

City of Philadelphia

Economic Impact Analysis of Proposed 10 Year Tax Abatement Adjustments (2018)



Prepared by:



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Section 1 – Introduction and Overview

1.1 Purpose of the Assignment and Executive Summary

The City of Philadelphia retained the services of Jones Lang LaSalle to identify and quantify the economic impact of altering the terms of its ten-year property tax abatement program. The ten-year tax abatement program was designed to encourage the development or rehabilitation of real estate by exempting the value of the improvements from tax for ten years.¹ The Kenney administration, with input from Council members, is interested in estimating the impact of various changes to the abatement on likely future development, City and School District tax revenue, as well as jobs through the use of historical data and analysis.

Our firm also had the privilege of working with the City on similar analysis 4 years ago. As such, in this report we will provide perspective relative to economic and capital market conditions from the previous report, where appropriate. To ensure that the impact of as many ideas for adjustment as possible have been estimated, or otherwise accounted for, the City has asked JLL to examine impact under the following 10 scenarios²:

1. Eliminating the abatement immediately
2. Eliminating only the School District portion (the 55% of Real Estate Taxes allotted for the School District)
3. Limiting individual abatements to five years
4. Phasing out individual abatements after year five
5. Phasing out individual abatements starting year eight
6. Phasing out individual abatements at 10% per year, for ten years
7. Eliminating the School District portion of the abatement above the first \$150 per residential square foot of value
8. Eliminating the School District portion of the abatement above the first \$500,000 of value on residential new construction and rehabilitation
9. Only abating the initial value of construction while increases in values are not abated
10. Capping the abatement at \$250,000 for residential properties and extend the term of the abatement (Analyzed separately as sensitivity discussion, would require state authorization)

In order to address concerns that all geographic sections of the city haven't participated in the abatement program, to the study also considered:

1. How spatial utilization of the abatement has occurred across the city's geography.
2. Approaches for adding a geographic requirement to abatement eligibility that could increase utilization in areas with limited investment.

There are likely a myriad of other options to consider. However, we believe that the impact of most such options can be approximated from the above examined scenarios.

¹ See Appendix 2

² At the writing of this report, there is proposed legislation to add a 1% levy on new construction costs tax to generate revenue for the City's Housing Trust Fund. Where possible, this study notes the potential impact of that proposed tax for each scenario examined to provide additional information for policy makers to consider. For comparison purposes, we model this impact as a simple increase in the present value cost of construction.

Executive Summary

- Due to national economic conditions and Philadelphia’s positioning in Northeastern urban real estate markets, Philadelphia’s economy and development volume³ have rebounded from the previous recession along with the national economy.
 - The city’s development volume has demonstrated the classic “V” shaped recession recovery pattern typical of stable, moderately space constrained economies.
 - Put another way, Philadelphia has come out of the recession at a very similar speed and trajectory to the course it took on the way in to recession.
 - This is in line with our modeled forecasts for the city’s real estate development volume from 4 years ago.
- Using historical capital markets data, we can conclude that having the abatement in place over the past few years was a significant factor in the city’s ability to recover at a similar pace as its peer group of Northeastern cities, and space constrained, major urban real estate markets⁴, from the last recession.
 - The city was able to compete for a share of investment capital from off shore, national, and institutional sources, while becoming less reliant on local and regionally focused sources of funding.
 - The portion of national sources of liquidity funding transactions in the city increased by roughly 25% over pre-recession figures.⁵
 - These sources of liquidity would likely not have been available without the City offering investment yields, relative to risk, that were at least in line with historical norms and competitive with other major urban markets.
- Historical analysis suggests that had the abatement not been in place during the past economic recovery, a portion of Philadelphia’s recent development volume would likely not have been attractive enough to initiate.
 - However, the data suggests that the following statements are also true:
 - Some higher end⁶ projects in the higher demand sections of the city would likely have been profitable enough to do with or without the abatement.
 - The need for capital, that had been “on the sidelines” during the downturn, to be put to work when a sustained recovery was clear, even if yields were not ideal, would have driven some transactions.

³ For the purposes of this study, we define development volume as the number properties that have either been newly constructed or substantially renovated.

⁴ Markets with space constraint are considered structurally different from those without (eg. Houston, Dallas, some other Southwestern markets) because new demand can more rapidly be met by new supply, thus limiting significant price swings.

⁵ Source: Real Capital Analytics. It should also be noted that Philadelphia has yet to attract its share of national residential developers and is still largely dependent on local firms to fill that need.

⁶ We define “higher end” as high amenity, or “luxury”, projects where pricing to the end user is [10%-15%] above of the City’s historical averages.

- General positivity of economic expectations during an economic recovery makes all markets participants less risk averse.
- It is also still clear that, on average, the abatement is still significant in helping Philadelphia be competitive with its peer group.
 - On new construction, the abatement can reduce build costs by [12% -14%], on a present value basis. This translates into a [1.4% - 1.6%] increase in potential yield, the ratio of a project's costs to its income.
 - For perspective, the difference in expected investment return between major real estate markets averages only about [2% to 3%] as you move down a list of cities ranked from highest to lowest average real estate yields.
 - As a capital group is considering its portfolio allocation options between cities, all else being equal, the abatement clearly helps Philadelphia to be a plausible option among its competitor cities.⁷
- Forecasted losses of future development volume are lower than our results from four years ago. This is primarily due to the idea that in our previous analysis, we looked at how proposals to alter the abatement would result in loss of future development volume based on:
 - Loss due to some projects simply not having enough projected profitability to initiate, and
 - The city missing out on, or limiting its participation in, the early stages of recovery where development volume growth rates are at their highest and *at their most sensitive to risk* (as recoveries extend, perception of risk level falls due to increased confidence that the recovery is sustainable).
- Given that we forecast more normalized growth over the near and intermediate term⁸ for Philadelphia's economy, we are no longer factoring in projected losses from the second of the two above components – missing out on development during the early stages of an economic recovery⁹.

⁷ We define Northeastern and major urban market competitor cities peer group as New York, San Francisco, Boston, Chicago, Pittsburgh, Baltimore, and District of Columbia.

⁸ We define near and intermediate term as 5 to 10 years. To be conservative relative to history, we have assumed [3%] development volume growth, but only [1.5%] property value growth throughout the analysis term.

⁹ We have made certain adjustments to expected, per property, tax collection and volume to try to account for this market's wide swings in development volume, which can fall as by more than 60%, (peak to trough), during an economic cycle. The confluence of these and other assumptions offers a conservative, base level projection of long term revenue to the City for reasonable present value comparison across our cases.

- While this study has examined twice as many scenarios as were included in the prior report, the scenarios and their relative fiscal impacts can be summarized by the following:

All alternatives result in less revenue and fewer jobs in the long term, compared to the existing program; however, the timing and magnitude of the impacts vary based on the nature of the changes.¹⁰

	Scenario		Short-Term Tax Revenue	Long-Term Tax Revenue	Jobs	Administrative Ease
1	Eliminate	Completely	High Increase	Highest Loss	Highest Loss	Easiest
2	Eliminate	School District Only	Highest Increase	High Loss	High Loss	Easy
3	Shorten	5 Year	Lowest Increase	High Loss	High Loss	Easy
4	Phase Out	After Year 5	Lowest Increase	Moderate Loss	Moderate Loss	Moderate
5	Phase Out	After Year 8	Lowest Increase	Moderate Loss	Moderate Loss	Moderate
6	Phase Out	By 10%/year	Moderate Increase	Moderate Loss	Moderate Loss	Moderate
7	Cap	\$150/psf School Only	Moderate Increase	Lowest Loss	Low Loss	Hard
8	Cap	\$500,000 value School Only	Moderate Increase	Limited Loss	Low Loss	Hard
9	Cap	Construction Value School Only	Low Increase	Limited Loss	Low Loss	Hardest
10	Cap	\$250,000 Residential value	Low Increase	High Loss	Moderate Loss	Moderate

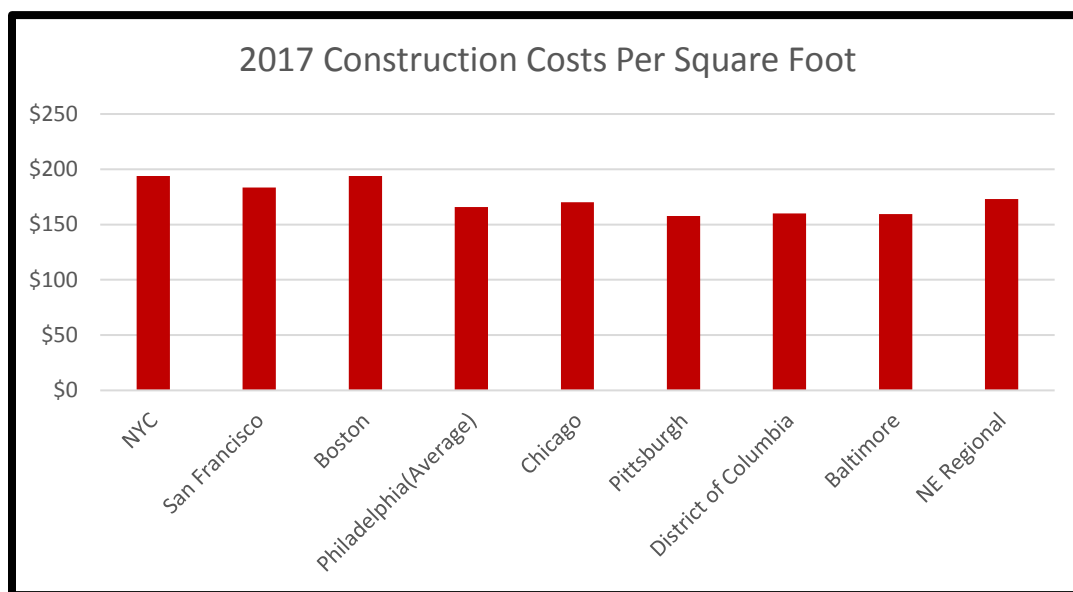
- Eliminate or shorten the abatement (Cases 1-3)**
 - Pro** – Could raise short term tax revenue, “shake out” projects with questionable business cases, and not help fund projects that would be developed with or without the abatement benefit.
 - Con** – Highest risks are losing some portion of future development volume and recently acquired sources of liquidity, limiting developer appetite to take on projects in riskier areas of the City, as well as losing tax revenue from reduced development volume in the intermediate and longer term.
- Phase out the abatement over time (Cases 4-6)**
 - Pro** – Could have lower risk of development loss as cost of future reduction of incentive could be offset by future improvements in rents, interest rates, income demographics, etc.
 - Con** – Less short-term capital increase to the City, and would also have to be calibrated precisely so that financial underwriters don’t perceive the adjustment as a simple elimination and remove the incentive as a capital source to fund against.

¹⁰ We define short term as 1-5 years from inception of proposed change. For perspective, the highest increase in 5 year revenue, in this model, is approx \$9.2M.

- **Cap the abatement benefit (Cases 7-10)**
 - **Pro** – Could increase short term tax revenue and help target the abatement towards projects with the highest likely need, while allowing developers and homeowners to adjust capital decisions to maximize the abatement’s value, thus limiting risk of development volume loss.
 - **Con** – Could be administratively difficult/costly for the City, (depending on configuration of the cap), while reducing Philadelphia’s ability to attract higher end office using employees and, indirectly, the business that need to attract/retain them.
- **Geographic modifications to the abatement**
 - **Pro** – Offers City decision makers the potential for an objective and precise method of targeting incentive dollars to areas of most need, then reallocate funds elsewhere as conditions change.
 - **Con** – If not properly managed, may spur rapidly accelerated prices in targeted areas. Policy may lag market interest, selected area may not receive additional demand and limit utilization. Less predictable, more complicated for developers and home owners. May discourage investment by some property owners in some neighborhoods that are eligible today.

1.2 Overview

Average Construction Cost Comparison by City



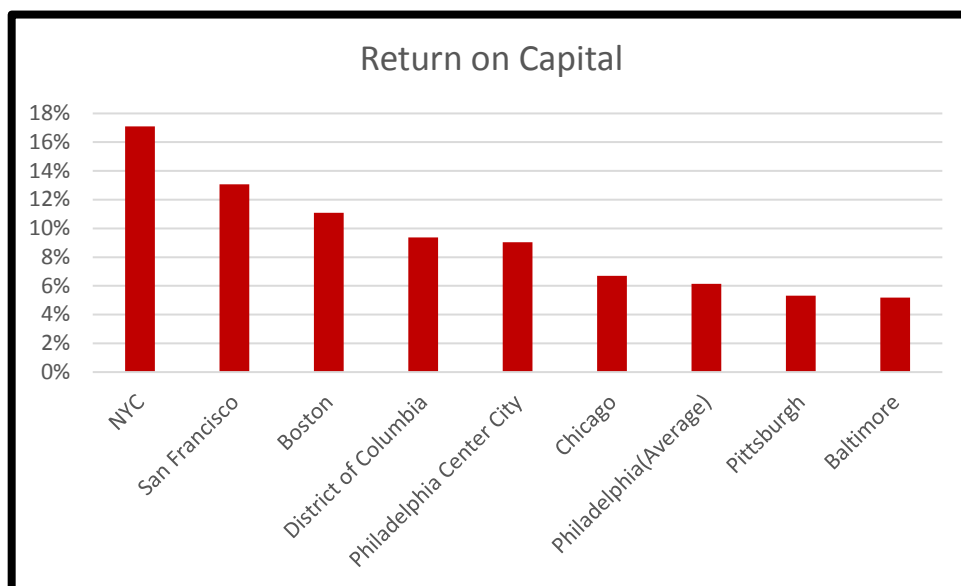
- Philadelphia's construction costs^{11 12} relative to its rents¹³, diminish this market's ability to provide returns for investors, as rents and sales prices lag behind peer group cities.
- In the northeastern region, there are multiple choices for investors to access major city real estate cash flows and returns. In other regions, like the Midwest, those choices may be more limited.¹⁴
- However, providing investors/owners with returns on investment dollars similar to those of major markets can be challenging in Philadelphia.

¹¹ Source: RS Means, other third-party data

¹² Construction costs are for typical residential units, which comprise the vast majority of Philadelphia's abated properties. Impacts will differ between residential and commercial construction as yield metrics, price sensitivity, occupancy and exit strategies can differ greatly from residential.

¹³ While rents have grown in Philadelphia, they still lag behind peer cities, on average. Increases have also been partially offset by increasing land prices.

¹⁴ For example, Chicago offers virtually the only opportunity for major city urban real estate investment in the Midwest.

Annual Return on Costs Comparison¹⁵

- Philadelphia, taken on average, does not offer particularly attractive returns to investors relative to its peers. In the above, we see how even a slight boost in yield that an abatement offers could help the city compare more favorably to other major markets.
- However, if we isolate the Center City market,¹⁶ we see a slightly different picture. Because of this submarket's ability to command higher rents, it appears that this particular submarket can offer yields that are still below, but decidedly more in line, with market averages of other major cities.
- While this suggests that some projects in the high demand sections of the city have use for, but not a need for, an abatement, there must also be large areas of the city that do still need the incentive to justify investment. It should also be noted that virtually all affordable housing projects in recent years have made use of the program.
- Our models indicate that if the abatement were not in place during the previous economic cycle, between [30% and 40%] of development in Philadelphia could have been lost or delayed, particularly outside of Center City.

¹⁵ RS Means cost and various rent data sources.

¹⁶ Market rate, "arm's length", real estate transactions occurring with the area bounded by Highways 676, 76, 95, and South Street.

1.3 Approach to the Assignment

Developers invest in markets where there is a reasonable expectation of profit, or yield. Developer profit models vary widely, and it can be challenging to model and predict potential profits using only historical data. Part of every developer decision process, however, is measuring if there is enough cash yield in a property to cover carrying costs until exit (selling a property), should that exit take longer than expected.

We can model this financial portion of the developer’s decision process to initiate development by examining historical rents and construction cost data.

Modeling this decision process using historical data forms the basis of our analysis.

There is typically an average level of yield or profit that will entice investors into a market. There will also be a “floor” level of yield beneath which, most investors will likely choose not to transact.

Our approach is to:

1. Calculate the historical floor level¹⁷ for this market.
2. Translate changes in Real Estate Tax policy regarding the abatement into an implied loss in yield for the average development in Philadelphia.
3. Estimate the new floor that compensates for an implied loss of yield from adjusting Real Estate Tax policy.

Calculating the change in the historical number of developed or improved properties that have yields above these floors, and projecting it forward is how we estimate likely changes in Philadelphia’s future development market.

We recognize that critics of this method might point out that “all boats rise/fall together”, implying that since the abatement impacts all properties equally, investors would simply reset expectations for the Philadelphia market and continue with new development, as usual.

We argue, however, that because Philadelphia is located in a region with many other options for investors to obtain consistent urban commercial real estate yield, it is likely that large portions of investment capital would simply be invested somewhere else in the Northeast if expectation for yield decreases. With so many

¹⁷ We define a floor as being the yield level above which properties in the Philadelphia market were more than 25% likely to transact.

alternatives where an investor can look for yield in the Northeast region, Philadelphia would likely not attract its fair share of development capital without being at least competitive in terms of yield.

1.4 Acknowledgement of Other Published Work on this Topic

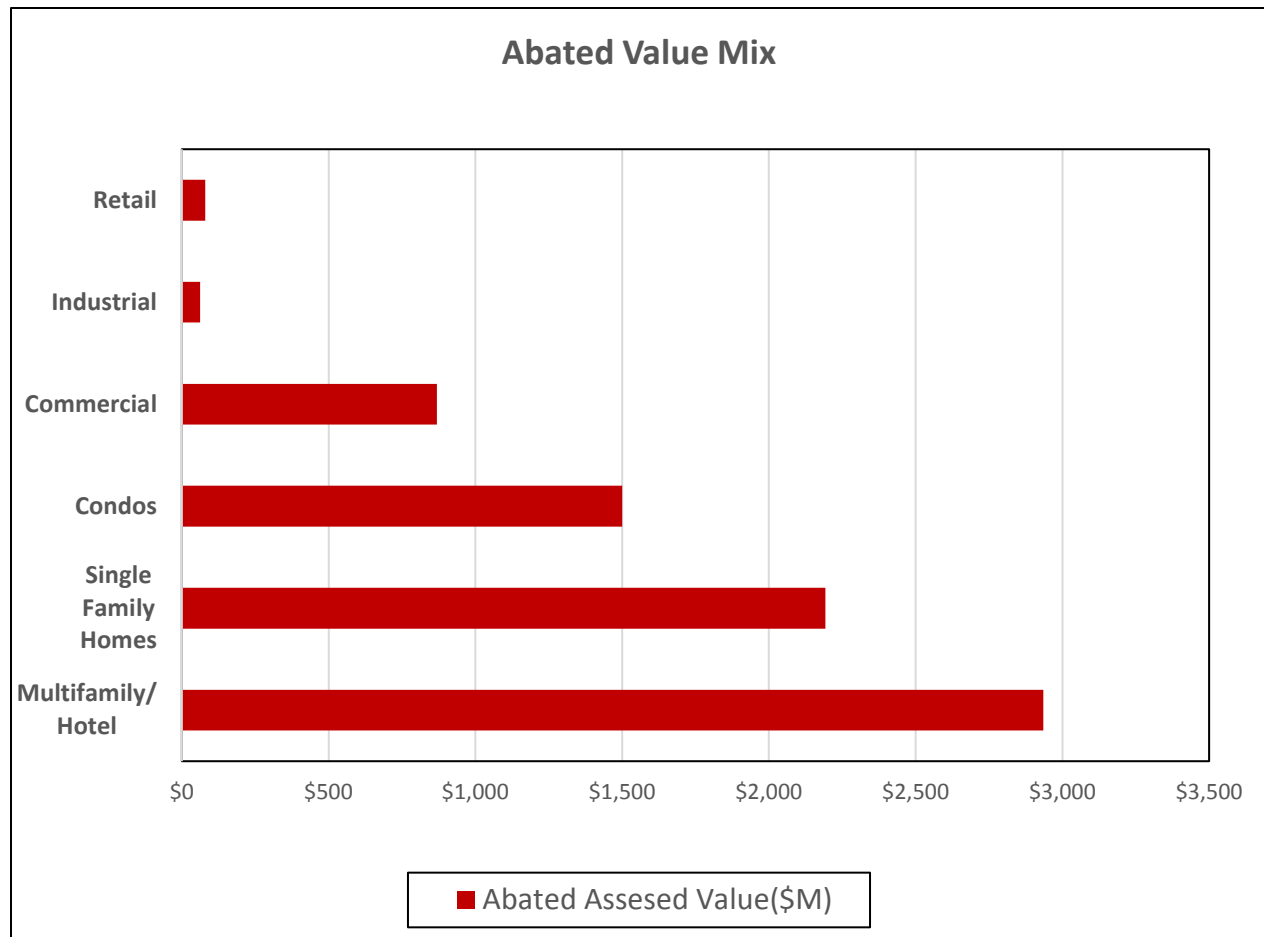
There are several publicly available articles and papers on the value of the abatement to the City of Philadelphia done by local economists, trade groups, and municipal authorities. The materials contain detailed analyses of the actual experience of a typical Philadelphia developer and abatement recipient. We acknowledge that there may be methods of estimating impact other than the ones used in this report, including those used in other studies. We are not in disagreement with those works or conclusions, and our report does not examine those methodologies.

The purpose of our analysis is to find an objective way to model the experience of developers and owners of properties that have received abatements using methods that strike the appropriate balance between clarity and defensibility.

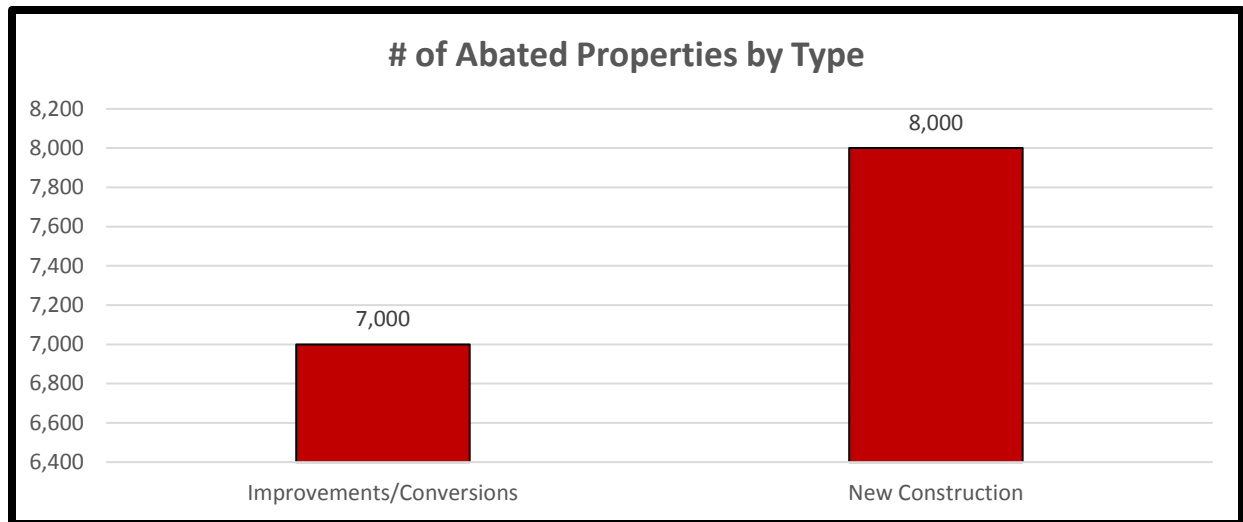
We believe that the methods used in this report represent one set of practical, data driven frameworks that allow for an objective view of the 10-year tax abatement. The majority of our comparative analysis only estimates future Real Estate Tax revenue. It does not examine other potential indirect economic impacts to the City or School District.

Section 2 – Existing Data Analysis

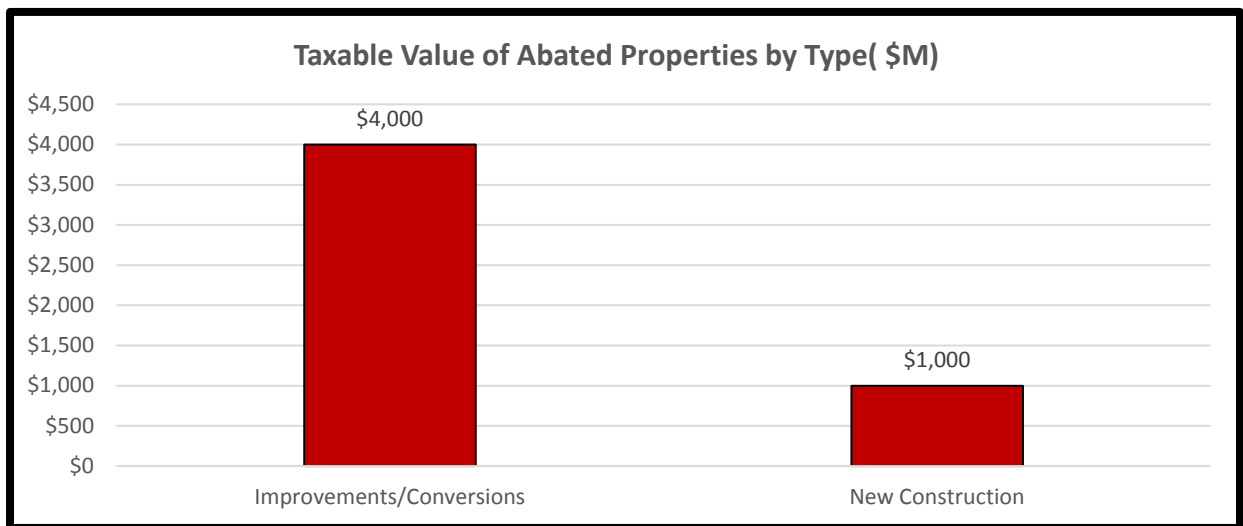
2.1 Current Mix of Abated Properties



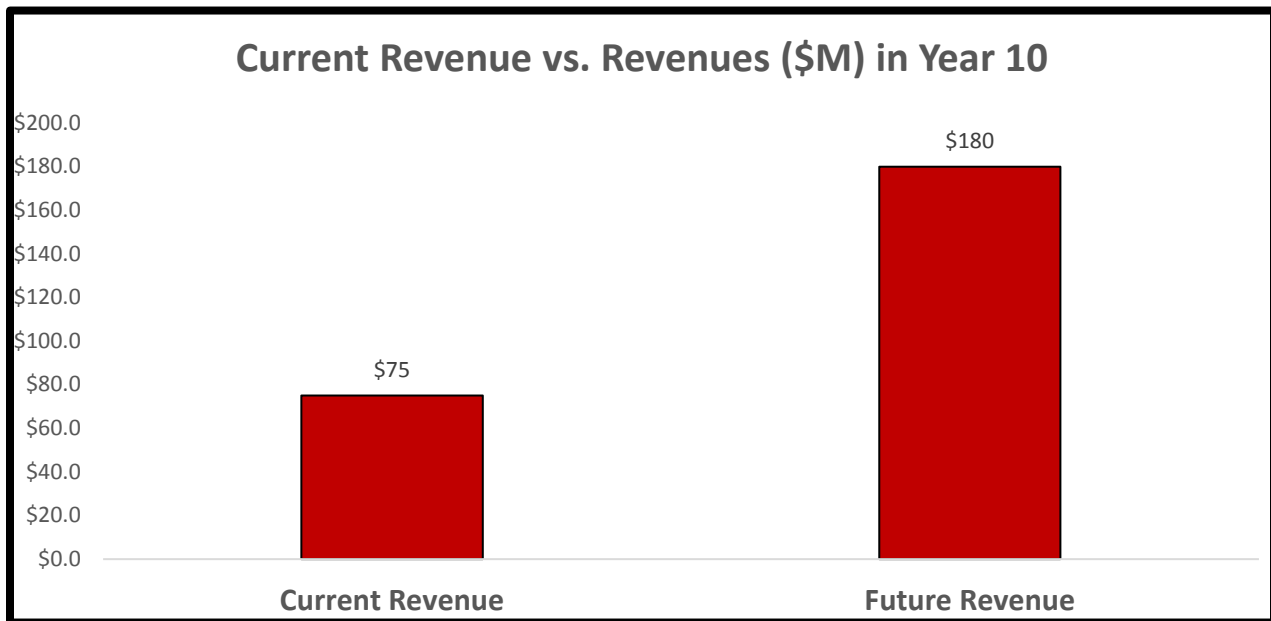
- Of the properties that have received the abatement, the vast majority are residential units with retail and industrial product making up very little of the total mix.

Properties with Abatements through 2017¹⁸

- New construction accounted for over half of the abatement volume.
- However, as the below chart demonstrates, the incentive has also been used extensively to upgrade, or stabilize existing housing stock, with the value of improved properties and conversions being more than four times that of new construction.



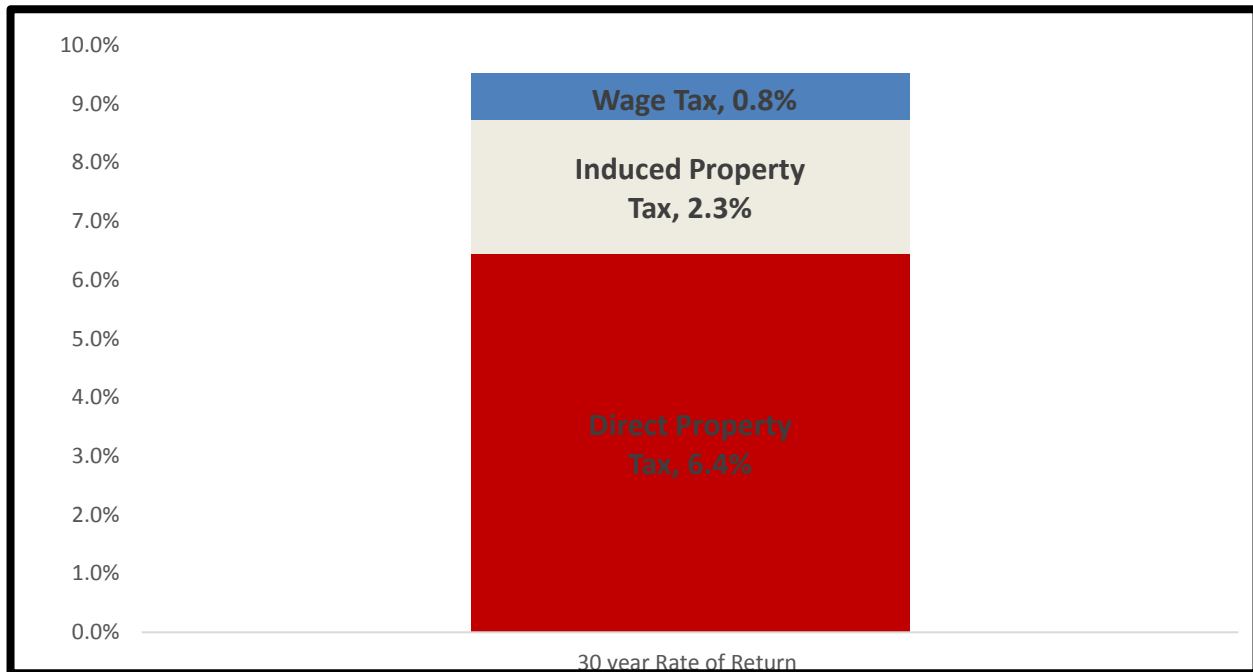
¹⁸ Figures rounded



- As abatements expire, the revenue from these properties is expected to more than double over the next 10 years.
- Philadelphia can expect to realize additional annual revenue from currently abated properties of approximately \$100M in year 10 by the time all current abatements expire.¹⁹

¹⁹ For comparison purposes. Assumes no changes in assessed values, or tax rate.

Return on the City's Investment



- Over a 30-year period, if we assume the City's "investment"²⁰ is 10 years of foregone tax collection, and its return on "investment" is comprised of the following:
 - 1. the direct Real Estate Taxes after abatement expiration,
 - 2. a portion of Wage Taxes during construction, and
 - 3. an assumption of minimal increases in surrounding property value from new construction or substantial upgrades to a given site,
 we see that a simple Internal Rate of Return (IRR%) calculation, shows that the incentive can provide a roughly 7% annual rate of return from direct property tax, higher if one includes an assumption of induced, non-abated, property value increases.

²⁰ JLL is not serving in the capacity of Financial Advisor to the City of Philadelphia. The above example is intended to be illustrative and not construed as investment advice.

Section 3 – Model Overview

3.1 Methodology (Examples are illustrative)

Since most investors are yield (or profit) driven, a method of calculating the likely impact of changing the abatement is to:

1. Define “yield”, for our purposes, simply as average rent for the zip code of a property/divided by the average development costs for the type of property.
2. Use the historical data to calculate the “floor”, in terms of yield, under which the likelihood of transacting is found to be small. (<25% chance).²¹
3. Determine how many properties transacted above that floor.
4. Calculate the change in average yield as result of a change in abatement.
5. Calculate the “new” implied floor (since the investor will now need to compensate for the loss of capital).
6. Determine how many properties would transact above that new floor.
7. The percent change between the quantities found in steps 3 and 6 is the implied loss of likely development, or the impact of changing the abatement on future development.

Example 1

1. Historically, we find that most properties (~100,000 properties), are developed at yield rates of 5% or more.
2. Assume we also find that a given change in the abatement results in a loss of an average yield of 1%.
3. The new floor underneath which properties are unlikely to transact is now 6% (5% +1%).
4. Now assume we also find that, historically, the number of properties that transacted above 6% is 80,000.

²¹ For the comparison purposes of this study, our definition of “development volume loss” is effectively the increase in properties with a 25% or less probability of transacting based on our historical analysis of pricing tolerances for this market.

We would say with this example that the change in yield results in a 20% $((100,000 - 80,000)/100,000)$ loss of development market.

Example 2

1. Property X was built at a development cost of \$200 per square foot, with the abatement.
2. Rents in that zip code average \$10 per square foot.

The yield expectation for property X is 5%. If our floor is also 5%, this property is at risk of not being completed. But, in our logic, this property “would likely transact” at the current yield level expectation.

1. Assume we know that a change in the abatement results in a change in yield such that the new floor is 6%,
2. Since rents won’t change as quickly, property X’s expected yield of 5%, is now below the floor and thus, would fall into our category of “unlikely to transact.”

3.2 Future Development Volume Estimation²²

Since 2013, Philadelphia development volume appears to have rebounded, in line with our projections, as the city and the national economy have recovered from recession and liquidity has returned to the capital markets.

Given the city and larger economy's place in the current economic cycle, we use a conservative projection for future development volume that is more in line with historical averages of [2%-3%].

In contrast, our baseline projection in the previous study was based on the assumption that development volume will move back towards long term averages, along with the larger economy, in an orderly fashion over a period of 5 years, while using a conservative 2% growth projection for the subsequent years.

3.3 Model Inputs

1. **Development volume growth** – Assumption for straight line development volume increases, after calculated initial losses, due to implied increases in development costs from adjustments to the abatement. These are set to 3% annually.
2. **Property value growth estimate** – Assumption set to 1.5% annual growth, a decided discount to recent averages, to be conservative, and account for the assumption that the City is likely to experience a slowdown before another expansion. To be clear, we make no assumption regarding the timing of when such a slowdown may occur.
3. **Construction Tax Assumption** – At the writing of this report, legislation to enact a construction impact tax is pending before City Council. Such a tax, in any form, would impact post adjustment cost estimates. As such, we have accounted for this variable in our model and set its magnitude to 0% for our baseline estimates, while setting it to 1% for discussing its likely impact in this document. We understand that the 1% rate is consistent with the current proposal before Council. The potential impact of this proposed tax is footnoted where appropriate.²³

²²We believe that the “gradual change” cases have impacts that would show up gradually over time. However, in our opinion, modeling in this effect would overly disadvantage the “immediate change” cases. As such, for comparison purposes, we have assumed that the impacts of all cases would be seen immediately, even if the proposed change was gradual in nature, and made substantially less impactful growth rate adjustments where appropriate.

²³ As stated earlier, we model this effect as a simple change in the present value cost of construction. In keeping with the general economic theory that underpins our model, as costs to develop go up, likely development volume comes down by some amount implied by historical analysis.

3.4 Model Outputs²⁴

1. **Year of Indifference (School District)** – This is the approximate year where cumulative tax collections by the School District, had no change in the abatement been made at all, would outpace what modeled tax collections would be, assuming a proposed change had been made.
2. **Year of Indifference (City)** – This is the approximate year where cumulative tax collections by the School District and City combined, had no change in the abatement been made at all, would outpace what modeled tax collections would be, assuming a proposed change had been made.
3. **Implied Job Loss** – Estimates the proforma job losses associated with annual loss of construction activity. To be conservative, this estimates only accounts for direct job losses and does not include any implied indirect or induced loss of employment or growth in employment as a result of the development activity.
4. **Spread Between Highest and Lowest Result**– Estimates the present value of the difference in estimated tax collection between the Status Quo case and the lowest yielding adjustment.

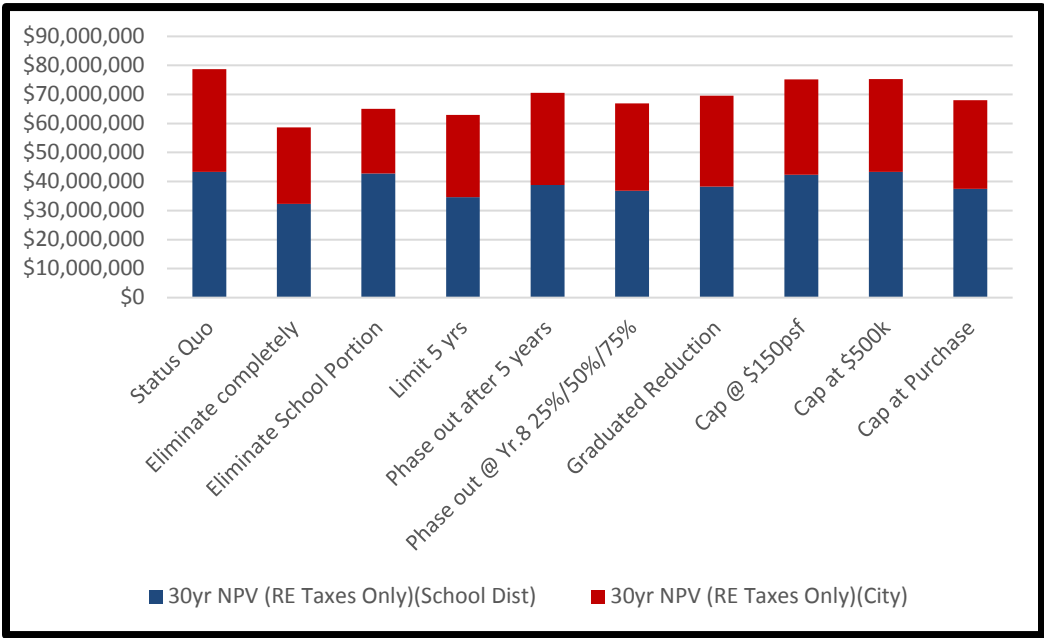
²⁴ As a check, we've modeled this data using two methods. The first holds discount rates consistent between scenarios and makes variations to growth using a formula based on pro forma cost differential of each scenario. The second method holds growth rates consistent and uses a formula to vary the discount rate of each scenario using a capital markets based method of assessing relative risk. We found the results between the methods to consistently be within 10%-15% of each other. The ranges shown below, for all cases, are meant to reflect those differences as well as account for any general error inherent in our assumptions or modeling.

Section 4 –
Modeled Results

Scenarios²⁵

To examine the short and long-term results of our case analysis, we first look at the 30-year²⁶ comparison for all scenarios of the net present value (NPV) of total expected Real Estate Tax for the City and School District:

Net Present Value of real estate taxes of 30-year period²⁷



In this case, we note that the difference between our highest and lowest cases, Status Quo and Eliminate Completely, is roughly \$20 million over a 30-year period.²⁸

²⁵ Since residential abatements form the vast majority of abatements under this program, we limit the analysis of the main body of this paper to the residential properties.

²⁶ We use a 30-year horizon to offer a view of financial impact within the term limits of widely available real estate finance instruments.

²⁷ As stated earlier, we have made certain NPV adjustments to expected tax collection and growth to try to account for this market's wide swings in development volume during an economic cycle.

²⁸ If we included the impact of a proposed construction tax at 1%, this value increases to over \$24 million.

Additionally, we also look at scenarios from the following other perspectives:

- **10-Year Comparison of Units Developed:** Quadrant 1 (Upper left) shows a 10-year comparison, in terms of number of units developed, between doing nothing (Blue bars), and making an adjustment (Red bars).
- **Crossover Analysis over 30-Year Period for Real Estate Tax Revenue:** Quadrant 2 (Upper right) shows a 30-year comparison, in terms of accumulated Real Estate Tax revenue, between doing nothing (Blue solid lines), and making an adjustment (Red solid lines). We also show the same comparison for only the School District portion of the tax (Dotted blue and red lines)²⁹
- **Employment Impact** – Quadrant 3 (Lower right) estimates loss of construction full time equivalent jobs (FTEs)³⁰.

²⁹ City level crossover ranges are adjusted to account for uncertainties around timing of impact and to not overly advantage these cases relative to the non “phase in” cases.

³⁰ Job loss estimate calculates 10-year direct construction employment only and assumes a local labor spend factor of 40%, or 40% of the construction labor force will be City of Philadelphia residents. This factor is typical for city/job type combinations where the likelihood of non-local residents being employed is high. Lastly, to avoid confusion, job losses are defined as full time equivalent (FTE) jobs no longer in the market in any given year of our analysis period.

4.1 Keeping the Abatement As-is (“Status Quo/Do Nothing”) ³¹

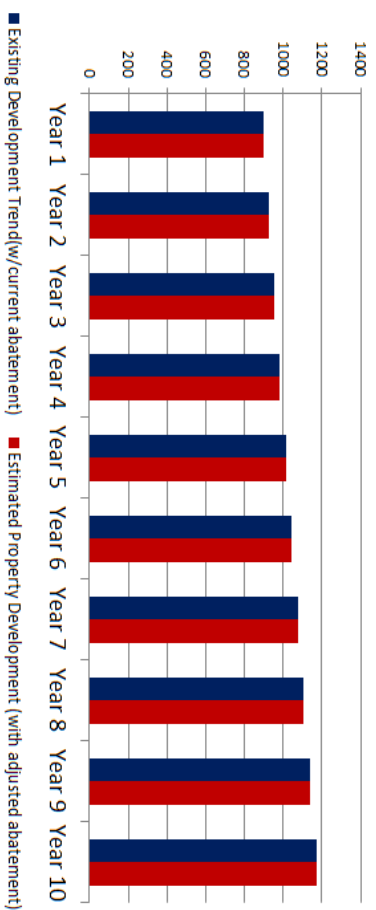
In this model we keep the abatement the same:

- In this case, since there is no change in policy, Red and Blue bars and lines in quadrants 1 and 2, respectively, are equal.
- As was mentioned earlier, our assumption is that this market performs in line with historical averages.

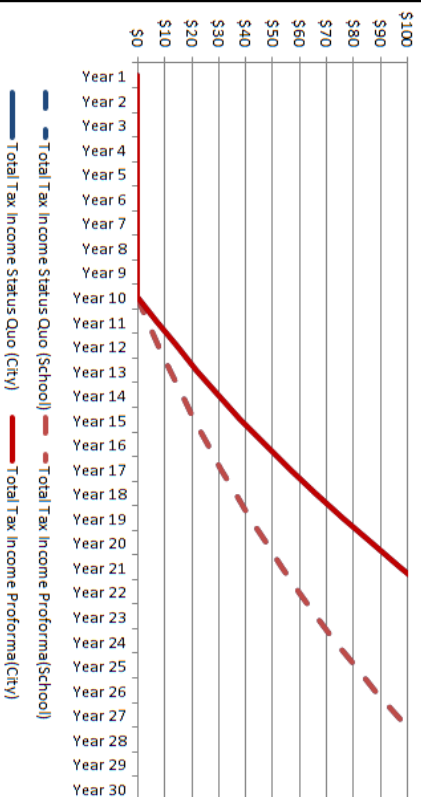
³¹ Our models suggest a 1% construction tax would lower the present value of this case by 4%-6% and risk 100 to 150 full time equivalent construction jobs.

Status Quo

10 Yr Projected Development Volume



30 yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Status Quo

Case Selector 1

Spread Between Highest and Lowest \$20 \$M

Dev Vol. Growth 3.0%
Prop. Value Growth 1.5%
Contruction Tax
Year of Indifference (School) 31
Year of Indifference (City) 31

Implied Job Loss -

4.2 Eliminating the Abatement Completely³²³³

- In this case we simulate the effects of completely removing the abatement over the past ten years. These data suggest that the projected future development volume loss implied from the historical pricing tolerances for this market, would be in the range of [40% to 50%].
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base within [15-18] years.³⁴ (See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within 17-19 years. (See dotted red and blue line cross over point).
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [1,700 – 1,900] full time construction jobs.
- The estimated present value of revenue from this case is [\$55M-\$65M.]

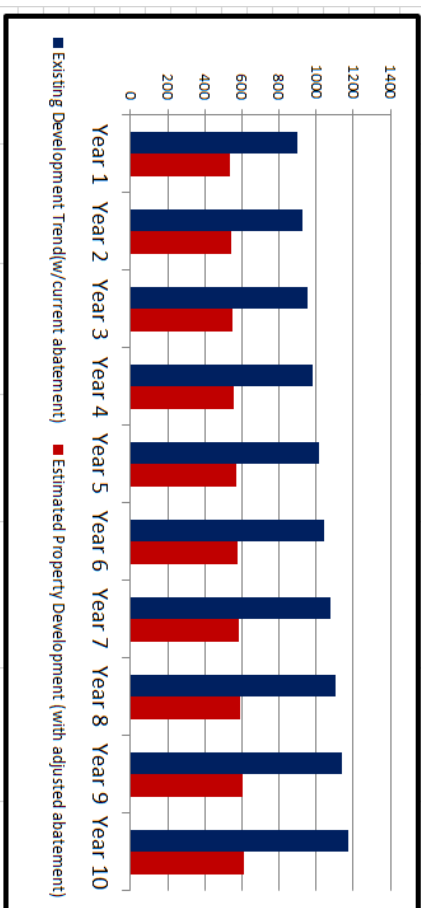
³² Our models suggest a 1% construction tax would lower the present value of this case by 5%-8% and increase job loss by 3%-5%.

³³ Ranges for this and all scenarios are used to account for normal statistical modeling error in our assumptions. (i.e. growth, pricing, discount rates, local spend factors, timing, etc.)

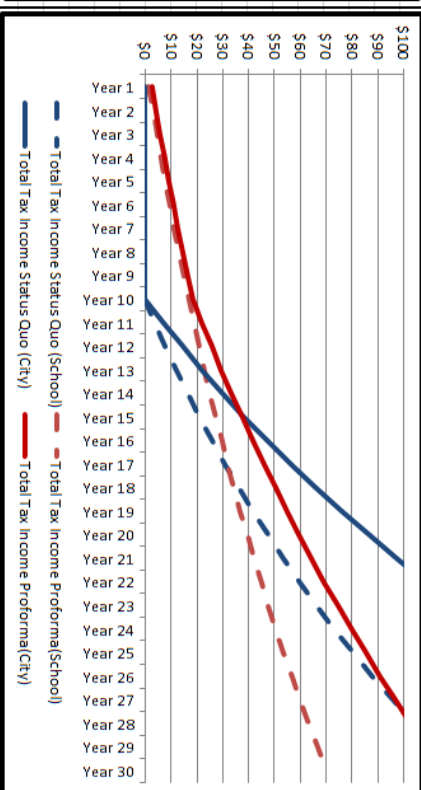
³⁴ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Eliminate completely

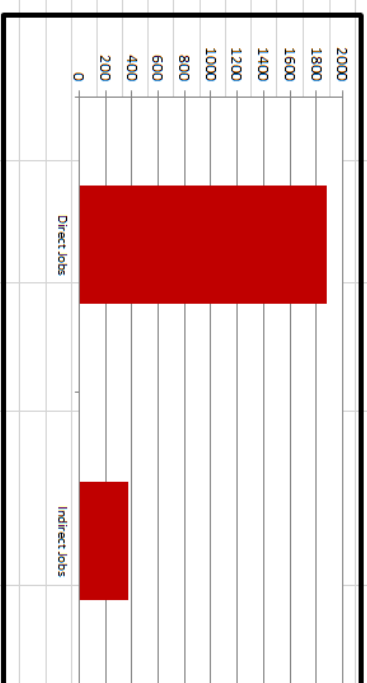
10 Yr Projected Development Volume



30 yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Case Selector Eliminate completely

Spread Between Highest and Lowest ✓

Dev Vol. Growth

Prop. Value Growth

Construction Tax

Year of Indifference (School)

Year of Indifference (City)

Implied Job Loss

4.3 Removing Only the School District portion of the Abatement³⁵

In this model we simulate removing the School District portion of the abatement (45% City portion of Real Estate Taxes remains abated; School District's 55% becomes taxable):

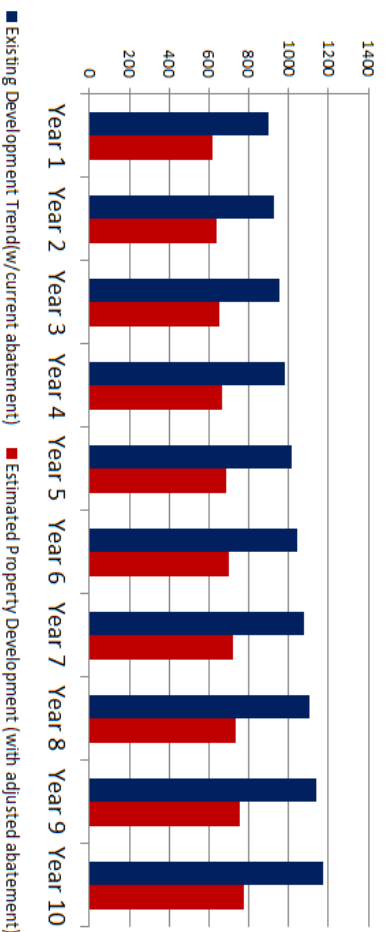
- In this case we simulate the effects of reducing the abatement by 55% over the past ten years. These data suggest that the projected loss in future development volume, implied from the historical pricing tolerances for this market, would be in the range of [30% to 35%].
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base within [16-18] years.³⁶(See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within [20-24] years. (See dotted red and blue line cross over point).
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [1,200 to 1,500] full time construction jobs.
- The estimated present value of revenue from this case is [\$58M-\$68M].

³⁵ Our models suggest a 1% construction tax would lower the present value of this case by 8-11%, and increase job losses by 3%-4%.

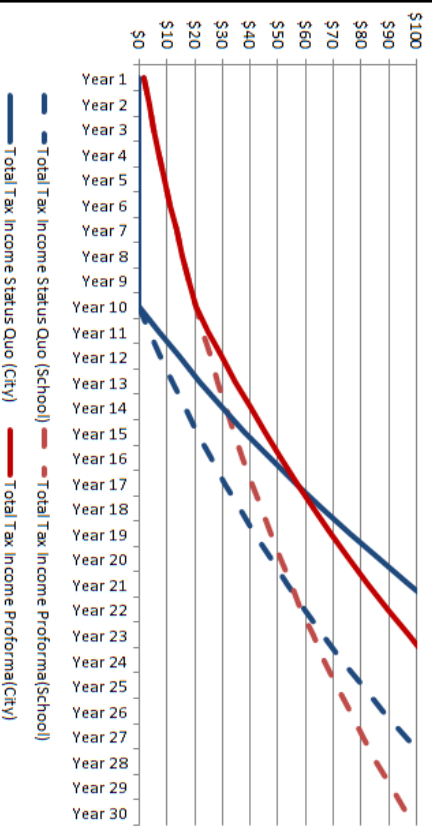
³⁶ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Eliminate School Portion

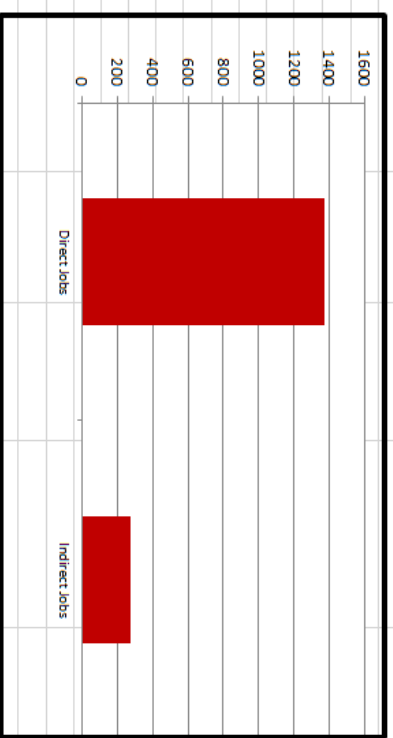
10 Yr Projected Development Volume



30 yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Case Selector Eliminate School Portion

Spread Between Highest and Lowest \$20 \$M

Dev Vol. Growth 3.0%

Prop. Value Growth 1.5%

Construction Tax 22

Year of Indifference (School) 18

Year of Indifference (City) 18

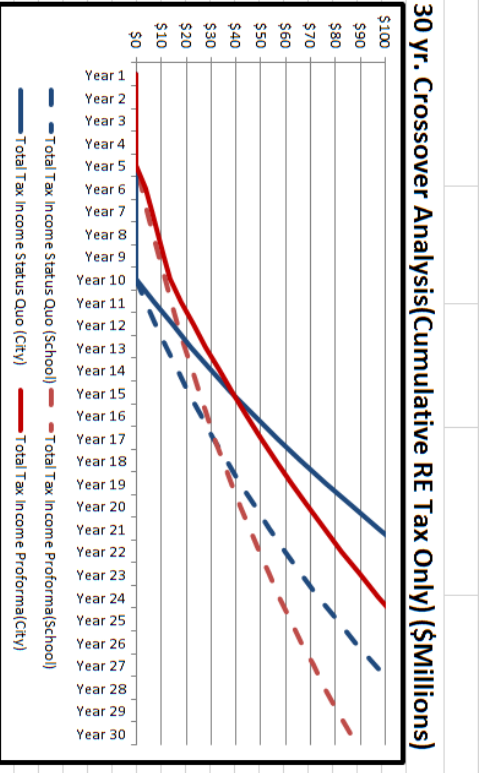
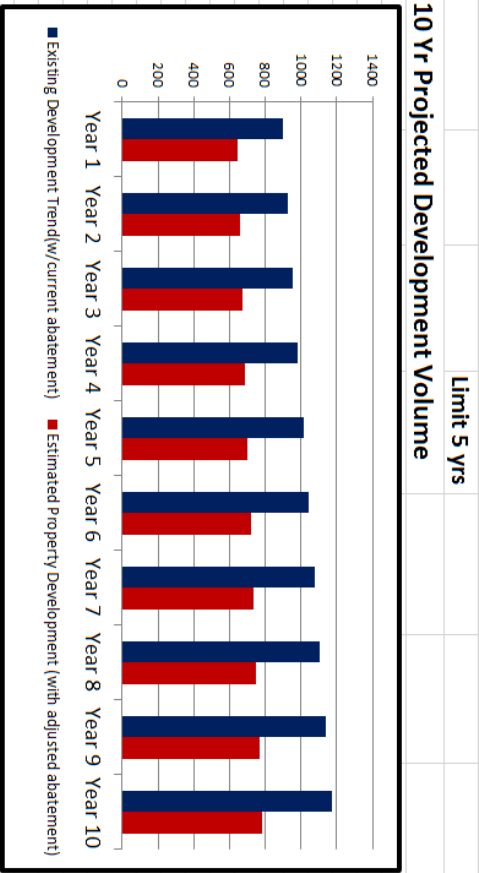
Implied Job Loss 1,372

4.4 Limit the Term of the Abatement to 5 Years³⁸

- In this case we simulate the effects of eliminating the abatement after 5 years. These data suggest that the projected future development volume loss, implied from the historical pricing tolerances for this market, would be in the range of 30%-35%.
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base within [15-18] years after the existing abatement expires.³⁹ (See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within [17-19] years after the abatement expires. (See dotted red and blue line cross over point).
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [1,200 – 1,400] full time construction jobs.
- The estimated present value of revenue from this case is [\$55M-\$65M].

³⁸ Our models suggest a 1% construction tax would lower the present value of this case by 3%-5% and increase job loss by 2%-4%.

³⁹ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.



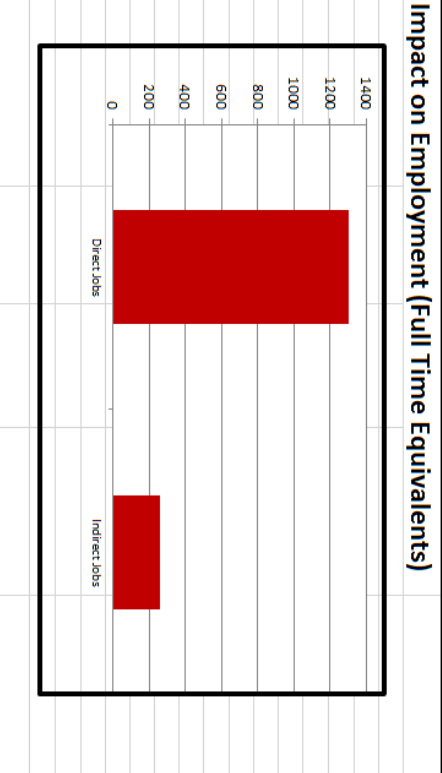
Limit 5 yrs

Case Selector

Spread Between Highest and Lowest

Dev Vol. Growth	3.0%
Prop. Value Growth	1.5%
Contruaction Tax	
Year of Indifference (School)	18
Year of Indifference (City)	16

Implied Job Loss



4.5 Phasing out the Abatement after 5 years ⁴⁰

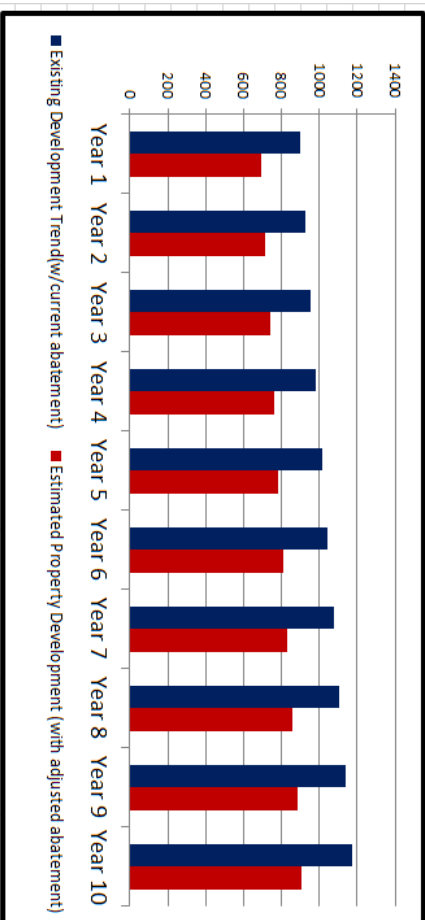
- In this case, we simulate reducing the abatement by 20% each year, over 5 years, until phased out. In this simulation, the estimated 10-year development loss is estimated at [20% - 30%].
- If we project that relationship into the future, quadrant three shows us that the accumulated Real Estate Taxes from this adjustment to the abatement are matched by those associated with keeping the abatement in place, within [15-19] years, for both the School District and the City.⁴¹
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [800-1,000] full time construction jobs.
- The estimated present value of revenue from this case is [\$60M-\$70M].

⁴⁰ Our models suggest a 1% construction tax would lower the present value of this case by 5%-7%, and increase jobs losses by 5%-8%.

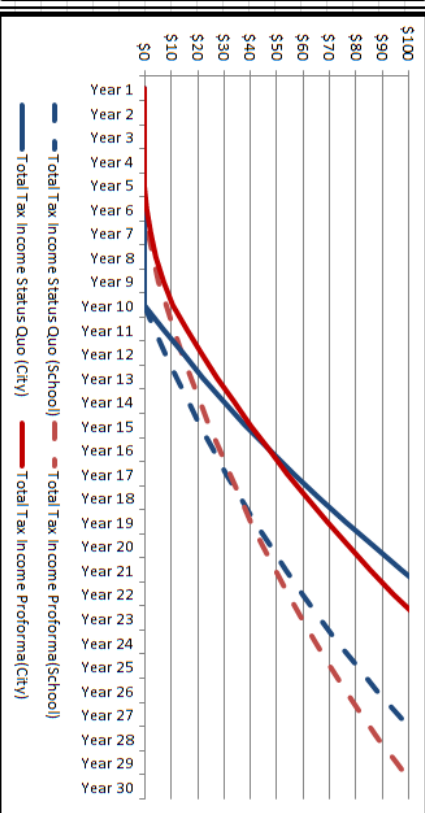
⁴¹ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Phase out after 5 years

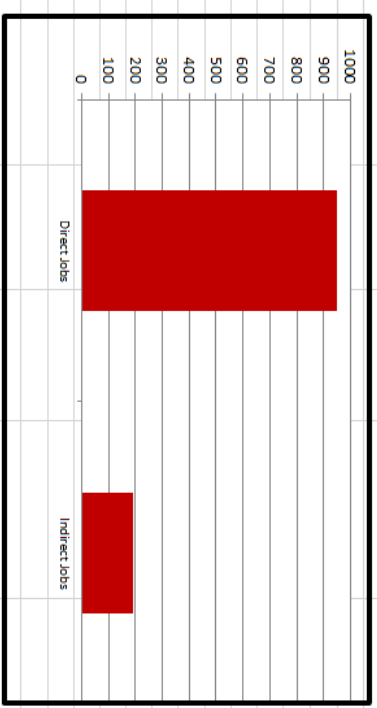
10 Yr Projected Development Volume



30 Yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Phase out after 5 years

Case Selector

Spread Between Highest and Lowest

Dev Vol. Growth

Prop. Value Growth

Constrution Tax

Year of Indifference (School)

Year of Indifference (City)

Implied Job Loss

4.6 Phasing out starting in Year 8⁴³

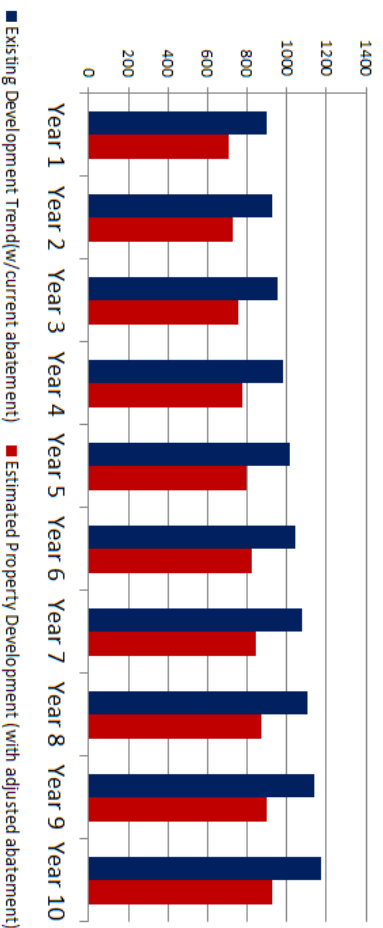
- In this case, we simulated the effects of phasing out of the abatement starting in year 8. The data suggests that the projected future development volume loss, implied from the historical pricing tolerances for this market, would be in the range of [20% to 25%].
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base within [13-15] years⁴⁴. (See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within [14-16] years. (See dotted red and blue line cross over point).
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [800 – 1,000] full time construction jobs.
- The estimated present value of revenue from this case is \$60M-\$70M.

⁴³ Our models suggest a 1% construction tax would lower the present value of this case by 4%-6%, and increase jobs losses by 6%-8%.

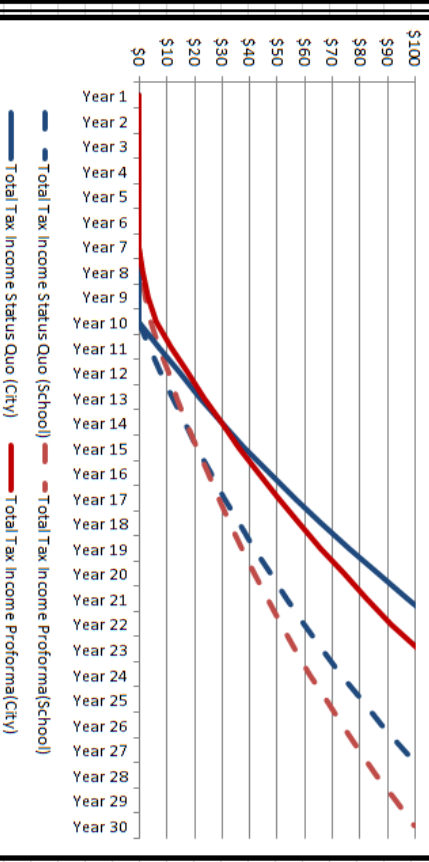
⁴⁴ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Phase out @ Yr.8 25%/50%/75%

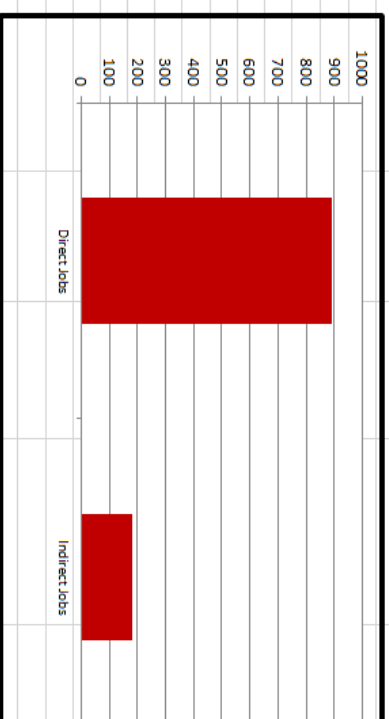
10 Yr Projected Development Volume



30 yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Phase out @ Yr.8 25%/50%/75%	5
Case Selector	5
Spread Between Highest and Lowest	\$20 \$M
Dev Vol. Growth	3.0%
Prop. Value Growth	1.5%
Contruction Tax	15
Year of Indifference (School)	14
Year of Indifference (City)	14
Implied Job Loss	894

4.7 Phasing out gradually from Year 1⁴⁵

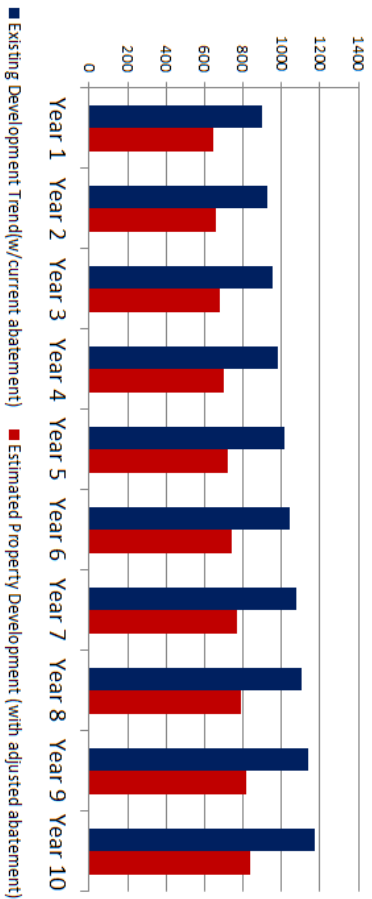
- In this case we simulate the effects of phasing out of the abatement over ten years, starting in year 1, with 10 percentage point decreases annually. This scenario suggests that the projected future development volume loss, implied from the historical pricing tolerances for this market, would be in the range of [30% to 40%].
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base within [16-19] years.⁴⁶ (See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within 18-20 years. (See dotted red and blue line cross over point).
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [1,100 – 1,300] full time construction jobs.
- The estimated present value of revenue from this case is [\$60M-\$70M].

⁴⁵ Our models suggest a 1% construction tax would lower the present value of this case by 9%-12% and increases job losses by 2%-3%.

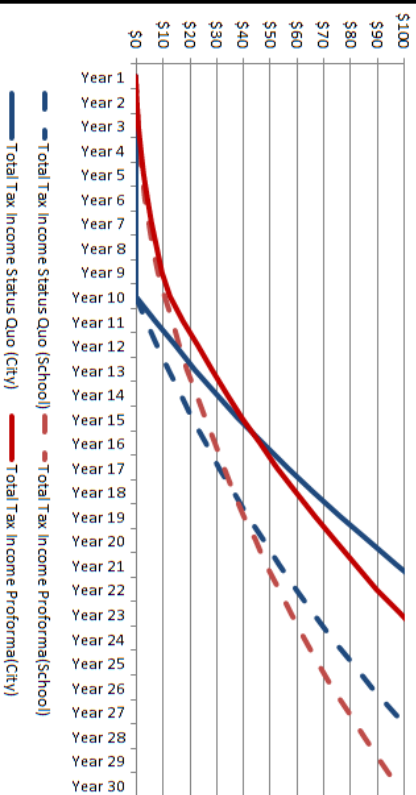
⁴⁶ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Graduated Reduction

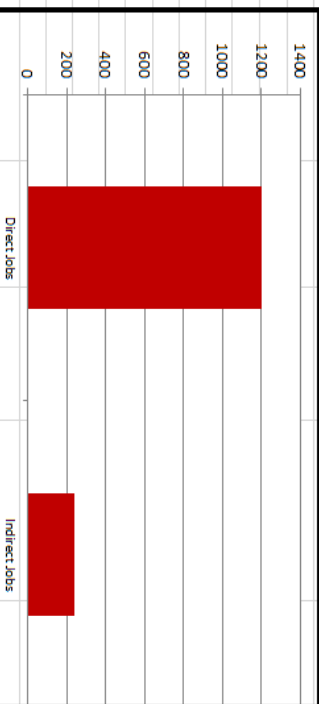
10 Yr Projected Development Volume



30 Yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Graduated Reduction

Case Selector **6**

Spread Between Highest and Lowest **\$20 \$M**

Dev Vol. Growth

3.0%

Prop. Value Growth

1.5%

Contruction Tax

19

Year of Indifference (School)

16

Year of Indifference (City)

Implied Job Loss

1,204

4.8 Eliminate the School District's portion on Value above \$150 per square foot⁴⁷

- In this case we simulate the effects of eliminating the School District's portion of the abatement on value above \$150 per square foot⁴⁸. The data suggests that the projected future residential development volume loss, implied from the historical pricing tolerances for this market, would be less than [10% -15%] as higher end development volume could easily shift towards lower cost product, or simply absorb the cost of losing the abatement.
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base within [14-17] years.⁴⁹ (See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within [16-18] years. (See dotted red and blue line cross over point).
- However, the difference between this case and Status quo are small enough to render the numerical crossover points almost meaningless.
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [800 – 900] full time construction jobs.
- The estimated present value of revenue from this case is [\$65M-\$73M].

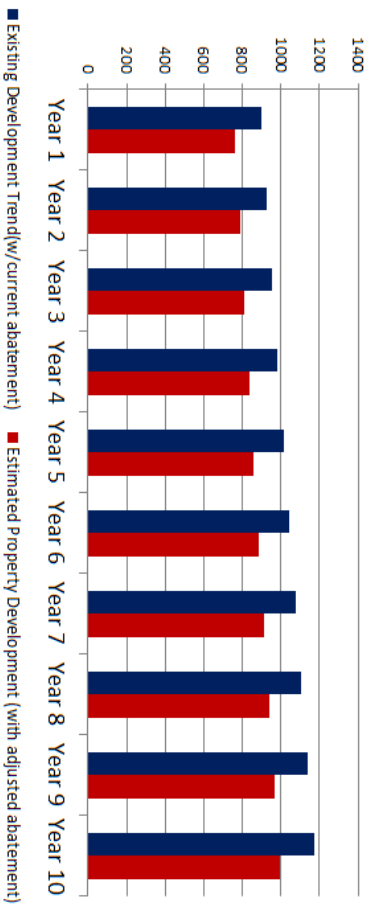
⁴⁷ Our models suggest a 1% construction tax would lower the present value of this case by 2%-3% with increasing job loss by 1%-2%.

⁴⁸ Impact is limited to single family home development activity.

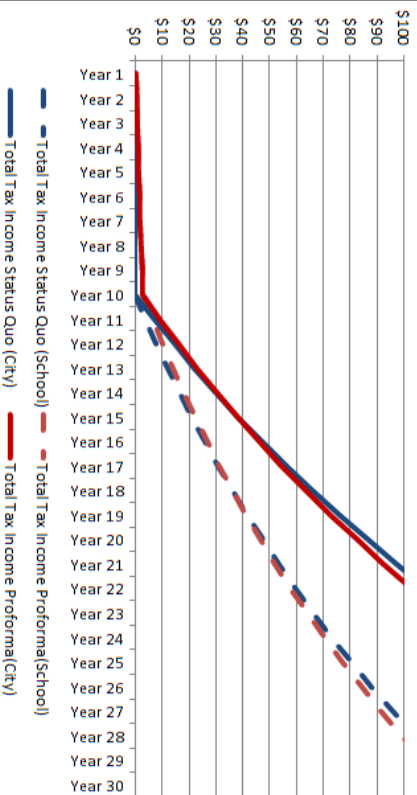
⁴⁹ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Cap @ \$150psf

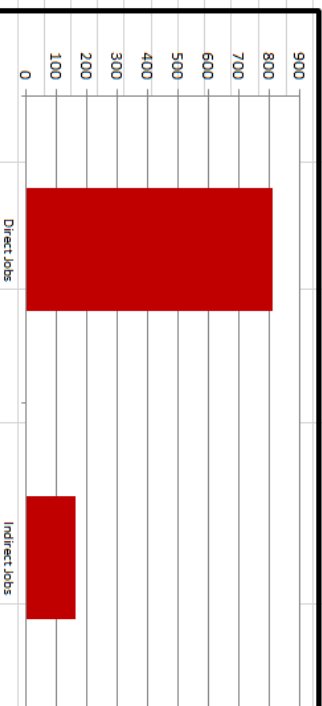
10 Yr Projected Development Volume



30 yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Cap @ \$150psf
Case Selector 7

Spread Between Highest and Lowest \$20 \$/M

Dev Vol. Growth 3.0%
Prop. Value Growth 1.5%
Contruction Tax
Year of Indifference (School) 16
Year of Indifference (City) 14

Implied Job Loss 810

4.9 Eliminate the School District's portion on value above \$500k per unit⁵⁰

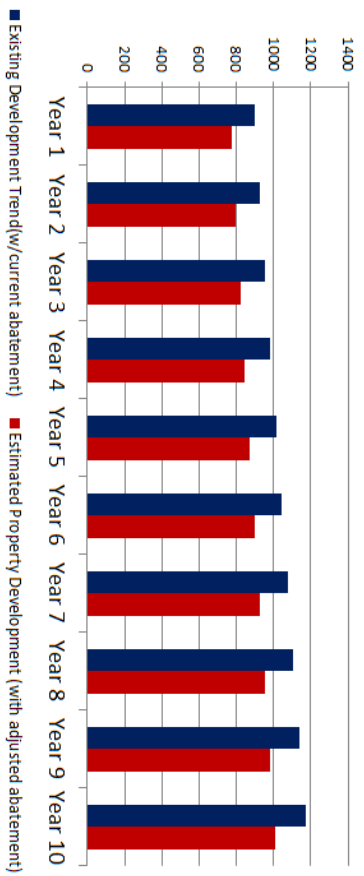
- In this case we simulate the effects of eliminating the School District's portion of the abatement on value above \$500k per unit. The data suggests that the projected future residential development volume loss, implied from the historical pricing tolerances for this market, would be less than [14% -19%] as higher end development volume could easily shift towards lower cost product, or simply absorb the cost of losing the abatement.
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base within [16-20] years.⁵¹(See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within [20-22] years after the abatement expires. (See dotted red and blue line cross over point).
- We estimate that the loss of development will result in a loss of construction employment in Philadelphia of roughly [500 – 600] full time construction jobs.
- The estimated present value of revenue from this case is [\$66M-\$74M].

⁵⁰ Our models suggest a 1% construction tax would lower the present value of this case by 3%-5% and increase job losses by 6%-8%.

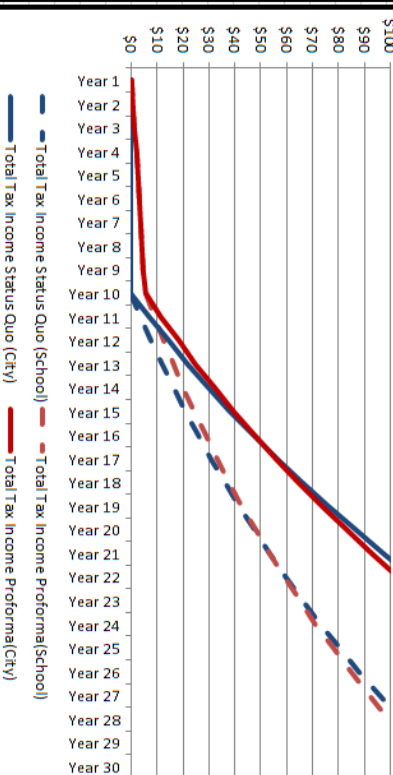
⁵¹ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Cap at \$500k

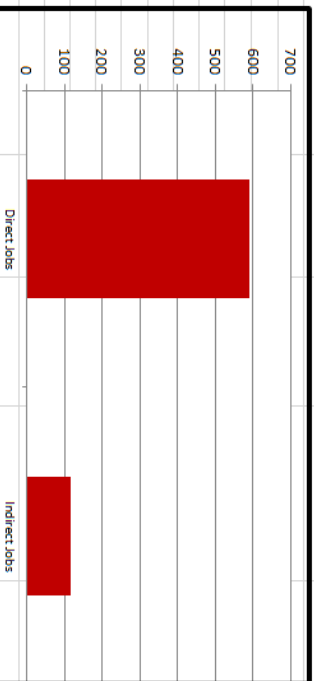
10 Yr Projected Development Volume



30 yr. Crossover Analysis(Cumulative RE Tax Only) (\$Millions)



Impact on Employment (Full Time Equivalents)



Case Selector	10	Cap at \$500k
Spread Between Highest and Lowest	\$20 \$M	
Dev Vol. Growth	3.0%	
Prop. Value Growth	1.5%	
Contruction Tax		
Year of Indifference (School)	20	
Year of Indifference (City)	16	
Implied Job Loss	589	

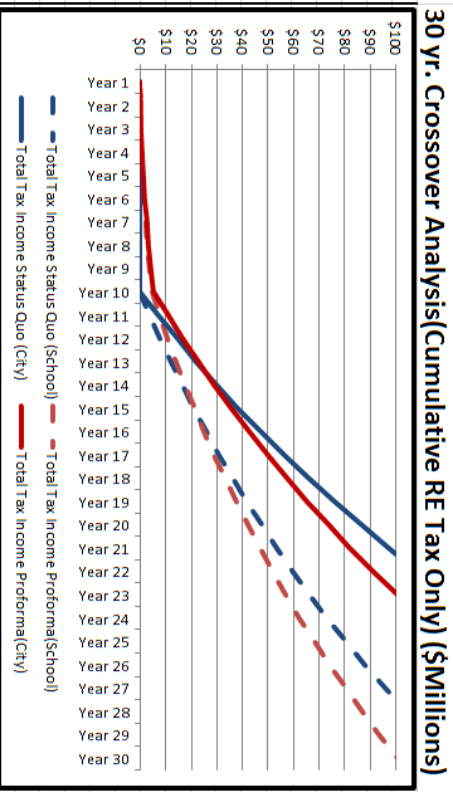
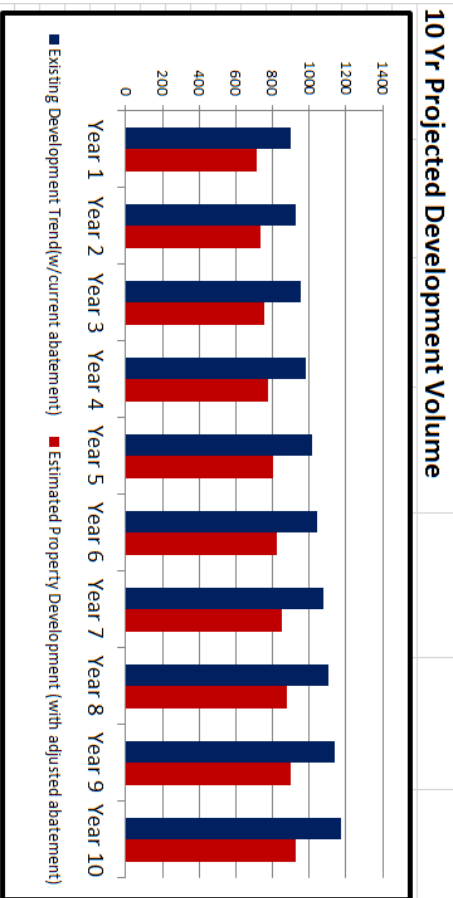
4.10 Cap the Abatement at Initial Construction Value⁵²

- In this case, we simulate the effects of eliminating the School District portion of the abatement on all value above initial construction costs. The data suggests that the projected future development volume loss implied from the historical pricing tolerances for this market, would be less than 5%.
- Quadrant 2 shows us that the short-term gains from reducing the abatement are outweighed by the long-term benefits of a broader tax base with [14-17] years.⁵³(See solid red and blue line crossover point).
- The long-term benefits to the School District outweigh the short-term gains within [15-18] years. (See dotted red and blue line cross over point).
- We estimate that the loss of development will result in a loss of limited construction jobs for this case.
- There is very little apparent difference between this case and status quo in our tables because, at our property value growth assumption of 1.5%, there simply isn't a lot of growth over initial value to tax fully. At higher property value growth assumption this case would likely show more contrast.
- The estimated present value of revenue from this case is [\$60M-\$69M].

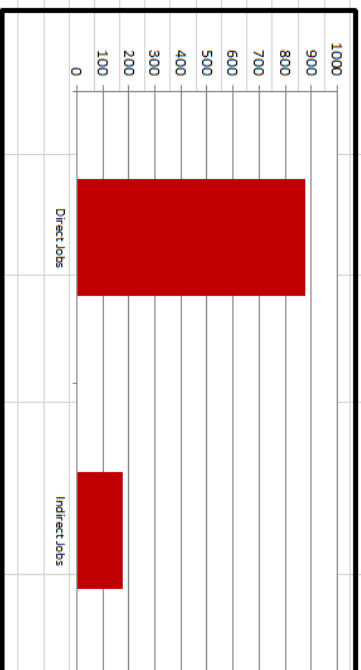
⁵² Our models suggest a 1% construction tax would lower the present value of this case by 5%-7%, and increase job losses by 1%-3%

⁵³ For conservatism, this does not include the land portion of Real Estate Taxes paid during the abatement period.

Cap at Purchase



Impact on Employment (Full Time Equivalents)



Case Selector	Cap at Purchase
9	9
Spread Between Highest and Lowest	\$20 \$M
Dev Vol. Growth	3.0%
Prop. Value Growth	1.5%
Construction Tax	
Year of Indifference (School)	16
Year of Indifference (City)	14
Implied Job Loss	878

Concept for Lower Value Residences

We were also asked to consider how the existing abatement could be altered to make it meaningful for homes under \$250k. Less than 28% of properties taking advantage the current abatement were valued in this price range. We believe that one reason for this could be that construction/renovation costs tend to go up per square foot as a home becomes smaller. Also, these homes typically don't increase in value at the same rate as more expensive homes.

Our calculations suggest that an abatement for these homes that extended to approximately 25 years would have a value significant enough to correct for some of this difference. This, along with some mechanism that allowed the incentive to be more easily capitalized⁵⁴ could increase participation from this tier of value.

Increasing the length of the abatement term beyond 10-years would require state authorization.

⁵⁴ The likelihood of those living in these homes having enough disposable income to finance significant renovation upfront is low. Thus, some alternative finance mechanism would have to be in place for this type of tax incentive to be effective, similar to certain programs offered in New Jersey.

Geographic Eligibility Concept

Additionally, we have examined the distribution of abatement utilization across the city and found that there are stark geographic disparities. These disparities are primarily due to the abatement not being enough of an incentive to bridge the gap in yield for projects in areas where there has historically been little activity.

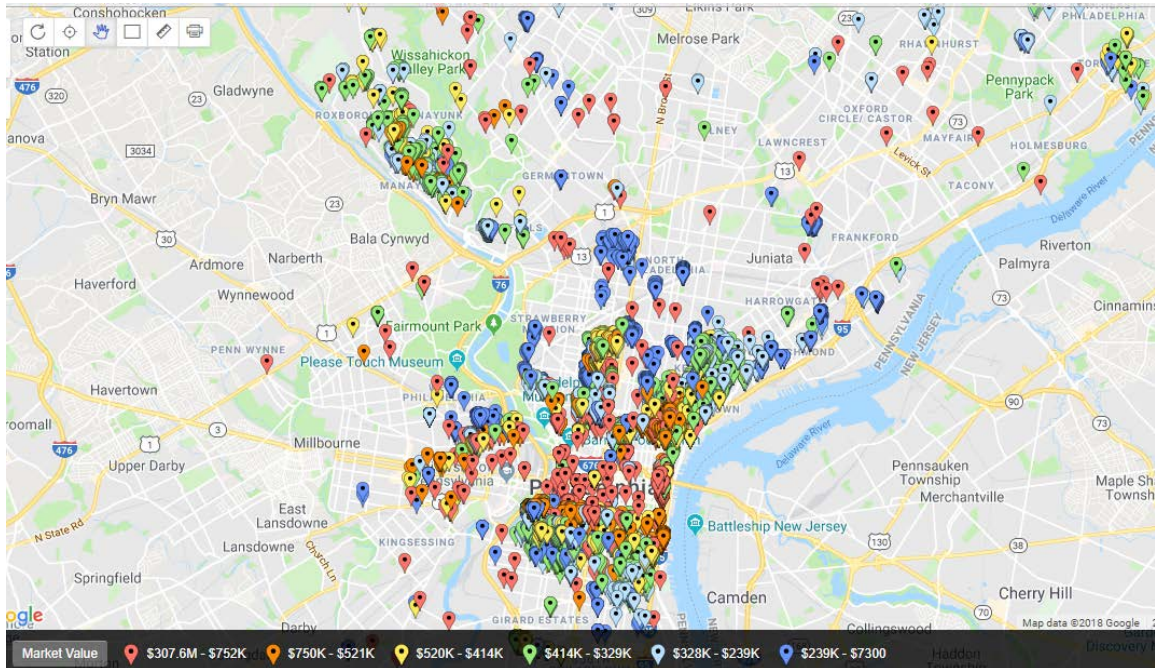
One way to potentially alleviate some of this disparity - without substantially increasing the value of the abatement to cover the previously mentioned yield gap – is to restrict the abatement to certain geographic areas within the city.

We have modeled a concept where eligibility for the abatement would be determined by block group-level characteristics, including: household income, average property value, and average transaction volume. Block groups that show below city median on the income indicator and either 1 of the remaining 2 indicators would be eligible for the abatement.

This concept would likely pose administrative challenges to the City, as policy adjustments would be needed to preserve affordable housing and avoid displacing long-time residents. Plus, eligibility maps would have to be updated periodically as new block group data become available.

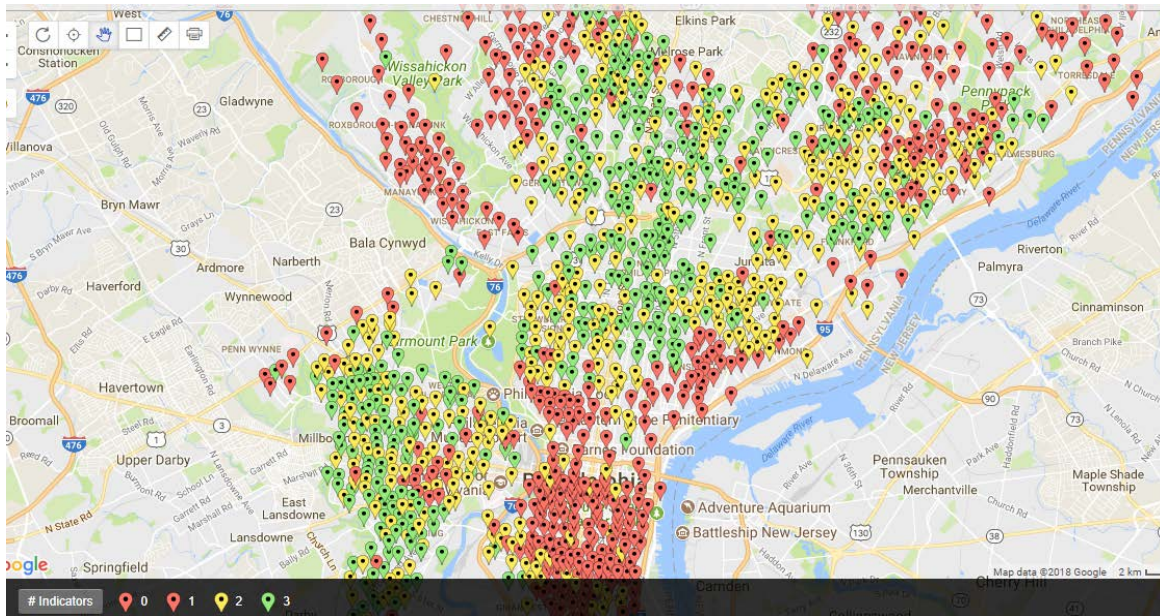
However, this type of system offers the potential for the City to more evenly distribute its abatement, or other incentive dollars to sections of the city that would likely be underserved by the private capital markets, then redirect those funds away once/if conditions have changed for that area.

Properties that have been abated over the past 10 years, by market value⁵⁵



Under this system, sections of the city that have been out of the reach of the abatement over the past ten years would have increased eligibility (green and yellow dots), whereas areas with recent high concentrations of participation would have likely have less chance of eligibility (red dots).

Block groups that would be eligible under the Geographic eligibility concept



⁵⁵ Properties in City databases of abated properties, by City assessed market values.

Conclusion

It summary, it appears to be clear that making an adjustment to the abatement would almost certainly come with a risk of some loss of development and its related tax revenue. Moreover, the option of eliminating it completely, right away, appear to carry the most risk of development loss.

Which adjustment option is optimal, however, is more nuanced and dependent on Philadelphia's appetite for risk and expectation for continued growth.

On a total tax revenue basis:

Over a 30-year period, the scenarios that involve some differing levels of taxation above certain thresholds or "caps" appear to yield the least risk, and the most revenue, for the School District and City. However, the administrative difficulty and cost of these is difficult to predict and may render them impractical, even if theoretically superior.

As such, the next best cases, assuming there is an adjustment, appear to be "gradual phase out" cases along with, of course, simply eliminating the School District portion of the abatement, in terms of raising the most revenue for the School District, with at least one yielding almost as much present value revenue as simply eliminating the School District portion.

None of the "eliminate or significantly curtail now" cases produce results on par with the above for the School District.

To the City as a whole, of the two more practical types of scenarios we've examined, the gradual phase out cases are clearly the highest yielding option.

On a net present value (NPV) basis:

The estimated revenue to the City as a whole is virtually even between the phase out starting in year 8 case, and the case that eliminates only the School District portion.

Over a 30-year period, the scenario that involves eliminating the School District portion right away does appear to yield higher present value. This is so because the NPV calculation weights revenue that comes in sooner more heavily than what comes in later. As the tables show, however, this does come at the potential cost of a slower growth in real estate development and tax revenue, over time, than the gradual adjustment cases.

On a relative risk basis:

Almost any scenario that involves increasing costs right away will be more risky than one that gradually increases costs over time, even if, mathematically, they increase costs by equivalent amounts. In most cases, this is true because those investing capital have time to adjust construction and liquidity strategies to account for the change.

In conclusion, while estimating the impact of each scenario can be straightforward, the ultimate decision rests on Philadelphia's appetite for risk relative to its short-term funding needs vs. its longer-term positioning in the real estate capital markets.

Appendix 1 Background Tables (without Construction Tax Impact)

Status Quo				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$0	\$0	\$0
7	\$0	\$0	\$0	\$0
8	\$0	\$0	\$0	\$0
9	\$0	\$0	\$0	\$0
10	\$0	\$0	\$0	\$0
11	\$3,858,639	\$3,858,639	\$7,015,707	\$7,015,707
12	\$7,892,653	\$7,892,653	\$14,350,277	\$14,350,277
13	\$12,110,012	\$12,110,012	\$22,018,204	\$22,018,204
14	\$16,519,051	\$16,519,051	\$30,034,639	\$30,034,639
15	\$21,128,481	\$21,128,481	\$38,415,420	\$38,415,420
16	\$25,947,409	\$25,947,409	\$47,177,107	\$47,177,107
17	\$30,985,358	\$30,985,358	\$56,337,014	\$56,337,014
18	\$36,252,281	\$36,252,281	\$65,913,238	\$65,913,238
19	\$41,758,586	\$41,758,586	\$75,924,701	\$75,924,701
20	\$47,515,152	\$47,515,152	\$86,391,186	\$86,391,186
21	\$53,533,355	\$53,533,355	\$97,333,372	\$97,333,372
22	\$59,825,084	\$59,825,084	\$108,772,880	\$108,772,880
23	\$66,402,773	\$66,402,773	\$120,732,315	\$120,732,315
24	\$73,279,418	\$73,279,418	\$133,235,305	\$133,235,305
25	\$80,468,606	\$80,468,606	\$146,306,557	\$146,306,557
26	\$87,984,543	\$87,984,543	\$159,971,896	\$159,971,896
27	\$95,842,079	\$95,842,079	\$174,258,326	\$174,258,326
28	\$104,056,740	\$104,056,740	\$189,194,074	\$189,194,074
29	\$112,644,758	\$112,644,758	\$204,808,651	\$204,808,651
30	\$121,623,101	\$121,623,101	\$221,132,911	\$221,132,911

Eliminate School Portion				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$1,705,610	\$0	\$1,705,610
2	\$0	\$3,480,083	\$0	\$3,480,083
3	\$0	\$5,326,202	\$0	\$5,326,202
4	\$0	\$7,246,857	\$0	\$7,246,857
5	\$0	\$9,245,058	\$0	\$9,245,058
6	\$0	\$11,323,937	\$0	\$11,323,937
7	\$0	\$13,486,751	\$0	\$13,486,751
8	\$0	\$15,736,888	\$0	\$15,736,888
9	\$0	\$18,077,875	\$0	\$18,077,875
10	\$0	\$20,513,379	\$0	\$20,513,379
11	\$3,858,639	\$23,047,216	\$7,015,707	\$25,120,356
12	\$7,892,653	\$25,683,357	\$14,350,277	\$29,913,340
13	\$12,110,012	\$28,425,933	\$22,018,204	\$34,899,840
14	\$16,519,051	\$31,279,239	\$30,034,639	\$40,087,671
15	\$21,128,481	\$34,247,748	\$38,415,420	\$45,484,960
16	\$25,947,409	\$37,336,111	\$47,177,107	\$51,100,165
17	\$30,985,358	\$40,549,166	\$56,337,014	\$56,942,083
18	\$36,252,281	\$43,891,949	\$65,913,238	\$63,019,869
19	\$41,758,586	\$47,369,696	\$75,924,701	\$69,343,046
20	\$47,515,152	\$50,987,857	\$86,391,186	\$75,921,521
21	\$53,533,355	\$54,752,101	\$97,333,372	\$82,765,602
22	\$59,825,084	\$58,668,327	\$108,772,880	\$89,886,012
23	\$66,402,773	\$62,742,671	\$120,732,315	\$97,293,910
24	\$73,279,418	\$66,981,516	\$133,235,305	\$105,000,901
25	\$80,468,606	\$71,391,504	\$146,306,557	\$113,019,061
26	\$87,984,543	\$75,979,546	\$159,971,896	\$121,360,956
27	\$95,842,079	\$80,752,830	\$174,258,326	\$130,039,654
28	\$104,056,740	\$85,718,835	\$189,194,074	\$139,068,754
29	\$112,644,758	\$90,885,343	\$204,808,651	\$148,462,404
30	\$121,623,101	\$96,260,448	\$221,132,911	\$158,235,323

Phase out after 5 years				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$478,048	\$0	\$869,178
7	\$0	\$1,477,598	\$0	\$2,295,412
8	\$0	\$3,045,067	\$0	\$4,327,542
9	\$0	\$5,230,015	\$0	\$7,017,700
10	\$0	\$8,085,333	\$0	\$10,421,501
11	\$3,858,639	\$11,070,424	\$7,015,707	\$15,848,941
12	\$7,892,653	\$14,191,188	\$14,350,277	\$21,523,057
13	\$12,110,012	\$17,453,791	\$22,018,204	\$27,455,061
14	\$16,519,051	\$20,864,679	\$30,034,639	\$33,656,676
15	\$21,128,481	\$24,430,591	\$38,415,420	\$40,140,154
16	\$25,947,409	\$28,158,575	\$47,177,107	\$46,918,305
17	\$30,985,358	\$32,055,995	\$56,337,014	\$54,004,524
18	\$36,252,281	\$36,130,553	\$65,913,238	\$61,412,812
19	\$41,758,586	\$40,390,300	\$75,924,701	\$69,157,806
20	\$47,515,152	\$44,843,652	\$86,391,186	\$77,254,810
21	\$53,533,355	\$49,499,410	\$97,333,372	\$85,719,823
22	\$59,825,084	\$54,366,771	\$108,772,880	\$94,569,571
23	\$66,402,773	\$59,455,354	\$120,732,315	\$103,821,540
24	\$73,279,418	\$64,775,213	\$133,235,305	\$113,494,011
25	\$80,468,606	\$70,336,859	\$146,306,557	\$123,606,095
26	\$87,984,543	\$76,151,283	\$159,971,896	\$134,177,774
27	\$95,842,079	\$82,229,972	\$174,258,326	\$145,229,936
28	\$104,056,740	\$88,584,937	\$189,194,074	\$156,784,418
29	\$112,644,758	\$95,228,735	\$204,808,651	\$168,864,052
30	\$121,623,101	\$102,174,495	\$221,132,911	\$181,492,705

Eliminate completely				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$1,467,467	\$0	\$2,668,122
2	\$0	\$2,979,289	\$0	\$4,216,233
3	\$0	\$4,536,805	\$0	\$5,811,136
4	\$0	\$6,141,397	\$0	\$7,454,245
5	\$0	\$7,794,488	\$0	\$9,147,017
6	\$0	\$9,497,544	\$0	\$10,890,953
7	\$0	\$11,252,074	\$0	\$12,687,599
8	\$0	\$13,059,635	\$0	\$14,538,549
9	\$0	\$14,921,830	\$0	\$16,445,444
10	\$0	\$16,840,309	\$0	\$18,409,974
11	\$3,858,639	\$18,816,775	\$7,015,707	\$22,003,548
12	\$7,892,653	\$20,852,979	\$14,350,277	\$25,705,738
13	\$12,110,012	\$22,950,728	\$22,018,204	\$29,519,826
14	\$16,519,051	\$25,111,881	\$30,034,639	\$33,449,195
15	\$21,128,481	\$27,338,354	\$38,415,420	\$37,497,329
16	\$25,947,409	\$29,632,123	\$47,177,107	\$41,667,818
17	\$30,985,358	\$31,995,221	\$56,337,014	\$45,964,360
18	\$36,252,281	\$34,429,744	\$65,913,238	\$50,390,765
19	\$41,758,586	\$36,937,851	\$75,924,701	\$54,950,958
20	\$47,515,152	\$39,521,764	\$86,391,186	\$59,648,983
21	\$53,533,355	\$42,183,777	\$97,333,372	\$64,489,006
22	\$59,825,084	\$44,926,249	\$108,772,880	\$69,475,319
23	\$66,402,773	\$47,751,612	\$120,732,315	\$74,612,342
24	\$73,279,418	\$50,662,371	\$133,235,305	\$79,904,633
25	\$80,468,606	\$53,661,109	\$146,306,557	\$85,356,882
26	\$87,984,543	\$56,750,483	\$159,971,896	\$90,973,927
27	\$95,842,079	\$59,933,234	\$174,258,326	\$96,760,746
28	\$104,056,740	\$63,212,183	\$189,194,074	\$102,722,472
29	\$112,644,758	\$66,590,238	\$204,808,651	\$108,864,391
30	\$121,623,101	\$70,070,395	\$221,132,911	\$115,191,949

Phase out @ Yr.8 25%/50%/75%				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$0	\$0	\$0
7	\$0	\$0	\$0	\$0
8	\$0	\$664,745	\$0	\$1,208,626
9	\$0	\$2,054,659	\$0	\$3,191,862
10	\$0	\$4,234,288	\$0	\$6,017,621
11	\$3,858,639	\$7,272,545	\$7,015,707	\$11,541,725
12	\$7,892,653	\$10,448,892	\$14,350,277	\$17,316,900
13	\$12,110,012	\$13,769,603	\$22,018,204	\$23,354,557
14	\$16,519,051	\$17,241,241	\$30,034,639	\$29,666,626
15	\$21,128,481	\$20,870,664	\$38,415,420	\$36,265,578
16	\$25,947,409	\$24,665,045	\$47,177,107	\$43,164,452
17	\$30,985,358	\$28,631,880	\$56,337,014	\$50,376,880
18	\$36,252,281	\$32,779,009	\$65,913,238	\$57,917,113
19	\$41,758,586	\$37,114,624	\$75,924,701	\$65,800,049
20	\$47,515,152	\$41,647,292	\$86,391,186	\$74,041,265
21	\$53,533,355	\$46,385,971	\$97,333,372	\$82,657,044
22	\$59,825,084	\$51,340,022	\$108,772,880	\$91,664,411
23	\$66,402,773	\$56,519,236	\$120,732,315	\$101,081,162
24	\$73,279,418	\$61,933,844	\$133,235,305	\$110,925,904
25	\$80,468,606	\$67,594,546	\$146,306,557	\$121,218,091
26	\$87,984,543	\$73,512,528	\$159,971,896	\$131,978,057
27	\$95,842,079	\$79,699,481	\$174,258,326	\$143,227,063
28	\$104,056,740	\$86,167,632	\$189,194,074	\$154,987,337
29	\$112,644,758	\$92,929,760	\$204,808,651	\$167,282,115
30	\$121,623,101	\$99,999,226	\$221,132,911	\$180,135,691

Graduated Reduction				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$184,599	\$0	\$335,635
3	\$0	\$570,577	\$0	\$886,377
4	\$0	\$1,175,858	\$0	\$1,671,088
5	\$0	\$2,019,580	\$0	\$2,709,897
6	\$0	\$3,122,165	\$0	\$4,024,281
7	\$0	\$4,505,403	\$0	\$5,637,144
8	\$0	\$6,192,527	\$0	\$7,572,901
9	\$0	\$8,208,303	\$0	\$9,857,574
10	\$0	\$10,579,120	\$0	\$12,518,879
11	\$3,858,639	\$13,333,087	\$7,015,707	\$17,526,091
12	\$7,892,653	\$16,212,221	\$14,350,277	\$22,760,882
13	\$12,110,012	\$19,222,213	\$22,018,204	\$28,233,594
14	\$16,519,051	\$22,369,008	\$30,034,639	\$33,955,040
15	\$21,128,481	\$25,658,826	\$38,415,420	\$39,936,527
16	\$25,947,409	\$29,098,166	\$47,177,107	\$46,189,871
17	\$30,985,358	\$32,693,823	\$56,337,014	\$52,727,431
18	\$36,252,281	\$36,452,904	\$65,913,238	\$59,562,122
19	\$41,758,586	\$40,382,834	\$75,924,701	\$66,707,450
20	\$47,515,152	\$44,491,380	\$86,391,186	\$74,177,534
21	\$53,533,355	\$48,786,659	\$97,333,372	\$81,987,132
22	\$59,825,084	\$53,277,159	\$108,772,880	\$90,151,677
23	\$66,402,773	\$57,971,752	\$120,732,315	\$98,687,300
24	\$73,279,418	\$62,879,714	\$133,235,305	\$107,610,868
25	\$80,468,606	\$68,010,743	\$146,306,557	\$116,940,012
26	\$87,984,543	\$73,374,977	\$159,971,896	\$126,693,165
27	\$95,842,079	\$78,983,016	\$174,258,326	\$136,889,599
28	\$104,056,740	\$84,845,940	\$189,194,074	\$147,549,461
29	\$112,644,758	\$90,975,334	\$204,808,651	\$158,693,813
30	\$121,623,101	\$97,383,309	\$221,132,911	\$170,344,677

Cap @ \$150psf				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$245,518	\$0	\$245,518
2	\$0	\$498,401	\$0	\$498,401
3	\$0	\$758,870	\$0	\$758,870
4	\$0	\$1,027,154	\$0	\$1,027,154
5	\$0	\$1,303,486	\$0	\$1,303,486
6	\$0	\$1,588,108	\$0	\$1,588,108
7	\$0	\$1,881,269	\$0	\$1,881,269
8	\$0	\$2,183,224	\$0	\$2,183,224
9	\$0	\$2,494,238	\$0	\$2,494,238
10	\$0	\$2,814,583	\$0	\$2,814,583
11	\$3,858,639	\$6,241,256	\$7,015,707	\$9,044,897
12	\$7,892,653	\$9,828,556	\$14,350,277	\$15,567,261
13	\$12,110,012	\$13,583,931	\$22,018,204	\$22,395,216
14	\$16,519,051	\$17,515,171	\$30,034,639	\$29,542,925
15	\$21,128,481	\$21,630,424	\$38,415,420	\$37,025,203
16	\$25,947,409	\$25,938,214	\$47,177,107	\$44,857,549
17	\$30,985,358	\$30,447,457	\$56,337,014	\$53,056,171
18	\$36,252,281	\$35,167,478	\$65,913,238	\$61,638,028
19	\$41,758,586	\$40,108,032	\$75,924,701	\$70,620,854
20	\$47,515,152	\$45,279,323	\$86,391,186	\$80,023,202
21	\$53,533,355	\$50,692,024	\$97,333,372	\$89,864,476
22	\$59,825,084	\$56,357,297	\$108,772,880	\$100,164,973
23	\$66,402,773	\$62,286,820	\$120,732,315	\$110,945,924
24	\$73,279,418	\$68,492,805	\$133,235,305	\$122,229,533
25	\$80,468,606	\$74,988,027	\$146,306,557	\$134,039,026
26	\$87,984,543	\$81,785,845	\$159,971,896	\$146,398,697
27	\$95,842,079	\$88,900,236	\$174,258,326	\$159,333,953
28	\$104,056,740	\$96,345,816	\$189,194,074	\$172,871,370
29	\$112,644,758	\$104,137,872	\$204,808,651	\$187,038,745
30	\$121,623,101	\$112,292,394	\$221,132,911	\$201,865,149

Limit 5 yrs				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$2,126,047	\$0	\$3,865,540
7	\$0	\$4,332,538	\$0	\$6,137,849
8	\$0	\$6,622,518	\$0	\$8,496,137
9	\$0	\$8,999,144	\$0	\$10,943,657
10	\$0	\$11,465,696	\$0	\$13,483,784
11	\$3,858,639	\$14,025,577	\$7,015,707	\$18,138,112
12	\$7,892,653	\$16,682,316	\$14,350,277	\$22,968,548
13	\$12,110,012	\$19,439,580	\$22,018,204	\$27,981,755
14	\$16,519,051	\$22,301,172	\$30,034,639	\$33,184,650
15	\$21,128,481	\$25,271,040	\$38,415,420	\$38,584,409
16	\$25,947,409	\$28,353,280	\$47,177,107	\$44,188,482
17	\$30,985,358	\$31,552,144	\$56,337,014	\$50,004,599
18	\$36,252,281	\$34,872,045	\$65,913,238	\$56,040,783
19	\$41,758,586	\$38,317,563	\$75,924,701	\$62,305,361
20	\$47,515,152	\$41,893,451	\$86,391,186	\$68,806,975
21	\$53,533,355	\$45,604,642	\$97,333,372	\$75,554,594
22	\$59,825,084	\$49,456,254	\$108,772,880	\$82,557,526
23	\$66,402,773	\$53,453,602	\$120,732,315	\$89,825,432
24	\$73,279,418	\$57,602,200	\$133,235,305	\$97,368,336
25	\$80,468,606	\$61,907,770	\$146,306,557	\$105,196,646
26	\$87,984,543	\$66,376,252	\$159,971,896	\$113,321,159
27	\$95,842,079	\$71,013,811	\$174,258,326	\$121,753,084
28	\$104,056,740	\$75,826,843	\$189,194,074	\$130,504,051
29	\$112,644,758	\$80,821,988	\$204,808,651	\$139,586,133
30	\$121,623,101	\$86,006,137	\$221,132,911	\$149,011,858

Cap at Purchase				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$88,968	\$0	\$161,759
3	\$0	\$270,946	\$0	\$419,838
4	\$0	\$550,163	\$0	\$778,614
5	\$0	\$931,039	\$0	\$1,242,664
6	\$0	\$1,418,192	\$0	\$1,816,772
7	\$0	\$2,016,454	\$0	\$2,505,942
8	\$0	\$2,730,875	\$0	\$3,315,401
9	\$0	\$3,566,734	\$0	\$4,250,618
10	\$0	\$4,529,550	\$0	\$5,317,309
11	\$3,858,639	\$7,582,576	\$7,015,707	\$10,868,265
12	\$7,892,653	\$10,774,362	\$14,350,277	\$16,671,512
13	\$12,110,012	\$14,111,214	\$22,018,204	\$22,738,517
14	\$16,519,051	\$17,599,727	\$30,034,639	\$29,081,267
15	\$21,128,481	\$21,246,792	\$38,415,420	\$35,712,295
16	\$25,947,409	\$25,059,617	\$47,177,107	\$42,644,703
17	\$30,985,358	\$29,045,734	\$56,337,014	\$49,892,189
18	\$36,252,281	\$33,213,021	\$65,913,238	\$57,469,073
19	\$41,758,586	\$37,569,710	\$75,924,701	\$65,390,327
20	\$47,515,152	\$42,124,411	\$86,391,186	\$73,671,602
21	\$53,533,355	\$46,886,124	\$97,333,372	\$82,329,261
22	\$59,825,084	\$51,864,256	\$108,772,880	\$91,380,410
23	\$66,402,773	\$57,068,644	\$120,732,315	\$100,842,934
24	\$73,279,418	\$62,509,572	\$133,235,305	\$110,735,530
25	\$80,468,606	\$68,197,790	\$146,306,557	\$121,077,744
26	\$87,984,543	\$74,144,537	\$159,971,896	\$131,890,012
27	\$95,842,079	\$80,361,564	\$174,258,326	\$143,193,698
28	\$104,056,740	\$86,861,155	\$189,194,074	\$155,011,135
29	\$112,644,758	\$93,656,152	\$204,808,651	\$167,365,676
30	\$121,623,101	\$100,759,982	\$221,132,911	\$180,281,730

Cap at \$500k				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$469,789	\$0	\$469,789
2	\$0	\$953,672	\$0	\$953,672
3	\$0	\$1,452,071	\$0	\$1,452,071
4	\$0	\$1,965,422	\$0	\$1,965,422
5	\$0	\$2,494,174	\$0	\$2,494,174
6	\$0	\$3,038,788	\$0	\$3,038,788
7	\$0	\$3,599,741	\$0	\$3,599,741
8	\$0	\$4,177,522	\$0	\$4,177,522
9	\$0	\$4,772,637	\$0	\$4,772,637
10	\$0	\$5,385,605	\$0	\$5,385,605
11	\$3,858,639	\$8,746,166	\$7,015,707	\$11,495,716
12	\$7,892,653	\$12,265,968	\$14,350,277	\$17,895,355
13	\$12,110,012	\$15,952,442	\$22,018,204	\$24,598,037
14	\$16,519,051	\$19,813,366	\$30,034,639	\$31,617,899
15	\$21,128,481	\$23,856,875	\$38,415,420	\$38,969,733
16	\$25,947,409	\$28,091,481	\$47,177,107	\$46,669,016
17	\$30,985,358	\$32,526,088	\$56,337,014	\$54,731,938
18	\$36,252,281	\$37,170,013	\$65,913,238	\$63,175,438
19	\$41,758,586	\$42,033,002	\$75,924,701	\$72,017,237
20	\$47,515,152	\$47,125,252	\$86,391,186	\$81,275,873
21	\$53,533,355	\$52,457,430	\$97,333,372	\$90,970,741
22	\$59,825,084	\$58,040,694	\$108,772,880	\$101,122,131
23	\$66,402,773	\$63,886,720	\$120,732,315	\$111,751,268
24	\$73,279,418	\$70,007,719	\$133,235,305	\$122,880,357
25	\$80,468,606	\$76,416,467	\$146,306,557	\$134,532,627
26	\$87,984,543	\$83,126,329	\$159,971,896	\$146,732,376
27	\$95,842,079	\$90,151,286	\$174,258,326	\$159,505,025
28	\$104,056,740	\$97,505,963	\$189,194,074	\$172,877,164
29	\$112,644,758	\$105,205,658	\$204,808,651	\$186,876,610
30	\$121,623,101	\$113,266,375	\$221,132,911	\$201,532,459

Appendix 1 Background Tables (Includes Construction Tax Impact Estimate)⁵⁶

Status Quo				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$0	\$0	\$0
7	\$0	\$0	\$0	\$0
8	\$0	\$0	\$0	\$0
9	\$0	\$0	\$0	\$0
10	\$0	\$0	\$0	\$0
11	\$3,858,639	\$3,588,534	\$7,015,707	\$6,524,607
12	\$7,892,653	\$7,340,167	\$14,350,277	\$13,345,758
13	\$12,110,012	\$11,262,312	\$22,018,204	\$20,476,930
14	\$16,519,051	\$15,362,718	\$30,034,639	\$27,932,214
15	\$21,128,481	\$19,649,487	\$38,415,420	\$35,726,340
16	\$25,947,409	\$24,131,090	\$47,177,107	\$43,874,710
17	\$30,985,358	\$28,816,382	\$56,337,014	\$52,393,423
18	\$36,252,281	\$33,714,621	\$65,913,238	\$61,299,311
19	\$41,758,586	\$38,835,485	\$75,924,701	\$70,609,972
20	\$47,515,152	\$44,189,091	\$86,391,186	\$80,343,803
21	\$53,533,355	\$49,786,020	\$97,333,372	\$90,520,036
22	\$59,825,084	\$55,637,328	\$108,772,880	\$101,158,779
23	\$66,402,773	\$61,754,579	\$120,732,315	\$112,281,052
24	\$73,279,418	\$68,149,859	\$133,235,305	\$123,908,834
25	\$80,468,606	\$74,835,804	\$146,306,557	\$136,065,097
26	\$87,984,543	\$81,825,625	\$159,971,896	\$148,773,863
27	\$95,842,079	\$89,133,134	\$174,258,326	\$162,060,243
28	\$104,056,740	\$96,772,769	\$189,194,074	\$175,950,488
29	\$112,644,758	\$104,759,625	\$204,808,651	\$190,472,045
30	\$121,623,101	\$113,109,484	\$221,132,911	\$205,653,607

⁵⁶ Status quo refers to the case where there is no change to the abatement and no construction tax.

Eliminate School Portion				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$1,675,309	\$0	\$1,675,309
2	\$0	\$3,418,259	\$0	\$3,418,259
3	\$0	\$5,231,581	\$0	\$5,231,581
4	\$0	\$7,118,115	\$0	\$7,118,115
5	\$0	\$9,080,818	\$0	\$9,080,818
6	\$0	\$11,122,766	\$0	\$11,122,766
7	\$0	\$13,247,157	\$0	\$13,247,157
8	\$0	\$15,457,320	\$0	\$15,457,320
9	\$0	\$17,756,718	\$0	\$17,756,718
10	\$0	\$20,148,955	\$0	\$20,148,955
11	\$3,858,639	\$22,637,779	\$7,015,707	\$24,674,089
12	\$7,892,653	\$25,227,088	\$14,350,277	\$29,381,924
13	\$12,110,012	\$27,920,941	\$22,018,204	\$34,279,839
14	\$16,519,051	\$30,723,559	\$30,034,639	\$39,375,507
15	\$21,128,481	\$33,639,332	\$38,415,420	\$44,676,912
16	\$25,947,409	\$36,672,829	\$47,177,107	\$50,192,362
17	\$30,985,358	\$39,828,804	\$56,337,014	\$55,930,498
18	\$36,252,281	\$43,112,201	\$65,913,238	\$61,900,311
19	\$41,758,586	\$46,528,165	\$75,924,701	\$68,111,155
20	\$47,515,152	\$50,082,049	\$86,391,186	\$74,572,762
21	\$53,533,355	\$53,779,421	\$97,333,372	\$81,295,257
22	\$59,825,084	\$57,626,075	\$108,772,880	\$88,289,172
23	\$66,402,773	\$61,628,037	\$120,732,315	\$95,565,467
24	\$73,279,418	\$65,791,578	\$133,235,305	\$103,135,542
25	\$80,468,606	\$70,123,222	\$146,306,557	\$111,011,259
26	\$87,984,543	\$74,629,757	\$159,971,896	\$119,204,958
27	\$95,842,079	\$79,318,242	\$174,258,326	\$127,729,477
28	\$104,056,740	\$84,196,026	\$189,194,074	\$136,598,174
29	\$112,644,758	\$89,270,750	\$204,808,651	\$145,824,945
30	\$121,623,101	\$94,550,365	\$221,132,911	\$155,424,247

Phase out after 5 years				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$464,212	\$0	\$844,022
7	\$0	\$1,434,833	\$0	\$2,228,978
8	\$0	\$2,956,937	\$0	\$4,202,294
9	\$0	\$5,078,648	\$0	\$6,814,593
10	\$0	\$7,851,326	\$0	\$10,119,881
11	\$3,858,639	\$10,750,023	\$7,015,707	\$15,390,239
12	\$7,892,653	\$13,780,465	\$14,350,277	\$20,900,135
13	\$12,110,012	\$16,948,642	\$22,018,204	\$26,660,455
14	\$16,519,051	\$20,260,811	\$30,034,639	\$32,682,581
15	\$21,128,481	\$23,723,519	\$38,415,420	\$38,978,414
16	\$25,947,409	\$27,343,607	\$47,177,107	\$45,560,392
17	\$30,985,358	\$31,128,228	\$56,337,014	\$52,441,521
18	\$36,252,281	\$35,084,860	\$65,913,238	\$59,635,397
19	\$41,758,586	\$39,221,321	\$75,924,701	\$67,156,235
20	\$47,515,152	\$43,545,784	\$86,391,186	\$75,018,895
21	\$53,533,355	\$48,066,793	\$97,333,372	\$83,238,912
22	\$59,825,084	\$52,793,283	\$108,772,880	\$91,832,530
23	\$66,402,773	\$57,734,592	\$120,732,315	\$100,816,728
24	\$73,279,418	\$62,900,483	\$133,235,305	\$110,209,257
25	\$80,468,606	\$68,301,164	\$146,306,557	\$120,028,677
26	\$87,984,543	\$73,947,306	\$159,971,896	\$130,294,389
27	\$95,842,079	\$79,850,064	\$174,258,326	\$141,026,678
28	\$104,056,740	\$86,021,104	\$189,194,074	\$152,246,750
29	\$112,644,758	\$92,472,617	\$204,808,651	\$163,976,774
30	\$121,623,101	\$99,217,351	\$221,132,911	\$176,239,927

Eliminate completely				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$1,439,534	\$0	\$2,617,335
2	\$0	\$2,922,578	\$0	\$4,135,977
3	\$0	\$4,450,447	\$0	\$5,700,521
4	\$0	\$6,024,496	\$0	\$7,312,354
5	\$0	\$7,646,120	\$0	\$8,972,904
6	\$0	\$9,316,758	\$0	\$10,683,644
7	\$0	\$11,037,891	\$0	\$12,446,091
8	\$0	\$12,811,045	\$0	\$14,261,808
9	\$0	\$14,637,793	\$0	\$16,132,405
10	\$0	\$16,519,754	\$0	\$18,059,541
11	\$3,858,639	\$18,458,598	\$7,015,707	\$21,584,711
12	\$7,892,653	\$20,456,043	\$14,350,277	\$25,216,429
13	\$12,110,012	\$22,513,861	\$22,018,204	\$28,957,916
14	\$16,519,051	\$24,633,876	\$30,034,639	\$32,812,490
15	\$21,128,481	\$26,817,969	\$38,415,420	\$36,783,568
16	\$25,947,409	\$29,068,076	\$47,177,107	\$40,874,672
17	\$30,985,358	\$31,386,193	\$56,337,014	\$45,089,429
18	\$36,252,281	\$33,774,375	\$65,913,238	\$49,431,578
19	\$41,758,586	\$36,234,739	\$75,924,701	\$53,904,968
20	\$47,515,152	\$38,769,468	\$86,391,186	\$58,513,566
21	\$53,533,355	\$41,380,809	\$97,333,372	\$63,261,459
22	\$59,825,084	\$44,071,078	\$108,772,880	\$68,152,857
23	\$66,402,773	\$46,842,660	\$120,732,315	\$73,192,097
24	\$73,279,418	\$49,698,014	\$133,235,305	\$78,383,649
25	\$80,468,606	\$52,639,670	\$146,306,557	\$83,732,115
26	\$87,984,543	\$55,670,238	\$159,971,896	\$89,242,239
27	\$95,842,079	\$58,792,405	\$174,258,326	\$94,918,906
28	\$104,056,740	\$62,008,940	\$189,194,074	\$100,767,151
29	\$112,644,758	\$65,322,694	\$204,808,651	\$106,792,158
30	\$121,623,101	\$68,736,606	\$221,132,911	\$112,999,272

Phase out @ Yr.8 25%/50%/75%				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$0	\$0	\$0
7	\$0	\$0	\$0	\$0
8	\$0	\$656,020	\$0	\$1,192,764
9	\$0	\$2,027,693	\$0	\$3,149,971
10	\$0	\$4,178,717	\$0	\$5,938,645
11	\$3,858,639	\$7,177,100	\$7,015,707	\$11,390,250
12	\$7,892,653	\$10,311,759	\$14,350,277	\$17,089,631
13	\$12,110,012	\$13,588,889	\$22,018,204	\$23,048,049
14	\$16,519,051	\$17,014,964	\$30,034,639	\$29,277,277
15	\$21,128,481	\$20,596,755	\$38,415,420	\$35,789,623
16	\$25,947,409	\$24,341,338	\$47,177,107	\$42,597,955
17	\$30,985,358	\$28,256,112	\$56,337,014	\$49,715,727
18	\$36,252,281	\$32,348,812	\$65,913,238	\$57,157,000
19	\$41,758,586	\$36,627,526	\$75,924,701	\$64,936,480
20	\$47,515,152	\$41,100,708	\$86,391,186	\$73,069,537
21	\$53,533,355	\$45,777,195	\$97,333,372	\$81,572,242
22	\$59,825,084	\$50,666,229	\$108,772,880	\$90,461,394
23	\$66,402,773	\$55,777,469	\$120,732,315	\$99,754,559
24	\$73,279,418	\$61,121,016	\$133,235,305	\$109,470,097
25	\$80,468,606	\$66,707,426	\$146,306,557	\$119,627,207
26	\$87,984,543	\$72,547,739	\$159,971,896	\$130,245,958
27	\$95,842,079	\$78,653,494	\$174,258,326	\$141,347,331
28	\$104,056,740	\$85,036,756	\$189,194,074	\$152,953,261
29	\$112,644,758	\$91,710,137	\$204,808,651	\$165,086,681
30	\$121,623,101	\$98,686,823	\$221,132,911	\$177,771,565

Graduated Reduction				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$182,372	\$0	\$331,585
3	\$0	\$563,693	\$0	\$875,682
4	\$0	\$1,161,670	\$0	\$1,650,925
5	\$0	\$1,995,212	\$0	\$2,677,200
6	\$0	\$3,084,494	\$0	\$3,975,725
7	\$0	\$4,451,042	\$0	\$5,569,127
8	\$0	\$6,117,810	\$0	\$7,481,528
9	\$0	\$8,109,263	\$0	\$9,738,635
10	\$0	\$10,451,474	\$0	\$12,367,829
11	\$3,858,639	\$13,172,213	\$7,015,707	\$17,314,625
12	\$7,892,653	\$16,016,608	\$14,350,277	\$22,486,254
13	\$12,110,012	\$18,990,282	\$22,018,204	\$27,892,933
14	\$16,519,051	\$22,099,109	\$30,034,639	\$33,545,346
15	\$21,128,481	\$25,349,232	\$38,415,420	\$39,454,661
16	\$25,947,409	\$28,747,074	\$47,177,107	\$45,632,555
17	\$30,985,358	\$32,299,347	\$56,337,014	\$52,091,233
18	\$36,252,281	\$36,013,071	\$65,913,238	\$58,843,459
19	\$41,758,586	\$39,895,584	\$75,924,701	\$65,902,573
20	\$47,515,152	\$43,954,557	\$86,391,186	\$73,282,524
21	\$53,533,355	\$48,198,010	\$97,333,372	\$80,997,893
22	\$59,825,084	\$52,634,328	\$108,772,880	\$89,063,927
23	\$66,402,773	\$57,272,277	\$120,732,315	\$97,496,561
24	\$73,279,418	\$62,121,021	\$133,235,305	\$106,312,459
25	\$80,468,606	\$67,190,140	\$146,306,557	\$115,529,039
26	\$87,984,543	\$72,489,651	\$159,971,896	\$125,164,513
27	\$95,842,079	\$78,030,024	\$174,258,326	\$135,237,919
28	\$104,056,740	\$83,822,207	\$189,194,074	\$145,769,161
29	\$112,644,758	\$89,877,645	\$204,808,651	\$156,779,049
30	\$121,623,101	\$96,208,303	\$221,132,911	\$168,289,335

Cap @ \$150psf				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$240,455	\$0	\$240,455
2	\$0	\$488,124	\$0	\$488,124
3	\$0	\$743,223	\$0	\$743,223
4	\$0	\$1,005,975	\$0	\$1,005,975
5	\$0	\$1,276,610	\$0	\$1,276,610
6	\$0	\$1,555,363	\$0	\$1,555,363
7	\$0	\$1,842,480	\$0	\$1,842,480
8	\$0	\$2,138,209	\$0	\$2,138,209
9	\$0	\$2,442,811	\$0	\$2,442,811
10	\$0	\$2,756,550	\$0	\$2,756,550
11	\$3,858,639	\$6,112,570	\$7,015,707	\$8,858,404
12	\$7,892,653	\$9,625,905	\$14,350,277	\$15,246,287
13	\$12,110,012	\$13,303,850	\$22,018,204	\$21,933,459
14	\$16,519,051	\$17,154,034	\$30,034,639	\$28,933,793
15	\$21,128,481	\$21,184,436	\$38,415,420	\$36,261,797
16	\$25,947,409	\$25,403,406	\$47,177,107	\$43,932,651
17	\$30,985,358	\$29,819,674	\$56,337,014	\$51,962,230
18	\$36,252,281	\$34,442,375	\$65,913,238	\$60,367,141
19	\$41,758,586	\$39,281,062	\$75,924,701	\$69,164,754
20	\$47,515,152	\$44,345,729	\$86,391,186	\$78,373,239
21	\$53,533,355	\$49,646,828	\$97,333,372	\$88,011,600
22	\$59,825,084	\$55,195,291	\$108,772,880	\$98,099,716
23	\$66,402,773	\$61,002,556	\$120,732,315	\$108,658,379
24	\$73,279,418	\$67,080,582	\$133,235,305	\$119,709,336
25	\$80,468,606	\$73,441,882	\$146,306,557	\$131,275,335
26	\$87,984,543	\$80,099,539	\$159,971,896	\$143,380,167
27	\$95,842,079	\$87,067,242	\$174,258,326	\$156,048,717
28	\$104,056,740	\$94,359,304	\$189,194,074	\$169,307,012
29	\$112,644,758	\$101,990,699	\$204,808,651	\$183,182,276
30	\$121,623,101	\$109,977,087	\$221,132,911	\$197,702,981

Limit 5 yrs				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
3	\$0	\$0	\$0	\$0
4	\$0	\$0	\$0	\$0
5	\$0	\$0	\$0	\$0
6	\$0	\$2,100,395	\$0	\$3,818,899
7	\$0	\$4,280,263	\$0	\$6,063,791
8	\$0	\$6,542,612	\$0	\$8,393,625
9	\$0	\$8,890,562	\$0	\$10,811,613
10	\$0	\$11,327,354	\$0	\$13,321,092
11	\$3,858,639	\$13,856,347	\$7,015,707	\$17,919,262
12	\$7,892,653	\$16,481,031	\$14,350,277	\$22,691,414
13	\$12,110,012	\$19,205,027	\$22,018,204	\$27,644,134
14	\$16,519,051	\$22,032,091	\$30,034,639	\$32,784,251
15	\$21,128,481	\$24,966,125	\$38,415,420	\$38,118,858
16	\$25,947,409	\$28,011,176	\$47,177,107	\$43,655,314
17	\$30,985,358	\$31,171,443	\$56,337,014	\$49,401,254
18	\$36,252,281	\$34,451,287	\$65,913,238	\$55,364,607
19	\$41,758,586	\$37,855,232	\$75,924,701	\$61,553,598
20	\$47,515,152	\$41,387,974	\$86,391,186	\$67,976,765
21	\$53,533,355	\$45,054,386	\$97,333,372	\$74,642,969
22	\$59,825,084	\$48,859,526	\$108,772,880	\$81,561,405
23	\$66,402,773	\$52,808,643	\$120,732,315	\$88,741,618
24	\$73,279,418	\$56,907,184	\$133,235,305	\$96,193,511
25	\$80,468,606	\$61,160,805	\$146,306,557	\$103,927,366
26	\$87,984,543	\$65,575,371	\$159,971,896	\$111,953,851
27	\$95,842,079	\$70,156,974	\$174,258,326	\$120,284,038
28	\$104,056,740	\$74,911,933	\$189,194,074	\$128,929,418
29	\$112,644,758	\$79,846,808	\$204,808,651	\$137,901,917
30	\$121,623,101	\$84,968,406	\$221,132,911	\$147,213,914

Cap at \$500k					
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)	
1	\$0	\$464,995	\$0	\$464,995	
2	\$0	\$943,940	\$0	\$943,940	
3	\$0	\$1,437,254	\$0	\$1,437,254	
4	\$0	\$1,945,367	\$0	\$1,945,367	
5	\$0	\$2,468,723	\$0	\$2,468,723	
6	\$0	\$3,007,780	\$0	\$3,007,780	
7	\$0	\$3,563,009	\$0	\$3,563,009	
8	\$0	\$4,134,894	\$0	\$4,134,894	
9	\$0	\$4,723,936	\$0	\$4,723,936	
10	\$0	\$5,330,650	\$0	\$5,330,650	
11	\$3,858,639	\$8,656,919	\$7,015,707	\$11,378,413	
12	\$7,892,653	\$12,140,805	\$14,350,277	\$17,712,750	
13	\$12,110,012	\$15,789,662	\$22,018,204	\$24,347,036	
14	\$16,519,051	\$19,611,189	\$30,034,639	\$31,295,267	
15	\$21,128,481	\$23,613,438	\$38,415,420	\$38,572,083	
16	\$25,947,409	\$27,804,833	\$47,177,107	\$46,192,802	
17	\$30,985,358	\$32,194,189	\$56,337,014	\$54,173,449	
18	\$36,252,281	\$36,790,727	\$65,913,238	\$62,530,791	
19	\$41,758,586	\$41,604,094	\$75,924,701	\$71,282,367	
20	\$47,515,152	\$46,644,382	\$86,391,186	\$80,446,527	
21	\$53,533,355	\$51,922,150	\$97,333,372	\$90,042,468	
22	\$59,825,084	\$57,448,442	\$108,772,880	\$100,090,272	
23	\$66,402,773	\$63,234,814	\$120,732,315	\$110,610,949	
24	\$73,279,418	\$69,293,354	\$133,235,305	\$121,626,476	
25	\$80,468,606	\$75,636,707	\$146,306,557	\$133,159,845	
26	\$87,984,543	\$82,278,101	\$159,971,896	\$145,235,107	
27	\$95,842,079	\$89,231,375	\$174,258,326	\$157,877,423	
28	\$104,056,740	\$96,511,004	\$189,194,074	\$171,113,112	
29	\$112,644,758	\$104,132,130	\$204,808,651	\$184,969,706	
30	\$121,623,101	\$112,110,595	\$221,132,911	\$199,476,005	

Cap at Purchase				
Year	Total Tax Income Status Quo (School)	Total Tax Income Proforma(School)	Total Tax Income Status Quo (City)	Total Tax Income Proforma(City)
1	\$0	\$0	\$0	\$0
2	\$0	\$88,968	\$0	\$161,759
3	\$0	\$270,946	\$0	\$419,838
4	\$0	\$550,163	\$0	\$778,614
5	\$0	\$931,039	\$0	\$1,242,664
6	\$0	\$1,418,192	\$0	\$1,816,772
7	\$0	\$2,016,454	\$0	\$2,505,942
8	\$0	\$2,730,875	\$0	\$3,315,401
9	\$0	\$3,566,734	\$0	\$4,250,618
10	\$0	\$4,529,550	\$0	\$5,317,309
11	\$3,858,639	\$7,582,576	\$7,015,707	\$10,868,265
12	\$7,892,653	\$10,774,362	\$14,350,277	\$16,671,512
13	\$12,110,012	\$14,111,214	\$22,018,204	\$22,738,517
14	\$16,519,051	\$17,599,727	\$30,034,639	\$29,081,267
15	\$21,128,481	\$21,246,792	\$38,415,420	\$35,712,295
16	\$25,947,409	\$25,059,617	\$47,177,107	\$42,644,703
17	\$30,985,358	\$29,045,734	\$56,337,014	\$49,892,189
18	\$36,252,281	\$33,213,021	\$65,913,238	\$57,469,073
19	\$41,758,586	\$37,569,710	\$75,924,701	\$65,390,327
20	\$47,515,152	\$42,124,411	\$86,391,186	\$73,671,602
21	\$53,533,355	\$46,886,124	\$97,333,372	\$82,329,261
22	\$59,825,084	\$51,864,256	\$108,772,880	\$91,380,410
23	\$66,402,773	\$57,068,644	\$120,732,315	\$100,842,934
24	\$73,279,418	\$62,509,572	\$133,235,305	\$110,735,530
25	\$80,468,606	\$68,197,790	\$146,306,557	\$121,077,744
26	\$87,984,543	\$74,144,537	\$159,971,896	\$131,890,012
27	\$95,842,079	\$80,361,564	\$174,258,326	\$143,193,698
28	\$104,056,740	\$86,861,155	\$189,194,074	\$155,011,135
29	\$112,644,758	\$93,656,152	\$204,808,651	\$167,365,676
30	\$121,623,101	\$100,759,982	\$221,132,911	\$180,281,730

Appendix 2

[Rehab Construction for Residential Properties \(Ordinance 961\)](#) — A ten-year abatement from Real Estate Taxes on improvements to existing residential properties containing one or more units. (Ordinary upkeep and maintenance are not improvements). Available for single family homes, duplexes, apartments, and condos. Not available for hotels.

[Development Abatement for New or Improved Residential Properties \(State Act 175\)](#) — An abatement (for up to 30 months) from Real Estate Taxes during new construction of single and multiple dwellings constructed for residential purposes or improvements to existing unoccupied residential dwellings or improvements to existing structures for purposes of conversion to residential dwellings.

[Rehab & New Construction for Commercial & Industrial Properties \(Ordinance 1130\)](#) — A ten-year abatement from Real Estate Taxes on new construction or improvements to deteriorated industrial, commercial or other business properties. (Ordinary upkeep and maintenance are not considered improvements.) Not intended for residential properties.

[New Construction for Residential Properties \(Ordinance 1456-A\)](#) — A ten-year abatement from Real Estate Taxes for new construction of residential properties. Available for single-family homes, duplexes, apartments, and condos. Not available for hotels.