	Master plan implementation, marketing, development management, coordination	Development management, marketing, contracting authority, coordination	Development management, marketing, coordination	Development management, economic development, master planning, visioning	Master Plan, Visioning, Financing, Coordination, Leasing, Contracting,	Visioning, master planning Implementation on body for the development currently being defined	Appointed by the City of Chicago as owner / manager of the MP development	Establish and promote vision and master plan Coordinate implementation of capital projects

These implementation models and dedicated project management organizational structures had a number of benefits, including:

- Strong market signaling
- Effective coordination between multiple public agencies
- Providing greater certainty to developers, investors and the market
- Effectively coordinating required investments
- Strengthening independence of the project to ensure effective continuity in vision and implementation
- Providing a 'one stop shop' for developers and investors to streamline the development process and reduce transaction costs
- Building and retaining focused capacity for undertaking the project
- Potential for various financing approaches
- Stability and continuity for the development over time

A development-focused implementation entity may be useful for securing finance for the development: As the Port is not a real estate developer or property manager, it will likely have to bring in experts to manage the development process (using the Implementation body). These experts bring with them experience and skills regarding the best means to fund large-scale developments, the requirements for bankable development plans and the advantages and disadvantages of each avenue of funding (private equity versus a public development company, for example). Further, the credibility that they experts bring to the development's operations will help to convince equity and debt providers that the site's development planning and strategy are targeted towards maximizing the site's benefits to all stakeholders.

One avenue of implantation may explore is tax increment financing ("TIF"), which can capture new incremental real and personal property taxes in support of financing project-related public infrastructure. TIF is not uncommon in this type of redevelopment projects; it was for instance also used for developing Millennium Park in Chicago. If TIF funding is available for this development effort (given that there may be an implementation body involved), then it should be evaluated for appropriateness.

Special assessment districts and revenue generated from publicly-managed parking structures can offer additional public funding possibilities. Separate TIF districts may be created to correspond with the phased implementation program. This financing can also show public commitment to the level and quality of private investment envisioned by the plan. This use of TIF, when combined with a special assessment and public parking revenues, may also yield a favorable return for the city.

There are also a number of Federal tax credit programs that could be utilized to offset some of the development costs. If affordable housing for low income populations is desired on the site, one could consider Low Income Housing Tax Credits ("LIHTC"). While this may not be the goal of the development, it is essential to boost the population density in order to get the project up to speed and to drive retail. For commercial development, there is tax credit money available from the Federal government in the form of New Market Tax Credits. All of these tax credit programs can be explored as alternative methods of financing when the actual developments are planned.

5. CONCLUSION: A SUCCESSFUL WATERFRONT DEVELOPMENT WILL STRATEGICALLY CONTRIBUTE TO CLEVELAND'S FUTURE GROWTH

Cleveland is poised at a critical moment in terms of its economic development over the coming decades. It has the potential to use its deep roots in industry and technology to move into emerging niches within these areas, in particular within green technology and advanced manufacturing. The city's future development will depend in part on its ability to remain competitive and attractive within the region and even the nation. Capturing and holding the public's attention through a sophisticated waterfront development linking the downtown to the water and surrounding areas will help to position Cleveland again as an economically and culturally important city within the region.

The Port Authority has an important strategic opportunity to contribute to Cleveland's revitalization using the development of the port site as a catalyst for wider ranging efforts. The port's development may do more than initiate positive changes in the city and region: it may also help to support ongoing economic and social development efforts. To be successful in these regards, though, it must get the development's timing, targets, mix and potential right.

We have conducted a substantial study to assist the Port Authority on how to make this waterfront project a success based on worldwide experience, detailed analysis of the real estate market and demand in Cleveland, and robust financial modeling to identify and test potential options for development of the site. Our analysis shows that Cleveland's supporting economic, population and real estate drivers are healthy enough to support growth, even with portions of the macro-environment under strain. In short, there is no deal-killer in the details: examining both the big picture and minutia did not uncover anything that by itself would make the development unsuccessful, given the right level of political and financial support, and a patient approach to development. Reinforced by worldwide experience, our analysis shows that an inspirational, human-level, mixed use waterfront development is possible, and this report indicated how it can be achieved.

APPENDIX A: OUR APPROACH TO LARGE-SCALE REAL ESTATE DEVELOPMENT PLANNING

Large-scale real estate development planning is more than simply planning how much of what property type to place on certain pieces of ground over a definite period. Rather, large-scale developments carry unique risks in terms of their size, cost, complexity and image. Understanding and mitigating these risks requires a holistic view of the economic, social and physical context in which the development will be placed, as well as a balanced picture of the potential opportunities that these developments can precipitate.

Our structured and fact-driven approach to real estate development is predicated on three principles:

1. Understand the complexities and system linkages between the current and potential real estate market with economic growth and the real estate business cycle. There is no single, all-important demand driver that could be manipulated for success; rather, economic growth and real estate development success go hand in hand and one cannot be separated from the other.
2. Each development mix is unique and differences in demand drivers are subtle. Understanding how each driver affects each mix will help to determine the site's positioning strategy, mix synergy, and potential demand.
3. Large-scale real estate developments must be marketable and absorbable, that is, they must be planned with market demand in mind. Under this approach, developments can succeed in a stagnant market if they supply a market segment with products or services that are not found in equally competitive surroundings.

Capturing a complete picture of current real estate market conditions requires a systematic approach in which demographic, social, economic, and stakeholder factors influence available development options for a given location. Large-scale real estate developments alter the environments into which they are placed. They change the character and fabric of their neighborhood and city, sometimes for the worse, but often for the better. Well designed and planned large-scale developments ultimately do more than just add new quantities of real estate inventory (no matter how attractive) to a place; they help to create a sense of uniqueness that people want to experience.

BUILT ON CASE STUDIES OF SUCCESSFUL DEVELOPMENTS WORLDWIDE

All over the world, developers and governments have experimented with large-scale real estate development plans to generate employment, diversify their economies or simply monetize assets. Many of these developments are successful, thriving places that enhance the quality and character of their cities and regions. We believe that examining what worked (and sometimes what did not work) in these developments provides ground-truth to our planning assumptions and outcome expectations. These case studies allow us to understand how different delivery vehicles, product mixes and catalytic drivers created success stories – and how we might be able to use these insights to our advantage. In particular, we examine cities similar to Cleveland that have created thriving waterfront hubs of commerce, residence and entertainment in the face of macro-level challenges.

For example, the highest and best use potential for the Port site is not likely a single use. Rather, the most promising opportunity is to capitalize on the market synergies that result from co-location of diverse but complimentary uses to create an exciting mixed-use community, as seen in case studies worldwide. Cleveland has a successful track record of this development theme: University Circle, Westside Market in Ohio City, and Lincoln Park.

As is also clear from the case studies of waterfront projects elsewhere, the uses must support each other, and simultaneously be able to survive independently. In general, successful mixed-use developments are defined by uses that are strong enough to stand on their own, but in combination they create a development that is much greater than the sum of its parts. By integrating retail, hospitality and public functions and facilities within the development, the area is able to attract traffic and maintain patrons and visitors, which adds to the vitality and liveliness of the area. A key lesson is that the proximity to the waterfront, a high quality public space and some buzz and excitement are the key ingredients to make a place attractive. This attractiveness in turn is vital for commercial success, which is 'captured' in the residential and office uses.

However, this potential can only be fully realized if both public and private investments in the district are guided by a master development plan that encompasses the entire waterfront and business district. Market identity and pedestrian access from one use to another are important market factors. The case studies show that this market identity can be created through a number of methods including the type of mixed use and public spaces, iconic architecture, site specific branding, and/or compelling design. A unique identity will provide a variety of benefits, such as increasing the overall attractiveness of the site, particularly to the public.

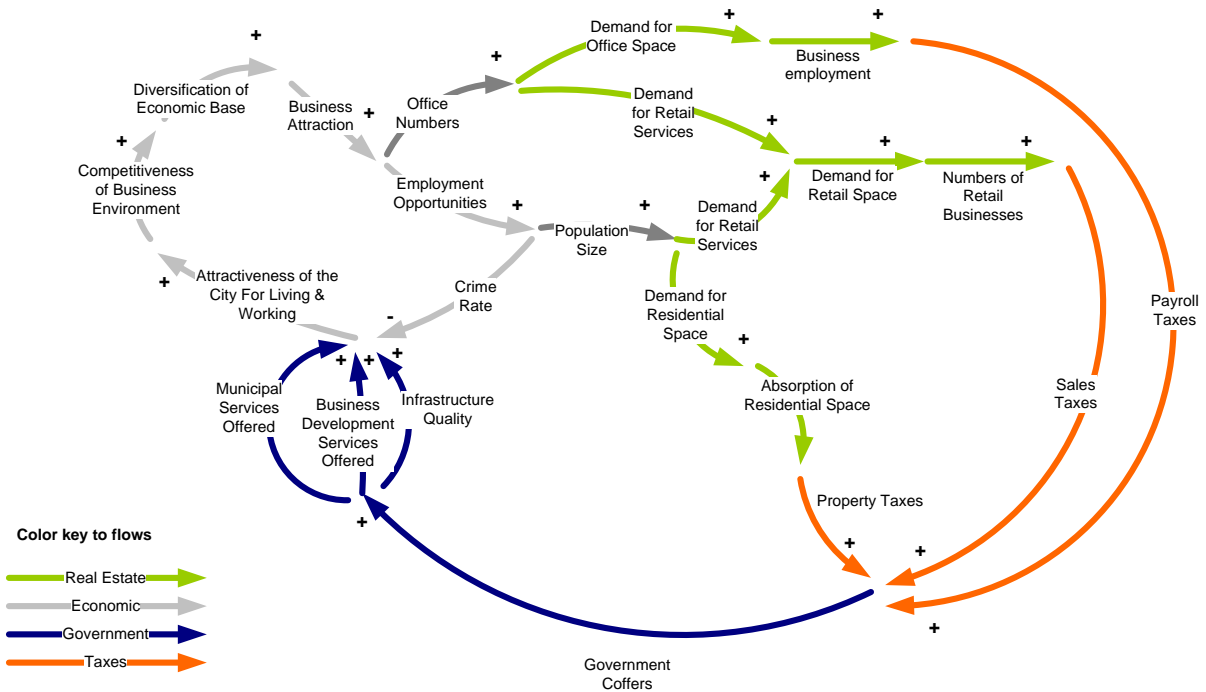
The development must be so efficiently integrated that it functions just like an extension of the city. Such a plan will ensure that individual new projects are part of a cohesive pattern of interrelated and mutually compatible uses. In addition, a number of strategically positioned anchor uses will have to be planned and/or developed before the ancillary uses infill the rest of the site.

With coordination, strategic public investment, and targeted land acquisition, the economic value of the entire area will be enhanced. This value will be manifested in higher-quality development, faster absorption rates, higher long-term property appreciation and performance, and greater synergy between different land uses.

CONTEXTUALLY INTEGRATED WITH THE BROADER SOCIO-ECONOMIC AND FINANCIAL CONTEXT

Our approach to real estate development is informed by the insight that cities are sustained by business competitiveness (typically a combination of good infrastructure, business-friendly political culture, educated workforce and attractive urban core). This competitiveness attracts businesses (see Figure 77) that in turn attract residents seeking economic opportunities. Retailers follow these people (as workers and residents) with shopping, restaurant and entertainment opportunities. The economic activities of these groups generate taxes for the city to support public amenities, such as parks and schools, which help to anchor residents to the city and to one another. Good developments enhance a city's competitiveness.

Figure 77: High-level conceptual model of integrated real estate development planning shows the linkages between real estate development and economic growth

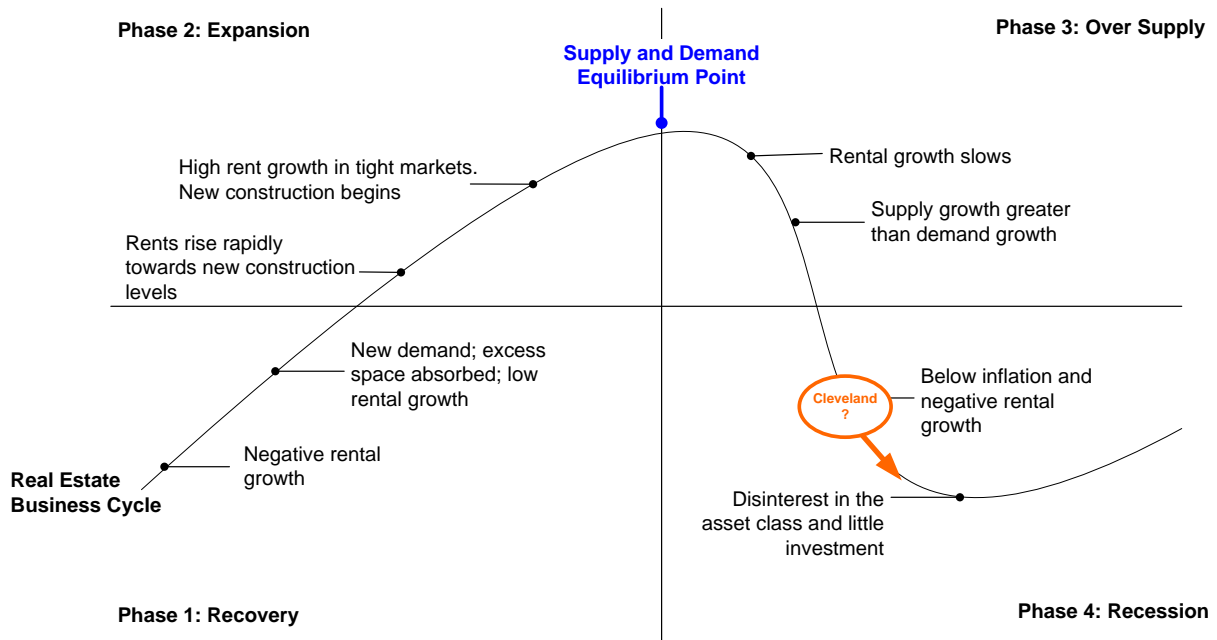


Under sustainable and flourishing developments, the linkages create a reinforcing system in which economic growth and a dynamic real estate market go hand in hand. For example, an increase in tax revenues (the orange line in Figure 77), would subsequently impact government investment into public infrastructure, business development and municipal services. These investments increase the attractiveness of a city for businesses. Businesses bring economic opportunity and a growing population that seeks residential, commercial, and retail space. The cycle continues when a growing economy, supported by an increasing population base contribute to rising property prices and increased consumption that bring the municipality higher tax revenues. Likewise, a negative feedback loop can result in a weakening real estate market until structural defects are remedied that allow for positive effects to assert themselves. Given the circular nature of these linkages, it is possible therefore that a successful large-scale real estate development can be a catalyst for improved market competitiveness as new firms enter the market and established firms and the government work to enhance the location’s attractiveness.

The reinforcing loop between real estate and economic growth are not without natural caps and checks. A very important one of these is “the real estate business cycle”. It is hence important to consider both the above loop and the real estate business cycle when planning a large scale development.

The wider context model of the real estate market focuses on linkages and influences of the economy, population and government on a particular development, while the real estate market’s supply and demand characteristics model (Figure 78) helps to understanding market timing and development potential at a given point in time.

Figure 78: The real estate business cycle helps to guide real estate planning decisions



Generally speaking, real estate as an industry works in a cyclical manner, with four primary quadrants (Figure 78). In the first phase, Recovery, the industry faces improving fundamentals, and the beginnings of demand growth. By the second phase, Expansion, demand is strong and growing. New development is justifiable based on rental rates and sales prices. Eventually, though, the industry enters Over-Supply, the third phase. Here the supply-demand fundamentals of the market are out of sync and too much supply exists for the existing demand. This period is typically characterized by slowing rental growth, high average prices, and units pouring onto market that were planned during the booming Expansion phase. As the Over-Supply quadrant transitions to Recession, the fourth phase, rental growth has essentially collapsed along with sales growth. New construction slows or even stops in some areas. This quadrant represents the closest that the real estate industry comes to a proverbial black hole, with immature developments losing money and mature developments cutting prices to maintain competitiveness and solvency.

Each of these phases represents a period of time that may last months or years, and during periods of transition from one quadrant to another, it may be difficult to establish precisely which of the two is dominant. Also, individual real estate asset classes (such as retail, residential, office, and industrial) will be traveling on the same curve, but at different speeds. The timing as well as the angle of ascent and descent may be different for each property type on the real estate business cycle, meaning that residential, for example, may be falling more quickly than industrial properties, even though each property asset class is in the Over-Supply quadrant.

We are cognizant of the probability that Cleveland is now in the fourth Quadrant, Recession, and may have some time (1-2 years) left before entering the Recovery phase.

A REFLECTION OF PUBLIC AND PRIVATE STAKEHOLDER NEEDS

Healthy, sustainable places are based on the synergism created by different groups of actors with different motivations for locating in that place. Understanding what attracts each group,

typically the residential, retail, office and tourist markets, helps the developer understand what the area in which he is operating must provide to maintain sustained demand. For this report, we assume that these groups (as shown in Figure 79 below) require that their core hygiene factors be met, and that the amenities offered at the site and building levels support the area’s locational strengths (such as water views and multiple transportation options on-site).

Figure 79: Typical demand drivers by industry show development concerns



As Figure 79 indicates, residents are primarily concerned with proximity to employment, locational amenities, the attractiveness of their surroundings, and their safety and security. Tourists favor similar attributes, but with an increased focus on the novelty of their experiences. Typically, tourists look for entertainment options and diversions that justify the time and expense of having traveled to a new location (this statement holds proportionally true for both local tourists and those who travel long distances).

Office users are concerned with their locational linkages to other support businesses, transportation networks and employees. They also care about the quality of the building in which they are located, in part for what it says about the firm’s values and in part for the practical services that the building offers (such as concierge services). Retailers tend to be driven by people, whether residential, tourist or commercial is mostly irrelevant except for determining the particular types of retailers that will locate within a given development. Often, though, retailers are derivatives within the real estate equation because they tend to follow people wherever they may be, adjusting their offerings for the income, accessibility and tastes of their clientele. Exceptions to this general pattern can occur if the development is unique and large enough in scale to draw foot traffic outside of the typical retail catchment area.

We assume that any development on the port must be cognizant of these factors and seek to build upon these drivers as much as is possible within the project’s time and budget constraints. Given the right mix, demand drivers will build on one another and ensure that a development is sustainable.

MARKET-DRIVEN, FOCUSED ON ABSORPTION AND SUSTAINABLE GROWTH

Successful real estate developments understand high-level demand drivers, but real estate products fundamentally must match demand. The end user dictates the success of a development, not the developer. In other words, the mentality of “build it and they will come” is extremely risky in the context of large-scale real estate developments. Strong markets do not necessarily justify a new development and likewise a weak market should not dismiss good development ideas. For large-scale real estate developments, understanding these trends is essential in keeping absorption levels at a profitable level.

Determining marketability and absorbability requires a structured market research focusing on the three P’s: Place, Product and Price. Understanding Place follows the most fundamental mantra of real estate: “Location, Location, Location.” Given that the Port site remains undeveloped but is located next to the Central Business District (CBD) and Lake Erie, the Place characteristic can likely be classified as quite good. Within the Product characteristic, we must evaluate the relative mix between property types (e.g., Office A or low-income housing) as demand characteristics (and hence potential absorption) differ vastly within products. Finally, understanding the pricing characteristic helps to determine the profitability and feasibility of the product selections, given what a region can (and is willing to) pay.

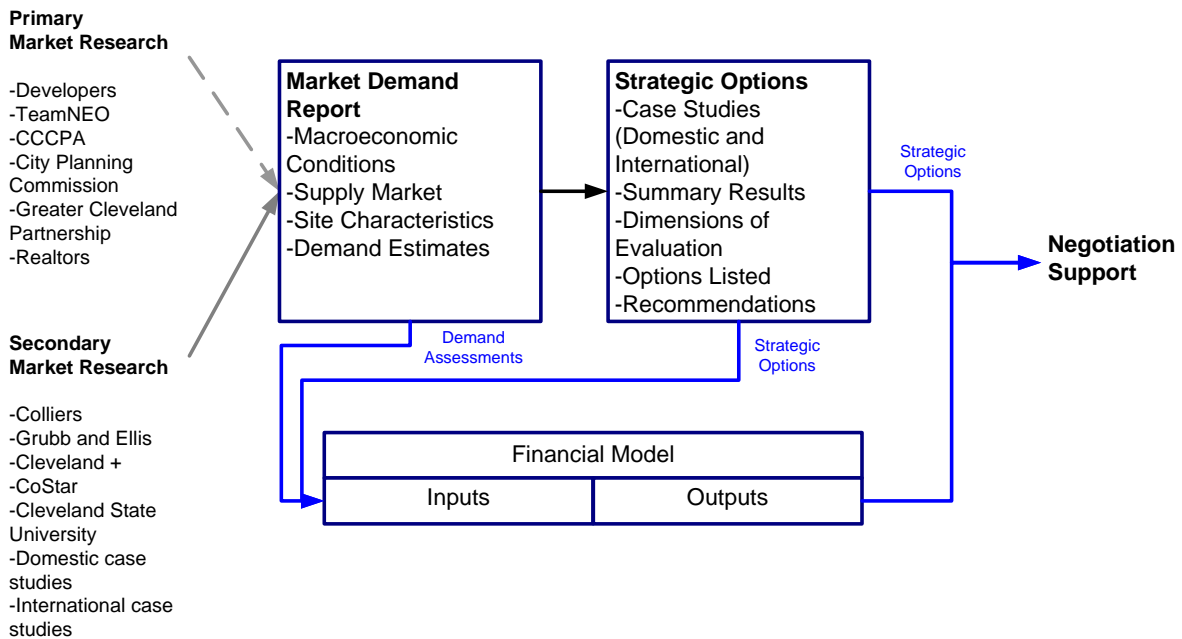
Understanding trends requires quantitative trend analysis and extensive stakeholder interviews with developers, potential residents, city planners, brokers, and real estate agencies.

A STRUCTURED ANALYTICAL PROCESS THAT PROVIDES FLEXIBILITY IN TERMS OF MIX, TIMING AND STRATEGIC OPTIONS EVALUATED

Our analysis of high-level linkages in the context of the real estate business cycle and each mix’s unique demand drivers is logic and data-driven. This structured approach provides a foundation for development options that will be then fine tuned with stakeholder perspectives and lessons learned from similar large-scale real estate developments. The result is a comprehensive review of current market conditions and a guide to future development potential on the waterfront site.

Our approach at a practical level involves collecting research from primary and secondary stakeholders, which can then be analyzed for current conditions and trends. These insights can then be paired with case studies of other large-scale real estate plans, domestically and internationally, to grasp what may be accomplished (also for the wider area and city) and to capture the lessons that can be learned from them and the options that may be available to the Port. Even though each development is unique, the process of moving from a portion of under-utilized land to a thriving development shares intrinsic similarities from place to place. Insights into the best and worst means of achieving success allow us to approach the idea of large-scale real estate development pragmatically, with an eye to realistic costs, timelines and product offerings. Concurrently with the analysis of the data and the formulation of strategic options, we also build demand and financial models that can help to provide quantitative support to each strategic option.

Figure 80: Output overview
Level 0: Cleveland Port Output Overview



From all of the data that we collect on current demographic, economic, real estate supply and demand, case studies, interviews with the city, developers, real estate agents and others, we have drafted this report for the Port. It specifies ranges of demand for property asset classes as determined from the trends and demand that the Port’s redevelopment ignites, as well as elaborate the strategic options for redevelopment options by real estate type on the site of the current Cleveland Port. The financial model, meanwhile, takes results from the demand model to support the site’s strategic options. All of this work can be used by the Port as it pursues negotiations with developers and others on moving forward with development planning on the site.

APPENDIX B: CASE STUDY DETAILS

B.1 VICTORIA & ALFRED WATERFRONT, CAPE TOWN, SOUTH AFRICA

B.1.1 Short Description

The Victoria & Alfred (V&A) Waterfront in Cape Town, South Africa, is a classic case of successful waterfront redevelopment, both from a commercial and a city regeneration point of view. Over an 18 year period (1989 – 2007), the 300 acre derelict docklands in the oldest sections of the city were transformed into a vibrant area comprising shops, restaurants, hotels, office space, a luxury residential area, various leisure facilities (an aquarium, cinemas, museums, etc.), and – characteristically – a working harbor. The V&A waterfront receives > 20 million visits annually.



B.1.2 Strategic Theme / Focus of the Case

The official mission of the V&A Waterfront project was “to make the historic harbor a very special place for all Capetonians and visitors.”

A central element of the V&A strategy was to retain some working harbor functions (tugs & pilot boats, fishing boats, light shipping traffic, ship repairs) in the area. This provided a vibrant backdrop for the new development. Water-related activities were encouraged in the area.

‘Authenticity’ was a second element. Old harbor buildings were converted to new uses, rather than being replaced.

A third element was to increase the amount of waterfront space. This was done by digging a new basin and a canal from the Waterfront to the city CBD. This increased waterfront space, created more waterfront views and helped connect the waterfront to the city.

B.1.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

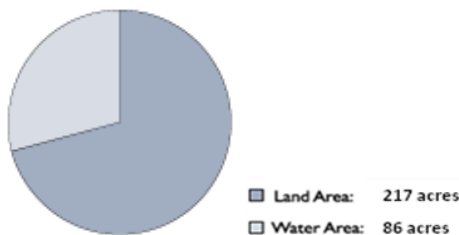
The docklands site was cut off from the city centre by a corridor of roads, railway lines and elevated freeways. This also effectively cut the city centre off from the waterfront. At city level, the planning motivation for the project was to re-establishment physical links between Cape Town and its waterfront (and old coastal heritage). A first priority was to install new connections between the city and the waterfront; this included a canal and a pedestrian crossover. 65% of V&A visitors are local Capetonians, showing the success in integrating the city to its waterfront.

The project initially had a negative impact on Cape Town’s CBD and other parts of the city, as business was drawn away. However after 2000, due to the success of the waterfront project new markets were attracted to CBD areas, leading to a large-scale CBD redevelopment. Empty office buildings in the city centre have been adapted for residential use, and drew people back to the CBD to live.

B.1.4 Functions and Land Uses

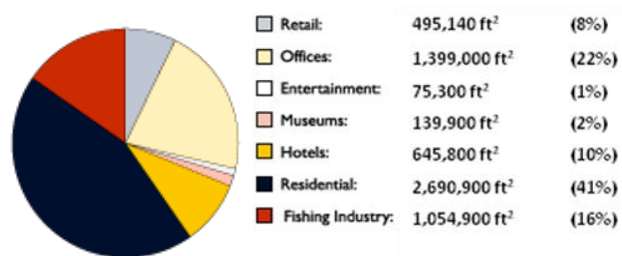
The V&A has > 400 retail outlets, > 70 places to eat and drink, > 320,000 ft² of commercial office space, a craft market and workshops, 7 hotels, > 500 residential apartments, and 9 leisure facilities.

Land Information



Total Site Area:
300 acres

Land Use Plan



Total Development Rights:
6,700,000 ft²

B.1.5 Infrastructure Components

The main infrastructure components consisted of new roads, paving, bridges and landscaping within the site, and importantly connecting infrastructure to open up public access to the area and to connect the area to the city. This included the new canal and a raised pedestrian crossing connecting the Waterfront to the city centre. Furthermore, parking spaces were created at the V&A Waterfront, within easy reach of the waterfront attractions.

B.1.6 Financial Information

Total investment in redeveloping the V&A Waterfront equals approximately \$800 million. This investment was almost entirely done on a self-financing basis: revenues generated in each phase of the development have covered investments including expenditures on infrastructure and public spaces in following stages. The project did not receive any direct governmental or municipal subsidies apart from an initial kick start. State-owned SA Transport Services, now Transnet, provided the necessary \$50m kick-start funding, and has invested about \$200 million in total. The

remaining funding has come from other sources and private investment in commercial and residential projects.

Annual turnover in the V&A Waterfront now exceeds \$230m, and the project has been highly profitable. Within 15 years the V&A became the biggest payer of property tax in the city.

V&A Waterfront has established the benchmark for prime (A-Grade) rentals in Cape Town. This is remarkable given that the land was previously derelict and vacant.

B.1.7 Development and Implementation Strategy

A public-owned SPV – V&A Waterfront Holdings Ltd. – was set up to undertake the development. V&A Waterfront Holdings was owned by public-owned Transnet (26%), and several Transnet pension funds (74%).

The entire development process - conceptualization, development, planning, coordination, financing - was undertaken through this company. The company owned all land, acted as landlord, managed the V&A Waterfront area, and provided a sustained program of entertainment and special events for visitors. V&A Waterfront Holding Ltd had three subsidiaries:

1. V&A Waterfront Properties (Pty) Ltd – owner of the land earmarked for investment within the Group.
2. V&A Waterfront Marina (Pty) Ltd – owner of the land to be developed and sold as residential units.
3. Victoria & Alfred Waterfront (Pty) Ltd – employer of the Executive and Staff who manage the Group (including development activities, property and marine management, leasing, asset management, marketing, security and estate services).

In 2006 the company was sold for approximately \$1 billion to an international consortium consisting of London & Regional (37% of shares), a UK private property group owned by Dubai World (37%), and a group of Black Economic Empowerment investors (26%).

For the project a “package of plans” approach was adopted, in which a series of plans was developed with an increasing level of detail extending from a development framework, precinct plans, site development plans, and finally to building plans. The project was divided in six phases:

Phase 1	1989-1990	<p>Pilot project: Pierhead Precinct (the initial public focus to demonstrate change, show intention, create momentum for next phases)</p> <ul style="list-style-type: none"> • Renovation of original Harbor Offices / old power station / warehouses / several Victorian buildings for new uses (restaurants, taverns, specialty shopping, a hotel, theatre, craft market, and the national Maritime Museum). • Floating jetties introduced. • New hard and soft landscaping complemented the quayside ambience.
Phase 2	1991-1993	<p>Completion: Victoria Wharf Retail and Entertainment Centre (creating momentum to make V&A most visited retail centre in Cape Town)</p> <ul style="list-style-type: none"> • 87,000 ft² centre with restaurants, entertainment, speciality shopping.

		<p>Attractive to domestic visitors and international tourists.</p> <ul style="list-style-type: none"> • Old prison converted to Graduate School of Business of local university, Waterfront City Lodge hotel opened, Caltex service station and regional HQ opened.
Phase 3	1994-1997	<p>Attraction Projects / Auto Sales (continue development momentum)</p> <ul style="list-style-type: none"> • BMW Pavilion, Auto Atlantic BMW dealership • Imax Theatre, Two Oceans Aquarium • Granger Bay Phase 1 shore protection works
Phase 4	1996-2000	<p>Extension Victoria Wharf Shopping Centre / new Hotel Projects (further expansion)</p> <ul style="list-style-type: none"> • 60,000 ft² expansion of shopping centre • 120-room 5-star Cape Grace Hotel on waterfront of newly flooded New Basin • 330-room 5-star Table Bay Hotel on Quay 6
Phase 5	1999-2004	<p>V&A Marina Luxury Residential Development (Sector 1) / Clocktower Precinct (mixed use) (introduce residential)</p> <ul style="list-style-type: none"> • V&A Marina Sector 1 comprised 273 up-market residential apartments • Clocktower Precinct – mixed use, integration of fishing industry activities with new uses such as retail, offices and public ferry terminal to Robben Island. Includes new corporate HQ, 1,000-bay parking garage, tourism centre, retail shops and restaurants, more offices and 8,200 ft² of fishing industry activities.
Phase 6	2004-2007	<p>Completion Projects</p> <ul style="list-style-type: none"> • V&A Marina Sector 2 residential development of 230 apartments • Kerzner International's luxury 150-key One & Only V&A Waterfront Hotel (and extension of V&A Hotel) • New HQ for BP • Further extension of Victoria Wharf Shopping Centre • 1,250-bay parking garage • Two office projects

B.1.8 Key Lessons

- Evaluate and develop each waterfront around its **unique location, character and local circumstances**. Convert old buildings / facilities to new uses to retain area character.
- Retain some harbor functions to keep a '**working harbor**' character (this adds vitality and buzz to the area).

- Waterfront space and waterfront views can be increased by digging new basins and canals.
- **Connecting the Waterfront to the city** (inter alia by creating public access and removing infrastructure barriers) is critical. Strategically position the development within wider trends / needs of the city.
- Avoid random growth and rather **concentrate interventions**:
- Pierhead Precinct was the initial (highly visible) project – the project “started small in the biggest possible way”. This created revenues and triggered market demand for follow-on phases.
- Several public functions (museums, aquarium, university, etc.) were moved to the area over time.
- **Multi-uses** of the area is critical – working harbor, shopping, entertaining, visiting, living...
- Establishing a **public-owned SPV as the development vehicle** is an interesting approach for managing and financing such developments. This gives project focus, allows internal financing, and allows subsequent sale of the company to exit.
- **Strong public leadership of the project sponsors** was critical to mobilize stakeholders and get the project going (most people said “*it cannot be done*”). The pilot Pierhead Precinct visibly demonstrated the seriousness of the public sector.
- **Steady vision, but flexible approach.** Critically important, the development always kept to its original vision, although a flexible approach to new opportunities and land rights was adopted.

B.2 HAFENCITY, HAMBURG, GERMANY

B.2.1 Short Description

HafenCity is Europe’s flagship port site redevelopment, encompassing 388 acres (of which 304 acres are land) at the north bank of the River Elbe in Hamburg, Germany. The former port area between the historic Speicherstadt warehouse district and the river is transformed into a new part of the city with a cosmopolitan mix of apartments, service businesses, culture, leisure, tourism, and retail.

With HafenCity the city centre will have direct access to the waterside again, after being cut off for more than a century by the Speicherstadt warehouses and port facilities along the river.



B.2.2 Strategic Theme / Focus of the Case

The HafenCity project is to be seen as an expansion of the Hamburg city centre (by about 40% by 2025). This means that a high degree of urbanity is to be achieved in which different uses are mixed. Extraordinary attention is paid to the quality of architecture and of public space.

The building density will be quite high (FAR of 2.5 to 3.0), with most buildings no higher than 6 – 7 stories and only some exceeding 10 stories. In this way a highly urban environment is created, while at the same time the skyline does not become dominated by the project. Rather the city's identity is reinforced: the goal is to stress and accentuate the views towards Hamburg's existing important and prominent buildings and features, while enhancing the outlook from the present-day city centre to HafenCity and the river.

The layout of the harbor's basins together with most of the original embankments and quay walls are retained, and many old warehouses and other dock-related buildings are integrated in the project. Even though the river is in direct connection with the sea and goes through tidal movements, HafenCity will not be surrounded by dykes; rather the ground level of the buildings and access streets are raised to 25 feet above sea level. Direct access to the water is however provided by promenades along the watersides and carefully designed water steps. All of this contributes to a typical maritime atmosphere.

Furthermore, strong efforts are made to incorporate sustainability within the project and save natural resources in the production of energy, e.g. through an eco friendly district heating system.

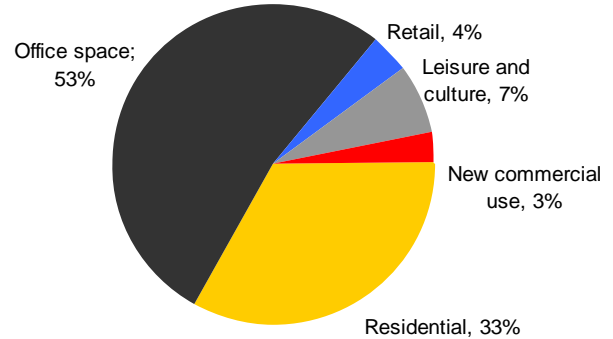
B.2.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

HafenCity is to 'update' Hamburg's identity as a maritime city and to become an energizing influence on Hamburg's economic, ecological, social and cultural development. The project

provides new possibilities for the city centre to accommodate retail, entertainment, leisure, culture and tourism. HafenCity is connected to the rest of the city by new infrastructure for road traffic, public transport, cyclists and pedestrians. The main connecting streets between the city centre and HafenCity will be renovated and the public spaces improved to make passage easier and more attractive.

B.2.4 Functions and Land Uses

In HafenCity about 5.500 residences (about 6.5 million ft²) will be built housing approximately 12,000 people. Office and commercial space will encompass 10.2 million ft², which can potentially accommodate more than 40,000 jobs.



Public uses in Hafencity include three major cultural facilities:

- Elbphilharmonie Concert Hall
- International Maritime Museum of Hamburg
- Science Centre.

In addition, the project will include the HCU HafenCity University and an elementary school. Along the waterfront, a cruise terminal and several large terraces are to be situated. In addition, a 130,000 ft² park area is planned.

B.2.5 Infrastructure Components

Site specific infrastructure includes new internal roads, high-capacity water, sewage and district heating infrastructure, and communication networks. Strategic connecting infrastructure is the new U4 underground line, with two new stations within the project area, to integrate HafenCity into the Hamburg underground railway network. Connecting road infrastructure links HafenCity to the existing road system in the city.

Because HafenCity is located between the river and the flood protection line of the city, special provisions have to be made to protect against flooding. The main access routes are elevated to ensure unrestricted access for fire and emergency services in the event of extreme storm tide. The buildings in HafenCity are raised a further 10 feet on mounds (with an additional advantage that they can be used for parking spaces).

B.2.6 Financial Information

Public investment on land preparation, infrastructure, public spaces, flood protection, and project management of Hafencity is \$ 1.8 billion. All construction is paid for by private investors, who in total will invest approximately \$ 7 to 7.7 billion.

90% of the land in the project area is city property. In 1997 this land was transferred to a newly created “Stadt und Hafen” (City and Harbor) Fund. The Fund then accessed finance from the municipal credit fund in Germany, on the same conditions normally applied to municipalities. This

money is used to finance most of the necessary public investments, and is to be paid back from the revenues that result from the sale of land.

The new cultural and educational facilities (Elbphilharmonie Concert Hall, International Maritime Museum of Hamburg, the Science Centre, HCU HafenCity University and the elementary school) are paid for directly by the City of Hamburg.

B.2.7 Development and Implementation Strategy

The HafenCity project spans 20 to 25 years in total and is implemented in stages. The City of Hamburg founded a SPV named 'HafenCity Hamburg GmbH' to carry out the project and act as trustee of the "Stadt und Hafen" Fund. The company is still a 100% daughter of the City and is supervised by the City of Hamburg chancellery and senate. The Chief Building Engineer of the City's Office for Urban Development has a strong say in the plans, due to the importance of the architectural and spatial quality. The City also has influence through the building permits it extends.

The Masterplan for the project was a combined result of an international competition process, a public planning debate and political decision-making. First, a broad consensus was built between key players on the objectives and measures involved. Then a competition process was organized between eight interdisciplinary consortia, that were selected from 174 bidders. The first step in the completion process was a design symposium which covered the main issues connected with the site. Thereafter, the design teams worked out their basic design concepts, which they presented to the wider public. The winning plan was finally approved in February 2000 after numerous revisions.

Individual pieces of land are at first only provisionally sold to private investors. Within 1 to 1,5 years after the (conditional) sale investors are obliged to make studies of site situation and organize an open competition between architects – of which some are suggested by the City of Hamburg. Through the building permit process the City and HafenCity Hamburg GmbH maintains influence on the quality of architecture as well as the timing at which space becomes available within the overall project. Private investors do not pay for the acquisition of the land until just prior to the start of construction, when the sale is made definitive. This arrangement significantly reduces the development risks for private investors while at the same time it prevents speculation and ensures high quality architecture.

A high degree of flexibility has been built in from the outset. Planning can adapt to changing circumstances, but the basic structure and layout is fixed. The area is divided into eight main 'Quarters'. Each Quarter has its own identity and is able to function independently from later stages. Implementation progresses from west to east and from north to south. This ensures good access to completed Quarters from the city centre, and avoids construction work being scattered all over the site.

Several focal points of residential construction are formed with at least 800 to 1,000 dwellings ('Dalmannkai', 'Am Lohsepark' and 'Baakenhafen') to allow the Quarters to be self-contained. The waterside is made accessible and attractive as soon as possible to make the area more lively and vibrant.

To position HafenCity as a prominent and important international venture, development of the centre of the area (the 'Überseequartier'), which encompasses exclusive office locations and more than 1.1 million ft² of upscale retail and leisure, was started at the very beginning of the

project. Construction of the new U4 underground line started in 2007 and is expected to be completed in 2012.

The main phasing of implementation for the development is outlined below:

“Am Santorkai”	2004 – 2005 (completed)	409,000 ft ² Gross Floor Area 5 residential, 3 office buildings (initial occupation late 2004)
“Dalmannkai”	2005 – 2009 (completed)	1.2 m ft ² GFA 650 apartments, services, hospitality outlets, adjacent to dock for historic sailing vessels, marina, pontoon bridges Building of the Elbphilharmonie Concert Hall at the tip of the quay has just commenced and is expected to finish in 2012
“Strandkai”	2007 – 2012	2 m ft ² GFA Service-sector companies, hospitality outlets, leisure infrastructure and residential housing. Dense overall structure, 6 to 7 floors with towers rising as high as 180 ft
“Am Sandtorpark – Grasbrook”	2005 – 2010	667,000 ft ² GFA Service space, residential space and an elementary school. Richly-varied landscape of green areas and watercourses.
“Überseequartier”	2007 – 2012	2,96 m ft ² GFA Culture, leisure, cruise ship terminal, retail, hospitality, hotels, services, residential housing, Science Center with Aquarium and Science Theatre.
“Brooktorkai”	2007 – 2009	1.1 m ft ² GFA Office space and a four-star hotel. Solitary, 7-9 storey buildings.
“Elbtorquartier”	2007 – 2012	1.2 m ft ² GFA New Knowledge quarter. Leisure, culture, service-sector outlets, retail, residential housing, International Maritime Museum of Hamburg (opened in 2008) and HafenCity University, accommodating 1,500 student and 180 staff.
“Am Lohsepark”	2009 – assignment of investors 2012/2013 – first buildings completed 2018 – full completion	129,000 ft ² green area, with residential buildings on both sides.
“Oberhafen”	2020 – construction to start	861,000 ft ² GFA Modern-style buildings for commercial use, mainly service-sector companies, and private accommodation.

“Baakenhafen”	2010 – construction to start	1.8 m ft ² GFA Zoned for residential development, parks and promenades.
“Elbbrückenzenrum”	Development to proceed as per market demand	High-rise development featuring 16- to 26-storey buildings, with office space for service-sector businesses and pockets of residential development.

B.2.8 Key Lessons

- Using a **publically-owned company as the development vehicle** is an interesting approach. Inter alia it enables **careful phasing of land release** for maximum market leverage
- Take a **long term perspective** (20 to 25 years) and incorporate as much flexibility into the project as possible, e.g. by creating quarters with their own identity that can function independently of other quarters.
- Use **competitive forces** in such a way that they work to enhance the quality of the overall spatial design and architecture – by requiring competitive design for developments within the overall development concept.
- **Integrate the project within the existing city** in multiple ways: realize connecting infrastructure, create attractive and easy passages, and reinforce the identity of the existing city and buildings through the spatial and architectural design.
- **Develop the most prominent part of the project immediately** at the start to position the project as important and exclusive and signal seriousness of the development.
- Incorporate **cultural elements** to highlight the project and to make the area attractive and vibrant.
- Differentiate the development by incorporating sustainability, high quality design and architecture, and high quality public space

B.3 “KOP VAN ZUID” (HEAD OF THE SOUTH), ROTTERDAM, THE NETHERLANDS

B.3.1 Short Description

The Kop van Zuid area covers 310 acres and is situated on the south bank of the river Maas, that divides the city of Rotterdam. Over the past 19 years, the Kop van Zuid successfully changed from a desolated industrial wasteland, into an attractive and lively area that combines residential, commercial (hotels, shops, conference facilities, cruise ship terminal) and entertainment (shops, restaurants, galleries) uses. The Erasmus bridge - part of the project – has become a key landmark of the city.

As a result of a shift of port activities in western direction toward the sea in the 1960s and 1970s the ‘Head of the South’ (Kop van Zuid), across the river from the city centre, was under-used. At the same time Rotterdam sought to broaden its economic base to become less dependent on the port in the 80s, as a response to the recession at the end of 1970s and the beginning of 1980s, which hit the city hard. Along with the ambition to diversify the city’s economy came the ambition to make Rotterdam an attractive location for ‘knowledge industries’ and for highly educated

'knowledge workers'. At the start of 90s, the derelict Kop van Zuid was redeveloped with this objective in mind.



B.3.2 Strategic Theme and focus of the Case

The official mission for the Kop van Zuid area was “to develop it as an attractive area, a place worth visiting, worth living in, worth investing in”. From the start the project was aimed to change Rotterdam as a whole, not just to transform an abandoned port area. The River Maas had always been seen as a barrier, and the south bank beyond it a place of little interest. Furthermore, in many parts of the south bank high unemployment and social exclusion needed to be tackled. At the same time Rotterdam needed a larger city centre, and areas with the quality and excitement to attract the types of people who drive the ‘knowledge economy’, if the city were to prosper and grow. Hence the Kop van Zuid project served multiple objectives at the same time: the creation of an undivided city with its centre on both banks of the river Maas, while providing an important stimulus for the relatively deprived areas on the south bank.

For these objectives to be achieved it was key to change the image of the city to outsiders (particularly business investors and enterprising people) but also to change the image of a large part of the city to existing residents of Rotterdam. Hence much emphasis was put on high quality architecture and public space. High quality of the public realm, helps to attract people with higher incomes to live in the area, thus helping to rebalance the demographic profile. The Erasmus bridge connecting the north and south bank is an elegant and spectacular design. Kop van Zuid moreover has a number of stunning buildings, many of which were designed by leading architects such as Renzo Piano, Norman Foster and Rem Koolhaas. The waterside has been opened up to people on foot, there is good lighting, a minimum of street clutter, and imaginative use of shared surfaces, with ample street parking in most residential areas combined with wide tree-lined pavements. The streets are kept scrupulously clean.

Another important element was the revival of some existing buildings. The old office and liner terminal of the Holland America Line, which has considerable historical and architectural significance, have been transformed into a hotel and restaurant. Some of the old warehouses now serve as student accommodation, while others house a supermarket and restaurants featuring food from around the world. Public art in the district is used imaginatively to interpret the area’s history.

B.3.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

The Kop van Zuid redevelopment aimed to bring the city halves on the north and south bank closer together, physically but also in people's mindsets. At the same time the project was part of the city's ambitions to broaden its economic base, while also providing a boost to the poorer areas on the south bank. Hence from the outset the objectives stretched beyond just the project area, but to the development of the city and the surrounding areas.

This was achieved on a number of levels. First of all by the construction of new, connecting infrastructure. A new bridge crossing the Maas River was built (the Erasmus bridge), and one crossing Rijnhaven. A new underground metro stop was created, and the city tram system was extended over through the area, with new stops. A viaduct, and new connecting and internal road infrastructure was built.

Explicit attention was paid moreover to spreading the benefits of the project, through the so-called Mutual Benefits program. This program acted as a broker, or employment agency, matching local job-seekers to employment opportunities in (the construction of) Kop van Zuid, funded projects to restructure and upgrade shopping streets and public facilities in the surrounding neighborhoods, and acted as promoted new businesses and new business ideas. Furthermore, the new schools in the Kop van Zuid area give young inhabitants in the neighboring districts the chance to improve their skills and benefit from better facilities. They also create a common interest for parents to connect with each other.

The success of the Kop van Zuid project has brought about the redevelopment of bordering districts. In 2007 the "Parkstad" project commenced in response to pressure from housing associations and private developers. The project seeks to redevelop the area in the vicinity of Kop van Zuid, characterized by unpopular social housing blocks of flats and low grade private housing, and create 1,500 new dwellings mostly for middle and higher income groups.

B.3.4 Functions and Land Uses

Key Figures of Kop van Zuid are: an area of 310 acres, 5,300 new dwellings, 4,305,600 ft² office space, 376,740 ft² business / working space, 322,920 ft² educational facilities and 322,920 ft² recreational and other facilities. Stated in the Covenant between the municipality of Rotterdam and the Dutch State, Rotterdam committed to realize the following with respect to the Kop van Zuid:

- To build high quality office and business space, which were also oriented on the international market;
- To build 4,500 houses of which at least 50% fall within the scope of not- or barely subsidized sector;
- To create well functioning high quality cultural and tourist facilities, especially in relation with the waterfront;
- Connecting the area by building the Erasmus bridge including tramlines and further connection of the area to the south through the "Laan op Zuid" formally known as the Emplacementweg and the "Varkenoordse Viaduct" - including the construction of a metro station near to Wilhelminapier;

- A public transport connection using the Erasmus bridge and the connection of the Wilhelminapier and other parts of the project area by use of public transport;
- A bridge over the Rijnhaven;
- All embedded in a high quality urban public space and urban vegetation.

Functionally the Kop van Zuid project is divided in 7 different zones.

1. Wilhelmina Pier, having 1,969,811 ft² of offices, 1.200 units in intensive housing (230 ft high towers), Corporate skyscrapers (PTT – Port Building), an Hotel (Former headquarter of the Holland- America Line) and the Luxor Theatre.
2. Zuidkade, having 1,593,072 ft² of offices, housing for elderly, communal facilities, courtyards and the Ichthus Hogeschool.
3. Entrepot Area, having rent and for sale housing, the Festival Market, a marina, the commercial mall and urban facilities.
4. Landtong, family Houses, luxury apartments, urban facilities and a sports centre.
5. Stadstuinen, an area designed with children in mind, commercial facilities, an eco corner, a school and social / medical facilities.
6. Vuurplaat, having the main road that connects Kop van Zuid with the surroundings, a super market, an eco corner, a school and commercial facilities.
7. Parkzicht, having 1970's – 1980's social housing, commercial facilities and a school.

Public facilities strategically located in the area include:

- Regional court
- Tax offices
- Rotterdam Port Authority Head Offices
- University student housing
- Schools
- Cruise terminal
- Theatre

B.3.5 Infrastructure Components

The Erasmus Bridge, the new Metro station in Kop van Zuid and extension of the tram system have linked the north and south sides of the city much more closely. By putting the main railway lines, crossing the area, underground, the pedestrian links with the adjoining residential areas have been greatly improved, and new suburban stations have helped improve local accessibility.

There is also a popular system of water taxis which cross the river and link up with various visitor attractions.

B.3.6 Financial Information

The total investment on the basis of overall land and building costs is about \$3 billion, including the main infrastructure. The redevelopment of the area of such big-scale project could not be done by municipality alone. Broadly speaking, in the development process of the Kop van Zuid the Rotterdam municipality provided collective facilities, such as the construction of infrastructure, while various private parties take care of building up the plan area. Furthermore, the national government through the Ministry of Housing, funded the New bridge (later given the name Erasmus Bridge), Spatial Planning and Environment (VROM) and a part of the infrastructure in the project. The City Development Corporation and Rotterdam's Transport Company also had substantial capital that they could invest as they are able to borrow against the prospects of future income. Furthermore, the Rotterdam City Council, through its subsidiary the Port Authority, owned most of the land.

The successful development of Kop van Zuid will generate substantial extra revenues from property tax for the City Council, which will make it a good investment for the city, in addition to the money generated by rising property values when disposals are made.

B.3.7 Development and Implementation Strategy

A project organization was set up – the Kop van Zuid Project Organization – consisting of RCDC (officially responsible for the project), several municipal departments (the Department of Urban Planning and Housing, the Rotterdam City Development Corporation, the Rotterdam Department of Public Works, the Local Authority Department, the Rotterdam Transportation Company and the Rotterdam Port Authorities), TPD, Rotterdam Municipal Port Management, and neighborhood organizations. Each of the municipal departments is represented by one project coordinator in the project organization. The project manager, who has direct contact with the directors of the municipal organizations involved and the local political bodies, has been entrusted with the overall responsibility. A Steering Committee, consisting of senior officers and directors of different municipal departments, supervised the project.

Thanks to the organization model, the official decision lines are kept shorter and, in spite of the large number of participants, the development is running very successfully. To guarantee the quality of the Kop van Zuid, an external Quality Team of architectural and urban experts was established.

With the enthusiasm and leadership of key persons in TPD, City Council and later RCDC, ability to enlist all actors was essential for all further actions – strategic networks with market parties, and national and local actors. With that came political support; recognition of problems and opportunities in region and of the Kop van Zuid particularly

Different from other projects was the fact that the Government made sure most part of the buildings would be occupied, before starting with the development of infrastructure, such as motorways, water pipelines, sewerage, electricity net etc. In this respect, key element of the implementation strategy was the decision to move the municipal port authority's customs, legal and tax departments to the new area. Later the decision to build some public colleges in the area and the relocation of the Luxor Theatre added to the public commitment. The National Photo and Film Institute was relocated from Amsterdam to Rotterdam.

While the master plan showed how the area would be redeveloped, it was recognized that the strategy also depended on making sure that the development changed the city's whole image and on convincing the private sector to invest in the area. This meant creating eye-catching, and highly visible, structures early on in the development, and committing sufficient public resources to transport and other infrastructure, public facilities and the environment to attract in private investors.

B.3.8 Phasing

The project was divided in several phases. First phase enhanced the building of the tax authorities, the magistral of justice and several offices. The main strategy behind was to ensure that the offices build would be occupied. Even in case that the demand of office space would be insufficient, the Government of Rotterdam would partly move to Kop van Zuid. Together with above mentioned Government buildings, Rotterdam started early with the creation of the Erasmus bridge. This bridge was the key improvement of the area and should attract companies to move to de Kop van Zuid. The masterplan was designed to be reasonably flexible which allowed the mix of housing and commercial space to be varied when the demand for housing in the area proved to be so strong.

Phasing of Kop van Zuid projects in the area over the past 19 years is outlined below.

Phase 1	1990-1995	<p>Location Wilhelminapier: 1990 – 1993: Renovation Hotel New York, 8,000 ft² facilities, 5,400 ft² congress hall, 72 hotel rooms. 1993 – 1995: Maritime Simulation Rotterdam (MSR), 39,000 ft² centre for training and research.</p> <p>Location Zuidkade: 1994 – April 1997: Wilhelminahof, 1,080,000 ft² office space.</p> <p>Location Landtong: 1992 – 1997: Statendam, Maasdam, 625 apartments, 13,000 ft² recreation space.</p> <p>Location Entrepôtgebied: 1994 – 1997: Entrepot gebouw, 414 apartments, 25,000 ft² office space, 108,000 ft² retail, 5,700 ft² businesses.</p> <p>Location Peperklip: 1995: Renovation Peperklip, social residential building</p> <p>Main Infrastructure: 1993 – September 1996: Erasmus bridge (2,800 feet), connection between centre of Rotterdam to the south area. 1993 – September 1996: Metro station Wilhelminaplein, creation of an extra metro stop in the Kop van Zuid area. 1993 – September 1996: Varkenoordse viaduct.</p>
Phase 2	1996-2000	<p>Location Wilhelminapier: 1995 – July 1999: Renovation grain silo Leidsche Veen (State monument), 281 apartments.</p>

		<p>1997 – September 1997: Renovation Cruise terminal, 43,000 ft² cruise terminal, 6,500 ft² restaurant space.</p> <p>September 1998 – July 2000: World Port Center, 430,000 ft² office space, 3,200 ft² restaurant space.</p> <p>1998 – September 2000: Toren op Zuid, 240,000 ft² office space, 2,200 ft² retail and restaurant space.</p> <p>September 1998 – April 2001, Luxor Theater.</p> <p>Location Zuidkade:</p> <p>1998 – 2000: Hogeschool Inholland, University 220,000 ft².</p> <p>2000-2002: De Rede, 107 apartments and 11,000 m² plinth function.</p> <p>2000 – 2003: Sociale Verzekerings Bank, 140,000 ft² office space, users are Sociale Verzekerings Bank and Hogeschool Inholland.</p> <p>Location Willemspoorttunnel:</p> <p>2000 – 2002: Brugweg Oostzijde Noordereiland, 213 apartments, moving 35,000 ft² offices.</p> <p>Location Stadstuinen:</p> <p>1994 – 1997: Vuurplaat, 171 apartments.</p> <p>Location Parkstad:</p> <p>1995 – 1996: Albeda College, Prinses Margriet School, EHZ, 270,000 ft² high school space.</p>
<p>Phase 3 Location Wilhelminapier</p>	<p>2001-</p>	<p>Location Wilhelminapier:</p> <p>March 2003 – December 2005: Montevideo, 192 apartments, 65,000 ft² office space, 8,600 ft² fitness room, 22,000 ft² facilities.</p> <p>2004 – 2005: Pedestrian tunnel between Prinsendam and Wilhelminahof.</p> <p>2006 – 2007: Renovation of former H.A.L. building renamed Las Palmas, 108,000 ft² office space, 86,000 ft² cultural facilities, 5,400 ft² business facilities.</p> <p>May 2010 – : New Orleans, 238 apartments, movie theater.</p> <p>2011 – : Pakhuismeesteren, Renovation former silo, 24 apartments, 65,000 ft² business space.</p> <p>2011 – : De Rotterdam, 1,720,000 ft², 4 star Hotel, 265 room, 750,000 ft² office space, 27,000 ft² retail and leisure, 225 apartments.</p> <p>2012 – : Baltimore, 540,000 ft² office space.</p> <p>2012 – : Chicago, Hotel and congress hall.</p> <p>2012 – : San Francisco, Boston, Philadelphia and Havana, apartment buildings.</p> <p>Location Zuidkade:</p> <p>2002 – 2005: De Compagnie, 182 apartments and 15,000 ft²</p>

		<p>business space.</p> <p>2005 – 2008: Laan op Zuid, 280,000 ft² office space, users are UWV, GAK, GUO, Cadans and RGD.</p> <p>November 2005 – : Cité, 350,000 ft² of which 498 apartments, 4,700 ft² facilities, 6,000 ft² workspace, 10,000 ft² business facilities.</p> <p>2006 – : Ichtushof, Three buildings.</p> <p>2006 – 2008: Hogeschool Inholland, Extension University space, 200,000 m².</p> <p>March 2007 – 2009: Maastoren, 480,000 ft² office space and small restaurants.</p> <p>2008 – : Vancouver, 120,000 ft² office space and business area.</p> <p>Location Entrepôtgebied:</p> <p>2007 – 2008: Hotel Pincoffs, Renovation former harbor office.</p> <p>Location Willemspoorttunnel:</p> <p>2009 – : Spoortunnellocatie Zuid.</p> <p>Brugweg Westzijde Noordereiland, apartments on top of the railway bridge.</p>
--	--	---

B.3.9 Key Lessons learned

- In the time Kop van Zuid was developed, a period of economical prosperity of 15 years followed, resulting in a rising demand for high quality buildings and state of the art housing.
- Establishing RCDC and project organization was essential for the realization of Kop van Zuid.
- Different from other projects was the fact that the government made sure the buildings would be occupied for most part, before starting with the development of infrastructure, such as motorways, water pipelines, sewerage, electricity grid, etc. For this purpose some of the municipal departments, like the Port Management moved their offices to the area.
- Furthermore, the new ‘network model’ of working was essential in achieving positive social change in municipal departments. That directly influenced collaboration with market parties and community. The City council and key people triggered the process in new way of urban governance – trying to steer and influence the development of the city as whole.
- The Kop van Zuid succeeded to attract companies and cultural institutions to the area.

B.4 ABANDOIBARRA, BILBAO, SPAIN

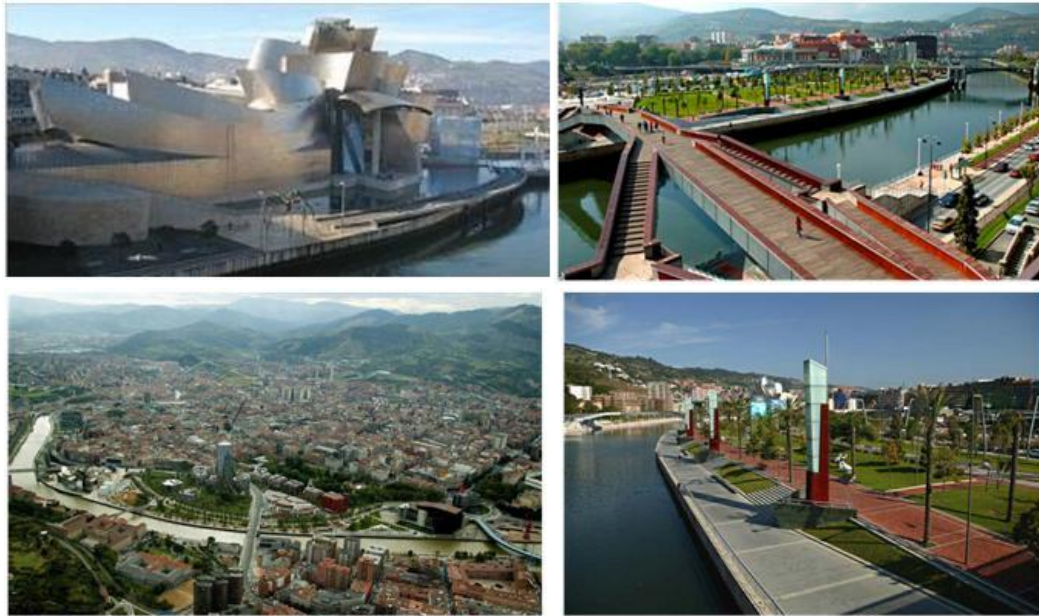
B.4.1 Short Description

Bilbao (also Bilbo in Basque) is the largest city in the Basque Country in northern Spain and the capital of the province of Biscay (Basque: Bizkaia). The city has 354,145 inhabitants (2006) and is the most industrially active part of Greater Bilbao, the zone in which almost half of the Basque Country's population lives. Greater Bilbao's 950,155 inhabitants are spread along the length of the Nervión River, whose banks are home also to numerous businesses and factories, which during the industrial revolution brought heightened prosperity to the region. The urban area is enclosed by two small mountain ranges called Pagasarri (to the south) and Artxanda (to the north); this gives the city its nickname, "the hole".

Ports along the river provided the basis for the development of Bilbao as a city until the arrival of the international recession, which had serious knock-on effects, particularly in the Basque Country in the early 1980's: heavy industry reached a crisis point; the steel and shipbuilding companies, which had sustained the economy of Bizkaia, had been dealt a mortal blow. In this context, the problem of obsolescent industrial concerns was seen as an opportunity for the future. The areas freed by the closing down of industrial, railway and port activities were flat and waterfront sites: this was a chance to give metropolitan Bilbao a new urban structure centered on the river, linking municipalities and providing a physical backdrop for the setting up of the new economy on which the city would depend for its future.



A process of transformation was started in the late 1980's with the ultimate aim of renewing the economic base of the region. There was a widespread political and social consensus as to the need 'to do something' to find a different future. It is an 'eventless' process and therefore has no completion date. Abandoibarra, a 86.5 acre waterfront area to the north-west of Bilbao, is the most emblematic project taken on within the framework of the regeneration of Bilbao, not only due to its ability to transform an industrial area, but as an urban revolution. This area was the location at various times through the years for the Euskalduna shipyard (now the Euskalduna Conference and Music Hall) and the RENFE (National Railway Company) Container Depot, and was long cut off from the rest of the town by a railway line. But it is now about to become the new centre of Bilbao. In accordance with the Master Plan drawn up by the architect César Pelli (who was also responsible for Battery Park in New York), here is room for leisure, business, culture, green spaces, housing and an expanse of water which no longer constitutes a barrier, but has rather been transformed into an axis stretching across the city.



B.4.2 Strategic Theme / Focus of the Case

At the end of the 1980s, Bilbao Metr6poli-30 was formed, a partnership between public and private sector shareholders in the Bilbao Metropolitan area. Bilbao Metr6poli-30 could be best described as a think-tank, lobby organization and catalyst for investment. One of its objectives is to strengthen the interaction between public sector plans and interventions and private sector interests. Other tasks include the local and international promotion of Bilbao's new image as a post-industrial city and the funding of research into the metropolitan area. In its founding documents Bilbao Metr6poli-30 drafted a highly general strategic plan in which four fields of action were identified:

- Formation of a knowledge-based high-tech sector;
- Inner-city urban renewal; especially revitalization of the Old Quarter;
- Environmental intervention: river cleaning, industrial land recycling;
- Strengthening of cultural identity through culture-led regeneration.

The regeneration of Bilbao has taken place along these lines. The redevelopment of the Abandoibarra area has been shaped by the ambition to put Bilbao on the map as an important cultural centre, with flagship projects of extraordinary landscape and architectural design, including:

- The Guggenheim Bilbao Museum (designed by Frank Gehry);
- The Euskalduna Congress & Concert Centre (designed by Frederico Soriano);
- The Torre Iberdrola (designed C6sar Pelli);
- The Duesto Library (designed by Rafael Moneo);

- An university auditorium (designed by Alvaro Siza);
- A new pedestrian walkway crossing the river (designed by Santiago Calatrava);
- A new metro system (designed by Norman Foster).

B.4.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

Besides Abandoibarra several other areas have been redeveloped in the context of Bilbao's revitalization strategy:

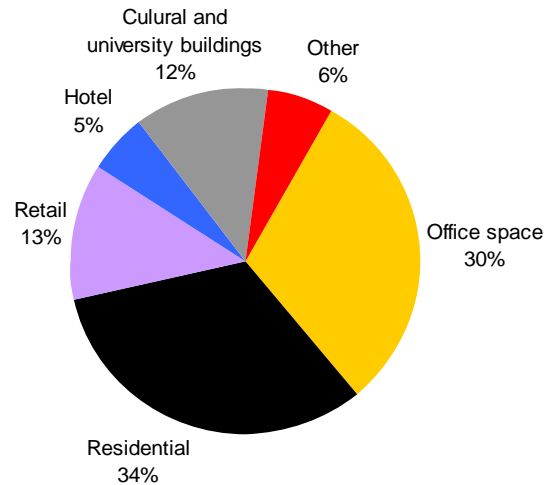
- Ametzola: 27 acre, formerly the location of three goods railway stations, now a residential area with a 387,500 ft² park.
- Southern Connection: a project to restructure the complicated rail system which formerly passed through the city centre. Five new stations have already been built.
- Bilbao La Vieja, an area located in the old town. Some of the estimated surpluses arising from the sale of land in Abandoibarra are invested here.
- Urban-Galindo (Barakaldo). Barakaldo is the second largest municipality in Bizkaia and the fourth in the Basque Country in terms of population. It stands at the geographical centre of metropolitan Bilbao. An ambitious urban plan is underway on this site with the aim of integrating Barakaldo and recovering the waterfront for the use of local people.

Bilbao's revitalization approach furthermore consists of the following elements:

- An environmental clean-up: decontamination of soil, and a new water sanitation system to sanitize polluted water from industrial uses and household sewage;
- Economic restructuring: a business development agency (SPRI – Sociedad para la Promoción y Reconversión Industrial) was founded already in 1981 and has developed several Technology Parks in the Bizkaia province.
- Social programmes: Two agencies – Surbisa and Lan Ekintza – were created to tackle social problems resulting from the urban crisis and structural change. Surbisa was set up as a neighbourhood renewal agency. Lan Ekintza was set up in 1998 to link fragile parts of the labour force with job opportunities.

B.4.4 Functions and Land Uses

About 2,152,780 ft² of the 3,767,365 ft² Abandoibarra area (almost 60%) will consist of park area. In the building area, about 791,147 ft² of office space will be realized, 844,966 ft² will be residential (approx. 800 housing units), 333,681 ft² of retail, 139,931 ft² of hotel space, 322,917 ft² cultural and university buildings, and 161,459 ft² for other uses. The distribution is as follows:



B.4.5 Infrastructure Components

The most important investment (approx. \$1.2 billion) in new local public transport was the new metro system with stations designed by the architect Norman Foster. The first metro line, running from the city centre along the Right Bank, was inaugurated in 1995; a second line covering the Left Bank opened a few years later. In addition, the two national railway companies RENFE and FEVE, which operate commuter train services in the metropolitan area, modernized their system, and repositioned the a railway track that cut off the Abandoiparra area from the rest the city (investment of \$100m). A new addition to the rail-based public transport system is the tram line which connects Bilbao's central areas and runs along the revitalized waterfront (investment of about \$24m). It was opened in 2002 and is run by the Basque transport consortium EuskoTren. The bus system was also modernized.

B.4.6 Financial Information

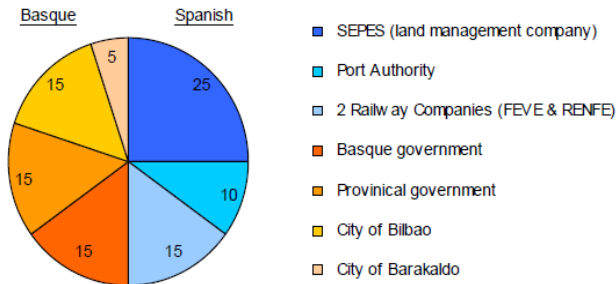
Until now the Special Purpose Vehicle that is responsible for the revitalization of Bilbao (BILBAO Ría 2000) has been able to finance itself. The governments and public parties that are involved have brought in their land for free, and the revenues from the sale of land have so far been sufficient to cover the expenses. However, since this was not clear from the outset, BILBAO Ría 2000 did receive subsidies of about \$30 million from European Structural Funds. Expenses for the preparation and redevelopment of the Abandoibarra area amount to about \$120 million. The county level administration paid for the investments needed for the Guggenheim Bilbao Museum (\$180m) and the Euskaldun Congress & Concert Centre (\$90m). The other buildings in the Abandoibarra area require an investment of about \$500 million in total.

B.4.7 Development and Implementation Strategy

In 1987 the municipality of Bilbao drew up its first General Urban Plan, which proposed that the major opportunities for development in Bilbao were to be found at Abandoibarra and Ametzola, on land belonging to companies dependent on the central administration. The General Committee of what was the Ministry of Transport and Public Works, which was the co-ordinating body for work to be carried out, arranged the creation of "BILBAO Ría 2000" in which 50% stakes were held by both parties, for the regeneration of metropolitan Bilbao.

BILBAO Ría 2000 was created on 19 November 1992 with the intention of recovering former industrial space around the city. It is a non-profit making entity, the product of a cooperation commitment on the part of all public authorities in a common task to transform the metropolitan area of Bilbao. BILBAO Ría 2000 coordinates and executes projects in relation to town planning, transportation and the environment. These are carried out with a global approach focusing on the urban directives drawn up by the planning authorities.

It is owned in equal parts by the central State administration through public companies SEPES (a public land management company), the Bilbao Port Authority, the rail companies ADIF and Feve - and Basque administration (Basque Government, Provincial Council of Bizkaia, and Bilbao and Barakaldo Town Halls).



Active commitment of all bodies involved in this project has been a key feature from the outset, and has allowed many major projects to be carried forward. Hence BILBAO Ría 2000 has considerable planning powers regarding priorities for intervention, disposal of land and other property, building characteristics and the management of public funds for redevelopment.

Development work on Abandoibarra actually started in 1998. However, the first real phase was initiated by BILBAO Ría 2000 last year, running until the year 2002. This task involved the demolition and reconstruction of the Ribera quayside, development work on Avenida Abandoibarra and the Ribera Park and construction of the pedestrian walkway connecting Abandoibarra to the right bank of the river.

The second phase, between 2002 and 2004, involves an extension to the Doña Casilda Park and development work on Plaza de Euskadi and the creation of a park, La Campa, next to the 541 Torre Iberdrola.

During this period, Abandoibarra will slowly take shape following the construction of several additional features: two office blocks (nine floors, with a total surface area of 215,278 ft², and five housing blocks providing 800 housing units. The dynamic nature of the area, since one of the objectives in the plans for Abandoibarra is to ensure 24 hours vitality, will be completed with the Zubiarte shopping and leisure facility, designed by the United States architect Robert Stern; the five-star Sheraton hotel, which will be located next to the Euskalduna Conference Hall and built by a Mexican architect, Ricardo Legorreta; the University of Deusto Library and the University of the Basque Country's Paranymp.

One of the main features of the project is greenery. In total, about 60% of Abandoibarra, an area of around 2,152,780 ft², will consist of gardens and open spaces. This will be the configuration of the Ribera Park, which will stretch along the river for almost a mile between the Guggenheim Museum and the Euskalduna Conference Hall. This park of around 1,001,043 ft² is essential to the development of Abandoibarra because it is here that all possible leisure activities converge.

B.4.8 Key Lessons

The following key lessons are derived from the Bilbao case:

- Revitalization in Bilbao took place on many levels: physical, economic, environmental and social.

- Culture and leisure have been the driving forces for the redevelopment of the Abandoibarra area, and has changed Bilbao's image from a declining industrial town into an exciting place.
- Substantial investment by national, provincial and local governments and public bodies was needed to get the momentum going and make the project in to a success. Moreover, a long term view was required as the project will take about 20 years from beginning to end.
- Public and private sector stakeholders came together at the end of 80s in the shape of Bilbao Metr poli-30, to discuss the future of the city and work out a revitalization strategy. Since then this body has an active role in promoting the city and attracting investments.
- Creation of a project entity with the mandate to redesign the city centre. This created ownership and focus for the project company. The project company had thorough stakeholder contacts: politicians, techniques and citizens, and substantial planning powers.
- City centre alterations have been integrated covering all aspects of the city; real estate, public transport, public buildings.

B.5 EURALILLE, FRANCE

B.5.1 Short description

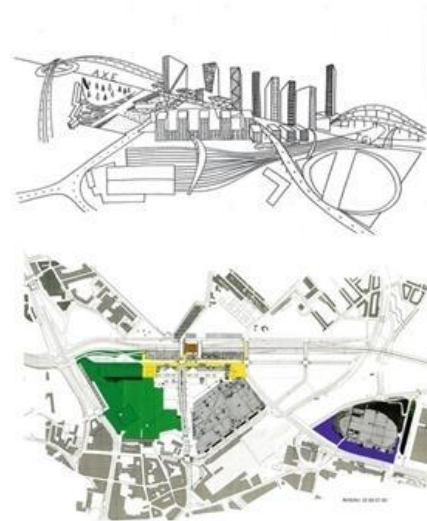
Lille was struggling with the results of a vast decline of a once so thriving textile industry. The region faced a physical and environmental crisis, as de-industrialization, economic stagnation, poverty and population shifts led to widespread urban decay.

In the mid-1980s the Lille Metropolis started a policy of economic renewal, based on the principles adopted by the majority of large French cities: accessibility, attractiveness and the establishment of strongly integrated development poles. City and regional governments became especially concerned with competitiveness and image building

In line with this policy and linked to the construction of the Channel Tunnel and new TGV station in Lille, in 1990 the decision was made to build business center Euralille. The project included the development of high value-added service industries, commerce, leisure and infrastructure, and was developed on former waste building ground adjoining the center.

The initial Euralille consisted of three parts: the Cit  des Affaires, including the Lille Europe station with the WTC and Cr dit Lyonnais office towers above it, the Euralille Centre, situated between the two stations, including offices, apartments, a shopping centre, a hotel and other amenities, and the Grand Palais Congress Centre. Other subprojects were added gradually. Due to a crisis in the real estate market in the mid 1990s, the amount of offices realized has long remained below schedule.

Despite initial skepticism, the effect of Euralille on the urban economy is generally considered as positive. Furthermore, the project has significant symbolic value, contributing much to the image and self-confidence of Lille as a modern city, and its position as a centre for shopping and tourism. In particular, the position of the inner city itself has been strengthened.



B.5.2 Strategic theme / focus of the case

The declining textile industry impacted Lille severely. Economical, physical and social wellbeing needed to be restored in order to revive the city. Euralille was used to realize this restoration. Objectives of Euralille were to improve the economic position of the city, to attract international firms, to link the TGV station to real estate developments, to create jobs and to satisfy rising local housing demand by constructing new units.

B.5.3 Role and Integration in the immediate Area and with the Wider Development of the City and Region

The region surrounding the Lille conglomerate extends across the Northern borders into Belgium. As the area is now a central hub in the transport system between Paris and the Northern European cities such as Brussels, Amsterdam and London, the entire region profits from the redevelopment process. Moreover, Euralille provides the region with a real dynamic urban centre leading the conversion process of traditional industries.

B.5.4 Functions and Land uses

Euralille covers 175 acres. The transportation infrastructure built within the context of Euralille includes the east ring of Lille (inaugurated in 1999), the Lille-Europe TGV station (1993), the subway station Euralille (1994), the tramway station Lille Flandres, and the Le Corbusier bridge (1994). Furthermore, Euralille includes office space; a trade centre with shops, and parking space; housing; a hotel; an exhibition and conference space; and La Passerelle, a pluralist, multi-religious arena run by the Catholic and Reformed Church of Lille. In 2003, Euralille (including Euralille 2) covered 8,622.885 ft², of which 40% was business-related, 21% was residential, and 39% were amenities.

B.5.5 Infrastructure Components

As mentioned under point 4, infrastructure makes up a large part of Euralille. Lille's economic mutation has been built upon these new transport infrastructures (Eurostar, Thalys), placing the city just one hour by high-speed TGV train from Paris, 35 minutes from Brussels, 55 minutes from Charles de Gaulle airport and 1 hour 20 minutes from London.

B.5.6 Financial Information

The costs of the Euralille project amounted to approximately \$1 billion.

In 1990, SAEM Euralille, a public private partnership, was set up for the operational phase of the project. This company represented the Lille urban community authorities as the contracting authority and was responsible for the achievement and marketing of the Euralille project. The table below gives an overview of the parties that were part of SAEM Euralille.

Public parties	54%	Private parties	46%
Ville de Lille	26,5%	Regional banks	14,6%
Lille métropole Communauté	16,5%	National banks	19%
Urbaine Département du Nord	5,5%	International banks	4%
Région Nord-Pas de Calais	5,5%	Lloyd Continental	2,4%
		SNCF	3%
		Chamber of Commerce	3%

B.5.7 Development and Implementation Strategy

The development strategy of Euralille is modular, in the sense that possibilities for future growth are an explicit part of the plan. The phasing of the project is shown in the table below.

1988	Feasibility studies
1991	Creation of the SAEM (Société Anonyme d'Economie Mixte) Euralille with a capital of FF 50m (50.9% public and 49.1% private sector) Start of preparatory works
1992	Start of infrastructure works
1993	Creation of the cercle des usagers (users' group) The TGV line Lille–Paris becomes operational
1994	Entry into service of the new TGV station Lille-Europe and of the subway station Euralille Entry into service of the link towards Lyon and the south of France Entry into service of the Congress and Exhibition Centre Entry into service of the Trade Centre Euralille and of the tramway station Lille Flandres Entry into service of the Zénith; of the TGV Eurostar; of the link to the Roissy–Charles de Gaulle airport
1995	The Tour du Crédit Lyonnais completed Subway line two becomes operational Lilleurope Tower completed The Hauts du Romarin completed
1999-2000	Delivery of 260 housing units at Boulevard Carnot and in the Romarin sector

2000-2010	<p>Romarin sector: 108,000 ft² of office space and a 2–3-star hotel with 80 rooms</p> <p>Cité des affaires: 130,000 ft² of office space and a 4-star hotel with 124 rooms</p> <p>Saint Maurice: 180,000 ft² of office space</p> <p>Euralille 2 (south sector):</p> <ul style="list-style-type: none"> • Central administration Région Nord Pas-de-Calais (540,000 ft²) • Extension of exhibition space in Lille Grand Palais (160,000 ft²) • 400,000 ft² of office space and 800 housing units
-----------	---

B.5.8 Key Lessons

From Euralille, several key lessons can be drawn:

- A large scale urban project should be managed on a long-term basis and the contracting authorities must play a leading role in deciding what work has to be carried out by the partnership responsible for implementing the project and then assessing the actions according to a clearly defined framework. To achieve this, it is essential that at the start of the project, the contracting authorities carry out preliminary studies to effectively define all aspects of the project.
- At Euralille, every allocation of square feet has been the result of a specific initiative with specific intended occupiers. For each segment of the project, possible developers, investors and users in the public, the private and the mixed sector were searched for in advance. The effect of this approach was that uncertainties and risks were greatly limited.
- The active collaboration of and among transportation authorities and the harmonization of public decisions at different levels have been indispensable in the achievement of the 'quantum leap' in the area's accessibility. Two factors are, in this respect, especially important. On the one hand, a powerful impulse is given to the process by the decision to have the three branches of the North European high-speed network (towards Paris, London and Brussels) cross where the local and regional transportation networks also converge (conventional train, metro, tram, bus and automobile): in the middle of the city. On the other hand are the institutional instruments and the political ability to procure punctual and concrete support (i.e. including the attached investments) from the relevant national, regional and local levels of government.
- The revenues that accrued from the development of certain parts of Euralille were used for the realization of other parts of Euralille.
- There was a true political desire to make Euralille a success. This desire was defined in urban development documents and made it possible to preserve landsites for the future.
- Reality can differ from expectations. In order to cope with such differences, a flexible approach is indispensable. In the case of Euralille, unforeseen technical problems hampered the smooth development of the business centre, while the ability of the city's shopping centre to attract shoppers travelling by public transport was not immediate due to a cultural barrier.

B.6 BALTIMORE WATERFRONT – HARBOR EAST

B.6.1 Short Description – Harbor East

Baltimore, Maryland's Inner Harbor development is one of the earliest examples of successful waterfront redevelopment in the context of city regeneration. The Inner Harbor attracts over 16 million visitors annually grossing \$167 million in revenue per year. The city of Baltimore received \$709,000 in lease revenues in 2008, up 60% since 2004. The 30 year Inner Harbor plan brought to the waterfront a mix of tourism, retail, commercial, and high-end residential units. New developments are still under construction, and the City of Baltimore is projected to gain population for the first time since 1950.

Origins for the development date back to 1956 when the shop closings and abandoned vehicles left Baltimore's downtown unlivable. In the 1964, a well known architect and planner, David Wallace, submitted plans to redevelop the waterfront. The project had difficulty getting traction at the onset because residents found a harbor known for its commercial activity to be an unsuitable place for leisure. By 1990, the Inner Harbor redevelopment was near completion and a tourism-based identity born. This gave enough traction for the Harbor East development to meet the demand for waterfront residential and commercial space.

Jump forward 20 years and the city's CBD and adjacent waterfront areas are thriving. Restaurants and tourist attractions line the waterfront all within a short walk from the financial district. The abandoned cars of the 1950's have been replaced with paid parkers in multi-level garages. Harbor East captures the demand created by the two areas with a heavy residential mix missing from the waterfront developments. The nearly complete 10m ft² Inner Harbor East development is arguably becoming the new heart of a revitalized city. The \$1.3 billion project is a mixed use development incorporating a marina and prime commercial, retail, residential, and tourism space. Harbor East capitalizes on its proximity to the CBD (which was revitalized by the Inner Harbor), sport venues, tourist attractions, the historical Fells Point, convention center and the Chesapeake Bay.



B.6.2 Strategic Theme / Focus of the Case

The original plan for Harbor East was “to balance all the interests of neighborhood life with the interests of commercial developers.” The neighborhood agreed to orient developments to the street level limiting the area to a small hotel, upscale townhouses, small businesses and a marina. The idea was not to overshadow any surrounding area, especially the historical Fells Point. However, Baltimore’s growth quickly meant that high real estate demand for the waterfront would force the development to be grander than originally imagined.

Since then, the plan has changed and the development looks to be higher and denser. The Harbor East project’s focus has shifted from trying to blend seamlessly into the surrounding neighborhoods to the self-sufficient luxurious center of Baltimore. Eleven square city blocks of high density space will be the new center of activity for the greater Baltimore area by providing a high-end mix of retail, destination restaurants, Class-A offices, residential units, hotels, marina, and an eleven-acre waterfront park. Developers will focus on meeting high demand for housing and additional office space not available on the current inner harbor. Harbor East will be easy to access, but patrons will have little reason to leave the area because of the plethora of mixes and amenities.

The development will be anchored by 4 high-end residential buildings with condos and apartments, including a Four-Seasons Hotel and Residences. These buildings will be connected via boardwalks and green space to the rest of the neighborhood and the waterfront. Residents could then travel by foot to work, play, eat and sleep all within the East Harbor. The development is designed to encourage foot traffic. A free shuttle will provide quick access to the Inner Harbor and the CDB.

B.6.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

The upscale Harbor East is arguably the most vibrant area of the entire Inner Harbor. It attempts to capture a strong mix of all sections Baltimore but be distinctively different from the Inner Harbor featuring less tourism and more business and residential. The development will draw high profile tenants from the CBD such as Legg Mason, Morgan Stanley, Laureate, Citi-Smith Barney and Johns Hopkins. The Four Seasons Hotel will support other business functions and convention visits in the area. In keeping with the residential theme of Fells Point, it will also command the upscale Vue building in the heart of the neighborhood.

A major focus of the development is accessibility. A series of pedestrian friendly waterfront walkways will connect it with the Inner Harbor and Fells Point. This would allow for pedestrians to walk 10 minutes from Harbor East to the touristy Harbor Place and the further CBD. The Marina will offer unique access to the bay and its connectivity potential is one reason Harbor Point is so successful. Streets do, however, hinder pedestrian traffic to the adjacent Little Italy.



Total investment into the most recent development includes 22 private investments totaling \$1.3 billion. An estimated 5000 permanent jobs were also to the area. The overall impact of this development however is difficult to measure since much absorption will be cannibalizing from other Inner Harbor real estate developments as evident by the business tenants. However, Harbor East should be able to attract visitors from nearby metropolitan areas (Washington DC) for some crab cakes and football. The Inner Harbor is already producing over \$60 million in annual tax revenues and the finished Harbor East should provide additional tax revenues for the city.

B.6.4 Functions and Land Uses

The 65-acre, mixed-use, urban waterfront redevelopment will cover 11 city blocks and include 10m ft2 of total development space. Office space and residential units will make up a good portion of the development. Restaurant and retail establishments are integrated into the residential and commercial units. Green space and a marina will balance the rest of the development. Once completed (Mid to late 2009), Harbor East will boast:

- 2500 upscale residential units

- 3m ft² Class A office space including 650,000 ft² Class A+ office tower
- 9 Hotels featuring 3000 hotel rooms
- 200 slip marina
- 1m ft² of retail, with restaurants and upscale specialty, lifestyle, and fashion establishments

Notable Real Estate Developments		
Four Seasons Development	2009-2010	<p>The \$550 million development includes a 44 story Four Season's Hotel and Residences and a 24 story Legg Mason Tower.</p> <p>The Hotel and Residences will have upon completion: 200 rooms, 129 upscale condos, and 3 waterfront restaurants.</p> <p>The Tower currently has 650,000 ft² of office space.</p> <p>The development will include a 500,000 ft² parking facility</p>
Marriott Waterfront	2001	\$129 million development with 29% public funding (includes payment in lieu of 25 year tax abatement.
Spinnaker Bay	2005	19 Story mixed use high rise with: 316 Apartments, 32 Condominiums ranging from 1400 to 4000 ft ² , and retail.
800 and 801 Aliceanna	2007	<p>800 Aliceanna Street will incorporate: 330,000 office, 50 loft apartments, 150-unit extended stay hotel, a 50,000 ft² health club and 60,000 ft² of retail space.</p> <p>801 Aliceanna Street will incorporate: 330 apartments, 30 waterfront condos and 60,000 ft² of retail and restaurant space</p>
The Vue	2008	28 storey, 1.2 m ft ² mixed use development with: 200,000 ft ² office, 70,000 ft ² of retail space, 787 structured parking spaces. Will be the main entertainment center of Harbor east with movie theatre.

B.6.5 Infrastructure Components

The Marina reconstruction provides visitors to the inner harbor easy access to the amenities of the East Harbor Promenade and the Inner Harbor. The Marina reconstruction was completed in phase one and provided an anchor for the residential and commercial developments. Aside from roads, no other large infrastructure components, such as bridges, were built.

B.6.6 Financial Information

The developers, H&S Properties and Struever Bros, estimate the total cost of the development to be well over \$1 billion. The success of the Inner Harbor brought enough momentum in which most developments were funded by private funding, though the use of tax breaks were also heavily involved, especially in the early stages of the development in the early 1990s. Phase One infrastructure was paid for by direct public financing or through grants.

As the project has progressed, the city of Baltimore has all but eliminated grants and attracts developers through tax breaks. The Legg-Mason building was given a 15 year \$33 million tax break to keep rents attractive enough to move Legg-Mason in the building. Similar tax breaks were also given to a parking garage, and most other buildings in the area.

The city expects the building tax cuts to generate revenues from attracting tenants. The Legg-Mason building alone is estimated to bring in \$162 million in tax revenues during the first 25 year period.

B.6.7 Development and Implementation Strategy

The development of Harbor East has been led by John Paterakis, owner of the H&S Properties Development Corporation, and the city of Baltimore via various departments including the Baltimore Development Corporation. Involvement by Paterakis and H&S Properties meant they were responsible for most of the financing with some city of Baltimore help. In 1971, the Mayor and the Baltimore City Council submitted an Urban Renewal Plan which built a framework for development.

The City of Baltimore paid for and heavily subsidized H&S Properties for infrastructure to jumpstart the development in phase 1 (early 1990s). By phase 2, Paterakis' vision of the harbor changed when the newly finished Convention Center created an immense demand for hotel space. He proposed a 48 story hotel that was eventually scaled down to better accommodate the original development plan. The 2000 completion of the Baltimore Marriott Waterfront Hotel changed the face of Harbor East, setting the precedent for taller buildings and precipitating a slew of new upscale residential and Class A office developments. Paterakis and other developers have since then relied less on subsidies and more tax breaks for financing.

The master plan had 4 phases, which mostly became a mute point after the opening of the Marriott Waterfront Hotel, which increased the scale of every development afterwards. The original phasing plan is as follows:

General Phasing Strategy			
Phase 1	Marina Restoration	Promenade	Streets and Infrastructure
Phase 2	Hotel	Residential	Commercial
Phase 3	Residential		
Phase 4	Hotel	Commercial	

B.6.8 Key Lessons

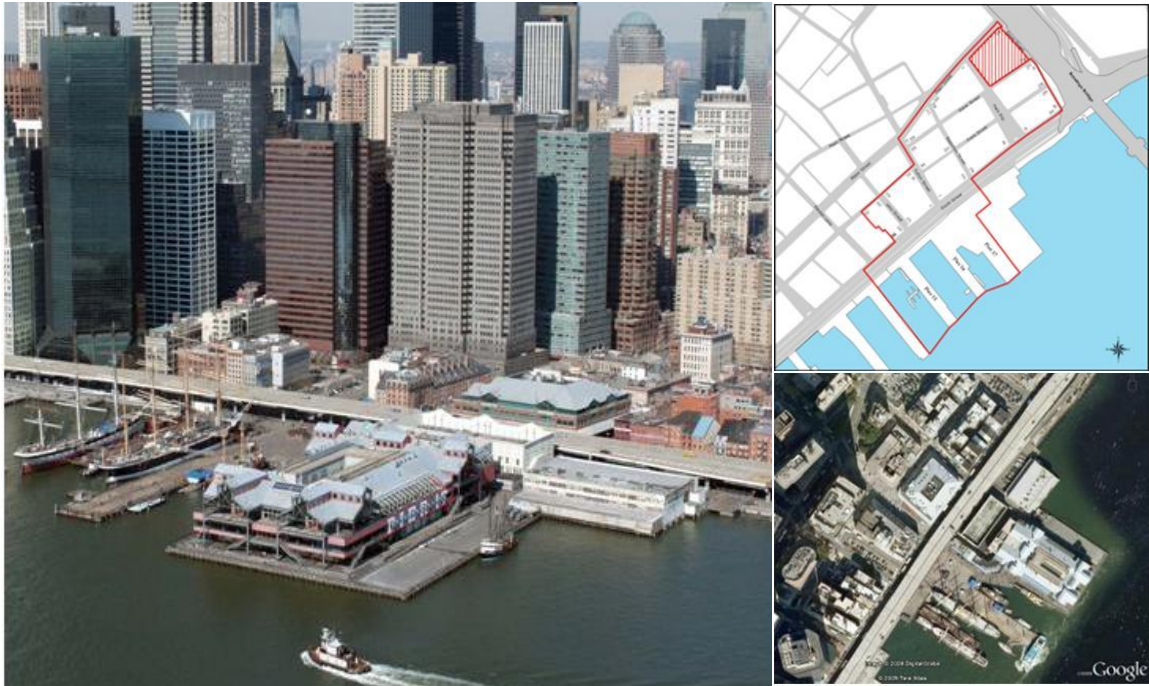
- **Development Incentives:** Tax abatement is essential in helping developments attract tenants from cheaper alternatives in the suburbs. As markets mature, less government subsidy will be required.
- **Adaptability and Flexibility:** The master plan needs some flexibility in order to capture new opportunities. East Harbor would have its gravitational pull if the original master plan was followed.
- **Seeking Foot traffic:** Developing foot traffic first is essential in creating an effective waterfront. East Harbor relied on capturing convention center visitors to help shift the city center closer to the development.
- **Diversified Use:** H&S properties emphasized the importance of diversifying a usage mix in order to attract and retain a working population. Adding a marina can add vibrancy to a development.

B.7 SOUTH STREET SEAPORT, NEW YORK, USA

B.7.1 Short Description

The South Street Seaport, located on the Lower East side of New York City, NY is a great example of a successful waterfront re-development. With a history that dates back 300 years, the South St. Seaport was once the most prosperous commercial district in all of Manhattan. During the mid 1860's the seaport began to deteriorate, leaving the once thriving business center reduced to merely a fish market surrounded by abandoned buildings and warehouses. It wasn't until the early 1960's that lower Manhattan became the focus of a revitalization phase of which the Seaport was seen as a catalyst. Shortly thereafter in 1967, the South St. Seaport Maritime Museum was established. The museum played an important role in helping to preserve the historic district of which the Seaport was a part of, as well as becoming a destination for visitors.

Over the past 45 years, the 3.5 acre derelict dockland and surrounding area in one of the oldest sections of the city was transformed into a vibrant, historic area comprised of shops, restaurants, office space, a luxury residential area, and various leisure facilities (live music arenas, museums, etc.). The South Street Seaport receives millions of visitors annually and is considered one of the great historical landmarks of New York City.



B.7.2 Strategic Theme / Focus of the Case

The Seaport marketplace was planned and developed over a 20-year period as a joint venture between the non-profit South Street Seaport Museum, the city and state of New York, and the Rouse Company. The city committed \$100,000 to join the Rouse Company and the Seaport Museum in funding a feasibility study for the project. Rouse asked Benjamin Thompson & Associates, the architect for the Faneuil Hall marketplace, to prepare a master plan for the Seaport. The architectural firm made three key recommendations: use Fulton Street as the pedestrian centre of the district, connecting the Wall Street area to the East River; build a new Fulton Market building at the corner of Fulton and South Streets; and reconstruct Piers 17 and 18 to hold a shopping pavilion on the edge of the river. Together with the other commercial and museum activities on Fulton Street in Schermerhorn Row and the Museum Block, this would replicate the synergy achieved by the three adjacent Quincy Market buildings of Faneuil Hall. The plan would produce approximately 250,000 ft² of leasable retail space in a contiguous commercial-cultural-entertainment complex. The initial scheme also called for a walkway over South Street and the Fulton Fish Market to connect the new Fulton Market to the Pier 17 pavilion. This ambitious emphasis on commercial development far exceeded the earlier visions of the Seaport Museum and the Lindsay administration planners, but the financial feasibility study predicted a strong market potential. The expanding workforce of lower Manhattan, the increasing number of tourists to New York and area residents would generate demand.

B.7.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

The re-development of South Street Seaport was an important part of the larger-scale development that was occurring in Lower Manhattan and New York City in general. With this in mind, the Seaport redevelopment plan strived to meet the following goals:

- Give the urbanites of Manhattan an escape from the city

- Create an environment that:
 - Welcomes the leisurely stroll of pedestrians & tourists
 - Fosters a desire to live, shop and dine in the seaport area
- Recreate as much commercial and retail activity as there once was during the seaports prime

In the 1960's lower Manhattan began to experience great change. The business district of Wall Street as well as the rest of the financial district was expanding. Through expansion and growth came new residential and commercial developments in lower Manhattan. The time had come for the revitalization of the complete lower Manhattan sector using the seaport as a pivotal attraction. Economic development was an important issue during the 1977 mayoral campaign, and the new mayor made the Seaport project a priority. The goal of the revitalization of the South St. Seaport was to give the urbanites of Manhattan an escape from the city. To create a much less frenzied atmosphere, the streets that originally ran through the seaport were closed off to all motorized traffic and repaved with cobblestones. This created an environment that welcomed the leisurely stroll of pedestrians and a desire to live, shop and dine in the same area. The abandoned buildings and warehouses that were once important to the maritime activities were renovated and quickly became occupied by numerous specialty shops and restaurants. Today, the Seaport is bustling with just as much commercial and retail activity as it once was during the prime of the shipping era.

B.7.4 Functions and Land Uses

Pier 17, the surrounding historic seaport area, and shopping mall include the following functions and uses (some are projected uses for the future):

- Over 3.5 acres of pier designed as actively-programmed, publicly accessible open space
- 250,000 ft² of leasable retail space
- Four, two-story retail buildings and additional retail in buildings across the pier and under the FDR Drive
- A boutique-style department store
- An iconic hotel and residential building
- A small boutique hotel atop retail structures designed by SHoP Architects
- Open site lines to the Brooklyn Bridge and New York Harbor
- Improved water-transit access
- Construction that is LEED Silver certified and compliant with Local Law 86, the city's standard for sustainability in its own construction projects
- A former fish market that has been converted into a specialty market, the Fulton Stall Market

- 30,000 ft² of community space
- Enhanced “cultural space” for live music concerts and additional entertainment events

B.7.5 Infrastructure Components

The main infrastructure component of the port and mall area consist of closed off, cobblestone paved roads around and through the historic district giving the port a quaint and leisurely feel. The area is easily accessible by car or cab. Subways, buses, and ferry stops are only minutes away in walking distance. With New York’s extensive and easy-to-use transportation system you can quickly arrive at the seaport from all three surrounding airports and train stations, as well as from locations throughout greater New York.



B.7.6 Financial Information

Implementing the Seaport plan would be a highly visible accomplishment for New York City, creating jobs, establishing a new tourist attraction and revitalizing the waterfront. In his first month in office, NYC Mayor Ed Koch visited Faneuil Hall in Boston and met with James Rouse. The city committed \$100,000 to join the Rouse Company and the Seaport Museum in funding a feasibility study for the project.

Throughout the late 1970’s, the Museum’s Trustees actively courted commercial developers to come in and sublease space at the Seaport. The goal was to provide a maritime marketplace with modern comforts in a historic setting similar to Baltimore’s Harbor Place and Boston’s Quincy Market. In 1980, the Museum solidified its partnership with the Rouse Company.

The Museum undertook a \$268 million project to restore and revive the Seaport. Much of the funding came from private sources, the City of New York and the Museum. The Museum organized the funding of the entire project, itself contributing over \$20 million. The Rouse Company, for its part, invested \$90 million in the development. Aside from revenue, the overall goal of the project was to gentrify the area and to popularize it as a place of entertainment, learning, restaurants, and shopping.

B.7.7 Development and Implementation Strategy

The public-private partnership component of the South Street Seaport redevelopment plan provides insight as to how this large-scale, mixed-use, multi-phase project was (and still is) undertaken.

The underlying land on which the primary part of the Seaport is situated, is owned (like nearly all NYC waterfront land) by the SBS (Department of Small Business Services). This land was originally leased to The Rouse Company and then later on was transferred over to General Growth Properties when they (GGP) bought Rouse. The land was leased on a 99 year master lease. One of the more interesting parts of this public-private partnership is the fact that the SBS which is a quasi-government organization, structured a lease agreement in which they would participate in the financial returns of the project based on performance, above and beyond a fixed ground lease payment.

The following is a timeline of events for the redevelopment of the Seaport.

1960	Lower Manhattan undergoes revitalization phase
1967	South St. Seaport Museum built
1974	The State of New York purchases the "Schermerhorn Row" block of the seaport – acting as the states recognition of the historical purpose of the seaport
1976	The seaport became the major focal point of New York City's Bicentennial celebration
1976-1978	Rouse Corporation begins South Street Seaport area revitalization process
1982	Redevelopment of the seaport helped turn museum into greater tourist attraction (through the development of shopping centers, restaurants, etc.)
1983	Fulton Market Building constructed – housing restaurants and private gathering facilities
1984	Seaport opens to the public with dozens of shops and newly expanded museum
2003	Schermerhorn Row reopens to the public after \$20 million renovation project

B.7.8 Key Lessons

- The Seaport development and re-development processes are ongoing. Plans have changed, timing has been adjusted, and parties involved have come and gone. It is important to recognize that the vision for the Seaport or any other project of this magnitude must be reasonable enough where each participant can hope to fulfill their requirements and achieve their goals throughout the inevitable economic cycles that will come and go throughout the project's life.
- A financially sound public-private partnership is an integral part of the Seaport's story. Because the government agency that controlled the land had a sound partnership

structure in place, it was able to transfer the rights and obligations from one private developer to another when the initial private developer needed to step out of the picture. And now that the current private financial partner is going through bankruptcy, the sound public-private strategy will once again be put to the test.

- As both the public and private sector participants in the South Street Seaport's development and re-development have learned, certain projects will simply not have adequate demand built into the market to support the heavy infrastructure and costs necessary to get a large-scale project "off the ground". There needs to be some sort of catalyst, or underlying theme that will drive people and demand to the site and that will in turn help create an entire new market where there had been none. In the case of the Seaport, the museum helped in that role, not only having an impact on plan and design pertaining to the development of the surrounding site, but also helped serve to attract people to the Seaport, creating an entirely new market.

B.8 THE WATERFRONT DISTRICT, BELLINGHAM, WASHINGTON

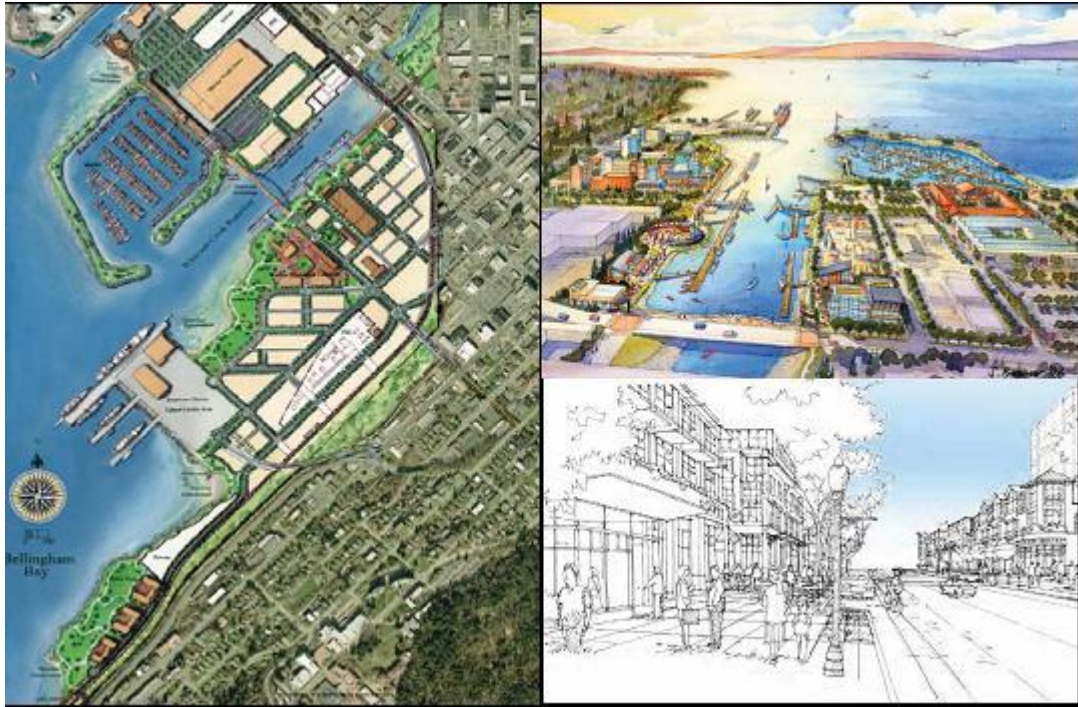
B.8.1 Short Description

The Bellingham Waterfront District is a 220 acre planned redevelopment site on the coast of the Bellingham Bay, 90 miles north of Seattle, Washington. Natural resource and goods producing industries once drove the city's economy, but now accounts for less than 25% of non-agricultural employment. Years of logging and milling left significant ecologic damage to the bay area. There are currently 12 different sites along the Bellingham Bay under the Washington State's Department of Ecology Toxics Cleanup Program. Groundbreaking will not likely occur before 2010, when the first wave of cleaning efforts wraps up.

Efforts to revitalize the Bellingham Port began in 1999 when the Georgia-Pacific company shut down a major plant laying off 1,000 workers. The City recognized a need for a catalyst to jumpstart an economy that could no longer rely on natural resources and manufacturing. In 2003, a joint department initiative led by the US National Oceanic and Atmospheric Administration (NOAA) selected the Port of Bellingham as a Portfields Demonstration Project to provide the framework for port revitalization. In the same year, a citizen led Waterfront Futures Group⁴⁵ published a year 2026 vision for a large scale port revitalization effort.

Momentum for the development came in 2005 when the Georgia-Pacific Company sold their 137 acre site (valued at \$37 million) to the Port Authority for \$10 with the stipulation that the Port assumes all cleanup efforts. Infrastructure developments will be financed by the city of Bellingham. The Waterfront Advisory Group (created 2004 to replace the Waterfront Futures Group) is developing a detailed waterfront master plan, which they will release in Mid-2009. The Waterfront District master plan will follow closely to the guidelines put forth in the development vision and draft plans. A draft framework plan was submitted in September 2008.

⁴⁵ Special interest group of 10 major appointed community members



Ownership of the proposed 220 acres of is split among the Port, the City of Bellingham, the State of Washington, and various private owners (such as BNSF and PSE). Land owned by the state of Washington is mainly on the southwest tip of the development zone. The City of Bellingham owns land mainly along the edge of the port and city, and the Port owns the land in between. The majority of the land not owned by the Port or the City belongs to the State of Washington.

Port of Bellingham	148.9
City of Bellingham	21.1
Other	46.2
Total	<u>216.3</u>

B.8.2 Strategic Theme / Focus of the Case

The development vision is to be a sustainable and environmentally friendly catalyst for economic development. A century of industry activity left most of the land available unsuitable for use and the small city did not have the amenities to attract the people needed to shift into a serviced based economy. In order to be successful, the Water Futures Group realized the importance of eliminating the legacy of environmental pollution as the first step in revitalizing the city.

As a result, the City vision is to become one of the first LEED designed developments in the country. It will incorporate the city’s triple bottom line accounting system (reviews environmental, social, economic impacts) to ensure that all real estate developments will be sustainable. The development will be centered on foot and bicycle traffic. Multi-modal streets will include biking/parking lanes with barriers protecting bikers from automobile traffic. A high speed bike path will connect the entire development. Green space and ecology related tourism will also be a strong focus for the waterfront development.

It is also important for the Waterfront District not to create a new side of town, but rather expand current established neighborhoods. The development will extend the adjacent CBD, Western Washington University, and residential units to the waterfront area – next to existing industrial and green space. The development also lacks a significant retail segment.

Residential units will not be solely upscale but include a healthy mix of luxury to low end housing to reflect the city’s makeup. There are plans to renovate older industrial buildings will rather than demolish them for a historical district. A new marina extension directly east of the current marina will help bring the community closer together. Lastly port operations will be consolidated and kept on the port site.

B.8.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

The waterfront area is physically removed from the city of Bellingham by a stretch of railroad. Access is difficult but pollution levels would deter any visitors from seeking access anyway. The new development would extend and redesign roads down to the waterfront from the northeast end of the port. These 6 multi modal roads will bring CBD and residential foot traffic into the port area. Some of roads will be developed on each side with restaurants and retail establishments to help bridge the new development seamlessly with the existing development. Access on the south east side will remain limited to only one road due to physical restrictions caused by the waterway.

One key differentiator for the Waterfront District is the incorporation of an educational institution on the waterfront. Historically, Western Washington University has been overlooking the bay, but the school would like to expand into the waterfront with student housing and classrooms. Both the School of Environment and its Northwest Consortium of Technological Innovation will aim to relocate and integrate into the community. The waterfront would act as a connector for the school and the CBD.

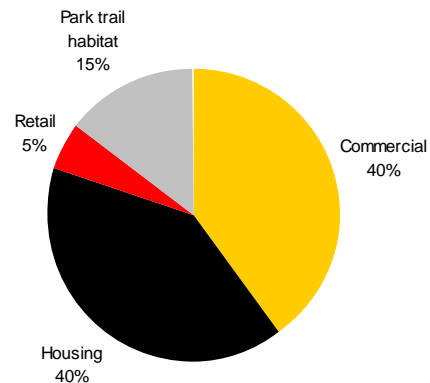
The waterfront development is designed to attract outside investors, entrepreneurs, residents, and tourists that in turn will jumpstart the economy. The development will strengthen and diversify the Whatcom County economic base through incubation of service and knowledge industries.

B.8.4 Functions and Land Uses

When completed, the development will total 220 acres after the year 2026. The proposed medium density building plan will include 2.8m ft² of commercial space, 2.8m ft² of mixed residential, 0.3m ft² of retail, and 1.4m ft² of parks, trails, and habitat. Total developed land (excluding water) will account for at least 178 acres of the development. Highlights of these uses include:

- There will be 34.3 acres of **green space**, not including bicycle trails that will connect the entire waterfront district with.
- A **Western Washington University Campus extension** that will cover 10-16 acres with student housing and two schools.
- An **Updated Marina** with older sections revitalized and a new section with 450 boating slips in place of the current lagoon.
- New **Beaches** to the North of the Marina for leisure use, currently unused and difficult to access.

Proposed Mix for Waterfront Development



- A **TerrAquarium** that will exhibit large water animals and have live exhibits of otters and squids. It is estimated to have a regional draw as far as Seattle and even Vancouver B.C.
- A restored **Marine habitat** destroyed from years of on site pollution. Will feature a salmon habitat.

B.8.5 Infrastructure Components

A new street grid will be essential for the success of the development. Transportation infrastructure on the Port site does not allow for easy access or have the capacity for any large scale mixed-used development. The Waterfront District proposes to invest in 6 new multimodal streets as the anchor for the proposed development.

2 streets will run parallel along the eastern side of the development and into the residential areas north of the marina. Roads connecting the CBD will run perpendicular to these, creating a grid near at the north east corner of the development. The multi-modal streets will differ slightly in design dependent on the surrounding use. Streets with retail establishments near the CBD will include green medians and dedicated parking/biking lanes. New major bridges may be required, but mainly for foot and bicycle traffic. The new marina will extend into the bay.

To attract businesses into the development, the city will invest in a fiberoptic network called the High Technology Communication Infrastructure (HTCI). This network provide businesses on the new development with one of the fastest networks in the country.

B.8.6 Financial Information

Most recent estimates place the cost of delivering the project will upwards of \$347 million with \$198 million due in the first phase. The Authority will seek public investment for cleanup, demolition, and maritime related improvements to infrastructure and facility improvements at a total cost of \$149 million. Roads, bridges, utilities, parks and trails will cost a total of \$198 million, with \$131 million in the first phase with most elements under the city's jurisdiction.

B.8.7 Proposed Infrastructure Improvements (\$millions):

Planning Element	2006 Framework Plan 6.0 MSF	2008 Proposal Full Build-Out 6.0 MSF	2008 Proposal First Phase 4.0 MSF	2008 Proposal Second Phase 2.0 MSF
Environmental Cleanup	\$85	\$94		
Demolition	\$10	\$10		
Marine Infrastructure	\$12	\$13		
Marina Facilities	\$24	\$26		
Visitor Boat Moorage	\$6	\$6		
Subtotal	\$137	\$149		
Roads and Bridges	\$119	\$99	\$65	\$34
Utilities	\$22	\$40	\$26	\$14
Parks and Trails	\$56	\$59	\$40	\$19
Subtotal	\$197	\$198	\$131	\$67
Total	\$334	\$347		

Public investments will mainly come from tax revenues generated by businesses and residents moving into the development. Portions of the clean up related function will come from federal funding from the NOAA Portfield program and the 2009 ARRA stimulus package.

B.8.8 Development and Implementation Strategy

The Waterfront District will be developed in three phases where exact timing has not been determined. The majority of the work will be done in phase 1 and 2 (see below). In fact, phase three improvements are not currently budgeted as the scope of work is still under development. Currently, all planning is done in by a joint partnership between the Port of Bellingham and the City of Bellingham, with input from the Waterfront Advisory Group, to ensure the vibrancy of the waterfront in three areas: jobs and economy, natural systems and the environment, and character uses and design.

The 220 acre site will be split into 5 development areas, but will follow the same guiding principles laid out by the master plan. The first and main phase will include clean up, infrastructure expansions, and the development of four areas. Phase 2 will add finishing touches to only two development areas and phase three will include only one. The financial estimates for phase three developments have not been settled.

The Waterfront District master plan will dictate 6.0 m ft² of mixed-use developments fairly agnostic to type of use – instead the 220 acres will be parceled into five different zones each with a different development focus. Focuses are determined by proximity toward the downtown area and access to infrastructure. The port does not use a more detailed strategy citing the difficulty of predicting market conditions past the first 5 years of the development. Adaptability is the key to phasing and use.

Phase 1 – Infrastructure Preparation (2009-?)		
Downtown Area	2.2 m ft ²	Demolition of Granary, replaced with road to connect to waterfront. Extension of Central Avenue. Additions to other access points.
Marine Trades	600,000 ft ²	Improved streets and add road access to Clean Ocean Marina, new boat ramp, and addition of green space/trails.
Shipping Terminal	690,000 ft ²	Maintain access. Develop new shipping terminal.
Cornwall Point	367,000 ft ²	Relocation of railroad and reconstruction of the Cornwall Bridge. Extension of Cornwall Avenue to provide extra space for development.

Phase 2 (? - ?)		
Downtown Area	695,000 ft ²	Adds fourth connector street to waterfront and addition of new ramp. Will physically and visually connect historical district with waterfront.
Marine Trades	400,000 ft ²	Add connector streets to the grid

Phase 3 (? - 2039)		
Log Pond Area	1.6 m ft ²	Street work to facilitate development of area. May need extra connectors depending on phase 1 and 2.

B.8.9 Key Lessons

- Public Input** – The Port attempted to expedite the planning process by involving public input in all stages of the planning process. This led to the forming of two distinctive groups, the Water Futures Group followed by the Water Advisory Group. While it did not necessary shorten the process, the community benefited from a strong and unified voice. Public input put the port’s decisions under heavy scrutiny and increased expectations for the Waterfront District.
- Adaptability in the Master Plan** – The port authority did not, “want to be clinical” in determining the specific phasing and mix of the port. They realized the unpredictability of a 30 year plan and instead will be flexible and open to whatever the market demands.

- **Continuity of Leadership** – Changes in the City of Bellingham leadership set back the planning process as each new elected official required additional due diligence before continuing with the process. Port of Bellingham officials were forced to backtrack and win support of three different mayors since the start of the plan.
- **LEED Certification** – The Port will use tax incentives to force all developments to comply with LEED certification. The tax code will render non-LEED silver certified buildings unprofitable to maintain.

B.9 MILLENNIUM PARK, CHICAGO, USA

B.9.1 Short Description

Millennium Park is a flagship redevelopment project that has helped to transform the downtown of Chicago. Millennium Park is in the heart of downtown Chicago on 25 acres of land – of which 16 acres comprises airspace over the city’s commuter railways, and the remainder was surface parking lots and a shabby park. The area is on the Lake Michigan waterfront, and within what was the rather sleepy East Loop retail and office area. Using an innovative public-private financing partnership, Millennium Park has been developed as an assortment of arts, music, sculptural, architectural, and landscaping elements from some of the world’s most accomplished designers.

Millennium Park has had a dramatic effect on downtown Chicago, stimulating a mixed-use, round-the-clock neighborhood around it that includes office, residential, entertainment and open space. Millennium Park has doubled the property values of nearby commercial buildings, and turned the surrounding area into one of the hottest residential neighborhoods with more than a dozen new projects being developed. In 2005, an Economic Impact Study of Millennium Park found that \$1.4 billion of new residential investment had been stimulated.

Millennium Park demonstrates how a disused part of a waterfront area can be turned into a transforming downtown development with dramatic spin-off benefits to the city as a whole. The Chicago Sun – Times said of Millennium Park: *“You can’t put a monetary value on public works that enhance the image and quality of life of a city... They stand to draw huge numbers of city and suburban dwellers downtown to reclaim some of the communal urban experience that has been lost... and to marvel again at the vision and cultural reach of this architectural First City... considering the burst of energy and new life [Millennium Park] will bring to the city.”*





B.9.2 Strategic Theme and focus of the Case

Millennium Park was initiated in 1998 as part of Mayor Daley's campaign to make Chicago's motto, *Urbs in Horto* (City in a Garden), a reality. *"Millennium Park honors and builds on several proud Chicago traditions at once – beautiful architecture, landscaped and protected parklands, and the ongoing celebration of the arts"*, Mayor Daley. The strategic focus of Millennium Park is to create a spectacular cultural venue adjoining the CBD to revitalize the city and define Chicago to the world. As such, Millennium Park focuses on using public facilities and uses – arts, music, cultural, recreational, exceptional public space – as a catalyst for wider economic development. By creating an exceptional and flagship symbol for the city, Millennium Park catalyzed also a new residential momentum in the downtown.

B.9.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

Millennium Park is physically located in downtown Chicago, in the waterfront area of Lake Michigan. Prior to the development, the area was an unfinished corner of the 129 acre Grant Park, an unsightly space dominated by commuter rail lines and surface parking lots. The surrounding area was an unexceptional retail and office area. Millennium Park transformed the old site into a high quality cluster of public facilities and uses, which provided a new driver for lifestyle in the surrounding areas.

At the wider city level, Millennium Park aimed to redefine the way the world would view Chicago, creating a truly exceptional venue designed by leading architects and designers of the world. The intention was also to give new pride and vision for the city as a whole, around which economic activities, tourism, and new investment in the city would be based. Millennium Park is estimated to attract almost 4 million visitors to the city and downtown each year.

B.9.4 Functions and Land Uses

Millennium Park covers an area of 25 acres and is comprised of public uses – galleries, open space, music venues, etc. – and with underground parking for 4,000 cars. Millennium Park has a number of prominent features, including:

- Frank Gehry-designed Jay Pritzker Pavilion, the most sophisticated outdoor concert venue of its kind in the United States
- Interactive Crown Fountain by Jaume Plensa

- Lurie Garden designed by the team of Gustafson Guthrie Nichol Ltd, Piet Oudolf and Robert Israel
- Anish Kapoor's hugely popular Cloud Gate sculpture
- Chase Promenade, a three-block-long walkway lined by nearly 200 trees
- Boeing Galleries, providing formal space for public exhibitions
- Exelon Pavilions, using state-of-the art technology to convert solar energy into electricity, the four Pavilions house inter alia the Welcome Centre, energy display area and parking entrance.
- State-of-the-art Joan W. and Irving B. Harris Theater for Music and Dance with over 1,500 theater seats
- McCormick Tribune Plaza and Ice Rink
- Wrigley Square and Millennium Monument (Peristyle)
- McDonald's Cycle Center, a 300-space, heated indoor bicycle parking facility used also for runners and in-line skaters

B.9.5 Infrastructure Components

As noted, the Millennium Park comprises a large number of public facilities and high-quality open spaces. Major infrastructure components of the park are:

- Decking of the subway lines, creating the first green-roofed rail yard in the world
- Underground parking facilities providing space for 4,000 vehicles
- BP Bridge, a 925-foot-long winding bridge (designed by Frank Gehry) providing spectacular views of the Chicago skyline, Grant Park and Lake Michigan, connecting the Park to the Daley Bicentennial Plaza

B.9.6 Financial Information

The \$475 million (three times over its original budget) Millennium Park was financed through an innovative public-private partnership. The city provided \$270 million for the park's infrastructure raised by a \$175 million bond backed by the underground parking facility, and \$95 million of tax increment financing provided by the Central Loop TIF. Minimum donations of \$1 million were sought from the private sector. \$220 million was privately raised from 105 individuals, foundations and corporations for the enhancements (galleries, music venues, etc.) on the site, and to establish a \$30 million maintenance endowment fund.

An overview of the final costs of the park infrastructure and enhancements is provided below:

Project	Final Cost	Project	Final Cost
Garage	\$105.6 m	Exelon Pavilions	\$7.0 m
Metra superstructure	\$60.6 m	Peristyle/Wrigley Square	\$5.0 m
Jay Pritzker Pavilion	\$60.3 m	Chase Promenade	\$4.0 m
Harris Theater	\$60.0 m	McCormick Tribune Plaza & Ice Rink	\$3.2 m
Park finishes/landscaping	\$42.9 m	Misc. (fencing, terraces, graphics)	\$1.6 m
Design and management costs	\$39.5 m	Cloud Gate sculpture	\$23.0 m
Endowment	\$25.0 m	Lurie Garden	\$13.2 m
Crown Fountain	\$17.0 m	BP Pedestrian Bridge	\$14.5 m

B.9.7 Development and Implementation Strategy

The initial years of development of Millennium Park were conducted by the city. In 2000 the responsibility for Millennium Park was transferred to the Public Building Commission of Chicago which acted as the owner/developer of Millennium Park for the City of Chicago from May 2000 until project completion. Importantly, Millennium Park was ultimately guided by City agencies, a Donor group, artists, landscape architects, architects, engineers, construction managers, and contractors. This involvement of private parties within a visionary framework set by the city has resulted in the innovation and exceptional nature of the Park.

However, the diverse public and private sponsorship of the Park meant strong project management was required. Due to the unusual nature of the various donations and the construction constraints, the park was in a constant state of flux, including drawing and design changes. Contractors came and went as the design evolved. Since many elements were paid for with private donations, each arm of the project's management team had to work carefully to ensure that the donors' expectations were met.

B.9.8 Phasing

The conceptualization of Millennium Park began in 1997, and six years was required for design and construction, from 1998 to 2004. Construction completed four years behind schedule. The West Phase of the park was completed during 2001 to 2002, and the East Phase during 2003 to 2004.

B.9.9 Key Lessons learned

- Strategic investment in public facilities and public spaces can have a catalytic effect on city and downtown economic development and have a substantial positive impact on property values
- Millennium Park required visionary leadership from the Mayor and City government, with openness to work closely with the private sector on realising the vision

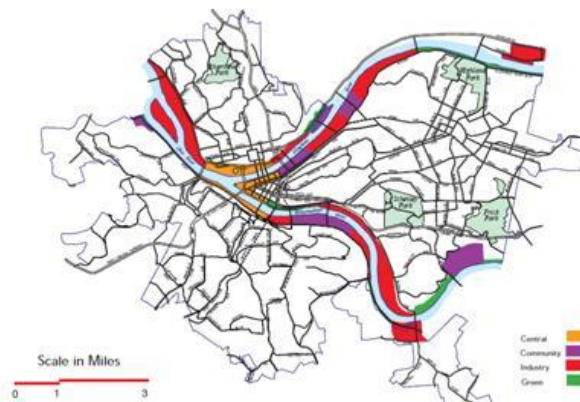
- The dramatic nature of Millennium Park was built at least in part by involving leading international designers and architects to make exceptional buildings and spaces
- Creating high quality cultural and open space stimulated new residential developments in the downtown and a return to the central city as a desirable living environment
- Almost the entire park was built on land reclaimed from railway lines and open care parks
- The combination of public financing (partially bonds and TIFs) and private financing was key to realising the Park

B.10 THREE RIVERS PARK, PITTSBURGH, USA

B.10.1 Short Description

Located at the point where the Allegheny and Monongahela rivers form the Ohio river, Pittsburgh's economic base and prosperity has always depended on its waterways. The rivers were of vital importance for industry and transportation. However, as the steel industry – the city's main economic base – imploded in the late 1970s and early 1980s, many of the steel mills at the rivers' shores shut down. Pittsburgh's economy moved from manufacturing to technology, education and health care. These developments have meant that the function of the city waterfronts has changed.

The Three Rivers Park is an initiative started in 2000 to create a continuous, accessible waterfront park system connecting places and destinations along the three rivers between the West End Bridge on the Ohio, the 31st Street Bridge on the Allegheny and the Hot Metal Bridge on the Monongahela. Linking more than ten miles of public and private riverfront property including bridges, shorelines and adjacent development, Three Rivers Park will comprise a single, grand public space with trails, walkways, bridges, and green spaces.



B.10.2 Strategic Theme and focus of the Case

As the steel industry declined in the 70s and 80s, the local economy suffered a serious depression. The closures of steel mills caused a ripple effect, as railroads, mines, and other factories across the region lost business and closed. Unemployment rose dramatically. Pittsburgh suffered with a declining population, and also saw a white flight to the suburbs.

Pittsburgh responded with efforts to diversify its economic base. At the same time it launched the Renaissance II program, which resulted in the building of several distinctive skyscrapers in the downtown Golden Triangle and a neighborhood revitalization effort citywide. Later, several important cultural institutions were built to resurrect the downtown cultural life. In the 1990s also the former mill sites were redeveloped.

With the successful transition to an important center of medical research, computer and robotics technologies, and arts and culture, stretches of riverfront were left abandoned, underused, and environmentally compromised. While at the same time livability is becoming more and more important to attain competitive advantage. As then Mayor Tom Murphy put it: *“Distinctions between a city’s product and personality blur. Cities compete not just in terms of the quality of finished goods but in the quality of life; not only in speed of production and delivery, but in their ability to attract a steady stream of new investment and with it the world’s best ideas and talent.”* Hence the need to redevelop the riverfronts into vibrant and inviting places providing recreational opportunities, and serving as a public commons.

B.10.3 Role and Integration in the Immediate Area and with the Wider Development of the City and Region

Vital in the Three Rivers Park is to create public access to the entire Pittsburgh waterfront. A riverfront divided, parcel by parcel, will obstruct the development of a single, unifying riverfront greenway. Linear access to the riverfront serves as a cohesive force, linking municipalities, residential and commercial development, and destination attractions. Hence the Three Rivers Heritage Trail spanning for 37 miles along both shores of the Allegheny, Monongahela and Ohio Rivers, is an important component of the Three Rivers Park initiative. Moreover, the riverfront offers opportunities for recreation, such as skating, biking, rowing, kayaking, and venture outdoors; and for hosting major events, such as the Three Rivers Art festival, the Three Rivers regatta, and the Pittsburgh Triathlon. The impact of both recreational and commercial uses can be felt on adjacent lands, and will significantly contribute to enhancing the quality of life in the city as a whole.

Furthermore, the Three Rivers Park initiative is part of broader efforts to revitalize the waterfront: most notably the new PNC baseball park, Heinz Field football stadium and Majestic Star Casino at the north shore of Allegheny river, expansion of the Convention Center, and several office, retail and residential developments.

B.10.4 Infrastructure Components

Major infrastructure components related to the Three Rivers Park initiative are new pedestrian bridges across the Allegheny river and across the Ohio river, several parking garages, and boat ramps and marinas. The parks are scattered with public art, monuments and fountains.

B.10.5 Financial Information

Until 2010 a total of \$3.5 billion will be invested in the various waterfront sites in the Three Rivers Park area (including the new stadiums, casino, buildings, residential projects, etc). These investments are both public and private. Public money comes from the Pittsburgh Development Fund and from tax increment financing. Private contributions are endowments from e.g the Richard K. Mellon Foundation, Heinz Endowments, the Alcoa Foundation, as well as private investments by developers and corporations.

B.10.6 Development and Implementation Strategy

In 1998 the City of Pittsburgh formulated the Riverfront Development Plan: a comprehensive plan for the waterfronts along the three rivers. The City uses land zoning and land acquisition to make the Three Rivers Park into a reality. Furthermore, the City – in close collaboration with local stakeholders – has specified a number of Riverfront Development principles.

In 2000 the Pittsburgh Riverlife Task Force was established as a nonprofit public-private partnership representing the city's most influential property owners, developers, civic and business leaders to engage in services that will facilitate the future development of Three Rivers Park. The core goal of the Riverlife Task Force is to reclaim, restore and promote Pittsburgh's riverfronts as an environmental, recreational, cultural, and economic hub for the people of the region and its visitors. This is being accomplished through a combination of the following three approaches:

- Developing core capital projects and acting as the driving force behind them.
- Supporting other capital projects that are sponsored by public and private partners.
- Advocating for high quality design, environmental preservation, and other issues that affect the park's development

Since its establishment, the Riverlife Task force has held over 120 public meetings with community groups, river users, and professional associations to ensure that the vision would reflect the diversity of expectations that multiple stakeholders had for riverfront development. The Task Force works closely with developers to facilitate the projects while simultaneously allowing the emerging vision to be shaped and tested.

B.10.7 Phasing

Three Rivers Park will be realized one project at a time with the goal that, by 2020, the park will serve as a landmark that will define the city for years to come. One of the parks already completed is the highly popular North Shore Riverfront Park in between PNC Park and Heinz Field, with many large open panels of grass and native landscaping as well as a riverwalk. Currently, the following major projects are being realized:

- The revitalization of Point State Park, the 36-acre state park and National Historic Landmark located at the confluence of Pittsburgh's three rivers in the heart of downtown Pittsburgh;
- The conversion of the Mon Wharf Landing from a river edge parking deck along the downtown riverfront into an innovative and connective promenade with a floating park mounted on barges;
- The West End Pedestrian Bridge connecting the north and south shores of the Ohio River.
- The Convention Center Riverfront Park, in front of the Convention Center.
- The South Shore Riverfront Park, with a series of terraces, stairs, ramps, entertainment venues and a marina, connected to the Hot Metal Pedestrian Bridge and bike trail, and in the proximity of the SouthSide Works retail complex.

B.10.8 Key Lessons learned

- Development of the riverfront can be used to enhance a city's liveability and support a city's economic and physical transition.
- Public access to the waterfront is of great importance, as it plays an important role in the identity of a city, can provide many recreational opportunities, and can serve as a public commons.
- A public-private partnership model as used in Pittsburgh, representing the most influential property owners, developers, civic and business leaders, can work very well when there is a clear common interest but not yet a clear goal.

APPENDIX C: PRELIMINARY PORT RELOCATION ROADMAP

Port relocations are a major operation, which can create pressures on both the port operations, and also on the surroundings of the existing and new port locations. The construction of phase 1 of the new Port Facility is expected to start probably in 2012 and is estimated to be finalized in 2014 after a three year construction period. The second phase is expected to be constructed between 2019 and 2021, with phase 3 forecast between 2024 and 2026 (Reference: Transformation Investments Port Relocation Update - March 2009). Phase 1 will be of sufficient size to accommodate to a large extent the existing port facilities currently conducted on the existing waterfront site. Assuming this planning and construction trajectory is achieved, the existing port facilities could be relocated to a new permanent site in 2014 - 2015 earliest. As understood from the data the new site requires land reclamation. Reclamation usually requires an EIA (Environmental Impact Assessment) which requires significant time and effort from the CCCPA. If EIA forms a part of the construction permits the governmental approval process can be more time consuming. Therefore Greenfield projects with land reclamation have the tendency to encounter delay in construction planning, in case the project is not guided very carefully.

The initial phases of the waterfront real estate development will take place before 2015, and therefore even under the best case scenario for construction of the port new facility, existing port functions and facilities will need to be retained on the waterfront site during the real estate development. Beyond 2015, CCCPA can decide whether and what port functions to allocate to the new facility and which activities might be permanently retained at the waterfront development site. Regarding the overlap period, there are three main considerations:

- Port functions can add value to a real estate project if combined properly
- Bulk cargo handling has environmental effects impacting on its surroundings
- Developing appropriate (temporary) on site concentration of port functions to support the real estate development

Phasing of the relocation of port functions from the Cleveland waterfront site is affected by the availability schedule of the new facility, as well as by the real estate development needs of the existing waterfront site. A phased relocation approach therefore needs to take both planning considerations into account. Based on the initial analysis of port functions, the construction planning for the new port facility, and the requirements of the real estate development, the following issues have been identified.

- **Minimum space requirements for on-site port functions** – The space required for port functions is dependent on shipping and freight volumes. Under current (depressed) traffic volumes, the availability of space for retaining port operations on site is not an obstacle to beginning real estate development on the site. Taking into account the specifics of the Cleveland site, slips and related road infrastructure, it is possible to concentrate port functions on approximately 20 to 25 acres, while retaining functionality. It is also possible to further intensify use of a temporary site, to accommodate some increased freight volumes if traffic increases to previous levels.
- **Warehousing facilities** – Since the warehousing facilities are directly related to the bulk freight, it is necessary to retain the warehouses (albeit in a more concentrated arrangement) on site, and relocate these at the same time as the related port functions. There are four warehouses on the site, namely the large Warehouse A, and Warehouses 24, 26 and 30. Warehouse 32 on the most eastern edge of the site is under control of the city and was being used for a trolley car exhibition. Warehouse 30 is not currently used.

- **Cranes and freight loading equipment** – There are three crawler cranes on the site, and one heavy-lifting and immovable derrick. Functional cranes are required only on the slips which will be actively used. It may be necessary to move cranes from the slip that will not be actively used to those with active use. For cranes that are not functionally required and that are on slip sidings that will not be actively used, consideration should be given to retaining them in-situ to maintain and build the maritime character of the area. This is common in several other waterfront developments.
- **Quay wall baring and load capacity** – The current slips are already used for freight functions and hence should be capable of retaining the required traffic.
- **Noise levels** – Noise levels are determined mainly by the size and type of crane, and the cargo type. Considering the relative small size of the cranes and the potential buffer distance between the port activity and the initial real estate development phases, the noise should be at acceptable levels. Importantly, loading and unloading activities take place during week days, usually between 8 am and 4 pm. This therefore does not pose direct noise problems for residential uses. Track traffic on and off the site may present more noise issues, and can be addressed through routing and buffer spaces.
- **Pollution and dust** – Dust forming from freight loading can create problems for adjoining areas. Given that the site is known to be windy, any immediate dust problems can be addressed by the common practice of covering (partly) the handling activity if necessary. Bulk vessels emit relatively little pollution while docked. Pollution from truck traffic poses more of a concern. A program is reportedly underway to encourage retrofitting of trucks, and a program to discourage (prohibit) idling of trucks on site is also being initiated. Cranes have already been retrofitted to reduce pollution levels. A greater problem relates to dust from the open limestone storage sites on the western edge of the site. As an interim measure any related dust problems can be reduce by temporary covers, while, as indicated later, these activities should be removed from the site at an early stage.
- **Port security** – When concentrated on the interim location, the port needs to be secured to relevant Homeland Security standards.
- **Buffer space** – Given the space required for concentrated port functions, and the expected pace of real estate development phases, it will be possible to have a sufficient buffer area between the port activities and initial development areas.
- **Access infrastructure** – Road and rail access into the port site and to the warehousing and slips able to cope with the related truck and rail traffic needs to be maintained. There are existing road access ways to the site, as well as used and unused onsite rail routes. Adequate access will need to be maintained for temporary port functions.
- **Possible constraints on port growth in the short term** – Concentrating port functions on a smaller site to accommodate the initial phases of real estate development may limit space required for further expansion of port functions and development for example of new freight types. Generally, given the time involved in such port expansion and diversification, it is probable that any short term growth in port traffic volumes in coming years can be accommodated by further intensification of the current site, while the new port facility is under construction providing for potential future expansion.
- **Functions under direct control** – Most of the port functions on the site are under the direct control of the port Authority. These functions and related facilities are able to be

relocated under direct decision and control of the CCCPA. The port functions on the western edge of the site however are conducted under two lease agreements – one an annually renewed lease, and the other a long term lease. Regarding the long term lease, this lease may need to be prematurely ended to relocate these activities should market pressure for development on the western edge be realized sooner than anticipated. A legal assessment should be made about the options for breaking the lease, and this may require consideration of provision of an alternative location.

An indicative Phasing Plan would focus on initial stages of development

A potential approach to a phased port consolidation is presented in the table below (Figure 81). In this scheme the port functions are relocated to the Interim Port site in three steps. After step 1 the Real Estate development can be started. During each step of the port relocation, the development of the real estate can be expanded. The port functions shall remain on the Interim Port site until the new port site is constructed. The details of the scheme are set out below including a figure marking each step and site.

Figure 81: Indicative 20 year phasing plan

Years	Waterfront Real Estate Development		Port Functions on Waterfront Site	New Port Facility
~1	General project and site preparation		Relocate Port Activities on A and B to Interim Port Site	
1 – 2	Initiate development of North-Eastern sector, site Real Estate site A		Exit western perimeter lease and remove open ground storage / cement silos	
3 – 5	Real Estate site A development	Preparation of site Real Estate B & C	Relocate Port Activities on C to Interim Port Site	Construction
5 – 10	Development of Real Estate site B	Development of Real Estate site C	Port Functioning on Interim Port Site	Construction
10 – 15	Continuation of development Real Estate site B and C		Phased relocation to New Port Site	New Site Available
15 +	Preparation and development of vacated Interim Port Site			Further port expansion

Figure 82: Port activity consolidation plan



APPENDIX D: REAL ESTATE DEFINITIONS

ADR (Average Daily Rate) - One of the commonly used financial indicators in the hotel industry to measure how well a hotel performs compared to its competitors and itself (year over year). The number represents the average rental income per occupied room in a given time period. ADR along with the property's occupancy are the foundations for the property's financial performance. The ADR can be calculated by dividing the room revenue by the number of rooms sold.

BUA (Built-Up Area) - The built-up area refers to the entire area of the floor including carpet area, walls, lobbies and corridors, atrium areas and basement.

CAM (Common Area Maintenance) - Common areas include hallways, pathways and utilities. CAM fees are collected by the landlords from the tenants to cover maintenance, property taxes and insurance in the case of Triple Net Lease.

Capitalization Rate (or Cap Rate) - The capitalization rate is the return on investment on the property. Capitalization rate is measured by the formula: Purchase Price / Net Operating Income from the Property.

Cash on cash - It is the annual percentage return of your down payment not including appreciation. It is the first year's cash flow divided by your initial down payment.

Debt Service - The payments consisting of amortization and interest on a loan.

Discount Rate - The interest rate used in determining the present value (PV) of future cash flows. For example, let's say you expect \$1,000 dollars in one year's time. To determine the present value of this \$1,000 (what it is worth to you today) you would need to discount it by a particular rate of interest (often the risk-free rate but not always). Assuming a discount rate of 10%, the \$1,000 in a year's time would be the equivalent of \$909.09 to you today ($1000/[1.00 + 0.10]$).

DSCR (Debt Service Coverage Ratio) - The ratio of cash available for debt servicing to interest, principal and lease payments. It is a popular benchmark used in the measurement of an entity's (person or corporation) ability to produce enough cash to cover its debt (including lease) payments. The higher this ratio is, the easier it is to obtain a loan. The phrase is also used in commercial banking and may be expressed as a minimum ratio that is acceptable to a lender; it may be a loan condition or covenant. Breaching a DSCR covenant can, in some circumstances, be an act of default.

FAR (Floor-Area Ratio) or Floor Space Index (FSI) - The ratio of the total floor area of buildings on a certain location to the size of the land of that location, or the limit imposed on such a ratio. The Floor Area Ratio is the total building square footage (building area) divided by the site size square footage (site area). As a formula: Floor Area Ratio = (Total covered area on all floors of all buildings on a certain plot)/(Area of the plot). Thus, an FSI of 2.0 would indicate that the total floor area of a building is two times the gross area of the plot on which it is constructed, as would be found in a multiple-story building.

GLA (Gross Leasable Area) - This is the Gross Leasable Area or the total rentable area. This is the area that can be leased out for rental income. This does not include spaces for elevators, utilities room etc.

IRR (Internal Rate of Return) - Rate of return used in capital budgeting to measure and compare the profitability of investments. It is also called the discounted cash flow rate of return (DCFROR) or simply the rate of return (ROR). The term internal refers to the fact

that its calculation does not incorporate environmental factors (e.g. the interest rate or inflation). $IRR > \text{Discount Rate}$

Leverage - The use of borrowed funds to complete an investment transaction. The higher the proportion of borrowed funds used to make the investment, the higher the leverage and the lower the proportion of equity funds.

Mortgage Constant - The total annual payment of principal and interest (annual debt service) on a level-payment amortized mortgage, expressed as a percentage of the initial principal amount of the loan.

MV (Market value) - Valuation process evaluates the market value of the property. Demand and supply forces in the market and factors like type of property, quality and construction, its location, infrastructure and available maintenance are taken into consideration. Market value of the property is the price that the property commands in the open market.

NOI (Net Operating Income) - Net Operating Income is the annual income after deducting from gross income the operating expenses, including property taxes; insurance; utilities; management fees; heating and cooling expenses; repairs and maintenance; and replacement of equipment - but excluding mortgage payments.

NPV (Net Present Value) - Defined as the total present value (PV) of a time series of cash flows. It is a standard method for using the time value of money to appraise long-term projects. Used for capital budgeting, and widely throughout economics, it measures the excess or shortfall of cash flows, in present value terms, once financing charges are met. $NPV > 0$

Recapture Rate - The annual rate at which capital investment is returned to an investor over a specified period of time; the annual amount, apart from interest or return on interest (compound interest), that can be recaptured from an investment. Also called capital recovery rate.

RevPAR (Revenue Per Available Room) - Also a commonly used financial indicators in the hotel industry to measure how well a hotel performs compared to its peers. Calculated: $\text{RevPAR} = \text{Room Rev} / \text{Rooms Available}$

Retail product types are divided accordingly:⁴⁶

- **General Retail:** Typically are single-tenant freestanding general purpose commercial buildings with parking. Many single retail buildings fall into this use code, especially when they do not meet any of the more detailed use code descriptions.
- **Mall Market:** The combined retail center types of **Lifestyle Center** (an upscale, specialty retail, main street concept shopping center. An open center, usually without anchors, about 300,000 square feet GLA or larger, located near affluent neighborhoods, includes upscale retail, trendy restaurants and entertainment retail. Nicely landscaped with convenient parking located close to the stores). **Regional Mall** (provides shopping goods, general merchandise, apparel, and furniture, and home furnishings in full depth and variety. It is built around the full-line department store with a minimum GLA of 100,000 square feet, as the major

⁴⁶ Marcus & Millichap Cleveland Retail Research 2Q2009.

drawing power. For even greater comparative shopping, two, three, or more department stores may be included. In theory a regional center has a GLA of 400,000 square feet, and may range from 300,000 to more than 1,000,000 square feet) and **Super Regional Mall** (regional centers in excess of 750,000 square feet GLA with three or more department stores).

- **Power Center:** The center typically consists of several freestanding (unconnected) anchors and only a minimum amount of small specialty tenants. 250,000 – 600,000 square feet. A Power Center is dominated by several large anchors, including discount department stores, off-price stores, warehouse clubs, or "category killers," i.e., stores that offer tremendous selection in a particular merchandise category at low prices.
- **Shopping Center:** The combined retail center types of **Community Center** (a shopping center development that has a total square footage between 100,000 – 350,000. Generally will have 2-3 large anchored tenants, but not department store anchors. Community Center typically offers a wider range of apparel and other soft goods than the Neighborhood Center. Among the more common anchors are supermarkets and super drugstores. Community Center tenants sometimes contain retailers selling such items as apparel, home improvement/furnishings, toys, electronics or sporting goods. The center is usually configured as a strip, in a straight line, or an "L" or "U" shape), **Neighborhood Center** (provides for the sales of convenience goods (food, drugs, etc.) and personal services (laundry, dry cleaning, etc.) for day-to-day living needs of the immediate neighborhood with a supermarket being the principal tenant. In theory, the typical GLA is 50,000 square feet. In practice, the GLA may range from 30,000 to 100,000 square feet), and **Strip Center** (an attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the storefronts, but a strip center does not have enclosed walkways linking the stores. A strip center may be configured in a straight line, or have an "L" or "U" shape).
- **Specialty Center:** The combined retail center types of **Airport Retail, Outlet Center** (usually located in a rural or occasionally a tourist location, an Outlet Center consists of manufacturer's outlet stores selling their own brands at a discount. 50,000 – 500,000 square feet. An Outlet Center does not have to be anchored. A strip configuration is most common, although some are enclosed malls and others can be arranged in a village cluster), and **Theme/Festival Center** (these centers typically employ a unifying theme that is carried out by the individual shops in their architectural design and, to an extent, in their merchandise. Sometimes the biggest appeal of these centers is to tourists; they can be anchored by restaurants and entertainment facilities. These centers, generally located in urban areas, tend to be adapted from older, sometimes historic, buildings, and can be part of mixed-use projects. 80,000 – 250,000 square feet).

APPENDIX E: BIBLIOGRAPHY

- “Cleveland Industrial Market.” *The CoStar Industrial Report*. First Quarter (2009): 1-35. PDF file.
- “Cleveland Office Market.” *The CoStar Office Report*. First Quarter (2009): 1-37. PDF file.
- “Cleveland Retail Market.” *The CoStar Retail Report*. First Quarter (2009): 1-36. PDF file.
- Alsenas, Paul. Director, Cuyahoga County Planning Commission. Personal interview. 12 May. 2009.
- Benmerzouga, Asmaae. “Cleveland, Ohio Office.” *Colliers Ostendorf-Morris Market Research*. First Quarter (2009): 1-5. PDF file.
- Browning, David. “Northeast Ohio Retail Report.” *CB Richard Ellis Special Report*. 2009: 1-7. Print.
- Browning, David. Managing Director, CB Richard Ellis. Personal interview. 12 May. 2009.
- Carney, John J. Developer. Personal interview. 12 May. 2009.
- Clemmer, Greg. “Cleveland Metro Area.” *Marcus & Millichap Cleveland Retail Research Market Update*. Second Quarter (2009): 1-4. PDF file.
- Eichel, Alona. “Cleveland Apartment CBD Submarket Edition.” *Property and Portfolio Research Submarket Fundamentals*. First Quarter (2009): 1-7. PDF file.
- Eichel, Alona. “Cleveland Apartment Edition.” *Property and Portfolio Research Market Performance*. First Quarter (2009): 1-6. PDF file.
- Eichel, Alona. “Cleveland Office CBD Submarket Edition.” *Property and Portfolio Research Submarket Fundamentals*. First Quarter (2009): 1-8. PDF file.
- Eichel, Alona. “Cleveland Office Edition.” *Property and Portfolio Research Market Performance*. First Quarter (2009): 1-6. PDF file.
- Eichel, Alona. “Cleveland Retail Edition.” *Property and Portfolio Research Market Performance*. First Quarter (2009): 1-6. PDF file.
- Eichel, Alona. “Cleveland Warehouse Edition.” *Property and Portfolio Research Market Performance*. First Quarter (2009): 1-6. PDF file.
- Fleischer, Alan. Owner, Motherlode. Personal interview. 12 May. 2009.
- Janik, Deb. Senior Vice President – Real Estate & Business Development, Greater Cleveland Partnership. Personal interview. 12 May. 2009.
- Lammon, Mark. Special Projects Manager, Downtown Cleveland Alliance. Personal interview. 12 May. 2009.
- Nosal, Bob. “Office Market Trends Cleveland.” *Grubb & Ellis Research*. First Quarter (2009): 1-2. PDF file.
- O’Neill, David. Managing, Director, Colliers Ostendorf-Morris. Personal interview. 12 May. 2009.

Reitman, Michele; Moore, Ross. "A Survey of Commerical Real Estate Markets." *Colliers International 2009 U.S. Real Estate Review*. 2009: 1-79. PDF file.

Other sources include:

- U.S. Census Bureau, 2005-2007 American Community Survey
- S&P/Case Shiller Index
- Freddie Mac Conventional Home Price Index (CMHPI)
- Freddie Mac Growth Rates
- Participation List - Cleveland CBD/Independent Tract, Smith Travel Research
- Hotel & Leisure Advisors
- Positively Cleveland