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Manufacturing Prosperity: Evaluating the Rehabilitation of Industrial Complexes

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**MANUFACTURING PROSPERITY:
EVALUATING THE REHABILITATION OF
INDUSTRIAL COMPLEXES**

Katie Spencer Milgrim

A THESIS

in

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in
Partial Fulfillment of the Requirements of the Degree of
MASTER OF SCIENCE IN HISTORIC PRESERVATION
2010

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The lights are once again on in many beautiful old industrial buildings. This thesis is dedicated to the people who have made that possible.

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I. INTRODUCTION

Numerous historic preservation projects have developed innovative partnerships, stimulating a variety of activities including economic development, heritage tourism, downtown development, and alternative transportation modes, all fostering community planning and development strategies with historic preservation at its core—essentially using historic preservation to create community and economic development.

*Forum Journal, "Transforming History into Economic Development"*¹

The American downtown is being rebuilt. Half a century of sprawl-inducing policies are being revamped or replaced to refocus attention on urban cores with the goal of encouraging people, businesses, and capital to remain in or return to these re-emerging markets. Today, enormous attention is being paid to cities and, in particular, post-industrial cores that are forced to reconcile with a loss of traditional, middle class, manufacturing jobs. Many American neighborhoods have experienced significant divestment and population decrease over the past half century as a result of these job losses. As industries that had flourished during the nineteenth and twentieth centuries closed or relocated, those with the resources to move did. A vacuum remained. Nevertheless, this vacuum is not without its own resources: a workforce in need of jobs and skills and many historic buildings. Rehabilitating historic industrial buildings has proven to be an effective way to leverage these resources in the support of economic development.

¹ Hunter, Craig, "Transforming History into Economic Development," *Forum Journal*, Summer 1995, Vol. 9, No. 4

Many precedents for the rehabilitation and reuse of industrial buildings for new business ventures exist. Cities like New York, Philadelphia, and Los Angeles have witnessed the creative classes' positive effects to this end. Light industrial and manufacturing endeavors have sprouted up at grassroots levels to fill a need for urban industrial spaces. Neighborhoods like these, where industrial activities have historically thrived, are commonly in central locations and benefit from sizable workforces, and inexpensive real estate make them attractive places for a variety of types of businesses. Small businesses especially benefit from sharing space and being near other businesses in the same industry, forming an incubator. These are central locations where interested parties may benefit from collaboration, co-location, and shared resources (educational, technological and infrastructure).

Introduction to Topic

This summer, I became interested in the rehabilitation of older industrial buildings for new industrial purposes. The Goodyear Industrial Tract, a 200-acre industrial enclave in South Los Angeles, was completed in 1919 and housed inventory and support services for the Goodyear Tire & Rubber Company until the 1950s. As Goodyear's operations there dwindled, the company began selling off the property, which brought a mix of industrial businesses to the campus. Today, it houses hundreds of industrial businesses, particularly within the furniture and garment industries. The affordability of the space (new buildings cost substantially more) and the use of historic industrial buildings for small businesses in an area desperate for jobs piqued my interest. I became curious

about how other historic industrial buildings around the country were being used and why. I began thinking about eighteenth and nineteenth century manufacturing buildings that have been rehabilitated into apartments or condominiums, with some cases of commercial office space. I wondered what effect policies and incentives (such as the Federal Rehabilitation Tax Credit) have had on how industrial buildings get adaptively reused. Specifically, what effect have national and regional (state and municipal) policies and incentives had on the large scale repurposing of industrial and manufacturing buildings? The need for middle-class jobs in combination with the inventory of older industrial buildings initially led me to the theory that public incentives and policies should favor adaptive reuse projects that retain or reintroduce industrial uses. In other words, new manufacturing businesses should almost always be encouraged to move into old manufacturing buildings.

However, I discovered a few significant problems with this: first, many older industrial buildings have required significant alterations in order to remain functional, this has stripped away a lot of the historic integrity, making them ineligible for nomination to the National Register of Historic Places. A building's eligibility for most incentives depend on its being listed on the National Register of Historic Places, with the exception of the 10 percent Federal Rehabilitation Credit.² Second, the demand for industrial space is much less than it was 50 or 100 years ago. Not only are there fewer manufacturing businesses, but the ones that still exist require less or different space. The demand for

² The 10% Federal Rehabilitation Tax Credit is available for non-historic properties built prior to 1936 that are being adapted to non-residential uses (not including hotels).

industrial real estate simply is not great enough to absorb all of the new and old industrial and warehouse space that is available. Therefore, while it is preferable, maintaining an industrial use in rehabilitated industrial buildings may not be the sole possible approach.

Another complicating factor is the fact that industrial buildings may be divided into two categories: individual buildings and large complexes. In many ways, these large industrial complexes are like campuses in that they feature a variety of architectural types and may have been self-contained neighborhoods in the years during their operation. Naturally, when these large campuses become vacant, their power to negatively impact the surrounding neighborhoods is correspondingly significant.

Redevelopment and historic rehabilitation are inter-related pursuits, and both are critical to the revitalization of industrial campuses. The incentives used by each field are different and focus on different parts of the overall goal. Redevelopment incentives often focus on attracting businesses, while preservation incentives deal with the treatment of the building. It is the goal of this thesis to **identify and evaluate the most effective strategies for rehabilitating industrial campuses into successful mixed-use developments**. These strategies include partnerships, incentives, and policies.

Methodology

My research has focused on the variety of public interventions available for the rehabilitation of industrial buildings in the United States and the private investment they helped attract, highlighting specific cases where large industrial complexes have been redeveloped into successful, mixed-use campuses. Increasingly, cities and their redevelopment authorities are focusing resources on the rehabilitation of historic industrial campuses. The resulting rehabilitation projects have produced an interesting variety of results.

These projects are important because they provide clear evidence of the power of historic rehabilitation to create outstanding communities. Around the country, cities are seizing opportunities to leverage current underutilized, historically significant buildings to provide new economic opportunities while promoting cultural heritage. Not only have these projects saved cultural resources from demolition, but they have spurred economic growth, pioneered smart growth initiatives, and created beautiful public spaces.

To identify the most effective tools available for rehabilitating industrial campuses, it is necessary to first understand the different methods being used. My process has included:

- Assessing Adaptive-Reuse as a preservation strategy;

- Researching the policies and incentives effecting the rehabilitation of industrial campuses;
- Analyzing the rehabilitation of the Philadelphia Navy Yard, The Yards in Washington D.C., and the American Tobacco Company in Durham; and
- Identifying what is effective and areas for improvement.

II. LITERARY REVIEW

The built environment reflects the values and aspirations of a society, embodying meaning beyond mere aesthetics. They are the spaces in which we live, work, and entertain ourselves; their forms reveal the history of these activities. If architecture is, as Sigfried Giedion said, “the unmistakable index to what [is] really going on in any period in history,” then industrial architecture illustrates how many of those people made a living.³ Giedion’s *Mechanization Takes Command* supports this assertion through its investigation of the ways in which we have shaped our world through technology.

The historic built environment stands as a record of who we are, as a people, and how we have reached this point in time. If monuments and institutional buildings convey what we wish to be, then industrial buildings show how we have tried to achieve it. Where and how we manufacture our world speaks volumes about who we are, and embodies national identity. The industrial architecture of the last century and up until the First World War especially achieves this, with designs developed to house the specialized processes of the industrial revolution. Rapid advances during the industrial revolution boosted productivity and created a middle class. Businesses grew, leaving

³ Sigfried Giedion, *Space, Time, and Architecture: The Growth of a New Tradition* (Cambridge, MA: Harvard University Press, 1941) p 19-20.

their mark in the form of a fascinating array of industrial architecture across the United States.⁴

While the preservation and rehabilitation of industrial architecture faces challenges similar to other building types, many are in fact unique to industrial buildings. In addition to issues common to other older buildings such as obsolescence and cost to rehabilitate, industrial sites may face additional challenges, like contamination with hazardous materials from their prior use. Many industrial buildings were “built-to-suit” a particular business; when the business left, a new user for the building was not readily available. The result is that many industrial buildings currently sit empty. Decayed and vacant, these factories are the embodiment of unemployment, poverty, and failure. Nevertheless, they typically possess unique assets such as large floorplates, high ceilings, structural capacity (ability to bear heavy loads), and day-lighting. These assets should be leveraged in the pursuit of industrial buildings’ reuse. Drawing on existing assets is a powerful tool cities have to spur reinvestment.

Early Industrial Architecture

The earliest manufacturing was done at home; agricultural work was done on one’s own land. Manufactures were the earliest standardized workshop sites, different from traditional workshops because they housed production as well as storage, trading activities, and dwellings. Early architectural theorists wrote that *manufactures* or

⁴ Walter F. Peterson, *An Industrial Heritage* (Milwaukee: Milwaukee County Historical Society, 1978)

factures (factories) should be simple, solid, and sited on the periphery of town usually near a river. Nikolaus Pevsner traces Anton Koberger's fifteenth century printing factory in Nuremberg as one of the first examples of a factory.⁵ It had twenty-four presses and over one hundred employees.

As these industries emerged and matured, so did the architecture housing them. Special equipment, large workforces, and logistical needs drove the development of industrial architecture. The factory was developed as a social, organizational, and architectural model⁶. The mills of the northeast are famous for the campus-like setting and lifestyle provided for (or imposed upon) their workforces.⁷ They were built on waterways whose currents powered machinery. Steam-powered turbines liberated factories from locational constraints and permitted them to locate in cities where labor pools were largest. Factories became part of the urban ensemble; their architecture was a way to convey certain messages about the company and the activities the building housed. Business owners chose to build in classical styles, hoping to alleviate fear and anxiety through familiar associations that symbolized continuity and high purpose. The Albion Mill (London, 1786) is one of the earliest examples of this. In the United States, American factories remained somewhat spare until about 1900, when the City Beautiful movement and welfare capitalism combined to produce beautifully ornamented and

⁵ Nikolaus Pevsner, [A History of Building Types](#) (London: [Thames and Hudson, 1976](#)) p175-176.

⁶ Gillian Darley, [Factory](#) (Cambridge: Reaktion Books, 2003) p8.

⁷ Wallace, Kim E., ed. [The Character of a Steel Mill City Four Historic Neighborhoods of Johnstown, Pennsylvania](#) (Washington, D.C.: National Park Service, 1989)

highly styled buildings.⁸ It was the welfare capitalism movement that spread the practice of offering benefits in addition to money to employees, usually health care, and sometimes housing, social clubs, and education.

Long-time editor of the *Architectural Review*, J.M. Richards describes industrial architecture in terms of a *Functional Tradition*. More than any other building type, its form is an expression of its function. This is one reason for the inherent difficulty of rehabilitating industrial buildings. It requires finding a new use for a building which was built to house activities that no longer exist. In addition, because many industrial activities have left behind contaminants that require a long and expensive mitigation process, rehabilitating industrial buildings often means addressing environmental contamination issues. While resources exist for the assessment and clean-up of these sites, many building users do not want the added and often unpredictable work necessary to clear the building for occupancy. Most of these projects require a level of public intervention to facilitate bringing them back into service.

While some industries have been able to retrofit their buildings and continue to use them for over a century⁹, more typically it is difficult to accommodate necessary upgrades in others. The size of bays and expanse between columns restrict the activities that can occur inside. Challenges posed by obsolescence are compounded by

⁸ Aaron Wunsch, PhD, Personal Interview, January 7, 2010

⁹ Nichols and Stone is one such business. It is a furniture factory in New York that has been operating in the same building since 1857.

the fact that many industries no longer exist in this country; as technologies change the spaces needs for new businesses change as well.

Nevertheless, these buildings can still house a variety of activities. Many older industrial buildings have floor plans that may be partitioned, making them flexible. In addition, most were planned for very intensive uses, with allowances of up to 1000 pounds per square foot or more for uniformly distributed loads, much higher than modern buildings designed to house heavy industry (250 pounds per square foot). Additionally, these buildings were built in dense parts of cities, where supporting infrastructure and transit services make prime locations for development.

Adaptive Reuse

Given the importance of preserving industrial architecture and the inherent challenges of doing so, adaptive reuse of historic buildings is frequently adopted as a preservation strategy. Adapting older buildings to new uses is one way to offset the cost of rehabilitation and maintenance. Nevertheless, the decision to do so has important consequences. A value decision is made when an industrial building or complex is redeveloped into something other than a place for industry. The majority of literature in favor of the practice has an air of creative destruction. It accepts, if not embraces, the apparent necessity of shedding the former life of the building so that newer, nobler

purposes can be pursued: urban redevelopment, job creation, community reinvestment.^{10 11}

Academic literature is more critical of adaptive reuse, and addresses the topic of continuity of use.^{12 13} The preservation theory cited in these critiques holds that the best projects are those that bring new industrial purposes into old industrial buildings, thereby preserving use as well as architecture.¹⁴ There are a small number of cases where this has been possible, like the Frankford Arsenal (Bridesburg, Philadelphia) and the Greenpoint Manufacturing and Design Center (Brooklyn, New York City). The minimal improvements required by the small businesses and start-ups occupying these buildings keep costs down and rents affordable. However, the success of these and similar cases are unique and rare. There are simply not enough small industrial businesses to support the existing building stock, and medium and large businesses require specialized spaces.¹⁵

¹⁰ Randolph Langenbach, *A Future from the Past*, Washington: U.S. Dept. of Housing and Urban Development, 1978.

¹¹ Patrik Jonsson, "Old Mills Hum with New Uses," *The Christian Science Monitor*, 2002.

¹² John Ruskin was the most outspoken opponent of the repair or treatment of historic architecture, which he described as "a destruction accompanied with false description of the thing destroyed." John Ruskin. *The Seven Lamps of Architecture*. (New York: Dover Publications, [1880] 1989). p 194

¹³ U.S. Scientific Committee for the Inter American Symposium on Authenticity, ICOMOS U.S. "Evaluating Authenticity: Reflections Based on the U.S. Experience", Section III: Linking Values: Authenticity and Management, 1996.

¹⁴ Virginia Croft, *Recycled as Restaurants: Case Studies in Adaptive Reuse*.

¹⁵ There are fewer than 7,500 industrial businesses with 100 employees or less. (U.S. Small Business Administration. "Table of Small Business Size Standards Matched to North American Industry Classification System Codes," 2009)

As the U.S. economy continues to shift away from manufacturing and towards service-based industries, demand for industrial real estate will likewise shift. There is a glut (8.6 million square feet) of industrial real estate in the United States. This space will either need to be repurposed, be absorbed by the marketplace (as the economy grows or recovers), or be demolished. This makes repurposing a necessary consideration for the rehabilitation of historic industrial buildings. There are successful examples of the adaptive reuse of industrial buildings explored later in the paper.

Industrial buildings, especially large complexes, are particularly well-suited for mixed-use developments. This is because many of these facilities were built as campuses in which a variety of activities took place. The campus-like quality of large industrial complexes has, or can be made to have, pedestrian-friendly site plans. Appealing circulation, pedestrian scale, and a variety of buildings types and sizes are designed to house a number of different functions. In addition, workforce housing was very often developed in close proximity to these factory sites, putting many of them in neighborhoods with strong infrastructure and good support systems such as transit, power grids, and highways. The surrounding dense urban fabric puts many of these buildings in locations that can support growth.

Nevertheless, industrial architecture faces different preservation hazards than other building types. Besides the usual obsolescence issues faced by older buildings, industrial buildings must contend with the effects that technology has on manufacturing and the

types of spaces needed for businesses. Robert Kronenburg's *Spirit of the Machine* traces the parallel development of technology and architecture, establishing this fact. The destruction of factories like Schmidt's Brewery (built 1892, Philadelphia, Pennsylvania) and the Great Western Sugar Factory (built 1901, Loveland, Colorado) attest to this. Each fell with the decline of, or shifts within, their industries.

Changes in technology and the growth of globalization have changed the business and manufacturing landscape in America, leaving millions of square feet of vacant industrial property. In a 2009 Industrial report, Cushman and Wakefield's market research identified 843.6 million square feet of vacant space¹⁶. It is reasonable to infer that in older cities like Philadelphia and Chicago, where at least 15 percent of the building stock was built prior to 1939, a significant portion of vacant industrial space is also historic.

A significant amount of literature has been published in Great Britain discussing the adaptive reuse of industrial buildings. Many of the examples given involve new business uses. A significant number of these books were published in the 1970s, a time when policies and financial incentives were aligned in Britain to support the private development of these properties, whether for profit or non-profit purposes. Adaptive reuse in the United States on the other hand has followed a different trajectory.

¹⁶ Cushman Wakefield, Marketbeat: United States Industrial Report, 2009

Rehabilitation Incentives

The country's most powerful financial incentive for historic rehabilitation is the Federal Rehabilitation Tax Credit. The program offers two credits: 10 and 20 percent. Both are percent allocations based on the total qualified costs of approved rehabilitations for income-producing properties. To be eligible for the 20 percent tax credit, the building must be a "certified historic structure", meaning that it falls into at least one of the following categories: listed on the National Register individually, listed as a contributing building in a Historic District, or listed individually or as a contributing building in a local district of a Certified Local Government. All work must conform to the Secretary of the Interior's Standards for the Rehabilitation to ensure that a high level of preservation occurs.

The 10 percent Federal Rehabilitation Tax Credit is available for non-historic buildings built before 1936 that, while they do not need to conform to the same standards as historic rehabilitations, must meet certain guidelines. These guidelines include keeping at least 50 percent of the exterior walls of the structure as external walls, at least 75 percent of the extant exterior walls, and at least 75% of the extant interior structural framework. The 10 percent credit may not be used on residential properties, but can be applied to mixed-use projects as long as the revenue generated by the residential portion of the project is less than 80 percent of the project's total annual gross revenue.

It is the building and not the developer that determines whether the 10 or 20 percent credit would be most appropriate. The building's age (if it was first put into use after 1936) and presence on the National Register will preclude it from being eligible for the 10 percent credit. The converse is also true: if an older building does not retain enough of its historic fabric to be listed on the National Register, it is not considered historic and is therefore ineligible for the tax credit.

It is ironic that the buildings that have been most successful in adapting to change have been effectively shut out of the most successful preservation incentive (the 20 percent credit). There is an argument to be made for preserving these less well-preserved, "working" buildings, especially because they have been in service for so long. Building updates and retrofits that have altered or removed significant amounts of character-defining features negatively affect eligibility for the National Register. Many local governments look to this register to determine a building's eligibility for listing on their own registers. Some municipal and state programs employ more lenient qualifications, instead choosing to focus on what occurred at the location as opposed to the quality of the evidence.

In order to direct redevelopment towards focused sectors, states have created their own incentives, the most common of which is a state tax credit. It is commonly said that preservation is done at a local level; this makes state-based incentives potentially better suited to the needs of their jurisdictions but perhaps less potent in that state tax

liabilities are often less financially meaningful than federal liabilities. These programs frequently use eligibility for or presence on the National Register as a requirement. However, income producing status is usually not a factor determining eligibility. Instead, states maintain control over how funds are awarded through matrices that prioritize projects based on type or location. This produces interesting results that will be explored by this report.

In North Carolina, for example, developers, residents, and mill owners have taken the initiative in finding new uses for the state's vacant mills. The state has been crushed by the death of the American textile industry, once its largest job sector. Through the creation of a tax credit tiered according to location, the state has successfully directed private investment with great precision. There is a 30 percent credit for non-income producing properties (including owner-occupied housing), as well as a 20 percent credit for income-producing properties which may be "twinned" with the federal tax credit. Additionally, the state offers grants for pre-development (such as feasibility studies) and development. The state has also created a building code that historic properties may use in lieu of the local code, called the "Green Sheet."

These incentives attract private investors willing to assume the risk associated with redeveloping these properties. Through careful analysis, these investors determine the most attractive new uses for these locations. Leveraging public money for private

investment is an efficient way to conduct redevelopment. The private sector can operate more efficiently, benefitting from experience and expertise.

Many new businesses in North Carolina have replaced one type of industry with another, including manufacturing baby furniture, automobile alternators, and even growing mushrooms.¹⁷ While the new businesses bring economic opportunities back, seeing what was once a symbol of failure reused has had a transformative effect on these neighborhoods.

While older industrial buildings have many inherent traits making them attractive for reuse, hurdles exist that require the intervention of the public sector. Lack of information, (real or imagined) and negative perceptions lead to a higher cost of capital for these projects.¹⁸ Historic preservation is a tool for active reuse of older buildings and toward economic development. The inclusion of the provision for the Federal Rehabilitation Tax Credit in the Economic Recovery Tax Act (1977, reauthorized 1986) is an indication of the role that officials believed historic buildings could play in the economic recovery of older cities. This legislation has led to the creation of over 187,000 housing units, an average of 55 jobs per project, and over 50 billion dollars worth of private investment since its start in 1977.¹⁹ The success of this program has led to localized incentives and policies designed to assist projects in managing the financial gap that frequently exists when undertaking a rehabilitation project. Tax

¹⁷ Patrik Jonsson, "Old Mills Hum with New Uses". The Christian Science Monitor. July 30, 2002.

¹⁸ Sammis White et.al., Financing Economic Development in the 21st Century. (New York: M.E. Sharpe, 2003).

¹⁹ National Park Service Statistical Report and Analysis, FY 2009/2010.

credits, abatements, and increments, as well as grants, low interest loans, and loan securitization are all effective tools that have been developed.

Discussion on the topic of leveraging underutilized historic resources to catalyze growth in cities has increased in recent years, providing interesting ideas for new incentives and strategies. In May 2007, The Brookings Institution issued *Restoring Prosperity: The State Role in Revitalizing America's Older Industrial Cities*. Through each state's enabling legislation, the state has the power to "establish the rules under which local governments must operate."²⁰ The purpose of the report was to propose a framework for states to create roadmaps for redevelopment, citing the assets that many older industrial cities have as key resources. Historic buildings and landscapes were some of the most common assets discussed. Similarly, exhibits like *Shrinking Cities* (Cleveland, 2007) and the Community Design Collaborative's *Industrial Reuse* (Philadelphia, 2009-2010) focus on adaptive reuse of industrial properties as a critical element in the health of cities.

As discussed, current literature and discourse on the topic of industrial reuse focuses on it within a larger framework, as a redevelopment tool proven to be effective. What is less clear is how the interventions that have been introduced nationally and on state level have performed. By surveying existing incentives and policies, and focusing on a

²⁰ Jennifer Vey, "Restoring Prosperity: The State Role in Revitalizing America's Older Industrial Cities," (Washington, D.C.: The Brookings Institution, Metropolitan Policy Program, May 2007).pg 5

few cases in particular, I will 1. Describe how large industrial properties are preserved; and 2. Identify and evaluate the strategies for accomplishing this.

III. ADAPTIVE REUSE AS A PRESERVATION STRATEGY

American preservation standards are set on the national level by the Secretary of the Interior, which separates the treatment of historic buildings into four categories: restoration, preservation, rehabilitation, reconstruction.²¹ Preservation refers to the practice of halting degradation of the building, thus preserving the historic fabric in its current state. Restoration is similar but requires the project team to decide on a period of significance and conduct repairs and even removals to bring the building in line with that period; it may include a mixture of original and new elements that permit the building to be used as it was historically. Reconstruction is the act of replicating the appearance of an object or structure that is no longer extant through new construction. Rehabilitation is unique among these treatments in that it takes into consideration a building's functionality. The Secretary of the Interior's Standards define rehabilitation as "the process of returning a property to a state of utility, through repair or alteration."²²

The concept of use is an important one when considering the appropriateness of a preservation treatment. Though subtle, the difference between the use requirements

²¹ Secretary of the Interior's Standards for the Treatment of Historic Properties, Code of Federal Regulations; Title 68 C.F.R. Part 68, National Park Service, 1995.

²² Secretary of the Interior's Standards for the Treatment of Historic Properties, Code of Federal Regulations; Title 36, CFR 67, 1995.

under the Standards for Rehabilitation and the Standards for Restoration is what makes adaptive reuse a permissible treatment according to the Secretary of the Interior's Standards.²³ Implementation of a new use over keeping or restoring a historic use is the defining factor in whether rehabilitation will be the treatment of choice. Balancing the accommodation of an "efficient, contemporary use" while preserving the historic fabric is goal of rehabilitating historic buildings.²⁴ The process requires the identification and protection of character-defining features, and then weaving the new use into the existing building plan in a non-destructive way that also retains clarity between new and historic elements. A critical element of the rehabilitation of a historic building is thus preserving the "features which convey its historical, cultural, or architectural values"²⁵.

Almost all examples of rehabilitation are also examples of adaptive reuse. For example, even if a historic office building is being rehabilitated for use as an office building, it will not be used "as it was historically". Besides the alterations that accommodate the new use, adaptive reuse indicates that the new use is not identical to the historical one.

Historic buildings may be adapted to new uses because most have many years of useful life remaining. Rehabilitating existing older building stock is an effective and sustainable economic development tool because the benefits that it provides do not stop at the

²³ Standards for Rehabilitation state: "A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships." Standards for Restoration state: "A property will be used as it was historically or be given a new use which reflects the property's restoration period." Secretary of the Interior's Standards for the Treatment of Historic Buildings

²⁴ Code of Federal Regulations; Title 36, CFR 67

²⁵ Secretary of the Interior's Standards for Rehabilitating Historic Buildings

property line. Studies show that rehabilitation projects, on average, generate more jobs than new construction. Between 60 and 70 percent of the total cost is contributed to labor because of the intensiveness of the work and skill required.²⁶ In addition, rehabilitations often require regional materials, which “reduces the amount of energy consumed in the transportation of goods,” while supporting local businesses.²⁷ New construction often utilizes panelized and pre-fabricated components that are usually manufactured far from the construction site and require transport.

Besides their value as a redevelopment tool, historic buildings possess social, aesthetic, and historic value. Adaptive reuse of historic buildings has a transformative effect on the neighboring environment and community, offering tangible and intangible benefits.

Though many historic buildings may retain their original uses, obsolescence remains one of the greatest threats to historic buildings. If these structures are not “useful” they may face demolition²⁸. As David Lowenthal points out, “prolonged survival usually requires subsequent uses utterly unlike the original one”.²⁹ This requires a certain amount of transformability of older buildings if they are to be reused. Some building types are easier to adapt than others; this is why adaptive reuse is not always a simple

²⁶ Donovan Rypkema, Economics of Historic Preservation (Washington, D.C.: National Trust for Historic Preservation, [1994] 2008) p 12.

²⁷ Nancy Solomon, “Tapping the Synergies of Green Building and Historic Preservation,” (Architectural Record, July 2003) p 2.

²⁸ Though vague, I have selected “useful” intentionally here. It is up to communities to find uses for their historic architecture, saving their built heritage depends on it.

²⁹ David Lowenthal, The Past is a Foreign Country. (Cambridge: Cambridge University Press, 1985) p289.

solution to the problem of protecting historic architecture. Financial incentives exist to compensate for these challenges, as well as to spur private investment in these projects. Preservationists are charged with conserving not only the physical resource itself, but also a certain amount of its context. This may be manifest in the form of setback or stepped-height requirements, regulation of neighboring uses, or design guidelines effecting nearby non-historic buildings. The Getty Conservation Institute's *Values and Heritage Conservation* describes the importance of an integrated, interdisciplinary approach to the preservation of the built environment.³⁰ The historic resource's relationship to its surroundings is an important source of its meaning, which does not end at its lot lines. The building's context is part of its value, part of a neighborhood landscape that is more than the sum of its parts. However, there are cases where new contexts may be accepted and encouraged, as a historic building (or complex of buildings) is reborn into a new use.

In the case of the rehabilitation of industrial campuses, I have accepted context as the relationship of the buildings to one another, to the streets, and other public areas. Because the work previously done in these factories has disappeared, some context has been replaced by the new activities and uses occurring in these places. In the case of urban redevelopment projects, which each of my case studies are, I believe it is

³⁰ Erica Avrami, Randall Mason, and Marta de la Torre, Values and Heritage Conservation: Research Report. (Los Angeles: The Getty Conservation Institute, 2000).

reasonable to choose open space and amenities to encourage a new context, one of public engagement.

Another challenge with adaptive reuse is that it overwrites the building's original use, thereby potentially destroying some of the structure's significance or meaning. Assuming that the original use of the building no longer exists and that a new use cannot be introduced for whatever reason, two options remain for the building: allowing the structure to fall into a state of ruin, or preserving it in time as a museum. The former is a Ruskin-esque argument in favor of abandoning the site to the forces of nature, not intervening with anachronistic repairs. The latter favors a preservation approach, which prioritizes the physical fabric of the building.

The first of the Secretary of the Interior's Standards for Rehabilitation provides the option of either selecting a new use that "requires minimal change to the defining characteristics of the building" or using the building for its originally intended purpose.³¹ The idea is that a sympathetic or appropriate use would reduce the amount of change necessary to a building's distinctive materials and features. The only mention of "use" in the Secretary of the Interior's Standards, this guideline simultaneously addresses the desirability of the continuity of use and the necessity for change. It is a guideline that sums up preservation's attempts at managing change while protecting the past. This is further underscored by subsequent Guideline Four, which acknowledges that "most

³¹ Code of Federal Regulations; Title 36, CFR 67

properties change over time,” then states that evidence of these changes should be acknowledged and retained.³²

Interventions impact how a historic building is perceived or interpreted. The best rehabilitation projects refrain from offering a clear interpretation of the building’s invisible history and instead simply preserve the building’s character-defining features for the public to interact with in their own way. Meaning is subjective and changes with time, therefore interpretation is best left up to the individual. The building’s context and sense of place should not be sacrificed during the rehabilitation. The best rehabilitation projects preserve the possibility of reinterpretation of the building. Adaptive reuse is a particularly thorny area of preservation, yet is a practical solution to the issue of obsolescence. In addition to being a preservation strategy, it offers social, environmental, and economic benefits.

Social Benefits

Blight and abandonment have a detrimental effect on communities. The now-famous “broken-window theory” proved what seems instinctive: that degradation of a neighborhood has a catalytic effect, leading to more abandonment and destruction. However, the opposite is also true. Revitalization efforts can transform neighborhoods.

³² Ibid.

Vacancies have a negative psychological effect on a community. Often symbols of unemployment and poverty, they represent abandonment if not hopelessness. Blighted areas may also attract dangerous and illegal behavior. Post-industrial cities frequently suffer from vacancies that are the result of businesses moving. Empty factories, are a particularly visible reminder of the community's loss.³³ Rehabilitating these sites sends a signal to the community that new opportunities are coming, that their city can adapt and grow. By leveraging historic resources, cities have the power to strengthen and revitalize themselves. Rehabilitation of historic buildings has a counter-cyclical effect, leading to stabilization.

Environmental Benefits

In almost every country, what Americans call historic preservation is referred to as conservation. This is perhaps a more apt word given that the act of saving old buildings conserves cultural identity, history, and physical resources. Adaptive reuse recycles buildings, and when this is done with sensitivity towards the historic fabric (as outlined by the Secretary of the Interior's Standards), the heritage value is also conserved. In this sense, the rehabilitation of historic buildings is sustainable development; it "meets the needs of the present without compromising the ability of future generations to meet their own needs."³⁴

³³ Domino Sugar (Long Island City, New York), Bethlehem Steel (Bethlehem, Pennsylvania), and Pittsburgh Steel (Pittsburgh, Pennsylvania) are examples of large, historic industrial complexes that are highly visible to their cities.

³⁴ Brundtland Commission (World Commission on Environment and Development) first used this definition at the United Nations in 1983.

Place Economics principal, Donovan Rypkema, points to the rehabilitation of historic buildings as the quintessential form of sustainable development. In a presentation called *“Sustainability, Smart Growth and Historic Preservation”* Rypkema stated that for a community to be sustainable, it must be viable, livable, and equitable.³⁵ The principles are:

1. For a community to be viable there needs to be a link between environmental responsibility and economic responsibility;
2. For a community to be livable there needs to be a link between environmental responsibility and social responsibility; and
3. For a community to be equitable there needs to be a link between economic responsibility and social responsibility.

The reuse of historic buildings satisfies each of these tenets in that it conserves materials, historic fabric, and economic resources. Much of Rypkema’s writing on sustainability and preservation focuses on rehabilitation as a crucial part of smart growth planning.

The National Trust for Historic Preservation and the United States Green Buildings Council (USGBC) has emphasized the importance of existing buildings’ role in the effort to reduce the overall negative impact of buildings on the environment. An estimated 43 percent of the U.S’s carbon emissions originate from buildings.³⁶ (This figure does not take into account the amount of energy consumed during the harvesting or

³⁵ Historic Districts Council Annual Conference, held in New York City in 2007

³⁶ USGBC, Core Concepts Guide, 2009.

transportation of materials, or during construction.³⁷⁾ Reusing a 100,000 square foot industrial building or warehouse, for example, saves an estimated 97 million MBTUs of embodied energy.³⁸⁾ An additional 1200 MBTUs are saved as a result of avoiding demolition.³⁹⁾ These figures make clear that by simply deciding to reuse a building, we are making a sustainable development decision.

Organizations dedicated to environmental studies and planning are beginning to recognize the role that reusing buildings can play in the effort to reduce emissions, fuel usage, and construction waste. The Leadership in Energy and Environmental Design (LEED) is currently the most recognized and widely-used rating system for measuring the environmental impact of a building. Under the direction of the USGBC, LEED standards for new construction and rehabilitation offer an opportunity for older buildings to be rated along a sliding scale of four possible ratings, ranging from certified to platinum. Efforts are also being made among preservation professionals. The Preservation Green Lab is a pilot program started by the National Trust in Seattle. This group of professionals is working to develop techniques that protect the historic integrity of buildings in ways that conserve energy and have minimal environmental impact. These efforts are vital and bring the practicality and benefits of rehabilitation to the forefront

³⁷⁾ This measure is a measure of a building's embodied energy.

³⁸⁾ Embodied energy calculator provided by The Greenest Building, a website devoted to the reuse of historic buildings. <<http://www.thegreenestbuilding.org/>>

³⁹⁾ These figures are in Million British Thermal Units (MBTUs) and are estimates for industrial buildings using heavy construction types (masonry, concrete).

of the sustainable development movement.⁴⁰ The Preservation Green Lab has an important opportunity to act as an advocate of adaptive reuse as a sustainable development strategy.

Economic Benefits

Historic preservation plays an important role in the process of revitalizing older cities, and there is steadily growing awareness that preservation is a viable redevelopment strategy. The economic development field identifies the rehabilitation of underutilized, sometimes abandoned, historic buildings as a tool to trigger growth.⁴¹ The most significant results come from efforts where several properties are rehabilitated together as part of a comprehensive plan. Faneuil Hall in Boston, Massachusetts; the Powerhouse Arts District (Historic Warehouse District) in Jersey City, New Jersey; and Old Town Pasadena, California are examples of this. The National Trust for Historic Preservation's Mainstreet Program also uses this approach. The Mainstreet Program is an economic development strategy in which the rehabilitation of traditional commercial districts leads to economic growth (increased jobs and revenues). By redeveloping these buildings, cities may transform sources of blight into community assets that attract additional investment.

⁴⁰ Cities such as Los Angeles have policies in place that require all public buildings to be LEED certified. In order to keep public agencies in historic buildings, the historic preservation profession must be able to articulate the environmental benefits of reusing historic buildings.

⁴¹ Lynne Sagalyn. *Downtown, Inc.* (Cambridge, MA: MIT Press, 1997); Richard McGahey and Jennifer Vey, eds.. *Retooling for Growth*, (Washington, D.C.: Brookings Institution Press, 2008).

The metrics most commonly used to measure economic development are employment, income, and the effect on other industries.⁴² Economists debate over “people-versus-place prosperity,” or whether location matters in wealth and income creation beyond the “sum of the firms, workers, and owners of resources within them.”⁴³ In 1992, economist Roger Bolton demonstrated that there is an economic value to the sense of place. “Communities in distress have physical and social assets that can be harnessed to new productive economic activities with timely interventions and guidance.”⁴⁴ Places are complex collections of factors that combine to create value; places matter. Redevelopment projects around the country recognize this and are leveraging local historic resources.

The economic development associated with rehabilitating a historic building can be measured in terms of the value created through the actual rehabilitation process (in the form of construction jobs, purchase of materials, etc) plus the value created by the activity housed in the building once it is put into service. Donovan Rypkema’s book, *The Economics of Historic Preservation*, discusses the difference between the value created when buildings are rehabilitated as opposed to new construction. The labor intensive nature of the work means that the labor costs are typically between 60-70 percent of

⁴² Sammis White, et.al., Financing Economic Development in the 21st Century. (New York: M.E. Sharpe, 2003).

⁴³ Ann Markusen and Amy Glasmeier. Economic Development Quarterly: “Overhauling and Revitalizing Federal Economic Development Programs,” Vol. 22, No. 2, 83-91 (2008). p87

⁴⁴ Ibid. p 87

the total hard costs.⁴⁵ With new construction, labor accounts for half of the cost. In addition, the parts needed for replacement and repairs can usually be purchased locally.⁴⁶ This has a positive trickle-down effect on local businesses and suppliers.

Rehabilitated buildings continue to provide benefit above and beyond that of new-construction after they are put into service. Communities with preserved historic resources have a unique character. Shoppers visiting historic neighborhoods spend an average of 62 dollars per day more than other visitors.⁴⁷ Historic preservation also attracts jobs. Rehabilitated buildings in revitalized downtown neighborhoods provide affordable incubation space. Over half of all businesses in the United States are small businesses; these make up the fastest growing sector in terms of job creation.⁴⁸ Quality-of-life factors, such as preservation, are “particularly important for innovative firms staffed by creative workers.”⁴⁹

The effects of historic rehabilitation are tracked on a national level by the National Park Service, which measures outcomes associated with the Federal Rehabilitation Tax Credit (which will be discussed later in more detail). Because of the size and liquidity of the credit (the entire credit may be taken in the first year of the building’s operation and

⁴⁵ Donovan Rypkema. “Sustainability, Smart Growth and Historic Preservation.” Speech given at The Historic Districts Council Annual Conference, New York City, 2007. (Published with permission from the author in Blue Planet Green Living, 2009.) p 12

⁴⁶ Most of the elements of new construction are manufactured elsewhere and shipped to the building site partially assembled. Canada is the U.S.’s largest supplier of frames, panels and windows.

⁴⁷ Donovan Rypkema, Economics of Historic Preservation (Washington, D.C.: National Trust for Historic Preservation, [1994] 2008). p85

⁴⁸ U.S. Small Business Administration, Office of Advocacy, 2009 FAQ Sheet
< <http://www.sba.gov/advo/stats/sbfaq.pdf>>

⁴⁹ Donovan Rypkema, Economics of Historic Preservation (Washington, D.C.: National Trust for Historic Preservation, [1994] 2008). p105

syndicated for cash that can then be invested as equity in the project), it is the most important incentive available for the reuse of historic buildings. Since 1977, the credit has made over 35,675 projects possible, resulting in almost 100,000 low and moderate income housing units, and approximately 70,000 new jobs annually. In the 42 years since its creation, over 50 billion dollars in private investment have been reinvested in America's historic resources.

EXHIBIT 1: Federal Rehabilitation Tax Credit Statistics

| | Program Accomplishments 1977-2008 | Fiscal Year 2008 | Fiscal Year 2009 |
|--|-----------------------------------|------------------|------------------|
| Private investment leveraged | \$50.82 billion | \$5.64 billion | \$4.69 billion |
| Number of projects certified | 35,675 | 1,231 | 1,044 |
| Total number of housing units created | 187,088 | 17,051 | 13,743 |
| Number of affordable housing units created | 98,281 | 5,220 | 6,710 |
| Average number of local jobs created per project | NA | 55 | 55 |
| Total number of local jobs created | NA | 67,705 | 70,992 |

Figures provided by the National Park Service Statistical Report and Analysis (Fiscal Years 2008-2009)

IV. INCENTIVES AND POLICIES

Much of the appeal of historic buildings is that they are like palimpsests, the structure bearing the mark of its uses, often without a clear link to any single period. But ironically, from a regulatory perspective, the more frequently an older building has been adapted (or the more useful it has been), the more difficult it may be to preserve as historic.⁵⁰ The Federal Rehabilitation Tax Credit (FRTC) and most state rehabilitation tax credits target historic properties whose rehabilitations will follow the Secretary of the Interior's Standards. For this reason, incentives targeting non-historic, older buildings have filled a vital gap that often exists when financing the rehabilitation of older buildings.

Most current incentives use inclusion on the National Register as the benchmark for what is historic (and therefore worth saving and eligible for publicly-funded incentives). The National Register criteria require that the building in question be associated with either an important past event, people, potential archaeological find, or be a good example of particular architectural or engineering achievements. If the defining features that give the building its character have been significantly altered, it may not have sufficient historic integrity to be eligible for the Register. It is not uncommon for adaptive reuse projects to avoid preservation-based incentives altogether. Sometimes it

⁵⁰ Historic is taken here to mean on or eligible for the National Register of Historic Places.

is because of ineligibility, and sometimes it is because the owner does not want to be subject to design constraints. In either case, it leaves the building more vulnerable to further degradation and demolition.

At the national level, the 10 percent Federal Rehabilitation Tax Credit offers an alternative incentive for properties that are non-historic (neither listed on nor eligible for the National Register of Historic Places). And, in increasing locations, additional tax credits are available on a local level through state and municipal redevelopment agencies.⁵¹ States and municipalities have taken a growing role in sponsoring preservation-friendly initiatives to supplement those that exist at the federal level. These non-federal initiatives are varied and may apply to income-producing or non-income producing, historic or non-historic properties.

Connecticut provides an interesting example of how a state tax credit can be leveraged to encourage specific types of development. The state offers a 25 percent credit for rehabilitating certified historic commercial or industrial buildings for residential use.⁵²

Connecticut also offers the Historic Homes Rehabilitation Tax Credit, a 30 percent credit for owner-occupied residential buildings that are either certified historic (see state's

⁵¹ There are several state programs available for the rehabilitation of non-historic buildings that fit particular criteria such as building type or location. States offering this type of incentive include Iowa (barns built before 1937), Louisiana (residences 50 years or older that have are deemed either vacant and blighted or are within a development boundary), Vermont (buildings built before 1983, located in a designated "downtown zone" are eligible for a 25% façade-rehabilitation credit).

⁵² Here, "Certified Historic structures" means a historic commercial or industrial property that: (A) Is listed individually on the National or State Register of Historic Places, or (B) is located in a district listed on the National or State Register of Historic Places, and has been certified by the State Historical Commission as contributing to the historic character of such district.

definition in footnote) or within an established “Redevelopment Area” designated by the state within 29 municipalities.

Iowa’s State Rehabilitation Tax Credit offers another form of flexibility, in which any barn, commercial property, or mixed-use property built before 1937 is eligible for its 25 percent credit. There is a similar credit available for both income- and non income-producing residential properties.⁵³

States and municipalities also offer a variety of other types of incentives and funding opportunities for rehabilitation projects. Low-interest redevelopment loans and brownfield remediation grants are two examples. Pennsylvania’s “Heritage Area Programs” and its “Department of Conservation and Natural Resources” offer a Revolving Loan Fund and a Revolving Loan Fund Grant to “[finance] heritage related projects and activities and ...[bolster] the economic vitality of communities and heritage resources within State Heritage Areas”.⁵⁴ While not explicitly oriented towards historic properties, these incentives still promote reinvestment and reuse of aging infrastructure and revitalization of existing building stock.

It is because of the significant value derived by the public that the government makes such tax credits available for the rehabilitation of older buildings (historic or not). The

⁵³ The National Trust for Historic Preservation compiled an overview of the state rehabilitation tax credits at:

< <http://www.preservationnation.org/resources/find-funding/additional-resources/taxincentives.pdf>>

⁵⁴ “Revolving Loan Fund Grant (RLFG) Guidelines and Application Instructions,” Department of Conservation and Natural Resources. (2300-FM-RC0068, Rev. 1/2006). p1

triple-bottom line benefits of preserving our built heritage have led governments from the municipal to the federal levels to adopt policies and financial incentives to promote the rehabilitation of older buildings.⁵⁵ Interventions vary significantly in scope and eligibility. Understanding how these incentives and policies function and the outcomes they produce is a necessary step in evaluating their effectiveness. Here I focus on the role that state and local interventions have played in the adaptive reuse of these case studies of industrial campuses in three cities: Philadelphia, Washington, D.C., and Durham. One incentive shared by each of these projects was the most widely-used and successful of all preservation-based incentives, the Federal Rehabilitation Tax Credit.

Federal Rehabilitation Tax Credit, 20% and 10%

The Federal Rehabilitation Tax Credit was re-authorized under the 1986 Tax Reform Act (originally enacted in 1976). Under this program, older income-producing properties may apply (through their State Historic Preservation Office) for a credit equal to either 20 or 10 percent of the total rehabilitation costs of the project, minus the acquisition price. The income-producing requirement was put into place during the creation of the Tax Reform Act of 1986 in order to spur economic activity by encouraging the placement of income-producing endeavors in buildings which were often abandoned or under-utilized. In these cases the public benefit is two-fold—historic fabric is preserved and tax bases are increased.

⁵⁵ Triple-bottom line benefits refers to economic, social, and environmental benefits that are the result of certain types of development and investments.

Many state tax credits go beyond this restriction by qualifying the rehabilitation of non-income producing, historic properties. This is an important incentive since the Federal Rehabilitation Tax Credit applies only to income-producing buildings. For example, as shown in the chart on page 47, several states provide rehabilitation tax credits that target non-income producing properties such as owner-occupied housing.

Since 1977, the FRTC has given enormous momentum to the redevelopment of historic properties in the United States, becoming the most important preservation-related incentive. Over 35,000 historic buildings have been rehabilitated, generating over \$50 billion in private investment, and an average of 55 jobs per project.⁵⁶ Most of these projects have occurred in urban neighborhoods and commercial districts that are in need of revitalization.

⁵⁶ National Park Service Statistical Report and Analysis FY08

EXHIBIT 2: Rehabilitation Tax Credit Examples

| | National Register* | Must be Income-producing | Use or Location Constraints |
|--|--------------------|--------------------------|--|
| Federal Rehabilitation Tax 20% Credit | yes | yes | no |
| Federal Rehabilitation Tax 10% Credit | no | yes | no |
| New Markets Tax Credit | no | no | yes (redevelopment zones determined by the federal government) |
| Connecticut State Tax Credit | sometimes | no | sometimes (owner-occupied residences or located within redevelopment zone) |
| Iowa State Tax Credit | no | no | no |
| Louisiana Commercial Tax Credit | no | yes | yes (Downtown Development District or a Cultural District) |
| Louisiana Residential Tax Credit | no | no | yes (if not certified historic, then it must be in a designated district) |
| Missouri Rehabilitation Tax Credit | yes | no | yes (owner-occupied residences) |
| North Carolina Rehabilitation Tax Credit | yes | no | no |
| North Carolina Mill Tax Credit | yes | no | yes (industrial buildings) |
| Ohio Preservation Tax Credit | yes | no | yes (prove work could not proceed otherwise) |
| Pennsylvania | NA | NA | NA |
| Vermont Downtown and Village Center Tax Credit | no | yes | Yes (Designated Downtown or Designated Village Center) |
| Virginia Historic Rehabilitation Tax Credit | yes | no | yes (owner-occupied) |
| Washington, D.C. | NA | NA | NA |

*Where State Rehabilitation Tax Credits are concerned, “certified historic” also refers to buildings listed individually to the State Register of Historic Places or as contributing to a Historic District listed on the State Register of Historic Places.

The 20 percent credit rebates 20 percent of the qualified rehabilitation costs for income-producing properties in the form of a tax credit. Owners applying for this credit must establish that the property is certified historic and that all scheduled work will

conform to the Secretary of the Interior's Standards for Rehabilitation.⁵⁷ All work must be completed within two years and the property must be income-producing.⁵⁸

It may seem obvious that a building must be historic before it can receive financial incentives targeting historic architecture. However, the 10 percent FRTC is an opportunity for older buildings that are not on or eligible for the National Register of Historic Places to obtain subsidy for reuse⁵⁹. The 10 credit is available for any non-historic, pre-1936 building that is income-producing and is non-residential. The work is not subject to the Secretary of the Interior's Standards, but is instead governed by a different set of criteria. To qualify, projects must retain 75 percent of the interior and exterior walls (at least half of all original exterior walls must remain as exterior walls). The 10 percent credit is also subject to the two-or five-year completion schedule.

One of the most powerful elements of both the 10 and 20 percent credits is that 100 percent of the credits may be taken in the first year after completion. Once the credits are awarded, the property may not be sold and is subject to retaining its as-approved condition for five years. Historic properties that have claimed the 20 percent credit must also maintain the facility according to the Secretary of the Interior's Standards for

⁵⁷ Certified historic means that it is a) individually listed on the National Register, b) a contributing building within a National Register District, c) listed individually or as a contributing building in a local district of a Certified Local Government.

⁵⁸ "Phased Rehabilitations" allow five years for completion.

⁵⁹ Unless otherwise noted, when I refer to properties listed on the National Register I am referring both to properties that are individually listed and those that are contributing properties within a Historic District.

five years. If these requirements are not met, the credit may be recaptured on a pro rata basis for both 10 and 20 percent credit projects.

Tax Credits may be used in one of two ways: they may be applied against the owner's tax liability or they may be syndicated (sold to a third party).⁶⁰ Syndication is preferred with larger projects because many individuals do not have tax liabilities that equal the amount of credits a large project would generate. In these cases, the owner (and rehabilitator) of the property will form a Limited Liability Partnership with a large investor or bank wherein the bank is given a 99 percent stake in the property for five years, allowing them to benefit from almost all of the tax credits. After five years, full ownership is given back to the original owner and the investor-partner is released.

Other Incentives

Historic Preservation Easements also provide a way to reduce the costs of rehabilitating a historic property. To qualify for a Historic Preservation Easement through the Internal Revenue Service (IRS), the easement must either preserve a certified historic structure or a historically important land area to qualify for federal income and estate tax deductions. The IRS uses the National Park Service's criteria for determining whether a structure is certified historic. Unlike the FRTC, the income-producing requirement does not apply. However, the IRS requires that the certified historic structure (or historically

⁶⁰ Many individuals are not eligible for the tax credits obtained through real estate investments such as these. Because of the "at-risk", passive activity limitation, and alternative minimum tax provisions, many owners choose to sell their credits.

important land area) be accessible to the public. The degree of access is determined on a case-by-case basis. Once an easement is donated (to an IRS-approved non-profit entity), it typically remains part of the deed in perpetuity, though term easements exist. The reduction of the property's value is the result of the donation of development rights, which in turn results in a reduction of property taxes. Historic Preservation Easements are an effective way to preserve the historic character of a building.

Through these agreements, owners effectively donate control over a particular portion of the property to a non-profit entity that agrees to monitor its preservation. By placing this designated portion of a building (usually a façade, marquee, or public space such as a lobby) into the non-profit entity's hands, owners give up a certain amount of control and essentially become custodians of the area subject to the easement. This program has been extremely successful in preserving the historic contexts of many neighborhoods. Los Angeles' neon signs and storefront façade programs have been particularly successful. Nevertheless, the program's growth is checked by the state-by-state availability of non-profits with the man-power and funding to accept such easements.

A federal program not directly aimed at preservation, the New Markets Tax Credit (NMTC) program, has nevertheless had major impact on older neighborhoods and historic buildings. These credits are available for projects undertaking substantial renovations and leasehold improvements, as well as new construction. The program

was established to spur reinvestment in dense, impoverished areas identified by the federal government. Project sponsors submit requests for the credits through a competitive application process. The credit is for 39 percent of the qualified expenditures, and may be used towards federal tax liability or syndicated, as with the FRTC. The National Trust for Historic Preservation has created a for-profit subsidiary to invest in certified rehabilitation projects by purchasing the tax credits generated, thereby providing equity to the rehabilitation of historic commercial properties.

Through the creation of the National Trust Community Investment Corporation (NTCIC), the National Trust for Historic Preservation is able to invest in projects that have been earned federal and state historic tax credits and the New Markets Tax Credit. The NTCIC is helping to revitalize downtowns and business districts nationwide by stimulating economic development while preserving neighborhoods' sense of place. Profits from NTCIC's operations support the advocacy and educational programs of the National Trust.

The rehabilitation of the historic Worcester Center for Performing Arts is a particularly successful example of the NMTC being used with the FRTC. In 2008, the Nonprofit Finance Fund (a Community Development Financial Institution that assists non-profits with redevelopment projects) worked with Citibank and the Worcester Center for Performing Arts to renovate a historic theatre in downtown Worcester into the Hanover

Theatre for the Performing Arts. The rehabilitation of this 2,300-seat theatre cost \$30 million.

The incentives described above were available to, though not in all cases used by, each of the case studies evaluated in this report. The following incentives and policies are supplemental, and are specific to the case studies' respective cities and states.

Philadelphia, Pennsylvania Incentives and Policies

Pennsylvania does not currently offer a state rehabilitation tax credit, though House Bill HB 221 (PN 4000, 2007) came close to establishing \$15 million in grants and tax credits. There has been widespread support for the bill (which has passed the House unanimously), but funding the cost has stalled its success. The incentives package would include grants for buyers and sellers of homes that are historic or are in historic neighborhoods of up to \$15,000 per project. A tax credit would be available for income-producing commercial properties.⁶¹

While Pennsylvania does not offer incentives targeting historic rehabilitations, the state and the Commonwealth of Philadelphia offers low interest loans to home owners for improvements and a few property tax exemptions. While these programs do not target

⁶¹ House Bill No. 221, Session of 2007, Introduced by Representative Tangretti and Senate-amended.

historic properties specifically, they serve this subset by reducing the financial burden of rehabilitation. Below is a list of these programs.⁶²

- *The Purchase Improvement Program* (Pennsylvania Housing Finance Agency): Offers a low-interest (income-dependent) loan for home improvements of up to \$15,000.
- *Philadelphia Home Improvement Loan* (Philadelphia Redevelopment Authority): Offers low-interest loans for home improvements and repairs of up to \$25,000.
- *State Act 175: 5-Year tax Abatement on 100% of home improvements* (Philadelphia Board of Revision of Taxes).
- *City Councilmanic Ordinance 1130* (Philadelphia Board of Revision of Taxes): 10-Year Tax Abatement for 100% of improvements to a business property.
- *City Councilmanic Ordinance 970274* (Philadelphia Board of Revision of Taxes): 10-Year Tax Abatement for 100% of improvements to deteriorated industrial or commercial properties (must be vacant at least two years prior to application, or be at least 50 years old). This abatement includes the adaptive reuse of commercial properties for residential uses.

In addition to the incentives listed above, the City has approached preservation efforts from a redevelopment perspective. The City and agencies like the Philadelphia Industrial Development Corporation (PIDC) and the Redevelopment

⁶² These programs were identified in a pamphlet titled “Financial Subsidies and Incentives for Historic Preservation”, compiled by the 2001 Preservation Planning Studio at the University of Pennsylvania Graduate Program in Historic Preservation. It is available at :
< http://www.design.upenn.edu/his_pres/student/powelton_village/pdfs/financial_incentives.pdf>

Authority have completed revitalization projects that have included the rehabilitation of historic and older buildings. One such program, “Restore Philadelphia Corridors”, is a PIDC–led program that has targeted commercial corridors for revitalization with grants totaling \$65 million.⁶³

Though the funding and implementation of “Restore Philadelphia Corridors” came through PIDC, the project started with the Community Design Collaborative (CDC), which instigated discussion and investigation into the topic. The CDC has been an important catalyst for rehabilitation in Philadelphia. It is a volunteer-based community design center that provides pro bono predevelopment design work for non profits and “raises awareness about the importance of design in community revitalization.”⁶⁴ Approximately every year to 18 month, the CDC selects a topic for research and poses the issue to its volunteers, with the goal of generating design-based solutions. Many volunteers come from private firms; participation complements and enriches their for-profit projects. The CDC’s 2009/2010 project is “Infill Philadelphia”, which has looked at ways in which Philadelphia’s industrial land and buildings can be reused. There are currently four firms participating. Each firm was assigned a vacant industrial site and tasked with designing a reuse strategy. Two of the four sites contain historic structures. Early charettes indicate that firms are working with the historic context of the sites and are opting to use sensitive infill to enhance the character of the place.

⁶³ PIDC Annual Report 2008 <<http://www.pidc-pa.org/2008%20Annual%20Review.pdf>>

⁶⁴ Community Design Collaborative, Mission Statement. < http://cdesignc.org/p_1000.htm>

Washington, D.C. Preservation Incentives and Policies

Washington, D.C. does not offer a rehabilitation tax credit, but does offer a Homeowner Grant Program. The first preservation assistance program in the District, it was part of the Targeted Historic Preservation Assistance Amendment Act of 2006 which targeted homes within 12 historic districts for certified rehabilitations. D.C.'s State Historic Preservation Office also allocates federal grants funded by the National Park Service for historic preservation activities (surveys, planning, outreach, etc). These funds are allocated to State Historic Preservation Offices nationally.

As income-producing properties, commercial rehabilitations have access to the FRTC. Washington's preservation incentives seek to fill the gap that exists for homeowners by offering incentives designed to assist with the cost of repairing and maintaining older homes.

Additionally, the General Services Administration (GSA) is the largest landholder in Washington, and therefore has access to different sources of capital for the rehabilitation, and repair of its historic assets. An example of this is the adaptive reuse of six historic buildings at the St. Elizabeth's Hospital site. Located in the Anacostia neighborhood of Southeastern DC, the buildings will be rehabilitated as offices and research facilities for the Department of Homeland Security. The GSA is using a

combination of funds from the 2010 Omnibus Appropriations Act and the 2009 American Recovery and Reinvestment Act (ARRA).⁶⁵

In fact, there are a number of programs available through ARRA that could benefit historic preservation initiatives in Washington as well as nationwide. These include “Recovery Zone Bonds” (bonds available for capital improvements in areas with high poverty), Rural Communities Facilities Program (grants and loans funds for the improvement of public facilities), and the Global Climate Change Mitigation Incentive Fund (finances projects that foster economic development in distressed communities, including green rehabilitations).⁶⁶

Durham, North Carolina Preservation Incentives and Policies

North Carolina’s state historic preservation tax credits are some of the most generous and far-reaching in the country. North Carolina offers a standard state tax credit that mirrors the 20 percent credit offered by the FRTC. Like the 20 percent credit, it has the same eligibility requirements and requires the same compliance as the FRTC. But the state also offers credits for non-income producing properties and a special credit for mill rehabilitations.

⁶⁵ “RECOVERY: Adaptive Reuse of Historic Buildings for the Consolidation of the Department of Homeland Security (DHS) at the St Elizabeths Campus, SE, Washington, DC”. Federal Business Opportunities, Solicitation Number: GS11P10MKC0057.
<https://www.fbo.gov/index?s=opportunity&mode=form&id=3f771cc24de1fa579246084fd0afcb73&tab=core&_cview=1>

⁶⁶ “American Recovery and Reinvestment Act of 2009 (Recovery Act) Information for Communities”. FAQ sheet created by the Michigan Economic Development Corporation.
<http://ref.michiganadvantage.org/cm/attach/9BFADF1E-BA06-4CF1-8F4BD02EA602923F/RA_Community_Info.pdf>

Rehabilitation of non-income producing properties (including owner-occupied residences) that are on (or eligible for) the National Register may apply for a credit equal to 30 percent of the qualified rehabilitation cost. This provides an important benefit to offset the costs of rehabilitations that are not eligible for the FRTC.

In addition, the state's Mill Rehabilitation Tax Credit may be applied to qualified textile, tobacco, and furniture plants. The Mill Rehabilitation Tax Credit is more than the standard state historic preservation tax credit and may be applied for in lieu of or in addition to it.⁶⁷ A 30 and 40 percent credit are offered; the amount of the credit depends upon the "Development Tier" and whether it is being rehabilitated for an income- or non income-producing use.

A county's placement within the "Development Tier" is decided by North Carolina's Department of Commerce, and is predicated on the county's location (rural locations are put into Tier One or Two) and need for redevelopment. Eligible buildings must be "certified historic structures" and have been at least 80 percent vacant for at least two years prior to the date that it is deemed an "eligible site". Additionally, the building must have been used as a manufacturing facility or in support of manufacturing (warehouse, utilities, etc). The Development Tier scheme allows the state to weigh the credit in favor of rehabilitation occurring in needier areas and targeted to specific building type(s). Non income-producing properties receive the 40 percent credit as long

⁶⁷ North Carolina State Historic Preservation Office, N.C. General Statute (GS) 105-129.70-75

as they are in either Tier One or Two. North Carolina’s Mill Rehabilitation Tax Credits may be twinned with the Federal Tax Credit to provide a credit worth between 50 and 60 percent of the rehabilitation costs, as summarized in Exhibit 3 below.

EXHIBIT 3: North Carolina Mill Rehabilitation Tax Credit “Development Tier” Matrix

| Income-Producing | Development Tier Counties | Tax Credit | Certified Historic | Effective (State and FRTC combined) | Eligibility and FRTC |
|----------------------|---------------------------|------------|--------------------|-------------------------------------|----------------------|
| | 1 | 40% | Yes | 60% | |
| | 2 | 40% | Yes | 60% | |
| | 3 | 30% | Yes | 50% | |
| Non-Income producing | 1 | 40% | Yes | 40% | |
| | 2 | 40% | Yes | 40% | |
| | 3 | NONE | Either | 0% | |

Data Source: North Carolina State Historic Preservation Office, N.C. General Statute (GS) 105-129.70-75

Conclusions

Looking at three cities’ tools for the rehabilitation of historic resources makes apparent that there are many approaches to the same goal, which supplement and enrich the applicability of the already potent FRTC. In a city like Philadelphia, where the political emphasis has been on redevelopment and job growth, it makes sense that preservation efforts have been largely born out of these efforts. In Durham, where so many mill buildings sat vacant, the mills themselves spurred the legislation needed to rehabilitate them. The incentives for Washington, D.C.’s rehabilitation projects are largely directed

towards homeowners. Commercial rehabilitations take advantage of the Federal Rehabilitation Tax Credit as well as other federal incentives; though deals must be structured to enable developers to take tax credits. As a government entity which does not pay taxes, the GSA is not eligible for tax credits.

V. CASE STUDIES

Post-industrial cities throughout the United States have used the rehabilitation of older buildings as a strategy to spur economic development and neighborhood revitalization. Industrial buildings form an important subset of these examples; their size, typical location near transit, and affordable workers' housing make them effective resources for redevelopment. The case studies in this chapter have been selected to illustrate successful examples of the adaptive reuse of large, industrial complexes. The factors used in determining success are described below. Adaptive reuse projects that were not successful were those that either did not work as a real estate venture or did not effectively protect a significant amount of historic fabric.⁶⁸ Though outside the scope of this thesis, this brings an interesting issue to bear: whether projects that use the 10 percent Federal Rehabilitation Tax Credit (FRTC) for non-historic rehabilitations are actually preservation projects. In other words, if the structure is not historic, then is the act of saving such a building considered preservation?

The cases selected did not include 10 percent FRTC projects for two reasons. First, the quality and amount of information with respect to the preservation aspects of 10

⁶⁸ The Goodyear Tract in Los Angeles is an example of an industrial campus that does not retain enough historic fabric to be "certified historic". In addition, rehabilitating the spaces would drive rents up and push small industrial businesses out. Historic ruins like the Sutro Baths (San Francisco), Gas Works Park (Seattle), and Mill Ruins Park (Minneapolis), while excellent examples of preservation, but do not fit the adaptive reuse criteria applied to select the case studies in this thesis.

percent FRTC projects is far less than that of the 20 percent FRTC projects, presumably, this is due to the absence of a qualitative review procedure. The 10 percent FRTC is also used far less than the 20 percent credit. Second, the goal of the cases is to evaluate the use of incentives for the historic rehabilitation of industrial buildings. By nature, the 10 percent credit exists for the reuse of non-historic buildings. The quality of the site's historic fabric was a factor in case selection. All of the rehabilitation projects researched used the site's historic fabric as a core feature of the project.

The historic fabric of the place gives these projects their identities. The projects were selected by the developers because of the special character they possess as historic places. The result is that the historic buildings are the centerpieces of their projects.

It is important to look at how historic resources are treated in a variety of mixed-use industrial rehabilitation projects. While the historic fabric makes up only a fraction of the buildings in some of these cases, it has great impact by adding value to the neighboring new construction. In the case of the Philadelphia Navy Yard, for example, the historic core makes up only a fraction of the total property. However, many of the public amenities have been located here because of the beauty of the historic buildings as well as the public's interest in their history.

Implementation of adaptive reuse was also a factor in the selection process. As discussed earlier, continuity of use is an important consideration when rehabilitating an

historic building, and should be viewed in a positive light when comparing potential uses. Nevertheless, shifting economies and technologies have reduced the amount of industrial square footage necessary in the United States, making adaptive reuse a necessary undertaking. Besides the heritage value of continuity of use in the case of industrial preservation, there is also the benefit of providing or maintaining jobs in the area. Business activity has featured prominently in each of the selected case studies.

While the evaluation of success of the reuse treatment of a historic property depends to a degree upon the type of intervention selected, the following several factors have been selected as the most important for rehabilitation projects. All developments are National Register Historic Districts that have used the Federal Rehabilitation Tax Credit, indicating compliance with the Secretary of the Interior's Standards (SOI).⁶⁹ This is the benchmark for sensitive and high-quality rehabilitation. All industrial sites are publically-accessible as commercial, mixed-use developments.⁷⁰ The sites' new uses are not destructive to the architecture, as required by the SOI's Standards.

Sites that were considered, but not included, include the Arsenal Business Center (formerly the Frankford Arsenal, Philadelphia, PA); Goodyear Tract (Los Angeles, CA);

⁶⁹ Large-scale rehabilitation projects involving multiple buildings where the 10% FRTC was used could not be identified. Cases made available through the National Trust were individual commercial buildings, such as Federal Hill Fitness in Baltimore (formerly a grocery store), Porter's Coffee House in Baltimore (formerly a dry goods store), and the Dalton Building Annex in Rock Hill, SC (formerly a bank, now mixed-use)

National Trust Community Investment Corporation, "Rehab Tax Credit Guide".
<<http://www.ntcicfunds.com/projects/index.html>>

⁷⁰ The Philadelphia Navy Yard currently has limited retail (in the form of restaurants), but plans are in place.

Treasure Island (San Francisco, CA); and The Presidio (San Francisco, CA). With the exception of the Goodyear Tract (its historic fabric has been seriously compromised and the site is therefore almost certainly not eligible for the National Register), each of these sites has retained its historic integrity. The Arsenal Business Center was not selected because it was necessary to represent other metropolitan areas. Treasure Island has accessibility issues, making it difficult to sustain development there. The Presidio is a beautifully rehabilitated and restored mixed-use campus, but is unusual if not unique in its management structure, making it difficult to draw parallels between it and other facilities. Case study selection factors are summarized in Exhibit IV.

The Philadelphia Navy Yard, The Yards, and the American Tobacco Company are vibrant mixed-use developments and exemplify the positive impact that adaptive reuse can have on historic industrial buildings and their communities. By tracing their histories and evaluating the steps taken to develop these sites, I hope to identify effective strategies for the historic rehabilitation of industrial campuses

EXHIBIT 4: Case Study Selection Factors

| | Philadelphia Navy Yard | The Yards (Washington, D.C.) | American Tobacco Company (Durham, NC) |
|--|--|---------------------------------|---------------------------------------|
| National Register | Historic District | Historic District* | Historic District |
| Public Accessibility | Business Hours | Yes | Yes |
| Self-sustaining | Yes: properties sold to private entities | Yes: properties developer-owned | Yes: properties developer-owned |
| Mixed-Use Development | Yes | Yes | Yes |
| New use and upgrades are sensitive to the historic structure | Yes | Yes | Yes |

* Two structures are also National Historic Landmarks

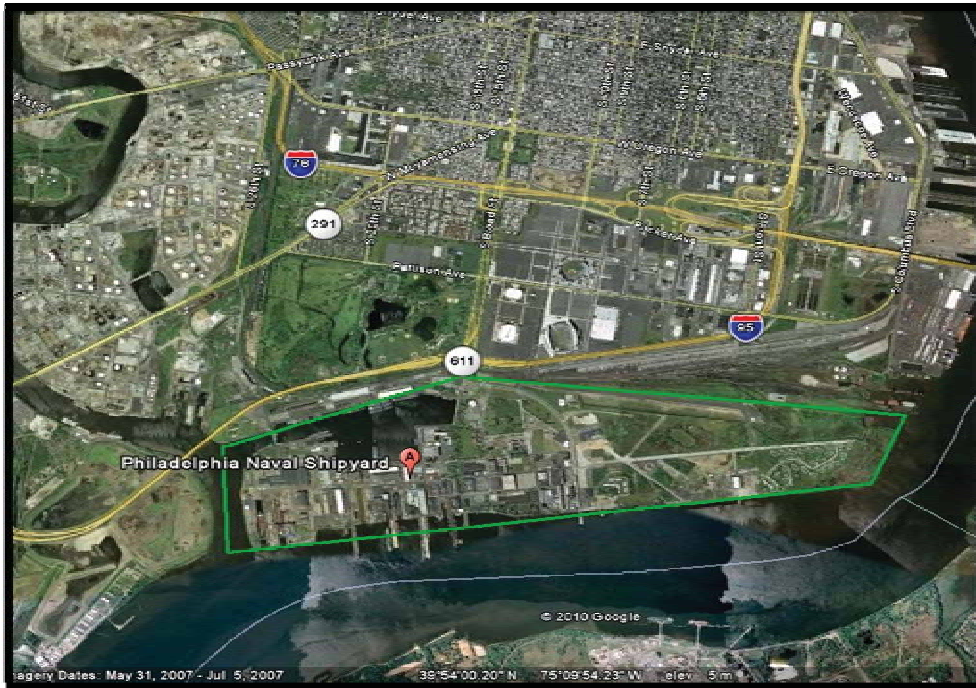
VI. PHILADELPHIA NAVY YARD

“But as far as the Navy Yard’s new identity as a corporate campus is concerned, part of its beauty and genius lies in its overall architectural differentiation--diversity in physical structures, you might say.” Dan Eldridge, *Keystone Edge*⁷¹

Journalists, planners, designers, and developers agree that it is the layers of history, the variety of design, and mix of uses that make the Philadelphia Navy Yard an attractive place to work, and eventually, to live. Over time, additional land was added to the original property as the needs of the Navy grew due to war and technology. The result is that the Navy Yard contains a mix of historic original building stock, industrial infrastructure like rail lines leading directly to warehouses, docks, and a large amount of land suitable for new construction.

⁷¹ Dan Eldridge, “Philly’s Ship Comes in at the Navy Yard,” *Keystone Edge* (February 5, 2001). <www.keystoneedge.com/features/navyyard0225.aspx>

IMAGE 1: Map of the Philadelphia Navy Yard



Source: Google Earth (2010)

With approximately one-third of the property designated as a National Historic Register District, the Navy Yard's crown jewel, from an architectural standpoint, is the ensemble of over 250 Victorian-era buildings and structures that give the site character and tie it to local history and a sense of place.

History

The Philadelphia Navy Yard is located at the end of Broad Street, approximately four miles due south of City Hall. It consists of 1200 acres of contiguous, waterfront land fronting the Delaware River. The river's easy access to the deepwater Delaware Bay to the south and New York to the north have made it a valuable means of transporting goods and people for commerce for nearly 400 years. Philadelphia's prime location

allowed access inland and to the Atlantic Ocean via the Delaware River while benefitting from an inland location, thereby protecting it from naval attacks.

This area has had a long history of shipbuilding, preceding the Navy's activity there. Before moving to League Island, the Navy Yard's final (current) location, it was located near South Street. In 1748, Benjamin Franklin and other prominent Philadelphians issued a lottery to raise funds to build two batteries along the Delaware River, south of the formal city boundaries in an area referred to by its Lenape name "Wicaco". At the time the City's Quaker politicians refused to dedicate public funds towards the endeavor, their pacifist beliefs being at odds with the proposed construction of fortifications equipped with artillery. These batteries were meant to protect the city during King George's War (1740-1748) during which Spanish and French warships threatened North America. Franklin's lottery funded the construction of two batteries, both along the water below South Street (then called Cedar Street).

Wicaco became the Borough of Southwark, as maritime trade and the shipbuilding industry grew, bringing shipbuilders, craftsmen and traders into the area. By the 1770s, 300-ton merchant ships were being manufactured by the Penrose, Wharton, and Humphreys families at privately-owned shipyards on South Front Street. In response to increasing pressure from the British, the Second Continental Congress passed a defense bill allocating 35,000 dollars to the defense of the Delaware River in 1775. That year the newly created Pennsylvania State Navy began adapting merchant ships for military use

and deploying them around the eastern seaboard. After the Revolutionary War, Philadelphia's shipbuilding industry competed with Boston, New York, and Washington for private and public contracts. However, Philadelphia won a competitive selection process making the 17-acre collection of shipbuilding yards in Southwark the U.S. Navy's first home in 1798.

During the first half of the 19th century, the Navy Yard competed for funding in order to expand and improve the facilities. Throughout this period, Joshua Humphreys (and later his son Samuel) acted as the ambassador of the Philadelphia Navy Yard, successfully arguing in favor of the city as the best location for the navy. He listed the number and quality of carpenters, the safe location inland, and low cost of materials as strengths.

In 1826, William Strickland designed the three story marble and granite Naval Personnel Retirement Home along the Schuylkill River, at 24th Street and Gray's Ferry. The Naval Home also included a hospital, and later the Naval Academy.

The Navy Yard brought growth to other parts of the city as well. Conflicts such as the Mexican American War brought increased spending to the Navy Yard, including the construction of wharfs, docks, buildings to house ships, and officers' quarters.

IMAGE 2: Philadelphia Navy Yard Postcard (c. 1919)



Source De: Free Library of Philadelphia, Print and Photography Department, Philadelphia, PA

IMAGE 3: Philadelphia Navy Yard (c. 1919)



Source: Historic American Engineering Record (HAER) PA, 51-PHILA,709-16

By 1850, the *Susquehanna* (America's first steamship) sailed out of Philadelphia, and a series of capital improvements began at the Yard in order to accommodate these larger and more complicated vessels. New infrastructure was installed, including gas lights, water pipes, a rail line, and a telegraph system. Many buildings were replaced or moved and dry docks were installed, making the Yard a fully modern facility. Shipbuilders collaborated with the nearby Merrick Foundry for ironwork and machining. However, as the transition to iron shipbuilding occurred, space constraints put pressures on the facilities.

A booming population led to growing density in Philadelphia as people and businesses competed for space. At its peak, the 17-acre Southwark site was home to over 52 buildings and shop; it also maintained the Pennsylvania Railroad's access to the wharf along the river. In 1863, when a fire destroyed most of the buildings in the Navy Yard, League Island was suggested as a possible replacement site. Philadelphia ceded the island to the federal government; the base was officially moved from Southwark Yard to League Island Yard (its final location at the south end of Broad Street) in 1868.

Three miles in circumference (approximately 600 acres), in 1868 League Island contained a corn field and family estate that had been there since the Colonial Period. Construction began on the island in the 1870s, including the engineering of a earth-filled causeway connecting the island to the city during low tide. This early construction included, on the north side of the island, a gatehouse and guardhouse, beyond which

laid living quarters. A major north-south axis continued from Broad Street south through the island connecting the residences and Marine Barracks on the north end to the ship buildings, dry docks, wharves, and piers on the south and west end. Machine shops, foundries, store buildings, and other support services were located throughout the island. By the 1890s, over 300 civilians worked at the Navy Yard. The workforce peaked at 2,000 during the Spanish-American War (1889) and into the early years of the twentieth century. A Congressional appropriation of one million dollars towards defense permitted upgrades to infrastructure and the construction of new industrial buildings, as well as the Marine Barracks and Officers' Quarters. It was at this time that electricity was added, streets paved and curbed, transportation improved, and a rail line extended into the island.

Naval history scholars point out that as warfare and maritime technologies improved, Philadelphia's location inland shifted from being a benefit to a liability.⁷² The Navy's fleet needed to remain nimble, but the Delaware River's shifting shoals and sand bars and ice in the winter made it difficult to maneuver. Nevertheless, the wars of the twentieth century guaranteed that the Navy Yard would remain open and busy, with peak total employment reaching 50,000 (civilian and military) by the mid twentieth century. During the First and Second World Wars, up to 3,500 civilian employees worked at the Navy Yard, outfitting destroyers and later aircraft carriers to be sent into service. Women were hired for industrial work and as telephone operators and clerks.

⁷² Jeffery M. Dorwart and Jean K. Wolf. The Philadelphia Navy Yard, from the Birth of the U.S. Navy to the Nuclear Age, Philadelphia (University of Pennsylvania Press, 2001).

During the 1920s, three million additional dollars were spent on expansion, including the addition of a 350-ton crane. By the 1950s, the Navy was reorganized to deal with nuclear threats, including atomic defense training. When the Korean War began, the Navy Yard was commissioned to outfit all United Nations naval forces. In 1967 work on the *Blue Ridge*, the final ship to be built at the Navy Yard was started. Involvement in the Vietnam War ramped up employment to over 13,000.

The cutting edge technologies and nuclear capabilities pursued during the Cold War caused all government-run yards to lose business to private contractors. For the next two decades, the Navy Yard's budget continued to be cut and its responsibilities reduced. When closure became imminent, city officials began assessing options. In 1996, The Philadelphia Navy Yard was finally closed under the 2005 Defense Base Realignment and Closure Act (BRAC).⁷³ Under BRAC, the Department of Defence (DOD) greatly reduced its excess facilities by disposing of bases and manufacturing facilities such as the Navy Yard. BRAC permitted the conveyance of land at below-market value to Redevelopment Authorities under a provision called an "Economic Development Conveyance."⁷⁴ It was under this provision that the Philadelphia Industrial Development Corporation acquired the land on behalf of the City.

⁷³ Created in 1988, several BRAC's have since been enacted with the goal of improving efficiencies at bases.

⁷⁴ Aaron Flynn, "Base Realignment and Closure (BRAC): Property Transfer and Disposal," CRS Report for Congress (Order Code RS22066, February 23, 2005).
<http://www.globalsecurity.org/military/library/report/crs/crs_rs22066.pdf>

The City of Philadelphia saw the Navy Yard's historic buildings and landscape as a valuable public resource. At 1,200 acres, League Island is larger than Center City, and the Navy Yard and has over one million square feet of space in historic buildings.⁷⁵ Like many cities in similar situations, Philadelphia recognized the inherent value of the historic resources at the Navy Yard and began preparing for its purchase

Historic Resources

The 1996 decommissioning of the Navy Yard for redevelopment by the City of Philadelphia triggered Section 106 of the National Historic Preservation Act (1966). Section 106 requires Federal Agencies, prior to approving an "undertaking", to take into account how the undertaking may affect properties eligible for or listed in the National Register of Historic Places.⁷⁶ In an undertaking such as this, involving disposal or transfer of public property, the Federal Agency must balance the integrity of the historic resource with the proposed use, working with the purchasing entity to "seek ways to avoid, minimize or mitigate any adverse effects on historic properties."⁷⁷ In this case, the undertaking was the sale of federal land for private use.⁷⁸ It required that the U.S. Navy take into consideration the effects of the transfer on the site's historic properties

⁷⁵ "Master Plan," Philadelphia Navy Yard site, prepared for PIDC and the City of Philadelphia by Osiris Group, Inc., 2009.

< <http://www.navyyard.org/master-plan> >

⁷⁶ Section 106 of the National Historic Preservation Act (NHPA) defines an "undertaking" as "a project, activity or program funded in whole or part under the direct or indirect jurisdiction of a Federal agency . . ."
" 36 CFR 800.16 (l)(1).

⁷⁷ 36 CFR, §800.1(a) (Effective August 5, 2004)

⁷⁸ Though the "private" owners were not known at the time, it was understood that the City would be holding the property (through the entity PAID) for eventual sale and redevelopment. As interim owner of the property, it was the City's responsibility to address the mitigation required by NHPA.

and seek ways to avoid, minimize, or mitigate adverse effects. John Milner and Associates (JMA) identified the potential adverse effects of the proposed development (as proposed by the 2004 Master Plan) and drafted an MOA that sought to resolve these effects. The Advisory Council on Historic Preservation (ACHP) is legally required to provide advice throughout the process and sign the Memorandum of Agreement. Other signatories included: the Navy, PIDC, the purchaser/developer (Urban Outfitters, Liberty Trust, Synterra, etc), the Philadelphia City Planning Commission, The Pennsylvania State Historic Preservation Office (SHPO), and Southeastern Pennsylvania Transportation Authority (SEPTA).

IMAGE 4: Building 543 (Machine Shop); built: F.T. Chambers, Civil Engineer, U.S. Navy; 1939



Source: Philadelphia Navy Yard, PIDC (2009)

IMAGE 5: Building 4 (Steam Engine Storehouse); builder unknown, [1877] 1901



Source: Philadelphia Navy Yard, PIDC (2009)

IMAGE 6: Building 100 (Marine Barracks); built: Henry Ives Cobb, 1901



Source: Philadelphia Navy Yard, PIDC (2009)

The Section 106 process, carried out over several years (1996-2000) between the Advisory Council on Historic Preservation (ACHP) and the federal agency (U.S. Navy in this case), set many of the preservation terms of the transfer, and provides an excellent opportunity to obtain valuable records on historic properties, typically in the form of the historic architecture surveys and significance evaluations, as was the case here. JMA researched and documented the area of the Navy Yard referred to as the Historic Core, preparing the National Register nomination, Historic American Engineering Record (HAER) documents, and state-level documentation of several assembly buildings and dry docks.⁷⁹ JMA also drafted the MOA which outlined appropriate uses for the historic buildings and landscapes. The program for the buildings requires the restoration of the

⁷⁹ The Navy Yard was not placed on the Philadelphia Historic Register as part of the Section 106 process.

exterior and the preservation and restoration of significant interior features. Parties interested in acquiring historic buildings must sign the MOA which includes the following provisions:

- The meticulous cleaning, repair, and replacement (where necessary) of exterior granite, brick, and cast iron.
- Window restoration or replacement to match historic windows.
- The removal of non-historic dropped ceilings to expose original metal roof truss systems.
- The hand scraping of brick perimeter walls to remove loose paint and the stabilization and protection of the remaining finish by a clear matte urethane.
- Raised concrete floors to meet flood code requirements.
- Preserve visual references to “ghost” buildings.

Part of the Section 106 mitigation associated with the redevelopment was for JMA to prepare a range of interpretive products. These included a pair of permanent on-site display panels summarizing the importance of the Philadelphia Naval Shipyard in U.S. history, particularly during the World War II period; and a publication. JMA describes the book, *Warships and Yardbirds*, as an illustration of how “the federal historic preservation compliance process can be employed to introduce a particular aspect of local history to the general public in a user-friendly manner.”⁸⁰

⁸⁰ JMA Press Release, 2000.

Throughout the 100-year life of the Philadelphia Navy Yard, development occurred intermittently, leading to a variety of periods and styles of architecture. There are a total of 233 buildings, 28 structures, and one object included within the Philadelphia Navy Yard League Island National Register Historic District. In 1999, The Philadelphia Naval Shipyard Historic District was added to the National Register of Historic Places. The nomination lists multiple periods of significance dating from 1850 through 1949.⁸¹ The Philadelphia Naval Shipyard Historic District (#99001579) includes 194 buildings, 29 structures, and 1 object on approximately 400 acres. The architecture firm is listed as Peary, Robert E., Karcher & Smith. While most of the buildings were built for industrial purposes, there are also barracks, officers' houses, a chapel, and other support buildings. The style is primarily Victorian, with extensive use of red brick.

The Plan

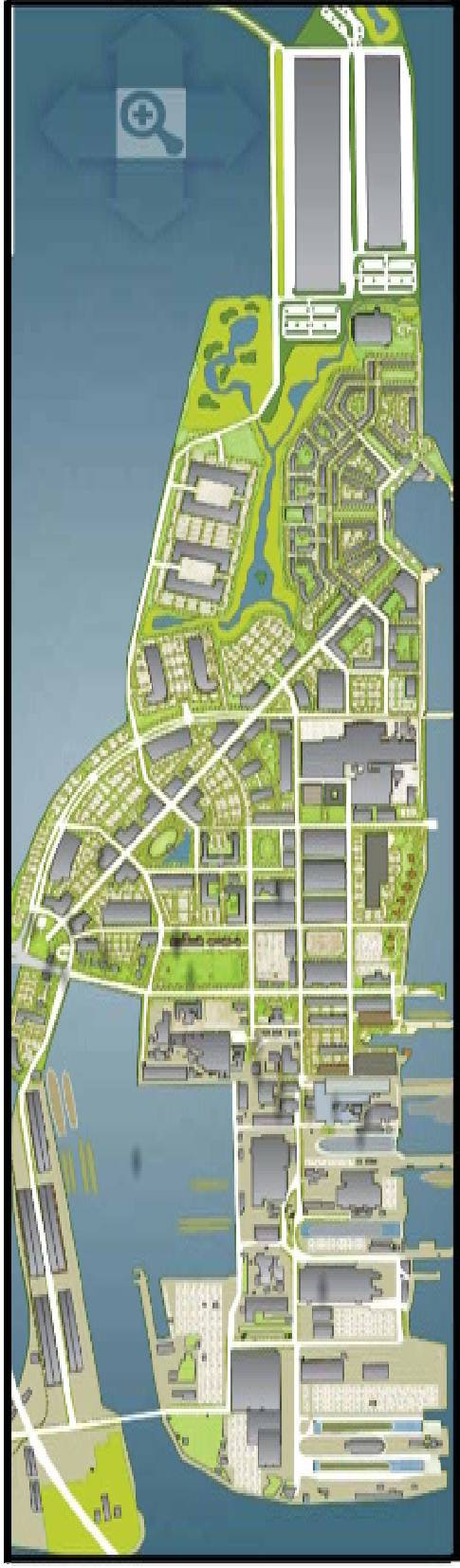
Though the Navy Yard's budget and number of employees had been declining for decades, the closure of the Navy Yard was a serious blow to the economy of the City of Philadelphia. With this in mind, Mayor Rendell, the Philadelphia Industrial Development Corporation (PIDC), and consultants studied the projected impact the closure would have on the City's economy.⁸² Loss of jobs and the associated negative trickle-down effect that would have on the services industry would have further depressed the economy of southeast Philadelphia. This negative impact, combined with

⁸¹ The Periods of Significance listed in the Philadelphia Navy Yard's nomination to the National Register of Historic Places are: 1850-1874, 1875-1899, 1900-1924, 1925-1949.

⁸² The PIDC is the City of Philadelphia's economic development corporation, focused on investing in businesses and job growth.

the opportunity presented by the site's existing buildings and infrastructure, as well as its miles of prime waterfront property, made the League Island Navy Yard a prime target for redevelopment. Work on the "Community Reuse Plan" plan in the late 1990s began before the Navy had fully decommissioned the site. The City's quick reaction to the closure and its collaborative approach are two key elements to the success of this project.

IMAGE 7: Philadelphia Navy Yard extant buildings overlaid with 2004 Site Plan



Source: Robert A.M. Stern Architects (2004)

The City understood the value of the land and its unique historic resources and designed a strategy that would maximize the benefits to the public while attracting private investment. The size, cost, and speed at which the City sought to redevelop this land called for a variety of public-private partnerships in which public incentives were offered.

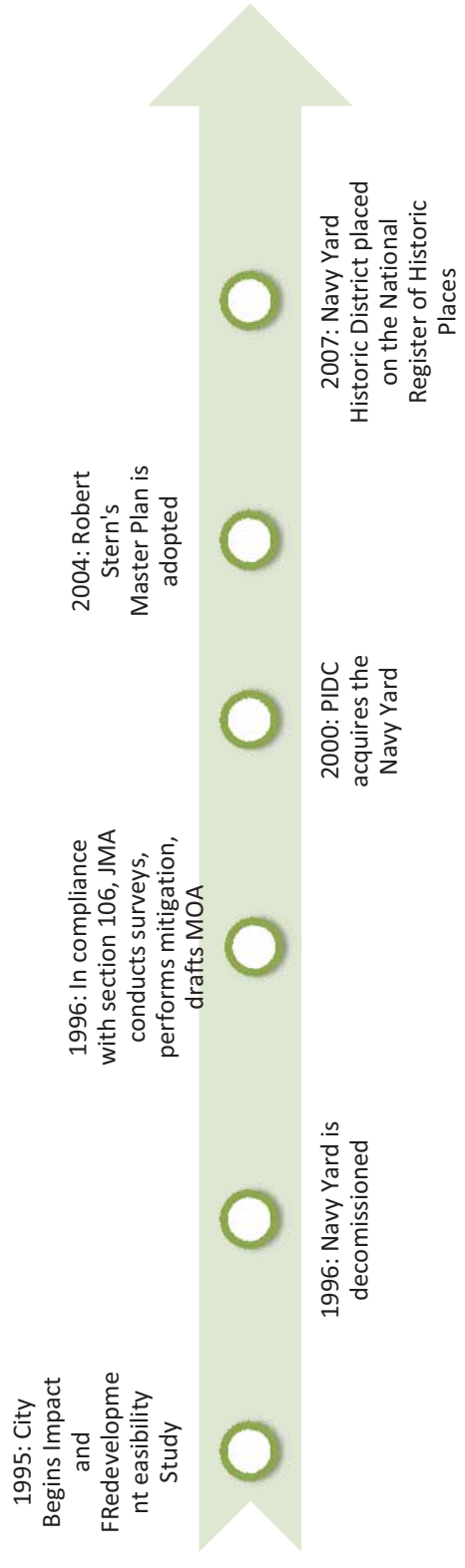
In 1994, the City of Philadelphia took control of the 1200-acre property via a ground-lease held by the Philadelphia Industrial Development Corporation (PIDC), which functioned as a purchase-option until the disposition of the property could occur. In 2000, the Philadelphia Authority of Industrial Development (PAID) purchased the entire site for two million dollars on behalf of the City of Philadelphia.⁸³ With the power to acquire, hold, and sell real estate and to issue tax-exempt bonds to finance economic development projects, PAID functions as PIDC's bank. PIDC is responsible for planning and development.

When the Navy Yard's closure in 1996 became imminent, the City commissioned a study that evaluated the impact that the closure would have on the nearby area as well as possible reuse strategies for the Yard. After its acquisition in 2000, the PIDC renamed the League Island Philadelphia Navy Yard the Philadelphia Naval Business Center and hired Robert A.M. Stern Architects to develop a Master Plan. As the timeline on page 84 indicates, the Master Plan was completed in 2004; PIDC began developing the property

⁸³ PAID is a public authority that operates as a land-holding entity for the City on development projects orchestrated by PIDC.

soon thereafter. The Plan called for approximately 11 million square feet of new construction and approximately one million square feet of historic rehabilitation for office, research & development, industrial, residential, commercial, and retail to be built out over approximately 30-50 years. The Plan features an extensive amount of public open space and recreational facilities. As land developer, PIDC built infrastructure improvements to attract tenants and buyers. This includes a significant amount of the public open spaces, sewers and water treatment facilities, as well as entitlements such as zoning and use permits that would be required for new uses. PIDC is also working on expanding mass transit (SEPTA) to the Navy Yard. All tenants pay for the upkeep of the public open space through common-area maintenance fees (CAM).

EXHIBIT 5: Key Events in the Rehabilitation of the Philadelphia Navy Yard

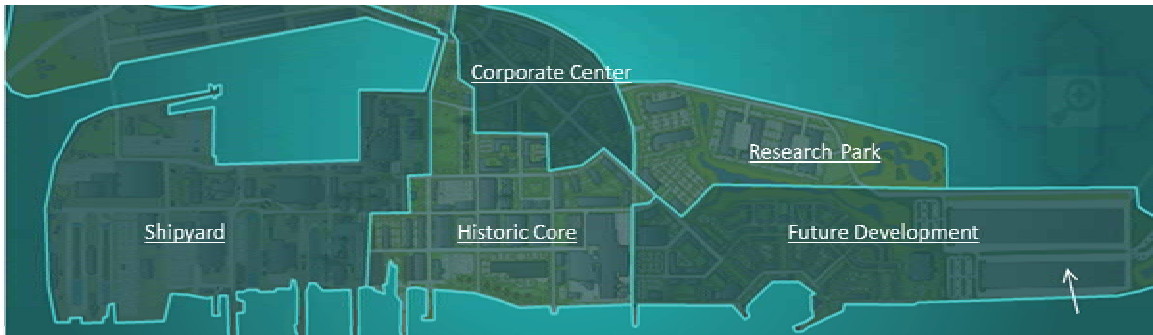


Because of its size, the Master Plan divides the Navy Yard into five areas; development is phased and commences with the PIDC issuing a Request for Proposals (RFP) for individual projects. Besides the existing uses listed below, planned development at the Navy Yard includes a speculative Navy Yard Commerce Center (high-tech manufacturing and distribution) within the Shipyard campus (started January 2009 by development partners Liberty Property Trust and Synterra Partners) and plans (not yet started) for residential infill within the Historic Core campus.

The five campuses are (see map on page 86):

- The Shipyard: 450 acres suitable for heavy industrial use, direct rail and ship access, Current businesses include Aker Philadelphia Shipyard (an anchor tenant employing 1,300 people), Tasty Baking Company, Paramount Pictures. There are a total of four buildings.
- The Corporate Center: 70 acres for commercial use, all new construction. There are a total of four buildings planned (two currently built).
- The Research Park: 80 acres for build-to-suit R&D and flexible office space. There are no buildings currently built, but 935,000 square feet may be accommodated.
- Future Developments: 200 acres of vacant waterfront with no planned development.
- The Historic Core: 400 acres of office, R&D, Urban Outfitters is the anchor tenant (7500 employees). There are a total of 233 buildings.

IMAGE 8: Five Campuses at the Philadelphia Navy Yard



Source: PIDC 2010

Incentivizing Development

PIDC is the City entity responsible for redeveloping the Navy Yard. PIDC's central strategy is to leverage financing and real estate resources to retain and grow employment throughout Philadelphia. It packages and offers a variety of financing options and business incentives for companies that locate at the Navy Yard. These economic development tools include tax incentives, financing incentives/direct lending, and workforce development. By having early support from the City, state, and federal agencies during the development of the master plan, PIDC was able to work through most of the regulatory issues and approvals that private developers faced. It is critical to have a central administrator for the property transfer of this scale and complexity. Furthermore, PIDC is in a better position to navigate these bureaucratic waters than the private sector because of its access to and familiarity with local government. By securing necessary permits and zoning for on-sale properties, PIDC reduces the riskiness of the investment from the developer's perspective, thereby adding value to the land.⁸⁴

⁸⁴ One of the major hurdles for the reuse of the eastern (unbuilt) portion of the Navy Yard has been brownfield remediation. PIDC has spearheaded a cleanup involving partnerships with the PA Department

This is one of the most effective interventions PIDC can perform, and it does not involve any direct financial outlay.

A variety of City, State, and Federal financial incentives were either created or already are available for businesses moving into the Navy Yard. They include the KOIZ (Keystone Opportunity Improvement Zone), the KIZ (Keystone Innovation Zone), the City's real estate tax abatement program, and the Federal Rehabilitation Tax Credit. Additional research and development tax credits are available for certain businesses, such as those involved in technology. A few deals in particular stand out because of their creativity.

The Navy Yard is listed on the National Register of Historic Places, with its earliest structures dating from 1875. As a result, federal investment historic tax credits of up to 20 percent may be available for eligible building rehabilitation costs. There are two million square feet of historic space in the Historic Core campus. Urban Outfitters was the first company that moved into the Navy Yard, and they chose to move into historic buildings because of their character. Urban Outfitter's decision has been a catalyst to subsequent development and a demonstration of the reuse potential of the Navy Yard's historic buildings. To incentivize Urban Outfitter's consolidation of corporate headquarters into several historic buildings at the yard, PIDC transferred the land to them at no cost and the buildings at one dollar. In exchange, the City got 250,000

of Environmental Protection, Philadelphia Department of Commerce, City of Philadelphia Redevelopment Authority, Conergy Projects, Inc., and Exelon Generation.

square feet (five buildings) of rehabilitated historic industrial buildings.⁸⁵ The project was completed in October 2006 at a total development cost of 115 million dollars, including 4 million dollars for infrastructure. The approximately 100 million dollars that went towards building rehabilitation was offset by the 20 percent Federal Rehabilitation Tax Credit.

Incentives have also spurred two major new construction projects. The first, undertaken by Liberty Property Trust, is the Navy Yard Corporate Center. Liberty received exclusive development rights to the land in exchange for paying for 40 percent of the 2 million dollar Master Plan (PIDC paid the rest). They were also responsible for paying for the infrastructure at Corporate Center (totaling 250 million dollars). The second site is the Aker Philadelphia Shipyard, where millions in state and local funds were used towards upgrades to their shipbuilding complex. As of 2009, approximately 400 million public dollars have leveraged between 2 and 3 billion dollars of private investment.⁸⁶

The Federal Rehabilitation Tax Credit is the only explicitly preservation-related incentive available. This credit may be used only on the rehabilitation of structures and not on the cultural landscape. Nevertheless, the outcome has been good: the streets retain

⁸⁵ Urban Outfitters is under negotiation to purchase an additional 100,000 square foot hangar.

⁸⁶ According to Mark Seltzer, Director of Leasing and Business Development for PIDC, as quoted in "Navy Yard: Fields, Fields, Fields of Dreams." by Thomas J. Walsh, PlanPhilly.com, March 26, 2009. <<http://planphilly.com/node/8556>>

their proportions, sidewalks, and trees. This is due to: 1. The MOA which called for preserving the traditional grid as much as possible; 2. Stern's Master Plan which works with the existing grid and natural landscape; and 3. The fact that it was already built.

Other incentives used by businesses at the Navy Yard indirectly promote the adaptive reuse of the historic buildings by encouraging capital improvements and growing businesses within KIZ and KOIZ zones (which include the Historic Core campus).

The first is the City's ten-year real estate tax abatement for new industrial or commercial construction, and for substantial rehabilitations. The abatement functions as a freeze of the property value prior to the improvements; it is for ten years and is transferrable upon sale. All new construction and substantial rehabilitation projects enjoy this abatement. The fact that Urban Outfitters paid between one and five dollars for each historic building means that they will essentially have no tax on the land for ten years. This is savings that offsets the cost of rehabilitation.

Another financial incentive is the Keystone Opportunity Improvement Zone (KOIZ), which includes almost all sections of the Navy Yard. Qualified companies locating within KOIZ areas are exempt from many state and municipal business taxes for up to 15 years (until 2018). The more business-friendly the Navy Yard is, the more likely that available historic buildings will be purchased, rehabilitated, and inhabited.

The Navy Yard was also designated a Keystone Innovation Zone (KIZ), a tax credit program offering up to 100,000 dollars in credits. The KIZ initiative "promotes

collaborative innovation among academic institutions, government research entities, and private industry to leverage technology commercialization for job creation”.⁸⁷ KIZ is especially targeted towards small and startup technology businesses. The KIZ anchor is the Building 100 Innovation Center, a technology incubator located in a 30,000 square foot historic building.

Lastly, the City issues Research and Development (R&D) tax credits at its discretion to encourage technology-oriented business creation. Unused credits may be syndicated for cash.

Outcome

Redevelopment is ahead of expectations. To date, PIDC has started or completed 65 million dollars in infrastructure improvements, including a new entrance on 26th Street. The Master Plan calls for a “Town Center” in the Historic Core, a mixed-use development to be housed in empty barracks and office buildings. However, a current deed-restriction blocking residential development must be overturned before this can happen.⁸⁸ Rental and for-sale housing is part of Stern’s Master Plan, which calls for high density. Because of the isolation of the Navy Yard, increased density on-site is necessary before retail can be supported.

⁸⁷ Nancy Zivitz Sussman, “The Navy Yard,” Volume 39, Number 4, (ULI Development Case Studies, Jan-March 2009).

⁸⁸ The deed restriction is a remnant from when the site was owned and used by the Department of Defense.

The result of the redevelopment to-date at the Philadelphia Navy Yard has been the re-creation of a lively mixed-use campus. By providing a majority of the site’s infrastructure, PIDC has signaled the City’s commitment to investing in the Navy Yard, which has attracted development and the application and, in some cases, creation of a wide variety of federal, state, and municipal incentives. By controlling the planning of the site, PIDC also retains better control over the pace and phasing of development.

Besides the financial benefits offered, one of the major benefits of having the public sector involved has been the implementation of a well-crafted master plan. If Philadelphia is to attract successful, high-skilled (and well-paying) companies, it must create a work environment outside of the office that is enticing to the workforce. Besides providing the types of incentives that business leaders seek, PIDC has tried to differentiate Philadelphia from other cities by using its resources at the Navy Yard: historic architecture and an accessible waterfront.

EXHIBIT 6: Navy Yard Outcomes

| | |
|----------------------------------|------------------------------|
| Navy Yard | |
| Total Square Footage | 5.5 million |
| Rehabilitated | 450,000+ |
| Total Jobs Created | 7500 employees, 80 companies |
| Private Dollars Leveraged | \$2-3 billion |

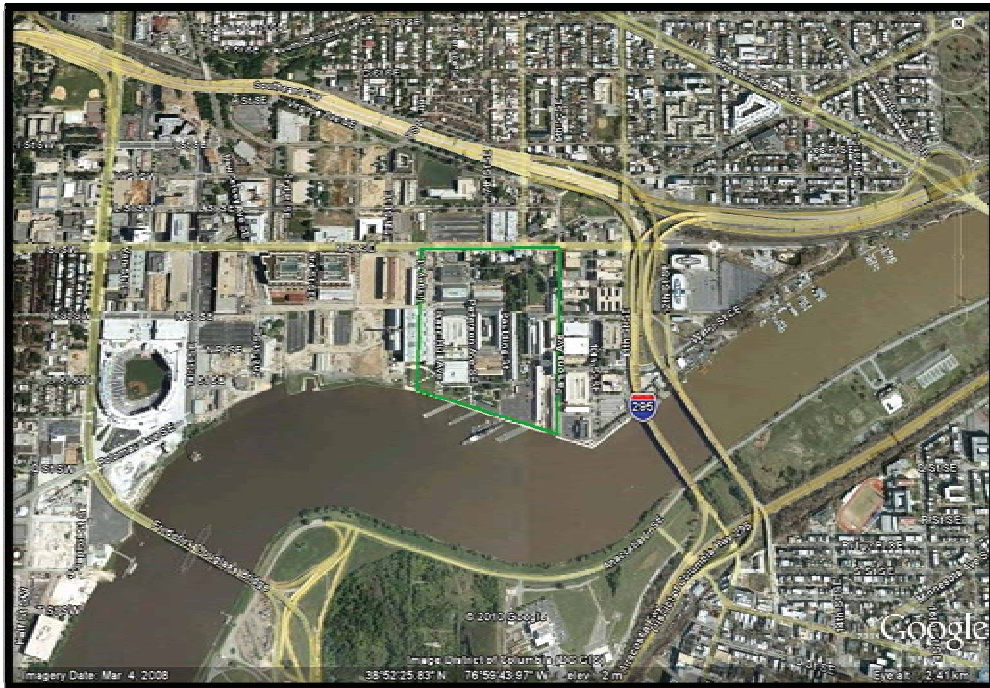
VII. The Yards, Washington D.C.

Similar to the case of the Philadelphia Navy Yard, the decommissioning of the Washington, D.C. Navy Yard left vacant a large swath of land clustered with several dozen historic buildings. Just as changes in manufacturing and technology have shuttered whole industries throughout the United States, changes in the nation's defense strategies have led to the decommissioning of large military installations.

The Yards in Washington, D.C. is an interesting example of how the federal General Services Administration, the private developer Forest City Washington, and the District of Columbia have partnered to create a vibrant waterfront neighborhood similar to the one envisioned by Pierre L'Enfant almost 300 years ago.

French aggression in the last decade of the eighteenth century led to an Act of Congress in 1799 to appropriate one million dollars towards the construction of six navy yards along the eastern seaboard. Boston; Norfolk; New York City; Philadelphia; Portsmouth; and Washington, D.C. promptly began construction of the six largest warships built for their time. In southeast Washington, D.C., forty acres along the Anacostia River, referred to as the "Eastern Branch" of the Potomac, was purchased for 4,000 dollars.

IMAGE 9: Washington, D.C. Navy Yard Map



Source: Google Earth (2010)

History

The Yards was originally bounded by 9th Street to the east, M Street to the north, and the river to the south. At the time of its construction, the western boundary was marshland that was eventually land-filled as growth occurred.

During its early years as a shipbuilding facility, the Washington, D.C. Navy Yard was the largest of its kind in this country. It played a vital role repairing and outfitting many ships and, during the War of 1812, as the Capital's defense against British invasion. It was unable to defend against the storming British troops, however, causing Commodore Tingey to order the entire navy yard burned with the exception of the Latrobe Gate and the Tingey House (also called Quarters A). After the war the low, white walls that had

been built around the yard in 1800 were heightened to ten feet, and extended to include an additional two lots. Filled marshlands to the west eventually formed a third of the yard's total area.

IMAGE 10: Washington Navy Yard, 1918



Source: Official U.S. Navy Photograph, now in the collections of the National Archives, # 80-G-454990

As the nineteenth century progressed, the Navy Yard began operating less as a shipbuilding facility and more as a manufacture and store, producing the parts needed for repairs and refitting vessels. The Anacostia River was too shallow to accommodate the larger, heavier ships being designed and its location was too far inland to be an effective defense. Nevertheless, it excelled as an ordnance manufacture and was soon functioning in even greater capacity, especially during the Civil War. In 1886 it was

officially transferred from under the oversight of the Bureaus of Construction and Repairs, Steam Engineering, and Yards and Docks to the Bureau of Ordnance. This officially created the United States Naval Gun Factory, the manufacturing center for all Navy weapons, ending its formal role as a shipbuilding yard.

The late nineteenth and early twentieth centuries brought technological advances to the Washington Navy Yard. Here, one of the nation's first steam engines produced the Navy's metal parts and engines, as well as armament for battle in every war until the 1960s. The yard was a center for innovation and experimentation; it hosted the invention of a wide array of new technologies, from battleship guns and the Panama Canal's gear locks to optical parts and medical prosthetics. As a center for research and development, it attracted pioneers like Robert Fulton, one of the inventors of the torpedo; Commodore John Rodgers, who built the first marine railway; and John Dahlgren, developer of the cannon. The Navy Yard tripled in size during the twentieth century, from its initial 40 acres. At its peak, the Yard consisted of 188 buildings on 126 acres, employing almost 25,000 people. The Navy Yard was the "chief manufacturing establishment in the city".⁸⁹

However, after World War II, the Navy's demand for capital ships with large guns diminished. In 1962, the Navy closed the gun factory and transferred all but the easternmost portion to the General Services Administration (GSA). The annexed area

⁸⁹ Constance M. Green, p.36

became known as the Navy Yard Annex. The area still controlled by the Navy serves as an administrative center and is home to the Navy Museum, the Naval Historical Center (housed in the Dudley Knox Center for Naval History), and Leutze Park. The Presidential yacht is also kept at the Navy Yard.

In addition to its role as a cutting-edge R&D facility for almost 150 years, the Washington Navy Yard has been “the ceremonial gateway to the nation's capital”⁹⁰. Diplomatic missions, ceremonies honoring fallen soldiers, and even Charles A. Lindbergh’s celebration upon returning from his famous transatlantic flight in 1927 were held here.

Historic Resources

The Washington Navy Yard Historic District was added to the National Register of Historic Places in 1973, and its Latrobe Gate was designated a National Historic Landmark District in 1976. Its period of significance is listed as 1800 to 1962; Benjamin Latrobe is the primary architect. The historic district covers about 42 acres and contains 45 historic structures, including the Latrobe Gate and the Tingey House (both individually listed on the National Register of Historic Places). The historic buildings

⁹⁰ Naval History and Heritage Command, “History of the Washington Naval Yard History and Descriptive Guide of the U.S. Navy Yard (1894)”

include officers' quarters and industrial buildings dating to the first half of the nineteenth century.

IMAGE 11: Washington Navy Yard, early 1990s



Source: Source: U.S. Naval Historical Center Photograph; #: NH 97844-KN

IMAGE 12: Building 167 (Boilermaker Shop), Washington Navy Yard; builder unknown (1918)



Source: army.arch.com, used with permission, 2010

IMAGE 13: Sentry Tower and Historic Wall (built after British attack in 1912), Washington Navy Yard, 2010



Source: army.arch.com, used with permission, 2010

IMAGE 14: Latrobe Gate, Washington Navy Yard; built: Benjamin Henry Latrobe, 1805



Source: Historic American Buildings Survey (HABS), Survey number DC-100 (1965)

The orientation and design of the buildings is appealing and pedestrian-friendly. A continuous street wall is formed by the attached industrial buildings, all abutting the streets, creating regular street lines and a definite feeling of enclosure of space. There is variety among the industrial buildings, some have long and narrow axes, typical of the mid- to late-nineteenth century truss spans. Buildings from the early twentieth century reflect construction's technological advances, with their broader spans. Many buildings feature arched fenestration, bays, and gables.

The Washington Navy Yard was the preeminent manufacturing establishment of nineteenth century Washington, D.C. When Pierre L'Enfant laid out the plans for the city, the strip of land along the Anacostia River, at the end of Eighth Street, was intended for Exchange Square, a commercial enclave. Some officials worried that locating the new Navy Yard here would reduce land values, but literature from the time indicates that the area flourished. Both George Washington and Thomas Jefferson supported the creation of the yard and saw it as a catalyst for the Capitol's growth and economy. In the early nineteenth century, the Navy Yard employed 380 people, roughly one-eighth of the city's total population (including slaves).⁹¹ ⁹² The historic facilities that housed the businesses and workforce of southeast Washington, D.C. then are being rehabilitated to do so again.

⁹¹Naval History and Heritage Command: "The Washington Navy Yard Historic District".

⁹² "Population of the 33 Urban Places: 1800". United States Census Bureau. June 15, 1998.

The Plan

When the General Services Administration (GSA) acquired responsibility for managing the reuse of the decommissioned portion of the Navy Yard in the 1960s, their intention was to develop it as a traditional Federal office enclave. The GSA's disposition process requires that they seek a new federal use ("internal reuse") for the land before pursuing other options; disposition may occur once no federal interest has been indicated. Despite the GSA's initial plans for a federal complex of offices (called the Southeast Federal Center), federal agencies "balked at moving there" due to the unattractiveness of the area.⁹³ Though the Department of Transportation was a committed tenant and had just built their headquarters there (7,000 employees, 1.4 million square feet), the area was a ghost town in need of redevelopment, amenities, and infrastructure to support it all. For three decades, the GSA had control of the Navy Yard Annex but, with the exception of the new Department of Transportation headquarters, public entities had little interest in moving there.⁹⁴ From a developer's perspective, the GSA had a captive audience and enough critical mass to warrant interest.

This was not the only location where GSA-owned property was languishing. The GSA recognized that creating enough critical mass to truly transform the site (and attract tenants) would require a combination of public and private support. Similar to the Philadelphia Industrial Development Corporation (PIDC), the National Capital

⁹³ Hall, Thomas C. "Norton Gets no Respect for Rent Control,"

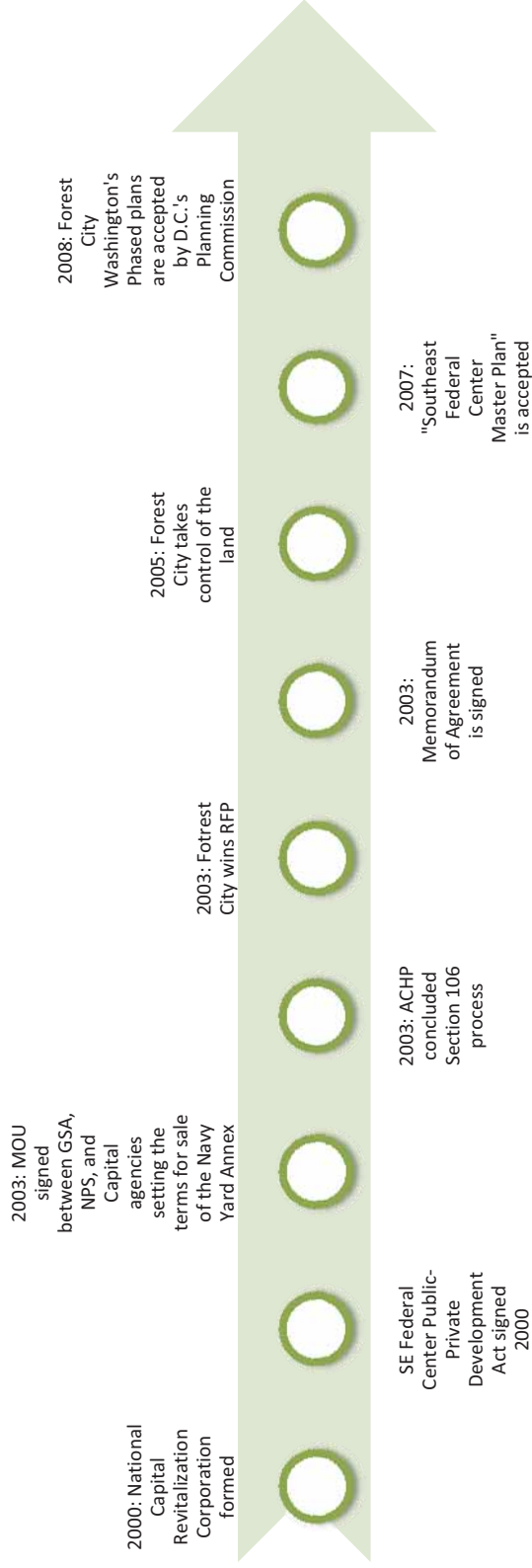
⁹⁴ After it was acquired from the Navy, the land was called the Southeast Federal Center (SEFC), after Forest City became involved it took the name "The Yards".

Revitalization Corporation (NCRC) was created in 2000 to spur revitalization in Washington, D.C. through strategic investments and business partnerships aimed at redeveloping and bringing opportunity to underserved parts of the Capitol.⁹⁵ The NCRC functioned as the District's redevelopment branch, assisting with the redevelopment of the Washington Navy Yard, and looking to the successes that public-private partnerships have had in the redevelopment of large tracts elsewhere. In April 2002, Washington DC published its Anacostia Waterfront Initiative, a covering 2700 acres of waterfront from Maryland to the Lincoln Memorial, including the Navy Yard.⁹⁶ A timeline of key events in the development of The Yards is on page 104.

⁹⁵ RLA Revitalization Corporation (RLARC) is a subsidiary of NCRC that manages and holds the properties being developed.

⁹⁶ White, Suzanne. "Southeast Federal Center Finalists Revel in Spotlight"

EXHIBIT 7 Key Events in the Rehabilitation of The Yards



In order to spur the redevelopment process (especially the transfer of property), District Congresswoman Eleanor Holmes Norton supported the Southeast Federal Center Public-Private Development Act (2000). This Act permits NCRC to work jointly with a private developer, lease the site, or sell it outright. In 2003, a Memorandum of Understanding (MOU) was signed between General Services Administration, National Park Service, District of Columbia Office of Planning, District Department of Transportation, and the Washington Metropolitan Area Transit Authority in preparation for the sale and future development of the site. The MOU included a provision allowing the National Capital Planning Commission the right to review and comment on each phase of development. In 2003, Congresswoman Norton persuaded the GSA to issue a Request for Proposals to developers who were interested in redeveloping the 42-acre Navy Yard Annex. Forest City Washington (FCW) was selected from five semi-finalists by a panel of planners, officials, and consultants to redevelop the nineteenth century navy yard into a mixed use, transit-oriented development. Key players' support of the project is highly visible, as in this statement from Mayor Fenty: "From day one, my Administration has made it a top priority to make sure this site becomes a great urban waterfront neighborhood that embraces its historic past and includes world-class public spaces for all residents and visitors alike. Forest City has been an excellent partner and they certainly have what it takes to get the job done."⁹⁷

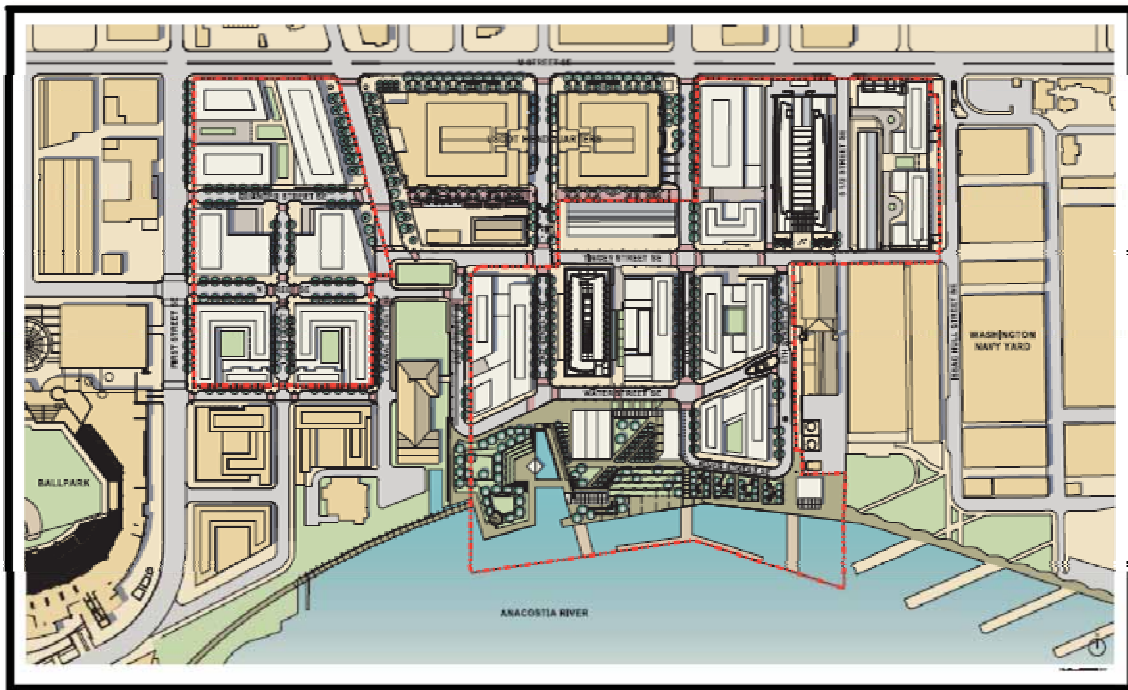
⁹⁷ District of Columbia Press Release (Mayor's Office), "Fenty Breaks Ground on the \$42 Million Park at the Yards," May 28, 2009.

The GSA is required by law to consider the impacts resulting from the sale of property, triggering the National Environmental Policy Act of 1969, the Historic Preservation Act of 1966 and other relevant statutes. Developed as part of the Section 106 process, the document “Summary Matrix of Impacts on Alternatives and Mitigation Measures” identified the potential effects on historic resources and mitigation measures. In 2003-2004, under Section 106, the Advisory Council on Historic Preservation (ACHP) and the GSA drafted a Memorandum of Agreement (MOA), which set many preservation terms of the transfer. A Programmatic Agreement was part of the MOA, and outlined Forest City’s responsibilities to protect the historic fabric (identified in the EIS) on the site. In addition to the negotiation of a Programmatic Agreement, a historic covenant was included on all deeds for conveyance. Historic preservation design guidelines, historic covenants, and a maintenance plan were negotiated and signed by the ACHP, GSA, Forest City Works, Washington D.C. State Historic Preservation Officer, and other consulting parties.

Partnering with Forest City allowed the GSA to use Forest City’s expertise, creativity, access to capital, and eligibility for the FRTC while simultaneously allowing Forest City to shoulder the majority of risk. In exchange, the GSA worked with the District to develop the Southeast Federal Center Public-Private Development Act (2000), facilitating federal land conveyance to the private sector, through the District’s redevelopment office (National Capital Revitalization Corporation). This Act has enabled the GSA to be able to

work with a partner and transfer land more efficiently.⁹⁸ Forest City selected D.C.-based architect Shalom Baranes Associates as the master planner of the site. The resulting Plan (Southeast Federal Center Master Plan, 2007) outlined 3.2 million square feet of residential use, and 2 million square feet for commercial, retail, and cultural space. The significant amount of public open space and amenities in the Plan included: a 5-acre waterfront park with a promenade along the Anacostia River (see map below).

IMAGE 15: The Yards Site Plan (area outside of boundaries belongs to GSA or DOD)



Source: The Yards, Forest City Washington (2010)

In the case of the Philadelphia Navy Yard, PIDC held all properties through their subsidiary PAID, and retained control over the pacing and quality of development through the RFP process. At The Yards, the GSA is still part of the process, requiring

⁹⁸ The GSA's land disposition process is complicated and time consuming. It involves a series of public hearings and impact reports before land can be transferred from public to private hands.

Programmatic Agreements. Each phase of Forest City's Master Plan (which includes transfer of historic properties) is subject to review by the project's 11 consulting parties and signatories, including the GSA; ACHP; U.S. Navy; National Capital Planning Commission; National Trust for Historic Preservation; District of Columbia State Historic Preservation Office (D.C. SHPO); D.C. Office of Planning; Capitol Hill Restoration Society. This makes the redevelopment process substantially more time-consuming and NCRC's role even more vital.

The Yards is multi-phased and has a 20-year timeline (see timeline on page. The first phase of construction (170 residential units and 40,000-sq-ft of retail) began in 2008 with the entire project to be completed in 15 years, over three phases. The first phase will be completed in 2010. The entire redevelopment area is included on the National Register of Historic Places as the Washington Navy Yard Historic District.⁹⁹ While there is simultaneous construction on multiple buildings, Phase I is primarily residential (condos and apartments). Infrastructure development (roads, sewers, etc) is being constructed by FCW. The following image shows development at the northeast portion of The Yards including the rehabilitation of Buildings 74 and 202 (the brick buildings in the center of the frame, left to right). The new Department of Transportation headquarters is the eight-story building in the far right of the frame.

⁹⁹ The Yards website, courtesy of Forest City Washington, a subsidiary of Forest City Enterprises.

IMAGE 16: Phase I Rehabilitation at The Yards, Washington, D.C. (early 2009)



Source: JDLand, used with permission, 2010

Incentivizing Development

Each of the components of the plan has different financing structures. The Navy Yard's major open green space, Yards Park, is a 5.5 acre waterfront park and esplanade. It is being constructed through the use of public sector funds involving the "Payment In Lieu Of Taxes" (PILOT) tax increment program. Upon completion, the project will be dedicated as a public park for the District of Columbia. It will be managed and programmed by the Capitol Riverfront Business Improvement District. Proceeds from the BID will also go towards the maintenance of public areas and security within The Yards. Preservation and affordable housing projects have used the Federal Rehabilitation Tax Credit and the Low Income Housing Tax Credit, respectively. While the exact financing structures of any of the buildings onsite are not available publicly, it has been reported that MacFarlane Partners has a 25 percent equity stake in The Yards with Forest City making up 75percent. Infrastructure investments totaling nearly \$90 million are being paid for by PILOT.¹⁰⁰

Outcome

A few activities have contributed to the success of the redevelopment of The Yards. The area adjoining The Yards still houses some activity. Recently the Navy transferred the NAVSEA command from Northern Virginia to the Washington Navy Yard, doubling Navy employment there to 11,000 workers. As the Navy's presence here grows, so does the demand for nearby office space for the Navy's private sector contractors.

¹⁰⁰ Heath, Thomas, "A Neighborhood Rises at The Yards."

The project has grown outward since beginning. FCW has extended its reach into the neighboring community (outside of the original project area) to revitalize some of the proximate dangerous and dilapidated federal housing projects, using Hope VI funds. This is another example of a mutually beneficial arrangement between the District and the developer: The Yards will benefit from the positive externalities and good press associated with cleaning up the area and providing high-quality affordable housing, while the District helps facilitate the process. Meanwhile the area's rent roll is growing. In Spring 2009, the Navy announced that it would be expanding operations by 700,000 square feet, a move that would increase office demand and retail traffic at The Yards.

The measure of success for Public-Private Development is two-fold: was it feasible for both the public and private entities and did it have positive impact on the community? In the case of The Yards, the developer increased his scope and accomplished the early stages of planned development. The GSA and the District are already benefitting from an increase in the tax base and the positive spillover into struggling communities that neighbor the site. The Yards also appears to be a success for end-users (the true *public*). A large park, preservation of historic buildings, a LEED Gold site plan, and new amenities have been created. The project also brings the property back onto the tax rolls (federal land cannot be taxed) and will generate approximately \$450 million in paychecks each

year.¹⁰¹ The majority of negative press has come from other neighborhoods that preferred to see redevelopment occur in other parts of the city.

FCW's president, Deborah Ratner Salzberg sums up the goal of The Yards: "We are building . . . an active waterfront that will transform an entire section of this city."¹⁰²

The rehabilitation of the historic fabric of The Yards is a key element of this transformation. Unlike many master-planned developments featuring all new construction, the rehabilitation of historic industrial complexes like The Yards imparts a sense of place and history that is appealing to people. Here, social benefits and economic development are both advanced.

EXHIBIT 8: The Yards Outcomes

| The Yards Outcomes |
|---|
| 42 acres |
| 2.1 mm SF of Office |
| 2,800 above-market residential units |
| 160,000-350,000 SF of Retail |
| \$2-3 billion in private investment leveraged |
| 250-350 permanent jobs created (once complete) |
| LEED Neighborhood Development Gold Plan (for entire site) |

¹⁰¹ Traditional property taxes will be paid once the PILOT program period is over.

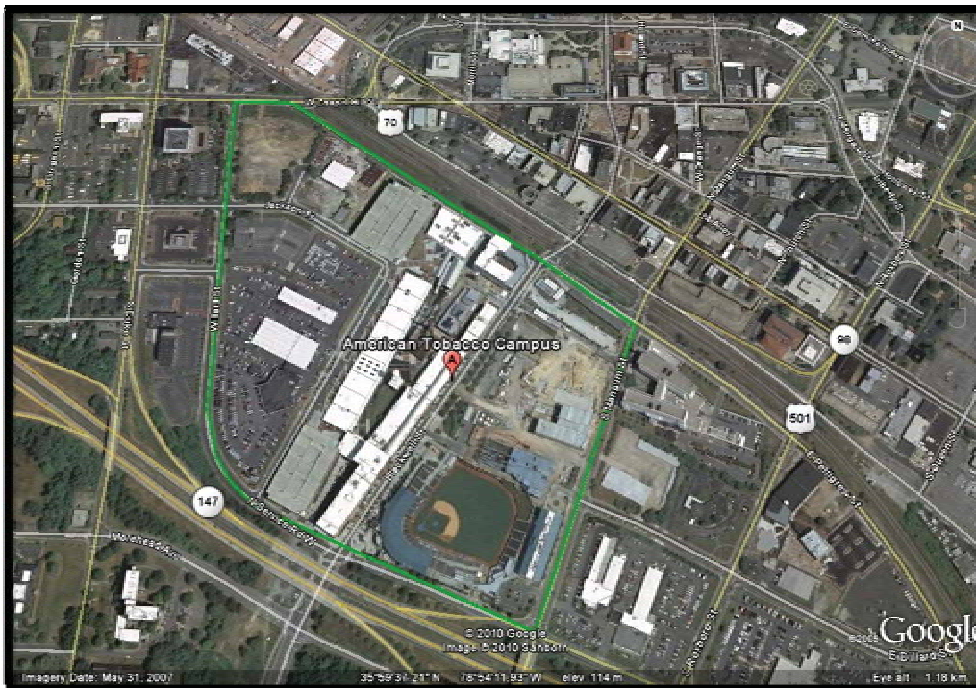
¹⁰² Heath, Thomas, "A Neighborhood Rises at The Yards."

VIII. American Tobacco Company Manufacturing Plant

“After years of economic decline in which the city saw its industries and residents flee to the suburbs, downtown Durham is capitalizing on the one key characteristic that distinguishes it from the suburbs: history.”¹⁰³

Durham is home to a uniquely American architecture: the tobacco warehouse. Dozens of these buildings, whether made of red brick or wood, stand around the city and its outskirts. Many have been rehabilitated to new uses thanks to innovative state incentives and a public willingness to reinvest in the state’s historic infrastructure.

IMAGE 17: Map of American Tobacco Campus



Source: Google Earth 2010

¹⁰³ Urban Land, “A Catalyst for Redevelopment”

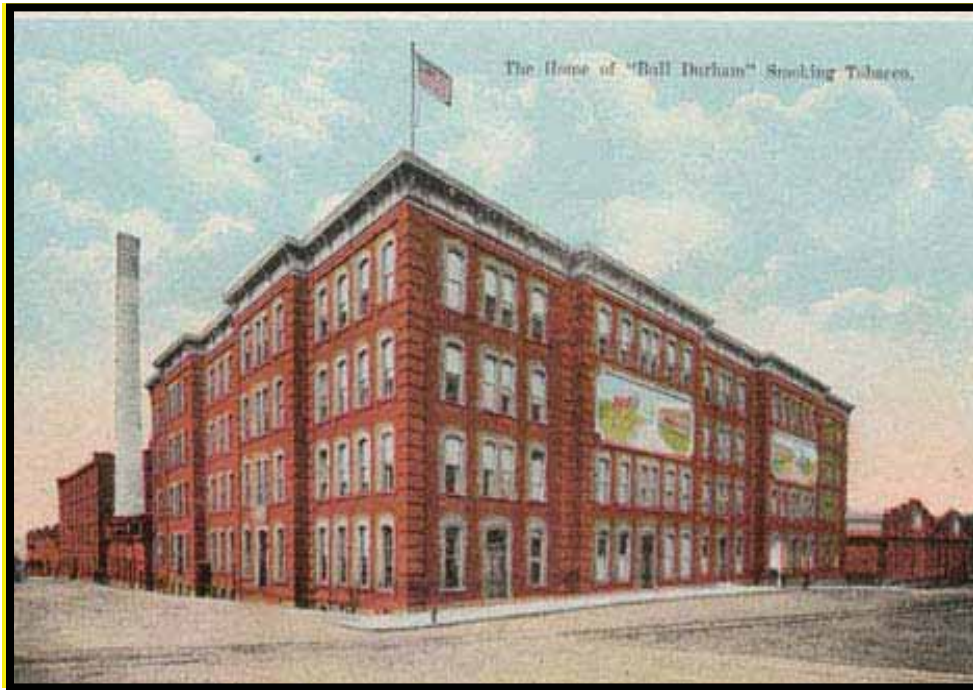
History

With almost a dozen buildings pertaining to his life listed on the National Register of Historic Places or registered as a National Historic Landmark, Washington Duke is one of the biggest names in Durham, North Carolinian history. Duke began tending a small tobacco farm upon being released from Confederate prison in 1865. He excelled and soon joined operations with Bull Durham tobacco and three other companies, forming the American Tobacco Company (ATC) in 1890. As the biggest tobacco company in the tobacco capital of the country, ATC was one of the 12 original members of the Dow Jones, and was subject to anti-trust legislation which eventually broke it up in 1911. The resulting firms were R.J. Reynolds, Liggett & Myers Tobacco, Lorillard, and the American Tobacco Company.

Constructed in 1874, Bull Durham's W. T. Blackwell Tobacco Building is the centerpiece of the American Tobacco National Register Historic District ; this central building is also a National Historic Landmark and one of the oldest industrial buildings in Durham. The success of Durham-grown tobacco grew exponentially during and after the Civil War, as soldiers and personnel moved in and around North Carolina. After the war, demand continued to grow as did operations in Durham. The town grew from a village into a hub of commercial activity with tobacco at its center. The W.T. Blackwell Tobacco Building was the first brick tobacco factory in the United States, built in 1874 by its namesake as a symbol of its importance and permanence. It was a stark and grand contrast to the wooden tobacco barns that dotted the landscape at the time, and

differentiated American Tobacco from all of the other growers of bright leaf tobacco (the most popular varietal at the time, and the type of tobacco Durham is most popular for producing).

IMAGE 18: American Tobacco Building (1910)



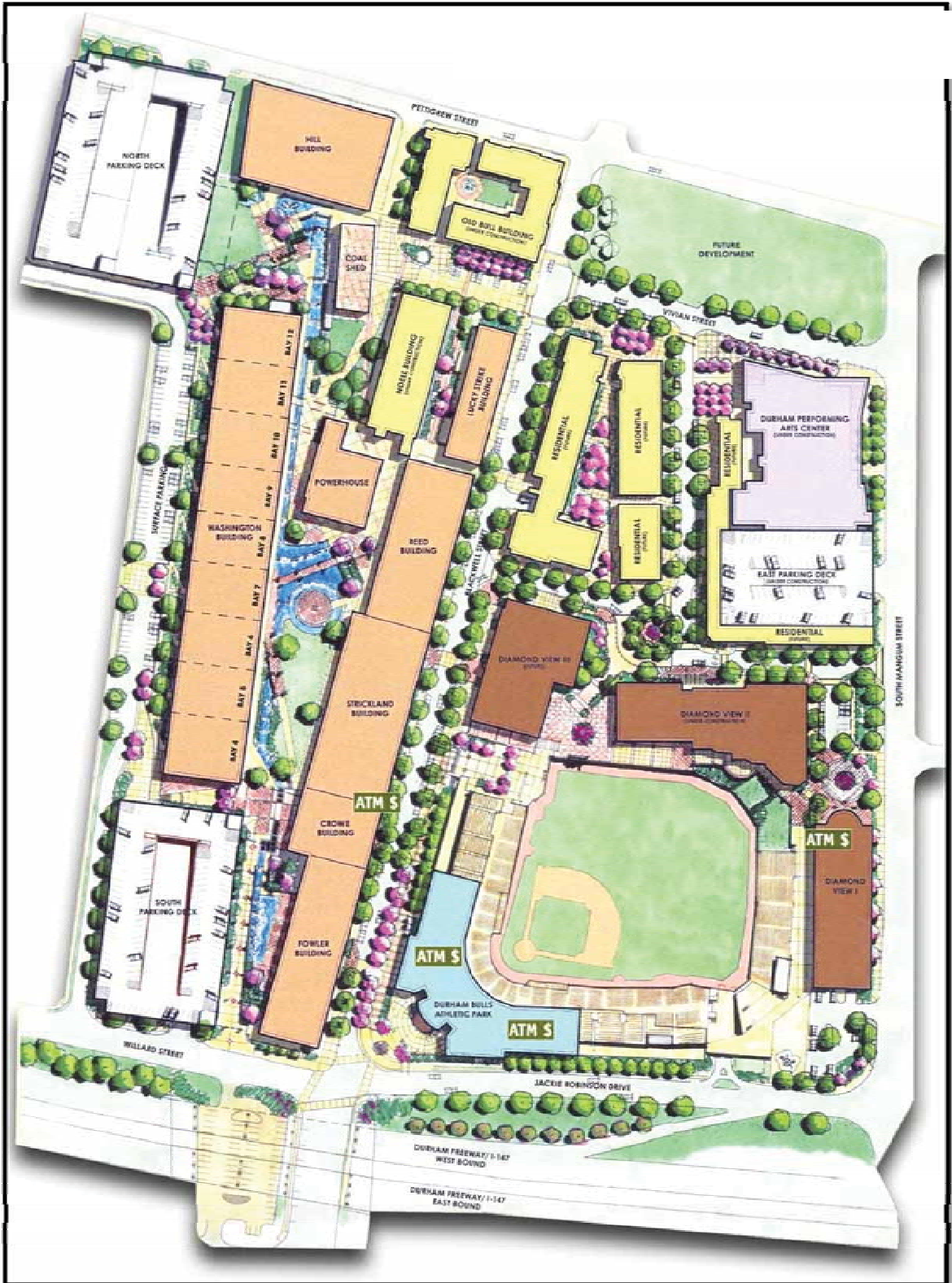
Source: Durham County Library

As the business grew, support industries sprang up around the factory in the late nineteenth and early twentieth centuries. The tobacco industry supported the cotton industry (cotton was needed for tobacco bags), which in turn supported the weaving industry, and so forth. As jobs became available, Durham's population grew exponentially. In 1900, Durham County's population was 26,000; by 1920 it had grown to 42,000.¹⁰⁴ Nearby buildings (which are part of the Historic District) were used for generating power, processing tobacco, manufacturing cigarettes, packaging,

¹⁰⁴ U.S. Census, Durham County Historic Records, 1900, 1920.

warehousing product, and as offices. The original building evolved from ell- to donut-shaped over the course of 30 years, as space needs grew. When the W.T. Blackwell Tobacco Building (the main structure) was constructed in 1874, it fronted Blackwell and Pettigrew Streets. By 1878, another wing was built, and in 1903 the final built section closed the sides, forming an "O". The interior courtyard was used as a parking lot. As the business grew, so did its space needs. American Tobacco Company built several buildings on the contiguous land around their initial, flagship factory, including the Fowler Building (1939), Washington Building (early 1920s), Strickland Building (1946), and the Lucky Strike Tower (1886).

IMAGE 19: American Tobacco Historic District Site Plan



Source: American Tobacco District

Historic Resources

The American Tobacco Company Historic District was listed on the National Register of Historic Places in 1974 and was named a National Historic Landmark in 1977. The American Tobacco Factory was placed on the National Register of Historic Places in 2000, the Historic District's largest and most important building. It is also referred to as the W.T. Blackwell Company Tobacco Building and the American Tobacco Company Manufacturing Plant. The district was listed for its role in America's tobacco industry between 1850 and 1974 and for its beautiful Italianate and Romanesque architecture. The unique red brick construction of the tobacco warehouses built in the nineteenth century is an important part of Durham's commercial architectural heritage. These warehouses and factories feature rows of chimneys, decorative bands of brickwork, and stepped facades pierced by large windows, artfully constructed in red brick (Appendix E).

Downtown Durham is ringed by these heavily ornamented industrial buildings. The pride that the Durham community has in their heritage is an important part of their identity as North Carolinians. The preservation of the American Tobacco Company complex had tremendous support. "We are saving this building as a physical connection to the past, because when the physical connection is gone then the memory starts to fade."¹⁰⁵ For the first time in over 50 years, historic buildings such as the Blackwell

¹⁰⁵ American Tobacco Historic District Documentary, speaker unidentified.

Buildings were restored to former architectural glory as (mid-century) false facades were removed and original materials were repaired.

IMAGE 20: Blackwell Building façade removal (mid-2005)



Source: Preservation Durham, 2010

IMAGE 21: American Tobacco District Entrance (2009)



Source: American Tobacco District, 2010

IMAGE 22: American Tobacco Historic District, with view of the Lucky Strike water tower and smokestack (2009)

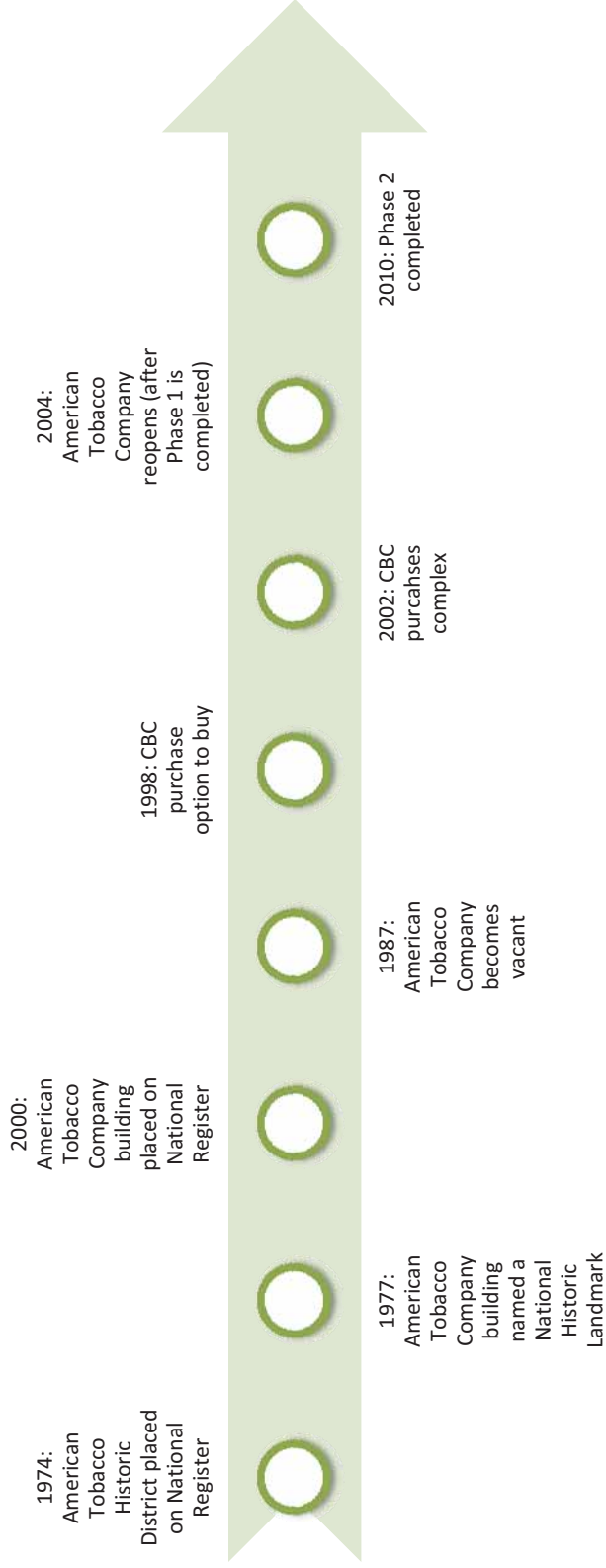


Source: American Tobacco Historic District

The Plan

The American Tobacco Company abandoned its Durham facility in 1987, after 113 years. The factory had marketed the first national tobacco brand (Bull Durham) and became internationally known as the manufacturer of Lucky Strikes. The eleven vacant buildings on the 16-acre campus then became a highly visible eyesore that blighted Durham's civic image for almost 17 years. When the Durham Bulls moved to a new baseball stadium across from the complex, large crowds viewed the derelict buildings summer after summer. Rehabilitating the American Tobacco Company campus to a use that would permit open space and public uses was important because of the central role played by the company in Durham's history. Additionally, the reuse plan would require a significant amount of foot-traffic to support the new businesses needed to fill all of the available space.

EXHIBIT 9: Key Events in the Rehabilitation of the American Tobacco Historic District



After three years of due diligence, Capitol Broadcasting Company (CBC) bought a purchase option on the one million square foot property in 1998, envisioning a mixed-use development. The company continued to renew the option until 2002, at which point they agreed to purchase the entire campus from American Tobacco for an undisclosed amount.

Because the transaction occurred between two private entities, the public sector played a much smaller role in the disposition process. Nevertheless, it was necessary for CBC to work closely with the Durham County Planning Commission to obtain approval of the two-phased Master Plan, and to obtain the necessary zoning variances for the development. CBC's use of rehabilitation tax credits required that they adhere to State and federal preservation requirements. Use of the Federal Rehabilitation Tax Credit (FRTC) and the North Carolina Mill Rehabilitation Tax Credit require that all work on the historic buildings is done according to the Secretary of the Interior's Standards ((SOI) for Rehabilitation and that they are properly maintained for at least five years after completion (and acceptance of the credit).

Some of the specific actions taken by CBC in order to comply with the SOI's Standards pertained to the use of materials, both for repairs and for new construction on the site. To preserve the historic nature of the original American Tobacco plant, only building materials that were available during the plant's lifetime (1874-1987) were used. In places where new concrete had to be poured next to existing concrete, it was stressed and stained to match. In addition, specialty brick masons were brought in to reconstruct

old brickwork and craft new brick elements with the same designs and patterns found in the original buildings.¹⁰⁶ One of the greatest impacts of the rehabilitation of the Blackwell Building was the removal of a false facade applied in the mid-20th Century (see photograph on page 115). Removal revealed original ornamental brickwork and the original Bull Durham painted sign.

Due to the size of the project, work was divided into two Phases. Phase One consisted of the Fowler, Crowe, Strickland, Reed, and Washington Buildings, and included the construction of two new parking garages and a new water feature through the center of the campus developed and constructed by W.P.Law Inc. based in Lexington, South Carolina (see map on page 113). The water feature and multiple paths are two ways that designers have attempted to mitigate the massiveness of the historic campus. Phase One included more than 600,000 square feet of rehabilitation, housing offices, restaurants, and community institutions (Duke offices, Durham Performing Arts Center, Durham Bulls offices). Forty three tenants have moved to the campus, resulting in 94 percent occupancy. The tenants include prominent local employers and many of the "creative class" companies that are important to the revitalization of downtown Durham.¹⁰⁷ Overall, the project is bringing 3,000 new permanent jobs to downtown. American Tobacco is much more than an office complex because of the amount of public space and activities at all hours of the day and evening.

106 Barbara Horwitz-Bennett, "American Tobacco Project: Turning Over a New Leaf", Building Design and Construction, Reed Publishing, October, 1, 2006.

¹⁰⁷As of 2010, tenants include: GlaxoSlate Pharmaceuticals, SmithGroup, TIAA-CRE, Morgan Stanley, Full Frame Documentary Film Festival, Coman Publishing Company, Bronto Software.

Phase Two consisted of the rehabilitation of the remaining 400,000 square feet of historic buildings into residential, retail, and additional office space began in 2008. This last phase consists of the remaining buildings at the north end of the site and is scheduled to be completed in late 2010. Many office spaces on the campus are now used by Duke University.¹⁰⁸

This project is the largest historic rehabilitation project in North Carolina. Notable because of its size, its national historic significance, and its impact, the \$145+ million development is a great example of the beneficial role of adaptive use of industrial heritage in rebuilding a local economy.

Incentivizing Development

North Carolina lost hundreds of thousands of manufacturing jobs in tobacco, textiles, and furniture during the last two decades¹⁰⁹. Hundreds of historic industrial factories are vacant. The American Tobacco Company project has become the "success story" model for proposed state legislation that would increase tax incentives for the reuse of historic industrial properties. Several other tobacco warehouses had previously been renovated in Durham. These are now popular sites for dining, shopping, offices and loft apartments. Because of American Tobacco's prominence and visibility, however, it has been viewed differently by the media and general public as the critical turning point for a struggling city center becoming a thriving downtown once again.

¹⁰⁸ A particularly nice touch, given the fact that the founder of American Tobacco (W.T. Blackwell) gave the endowment that brought Trinity College to Durham, later renamed Duke University.

¹⁰⁹ "Manufacturing Layoffs", North Carolina Rural Center, NC Rural Economic Development Center, April 2005.

This complex project was the result of a partnership of private and public organizations. A combination of private investment from the Capitol Broadcasting Company, infrastructure investment from Durham County, and State and Federal Rehabilitation Tax Credits made it possible. In May 2000, Durham City and County officials approved spending 37.1 million dollars for the construction of three parking decks as well as street and sidewalk improvements in and around the American Tobacco Campus¹¹⁰. Capitol Broadcasting Company's plan was contingent on the City and County's commitment of at least 35 million dollars in public money for the project, including parking and demolition of buildings not contributing to the Historic District (such as the DATA Headquarters). Capitol Broadcasting's investment in the rehabilitation was at least 145 million dollars, not including land acquisition, or marketing and management.

Capitol Broadcasting Company (developer and managing owner) and Bank of America (majority owner, tax credit investor) were partners and constituted the private sector. Durham County and City provided over 37.1 million dollars for the infrastructure improvements and demolition costs. The A.J. Fletcher Foundation (a non-profit) provided 4.75 million dollars towards the purchase of the land.¹¹¹ Self-Help, a local non-profit community development lender, provided 40 million dollars in low-interest financing because of the economic development merits of the project.

¹¹⁰ Ronnie Glassberg, "Delays Don't Dampen Optimism for Downtown Durham, N.C., Redevelopment Project," The Herald-Sun, March 20, 2001.

¹¹¹ The total price is undisclosed.

Outcome

A complex and risky project, the renovation of the American Tobacco campus is uplifting historic downtown Durham and serving as a much-needed model of industrial reuse throughout North Carolina and the South. The project has become a catalyst for downtown Durham's revival. Vacancy rates within the Durham-Chapel Hill area have dropped from 17.9 percent in 2004 to 7.8 percent as of March 2010.¹¹² One million square feet of historic fabric has been rehabilitated, prompting 500,000 square feet of complimentary infill. The first phase has completed the conversion of seven tobacco warehouses into residential condominiums, a new Amtrak station, retail, office, lab space, and a performing arts center.

The American Tobacco Trail, named for the company, is a multi-use rail-trail that begins just south of the Durham complex and runs 22 miles (35 km) towards Chatham and Wake Counties. It follows the route of the railroad (Norfolk Southern Railway (former) Durham Branch) that once served the factories, but was later abandoned when the businesses left. However, plans are in place to reopen the rail line for a "rails-to-trails" service that will bring people into tobacco country. The former tobacco buildings located along this historic line have been reused as shopping centers and housing (Brightleaf Square, West Village, and North Duke Street Condominiums).

¹¹² "Unemployment Drops in Durham-Chapel Hill", The Herald Sun, April 23, 2010.

The rehabilitation of the American Tobacco Company into the American Tobacco Historic District has revitalized downtown Durham. Almost as important, it has spurred the rehabilitation of other historic tobacco buildings within the region (and the reinvigoration of tobacco heritage in general, as evidenced by the American Tobacco Trail project). Its development of open space and public amenities serves as a model for successful adaptive reuse. As a mixed-use development, the project brings a diverse mix of visitors and creates a vibrant experience for the public, and has resulted in a successful investment for the developer (it is almost completely leased). Nevertheless, CBC would probably not have moved forward had it not been for the combination of City and County investment and State and Federal Rehabilitation Tax Credits.

EXHIBIT 9: American Tobacco Historic District Outcomes

| Navy Yard | |
|---------------------------|-------------------------------|
| Total Square Footage | 1.5 million |
| Rehabilitated | 1 million |
| Total Jobs Created | 6000 employees, 50+ companies |
| Private Dollars Leveraged | *undisclosed |

VIII. Conclusion

Early thoughts about the topic of this thesis focused on industrial buildings, and more especially on complexes containing multiple such buildings. Small neighborhoods unto themselves, these complexes provide a challenge and an opportunity to preservationists and planners who seek to return them to efficient use while preserving their historic character. Preservationists are trained to read landscapes for their layers of history and to consider ways to use the built environment as a way to better understand and disseminate heritage. The histories housed in sometimes modest, sometimes grand industrial buildings remain locked in many communities. Massive but abandoned and denigrated old factories, mills, and navy yards are painfully obvious reminders of lost jobs and prosperity to the towns in which they exist, subjects for debate and symbols of the failure, or abandonment, of entire industries.

These buildings and sites offer provocative opportunities for their communities to take control of their futures by reinterpreting their heritage. Rehabilitation can revitalize cities. Preservationists, planners, and developers have an opportunity to leverage these existing resources by adaptively reusing these buildings for new uses. Bringing the buildings back into active use creates jobs and opportunities while revitalizing the neighborhood. The best examples of the rehabilitation of industrial campuses are those

which have involved both public and private players. In these cases, collaboration has led to compromise and investment to achieve shared goals that benefit their respective communities. Though it is a more complex and time-consuming approach, historic preservation is most effective when used along with the tools of other fields.

Best Practices

The goal of this thesis is to illuminate some of the most effective strategies for rehabilitating industrial campuses into mixed-use developments. Assessing these strategies has been achieved by evaluating the history, historic resources, rehabilitation plans, incentives, and outcomes of each case study. Each case included collaboration between the public and private sectors, and each used existing or newly created incentives as a way to attract investment.

However, incentives perform another vital role, in that they are contingent upon the private developer's compliance with rehabilitation treatments, completion of the project, and maintenance. By applying for these incentives, a private developer voluntarily enters into an agreement to comply with pre-determined rules and regulations. Compliance with the Secretary of the Interior's Standards for Rehabilitation, length of term of ownership, public accessibility, and maintenance are examples of the preservation benefits exacted through preservation-related incentives. Federal, state, and local governments offer a benefit in exchange for compliance. This

“carrots and sticks” approach is a much more effective way of achieving preservation goals, as it balances the needs of both the public and private players.

Each case exemplifies a different level of public involvement. The City of Philadelphia has been active at the Navy Yard for almost 20 years, though tenants have been there less than three years. Here, the City’s early involvement through the purchase of the land, and now its managed disposition (through an RFP process) keeps them in control of the timing and type of development. Furthermore, the incentives the City offers helps shape the types of businesses it attracts. The Master Plan and MOA ensures that historic properties are handled in a sensitive way. The Yards in Washington, D.C. feature less public involvement, in that the entire Navy Yard Annex was awarded to Forest City Washington. Though Forest City’s work is subject to its (GSA- and District-approved) Master Plan and MOA, they have greater control of the timing and use of the buildings and land than at the Philadelphia Navy Yard. Of the private developers mentioned, the Capitol Broadcasting Company (CBC) had the most autonomy during the rehabilitation of the American Tobacco Historic District. CBC optioned the land, but secured public incentives and investment prior to purchase. In this sense, CBC was in control of the timeline. CBC was also in a position to select the level of involvement they were willing to accept from the public sector, with the knowledge that use of public incentives comes with a loss of control over certain decisions.

In all cases, a certain level of public private partnership has generated public benefit from private development. It is particularly effective with large industrial campuses due

to the riskiness of the scale and the difficulty of the site (many older industrial sites are also brownfields).^{113 114} Below is a series of best practices gathered from each of the cases.

¹¹³ Sagalyn, Lynne B., "Negotiating for Public Benefits", p 195

¹¹⁴ The U.S. Environmental Protection Agency (EPA) defines brownfields as "real property, the ... reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. ("Small Business Liability Relief and Brownfields Revitalization Act," Public Law 107-118 (H.R. 2869))

EXHIBIT 11: Best Practices in Case Studies

| Best Practice | Benefit |
|---|---|
| Cities need an entity that can hold the land while a Master Plan is being prepared and the land is being remediated, developed, etc | Allows the public to maintain control |
| Incentives designed to target specific areas of need have been successful in directing reinvestment towards these areas (Mill Rehabilitation Tax Credit, States' Residential Rehabilitation Tax Credits). Nevertheless, flexible incentives are critical to support the maximum number of historic preservation projects. | Increased use of credits |
| The National Park Service should do a better job of encouraging the use of the 10% FRTC, by improving the amount and accessibility of information on this credit. | Increased use of 10% credit |
| Cities should work closely with private developers to zone and assemble land, possibly doing so prior to land disposition. | It is easier for the City to navigate red tape than a developer; performing this step makes the project more attractive to developers. This also puts the city in a better position to make requests that would add public value, such as rehabilitation of the historic buildings, building infrastructure, and devoting land for public open space. |
| Early support from municipal, state, and federal agencies is critical. | Regulatory issues are more easily resolved and approvals more expeditiously granted |
| "Lessen the dependence of projects within [large] complex[es] on each other for purposes of eligibility for the tax credits." ¹¹⁵ | Easier for a single owner to use the tax credit on large, multiple-building projects. ¹¹⁶ |

¹¹⁵ NPS Advisory Board Report, September 2006. p16

¹¹⁶ Current policy makes tax credits for such individual projects within the complex dependent for five years upon acceptability of any other rehabilitation work done elsewhere in the complex.

Recommendations

Offering incentives is also an effective way for governments to direct private investment within a particular geographic area or among a certain building type. Incentives designed to target specific areas of need have been successful in attracting redevelopment towards these areas (Mill Rehabilitation Tax Credit and States' Residential Rehabilitation Tax Credits). Nevertheless, broad-based incentives are critical to support the maximum number of historic preservation projects. The success of the Federal Rehabilitation Tax Credit is evidence of this success, as it provides for both historic and non-historic rehabilitations (the income-producing requirement and age of the building are the two primary restrictions). One way to offer a broad-based incentive without linking it to income-generating uses is to offer non-monetary incentives. Density bonuses, waived development exactions, and waived parking requirements directly benefit a project's bottom-line without taking money out of public coffers. These would make attractive incentives and could be offered to rehabilitation projects that are non-income producing, and possibly non-historic (sharing eligibility requirements with the 10 percent FRTC).

The rehabilitation of industrial buildings and complexes is a deep topic that calls for additional research. In the United States, the creative classes are leading the charge in the reuse of industrial buildings, and most of the literature on the subject is published

electronically by sources such as Planetizen and The Forum Journal¹¹⁷. While some think tanks (Urban Land Institute, National Trust for Historic Preservation, U.S. Green Building Council) have touched on the subject by looking at particular case studies, the majority of published literature on this subject comes from England and Western Europe.

Another area for further study is the topic of why the 10 percent Federal Rehabilitation Tax Credit has not had a bigger impact on the rehabilitation of industrial buildings. Speculation leads one to believe that it may be due to the size of the credit (10 versus 20 percent), but it may also be related to the importance of the historic character of the buildings in the rehabilitation of industrial complexes and the developer's desire to protect and leverage those historic resources in creating a mixed-use campus with special character.

The architecture field has produced excellent, recent literature on the necessity of buildings' flexibility. That is to say, a building's designer should anticipate the fact that a building will undergo many program changes during its lifecycle, its design should be flexible enough to accommodate this. Real Estate developers involved in adaptive reuse projects, such as Jonathan Rose (Jonathan Rose Companies), are similarly committed to the importance of "flex-space," whether the reason is a desire for greater sustainability, or greater profit (through the adaptation of a building to a variety of tenant

¹¹⁷Planetizen is located at < <http://www.planetizen.com>>. The Forum Journal is published by the National Trust for Historic Preservation and is located at <http://www.preservationnation.org/forum/>.

configurations).¹¹⁸ “Flexible building programs” and adaptive reuse are closely related pursuits. Both preservationists and architects would benefit from improving the flow of information between these fields so that effective strategies may be shared.

The goal of preservation is to manage change in such a way that the built environment may be efficient and productive while retaining enough historic fabric to allow it to serve as a link to the past. These related endeavors were achieved in each of the cases described through an interdisciplinary approach involving a combination of public, private, and non-profit players. Incentives that have effectively tied together the parties’ goals not only catalyzed these projects, but also provided the mechanisms which kept compliance in check. Additionally, effective preservation initiatives leverage maximum benefit from rehabilitation projects by recognizing the heritage, economic, and environmental benefits of such projects. The rehabilitation of industrial complexes into mixed-use developments not only preserves heritage for future generations, it preserves jobs and communities.

¹¹⁸ Young-ju Kim, “Organism of Options: A Design Strategy for Flexible Space,” Submitted to the Department of Architecture in partial fulfillment of the requirements for the Degree of Master of Architecture at M.I.T., February 2008.

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