THE ECONOMIC AND FISCAL IMPACT OF TOWER INVESTMENTS' DEVELOPMENTS IN PHILADELPHIA'S NORTHERN LIBERTIES NEIGHBORHOOD

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EXECUTIVE SUMMARY



Tower Investments' development work in the Northern Liberties section of the City of Philadelphia has had a dramatic effect at the neighborhood and citywide level, and has led to **a $1 billion increase in the aggregate market value of real estate in the Northern Liberties**.

Counted among Tower Investments' $200 million in direct developments are commercial space for over 80 businesses, more than 560 housing units totaling over 800,000 square feet of commercial and residential space, and beloved public spaces such as the 80,000 square foot Italian-style courtyard within the Piazza at Schmidt's. These developments have stimulated the City and Commonwealth economy, created jobs, and generated tax revenues:

- One-time impact of upfront construction of developments by Tower Investments in Northern Liberties of **$300 million in expenditures** supporting **1,300 jobs** and generating **$3 million in tax revenues for the City**, and **$480 million in expenditures** supporting **4,100 jobs** and generating **$11 million in tax revenues for the Commonwealth**

- Annual impact of ongoing operations of commercial developments by Tower Investments in Northern Liberties of **$150 million in expenditures** supporting **1,700 jobs** and generating **$4 million in tax revenues for the City**, and **$210 million in expenditures** supporting **2,200 jobs** and **$12 million in tax revenues for the Commonwealth**

- An additional **$500,000 in new tax revenues to the City and Commonwealth** from the net importation of hundreds of residents and wage earners represented by residential developments by Tower Investments in Northern Liberties

These investments have turned around the Northern Liberties real estate market, resulting in 600,000 square feet of new commercial space and 2.55 million square feet of new residential space between 2000 and 2011 (far **more than the previous 20 years combined**). These other developments have also had a stimulative effect on the City and Commonwealth economy:

- One-time impact of upfront construction of all new developments in Northern Liberties from 2000 to 2011 of **$520 million in expenditures** supporting **2,200 jobs** and generating **$6 million in tax revenues for the City**, and **$840 million in expenditures** supporting **7,200 jobs** and generating **$19 million in tax revenues for the Commonwealth**

- Annual impact of ongoing operations of all new commercial developments in Northern Liberties from 2000 to 2011 of **$390 million in expenditures** supporting **4,200 jobs** and generating **$13 million in tax revenues for the City**, and **$540 million in expenditures** supporting **5,400 jobs** and generating **$30 million in tax revenues for the Commonwealth**

- An additional combined **$2.1 million in new tax revenues to the City and Commonwealth** from net importation of over 1,500 residents and wage earners represented by all new residential developments in Northern Liberties from 2000 to 2011

The value-enhancing effect of Tower Investments' development has yielded large gains in the value of nearby houses, thus boosting household wealth and generating more property tax revenues for the City and School District each year. Tower Investments' developments in Northern Liberties can therefore be said to have contributed to an increase of about $1 billion in the aggregate market value of real estate in Northern Liberties.

- Proximity to a Tower Investments development has conferred an aggregate **$425 million increase in house values**, and an additional **$13M per year in property tax revenues to the City and School District of Philadelphia**

The success of Tower Investments and of Northern Liberties has clearly contributed to the growth of such areas as Fishtown, Kensington, Port Richmond, and the nearby Delaware waterfront. These areas have experienced new waves of attention and investment due in large part to their proximity to Northern Liberties, and with this new attention and investment have developed their own positions of strength, further improving this overall section of the City.

1.0 INTRODUCTION

1.1 Tower Investments' Development Work in Northern Liberties

Tower Investments' development work in the Northern Liberties section of the City of Philadelphia has had a dramatic effect at the neighborhood and citywide levels. A mere decade ago, this area was significantly physically blighted and not seriously contemplated for real estate development.



Now, iconic structures such as the Piazza at Schmidt's and Liberties Walk have received prominent national media attention and have become locations of choice for a wide range of residents, retailers, and visitors. Counted among Tower Investments' developments are **commercial space for over 80 businesses as well as over 560 housing units totaling over 800,000 square feet of commercial and residential space**, as well as beloved public spaces such as the 80,000 square foot Italian-style courtyard within the Piazza (see Table 1.1).

Table 1.1 – Summary of Tower Investments' Developments in Northern Liberties

Commercial	Residential
82 total businesses – 252,100 SF	561 total units – 595,400 SF
32 office tenants – 90,200 SF	1BR – 220 units
27 retail tenants – 98,300 SF	2BR – 257 units
14 restaurant tenants – 27,400 SF	3BR – 50 units
7 gallery/studio tenants – 7,500 SF	4BR – 6 units
4 salon tenants – 5,400 SF	5BR – 1 unit
1 event facility – 18,000 SF	Efficiency – 2 units
1 gym – 5,250 SF	Studio – 25 units

Source: Tower Investments (2012), Econsult Corporation (2012)

1.2 The Explosive Growth of the Northern Liberties Real Estate Market

Furthermore, the overall impact of Tower Investments' work in Northern Liberties extends beyond its own projects, as it has spawned significant residential and commercial development by other developers, due in large part to the increased confidence in Northern Liberties as a bona fide real estate market and to the demand to be located near Tower Investments' developments. Inclusive of Tower Investments' own developments, as well as new construction and major rehabilitation projects undertaken by other developers in response, **between 2000 and 2011, Northern Liberties added over 2.5 million square feet of residential space (over 10 times more than the previous 20 years combined) and over 600,000 square feet of commercial space (almost twice as much as the previous 20 years combined)** (see Table 1.2 and Figure 1.1).[1] And, as is discussed in Section 6, the turnaround of the Northern Liberties real estate market has led not only to new developments but also to dramatic increases in the market value of existing developments.

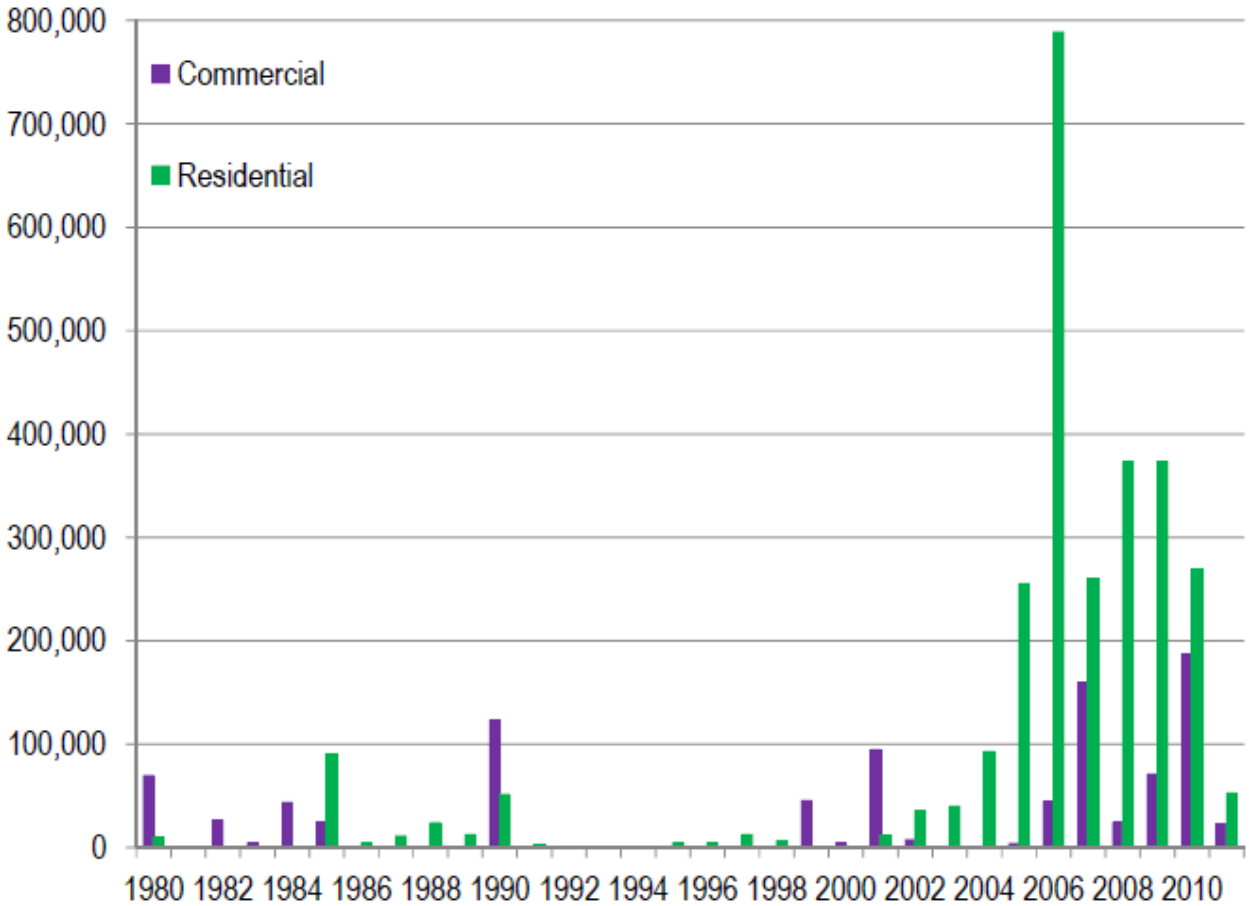
[1] See Appendix A for additional detail on square footage added in Northern Liberties.

Table 1.2 – Square Footage Added in Northern Liberties

Time Frame	Commercial	Residential
<1980	8,599,024	6,042,738
1980s	167,242	150,640
1990s	169,163	80,360
2000-2011	616,847	2,550,844

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

Figure 1.1 – Square Footage Added in Northern Liberties



Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

1.3 The Economic Impact of Tower Investments' Development Work in Northern Liberties

In addition to transforming Northern Liberties into a preferred residential, commercial, and leisure destination, Tower Investments' developments, and additional developments by others that have followed, have had a profound economic impact within the City of Philadelphia and the Commonwealth of Pennsylvania. This impact takes four forms:

1. Tower Investments has invested about $200 million in its own developments in Northern Liberties. These one-time **upfront construction expenditures** have significant spillover effects, in terms of economic stimulus, job creation, and tax revenue generation, which are particularly welcomed at a time of slack construction demand, sluggish economic growth, and constrained public sector finances (see Section 3).

2. The ongoing operations of Tower Investments' developments represent an **influx of commercial activity** – retail and restaurant spending, office operations, and residential repopulation – that also provides economic stimulus, supports employment, and generates tax revenues within the City and Commonwealth (see Section 4).

3. Tower Investments' investment in Northern Liberties has catalyzed **additional real estate development** nearby. These additional investments represent upfront construction expenditures and ongoing operating expenditures that also generate economic and fiscal impacts throughout the City and Commonwealth (see Section 5).

4. The physical improvements in Northern Liberties – in new structures, overall aesthetics, and foot traffic – represent the **creation of new property value**, both at the site of Tower Investments' development as well as at nearby locations. This represents a massive increase in household wealth as well as an expansion of the property tax base, and therefore of annual property tax revenues, for the City and for the School District of Philadelphia (see Section 6).

The purpose of this report is to use data from Tower Investments, as well as industry standard economic and analytical techniques, to estimate the overall economic impact of Tower Investments' developments within the City and Commonwealth. Where data were unavailable, conservative assumptions were derived from industry averages.

2.0 IMPACT FROM UPFRONT CONSTRUCTION BY TOWER INVESTMENTS

2.1 Direct Expenditures from Upfront Construction

It is estimated that Tower Investments made $200 million in upfront construction expenditures over the past decade, including construction costs and professional services fees. This amount does not include land acquisition costs, financing costs, and cost contingencies, which are typically expenditure categories that are excluded from traditional input-output modeling exercises because they do not represent the purchase of goods and services.



2.2 Economic Impact from Upfront Construction

The first set of economic impacts that results from these investments takes place during the construction period itself[2]. These investments represented a welcome form of economic stimulus and job creation within the City and Commonwealth, particularly at a time of economic distress, slack construction demand, high unemployment, and constrained fiscal budgets.



[2] For a detailed explanation of the economic impact methodology, see Appendix B.

It is estimated that these investments, and the indirect and induced expenditures that resulted from them, generated a considerable impact within the City and Commonwealth (see Table 3.1). Within the City, upfront construction is estimated to have generated about $300 million in expenditures, supporting about **1,300 jobs** and about $50 million in earnings. Within the Commonwealth, upfront construction is estimated to have generated about $480 million in expenditures, supporting about **4,100 jobs** and about $160 million in earnings.[3]

Table 2.1 – Estimated One-Time Economic Impact of Upfront Construction of Developments by Tower Investments in Northern Liberties ($M)

	City	Commonwealth
Direct Expenditures	$200	$200
Indirect and Induced Expenditures	$99	$282
Total Expenditures	$299	$482
Total Employment	1,265	4,135
Total Earnings	$50	$156

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

2.3 Industry Distribution of Economic Impact from Upfront Construction

The construction industry has gained the most from Tower Investments' investments in Northern Liberties, but many other industries will also be positively impacted (see Appendix C). Within the City, it is preliminarily estimated that 46 percent of the expenditure impact and 48 percent of the employment impact will be in industries besides construction. Within the Commonwealth, it is preliminarily estimated that 66 percent of the expenditure impact and 63 percent of the employment impact will be in industries besides construction.

[3] Commonwealth impacts are larger than City impacts, even though direct expenditures are the same, because spillover impacts continue to emanate beyond City boundaries to areas outside the City. Since the City is completely contained within the Commonwealth, the Commonwealth figures include the City figures, and the difference between the two represents the impact that is estimated to take place inside the Commonwealth but outside the City.

2.4 Fiscal Impact from Upfront Construction

This expansion in economic activity – through the direct construction expenditures of Tower Investments' developments in Northern Liberties and the indirect and induced expenditures that result from them – also expanded various tax bases within the City and Commonwealth (see Table 2.2). It is estimated that **the City gained about $3 million in tax revenues and the Commonwealth gained about $11 million in tax revenues** as a result.[4]

Table 2.2 – Estimated One-Time Fiscal Impact from Upfront Construction of Developments by Tower Investments in Northern Liberties ($M)

City of Philadelphia		Commonwealth of Pennsylvania	
Wage and Earnings	$1.8	Personal Income	$5.1
Sales	$0.4	Sales and Use	$4.6
Business Privilege	$0.9	Corporate Net Income	$1.2
Total City Tax Revenues	$3.1	Total Commonwealth Tax Revenues	$10.9

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

[4] Because the City and Commonwealth are distinct government jurisdictions, there is no overlap between City tax revenue estimates and Commonwealth tax revenue estimates: the City tax revenue figure is the amount estimated to go to the City, and the Commonwealth tax revenue figure is the amount estimated to go to the Commonwealth. These tax revenue estimates do not include property tax revenues, which are considered in Section 6.

3.0 IMPACT FROM ONGOING OPERATIONS BY TOWER INVESTMENTS' DEVELOPMENTS

3.1 Direct Expenditures from Ongoing Operations

Tower Investments' developments include over 80 businesses spanning over 250,000 square feet of space and over 1,200 employees (see Appendix D). Using data provided by Tower Investments, and based on conservative assumptions as to salaries and expenditures associated with various uses, it is estimated that these developments represent about $100 million in annual operations (see Table 3.1).





Table 3.1 – Conservative Estimate of Annual Operating Expenditures Associated with Tower Investments' Developments in Northern Liberties[5]

Use	Office	Restaurant	Commercial	Total
SF	90,203	27,370	134,509	252,082
Employees	342	357	527	1,226
Estimated Total Expenditures (in $M)	$29	$18	$53	$99

Source: Tower Investments (2012), US Bureau of Labor Statistics (2011), bizstats.com (2011), Econsult Corporation (2012)

3.2 Economic Impact from Ongoing Operations

The first set of economic impacts that results from these investments takes place during the construction period itself, as discussed in Section 2. The second set of economic impacts that results from these investments takes place each year thereafter, as these developments represent operating expenditures that in turn have a stimulative effect on the City and Commonwealth economy.

Tower Investments is estimated to have developed about 252,000 square feet of commercial space throughout Northern Liberties. These commercial developments employ over 1,200 people and are directly responsible for significant expenditures within the City and Commonwealth in a variety of industry categories, namely retail, food, and entertainment.

It is estimated that these investments, and the indirect and induced expenditures that resulted from them, generated a considerable impact within the City and Commonwealth (see Table 3.2). **Within the City, ongoing operations are estimated to generate about $150 million in expenditures, supporting about 1,700 jobs and about $50 million in earnings per year. Within the Commonwealth, ongoing operations are estimated to generate about $210 million in expenditures, supporting about 2,200 jobs and about $70 million in earnings per year**.

[5] See Appendix D for additional detail on conservative assumptions utilized in estimating annual operating expenditures.

Table 3.2 – Estimated Annual Economic Impact of Ongoing Operations of Commercial Developments by Tower Investments in Northern Liberties ($M)

	City	Commonwealth
Direct Expenditures	$99	$99
Indirect and Induced Expenditures	$55	$115
Total Expenditures	$154	$214
Total Employment	1,665	2,158
Total Earnings	$49	$67

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

3.3 Industry Distribution of Economic Impact from Ongoing Operations

The retail industry gained the most from Tower Investments' developments in Northern Liberties, but many other industries will also be positively impacted (see Appendix E). Within the City, it is preliminarily estimated that 65 percent of the expenditure impact and 53 percent of the employment impact will be in industries besides retail. Within the Commonwealth, it is preliminarily estimated that 72 percent of the expenditure impact and 59 percent of the employment impact will be in industries besides retail.[6]

3.4 Fiscal Impact from Ongoing Operations

This expansion in economic activity – through the direct operating expenditures of Tower Investments' developments in Northern Liberties and through the indirect and induced expenditures that result from them – also expanded various tax bases within the City and Commonwealth (see Table 3.3). It is estimated that **the City gains about $5 million in tax revenues and the Commonwealth gains about $12 million in tax revenues each year** as a result.

[6] See Appendix E for additional detail on the industry composition of the estimated economic impact from ongoing operations of developments by Tower Investments in Northern Liberties.

Table 3.3 – Estimated Annual Fiscal Impact from Ongoing Operations of Commercial Developments by Tower Investments in Northern Liberties ($M)

City of Philadelphia		Commonwealth of Pennsylvania	
Wage and Earnings	$1.8	Personal Income	$2.2
Sales	$2.8	Sales and Use	$9.0
Business Privilege	$0.6	Corporate Net Income	$0.6
Total City Tax Revenues	$5.1	Total Commonwealth Tax Revenues	$11.9

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

3.5 Fiscal Impact from New Residents and Wage Earners

The fiscal impact estimates above only include that which is generated from the operations of the commercial components of Tower Investments' developments. To the extent that Tower Investments' developments include a significant residential component, which has resulted in net new residents and wage earners within the City and Commonwealth, these developments also represent an expansion in the City's and Commonwealth's tax bases and an increase in the City's and Commonwealth's tax revenues.

Using conservative assumptions regarding the importation of new residents and wage earners, and the annual personal earnings and taxable spending they represent, it is estimated that **the residential component of Tower Investments' developments directly results in an additional $350,000 in City tax revenues and an additional $155,000 in Commonwealth tax revenues per year** (see Table 3.4). These figures do not include any indirect or induced expenditures generated by this importation of residents and wage earners.

Table 3.4 – Estimated Annual Fiscal Impact from Net Importation of Residents and Wage Earners Represented by Residential Developments by Tower Investments in Northern Liberties[7]

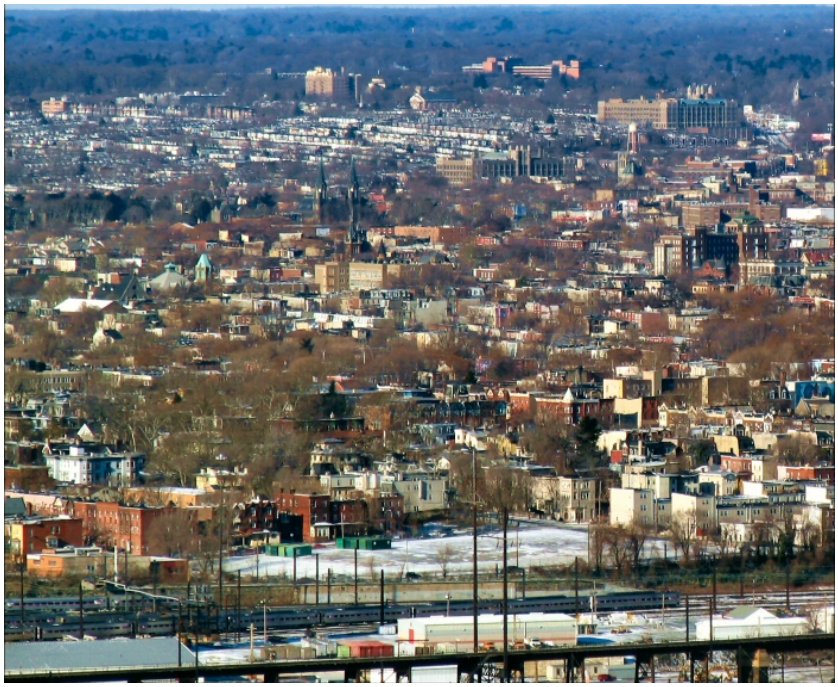
	#/%	City	Commonwealth
# Residents	913		
% New to City/Commonwealth		40%	20%
# New to City/Commonwealth		365	183
	#/%	City	Commonwealth
# Wage Earners	848		
% New to City/Commonwealth		20%	10%
# New to City/Commonwealth		170	85
	#/%	City	Commonwealth
New Income Tax Revenue ($000)		$333	$130
New Sales Tax Revenue ($000)		$17	$25
Total New Tax Revenue ($000)		$350	$155

Source: Tower Investments (2012), Econsult Corporation (2012)

[7] See Appendix F for additional detail on the fiscal impact from new residents and wage earners.

4.0 IMPACT FROM UPFRONT CONSTRUCTION AND ONGOING OPERATIONS BY ALL DEVELOPERS

4.1 Direct Expenditures from Upfront Construction



Tower Investments' developments in Northern Liberties have boosted the Northern Liberties real estate market and spawned significant additional nearby residential and commercial development. Using industry estimates for construction cost per square foot, it is estimated that an aggregate $300 million in upfront construction (representing 500,000 square feet of commercial space and 2.12 million square feet of residential space) took place between 2006 and 2011 (during which there was a significant housing bust and economic recession), and an aggregate $350 million in upfront construction (representing 600,000 square feet of commercial space and 2.55 million square feet of residential space) between 2000 and 2011 (see Table 4.1 and Figure 4.1).[8,9]

[8] See Appendix G for additional detail on estimated direct expenditures associated with all developments within Northern Liberties.

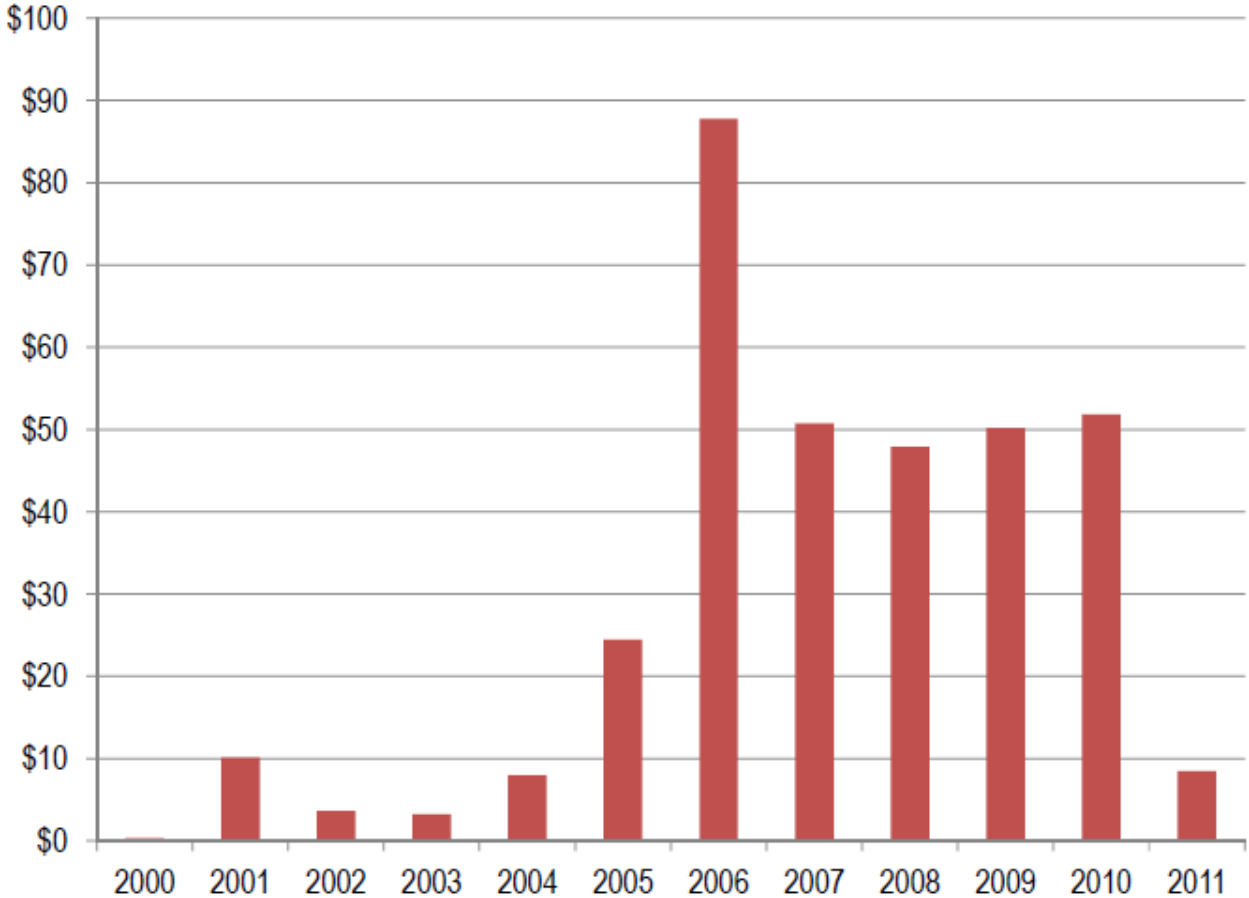
[9] See Appendix H for additional detail on the economic impact of new square footage added in Northern Liberties just between 2006 and 2011.

Table 4.1 – Estimated Investment Associated with New Square Footage Added in Northern Liberties

	Commercial	Residential	Aggregate Investment ($M)
2000-2005	108,965	435,091	$50
2006-2011	507,882	2,115,753	$297
2000-2011	616,847	2,550,844	$347

Source: City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

Figure 4.1 – Estimated Investment Associated with New Square Footage Added in Northern Liberties



Source: City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

4.2 Economic and Fiscal Impact from Upfront Construction

The first set of economic impacts that results from these investments takes place during the construction period itself. It is estimated that these investments, and the indirect and induced expenditures that resulted from them, generated a considerable impact within the City and Commonwealth (see Table 4.2).

Table 4.2 – Estimated One-Time Economic and Fiscal Impact of Upfront Construction of All New Developments in Northern Liberties from 2000 to 2011 ($M)

	City	Commonwealth
Direct Expenditures	$347	$347
Indirect and Induced Expenditures	$172	$490
Total Expenditures	$519	$837
Total Employment	2,194	7,175
Total Earnings	$86	$271
Total Tax Revenues	$6	$19

Source: US Department of Commerce (2009), City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

Within the City, upfront construction is estimated to have generated about $520 million in expenditures, supporting about 2,200 jobs and about $85 million in earnings. Within the Commonwealth, upfront construction is estimated to have generated about $837 million in expenditures, supporting about 7,175 jobs and about $270 million in earnings. It is also estimated that **the City gained about $6 million in tax revenues and the Commonwealth gained about $19 million in tax revenues** as a result.

4.3 Economic and Fiscal Impact from Ongoing Operations

The second set of economic impacts that results from these investments takes place each year thereafter, as these developments represent operating expenditures that in turn have a stimulative effect on the City and Commonwealth economy. Tower Investments is estimated to have developed about 250,000 square feet of commercial space throughout Northern Liberties, and Northern Liberties is estimated to have added about 600,000 square feet of

commercial space between 2000 and 2011. Therefore, it is estimated that the ongoing operations from this newly added commercial space generates about two and a half times the impact of that from ongoing operations of Tower Investments' commercial developments (see Table 4.3).

Table 4.3 – Estimated Annual Economic and Fiscal Impact of Ongoing Operations of All New Commercial Developments in Northern Liberties from 2000 to 2011 ($M)

	City	Commonwealth
Direct Expenditures	$250	$250
Indirect and Induced Expenditures	$139	$290
Total Expenditures	$389	$540
Total Employment	4,205	5,449
Total Earnings	$124	$169
Total Tax Revenues	$13	$30

Source: US Department of Commerce (2009), City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

Within the City, ongoing operations are estimated to generate about $390 million in expenditures, supporting about 4,205 jobs and about $124 million in earnings per year. Within the Commonwealth, ongoing operations are estimated to generate about $540 million in expenditures, supporting about 5,450 jobs and about $169 million in earnings per year. It is also estimated that **the City gains about $13 million in tax revenues and the Commonwealth gains about $30 million in tax revenues each year** as a result.

The fiscal impact estimates above only include impacts generated from the operations of the commercial components of new developments within Northern Liberties. To the extent that these new developments also include a significant residential component, which has resulted in net new residents and wage earners within the City and Commonwealth, these developments also represent an expansion in the City's and Commonwealth's tax bases and an increase in the City's and Commonwealth's tax revenues.

Tower Investments is estimated to have developed about 600,000 square feet of residential space throughout Northern Liberties, and Northern Liberties is estimated to have added about 2.6 million square feet of residential space between 2000 and 2011, or about four times that of Tower Investments' residential developments. Therefore, it is estimated that the ongoing

operations from this newly added residential space generate about four times the impact of that from ongoing operations of Tower Investments' residential developments.

Using conservative assumptions regarding the importation of new residents and wage earners, and the annual personal earnings and taxable spending they represent, it is estimated that **the residential component of all of these new developments directly results in an additional $1.4 million in City tax revenues and an additional $600,000 in Commonwealth tax revenues per year** (see Table 4.4).[10]

Table 4.4 – Estimated Annual Fiscal Impact from Net Importation of Residents and Wage Earners Represented by All New Residential Developments in Northern Liberties from 2000 to 2011

	City	Commonwealth
# Residents New to City/Commonwealth	1,570	788
# Wage Earners New to City/Commonwealth	731	366
Total New Tax Revenue ($M)	$1.5	$0.6

Source: City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

[10] These figures do not include any indirect or induced expenditures generated by this importation of residents and wage earners.

5.0 PROPERTY VALUE IMPACT

5.1 Changing Demographic Profile

Northern Liberties has undergone a dramatic transformation in the past decade, due in large part to physical investments by Tower Investments in popular and iconic developments such as the Piazza at Schmidt's. The neighborhood has seen a significant population increase, particularly among young adults with high educational attainment and high income levels (see Table 5.1).

Tower Investments' developments have made Northern Liberties a real estate destination of choice. This can be described statistically in three inter-related ways:

1. Northern Liberties has experienced a dramatic increase in housing prices (Section 5.2).

2. People are willing to pay a steep premium for housing that is close to a Tower Investments development (Section 5.3).

3. The aggregate premium associated with proximity to a Tower Investments development represents a very large increase in household wealth and in annual property tax revenues for the City and the School District of Philadelphia (Section 5.4).

Table 5.1 – Selected 2000 and 2010 Demographic Characteristics for Northern Liberties Census Tracts and for the City of Philadelphia

	Northern Liberties[11]	Philadelphia
2000-2010 % Change in Population	+28.5%	+0.6%
2000-2010 % Change in Ages 25-44	+66.7%	-2.3%
2000-2010 % Change in Mean Earnings	+61.6%	+9.7%
2000 vs. 2010 % Housing Units Vacant	15.5% vs. 12.7%	10.9% vs. 10.5%
2000 vs. 2010 % Age 25+ w/Bachelor or Higher	27.9% vs. 45.6%	17.9% vs. 22.6%
2000 vs. 2010 % Unemployed	10.2% vs. 7.3%	10.9% vs. 15.8%

Source: US Census Bureau (2000, 2010), Econsult Corporation (2012)

[11] From the 2000 Census, Census Tracts 128, 129, 130, 142, and 144 were used. From the 2010 Census, Census Tracts 142, 144, and 367 (which is an almost exact replacement for Census Tracts 128, 129, and 130 from the 2000 Census) were used. See Appendix I for additional detail on demographics in 2000 and 2010 for Northern Liberties and for the City.

5.2 Soaring Premiums Associated with Residential Units in Northern Liberties

Tower Investments' developments in Northern Liberties have thoroughly altered Northern Liberties as a residential location. This can be best seen by constructing a house price index for Northern Liberties, and tracking its movements over time in relationship to the City as a whole. A house price index is a quality-adjusted measurement of house prices, based on actual arms-length residential real estate transactions, and is a useful way to understand how a residential real estate market compares across time (i.e. over a number of years) and space (i.e. vs. other markets).

In the case of Northern Liberties, the house price appreciation is dramatic (see Table 5.2). From 1980 to the end of the first quarter of 2012, **while the City's average house increased in value by three and half times, the average house in Northern Liberties increased in value by over 18 times** (see Figure 5.1). From 2000 to the end of the first quarter of 2012, **the average house in Northern Liberties quadrupled in value, while the average house in the City as a whole increased by only 76 percent** (see Figure 5.2).[12]

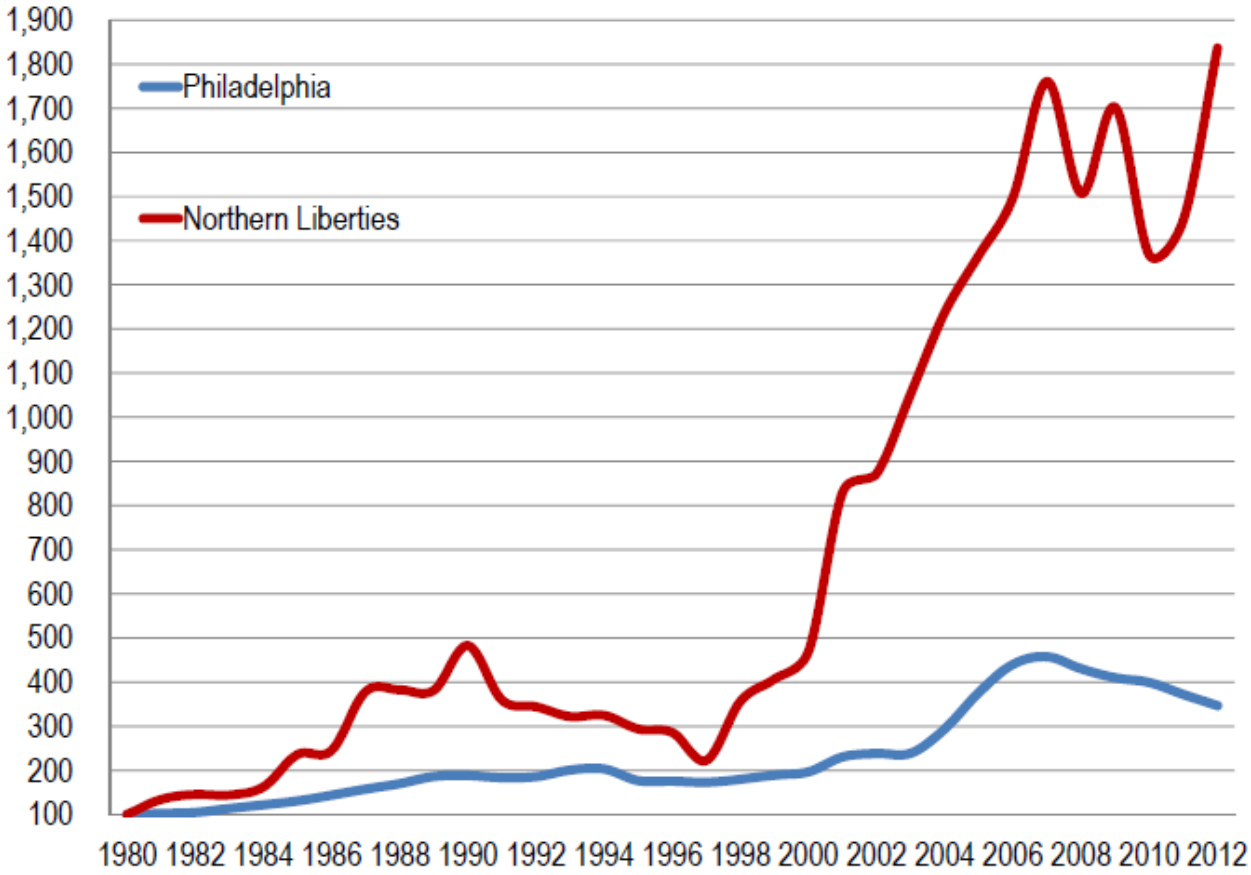
Table 5.2 – House Price Index for Northern Liberties and the City of Philadelphia (Indexed: 1980 = 100 or 2000 = 100)

	Philadelphia	Northern Liberties		Philadelphia	Northern Liberties
1980	100	100	2000	100	100
2012	347	1,836	2012	176	390

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

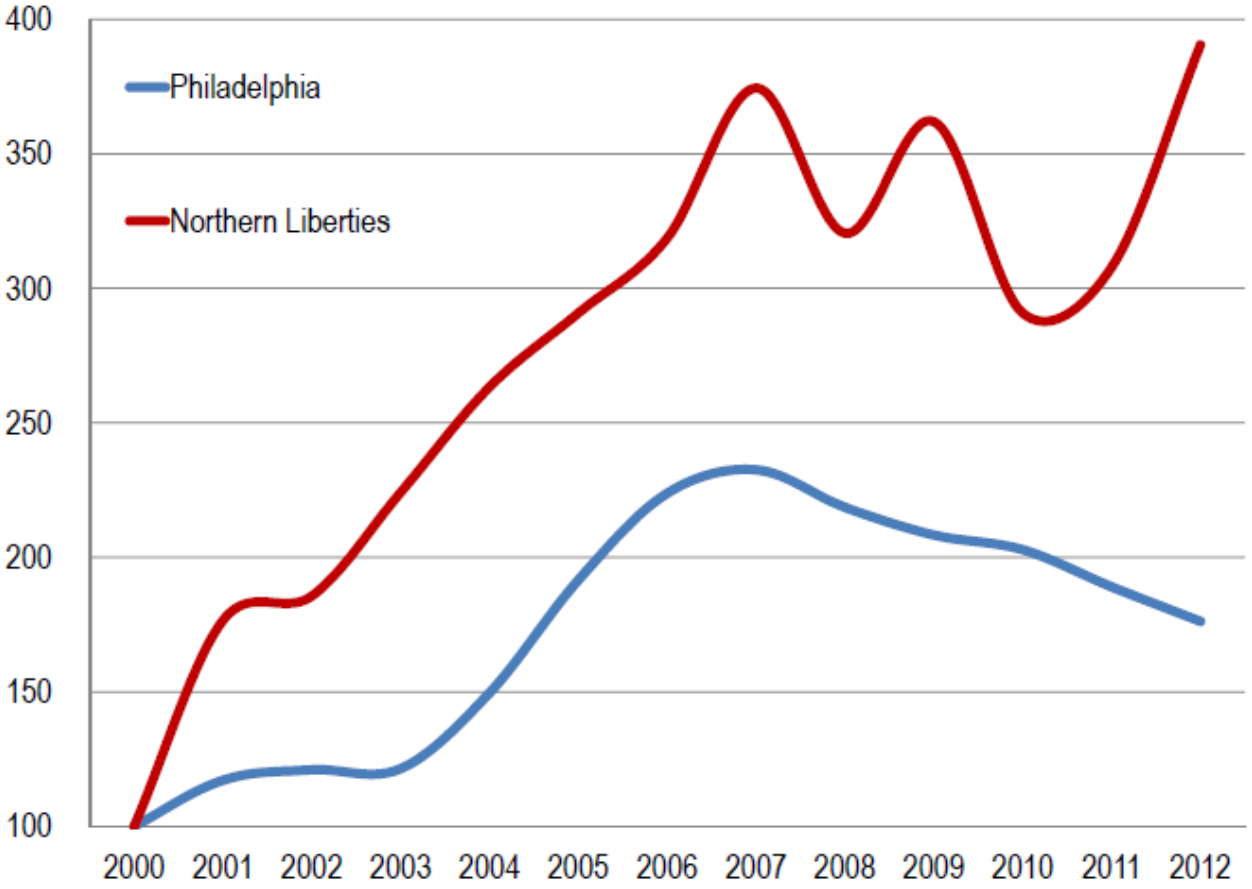
[12] See Appendix J for additional detail on house price index estimates for Northern Liberties.

Figure 5.1 – House Price Index for Northern Liberties and the City of Philadelphia, 1980 to Q1 2012



Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

Figure 5.2 – House Price Index for Northern Liberties and the City of Philadelphia, 2000 to Q1 2012



Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

5.3 Value-Enhancing Effect of Tower Investments' Developments in Northern Liberties

The transformative power of Tower Investments' developments can also be discerned by isolating the premium associated with proximity to Tower Investments' developments in Northern Liberties. The hypothesis associated with such an inquiry is that houses located near Tower Investments' developments will sell at a premium once those developments are in place. This is likely to be so for two reasons. First, Tower Investments' developments often involve significant rehabilitation or new construction on sites that began as less attractive and perhaps even blighting structures. Second, Tower Investments' developments represent amenities – public space, retail offerings, and entertainment venues – that people prefer to be near and are willing to pay a premium to be near.



To test this hypothesis, a hedonic regression analysis was performed. Specifically, the analysis isolated the effect of proximity to a Tower Investments development on property values both before and after completion of the Tower Investments development, while controlling for other potentially explanatory variables.[13]

This analysis clearly indicates that Tower Investments' developments have a significant value-enhancing effect on nearby houses. **Houses located within a ¼-mile of a Tower Investments development traded at a 67 percent premium in the years after that development was completed** (see Table 5.3). Hence, **the median value of houses located within a ¼-**

[13] Econometric techniques such as hedonic regression analyses attempt to isolate the marginal impact of some characteristic – in this case, proximity to a Tower Investments development – on prices people pay for houses. By controlling for other potentially explanatory variables, hedonic regressions can provide an estimate of how much more or less a house is worth based on its proximity to a Tower Investments development.

If that characteristic is worth 10 percent, that does not necessarily mean that all such houses increased by 10 percent. Rather, it means that, if such a house were proximate to a Tower Investments development, it would sell for 10 percent more than if it were not proximate to a Tower Investments development. Thus, if similar houses were appreciating by 20 percent during a given time period, that house, because it was proximate to a Tower Investments development, would have appreciated by 30 percent: 20 percent, like the other houses, plus 10 percent, because it was proximate to a Tower Investments development. Or, if similar houses were depreciating by 20 percent during a given time period, that house, because it was proximate to a Tower Investments development, would have depreciated by 10 percent: minus 20 percent, like the other houses, plus 10 percent, because it was proximate to a Tower Investments development

See Appendix K for additional detail on hedonic regression methodology and results.

mile of a Tower Investments development increased by even more than the median value of other houses within Northern Liberties, and far outpaced the increase in the median value of houses throughout the City: a 30-fold increase since 1980 (vs. a four-fold increase for the City as a whole) and a five-fold increase since 2000 (vs. only a 82 percent increase for the City as a whole) (see Table 5.4 and Figure 5.3).[14]

Table 5.3 – Hedonic Regression Results for Isolating the Effect of Proximity to a Tower Investments Development on House Prices

Time Period	1980 to Q1 2012
# Observations	429,776
% Premium after Development	67%

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

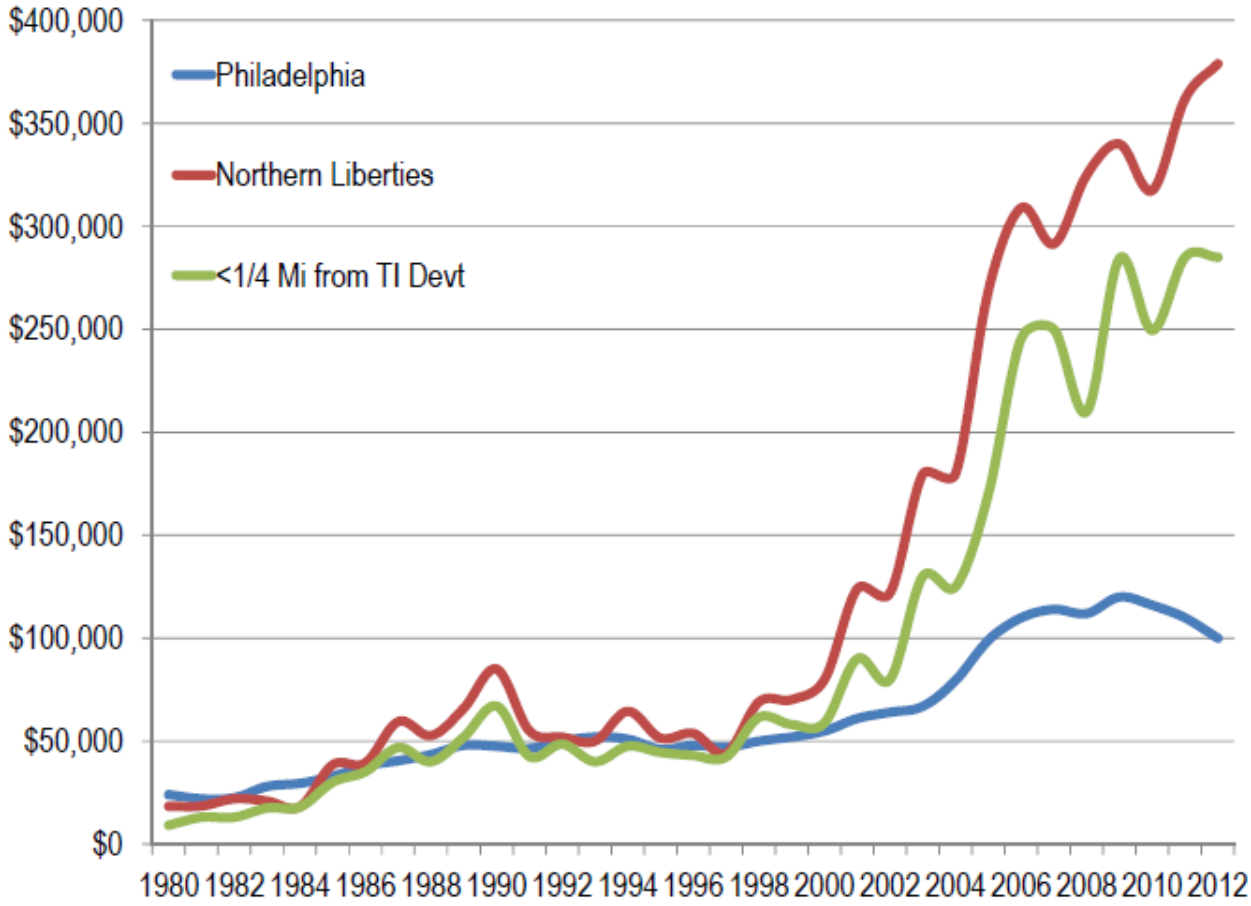
Table 5.4 – % Increase in Median House Values for Northern Liberties and for Houses Located within a ¼-Mile of a Tower Investments Development

	Philadelphia	Northern Liberties	<1/4 Mi from TI Dev't
1980-2012	317%	1965%	3015%
2000-2012	82%	374%	384%

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

[14] See Appendix L for additional detail on the change in median house values over time for Northern Liberties and for houses located near Tower Investments developments.

Figure 5.3 – Median House Values for Northern Liberties and for Houses Located within a ¼-Mile of a Tower Investments Development



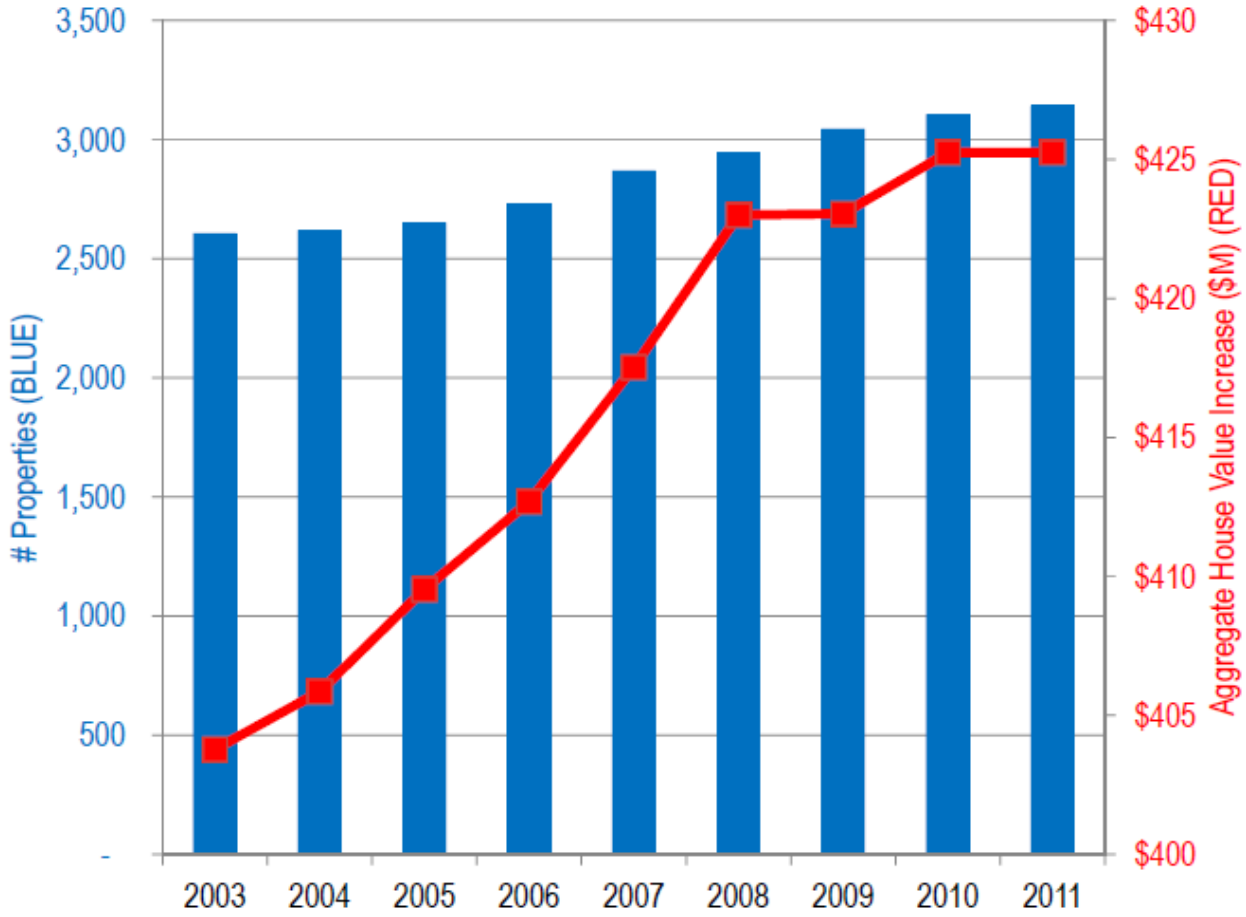
Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

6.4 Aggregate Increase in Property Value Due to Value-Enhancing Effect of Tower Investments' Developments

Multiplying out by the 3,141 houses in Northern Liberties that are located within a ¼-mile of at least one Tower Investments development (since all such houses have been positively affected by their proximity to a Tower Investments development), and accounting for the number of years each house has been near at least one Tower Investments development, **Tower Investments' developments have led to an aggregate $425 million increase in household wealth, simply from the increase in the value of houses located within a ¼ mile from its developments** (i.e. not including the property value additions associated with Tower Investments' developments themselves or with other new developments induced by Tower

Investments' developments) (see Figure 5.4).[15] If this increase in market value was properly accounted for in the assessed values of these nearby houses, it would mean **an additional $13 million per year in property tax revenues to the City and the School District** (see Table 5.5).[16]

Figure 5.4 – Estimated Aggregate House Value Increase as a Result of Proximity to a Tower Investments Development



Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

[15] See Appendix M for additional detail on the aggregate increase in property value due to the value-enhancing effect of Tower Investments' developments.

[16] If that aggregate $425 million increase in house prices were correctly accounted for in assessed values, then the property tax revenue increase would be $425 million x the City's current 32 percent ratio of assessed value to market value x the City's current property tax rate of 9.432 percent = about $13 million per year, of which about $5.6 million per year would go to the City and about $7.4 million per year would go to the School District.

Table 5.5 – Estimated Aggregate House Value Increase as a Result of Proximity to a Tower Investments Development

# Properties within a ¼-Mile of a Tower Investments Development	Aggregate House Value Increase (in $M)	Estimated Annual Property Tax Revenue Increase (in $M)
3,141	$425.3	$13

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

5.5 Tower Investments' Contribution to the Increase in Market Value in Northern Liberties

In summary, **Tower Investments' developments in Northern Liberties can be said to have contributed to the aggregate market value of real estate in Northern Liberties** in three ways:

1. Its developments represent new residential and commercial space within Northern Liberties.

2. Its developments paved the way for other new residential and commercial development within Northern Liberties.

3. Its developments have conferred a premium on nearby houses, increasing their market values.

Summing these contributions, **the aggregate increase in market value in Northern Liberties since 2000 is about $1 billion** (see Table 5.6). As this estimate is based on conservative assumptions, it is possible that the aggregate increase in market value is even greater.[17]

[17] See Appendix N for additional detail on the aggregate market value increase in Northern Liberties since 2000.

Table 5.6 – Estimated Aggregate Market Value Increase in Northern Liberties Since 2000

New Residential Space	New Commercial Space	Increase in Value of Existing Residential Space Due to Proximity to a Tower Investments Development	Total Market Value Increase
$452M	$77M	$425M	$954M

Source: Econsult Corporation (2012)

5.6 Tower Investments' Positive Influence beyond Northern Liberties

Not accounted for in the analyses in this section, but a very real and very large component of Tower Investments' positive impact within the City, is the spillover effects of its work in neighboring areas. **The success of Tower Investments and of Northern Liberties has clearly contributed to the growth of such areas as Fishtown, Kensington, Port Richmond, and the nearby Delaware waterfront**. These areas have experienced new waves of attention and investment due in large part to their proximity to Northern Liberties, and with this new attention and investment have developed their own positions of strength, further improving this overall section of the City.

6.0 CONCLUSION

In summary, Tower Investments' development work in Northern Liberties has had a transformative effect on Northern Liberties, and has resulted in a significant amount of economic and fiscal impacts throughout the City and Commonwealth, in the following ways:

1. **Its $200 million investment in its own developments** have stimulated the City and Commonwealth economy, created jobs, and generated tax revenues, as have the economic activity represented by their **ongoing operations**.

2. These investments have turned around the Northern Liberties real estate market, resulting in much more **new residential and commercial development** in the past decade or so than in the previous two decades combined. These other developments have also had a stimulative effect on the City and Commonwealth economy.

3. **The value-enhancing effect of Tower Investments' development** has yielded large gains in the value of nearby houses, thus boosting household wealth and generating more property tax revenues for the City and School District each year.



APPENDIX A – ADDITIONAL DETAIL ON SQUARE FOOTAGE ADDED IN NORTHERN LIBERTIES

Table A.1 – Square Footage Added in Northern Liberties

Year Built	# Projects Commercial	SF Commercial	# Projects Residential	SF Residential
<1980	828	8,599,024	3,352	6,042,738
1980	3	69,206	3	9,880
1981	0	0	0	0
1982	1	25,675	0	0
1983	1	4,300	0	0
1984	1	43,561	0	0
1985	2	24,500	1	90,000
1986	0	0	2	3,912
1987	0	0	6	10,932
1988	0	0	21	23,520
1989	0	0	9	12,396
1990	5	122,970	33	50,902
1991	1	769	1	2,688
1992	0	0	0	0
1993	0	0	0	0
1994	0	0	0	0
1995	0	0	4	4,082
1996	0	0	1	4,245
1997	0	0	10	12,160
1998	0	0	3	6,283
1999	4	45,424	0	0
2000	1	3,670	0	0
2001	1	94,330	7	11,998
2002	2	7,327	20	35,322
2003	0	0	15	39,662
2004	0	0	21	92,857
2005	1	3,638	50	255,252
2006	9	44,608	473	788,593
2007	9	159,451	167	260,036
2008	8	23,736	75	372,994
2009	10	70,817	283	373,397
2010	6	186,690	58	268,513
2011	9	22,580	38	52,220

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

APPENDIX B – ECONOMIC AND FISCAL IMPACT MODEL METHODOLOGY

B.1 Economic Impact Model

The methodology and input-output model used in this economic impact analysis are considered standard for estimating such expenditure impacts, and the results are typically recognized as reasonable and plausible effects based on the assumptions (including data) used to generate the impacts. In general, any economic activity can be described in terms of the total output generated from every dollar of direct expenditures. If an industry in a given region sells $1 million of its goods, there is a direct infusion of $1 million into the region. These are referred to as *direct expenditures*.

However, the economic impact on the region does not stop with that initial direct expenditure. Regional suppliers to that industry have also been called upon to increase their production to meet the needs of the industry to produce the $1 million in goods sold. Further, suppliers of these same suppliers must also increase production to meet their increased needs as well. These are referred to as *indirect expenditures*. In addition, these direct and indirect expenditures require workers, and these workers must be paid for their labor. These wages and salaries will, in turn, be spent in part on goods and services produced locally, engendering another round of impacts. These are referred to as *induced expenditures*.

Direct expenditures are fed into a model constructed by Econsult Corporation and based on data provided by the US Department of Commerce's Bureau of Economic Analysis through its Regional Input-Output Modeling System (RIMS II). The model then produces a calculation of the total expenditure effect on the regional economy. This total effect includes the initial direct expenditure effect, as well as the ripple effects described, the indirect and induced expenditure effects.

Part of the total expenditure effect is actually the increase in total wages and salaries (usually referred to as earnings), which the model can separate from the expenditure estimates. Direct payroll estimates are fed into the "household' industry of the input-output model. Impacts of this industry are estimated using the personal consumption expenditure breakdown of the national input-output table and are adjusted to account for regional consumption spending and leakages from personal taxes and savings. The direct, indirect, and induced earnings represent a component of the total economic impact attributable to wages and salaries. Finally, the model calculates the total expenditures affecting the various industries and translates this estimate into an estimate of the total labor (or jobs) required to produce this output.[18]

In short, the input-output model estimates the total economic activity in a region that can be attributed to the direct demand for the goods or services of various industries. This type of

[18] In the input-output model, the estimate of increased employment will always be in terms of the employment required for a given level of production, usually referred to as *person-years* of employment. As such, these estimates cannot be interpreted as specifying *permanent jobs.*

approach is used to estimate the total economic activity attributable to the expenditures associated with various types of spending in the region.

B.2 Fiscal Impact Model

The RIMS II model provides estimates of the economic impact of a new project or program on the regional economy. It does not, however, estimate the fiscal impact of the increased economic activity on state and local governments. Econsult has constructed a model that takes the output from the RIMS II model and generates detailed estimates of the increases in state and local tax collections that arise from the new project. Those revenues are in fact a part of the total economic impact of a new project that is often ignored in conventional economic impact analyses.

The RIMS II model provides estimates of direct, indirect, and induced expenditures, earnings, and employment within the defined region. The Econsult fiscal impact model combines the RIMS II output with U. S. Census Bureau County Business Patterns data to produce estimates of the distribution of additional employment and earnings by county. In addition, the 2000 Census "Journey to Work" data on commuting flows are utilized to estimate income earned by residents of each county within the region, regardless of where they work. The fiscal model can then estimate the increase in earned income taxes by county and for the state as a whole resulting from the new project. For complex cases, like Philadelphia, the model can differentiate between residents and nonresidents and apply the proper wage tax rate. Pennsylvania state business and sales taxes, as well as business taxes in Philadelphia, are estimated based on the most recent data on average sales tax base per employee by major industry, as contained in publications from the Pennsylvania Department of Revenue.

Figure B.1 – Glossary of Terms for Input-Output Models

Multiplier Effect – the notion that initial outlays have a ripple effect on a local economy, to the extent that direct expenditures lead to indirect and induced expenditures.

Economic Impacts – total expenditures, employment, and earnings generated.

Fiscal Impacts – local and/or state tax revenues generated.

Direct Expenditures – initial outlays usually associated with the project or activity being modeled; examples: one-time upfront construction and related expenditures associated with a new or renovated facility, annual expenditures associated with ongoing facility maintenance and/or operating activity.

Direct Employment – the full time equivalent jobs associated with the direct expenditures.

Direct Earnings – the salaries and wages earned by employees and contractors as part of the direct expenditures.

Indirect Expenditures – indirect and induced outlays resulting from the direct expenditures; examples: vendors increasing production to meet new demand associated with the direct expenditures, workers spending direct earnings on various purchases within the local economy.

Indirect Employment – the full time equivalent jobs associated with the indirect expenditures.

Indirect Earnings – the salaries and wages earned by employees and contractors as part of the indirect expenditures.

Total Expenditures – the sum total of direct expenditures and indirect expenditures.

Total Employment – the sum total of direct employment and indirect employment.

Total Earnings – the sum total of direct earnings and indirect earnings.

Source: Econsult Corporation (2009)

APPENDIX C – ESTIMATED INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT FROM UPFRONT CONSTRUCTION BY TOWER INVESTMENTS

Table C.1 – Estimated Expenditure Distribution of Economic Impact within the City from Upfront Construction of Tower Investments' Developments in Northern Liberties

Rank	Industry	Expenditures	%
1	Construction	$160	53.7%
2	Professional, scientific, and technical services	$56	18.8%
3	Real estate and rental and leasing	$13	4.5%
4	Manufacturing	$12	4.2%
5	Finance and insurance	$10	3.4%
	All other industries	$46	15.5%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

Table C.2 – Estimated Employment Distribution of Economic Impact within the City from Upfront Construction of Tower Investments' Developments in Northern Liberties

Rank	Industry	Employment	%
1	Construction	663	52.4%
2	Professional, scientific, and technical services	205	16.2%
3	Retail trade	71	5.6%
4	Accommodation and food services	52	4.1%
5	Health care and social assistance	49	3.9%
	All other industries	225	17.8%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

Table C.3 – Estimated Expenditure Distribution of Economic Impact within the Commonwealth from Upfront Construction of Tower Investments' Developments in Northern Liberties

Rank	Industry	Expenditures	%
1	Construction	$162	33.5%
2	Professional, scientific, and technical services	$67	13.8%
3	Manufacturing	$62	13.0%
4	Real estate and rental and leasing	$30	6.2%
5	Retail trade	$25	5.2%
	All other industries	$137	28.3%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

Table C.4 – Estimated Employment Distribution of Economic Impact within the Commonwealth from Upfront Construction of Tower Investments' Developments in Northern Liberties

Rank	Industry	Employment	%
1	Construction	1,515	36.6%
2	Professional, scientific, and technical services	502	12.1%
3	Retail trade	412	10.0%
4	Health care and social assistance	302	7.3%
5	Manufacturing	289	7.0%
	All other industries	730	23.1%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

APPENDIX D – CONSERVATIVE ASSUMPTIONS MADE IN ESTIMATING ANNUAL OPERATING EXPENDITURES BY TOWER INVESTMENTS' DEVELOPMENTS

Table D.1 – Square Footage and Employees by Use within Tower Investments' Developments in Northern Liberties

Use	#	SF	Employees
Office	32	90,200	342
Retail	27	98,300	391
Gallery/Studio	7	7,500	35
Event Facility	1	18,000	65
Gym	1	5,250	8
Salon	4	5,400	28
Restaurant	14	27,400	357
Total	82	252,100	1,226

Source: Tower Investments (2012), Econsult Corporation (2012)

Table D.2 – Conservative Assumptions Made in Estimating Annual Operating Expenditures from Tower Investments' Developments in Northern Liberties

Use	Office	Restaurant	Commercial	Total
SF	90,203	27,370	134,509	252,082
# Employees	342	357	527	1,226
Average Annual Salary	$50,000	$20,000	$20,000	
(From US BLS / CCD)	$58,210	$25,166	$25,166	
Estimated Total Salaries ($M)	$17	$7	$11	$35
Salaries as % of Total Expenditures	60%	40%	20%	
(From bizstats.com)	30%	20%	10%	
Estimated Total Expenditures (in $M)	$29	$18	$53	$99

Source: Tower Investments (2012), US Bureau of Labor Statistics (2011), bizstats.com (2011), Econsult Corporation (2012)

APPENDIX E – ESTIMATED INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT FROM ONGOING OPERATIONS OF TOWER INVESTMENTS' DEVELOPMENTS

Table E.1 – Estimated Expenditure Distribution of Economic Impact within the City from Ongoing Operations of Tower Investments' Developments in Northern Liberties

Rank	Industry	Expenditures	%
1	Retail trade	$55	35.4%
2	Professional, scientific, and technical services	$35	22.6%
3	Accommodation and food services	$20	13.0%
4	Real estate and rental and leasing	$10	6.5%
5	Information	$6	3.9%
	All other industries	$29	18.5%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

Table E.2 – Estimated Employment Distribution of Economic Impact within the City from Ongoing Operations of Tower Investments' Developments in Northern Liberties

Rank	Industry	Employment	%
1	Retail trade	790	47.4%
2	Accommodation and food services	463	27.8%
3	Professional, scientific, and technical services	178	10.7%
4	Administrative and waste management services	41	2.5%
5	Health care and social assistance	39	2.4%
	All other industries	104	6.3%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

Table E.3 – Estimated Expenditure Distribution of Economic Impact within the Commonwealth from Ongoing Operations of Tower Investments' Developments in Northern Liberties

Rank	Industry	Expenditures	%
1	Retail trade	$61	28.4%
2	Professional, scientific, and technical services	$38	17.9%
3	Accommodation and food services	$22	10.1%
4	Manufacturing	$17	8.2%
5	Real estate and rental and leasing	$15	7.1%
	All other industries	$61	28.4%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

Table E.4 – Estimated Employment Distribution of Economic Impact within the Commonwealth from Ongoing Operations of Tower Investments' Developments in Northern Liberties

Rank	Industry	Employment	%
1	Retail trade	887	41.1%
2	Accommodation and food services	436	20.2%
3	Professional, scientific, and technical services	255	11.8%
4	Health care and social assistance	114	5.3%
5	Administrative and waste management services	72	3.4%
	All other industries	393	18.2%

Source: US Department of Commerce (2009), Tower Investments (2012), Econsult Corporation (2012)

APPENDIX F – ADDITIONAL DETAIL ON FISCAL IMPACT FROM NEW RESIDENTS AND WAGE EARNERS RESULTING FROM TOWER INVESTMENTS' RESIDENTIAL DEVELOPMENTS

Table F.1 – Distribution of Residential Units and Estimated Resulting Residents and Wage Earners Living in Developments by Tower Investments in Northern Liberties[19]

Type	# Units	Residents/Unit	# Residents	Wage Earners/Unit	# Wage Earners
1BR	220	1	220	1	220
2BR	257	2	514	2	514
3BR	50	3	150	2	100
4BR	6	4	24	2	12
5BR	1	5	5	2	2
Total	534		913		848

Source: Tower Investments (2012), Econsult Corporation (2012)

Table F.2 – Estimated Residents and Wage Earners Living in Developments by Tower Investments in Northern Liberties That Are New to the City of Philadelphia and the Commonwealth of Pennsylvania[20]

	#/%	City	Commonwealth
# Residents	913		
% New to City/Commonwealth		40%	20%
# New to City/Commonwealth		365	183
	#/%	City	Commonwealth
# Wage Earners	848		
% New to City/Commonwealth		20%	10%
# New to City/Commonwealth		170	85

Source: Tower Investments (2012), Econsult Corporation (2012)

[19] It is conservatively assumed that there is one resident per bedroom, one wage earner per one-bedroom unit, and two wage earners per multi-bedroom unit.

[20] It is assumed that the vast majority of residents and wage earners are not new to the City or the Commonwealth.

Table F.3 – Estimated Wage and Income Tax Revenues from Residents and Wage Earners Living in Developments by Tower Investments in Northern Liberties That Are New to the City of Philadelphia and the Commonwealth of Pennsylvania[21]

	#/%	City	Commonwealth
New Wage Earners		170	85
Average Salary	$50,000		
Aggregate Salary ($M)		$8.5	$4.2
Income Tax Rate		3.93%	3.07%
New Income Tax Revenue ($000)		$333	$130

Source: Tower Investments (2012), Econsult Corporation (2012)

Table F.4 – Estimated Sales Tax Revenues from Residents and Wage Earners Living in Developments by Tower Investments in Northern Liberties That Are New to the City of Philadelphia and the Commonwealth of Pennsylvania[22]

	#/%	City	Commonwealth
Aggregate Salary ($M)		$8.5	$4.2
% Spent on Sales Taxable Items	10%		
Sales Taxable Amount ($M)		$0.85	$0.42
Sales Tax Rate		2%	6%
New Sales Tax Revenue ($000)		$17	$25

Source: Tower Investments (2012), Econsult Corporation (2012)

[21] A relatively low average annual salary is conservatively assumed.

[22] A relatively low proportion of sales taxable purchases is conservatively assumed.

APPENDIX G – ADDITIONAL DETAIL ON ESTIMATED DIRECT EXPENDITURES FROM ALL NEW DEVELOPMENTS IN NORTHERN LIBERTIES BETWEEN 2000 AND 2011

Table G.1 – Construction Cost per Square Foot Estimates Used in Estimating Annual Construction Costs Associated with All New Developments in Northern Liberties (Highlighted = Base Years from Which Other Years' Values Are Derived)

Year	Commercial[23]	Residential[24]	Cost Index[25]
1999	$90	$75	570
2000	$94	$78	595
2001	$97	$81	613
2002	$98	$81	619
2003	$98	$82	621
2004	$104	$86	655
2005	$114	$94	717
2006	$126	$104	793
2007	$135	$112	854
2008	$144	$119	908
2009	$132	$109	832
2010	$127	$105	799
2011	$129	$107	812
2012	$130	$108	821

Source: Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

[23] 2012 number is from Buildingjournal.com and assumes a retail store.

[24] 2010 number is from Marshall & Swift and assumes a brick house of average quality, using union labor.

[25] Cost index is from Turner Construction's Building Cost Index and is used to convert construction cost per square foot estimates for all other years.

Table G.2 – Estimated Investment Associated with New Square Footage Added in Northern Liberties

	Commercial	Residential	Aggregate Investment ($M)
2000	3,670	-	$0
2001	94,330	11,998	$10
2002	7,327	35,322	$4
2003	-	39,662	$3
2004	-	92,857	$8
2005	3,638	255,252	$24
2006	44,608	788,593	$88
2007	159,451	260,036	$51
2008	23,736	372,994	$48
2009	70,817	373,397	$50
2010	186,690	268,513	$52
2011	22,580	52,220	$8
2000-2005	108,965	435,091	$50
2006-2011	507,882	2,115,753	$297
2000-2011	616,847	2,550,844	$347

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

APPENDIX H – ADDITIONAL DETAIL ON THE ECONOMIC IMPACT OF NEW SQUARE FOOTAGE ADDED IN NORTHERN LIBERTIES JUST BETWEEN 2006 AND 2011

Table H.1 – Estimated One-Time Economic and Fiscal Impact of Upfront Construction of All New Developments in Northern Liberties from 2006 to 2011 ($M)

	City	Commonwealth
Direct Expenditures	$297	$297
Indirect and Induced Expenditures	$147	$419
Total Expenditures	$444	$716
Total Employment	1,878	6,141
Total Earnings	$74	$232
Total Tax Revenues	$5	$16

Source: US Department of Commerce (2009), City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

Table H.2 – Estimated Annual Economic and Fiscal Impact of Ongoing Operations of All New Commercial Developments in Northern Liberties from 2006 to 2011 ($M)

	City	Commonwealth
Direct Expenditures	$198	$198
Indirect and Induced Expenditures	$110	$230
Total Expenditures	$308	$428
Total Employment	3,330	4,316
Total Earnings	$98	$134
Total Tax Revenues	$10	$24

Source: US Department of Commerce (2009), City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

Table H.3 – Estimated Annual Fiscal Impact from Net Importation of Residents and Wage Earners Represented by All New Residential Developments in Northern Liberties from 2006 to 2011

	City	Commonwealth
# Residents New to City/Commonwealth	1,278	641
# Wage Earners New to City/Commonwealth	595	298
Total New Tax Revenue ($M)	$1.2	$0.5

Source: City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

APPENDIX I – ADDITIONAL DETAIL ON DEMOGRAPHIC CHARACTERISTICS OF NORTHERN LIBERTIES

Figure I.1 – Boundaries for Northern Liberties (Table H.1) and for Northern Liberties Census Tracts (Table H.2)



Source: Tower Investments (2012), US Census Bureau (2010), Econsult Corporation (2012)

Table I.1 – Selected Demographic Characteristics in 2000 and 2010 for Northern Liberties

Category	2000	2010
Total population	2,552	5,018
25 to 34 years	692	
35 to 44 years	496	
25 to 29 years		1,197
30 to 34 years		804
35 to 39 years		485
40 to 44 years		328
Total households	1,268	2,717
Total housing units	1,513	3,260
Occupied housing units	1,268	2,717
Vacant housing units	245	442
Owner-occupied housing units	604	1,126
Renter-occupied housing units	664	1,591
Employed	1,420	
Unemployed	71	
Less than $15,000	280	684
$15,000 to $24,999	162	283
$25,000 to $34,999	171	366
$35,000 to $49,999	199	437
$50,000 to $74,999	249	438
$75,000 to $99,999	86	264
$100,000 to $149,999	61	205
$150,000 to $199,999	39	57
$200,000 or more	6	96
Mean earnings	$45,096	$54,597

Source: US Census Bureau (2000, 2010), Econsult Corporation (2012)

Table I.2 – Selected Demographic Characteristics in 2000 and 2010 for Northern Liberties Census Tracts and for the City of Philadelphia

	2000	2000	2000	2000	2000	2000	2000	2010	2010	2010	2010	2010
Category	142	144	128	129	130	NoLib	Phila	142	144	367	NoLib	Phila
Total population	2,171	3,217	236	553	994	7,171	1,517,550	3,570	3,105	2,542	9,217	1,526,006
25 to 34 years	495	512	106	215	243	1,571	224,864					
35 to 44 years	385	475	49	112	183	1,204	219,910					
25 to 29 years								895	432	565	1,892	135,610
30 to 34 years								551	336	437	1,324	110,452
35 to 39 years								347	219	254	820	94,007
40 to 44 years								232	187	172	591	94,316
Total households	983	1,152	145	329	477	3,086	590,071	1,813	1,307	1,378	4,498	599,736
Total housing units	1,201	1,377	165	373	537	3,653	661,958	2,063	1,561	1,529	5,153	670,171
Occupied housing units	983	1,152	145	329	477	3,086	590,071	1,813	1,307	1,378	4,498	599,736
Vacant housing units	218	225	20	44	60	567	71,887	250	254	151	655	70,435
Owner-occupied housing units	524	541	25	99	246	1,435	349,633	707	603	607	1,917	324,536
Renter-occupied housing units	459	611	120	230	231	1,651	240,438	1,106	704	771	2,581	275,200
Population 3 years and over enrolled in school	576	920	16	101	300	1,913	440,307	677	657	306	1,640	431,360
Population 25 years and over	1,508	2,049	206	449	682	4,894	966,197	2,241	1,737	1,830	5,808	981,413
Bachelor's degree	263	170	51	91	173	748	99,936	766	320	649	1,735	125,477
Graduate or professional degree	207	124	89	133	62	615	72,705	423	100	391	914	95,901
Same house in 1995	1,227	1,852	94	175	541	3,889	879,027	2,318	2,181	1,743	6,242	1,301,493
Different house in the U.S. in 1995	728	958	107	330	419	2,542	494,773	626	336	475	1,437	196,952
Same county	539	660	25	175	236	1,635	359,507	316	287	251	854	140,841

	2000	2000	2000	2000	2000	2000	2000	2010	2010	2010	2010	2010
Category	142	144	128	129	130	NoLib	Phila	142	144	367	NoLib	Phila
Different county	189	298	82	155	183	907	135,266	310	49	224	583	56,111
Same state	61	55	49	32	142	339	54,213	170	21	89	280	22,876
Different state	128	243	33	123	41	568	81,053	140	28	135	303	33,235
Employed	941	992	186	377	592	3,088	584,957	1,948	1,003	1,560	4,511	597,521
Unemployed	27	260	-	27	38	352	71,582	141	90	123	354	111,982
Management, professional, and related occupations	428	313	140	228	251	1,360	184,361	1,044	349	904	2,297	209,333
Service occupations	173	186	37	31	149	576	115,218	277	151	81	509	139,698
Sales and office occupations	183	236	9	70	102	600	173,270	435	186	383	1,004	148,715
Less than $10,000	199	346	27	45	79	696	109,237	109	174	70	353	96,956
$10,000 to $14,999	56	113	-	-	48	217	49,035	113	176	20	309	48,163
$15,000 to $24,999	118	136	-	25	89	368	89,059	102	195	67	364	79,464
$25,000 to $34,999	160	175	31	53	29	448	79,532	74	173	102	349	66,536
$35,000 to $49,999	159	177	18	35	87	476	91,683	139	109	152	400	77,014
$50,000 to $74,999	174	157	16	31	85	463	92,326	357	155	238	750	93,245
$75,000 to $99,999	56	30	50	42	51	229	42,495	210	112	225	547	49,165
$100,000 to $149,999	20	9	8	26	19	82	25,092	143	31	163	337	39,492
$150,000 to $199,999	4	5	-	29	16	54	5,639	102	-	63	165	14,013
$200,000 or more	14	-	-	-	-	14	6,185	38	8	95	141	11,365
Mean earnings	$46,413	$32,321	$54,706	$58,925	$46,115	$41,288	$44,963	$72,152	$44,119	$86,637	$66,703	$49,307

Source: US Census Bureau (2000, 2010), Econsult Corporation (2012)

APPENDIX J – ADDITIONAL DETAIL ON HOUSE PRICE INDEX ESTIMATES FOR NORTHERN LIBERTIES

Table J.1 – House Price Index for Northern Liberties and the City of Philadelphia, 1980 to Q1 2012 (Indexed: 1980 = 100 or 2000 = 100)

Year	Philadelphia	Northern Liberties	Philadelphia	Northern Liberties
1980	100	100		
1981	102	134		
1982	105	145		
1983	114	144		
1984	122	163		
1985	131	236		
1986	144	245		
1987	158	379		
1988	170	383		
1989	186	381		
1990	188	483		
1991	184	359		
1992	186	344		
1993	201	322		
1994	203	325		
1995	177	294		
1996	176	286		
1997	173	223		
1998	180	356		
1999	189	407		
2000	197	470	100	100
2001	231	830	117	177
2002	238	873	121	186

Year	Philadelphia	Northern Liberties	Philadelphia	Northern Liberties
2003	239	1,054	121	224
2004	294	1,238	150	263
2005	377	1,367	192	291
2006	440	1,498	224	319
2007	457	1,760	233	374
2008	430	1,507	219	321
2009	410	1,702	208	362
2010	399	1,367	203	291
2011	372	1,447	189	308
2012	347	1,836	176	390

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

APPENDIX K – ADDITIONAL DETAIL ON HEDONIC REGRESSION METHODOLOGY AND RESULTS

K.1 Overall Methodological Approach

Hedonic regression analyses presume that house prices represent a buyer's willingness to pay for a bundle of attributes – some positive and some negative – associated with the house. Some are related to the structure itself – number of bedrooms and bathrooms, age and condition of systems, existence of various desirable features like a pool or a patio. Some are related to the mix of costs and services associated with the governing jurisdictions within which the house is located – tax levels, the caliber of public schools, the quality of police and fire. Finally, some are related to proximity to various amenities and disamenities – distance to the nearest park, playground, landfill. Econometric techniques can be used to isolate the influence of each of these factors on the overall price buyers are willing to pay for a house.

The analytical approach used to determine the effect of Tower Investments' developments in Northern Liberties proceeds in two steps. First, a hedonic regression is performed to isolate the impact on house prices of proximity to a Tower Investments development, prior to the completion of the development. Second, a hedonic regression is performed to isolate the impact on house prices of proximity to a Tower Investments development, subsequent to the completion of the development.

The hypothesis is that the impact on house prices of proximity to a Tower Investments development will be significantly higher subsequent to the completion of the development than prior to the completion of the development. This is likely to be so for two reasons. First, Tower Investments' developments often involve significant rehabilitation or new construction on sites that began as less attractive and perhaps even blighting structures. Second, Tower Investments' developments represent amenities – public space, retail offerings, and entertainment venues – that people prefer to be near and are willing to pay a premium to be near.

K.2 Analytical Steps Undertaken

To test this hypothesis, the following actions were undertaken. First, Tower Investments' developments were geocoded, utilizing data provided by Tower Investments as to address and completion year for each development.

The 430,000 arms-length house sales transactions that took place in the City between 1980 and the end of the first quarter of 2012 were similarly geocoded, using data obtained from the City's Department of Records and the City's Office of Property Assessment. Each sale was

identified with a number of characteristics, including location, date and price of sale, and characteristics of the house and lot (lot size, building size, and other physical characteristics). For each of these 430,000 sales, it was determined whether it took place within a ¼-mile of Tower Investments development, as well as whether it took place prior to or subsequent to the completion of the development (see Table J.1).

Table K.1 – Tower Investments' Developments, by Year Completed

Project	Address	Year Completed
1151-53 N. Hancock Street	1151-53 N. Hancock Street	2002
916 N. American Street	916 N. American Street	2002
Cambridge Lofts	1156 N. 3rd Street	2002
958 N. 2nd Street	958 N. 2nd Street	2002
Poplar Court	311-17 W. Poplar Street	2003
Cespache Ballroom	925 N. 2nd Street	2003
Tendenza	969 N. 2nd Street	2004
Erbe	1001 N. 2nd Street	2004
Liberties Walk Block 1	1030-40 N. 2nd Street	2005
Liberties Walk Block 2	1030 N. American Street	2005
Montesino	1010 N. Hancock Street	2005
Mercato	1022 N. Hancock Street	2005
Del Campo	1011 N. Hancock Street	2006
Boone Lofts	109 W. Wildey Street	2006
201 Spring Garden	201 Spring Garden Street	2006
Liberties Walk Block 3	1021 N. 3rd Street	2009
Liberties Walk Block 4	1024 N. 3rd Street	2009
Navona	1050 N. Hancock Street	2009
Rialto	1033 N. 2nd Street	2009
Liberties Walk George Townhomes	202 W. George Street	2010
Liberties Walk George Townhomes	204 W. George Street	2010
Liberties Walk George Townhomes	208 W. George Street	2010

Project	Address	Year Completed
Liberties Walk George Townhomes	210 W. George Street	2010
Liberties Walk George Townhomes	212 W. George Street	2010
Liberties Walk George Townhomes	214 w. George Street	2010
Liberties Walk George Townhomes	216 W. George Street	2010
Liberties Walk George Townhomes	218 W. George Street	2010
Liberties Walk George Townhomes	220 W. George Street	2010
Liberties Walk George Townhomes	222 W. George Street	2010
Liberties Walk George Townhomes	226 W. George Street	2010
Liberties Walk George Townhomes	228 W. George Street	2010
Liberties Walk George Townhomes	230 W. George Street	2010
Liberties Walk George Townhomes	232 W. George Street	2010
Liberties Walk George Townhomes	234 W. George Street	2010
Liberties Walk Orianna Townhomes	1023 N. Orianna Street	2010
Liberties Walk Orianna Townhomes	1025 N. Orianna Street	2010
1300 Howard 3 houses	1353-57 Mascher Street	2010
1028 N. 3rd Street	1028 N. 3rd Street	2011
Liberties Walk 3rd/Bodine Townhome	1033 N. 3rd Street	2011
Liberties Walk 3rd/Bodine Townhome	1035 N. 3rd Street	2011
Shops at Schmidts	180 W. Girard Avenue	2011
Orianna St. Townhomes	1134-46 Orianna Street	2011
Arrow (North Shore Beach Club)	1031 Germantown Avenue	2011
1301 Howard 4 houses	140-46 Master Street	2011
Green Street Townhomes	211-221 Green Street	2012

Source: Tower Investments (2012)

K.3 Hedonic Regression Results

The evaluation of the hedonic regression results focused on two variables: "pre_TI," which represents the isolated impact of proximity to a Tower Investments development prior to the completion of the development, and "post_TI," which represents the isolated impact of proximity to a Tower Investments development subsequent to the completion of the development (see Table J.2). Note that the isolated impact of proximity to a Tower Investments development jumps from 14 percent prior to the completion of the development to 67 percent subsequent to the completion of the development, verifying the hypothesis. Note also that the result is statistically significant (based on the t-value) and that the regression has accounted for sufficient other possibly explanatory variables so as to explain a high proportion of the ensuing results (based on the r-squared).

Table K.2 – Hedonic Regression Results for Isolating the Effect of Proximity to a Tower Investments Development on House Prices

Variable	Definition	Estimate	Std. Error	t Value	Pr>|t|	%Value[26]
Intercept	Intercept	5.47	0.07	75.91	<.0001	
pre_TI	pre-development fixed effect	0.14	0.02	6.87	<.0001	14%
post_TI	post-development fixed effect	0.51	0.03	19.87	<.0001	67%
N = 429,776						
R-squared = 0.7555						

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

[26] Because these regressions used the natural log of price, results can be expressed in percentage terms by raising e to the power of each coefficient's value and then subtracting 1.

APPENDIX L – ADDITIONAL DETAIL ON MEDIAN HOUSE VALUES FOR NORTHERN LIBERTIES AND FOR HOUSES LOCATED NEAR TOWER INVESTMENTS DEVELOPMENTS

Table L.1 – Median House Values for Northern Liberties and for Houses Located near Tower Investments Developments, 1980 to Q1 2012

Year	Philadelphia	Northern Liberties	<1/4 Mi from TI Dev't
1980	$24,000	$18,350	$9,150
1981	$22,000	$18,500	$13,000
1982	$22,500	$22,000	$13,000
1983	$28,000	$20,900	$17,500
1984	$29,500	$18,150	$18,000
1985	$32,900	$38,500	$30,000
1986	$38,000	$39,500	$35,200
1987	$40,500	$59,500	$46,850
1988	$43,500	$52,700	$40,000
1989	$48,000	$66,000	$52,000
1990	$47,500	$85,000	$67,000
1991	$46,500	$55,000	$42,500
1992	$50,000	$52,000	$48,500
1993	$52,000	$50,000	$40,000
1994	$51,000	$64,500	$47,500
1995	$46,000	$51,500	$44,500
1996	$48,000	$53,750	$43,000
1997	$47,000	$44,000	$42,250
1998	$50,000	$69,000	$61,500
1999	$52,000	$70,200	$58,000
2000	$54,900	$79,900	$58,900
2001	$61,000	$124,000	$90,000
2002	$64,000	$122,000	$80,000

Year	Philadelphia	Northern Liberties	<1/4 Mi from TI Dev't
2003	$66,900	$179,750	$130,000
2004	$79,500	$180,000	$125,000
2005	$99,000	$268,825	$170,000
2006	$109,900	$309,000	$245,500
2007	$114,000	$291,500	$250,000
2008	$112,000	$325,000	$210,000
2009	$120,000	$340,000	$284,500
2010	$116,000	$317,500	$249,500
2011	$109,900	$362,000	$285,000
2012	$100,000	$379,000	$285,000

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

APPENDIX M – ADDITIONAL DETAIL ON THE AGGREGATE INCREASE IN PROPERTY VALUE DUE TO THE VALUE-ENHANCING EFFECT OF TOWER INVESTMENTS' DEVELOPMENTS

The aggregate increase in property value due to the value-enhancing effect of Tower Investments' developments in Northern Liberties is derived by taking the increases in median house values for the houses located within a ¼-mile from a Tower Investments development, and compounding those increases over the number of years from the completion year of the Tower Investments development to the present for each year's worth of Tower Investments developments.

For example, in 2003, the year after the completion year of the first Tower Investments developments that was analyzed in this report, there were 2,605 houses in Northern Liberties that were a ¼-mile from at least one Tower Investments development. The difference between 2003 and 2012 in median house values for such houses was 119 percent ($130,000 in 2003 vs. $285,000 in 2012), so each of those houses is assumed to have increased in value by 119 percent, for an aggregate house value appreciation of $404 million.

In 2004, there were 13 additional properties in Northern Liberties that were a ¼-mile from at least one Tower Investments development reflecting both the fact that Tower Investments completed new developments during the previous year and that new houses were constructed in Northern Liberties. The difference between 2004 and 2012 in median house values for such houses was 128 percent ($125,000 in 2003 vs. $285,000 in 2012), so each of those houses is assumed to have increased in value by 128 percent, for an aggregate house value appreciation of $2 million.

Said another way, there are 3,141 properties within a ¼-mile of at least one Tower Investments development. 2,605 of them have had the benefit of being near at least one Tower Investments development since at least 2003, and have therefore appreciated at a higher rate than the citywide average since that year. Thirteen more have had the benefit of being near at least one Tower Investments development since 2004, and have therefore appreciated at a higher rate than the citywide average since that year. This calculation is repeated for all of the years from 2003 to 2011. This yields an aggregate house value appreciation of about $425 million (see Table L.1).

Table M.1 – Estimated Aggregate House Value Increase as a Result of Proximity to a Tower Investments Development

Year	# Properties within a ¼-Mile of a Tower Investment Development	% Increase from That Year to 2012	$ Increase from That Year to 2012	Aggregate House Value Increase (in $M)
2003 and before	2,605	119.2%	$155,000	$404
2004	13	128.0%	$160,000	$2
2005	32	67.6%	$115,000	$4
2006	80	16.1%	$39,500	$3
2007	138	14.0%	$35,000	$5
2008	73	35.7%	$75,000	$5
2009	102	0.2%	$500	$0
2010	62	14.2%	$35,500	$2
2011	36	0.0%	$0	$0
Total	3,141			$425.3

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Econsult Corporation (2012)

The aggregate house value appreciation is probably even higher than this estimate. These calculations do not take into account the fact that some houses were located near more than one Tower Investments development, and therefore their increase in house value is probably greater than that which was assumed here.

APPENDIX N – ADDITIONAL DETAIL ON THE AGGREGATE MARKET VALUE INCREASE IN NORTHERN LIBERTIES SINCE 2000

The increase in market value in Northern Liberties associated with the addition of new residential and commercial space was estimated using market data and conservative assumptions. For the new commercial space, it was assumed that market value is equal to construction costs, and construction costs were derived by multiplying new commercial square footage in a given year by the average construction cost per square foot for that year (see Table M.1).

Table N.1 – Estimated Aggregate Market Value for New Commercial Space in Northern Liberties

Year	Commercial SF Added	Cost/SF	Aggregate Cost ($M)
2000	3,670	$94	$0
2001	94,330	$97	$9
2002	7,327	$98	$1
2003	-	$98	$0
2004	-	$104	$0
2005	3,638	$114	$0
2006	44,608	$126	$6
2007	159,451	$135	$22
2008	23,736	$144	$3
2009	70,817	$132	$9
2010	186,690	$127	$24
2011	22,580	$129	$3
Total	616,847		$77
Ratio of Market Value to Construction Cost			1:1
Aggregate Market Value Added			$77

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)

Market value for new residential space was derived by multiplying new residential square footage in a given year by the average price per square foot for that year. Average price per square foot for a given year, in turn, was derived by dividing median house price in a given year by the average square footage per unit for that year (see Table M.2).

Table N.2 – Estimated Aggregate Market Value for New Residential Space in Northern Liberties

	Residential SF Added	Average SF/Unit	Median Price	Estimated Price/SF	Aggregate Value ($M)
2000	0	1,482	$79,900	$54	$0
2001	11,998	1,714	$124,000	$72	$1
2002	35,322	1,766	$122,000	$69	$2
2003	39,662	1,904	$179,750	$94	$4
2004	92,857	2,243	$180,000	$80	$7
2005	255,252	2,346	$268,825	$115	$29
2006	788,593	1,597	$309,000	$194	$153
2007	260,036	1,481	$291,500	$197	$51
2008	372,994	2,345	$325,000	$139	$52
2009	373,397	1,386	$340,000	$245	$92
2010	268,513	2,079	$317,500	$153	$41
2011	52,220	947	$362,000	$382	$20
Total	2,550,844				$452

Source: City of Philadelphia Department of Records (2012), City of Philadelphia Office of Property Assessment (2012), Marshall & Swift (2010), Buildingjournal.com (2012), Turner Construction (2012), Econsult Corporation (2012)