

PROPERTY TAX WORKING GROUP

Protecting homeowners, strengthening neighborhoods.

FOCUSED RECOMMENDATION GROUP #3

Group 3: Residential Tax Abatement Policy Review

PROPERTY TAX WORKING GROUP

Protecting homeowners, strengthening neighborhoods.

Focused Recommendation Group Guidance for Leads

ROLES + RESPONSIBILITIES

- Attend December 19th Property Tax Working Group meeting
- Facilitate conversation in Focused Recommendation Group (each group will be in a separate room)
 - Let Samantha know what materials you will need (flip chart, projector, laptop, markers, etc.)
- Conduct research as needed
- Present group's recommendation/progress at January's Property Tax Working Group meeting
 - Short presentation (15 minutes) followed by Q and A
 - Provide text to Samantha in advance (bullet points okay!)

PROMPTS

Group 1: Desired Property Tax Policy for Seniors and Living with Disabilities/Special Needs (Lead: Heather Sturgill)

- What is the property tax relief program?
 - Completely frozen?
 - Pay only a certain percentage?
 - Other?
- What are the eligibility criteria for gaining the property tax relief?
 - Income?
 - Tenure in residence?
 - Age?
 - Other?
- What impacts will this proposed policy have – both positive and negative?

Group 2: Support for Low/Limited Income Residents (Lead: Rick Williams)

- Address existing challenges that put low or limited income residents at risk of being displaced from their homes
 - What barriers exist?
 - What is the effect of development or redevelopment?
 - Etc.
- What resources exist already for this population?
- What resources could be created (financial tools, etc.)?

Group 3: Residential Tax Abatement Policy Review (Leads: Carol Gibbs and Dan Bower)

- Dissect the current City of Cincinnati Residential CRA policy.
- Look at other Ohio cities' tax abatement policies
- What parameters should be added to the current policy?

RESOURCES

- Links to online resources (provided via email)
- Packet with resources
- Survey responses that are related to Focused Recommendation Group topic

PROPERTY TAX WORKING GROUP

Protecting homeowners, strengthening neighborhoods.

Focused Recommendation Group Resources Group 3: Residential Tax Abatement Policy Review

ONLY DIGITAL

- [Cincy Insights Residential Tax Abatements](#)
- [Community Reinvestment Area Reauthorization - Budget and Finance Committee Meeting Video](#)
- [Hamilton County Auditor Data - Exempt, TIF, and Abated Properties - Raw](#)
- [Hamilton County Auditor Data - Exempt, TIF, and Abated Properties - City Single Family Residential](#)
- [Community-Wide Housing Strategy Preliminary Recommendations Presentation \(PennPraxis/LISC of Greater Cincinnati\)](#)
- [Community-Wide Housing Strategy Research Update Presentation \(PennPraxis/LISC of Greater Cincinnati\)](#)
- [Community-Wide Housing Strategy Website](#)

DIGITAL + HARD COPY

HOUSING + DEVELOPMENT

1. [Do Policy Incentives Promote Green Building?](#)
2. [Green Building Economic Impact Study](#)

SHORT TERM RENTALS

3. [When Airbnb Listings in a City Increase, So Do Rent Prices](#)

TAX ABATEMENTS

4. [Cincy Insights Residential Tax Abatement One-Pager](#)
5. [Cleveland Selects Experts to Help Overhaul of Tax Abatement Policy, Incentives for Developers](#)
6. [Community Reinvestment Area Reauthorization - 2017 Emergency Ordinance](#)
7. [Economic and Fiscal Impacts of Property Tax Abatement in a Large County](#)
8. [Tax Abatement Law FAQs](#)

SURVEY RESPONSES TO REVIEW

9. [1ST Survey](#)
 - Tell us about your experiences with property taxes in your neighborhood. (p. 1)
 - Do you have any ideas on how to ensure that property owners, specifically legacy residents and senior citizens on fixed incomes, have a greater opportunity to remain in their homes? (p. 20)
 - What do you want to learn more about regarding property taxes? (p. 47)
10. [2nd Survey](#)
 - How do you think tax abatements have affected your neighborhood? (p. 26)

Do Policy Incentives Promote Green Building?

Shaun A. Bond and Avis Devine
Department of Finance and Real Estate
University of Cincinnati

January 2014

(Draft in progress – do not cite without the permission of the authors)

Abstract:

For more than a decade, governments have been incentivizing, and now requiring, private developers to construct energy efficient, sustainable projects. We examine the types of incentive programs governing single family market-rate residential construction and determine whether or not these programs have successfully encouraged energy efficient construction. A cross-sectional comparison of municipalities with and without green private residential incentive programs indicates which type of certification program is most popular, which types of incentive programs prove most successful, and which government levels of policy issuance prove most effective.

Key words: Energy Efficiency, Sustainability, Policy, Residential

JEL Codes: R11, R52, R58, E61

Since 1999, several municipalities, counties, and states have enacted policies which incentivize energy efficient or sustainable construction on private construction projects using the LEED, Energy Star, or other green-rating programs as a guideline. Examples of policy incentive tools which can shape supply and design are tax abatement, density bonuses, grant or loan programs, expedited permitting, and permitting/zoning fee reductions or feebate (the rebating of fees) programs. Additionally, several governing bodies have gone beyond incentivizing sustainable development, now requiring some level of sustainability in all new construction.

The intention behind such policies is to encourage green construction. In the United States, buildings are the largest energy-using sector, consuming 41 percent of all energy (followed by industrial activities and transportation at 30 percent and 29 percent, respectively)¹ and 73 percent of electricity.² Additionally, the construction process in the United States accounts for 38 percent of all CO₂ gas emissions³ and is one of the heaviest users of natural resources, consuming 40 percent of the world's natural resources.⁴ Energy efficient buildings consume fewer natural resources (and create less waste), use less power, and put off fewer emissions. Given the significant role of buildings in resource and waste management for the world, governing bodies have begun to encourage or require more energy efficient and sustainable construction by enacting policy.

Through year-end 2009, 65 energy efficiency policies were enacted by state, county, and municipal bodies in the United States governing private residential (both multifamily and single family) construction and governed by the United States Green Building Council's (USGBC) Leadership in Energy and

¹ National Trust for Historic Preservation (2011). *The Greenest Building: Quantifying the Environmental Value of Building Reuse*, Accessed Jan. 26, 2012 via <http://www.preservationnation.org/issues/sustainability/green-lab/usefulfacts-about-greenest-buildings.html>

² Department of Energy (2011). *Buildings Energy Data Book. Buildings Share of Electricity Consumption/Sales*. Accessed October 26, 2011 via http://buildingsdatabook.eren.doe.gov/docs/xls_pdf/6.1.1.pdf

³ Energy Information Administration (2008). *Assumptions to the Annual Energy Outlook*.

⁴ Lenssen and Roodman (1995). *Worldwatch Paper 124: A Building Revolution: How Ecology and Health Concerns are Transforming Construction*. Worldwatch Institute.

Environmental Design (LEED) rating program.⁵ Additionally, there is one private residential construction policy tied solely to the Environmental Protection Agency's (EPA) Energy Star program, and there may be other programs linked exclusively to other green building programs such as Green Globes, Earthcraft, etc.⁶ While many of the LEED-related policies allow for other rating programs such as these to be used in place of LEED, few exclude LEED from the list of accepted rating systems. This indicates LEED's status as the energy efficiency benchmark of choice for government single family construction incentive programs.

Focusing on these areas in which environmentally efficient residential construction has been encouraged, we look to see if there has been an increase in the number of LEED homes built. Using a variety of econometric modeling techniques, we compare these areas cross-sectionally with other markets that have not provided green incentive programs to measure the effect of the policies, while controlling for economic and demographic drivers of construction. Through this, we examine the effectiveness of the different policy categories and of different governing bodies' policy issuances and find drastic differences in their success rates. Municipalities have the greatest success with incentive policies, followed closely by state-level policies, while county-level policies prove less effective. Additionally, incentive categories which have definite economic benefit prove to be more successful in encouraging green construction than their counterparts which may or may not prove economically beneficial. Lastly, we identify which incentive categories have the less consistent track record and postulate what may be driving these results.

⁵ There are also numerous policies governing public construction for both residential and commercial use and private commercial use; this research focuses on private residential uses and their related policies.

⁶ There are several rating systems in the United States, many created by the state or local governments specifically to address their own needs. We focus on the national (or international) programs which government bodies frequently accept in lieu of their own rating systems.

Literature Review

To date there has been little research completed on residential buildings and sustainability, with the majority of the focus placed on commercial buildings, specifically office space. This body of literature provides evidence of rental and sale price premiums and superior occupancy rates associated with green commercial buildings, basing the green definition on the Energy Star, LEED, or other national equivalent labeling systems (Miller, Spivey, and Florance, 2008; Wiley, Benefield, and Johnson, 2010, Eichholtz, Kok, and Quigley 2010, Kok and Jennen, 2011, Kok, McGraw, and Quigley 2011, Ciochetti and McGowan 2010; Fuerst and McAllister 2009, 2011).

A comparatively limited amount of research examines sustainability and residential properties. Aroul and Hansz (2011) examines Frisco, Texas, the nation's first municipality to mandate a sustainable green building program, and Costa and Kahn (2009) focuses on Sacramento, California. Both studies examine house transaction prices and find premiums for green construction. Kok and Kahn (2012) examines single family home sales in California from 2007 through 2012 and finds those with energy efficiency certification transact at a sales premium minimum of nine percent; Deng, Li, and Quigley (2012) finds a similar (albeit smaller magnitude) result in Singapore. Bond and Devine (2013, working paper) measures the rental rate premium associated with multifamily properties identifying themselves as green and as being LEED certified, finding both to be positive and significant, and that the LEED certification premium is greater than the premium associated with uncertified green properties. Brounen and Kok (2011) examines Dutch residences and finds that energy labels create transparency in the energy efficiency of dwellings. The authors also find that the adoption rate of energy labels on housing is positively correlated with the location of Green party voters in the 2006 national election, and that consumers capitalize the energy label information into the pricing of homes.

In peripheral research, Brounen, Kok, and Quigley (2011) examines the extent to which utility usage is determined by technical specifications of a residence as opposed to demographic characteristics of the

residents. Based on a sample of more than 300,000 Dutch residents, gas usage is determined by technology but electricity usage varies more directly with income and family composition. However, Sadler (2003) finds that residents exhibit a strong preference for energy efficient renovations and Kwak, Yoo, and Kwak (2010) finds a high consumer willingness to pay for energy-saving measures in Korean buildings. Additionally, Banfi et al. (2008) shows Swiss residents value energy-saving construction features. In contrast, Brounen, Kok, and Quigley (working paper, 2011) examines awareness and behavior of households regarding their residential energy usage. They find that “energy literacy” is quite low, indicating that while consumers may value energy efficiency in theory, few people would be able to identify such energy efficiency in their own lives.

Additionally, some studies focus on specific energy-saving residential construction features. Cameron (1985) analyzes the impact of energy efficient retrofitting, such as the inclusion of storm windows and insulation, and Dinan and Miranowski (1989) was the first to find that energy efficiency improvements are capitalized into housing transaction prices, with similar results found by Horowitz and Haeri (1990) regarding thermal performance improvements. Bollinger and Gillingham (2010) study the diffusion of solar panels across communities and Dastrup et al. (2010) examines San Diego single-family residential resale transactions involving solar panels and finds a price premium.

There is also a young and growing body of work on governmental policies with environmental requirements. Much of the work to-date is descriptive (McCrudden 2004, Cogburn and Rahm 2005, May and Koski 2007), examining barriers and solutions to government green building procurement policies (Michelson and de Boer 2009, Sourani and Sohail 2011) and the potential impacts of green government policies (Marron 1997 & 2003). One of the first contributions to empirical analysis of these questions is provided by Simcoe and Toffel (2011, working paper), which finds that green government purchasing policies can spill over into the private sector construction, stimulating additional green construction. All of

this work focuses on the effects of government policies regarding government space, whereas our research is among the first to examine the effects of government policies directed at private construction.

Pricing premiums have been verified in both commercial and single family residential sustainable construction in a variety of locations, both within the United States and internationally. Additionally, consumers appear interested in sustainable options in their housing and are willing to pay a reasonable premium (i.e. – a premium which may be offset by the long-term utility savings associated with the investment) for such improvements. Having verified that pricing premiums may be achieved on sustainable construction, government policies implemented to encourage energy efficient construction could sufficiently incentivize developers to pursue sustainable construction. We could find no research completed to-date addressing the success of such programs in encouraging green construction, making our efforts some of the first in this field.

Certification Programs

Green housing generally refers to homes constructed and/or operable in a sustainable manner. These homes incorporate environmental considerations and resource efficiencies into many steps of the building and development process to minimize environmental impact. The design, construction, and operation of a home can focus on energy, water, and resource efficiency, building design and materials, indoor environment quality, and the home's overall impact on the environment. There are two major players in U.S. sustainable certification: the Environmental Protection Agency's (EPA) Energy Star; and, the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED).⁷ While there are several other rating programs available and no evidence to indicate that Energy Star and LEED are better programs than the others, these two programs are the most widely used and accepted in the United States.

⁷ Much of the data are taken from each program's respective website: www.energystar.gov and www.usgbc.org.

Energy Star

The Energy Star program was created in the early 1990s by the United States Environmental Protection Agency (the EPA) in an attempt to reduce energy consumption and greenhouse gas emission by power plants. The program was intended to be part of a series of voluntary programs that would demonstrate the potential for profit in reducing greenhouse gases and facilitate further steps to reducing global warming gases. The initial program was a labeling campaign for computer and printer products, expanded to include labels for residential heating and cooling systems. More than 1.3 million homes have been Energy Star certified since the home labeling program began in 1995.

To earn Energy Star certification, a home must meet guidelines for energy efficiency set by the EPA. These homes are at least fifteen percent more energy efficient than homes built to the 2004 International Residential Code (IRC), and include additional energy-saving features that typically make them 20–30 percent more efficient than standard homes. In addition to the environmental benefits associated with construction and use of an Energy Star home, other benefits include mortgage closing cost credits, specialized mortgage products, and utility firm cost offsets to help encourage Energy Star upgrades. Any home three stories or less can earn the Energy Star label if it has been verified to meet the EPA's guidelines, including both new and existing construction. Energy Star qualified homes can include a variety of energy-efficient features that contribute to improved home quality and homeowner comfort, and to lower energy demand and reduced air pollution. These features include effective insulation, high-performance windows, tight construction and ducts, efficient heating and cooling equipment, equipping the home with Energy Star qualified products, and using Energy Star's third party independent Home Energy Raters to verify successful inclusion of these features.

However, the Energy Star program's rigor has been questioned. In 2008, the EPA Office of the Inspector General released its report on the Energy Star program, finding the program's claims regarding greenhouse gas reductions were inaccurate and based on faulty data. Additionally, the Inspector General found that

Energy Star program's reported energy savings were unreliable, and that many of the touted benefits could not be verified.⁸ The EPA released reports in 2007 and 2008 claiming Energy Star labels were misleading.⁹ In March 2010, a report by the Government Accountability Office stated that the Energy Star program had accepted fifteen of 20 bogus products submitted for approval. The Energy Star program had also qualified four businesses as Energy Star partners, failing to identify the fact that information on the companies, products, and staff were all fictitious.¹⁰

LEED

Developed by the U.S. Green Building Council (USGBC) in 1998, Leadership in Energy and Environmental Design (LEED) is intended to provide building owners and operators with a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. LEED is a transparent process where the technical criteria proposed by USGBC members are publicly reviewed for approval by the almost 20,000 member organizations that constitute the USGBC. LEED certified buildings are intended to use resources more efficiently when compared to built-to-code properties. Often, when a LEED rating is pursued, the cost of initial design and construction rises. However, these higher initial costs can be effectively mitigated by the savings incurred over time due to the lower-than-industry-standard operational costs typical of a LEED certified building, and recent findings suggest that if green strategies are instituted from the beginning of the planning process, those added costs may be avoided. Additionally, this construction cost premium is shrinking as green construction methods and materials become less the exception and more the norm.¹¹

⁸ Environmental News Service, "Energy Star Climate Change Claims Misleading, Audit Finds," Washington, D.C., December 2008. <http://www.ens-newswire.com/ens/dec2008/2008-12-31-092.asp>

⁹ Becker, B., "Why Obama's Energy Savings Estimate May Be Skewed," *The New York Times*, February 6th, 2009. http://www.nytimes.com/2009/02/07/washington/07energy.html?_r=0

¹⁰ United States Government Accountability Office, "Energy Star Program: Covert Testing Shows the Energy Star Program Certification Process Is Vulnerable to Fraud and Abuse" (GAO-10-470), Washington, D.C., March 2010. <http://www.gao.gov/new.items/d10470.pdf>

¹¹ World Green Building Council, "The Business Case for Green Building: A Review of the Costs and Benefits for Developers, Investors and Occupants," 2013. http://www.worldgbc.org/files/8313/6324/2676/Business_Case_For_Green_Building_Report_WEB_2013-03-13.pdf

The LEED program may be applied to any sustainably constructed building. The LEED for Homes program was subsequently developed to lower the cost of certification on small scale projects, and is available exclusively for residential construction less than six stories in height. This certification product is often used for low-rise multifamily buildings, but is most commonly used for single-family housing, the focus of this analysis. Through year-end 2011, there were approximately 14,000 LEED and LEED for Homes certified homes constructed. To pursue any type of LEED certification, each project must begin by meeting the Energy Star requirements and then improve its sustainability substantially over that level; this provides a concise relative comparison of the two certification products. To meet LEED requirements, a home must meet sustainability requirements in the categories of energy use, water use, indoor air quality, material use (including the minimization of waste), land use, and education of the homebuilder and end user.

The LEED programs also have their drawbacks. LEED is a design tool and not a performance measurement tool. It is also not yet climate-specific, although the newest version is intended to address this weakness. Because of this, designers may make materials or design choices that garner a LEED point, even though they may not be the most site or climate-appropriate choice available. Additionally, LEED is developed and continuously modified by workers in the sustainable building industry, especially in the ten largest metro areas in the U.S.; however, LEED certified buildings have been slower to penetrate small and mid-sized markets. Another complaint is that its sizable certification costs less efficiently allocate project funds that could be used to make the building in question more sustainable. Lastly, many critics have noted that compliance and certification costs have grown faster than staff support from the USGBC.

Data

There were 177 government policies enacted before 2010 which incentivize or require energy efficiency for the private construction; of these, 127 are primarily aimed toward LEED programs and 50 are aimed

toward Energy Star programs.¹² Of the 50 Energy Star private programs, 23 are requisite and govern eighteen locales (ten states and eight municipalities, plus four federal agency programs) and 27 are campaigns and incentive programs governing 23 locales (five states, one county, seventeen municipalities, and two regions). Comprising the latter are six policies encouraging energy efficiency, sixteen contests, and five incentive programs. However, none of the five incentive policies are applicable to private *residential* construction. Similarly of the eighteen requisite programs, only one relates to private residential construction.

Of the 127 LEED-aimed private programs, 113 relate to commercial uses and 65 relate to residential uses (with several policies relating to both). Of the 65 private residential-related policies, 61 govern single family construction and the vast majority are incentivizing programs. Several of these programs allow for other rating programs to be used to measure energy efficiency as well, but they all accept LEED as a rating tool. While the LEED rating programs are accepted as a measure of energy efficiency, LEED certification is not always required to receive the incentives (or meet the requirements). Instead, compliance with the LEED standards is required, but certification is sometimes optional. However, given the pricing premium associated with LEED-certified single family homes (Costa and Kahn 2009, Aroul and Hansz 2011), it is reasonable to assume that, having already met all the LEED guidelines, most builders will complete the process with certification, especially under the less onerous LEED for Homes program.

Of the 61 LEED-related private single family residential policies, four are state-level incentive programs, twelve are county-level incentive programs (with one policy including a requisite feature as well), and the remaining 44 policies are municipal level programs.¹³ Of those 44 municipal programs, seven incorporate requisite features. Following is a summary of the LEED-directed programs applicable to single family

¹² The 2010 cut off is selected so that two years of construction data could be collected following the latest policies included in the study.

¹³ Some municipalities had more than one policy enacted, and one policy was enacted in a municipality on which little governmental data was collected, so it was suppressed from the later analysis. The final sample included 36 municipalities with policies.

residential construction, broken down by their locale type: state, county, and municipality. Each Panel of Table 1 indicates the number of policies which offer each of the common incentive types, as well as which have required programs, and the level of LEED compliance required to receive that incentive (or required to be met for compliance). In many cases, certification under a program is not required. Instead, the developer is required to prove compliance with the program at specified certification levels; if a specific level of compliance is not given, this is noted as the LEED Registration category. Lastly, several programs only require compliance with general green guidelines, making no mention of a specific registration or completion of a rating program's scorecard. This is noted as the General Green category.

(Insert Table 1 here)

As can be seen from Table 1, the most common level of compliance required for green single family programs is LEED Certified. However, LEED Registered and LEED Silver certification levels are also frequently demanded and in one instance a municipality requires LEED Gold certification in order to receive an incentive. Additionally, expedited permitting, fee reduction and feebate programs, and density bonuses are the most commonly issued incentives to encourage energy efficiency.

All of the policies were enacted between 1999 and 2009, with only one policy enacted prior to 2002. In fact, all but eight of the policies were enacted between 2006 and 2009, indicating that these private single-family incentivizing policies are a recent development. The county and municipal policies affect 421 municipalities total, with twelve county policies affecting 390 municipalities and 36 municipalities enacting policies as well; five municipalities are affect by both a municipal level policy and either a county-level or state-level policy.

Data were collected from HUD regarding the single family building permits issued annually for 2000 and 2005 through 2011. Of the approximately 29,000 municipalities and Census Designated Places in the

United States, data were available and collected for approximately 6,500.¹⁴ These 6,500 municipalities represent approximately 65 percent of the total U.S. population. Figure 1 provides the average annual single family building permit activity for both the full sample and the subsample of municipalities which have experienced any LEED single family construction. Following the housing crisis, there was stabilization in the number of housing permits issued annually for 2009 through 2011; both of these trends can be seen in the full group and the LEED subsample. The average number of housing starts is higher in the LEED subgroup, but this is expected; by definition, all of the LEED subgroup municipalities are active in single family construction, while many of the municipalities in the full sample are not.

(Insert Figure 1 Here)

The LEED programs (predominantly LEED for Homes) have been certifying single family projects since 2006, with some projects initially registering as early as 2003. Between its inception and year-end 2011, the commercially-focused LEED programs, including LEED New Construction, LEED Neighborhood Development, LEED Existing Buildings, LEED Core and Shell and others, registered 92 projects which involved a single family housing aspect. Of those 92, 73 are situated in the United States, and sixteen of those completed the LEED certification process (the balance only registering for the program to-date). Fourteen of the sixteen are projects of local or state governments or non-profit organizations such as schools, leaving two certified projects completed by private developers.

The LEED for Homes program is tailored to single family construction and is a less expensive and involved process, making it the more widely used option when pursuing LEED standards on single family construction. There were 6,977 projects totaling 16,444 units (both single and multi-family) certified

¹⁴ While 6,500 municipalities were selected for their construction-active nature as well as availability of all data, the subgroup is a good representation of the full sample of U.S. municipalities. The smaller sample has exactly the same average scaled number of single family building permits for 2006-2011 (26), roughly the same average 2005-2011 population (22,796 vs. 21,148), and roughly the same percent of municipalities are situated in the Top 100 MSAs (39% vs. 32%).

between the program's inception in 2006 and year-end 2011. Of that, 6,365 projects (6,690 units) are single family construction, and 6,133 of those projects (6,458 units) are situated in the United States. Government-related (example: military) and other non-profit development (example: affordable housing) comprise over half of these projects, leaving 2,818 units constructed by private developers. One of the LEED for Homes projects is confidential. Therefore, there were approximately 2,800 non-confidential LEED certified for-profit single family homes constructed in the United States between 2006 and year-end 2011. Given the extremely limited number of usable observations under the original LEED program (only two), those observations have been thrown out. A summary of the two programs and the breakdown of units can be seen in Panel A of Table 2.

(Insert Table 2 here)

Panel B of Table 2 provides counts of the LEED single family construction at the municipal level. Since the inception of the LEED programs, 521 municipalities in the United State experienced the private construction of 2,818 LEED for Homes single family homes. Of those 521 municipalities, only 218 had more than one LEED single family home constructed during that six-year period, and only 59 municipalities had at least ten LEED single family homes constructed. The table provides a year-by-year breakdown of the LEED single family home private construction activity. From 2006 through 2010, there is a continual increase in the number of municipalities seeing LEED single family home construction, from thirteen municipalities in 2006 to over 200 in 2010 and 2011. Additionally, there is an increase each year in the number of municipalities that see more than one LEED single family home privately constructed. The number of municipalities seeing the construction of at least ten LEED single family homes increased, but has generally leveled off since 2009.

To begin to understand the relationship between LEED incentivizing policies and LEED construction, the last column of Table 2's Panel B shows the number of municipalities which experienced LEED construction

during each year and had an incentivizing policy in-place (through the end of the prior year). For example, of the thirteen municipalities which experienced private construction of LEED single family homes in 2006, only one had a LEED incentivizing policy in-place prior to year-end 2005. Toward the end of the time period, more municipalities that were experiencing LEED construction had incentivizing policies in place. However, the portion of municipalities experiencing LEED construction that had incentivizing policies in-place did not rise very much. More generally, of the 421 municipalities which are affected by a LEED-related policy, only 36 experienced LEED single family private construction, and only 24 municipalities experienced private construction of at least two LEED single family homes. Additionally, of the 36 municipalities which had municipal-level incentivizing policies, half did not experience any LEED single family private construction, and of the 390 municipalities affected by a county-level incentivizing policy, 368 did not experience any LEED single family private construction. This indicates many LEED incentive policies may be proving ineffective.

To complete this baseline analysis, we examined how much of the policy development and LEED construction takes place in our country's most populous areas. Of the over 29,000 municipalities and census designated places in the United States, approximately 9,000 are situated in the 100 most populous MSAs (metropolitan statistical areas) based on 2003 definitions.¹⁵ Of the twelve county-level incentive policies, eight are situated within the 100 most populous MSAs, and 28 of the 36 municipalities with incentive policies are situated within these areas. Approximately three-fourths of incentive policies are occurring in the areas which are home to 65 percent of the U.S. population. However, of the 521 municipalities which experienced private LEED single family home construction, only 57 percent are situated within the most populous MSAs, and those municipalities experienced 65 percent of the LEED single family private construction. Further examination shows that 128 municipalities in these MSAs experienced construction of at least two LEED single family privately developed homes, and 40 of the 59 municipalities which are

¹⁵ MSA definitions are updated regularly, with the most extensive updates coming from the decennial census analysis. The June 2003 MSA definitions appear to be those based on the 2000 Census, and the 2010 Census updates have not yet been made available.

homes to at least ten LEED single family privately developed homes are situated in these 100 most populous MSAs. Therefore, the most populous areas of the country are not home to the vast majority of the incentivizing policies or the LEED construction, but rather a representative percent of each.

Finding that green policies are popular in higher-density areas while green construction is more evenly distributed across the country, the question arises: do some municipalities have a predisposition to green? This question poses an endogeneity concern which we will address in our analysis through three control variables. First there are the heating degree day (HDD) and cooling degree day (CDD) variables. HDD and CDD provide measures of how climate may drive an area to pursue green construction. One of the most significant benefits to green construction is energy savings related to indoor air temperature.¹⁶ Therefore, areas with extreme climates requiring significant amounts of heating and/or cooling would be extraordinarily incentivized to pursue green construction and policies. In each variable's case, a baseline temperature is set (say, 65 degrees Fahrenheit). If on a certain day the average temperature was 80 degrees, a building would need to cool 15 degrees that day to reach the 65 degree temperature. If that temperature persisted for 10 days, that would be 150 degrees of cooling required for those 10 days. Total degrees needed to heat and cool, respectively, an area for one year are totaled, creating the HDD and CDD variables. This information is taken from the National Climate Data Center based on 2009 data.

The third green variable captures the predisposition of the residents of an area to desire or require green construction. There is an environmental ideology which makes some people more likely than the average consumer to demand green products and practices. In the literature to-date, the common method for measuring this ideology is to measure the Green Party votes or to measure the percent of hybrid and electric car sales or registrations in an area. Unfortunately, given the U.S.'s strong two-party system, relying on

¹⁶ Ibid. World Green Building Council, "The Business Case for Green Building: A Review of the Costs and Benefits for Developers, Investors and Occupants."

the Green Party vote count does not work for U.S. analysis as well as it does in the analysis of other countries. While the percent of hybrid and electric car registrations is a strong measure of green ideology, most of the research using that data is working in either a small geographic region or at a larger unit of measure (such as an MSA, as opposed to municipality).¹⁷ Collecting data on hybrid and electric car registrations nationally at the municipal level is quite difficult and cost prohibitive. Instead, we pose a new measure of green ideology: clean fuel stations. Clean fuel stations are counterparts to gas stations and provide a variety of clean fuel options (electric car charging stations, ethanol, etc.). The idea behind this relationship is simple: a clean fuel station will only be operated where it is demanded. Since the vast majority of the time we refuel our automobiles near our homes, a clean fuel station is a strong proxy for the local presence of alternative fuel vehicles. Since alternative fuel vehicles are an already-accepted proxy for green ideology, this proxy should prove as successful as hybrid and electric vehicle registrations. The advantage is the U.S Department of Energy provides a continuously updated database of every clean fuel station in the U.S. As of April 18, 2013, there were 11,597 clean fuel stations nationwide, including 5,734 electric stations (predominantly situated on the east and west coasts), 2,339 ethanol stations (predominantly situated in the Midwest), and 2,586 propane stations (scattered evenly across the country). Figure 2 is a map of the clean fuel stations in the U.S. as of that date, including all seven types of tracked clean fuel stations.

(Insert Figure 2 Here)

In addition to the focus on building permits and green policies, predispositions, and construction, there are a variety of control variables utilized in our analysis. Population and per capita income data are taken from the American Community Survey, and the former is used in conjunction with the Office of Budget

¹⁷ Additionally, controlling for hybrid and electric car sales seems poor because the location of a car's sale has more to do with the supply of this car type than the demand. Someone that lives in rural ND would need to drive to a more cosmopolitan area to purchase a hybrid or electric car, invalidating that measure).

Oversight's metropolitan statistical area definitions to determine the 100 most populous MSAs. Lastly, a recent nationwide Gallup poll is used to quintile states as very conservative, conservative, moderate, liberal, and very liberal (Newport 2013).

(Insert Table 3 Here)

Table 3 presents the averages for selected variables described above. These averages are presented for the full sample, as well as two subsets representing those municipalities with and without any LEED single family homes and those municipalities with and without any LEED incentivizing policies; in our analysis, transformations of these values are occasionally used as well. Municipalities with LEED construction and with LEED policies are more likely to be situated in the Top 100 MSAs of the U.S., and those municipalities have higher populations and per capita incomes. These municipalities also appear to have fewer building permits on average, but that may reflect the effect of a few outliers. Looking at the green variables, both HDD and CDD are relatively similar across all categories except for the policy group. This group has approximately half as many cooling days and almost 50 percent more heating days, indicating that policies may be most prevalent in the north. This is largely driven by the fact that Minnesota has a state-wide policy (one of only four states to do so) and a large number of municipalities. This result is mirrored in the geographic breakdown analysis, with 65 percent of the policy subgroup situated in Division 4, which includes Minnesota. Other notable results in the geographic analysis include heavy LEED construction in the Pacific and Mountain Divisions (areas having a reputation for being more environmentally conscious), and the greatest concentration of LEED construction occurring in the South Atlantic Division. One in five LEED homes are constructed in this area which includes both the Washington, D.C. MSA (the most liberal region in the country and an environmentally sensitive area) and the southeast states (which would benefit more than the average U.S. area from lower energy costs associated with indoor air temperature).

(Insert Figure 3 Here)

Lastly, Figure 3 graphs the political persuasion of the sample and each subsample. The full sample indicates that the U.S. as a whole is skewed slightly more conservative than liberal (46 percent versus 37 percent), with just over one-fifth of the country identifying as moderate. This finding matches that put forth in the Gallup poll from which this data was taken, indicating that the full sample correctly represent the nation's political ideology. Turning to the subsamples, there is a substantial skewness towards liberal and very liberal in areas with LEED construction. In contrast, the areas with LEED incentivizing policies are not necessarily strongly liberal, but rather strongly moderate. Of note is the fact that each of the five political categories are represented in every subsample with the exception of no 'very conservative' municipalities (or, more specifically municipalities in very conservative states) associated with the LEED incentivizing policy subset.

Methodology

A variety of econometric techniques are used to investigate our question. Probit models are used to determine how energy efficient incentive policy influences construction of green single-family residential properties. First, we examine if these policies affect the choice to construct green rated or traditional nonrated single family homes. To do this, we model the binary choice of constructing green vs. traditional properties at the municipal level, seeing if there is a relationship between the green incentive programs and the construction of sustainable or energy efficient properties. This model is described as follows.

$$G_i = \alpha_i + \beta_i S_i + \sum \gamma_i X_i + \sum \delta_i P_i + v_i \quad (\text{Equation 1})$$

In Equation 1, G_i is a binary variable which takes the value of 1 if at least one LEED certified single family residential property has been constructed by a private developer in the i th municipality over the 2006 through 2011 time period, and a value of zero otherwise. S_i is a dummy variable indicating the presence of

energy efficient or sustainable incentive policies in the i th municipality, the definition of which will be modeled differently in a variety of equations throughout our analysis. X_i represents a vector of demographic and other economic characteristics used to describe each locale and P_i represents a vector of characteristics which capture the propensity of a locality to experience green construction. α , β , γ , and δ are each coefficient estimates and v is an error term.

In addition to the probit model described above, we also use a negative binomial regression to analyze a model similar to the one posed in Equation 1, but this time the dependent variable is the number of single family LEED homes constructed; the explanatory variables are the same. This model is shown in Equation 2, in which L_i represents the count of LEED single family homes and q is an error term; all other variables are described above.

$$L_i = \alpha_i + \beta_i S_i + \sum \gamma_i X_i + \sum \delta_i P_i + q_i \quad (\text{Equation 2})$$

In order to address the substantial differences in municipality characteristics described in the Data section, a matching procedure is utilized and the resulting weights are applied to the regression models. The matching methodology used is Coarsened Exact Matching (CEM), a monotonic imbalance reducing matching method (Iacus, King, and Porro, 2008). The primary difference between this method and common propensity score matching is that the balance between the control and treatment groups is selected ex ante rather than discovered through trial and error of model estimations. The CEM process can be defined in three steps. First, the data is coarsened by discretizing the variables to build a multi-dimensional histogram. Second, any observations from a cell that does not contain at least one control and one treatment observation is discarded. Last, weights are created, with each treatment observation receiving a weight of one, and each control observation receiving a weight of $\text{Treatment}_i / \text{Control}_i$ (a weighted weight). Some of the benefits of CEM include: the adjustment of one variable's imbalance does not affect the maximum imbalance on other variables; a guarantee of common empirical support (without specific restriction of the data); results which

are robust to measurement error; and, a process that is more transparent than propensity score matching. Lastly, CEM has been found to outperform other matching methods in Monte Carlo tests.

An econometric concern facing our question is one of sample selection bias. When examining the count of homes that are LEED constructed, those municipalities which make that list have first met the threshold of having any LEED construction at all. While we model the answer to these two questions separately (Does an incentive policy encourage any LEED construction? How much green construction does an incentive policy encourage?), to capitalize on the information in our data, we consider a model which addresses these two questions concurrently. That is to say, we must simultaneously answer the following questions:

1. Does the municipality have a LEED incentive policy?
2. Does the municipality have any LEED construction?
3. If the municipality has LEED construction, how much?

By only answering these questions individually or in sets of two, we are ignoring the complexity of the data and the possible sample selection issues which may arise. To address that, we employ an endogenous participation and endogenous treatment model (Bratti and Miranda, 2010). In this Poisson model, three equations answering the three questions above are estimated, as described in Equations 1, 2 and 3.

$$S_i = \alpha'_i + \sum \gamma_i X_i + \sum \delta_i P_i + \varepsilon_i \quad (\text{Equation 3})$$

In order to close the model, all of the covariates are assumed exogenous (with the exception of the treatment variable, the incentive policy) and each of the equations' distributions is assumed $N(0, \sigma^2)$. It is the measures of correlation between the equations which are of interest in testing the effectiveness of this model. Correlations between the three dependent variables are functions of factor loadings on the residuals of the treatment and participation equations.

$$v = \lambda_1 \eta + \zeta \quad q = \lambda_2 \eta + \xi \quad (\text{Equation 4})$$

Equation 4 provides examples of the factor loadings (λ_1 and λ_2) from the equations' errors (v and q); ζ and ξ are idiosyncratic errors terms. λ_1 and λ_2 have no distributional requirements (aside from being real numbers). However, to close the model, the following distributional conditions are required.

$$\text{Condition 1: } D(\eta|S, X, P, \zeta, \xi) = D(\eta)$$

$$\text{Condition 2: } D(\zeta|S, X, P, \eta) = D(\zeta|\eta)$$

$$\text{Condition 3: } D(\xi|S, X, P, \eta) = D(\xi|\eta)$$

$$\text{Condition 4: } \zeta \perp \xi | \eta \quad (\text{Equation 5})$$

Condition 1 requires random effects, with unobserved individual heterogeneity term η being independent of all explanatory variables and error terms ζ and ξ . Conditions 2 and 3 are conditional independence assumptions which, instead of requiring ζ and ξ to be independent, allows for limited dependence between the idiosyncratic error terms and the control variables. However, Condition 4 requires ζ and ξ be independent of each other, conditional on η . Therefore, ζ and ξ are not necessarily independent of each other, but conditional on η they are both distributed as independent standard normal variates (Bratti and Miranda, 2010). Considering these structural controls of the model, the correlations between the dependent variables are functions of these factor loadings:

$$\rho_{\eta,v} = \frac{\lambda_1 \sigma_\eta^2}{\sqrt{\sigma_\eta^2 (\lambda_1^2 \sigma_\eta^2 + 1)}} \quad (\text{Equation 6})$$

$$\rho_{\eta,q} = \frac{\lambda_2 \sigma_\eta^2}{\sqrt{\sigma_\eta^2 (\lambda_2^2 \sigma_\eta^2 + 1)}} \quad (\text{Equation 7})$$

$$\rho_{v,q} = \frac{\lambda_1 \lambda_2 \sigma_\eta^2}{\sqrt{(\lambda_1^2 \sigma_\eta^2 + 1)(\lambda_2^2 \sigma_\eta^2 + 1)}} \quad (\text{Equation 8})$$

The model is estimated using maximum simulated likelihood (MSL), and there can be differences in the independent variables in each of the three equations. Additionally, given the nature of the model, CEM weights cannot be used in association with this MSL estimation method. It is recommended that the MSL model be estimated using a minimum of 1,000 Halton draws to perform the integration.

Results

Using Equations 1 and 2, we begin to explore the relationship between private construction of green single family housing and government green housing incentivizing policies. The dependent variable in Equation 1 is binary, taking a value of one if there has been at least one LEED single family home certified in the municipality through year-end 2011. Equation 2's dependent variable is similar in content, but instead measures the count of LEED single family homes certified in a municipality through year-end 2011. As previously noted, the majority of LEED homes construction has occurred since 2006. The loading on these explanatory variables (and their statistical strength) gives a basic indication if green construction incentive policies have a positive effect on green single family residential (LEED) construction.

However, certain areas may be pre-disposed to encourage green construction. In order to capture and measure this effect, we consider a variety of variables posed in the existing green construction literature. Tested in in different model specifications are the total heating days, the total cooling days, the average and average change in the residential cost of electricity, the average and average change in the residential cost of natural gas, and the scaled number of clean fuel stations per 1,000 residents. We found these measures to be highly correlated with both state and geographic division fixed effects and the variables controlling

for political ideology. Upon review, this seemed logical given the physical location of states highly affects the area's need for heating, cooling, and fuel for that temperature management. The most informative combination of these variables proves to be HDD, CDD, scaled clean fuel stations, and the political ideology variables; we omit heating fuel and electricity costs as well as state and geographic controls as the information they provide is redundant.

In addition to a propensity for green construction, an area may also have a predisposition for more construction in general, thereby increasing the chances for green construction. To control for such growth and demand factors, we include variables measuring the natural log of average annual population change and of the average annual per capita income change from 2006 through 2011. Additionally, we also frequently divide these two measures into quintiles and use those categorical variables instead. Lastly, we control for construction activity with a measure of the average total number of single family building permits issued (per 1,000 people) from 2006 through 2011. All of the data for these variables are taken from the one-year American Community Survey. Lastly, in order to control for the sample selection bias of areas which are not constructing new homes at all (and would therefore not be constructing LEED homes), municipalities with no single family building permits issued over the 2006 through 2011 time period are dropped.

Table 4 highlights the regression results utilizing Equations 1 and 2 and our complied data. Columns 1 and 3 present estimations of Equation 1 with and without CEM weighting, and Columns 2 and 4 present estimations of Equation 2 with and without CEM weighting, respectively. In all of the equations in Table 4, the treatment variable is a dummy with a value of one if a municipality has any LEED incentive policy available from any level of government (municipal, county, or state). The CEM weights used in Columns 3 and 4 are developed around the treatment variable and based on a comparison of clean fuel stations, income, population, and building permits. The addition of the weights results in only a small decrease in sample size and a strengthening of the pseudo R squared when compared with the non-weighted equation.

(Insert Table 4 Here)

Results of note in Table 4 begin with the treatment variable. Columns 1, 2, and 4 all return statistically significant results, indicating that the introduction of any LEED government incentive policy will increase LEED construction. While the findings regarding the probit are mixed, the unweighted Column 1 results indicate the marginal effect of having any LEED incentive policy increases the probability of LEED construction by approximately 2.4 percent; the weighted results show no statistical significance and a counterintuitive sign on the coefficient. However, when evaluating the number of LEED homes constructed, the results are much more consistent. Both the weighted and unweighted equations (Columns 2 and 4) return highly statistically significant results with the anticipated sign and a notable coefficient magnitude.

There are several other important results highlighted in Table 4 and seen throughout our analysis. First is the statistically strong and consistent role political ideology plays in every estimated equation. Across our analysis, we find that at least one category proves statistically significant in each estimation, and all ideological subcategories generally return negative coefficients with the exception of Very Liberal. The dummy variable used to define municipalities situated within the 100 most populous MSAs in the U.S. has inconsistent results, indicating that LEED-related policies may not merely be an activity for big city areas (or may not merely be successful in those areas). The green variables – the log of total HDD and CDD, and clean fuel stations – also have mixed success, but more often than not at least one of these variables proves statistically significant in each estimation. Population and income variables consistently prove to be very important drivers in our equations. This is likely due to the important role these variables play in the related topics of housing growth and demand. However, it should be noted that the higher income quintiles are often the ones which prove most significant. This could reflect that private market-rate housing construction occurs in richer areas. Additionally, higher income is often considered a proxy for higher education, which could indicate that the higher educated areas are demanding more green products. Lastly,

two variables which have inconsistent results are the total single family building permits and the dummy controlling for municipalities with multiple LEED policies.

(Insert Table 5 Here)

Focusing more specifically on the municipality-level nature of the data, we re-estimate all of the equations from Table 4, but this time the treatment variable represents only municipal-level policies (excluding county and state-level policies which are available to a municipality); the results are shown in Table 5. Given the reduced treatment group, the CEM matching pared down the sample substantially for the estimations described in Columns 3 and 4. The treatment variable experienced a similar level of success in this subgroup. This time, both of the unweighted models returned statistically and economically significant results, with the expected sign and sizable magnitudes. In this probit model, the marginal effect of having a municipal-level policy is a 29 percent increase in the likelihood of having LEED construction. The weighted regressions returned statistically insignificant results on the treatment variable. The control variables remained quite strong and returned signs consistent with the findings in Table 4. Lastly, comparing the pseudo R-squareds from similar equations in Tables 4 and 5 indicates relatively similar model strength for both definitions of the treatment variable.

(Insert Tables 6 & 7 Here)

Tables 6 and 7 provide analyses similar to those found in Table 5, this time for county-level and state-level policies, respectively. All of the general results found in the municipal-level analysis hold for county and state-level analysis (the smaller R squareds in the weighted equations, the highly significant and consistent results relating to the control variables, etc.). However, the loadings on the county treatment dummies in Table 6, while strongly significant in some cases, are also consistently negative, indicating that the incentive policy would actually be discouraging green construction. This is contrary to the goal of the incentivizing policies and may instead indicate that county-level policies are an ineffective way to encourage green

construction. However, the state-level treatment variables all have positive loadings and are economically and statistically significant. Based on these findings, it appears that state and municipal-level green incentive policies are most effective in encouraging LEED single family construction.

Categorical Policy Analysis

In order to better understand the impact green incentive policies have on green single family green construction, we replace the single dummy policy variable with individual dummy variables for seven popular categories of incentive types. By doing this, we are able to examine if certain types of incentive policies are more effective at encouraging green construction than others. The seven incentive categories are: expedited permitting; fee reduction (including feebate); density bonuses; real estate tax abatement; tax credits; grants; and, other programs. Other is a catch-all for less common incentives including technical assistance, expedited sewer and water line installation, etc. It should be noted that several policies include incentives from more than one of these categories. A correlation analysis was completed for these policies and is shown in Table 8. The policies are generally highly uncorrelated with each other. Only expedited permitting and fee reduction policies are more than 25 percent correlated, with the vast majority of the policies less than ten percent correlated.

(Insert Table 8 Here)

Table 9 describes the results of re-estimating Column 1 and 2's equations from Tables 4, 5, 6 and 7 with the treatment variable broken into seven treatment variables. Since there is no longer one treatment variable, weighting is not utilized. In Panel A, the first two columns examine the broken-out categories for any policy available to a municipality (municipal, county, and state level), in the probit and negative binomial regression models, respectively. The control variable loadings remain consistent with the finding from the earlier tables so those results are suppressed. The probit model indicates Fee Reduction and Tax Credit categories have a statistically significant positive relationship with the presence of LEED

construction. Specifically, the marginal effect of having any type of tax credit policies is a 26 percent increase in the probability of a municipality experiencing LEED construction. The count equation in Column 2 provides differing results, reporting the positive statistically significant relationship for Expedited Permitting, Tax Credit and Grant policies. Other policies also returns statistically significant results, but with a negative sign, indicating the opposite relationship from the desired effect.

(Insert Table 9 Here)

Columns 3 and 4 of Panel A represent the same analysis, but with the treatment variables restricted to only municipal-level policies. Here, the success rate appears much lower. Only Expedited Permitting returns statistically significant results in both the probit and the count models. However, these results are strong, with the expected sign and a notable coefficient magnitude. Aside from that, the only other incentive categories with a statistically significant relationship are Tax Abatement and Other; in the probit model, Other policies prove strongly economically and statistically significant with the expected sign, as does Tax Abatement in the count model. This divergence from the results regarding Other policies in Columns 1 and 2 may indicate that Other incentive policies (or the types of Other policies pursued by municipalities vs. counties and states) may be an incentive model that works well at the municipal level, while being less effective at the county and state level.

Panel B provides the same analysis for the county (Columns 1 and 2) and state (Columns 3 and 4) level. Even once broken out into different policy categories, the county-level policy dummies predominantly have negative loadings and only the Other category has statistical significance. This further supports the concept that county-level incentive policies may not be an effective tool to encourage green construction. The state-level results are mixed. The probit model proves to be a total loss, with no economically or statistically significant treatments, and half of the treatments omitted in order to complete the analysis. However, in the count-driven model (Column 4), Tax Abatement is the only category which does not return statistically significant results. While the Tax Credit and Grant categories return significant results with the expected

sign, the Other category again carries a negative sign, indicating that these non-traditional types of incentive policies may not effectively encourage green single family construction.

These multinomial regressions provide the benefit of controlling for all of the policy categories simultaneously. However, given the limited number of certain types of policies at different government levels, these models have their limitations. In particular, these limitations are visible in the probit models. For example, in the state-level probit (Panel B, Column 3), two of the four policy categories are omitted in order to obtain results. While the balance of the results are informative, we lose insight into Tax Credit and Grant policies in the probit, which is especially disappointing given those two policy types' strong results in the state-level count equation (Panel B, Column 4).

To amplify our categorical results further, we re-define and estimate these equations once more. Utilizing the same probit and count models, we can once again estimate both weighted and unweighted scenarios (all with robust standard errors) as these models each have only one treatment variable. In this set of equations, the treatment variables are defined by policy category. By identifying all municipalities which are affected by a specific category of policy at any government level (municipal, county, or state), our samples become more robust, reducing the likelihood that certain policy category results would be suppressed.

Therefore, for each of the seven policy categories, an analysis is completed similar to that found in Tables 4 through 7. Table 10 provides a summary of this set of regressions. As is seen in Tables 4 through 7, the control variables remain very consistent and strong in these categorical models. Similar results were found in the parsimonious estimations developed for Table 10. Additionally, the pseudo R-squareds for the probit models fall within the range of those found in Table 4 through 7. Given the lack of new information in these controls, those results are suppressed. Instead, Table 10 includes each equation's treatment variable coefficient, its statistical significance, and the associated standard errors.

(Insert Table 10 Here)

In this analysis, Tax Credit surfaces as the strongest incentive policy category. In all four models, Tax Credit returns positive, highly significant results (both economically and statistically). Grant comes in as a close second, followed by Expedited Permitting, Fee Reduction, and Tax Abatement. Density Bonus results mostly have the expected sign, but have limited economic impact and low statistical strength, and Other suffers from the same mixed and weak results seen in the earlier analysis. All together, the categorical analysis indicates that Tax Credit is the most effective incentive policy type, and Other may produce unreliable and unexpected results. The balance of the categories vary in their strength and effectiveness, but Grant and Expedited Permitting also prove to be effective incentivizing tools.

Multiple Equation Models

While control variables are used to address endogeneity concerns in the single equation models described thus far, the endogenous participation endogenous treatment model is also utilized to examine endogeneity concerns.¹⁸ Here, the endogeneity extends beyond the two questions outlined above to additionally address the different between having or not having LEED construction, and how much LEED construction there is. These two variables are obviously highly correlated, but each is also correlated with the decision to have an incentive policy as well. Effectively, here we are combining the probit and the negative binomial equations together and simultaneously estimating them. Unfortunately, the simulation process associated with this modeling precludes the use of weights and can also provide noisy results. However, as a check of our earlier results rather than a stand-alone estimation technique, the EPET model proves helpful.

Table 11 summarizes the results of interest from the EPET regressions. We completed the simulations with all of the treatment variables proposed throughout the paper: any policy category at any government level (Column 1); any policy category at the municipal, county, and state government levels (Columns 2, 3, and 4, respectively); and, for six of the seven policy categories at any government level (Columns 5 through

¹⁸ Additionally, biprobit and endogenous switch and sample selection models were used to test for endogeneity. Both models indicate there is an endogenous relationship between the existence of an incentive policy and LEED construction.

10); the model with Density Bonus at the treatment variable would not converge and is excluded. In each column, the treatment variable's loading, statistical significance, and associated standard errors are reported, as they are for the three correlations associated with the model. Finally, there is a Wald test examining the probability that none of the equations are correlated.

(Insert Table 11 Here)

The results in Columns 1 through 4 reinforce the analysis completed thus far. In each of these equations, the Wald test indicates that there is a correlation between incentive policies and green construction. Looking more closely, the municipal-level policy results prove the strongest. The treatment variable loadings are both positive and very strong economically and statistically, and the correlation coefficients are all statistically significant. Similar statistical strength is found in all the reported results regarding county-level policies, but the factor loadings here are both negative. The state factor loadings are not statistically or economically significant, but all of the correlation coefficients are.

Turning to the policy category variables, these results were not as strong. The Wald tests for the Tax Abatement and Other categories question whether there is a correlation between these incentive types and green construction, and none of the treatment variable coefficients or correlation coefficients proved statistically significant. However, the Expedited Permitting, Fee Reduction, Tax Credit, and Grant categories' Wald tests all indicated strong relationships between the incentive types and green construction, and the loadings on the treatment variables and correlations moderately support that finding. None of the incentive category estimations are as strong as the government-level estimations, but that is likely a reflection of the sample, as there are relatively few instances of some of these policy categories. Overall, these results support the findings previously highlighted.

Conclusion

After collecting data on single family, private, green construction incentive policies, and both total and green total single family construction, we examined whether green incentive policies do or do not increase green construction. Our results clearly indicate that there is a correlation between green incentive policies and green construction, however not all government bodies experience the same success with their policies, and not all policy types are equally effective.

Municipal and state-level policies appear to be far more effective than county level policies. This is most likely a reflection of the incentives which these governments offer. The municipality is the government body which issues building permits, providing this group the greatest flexibility in offering construction-related incentives such as expedited permitting, fee reductions, and density bonuses. Additionally, the municipality is the micro-governing body in this scenario. Therefore, the municipality should be the governing group with the most robust knowledge of what type of incentives would be beneficial to developers working in their community, and the municipal government has the ability to tailor policies to be enticing within their local arena.

When enacting policies from a higher government level (county or state), the incentives which benefit one community may offer little benefit to another. An example could be density bonuses. In San Francisco, an increased density bonus would have massive economic impact on a project. Meanwhile, in other parts of the state, a density bonus could provide little to no economic benefit. Therefore, one incentive policy enacted at a higher government level could produce very different results across the municipalities it effects. This is a drawback of county-level policy effectiveness, and as seen in the analysis, has resulted in very low success rates for county-level policies overall. However, state policies prove to be quite effective. This is likely due to the nature of the policies being offered.

While every incentive policy is intended to encourage green construction, not all incentives are created equal. Aside from a local government body having greater insight to tailor their incentives to match the local development environment, certain types of policies may garner more attention in general. These are

the policies that have a more tangible fiscal benefit. While a density bonus could or could not result in an economic benefit, policies like tax credits and grants nearly always result in economic benefit, and a benefit that should be sizable enough to outweigh the cost of certifying and/or constructing green. These types of policies experienced greater success than the balance of the policy categories, and that is likely because any developer in any community can benefit from definite fiscal incentive such as a grant. Nearly all the state-level incentive policies fall in the more tangible economic benefit categories, with states offering tax abatements, tax credits, and grants to encourage green single family construction. By selecting the more effective types of policies, the state-level government bodies have positioned their programs for greater success.

There are state incentives that fall into the Other category, but those experience the same mixed results seen throughout the analysis regarding this policy category. In fact, if there is one policy type which government bodies should approach cautiously, it is Other. The results indicate that non-traditional incentives may not prove worthwhile. Whether it be because developers respond better to the mainstream incentives types with which they are familiar, or because the unique benefit being offered in the policy is not actually much of an incentive, the Other category of policies proves to be ineffective.

The take away from this research is fourfold: first, municipalities' ability to tailor incentives to the local development/construction process makes them a good place to implement green incentive policies; second, incentives that have definite economic benefit (such as tax credits and grants) prove the most effective in incentivizing green construction; third: broad-based policies may not be as effective as their counterparts, so higher-level governing bodies should be realistic about their incentive policy goals and how to make them most effective; and, last: non-traditional incentive categories do not consistently return the desired results, so their use in lieu of mainstream incentive categories should be carefully scrutinized.

Works Referenced

- Aroul, R. and Hansz, J., 2012. The Value of "Green:" Evidence from the First Mandatory Residential Green Building Program. *Journal of Real Estate Research*, 34 (1): 27-49.
- Banfi, S., Farsi, M., Filippini, M., and Jakob, M., 2008. Willingness to pay for energy-saving measures in residential buildings. *Energy Economics*, 30: 503-516.
- Bollinger, B. and Gillingham, K., 2011. Peer Effects in the Diffusion of Solar Photovoltaic Panels. Working paper.
- Bond, S. and Devine, A., 2013. Rental Rate Premiums Associated with Green Multifamily Properties. Working Paper.
- Bratti, M. and Miranda, A., 2010. Endogenous Treatment Effects for Count Data Models with Sample Selection or Endogenous Participation. University of London, DoQSS Working Paper No. 1005.
- Brounen, D. and Kok, N., 2011. On the economics of energy labels in the housing market. *Journal of Environmental Economics and Management*, 62:166-179.
- Brounen, D., Kok, N., and Quigley, J., 2011. Residential Energy Use and Conservation: Economics and Demographics. Working paper.
- Brounen, D., Kok, N., and Quigley, J., 2011. Residential Energy Literacy and Capitalization. Working paper.
- Cameron, T., 1985. A nested logit model for energy conservation activity by owners of existing single family dwellings. *The Review of Economics and Statistics*, 67 (2):205-211.
- Carothers, S. and Hurt, A., 2011. Getting to 55 MPG, Map: Hybrid And Electric Sales Across The County. November 22, 2011, available at: <http://www.npr.org/2011/11/22/142476940/map-hybrid-and-electric-sales-across-the-country>
- Ciochetti B. and McGowan, M., 2010. Energy Efficiency Improvements: Do they Pay? *Journal of Sustainable Real Estate*, 2 (1):305-333.
- Cogburn, J. and Rahm, D., 2005. Environmentally Preferable Purchasing: Who Is Doing What in the United States? *Journal of Public Procurement*, 5(1): 23-53.
- Costa, D. and Kahn, M., 2009. Towards a Greener California: An Analysis of Household Variation in Residential Electricity Purchases. Working Paper.
- Dastrup, S., Zivin, J., Costa, D., and Kahn, M., 2011. Understanding the Solar Home Price Premium: Electricity Generation and "Green" Social Status. Working Paper.
- Deng, Y., Li, Z., and Quigley, J., 2012. Economic returns to energy-efficient investments in the housing market: Evidence from Singapore. *Regional Science and Urban Economics*, 42:506-515.
- Dinan, T. and Miranowski, J., 1989. Estimating the Implicit Price of Energy Efficiency Improvements in the Residential Housing Market, *Journal of Urban Economics*, 25:52-67.

- Eichholtz, P., Kok, N., and Quigley, J., 2010. Doing Well by Doing Good: Green Office Buildings. *American Economic Review*, 100:2494-2511.
- Eichholtz, P., Kok, N., and Quigley, J., 2011. The Economics of Green Building. IBER working paper #W10-003.
- Fuerst, F. and McAllister, P., 2009. An Investigation of the Effect of Eco-Labeling on Office Occupancy Rates, *Journal of Sustainable Real Estate*, 1 (1):49-64.
- Fuerst, F. and McAllister, P., 2011. Green Noise or Green Value? Measuring the Effects of Environmental Certification on Office Values, *Real Estate Economics*, 39 (1): 45-69.
- Greene, W., 2012. *Econometric Analysis*, 7th edition. Upper Saddle River, NJ: Prentice Hall.
- Horowitz, M. and Hossein, H., 1990. Economic efficiency v energy efficiency: Do model conservation standards make good sense? *Energy Economics*, 12 (2):122-131.
- Iacus, S., King, G., and Porro, G., 2009. Causal Inference Without Balance Checking: Coarsened Exact Matching, Working Paper. Available at: <http://gking.harvard.edu/files/cem-plus.pdf>
- Kahn, M. and Vaughn, R., 2009. Green Market Geography: The Spatial Clustering of Hybrid Vehicles and LEED Registered Buildings. *B.E. Journal of Economic Analysis & Policy: Contribution to Economic Analysis & Policy*, 9(2): 1-22.
- Kok, N., McGraw, M., and Quigley, J., 2011. The Diffusion of Energy Efficiency in Building. *American Economic Review*, 101 (3):77-82.
- Kok, N. and Jennen, M., 2011. The Value of Energy Labels in the European Office Market. Working paper.
- Kok, N. and Kahn, M., 2012. The Value of Green Labels in the California Housing Market: An Economic Analysis of the Impact of Green Labeling on the Sales Price of a Home, July 2012. Available at: http://issuu.com/nilskok/docs/kk_green_homes_071912/3
- Kwak, S., Yoo, S., and Kwak, S., 2010. Valuing energy saving measures in residential buildings: A choice experiment study. *Energy Policy*, 38:673-677.
- Marron, D., 1997. Buying Green: Government Procurement as an Instrument of Environmental Policy. *Public Finance Review*, 25(3):285-305.
- Marron, D., 2003. Greener Public Purchasing as an Environmental Policy Instrument. *OECD Journal on Budgeting*, 3(4): 71-105.
- May, P. and Koski, C., 2007. State Environmental Policies: Analyzing Green Building Mandates. *Review of Policy Research*, 24(1):49-65.
- McCrudden, C., 2004. Using Public Procurement to Achieve Social Outcomes. *Natural Resources Forum*, 28(4): 257-267.

- Michaelsen, O. and de Boer, L., 2009. Green Procurement in Norway: A Survey of Practices at the Municipal and County Level. *Journal of Environmental Management*, 91(1):160-167.
- Miller, N., Spivey, J., and Florance, A., 2008. Does Green Pay Off? *Journal of Real Estate Portfolio Management*, 14 (4): 385-400.
- Newport, F., 2013. Alabama, North Dakota, Wyoming Most Conservative States: Americans slightly less conservative, slightly more liberal. *Gallup: State of the States*, February 1, 2013. Available at: <http://www.gallup.com/poll/160196/alabama-north-dakota-wyoming-conservative-states.aspx>
- Sadler, M., 2003. Home energy preferences and policy: applying stated choice modeling to a hybrid energy economic model. Report to National Resources Canada, Simon Fraser University, September 2003.
- Simcoe, T. and Toffel, M., working paper. Public Procurement and the Private Supply of Green Buildings. Harvard Business School Working Paper 13-030, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2142085
- Sourani, A. and Sohail, M., 2011. Barriers to Addressing Sustainable Construction in Public Procurement Strategies. *Proceedings of the Institution of Civil Engineers (ICE) – Engineering Sustainability*, 164(4): 229-237.
- Wiley, J., Benefield, J., and Johnson, K., 2010. Green Design and the Market for Commercial Office Space. *Journal of Real Estate Finance and Economics*, 41 (2): 228-243.

Table 1: Summary of Government Policies Incentivizing LEED Single Family Private Construction

The following table summarize the types of policies incentivizing green construction in the private single family market. Panels A, B, and C provide breakdowns by incentive type and required level of certification compliance for the State, County, and Municipal levels, respectively. Not all incentive types are used at each level of government policy, and some policies include multiple incentive programs.

	<u>General</u> <u>Green</u>	<u>LEED</u> <u>Registered</u>	<u>LEED</u> <u>Certified</u>	<u>LEED</u> <u>Silver</u>	<u>LEED</u> <u>Gold</u>	<u>Total</u>
Panel A: State						
Expedited Permitting						
Fee Reduction/ Feebate						
Density Bonus						
Tax Abatement	1					1
Tax Credit				1		1
Grant	1					1
Other	1					1
Requisite						
Total	3			1		
Panel B: County						
	<u>General</u> <u>"Green"</u>	<u>LEED</u> <u>Registered</u>	<u>LEED</u> <u>Certified</u>	<u>LEED</u> <u>Silver</u>	<u>LEED</u> <u>Gold</u>	<u>Total</u>
Expedited Permitting		1	2	1		4
Fee Reduction/ Feebate			4			4
Density Bonus			1			1
Tax Abatement			1	1		2
Tax Credit			1	1		2
Grant						
Other				1		1
Requisite			1			1
Total		1	10	4		
Panel C: Municipality						
	<u>General</u> <u>"Green"</u>	<u>LEED</u> <u>Registered</u>	<u>LEED</u> <u>Certified</u>	<u>LEED</u> <u>Silver</u>	<u>LEED</u> <u>Gold</u>	<u>Total</u>
Expedited Permitting	1	8	3	2	1	15
Fee Reduction/ Feebate	1	2	3	3		9
Density Bonus		2	5	2		9
Tax Abatement			1			1
Tax Credit						
Grant		1	2	1		4
Other		1	2			3
Requisite	3		4			7
Total	5	14	20	8	1	

**Some policies include multiple incentives*

Table 2: Residential LEED Summary

The following two tables provide summary information on residential properties which have been LEED certified. Panel A describes the number of LEED, market-rate, single family homes in the United States which have been certified under the two available programs through year-end 2011. Panel B examines that group of certified homes annually at the municipal level. This table highlights the number of LEED homes certified each year from the program's inception through year-end 2011. At the municipal level, breakdowns are provided for the number of communities with any market rate LEED single family construction, and for communities with a notable amount of LEED construction (at least ten homes in a year). Additionally, it is noted how many municipalities with LEED construction during that year had any green incentivizing policies in effect.

Panel A

<u>LEED</u>		<u>LEED For Homes</u>	
Total Registered SF Units	92	Total Certified Units	16444
Total SF Certified Units	19	Total SF Certified Units	6690
Other Countries	3	Other Countries	232
United States	16	United States	6458
Non-Profit/Government	14	Non-Profit/Government	3640
Private Development	2	Private Development	2818 *
			<i>*includes 1 confidential property</i>

Panel B

Timeframe	# Municipalities	# LEED SF Units	# Municipalities > 1 LEED SF Units	# Municipalities > 9 LEED SF Units	# Municipalities with Policy In-Place
2006-2011	521	2818	218	59	
2006	13	24	2	1	1 with pre-2006 policy
2007	46	171	16	3	0 with pre-2007 policy
2008	109	393	47	8	5 with pre-2008 policy
2009	169	669	55	19	12 with pre-2009 policy
2010	218	884	66	14	21 with pre-2010 policy
2011	200	677	73	16	25 with pre-2011 policy

Table 3: Variable Summary Statistics

The following table lists the average of each variable listed for the full sample and subsamples of municipalities with and without LEED construction and with and without green incentivizing policies. It should be noted that in the analysis, transformations of these variables are sometimes used as well.

	Full Sample	LEED	Non-LEED	Policy	No Policy
Top 100 MSA	39%	58%	38%	44%	39%
HDD	4,686	4,274	4,721	6,733	4,357
CDD	1,389	1,382	1,390	752	1,492
Clean Fuel Stations per 1,000 people	0.12	0.28	0.11	0.20	0.11
Total 2006-2011 SF Building Permits per 1,000 people	26	20	27	20	27
Average 2005-2011 Per Capita Income	22,796	31,526	22,185	26,994	22,184
Average 2005-2011 Population	5,154	16,252	4,682	3,494	5,487
Very Conservative	16%	6%	17%	0%	18%
Conservative	28%	19%	28%	4%	31%
Moderate	21%	26%	20%	10%	22%
Liberal	28%	26%	28%	77%	20%
Very Liberal	9%	23%	7%	9%	8%
D1: New England (CT, ME, MA, NH, RI, VT)	2%	10%	2%	0%	3%
D2: Middle Atlantic (NJ, NY, PA)	3%	8%	2%	9%	2%
D3: East North Central (IN, IL, MI OH WI)	15%	13%	15%	0%	17%
D4: West North Central (IA, KS, MN MO, NE, ND, SD)	29%	6%	31%	65%	23%
D5: South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA)	9%	20%	8%	7%	9%
D6: East South Central (AL, KY, MS, TN)	8%	3%	8%	0%	9%
D7: West South Central (AR, LA, OK, TX)	16%	9%	17%	3%	18%
D8: Mountain (AZ, CO, ID, NM, MT, UT, NV, WY)	7%	14%	7%	3%	8%
D9: Pacific (AK, CA, HI, OR, WA)	12%	18%	11%	12%	12%
Observations	6708	518	6190	929	5779

Table 4: Regression Results with Any Policy as Treatment Variable

The following table details the coefficient results for Probit (Columns 1 & 3) and Negative Binomial (Columns 2 & 4) regressions. In each of these equations, the treatment variable has a value of 1 if there is any LEED incentive policy affecting the municipality (municipal, county, or state policy). Columns 3 & 4 include CEM weights. *, **, and *** indicate statistical significance at the 10, 5, and 1 percent level of analysis.

<i>Dependent Variable</i>	(1) LEED Dummy	(2) Total LEED	(3) LEED Dummy	(4) Total LEED
Any Policy Dummy	0.2270991 *** (.0873)	1.095313 *** (.2737)	-0.014392 (.0906)	1.167783 *** (.3202)
Very Conservative	-0.4063256 *** (.1086)	-0.541248 (.4282)	-0.260916 ** (.1298)	-0.195191 (.3884)
Conservative	-0.1567365 * (.0804)	-0.769736 *** (.2921)	-0.034178 (.1073)	-0.471532 * (.2661)
Liberal	-0.3735889 *** (.0861)	-1.025921 *** (.2586)		-0.432402 * (.2431)
Very Liberal	0.0223669 (.1004)	0.5947375 (.4381)	0.1384935 *** (.1110)	1.032269 ** (.5277)
Top 100 MSA Dummy	-0.1006843 (.0711)		-0.025639 *** (.0931)	
Ln(Total HDD & CDD)	-0.0673169 (.0808)	-0.382739 (.2675)	0.0034666 (.1135)	-0.350492 (.2930)
Scaled Clean Fuel Stations	0.0920189 ** (.0404)			
PCI Quintile 2				1.066801 ** (.4778)
PCI Quintile 3		1.090067 *** (.3504)		1.698965 *** (.4885)
PCI Quintile 4	0.5140318 *** (.0742)	1.417991 *** (.2845)	0.5275788 *** (.0905)	2.270469 *** (.4721)
PCI Quintile 5	0.8636932 *** (.0790)	2.035037 *** (.2503)	0.8440201 *** (.0939)	2.72856 *** (.4315)
Population Quintile 2	0.5718725 *** (.1465)	1.136316 ** (.5437)	0.5947732 *** (.2258)	1.154909 ** (.4782)
Population Quintile 3	0.6937873 *** (.1440)	1.168803 ** (.4903)	0.6740132 *** (.2236)	1.481004 *** (.4837)
Population Quintile 4	0.798892 *** (.1434)	1.834143 *** (.4947)	0.9575893 *** (.2287)	2.227874 *** (.4613)
Population Quintile 5	1.311143 *** (.1405)	3.838829 *** (.4890)	1.41088 *** (.2274)	4.223419 *** (.4702)
Total Scaled Building Permits	0.000033 (.0000)		0.001037 (.0008)	
Multiple Policies Dummy				-1.053804 ** (.4542)
Constant	-2.026093 *** (.7299)	-1.411533 (2.4649)	-2.78158 *** (1.0468)	-2.840407 *** (2.6911)
Observations	6558	6558	6440	6440
Pseudo R ²	0.1741		0.1955	
CEM Weights	No	No	Yes	Yes

Table 5: Regression Results with Municipal-level Policy as Treatment Variable

The following table details the coefficient results for Probit (Columns 1 & 3) and Negative Binomial (Columns 2 & 4) regressions. In each of these equations, the treatment variable has a value of 1 if there is a municipal-level LEED incentive policy affecting the municipality. Columns 3 & 4 include CEM weights. *, **, and *** indicate statistical significance at the 10, 5, and 1 percent level of analysis.

<i>Dependent Variable</i>	(1) LEED Dummy	(2) Total LEED	(3) LEED Dummy	(4) Total LEED
Municipal Policy Dummy	1.419415 *** (.2855)	2.592124 *** (.7213)	0.5350325 (.4382)	0.4167254 (.4142)
Very Conservative	-0.4106907 *** (.1092)	-0.879919 ** (.4346)	-0.66447 *** (.2372)	-1.62063 *** (.5574)
Conservative	-0.1563536 * 0806)	-1.033589 *** (.3017)	0.0481144 (.2365)	-0.864268 ** (.3957)
Liberal	-0.3059354 *** (.0816)	-1.16911 *** (.2792)	-0.274993 (.2188)	-1.267887 *** (.3872)
Very Liberal	0.0591654 (.1011)	0.722979 (.4706)		
Top 100 MSA Dummy	-0.0880692 (.0705)		0.360566 * (.1998)	0.3053528 (.3574)
Ln(Total HDD & CDD)	-0.069839 (.0886)	-0.152966 (.2703)	0.5313636 ** (.2164)	0.2591894 (.4708)
Scaled Clean Fuel Stations	0.0900339 ** (.0401)		3.026529 *** (.7868)	2.306228 (1.6029)
PCI Quintile 2				2.451634 *** (.6608)
PCI Quintile 3		1.097417 *** (.3765)	0.2433135 (.4856)	3.786 *** (.6830)
PCI Quintile 4	0.5151178 *** (.0743)	1.36044 *** (.2912)	1.088234 *** (.3385)	4.893954 *** (.6466)
PCI Quintile 5	0.8744643 *** (.0789)	1.97112 *** (.2540)	0.720217 ** (.3292)	4.560213 *** (.6533)
Population Quintile 2	0.5556866 *** (.1469)	1.174702 ** (.5243)		
Population Quintile 3	0.6804346 *** (.1444)	1.247913 *** (.4797)		
Population Quintile 4	0.7622872 *** (.1435)	2.060257 *** (.5155)	0.2080708 (.3289)	
Population Quintile 5	1.256548 *** (.1409)	3.964604 *** (.4824)	0.8083878 *** (.2570)	2.494463 *** (.3365)
Total Scaled Building Permits	0.0000305 (.0000)		-0.001053 (.0028)	-0.003928 (.0061)
Multiple Policies Dummy	-0.3631354 * (.1877)	-0.849394 (.5833)	-0.078427 (.4039)	
Constant	-1.975374 ** (.7948)	-3.132073 (2.4923)	-6.575571 *** (1.9697)	-7.199806 * (4.1040)
Observations	6558	6558	1901	1901
Pseudo R ²	0.1816		0.1443	
CEM Weights	No	No	Yes	Yes

Table 6: Regression Results with County-level Policy as Treatment Variable

The following table details the coefficient results for Probit (Columns 1 & 3) and Negative Binomial (Columns 2 & 4) regressions. In each of these equations, the treatment variable has a value of 1 if there is a county-level LEED incentive policy affecting the municipality. Columns 3 & 4 include CEM weights. *, **, and *** indicate statistical significance at the 10, 5, and 1 percent level of analysis.

<i>Dependent Variable</i>	(1) LEED Dummy	(2) Total LEED	(3) LEED Dummy	(4) Total LEED
County Policy Dummy	-1.094297 *** (.2815)	-1.911719 *** (.6874)	-0.7278127 (.4956)	-1.025269 (.6800)
Very Conservative	3981 *** (.1091)	-0.878068 ** (.4358)	-0.5383511 *** (.1672)	-0.823309 ** (.3958)
Conservative	-0.1626712 ** (.0805)	-1.072591 *** (.3019)	-0.231458 * (.1299)	-0.918051 *** (.2968)
Liberal	-0.3111645 *** (.0816)	-1.131524 *** (.2773)		-0.330058 (.2823)
Very Liberal	0.0522573 (.1009)	0.7265985 (.4734)	-0.0993205 (.1911)	
Top 100 MSA Dummy	-0.0897065 (.0704)		-0.1037232 (.1506)	
Ln(Total HDD & CDD)	-0.0677822 (.0882)	-0.273929 (.2783)	0.0413709 (.1751)	0.3460446 (.2815)
Scaled Clean Fuel Stations	0.0915938 ** (.0402)		1.113337 *** (.2857)	2.466698 *** (.9049)
PCI Quintile 2			0.2375656 (.2188)	1.996762 *** (.6162)
PCI Quintile 3		1.110551 *** (.3781)		2.124843 *** (.6092)
PCI Quintile 4	0.5181464 *** (.0742)	1.371901 *** (.2899)	0.9251778 *** (.2308)	2.923113 *** (.4610)
PCI Quintile 5	0.8748912 *** (.0786)	1.9442 *** (.2565)	0.9910184 *** (.1794)	2.693225 *** (.4605)
Population Quintile 2	0.5583681 *** (.1471)	1.173282 ** (.5242)		-0.033782 (.3920)
Population Quintile 3	0.6801432 *** (.1446)	1.229118 *** (.4795)		
Population Quintile 4	0.7644088 *** (.1436)	2.032023 *** (.5148)	0.4663536 ** (.1911)	0.9807916 *** (.3407)
Population Quintile 5	1.266916 *** (.1408)	3.954208 *** (.4807)	0.7098591 *** (.1541)	2.377355 *** (.3161)
Total Scaled Building Permits	0.0000306 (.0000)		0.0025915 (.0017)	
Multiple Policies Dummy	0.8972633 *** (.2375)	1.536571 *** (.5476)	0.2871006 (.4736)	0.6421314 (.5549)
Constant	-1.994007 ** (.7909)	-2.073974 *** (2.5578)	-2.544025 * (1.5211)	-7.343204 *** (2.4721)
Observations	6558	6558	4704	4704
Pseudo R ²	0.1774		0.1024	
CEM Weights	No	No	Yes	Yes

Table 7: Regression Results with State-level Policy as Treatment Variable

The following table details the coefficient results for Probit (Columns 1 & 3) and Negative Binomial (Columns 2 & 4) regressions. In each of these equations, the treatment variable has a value of 1 if there is a state-level LEED incentive policy affecting the municipality. Columns 3 & 4 include CEM weights. *, **, and *** indicate statistical significance at the 10, 5, and 1 percent level of analysis.

<i>Dependent Variable</i>	(1) LEED Dummy	(2) Total LEED	(3) LEED Dummy	(4) Total LEED
State Policy Dummy	0.2834962 *** (.1099)	1.282913 *** (.3194)	0.2096625 ** (.1070)	1.289176 *** (.3595)
Very Conservative	-0.4142954 *** (.1088)	-0.534693 (.4358)	-0.126942 (.1262)	-0.090285 (.4552)
Conservative	-0.1601485 ** (.0806)	-0.729603 ** (.2900)	-0.031894 (.1160)	-0.728427 ** (.3261)
Liberal	-0.3777628 *** (.0870)	-0.968564 *** (.2554)		-0.49603 * (.2871)
Very Liberal	0.0072345 (.1010)	0.5628245 (.4375)	0.230213 ** (.1069)	1.395602 ** (.6613)
Top 100 MSA Dummy	-0.0965862 (.0706)		-0.102338 (.0908)	
Ln(Total HDD & CDD)		-0.570396 ** (.2708)	-0.197736 * (.1102)	-1.012814 *** (.3654)
Scaled Clean Fuel Stations	0.0922453 ** (.0403)			-0.786629 ** (.3574)
PCI Quintile 2				
PCI Quintile 3		1.097179 *** (.3498)	0.0959132 (.1175)	
PCI Quintile 4	0.5161276 *** (.0742)	1.512822 *** (.2804)	0.3754375 *** (.0986)	0.8174045 *** (.2913)
PCI Quintile 5	0.8659181 *** (.0790)	2.057916 *** (.2494)	0.7886179 *** (.1171)	1.358097 *** (.2833)
Population Quintile 2	0.572374 *** (.1465)	1.158425 ** (.5520)	0.5976163 *** (.2200)	1.316945 *** (.4828)
Population Quintile 3	0.6948529 *** (.1440)	1.178033 ** (.4963)	0.7432603 *** (.2224)	1.620349 *** (.4706)
Population Quintile 4	0.7983415 *** (.1433)	1.791239 *** (.4955)	0.8530252 *** (.2236)	2.160734 *** (.4543)
Population Quintile 5	1.314681 *** (.1405)	3.890405 *** (.4968)	1.309299 *** (.2299)	4.153434 *** (.4856)
Total Scaled Building Permits	0.0000305 (.0000)		0.001213 (.0008)	
Multiple Policies Dummy				
Constant	-1.44366 * (.1584) .7925)	0.1595632 *** (2.4636)	-1.037088 (1.0159)	4.219105 (3.3587)
Observations	6558	6558	6145	6145
Pseudo R ²	0.1741		0.1909	
CEM Weights	No	No	Yes	Yes

Table 8: Correlation Matrix for Incentive Policy Types

The follow table provides the correlation coefficients for the seven categories of incentive programs used in this analysis. Despite many policies or locales offering multiple incentive categories, the correlation between these categories is quite low.

	Expedited Permitting	Fee Reduction	Density Bonus	Tax Abatement	Tax Credit	Grant	Other
Expedited Permitting	1.00						
Fee Reduction	0.41	1.00					
Density Bonus	0.22	0.17	1.00				
Tax Abatement	-0.01	0.00	0.01	1.00			
Tax Credit	-0.02	-0.02	-0.01	-0.04	1.00		
Grant	0.09	0.02	0.09	-0.06	0.02	1.00	
Other	0.03	-0.02	0.13	-0.05	-0.02	0.00	1.00

Table 9: Regression Results with Policy Types Broken Out

The following table details the coefficient results for Probit (Columns 1 & 3) and Negative Binomial (Columns 2 & 4) regressions. Only the treatment variable loadings are shown, with the control variable results suppressed. In each of these equations, the policy variables have a value of 1 if that type of LEED incentive policy is affecting the municipality. In Panel A, Columns 1 & 2 examine any policy level affecting the municipality (municipal, county, and state), and Columns 3 & 4 examine only municipal-level policies affecting the municipality. In Panel B, Columns 1 & 2 examine only county-level policies affecting the municipality, and Columns 3 & 4 examine only state-level policies affecting the municipality. *, **, and *** indicate statistical significance at the 10, 5, and 1 percent level of analysis.

Panel A

<i>Dependent Variable</i>	(1) LEED Dummy	(2) Total LEED	(3) LEED Dummy	(4) Total LEED
Any Expedited Permit Policy	0.294631 (.2396)	1.417212 ** (.6473)		
Any Fee Reduction Policy	0.7555522 ** (.3634)	0.7684007 (.6441)		
Any Density Bonus Policy	0.4145947 (.5691)	1.057719 (.9069)		
Any Tax Abatement Policy	-0.0890281 (.2166)	0.8441376 (.5839)		
Any Tax Credit Policy	1.342476 *** (.3016)	3.991575 *** (.6198)		
Any Grant Policy	0.3419823 (.2266)	3.116847 *** (.7946)		
Any Other Policy	-0.1204965 (.1253)	-1.049783 *** (.3263)		
Muni Expedited Permit Policy			0.8467137 ** (.3719)	1.842148 *** (.5982)
Muni Fee Reduction Policy			0.7249853 (.5284)	0.8293264 (.9238)
Muni Density Bonus Policy			-0.233848 (.7424)	-1.045511 (.7965)
Muni Tax Abatement Policy				4.560153 *** (.2964)
Muni Grant Policy			-0.010042 (.8141)	-0.693546 (.9660)
Muni Other Policy			1.688981 ** (.7349)	1.76113 * (.9795)
Observations	6558	6558	6558	6558
Pseudo R ²	0.1856		0.1779	
CEM Weights	No	No	No	No

Table 9: Regression Results With Municipal-level Policies Broken Out (Continued)

<u>Panel B</u>				
<i>Dependent Variable</i>	(1) LEED Dummy	(2) Total LEED	(3) LEED Dummy	(4) Total LEED
County Expedited Permit Policy	-0.1632582 (.3523)	-0.798304 (1.0270)		
County Fee Reduction Policy	0.2389348 (.5645)	-0.740173 (.8644)		
County Density Bonus Policy				
County Tax Abatement Policy	-0.6522649 (.4655)	0.1231271 (.8552)		
County Tax Credit Policy	0.4367233 (.4283)	-0.479455 (.7352)		
County Other Policy	-0.3885342 * (.2339)	-0.639968 (.7129)		
State Tax Abatement Policy			-0.002349 (.2719)	-0.250759 (.5857)
State Tax Credit Policy				4.899739 *** (.5966)
State Grant Policy				3.221025 *** (.7980)
State Other Policy			-0.089712 (.1523)	-0.982453 ** (.4244)
Observations	6558	6558	6558	6558
Pseudo R ²	0.1735		0.1686	
CEM Weights	No	No	No	No

Table 10: Categorical Treatment Variable Loadings from Probit and Count Regression Results

The following table details the coefficient results for Probit (Columns 1 & 3) and Negative Binomial (Columns 2 & 4) regressions. In each of these equations, the treatment variable has a value of 1 if there is any LEED incentive policy in the category listed affecting the municipality (municipal, county, or state policy). Columns 3 & 4 include CEM weights. *, **, and *** indicate statistical significance at the 10, 5, and 1 percent level of analysis.

	(1)	(2)	(3)	(4)
	Unweighted		Weighted	
	Probit	Count	Probit	Count
Expedited Permitting	0.4758383 ** (.2168)	0.755434 * (.4454)	-0.0297 (.2456)	-0.111074 (.4248)
Fee Reduction	0.8939616 *** (.3274)	0.469915 (.4388)	0.76305 ** (.3257)	0.8408683 * (.4847)
Density Bonus	0.6174146 (.4673)	0.002682 (.6867)	0.29213 (.4940)	-0.46018 (.7685)
Tax Abatement	-0.164464 (.2172)	0.914344 (.6767)	-0.4681 ** (.2351)	0.1592986 (.5482)
Tax Credit	1.431486 *** (.2615)	4.014653 *** (.4315)	1.59644 *** (.2821)	3.374645 *** (.4717)
Grant	0.4870332 *** (.1874)	2.356436 *** (.6533)	0.38173 * (.2100)	2.550782 *** (.7849)
Other	-0.1318187 (.1234)	-0.58815 * (.3398)	-0.227 * (.1161)	-0.855308 *** (.2984)

Table 11: EPET Regression Results Summary

Columns 1 through 10 provide the loadings, statistical significance, and standard errors for the treatment variable in the participation and count equations, and for the correlations between each of the three pairs of equations. At the bottom of each column is the p-value of a Wald Test with the hypothesis that none of the equations are correlated. This analysis is completed for any policy category at any government level (municipal, county, or state) in Column 1, for any policy category at the municipal, county, and state government levels in Columns 2, 3, and 4 (respectively), and for six of the seven policy categories at any government level in Columns 5 through 10; the results for Density Bonus did not converge. *, **, and *** indicate statistical significance at the 10, 5, and 1 percent level of analysis, respectively.

<i>Treatment Variable</i>	(1) Any Policy	(2) Municipal Policy	(3) County Policy	(4) State Policy	(5) Expedited Permitting
Treatment Loading in Participation	0.1340998 (.1489)	1.343038 (.3391) ***	-0.765271 (.2212) ***	0.0941846 (.1154)	-0.400435 (.3640)
Treatment Loading in Count	-1.304785 (.6088) **	4.365087 (1.1272) ***	-2.64656 (.7565) ***	-0.0977103 (.1751)	0.6148434 (.6148) ***
ρ , Treatment & Count	0.5863438 (.1174) ***	-0.7342192 (.1986) ***	0.6868625 (.1447) ***	0.38235 (.0704) ***	0.8774949 (.1029) ***
ρ , Participation & Count	0.0673835 (.1207)	0.2775926 (.1137) **	0.3492271 (.1060) ***	0.3473934 (.1106) ***	0.3286188 (.1278) ***
ρ , Treatment & Participation	0.0395099 (.0731)	-0.2038139 (.1026) **	0.239871 (.0935) ***	0.1328259 (.0397) ***	0.2883613 (.1129) **
Wald Test p-value ($\rho = \rho = \rho = 0$)	0.0000	0.0003	0.0000	0.0000	0.0000
<i>Treatment Variable</i>	(6) Fee Reduction	(7) Tax Abatement	(8) Tax Credit	(9) Grant	(10) Other
Treatment Loading in Participation	0.2943566 (.5779)	-0.239526 (.4615)	2.144966 (.6401) ***	0.5019607 (.2955) *	0.1338421 (.2032)
Treatment Loading in Count	-30385209 (.7681) ***	1.158072 (3.0802)	-2.706837 (.6221) ***	1.412583 (1.5255)	-2.204748 (1.3523)
ρ , Treatment & Count	0.9343571 (.1183) ***	0.0636283 (.8005)	0.0961173 (.0961) ***	-0.2589443 (.3186)	0.4335116 (.3201)
ρ , Participation & Count	0.2392795 (.1427) *	-0.1486656 (.1936)	-0.271812 (.1509) **	-0.3943297 (.1685) **	-0.252487 (.1879)
ρ , Treatment & Participation	0.2235725 (.1378)	-0.0094593 (.1268)	-0.232105 (.1468)	0.1021094 (.1354)	-0.109456 (.1123)
Wald Test p-value ($\rho = \rho = \rho = 0$)	0.0000	0.8753	0.0000	0.0631	0.2313

Figure 1: Mean Single Family Building Permits, 2005 through 2011

This table highlights the average annual single family building permits of the municipalities in the sample. All represents the average single family building permits annually for 2005 through 2011 for all reporting municipalities in the United States (approximately 6,500). LEED represents the same data for the approximately 370 municipalities which are home to at least one LEED certified single family home through year-end 2011. The expected fall off of single family construction during the recent housing crisis is evident in both groups, as is a stabilization of new home starts over the 2009 through 2011 period.

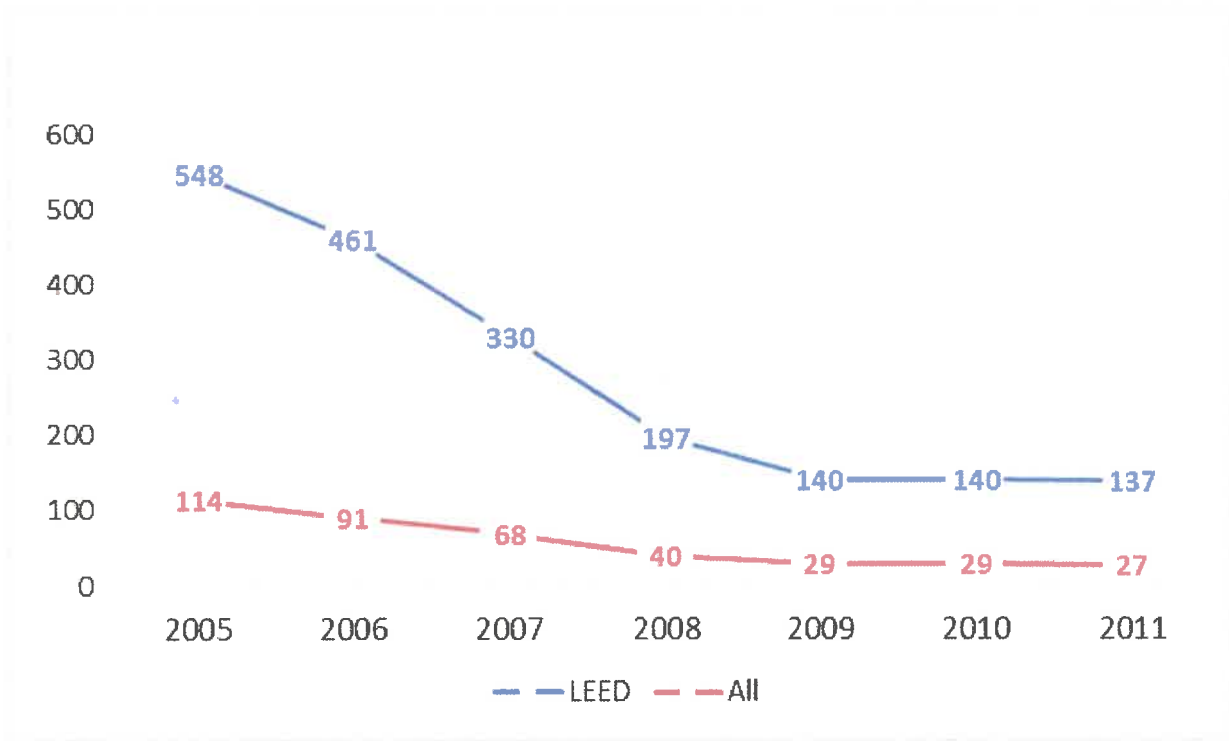
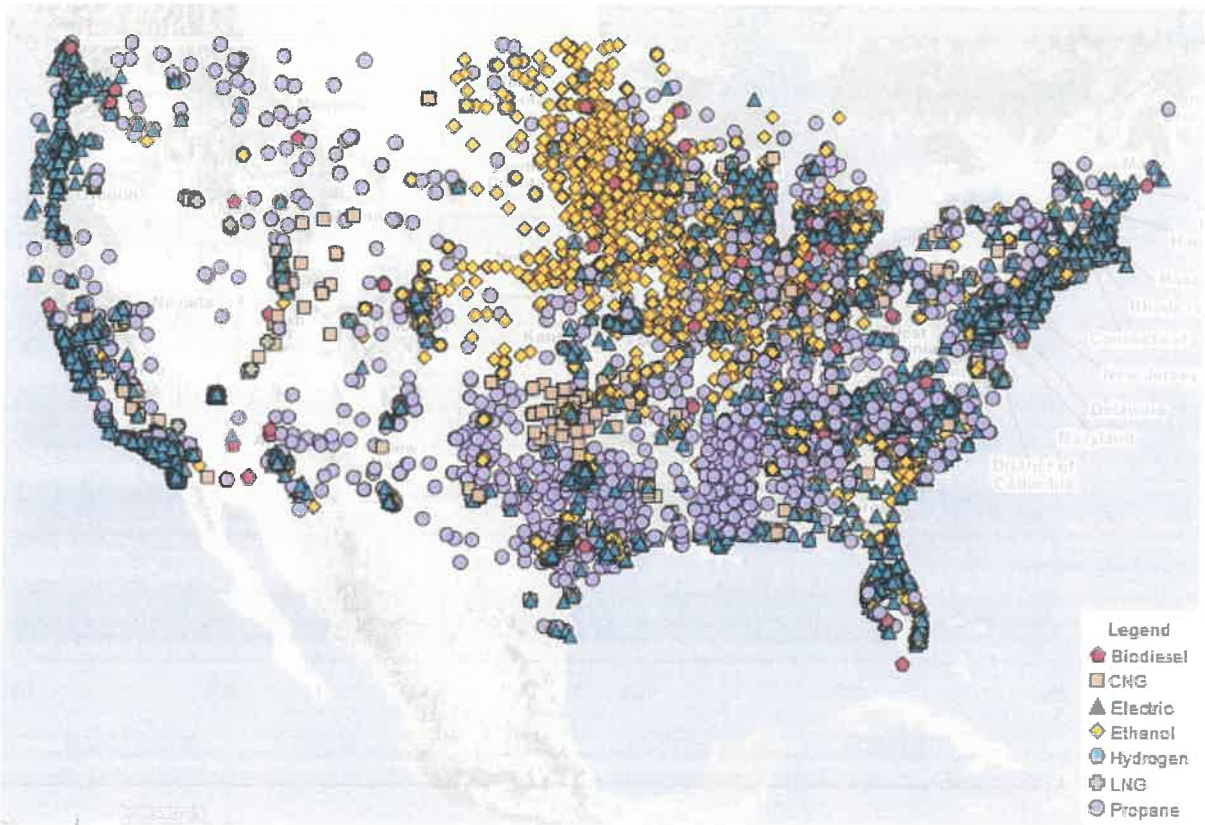


Figure 2: Clean Fuel Station Locations as of April 18th, 2013

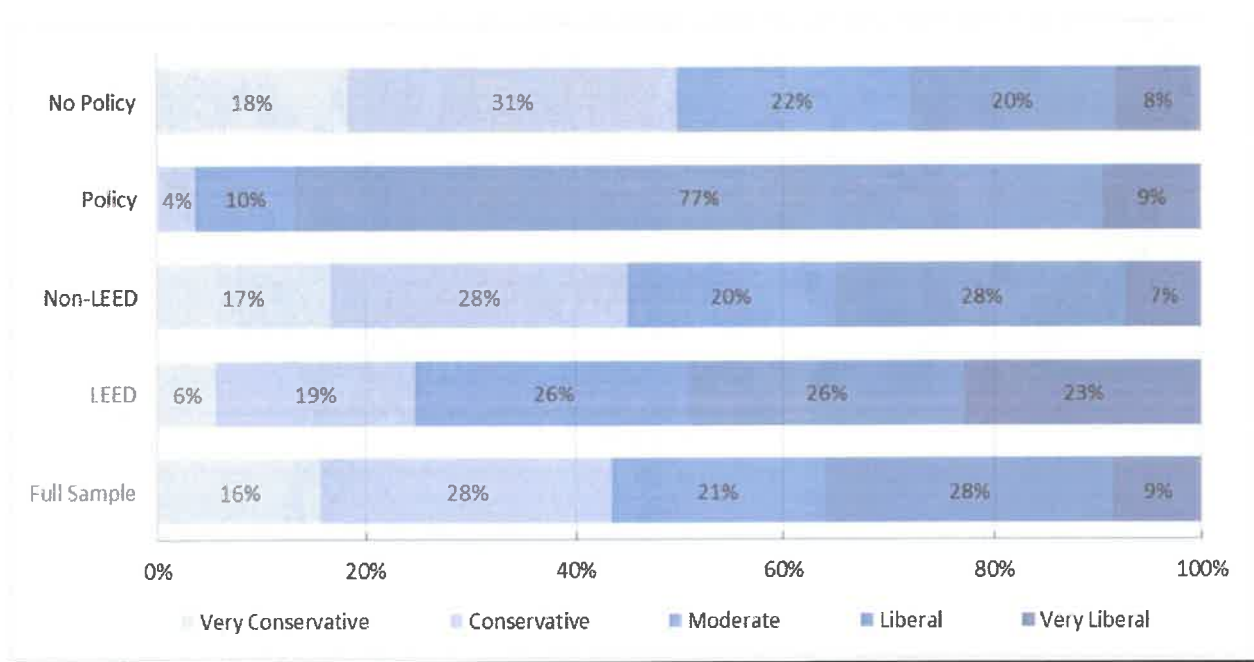
The following map notes the mainland locations of the 11,597 clean fuel stations in operation as of April 18th, 2013. This data is available from the Department of Energy and is updated in real time. While the most popular types of fueling stations include electric, ethanol and propane, this map shows the location of all seven tracked clean fuel station types: biodiesel, CNG (compressed natural gas), electric, ethanol, hydrogen, LNG (liquefied natural gas), and propane.



Source: Department of Energy, available at: http://www.afdc.energy.gov/fuels/electricity_locations.html

Figure 3: Distribution of Political Ideology

This graph highlights the distribution of political ideology in the full sample of municipalities as well as in the two subsets of municipalities: with and without LEED single family construction; with and without LEED incentivizing policy. Each bar is divided into the percent of municipalities whose state identifies as very conservative, conservative, moderate, liberal, or very liberal. This data is based on a year-long Gallup poll in 2012 collecting responses from individuals across the U.S. All five classifications are represented in each sample group with the exception of Policy (there are no very conservative areas in this subsample).





U.S. GREEN BUILDING COUNCIL

Green Building Economic Impact Study

September 2015

PREPARED FOR

U.S. Green Building Council
2101 L Street, NW, Suite 500
Washington, DC 20037

PREPARED BY

Booz Allen Hamilton
8283 Greensboro Drive
McLean, VA 22108

Booz | Allen | Hamilton

About

U.S. Green Building Council

The U.S. Green Building Council (USGBC) is committed to a prosperous, healthy and sustainable future through cost-efficient and energy-saving green buildings. USGBC works toward its mission of market transformation through its LEED green building certification program, robust educational offerings, a nationwide community and volunteer network of thousands of individuals, the annual Greenbuild International Conference & Expo, the Center for Green Schools and advocacy in support of public policy that encourages and enables green buildings and communities.

Industry-led and consensus-driven, USGBC is as diverse as the marketplace it serves. Membership includes nearly 13,000 building owners and end-users, real estate developers, facility managers, architects, designers, engineers, general contractors, subcontractors, product and building system manufacturers, government agencies, and nonprofits. Leaders from within each of these sectors participate in the development of the LEED certification system and the direction of the organization through volunteer service on USGBC's open committees.

Leadership in Energy and Environmental Design (LEED) USGBC's LEED green building program is the foremost program for the design, construction, maintenance and operations of green buildings, homes and communities. By using less energy, LEED-certified spaces save money for families, businesses and taxpayers; reduce carbon emissions; and contribute to a healthier environment for residents, workers and the larger community.

LEED is a globally recognized benchmark for green building. The rating systems are supported by numerous USGBC staff and volunteers who serve on committees and advisory groups that are constantly reevaluating LEED to ensure it remains technically rigorous, market relevant and leadership-oriented. Whether through clarification of language to a specific credit, an adaptation to an existing rating system or a comprehensive update to the entire suite of rating systems, our experts are dedicated to keeping LEED on the leading edge of the sustainable design and building movement.

Booz Allen Hamilton

Booz Allen Hamilton has been at the forefront of strategy and technology consulting for 100 years. Today, Booz Allen is a leading provider of management consulting, technology, and engineering services to the US government in defense, intelligence, and civil markets, and to major corporations, institutions, and not-for-profit organizations. Booz Allen Hamilton partners with clients to solve their most important and complex problems, making their mission our mission, and delivering results that endure. With a culture that thrives on collaboration, reinforced by our intimate client connections and key external alliances, Booz Allen tackles today's market trends with a focus on the future.

Learn More

usgbc.org

boozallen.com

Table of Contents

Executive Summary vi

1 Introduction 1

2 Data and Methodology 3

3 National Green Construction Economic Impact 10

4 National LEED Construction Economic Impact 17

5 State Green Construction Economic Impact 24

6 State LEED Construction Economic Impact 33

7 Selected Savings 42

8 Tax Contributions by State 51

9 Conclusions 54

Appendix A: Glossary of Terms A-1

Appendix B: IMPLAN Background and General Methods A-4

Appendix C: Green & LEED Methodology Data Tables A-5

Appendix D: IMPLAN Results for Green Construction A-11

Appendix E: IMPLAN Results for USGBC Impact A-13

Appendix F: Tax Contributions by State A-15

Appendix G: References A-19

List of Tables and Figures

FIGURE 3.1: NATIONAL GREEN CONSTRUCTION SPENDING (\$)	12
TABLE 3.1: NATIONAL GREEN CONSTRUCTION SPENDING	12
TABLE 3.2: SUMMARY OF NET IMPACT OF NATIONAL GREEN CONSTRUCTION EXPENDITURES	13
FIGURE 3.2: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL GREEN CONSTRUCTION ON GDP (\$)	14
TABLE 3.3: TOTAL IMPACT OF NATIONAL GREEN CONSTRUCTION ON GDP (\$, BILLIONS)	14
FIGURE 3.3: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL GREEN CONSTRUCTION ON EMPLOYMENT (JOBS)	15
TABLE 3.4: TOTAL IMPACT OF NATIONAL GREEN CONSTRUCTION ON EMPLOYMENT (JOBS)	15
FIGURE 3.4: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL GREEN CONSTRUCTION ON LABOR EARNINGS (\$)	16
TABLE 3.5: TOTAL IMPACT OF NATIONAL GREEN CONSTRUCTION ON LABOR EARNINGS (\$, BILLIONS)	16
FIGURE 4.1: NATIONAL LEED CONSTRUCTION SPENDING (\$)	19
TABLE 4.1: NATIONAL LEED CONSTRUCTION SPENDING (\$, BY YEAR)	19
TABLE 4.2: SUMMARY OF NET IMPACT OF NATIONAL LEED-CERTIFIED CONSTRUCTION EXPENDITURES	20
FIGURE 4.2: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL LEED-CERTIFIED CONSTRUCTION ON GDP (\$)	20
TABLE 4.3: TOTAL IMPACT OF NATIONAL LEED CONSTRUCTION ON GDP (\$, BILLIONS)	21
FIGURE 4.3: TOTAL DIRECT, INDIRECT, INDUCED IMPACT OF NATIONAL LEED CONSTRUCTION ON EMPLOYMENT (JOBS)	21
TABLE 4.4: TOTAL IMPACT OF NATIONAL LEED CONSTRUCTION ON EMPLOYMENT (JOBS)	22
FIGURE 4.4: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL LEED-CERTIFIED CONSTRUCTION ON LABOR EARNINGS (\$)	22
TABLE 4.5: TOTAL IMPACT OF NATIONAL LEED CONSTRUCTION ON LABOR EARNINGS (\$, BILLIONS)	23
TABLE 5.1: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON GDP (2011-2014, \$, BILLIONS)	25
TABLE 5.2: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON GDP (2015-2018, \$, BILLIONS)	26
TABLE 5.3: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2011-2014, JOBS)	27
TABLE 5.4: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2015-2018, JOBS)	28
TABLE 5.5: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2011-2014, \$, BILLIONS)	30
TABLE 5.6: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2015-2018, \$, BILLIONS)	31
TABLE 6.1: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON GDP (2011-2014, \$, BILLIONS)	33
TABLE 6.2: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON GDP (2015-2018, \$, BILLIONS)	35
TABLE 6.3: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2011-2014, JOBS)	36
TABLE 6.4: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2015-2018, JOBS)	37
TABLE 6.5: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2011-2014, \$, BILLIONS)	39
TABLE 6.6: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2015-2018, \$, BILLIONS)	40
FIGURE 7.1: ESTIMATED EQUIVALENTS FOR ENERGY BENEFITS	44
FIGURE 7.2: SELECTED SAVINGS FOR GREEN CONSTRUCTION (\$)	45
TABLE 7.1: SELECTED SAVINGS FOR GREEN CONSTRUCTION (\$, BY YEAR)	45
FIGURE 7.3: SELECTED SAVINGS FOR LEED CONSTRUCTION (\$)	46
TABLE 7.2: SELECTED SAVINGS FOR LEED CONSTRUCTION (\$)	46
FIGURE 7.4: SELECTED SAVINGS FOR GREEN CONSTRUCTION BY CATEGORY (\$)	46
TABLE 7.3: SELECTED SAVINGS FOR GREEN CONSTRUCTION BY CATEGORY (\$, MILLIONS)	47
FIGURE 7.5: SELECTED SAVINGS FOR LEED CONSTRUCTION BY CATEGORY (\$)	48
TABLE 7.4: SELECTED SAVINGS FOR LEED CONSTRUCTION BY CATEGORY (\$, MILLIONS)	48
TABLE 7.5: PER SQUARE FOOT ENERGY SAVINGS BY CERTIFICATION LEVEL (\$/ SQ. FT)	49
TABLE 7.6: PER SQUARE FOOT TRASH SAVINGS BY CERTIFICATION LEVEL (\$/ SQ. FT)	49
TABLE 7.7: PER SQUARE FOOT WATER SAVINGS BY CERTIFICATION LEVEL (\$/ SQ. FT)	50
TABLE 7.8: PER SQUARE FOOT MAINTENANCE BY CERTIFICATION LEVEL / SQ. FT	50
TABLE 8.1: STATE TAX CONTRIBUTIONS (2015-2018, \$, MILLION)	52
TABLE C.1: NEW GREEN CONSTRUCTION SPENDING BY ASSET TYPE (\$ MILLIONS)	A-5
TABLE C.2: NEW GREEN CONSTRUCTION SPENDING BY ASSET TYPE (CONTD.) (\$ MILLIONS)	A-5
TABLE C.3: HISTORICAL INDEX FOR CONSTRUCTION COST BY YEAR	A-6
TABLE C.4: LOCATION COST FACTORS FOR CONSTRUCTION BY STATE	A-6
TABLE C.5: CONSTRUCTION SPENDING BY ASSET TYPE (\$/FT ²)	A-7
TABLE C.6: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)	A-8
TABLE C.7: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)	A-8
TABLE C.8: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)	A-9
TABLE C.9: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)	A-9
TABLE C.10: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)	A-10
TABLE C.11: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)	A-10

TABLE D.1: GREEN CONSTRUCTION GDP NET ECONOMIC IMPACT (\$, BILLIONS) (SPENDING - SAVINGS)	A-11
TABLE D.2: CONSTRUCTION EMPLOYMENT NET ECONOMIC IMPACT (SPENDING - SAVINGS)	A-11
TABLE D.3: GREEN CONSTRUCTION LABOR EARNINGS NET ECONOMIC IMPACT (\$, BILLIONS) (SPENDING - SAVINGS)	A-12
TABLE E.1: LEED CONSTRUCTION GDP NET ECONOMIC IMPACT (\$, BILLIONS) (SPENDING - SAVINGS)	A-13
TABLE E.2: LEED CONSTRUCTION EMPLOYMENT NET ECONOMIC IMPACT (SPENDING - SAVINGS)	A-13
TABLE E.3: LEED CONSTRUCTION LABOR EARNINGS NET ECONOMIC IMPACT (\$, BILLIONS) (SPENDING - SAVINGS).....	A-14
TABLE F.1: ANNUAL INCOME TAX BY STATE (\$, MILLIONS).....	A-15
TABLE F.2: ANNUAL PROPERTY TAX BY STATE (\$, MILLIONS).....	A-16
TABLE F.3: TOTAL ANNUAL TAXES BY STATE (\$, MILLIONS)	A-17

Executive Summary

The U.S. Green Building Council (USGBC) presents the Green Building Economic Impact Study, prepared by Booz Allen Hamilton (Booz Allen). The study explores the multifaceted economic contribution of green construction to the U.S. market. Building from the 2009 Green Jobs Study¹ that Booz Allen compiled for USGBC, we have refined the methodology and data to account for the evolving market environment. In this study we have quantified the economic value creation from green construction and Leadership in Energy and Environmental Design (LEED) building construction in gross domestic product (GDP), jobs, labor earnings, individual states' tax contributions, and environmental indicators at the national and state levels. The increase in green construction spending is notable, however the direct, indirect, and induced economic impact of this growth is yet to be reported in detail. This study elucidates these direct, indirect, and induced economic impacts.

The future for the green industry is projected to see positive growth for years to come, with its influence reaching across the U.S. economy with significant environmental and social benefits being generated to protect the people and the planet. Our findings show that green building construction growth currently outpaces general construction and will continue to do so through 2018. Annual green construction spending is expected to grow 15.1% year over year (YoY) for 2015-2018, with annual spending projected to increase from \$150.6 billion in 2015 to \$224.4 billion in 2018. LEED construction spending is forecast to have a year-over-year growth rate of 12.3%, increasing from a \$61.8 billion spending in 2015, to \$78.6 billion spending in 2018. LEED residential is forecasted at a high YoY growth rate of 31.1% during the period of 2015 to 2018, reflecting its potential given the historically small market penetration. The LEED commercial forecast demonstrates a steady YoY growth rate of 8.5% for 2015-2018. Estimates of the economic impact of green building construction for 2015-18 show a significant increase in impact on GDP, jobs, and labor earnings as compared to 2011-14.

National Green Construction Cumulative Direct Economic Impact

From 2011-2014, the green construction market has:

- Generated \$167.4 billion in GDP
- Supported over 2.1 million jobs
- Provided \$147.7 billion in labor earnings

From 2015-2018, this study predicts that green construction will:

- Generate an additional \$303.4 billion in GDP
- Support 3.9 million jobs
- Provide \$268.4 billion in labor earnings

¹Booz Allen Hamilton (2009). *USGBC Green Jobs Study*.

National LEED Construction Cumulative Direct Economic Impact

From 2011-2014, LEED-related construction spending has:

- Generated \$80.6 billion in GDP
- Supported 1 million jobs
- Provided \$70.9 billion in labor earnings

From 2015-2018, this study forecasts that LEED-related construction spending will:

- Generate an additional \$108.8 billion in GDP
- Support 1.4 million jobs
- Provide \$95.7 billion in labor earnings

1 Introduction

The construction industry, as a whole, has proven to be durable and able to withstand external influences after the initially lagging recovery following the economic downturn of 2009.² Both residential and nonresidential building sectors have experienced growth since 2011, creating essential jobs and noticeably contributing to GDP. Although the growth of the construction industry has mirrored that of the overall economy since 2009, there has been a steady increase in investments and bank lending, allowing for the possibility of more sustained economic development positively affecting construction going forward.

Green construction represents a portion of building activity as a whole and its growth rate has outpaced general construction over the past few years.³ The green construction market is expected to continue its growth in the coming years due to sustained investment in green technologies, manageable inflation rates, increased government infrastructure spending, declines in long-term interest rates, and a steady market signal for green construction and resale value.⁴ Local and national policy has continued to support green construction and renovation due to multiple drivers such as changes in code, and regional, state and national emphasis on energy efficiency, greenhouse gas reduction, and creating more jobs domestically.⁵ LEED construction is a market leader of green construction and continues to be a key influencer of widespread green construction adoption over the next four years. Economic and social benefits to owners and occupants, incentive utility program benefits, decreased lifecycle costs, and increased asset value are among the reasons that companies and individuals will continue to choose to build LEED-certified buildings. These benefits, as well as quantifiable environmental benefits including reduction in carbon footprint will be amongst the reasons for government bodies to continue to choose to build LEED-certified buildings.

This study aims to provide a methodical analysis of the economic value of both green and LEED-certified building construction at the national and state levels. We began by forecasting construction spending for green construction and LEED-certified construction. Next, we examined the economic impacts of green and LEED construction, including total jobs supported. Finally, we analyzed state revenue contributions from LEED construction. This report follows in broad strokes the topics of the 2009 USGBC Green Jobs Study, leveraging newly published data pertaining to green and LEED-certified building construction to expand the detail of our forecasts and analyses.

In the following nine sections, we project annual green and LEED construction spending for the years 2015-2018 and provide an analysis of both green construction's and LEED construction's contributions to key economic indicators including GDP, jobs, and labor earnings. Each section details the assumptions, analysis, and key takeaways of the economic impact of both green and LEED-certified building construction, with accompanying figures and tables throughout. In addition to quantifying the economic impact of green and LEED construction, we have estimated the savings

² Booz Allen Hamilton (unpublished). Analysis of U.S. Census Bureau construction spending data retrieved from <http://www.census.gov/econ/currentdata/>

³ Dodge Data & Analytics (2012). *2013 Dodge Construction Green Outlook Report*.

⁴ JLL (2013). *U.S. Construction Outlook Report*.

⁵ The American Institutes of Architects (2009). *Local Leaders in Sustainability- Green Building Policy in a Changing Economic Environment*.

of these sectors. The report concludes with an analysis of LEED construction's impact on state tax revenues and forecasts the four-year impact (2015-2018).

Specifically:

- Section 2 identifies the central data sources used and the accompanying methodology, including use of literature and models.
- Section 3 estimates the national economic impact resulting from the total green construction market, including the total value of green construction.
- Section 4 estimates the national economic impact resulting from LEED-related expenditures for all LEED-certified buildings.
- Sections 5 and 6 provide the results of an analysis of green and LEED construction economic impacts, respectively, at the state level.
- Section 7 estimates the energy savings and selected environmental benefits for the total green construction market and for LEED-certified buildings.
- Section 8 evaluates tax contributions of LEED construction by state.
- Section 9 summarizes the study's conclusions.

2 Data and Methodology

Data Sources

Our analysis used a robust set of data on the U.S. construction industry and green construction industry, which is tracked annually and projected out for three years (until 2017). For the LEED construction industry, the USGBC project database captures data for over 80,000 projects including project size, location, building asset type and certification level. To construct a robust methodology, we have utilized best available data and combined it with sound modeling techniques.

A key data source is the 2015 Dodge Construction Outlook report, which provides the forecast of U.S. construction starts, including detailed analysis of the industry's economic environment and market trends. It discusses recent developments in economic affairs and how they shape the construction outlook. According to the report, construction starts are expected to increase 9% in 2015 and will reach \$612 billion.⁶ The 2015 Dodge Construction Outlook analyzes which sectors of the U.S. construction market will see improvement over the year and which sectors will continue to struggle toward a long-awaited recovery. It covers the major sectors of the U.S. construction market with breakouts for detailed categories within the residential, nonresidential and engineering sectors.

Dodge Data & Analytics' Green Building Market Sizing is based on its construction market forecast, project data, and substantiated by additional research, analysis and surveys conducted by Dodge Data & Analytics between 2005 and 2013. Building codes, legislation, and policies are also used in determining market estimates.

Dodge Data & Analytics defines the Green Construction Market as follows:

"We define green building as one built to LEED standards, an equivalent green building certification program, or one that incorporates numerous green building elements across five category areas: energy efficiency, water efficiency, resource efficiency, responsible site management and improved indoor air quality. Projects that only feature a few green building products (e.g., HVAC systems, waterless urinals) or that only address one aspect of a green building, such as energy efficiency, are not included in this calculation."⁷

Based on this definition, Dodge Data & Analytics evaluates a project in its sample pool to determine whether it should be categorized as part of the green construction market. If a project is determined to meet the criteria above, the entire project value is deemed to be part of the green construction market, not just the share of the project that can be traced to green building elements. The value of each project is logged in the database according to the construction start date. Therefore, if a \$100 million building is scheduled to break ground in 2016, the entire \$100 million project value will be assigned to 2016, regardless of the planned construction schedule or how long the project actually takes to complete. The database primarily captures new construction data; however, major renovations are also included.

⁶ Dodge Data & Analytics (2014). *2015 Construction Outlook Report*.

⁷ Dodge Data & Analytics (2012). *2013 Dodge Construction Green Outlook Report*.

This definition is clarified as follows: “Equally important, the definition does not include administrative or non-construction professionals working for design or construction firms, including accounting, marketing and green cleaning staff. It also does not include the manufacturing of green products.”

The Dodge Data & Analytics report provides the greatest volume of data for our analysis. However, additional, smaller data sets were required for individual analyses. These specific data sets are described in the relevant methodology sections below.

Modeling Techniques

The economic impact from annual green construction spending and savings was calculated for the entire U.S. using the IMPLAN model. The national economic impacts in terms of direct, indirect, and induced effects were then disaggregated by states based on each state’s ratio of green spending and savings relative to the nation. Within this analysis:

- **Direct** effects are the initial economic changes to the impacted industry (e.g., a general contractor who constructs a green building).
- **Indirect** effects represent the increased economic activity generated for downstream businesses that provide supplies and raw materials for the industries directly affected (e.g., the general contractor purchases supplies from steel and lumber companies).
- **Induced** effects capture the economic impact from the increased income of households that are directly and indirectly affected by green building expenditures (e.g., employees of the general contractor, the steel supplier, and the lumber supplier use their additional income from green construction spending to purchase products and services from food and gas to healthcare and education).

The annual green construction spending and savings estimates, which were pulled from reputable sources, were grouped into 14 economic sectors within the IMPLAN model. For each impacted economic sector, IMPLAN calculates the direct, indirect, and induced effects on GDP, jobs, and labor earnings (wages). Construction spending will generate positive economic impact, whereas savings will reduce economic activity within an industry sector.

Calculated LEED spending and savings were assigned to 11 economic sectors based on an analysis of the types of buildings that are LEED certified. Similarly, green spending and savings were assigned to 11 economic sectors listed below.

These 11 sectors were selected based on the type of LEED-certified buildings since economic impact would depend on total spending on LEED projects. For example, a new build high-rise office building will have a different economic impact than retrofitting an existing high-rise office building since its construction spending for the new high-rise office building would be considerably higher resulting in greater impact. Similarly, construction spending on a hospital will have a different economic impact than construction on single-family homes. Based on this approach, construction spending will have a positive impact on the following 11 economic sectors:

- Construction of new health care structures
- Construction of new manufacturing structures
- Construction of new educational and vocational structures
- Construction of new highways and streets
- Construction of new commercial structures, including farm structures
- Construction of other new nonresidential structures
- Construction of new single-family residential structures

- Construction of new multifamily residential structures
- Maintenance and repair construction of nonresidential structures
- Maintenance and repair construction of residential structures
- Maintenance and repair construction of highways, streets, bridges, and tunnels

The five categories that will experience economic contraction as a result of the non-residential and residential structure maintenance savings are as follows:

- Maintenance and repair construction of nonresidential structures
- Maintenance and repair construction of residential structures
- Waste management and remediation services
- Water, sewage, and other water treatment systems
- Electric power generation, transmission, and distribution

The model produces economic impact on national GDP, jobs and labor earnings by these specific economic sectors.

Analytical Methodology

Below we provide an overview of the data sources, approach, and methodology for the analyses of:

- Green Construction
- LEED Construction
- Tax Contributions by State

The results of our approach section, acted as inputs for our IMPLAN model and were segmented into the different economic sectors we considered for our analysis. We went about calculating construction spending and savings associated with green and LEED construction from 2005 to 2018. Our state-level segmentation approach for spending and savings for both, green and LEED construction has also been detailed below. Finally, we have elaborated on our approach to forecast State Tax contributions by LEED construction for all 50 states between 2015 and 2018.

National Green Construction Approach

Dodge Data & Analytics' 2013 Green Construction Outlook⁸ provides estimates for years 2009 to 2016. Where a range of values was provided, we used the midpoint of the values. We then used these numbers to generate an estimate of the green construction market for all other years between 2005 and 2018. For this purpose we used exponential smoothing techniques in Tableau in considering various demand factors to forecast green construction spending based on historical data from the 2013 Green Construction Outlook Report. After conducting a thorough literature review of current green-related studies, we tested potential drivers and identified the major drivers of green construction growth, that is, the two with highest correlation, which include urbanization and GDP. Regressing historical data considering these demand drivers, we forecasted projections for Green Construction Spending until 2018. The result of these estimates can be seen in Appendix C. We further used this report to understand spending segmented by building asset type to assign this data toward IMPLAN codes for our Economic Impact Analysis model.

We conducted a Green Savings analysis, to size the potential costs avoided due to green construction compared to conventional construction for the following savings categories: energy,

⁸ Dodge Data & Analytics (2012). *2013 Dodge Construction Green Outlook Report*.

maintenance, trash, and water. For the purposes of calculating the economic impact of green construction, the value of savings reduces income for those impacted economic sectors we consider in our IMPLAN model. Dodge Data & Analytics does not report the number of square feet associated with the green construction market. This information is necessary to calculate the green construction market savings. To do this, we obtained data on the average green construction cost per square foot (\$/ sq. ft.) for a new building by building asset type. After segmenting green construction spending by building asset type, we calculated total annual square foot of each building asset type for 2015-18 by using total spending data by building asset type and per square foot cost data for that building asset type in 2015-2018. We used the 2015 RSMeans Square Foot Cost Book to get this data. Further, by using historical indices for construction, we calculated cost per square foot for all years between 2005-2015 and used this to size total annual square foot of green construction by building asset type from 2005-2015. This data is displayed in Appendix C. Using the aggregate annual square foot of green construction, we estimated the aggregate associated savings along energy, maintenance, trash and water, by multiplying it with per square foot green savings projections as explained in Section 7. We segmented this savings data to assign towards relevant IMPLAN codes for our Economic Impact Analysis model.

State-level Green Construction Approach

The approach utilized to analyze economic impact at the state level mirrors that of the national level approach modified for the change in scope. For the state analysis, we first used the 2013 Dodge Data & Analytics Green Outlook report to gain data regarding building asset type green construction spending and segmented overall green spending by building asset type. We then looked at CBRE's National Green Building Adoption Index report to capture green construction adoption rates based on location, in order to provide further insight into the projections for future green construction. Since individual state residential and non-residential green construction has different penetration levels, we ran independent exponential smoothing forecasts on each and calculated total green construction by state. For residential green construction, we used location cost factors and square foot cost of construction for residential projects, and used state-level split of spending provided in the 2013 Dodge Data & Analytics Green Outlook report⁹. For non-residential green construction, we used constructions put in place data from U.S. Census to understand total penetration for non-residential construction by state.¹⁰ Using both green adoption levels and non-residential construction penetration by state, we forecasted segmentation of non-residential green construction spending by state up to 2018. We proceeded to use location cost factors from the 2015 RSMeans Square Foot Cost Book¹¹ to calculate spending by state. We then added residential and non-residential green construction spending by state to calculate total state-level green construction spending. We used these spending ratios to model savings by state as well. Finally, we assigned both spending and savings by state to relevant IMPLAN codes for our Economic Impact Analysis model.

National LEED Construction Approach

The approach to determine the economic impact of LEED construction was based on the total cost of construction of LEED buildings plus certification fees. In contrast, the 2009 Green Jobs study was

⁹ Dodge Data & Analytics (2012). *2013 Dodge Construction Green Outlook Report*.

¹⁰ U.S. Census Bureau (2015, July). *Value of Construction Put in Place at a Glance*. Retrieved from: <https://www.census.gov/construction/c30/c30index.html>.

¹¹ Phelan, Marilyn. AIA (2015). *RSMeans Square Foot Costs, 36th annual edition*.

based on the marginal cost of LEED based on studies available at the time. Following analysis of the USGBC database of LEED certifications along with a thorough review of current LEED-related literature, we used exponential smoothing to forecast LEED construction assets by square foot based on historical LEED-certified project data. Our project database comprised of detailed information about location, certification level, construction square foot, certification type, registration date, and building asset type. We identified 12 major drivers of LEED construction growth and used Excel, R, and Tableau to run covariance analyses to determine most correlative factors such as Urbanization and GDP for each asset type. We then chose the two most correlated factors based on their p-values. We set our threshold value at 5% or 0.05. Both Urbanization and GDP had p-values lesser than 1% (p-values < 0.01) indicating we do not reject the null hypotheses of a significant test if the observed results have a 99% level of confidence. We forecasted projections for LEED Construction square foot growth for three different scenarios: baseline, pessimistic, and optimistic by using exponential smoothing technique on multivariate regression around these leading demand drivers. The optimistic forecast was chosen based on the assumption that economic conditions will continue in their positive trajectories and provide an incubator for the growth of the LEED construction market. Subsequently, we ran Monte Carlo simulations on these projections to gain a more realistic, tempered growth rate. In addition, we invalidated any potential spikes in LEED growth due to new version releases by plotting LEED version maturity curves and demonstrating that the version changes had little effect on the overall LEED demand curve.

Using USGBC's historical database we segmented this square foot data by building asset type from 2005-2018, as follows. Based on the per square foot cost by building asset type for green construction, we calculated the construction component of LEED spending for 2015. Specifically, we used the 2015 RSMMeans Square Foot Cost Book¹² for data on construction cost per square foot (\$/sq. ft.) for new buildings by building asset type. Further, we calculated and added the LEED certification fees by certification level for each building type for years 2015, the collective sum of which gave us LEED spending for 2015. Then, by using historical indices for construction, we calculated cost per square foot for all years between 2005-2015 and used this to size annual spending of LEED construction by building asset type from 2005-2015. We proceeded to forecast LEED construction spending from 2016 to 2018.

We conducted a LEED savings analysis to size the potential building owner expenditures avoided due to LEED construction over traditional construction for the following savings categories: energy, maintenance, waste, and water. After segmenting LEED construction spending by building asset type, we conducted a certification level analysis on USGBC's historical LEED project database. We segmented the historical LEED project database to get aggregate square foot data of LEED construction by certification level per year from 2005-2015 and also for forecasted projections until 2018. We proceeded to conduct a meta-analysis to calculate per square foot LEED savings projections for different LEED certification levels as described in section 7. Using the aggregate annual square foot of LEED construction by certification level, we estimated aggregate associated savings along energy, maintenance, trash and water, by multiplying it with the per square foot LEED savings projections. We segmented this savings data to assign toward relevant IMPLAN codes for our Economic Impact Analysis model.

¹² Phelan, Marilyn. AIA (2015). *RSMMeans Square Foot Costs, 36th annual edition.*

State-level LEED Construction Approach

The approach utilized to analyze economic impact at the state level is essentially the same as was used at the national level with a few exceptions. USGBC's historical LEED project database comprised of detailed information on which we conducted a location-based analysis to segment this database by state by year from 2005 to 2015. This analysis also helped us understand building asset type LEED construction segments by state, which helped estimate costs by state as per square foot costs by building asset type vary. We also looked at CBRE's National Green Building Adoption Index¹³ report to understand adoption rates based on location, in order to gain a better understanding of projections. Since state-wise LEED construction for residential and non-residential LEED construction has different penetration levels, we ran independent analysis on each and calculated total LEED construction by state. For residential LEED construction, we used the historical LEED project database, and looked at location cost factors and square foot costs of construction for residential projects and added LEED certification fees. For non-residential LEED construction, we ran a similar analysis, however using square foot construction data for different non-residential building asset types. We used the 2015 RSMeans Square Foot Cost Book¹⁴ for all square foot data. Thus, location-specific data was used to derive LEED construction for each state. We then added residential and non-residential LEED construction spending by state to get total state-level LEED construction spending. We used these spending ratios to get savings by state as well. Finally, we assigned both spending and savings by state to relevant IMPLAN codes for our Economic Impact Analysis model.

Tax Contributions by State Approach

To quantify the impact of LEED construction at the state level and to forecast the four-year impact (2015-2018), this study utilized income and property tax as measures of contribution. We then took data from the USGBC internal database and used a bottom-up approach that calculates tax revenues by building asset type (property type), income generated by individuals involved, rental income and other indirect and induced income tax generated by LEED construction. We collected individual historical state tax data and segmented tax income based on categories relevant to LEED construction. We did not include taxes around certifications and credentials, if any, from our calculations because they would have little impact to overall tax generated. We used tax information and segmented total jobs and construction jobs with state level results of our economic impact analysis. Further, we used average construction jobs data by state to calculate total income and tax associated. By using labor earnings by state for LEED construction, we calculated the individual income tax associated with each state. Similarly, we calculated corporate income tax by companies involved in construction by applying the national average proportion of corporate tax that represents rentals and construction (1.5%) to each state's total corporate tax revenues, and then segmented it by LEED penetration by state.¹⁵ By using project data, by asset type, by state, we ran an analysis to calculate property tax.

In this analysis, there were three major buckets of tax utilized: individual income tax, corporate income tax, and property tax. Individual income tax refers to the income tax collected from individuals with a LEED-related job. This state-imposed individual income tax was further split into

¹³ CBRE, Maastricht University, and real GREEN (2014). *National Green Building Adoption Index*.

¹⁴ Phelan, Marilyn. AIA (2015). *RSMeans Square Foot Costs, 36th annual edition*.

¹⁵ CBRE, Maastricht University, and real GREEN (2014). *National Green Building Adoption Index*.

direct, indirect, and induced LEED-related employment income tax categories. Corporate income tax refers to state taxes collected from LEED-related corporations and similarly, state property tax refers to taxes collected on LEED-related properties.

Appendix A provides a glossary. Appendix B and C provide additional details concerning modeling and assumptions.

3 National Green Construction Economic Impact

Green construction continues its growth as building owners look to sustainable building for economic, environmental, and social motivations. While the increase in green construction spending is notable, the direct, indirect, and induced economic impact of this growth is not yet well studied. This report aims to shed light on exactly these direct, indirect, and induced economic impacts, beginning with a national scope of analysis.

Green building, also called sustainable or high performance building, emerged in response to concerns of the long-term environmental and economic impacts of traditional construction. In pursuit of sustainability, green buildings have used energy, land, water, and materials more efficiently, and have the added benefit of saving money for both businesses and taxpayers. For example, it has been shown that an initial upfront “green investment” of just 2% of construction costs is shown to yield lifecycle savings of more than 10 times the amount of the initial investment.¹⁶ The standards for green building include processes that aim to reduce environmental impact throughout a building’s lifecycle, resulting in the reduction of environmental impact, emissions costs, waste disposal, water bills, energy usage, and operations and maintenance costs.¹⁷ In addition to the economic and environmental benefits, there is substantial evidence to support a correlation between green standards and worker health and productivity.¹⁸ While this study does not explore the productivity or

KEY TAKEAWAYS

From 2015-2018, green construction spending forecasted to grow 15.1% YoY to \$224.4 billion

National green construction will directly impact GDP by \$303.4 billion from 2015-2018

Also, it will directly support over 3.9 million jobs generating \$268.4 billion in labor earnings from 2015-2018

¹⁶ Kats, Greg (2003, October) *The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force*. Retrieved from: <http://www.calrecycle.ca.gov/greenbuilding/design/costbenefit/report.pdf>

¹⁷ JLL (2013). *U.S. Construction Outlook Report*.

¹⁸ Kats, Greg (2003, October) *The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force*. Retrieved from: <http://www.calrecycle.ca.gov/greenbuilding/design/costbenefit/report.pdf>

health of workers, it is worth noting the far reach of green constructions' benefits and areas of potential future study.

This section summarizes the findings of the green building construction economic analysis performed in this study. The results forecast annual green building construction spending for the years 2015-2018, as well as quantify the contribution of green construction to key annual economic indicators. The economic impacts cited here are the result of an analysis of the total value of green buildings, rather than segmented spending separating out green-specific technologies or professions, as green construction creates employment opportunities for both green and non-green professions. This section of the study includes both LEED-certified buildings and non-LEED-certified high-performance green buildings and further estimates the savings associated with green building construction, as there can be a contraction of economic activity in some industry sectors due to efficient operation and resulting decreased expenditures (e.g., electrical savings).¹⁹

Assumptions

We made several assumptions based on the available data:

- Dodge Data & Analytics' definition of the green construction market includes the total value of the building, not just the incremental value attributable to environmentally friendly equipment. Therefore, the economic and employment impact of these investments will capture both "green jobs" and traditional construction jobs employed in these green buildings.
- Dodge Analytics issues periodic forecasts for the total value of the green construction market, but it does not estimate the number of square feet of building space associated with those estimates. Therefore, we calculated the approximate number of square feet for each year by asset type by dividing the building's total construction cost by the average cost per square foot for each asset type to construct a building and used historical indices and inflation to calculate square foot per from 2005-2018.
- Inflation rates from 2005 to 2018 were included to adjust the average energy, trash, water, and maintenance costs.
- The 2015 RS Means Square Foot Cost²⁰ book was used to calculate asset type and used historical factors to calculate the cost per year.
- GDP deflators from OMB President's Budget table were leveraged to understand historical dollar value economic impact based on the current dollar value.
- IMPLAN input-output accounts are based on industry survey data collected periodically by the U.S. Bureau of Economic Analysis and follow a balanced account format recommended by the United Nations.
- The national economic impacts in terms of direct, indirect, and induced effects were disaggregated by state, as presented in Section 5.

Analysis

The growth in green construction spending is currently outpacing non-green construction spending. Annual green construction spending is expected to grow 15.1% YoY for 2015-2018, with

¹⁹ When this report refers to "negative" impacts, such as those induced by electrical savings, it is to say that certain industry sectors, e.g. electric utilities, will see a decrease in their revenue due to the increased efficiency and thus decreased electricity use in green buildings.

²⁰ Phelan, Marilyn. AIA (2015). *RSMeans Square Foot Costs, 36th annual edition*.

annual spending projected to increase from \$150.6 billion in 2015 to \$224.4 billion in 2018. Residential green construction spending is expected to grow from \$55 billion in 2015 to \$100.4 billion in 2018, representing a YoY growth of 24.5%, while commercial green construction spending is estimated to grow from \$95.6 billion in 2015 to \$123.96 billion in 2018, reflecting a YoY growth of 9.76%. By 2018, green residential construction is projected to represent approximately 44.75% of all green construction.

Green construction contributed significantly to the national GDP with a net direct economic impact of \$60.7 billion and an indirect impact of \$68.9 billion in 2015. It is expected to grow to \$85.4 billion and \$98.3 billion respectively by 2018. This means that the green construction market's impact on GDP is projected to increase by 41% from 2015 to 2018. It is estimated that in 2015, green construction will directly contribute 796,000 jobs to the U.S. economy, while \$53.6 billion of all wages will be directly accounted for by the green construction industry. By 2018, these numbers will increase to 1.1 million and \$75.6 billion respectively. According to predictions, by 2018, the green construction industry will be in some way responsible for 38% of all construction jobs.²¹ Indirect GDP contributions from green construction between the years 2011 and 2014 total \$188.8 billion and are projected to rise to a four-year indirect contribution total of \$345.7 billion for 2015-2018. Current induced GDP contribution projections for 2015 total \$70.8 billion and will increase to approximately \$100.3 billion by 2018.

FIGURE 3.1: NATIONAL GREEN CONSTRUCTION SPENDING (\$)

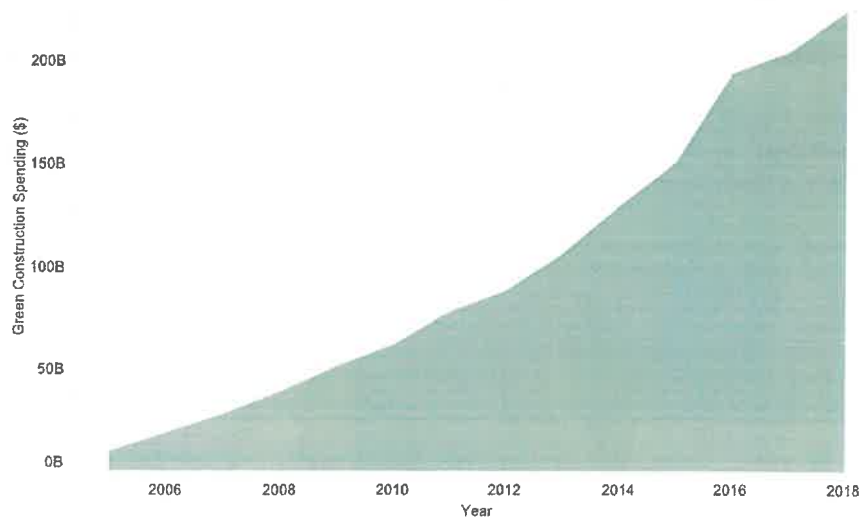


TABLE 3.1: NATIONAL GREEN CONSTRUCTION SPENDING

Year	National Green Construction Spending (\$Millions)
2005	10,000
2006	19,000

²¹ Lacey, T., Wright, B. (2009). *Occupational employment projections to 2018*.

2007	28,000
2008	39,000
2009	51,500
2010	62,000
2011	78,000
2012	88,000
2013	106,000
2014	129,000
2015	<i>151,000</i>
2016	<i>194,000</i>
2017	<i>205,000</i>
2018	<i>224,000</i>

Note: Italics indicate that data is a projection

TABLE 3.2: SUMMARY OF NET IMPACT OF NATIONAL GREEN CONSTRUCTION EXPENDITURES

Type of Economic Impact Supported by Green Construction Spending	Cumulative Net Impact	
	2011-2014	2015-2018
GDP (millions)	\$551,000	<i>\$1,004,000</i>
Employment (jobs)	6,429,000	<i>11,796,000</i>
Labor Earnings (millions)	\$369,000	<i>\$673,000</i>

Note: Italics indicate that data is a projection

FIGURE 3.2: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL GREEN CONSTRUCTION ON GDP (\$)

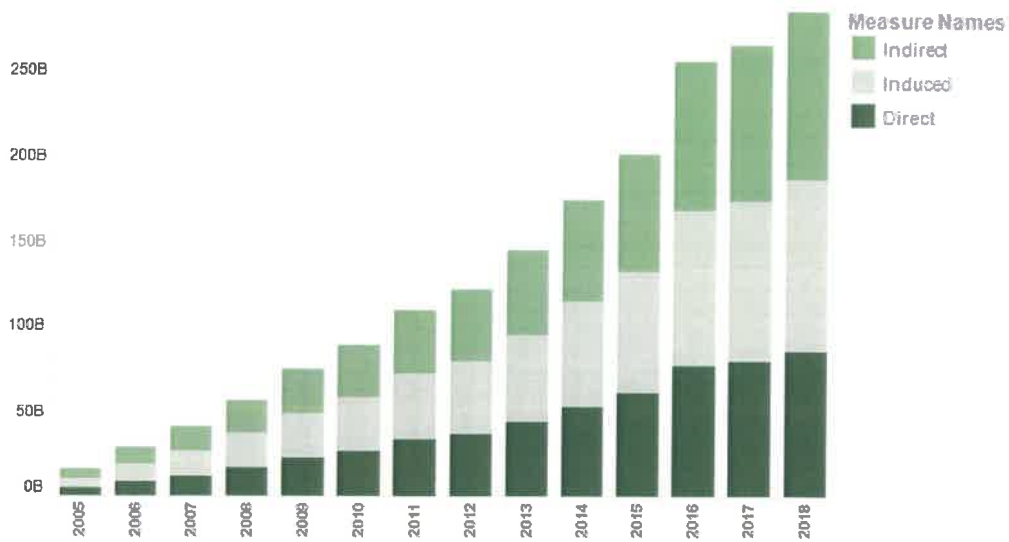


TABLE 3.3: TOTAL IMPACT OF NATIONAL GREEN CONSTRUCTION ON GDP (\$, BILLIONS)

Total Impact of National Green Construction on GDP (\$, billions)				
Year	Direct	Indirect	Induced	Total
2005	4.71	5.71	5.66	16.08
2006	8.66	10.25	10.29	29.19
2007	12.40	14.67	14.73	41.79
2008	17.16	19.70	20.14	57.00
2009	22.64	25.59	26.38	74.61
2010	27.11	30.50	31.48	89.09
2011	33.56	37.55	38.87	109.98
2012	36.89	41.98	43.06	121.94
2013	43.78	49.92	51.19	144.88
2014	53.17	59.40	61.59	174.15
2015	60.73	68.92	70.82	200.47
2016	77.52	87.30	90.09	254.90
2017	79.79	91.16	93.36	264.31
2018	85.44	98.40	100.35	284.19

Note: Italics indicate that data is a projection

FIGURE 3.3: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL GREEN CONSTRUCTION ON EMPLOYMENT (JOBS)

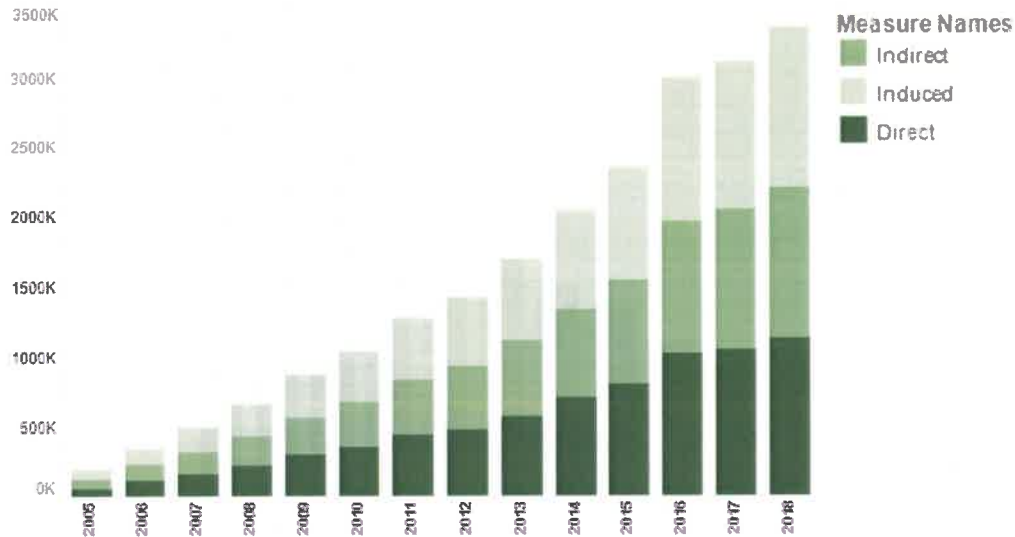


TABLE 3.4: TOTAL IMPACT OF NATIONAL GREEN CONSTRUCTION ON EMPLOYMENT (JOBS)

Total Impact of National Green Construction on Employment (Jobs)				
Year	Direct	Indirect	Induced	Total
2005	62,000	66,000	65,000	192,000
2006	113,000	112,000	117,000	343,000
2007	162,000	157,000	168,000	487,000
2008	225,000	210,000	229,000	664,000
2009	296,000	272,000	300,000	868,000
2010	354,000	322,000	358,000	1,034,000
2011	438,000	397,000	442,000	1,277,000
2012	482,000	447,000	490,000	1,419,000
2013	575,000	539,000	583,000	1,696,000
2014	699,000	637,000	701,000	2,037,000
2015	797,000	746,000	806,000	2,349,000
2016	1,018,000	945,000	1,025,000	2,989,000
2017	1,049,000	997,000	1,063,000	3,109,000
2018	1,124,000	1,082,000	1,143,000	3,349,000

Note: Italics indicate that data is a projection

FIGURE 3.4: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL GREEN CONSTRUCTION ON LABOR EARNINGS (\$)

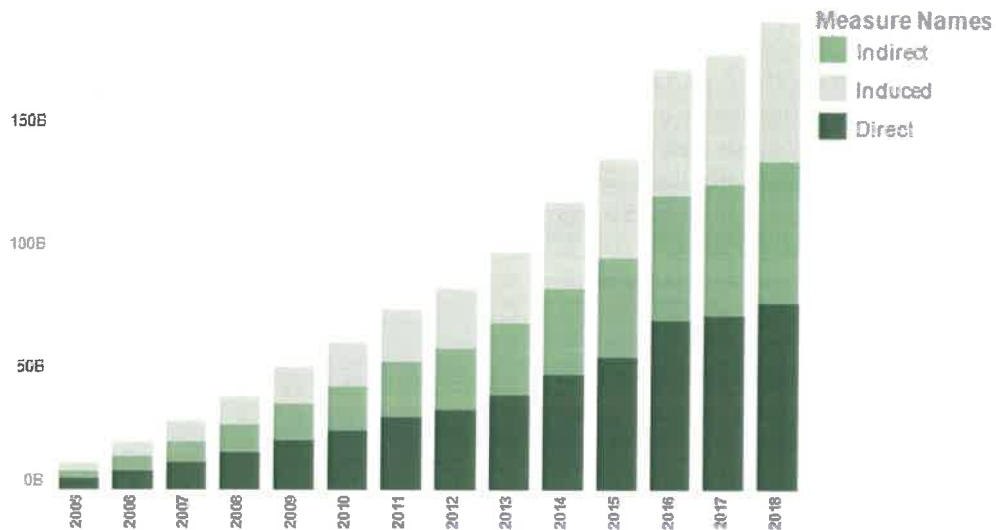


TABLE 3.5: TOTAL IMPACT OF NATIONAL GREEN CONSTRUCTION ON LABOR EARNINGS (\$, BILLIONS)

Total Impact of National Green Construction on Labor Earnings (\$, billions)				
Year	Direct	Indirect	Induced	Total
2005	4.15	3.36	3.22	10.73
2006	7.62	6.05	5.85	19.52
2007	10.91	8.65	8.37	27.93
2008	15.11	11.64	11.45	38.20
2009	19.99	15.04	14.99	50.03
2010	23.93	17.88	17.89	59.70
2011	29.62	22.01	22.10	73.72
2012	32.54	24.66	24.48	81.68
2013	38.69	29.31	29.10	97.10
2014	46.94	34.90	35.01	116.84
2015	53.66	40.42	40.26	134.33
2016	68.50	51.19	51.21	170.90
2017	70.61	53.42	53.07	177.10
2018	75.67	57.64	57.05	190.36

Note: Italics indicate that data is a projection

4 National LEED Construction Economic Impact

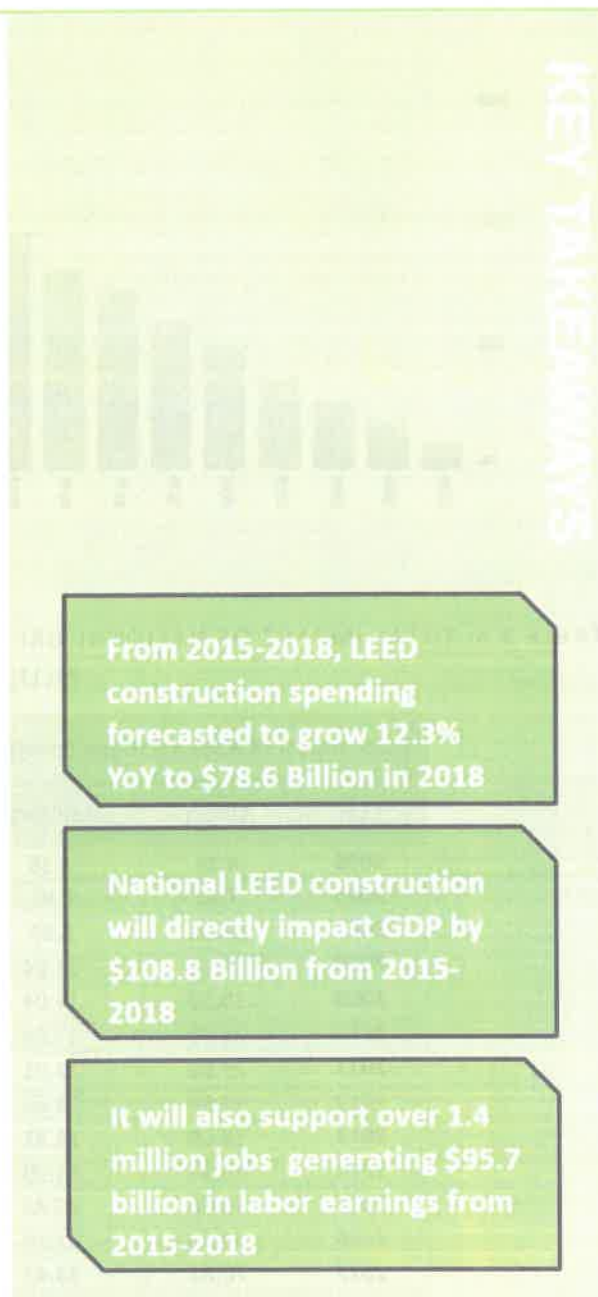
LEED provides a voluntary third-party verification of green building design and construction, and is widely embraced as the premier green building design standard. Over the past 15 years since its inception, LEED has gone from a single standard for new construction to a comprehensive system of standards which aims to comprehensively address the development and construction process. The benefits of LEED-certified buildings go beyond energy and operating cost savings to include increases in asset value, ROI, and occupancy. Additional benefits such as increased worker productivity and positive public reputation resulting from LEED certification can also contribute to LEED's attraction as a market differentiator.²²

LEED is largely responsible for the growth of the green construction sector, as it composed nearly 37.5% of green construction jobs in 2014. Additionally, LEED was responsible for \$20.7 billion in direct GDP contribution to the U.S. economy in that same year. This section of the study aims to estimate the national economic impact of LEED-certified construction.

Assumptions

We made several assumptions given the available data:

- LEED construction numbers represent the total value of the building, and not solely the incremental value. As stated above, the economic and employment impact of these investments captures both "green jobs" and traditional construction used in the building of the LEED certified buildings.



²² McGraw-Hill Construction (2013). *Smart Market Report: World Green Building Trends, Business Benefits Driving New and Retrofit Market Opportunities in Over 60 Countries.*

- In addition to the total construction cost, we added estimated LEED certification fees. The costs do not expressly account for any consulting fees or added costs (if any) given that the study focuses on overall aggregate contribution from the construction of LEED buildings.
- Considered inflation rates from 2005 to 2018 to adjust the average energy, trash, water, and operation and maintenance costs.
- For the LEED spending analysis, from 2009 onwards we removed all square foot data associated with LEED rating system LEED Existing Buildings: Operations & Maintenance (EBOM), since subject matter expert (SME) input suggested low spending associated with such projects. LEED certification fees were projected from 2009 onwards given the availability of data.
- We used GDP deflators from Office of Management and Budget President's Budget table to understand historical dollar value economic impact based on the current dollar value.
- The IMPLAN input-output accounts are based on industry survey data collected periodically by the U.S. Bureau of Economic Analysis and follow a balanced account format recommended by the United Nations.
- For the IMPLAN economic analysis, spending and savings were assigned to 11 economic sectors based on an analysis of the types of buildings that are LEED certified.
- The national economic impacts in terms of direct, indirect, and induced effects were disaggregated by states based on each state's ratio of green and LEED spending and savings relative to the nation, as presented in Section 6.

Note: USGBC's LEED economic impact is a subset of the impact of the overall green construction market because the definition of the "green construction market" is broader and includes buildings that do not qualify for LEED certification as well those that have not applied for LEED certification. See definition of green construction in Appendix A.

Analysis

A Monte Carlo simulation of the optimistic LEED construction forecast resulted in a YoY spending growth rate of 12.3%, growing from a \$61.8 billion industry in 2015, to \$78.6 billion in 2018. LEED Residential is forecasted at a high YoY growth rate of 31.1% by square foot, reflecting its potential given the historically small market penetration. The LEED Commercial forecast demonstrates a steady YoY growth rate of 8.5% by square foot, for 2015-2018.

Construction of LEED certified buildings contributed \$20.7 billion to the national GDP and 272,000 jobs to the U.S. economy in 2014. By 2018, these contributions are expected to increase to \$29.8 billion and 385,000 respectively. In addition, LEED is forecasted to account for \$26.2 billion in wages in 2018, increasing from \$18.3 billion in 2014.

FIGURE 4.1: NATIONAL LEED CONSTRUCTION SPENDING (\$)

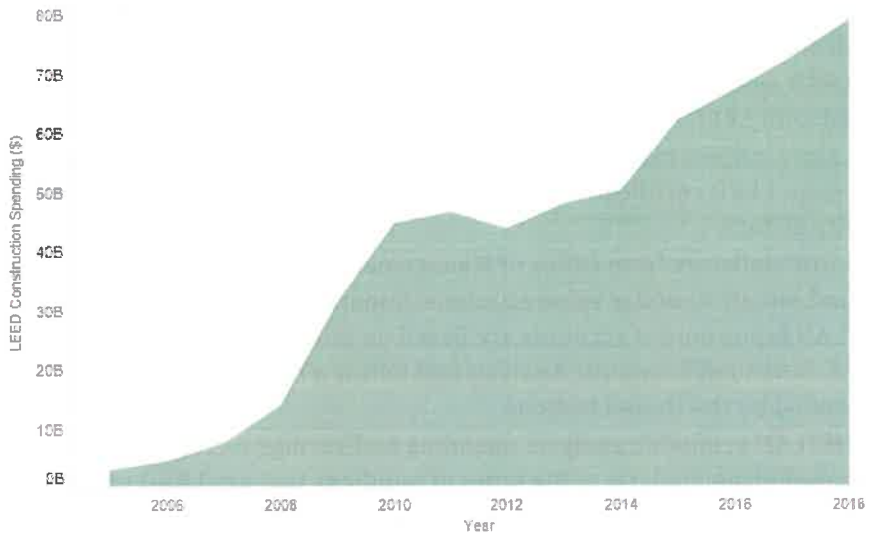


TABLE 4.1: NATIONAL LEED CONSTRUCTION SPENDING (\$, BY YEAR)

Year	National LEED Construction Spending (\$)
2005	2,640,000,000
2006	4,100,000,000
2007	7,230,000,000
2008	13,600,000,000
2009	31,140,000,000
2010	44,390,000,000
2011	46,280,000,000
2012	43,460,000,000
2013	47,640,000,000
2014	49,790,000,000
2015	61,800,000,000
2016	66,870,000,000
2017	72,520,000,000
2018	78,630,000,000

Note: Italics indicate that data is a projection

TABLE 4.2: SUMMARY OF NET IMPACT OF NATIONAL LEED-CERTIFIED CONSTRUCTION EXPENDITURES

Type of Economic Impact Supported by LEED Construction Spending	Cumulative Net Impact	
	2011-2014	2015-2018
GDP (millions)	\$256,000	<i>\$357,000</i>
Employment (jobs)	2,900,000	<i>4,100,000</i>
Labor Earnings (millions)	\$172,000	<i>\$239,000</i>

Note: Italics indicate that data is a projection

FIGURE 4.2: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL LEED-CERTIFIED CONSTRUCTION ON GDP (\$)

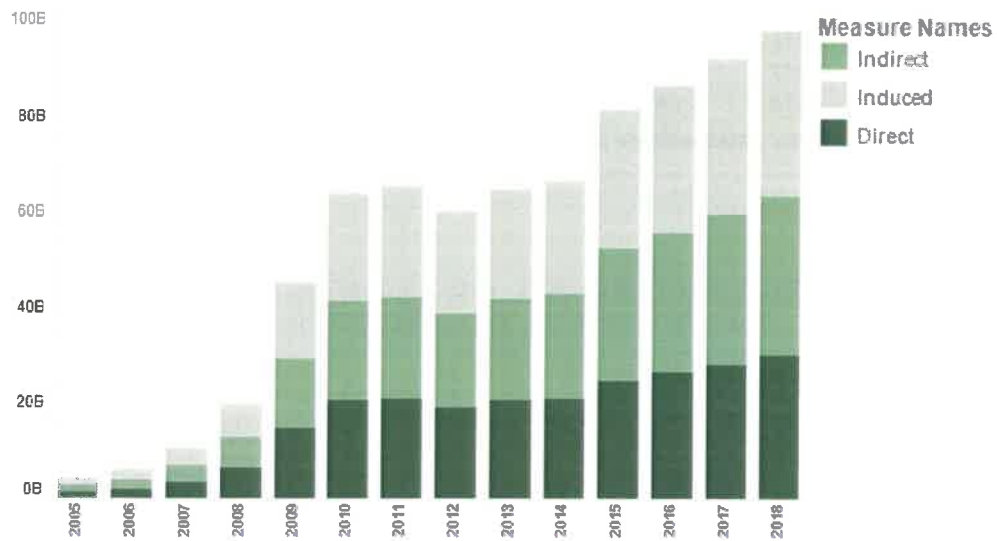


TABLE 4.3: TOTAL IMPACT OF NATIONAL LEED CONSTRUCTION ON GDP (\$, BILLIONS)

Total Impact of National LEED Construction on GDP (\$, billions)				
Year	Direct	Indirect	Induced	Total
2005	1.36	1.30	1.48	4.14
2006	2.02	1.98	2.22	6.23
2007	3.41	3.50	3.81	10.72
2008	6.45	6.27	7.06	19.78
2009	14.60	14.32	16.02	44.94
2010	20.36	20.64	22.61	63.60
2011	20.69	21.22	23.08	65.00
2012	18.87	19.71	21.23	59.81
2013	20.30	21.28	22.87	64.44
2014	20.76	22.04	23.55	66.36
2015	24.70	27.60	28.60	80.90
2016	26.30	29.40	30.46	86.17
2017	28.03	31.33	32.46	91.81
2018	29.81	33.32	34.52	97.66

Note: Italics indicate that data is a projection

FIGURE 4.3: TOTAL DIRECT, INDIRECT, INDUCED IMPACT OF NATIONAL LEED CONSTRUCTION ON EMPLOYMENT (JOBS)

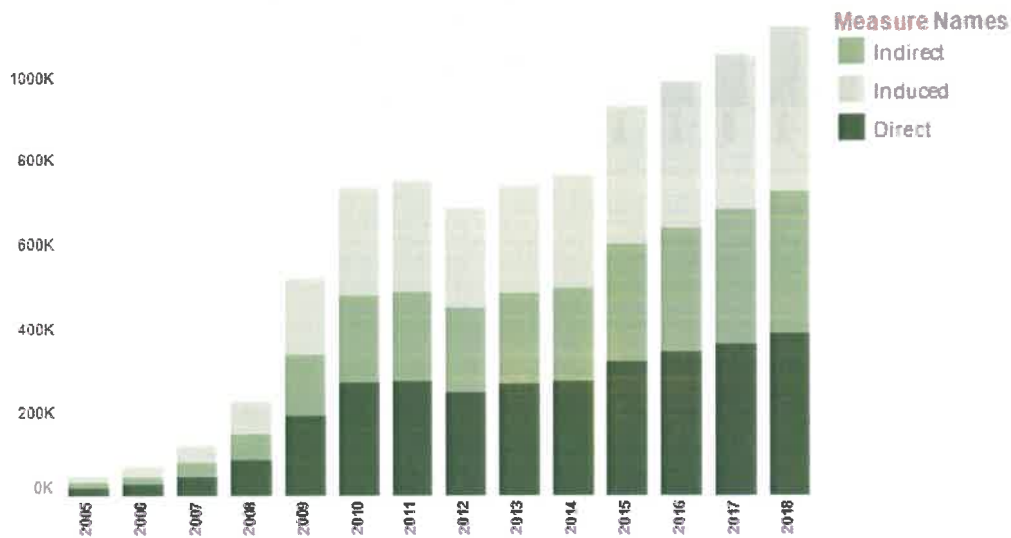


TABLE 4.4: TOTAL IMPACT OF NATIONAL LEED CONSTRUCTION ON EMPLOYMENT (JOBS)

Total Impact of National LEED Construction on Employment (Jobs)				
Year	Direct	Indirect	Induced	Total
2005	18,000	13,000	17,000	48,000
2006	27,000	19,000	25,000	71,000
2007	45,000	35,000	43,000	123,000
2008	85,000	62,000	80,000	227,000
2009	193,000	144,000	182,000	519,000
2010	267,000	209,000	257,000	734,000
2011	271,000	216,000	262,000	749,000
2012	247,000	199,000	241,000	688,000
2013	266,000	216,000	260,000	741,000
2014	272,000	224,000	268,000	764,000
2015	319,000	281,000	325,000	925,000
2016	340,000	299,000	346,000	985,000
2017	362,000	318,000	369,000	1,049,000
2018	386,000	339,000	392,000	1,116,000

Note: Italics indicate that data is a projection

FIGURE 4.4: TOTAL DIRECT, INDIRECT, AND INDUCED IMPACT OF NATIONAL LEED-CERTIFIED CONSTRUCTION ON LABOR EARNINGS (\$)

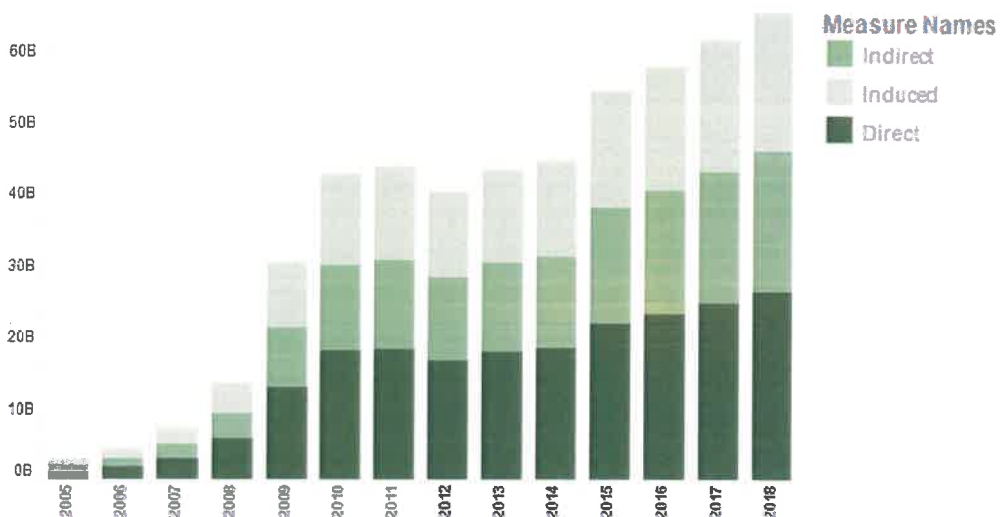


TABLE 4.5: TOTAL IMPACT OF NATIONAL LEED CONSTRUCTION ON LABOR EARNINGS (\$, BILLIONS)

Total Impact of National LEED Construction on Labor Earnings (\$, billions)				
Year	Direct	Indirect	Induced	Total
2005	1.19	0.78	0.84	2.81
2006	1.78	1.18	1.26	4.22
2007	3.00	2.08	2.17	7.24
2008	5.67	3.73	4.01	13.42
2009	12.85	8.45	9.11	30.41
2010	17.93	12.12	12.85	42.91
2011	18.22	12.47	13.12	43.80
2012	16.60	11.62	12.07	40.28
2013	17.85	12.55	13.00	43.39
2014	18.30	12.99	13.39	44.68
2015	<i>21.72</i>	<i>16.25</i>	<i>16.26</i>	<i>54.23</i>
2016	<i>23.13</i>	<i>17.31</i>	<i>17.32</i>	<i>57.76</i>
2017	<i>24.64</i>	<i>18.45</i>	<i>18.45</i>	<i>61.54</i>
2018	<i>26.21</i>	<i>19.62</i>	<i>19.63</i>	<i>65.46</i>

Note: Italics indicate that data is a projection

5 State Green Construction Economic Impact

To quantify the contribution of green construction to state economies, we analyzed green construction spending, savings as well as direct, indirect, and induced contributions to GDP, employment, and labor earnings. This analysis was conducted using green construction spending data from the 2013 Green Construction Outlook²³ and location factors from the 2015 RSMeans Square Foot Costs report²⁴ in order to identify past green construction impact on GDP, employment, and labor earnings as well as to project the 2015-2018 LEED construction contribution in these same areas.

Analysis

Just as some states have more general construction activity than others, a few states emerging as leaders in their total green spend and resulting economic impact. States in the top 10% of economic contributors for green construction (aggregate 2005-2014 historical and 2015-2018 forecasted data) include California, Florida, New York, North Carolina, and Texas. Green construction's contribution to state GDP ranged from 0.2% to 0.6% from 2011 to 2014 and is expected to grow between 53% and 204% for the forecasted period 2015 to 2018. Data for the individual economic impact categories was separated into impact subcategories for the 2011-2014 and 2015-2018 time periods. Illinois, Nebraska, Nevada, Rhode Island and West Virginia were the five states with the highest projected increase in green construction's direct contribution to GDP while comparing economic impact during 2011-2014 and 2015-2018.

KEY TAKEAWAYS

CA, FL, NY, NC & TX will be largest contributors to green construction economic impact from 2015-2018

Median direct green construction contribution to GDP by state is forecasted at \$934 million in 2015

Median direct green construction contribution to GDP by state is forecasted at \$1.3 billion in 2018

²³ Dodge Data & Analytics (2012). *2013 Dodge Construction Green Outlook Report*.

²⁴ Phelan, Marilyn. AIA (2015). *RSMeans Square Foot Costs, 36th annual edition*.

TABLE 5.1: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON GDP (2011-2014, \$, BILLIONS)

State Green Construction Economic Impact on GDP (2011-2014, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	2.46	2.77	2.86	8.09
Alaska	0.33	0.37	0.38	1.07
Arizona	4.71	5.31	5.47	15.49
Arkansas	1.17	1.31	1.36	3.84
California	14.28	16.11	16.61	47.00
Colorado	4.33	4.89	5.04	14.25
Connecticut	1.46	1.65	1.70	4.80
Delaware	0.52	0.59	0.61	1.71
Florida	12.02	13.55	13.98	39.55
Georgia	4.97	5.61	5.78	16.35
Hawaii	0.76	0.86	0.89	2.51
Idaho	1.10	1.24	1.28	3.61
Illinois	5.36	6.05	6.24	17.64
Indiana	3.59	4.04	4.17	11.80
Iowa	2.50	2.83	2.92	8.25
Kansas	1.77	1.99	2.06	5.82
Kentucky	1.67	1.88	1.94	5.50
Louisiana	3.43	3.87	3.99	11.30
Maine	0.55	0.62	0.64	1.81
Maryland	2.64	2.98	3.07	8.69
Massachusetts	4.02	4.54	4.68	13.23
Michigan	3.44	3.88	4.00	11.33
Minnesota	2.85	3.21	3.31	9.38
Mississippi	1.43	1.61	1.66	4.70
Missouri	2.67	3.01	3.11	8.79
Montana	0.51	0.57	0.59	1.68
Nebraska	1.08	1.22	1.26	3.56
Nevada	1.68	1.90	1.96	5.54
New Hampshire	0.70	0.79	0.82	2.31
New Jersey	3.33	3.75	3.87	10.95
New Mexico	1.41	1.59	1.64	4.64
New York	9.60	10.84	11.17	31.62
North Carolina	6.32	7.13	7.35	20.79
North Dakota	1.10	1.24	1.28	3.62
Ohio	5.13	5.78	5.96	16.87
Oklahoma	2.06	2.32	2.39	6.77
Oregon	3.04	3.44	3.54	10.02
Pennsylvania	4.71	5.31	5.47	15.49
Rhode Island	0.29	0.32	0.33	0.94
South Carolina	3.58	4.04	4.16	11.77
South Dakota	0.61	0.68	0.70	1.99
Tennessee	3.83	4.32	4.46	12.61

Texas	18.76	21.16	21.82	61.73
Utah	2.56	2.89	2.98	8.43
Vermont	0.31	0.35	0.36	1.01
Virginia	4.08	4.60	4.74	13.42
Washington	4.93	5.57	5.74	16.24
West Virginia	0.58	0.65	0.67	1.91
Wisconsin	2.70	3.04	3.14	8.87
Wyoming	0.51	0.57	0.59	1.66

TABLE 5.2: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON GDP (2015-2018, \$, BILLIONS)

State Green Construction Economic Impact on GDP (2015-2018, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	4.94	5.63	5.77	16.34
Alaska	0.57	0.65	0.67	1.90
Arizona	9.05	10.31	10.57	29.93
Arkansas	2.13	2.43	2.49	7.06
California	27.33	31.94	31.94	91.22
Colorado	7.23	8.24	8.45	23.92
Connecticut	2.80	3.19	3.27	9.25
Delaware	0.81	0.92	0.94	2.67
Florida	23.04	26.26	26.93	76.23
Georgia	10.09	11.49	11.79	33.37
Hawaii	1.55	1.77	1.81	5.13
Idaho	2.10	2.39	2.45	6.94
Illinois	11.33	13.24	13.24	37.80
Indiana	7.07	8.06	8.27	23.40
Iowa	3.92	4.46	4.58	12.96
Kansas	2.80	3.19	3.27	9.25
Kentucky	3.08	3.50	3.59	10.17
Louisiana	5.41	6.16	6.32	17.89
Maine	1.11	1.27	1.30	3.69
Maryland	5.15	5.87	6.02	17.04
Massachusetts	6.62	7.55	7.74	21.91
Michigan	6.24	7.11	7.29	20.63
Minnesota	4.67	5.32	5.45	15.44
Mississippi	2.46	2.80	2.87	8.13
Missouri	5.06	5.76	5.91	16.73
Montana	0.78	0.89	0.92	2.59
Nebraska	2.22	2.53	2.59	7.34
Nevada	5.11	5.83	5.97	16.91
New Hampshire	1.31	1.50	1.54	4.35
New Jersey	6.20	7.06	7.24	20.51
New Mexico	2.34	2.67	2.74	7.76

New York	<i>14.80</i>	<i>16.87</i>	<i>17.30</i>	<i>48.97</i>
North Carolina	<i>11.87</i>	<i>13.52</i>	<i>13.87</i>	<i>39.26</i>
North Dakota	<i>1.26</i>	<i>1.43</i>	<i>1.47</i>	<i>4.16</i>
Ohio	<i>8.69</i>	<i>9.90</i>	<i>10.16</i>	<i>28.76</i>
Oklahoma	<i>3.48</i>	<i>3.97</i>	<i>4.07</i>	<i>11.52</i>
Oregon	<i>4.53</i>	<i>5.16</i>	<i>5.29</i>	<i>14.98</i>
Pennsylvania	<i>8.79</i>	<i>10.02</i>	<i>10.28</i>	<i>29.09</i>
Rhode Island	<i>0.65</i>	<i>0.74</i>	<i>0.75</i>	<i>2.14</i>
South Carolina	<i>6.20</i>	<i>7.06</i>	<i>7.24</i>	<i>20.51</i>
South Dakota	<i>1.04</i>	<i>1.19</i>	<i>1.22</i>	<i>3.44</i>
Tennessee	<i>6.52</i>	<i>7.43</i>	<i>7.62</i>	<i>21.58</i>
Texas	<i>32.39</i>	<i>36.90</i>	<i>37.85</i>	<i>107.13</i>
Utah	<i>4.26</i>	<i>4.85</i>	<i>4.97</i>	<i>14.08</i>
Vermont	<i>0.55</i>	<i>0.63</i>	<i>0.65</i>	<i>1.83</i>
Virginia	<i>8.03</i>	<i>9.15</i>	<i>9.38</i>	<i>26.56</i>
Washington	<i>8.70</i>	<i>9.91</i>	<i>10.16</i>	<i>28.77</i>
West Virginia	<i>1.35</i>	<i>1.54</i>	<i>1.58</i>	<i>4.46</i>
Wisconsin	<i>5.03</i>	<i>5.73</i>	<i>5.87</i>	<i>16.63</i>
Wyoming	<i>0.81</i>	<i>0.95</i>	<i>0.95</i>	<i>2.70</i>

Note: Italics indicate that data is a projection

TABLE 5.3: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2011-2014, JOBS)

State Green Construction Economic Impact on Employment (2011-2014, Jobs)				
State	Direct	Indirect	Induced	Total
Alabama	32,000	30,000	33,000	94,000
Alaska	4,000	4,000	4,000	13,000
Arizona	62,000	57,000	62,000	181,000
Arkansas	15,000	14,000	15,000	45,000
California	187,000	172,000	189,000	549,000
Colorado	57,000	52,000	57,000	166,000
Connecticut	19,000	18,000	19,000	56,000
Delaware	7,000	6,000	7,000	20,000
Florida	158,000	145,000	159,000	462,000
Georgia	65,000	60,000	66,000	191,000
Hawaii	10,000	9,000	10,000	29,000
Idaho	14,000	13,000	15,000	42,000
Illinois	70,000	65,000	71,000	206,000
Indiana	47,000	43,000	47,000	138,000
Iowa	33,000	30,000	33,000	96,000
Kansas	23,000	21,000	23,000	68,000
Kentucky	22,000	20,000	22,000	64,000
Louisiana	45,000	41,000	45,000	132,000
Maine	7,000	7,000	7,000	21,000
Maryland	35,000	32,000	35,000	101,000

Massachusetts	53,000	49,000	53,000	154,000
Michigan	45,000	41,000	46,000	132,000
Minnesota	37,000	34,000	38,000	109,000
Mississippi	19,000	17,000	19,000	55,000
Missouri	35,000	32,000	35,000	103,000
Montana	7,000	6,000	7,000	20,000
Nebraska	14,000	13,000	14,000	42,000
Nevada	22,000	20,000	22,000	65,000
New Hampshire	9,000	8,000	9,000	27,000
New Jersey	44,000	40,000	44,000	128,000
New Mexico	18,000	17,000	19,000	54,000
New York	126,000	116,000	127,000	369,000
North Carolina	83,000	76,000	84,000	243,000
North Dakota	14,000	13,000	15,000	42,000
Ohio	67,000	62,000	68,000	197,000
Oklahoma	27,000	25,000	27,000	79,000
Oregon	40,000	37,000	40,000	117,000
Pennsylvania	62,000	57,000	62,000	181,000
Rhode Island	4,000	3,000	4,000	11,000
South Carolina	47,000	43,000	47,000	137,000
South Dakota	8,000	7,000	8,000	23,000
Tennessee	50,000	46,000	51,000	147,000
Texas	246,000	226,000	248,000	720,000
Utah	34,000	31,000	34,000	98,000
Vermont	4,000	4,000	4,000	12,000
Virginia	53,000	49,000	54,000	157,000
Washington	65,000	59,000	65,000	189,000
West Virginia	8,000	7,000	8,000	22,000
Wisconsin	35,000	33,000	36,000	104,000
Wyoming	7,000	6,000	7,000	19,000

TABLE 5.4: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2015-2018, JOBS)

State Green Construction Economic Impact on Employment (2015-2018, Jobs)				
State	Direct	Indirect	Induced	Total
Alabama	65,000	61,000	66,000	192,000
Alaska	8,000	7,000	8,000	22,000
Arizona	119,000	112,000	120,000	352,000
Arkansas	28,000	27,000	28,000	83,000
California	359,000	340,000	364,000	1,062,000
Colorado	95,000	90,000	96,000	281,000
Connecticut	37,000	35,000	37,000	109,000
Delaware	11,000	10,000	11,000	31,000
Florida	303,000	286,000	307,000	896,000
Georgia	133,000	125,000	134,000	392,000

Hawaii	<i>20,000</i>	<i>19,000</i>	<i>21,000</i>	<i>60,000</i>
Idaho	<i>28,000</i>	<i>26,000</i>	<i>28,000</i>	<i>82,000</i>
Illinois	<i>149,000</i>	<i>141,000</i>	<i>151,000</i>	<i>440,000</i>
Indiana	<i>93,000</i>	<i>88,000</i>	<i>94,000</i>	<i>275,000</i>
Iowa	<i>51,000</i>	<i>49,000</i>	<i>52,000</i>	<i>152,000</i>
Kansas	<i>37,000</i>	<i>35,000</i>	<i>37,000</i>	<i>109,000</i>
Kentucky	<i>40,000</i>	<i>38,000</i>	<i>41,000</i>	<i>120,000</i>
Louisiana	<i>71,000</i>	<i>67,000</i>	<i>72,000</i>	<i>210,000</i>
Maine	<i>15,000</i>	<i>14,000</i>	<i>15,000</i>	<i>43,000</i>
Maryland	<i>68,000</i>	<i>64,000</i>	<i>69,000</i>	<i>200,000</i>
Massachusetts	<i>87,000</i>	<i>82,000</i>	<i>88,000</i>	<i>257,000</i>
Michigan	<i>82,000</i>	<i>77,000</i>	<i>83,000</i>	<i>242,000</i>
Minnesota	<i>61,000</i>	<i>58,000</i>	<i>62,000</i>	<i>181,000</i>
Mississippi	<i>32,000</i>	<i>31,000</i>	<i>33,000</i>	<i>95,000</i>
Missouri	<i>66,000</i>	<i>63,000</i>	<i>67,000</i>	<i>197,000</i>
Montana	<i>10,000</i>	<i>10,000</i>	<i>10,000</i>	<i>30,000</i>
Nebraska	<i>29,000</i>	<i>28,000</i>	<i>30,000</i>	<i>86,000</i>
Nevada	<i>67,000</i>	<i>64,000</i>	<i>68,000</i>	<i>199,000</i>
New Hampshire	<i>17,000</i>	<i>16,000</i>	<i>17,000</i>	<i>51,000</i>
New Jersey	<i>81,000</i>	<i>77,000</i>	<i>82,000</i>	<i>241,000</i>
New Mexico	<i>31,000</i>	<i>29,000</i>	<i>31,000</i>	<i>91,000</i>
New York	<i>195,000</i>	<i>184,000</i>	<i>197,000</i>	<i>575,000</i>
North Carolina	<i>156,000</i>	<i>147,000</i>	<i>158,000</i>	<i>461,000</i>
North Dakota	<i>17,000</i>	<i>16,000</i>	<i>17,000</i>	<i>49,000</i>
Ohio	<i>114,000</i>	<i>108,000</i>	<i>116,000</i>	<i>338,000</i>
Oklahoma	<i>46,000</i>	<i>43,000</i>	<i>46,000</i>	<i>135,000</i>
Oregon	<i>60,000</i>	<i>56,000</i>	<i>60,000</i>	<i>176,000</i>
Pennsylvania	<i>116,000</i>	<i>109,000</i>	<i>117,000</i>	<i>342,000</i>
Rhode Island	<i>8,000</i>	<i>8,000</i>	<i>9,000</i>	<i>25,000</i>
South Carolina	<i>81,000</i>	<i>77,000</i>	<i>82,000</i>	<i>241,000</i>
South Dakota	<i>14,000</i>	<i>13,000</i>	<i>14,000</i>	<i>40,000</i>
Tennessee	<i>86,000</i>	<i>81,000</i>	<i>87,000</i>	<i>254,000</i>
Texas	<i>426,000</i>	<i>402,000</i>	<i>431,000</i>	<i>1,259,000</i>
Utah	<i>56,000</i>	<i>53,000</i>	<i>57,000</i>	<i>165,000</i>
Vermont	<i>7,000</i>	<i>7,000</i>	<i>7,000</i>	<i>22,000</i>
Virginia	<i>106,000</i>	<i>100,000</i>	<i>107,000</i>	<i>312,000</i>
Washington	<i>114,000</i>	<i>108,000</i>	<i>116,000</i>	<i>338,000</i>
West Virginia	<i>18,000</i>	<i>17,000</i>	<i>18,000</i>	<i>52,000</i>
Wisconsin	<i>66,000</i>	<i>62,000</i>	<i>67,000</i>	<i>195,000</i>
Wyoming	<i>11,000</i>	<i>10,000</i>	<i>11,000</i>	<i>31,000</i>

Note: Italics indicate that data is a projection

TABLE 5.5: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2011-2014, \$, BILLIONS)

State Green Construction Economic Impact on Labor Earnings (2011-2014, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	2.17	1.63	1.63	5.43
Alaska	0.29	0.22	0.22	0.72
Arizona	4.15	3.12	3.11	10.38
Arkansas	1.03	0.77	0.77	2.57
California	12.61	9.46	9.44	31.51
Colorado	3.82	2.87	2.86	9.55
Connecticut	1.29	0.97	0.96	3.22
Delaware	0.46	0.34	0.34	1.15
Florida	10.61	7.96	7.95	26.51
Georgia	4.39	3.29	3.29	10.96
Hawaii	0.67	0.50	0.50	1.68
Idaho	0.97	0.73	0.73	2.42
Illinois	4.73	3.55	3.54	11.83
Indiana	3.17	2.37	2.37	7.91
Iowa	2.21	1.66	1.66	5.53
Kansas	1.56	1.17	1.17	3.90
Kentucky	1.47	1.11	1.10	3.68
Louisiana	3.03	2.27	2.27	7.57
Maine	0.49	0.36	0.36	1.21
Maryland	2.33	1.75	1.75	5.83
Massachusetts	3.55	2.66	2.66	8.87
Michigan	3.04	2.28	2.28	7.59
Minnesota	2.51	1.89	1.88	6.29
Mississippi	1.26	0.95	0.94	3.15
Missouri	2.36	1.77	1.77	5.89
Montana	0.45	0.34	0.34	1.12
Nebraska	0.95	0.72	0.71	2.39
Nevada	1.49	1.11	1.11	3.71
New Hampshire	0.62	0.47	0.46	1.55
New Jersey	2.94	2.20	2.20	7.34
New Mexico	1.25	0.93	0.93	3.11
New York	8.48	6.36	6.35	21.19
North Carolina	5.58	4.18	4.18	13.94
North Dakota	0.97	0.73	0.73	2.42
Ohio	4.53	3.40	3.39	11.31
Oklahoma	1.82	1.36	1.36	4.54
Oregon	2.69	2.02	2.01	6.72
Pennsylvania	4.15	3.12	3.11	10.38
Rhode Island	0.25	0.19	0.19	0.63
South Carolina	3.16	2.37	2.36	7.89
South Dakota	0.53	0.40	0.40	1.34
Tennessee	3.38	2.54	2.53	8.45

Texas	16.56	12.42	12.40	41.39
Utah	2.26	1.70	1.69	5.65
Vermont	0.27	0.20	0.20	0.68
Virginia	3.60	2.70	2.70	8.99
Washington	4.36	3.27	3.26	10.89
West Virginia	0.51	0.38	0.38	1.28
Wisconsin	2.38	1.79	1.78	5.95
Wyoming	0.45	0.33	0.33	1.12

TABLE 5.6: STATE GREEN CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2015-2018, \$, BILLIONS)

State Green Construction Economic Impact on Labor Earnings (2015-2018, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	4.37	3.30	3.28	10.95
Alaska	0.51	0.38	0.38	1.27
Arizona	8.00	6.04	6.01	20.06
Arkansas	1.89	1.42	1.42	4.73
California	24.18	18.26	18.16	60.59
Colorado	6.40	4.83	4.80	16.03
Connecticut	2.47	1.87	1.86	6.20
Delaware	0.71	0.54	0.54	1.79
Florida	20.38	15.39	15.31	51.08
Georgia	8.92	6.74	6.70	22.36
Hawaii	1.37	1.04	1.03	3.44
Idaho	1.85	1.40	1.39	4.65
Illinois	10.02	7.57	7.52	25.11
Indiana	6.26	4.72	4.70	15.68
Iowa	3.46	2.62	2.60	8.68
Kansas	2.47	1.87	1.86	6.20
Kentucky	2.72	2.05	2.04	6.82
Louisiana	4.79	3.61	3.59	11.99
Maine	0.99	0.74	0.74	2.47
Maryland	4.56	3.44	3.42	11.42
Massachusetts	5.86	4.42	4.40	14.68
Michigan	5.52	4.16	4.14	13.82
Minnesota	4.13	3.12	3.10	10.35
Mississippi	2.17	1.64	1.63	5.45
Missouri	4.47	3.38	3.36	11.21
Montana	0.69	0.52	0.52	1.74
Nebraska	1.96	1.48	1.47	4.92
Nevada	4.52	3.41	3.40	11.33
New Hampshire	1.16	0.88	0.87	2.91
New Jersey	5.48	4.14	4.12	13.74
New Mexico	2.07	1.57	1.56	5.20
New York	13.09	9.89	9.83	32.81

North Carolina	<i>10.50</i>	<i>7.93</i>	<i>7.88</i>	<i>26.31</i>
North Dakota	<i>1.11</i>	<i>0.84</i>	<i>0.83</i>	<i>2.78</i>
Ohio	<i>7.69</i>	<i>5.81</i>	<i>5.77</i>	<i>19.27</i>
Oklahoma	<i>3.08</i>	<i>2.33</i>	<i>2.31</i>	<i>7.72</i>
Oregon	<i>4.01</i>	<i>3.02</i>	<i>3.01</i>	<i>10.04</i>
Pennsylvania	<i>7.78</i>	<i>5.87</i>	<i>5.84</i>	<i>19.49</i>
Rhode Island	<i>0.57</i>	<i>0.43</i>	<i>0.43</i>	<i>1.43</i>
South Carolina	<i>5.48</i>	<i>4.14</i>	<i>4.12</i>	<i>13.74</i>
South Dakota	<i>0.92</i>	<i>0.69</i>	<i>0.69</i>	<i>2.31</i>
Tennessee	<i>5.77</i>	<i>4.36</i>	<i>4.33</i>	<i>14.46</i>
Texas	<i>28.65</i>	<i>21.63</i>	<i>21.51</i>	<i>71.79</i>
Utah	<i>3.77</i>	<i>2.84</i>	<i>2.83</i>	<i>9.44</i>
Vermont	<i>0.49</i>	<i>0.37</i>	<i>0.37</i>	<i>1.23</i>
Virginia	<i>7.10</i>	<i>5.36</i>	<i>5.33</i>	<i>17.80</i>
Washington	<i>7.69</i>	<i>5.81</i>	<i>5.78</i>	<i>19.28</i>
West Virginia	<i>1.19</i>	<i>0.90</i>	<i>0.90</i>	<i>2.99</i>
Wisconsin	<i>4.45</i>	<i>3.36</i>	<i>3.34</i>	<i>11.14</i>
Wyoming	<i>0.72</i>	<i>0.54</i>	<i>0.54</i>	<i>1.80</i>

Note: Italics indicate that data is a projection

6 State LEED Construction Economic Impact

To quantify the contribution of LEED construction to state economies, we analyzed LEED construction spending as well as direct, indirect, and induced contributions to GDP, employment, and labor earnings. This analysis was conducted using USGBC data and location factors from the 2015 RSMeans Square Foot Costs report²⁵ in order to identify past LEED construction impact on GDP, employment, and labor earnings as well as to project the 2015-2018 LEED construction contribution in these same areas.

Analysis

States in the top 10% of economic contributors for LEED (aggregate 2005-2014 historical and 2015-2018 forecasted data) include California, Illinois, Nevada, New York, and Texas. Data for the individual economic impact categories separated into impact subcategories for the 2011-2014 and 2015-2018 time periods can be found in the charts on the next page. LEED construction's contribution to state GDP ranged from 0.02% to 0.23% from 2011 to 2014 and is expected to grow up to 153% for the forecasted period of 2015 to 2018. Idaho, Michigan, Nevada, Oregon and Vermont were the five states with the highest projected increase in green construction's direct contribution to GDP while comparing economic impact during 2011-2014 and 2015-2018.

TABLE 6.1: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON GDP (2011-2014,



²⁵ Phelan, Marilyn. AIA (2015). *RSMeans Square Foot Costs, 36th annual edition*.

\$, BILLIONS)

State LEED Construction Economic Impact on GDP (2011-2014, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	0.31	0.32	0.34	1.04
Alaska	0.11	0.11	0.12	0.35
Arizona	1.30	1.36	1.46	4.98
Arkansas	0.17	0.17	0.19	0.58
California	14.28	14.93	16.07	49.13
Colorado	2.15	2.25	2.42	7.48
Connecticut	0.62	0.65	0.70	2.19
District of Columbia	3.55	3.71	4.00	10.21
Delaware	0.08	0.08	0.09	0.21
Florida	2.65	2.76	2.98	7.91
Georgia	2.33	2.43	2.62	7.71
Hawaii	0.43	0.45	0.48	1.22
Idaho	0.11	0.12	0.12	0.50
Illinois	6.57	6.87	7.40	25.77
Indiana	0.90	0.94	1.02	2.57
Iowa	0.42	0.44	0.47	1.26
Kansas	0.25	0.26	0.28	1.02
Kentucky	0.37	0.39	0.42	1.04
Louisiana	0.27	0.28	0.30	0.73
Maine	0.16	0.16	0.18	0.54
Maryland	2.19	2.29	2.47	7.78
Massachusetts	2.92	3.05	3.28	10.61
Michigan	1.00	1.05	1.13	4.89
Minnesota	1.47	1.54	1.65	4.63
Mississippi	0.24	0.25	0.27	0.88
Missouri	0.88	0.92	0.99	2.96
Montana	0.06	0.06	0.06	0.22
Nebraska	0.19	0.20	0.21	0.58
Nevada	0.96	1.01	1.09	14.92
New Hampshire	0.15	0.15	0.17	0.53
New Jersey	1.61	1.69	1.82	6.04
New Mexico	0.39	0.40	0.43	1.16
New York	7.64	7.98	8.60	23.85
North Carolina	1.83	1.91	2.06	5.89
North Dakota	0.05	0.05	0.06	0.14
Ohio	2.58	2.70	2.91	8.42
Oklahoma	0.22	0.23	0.25	0.70
Oregon	1.13	1.18	1.27	5.08
Pennsylvania	2.50	2.61	2.82	9.23
Rhode Island	0.16	0.17	0.18	0.52
South Carolina	0.44	0.46	0.49	1.64
South Dakota	0.08	0.08	0.09	0.20
Tennessee	1.02	1.07	1.15	3.31

Texas	6.68	6.97	7.51	20.94
Utah	0.49	0.51	0.55	1.68
Vermont	0.08	0.08	0.09	0.40
Virginia	3.48	3.64	3.92	10.32
Washington	2.18	2.27	2.45	8.84
West Virginia	0.07	0.07	0.07	0.21
Wisconsin	0.87	0.91	0.98	3.31
Wyoming	0.06	0.07	0.07	0.22

TABLE 6.2: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON GDP (2015-2018, \$, BILLIONS)

State LEED Construction Economic Impact on GDP (2015-2018, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	0.37	0.42	0.43	1.23
Alaska	0.12	0.13	0.14	0.38
Arizona	2.08	2.32	2.40	6.80
Arkansas	0.22	0.24	0.25	0.71
California	17.83	19.93	20.64	58.40
Colorado	2.76	3.09	3.20	9.05
Connecticut	0.83	0.92	0.96	2.70
District of Columbia	2.63	2.94	3.05	8.63
Delaware	0.04	0.05	0.05	0.14
Florida	2.24	2.50	2.59	7.33
Georgia	2.63	2.94	3.05	8.63
Hawaii	0.31	0.34	0.36	1.01
Idaho	0.24	0.27	0.28	0.79
Illinois	11.03	12.33	12.77	36.13
Indiana	0.65	0.73	0.75	2.13
Iowa	0.36	0.40	0.41	1.17
Kansas	0.46	0.51	0.53	1.49
Kentucky	0.25	0.28	0.29	0.83
Louisiana	0.16	0.18	0.19	0.54
Maine	0.20	0.22	0.23	0.65
Maryland	2.94	3.29	3.41	9.64
Massachusetts	4.15	4.64	4.81	13.60
Michigan	2.53	2.83	2.93	8.30
Minnesota	1.45	1.62	1.68	4.75
Mississippi	0.35	0.40	0.41	1.16
Missouri	1.03	1.15	1.19	3.37
Montana	0.09	0.10	0.10	0.30
Nebraska	0.17	0.19	0.20	0.56
Nevada	2.61	2.92	3.02	8.55
New Hampshire	0.20	0.23	0.23	0.66
New Jersey	2.45	2.74	2.84	8.03
New Mexico	0.33	0.37	0.39	1.10

New York	<i>7.36</i>	<i>8.23</i>	<i>8.52</i>	<i>24.11</i>
North Carolina	<i>1.93</i>	<i>2.15</i>	<i>2.23</i>	<i>6.32</i>
North Dakota	<i>0.04</i>	<i>0.04</i>	<i>0.04</i>	<i>0.12</i>
Ohio	<i>2.80</i>	<i>3.13</i>	<i>3.24</i>	<i>9.17</i>
Oklahoma	<i>0.22</i>	<i>0.24</i>	<i>0.25</i>	<i>0.71</i>
Oregon	<i>2.48</i>	<i>2.77</i>	<i>2.87</i>	<i>8.13</i>
Pennsylvania	<i>3.68</i>	<i>4.11</i>	<i>4.26</i>	<i>12.04</i>
Rhode Island	<i>0.18</i>	<i>0.20</i>	<i>0.20</i>	<i>0.57</i>
South Carolina	<i>0.67</i>	<i>0.74</i>	<i>0.77</i>	<i>2.18</i>
South Dakota	<i>0.04</i>	<i>0.04</i>	<i>0.05</i>	<i>0.13</i>
Tennessee	<i>1.09</i>	<i>1.22</i>	<i>1.26</i>	<i>3.57</i>
Texas	<i>6.53</i>	<i>7.30</i>	<i>7.56</i>	<i>21.39</i>
Utah	<i>0.60</i>	<i>0.67</i>	<i>0.70</i>	<i>1.97</i>
Vermont	<i>0.21</i>	<i>0.24</i>	<i>0.24</i>	<i>0.69</i>
Virginia	<i>2.87</i>	<i>3.20</i>	<i>3.32</i>	<i>9.39</i>
Washington	<i>3.93</i>	<i>4.39</i>	<i>4.55</i>	<i>12.87</i>
West Virginia	<i>0.06</i>	<i>0.07</i>	<i>0.07</i>	<i>0.21</i>
Wisconsin	<i>1.38</i>	<i>1.54</i>	<i>1.60</i>	<i>4.51</i>
Wyoming	<i>0.08</i>	<i>0.09</i>	<i>0.09</i>	<i>0.26</i>

Note: Italics indicate that data is a projection

TABLE 6.3: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2011-2014, JOBS)

State LEED Construction Economic Impact on Employment (2011-2014, Jobs)				
State	Direct	Indirect	Induced	Total
Alabama	4,000	3,000	4,000	11,000
Alaska	1,000	1,000	1,000	4,000
Arizona	17,000	14,000	17,000	47,000
Arkansas	2,000	2,000	2,000	6,000
California	187,000	152,000	183,000	521,000
Colorado	28,000	23,000	27,000	78,000
Connecticut	8,000	7,000	8,000	23,000
District of Columbia	47,000	38,000	45,000	130,000
Delaware	1,000	1,000	1,000	3,000
Florida	35,000	28,000	34,000	97,000
Georgia	30,000	25,000	30,000	85,000
Hawaii	6,000	5,000	5,000	16,000
Idaho	1,000	1,000	1,000	4,000
Illinois	86,000	70,000	84,000	240,000
Indiana	12,000	10,000	12,000	33,000
Iowa	6,000	4,000	5,000	15,000
Kansas	3,000	3,000	3,000	9,000
Kentucky	5,000	4,000	5,000	14,000
Louisiana	4,000	3,000	3,000	10,000
Maine	2,000	2,000	2,000	6,000

Maryland	29,000	23,000	28,000	80,000
Massachusetts	38,000	31,000	37,000	106,000
Michigan	13,000	11,000	13,000	37,000
Minnesota	19,000	16,000	19,000	54,000
Mississippi	3,000	3,000	3,000	9,000
Missouri	12,000	9,000	11,000	32,000
Montana	1,000	1,000	1,000	2,000
Nebraska	2,000	2,000	2,000	7,000
Nevada	13,000	10,000	12,000	35,000
New Hampshire	2,000	2,000	2,000	5,000
New Jersey	21,000	17,000	21,000	59,000
New Mexico	5,000	4,000	5,000	14,000
New York	100,000	81,000	98,000	279,000
North Carolina	24,000	19,000	23,000	67,000
North Dakota	1,000	1,000	1,000	2,000
Ohio	34,000	27,000	33,000	94,000
Oklahoma	3,000	2,000	3,000	8,000
Oregon	15,000	12,000	14,000	41,000
Pennsylvania	33,000	27,000	32,000	91,000
Rhode Island	2,000	2,000	2,000	6,000
South Carolina	6,000	5,000	6,000	16,000
South Dakota	1,000	1,000	1,000	3,000
Tennessee	13,000	11,000	13,000	37,000
Texas	87,000	71,000	85,000	243,000
Utah	6,000	5,000	6,000	18,000
Vermont	1,000	1,000	1,000	3,000
Virginia	46,000	37,000	45,000	127,000
Washington	29,000	23,000	28,000	79,000
West Virginia	1,000	1,000	1,000	2,000
Wisconsin	11,000	9,000	11,000	32,000
Wyoming	1,000	1,000	1,000	2,000

TABLE 6.4: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON EMPLOYMENT (2015-2018, JOBS)

State LEED Construction Economic Impact on Employment (2015-2018, Jobs)				
State	Direct	Indirect	Induced	Total
Alabama	5,000	4,000	5,000	14,000
Alaska	2,000	1,000	2,000	4,000
Arizona	27,000	24,000	27,000	78,000
Arkansas	3,000	2,000	3,000	8,000
California	231,000	203,000	234,000	668,000
Colorado	36,000	31,000	36,000	103,000
Connecticut	11,000	9,000	11,000	31,000
District of Columbia	34,000	30,000	35,000	99,000
Delaware	1,000	0	1,000	2,000

Florida	<i>29,000</i>	<i>25,000</i>	<i>29,000</i>	<i>84,000</i>
Georgia	<i>34,000</i>	<i>30,000</i>	<i>35,000</i>	<i>99,000</i>
Hawaii	<i>4,000</i>	<i>4,000</i>	<i>4,000</i>	<i>12,000</i>
Idaho	<i>3,000</i>	<i>3,000</i>	<i>3,000</i>	<i>9,000</i>
Illinois	<i>143,000</i>	<i>125,000</i>	<i>145,000</i>	<i>413,000</i>
Indiana	<i>8,000</i>	<i>7,000</i>	<i>9,000</i>	<i>24,000</i>
Iowa	<i>5,000</i>	<i>4,000</i>	<i>5,000</i>	<i>13,000</i>
Kansas	<i>6,000</i>	<i>5,000</i>	<i>6,000</i>	<i>17,000</i>
Kentucky	<i>3,000</i>	<i>3,000</i>	<i>3,000</i>	<i>9,000</i>
Louisiana	<i>2,000</i>	<i>2,000</i>	<i>2,000</i>	<i>6,000</i>
Maine	<i>3,000</i>	<i>2,000</i>	<i>3,000</i>	<i>7,000</i>
Maryland	<i>38,000</i>	<i>33,000</i>	<i>39,000</i>	<i>110,000</i>
Massachusetts	<i>54,000</i>	<i>47,000</i>	<i>55,000</i>	<i>155,000</i>
Michigan	<i>33,000</i>	<i>29,000</i>	<i>33,000</i>	<i>95,000</i>
Minnesota	<i>19,000</i>	<i>16,000</i>	<i>19,000</i>	<i>54,000</i>
Mississippi	<i>5,000</i>	<i>4,000</i>	<i>5,000</i>	<i>13,000</i>
Missouri	<i>13,000</i>	<i>12,000</i>	<i>14,000</i>	<i>39,000</i>
Montana	<i>1,000</i>	<i>1,000</i>	<i>1,000</i>	<i>3,000</i>
Nebraska	<i>2,000</i>	<i>2,000</i>	<i>2,000</i>	<i>6,000</i>
Nevada	<i>33,000</i>	<i>29,000</i>	<i>34,000</i>	<i>96,000</i>
New Hampshire	<i>3,000</i>	<i>2,000</i>	<i>3,000</i>	<i>8,000</i>
New Jersey	<i>32,000</i>	<i>28,000</i>	<i>32,000</i>	<i>92,000</i>
New Mexico	<i>4,000</i>	<i>4,000</i>	<i>4,000</i>	<i>13,000</i>
New York	<i>95,000</i>	<i>84,000</i>	<i>97,000</i>	<i>276,000</i>
North Carolina	<i>25,000</i>	<i>22,000</i>	<i>25,000</i>	<i>72,000</i>
North Dakota	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,000</i>
Ohio	<i>36,000</i>	<i>32,000</i>	<i>37,000</i>	<i>105,000</i>
Oklahoma	<i>3,000</i>	<i>2,000</i>	<i>3,000</i>	<i>8,000</i>
Oregon	<i>32,000</i>	<i>28,000</i>	<i>33,000</i>	<i>93,000</i>
Pennsylvania	<i>48,000</i>	<i>42,000</i>	<i>48,000</i>	<i>138,000</i>
Rhode Island	<i>2,000</i>	<i>2,000</i>	<i>2,000</i>	<i>7,000</i>
South Carolina	<i>9,000</i>	<i>8,000</i>	<i>9,000</i>	<i>25,000</i>
South Dakota	<i>1,000</i>	<i>0</i>	<i>1,000</i>	<i>1,000</i>
Tennessee	<i>14,000</i>	<i>12,000</i>	<i>14,000</i>	<i>41,000</i>
Texas	<i>84,000</i>	<i>74,000</i>	<i>86,000</i>	<i>244,000</i>
Utah	<i>8,000</i>	<i>7,000</i>	<i>8,000</i>	<i>23,000</i>
Vermont	<i>3,000</i>	<i>2,000</i>	<i>3,000</i>	<i>8,000</i>
Virginia	<i>37,000</i>	<i>33,000</i>	<i>38,000</i>	<i>107,000</i>
Washington	<i>51,000</i>	<i>45,000</i>	<i>52,000</i>	<i>147,000</i>
West Virginia	<i>1,000</i>	<i>1,000</i>	<i>1,000</i>	<i>2,000</i>
Wisconsin	<i>18,000</i>	<i>16,000</i>	<i>18,000</i>	<i>52,000</i>
Wyoming	<i>1,000</i>	<i>1,000</i>	<i>1,000</i>	<i>3,000</i>

Note: Italics indicate that data is a projection

TABLE 6.5: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2011-2014, \$, BILLIONS)

State LEED Construction Economic Impact on Labor Earnings (2011-2014, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	0.27	0.19	0.20	0.70
Alaska	0.10	0.07	0.07	0.24
Arizona	1.14	0.80	0.83	3.31
Arkansas	0.15	0.10	0.11	0.39
California	12.57	8.79	9.13	33.09
Colorado	1.89	1.32	1.38	5.03
Connecticut	0.55	0.38	0.40	1.47
District of Columbia	3.13	2.19	2.27	7.05
Delaware	0.07	0.05	0.05	0.14
Florida	2.33	1.63	1.69	5.43
Georgia	2.05	1.43	1.49	5.22
Hawaii	0.38	0.26	0.27	0.84
Idaho	0.10	0.07	0.07	0.32
Illinois	5.78	4.05	4.20	17.09
Indiana	0.79	0.56	0.58	1.78
Iowa	0.37	0.26	0.27	0.86
Kansas	0.22	0.15	0.16	0.67
Kentucky	0.33	0.23	0.24	0.72
Louisiana	0.24	0.17	0.17	0.51
Maine	0.14	0.10	0.10	0.37
Maryland	1.93	1.35	1.40	5.22
Massachusetts	2.57	1.80	1.87	7.09
Michigan	0.88	0.62	0.64	3.17
Minnesota	1.29	0.90	0.94	3.15
Mississippi	0.21	0.15	0.15	0.59
Missouri	0.78	0.54	0.57	2.00
Montana	0.05	0.03	0.04	0.14
Nebraska	0.17	0.12	0.12	0.39
Nevada	0.85	0.60	0.62	9.07
New Hampshire	0.13	0.09	0.09	0.35
New Jersey	1.42	0.99	1.03	4.03
New Mexico	0.34	0.24	0.25	0.80
New York	6.73	4.70	4.89	16.27
North Carolina	1.61	1.12	1.17	4.00
North Dakota	0.04	0.03	0.03	0.10
Ohio	2.27	1.59	1.65	5.71
Oklahoma	0.20	0.14	0.14	0.47
Oregon	0.99	0.69	0.72	3.32
Pennsylvania	2.20	1.54	1.60	6.16
Rhode Island	0.14	0.10	0.10	0.36
South Carolina	0.39	0.27	0.28	1.09
South Dakota	0.07	0.05	0.05	0.14

Tennessee	0.90	0.63	0.65	2.25
Texas	5.88	4.10	4.27	14.28
Utah	0.43	0.30	0.31	1.13
Vermont	0.07	0.05	0.05	0.26
Virginia	3.06	2.14	2.23	7.09
Washington	1.92	1.34	1.39	5.84
West Virginia	0.06	0.04	0.04	0.14
Wisconsin	0.76	0.53	0.55	2.20
Wyoming	0.06	0.04	0.04	0.15

TABLE 6.6: STATE LEED CONSTRUCTION ECONOMIC IMPACT ON LABOR EARNINGS (2015-2018, \$, BILLIONS)

State LEED Construction Economic Impact on Labor Earnings (2015-2018, \$, billions)				
State	Direct	Indirect	Induced	Total
Alabama	0.33	0.25	0.25	0.82
Alaska	0.10	0.08	0.08	0.26
Arizona	1.83	1.37	1.37	4.56
Arkansas	0.19	0.14	0.14	0.48
California	15.68	11.73	11.74	39.15
Colorado	2.43	1.82	1.82	6.06
Connecticut	0.73	0.54	0.54	1.81
District of Columbia	2.32	1.73	1.73	5.78
Delaware	0.04	0.03	0.03	0.09
Florida	1.97	1.47	1.47	4.92
Georgia	2.32	1.73	1.73	5.79
Hawaii	0.27	0.20	0.20	0.68
Idaho	0.21	0.16	0.16	0.53
Illinois	9.70	7.26	7.26	24.22
Indiana	0.57	0.43	0.43	1.43
Iowa	0.31	0.24	0.24	0.79
Kansas	0.40	0.30	0.30	1.00
Kentucky	0.22	0.17	0.17	0.55
Louisiana	0.14	0.11	0.11	0.36
Maine	0.18	0.13	0.13	0.44
Maryland	2.59	1.94	1.94	6.46
Massachusetts	3.65	2.73	2.73	9.12
Michigan	2.23	1.67	1.67	5.56
Minnesota	1.28	0.96	0.96	3.19
Mississippi	0.31	0.23	0.23	0.78
Missouri	0.91	0.68	0.68	2.26
Montana	0.08	0.06	0.06	0.20
Nebraska	0.15	0.11	0.11	0.38
Nevada	2.29	1.72	1.72	5.73
New Hampshire	0.18	0.13	0.13	0.44

New Jersey	<i>2.16</i>	<i>1.61</i>	<i>1.61</i>	<i>5.38</i>
New Mexico	<i>0.29</i>	<i>0.22</i>	<i>0.22</i>	<i>0.73</i>
New York	<i>6.47</i>	<i>4.85</i>	<i>4.85</i>	<i>16.16</i>
North Carolina	<i>1.70</i>	<i>1.27</i>	<i>1.27</i>	<i>4.23</i>
North Dakota	<i>0.03</i>	<i>0.02</i>	<i>0.02</i>	<i>0.08</i>
Ohio	<i>2.46</i>	<i>1.84</i>	<i>1.84</i>	<i>6.15</i>
Oklahoma	<i>0.19</i>	<i>0.14</i>	<i>0.14</i>	<i>0.48</i>
Oregon	<i>2.18</i>	<i>1.63</i>	<i>1.63</i>	<i>5.45</i>
Pennsylvania	<i>3.23</i>	<i>2.42</i>	<i>2.42</i>	<i>8.07</i>
Rhode Island	<i>0.15</i>	<i>0.12</i>	<i>0.12</i>	<i>0.39</i>
South Carolina	<i>0.59</i>	<i>0.44</i>	<i>0.44</i>	<i>1.46</i>
South Dakota	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.09</i>
Tennessee	<i>0.96</i>	<i>0.72</i>	<i>0.72</i>	<i>2.39</i>
Texas	<i>5.74</i>	<i>4.30</i>	<i>4.30</i>	<i>14.34</i>
Utah	<i>0.53</i>	<i>0.40</i>	<i>0.40</i>	<i>1.32</i>
Vermont	<i>0.19</i>	<i>0.14</i>	<i>0.14</i>	<i>0.46</i>
Virginia	<i>2.52</i>	<i>1.89</i>	<i>1.89</i>	<i>6.29</i>
Washington	<i>3.45</i>	<i>2.59</i>	<i>2.59</i>	<i>8.63</i>
West Virginia	<i>0.06</i>	<i>0.04</i>	<i>0.04</i>	<i>0.14</i>
Wisconsin	<i>1.21</i>	<i>0.91</i>	<i>0.91</i>	<i>3.03</i>
Wyoming	<i>0.07</i>	<i>0.05</i>	<i>0.05</i>	<i>0.18</i>

Note: Italics indicate that data is a projection

7 Selected Savings

Green buildings result in real, quantifiable savings such as energy savings and maintenance labor as well as other benefits such as better quality of air and worker satisfaction. For example, the U.S. General Services Administration's Green Building Performance report stated that their green buildings studied outperformed U.S. commercial buildings by using less energy and water, emitting less CO₂, costing less to maintain and had occupants who are more satisfied than those working in typical buildings.²⁶ In fact, these buildings scored 76% higher by occupants in terms of satisfaction than the average for U.S. commercial buildings. This analysis focuses on quantifying projected operational savings only, for those savings categories with accountable data.

Booz Allen performed a high-level evaluation of the aggregate energy and environmental benefits reported from green and LEED building construction. Green buildings generate savings for building owners by reducing demand in various operational cost categories. These savings have been quantitatively reported most often across four savings categories:

- Energy
- Water
- Trash
- Maintenance labor

Green construction can also save money in construction, including, but not limited to:²⁷

- Reducing disposal cost of construction waste
- Integrated design process

Green construction to save
23.5 billion Kilowatt Hours of
energy from 2015-2018

LEED construction to save
12.38 billion Kilowatt Hours of
energy from 2015-2018

LEED construction to reduce
annual greenhouse gas
emissions from 1.8 million
cars from 2015-2018

²⁶ GSA Public Buildings Service (2011, August). *Green Building Performance: A Post Occupancy Evaluation of 22 GSA Buildings*.

²⁷ Charles Lockwood (2006, June) "Building the Green Way," Harvard Business Review. Retrieved from: <https://hbr.org/2006/06/building-the-green-way>.

- Correctly sizing equipment

We did not attempt to quantify additional benefits such as employee productivity, for this study.

To calculate green building monetary savings, we analyzed only operational savings categories throughout the expected life of green buildings on an annual basis. Demand is reduced and thus savings are realized in energy, water, trash, and maintenance. In pursuit of a holistic approach to the impact of savings and spending on green and LEED construction, the Booz Allen team identified the need to subtract these savings associated with increased spending on green buildings, from the economic sectors in our IMPLAN model explained in the methodology section. To quantify LEED energy savings, Booz Allen used a meta-analysis based approach to estimate the average savings per square foot associated with LEED for each LEED achievement level of LEED v2009. We conducted an analysis of several sources including the Department of Energy's Buildings Performance Database and GSA's Green Building Performance Study to calculate savings.^{28 29} These sources looked at the performance of over 750,000 projects, which categorized as either general, green, or LEED construction. All reports or databases considered assessed the performance of these projects against at least one of the four savings categories mentioned above. Through this analysis, we then calculated the average savings per square foot by savings category: energy, water, trash, and maintenance displayed below. To estimate historical and forecasted data, we adjusted the data using both historical and projected inflation rates. Our findings from our meta-analysis of the literature considered is summarized into the following (Tables 7.5, 7.6, 7.7, 7.8):

- Annual per square foot energy savings
- Annual per square foot water savings
- Annual per square foot trash savings
- Annual per square foot maintenance savings

These were further categorized into different certification levels for LEED or green so as to get a better estimate of total savings. They are as follows:

- LEED Certified
- LEED Silver
- LEED Gold
- LEED Platinum
- Green

We segmented our LEED square foot database by level of certification as listed above. To calculate the savings generated each year by green construction, we multiplied the cumulative square footage of green buildings for each year by the savings (per square foot) by savings category for that year. To calculate the savings generated each year for LEED, we followed a similar process for each of the different certification levels. Finally we added all four certification levels to get total LEED savings.

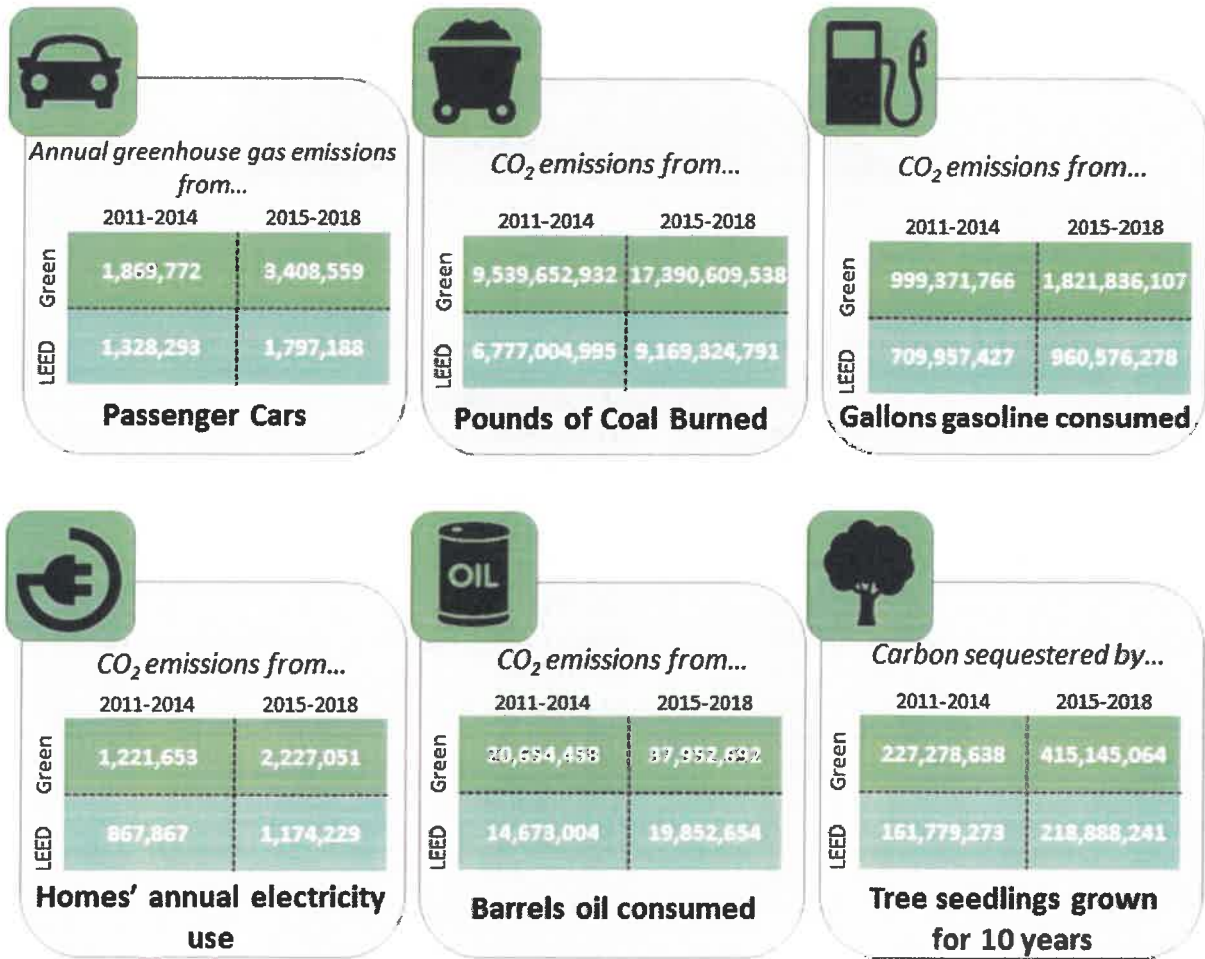
²⁸ GSA Public Buildings Service (2011, August). *Green Building Performance: A Post Occupancy Evaluation of 22 GSA Buildings*.

²⁹ Department of Energy (2015, August). *Building Performance Database*. Retrieved from: <http://energy.gov/eere/buildings/building-performance-database>

Analysis

From 2015– 2018, the green construction market is estimated to generate \$4.8 billion in savings from green construction, with LEED-certified buildings accounting for as much as \$2.2 billion of total savings. From 2015-2018 the green construction market is expected to generate \$2.4 billion in energy savings, \$99.2 million in trash savings, \$256.5 million in water and \$1.5 billion in maintenance savings. During the same time period, LEED-certified buildings account for as much as \$1.2 billion in energy savings, \$54.2 million in Trash savings, \$149.5 million in water and \$715.3 million in Maintenance savings.

FIGURE 7.1: ESTIMATED EQUIVALENTS FOR ENERGY BENEFITS³⁰



³⁰ U.S. Environmental Protection Agency (2014, April). Greenhouse Gas Equivalencies Calculator. Retrieved from: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

FIGURE 7.2: SELECTED SAVINGS FOR GREEN CONSTRUCTION (\$)

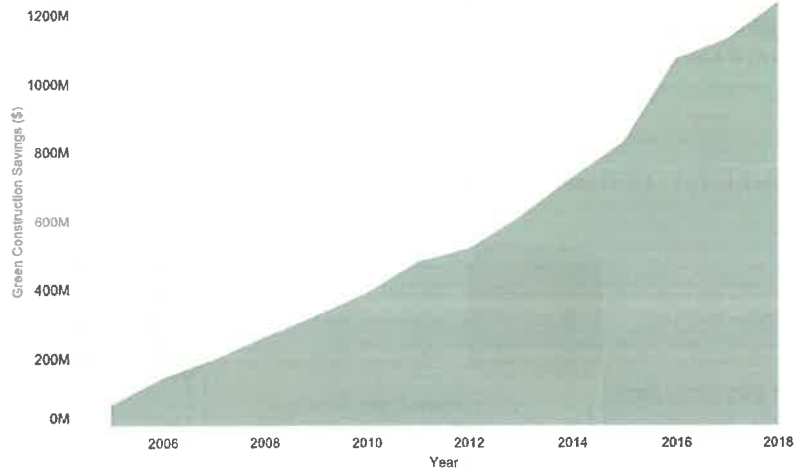


TABLE 7.1: SELECTED SAVINGS FOR GREEN CONSTRUCTION (\$, BY YEAR)

Year	Green Construction Savings (\$)
2005	62,602,000
2006	139,819,000
2007	194,787,000
2008	261,294,000
2009	323,364,000
2010	390,909,000
2011	480,161,000
2012	517,999,000
2013	614,303,000
2014	726,212,000
2015	830,784,000
2016	1,071,506,000
2017	1,128,008,000
2018	1,233,671,000

Note: Italics indicate that data is a projection

FIGURE 7.3: SELECTED SAVINGS FOR LEED CONSTRUCTION (\$)

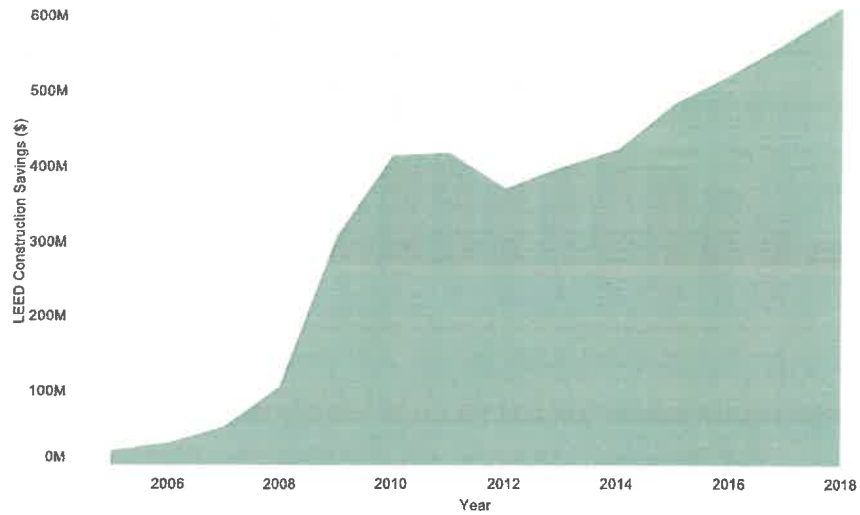


TABLE 7.2: SELECTED SAVINGS FOR LEED CONSTRUCTION (\$)

Year	LEED Construction Savings (\$)
2005	20,362,000
2006	30,444,000
2007	52,202,000
2008	105,444,000
2009	305,662,000
2010	414,523,000
2011	418,521,000
2012	370,405,000
2013	399,075,000
2014	423,151,000
2015	483,399,000
2016	522,692,000
2017	566,179,000
2018	613,105,000

Note: Italics indicate that data is a projection

FIGURE 7.4: SELECTED SAVINGS FOR GREEN CONSTRUCTION BY CATEGORY (\$)

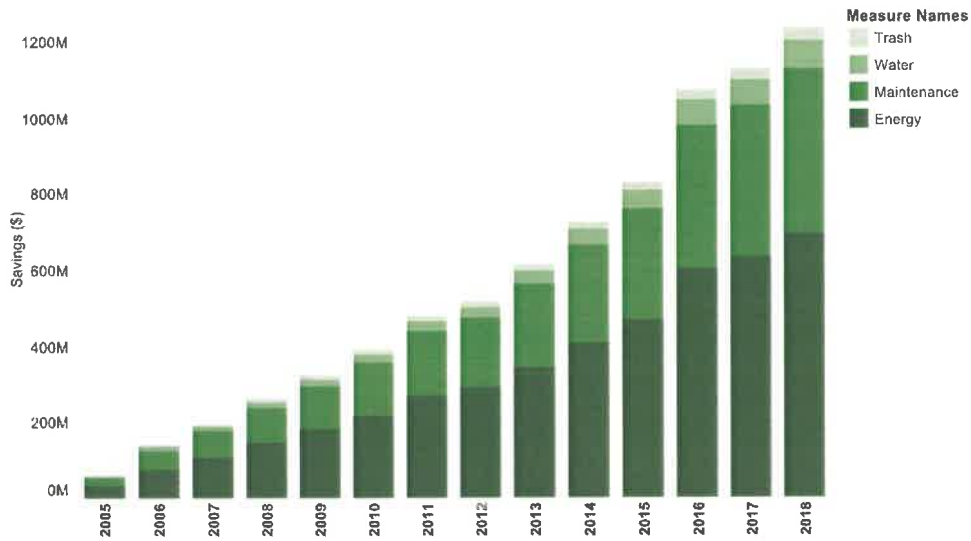


TABLE 7.3: SELECTED SAVINGS FOR GREEN CONSTRUCTION BY CATEGORY (\$, MILLIONS)

Total Green Savings by Savings Category (\$, millions)				
Year	Energy	Trash	Water	Maintenance
2005	35.27	1.46	3.77	22.11
2006	78.77	3.25	8.41	49.39
2007	109.73	4.53	11.72	68.80
2008	147.20	6.08	15.72	92.30
2009	182.17	7.53	19.45	114.22
2010	220.22	9.10	23.52	138.08
2011	270.50	11.18	28.88	169.60
2012	291.81	12.06	31.16	182.97
2013	346.07	14.30	36.95	216.99
2014	409.11	16.90	43.69	256.52
2015	468.02	19.34	49.98	293.45
2016	603.63	24.94	64.46	378.48
2017	635.46	26.25	67.86	398.44
2018	694.98	28.71	74.21	435.76

Note: Italics indicate that data is a projection

FIGURE 7.5: SELECTED SAVINGS FOR LEED CONSTRUCTION BY CATEGORY (\$)

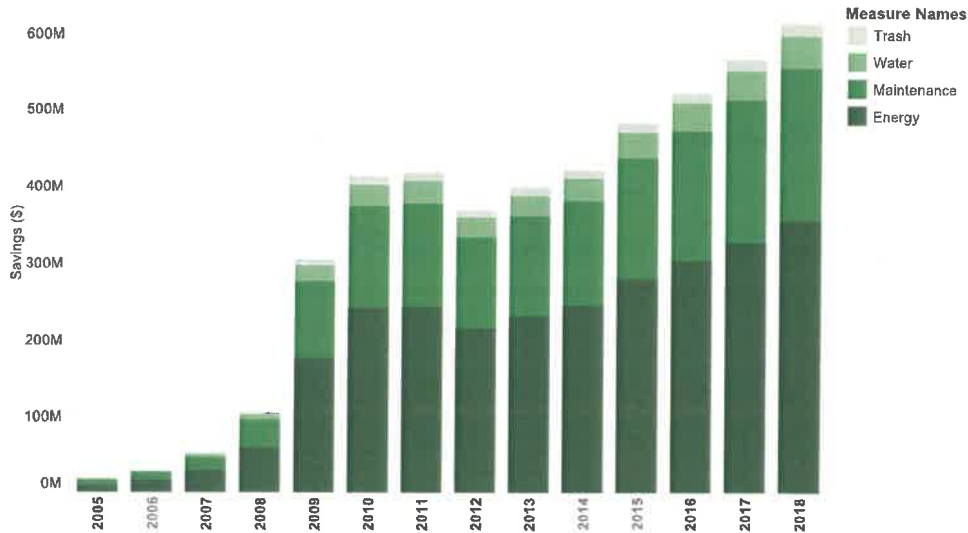


TABLE 7.4: SELECTED SAVINGS FOR LEED CONSTRUCTION BY CATEGORY (\$, MILLIONS)

Total LEED Savings by Savings Category (\$, millions)				
Year	Energy	Trash	Water	Maintenance
2005	1.17	0.45	1.07	7.68
2006	17.36	0.72	1.85	10.51
2007	29.68	1.24	3.28	18.01
2008	59.46	2.52	7.21	36.26
2009	176.55	7.54	20.85	100.71
2010	241.93	10.39	28.49	133.72
2011	243.97	10.49	28.96	135.11
2012	215.61	9.25	25.40	120.15
2013	230.99	9.85	26.80	131.44
2014	245.20	10.55	29.73	137.67
2015	280.10	11.99	33.09	158.23
2016	302.86	12.96	35.78	171.09
2017	328.06	14.04	38.75	185.32
2018	355.25	15.21	41.97	200.68

Note: Italics indicate that data is a projection

TABLE 7.5: PER SQUARE FOOT ENERGY SAVINGS BY CERTIFICATION LEVEL (\$/ SQ. FT)

Energy Savings (\$/sq. ft)					
Year	LEED Certified	LEED Gold	LEED Silver	LEED Platinum	Green
2005	0.4273	0.4415	0.6631	0.6963	0.5107
2006	0.4266	0.4408	0.6621	0.6952	0.5098
2007	0.4260	0.4402	0.6612	0.6942	0.5091
2008	0.4252	0.4394	0.6599	0.6929	0.5082
2009	0.4253	0.4395	0.6600	0.6930	0.5083
2010	0.4249	0.4391	0.6595	0.6925	0.5079
2011	0.4243	0.4384	0.6585	0.6914	0.5070
2012	0.4238	0.4379	0.6578	0.6906	0.5065
2013	0.4235	0.4376	0.6573	0.6901	0.5061
2014	0.4232	0.4373	0.6567	0.6896	0.5057
2015	0.4231	0.4372	0.6567	0.6895	0.5057
2016	0.4228	0.4369	0.6562	0.6890	0.5053
2017	0.4223	0.4364	0.6554	0.6882	0.5047
2018	0.4218	0.4358	0.6546	0.6873	0.5041

TABLE 7.6: PER SQUARE FOOT TRASH SAVINGS BY CERTIFICATION LEVEL (\$/ SQ. FT)

Trash Savings (\$/sq. ft)					
Year	LEED Certified	LEED Gold	LEED Silver	LEED Platinum	Green
2005	0.0144	0.0186	0.0303	0.0318	0.0211
2006	0.0144	0.0186	0.0302	0.0318	0.0211
2007	0.0143	0.0186	0.0302	0.0317	0.0210
2008	0.0143	0.0185	0.0302	0.0317	0.0210
2009	0.0143	0.0185	0.0302	0.0317	0.0210
2010	0.0143	0.0185	0.0301	0.0316	0.0210
2011	0.0143	0.0185	0.0301	0.0316	0.0209
2012	0.0143	0.0185	0.0301	0.0316	0.0209
2013	0.0142	0.0185	0.0300	0.0315	0.0209
2014	0.0142	0.0184	0.0300	0.0315	0.0209
2015	0.0142	0.0184	0.0300	0.0315	0.0209
2016	0.0142	0.0184	0.0300	0.0315	0.0209
2017	0.0142	0.0184	0.0299	0.0314	0.0208
2018	0.0142	0.0184	0.0299	0.0314	0.0208

TABLE 7.7: PER SQUARE FOOT WATER SAVINGS BY CERTIFICATION LEVEL (\$/ SQ. FT)

Water Savings (\$/sq. ft)					
Year	LEED Certified	LEED Gold	LEED Silver	LEED Platinum	Green
2005	0.0174	0.0370	0.1092	0.1146	0.0545
2006	0.0174	0.0369	0.1090	0.1144	0.0544
2007	0.0174	0.0369	0.1088	0.1143	0.0544
2008	0.0173	0.0368	0.1086	0.1141	0.0543
2009	0.0173	0.0368	0.1087	0.1141	0.0543
2010	0.0173	0.0368	0.1086	0.1140	0.0542
2011	0.0173	0.0367	0.1084	0.1138	0.0541
2012	0.0173	0.0367	0.1083	0.1137	0.0541
2013	0.0173	0.0367	0.1082	0.1136	0.0540
2014	0.0173	0.0366	0.1081	0.1135	0.0540
2015	0.0172	0.0366	0.1081	0.1135	0.0540
2016	0.0172	0.0366	0.1080	0.1134	0.0540
2017	0.0172	0.0366	0.1079	0.1133	0.0539
2018	0.0172	0.0365	0.1078	0.1132	0.0538

TABLE 7.8: PER SQUARE FOOT MAINTENANCE BY CERTIFICATION LEVEL / SQ. FT

Maintenance Savings (\$/sq. ft)					
Year	LEED Certified	LEED Gold	LEED Silver	LEED Platinum	Green
2005	0.3893	0.2010	0.3703	0.3888	0.3202
2006	0.3887	0.2006	0.3697	0.3882	0.3197
2007	0.3882	0.2004	0.3692	0.3876	0.3192
2008	0.3874	0.2000	0.3685	0.3869	0.3186
2009	0.3875	0.2000	0.3685	0.3870	0.3187
2010	0.3872	0.1999	0.3682	0.3866	0.3184
2011	0.3866	0.1995	0.3676	0.3860	0.3179
2012	0.3862	0.1993	0.3673	0.3856	0.3176
2013	0.3859	0.1992	0.3670	0.3853	0.3173
2014	0.3856	0.1990	0.3667	0.3850	0.3171
2015	0.3856	0.1990	0.3667	0.3850	0.3171
2016	0.3853	0.1989	0.3664	0.3847	0.3168
2017	0.3848	0.1986	0.3660	0.3843	0.3165
2018	0.3843	0.1984	0.3655	0.3838	0.3161

8 Tax Contributions by State

In order to further explore the economic impact analysis conducted in this report, we analyzed the tax contributions by state from LEED construction. We calculated this by leveraging data from individual income, corporate income, and real property tax by state. The analysis provides estimates of state tax revenues associated with LEED construction in a given year. However, it does not account for state tax revenues associated with previous LEED projects. Early LEED buildings could significantly add to state tax revenues through property tax as well as income taxes for ongoing operations. Thus, the numbers herein are underestimates of the full LEED related tax contribution.

Assumptions

We made several assumptions given the available data:

- The ratio between total construction spend and total LEED spend is the same for the ratio between total construction selling prices and total LEED construction selling prices by state.
- Incentives were excluded from this analysis, as reliable data are not readily available. Moreover, they are often paid on varying dates and vary greatly by state and locality.
- Sales taxes were also excluded, as most states generally do not tax certification or credentials.

Analysis

In 2014, LEED-related employment directly contributed \$1.09 billion of individual income tax and is expected to increase to a \$1.5 billion contribution by 2018. Corporate income tax contributions totaled \$689.5 million in 2014 and should increase to \$1.06 billion by 2018 while total state income tax (corporate plus individual) in 2014 was \$3.35 billion and is expected to increase to \$4.82 billion by 2018.

In 2014, state LEED-related property taxes contributed approximately \$2.06 billion and are estimated to increase to \$3.62 billion in 2018. Total state tax contributions related to LEED building construction totaled \$5.4 billion in 2014 and are forecasted to increase to \$8.4 billion in 2018.

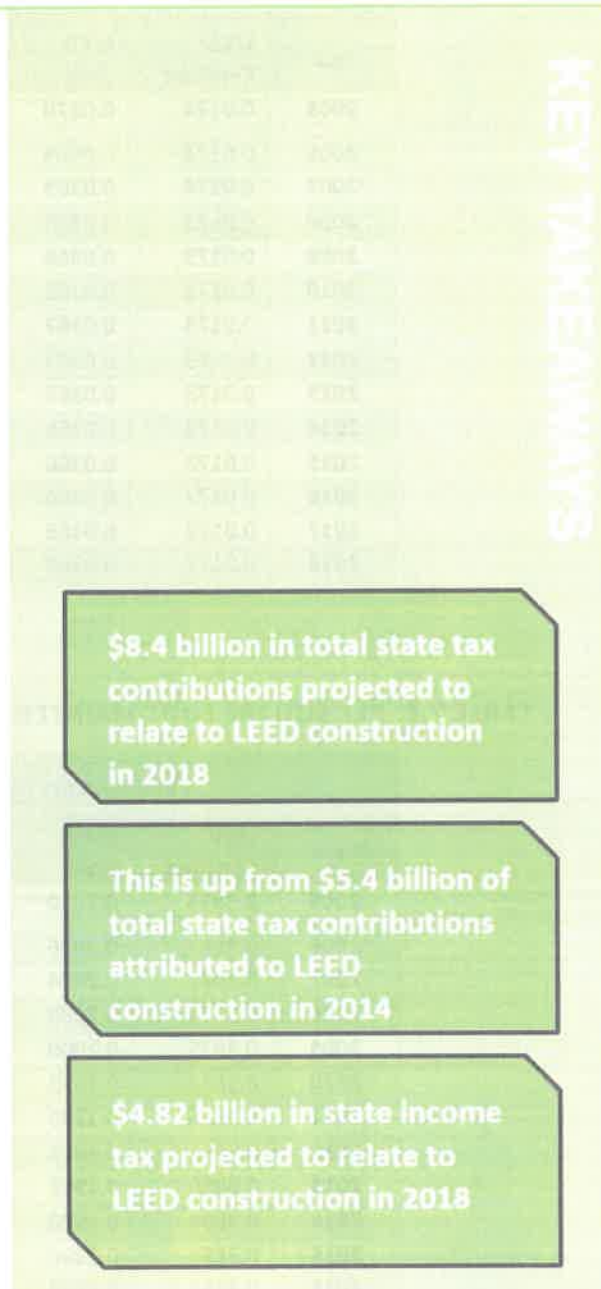


TABLE 8.1: STATE TAX CONTRIBUTIONS (2015-2018, \$, MILLION)

State Tax Contributions (2015-2018, \$, million)				
State	Individual Income Tax	Corporate Income Tax	Property Tax	Total State Tax
Alabama	39.16	49.72	62.26	151.14
Alaska	5.98	67.71	57.75	131.45
Arizona	163.43	34.46	448.60	646.49
Arkansas	32.43	24.16	263.68	320.27
California	3,692.41	617.40	3,266.58	7,576.39
Colorado	327.53	41.34	n/a	368.88
Connecticut	167.96	48.77	n/a	216.73
Delaware	5.77	17.10	n/a	22.87
Florida	31.34	143.57	0.05	174.97
Georgia	322.20	53.46	473.45	849.11
Hawaii	44.72	3.90	n/a	48.62
Idaho	32.33	80.28	n/a	112.61
Illinois	1,751.91	336.60	148.48	2,236.99
Indiana	68.21	40.73	1.72	110.66
Iowa	45.27	20.25	n/a	65.52
Kansas	49.74	24.78	31.27	105.79
Kentucky	33.80	26.39	114.47	174.66
Louisiana	15.09	14.31	3.82	33.22
Maine	28.28	11.23	16.54	56.05
Maryland	413.86	61.06	1,000.55	1,475.48
Massachusetts	735.43	174.26	4.74	914.42
Michigan	264.95	153.00	1,743.00	2,160.94
Minnesota	262.05	59.79	556.53	878.38
Mississippi	42.35	35.80	9.06	87.21
Missouri	113.08	26.96	13.83	153.86
Montana	13.64	18.92	65.07	97.63
Nebraska	23.68	16.46	0.03	40.16
Nevada	n/a	n/a	1,457.89	1,457.89
New Hampshire	9.58	54.83	141.40	205.81
New Jersey	370.08	190.78	5.65	566.50
New Mexico	33.16	16.91	39.47	89.54
New York	1,577.27	296.60	n/a	1,873.87
North Carolina	285.16	118.97	n/a	404.13
North Dakota	2.98	31.65	0.14	34.77
Ohio	226.80	n/a	n/a	226.80
Oklahoma	24.88	58.86	n/a	83.74
Oregon	493.76	75.93	25.89	595.58
Pennsylvania	409.20	232.19	43.31	684.70
Rhode Island	20.25	6.79	1.72	28.76
South Carolina	73.92	33.05	5.08	112.05
South Dakota	0.14	1.09	n/a	1.23
Tennessee	30.32	62.21	n/a	92.54

Texas	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Utah	<i>75.87</i>	<i>22.66</i>	<i>n/a</i>	<i>98.54</i>
Vermont	<i>27.03</i>	<i>31.00</i>	<i>912.30</i>	<i>970.33</i>
Virginia	<i>394.85</i>	<i>41.41</i>	<i>31.62</i>	<i>467.89</i>
Washington	<i>n/a</i>	<i>n/a</i>	<i>1,984.14</i>	<i>1,984.14</i>
West Virginia	<i>10.47</i>	<i>17.90</i>	<i>n/a</i>	<i>28.37</i>
Wisconsin	<i>201.22</i>	<i>146.54</i>	<i>108.24</i>	<i>456.00</i>
Wyoming	<i>n/a</i>	<i>n/a</i>	<i>77.91</i>	<i>77.91</i>

Note: Italics indicate that data is a projection

9 Conclusions

Green and LEED construction have proven themselves as an economic stimulus, adding significantly to the GDP, jobs, and labor earnings throughout the United States. The projections of this report indicate that this positive economic contribution will continue and will grow in the future. In addition, those choosing to pursue high-performance building construction are well positioned to take advantage of the monetary savings and robust economic benefits. This economic impact also means significant environmental and social benefits are being generated to protect the people and the planet. Green construction, green jobs, and the resulting state and national benefits continue to rise, as this study projects that green construction will generate an additional \$303.4 billion in GDP, 3.9 million jobs, and \$268.4 billion in labor earnings in the coming years 2015-2018. LEED specifically is projected to contribute an additional \$108.8 billion in GDP, 1.4 million jobs, and \$95.7 billion in labor earnings in the coming years 2015-2018. Moreover, LEED is projected to provide estimated energy benefits from 2015-2018 equivalent to avoiding annual greenhouse gas emissions from 1.8 million passenger cars or the CO₂ emissions from 960 million gallons of gasoline consumed.

National Green Construction Cumulative Direct Economic Impact

From 2011-2014, the green construction market has:

- Generated \$167 billion in GDP
- Supported over 2.1 million jobs
- Provided \$148 billion in labor earnings

From 2015-2018, this study predicts that green construction will:

- Generate an additional \$303 billion in GDP
- Support 3.9 million jobs
- Provide \$268 billion in labor earnings

National LEED Construction Cumulative Direct Economic Impact

From 2011-2014, LEED-related construction spending has:

- Generated \$81 billion in GDP
- Supported 1.1 million jobs
- Provided \$71 billion in labor earnings

From 2015-2018, this study forecasts that LEED-related construction spending will:

- Generate an additional \$109 billion in GDP
- Support 1.4 million jobs
- Provide \$96 billion in labor earnings

Appendix A: Glossary of Terms

This glossary defines terms used throughout the Green Building Economic Impact Study. It includes industry-specific language and differentiates commonly used terms for the context of this report.

Analysis of Covariance (ANCOVA): A linear model which blends Analysis of Variance (ANOVA) and regression. ANCOVA evaluates whether population means of a dependent variable (DV) are equal across levels of a categorical independent variable (IV) often called a treatment, while statistically controlling for the effects of other continuous variables that are not of primary interest, known as covariates (CV), or nuisance variables.

Bottom-Up Approach: An approach to an analysis which involved the piecing together of multiple systems to give rise to a more complex systems.

Corporate Income Tax: A tax based on net taxable income as defined under federal or state law.

Covariance Matrix: A matrix which helps illustrate the strength of the correlation between two factors.

Demand Factors: Factors which drive a consumer's desire and willingness to pay a price for a specific good or service.

Direct Economic Impact: The initial economic changes to the impacted industry (e.g., a general contractor who constructs a green building).

Economic Contraction: A general slowdown in economic activity affected by macroeconomic indicators such as GDP (gross domestic product), investment spending, capacity utilization, household income,

business profits, and inflation fall, while bankruptcies and the unemployment rate rise.

Economic Impact: The effect of an event on the economy in a specified zone, here defined at both the state and national level. This study analyzes the economic impact of construction, green construction, and LEED construction.

Exponential Smoothing: A statistical technique for detecting meaningful changes in data by ignoring the fluctuations irrelevant to the purpose at hand. To accomplish this, older data is given progressively-less relative weight (importance) whereas newer data is given progressively-greater weight.

Forecast: The process of attempting to predict the future condition of the economy which involves the use of statistical models.

Full Time Equivalent (FTE): A number that indicates the workload of an employed person in a way that makes workloads comparable across various contexts.

Green Construction Market: Dodge Data & Analytics (formerly McGraw-Hill Construction) defines green building as “one built to LEED standards, an equivalent green building certification program, or one that incorporates numerous green building elements across five category areas: energy efficiency, water efficiency, resource efficiency, responsible site management and improved indoor air quality. Projects that only feature a few green building products (e.g., HVAC systems, waterless urinals) or that only address one aspect of a green building, such as energy efficiency, are not included in this calculation.”

Green Jobs: McGraw-Hill defines green jobs in one of two ways. **Green Design Job:** “Involves more than 50% work on green projects or designing uniquely green systems on any building. Examples include designing green roofing systems or solar energy systems.” **Green Construction Job:** “Involves installing a uniquely green system or doing work that requires different skills to meet green goals. Examples of uniquely green systems include composting toilets and solar panels, and an example of a job that would require different skills to meet green goals is a painter who uses products that require different ventilation systems.”

Gross Domestic Product (GDP): A broad measurement of a nation’s overall economic activity, including the monetary value of all the goods and services produced within a country’s borders during a specific time period.

Heating, Ventilation and Air Conditioning (HVAC): The technology that controls indoor environmental comfort. Its goal is to provide thermal comfort and acceptable indoor air quality.

Indirect Economic Impact: The increased economic activity generated for downstream businesses that provide supplies and raw materials for the industries directly affected (e.g., the general contractor purchases supplies from steel and lumber companies).

Individual Income Tax: A tax that governments impose on personal financial income.

Induced Economic Impact: The economic impact from the increased income of households that are directly and indirectly affected by green building expenditures (e.g., employees of the general contractor, the steel supplier, and the lumber supplier use their additional income from green construction spending to purchase products and services

from food and gas to healthcare and education).

Labor Earnings: The wages earned from labor, here referring to those wages earned in construction, green construction, and LEED construction.

Leading Indicators: A measurable economic factor that changes before the economy starts to follow a particular pattern or trend. Leading indicators are used to predict changes in the economy.

Linear Regression: An approach for modeling the relationship between a scalar dependent variable “y” and one or more explanatory variables (or independent variables) denoted “x”.

Marginal LEED Cost: The additional cost incurred when LEED standards are used in construction.

McGraw-Hill Construction (MHC): McGraw-Hill Construction has been renamed Dodge Data and Analytics, and offers data, analytics, news and intelligence services regarding the North American construction industry.

Model: A theoretical construct representing economic processes by a set of variables and a set of logical and/or quantitative relationships between them. Models are built to compress complex data inputs to present easily digestible data and associated forecasts.

Monte Carlo Simulation: A technique used to approximate the likelihood, or probability of a certain outcome by running multiple trial runs, called simulations, using multiple variables.

Multiplier: When relating to economics, a multiplier is a factor by which an increment of income exceeds the resulting increment of savings or investment.

Property Tax: A tax on physical property that the owner of said property is required to pay.

R (Statistical Modeling Tool): A software environment for statistical computing and graphics.

Regression: A statistical measure that attempts to determine the strength of the relationship between one dependent variable (y) and a series of independent variables.

Multivariate Regression: A statistical tool

used to derive the value of a variable from several other independent, or predictor, variables.

Tableau: An interactive data visualization tool.

USGBC: U.S. Green Building Council, sponsor of the report.

Year over Year (YoY): A method of evaluating two or more measured events to compare the results at one time period with those from another time period (or series of time periods), on an annualized basis.

Appendix B: IMPLAN Background and General Methods

This appendix provides additional information. The IMPLAN modeling system combines the U.S. Bureau of Economic Analysis Input-Output (IO) Benchmarks with other data to construct quantitative models of trade flow relationships between businesses and between businesses and final consumers. The IMPLAN input-output accounts are based on industry survey data collected periodically by the U.S. Bureau of Economic Analysis and follow a balanced account format recommended by the United Nations. The IMPLAN modeling system has been in use since 1979 and is currently used by over 500 private consulting firms, university research centers, and government agencies.

Each industry that produces goods and services generates demands for other goods and services. Multipliers describe these iterations (IMPLAN Manual, 2003). Multipliers can be described through the following definitions.

- **Direct** effects are the initial change to the industry or institution in question.
- **Indirect** effects are the changes in inter-industry purchases as they respond to the new demands of the directly affected industries. The direct change creates increases in economic activity for downstream businesses that support these direct industries.
- **Induced** effects are the increases in household income expenditures generated by the direct and indirect effects.

A Social Accounting Matrix (SAM) multiplier, as modeled by IMPLAN, is defined as the sum of the direct, indirect and induced effects, divided by the direct effect. It shows the amount of additional economic activity generated by the direct economic stimulus. Therefore, multipliers closer to one indicate very little additional activity generated, and larger multipliers indicate more downstream or rollover (i.e., indirect and induced) economic activity.

The United States data file was obtained from the Minnesota IMPLAN Group (MIG). The model was then constructed and the multipliers created for the national area data. The IMPLAN methodology is explained for each of the categories of economic contribution. Green and LEED certified construction in Section 2 and Section 7(Savings).

Appendix C: Green & LEED Methodology Data Tables

TABLE C.1: NEW GREEN CONSTRUCTION SPENDING BY ASSET TYPE (\$ MILLIONS)

New Green Construction Spending (\$ Millions) contd. below								
Year	Health Care	Manufacturing	Educational & Vocational	Highways & Streets	Commercial	Non-residential	Single-family residential	Multi-family residential
2005	478	54	924	44	713	238	1715	4002
2006	1620	457	3132	449	1674	980	2244	5236
2007	2179	354	4873	1095	3362	1036	2504	5842
2008	3115	1459	7009	1066	5629	1192	3271	7632
2009	3200	1430	7200	799	8348	1439	2635	6149
2010	3339	793	7512	1071	11088	1400	2205	5145
2011	3652	880	9505	953	14221	3002	2693	6284
2012	4504	711	12243	1348	14805	4369	4522	10550
2013	5342	500	11277	1081	19089	3664	6588	15372
2014	4806	749	12016	1974	28327	4574	7570	17664
2015	5592	872	12600	2296	24882	11129	9900	23100
2016	7217	1125	13200	2964	34932	14305	12870	30030
2017	7607	1186	13200	3124	32545	13877	15420	35980
2018	8330	1299	13800	3421	33099	14428	18075	42175

TABLE C.2: NEW GREEN CONSTRUCTION SPENDING BY ASSET TYPE (CONTD.) (\$ MILLIONS)

Maintenance & Repair Green Construction Spending (\$ Millions) contd.				
Year	Non-residential	Residential	Others	Total
2005	540	1282	10	10000
2006	1598	1520	91	19000
2007	3753	2654	348	28000
2008	5228	3097	303	39000
2009	14064	5715	520	51500
2010	21829	6649	968	62000
2011	27935	8023	852	78000
2012	24131	9928	888	88000
2013	27307	15040	740	106000
2014	33537	16766	1311	129296
2015	36716	22000	1531	150618
2016	47186	28600	1976	194404
2017	45610	34267	2083	204898
2018	47303	40167	2280	224376

TABLE C.3: HISTORICAL INDEX FOR CONSTRUCTION COST BY YEAR

Year	Historical Index Construction Cost
2005	146.70
2006	156.20
2007	165.00
2008	171.00
2009	182.50
2010	181.60
2011	185.70
2012	194.00
2013	196.90
2014	203.00
2015-18	206.70

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.4: LOCATION COST FACTORS FOR CONSTRUCTION BY STATE

Construction Location Cost Factors		
State	Residential	Non-Residential
Alabama	0.76	0.82
Alaska	1.27	1.21
Arizona	0.85	0.87
Arkansas	0.75	0.79
California	1.13	1.09
Colorado	0.88	0.91
Connecticut	1.11	1.10
District of Columbia	0.93	0.97
Delaware	1.02	1.04
Florida	0.83	0.87
Georgia	0.77	0.82
Hawaii	1.23	1.19
Idaho	0.90	0.92
Illinois	1.08	1.06
Indiana	0.92	0.92
Iowa	0.83	0.87
Kansas	0.83	0.87
Kentucky	0.88	0.90
Louisiana	0.80	0.83
Maine	0.94	0.93
Maryland	0.87	0.90
Massachusetts	1.15	1.11
Michigan	0.94	0.95
Minnesota	0.92	1.01
Mississippi	0.77	0.81

Missouri	0.94	0.97
Montana	0.88	0.90
Nebraska	0.87	0.89
Nevada	0.98	0.98
New Hampshire	0.93	0.92
New Jersey	1.13	1.11
New Mexico	0.83	0.87
New York	1.14	1.13
North Carolina	0.84	0.80
North Dakota	0.77	0.84
Ohio	0.94	0.94
Oklahoma	0.78	0.82
Oregon	0.99	0.99
Pennsylvania	0.95	0.98
Rhode Island	1.10	1.08
South Carolina	0.85	0.81
South Dakota	0.75	0.79
Tennessee	0.78	0.84
Texas	0.82	0.84
Utah	0.80	0.86
Vermont	0.94	0.93
Virginia	0.93	0.87
Washington	0.99	0.98
West Virginia	0.94	0.97
Wisconsin	0.99	0.98
Wyoming	0.81	0.87

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.5: CONSTRUCTION SPENDING BY ASSET TYPE (\$/FT²)

Construction Spending by Asset Type (\$/ft ²)			
Year	Educational Facilities	Higher Ed	K-12
2005	131.24	131.80	130.96
2006	139.74	140.34	139.44
2007	147.61	148.24	147.30
2008	152.98	153.64	152.65
2009	163.27	163.97	162.92
2010	162.46	163.16	162.12
2011	166.13	166.84	165.78
2012	173.56	174.30	173.19
2013	176.15	176.91	175.78
2014	181.61	182.39	181.22
2015	184.92	185.71	184.53
2016	184.92	185.71	184.53
2017	184.92	185.71	184.53
2018	184.92	185.71	184.53

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.6: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)

Construction Spending by Asset Type (\$/ft ²)			
Year	Health Care	Laboratory	Other
2005	138.05	157.56	112.08
2006	146.99	167.76	119.34
2007	155.27	177.21	126.06
2008	160.91	183.66	130.64
2009	171.73	196.01	139.43
2010	170.89	195.04	138.74
2011	174.75	199.45	141.87
2012	182.56	208.36	148.22
2013	185.29	211.47	150.43
2014	191.03	218.03	155.09
2015	194.51	222.00	157.92
2016	194.51	222.00	157.92
2017	194.51	222.00	157.92
2018	194.51	222.00	157.92

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.7: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)

Construction Spending by Asset Type (\$/ft ²)			
Year	Single-Family Home	Multi-Family Residential	Warehouse and Distribution
2005	74.71	92.12	68.34
2006	79.55	98.09	72.76
2007	84.03	103.61	76.86
2008	87.08	107.38	79.65
2009	92.94	114.60	85.01
2010	92.48	114.04	84.59
2011	94.57	116.61	86.50
2012	98.80	121.82	90.37
2013	100.27	123.64	91.72
2014	103.38	127.47	94.56
2015	105.26	129.80	96.28
2016	105.26	129.80	96.28
2017	105.26	129.80	96.28
2018	105.26	129.80	96.28

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.8: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)

Construction Spending by Asset Type (\$/ft ²)			
Year	Single-Family Home	Multi-Family Residential	Warehouse and Distribution
2005	74.71	92.12	68.34
2006	79.55	98.09	72.76
2007	84.03	103.61	76.86
2008	87.08	107.38	79.65
2009	92.94	114.60	85.01
2010	92.48	114.04	84.59
2011	94.57	116.61	86.50
2012	98.80	121.82	90.37
2013	100.27	123.64	91.72
2014	103.38	127.47	94.56
2015	105.26	129.80	96.28
2016	105.26	129.80	96.28
2017	105.26	129.80	96.28
2018	105.26	129.80	96.28

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.9: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)

Construction Spending by Asset Type (\$/ft ²)			
Year	Office	Office: Mixed Use	Retail
2005	112.39	112.39	74.28
2006	119.67	119.67	79.09
2007	126.41	126.41	83.55
2008	131.01	131.01	86.59
2009	139.82	139.82	92.41
2010	139.13	139.13	91.95
2011	142.27	142.27	94.03
2012	148.63	148.63	98.23
2013	150.85	150.85	99.70
2014	155.53	155.53	102.79
2015	158.36	158.36	104.66
2016	158.36	158.36	104.66
2017	158.36	158.36	104.66
2018	158.36	158.36	104.66

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.10: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)

Construction Spending by Asset Type (\$/ft ²)			
Year	Military Base	Datacenter	Warehouse and Distribution
2005	157.61	157.56	68.34
2006	167.82	167.76	72.76
2007	177.27	177.21	76.86
2008	183.72	183.66	79.65
2009	196.08	196.01	85.01
2010	195.11	195.04	84.59
2011	199.51	199.45	86.50
2012	208.43	208.36	90.37
2013	211.55	211.47	91.72
2014	218.10	218.03	94.56
2015	222.08	222.00	96.28
2016	222.08	222.00	96.28
2017	222.08	222.00	96.28
2018	222.08	222.00	96.28

Source: (RSMMeans 2015 Square Foot Cost Book)

TABLE C.11: CONSTRUCTION SPENDING BY ASSET TYPE (\$/SQ.FT)

Construction Spending by Asset Type (\$/ft ²)			
Year	Public Assembly	Religious Worship	Service
2005	112.08	101.78	115.15
2006	119.34	108.37	122.60
2007	126.06	114.47	129.51
2008	130.64	118.64	134.22
2009	139.43	126.62	143.25
2010	138.74	125.99	142.54
2011	141.87	128.84	145.76
2012	148.22	134.59	152.27
2013	150.43	136.61	154.55
2014	155.09	140.84	159.34
2015	157.92	143.41	162.24
2016	157.92	143.41	162.24
2017	157.92	143.41	162.24
2018	157.92	143.41	162.24

Source: (RSMMeans 2015 Square Foot Cost Book)

Appendix D: IMPLAN Results for Green Construction

TABLE D.1: GREEN CONSTRUCTION GDP NET ECONOMIC IMPACT (\$, BILLIONS) (SPENDING - SAVINGS)

Green Construction GDP Net Economic Impact (\$, billions) (Spending - Savings)			
Year	Direct	Indirect	Induced
2005	4.71	5.71	5.66
2006	8.66	10.25	10.29
2007	12.40	14.67	14.73
2008	17.16	19.70	20.14
2009	22.64	25.59	26.38
2010	27.11	30.50	31.48
2011	33.56	37.55	38.87
2012	36.89	41.98	43.06
2013	43.78	49.92	51.19
2014	53.17	59.40	61.59
2015	60.73	68.92	70.82
2016	77.52	87.30	90.09
2017	79.79	91.16	93.36
2018	85.44	98.40	100.35

TABLE D.2: CONSTRUCTION EMPLOYMENT NET ECONOMIC IMPACT (SPENDING - SAVINGS)

Green Construction Employment Net Economic Impact Jobs (Spending - Savings)			
Year	Direct	Indirect	Induced
2005	62,000	66,000	65,000
2006	113,000	112,000	117,000
2007	162,000	157,000	168,000
2008	225,000	210,000	229,000
2009	296,000	272,000	300,000
2010	354,000	322,000	358,000
2011	438,000	397,000	442,000
2012	482,000	447,000	490,000
2013	575,000	539,000	583,000
2014	699,000	637,000	701,000
2015	797,000	746,000	806,000
2016	1,018,000	945,000	1,025,000
2017	1,049,000	997,000	1,063,000
2018	1,124,000	1,082,000	1,143,000

TABLE D.3: GREEN CONSTRUCTION LABOR EARNINGS NET ECONOMIC IMPACT (\$, BILLIONS)
(SPENDING - SAVINGS)

Green Construction Labor Earnings Net Economic Impact (\$, billions) (Spending - Savings)			
Year	Direct	Indirect	Induced
2005	4.15	3.36	3.22
2006	7.62	6.05	5.85
2007	10.91	8.65	8.37
2008	15.11	11.64	11.45
2009	19.99	15.04	14.99
2010	23.93	17.88	17.89
2011	29.62	22.01	22.10
2012	32.54	24.66	24.48
2013	38.69	29.31	29.10
2014	46.94	34.90	35.01
2015	53.66	40.42	40.26
2016	68.50	51.19	51.21
2017	70.61	53.42	53.07
2018	75.67	57.64	57.05

Appendix E: IMPLAN Results for USGBC Impact

TABLE E.1: LEED CONSTRUCTION GDP NET ECONOMIC IMPACT (\$, BILLIONS) (SPENDING - SAVINGS)

LEED Construction GDP Net Economic Impact (\$, billions) (Spending - Savings)			
Year	Direct	Indirect	Induced
2005	1.36	1.30	1.48
2006	2.02	1.98	2.22
2007	3.41	3.50	3.81
2008	6.45	6.27	7.06
2009	14.60	14.32	16.02
2010	20.36	20.64	22.61
2011	20.69	21.22	23.08
2012	18.87	19.71	21.23
2013	20.30	21.28	22.87
2014	20.76	22.04	23.55
2015	24.70	27.60	28.60
2016	26.30	29.40	30.46
2017	28.03	31.33	32.46
2018	29.81	33.32	34.52

TABLE E.2: LEED CONSTRUCTION EMPLOYMENT NET ECONOMIC IMPACT (SPENDING - SAVINGS)

LEED Construction Employment Net Economic Impact Jobs (Spending - Savings)			
Year	Direct	Indirect	Induced
2005	18,000	13,000	17,000
2006	27,000	19,000	25,000
2007	45,000	35,000	43,000
2008	85,000	62,000	80,000
2009	193,000	144,000	182,000
2010	267,000	209,000	257,000
2011	271,000	216,000	262,000
2012	247,000	199,000	241,000
2013	266,000	216,000	260,000
2014	272,000	224,000	268,000
2015	319,000	281,000	325,000
2016	340,000	299,000	346,000
2017	362,000	318,000	369,000
2018	386,000	339,000	392,000

TABLE E.3: LEED CONSTRUCTION LABOR EARNINGS NET ECONOMIC IMPACT (\$, BILLIONS)
(SPENDING - SAVINGS)

LEED Construction Labor Earnings Net Economic Impact (\$, billions) (Spending - Savings)			
Year	Direct	Indirect	Induced
2005	1.19	0.78	0.84
2006	1.78	1.18	1.26
2007	3.00	2.08	2.17
2008	5.67	3.73	4.01
2009	12.85	8.45	9.11
2010	17.93	12.12	12.85
2011	18.22	12.47	13.12
2012	16.60	11.62	12.07
2013	17.85	12.55	13.00
2014	18.30	12.99	13.39
2015	21.72	16.25	16.26
2016	23.13	17.31	17.32
2017	24.64	18.45	18.45
2018	26.21	19.62	19.63

Appendix F: Tax Contributions by State

TABLE F.1: ANNUAL INCOME TAX BY STATE (\$, MILLIONS)

Annual Income Tax by State (\$, millions)					
State	2014	2015	2016	2017	2018
Alabama	10.7	18.5	22.0	23.4	24.9
Alaska	6.6	24.2	15.5	16.5	17.5
Arizona	48.4	21.1	55.3	58.9	62.6
Arkansas	13.7	1.3	17.3	18.4	19.6
California	905.6	936.8	1054.5	1123.5	1195.1
Colorado	93.7	45.0	101.3	107.9	114.8
Connecticut	40.9	35.1	56.8	60.5	64.3
Delaware	5.5	0.0	7.2	7.6	8.1
Florida	37.0	20.3	48.4	51.5	54.8
Georgia	97.1	13.3	113.3	120.7	128.4
Hawaii	23.0	5.9	13.4	14.2	15.1
Idaho	3.9	2.9	34.3	36.5	38.9
Illinois	389.5	591.9	467.9	498.5	530.2
Indiana	34.1	13.3	29.9	31.8	33.9
Iowa	18.5	10.0	17.4	18.5	19.7
Kansas	14.6	27.3	14.8	15.7	16.7
Kentucky	22.7	5.2	17.2	18.3	19.5
Louisiana	14.6	2.8	8.3	8.9	9.4
Maine	9.5	3.7	11.2	11.9	12.7
Maryland	111.9	133.8	106.7	113.6	120.9
Massachusetts	168.0	127.6	244.5	260.5	277.1
Michigan	35.4	56.0	113.2	120.6	128.3
Minnesota	103.8	35.4	89.5	95.4	101.5
Mississippi	16.9	25.8	16.4	17.4	18.6
Missouri	27.2	14.6	39.2	41.8	44.4
Montana	3.8	4.5	8.8	9.4	10.0
Nebraska	11.0	0.2	12.5	13.3	14.2
Nevada	0.0	0.0	0.0	0.0	0.0
New Hampshire	9.5	1.3	19.7	21.0	22.4
New Jersey	102.4	123.5	136.7	145.7	155.0
New Mexico	9.0	7.8	13.2	14.1	15.0
New York	450.0	277.3	499.1	531.8	565.7
North Carolina	67.9	74.9	102.9	109.7	116.7
North Dakota	4.1	2.4	10.1	10.7	11.4
Ohio	64.6	42.3	57.7	61.5	65.4
Oklahoma	8.4	6.2	24.2	25.8	27.5
Oregon	54.4	39.2	165.9	176.7	188.0
Pennsylvania	93.5	169.5	147.5	157.2	167.2
Rhode Island	7.0	3.0	7.5	8.0	8.5

South Carolina	15.6	10.0	30.3	32.3	34.4
South Dakota	0.4	0.0	0.4	0.4	0.4
Tennessee	25.9	18.9	23.0	24.5	26.1
Texas	0.0	0.0	0.0	0.0	0.0
Utah	19.6	16.9	25.5	27.2	28.9
Vermont	2.9	9.2	15.3	16.3	17.3
Virginia	114.1	47.5	121.5	129.5	137.7
Washington	0.0	0.0	0.0	0.0	0.0
West Virginia	4.8	0.0	8.9	9.4	10.1
Wisconsin	34.5	0.3	108.6	115.7	123.1
Wyoming	0.0	0.0	0.0	0.0	0.0

TABLE F.2: ANNUAL PROPERTY TAX BY STATE (\$, MILLIONS)

Annual Property Tax by State (\$, millions)					
State	2014	2015	2016	2017	2018
Alabama	7.6	12.9	15.4	16.4	17.5
Alaska	5.2	19.0	12.1	12.9	13.7
Arizona	111.6	47.9	125.3	133.5	142.0
Arkansas	64.8	6.2	80.5	85.8	91.2
California	698.4	710.0	799.2	851.5	905.8
Colorado	0.0	0.0	0.0	0.0	0.0
Connecticut	0.0	0.0	0.0	0.0	0.0
Delaware	0.0	0.0	0.0	0.0	0.0
Florida	0.0	0.0	0.0	0.0	0.0
Georgia	124.6	16.8	142.8	152.1	161.8
Hawaii	0.0	0.0	0.0	0.0	0.0
Idaho	0.0	0.0	0.0	0.0	0.0
Illinois	28.2	42.1	33.3	35.4	37.7
Indiana	0.5	0.2	0.5	0.5	0.5
Iowa	0.0	0.0	0.0	0.0	0.0
Kansas	6.2	11.4	6.2	6.6	7.0
Kentucky	43.6	10.0	32.7	34.8	37.0
Louisiana	1.9	0.4	1.1	1.2	1.2
Maine	4.0	1.6	4.7	5.0	5.3
Maryland	239.9	281.8	224.7	239.4	254.6
Massachusetts	0.9	0.7	1.3	1.4	1.4
Michigan	149.5	233.3	472.0	502.8	534.9
Minnesota	182.5	61.3	154.8	165.0	175.5
Mississippi	2.0	3.0	1.9	2.0	2.1
Missouri	2.7	1.4	3.9	4.1	4.4
Montana	7.7	8.9	17.6	18.7	19.9
Nebraska	0.0	0.0	0.0	0.0	0.0
Nevada	23.4	948.2	159.3	169.8	180.6
New Hampshire	20.9	2.8	43.3	46.2	49.1

New Jersey	1.0	1.2	1.4	1.5	1.6
New Mexico	7.2	6.1	10.4	11.1	11.8
New York	0.0	0.0	0.0	0.0	0.0
North Carolina	0.0	0.0	0.0	0.0	0.0
North Dakota	0.0	0.0	0.0	0.0	0.0
Ohio	0.0	0.0	0.0	0.0	0.0
Oklahoma	0.0	0.0	0.0	0.0	0.0
Oregon	2.5	1.8	7.5	8.0	8.5
Pennsylvania	6.4	11.4	10.0	10.6	11.3
Rhode Island	0.5	0.2	0.5	0.5	0.5
South Carolina	0.8	0.5	1.4	1.5	1.6
South Dakota	0.0	0.0	0.0	0.0	0.0
Tennessee	0.0	0.0	0.0	0.0	0.0
Texas	0.0	0.0	0.0	0.0	0.0
Utah	0.0	0.0	0.0	0.0	0.0
Vermont	46.4	144.3	240.1	255.8	272.1
Virginia	8.4	3.4	8.8	9.4	10.0
Washington	251.1	264.4	537.6	572.8	609.3
West Virginia	0.0	0.0	0.0	0.0	0.0
Wisconsin	10.9	0.1	33.8	36.0	38.3
Wyoming	1.0	28.6	15.4	16.4	17.5

TABLE F.3: TOTAL ANNUAL TAXES BY STATE (\$, MILLIONS)

Total Annual Taxes by State (\$, millions)					
State	2014	2015	2016	2017	2018
Alabama	18.3	31.4	37.4	39.9	42.4
Alaska	11.8	43.2	27.6	29.4	31.3
Arizona	160.0	69.1	180.5	192.3	204.6
Arkansas	78.5	7.5	97.8	104.2	110.8
California	1604.0	1646.8	1853.7	1975.0	2100.8
Colorado	93.7	45.0	101.3	107.9	114.8
Connecticut	40.9	35.1	56.8	60.5	64.3
Delaware	5.5	0.0	7.2	7.6	8.1
Florida	37.0	20.3	48.4	51.5	54.8
Georgia	221.7	30.0	256.1	272.8	290.2
Hawaii	23.0	5.9	13.4	14.2	15.1
Idaho	3.9	2.9	34.3	36.5	38.9
Illinois	417.7	634.0	501.1	533.9	567.9
Indiana	34.7	13.5	30.4	32.3	34.4
Iowa	18.5	10.0	17.4	18.5	19.7
Kansas	20.8	38.7	21.0	22.3	23.8
Kentucky	66.3	15.2	49.8	53.1	56.5
Louisiana	16.5	3.2	9.4	10.0	10.6
Maine	13.5	5.3	15.9	16.9	18.0
Maryland	351.9	415.6	331.3	353.0	375.5

Massachusetts	168.8	128.3	245.8	261.8	278.5
Michigan	185.0	289.3	585.1	623.4	663.1
Minnesota	286.3	96.7	244.4	260.4	276.9
Mississippi	18.9	28.8	18.3	19.5	20.7
Missouri	30.0	16.0	43.1	45.9	48.8
Montana	11.5	13.4	26.3	28.1	29.9
Nebraska	11.0	0.2	12.5	13.3	14.2
Nevada	23.4	948.2	159.3	169.8	180.6
New Hampshire	30.3	4.0	63.1	67.2	71.5
New Jersey	103.4	124.7	138.1	147.2	156.5
New Mexico	16.1	13.9	23.7	25.2	26.8
New York	450.0	277.3	499.1	531.8	565.7
North Carolina	67.9	74.9	102.9	109.7	116.7
North Dakota	4.1	2.4	10.1	10.8	11.5
Ohio	64.6	42.3	57.7	61.5	65.4
Oklahoma	8.4	6.2	24.2	25.8	27.5
Oregon	56.9	40.9	173.4	184.7	196.5
Pennsylvania	99.9	180.9	157.5	167.8	178.5
Rhode Island	7.5	3.2	8.0	8.5	9.0
South Carolina	16.3	10.5	31.8	33.8	36.0
South Dakota	0.4	0.0	0.4	0.4	0.4
Tennessee	25.9	18.9	23.0	24.5	26.1
Texas	0.0	0.0	0.0	0.0	0.0
Utah	19.6	16.9	25.5	27.2	28.9
Vermont	49.3	153.5	255.4	272.1	289.4
Virginia	122.6	50.9	130.3	138.9	147.7
Washington	251.1	264.4	537.6	572.8	609.3
West Virginia	4.8	0.0	8.9	9.4	10.1
Wisconsin	45.3	0.4	142.4	151.8	161.4
Wyoming	1.0	28.6	15.4	16.4	17.5

Appendix G: References

All resources referenced or consulted throughout the research, analysis, and construction of this report are noted here.

The American Institutes of Architects (2009). *Local Leaders in Sustainability- Green Building Policy in a Changing Economic Environment*.

Booz Allen Hamilton (unpublished). *Analysis of U.S. Census Bureau construction spending data* retrieved from <http://www.census.gov/econ/currentdata/>.

Booz Allen Hamilton (2009). *USGBC Green Jobs Study*. Retrieved from: <http://www.usgbc.org/Docs/Archive/General/Docs6435.pdf>

CBRE, Maastricht University, and real GREEN (2014). *National Green Building Adoption Index*.

Department of Energy (2015, August). *Building Performance Database*. Retrieved from: <http://energy.gov/eere/buildings/building-performance-database>

Dodge Data & Analytics (2012). *2013 Dodge Construction Green Outlook Report*.

Dodge Data & Analytics (2014). *2015 Construction Outlook Report*.

Environmental Engineers (2014). *Clean Energy Works for Us: Q3 2014 Jobs Report*.

Eicholtz, Piet, Kok, Nils, Quigley, John (2009, January). *Doing Well by Doing Good?*

Eicholtz, Piet, Kok, Nils, Quigley, John (2011, April) *Program on Housing and Urban Policy: The Economics of Green Building*.

Eisenstein, Seigel, Mozingo and Arens (2014, December). *Center for the Built Environment and Center for Resource Efficient Communities, Quantifying the Comprehensive Greenhouse Gas Co-Benefits of Green Buildings*.

GBIG Insight (2014). *High Performance Building Benefits and Investment Costs*.

Green Building Council (2009). *Regional Green Building Case Study Project: A post-occupancy study of LEED projects in Illinois*.

Grossi, Erin. *Dawn of the Building Performance Era*.

GSA Public Buildings Service (2011, August). *Green Building Performance: A Post Occupancy Evaluation of 22 GSA Buildings*.

International Monetary Fund (2005, July 09). *World Economic Outlook Database, United States GDP*. Retrieved from: <http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/index.aspx>

Inter-Organization Programme for the Sound Management of Chemicals (2014). *The Business Case for Knowing Chemicals in Products and Supply Chains*.

Investopedia (2015, August 21). Retrieved from: <http://www.investopedia.com/>

- JLL (2013). *U.S. Construction Outlook Report*.
- Kats, Greg (2003, October) *The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force*. Retrieved from:
<http://www.calrecycle.ca.gov/greenbuilding/design/costbenefit/report.pdf>
- Lacey, T., Wright, B. (2009). *Occupational employment projections to 2018*.
- Livingston, O., Cole, P., Elliott, D., Bartlett, R. (2014, March). *Building Energy Codes Program: National Benefits Assessment, 1992-2040*.
- Lockwood, Charles (2006, June) "Building the Green Way," Harvard Business Review. Retrieved from: <https://hbr.org/2006/06/building-the-green-way>.
- Matisoff, D., Noonan, D., Mazzolini, A. (2014, January) *Performance or Marketing Benefits? The Case of LEED Certification*.
- McGraw-Hill Construction (2010). *Business Benefits of Green Building: Building and Occupant Performance Driving Green Investment in Existing Commercial Buildings*.
- McGraw-Hill Construction (2012). *Construction Industry Workforce Shortages: Role of Certification, Training and Green Jobs in Filling the Gaps*.
- McGraw-Hill Construction. *Critical Construction Industry Trends Influencing Process and Profitability*.
- McGraw-Hill Construction (2014). *Green Multifamily and Single Family Homes: Growth in a Recovering Market*.
- McGraw-Hill Construction (2013). *Smart Market Report: World Green Building Trends, Business Benefits Driving New and Retrofit Market Opportunities in Over 60 Countries*.
- McKinsey & Company (2009, July). *Unlocking Energy Efficiency in U.S. Economy*.
- Mozingo and Arens (2014, August). *Quantifying the Comprehensive Greenhouse Gas Co-Benefits of Green Buildings*.
- National Academy of Sciences (2013). *Energy-Efficiency Standards and Green Building Certification Systems Used by the Department of Defense for Military Construction and Major Renovations*.
- Nielsen (2014, June). *Doing Well by Doing Good*.
- Partee, J (2009). *LEED Stories from Practice Article: Quantifying Sustainability*.
- Pew Charitable Trusts (2009, June). *The Clean Energy Economy: Repowering Jobs, Businesses and Investments Across*.
- Phelan, Marilyn. AIA (2015). *RSMeans Square Foot Costs, 36th annual edition*.
- Turner Construction Company (2014). *2014 Green Building Market Barometer*.
- The American Institutes of Architects (2009). *Local Leaders in Sustainability- Green Building Policy in a Changing Economic Environment*.

- U.S. Census Bureau (2014, July 1). *Population Estimates*. Retrieved from:
<http://www.census.gov/popest/data/index.html>
- U.S. Census Bureau (2015, July). *Value of Construction Put in Place at a Glance*. Retrieved from:
<https://www.census.gov/construction/c30/c30index.html>.
- U.S. Department of Labor (2014, May). *Occupational Employment Statistics*. Retrieved from:
<http://www.bls.gov/oes/tables.htm>
- U.S. Environmental Protection Agency (2014, April). Greenhouse Gas Equivalencies Calculator.
Retrieved from: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>
- United Nations Department of Economic and Social Affairs (2014). *Population Division*. Retrieved
from: <http://esa.un.org/unpd/wup/CD-ROM/>
- USGBC, NRDC & The Real Estate Roundtable (2011, June). *A New Retrofit Industry: An Analysis of the
job creation potential of tax incentives for energy efficiency in commercial buildings and other
components of the Better Buildings Initiative*.
- USGBC. U.S. LEED Certified Buildings Inventory.



U.S. Green Building Council

Booz | Allen | Hamilton

Booz
Allen

PREPARED FOR

U.S. Green Building Council
2101 L Street, NW, Suite 500
Washington, DC 20037

PREPARED BY

Booz Allen Hamilton
8283 Greensboro Drive
McLean, VA 22108

ECONOMICS

Research: When Airbnb Listings in a City Increase, So Do Rent Prices

by [Kyle Barron](#), [Edward Kung](#), and [Davide Proserpio](#)

APRIL 17, 2019



HBR STAFF/WESTEND61/GETTY IMAGES

Only a few years ago, most travelers stayed in hotels. Airbnb changed that. As of 2018, the company offers over 5 million properties, in over 85,000 cities across the world, and its market valuation exceeds \$30 billion. In 2017 alone, Airbnb users booked over 100 million nights.

But what does the company's growth and popularity mean for the cities and municipalities it operates in? According to Airbnb, it brings more money to these cities, in the form of both rental fees and the money that renters spend during their stays. The company also notes that roughly three-quarters of its listings aren't in traditional tourist neighborhoods, which means that money is going to communities typically ignored by the hospitality industry.

Critics, on the other hand, have argued that home-sharing platforms like Airbnb raise the cost of living for local renters. There is not much evidence to support this claim one way or the other, though a study focused on Boston found that an increase in Airbnb listings there was associated with an increase in rents. It is not difficult to see why the idea could be true more widely: By making short-term rentals easier, Airbnb could cause some landlords to switch their properties from long-term rentals, which are aimed at local residents, to short-term rentals, which are aimed at visitors. Cities and towns have a finite supply of housing, so this process would drive up rental rates over time.

Because of the limited empirical evidence, we decided to dig deeper. The results of our analysis are in a working paper. We started by collecting data from three sources: (1) consumer-facing information, from Airbnb, about the complete set of Airbnb properties in the U.S. (there are more than 1 million) and the hosts who offer them; (2) zip code-level information, from Zillow, about rental rates and housing prices in the U.S. real estate market; and (3) zip code-level data from the American Community Survey, an ongoing survey by the U.S. Census Bureau, including median household incomes, populations, employment rates, and education levels. We combined these different sources of information in order to study the impact of Airbnb on the housing market.

However, measuring this impact is not straightforward. The main challenge is that the housing market is, of course, affected by factors other than Airbnb, such as gentrification and economic trends. In our study, we control for these factors, and additionally use a technique known as instrumental variables to isolate the part of housing costs that is driven only by changes in Airbnb supply.

In simple terms, we argue that if a zip code is "touristy," meaning it has a lot of restaurants and bars, and if awareness of Airbnb increases, which we measure using the Google search index for the keyword "Airbnb," then any jump in Airbnb supply in that zip code is likely driven by an increase in

demand for short-term rentals through Airbnb, rather than local economic conditions.

Under this assumption, we show that a 1% increase in Airbnb listings is causally associated with a 0.018% increase in rental rates and a 0.026% increase in house prices. While these effects may seem very small, consider that Airbnb's year-over-year average growth is about 44%.

This means that, in aggregate, the growth in home-sharing through Airbnb contributes to about one-fifth of the average annual increase in U.S. rents and about one-seventh of the average annual increase in U.S. housing prices. By contrast, annual zip code demographic changes and general city trends contribute about three-fourths of the total rent growth and about three-fourths of the total housing price growth.

These results show that Airbnb does have an impact on the housing market. However, they don't tell the full story of how it is happening. In our study, we present two additional results that help explain the underlying economics.

First, we show that zip codes with higher owner-occupancy rates (the fraction of properties occupied by the owners themselves) are less affected by Airbnb. Those rates are important because the landlords who switch their properties from long-term rentals to short-term rentals are those who don't live in the houses they rent. Owner-occupiers do use Airbnb, but they use it to rent out their spare rooms or perhaps the whole home while they are away. However, these homes are still primarily occupied by a long-term resident (the owner), so they are not the ones being reallocated as short-term rentals through Airbnb.

Second, we present evidence that Airbnb affects the housing market through the reallocation of housing stock. By looking at housing vacancies, we show two things about the Airbnb supply: it is *positively* correlated with the share of homes that are vacant for seasonal or recreational use – which is how the Census Bureau classifies houses that are part of the short-term rental market – and *negatively* correlated with the share of homes in the market for long-term rentals.

Taken together, our results are consistent with the story that, because of Airbnb, absentee landlords are moving their properties out of the long-term rental and for-sale markets and into the short-term rental market.

Policy makers around the world are struggling to find the best way to regulate home-sharing platforms like Airbnb. On the one hand, these platforms allow homeowners to make money when they have more room than they need. On the other hand, absentee landlords are reducing the housing supply, which, in turn, increases the cost of living for local renters. According to our results, one way to reduce the latter effect while retaining the benefits of home-sharing would be to limit how many homes can be added to the short-term rental market, while still allowing owner-occupiers to share their extra space.

Kyle Barron holds a BA in economics from UCLA and is a former healthcare researcher at the National Bureau of Economic Research. Passionate about contributing to open-source software, Kyle developed an interface to connect Stata and Jupyter that has exceeded 50,000 downloads.

Edward Kung is an assistant professor of economics at UCLA. He is interested in how technology affects housing markets and urban economic outcomes, and his work has appeared in peer-reviewed journals such as the American Economic Review and the Journal of Urban Economics.



Davide Proserpio is an assistant professor of marketing at the University of Southern California. He is interested in the impact of digital platforms on industries and markets, and most of his work focuses on the empirical analysis of a variety of companies including Airbnb, TripAdvisor, and Expedia.

This article is about ECONOMICS

[+ Follow This Topic](#)

Comments

[Leave a Comment](#)

RESIDENTIAL TAX ABATEMENT DATA OVERVIEW

Prepared for the Property Tax Working Group

This data are based on the **Cincy Insight's Residential Tax Abatement Portal**. The data on this overview are from August 2, 2019. The Cincy Insight Portal is updated regularly and is interactive. It can be accessed here: bit.ly/ResidentialTaxAbatements

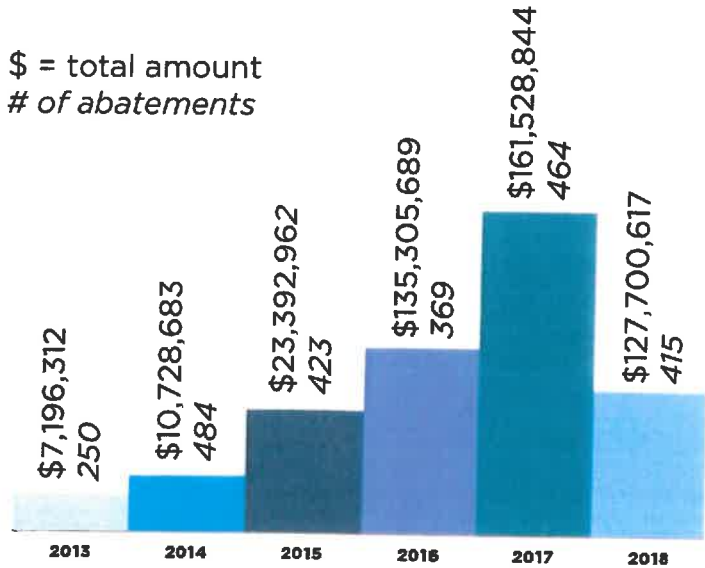
There have been **2,519** residential tax abatements totaling **\$166,188,996**.

ABATEMENTS BY NEIGHBORHOOD

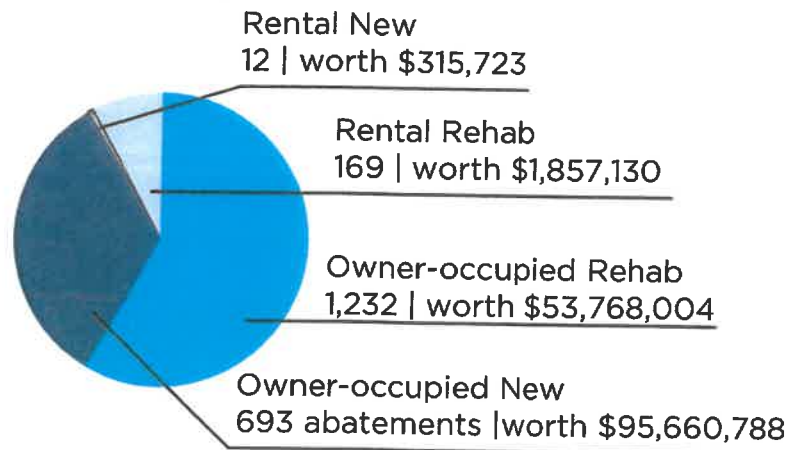
Neighborhood	# of Properties	Total Amount
Avondale	32	\$1,140,159
Avondale - North Avondale	4	\$66,982
Bond Hill	73	\$2,095,646
California	1	\$25,229
Camp Washington	8	\$144,666
Carthage	1	\$0
Clifton	44	\$1,127,426
College Hill	41	\$1,651,497
Columbia Tusculum	92	\$10,902,017
Columbia Tusculum - East End	6	\$517,364
Columbia Tusculum - Mt Lookout	4	\$476,764
Corryville	30	\$1,052,241
CUF	80	\$751,484
CUF - Heights	1	\$3,968
Downtown	27	\$2,452,737
East End	25	\$11,707,328
East Price Hill	26	\$478,225
East Walnut Hills	44	\$1,794,029
English Woods	1	\$22,597
Evanston	42	\$1,580,295
Hartwell	2	\$25,745
Hyde Park	262	\$42,042,383
Hyde Park - Oakley	1	\$0
Kennedy Heights	11	\$87,134
Linwood	14	\$1,827,628
Madisonville	43	\$1,580,497
Mount Adams	49	\$8,865,755
Mount Airy	8	\$215,806
Mount Auburn	47	\$2,437,967
Mount Lookout	143	\$9,603,488
Mount Washington	20	\$227,759
North Avondale	18	\$380,335
Northside	204	\$5,446,103
Oakley	137	\$4,282,218
Over-the-Rhine	194	\$20,224,475
Paddock Hills	4	\$75,626
Pendleton	25	\$1,685,002
Pleasant Ridge	20	\$585,909
Roselawn	3	\$9,940
Sayler Park	15	\$1,352,940
South Cumminsville	13	\$153,626
South Fairmount - Westwood	1	\$0
Spring Grove Village	3	\$49,244
Walnut Hills	51	\$13,489,933
West End	30	\$1,975,958
West Price Hill	16	\$248,620
Westwood	23	\$393,692
Not Provided	579	\$10,927,522

AMOUNT OF ABATEMENTS PER YEAR

\$ = total amount
= # of abatements



OWNERSHIP TYPE



Ownership info for 413 abatements (\$14,587,352) not provided

LEED CERTIFICATION STATUS



2,036 (\$68,424,165) not LEED certified

Neighborhoods are based off of Community Council boundaries.



Cleveland selects experts to help overhaul of tax abatement policy, incentives for developers

Posted Sep 23, 2019



Robert Higgs | cleveland.com

Cleveland has selected three consulting experts to evaluate the city's tax-abatement and development-incentives policies and to recommend possible changes to the system.

21

28
shares

By Robert Higgs, cleveland.com

CLEVELAND, Ohio – The city has selected three consulting experts to evaluate Cleveland’s tax-abatement and development-incentives policies; and to recommend changes to the system.

Menu

Weather



Subscribe

Sign In

Search

The selection of [Reinvestment Fund](#), [PFM Group Consulting](#) and the [Greater Ohio Policy Center](#), announced Monday, completes a team that will make a report by year’s end. They will work with Leverage Development and Neighborhood Connections to do the review.

City Council members believe a review is needed because the current policy for tax incentives does not differentiate between targeted development needed to lift up neighborhoods and projects that developers likely would build anyway.

West Side Councilman Kerry McCormack has said in several previous meetings that tax abatement probably isn’t needed for high-end townhouse projects.

Current tax incentives plans don’t expire until 2022. Acting now allows time to get a new plan in place without surprising developers.

The study will assess:

- Strategies to continue to promote development and housing options for neighborhoods across the city.
- Ways to protect current, long-term residents from displacement.
- Tools to leverage special assets in neighborhoods, such as access to mass transit and jobs.
- Equitable tax policies that are responsive to market conditions.

The study will rely on input from residents in Cleveland’s neighborhoods, the city said in an announcement. That resident-engagement plan will include focus groups, one-on-one interviews, and community meetings.

[View Comments \(21 \)](#)

City of Cincinnati



Interdepartment
Correspondence Sheet

201701376

Date: September 25, 2017

To: Vice Mayor Mann, Councilmember Flynn, and Councilmember Sittenfeld
From: Paula Boggs Muething, City Solicitor *PBM*
Subject: Emergency Ordinance – Community Reinvestment Area Reauthorization

Transmitted herewith is an emergency ordinance captioned as follows:

DECLARING the boundaries of the City of Cincinnati Community Reinvestment Area as coterminous with the corporate boundaries of the City of Cincinnati; **ESTABLISHING** certain procedures and general rules for Community Reinvestment Area real property tax exemptions pursuant to Ohio Revised Code Sections 3735.65 through 3735.70; and **AUTHORIZING** the City Manager to file a petition with the Director of the Ohio Development Services Agency to confirm the findings made herein.

PBM/JBW/(skj)
Attachment
237804-2

{00239948-1}

EMERGENCY

City of Cincinnati

JBW *12/21/17*

An Ordinance No. 274

- 2017

DECLARING the boundaries of the City of Cincinnati Community Reinvestment Area as coterminous with the corporate boundaries of the City of Cincinnati; **ESTABLISHING** certain procedures and general rules for Community Reinvestment Area real property tax exemptions pursuant to Ohio Revised Code Sections 3735.65 through 3735.70; and **AUTHORIZING** the City Manager to file a petition with the Director of the Ohio Development Services Agency to confirm the findings made herein.

WHEREAS, the City of Cincinnati, through the Department of Community and Economic Development, has surveyed the housing within its jurisdiction, which survey is attached to this ordinance as Exhibit A hereto (the "Housing Survey"); and

WHEREAS, as described in the Housing Survey, consistent with the definition of "community reinvestment area" in Ohio Revised Code Section 3735.65(B), housing facilities and structures of historical significance are located throughout the City's corporate boundaries, and new housing construction and repair of existing facilities or structures are discouraged throughout the City's corporate boundaries; and

WHEREAS, this ordinance is intended to constitute the "resolution" described in Ohio Revised Code Section 3735.66; and

WHEREAS, the entire City therefore meets the definition of "community reinvestment area" as described in Ohio Revised Code Section 3735.65(B), and this Council therefore desires to designate an area coterminous with the City's corporate boundaries as a community reinvestment area; now, therefore,

BE IT ORDAINED by the Council of the City of Cincinnati, State of Ohio:

Section 1. That the findings in the survey attached to this ordinance as Exhibit A hereto are hereby incorporated by reference, and that this Council expressly finds that (a) housing facilities and structures of historical significance are located throughout the City's corporate boundaries, and (b) new housing construction and repair of existing facilities or structures are discouraged throughout the City's corporate boundaries.

Section 2. That Council hereby designates the entirety of the City's corporate boundaries the City of Cincinnati Community Reinvestment Area, a community reinvestment area within the meaning of Ohio Revised Code Section 3735.65.

Section 3. That all new structures and remodeling satisfying the requirements of Ohio Revised Code Section 3735.65 through 3735.70 (the "Statute") and which are within the City of Cincinnati Community Reinvestment Area are eligible for exemption from taxation of up to the maximum percentage and term of years permitted by law; provided, however, that this Council expressly reserves the right to (a) establish policies which would operate to adjust the maximum exemption terms and percentages available to certain types of projects so long as they are within allowable state law limits, (b) set forth procedures governing the City's Community Reinvestment Area exemption program generally, including the processing and evaluation of exemption applications, the administration of exemptions, and so forth, and (c) approve or disapprove, on a discretionary and case-by-case basis, exemptions for Commercial Improvements (as defined below), which are to be subject to written agreements pursuant to Ohio Revised Code Section 3735.671 (each a "CRA Agreement").

Section 4. That the Director of the City's Department of Community and Economic Development is hereby designated as the housing officer (as such term is defined in Ohio Revised Code Section 3735.65(A)) for the City of Cincinnati Community Reinvestment Area.

Section 5. That except as may be otherwise provided by this Council, exemptions for remodeling or new construction of commercial (including residential apartment structures containing four or more dwelling units, but excluding owner-occupied residential condominium structures), industrial and mixed-use structures (collectively, "Commercial Improvements") are conditioned upon the execution of a CRA Agreement in a form required by the City (following

separate approval by ordinance of Council) prior to commencement of construction or remodeling, as provided in Ohio Revised Code Section 3735.671, specifying the term and percentage of the exemption and any additional conditions applicable to the exemption as may be required by law or agreed upon by the City and any parties thereto.

Section 6. That except as may be otherwise provided by this Council, exemptions for remodeling or new construction of one-, two- and three- dwelling unit residential structures are not conditioned upon the execution of a CRA Agreement. For the purposes of this ordinance, each owner-occupied residential condominium unit is considered a separate structure containing one dwelling unit.

Section 7. That Council (a) acknowledges that written agreements with respect to Commercial Improvements involve an application fee payable by the applicant to the Ohio Development Services Agency in the amount of \$750.00, (b) establishes an application fee for exemptions for remodeling or new construction of one-, two- and three- dwelling unit residential structures in the amount of \$75.00, and (c) establishes an annual fee to be included as a condition of each CRA Agreement in an amount equal to one percent of the annual real property tax exemption, but which shall in no event be less than \$500 per year or more than \$2,500 per year per CRA Agreement.

Section 8. That this Council acknowledges the City's obligations under that certain Agreement by and between the City and the City School District of the City of Cincinnati dated July 2, 1999, as amended.

Section 9. That except as may be otherwise provided by this Council, each exemption pursuant to this ordinance is conditioned upon (a) any remodeling or new construction being completed in compliance with applicable building code and zoning regulations, and (b) proper

application being made by the owner (or the owner's authorized representative) in accordance with state law and any procedures that may be set forth by the City from time to time.

Section 10. That the City Manager is authorized to file with the Director of the Ohio Development Services Agency a copy of this ordinance, including the Housing Survey attached hereto, together with such other supplemental information and documentation as he may deem to be reasonably necessary or desirable. As described in Ohio Revised Code Section 3735.66, such petition must be sent within fifteen days following the adoption of this ordinance.

Section 11. That all exemptions granted by the City in connection with this ordinance shall be subject to the requirements of the Statute, which is hereby incorporated by reference.

Section 12. That Council hereby constitutes and establishes a community reinvestment area housing council for the City of Cincinnati Community Reinvestment Area as described in Ohio Revised Code Section 3735.69 (the "Housing Council"). The purpose of the Housing Council is to discharge the duties of a community reinvestment area housing council provided under the Statute, in all cases in compliance with the provisions thereof. As required by the Statute, (a) the Housing Council shall have seven members, two of whom will be appointed by the Mayor, two of whom will be appointed by this Council, and one of whom will be appointed by City Planning Commission, (b) the majority of the foregoing members shall then appoint two additional members who are residents of the City, (c) terms of the members of the Housing Council shall be for three years, and (d) unexpired terms resulting from a vacancy in the Housing Council shall be filled in the same manner as the initial appointment was made.

Section 13. That the proper City officials are hereby authorized to do all things necessary to carry out the provisions of this ordinance.

Section 14. That it is hereby found and determined that (a) Ordinance No. 119-2007, passed March 28, 2007, as amended (the "Existing Resolution"), will expire by its terms on October 23, 2017, and therefore does not need to be repealed, and (b) any exemptions granted pursuant to or under the legal authority of the Existing Resolution shall not be in any way modified or impacted by the passage of this ordinance. Any applications made, authorizations of CRA Agreements made by Council or executed by the City and the other parties thereto, and exemptions granted pursuant to the Existing Resolution shall continue in full force and effect in accordance with the provisions of the Existing Resolution as it applied to that application, CRA Agreement or exemption, subject to any legal or contractual rights the City may have to revoke, terminate or modify the exemptions or otherwise exercise remedies. Any applications made, CRA Agreements authorized by Council, and exemptions granted on or following the Confirmation Date (as defined in Section 17 below) shall be subject to this ordinance. Any applications made prior to the Confirmation Date (as defined in Section 17 below) with respect to which the City Administration has not yet approved for exemption and forwarded to the County Auditor may, in the discretion of the applicant, be resubmitted for consideration pursuant to this ordinance.

Section 15. That the Clerk of Council is directed to publish this ordinance in the City Bulletin as soon as possible following its adoption.

Section 16. That the Clerk of Council is directed to send a certified copy of this ordinance to the Hamilton County Auditor for informational purposes.

Section 17. That this ordinance shall be an emergency measure necessary for the preservation of the public peace, health, safety and general welfare, and shall, subject to the terms of Article II, Section 6 of the Charter, be effective immediately; provided, however, that

exemptions may be granted pursuant to the Existing Resolution until the Director of the Ohio Development Services Agency has confirmed the findings described in this ordinance (such date being the "Confirmation Date"), at which time exemptions under the Statute shall be subject to this ordinance and not the Existing Resolution. The reason for the emergency is to provide adequate time for the Director of the Ohio Development Services Agency to review and confirm the findings described in this ordinance prior to the expiration of the Existing Resolution or as soon as possible thereafter.

Passed: September 27, 2017

Attest: Frederic Williams
Acting Clerk

John Cranley
John Cranley, Mayor

HEREBY CERTIFY THAT ORDINANCE No. 274-2017
WAS PUBLISHED IN THE CITY BULLETIN
IN ACCORDANCE WITH THE CHARTER ON 10-10-2017
Melissa Antay
CLERK OF COUNCIL

PS. *retraced*

Exhibit A

Housing Survey

(See Attached)

2017 CRA Housing Survey

This housing survey will provide information confirming that the City of Cincinnati is an area in which “housing facilities or structures of historical significance are located and new housing construction and repair of existing facilities or structures are discouraged,” as described in the definition of “community reinvestment area” in Ohio Revised Code Section 3735.65(B).

Historical Significance

Cincinnati has a considerable inventory of historically significant architecture, including 28 National Register Historic Districts. These districts are located throughout the City, with many situated in Downtown, Over-the-Rhine, and adjacent neighborhoods. A list and map of districts can be found in Appendix I.

Cincinnati City Council passed Historic Conservation Legislation in 1980. The purpose of this legislation was and is to promote the conservation, protection, restoration, rehabilitation, use, and overall enhancement of structures and districts in the City that possess special historic or architectural value. The Historic Conservation Board consists of seven members who are appointed by the City Manager. The Board must include at least one professional historic preservationist, one historian, two architects, one attorney, one person engaged in the real estate or development business, and one economist.

Housing Facilities

According to the 2011-2015 American Community Survey 5-Year Estimates, the City of Cincinnati contained approximately 162,398 housing units. This accounts for roughly 43% of the 377,126 housing units located within Hamilton County and roughly 18% of units located within the Cincinnati Metropolitan Statistical Area (MSA). These three geographies are compared throughout the survey using the various tables from the US Census Bureau’s American Community Survey (ACS), primarily between 2005 and 2015.

Housing units in the City of Cincinnati are generally older than those located in Hamilton County or the Cincinnati MSA. Over half of all housing units in the City were constructed before 1950, compared to roughly one third in Hamilton County and one fifth in the Cincinnati MSA.

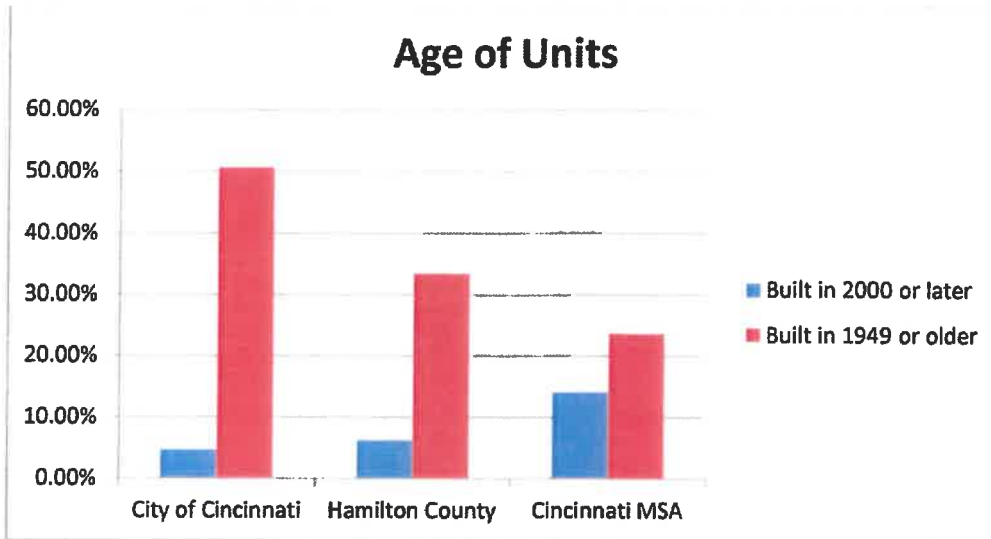


Figure 1: Year Structure Built/Age of Housing Units (ACS 2011-2015 5Y Est.)

This discrepancy is continuing to grow with comparatively more new housing units being constructed outside the City. Less than 5% of units in the City were built after 2000.

A greater percentage of housing units in the City of Cincinnati are vacant. In 2015 it was estimated that approximately 18% of units were vacant, which again compares unfavorably to Hamilton County and the Cincinnati MSA.

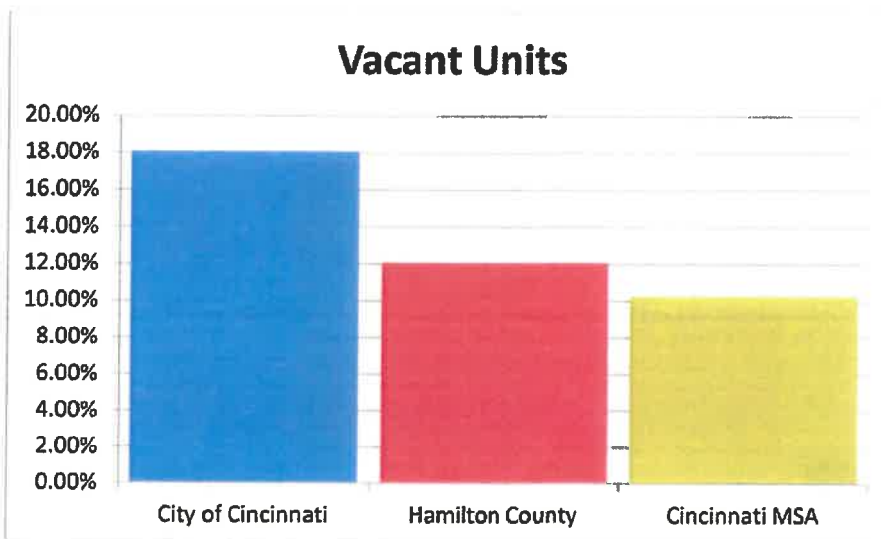


Figure 2: Vacant Housing Units (ACS 2011-2015 5Y Est.)

The City of Cincinnati also has a lower percentage of owner-occupied homes than the surrounding region. Only one third of housing units in the City are owner-occupied. Hamilton County and the Cincinnati MSA both have over 50% of units occupied by owners.

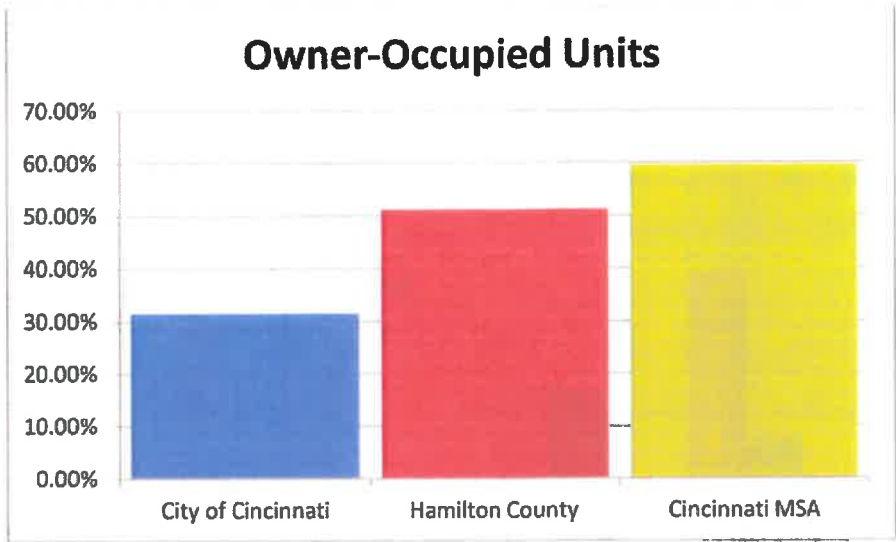


Figure 3: Owner-Occupied Housing Units (ACS 2011-2015 5Y Est.)

In addition to having a lower percentage, the total number of owner-occupied housing units in the City of Cincinnati decreased roughly 6% from 2010 and 11% from 2005.

The median value of housing units in Cincinnati is lower than that of the surrounding area. In 2015, the median value for units in Cincinnati was \$119,700, compared to \$142,000 and \$153,400 for Hamilton County and the Cincinnati MSA, respectively.

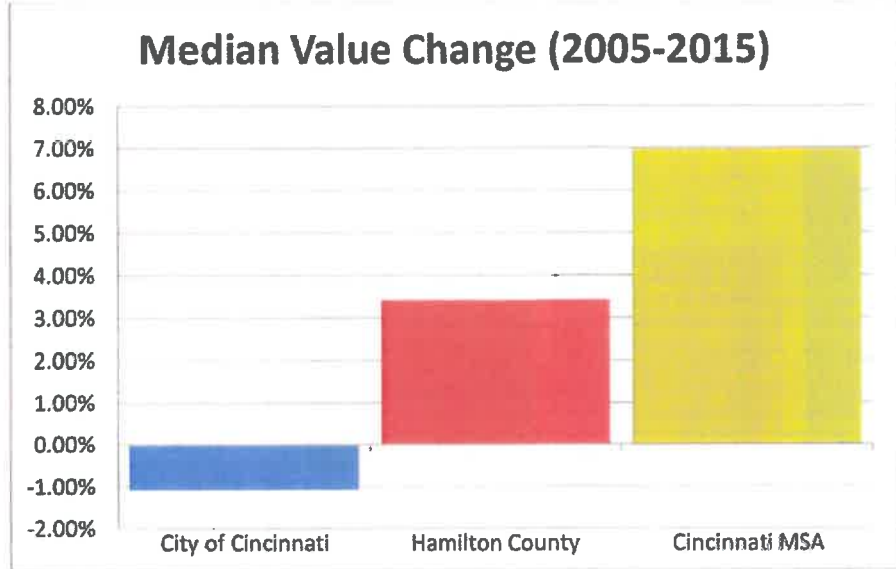


Figure 4: Median Value Change for Housing Units (2005 - 2015) (ACS 2011-2015 & 2005 5Y Est.)

In addition to having a lower median value, housing units in Cincinnati on average have decreased in value by roughly 1% since 2005. Median values in Hamilton County and the Cincinnati MSA have gone up by roughly 3% and 7% over the same time period, respectively.

Demographic Trends

Although the City of Cincinnati has experienced a decrease in owner-occupied homes and median housing value over the past decade, total population is now trending upwards and has grown more than Hamilton County.

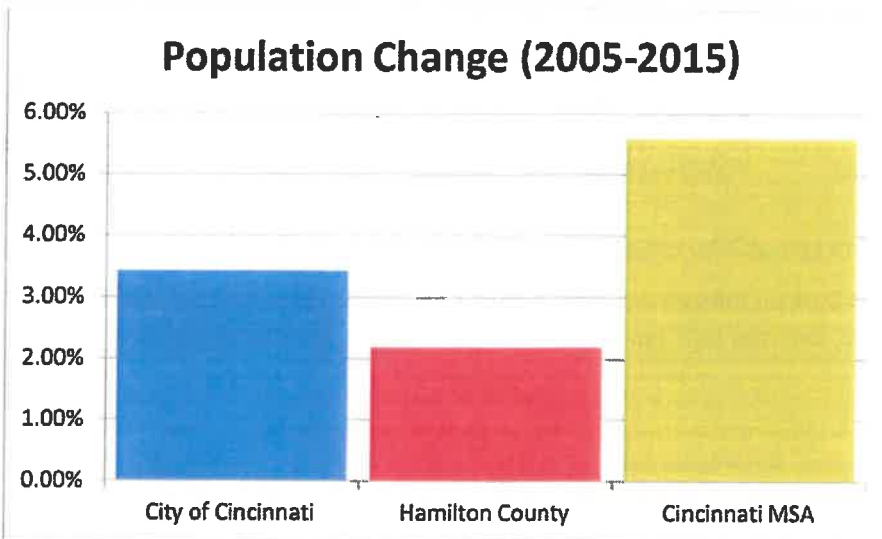


Figure 5: Population Change (2005-2015) (ACS 2011-2015 & 2005 5Y Est.)

However, the City's 2015 population is still roughly 10% lower than what was recorded in 2000, and the population of the Cincinnati MSA has grown nearly twice as much since 2005.

Cincinnati also has a higher percentage of residents living below the poverty level than surrounding areas. As of 2015, it was estimated that over 30% of City of Cincinnati residents were living below the poverty level. That percentage is twice that of the Cincinnati MSA.

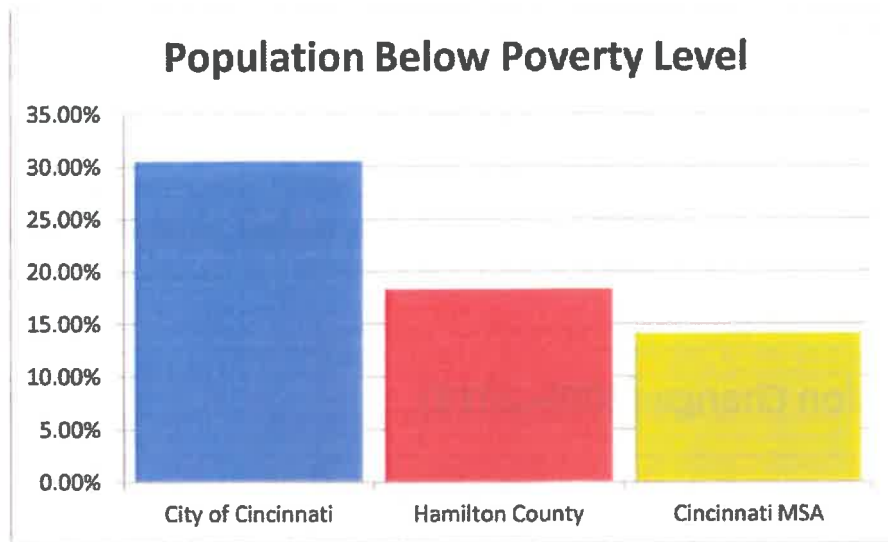


Figure 6: Population Below Poverty Level (ACS 2011-2015 5Y Est.)

According to the US Census Bureau, the percentage of people living below the poverty level in Cincinnati has been increasing steadily over the past ten years. Reported shares were 27% and 25% in 2010 and 2005, respectively.

Conclusions

This housing survey has outlined reasons why the City of Cincinnati meets the criteria of a “community reinvestment area” described in Ohio Revised Code 3735.65(B), namely, that it is an area in which “housing facilities or structures of historical significance are located and new housing construction and repair of existing facilities or structures are discouraged”:

- The City of Cincinnati includes a considerable inventory of historically significant structures, including 28 registered Historical Districts.
- Housing units in the City of Cincinnati are, on average, measurably older than those in the surrounding areas.
- The share of housing units lying vacant is larger in the City of Cincinnati compared to surrounding areas.
- There is a smaller percentage of owner-occupied homes, and there has been a decrease in the number of these units over the past 10 years.
- The median value for housing units has decreased over the past ten years while increasing in Hamilton County and the Cincinnati MSA over the same time period.
- Cincinnati has a significantly higher percentage of people living below the poverty level compared to surrounding areas, and the percentage has increased over the past ten years.

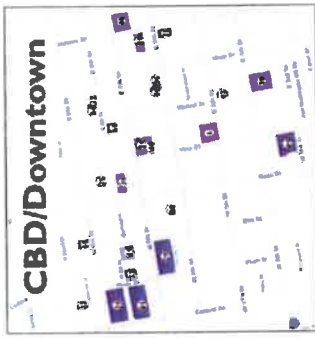
By maintaining the ability to offer real property tax incentives to residents, businesses, and developers, the City of Cincinnati will continue progress towards the programmatic goals of attracting and retaining residents, promoting homeownership, and spurring neighborhood revitalization.

Appendix I: Cincinnati Local Historic Districts and Landmarks

Cincinnati Local Historic Districts and Landmarks

Historic Districts

- 1 Auburn Avenue
- 2 Betts-Longworth
- 3 Bond Hill
- 4 Cleinview-Hackberry
- 5 Columbia Tusculum
- 6 Court Street
- 7 Dayton Street
- 8 East Walnut Hills
- 9 Hyde Park Observatory
- 10 Lincoln-Melrose
- 11 Lytle Park
- 12 Main Street
- 13 Mohawk-Bellevue NBD
- 14 Ninth Street
- 15 Northside NBD
- 16 Over-the-Rhine
- 17 Prospect Hill
- 18 Sacred Heart Academy/Mt.Storm
- 19 Third-Main Street
- 20 Uplands
- 21 West Fourth Street
- 22 Woodburn Ave NBD

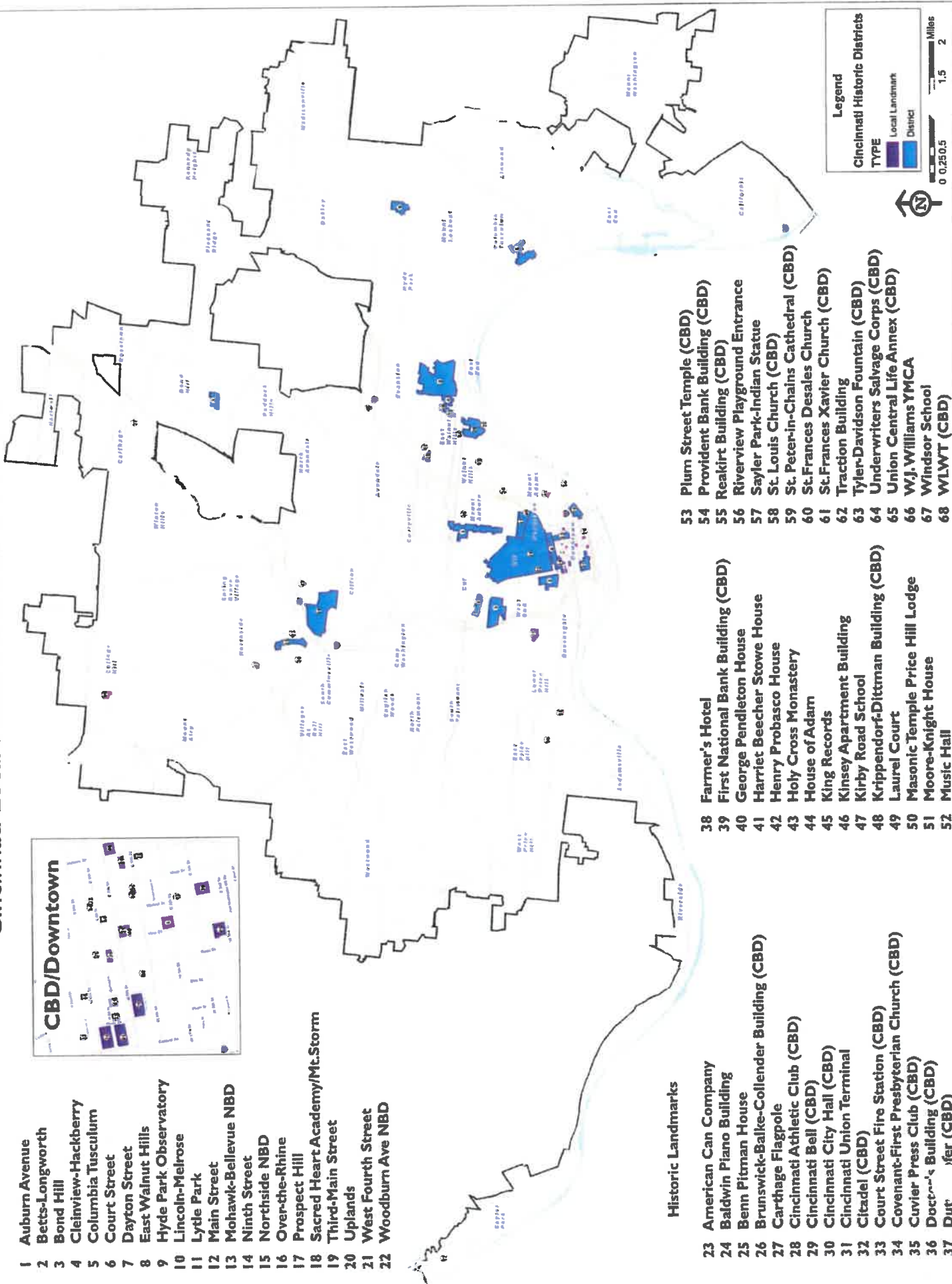


Historic Landmarks

- 23 American Can Company
- 24 Baldwin Piano Building
- 25 Benn Pitman House
- 26 Brunswick-Balke-Collender Building (CBD)
- 27 Carriage Flagpole
- 28 Cincinnati Athletic Club (CBD)
- 29 Cincinnati Bell (CBD)
- 30 Cincinnati City Hall (CBD)
- 31 Cincinnati Union Terminal
- 32 Citadel (CBD)
- 33 Court Street Fire Station (CBD)
- 34 Covenant-First Presbyterian Church (CBD)
- 35 Cuvier Press Club (CBD)
- 36 Doctor's Building (CBD)
- 37 Duff's Building (CBD)

- 38 Farmer's Hotel
- 39 First National Bank Building (CBD)
- 40 George Pendleton House
- 41 Harriet Beecher Stowe House
- 42 Henry Probasco House
- 43 Holy Cross Monastery
- 44 House of Adam
- 45 King Records
- 46 Kinsey Apartment Building
- 47 Kirby Road School
- 48 Krippendorf-Dittman Building (CBD)
- 49 Laurel Court
- 50 Masonic Temple Price Hill Lodge
- 51 Moore-Knight House
- 52 Music Hall

- 53 Plum Street Temple (CBD)
- 54 Provident Bank Building (CBD)
- 55 Reakirt Building (CBD)
- 56 Riverview Playground Entrance
- 57 Saylor Park-Indian Statue
- 58 St. Louis Church (CBD)
- 59 St. Peter-in-Chains Cathedral (CBD)
- 60 St-Francis Desales Church (CBD)
- 61 St-Francis Xavier Church (CBD)
- 62 Traction Building
- 63 Tyler-Davidson Fountain (CBD)
- 64 Underwriters Salvage Corps (CBD)
- 65 Union Central Life Annex (CBD)
- 66 W.J. Williams YMCA
- 67 Windsor School
- 68 WLWT (CBD)



Legend

Cincinnati Historic Districts

TYPE

- Local Landmark
- District

0 0.250.5 1.5 2 Miles



The Economic and Fiscal Impacts of Property Tax Abatement in a Large County

Daphne A. Kenyon, Adam H. Langley, Bethany P. Paquin, and Robert W. Wassmer

We analyze the economic and fiscal effects of two major property tax abatement programs – Community Reinvestment Areas (CRAs) and Enterprise Zones (EZs) – in Franklin County, Ohio. Using panel-data regression analysis, we find that a one percentage point increase in a school district’s CRA or EZ abatement intensity correlates with: (1) a 2.7 percent decrease in a school district’s mill rate for real property, (2) a 0.9 (0.7) percent decrease in effective residential (non-residential) property tax rates, and (3) a 1.6 percent increase in the total market value of property in the school district. While small, any reduction is arguably a positive outcome since tax incentives have generated enough growth in property values to offset the immediate drop in the tax base from an abatement, and thus avoid a tax shift to non-abated properties. We detail the restrictions and oversight used in these abatement programs that are greater than what used in most other places in the United States. We posit that this may be the reason for the desired outcome found.

Keywords: property tax abatement, tax incentive, economic development, property tax

JEL Codes: H25, H71

Daphne A. Kenyon, Ph.D.

(Corresponding Author)

*Resident Fellow in Tax Policy, Lincoln Institute of Land Policy
113 Brattle Street
Cambridge, MA 02138
dkenyon@lincolninst.edu
(617)503-2125*

Adam H. Langley

Senior Research Analyst, Lincoln Institute of Land Policy

Bethany P. Paquin

Research Analyst, Lincoln Institute of Land Policy

Robert W. Wassmer, Ph.D.

*Professor, Department of Public Policy and Administration
California State University, Sacramento*

February 15, 2018

(Draft - Not for Citation)

*The authors gratefully acknowledge Liliana Rivera and Sydney Zelinka for their valuable research assistance. This analysis would not have been possible without the expertise, data resources, and data support of the Franklin County (Ohio) Auditor Clarence Mingo, Mark Potts, and the staff of the Franklin County Auditor's Office. Professors Robert Greenbaum, Andrew Hanson, and Edward "Ned" Hill offered valuable insights on an earlier version of this research. The Franklin County Auditor's Office and the Lincoln Institute of Land Policy provided the funding necessary to complete this research. An earlier version of the complete report prepared for the Auditor's Office is at <http://www.lincolninst.edu/publications/other/evaluation-real-property-tax-abatements-franklin-county-ohio>.

Introduction

State and local governments in the United States use a variety of tax incentives to attract and retain business investment, create jobs, reduce blight, and pursue other economic and fiscal goals. Bartik (2017) estimates that throughout the United States in 2015, these incentives totaled about \$45 billion. Given this extensive use, evaluating their efficacy is important. While a tax incentive offered by a jurisdiction has the potential to promote or retain economic development within a jurisdiction, if in fact the economic development would have occurred without the tax incentive, the jurisdiction has given away tax revenue unnecessarily. Such foregone revenue reduces local funds available for public services or requires their replacement with increased taxes or fees. To mitigate the degree of foregone revenue due to tax incentives, most states now require some form of state-level review of their use (Pew Charitable Trusts 2017). The work of Good Jobs First – a self-described watchdog group – is an example of this trend toward increased public scrutiny of tax incentives for economic development (Tarczynska 2017).

When a business expands in a jurisdiction and receives a tax incentive, would it have done so without the incentive? The challenge for evaluating the effectiveness of tax incentives is that the counterfactual cannot be observed. This study is an attempt to answer the question just posed through regression analysis using recent panel data from two Franklin County (OH) geographical units (school districts and Census tracts).¹ Specifically, we test whether the greater use of property tax abatement within one of these geographic units increased the market value of property (a desired economic impact) and/or decreased its property tax rate (a desired fiscal impact).

Although previous research exists on the economic and fiscal impacts of local economic development incentives, the evidence remains less than decisive. Much of that research has focused on tax increment finance, enterprise zones, or federal empowerment zones (e.g., Greenbaum and Landers 2014, Bondonio and Greenbaum 2007, Hanson and Rohlin 2011, Hanson and Rohlin 2017). Our research offers another contribution to this policy-relevant literature. Our focus is on determining the influence of

¹ In 2017, Census estimates placed Franklin County as the most populous county in Ohio. Franklin County is home to Columbus, which is the capitol of Ohio.

property tax abatements, but we also control for the separate influence of Job Creation Tax Credits (JCTC). Property tax abatements and JCTCs made up more than 70 percent of total state and local government incentive costs in 2015 (Bartik, 2017).

The remainder of this paper contains sections devoted to background information on property tax abatement in Ohio and Franklin County, the expected economic and fiscal impacts of abatement, a summary of some of the previous empirical research on the efficacy of abatement, a description of the regression model and data used, panel-data regression results, and policy implications from our findings.

Property Tax Abatement in Ohio and Franklin County

Although both states and localities in the United States have made strides in recent years to fuller transparency on their use of tax incentives, evaluation and disclosure practices vary considerably. Connolly and Bell (2011) found only 18 states that included property tax expenditures in their tax expenditure budgets, with Ohio not being one of them. Ohio does, however, subject local property tax abatements to annual evaluation and it is one of only two states (along with New York) in which a state agency discloses data on local property tax incentives online. For each Enterprise Zone (EZ) and Community Reinvestment Area (CRA) abatement, the Ohio Development Services Agency (ODSA) publishes performance data, cost data, and an annual report by Tax Incentive Review Councils (TIRCs). TIRCs are state-authorized, local commissions that annually evaluate each property tax abatement offered and make a recommendation for or against its continuance (Tarczynska 2017, Kenyon *et al.* 2017). ODSA's disclosure of data, and TIRC findings for local property tax abatements, earned Ohio a fourth-place ranking for disclosure among the states studied by Good Jobs First (Tarczynska 2017).

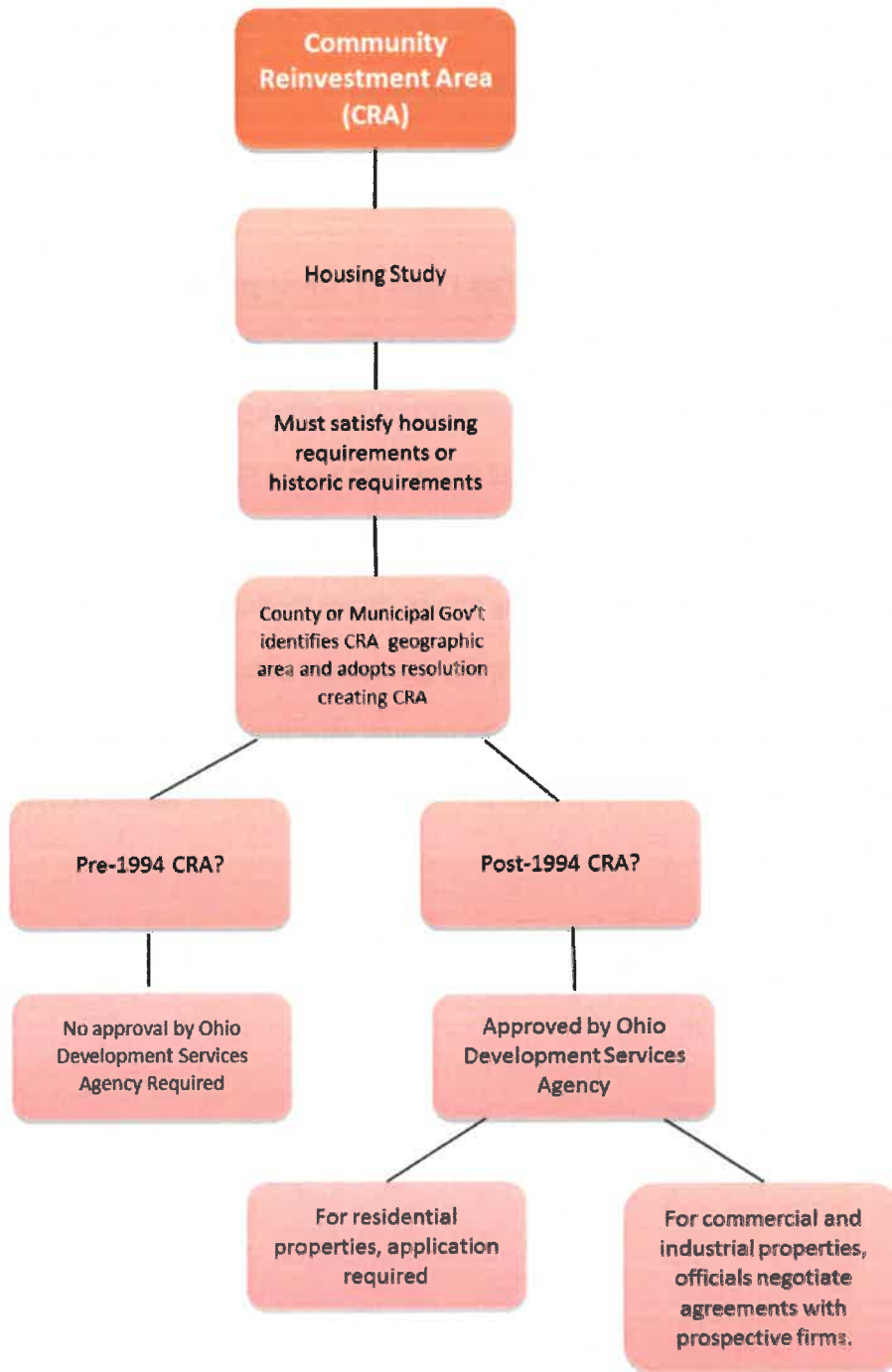
Community Reinvestment Areas (CRAs)² in Ohio provide tax exemptions to property owners who construct or make improvements to their residential, commercial, or industrial property in specific geographic areas. After public notification of intent, a city council or county commission may adopt a resolution establishing a CRA within its boundaries. To establish a CRA, the municipality or county must

² See Ohio Rev. Code § 3735.65 through 3735.70.

find that “the area included in the description is one in which housing facilities or structures of historical significance are located and new housing construction and repair of existing facilities or structures are discouraged” (Ohio Rev. Code §3735.65 (B)). The original intent of CRA abatement was property tax relief for construction or remodeling of housing, but most of the current tax savings under CRA now goes to industrial and commercial development.

Ohio offers two distinct types of CRAs (see Figure 1). CRAs granted before 1994 required no Ohio Development Services Agency (ODSA) approval and still exist. The individual tax abatements offered under these are time-limited and will eventually run out, although in 2015 most tax savings from CRA abatements in Franklin County still occurred in pre-1994 zones. For CRAs established after 1994, the state must approve establishment of a CRA zone. If the desired project is residential, the property owners can apply for an abatement, and a housing officer, chosen for the specific CRA, then determines if the property meets specified requirements. If property granted abatement under a post-1994 CRA is for commercial or industrial use, the municipality or county must enter into a written agreement with the business entity that requires approval by its legislative authority, and in some cases, overlying school districts (Ohio Development

Figure 1: Approval Processes for Community Reinvestment Areas



Note: Although pre-1994 CRAs still exist, it is no longer possible to create pre-1994 CRAs.

Sources: Ohio Rev. Code § 3735.65 ~ § 3735.70; Ohio Rev. Code § 5709.61 ~ § 5709.69; County Commissioners Association of Ohio (2016); and DeWine (2014).

Services Agency 2012). The starting requirement for the granting of a business CRA is a promise from the firm receiving it to generate new or retained jobs, increased payroll, and/or new investment.

Enterprise zones (EZs)³ offer non-residential property tax exemption on new real property inside the zone's perimeter, and allow a firm to qualify for a reduction in the corporate franchise tax.⁴ In practice, Ohio's EZs are not geographically targeted and often encompass nearly an entire city. Once a zone is certified, a municipality or county can enter into agreements with qualifying enterprises for incentives tied to investment and hiring. Inside a municipality, the maximum exemption from property taxation is three-quarters of the assessed value for up to 10 years, or an average of 60 percent over the term of the enterprise zone agreement. In the unincorporated area of the county, the maximum exemption is 60 percent of the assessed value of the property for up to ten years, or an average of 50 percent over the term of the enterprise zone agreement. EZs have provided exemption from taxation on both real and tangible personal property, and a reduction in the corporate franchise tax. However, Ohio's 2005 tax reform eliminated the tangible personal property tax and included a phase out of the corporate franchise tax. These changes have likely contributed to the slowdown in EZ adoption (County Commissioners Association of Ohio 2016). Of the \$65.4 million in tax savings from Franklin County CRA and EZ abatements in 2015, 52 percent were in pre-1994 CRA zones, 38 percent were in post-1994 CRA zones, and only 10 percent were in EZs. Although most abated properties are residential, most of the tax savings from CRAs and EZs go to industrial properties, which on average receive annual tax savings of \$228,675 per parcel.

Table 1 offers a concise summary of the differences between Ohio's residential and non-residential CRA abatement programs, and abatements granted through its EZ Program. An important feature of Ohio's property tax abatement program – which may contribute to the empirical findings recorded here – is the statutory requirement for using local Tax Incentive Review Councils (TIRCs).

³ See Ohio Rev. Code § 5709.61 through 5709.69.

⁴ The only exception to the requirement of exemption for new construction is for large manufacturing facilities or properties in a brownfield site (County Commissioners Association of Ohio 2016, 33).

Given the recent greater push for transparency and review of tax incentives throughout the United States, it is notable that all agreements for commercial and industrial property tax abatements for post-94 CRAs or EZs are subject to annual TIRC review. The TIRC annually audits the companies receiving property tax abatements in the jurisdiction it oversees to evaluate success at reaching their job, payroll, and/or investment promises established at the beginning of the agreements. These councils then recommend continuation, modification, or cancellation to the local government body originally approving the tax incentive agreement. Although this seems reasonable, it is not something widely practiced in other states.

Figure 2 shows the value of property abated through Community Reinvestment Areas (CRAs), Enterprise Zones (EZs), and Tax Increment Finance (TIFs) as a percent of total assessed property value in Franklin County from 1986 to 2015. CRA exempt value, as a percent of total assessed value, rose from 1986 to 2009, and then fell – equaling less than two percent in 2015. The value of property abated through “EZs and other” was well under one percent of total assessed value in the county for all years. Tax increment finance (TIF) is the most used form of property tax abatement in Franklin County. Until 1997, TIF accounted for a very small proportion of total assessed value; after that year, it increased markedly. In Franklin County, about two-thirds of all property tax revenue collected flows to school districts. Thus, in the absence of school compensation agreements, school districts bear much of the burden from any declines in property tax revenues due to tax abatements.^{5,6}

⁵ Both CRA and EZ legislation have complex language authorizing city or county officials to enter into agreements that compensate school districts for lost revenue from the granting of tax abatements.

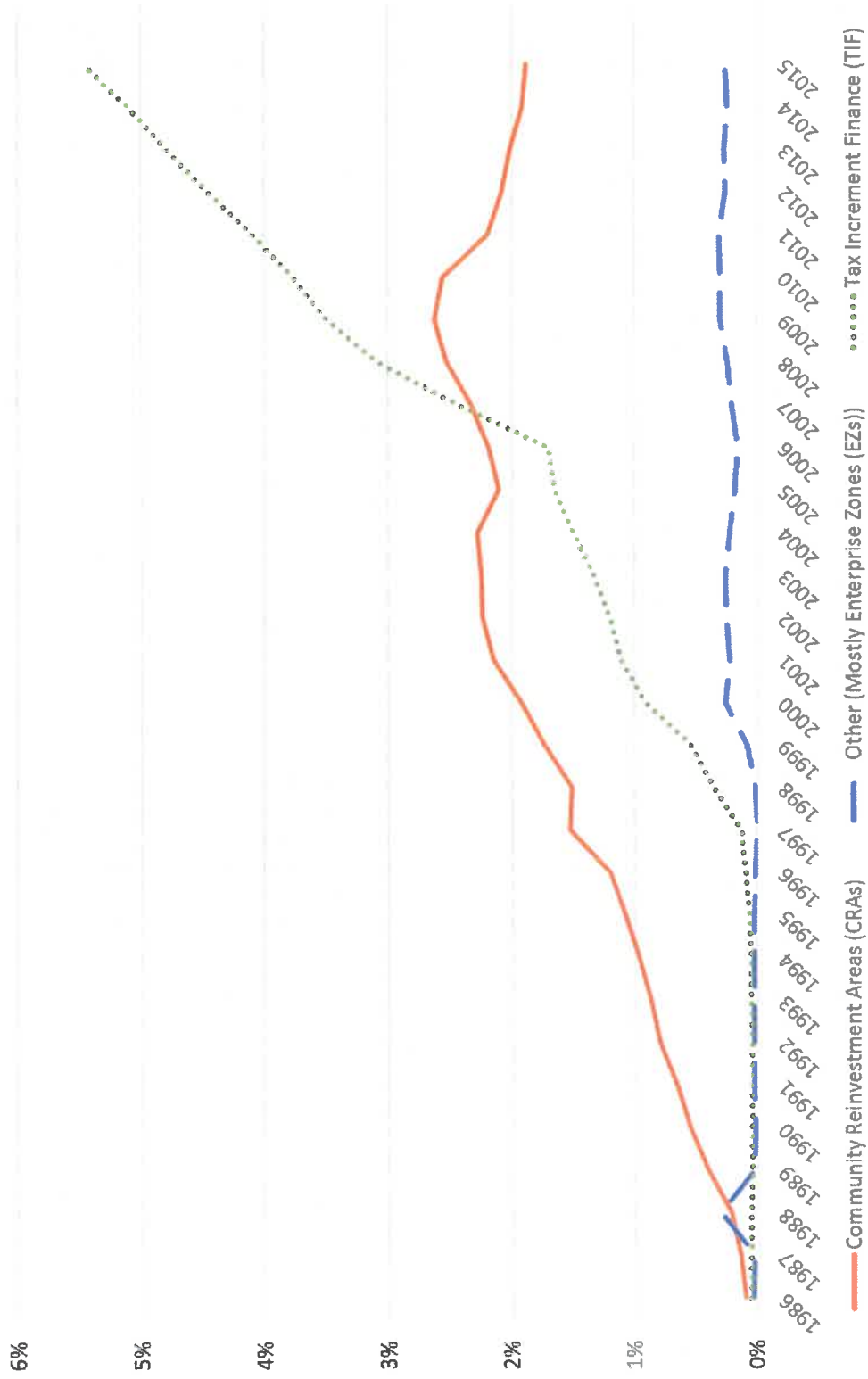
⁶ Ohio does not classify TIF as a tax exemption. Ohio documents often refer to TIF in Ohio as an abatement, but in practice TIF does not work like an abatement since the business still pays “service fees” that are equal to what they would have paid in property taxes.

Table 1: Property Tax Abatement Program Comparison

	Community Reinvestment Areas (CRAs)		Enterprise Zones (EZs)
	Residential	Commercial or Industrial	
Purpose	Revitalize housing stock, construct new housing	Retain or attract companies which generate investment and/or provide jobs	Retain or attract companies which generate investment and/or provide jobs
Industry Focus	Housing	Commercial or Industrial	Commercial or Industrial
Requirements	Housing structures or structures of historic significance are located; new housing construction and housing repair are discouraged		Minimum population (all EZs); satisfy distress criteria (full authority EZs only)
Local Government Authority	Established by municipalities or counties	Established by municipalities or counties	Established by municipalities or counties
Incentive Granted	Tax abatement of assessed value of newly remodeled or constructed property; always 100% abatement for pre-1994 CRA, up to 100% abatement for post-1994 CRA	Tax abatement of assessed value of newly remodeled or constructed real property; always 100% abatement for pre-1994 CRA, up to 100% abatement for post-1994 CRA, depending upon school board approval	Up to 100% abatement of assessed value of real property first used at project site because of agreement; abatement of personal property and reduction in corporate franchise tax liability much reduced by 2005 OH tax reform.
Term of Incentive	Up to 15 years	Up to 15 years	Up to 15 Years
Administered by	Housing officer and housing council (designated by local legislative authority)	Same as for residential CRA but approval of written agreement required if post-94 zone	Enterprise zone manager
Ongoing Monitoring by	No Tax Incentive Review Council (TIRC) review	Tax incentive review council (TIRC) which annually reviews compliance with tax exemption agreements and recommends continuation, modification, or cancellation of each agreement to municipal or county legislative body. One member of each TIRC must be from the relevant school board.	
Role of School Boards	Notice to school board required	Notice to school board required; school board approval required for post-1994 CRA if exemption > 50%	Without school board approval maximum abatement of 75%; with approval, 100%
Relocation of Jobs from Another OH Location	NA	Notice to municipality losing operations and to ODSA required	Notice to and waivers from ODSA required
Zone Amendments	Possible to amend pre-1994 CRA zones twice, but with a 3rd amendment the CRA becomes subject to post-1994 rules		Allowed, to change boundaries of EZ zone
Clawbacks	NA	Option to include clawback provision in individual agreements	Option to include clawback provision in individual agreements
Revocation of Incentive Agreements	Possible if not maintained or repaired as determined by housing officer	Possible if company has not met obligations in CRA agreement	Possible if company has not met obligations in EZ agreement

Note: Ohio Development Services Agency = ODSA. Sources: State Statute; DeWine 2015; Ohio Development Services Agency 2016; County Commissioners Association of Ohio 2016.

Figure 2:
Percentage of Franklin County Real Property Assessed Value by Class of Abatement, 1986-2015



Source: Ohio Department of Taxation

For the desired analysis, we must also consider two other forms of tax incentives available in Ohio. The first is Environmental Protection Abatements (EPA) that promote brownfield development. These are relatively minor in scale (only about one-fiftieth of the use of CRA/EZ abatements), but included here for comprehensiveness. The other is Job Creation Tax Credits (JCTCs) which allow refundable credits against state individual income tax, corporate income taxes, and/or the insurance premiums tax. The Ohio Tax Credit Authority governs the offering of a JCTC abatement. Eligible business owners must demonstrate that the project will create/retain jobs, is economically sound, and that the incentive is a major factor in the decision to go forward with the project. Agreements spell out: (1) the incentive duration (up to 15 years), (2) the requirement to operate at the location for at least seven years or three years after the end of the incentive (whichever is greater), (3) the benefit amount of the tax credit (which can vary between 50 and 75 percentage of a firm's new or retained payroll), (4) annual reporting requirements, (5) compliance requirements including a clawback provision, and (6) a provision restricting relocation of jobs within the state to meet job targets.⁷

Finally, as reported by the City of Columbus (2016), it is worth noting the annual taxes forgone for economic development purposes by Franklin County's largest jurisdiction.⁸ Job Creation Tax Credits (JCTCs) accounted for the most revenue abated away (\$872,172 of income taxes foregone), followed by CRAs (\$827,969 of property tax revenue forgone) and EZs (\$211,932 of property tax revenue forgone). Given an operating budgeting of just over \$1.7 billion for the City of Columbus in 2016, these abated tax revenues are relatively small, another fact worth noting when considering the empirical finding reported here.

⁷ As of March 2017, Franklin County had 114 active JCTC agreements that claimed to represent \$652.5 million in investment, 12,462 new jobs, and 14,267 retained jobs (Ohio Development Services Agency 2017a and 2017b).

⁸ This was in response to the new Governmental Accounting Standards Board (GASB) Statement No. 77 on Tax Abatement Disclosures, which applies to state and local financial reports for fiscal years beginning after December 2015.

Economic and Fiscal Impact of Property Tax Abatement

It is reasonable to assume that policymakers expect that granting property tax abatements results in some economic benefit to the local economy that would not have occurred without the tax incentive.

Determining whether property tax abatements on balance are causing firms to locate in a certain community, and thus increase investment, employment, and/or payroll, is a question beyond the realm of the Tax Incentive Review Council (TIRC) process just described. The TIRC evaluation only checks whether the promised amount of these activities occurred, and not if they would not have occurred without the abatement.

Tax incentives for economic development can have either a positive or negative impact on the jurisdiction providing the abatements (see Wassmer 2009, and Kenyon, Langley and Paquin 2012). As just mentioned, a crucial distinction is whether the economic activity would have occurred if the abatement was not offered. If it would not have, the positive side of the abatement is the revenue gain from expanded economic activity attributable to the incentive, which yields the positive fiscal impact of a reduced rate of property taxation. If the activity attributable to an abatement would have occurred even without the abatement, then the negative side of abatement is a loss in taxable property value, subsequent loss in property tax revenue, and the negative fiscal impact of an increase in the rate of property taxation this necessitates. Multiple regression analysis is the appropriate methodology for estimating the impact of incentive programs designed to stimulate local economic development. Through this technique, we estimate whether the use of an economic development program has a statistically significant positive effect on investment, property value, employment, or wages. Next, we offer a brief review of some related regression analyses of the economic and fiscal impacts of property tax abatement.

Literature Review

Hultquist's (2014) research is an example of the use of multiple regression analysis to detect the economic impact of incentives. It is highly relevant to this study due to its examination of the impact of Ohio's Enterprise Zone (EZ) and Job Creation Tax Credit (JCTC) programs on employment and wage

growth in Ohio zip codes between the years of 2000 to 2004.⁹ He finds that the cumulative value of both JCTC and EZ incentives exerts no influence on aggregate employment in a zip code, and only a very modest positive influence on wages. One of Hultquist's regression findings show that a \$1 million increase in total incentive value (which includes both Job Creation Tax Credits and Enterprise Zone incentive agreements) in an Ohio zip code, in both the previous year and current year, increased total wages in that zip code in the current year by a "modest" \$2,000 (pp. 216-217). When disaggregating the JCTC and EZ incentives, Hultquist finds that a \$1 million increase in zip-code-specific EZ abatement correlates with only a one-twentieth increase in a manufacturing job within the zip code. Alternatively, a \$1 million increase in tax credits through the JCTC correlates with a \$45 million increase in trade/transportation wages and nearly 900 jobs. Hultquist notes that the major difference between the influence of JCTC and EZ incentives arises because the typical JCTC firm tax credit was about \$150,000, while the typical EZ firm property tax abatement was about \$5.5 million. Thus, he appropriately cautions against making out-of-sample projections for the values of these incentives. Of concern to us is this study's reliance on only fixed-effect zip code dummies to control for the many factors that influence the economic outcomes observed in a zip code.¹⁰

Hicks and Faulk (2016) examined the fiscal impact of property tax abatements granted by local governments in the State of Indiana.¹¹ In Indiana, real or personal property located in an Economic Revitalization Area or Enterprise Zone receives a property tax abatement for up to 10 years. Unlike Ohio, Indiana ramps down abatement intensity over time. Using a data set based on counties for the period 2002 to 2011, Hicks and Faulk's simple regression methodology of regressing effective tax rate in a county against its abated share of property finds that each doubling of abated share increases the effective

⁹ Given the quantitative importance of CRAs in Ohio, we are perplexed as to why Hultquist did not include CRAs in his analysis.

¹⁰ We found only one study that examined the impact of CRAs, EZs, and JCTCs in Ohio. However, the focus of Greenbaum, Russell, and Petras (2010) was not the economic or fiscal impact of these tax incentives, but the degree to which these incentives were targeted.

¹¹ Faulk (2002) also has a study of the impact of Georgia's Jobs Tax Credit (a form of JCTC), but since she focuses on its impact on employment rather than property values we do not review that study here.

property tax rate by 12 percent. They caution the reader that this statistically significant finding can either mean that property tax abatements lead to higher effective property tax rates, or that counties with higher property tax rates provide a greater amount of property tax abatements. They suggest that a more thorough regression analysis, with the inclusion of appropriate control variables, is necessary to sort this out. We take this suggestion seriously in our own choice of a regression analysis of the fiscal impact of abatement that purposefully includes more control variables.

The analysis offered here broadly follows the Hultquist approach, and previous regression-based studies of the economic impact of property tax abatement. The economic variable we investigate is the market value of property. We could not, unfortunately, obtain employment or payroll data to use as a dependent variable because it is not widely available for the smaller units of geography used in this analysis of only Franklin County.

Regression Model, Methodology, and Data

Simple Model of What Determines a School District's Property Tax Rate

Since we want to understand the fiscal and economic impacts of property tax abatement and other forms of economic development incentives on a school district, we first think about the overall relationship between a school district's rate of annual property taxation, the dollar value of annual education expenditures its residents desire, and the market value of the property tax base used to raise the dollars needed for education expenditure. For jurisdiction "i" we represent this as:

$$(1) \text{ Property Tax Rate}_i = \text{Local Education Expenditure}_i / \text{Taxable Property Value}_i .$$

The assumption is that residents first decide upon an annual expenditure for their school district and then they tax property within the district at an annual rate that yields the necessary revenue.

Upon seeing the relationship just described, it becomes clear that all three of the measures in equation (1) are endogenous. To turn equation (1) into a viable reduced-form regression model, we need to describe the exogenous factors expected to influence differences in the two endogenous variables listed on its right side:

$$(2) \text{ Local Education Expenditure}_i = f(\text{Resident Characteristics that Influence Demand}_i);$$

$$(3) \text{ Taxable Property Value}_i = f(\text{Property Tax Abatement}_i, \text{Other Property Relevant Incentives}_i, \text{Property Exempt from Taxation}_i, \text{Property Base Characteristics}_i).$$

As described in equation (2), residential characteristics expected to create greater demand for K-12 education in a school district can also increase the expected amount of observed education expenditures. As noted in equation (3), a school district's taxable property value changes with the degree of property tax abatements and other relevant incentives offered within the district. A key question examined is whether the use of abatement and other incentives causes an increase in taxable property value that would not have occurred without them. In other words, do they just give away taxable property value, and thus reduce taxable property value? The degree of property that is exempt from taxation, furthermore, decreases total property value. Characteristics of a school district's property tax base can also change its value.

The next step in obtaining a viable regression model is specifying the available explanatory variables that represent the exogenous factors specified on the right side of equations (2) and (3). These are:

$$(4) \text{ Resident Characteristics that Influence Demand}_i = f(\text{Bachelor_Plus_Percent}_i^{12}, \text{Age19_Less_Percent}_i, \text{Enrollment}_i);$$

$$(5) \text{ Property Tax Abatement}_i = f(\text{CRA/EZ_Abate_Percent}_i, \text{CRA_Pre94_Percent}_i);$$

$$(6) \text{ Other Property Relevant Incentives}_i = f(\text{TIF_Abate_Percent}_i, \text{EPA_Abate_Percent}_i, \text{JCTC_Jobs_Per_100M_MarketVal}_i);$$

$$(7) \text{ Property Exempt from Taxation}_i = f(\text{Tax_Exempt_Property_Percent}_i);$$

$$(8) \text{ Property Base Characteristics}_i = f(\text{Number_Parcels}_i, \text{Parcels_NonResidential_Percent}_i).$$

As noted in equation (4), we expect that demand for K-12 education expenditure will be greater, the larger the percentage of the adult population over age 25 holding at least a bachelor's degree. The enrollment and percentage of the population of school age in a school district should also exert a positive influence on demand for K-12 public education, while enrollment will also raise the cost of providing it.

¹² We also gathered data on median household income in a school district, but exclude it here because of its partial correlation coefficient of 0.93 with bachelor degree holders. When we include both as explanatory variables in these regression analyses, neither exhibited statistical significance due to multicollinearity.

In Equation (5), we account for the use of property tax abatements by measuring “abatement intensity” – the value abated through CRA or EZ abatements as a percent of total market value in a school district, and the percentage of CRA abatement using pre-1994 rules. The latter explanatory variable offers a test of whether type of CRA abatement matters. Equation (6) accounts for the two other types of property tax abatement used in Franklin County. We measure both EPA and TIF abatement as the value abated through these respective abatements as a percent of total market value in a school district. Equation (6) also accounts for the other major tax incentive program of Job Creation Tax Credits (JCTCs).

Beginning in 2007, the State of Ohio Development Services Agency (ODSA) estimated the annual tax credit value of a JCTC to a specific firm if all promised jobs occurred. For use in this research, this is unfortunate since our school district data begins in 1998, and Census tract data begins in 2002. To overcome this, we must instead use the contracted value of retained or new jobs that ODSA has on file for all JCTC agreements negotiated since the program’s inception in 1993. The ODSA also has on file the number of years that the JCTC was awarded based upon an approved annual report documenting their existence. Of course, the use of a retained or created job can only act as an approximate measure of the exact value of the JCTC to the firm because the actual credit varies by the earnings of the job and the negotiated percentage (between 50 and 75 percent) of the tax credit. This could be a concern if we needed to know the value of the JCTC to a specific firm, but instead we only need a measure of the value of JCTCs to all firms receiving them in a Franklin County zip code or Census tract. We thus aggregate this job information, provided because of an email request to ODSA, for all firms whose address falls in each Franklin County school district or Census tract, for the years that the JCTC is granted, and for the years under consideration in this analysis. Given this aggregation, and the effect of averaging, we believe the number of jobs becomes a good proxy for the dollar value of the JCTC offered in a geographic unit. Across zip codes and Census tracts of widely varying sizes and economic activity, we normalize the variable by dividing by the market value of taxable property in the geographic entity measured in \$100 million.

In equation (7), we account directly for the percentage of a school district's property tax base exempt from taxation. Finally, equation (8) controls for differences in the number of parcels in a Franklin County school district, and the percentage of these parcels which are non-residential. There are two points to highlight about our key explanatory variable measure of CRA/EZ_Abate_Percent. First, it includes both CRA and EZ abatements. Enterprise zone abatements were too small in quantity to run regressions using that variable alone and the two abatement programs work very similarly in practice. Second, this variable and other measure of incentives (TIF, EPA, JCTC) account for the percent of property value abated at a given time, not the new abatements approved in that year.

The data sets used here contain observations from 16 school districts where more than half of their land area is in Franklin County. For these 16 school districts, we use data gathered from the 18 years between 1998 and 2015.¹³ Details on where the data used in this analysis comes from, and how we transformed it into the final forms used here, are in the Data Appendix.

Using Regression Analysis to Detect the Fiscal Impact of Property Tax Abatement

We define the fiscal impact of property tax abatement in a school district as the effect it has on the district's property tax rate. Using the equations specified above, and substituting in the exogenous factors in equations (4) through (8) that influence the endogenous measures of education expenditures and taxable property value in equation (1), yields the regression specification:

$$(9) \text{ Property Tax Rate} = f(\text{Bachelor_Plus_Percent}, \text{Enrollment}, \text{CRA/EZ_Abate_Percent}, \text{CRA_Pre94_Percent}, \text{TIF_Abate_Percent}, \text{EPA_Abate_Percent}, \text{Exempt_Percent}, \text{JCTC_Jobs_Per_100M_MarketVal}, \text{Parcels_Number}, \text{Parcels_NonResidential_Percent}).$$

This is a reduced-form regression specification because we include only exogenous and independent variables in equation (9) as causal right-side variables. The dependent variables used to detect the fiscal impact of property tax abatements are the actual mills assessed on real property in a school district, the effective rate of property taxation on residential property, and the effective rate of property taxation on non-residential property. Ohio has a complex property tax system which includes the use of tax reduction

¹³ Later, for the 284 Census tracts that we also analyze, we use data from the 14 years between 2002 and 2015.

factors that reduce the growth in taxes due to valuation increases. Property tax mills do not account for those tax reduction factors, whereas effective property tax rates do. Since tax reduction factors are computed separately for residential property (Class 1) and non-residential property (Class 2), effective property tax rates for residential and non-residential properties are typically different.¹⁴

Our analysis of property tax abatement uses a pooled data set and thus allows for the calculation of school district specific fixed effects after controlling for other general factors driving differences in the dependent variables. Our use of fixed effects (controlling for both year and school district or Census tract specific influences) panel data regression analysis to estimate the impact of CRAs and EZs on property values and property tax rates is a “difference-in-differences method.” It controls for factors that could exert a fiscal or economic impact, besides abatement, fixed in a jurisdiction over time. Thus, it allows greater confidence that when the regression analysis finds a fiscal or economic impact from abatement, it is a causal relationship rather than just a correlation.

For the regression analysis, we transform all the dependent variables in the regression analysis by taking their natural log. We do this to account for the fact that the relationship between the dependent and independent variables is not likely to be linear. Instead, we model this relationship as a one-unit change in an explanatory variable resulting in a percentage change in a dependent variable. Thus, a statistically significant regression coefficient indicates the expected influence of a one-unit change in the respective explanatory variable on the dependent variable in percentage terms. The exceptions to this occur where we transform the explanatory variables (enrollment and parcels) meant to account for differences in scale across zip codes or Census tracts into natural log form. We do this because the regression coefficient will then measure the percentage change in the dependent variable due to a one-percentage point increase in the log-transformed explanatory variable.

¹⁴ What Ohio terms “effective property tax rates” for residential and non-residential properties are not the same as what public finance economists usually refer to as an effective property tax rate (revenue raised divided by market value). The reason is that Ohio effective property tax rates do not account for other programs which reduce property tax liability for residential property: the homestead exemption, ten percent rollback credit, and 2.5 percent rollback credit. See Lang (2016) and Sullivan and Sobul (2010).

As described by Hoechle (2007), and Cameron and Trivedi (2010, Chapter 8), there are specific tests to perform before deciding upon the optimal form of regression estimation for a panel data set. The first is to test whether the use of fixed or random effects is appropriate. The appropriate Hausman test indicates fixed effects at the 99 percent confidence level. Next, we used Pesaran's test of cross sectional independence and found with 99.9 percent confidence that it was not an issue. Finally, we tested for the presence of autocorrelation in the regression using the Wooldridge test and found it present with greater than 99 percent confidence. Therefore, the appropriate regression process to use in STATA is "xtreg" with robust standard error estimation clustered on each school district. According to Hoechle (p. 4), this controls for autocorrelation specific to each panel and for heteroscedasticity. A control for school district (or Census tract) fixed effects exists in this STATA estimation by specifying it as the group variable. The addition of a set of year specific dummies account for year fixed effects.

Table 2 offers descriptive statistics for all variables used in the regression analyses based upon 288 observations drawn from the 16 school districts with at least half of their area in Franklin County during the 18-year span of 1998 to 2015. Details on the four sources of the variables used in this analysis are in the Data Appendix. Table 3 reports the School_Mills_Real regression result. A concern is the possibility that the explanatory variables used to measure different forms of abatement (CRA/EZ_Abate_Percent, TIF_Abate_Percent, EPA_Abate_Percent) are highly correlated and could lead to multicollinearity. We checked for this by calculating the pairwise correlation coefficients between these three variables and found them at levels low enough (in absolute value, less than 0.20) to not likely yield concerns.

As noted in Table 3, a one percentage point increase in the value abated through CRA or EZ abatement, as a percentage of a total market value in a school district, results in a statistically significant 2.7 percent decrease in a school district's property tax millage rate.¹⁵ **If expressed instead in terms of the impact of a one standard deviation increase in CRA/EZ abatement of about 4.6 percent, this**

¹⁵ As also noted in the last column of Table 3, the regression finding indicates with 90 percent confidence this effect falls within a 3.4 to 2.1 percent decrease.

decrease in school district mill rate jumps to about a 12.4 percent decrease. The regression analysis indicates that the use of Job Creation Tax Credits (JCTC) also reduces the school millage rate. One job created or retained through the granting of this tax credit to a firm per \$100 million in inflation-adjusted market property value results in a 0.019 percent decrease in the school district's millage rate. **If the measurement of the effect is in terms of a standard deviation increase of 67.5 more jobs created or retained through a JCTC offering, the percentage reduction in school millage rate is about 1.3 percent.** Finally, the use of TIF abatement exhibited a statistically significant influence on school millage rate. A one percentage point increase in the value abated through TIF as a percentage of a total market value in a school district results in about a 1.9 percent decrease in a school district's property tax millage rate. **If expressed instead in terms of the impact of a one standard deviation increase in TIF abatement of about 2.0 percent, this decrease in school district mill rate jumps to about a 3.8 percent decrease.**

When the dependent variable is an effective property tax rate instead of a mill rate, there is still a statistically significant impact of the CRA/EZ abatement on the property tax rate, but that effect is smaller for the non-residential rate than for the residential rate. As shown in Table 4, a one percentage point increase in the value abated through CRA or EZ abatement as a percentage of total market value in a school district results in about a 0.9 percent decrease in a school district's residential effective property tax rate. **If expressed instead in terms of the impact of a one standard deviation increase in CRA/EZ abatement of about 4.6 percentage points, this decrease in residential effective property tax rate grows to about 4 percent.** To put this result in dollar terms, the regression analysis predicts that a one standard deviation increase in CRA/EZ abatement as a percent of a school district's total property value lowers the average residential property tax bill in that school district for that year by about \$77 for the median property tax bill, and about \$100 for the average tax bill.¹⁶ For this regression, neither the TIF nor the JCTC variables are statistically significant.

¹⁶ To do this computation it is important to know that Ohio uses a 35 percent assessment ratio and mill rates are tax rates per \$1,000 of property. Using the parcel data collected from all Franklin County for the years 1998-2015, we

Table 5 presents the results for the regression where the dependent variable is the effective property tax rate for non-residential property. Again, the CRA/EZ variable is statistically significant. A one percentage point increase in the value abated through CRA or EZ abatement as a percentage of total market value in a school district results in about a 0.7 percent decrease in a school district's non-residential effective property tax rate. If expressed instead in terms of a one standard deviation increase in CRA/EZ abatement, this decrease in non-residential effective property tax rate grows to about 3 percent. Neither the TIF nor the JCTC variables are statistically significant. Interestingly, the CRA_Pre94_Percent variable becomes statistically significant. Although the coefficient is small, this may suggest that tax abatements under the rules of the early CRA program may be slightly more effective in reducing the effective property tax rate for non-residential property.

Using Regression Analysis to Detect the Economic Impact of Property Tax Abatement

We define the economic impact of property tax abatement in a Franklin County school district or Census tract as the effect it has on the market value of property. For a school district (i) that sets its own property tax rate, an algebraic manipulation of equation (1) yields:

$$(10) \text{ Taxable Property Value}_i = \text{Local Education Expenditures}_i / \text{Property Tax Rate}_i .$$

From this, the reduced form regression, resulting after the appropriate substitutions from equations (2) and (3), is:

$$(11) \text{ Taxable Property Value}_i = f(\text{Bachelor_Plus_Percent}_i, \text{Age19_Less_Percent}_i, \text{Enrollment}_i, \text{CRA/EZ Abate_Percent}_i, \text{CRA_Pre94_Percent}_i, \text{TIF_Abate_Percent}_i, \text{EPA_Abate_Percent}_i, \text{JCTC_Jobs_Per_100M_MarketVal}_i, \text{Tax_Exempt_Property_Percent}_i, \text{Parcels_Number}_i, \text{Parcels_NonResidential_Percent}_i).$$

We measure taxable property for both school districts and Census tracts in Franklin County as the market value of property in the relevant entity. The data used to estimate equation (11) for school districts is the same as described in Table 2.

find a median tax bill of \$1,960, while the average is \$2,547. In 2013 the median real estate taxes paid by an owner-occupied home in Ohio were \$1,982.

Testing for the presence of fixed over random effects, cross section independence, and autocorrelation, we again find their presence in this regression with a different dependent variable, but the same set of explanatory variables. Thus, we employ the same regression technique as earlier. Table 6 contains the school district based results for our economic impact analysis. Regarding the economic impact of property tax abatement on school districts in Franklin County, we find that a one percentage point increase in the value abated through CRA or EZ abatement as a percentage of a total market value in a school district results in about a 1.6 percent increase in the market value of property in a school district. **A one standard deviation percentage point increase of 4.6 in the percentage of school district's property tax base granted a CRA or EZ abatement results in about a 7.4 percent increase in the value of a school district's real property tax base.**

As an additional test of the economic impact of property tax abatement, we also gathered annual data from the 284 Census tracts in Franklin County from 2002 to 2015. These are not governmental jurisdictions, and thus levy no property taxes. Their inclusion offers a unit of observation that results in many observations within Franklin County, and thus are ideal as an additional way to examine the economic impact of property tax abatement on the market value of property. Referring to the earlier set of equations, we can only estimate the taxable property value relationship in equation (3) and check how property tax abatement, other property relevant incentives, property exempt from taxation, and other property base characteristics influence it. Table 7 contains descriptive statistics for the variables included in Census tract estimation of equation (3).

We find the presence of fixed over random effects, cross section independence, and autocorrelation, making it necessary again to use the same regression technique. The Census tract based results for our economic impact analysis are in Table 8. Like the regression using school district data, we again discovered that CRA or EZ abatement exerts a statistically significant positive influence on the market value of property, just not as large. A one percentage point increase in abatement intensity in a Census tract yields about a 0.4 percent increase in the market value of property. **If measured in terms of a one standard deviation 5.2 percentage point increase in CRA or EZ abatement intensity, the**

associated increase in Census tract property value rises to 2.1 percent. As found for a school district, TIF abatement also yields a positive influence on the market value of property in a Census tract. A one percentage point increase in value earmarked for TIF as a percentage of total market value results in about a 1.4 percent increase in the market value of property in a Census tract. **If measured in terms of a one standard deviation 5.4 percentage point increase in TIF abatement, the associated increase in Census tract property value rises to 7.6 percent.**

For a Census tract, unlike for a school district, jobs created or retained through a JCTC tax credit increase the market value of property. One job created or retained per \$100 million of market value property in the Census tract raises the tract's market value by 0.0086 percent. That is small. **However, when measured in terms of the standard deviation of 103.4 more jobs created or retained of this JCTC measure for all school districts over the years observed, the effect on Franklin County Census tract's market value of property rises to about a 0.9 percent increase.**¹⁷

¹⁷ Hanson (2009) also finds that a wage tax credit (in this case the federal Empowerment Zone) has a statistically significant positive impact on property value.

**Table 2: Descriptive Statistics for Variables Used in School District Fiscal/Economic Impact Regression Analysis
(16 Franklin County School Districts drawn from 18 years between 1998 and 2015)**

Variable	Mean	Standard Deviation	Minimum	Maximum	Source*
Dependent					
School Mills Real	38.29	7.89	22.95	55.76	FRANKLIN CO
Real Property Market Value	5,403,483,191	8,365,531,220	436,216,672	43,867,590,656	FRANKLIN CO
Residential Effective Real Rate	66.34	11.30	42.33	95.91	FRANKLIN CO
Non-Residential Effective Real Rate	76.46	12.27	53.41	103.37	FRANKLIN CO
Explanatory					
Bachelor Plus Percent	41.21	20.66	7.80	74.20	CENSUS
Age19 Less Percent	27.70	3.06	20.70	35.00	CENSUS
Enrollment	11,331	15,090	1,069	70,720	STATE
CRA/EZ Abate Percent	3.01	4.55	0.00	18.33	FRANKLIN CO
CRA Pre94 Percent	42.27	43.24	0.00	100.00	FRANKLIN CO
TIF Abate Percent	1.38	1.95	0.00	9.07	FRANKLIN CO
EPA Abate Percent	0.03	0.09	0.00	0.69	FRANKLIN CO
JTC Jobs Per 100M MarketVal	35.12	67.49	0.00	525.31	OHIO DEV SERVICES
Tax Exempt Property Percent	10.59	7.90	2.75	43.98	FRANKLIN CO
Parcels Number	25,481	41,506	2,919	187,842	FRANKLIN CO
Parcels NonResidential Percent	7.36	3.01	3.69	16.15	FRANKLIN CO

*Source definitions are in Data Sources section of appendix.

Table 3: Fiscal Impact Regression Results Using Franklin County School District Data (16 Franklin County School Districts drawn from 18 years between 1998 and 2015)

Dependent Variable: Ln_School_Mills_Real.

School district fixed effects and year dummy variables included, but not reported. Heteroscedastic and autocorrelated robust standard errors through clustering on school districts. Statistical significance measured in two-tailed test: *** > 99%, **95 to 99%, and *90 to 95%.

Explanatory Variable	Regression Coefficient	Statistical Significance	Regression Coefficient Robust Standard Error	90% Confidence Interval
Bachelor Plus Percent	0.0071	*	(0.0071)	0.00049 to 0.014
Age19 Less Percent	-0.026	***	(0.0091)	-0.041 to -0.011
Ln Enrollment	0.51	**	(0.095)	0.35 to 0.66
CRA/EZ Abate Percent	-0.027	***	(0.0041)	-0.034 to -0.021
CRA_Pre94 Percent	0.00027		(0.00027)	-0.00017 to 0.00071
TIF Abate Percent	-0.019	***	(0.0059)	-0.028 to -0.0089
EPA Abate Percent	-0.069		(0.081)	-0.20 to -0.064
JCTC Jobs Per 100M MarketVal	-0.00019	*	(0.00011)	-0.00036 to 0.000015
Tax Exempt Property Percent	-0.0013		(0.0026)	-0.0056 to 0.0029
Ln Parcels Number	0.12		(0.18)	-0.19 to 0.42
Parcels NonResidential Percent	-0.025	***	(0.0054)	-0.034 to -0.016
Within R-Squared^	0.755			
Observations	288			

^Within R-Squared measures the variance within the panel units (school districts) accounted for by the regression model.

Table 4: Fiscal Impact Regression Results Using Franklin County School District Data (16 Franklin County School Districts drawn from 18 years between 1998 and 2015)

Dependent Variable: Ln_Residential_Effective_Real_Rate.

School district fixed effects and year dummy variables included, but not reported. Heteroscedastic and autocorrelated robust standard errors through clustering on school districts. Statistical significance measured in two-tailed test: *** > 99%, **95 to 99%, and *90 to 95%.

Explanatory Variable	Regression Coefficient	Statistical Significance	Regression Coefficient Robust Standard Error	90% Confidence Interval
Bachelor Plus Percent	-0.0013		(0.0026)	-0.0056 to 0.0030
Age19 Less Percent	-0.026	**	(0.0060)	-0.035 to -0.016
Ln Enrollment	0.40	***	(0.063)	0.29 to 0.50
CRA/EZ Abate Percent	-0.0086	***	(0.0027)	-0.013 to -0.0041
CRA_Pre94 Percent	-0.000080		(0.00018)	-0.00037 to 0.00021
TIF Abate Percent	-0.0024		(0.0039)	-0.0088 to 0.0040
EPA_Abate Percent	-0.054		(0.053)	-0.14 to 0.033
JCTC_Jobs Per 100M_MarketVal	-0.000066		(0.000069)	-0.00018 to 0.000049
Tax_Exempt_Property_Percent	0.00090		(0.0017)	-0.0019 to 0.0037
Ln Parcels Number	-0.090		(0.12)	-0.29 to 0.11
Parcels_NonResidential_Percent	-0.0085	**	(0.0035)	-0.014 to -0.0027
Within R-Squared^	0.873			
Observations	288			

^Within R-Squared measures the variance within the panel units (school districts) accounted for by the regression model.

Table 5: Fiscal Impact Regression Results Using Franklin County School District Data (16 Franklin County School Districts drawn from 18 years between 1998 and 2015)

Dependent Variable: Ln_Non-Residential_Effective_Real_Rate.
 School district fixed effects and year dummy variables included, but not reported.
 Heteroscedastic and autocorrelated robust standard errors through clustering on school districts.
 Statistical significance measured in two-tailed test: *** > 99%, **95 to 99%, and *90 to 95%.

Explanatory Variable	Regression Coefficient	Statistical Significance	Regression Coefficient Robust Standard Error	90% Confidence Interval
Bachelor_Plus_Percent	0.0014		(0.0026)	-0.0029 to 0.0057
Age19_Less_Percent	-0.017	***	(0.0059)	-0.027 to -0.0075
Ln_Enrollment	0.35	**	(0.062)	0.25 to 0.46
CRA/EZ_Abate_Percent	-0.0074	***	(0.0027)	-0.011 to -0.0030
CRA_Pre94_Percent	-0.00035	**	(0.00018)	-0.00064 to -0.000056
TIF_Abate_Percent	-0.0021		(0.0039)	-0.0085 to 0.0042
EPA_Abate_Percent	-0.036		(0.053)	-0.12 to 0.051
JCTC_Jobs_Per_100M_MarketVal	-0.000098		(0.000069)	-0.00021 to 0.000016
Tax_Exempt_Property_Percent	-0.0012		(0.00017)	-0.0040 to 0.0016
Ln_Parcels_Number	-0.21	*	(0.12)	-0.41 to -0.015
Parcels_NonResidential_Percent	-0.019	***	(0.0035)	-0.025 to -0.013
Within R-Squared^	0.829			
Observations	288			

^Within R-Squared measures the variance within the panel units (school districts) accounted for by the regression model.

Table 6: Economic Impact Regression Results Using Franklin County School District Data (16 Franklin County School Districts drawn from 18 years between 1998 and 2015)

Dependent Variable: Ln_Real_Property_Market_Value.

School district fixed effects and year dummy variables included, but not reported. Heteroscedastic and autocorrelated robust standard errors through clustering on school districts. Statistical significance measured in two-tailed test: *** > 99%, **95 to 99%, and *90 to 95%.

Explanatory Variable	Regression Coefficient	Statistical Significance	Regression Coefficient Robust Standard Error	90% Confidence Interval
Bachelor_Plus_Percent	0.010	***	(0.0019)	0.0072 to 0.013
Age19_Less_Percent	0.0052		(0.0042)	-0.0019 to 0.012
Ln_Enrollment	0.039		(0.045)	-0.035 to 0.11
CRA/EZ_Abate_Percent	0.016	***	(0.0019)	0.012 to 0.019
CRA_Pre94_Percent	0.00047	***	(0.00013)	0.00026 to 0.00068
TIF_Abate_Percent	0.011		(0.0028)	0.0061 to 0.015
EPA_Abate_Percent	-0.053		(0.038)	-0.19 to 0.08
JCTC_Jobs_Per_100M_MarketVal	0.000016		(0.000085)	-0.12 to 0.0091
Tax_Exempt_Property_Percent	0.0056	***	(0.0012)	0.0036 to 0.0076
Ln_Parcels_Number	0.71	***	(0.087)	0.57 to 0.87
Parcels_NonResidential_Percent	-0.0017		(0.0025)	-0.0058 to 0.0025
Within R-Squared^	0.970			
Observations	288			

**Table 7: Descriptive Statistics for Variables Used in Census Tract Economic Impact Regression Analysis
(284 Franklin County Census Tracts drawn from 14 years between 2002 and 2015)**

Variable	Mean	Standard Deviation	Minimum	Maximum	Source*
Dependent					
Real_Property_Market_Value	322,522,228	343,506,916	21,659,000	4,849,540,608	FRANKLIN CO
Explanatory					
CRA/EZ_Abate_Percent	1.42	5.18	0	49.60	FRANKLIN CO
CRA_Pre94_Percent	7.28	25.43	0.00	100.00	FRANKLIN CO
TIF_Abate_Percent	1.38	5.42	0.00	76.42	FRANKLIN CO
EPA_Abate_Percent	0.049	0.48	0.00	11.61	FRANKLIN CO
JCTC_Jobs_Per_100M_MarketVal	19.21	103.39	0.00	2,681.84	OHIO DEV SERVICES
Tax_Exempt_Property_Percent	12.43	15.69	0.00	99.88	FRANKLIN CO
Parcels_Number	1,466	815	15	6,506	FRANKLIN CO
Parcels_NonResidential_Percent	12.78	16.75	0.071	100.00	FRANKLIN CO

Table 8: Economic Impact Regression Results Using Franklin County Census Tract Data (284 Franklin County Census Tracts drawn from 14 years between 2002 and 2015)

Dependent Variable: Ln_Real_Property_Market_Value.

Census tract fixed effects and year dummy variables included, but not reported.

Heteroscedastic and autocorrelated robust standard errors through clustering on school districts.

Statistical significance measured in two-tailed test: *** > 99%, **95 to 99%, and *90 to 95%.

Explanatory Variable	Regression Coefficient	Statistical Significance	Regression Coefficient Standard Error	90% Confidence Interval
CRA/EZ_Abate_Percent	0.0042	**	(0.0021)	0.00073 to 0.0077
CRA_Pre94_Percent	0.00017		(0.00019)	-0.00014 to 0.00048
TIF_Abate_Percent	0.014	***	(0.0017)	0.011 to 0.017
EPA_Abate_Percent	-0.0024		(0.0060)	-0.012 to 0.0074
JCTC_Jobs_Per_100M_MarketVal	0.000086	**	(0.000037)	0.000025 to 0.00015
Tax_Exempt_Property_Percent	0.0086	***	(0.0024)	0.0047 to 0.013
Ln_Parcels_Number	0.44	***	(0.13)	0.24 to 0.65
Parcels_NonResidential_Percent	-0.0013	***	(0.0014)	-0.0037 to -0.0011
Within R-Squared	0.547			
Observations	3,976			

Conclusion

Tax savings from CRA and EZ abatements equaled three percent of property taxes paid in Franklin County, Ohio in 2015. Our study investigates the economic and fiscal impacts of this loss in potential revenue. We use panel-data regression analyses to estimate the impact of Community Reinvestment Areas (CRAs) and Enterprise Zones (EZs) on property value and school property tax rates in this county. We found that the use of CRAs and EZs increased property values and decreased property tax rates as intended. Thus, our regression analysis reveals that CRA or EZ property tax abatements have exerted beneficial fiscal and economic impacts in Franklin County. In school districts, a one percentage point increase in the use of CRA and EZ abatements correlates with about a 1.6 percent increase in the market value of the district's property (economic impact), about a 2.7 percent decrease in the district's property tax millage rate for schools (fiscal impact), and a 0.9 and 0.7 percent decrease in effective tax rates on residential and non-residential property respectively (also fiscal impacts). For Census tracts, the same increase in abatement correlates with a 0.4 percent increase in the market value of the tract's property (economic impact).

We also found that differences in the use of TIF abatement in Franklin County school districts over the observed decades exerted no detectable influence on a district's property tax millage rate. TIFs did have the anticipated positive impact on the market value of school district property, but no statistically significant effect on market value of Census tract property. Specifically, a one percentage point increase in TIF abatement as a percentage of property value in a school district results in about a 1.4 percent increase in property value.¹⁸

This study of property tax incentives and Job Creation Tax Credits in a large Ohio county found modestly beneficial effects on property values and tax rates in Franklin County's school districts. This is

¹⁸ In an earlier version of this analysis, we did not control for JCTC use in Franklin County (see Kenyon, Langley, Paquin, and Wassmer 2017). In the regressions described here, we find that JCTC use decreases school millage rates and raises the market value of property in Census tracts. The inclusion of the JCTC variable only slightly changed the coefficients on CRA/EZ, our main explanatory variable. However, because of the inclusion of JCTC, we put greater credence in the results reported here than in our earlier working paper results.

policy relevant information, especially considering previous studies like *Protecting Public Education from Tax Giveaways to Corporations* (National Education Association, 2003) which concludes that “...today’s development subsidies may be enriching corporations at the cost of the education of tomorrow’s work force” (p. 2).¹⁹ We believe there are at least two explanations for our finding of this beneficial effect. First, Ohio does not make as extensive use of business tax incentives as some other states (Bartik 2017). Second, the mandated use of annual Tax Incentive Review Councils (TIRCs) may shine the light on particularly ineffective tax incentives and lead to more discretionary, and thus more effective, use.²⁰ Interestingly, these reasons align with some of the key reforms suggested by Good Jobs First (2016) for promoting accountability in economic development that include: (1) requiring disclosure of subsidy spending and company compliance, (2) protecting schools from tax giveaways, and (3) increasing accountability in the subsidy approval process.

Based on the results of the research presented in this paper we suggest that policymakers consider three courses of action. First, they should aim for limited, and not aggressive, use of property tax abatements to encourage economic development. Second, they should consider requiring an annual review process like Ohio’s tax incentive review councils. Through such a mechanism governments can at least determine whether businesses have generated or retained the promised jobs, payroll, or investment. Third, policymakers should add periodic reviews that go beyond tax incentive review councils to attempt to determine, as this study did, whether the jobs, payroll, or investment associated with business incentives would have materialized without the incentives.

¹⁹ In fact, the NEA (2003, p. 2) sponsored study specifically calls out the State of Ohio for reducing or diverting \$102 million in school property tax revenue that would have gone to schools in 1999, if not used for property tax abatement or tax increment finance. As described earlier, this figure was derived from a simple accounting of tax reduction under these programs, and not the more appropriate regression analyses completed here.

²⁰ See, for example, the description of Louisiana’s Industrial Tax Exemption Program in “Incentives for Economic Development” in Significant Features of the Property Tax.

References

- Bailey, Michael A. 2016. *Real Stats: Using Econometrics for Political Science and Public Policy*, New York, NY: Oxford University Press.
- Bartik, Timothy J. 2017. "A New Panel Database on Business Incentives for Economic Development Offered by State and Local Governments in the United States." Prepared for the Pew Charitable Trust. Accessed on 1/15/18: <http://research.upjohn.org/cgi/viewcontent.cgi?article=1228&context=reports>.
- Bondonio, Daniele, and Robert T. Greenbaum. 2007. "Do local tax incentives affect economic growth? What mean impacts miss in the analysis of enterprise zone policies." *Regional Science and Urban Economics* 37(1): 121-136.
- Cameron, A. Colin and Pravin K. Trivedi. 2010. *Microeconometrics Using STATA, Revised Edition*. College Station, TX: STATA Press.
- City of Columbus Ohio. 2016. *Comprehensive Financial Report*. Accessed on 1/15/18: https://www.columbus.gov/uploadedFiles/Columbus/Elected_Officials/City_Auditor/Reports/CAFR/2016_CAFR.pdf.
- Connolly, Katrina, and Michael Bell. 2011. "Strengthening the Local Property Tax: The Need for a Property Tax Expenditure Budget." Lincoln Institute of Land Policy.
- County Commissioners Association of Ohio. 2016. "Tax Abatement." *County Commissioners Handbook*. Accessed on 1/15/18: <https://www.ccao.org/county-commissioners-handbook>.
- DeWine, Mike. 2015. "Local Incentives." *2015 Ohio Economic Development Manual*. Ohio Attorney General's Office. Accessed on 1/15/18: <http://www.ohioattorneygeneral.gov/Economic-Development/Economic-Development-Files/Economic-Development-Manual.aspx>.
- Faulk, Dagny. 2002. "Do State Economic Development Incentives Create Jobs? An Analysis of State Employment Tax Credits." *National Tax Journal* 55(2): 263-280.
- Franklin County Auditor's Office. Various Years. Historical Value Control Tables from Tax System datasets
- Franklin County Auditor's Office. Various Years. CRA, EZ, and EPA Spreadsheets.
- Franklin County Auditor's Office. Various Years. CAMA Permit Tables.
- Franklin County Auditor's Office. Various Years. Historical Parcel Tables from Tax System
- Franklin County Auditor's Office. Various Years. Historical GIS Extract.
- Franklin County Auditor's Office. Various Years. Parcel Datasets.
- Franklin County Auditor's Office. Various Years. Tax Rate Sheets for Taxing Districts.
- Good Jobs First. 2016. "Key Reforms: Overview." Accessed on 1/15/18: <https://www.goodjobsfirst.org/accountable-development/key-reforms-overview>
- Greenbaum, Robert, T. and Jim Landers. 2014. "The Tiff Over Tif: A Review of the Literature Examining the Effectiveness of the Tax Increment Financing." *National Tax Journal* 67(3): 655-674.

- Greenbaum, Robert T., Blair D. Russell, and Tricia L. Petras. 2010. "Measuring the Distribution of Economic Development Tax Incentive Intensity." *Economic Development Quarterly* 24(2): 154-168.
- Hanson, Andrew and Shawn Rohlin. 2017. "Do Spatially Targeted Redevelopment Incentives Work? The Answer Depends on How You Ask the Question." Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA.
- Hanson, Andrew and Shawn Rohlin. 2011. "Do Location-Based Tax Incentives Attract New Business Establishments?" *Journal of Regional Science* 51(3):427-449.
- Hanson, Andrew. 2009. "Local Employment, Poverty, and Property Value Effects of Geographically-Targeted Tax Incentives: An Instrumental Variables Approach." *Regional Science and Urban Economics* 39(6): 721-731.
- Hicks, Michael and Dagny Faulk. 2016. "The Fiscal Impact of Local Property Tax Abatement in Indiana." *Journal of Public and Nonprofit Affairs* 2(2), pp. 161-173.
- Hoehle, Daniel. 2007. "Robust Standard Errors for Panel Regressions with Cross Sectional Dependence." *The STATA Journal* 7(3), pp. 281-312.
- Hultquist, Andrew. 2014. "An Evaluation of Geographically Targeted Economic Development Programs in Ohio." *Journal of Urban Affairs* 37(2), pp. 207-223. March 19.
- Kenyon, Daphne A., Adam H. Langley, Bethany P. Paquin, and Robert W. Wassmer. 2017. Evaluation of Real Property Tax Abatements in Franklin County, Ohio. March 24, updated May 1.
- Accessed on 1/15/18: www.lincolnst.edu/sites/default/files/pubfiles/evaluation-real-property-tax-abatements-franklin-county-ohio-full.pdf
- Kenyon, Daphne, Adam Langley and Bethany Paquin. 2012. *Rethinking Property Tax Incentives for Business*. Cambridge, MA: Lincoln Institute of Land Policy. Accessed on 1/15/18: www.lincolnst.edu/sites/default/files/pubfiles/rethinking-property-tax-incentives-for-business-full_0.pdf.
- Lang, Bree. 2016. "Ohio." State-by-State Property Tax at a Glance. Significant Features of the Property Tax. <https://datatoolkits.lincolnst.edu/subcenters/significant-features-property-tax/state-by-state-property-tax-at-a-glance>. Lincoln Institute of Land Policy and George Washington Institute of Public Policy.
- National Education Association. 2003. *Protecting Public Education from Tax Giveaways to Corporations*. Accessed on 1/15/18: <http://www.goodjobsfirst.org/sites/default/files/docs/pdf/edu.pdf> .
- Ohio Department of Taxation. 2015. Tax Data Series: Property Tax. Accessed on 1/15/18: www.tax.ohio.gov/tax_analysis/tax_data_series/publications_tds_property.aspx#Realpropertyonly.
- Ohio Department of Taxation. 2015. Tax Data Series: School District Data. Accessed on 1/15/18: www.tax.ohio.gov/tax_analysis/tax_data_series/school_district_data/publications_tds_school.aspx
- Ohio Development Services Agency. 2017a. Ohio Job Creation Tax Credit. Accessed on 1/15/18: https://development.ohio.gov/bs/bs_jctc.htm
- Ohio Development Services Agency. 2017b. Tax Incentive Reporting. Accessed on 1/15/18: www.development.ohio.gov/HB1/Default2.aspx

Ohio Development Services Agency. 2016. The Ohio Community Reinvestment Area. Accessed on 1/15/18: https://development.ohio.gov/bs/bs_comreinvest.htm.

Ohio Development Services Agency. 2012. "Ohio Community Reinvestment Area Program—Summary." State of Ohio. Accessed on 1/15/18: https://development.ohio.gov/files/bs/CRA_Summary.doc.

Ohio Development Services Agency. Various Years. Development Services Agency Annual Reports. Accessed on 1/15/18: <https://development.ohio.gov/reports/default.htm>.

Pew Charitable Trusts. 2017. "How States are Improving Tax Incentives for Jobs and Growth." May. Accessed on 1/15/18: http://www.pewtrusts.org/~media/assets/2017/05/edti_how_states_are_improving_tax_incentives_for_jobs_and_growth.pdf?la=en.

Significant Features of the Property Tax. "Incentives for Economic Development." https://datatoolkits.lincolnst.edu/subcenters/significant-features-property-tax/Report_Incentives_for_Economic_Development.aspx. Lincoln Institute of Land Policy and George Washington Institute of Public Policy.

Sullivan, Meghan and Mike Sobul. 2010. "Property Taxation and School Funding." Columbus, OH: Ohio Department of Taxation, Tax Research Series, Number One.

Tarczyska, Kasia. 2017. "Show Us the Local Subsidies: A Second Evaluation of City and County Online Disclosure Practices of Economic Development Subsidy Programs." Good Jobs First. Accessed on 1/15/18: www.goodjobsfirst.org/sites/default/files/docs/pdf/showusthelocalsubsidies2.pdf.

Wassmer, Robert. 2009. "Property Tax Abatement as a Means of Promoting State and Local Economic Activity in the United States," chapter in *Erosion of the Property Tax Base: Trends, Causes, and Consequences*, Edited by Nancy Augustine, Michael Bell, David Brunori, and Joan Youngman, Cambridge, MA: Lincoln Institute of Land Policy, Chapter 8, pp. 221-59.

APPENDIX

Data Sources

Franklin County Auditor's Office (FRANKLIN_CO)

For the analyses, we combined seven separate datasets to create a parcel-level annual dataset for 1998-2015. Then we summed the parcel-level data to the level of school districts and Census tracts for the analyses described in the report.

1) *Historical Value Control Tables from Tax System*: These annual datasets include information on market values for each parcel separated into three components: Market Value = Base Value + TIF Value + Exempt Value. These datasets also include land use codes for each parcel. We used these to separate properties into six categories—industrial (land use codes 300-399), office space (447-450 and 470), apartments (401-403), other commercial (400, 404-446, 451-469, 471-499), residential (500-599), and other (100-299, 600-999).

2) *CRA, EZ, and EPA Spreadsheets*: These annual spreadsheets include information for each parcel that has received an abatement, including the type of abatement (CRA, EZ, or EPA), the name of the CRA zone, market value abated, and net tax savings.

3) *Historical Parcel Tables from Tax System*: These tables include a school district code and city name. We used them to aggregate the parcel-level data to the level of school districts and cities.

4) *Historical GIS Extract*: This geodatabase includes geographic information for each parcel. It allowed us to map the data in ArcGIS and to spatially analyze. We also used the geocoded database to identify the Census tract for each parcel; we then used the database to aggregate parcel-level data to the level of Census tracts. The historical GIS extract also includes annual data on the tax charge for each parcel, the only exception being condominiums mapped differently than other parcels.

5) *Parcel Datasets from Auditor's Website*: For this paper, we used these datasets to fill in tax charges for condominiums missing data in the historical GIS extract. Data from the October spreadsheets represented each year. These datasets are available on the Auditor's website, accessed on 1/15/18:

ftp://apps.franklincountyauditor.com/Parcel_CSV/.

6) *Tax Rate Sheets for Taxing Districts*: These datasets offer effective tax rates for each taxing district. We merged the tax rate data with the parcel-level dataset by using each parcel's tax district code included in the Historical Parcel Tables from Tax System.

Census Data (CENSUS)

For school districts, our regression analysis includes several socioeconomic variables from the 2000 decennial Census and the 2006-2010 and 2011-2015 American Community Surveys. We used linear interpolation to approximate annual values based on the three data points available for each school district. We employed values from the decennial Census for 1998-99, the 2006-2010 ACS was used for 2008, and the 2011-2015 ACS was used for 2013-15, and then linear interpolations were used to approximate values for 2000-2007 and 2009-2012.

In addition, we use annual data on school district revenues from the individual unit of government files from the Census of Government Finances and the Annual Surveys of State and Local Government Finances. These data are only available up to 2014.

State Data Sources (STATE)

For school districts, our regression analysis uses some of the data available in annual SD1 spreadsheets from the Ohio Department of Taxation, including data on school mill rates, enrollment, and total real property values. Total property values reported for each school district in the SD1 spreadsheets are close to the sum of market values for all parcels in each school district that are reported in the datasets from the Franklin County Auditor's office, but not identical. To test our findings, we tried two similar regressions for school district property values: one where the dependent variable is total property value from the SD1 spreadsheets (schl_value_total), and a second where the dependent variable is the sum of market values for all parcels in each school district (market_value). The SD1 spreadsheets are available here, accessed on 1/15/18:

http://www.tax.ohio.gov/tax_analysis/tax_data_series/school_district_data/publications_tds_school.aspx

Ohio Development Services (OHIO_DEV_SERVICES)

This state agency is responsible for collecting information on all Job Creation Tax Credits (JCTC) offered in Ohio. The agency then compiles the data into annual reports like the one released for 2016 (accessed on 1/15/18) at <https://development.ohio.gov/files/reports/2016DEVAnnualReport.pdf>. The basis of these reports is data on expected jobs created and retained that each business must declare in their application for this credit. The agency then requires the business recipient to provide an annual report documenting the fulfillment of these job promises. Beginning in 2005, and not fully implemented until 2007, the agency also calculated and reported in aggregate, the dollar value of the JCTC to each firm. Since this value is not available for the full-time periods examined, we chose to use the total number of new and retained jobs promised. To aggregate these up to the geographic units of observation used here, we assigned the address of each JCTC recipient to its respective school district or Census tract using the Census Geocoder at <https://www.census.gov/geo/maps-data/data/geocoder.html>. We did this for each year that the JCTC agreement was in place. Once we created the aggregate values of JCTC jobs, we controlled for the expected relative impact by dividing each by the inflation adjusted (GDP deflator used) value of the market value of taxable real property in the respective district or tract. We derived this denominator from Franklin County data described previously.

Property Tax Working Group Tax Abatement Law FAQs

- **What are the Ohio state laws and City ordinances that govern residential tax abatements?**¹
 - Ohio Revised Code 3735.65-3735.70 (state laws that govern and enable local governments to enact Community Reinvestment Areas (CRAs); abatements are only on the improvement value)
 - Cincinnati Ordinances 274-2017 and 276-2017 (these ordinances designate the City of Cincinnati as a Community Reinvestment Area and set forth the City's residential CRA policies)
 - Ohio Revised Code 4503.064-4503.0610 (the state law homestead exemption laws that allow low-income senior citizens and permanently and totally disabled residents to reduce their property tax bills; up to \$25,000.00 of the residential property's market value can be exempted).
 - For example, qualifying residents owning a home with a market value of \$100,000 are billed as if the home is valued at \$75,000.
 - The City is not involved with the processing of this exemption.
 - Ohio Revised Code 5715.19 (this law provides the process for challenging valuations; it is not directly related to CRAs)
 - Ohio Revised Code 715.263 (state law which allows a local government to grant a tax credit up to the lesser of \$10,000 or the cost of demolition/abatement to those who purchase a nuisance property at a foreclosure sale)

- **Can the City create new property tax exemption laws?**
 - No. Only the Ohio General Assembly has the authority to pass laws that create *new* tax exemptions.
 - For example, if the residents of Ohio wanted to increase the amount of the homestead property tax exemption from \$25,000 to \$35,000 or create a new exemption for property owners who are legacy residents, a bill would have to be introduced and passed by the Ohio General Assembly.

- **How does someone obtain a CRA abatement from the City?**
 - Complete CRA application²
 - Fee payment
 - Notarized statement of work and budget
 - Copy of closed permits and/or final Certificate of Occupancy
 - A minimum of \$2,500 for 1-2 unit structures and \$5,000 for 3 unit structures must be spent on eligible improvements
 - Annual exterior inspections required to ensure proper maintenance
 - Tax abatements can be denied/revoked if code violations exist and/or are not promptly cured

¹ These laws apply only to residential housing with three or fewer units.

² Available at: <http://choosecincy.com/Community-Development/Homebuyers/Residential-Tax-Abatements.aspx>

Residential CRA Abatement Values (all 100%)

Construction Type	Conditions	Maximum Market Improvement Value	Term (years)
Remodeling	Non-LEED/Non-LBC Qualified	\$275,000	10
	HERS Qualified	\$275,000	12
	Certified Visitable	\$275,000	12
	HERS + Visitable	\$275,000	14
	LEED Certified	\$275,000	15
	LEED Silver	\$400,000	15
	LEED Gold or LBC Net Zero	\$562,000	15
	LEED Platinum, LBC Full, or LBC Petal (must include "Energy Petal")	No maximum	15
New Construction	Non-LEED/LBC Qualified	\$275,000	10
	Certified Visitable	\$275,000	12
	LEED Certified	\$275,000	12
	LEED Certified and Visitable	\$275,000	14
	LEED Silver	\$400,000	15
	LEED Gold or LBC Net Zero	\$562,000	15
	LEED Platinum, LBC Full, or LBC Petal (must include "Energy Petal")	No maximum	15

PROPOSED PILOT PROGRAM STATE LEGISLATION FOR PROPERTY TAX FREEZE FOR LEGACY RESIDENTS

ADD SECTION (g) to ORC 5715.19(A)(1)

- This section sets forth how an owner files a complaint against valuation or assessment of their property
- Proposed add-on language to existing statute:

(A)(1) ... (g) any determination of the total valuation of or assessment of any parcel that appears on the tax list that is triggered by the requirements set forth in section 5715.191 of the Revised Code.

PROVISION CREATING PILOT PROGRAM → ORC 5715.191 Legacy owner valuation or assessment in Hamilton County

- Proposal to add this section to create pilot program in Hamilton County for relief under 5715.19(A)(1)
- Proposed language:

(A) As used in section 5715.19 & 5715.191 of the Revised Code:

“Legacy Resident” shall mean any person owning taxable real property in Hamilton County or such a person’s spouse whose

- 1) market value has increased by over 50% between the current and preceding tax year;*
- 2) has lived in his or her home as a Principal Resident for 5 years or more;*
- 3) property taxes have not been certified delinquent for greater than 1 year or subject to tax lien sale, unless the Treasurer grants a waiver from this requirement;*
- 4) primary residence’s market value in the prior triennial valuation/appraisal conducted by the auditor was less than \$200,000;*

(B) Any Legacy Resident living in an Area of Reinvestment may file a complaint against valuation or assessment as proscribed by 5715.19 of the Revised Code. If a Legacy Resident Complainant can establish that s/he meets the requirements set forth under section (A), his or her property tax valuations will be set at the amount of the prior triennial valuation.

(C) Once a Legacy Resident qualifies under this section and section 5715.19, any valuation or assessment provided pursuant to these sections will be automatically applied to their real estate tax bill for three years. A Legacy Resident may add and remove family members to their deed if they die, move in, or move out, without affecting any valuation or assessment provided under this section and section 5715.19 as long as the Legacy Resident or their spouse lives in the property.

(D) A Legacy Resident becomes ineligible for reduced valuation or assessment under this section and section 5715.19 if they no longer live in the home or become delinquent in real estate taxes that are not subject to a payment agreement with the Treasurer.

Strategy #1: Property Tax Relief	
Existing Efforts / Resources That Support Strategy	Proposed NEW action items
Homestead exemption	Property tax freeze / exemption for legacy residents
BOR process to contest Auditor's valuation	Research other tax relief programs (e.g. CA, Philadelphia)
	Research / draft potential legislative changes in Ohio / locally
	Meet with Treasurer Goering and Commissioner Portune to discuss possible legislative / Policy changes
	Potential local advocacy to make Community Reinvestment Area (CRA) tax abatement (currently given for improvements to property) more limited (and hence, equitable) in how it is allocated &/or if there is VTICA option to capture some CRA "savings" for property tax relief for more vulnerable residents.
Strategy #2: Outreach to educate / inform residents regarding resources & options	
Existing Efforts / Resources That Support Strategy	Proposed NEW action items
Current stakeholders (Legal Aid, ProSeniors, WIN, CUFA, others) do outreach, counseling, one-on-one representation on an ongoing basis	Ask electeds to do more outreach on this issue
	Have stakeholders host more educational & outreach events to inform at-risk residents about their options
Strategy #3: Foreclosure Intervention / prevention	
Existing Efforts / Resources That Support Strategy	Proposed NEW action items
Legal Aid / ProSeniors	Identify mechanisms to prevent tax foreclosure filing in instances where owner-occupant resides at tax delinquent property
Emergency Mortgage Assistance Programs	
Strategy #4: Access to Better Finance Tools	
Existing Efforts / Resources That Support Strategy	Proposed NEW action items
Homeownership Center	Identify whether more loan products are available through CRA obligations, etc.
Strategy #5: Increase funding for home improvement grants	
Existing Efforts / Resources That Support Strategy	Proposed NEW action items
City / County – funded programs: PWC, CARE, Harbor	Lobby local politicians for more funding
	Identify potentially hidden / unused funding sources

PROPERTY TAX WORKING GROUP

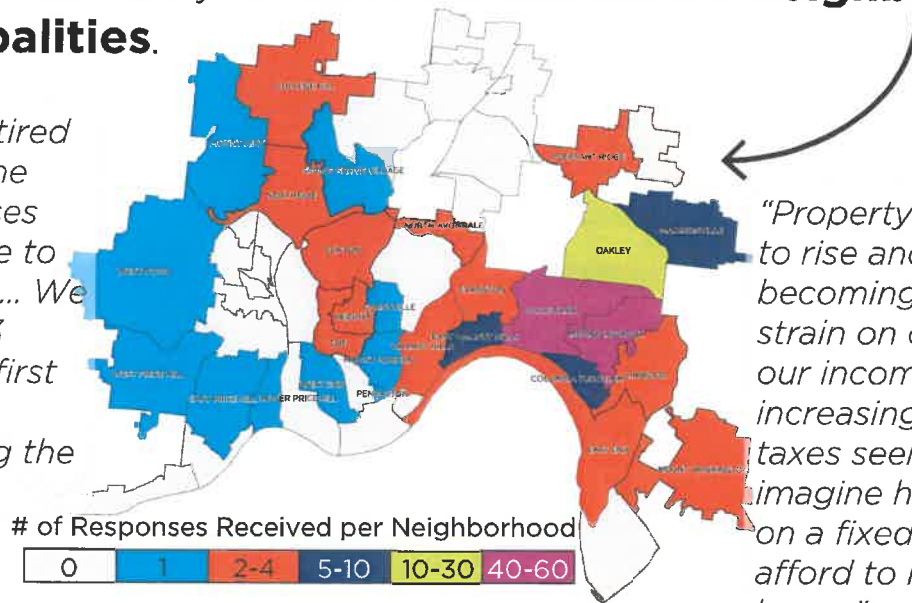
SURVEY RESPONSE SNAPSHOT

As of May 23, 2019

One of the ways the Property Tax Working Group is gathering feedback from members is through an online survey. The survey opened on March 14, 2019 and remains open. To submit your responses, visit: surveymonkey.com/r/PropertyTaxProject

In the **71 days** since the survey opened, the working group has received **208 responses** from community members in **26 Cincinnati neighborhoods** and **13 municipalities**.

"We have both retired now and feat at the rate of tax increases we will not be able to sustain living here... We have lived here 33 years and it's the first time we have considered leaving the city."



"Property taxes continue to rise and are becoming a financial strain on our family, as our income isn't increasing as quickly as taxes seem to be. I can't imagine how someone on a fixed income can afford to live in their home."

EMERGING THEMES WHAT IS YOUR EXPERIENCE WITH THIS ISSUE?

Concern about effects of tax abatements

Rising property taxes are affecting ability to stay in neighborhood

EMERGING THEMES WHAT IDEAS DO YOU HAVE TO ADDRESS THIS ISSUE?

Review tax abatement policy (39 respondents)

General comments on lowering taxes (30 respondents)

Adjust property taxes for legacy residents/senior citizens (41 respondents)

No abatements for new construction

Limit abatements to remodeling and reuse

Tax break for long-term residents (10+ years - freeze taxes at 10-year rate)

Property taxes as a % of net income

Extend cap for Homestead Exemption

Freeze property taxes at year of retirement

Stay up-to-date on the Property Tax Working Group by visiting cincinnati-oh.gov/propertytaxproject

PROPERTY TAX WORKING GROUP | ONLINE FEEDBACK FORM RESPONSES

Grayed out responses were recorded in past documents. Responses in black are new since April 26th.

- 1. Tell us about your experiences with property taxes in your neighborhood. *Note: Some respondents live outside of Cincinnati-city boundaries. Neighborhoods and municipalities are included.**

AMBERLY VILLAGE

- My property tax is 12k a year.

ANDERSON

- We have great snow removal but no sidewalks.

BRIDGETOWN

- Costs keep rising with every election. Even renewals cost more with increased property values. Schools are adding levies too. Oak Hills tried to increase our taxes for vague reasons by holding a special election during summer vacations. It failed but they will try again.

CLIFTON

- They go up and up! I was told you can't even get a replacement trash can. I can afford the zoo or stadiums because I have no extra money. Taxes used to be less than 25% of my mortgage; now they are over 50%. Seriously thinking of selling.
- We have had a negative experience in the significant rise in property taxes. After a re assessment our tax increased over 2,000\$ / year

CLIFTON HEIGHTS

- City of CINCINNATI taxes are high because residents pay for stadiums instead of those venues passing the cost to those who attend the events at the stadiums in the form of a sports or entertainment tax.
- Too high.

CLIFTON HEIGHTS/CUF

- My taxes have increased by nearly \$1,000 each year for the last three years. My mortgage has increased by \$120 (avg.) per month during those last years, resulting in a \$300+ increase overall.

COLERAIN TOWNSHIP

- Yes whenever they need more to cover something it's more taxes and mine just went up again and yes I'm a senior citizen and things need repair and I know longer can do it myself so that cost more and it never ends .
- My property taxes went up over \$100 per month. Dusty Rhodes decided that my property value almost doubled although nothing has been changed to my property. I sent paperwork to them that was postmarked before the deadline as I was advised to do by someone at the Board of Revisions but I was told that it was late

As of 5.23.19 at 3:00 p.m.

because it was sent with a Certificate of Mailing at the post office instead of Certified Mail. I had brain surgery a few years ago and my comprehension isn't always where it should be but I do understand that it doesn't change the postmark or the date of arrival. In my opinion the Board of Revision is taking advantage of people. I could not afford to get an assessment but I did take pictures as best as I could but to no avail.

COLLEGE HILL

- I have one of the highest property taxes on the street. I understand I bought the house later than most of the neighbors but if you are looking at it, you will see my taxes area almost three times higher than the next door.
- Paid on time.

COLUMBIA TUSCULUM

- They are too high. We moved from the DC area and pay 3-4 times as much on a \$\$-for-\$\$ basis, and this gets us a much lower level of services. If the purpose of the property tax is to fund services, there is no need for abatements. If its purpose is to encourage development in a couple of neighborhoods, then I guess it is doing its job.
- They are going higher at WAY beyond "inflation". We purchased a couple of years ago, and our experience matches that of neighbors who have lived here more than ten years. We purchased old stock, and do not get the giveaway of tax abatement.
- There has been a considerable amount of new construction in Columbia Tusculum. These new houses sell at a premium for a variety of reasons - open floor plans, upgraded appliances and aerial views. But the County considers the sales of these new custom homes as comparable sales for every other home in the neighborhood, even when the result is an unrealistic increase in market value over a recent purchase price. This shows a lack of good faith likely driven by the overriding need to generate as high a tax base as possible. It also creates an never-ending cycle where you buy a house, the property taxes are inevitable raised over and above anything realistic, you sell the house and the new owner appeals and gets the value lowered. This is what drives retirees out of their homes.
- Columbia Tusculum is a hotbed of construction on new home builds. As a result, our property values are rising along with our taxes. I'm happy that the area is popular. And I'm happy to pay my fair share of property taxes. However, tax abatements on these high priced homes is not fair. It's time for abatements to end.
- It's outrageous and thinking about moving to another county.
- Disastrous. Every 3 years I have to file a complaint with the Auditor's office because they have decided my taxes should double. So far I am winning but it is an extreme hassle especially in light of the significant tax abatements being given to LEED homes and to other projects in the high dollar range.

As of 5.23.19 at 3:00 p.m.

- Bought my first house in 2016. My taxes have gone up every year. There have been four new tax abated houses put across the street across from my home, three more to come. If the taxes continue to go up, I will be forced to move. I am in my 20's and already have student loans, stagnant wages, etc. and it was not expected that my mortgage payment would continue to go up every year due to tax abated homes. I would not be able to afford a home in my neighborhood if I were looking to buy now, rather than 3 years ago. It's gotten out of hand and the character of our neighborhood is being ruined by these ugly homes.
- Decreasing taxes for my home over last 10 years.
- They continue to increase exponentially faster than any income increases. My property tax has increased at least 25% if not more in the last 3 years. If I divide my total tax bill by 12 on a monthly basis, my taxes are almost as high as my mortgage. Who can realistically afford that? I know it is a result of new taxes voted in and auditors increase in value due to much larger and higher priced abated houses in the neighborhood. But. According to the 2012 US census, 39.4% of the taxed real estate in Cincinnati is owner occupied. Leading us to conclude that 60.6% are renter occupied, or vacant. The School Foundation Program Law was put in place when home ownership was common in urban centers. It's not common any longer. Home ownership is at its lowest rate in 50 years. With a growing population of families who rent, and renters in general, these people I feel, also tend to vote for school levies. Because of this, the homeowner has very little say over how high his property taxes go. I feel this is what we are seeing in Cincinnati. I think we need to set a percentage cap on the amount homeowners are required to pay towards public school funding. The state currently cuts and awards funding based on school performance and when we have a failing school system, the school comes to the homeowners to pay more, they label it an "emergency" and it passes. CPS spends around \$12k per k-12 student and with issue 44 passing, \$8k for select preschoolers. As taxpayers for public education, we're paying pretty close to private school numbers which in my opinion is absurd. When do homeowners, many who don't or never did use CPS get to say "we can't afford this anymore"?
- Way to high

CORRYVILLE

- Property taxes are extremely high. Sources of new funding should not default to property owners. Additionally, if you are NOT a property owner you should NOT be permitted to vote to increase property tax rates. Instead, sources of revenue should be driven by sales taxes where everyone can participate.

EAST END

- I'm in a 15 year old condo and don't have an abatement. I pay more here than I did when I lived in a seven bedroom home in Mt. Lookout.
- Too darn high!

EAST PRICE HILL

As of 5.23.19 at 3:00 p.m.

- Many of the homes here are really valued too high for this neighborhood.

EAST WALNUT HILLS

- Even though I'm lucky enough to be protected from developers building hideous mansion on my block and their owners receiving huge tax abatements, the property taxes have increased since I moved into the neighborhood... I do my best to vote for people who represent mine and our communities interests... however what is happening to our property taxes, and taxes in general is unacceptable. My neighbor had to fight a recent tax increase so he could afford to stay in the neighborhood... I hope our opinions a beard to reverse this trend.
- Property taxes tripled :(
- TOO HIGH! I moved here from outside of Cincinnati and I am truly regretting it. I love the city but property taxes are too high.
- Taxes rose significantly last year. I worry about my long-term neighbors, some who are fixed income, being able to afford to stay in the neighborhood.
- My property taxes increased by 47% just this year! We have lived in our house for almost 20 years, and have done almost no improvements other than what we did when we first moved in to make it 'livable', and new windows almost 10 years ago now. By and large the house still needs a LOT of work, and is in no way comparable to the houses of equal size selling for many hundreds of thousands of dollars in the area—because they have been rehabbed inside and out with new kitchens, new baths, they have driveways, etc. The tax increase of such an amount for no obvious reason (we didn't increase inherent value even if they 'market' did increase) just about ruined our finances in one fell swoop. I understand how property taxes work, more or less, and I believe in the community good. But there should be a limit to how much taxes can increase in one year's time if the property itself has not changed dramatically to justify it. There should also be a much easier and open process to appeal such tax increases.
- Disproportionate and arbitrary tax hikes that don't consider the actual property but rather other factors like gentrification/growing interest in the area.
- We have been in our home since 1995. In the past three years our property taxes have doubled. Developers are buying up older homes, tearing them down, and building new lead certified homes that are tax abated. This is going to price us out of our home at some point because we won't be able to afford the property taxes.
- My taxes here are much higher than suburban Montgomery, where I lived while my kids were growing up.

EVANSTON

- None at the moment, but I/we do anticipate a rise in taxes as development and new/ renovation of homes increase.
- So far so good but I want to keep it that way.
- As property taxes have increased in Evanston, there have been impacts to current residence most who are single senior citizens and single parents who live far under the poverty line. Due to the rising property taxes renters are being forced

As of 5.23.19 at 3:00 p.m.

out as they can no longer afford rent in the community and seniors and other middle-class homeowners are having to make serious decisions about being able to remain and maintain their homes. Evanston is a generationally rich community however the generationally richness is at risk due to displacement caused by development driven by tax abatements. As I watch my neighbors being forced from their home their communities in which they raise their children and planted deep roots, it saddens me deeply that the city of Cincinnati has not acted in a more efficient manner to ensure that development does not equal displacement of current residents and that the value of every life including black brown and those of color in those in poverty are seen as valuable.

- In Evanston, they haven't jumped as much as other communities

FAIRFAX

- They are high, getting higher, for things that I don't necessarily agree with. The older residents with fixed incomes in my neighborhood who helped build it into what it is are being priced out as taxes become too costly. Average property tax in the state of Ohio is 1.56%, ours is already 1.75% and now we're building a new school and funding increases for a fire department that is not solely serving our community as well.

GLENDALE

- Very high.

GREEN TOWNSHIP

- Property taxes are way too high!

HARRISON

- They continually go up; it is to the point that we are considering moving.

HYDE PARK

- My property taxes have increased disproportionately to income or my home's value. It is bad policy to tax non-liquid assets, and our property taxes are a strong disincentive against home ownership in general, investment in homes and real estate in Cincinnati, and retaining residents.
- Think that Cincinnati is showing what a progressive city it is giving tax abatement for those who build LEED. Finally, homeowners who are willing to pay extra for energy alternatives such as solar are getting a tax break. We need incentives to help people conserve energy-our future depends on it with climate change and Cincinnati is leading the way!
- They keep going up up up. I resent my wealthy neighbors who live in tax abated properties and don't pay taxes. Their share has to be borne by someone and I feel like it's me and my longtime neighbors.
- Our taxes are outrageous! We do not use the schools, yet we pay large taxes to support them and are frustrated when we here that some of them aren't very good. We worry that if we move it will be difficult to sell our house because there are limited buyers who can afford \$25,000. annually in taxes
- They have sky rocket in the last 4 years.

As of 5.23.19 at 3:00 p.m.

- Way too high
- Property taxes have gone up exponentially since we moved to Hyde Park in 1990. As everyone else points out, tearing down houses in the neighborhood to build/cram monster houses with tax abatements makes no sense. It "increases" the value of the neighborhood but you get to pay all the taxes. Giving rich people tax abatements is absolutely ludicrous.
- We previously owned two tax abated properties, one in Columbia Tusculum and one in Hyde Park
- I am a lifelong residence of Hyde Park 60+ years. I had to sell my beautiful home when my husband passed away simply because I could not afford the taxes. Tax abatements are very discriminating. Cincinnati should be fair to their life long seniors
- The high real estate taxes are on our mind and we talk about moving out of Cincinnati to escape them
- They have gone up much faster than the standard living cost
- Have steadily increased the past 15 years I have lived here
- Ever-increasing
- Property taxes are consistent with my expectations in my neighborhood
- They're too high.
- I moved in to my house 29 years ago. Then, the property taxes were reasonable and affordable. As time has gone by, in my opinion, property taxes are no longer reasonable and affordable - at least not for me, a retiree on a fixed income.
- Massive new houses on divided property.
- We have been in our house since 1976. Property taxes in Hyde Park have always been high. In recent years they have escalated to a level that is 60% HIGHER THAN WHAT THEY WOULD BE IN CALIFORNIA per \$100,000 valuation.
- They have gone up consistently and the city services are lacking
- They have risen dramatically and now that my husband and I are 65 we are afraid we cannot afford to stay here.
- I am in my late 50s, on a fixed income, and a Hyde Park homeowner since 2005. I live in a very modest two bedroom home by Hyde Park standards. I expected to be able to live in my home for the foreseeable future. A developer built 3 hideous McMansions on our street's dead end lot two years ago. These houses went for more than 700k. All are tax abated. It is criminal that such wealthy individuals are not paying their fair share of taxes. Anyone who can afford to live in a luxury home does not need or deserve a tax break. This is nothing but welfare for the wealthy and it is only a matter of time before my taxes are increased to compensate for this abomination.
- Besides the fact that my taxes are going up, many wonderful homes which give our neighborhoods an historic, authentic feel are being torn down and many new, unattractive houses are being built so that people can receive tax abatement. The new awful buildings and lots splits are ruining our neighborhoods, and I feel ripped

As of 5.23.19 at 3:00 p.m.

off because while my neighborhood is getting uglier with more traffic, I am footing the bill for all the people who aren't paying their fair share!!!! It's deplorable.

- They have skyrocketed in the 25 years I have lived here. It is out of control. Non-property owners from all over the city can vote and determine my fate. I parked in Mount Lookout share 80% of the tax load while only 20 or so percent live in the Hyde Park Mount Lookout area this grossly unjust and absolutely wrong.
- Property taxes are rising. My property taxes have increased by more than 50bps in the past 5 years.
- Way too high. 65% going to failing Cincinnati Schools, except for a couple of schools, roads in disrepair, routine services only fair, lack of police officers. When I check the Sunday NY Times Cincinnati ranks among the highest for property taxes. Could move to Indian Hill and pay lower property taxes for same value of my home!!!!
- Tax abated properties around the corner from our home also enjoy a more energy efficient house than our old one. We have the added burden of paying full taxes while on a fixed retirement income.
- Higher than most cities in the country. Services provided not worth the money we pay in taxes- terrible roads, poor school system, unresponsive police, lazy or overworked city service employees.
- We owned two tax abated properties - one in Columbia Tusculum and one in Hyde Park. We currently do not live in a tax abated property but live in Hyde Park.
- The property taxes are very high. It does not seem fair that new construction gets tax abatements in our neighborhood.
- Property Taxes are very high in this area and Cincinnati in general.
- My taxes have increased significantly.
- Have steadily increased...I have not done updates...Considered dated. Condo in Chestnut station 1... Will be priced out of my condo in about 5 to 10 years. Condo fees increase and property taxes. Just a matter of time...
- Rising taxes due to complete tear downs.
- I've only lived in Hyde Park for two years and the rising property taxes already have me looking to move out of the county. I have one of the smaller houses on the street and pay more than any other reasonable bigger houses than me due to the tax abatement laws.
- They are ridiculously high - almost as much as my mortgage.
- Property taxes keep going up as developers tear down viable houses and get 15 year tax abatements FROM MY CITY! Some of these developers who live in another state!
- Like all of Cincinnati they increase every year. We have both retired now and fear at the rate of tax increases we will not be able sustain living here. Another house on our street is being torn down. Million dollar homes replace them. We have lived here 33 years and it's the first time we have considered leaving the city.

As of 5.23.19 at 3:00 p.m.

- It's going up, up, up. Soon I will be subsidizing the 1plus million dollar houses going up at the end of my street. I can't afford to buy one, but apparently I'm expected to subsidize the buyer's property tax. I will have to move if it gets much higher. I've lived and loved this neighborhood for 40 years. The teardown houses are also destroying the loveliness of the area, so maybe it won't be so bad to relocate to Mariemont or Wyoming.
- Property taxes in Hyde Park are rising at an unreasonable level. I paid less than \$3,000 per year as recently as 2001. Now my property taxes are nearly \$8,000 per year. Tax abatements for new construction/tear downs are raising property taxes for long-time home owners. I have paid off my home and hoped to pass it on to my children. Now I'm not sure I'll even be able to afford to live in it myself if taxes keep escalating so rapidly. Something needs to be done! The character of the neighborhood is also changing from the beautiful, old historic homes that we all loved when we bought houses in Hyde Park.
- Purchased house in 1976. Currently paying about 20% of the 1976 purchase price ***every year *** just for property taxes.
- They have fluctuated every time a new assessment happens. The unpredictability is very concerning as a single income home owner.
- Hyde Park and Mount Lookout are getting decimated by tax abatements! TA's were supposed to encourage developers to bring new life/resources/opportunities to hurting areas. Instead, developers are using TA's to guarantee big profits in our hot markets! LEED-oriented TA's encourage the tearing down of our older homes, because to get the pork, it's cheaper to level the home than retrofit for LEED. And once they've torn down the house, they exploit our outdated zoning code and jam in more homes on the same lot. Our hot market is already a threat to older homes, but TA's are like throwing gasoline on a brush fire. Once the desirable character and scale of our neighborhoods that attracted developers in the first place are gone, we won't get them back. It is so wrong for us the residents to have to pay developers' to destroy our own neighborhoods!
- Abatements are hurting our community in myriad ways. This incentivizes tear-downs of existing beautiful old homes, which forever alters our neighborhood's character. Soul-less, out of scale homes are jammed in the lots. A lot of developers don't live here. Why should we reward them who have "no skin in the game"? We are subsidizing wealthy homeowners which leave us to pay their share. Isn't that called stealing?
- Ours seem to keep increasing while the owners of the 4 new tax abated homes on our side of the street, which range from 1.5 to 4 million dollars, are not paying.
- In my neighborhood, there is an increase of affluent homeowners wanting to live in tax abated houses just to avoid paying their full share of taxes for 10-15 years. Residents of Hyde Park/Mt. Lookout are actually tearing down their own homes in order to build tax abated houses. This increased desire to live in abated housing is incentivizing developers to tear down good housing stock and split lots in Hyde

As of 5.23.19 at 3:00 p.m.

Park and Mt. Lookout. The demand is up so developers are creating the supply. Tear downs and lot splits are hurting our community. They are forever changing the character and scale of our neighborhood. New construction tax abatements should not be permitted in healthy thriving communities. Incentives are not needed in Hyde Park and Mt. Lookout. New construction tax abatements in healthy affluent communities are simply tax shelters for the wealthy.

- Our property taxes have increased to over \$7,800 per year while the new \$500,000+ homes that surround us only pay \$1,000 more!!!! I've already told my spouse that it is unlikely we will be able to live in his family home when we retire due to our inability to pay the property taxes.
- They have continued to rise exponentially.
- Rising very fast and abatements are unfair. Houses selling over \$1MM could have same tax amount as my property of only \$350k.
- Our property taxes keep going up, our roads, sidewalks and street lights are not maintained and are in bad shape. I see new construction getting 15yr tax abatements and paying less tax than I do in a much smaller 100yr old home. This is unfair. In order to maintain our neighborhood charm and feel we need to stop the tax abatements for new construction which will slow down the demolition of old homes. Property owners should be encouraged to remodel or add on to their homes as I have just done and offered more tax incentives to do so than new construction.
- The taxes have increased for us over 50 percent since we bought our house less than five years ago.
- Quiet high as I own and older home. Yet equivalent tax rate for newer and much more expensive homes. I would like to purchase a larger older home but will not due to tax rate and will likely be forced to leave neighborhood.
- They keep escalating because the people vote for the levys
- Auditor's drive-by "re-evaluations" of properties have been going up at ever increasing rates. The lion's share of many retirees' "federal benefit" (aka social security) incomes is being swallowed by Hamilton County property taxes. We MUST have the equivalent of a California Prop 13 in Cincinnati, and Hamilton County, and throughout the State of Ohio.
- Taxes are increasing due to the number of tear downs/rebuilds that take advantage of tax abatements.
- My neighbors tear down and \$600k new home cost them nothing in property taxes while my family pays over \$7000 a year on a home valued at 50% less than the new home!!!

HYDE PARK/MT. LOOKOUT

- Too high.
- Gone up exponentially due to ridiculously ugly tear downs and build new. I'm guessing they get tax abatements while we pay higher taxes to cover them. Has to stop.

As of 5.23.19 at 3:00 p.m.

- **INSANE** My taxes rise exponentially every year while builders tear down beautiful homes and build monstrosities valued insanelly high while destroying the peace of my neighborhood. Then those Uber-wealthy jerks pay NOTHING in taxes for 15 years while my taxes climb based on their over-priced and inappropriately large eyesores.

LINWOOD

- Some neighbors have them.
- I find it utterly ridiculous that they tear down historical homes, build monstrosities for \$900,000 and give the new owners a tax break in a neighborhood that is not hurting for occupancy.
- We have many houses in the neighborhood with property tax abatement and it's really been a welcome sight as we've had a lot of blighted homes in the past and the overall neighborhood seems to be turning over.

MADERIA

- The valuation on my house jumped over 90000.00. We are in our second appeal.

MADISON PLACE

- 60-70% increase in 10 years.

MADISONVILLE

- My property taxes more than doubled last year. For the sake of being fair my new tax rate is likely more realistic. That being said if it happens again I will be moving out of the city.
- Our property value continues to rise and so do our taxes. We have lived in Madisonville for 40 years; we raised our family here when our friends all moved to the burbs. We love being in the city and we made sure we didn't over buy so that we could afford the taxes. At this point in our life as we approach a fixed income, we will have to make choices. We love our old house but it is not efficient and with the taxes we might choose to not afford to stay. The homestead break for seniors is not realistic based on the amount and the income requirements.
- Just purchased my first home so I budgeted accordingly and use escrow to help plan ahead when my home gets reassessed in 2 years. I understand that my neighbors are concerned that too many developers and rich people get tax abatements
- My property taxes doubled in 2018. I am retired teacher. According to the existing property tax guidelines for homeowners over 65, I don't qualify for any tax abatement or relief. A retired teacher makes too much money to qualify for property tax abatement? REALLY!
- Unacceptable. Tax increase for 2017 was over 150%. This property had NO lease-hold improvement.
- They're increasing and are more than I can pay without assistance.
- I have been a Madisonville homeowner since 1999. Like any good citizen, I've always considered my property tax too high, my property taxes have doubled. I am 69 and a retired school teacher. According to the applications, I don't qualify

As of 5.23.19 at 3:00 p.m.

for any tax abatements. The scale is out of balance. As a retiree, I find it a laughing matter that I make too much money to qualify for an abatement while some businesses receive abatements. I understand some churches are tax exempt, while having sources of income. These things need to be considered. In the meantime, I am scrounging to come up with \$1250 for my 1/2 year taxes.

MT. AIRY

- Property taxes are too high. I am retired. I cannot afford the increased tax.

MT. AUBURN

- After years of little change the Over-the-Rhine changes are pushing the county evaluation up and up but I have not invested in changes in my property. Could be taxed out, rest to say it is worth all that money but it is not till I sell it.

MT. LOOKOUT

- My taxes have increased 60% in the last 8 years. We have been in our house 28 years.
- I dearly love Mt Lookout-I have lived in the area for 40+ yrs. While my taxes continue to increase, people buying new homes valued at 2-3 times the value of mine are paying very little in taxes. The long time residents of the area are getting screwed at the hands of greedy developers that have little regard for the charm and integrity of the area. I am disappointed in our city leadership for allowing this to go on as long as it has. Shame on you!
- They're excessive and limit the our quality of living.
- We have lived here for over 25 years. Our property taxes have gone up year over year and it is becoming unaffordable. Now tax abatements are driving tear downs. People who can afford \$1M plus new homes are now paying significantly discounted property taxes. Meanwhile, they will use the city services and will not pay their fair share for the next 10+ years. It is welfare for the rich. Economic development was not needed in neighborhoods like Mt. Lookout and Hyde Park. This stimulus is having big unintended negative consequences and should be stopped.
- I have been gentrified by taxes. Am moving to Clermont County. I can get more house for less money strictly due to taxes. My \$300k condo has higher taxes than a tear down/new build \$750k tax abated house behind me. The newer big home also required removal of large old beautiful strong trees which ruined the character of the property.
- 2010 taxes = \$3402 2018 taxes = \$7658 That pretty much explains it.
- Our property taxes keep going up and there are million dollar houses being built in the neighborhood and they pay less property taxes than we do because of the abatements.
- They have skyrocketed in 3 years of living there. They have gone up almost \$400 a month or 25% in 3 years.

As of 5.23.19 at 3:00 p.m.

- Raises rents; legacy homes being sold to developers for tax abatement. How would you like to live next-door to someone paying zero tax while your tax goes up?
- Values are high as are associated taxes.
- Extremely high. Higher than my family in Boston.
- Back when we would normal deduct property taxes rather than standard deduction it used to make me feel better paying such high property taxes almost as my parents who have 4x larger home in Ft. Thomas. I have always been okay with it because we have wonderful parks and private schools.
- There are funny things going on - House is being sold well below market value by one person then an LLC being set up to do a redo on that house and then the taxes appear very low because of what the original selling price of the house was. I suspect it's a scam where the owners of the house rebate money back to the previous owners under the table. It is also a shame to see so many houses being torn down and then getting a big property tax abatement on the new houses that are put up. The only tax Abatement should be if it was vacant land and it was actually new construction. There should not be tax abatement on tearing the house down only to build another new house. Those people do not need tax benefits. At this point it probably does not make sense to have tax abatements at all in the Hyde Park Mount Lookout area when these houses are well above the market value in the city. When should also understand why soak the taxes in Cincinnati are so high compared to places like Indian Hills where they claim that each house has a farm. And therefore get tax breaks.
- They keep going up!!
- After moving into the City of Cincinnati from Blue Ash 4 years ago we have stunned at the sharp increase in real estate taxes in the neighborhood. Just read the real estate section in the Sunday New York Times where they compare similarly valued homes in 3 cities. Cincinnati's real estate taxes are shockingly high.
- I feel that it is a travesty when the longtime residents have increased property taxes and decreasing values of their property. All property should be taxed equally and fairly and abatements are unfair and criminal. Until the tax abated wealthy pay their fair share, maybe the rest of us should pay only the current percent of the abated properties on our homes at property tax time.
- Since we moved in 1991, our property taxes have increased by approximately 467% and now significantly our largest bill. We are now considering leaving the city of Cincinnati because of how high this bill is with no anticipation of it decreasing or slowing down.
- Property taxes continue to rise and are becoming a financial strain on our family, as our income isn't increasing as quickly as taxes seem to be. I can't imagine how someone on a fixed income can afford to live in their home.

As of 5.23.19 at 3:00 p.m.

- We are forced to pay for a stadium we never use. If we did use it, we would not receive a discount on ticket prices. Roads, schools, and sewers are worth the investment. But a playground for the fabulously rich financed on the backs of city residents who receive no return on the investment is larceny. Also, I took an old house and modernized the interior 20 years ago, making its value rise, extending its useful life span so where's my tax abatement?
- I have had teardowns on either side of me in 2015-2016, and am currently opposing a proposal to teardown 6 homes behind me and replace them with a 30-home cluster housing development.
- They are high yet those in way more expensive homes are not sharing in the expense because they are getting tax abatements for 10-15 years. This needs to be fixed.
- They are so much higher than other areas. We don't utilize the public schools. We will likely move out of this area largely due to property taxes. (Mt. Lookout)
- Our taxes keep going up, while new multi-million dollar properties get huge tax abatements.
- Real estate taxes have funded the public schools which my children attended for free.
- They keep rising, but I am surrounded by new development that is getting tax abatement. Very unfair!
- They are insanely high. I lived in metro Atlanta. I had a home worth 16% more and paid about 35% of the property tax I pay here. And there was no income tax. And services--police, fire, roads--were better. Parks are better here. I only came back b/c of family. No rational person would move here based on the economics. It's an economic brick-bat to the head.
- They keep getting higher because of recent levies that have been passed.
- They have gone up tremendously. We moved here in 1991. Our appraised value peaked in 2007 and is now \$100,000 less than 2007. However we actually pay more in property tax than we did when our home was at its peak.
- The significant increase due to the school levy is difficult for me since I am retired and on a fixed income. On the other hand I do understand the need for it.
- Very high for where I live.
- In general, they seem to continue to increase year-after-year as new levies continue to be added and existing ones consistently get renewed. In addition, the tax abatements available for new/LEED construction are encouraging developers to demolish older, smaller homes in exchange for newer homes in the \$750K+ price point. This in turn is affecting the stock of lower price housing in the area while at the same time giving massive tax breaks to people that can afford these expensive new homes. In addition, the tax abatements act as incentive for new projects such as the proposed 30 unit Redstone development on Linwood (starting at \$500K) and the 40 unit development on Walworth (starting at \$1million). These

As of 5.23.19 at 3:00 p.m.

large scale developments will introduce more families into school districts that will not pay property taxes that then go towards their funding.

- They are about 3x higher than the neighborhood that we left in Denver CO. Our house there was valued higher than the property we have here.
- Have always, consistently gone up. Significantly higher than surrounding areas outside the city.
- Property taxes have skyrocketed. Between the never ending increases and the limits on property tax as a tax deduction, I will have to sell my home when I retire.
- Extremely high and continue to increase.
- Taxes here have gone up very rapidly and we're nearing the breaking point. We bought our home for \$27,000 in 1974 when we were in our 30's and we're now both 74...the house needed a lot of work, and we did nearly all of it ourselves, including putting on the first new roof. The only contractor we hired was a plumber to install a hot water heating system. The most recent evaluation of our home was closer to \$400,000 than to \$300,000 and we have no idea how that figure was arrived at. This is our home, not an investment, and the other homes near us that are selling in the \$600,000 range are vastly different properties, so basing our evaluation on the sale of recent properties doesn't seem appropriate to us. Our annual tax bill is now over \$8000 and we're retired!
- My husband and I are small business owners, and we had been renting in Mt. Lookout for many years. Due to increased property taxes for our landlord, our rent was about to take a significant increase, so we were forced to try to find a new, affordable location. We had the opportunity to purchase the property at 816 Delta Ave on land contract directly from the previous owner. He and his wife had been using it as an advertising agency, which they closed, and so it was set up as a move-in ready office, furniture, fixtures, and all. We felt like we had been given a true opportunity. We settled on a price for the building, the contents, and a monthly payment amount that would allow us to demonstrate to a bank after 2-3 years that we could move to a traditional mortgage. On November 11, 2014, we closed on the property. At that time, our taxes were \$2206.99 per half year. In our land contract, the value of the land, property, and fixtures was \$325,000. An additional \$24,000 is designated under the contract as Personal Property and Furnishings. On April 20, 2017, we refinanced the property through Farmers and Merchants Bank. The process was very difficult because the appraiser that was assigned only valued the property at \$180,000 - a far cry from the \$325,000 purchase price. After discussion with the bank, the branch manager decided to override the appraisal and grant us the loan. We refinanced both the property and the contents for a total of \$349,000. We then received a letter from the Hamilton County Board of Revision that our new tax bill would increase to \$5,905.51!!!! I immediately thought there must be some mistake and contacted the auditor's office. I was directed to petition the board of revision for a hearing, which I did. I gathered all the documentation needed and attended the hearing explaining 1)

As of 5.23.19 at 3:00 p.m.

That the building had been purchased for \$325,000, not the \$349,000 listed on the auditor's website, and 2) that during the re-finance; the building had been appraised at \$180,000. I was told that the appraisal was irrelevant to their process and that since we didn't include a detailed list of furnishings in our land contract, that they would not grant our petition. So now we struggle every 6 months to find the money to pay our property taxes. We have to borrow from family, go into credit card debt, etc. just to pay these property taxes. What we thought was the best opportunity we could've imagined has turned into a financial nightmare for us. We are as creative as we possibly can be to rent out space in the building, but no matter what, we can't earn enough on the building to cover the mortgage and property taxes. There are building repairs we can't afford, so parts of the house are crumbling. We feel like the county has pulled one over on us, and whenever that tax bill arrives, it's a sad day. If small business is the backbone of our city, then our property taxes are crushing our back. I was encouraged to see this project put together by the city, and I really hope that our story helps identify the harm caused by skyrocketing property taxes, and just maybe our individual situation might be addressed. Thank you for looking out for us as residents and small business owners.

- Property Taxes continue to increase eventually it will drive me out of the house in which I have raised my children. I assume some of the money goes to providing bike trails and bike lanes at the expense of home owners. The value equation seems dramatically misaligned.
- The property tax abatement program is unnecessarily fueling the transformation of a mixed housing market in HP, Mt Lookout, Oakley etc. into a much more uniform high-end market. Tear downs in already wealthy neighborhoods is not good public policy!
- I'm paying over \$7,000/year on a house assessed at \$301,000, which I think is about the fair market value.
- They are super-high. Don't get me wrong, as a homeowner I know it's important to support the community and pay for the services received. Except property taxes are way out of line. Since we moved to Mt. Lookout, under 3 years ago, property taxes have increased almost 20%. Part of this, but only a portion, is because of value increase. As another point of comparison, my sister-in-law, living in the Bay Area of California, pays slightly less in property tax than we do, in a similar size house but that because of the area, is valued at probably 3-4 times our house value. It's way too much.
- Very upset about the abatements given in this area. This is not in the spirit of what abatements were created for.
- Our property tax is too high and so many surrounding new builds are not paying any taxes.
- My taxes are rapidly increasing, but my retirement income is not.

MT. WASHINGTON

As of 5.23.19 at 3:00 p.m.

- Undervalued.
- It is high.
- Huge increases for some decreases for your next-door neighbor Contested and reduced 21k but still 20k above others. Consultant sets the values, consultants rarely admit mistakes. The “listening” group you appeal while nice maybe one was competent. The whole process makes little sense as object in to make a smaller than fair reduction hopefully making the complainant semi happy and they go away.

NORTH AVONDALE

- Too high especially given the failing public schools that makes up 75-80% of the bill as a whole!
- They are jacking up at ridiculous rates especially with the nonstop tax hikes for schools and preschool promise.

NORTHSIDE

- I am happy with my property taxes, since I know that the vast majority of my taxes are supporting the school district, children services, developmental disabilities, public library, park district, and other important programs and services. It's a big city, and there is a lot to take care of within it.
- I am a renter in Northside looking to buy a home in Northside. Values for many homes have tripled in the past 5 years, and when they sell they are re-appraised at the higher sales price. While I can afford these homes and the taxes that come with it, I am concerned for the long-time residents of the neighborhood whose property tax bills will skyrocket once enough homes in Northside are re-appraised to higher values. Part of the value of your own property is determined by the value of other properties in the neighborhood. Reinvestment and new residents are a good thing, but many in Northside and other neighborhoods are on fixed incomes. The rapid rise in property values threatens their ability to age in place should the value of their home rise given the hot real estate market of Northside.

NORWOOD

- The continuous rise in our property taxes has me concerned that I may not be able to afford our monthly mortgage in the not so distant future. The extremely frustrating part is that this money is supposed to go towards road repair and Norwood has the worst roads I've seen in my entire life.

OAKLEY

- Property taxes continues to escalate every time the auditor does the reappraisals.
- In 2016 the annual property taxes on my house at 2780 Minot Avenue in Oakley were about \$2500. Now they stand at \$5000. They have doubled in 3 years. I have lived at this address since 1978. I am now 75 years old, and continued tax escalation like this may force me to consider selling. Some sort of abatement would be a godsend.
- My property taxes have doubled in 7 years of living here

As of 5.23.19 at 3:00 p.m.

- Taxes keep increasing as values go up and school levies increase. They're almost as much as our mortgage!
- Taxes are higher than other regions of the country or state. My neighborhood has ugly roads and poor public transportation.
- Property taxes are becoming the biggest threat to me being able to remain in my home. My taxes keep increasing and I honestly have not made any improvements to my property except keeping up on the general maintenance. It's just ridiculous. I worry more about my property taxes going up than anything else when it comes to my home. I've worked hard all my life and it's not right how folks in my neighborhood have homes valued at 5 times of mine and I pay more than they do!
- My taxes went up much higher after a reassessment due to everything going up. I fought it as my house is in fair condition but because it's in Oakley it was deemed worth a lot more just due to location.
- Property taxes keep going up and up, MUCH faster than wages do. I'm going to move out of Cincinnati if it keeps going up.
- Been living in my home for almost 40 years, in the last few years my taxes have almost tripled due to the inflated real estate market.
- They keep going up and up.
- Taxes have tripled in our neighborhood.....I am a senior citizen and WILL be forced to sell my house by next year. The so called homestead reduction is a JOKE.....I only had 300.00 reduced.....this is a joke!!!
- My taxes are astronomical given the size of my small 110 year old home on Drakewood Drive.
- Property taxes have gone up in huge increments and it makes it difficult for folks like me who have been here stay. I've lived here 7 years and taxes are more than my mortgage payment!
- I believe in a strong tax system to support our local infrastructure and community, especially our public schools. I take huge issue with tear downs in exchange for large and suburban looking homes selling for \$700,000+ in my neighborhood to someone who in turn will pay property taxes on maybe \$150,000 for the next 10-20 years. This has to stop on neighborhoods like Oakley, Hyde Park, and Mt. Lookout and be reserved for more depressed neighborhoods that need to incentivize potential buyers. Someone buying a \$700,000 house can afford to pay their fair share in taxes. This is out of control!
- I've have delayed buying a house and will probably have to look in a different neighborhood due to property taxes.
- I think it is absolutely ridiculous that property developers are allowed to build tax-abated (half million dollar plus) homes in my area. They are destroying sound historical homes and our area is prosperous and does not require incentives for people to live here. Sick and tired of subsidizing home purchase for individuals with 6 figure incomes.

As of 5.23.19 at 3:00 p.m.

- Our property taxes are ridiculously high. We pay more in taxes per month than the principal on our mortgage. We bought a \$300k house and will be paying more than the million dollar tear down/new build down the road. It is fundamentally unfair. If the city needs revenue it should use progressive income taxes.
- Continue to rise.
- As more development comes into Oakley, they receive tax abatements while my house is re-appraised for a higher value - raising my taxes. A lot of developments are apartment complexes that don't pay property taxes. So our community continues to expand, but we receive no benefit from the expansion. On top of that, we continue to have to pay for stadium taxes that are used by people outside of our community as well as us.
- way too high! It seems that every opportunity a government entity has to raise the millage or add a separate tax they do. There should be no reason for this as property taxes raise with inflation and property values.
- Old house gets torn down instead of remodeled, new tax abated house that doesn't fit the neighborhood in style or price gets built and they pay less taxes.
- Property tax rates are inequitable and favor higher income residents and developers. They are becoming burdensome for the average homeowner. Case in point: City Council just voted to give Hubbard a 12 year abatement on 100% of improvements to a site to build a new building, valued at approximately \$6.2 million. This is a poor decision by city council because Hubbard currently leases a building in the City and there is no understanding of whether the City will get a return on this tax abatement investment. The City has not been able to quantify a tangible benefit for why taxpayer dollars should be used to subsidize private corporations at such high levels. What will likely happen is that Hubbard's current location will remain empty for a long period of time, similar to what has happened in Walnut Hills after the City gave Anthem a \$6 million TIF to build a new building in Oakley. Anthem's old site in Walnut Hills has been a vacant eye sore with sidewalks blocked off by chainlink fencing. All of these tax-payer subsidized financing items just put the burden of paying for vital city services on the backs of residents. That's why this is inequitable. Businesses and developers profit with no return to us. They use & benefit from those same City services and don't pay a fair rate of use. Giving Hubbard all of that money would be akin to the City giving renters massive tax breaks to buy a home. Will they City start doing that?
- Escalating at a ridiculous rate. My property taxes are more expensive than my mortgage and crazy expensive houses are being built that pay no taxes. I find this very sad
- Property taxes in southwest Ohio are some of the highest in the state. They continue to increase as values increase and more levies are instituted.

PENDLETON

As of 5.23.19 at 3:00 p.m.

- They continue to increase. When we moved here in 1981. No one wanted our house so property taxes were very low. Now with development our taxes continue to increase, while our newer, more prosperous neighbors receive tax abatements.

PLEASANT RIDGE

- Consistently gone up in the nearly 9 years we have lived here. I do not understand Cincinnati's desire to pay for idiotic sporting stadiums instead of schools or public transportation.
- I have lived in my house since 1980. Taxes have at least tripled. I am on the verge of having to move because I am a retiree and my pension doesn't begin to keep up. I believe in paying taxes for the public good like libraries, parks, schools and social services. I RESENT having my taxes raised because I live in a popular neighborhood and my same old house has gone up in value more than \$200,000. I also resent paying FOREVER for Mike Brown's selfishness in foisting the stadium on us with no end to his demands for expensive upgrades. I resent developers getting a ton of money in abatement while pushing me out of my home.

PRICE HILL

- The value of my house has dropped nearly \$20+K since the recession. It is paid off; yet my tax bill alone amounts to more than \$300 a Month. I live on a corner. And, my house is valued about 30K more than any other house in my general area. (Wyoming Ave.) I do not know why this is so and have been unable to get any answers from the County/City. Best guess...arbitrary valuation. I am Retired.

SILVERTON

- My property taxes are so high I can't pay them. I have made no improvements since I moved in in 1999.

SPRING GROVE VILLAGE

- Lived here for over 20 years taxes goes up yearly to point it's over 3800.00 year for here it's ridiculous.

SPRINGFIELD TOWNSHIP

- Our fixed mortgage went from just over \$1200 to \$1585 in 2 years. Our total tax paid last year was \$7,999.76.

WALNUT HILLS

- I see neighbors having to decide to leave their longtime homes when the taxes rise beyond what their (often limited) incomes can support. This dynamic eventually reaches renters, too. There are fewer people of modest means. The contagion of rising valuation is changing the demographics of our neighborhood. Not only are we less diverse (race, age, income), but the new neighbors tend to be short-term residents whose interest in the neighborhood is largely financial, not putting down roots and engaging with neighbors.
- Our property taxes go up every year. It makes it difficult to budget and make repairs on our 150 year old home.

WEST END

- High, even on low valued property.

As of 5.23.19 at 3:00 p.m.

WESTERN HILLS/COVEDALE

- My property tax continues to rise even with more and more houses on my street becoming rentals, these rental companies do the minimal amount of work to property. I feel penalized for taking care of my house and property.
- We live in a home in West Price Hill/Covedale, and we pay \$9000 in property tax. Because we are in the CPS district and do not feel confident that the local schools can give us the education that our kids need, we pay for private education. Add to this the growing incidents of crime in our area, and you can imagine that we are fed up with paying the exorbitant property tax for the location and lack of adequate services we would like.

WESTWOOD

- The property value is actually lower than the county's evaluation due to all of the foreclosures and properties sitting empty but we cannot get a lower valuation.
- Our homes haven't seen much improvement-as many whom move in-don't stay due to property tax increases as well as school levy taxes etc. All taxes-owners have to pay here. I'm going to be moving in next 3 yrs. as well. I have lived on west side all my life-53 yrs. old.

2. Do you have any ideas on how to ensure that property owners, specifically legacy residents and senior citizens on fixed incomes, have a greater opportunity to remain in their homes?

REMOVE TAX ABATEMENTS

- STOP TAX ABATEMENTS IN NEIGHBORHOODS WHERE THERE IS STRONG DEMAND. THIS IS NOT ROCKET SCIENCE.
- Put an end to the abatements and give tax breaks to single and elderly homeowners who have lived in the area over a certain number of years and who have paid to support the schools and city for so long.
- Yes - abolish the abatement for new construction in Hyde Park. It's unnecessary and diverts these dollars from other parts of the City where this economic development would be helpful.
- Yes. First of all, cut out the "tax abatement" scandal. It is completely unnecessary. Everyone who lives in the areas of Hyde Park and Oakley should share the property tax burden. For a senior (70 yrs. old) like me, on a static, low income, the city could increase the homestead tax-break. Otherwise, I probably will have to leave. This is what I am contemplating now i.e. leaving. I would like to stay because I love the area and have lived here for a long time. I have improved my house over time and have planted a lot of perennials. It would be a shame, literally (on the city), if I were forced out.
- YES. Stop giving tax abatements in the HP/Mt. Lookout/Columbia Tusculum neighborhoods. It is non-sensical for these McMansions to receive tax abatements and the rest of us shoulder the burden.

As of 5.23.19 at 3:00 p.m.

- Stop the abatement program and distribute the tax burden equitably.
- Get rid of the tax abatements, or at the very least create an income-based tax abatement schedule which favors lower income families and not the wealthy individuals...
- End the abatements. Tax income from high end homes will reduce tax increases.
- STOP the tax abatement policy. Whatever the original thinking was, the actual effect is strongly net negative. I have yet to talk to anyone who - beyond narrow self-interest on the part of the (already wealthy) buyers of abated homes - believes this policy is improving the quality of living or housing stock in Hyde Park, Mt. Lookout or Columbia Tusculum. The policy is instead correctly viewed as grossly unjust to legacy taxpayers and a pork project for builders of new (generally inferior) housing stock. Stop this now!
- Get rid of the abatement immediately for thriving neighborhoods. This was not the intent of the tax abatement, which was supposed to spur development in needy areas.
- Yeah, discontinue the practice of abatements especially in the wealthy neighborhoods so that everyone pays in and so the rest of us don't get over taxed anymore. It's so unfair that we are paying for all the new residents in their new ugly houses. They should be paying MORE for ruining our neighborhoods with their subdivisions and traffic, not LESS.
- First and foremost you have to stop tax abatement programs in the wealthy parts of Cincinnati. That includes Hyde Park, Mt Lookout and Oakley. There have been FOUR teardowns by developers and of course all new houses are now tax abated for 10+ years. Who pays for that lost tax revenue? All the current tax payers. We are losing the character of our city as these cookie cutters houses are being put up by the land/home grab of these developers. Typically houses on our street costs 225K-300K on our street. Now there are teardowns and these brand new houses are being sold north of 600+K. Are you kidding me? Do we want to be like California where we price out middle class and working class people due to affordable housing being removed from the inventory?
- STOP HANDING OUT TAX ABATEMENTS! Hyde Park, Oakley, Mt Lookout in particular doesn't need the tax abatements - if the project isn't profitable without the abatements, then it shouldn't be done...
- Remove tax abatements on new construction and renovations. These abatements are for depressed or neglected areas, which is not the case for Hyde Park or Mt. Lookout.
- End the tax abatements and lower property taxes for all, not just senior citizens.
- Stop the tax abatements for new construction (even if you keep it for updates) - spread the pain evenly, especially for those who can afford it, like those building 7 figure homes.

As of 5.23.19 at 3:00 p.m.

- Stop all the tax abatement on new builds. Otherwise you'll just be raising taxes on everyone else to keep seniors and legacy residents in. Not sure what qualifies as legacy, but that would price me out with taxes.
- Yes, stop giving tax abatement in areas that do not necessitate them for development (i.e. - Mt. Lookout, Hyde Park come to top of mind). By giving tax abatement to developers to develop in desirable areas in NOT needed and furthers the divide between those that pay exorbitant city taxes and those that are taking advantage to line their own pocketbooks.
- Stop giving tax abatement to people buying 300k - million dollars homes.
- Stop unnecessary abatements
- Eliminate tax abatement for wealthy residents in desirable neighborhoods like Hyde Park and Mount Lookout. Provide true tax relief for longtime residents who are over 65.
- Eliminate tax abatement for developers, especially for tear downs. Limit abatement to adaptive remodeling and reuse of existing structure and prioritize home owners over developers. Consider relief in terms of percentage reductions for owners who reside on their properties and who have done so for 10-15 years or longer or who are retired.
- STOP TAX ABATEMENTS! All the new homes in Mt. Lookout do NOT NEED abatements!
- Don't allow tax abated homes in well off neighborhoods.
- Stop giving out tax abatement sand instead give out tax credits to those citizens. This amazing neighborhood is being ruined by developers and the city council who continues to allow tear downs and tax abatement a.
- The city needs to stop giving abatements to developers in neighborhoods that don't need help to attract buyers.
- Stop abatements. If you want to live in a million dollar home then pay the taxes on a million dollar home.
- Yes. Instead of offering handouts to wealthy home buyers in the form of tax abatements, offer tax credits to seniors or other residents in need. Not the wealthy. Why are they not paying their fair share?!
- End tax abatements for new construction. Force the wealthy to pay their share. The dollars gained could be used to provide discounted taxes for those in need.
- I think tax abatements are overused in many urban neighborhoods--make the wealthy pay their share.
- Won't happen unless the abatements STOP!!!
- Dramatically limiting tax abatement so costs are more evenly shared. Taxes are for services and all should contribute.
- Stop giving tax abatements in Hyde Park and Mt. Lookout. The spirit of tax abatements was to help blighted areas. Giving abatements to these expensive homes hurts all of us who are paying taxes.

As of 5.23.19 at 3:00 p.m.

- End the tax abatement program for residential property; reduce budget for stupid projects like fc Cincinnati and the useless streetcar, return to the homestead exemption
- Families buying home over \$500,000 do not need tax abatements. I should not have to subsidize the taxes of people that can afford a home two to three times the value of my home.
- Put a Cap on the amount of tax abatement a single property can utilize, such that low income properties get a full abatement, but not properties in excess of \$750,000.
- They could fix it to only these groups, and not to wealthy people buying new homes.
- The tax abatement program needs to be looked at and requirements Changed. The use of the program to avoid taxes is crushing seniors and lower income people who own their homes, but can no longer afford property taxes.
- End abatements in established neighborhoods such as Hyde Park, Mt Lookout, Clifton...
- My concern is that even If there were no property tax abatements, the city of Cincinnati would continue to use property taxes as a way of financing other projects within the city. So regardless, property owners that are legacy residents and senior citizens would have the issue either way. There's no guarantee that their problems go away with the reduction and/or illumination of tax abatements.
- Review qualifications for tax abatements.
- Eliminate the subsidies in strong neighborhoods that don't need them and direct what would have been the abated moneys to long-term residents that do actually need help with paying their property taxes. The end of abatements would also reduce the frenzy of real estate buying which drives up prices/values for all.
- Yes, stop giving these abatements so all will share the costs in this community.
- Stop giving out massive taxpayer subsidies to developers and businesses. Doing so has drastically raised the home values in neighborhoods b/c developers off giant tax abatements.
- Eliminate the property tax incentives for new builds in Oakley, HYde Park, Mt. lookout. These neighborhoods are highly developed and it isn't helping revitalize the neighborhood. It's only putting an undue burden on everyone else.
- Abatement should be if it was vacant land and it was actually new construction. There should not be tax abatement on tearing the house down only to build another new house. Those people do not need tax benefits. At this point it probably does not make sense to have tax abatements at all in the Hyde Park Mount Lookout area when these houses are well above the market value in the city. When should also understand why soak the taxes in Cincinnati are so high compared to places like Indian Hills where they claim that each house has a farm. And therefore get tax breaks

As of 5.23.19 at 3:00 p.m.

- Stop teardown incentives in affluent areas. If one can afford to buy a million plus house, one can pay the resulting taxes. Property taxes should not be expected to cover EVERYTHING.
- Stop granting permits for tear downs and rebuilds. Stop providing property tax abatements for new construction. On my street there is a house valued at nearly 3 times what mine is valued at with property taxes of about one third of what I pay. How is this fair? This is a case of the rich get richer while those unable to afford to buy a house solely for the purpose of tearing it down and building a higher valued home in its place carry the tax burden for the wealthier person. There are numerous examples of this situation in Hyde Park/Mount Lookout.

PROPERTY TAX DETERMINED BY OWNERS/LEGACY OWNERS

- Yes, put a ceiling on the taxes. Once you reach retirement age stop raising our taxes or at least charge us a lesser amount.
- Increase the income qualifications for seniors. My wife & I receive SS and it is more than the maximum income amount for the senior exemptions. Reduce the tax abatement program and only allow these rebates in low income neighborhoods instead of the wealthy neighborhoods like Oakley, Hyde Park, etc.
- Decrease taxes for Social Security residents (or anyone who have owned their home in Mt. Lookout for more than 25 years and have income of less than \$50k. These folks have never envisioned this type of private investment development (spurred, not by pride in community, but by short sighted city council interference in tax policy). I fail to see how any value comes to the county in this area of Cincinnati. The current abatement situation is actually destroying the very community charm that attracts people to it.
- Freeze property taxes for legacy residents 65 years or older until as long as they live in their homes and extend the freeze for an additional 10 years for relative taking over the home.
- Freeze taxes of legacy, seniors' homeowners at the rate and duration of new homeowners benefiting from the tax abatement in our neighborhoods.
- Property tax issue should be determined by those who own property area they are voting in.
- Do not raise taxes on those older than 65.
- I certainly think Legacy owners and senior citizens on fixed incomes should get more consideration than Developers. The developers are here to make money. The people who have lived in these neighborhoods for years are here to make their lives.
- I think 55 and up should be eligible for a "homestead exemption" and maybe even anyone who stays over ten years regardless of their age.
- Legacy owners make up a large part of CT along with senior citizens. We need some way to implement a cap on the taxes and eliminate the continual

As of 5.23.19 at 3:00 p.m.

harassment to increase taxes. I recommend a cap and how about an abatement to purchase homes over 100 years of age.

- If legacy owners... (what defines legacy) are on fixed income perhaps make the property taxes a % of net income...
- Have legacy owners and senior citizens submit income tax statements. Have them pay taxes based on what they earn.
- There should be some sort of break for anyone who resides in their home for over 10 years. Whether this is freezing the tax rate at that 10-year level or giving some sort of tax break to long-term residents and seniors, something has to happen. A block from us a developer bought a home that was abandoned and is now selling a new construction home there for \$450,000 on a block where most of the houses are valued at \$40,000.
- An acquaintance had suggested tying property taxes to income for elderly legacy residents, to assure taxes don't force them to sell. Seems like a good idea. I don't think this should be transferable to subsequent owners, even if related.
- Restore the senior citizen discount
- There needs to be a broader base for homestead, a broader base of income requirements and a better rate. Often times, senior citizens want to stay in their homes but the upkeep, taxes, utilities make that impossible with a fixed income. Many senior citizens are alone because a spouse has passed.
- Homestead exemption for seniors 2. What's a legacy resident? I was born here and left for a job, and now I'm back. So I don't get a benefit? Screw that idea. 3. Eliminate the LEED abatement. LEED is a hoax. If someone thinks it saves them money, they can have at it. It should not be (further) subsidized. 4. Equalize the abatement benefits so they are the same for improvement and replacement, with one exception.... 5. Abatement on replacement is reduced by 50% on each resale/transfer of the property to future owners until it falls below 10%, and then it's 0. So 100% of the abatement to the first owner occupant (OO), 50% to the 2nd OO, 25% to the 3rd OO, 12.5% to the 4th OO, then zero. And it expires in 15 years no matter what.
- Study the effects of introducing a way to lock in current property tax rates for legacy residents of X amount of years and ensure that these are tied to owners, and not properties, so as to be non-transferrable upon sale. In addition, end blanket abatements to all new construction and rather offer specific incentives towards building affordable housing and access to public transportation; in general it's a tool that should be used like a scalpel, not a sledgehammer.
- Extend the cap for the Homestead property tax exemption. Create legacy tax exemptions for residents who have lived in the same house for 20+ years.
- There are already some options in place for people over 65 with the homestead approval but maybe you could cap the rate increase to that class.
- Make a property tax credit for residency longevity; Higher taxes for properties that are not owner occupied; Stop abatements for new builds except in defined

As of 5.23.19 at 3:00 p.m.

blighted areas (not wealthy, desirable areas); Provide abatements in other areas to owner-occupied homes only - not transferrable to subsequent purchasers; Pin a substantial portion of taxes to value on date of purchase for long term residents

- Freeze or reduce property taxes for anyone 60 and older.
- Cap real estate taxes at retirement age.
- Expand Homestead Exemption by decreasing the minimum age and increasing the exempted value 2) Freeze valuation revisions for long-term homeowners
- Maybe some kind Of break for senior citizens and /or for people who remain in their homes for over 20 years.
- In high cost areas pass a law to make homeowners property tax fixed as soon as they file for social security. Limit the maximum abatements to 50% for new developments in highly developed areas (e.g. Mt. Lookout, Hyde Park & Oakley). Abatements should continue in lesser developed areas (e.g. Walnut Hills, OTR, Avondale, and Price Hill).
- Senior residents should not have to move out of the city and I hope you can find a Formular t cap rising taxes for seniors under a certain income.
- Create a deduction for people over 65. Other states / communities have these types of deductions.
- 0% property taxes for home owners over 65.
- Lock tax rate increases for legacy seniors. We watched a gifted and wonderful neighbor move out of the city last year because the taxes on her paid-for home became unbearable. Meanwhile, just a stones-throw away, an employed couple buys a remodeled, updated home with a 10-year tax abatement.
- No but make sure legacy residents, not just extremely low income residents are protected.
- I think there should be a cap put on property taxes for seniors with a fixed income, especially if they have been paying Cincinnati property taxes for 25 years or more. 10.8% of the population of Cincinnati is 65 and older. Those on a fixed budget cannot afford the continued property tax increases and may force them out of a home they've paid 30 years to own. Recent tax increases (7.93mil - 2016), and continued high tax rates (8.55mil - 2012, 10.26mil - 2014) are much greater than social security cost of living increases are. The yearly cost of living increase this population has seen lately is less than a Starbucks latte, yet they are paying taxes to CPS in 20% increases. I think When the male head of household is 65, or 62 for single elderly women, taxing their real estate should end for the purpose of school funding.
- Long-time residents and people on fixed-incomes should be able to apply for a property tax freeze until they move, sell, or pass the property on to their heirs. Or, when a fixed-income person's property value increases due to a changing neighborhood, the property tax increase should be phased in over time.
- No, but it MUST be done, elderly fixed-income home owners deserve a break

As of 5.23.19 at 3:00 p.m.

- Yes, allow a homestead credit for senior citizens. Pass a sales tax to make up the difference.
- How about tax abatements to those of us who have been living in the city and paying taxes instead of those building new homes? The tax abatements in areas like Hyde Park are often detrimental to the neighborhood and then developers, builders are rewarded and leave behind the negative consequences for long-time home owners.
- Postpone any increase in taxes until sale of property at end of life or within x years.
- Have reduced or hold on increases tired seeing seniors support the Cincinnati increase a sales tax so everyone can help soon elderly going to have to move to be able to live
- I know there are cities where taxes for senior citizens are frozen at a reasonable rate and don't go up until the property is sold...and the buyer will then pay the increased tax.
- Perhaps a cap on their tax based on income. But if house is passed on to other family members, it would need to be re-evaluated.
- Start by taking the Homestead Exemption back to where it used to be
- Place a cap on property taxes for homeowners over a certain age, and who have lived in their homes for a minimum of 10 years.
- I agree with breaks for seniors. I'm not sure why legacy residents should be treated much differently than new homeowners in the community - unless the goal is to prevent new owners from buying a house/property.
- There used to be a homestead deduction, but it now has a very low income requirement.
- Yes, legacy tax abatements. Increase the homestead exemption at the state level. Eliminate tax abatements in thriving neighborhoods, like Hyde Park and Mt. Lookout. Possibly grant tax abatements for renovations, thereby preserving historic housing.
- Give seniors a tax break. There is a state tax break now, but your income has to be almost poverty level.

GENERAL - TAXES

- One approach would be to freeze taxes for longtime owner occupants or to defer the increased tax burden to the point of sale.
- Stop giving the wealthy and developers a free ride. How about a tax break for being in your home longer than, say, 15 years?
- Some solutions would require state approval. (Eg, changing how calculated and/or switch to LVT.) Easiest solution is to reduce taxes. Can be done by shifting to other revenue sources (for example, SDIT's which are common in northern Ohio).
- Stop giving tax breaks to corporations.

As of 5.23.19 at 3:00 p.m.

- Some discount on further tax increases would help me considerably.
- Yes, fair taxation for all not for tear downs.
- End all tax abatements for highly desirable areas such as Mt Lookout, Hyde Park, and Oakley especially when a home that has been there for years are being torn down and replace with \$1 million-dollar homes. If you can afford a Half million to million-dollar house, you shouldn't be getting an abatement no matter what. If everyone pays taxes, it allows people to pay less or prevent increases. Tearing down of historic homes and building multiple tax abated properties on land is stressing the schools and making roads overly crowded.
- If everyone were to pay their fair share (no abatements in thriving neighborhoods) then the legacy residents and senior citizens would not have to pick up so much of the slack.
- When you purchase your home, I believe your property taxes should stay the same until that home is sold.
- After 10 years of owner occupancy, the owner's annual property taxes should be REDUCED 1% for each and every year of ownership. People like us who have supported this City for more than 42 years (and who have even been forced to replace all our sidewalks while sidewalks in OTHER neighborhoods remain cracked, broken, dislocated and otherwise out of code, leading one to wonder what the Sidewalk Banditos do to earn their pay) DESERVE such financial consideration for preserving and beautifying a 115-year-old house in a 130-plus year old neighborhood.
- Reduce everyone's property taxes.
- This committee should work to provide specific instruction to ALL property owners as to HOW the valuations -- and therefore the taxes -- on their properties are determined here in Hamilton County/City of Cincinnati. The Hamilton County Auditor claims he does not have time to prepare a document that would provide explanations and examples. That is unacceptable. Government is a monopoly and government take from its citizens. In America, however, citizens have a God-given right to expect government to SECURE their rights, including their right to property, not just take citizens' monies without explanation. Without clear understanding of how taxes are determined, citizens are robbed of information needed to challenge the workings of the tax law.
- Calculate taxes on their income. STOP all the new builds with 10 year tax abatements!!!!!!!!!!!!!!!!!!!!
- No except to have developers and builders of McMansions pay their fair share.
- Reallocate taxes.
- Make the wealthy people that are getting abatements pay their fair share, we cannot provide welfare to the wealthiest people in town. Who is getting pay in the county or city?
- The County needs to engage in good faith appraisals, which would include the rated age of the property into the appraisal factors. There should also be a ceiling

As of 5.23.19 at 3:00 p.m.

on the % increase that may be imposed over an arms-length market price in any given period. And we need some sort of exemption for retirees.

- **The tax policy should not be skewed in favor of one group over another. All property taxes need to be reduced.**
- I'm no tax expert - perhaps tying it to SSI increases in terms of percentage raised?
- There is no one single silver bullet fix: Assess a municipal real estate transfer tax; change the municipal income tax from a straight % to a stepped up tax based on income levels; assess a tax on vehicle ownership; raise the hotel taxes paid by visitors.
- Stop raising taxes!
- Lower the taxes!!!! I'm sick of hearing about City Council giving all new companies tax abatements-that gives them a free pass while property owners have to pay more to utility companies-water/gas, schools, and sadly the police/fire-do with less all the time-even having to lay off much needed personnel. Also owners should pay fines for walking away from their homes-if they are upside down on mortgages and not keeping their properties looking good/upkeep/maintenance. Then we wouldn't have crime/drugs/theft etc. coming into our neighborhoods. West Side is deteriorating at a rapid rate! That's why I will be moving sooner than later.
- I believe one way is to slow down the new development which we have to compensate in our higher taxes.
- Taxes have to be cut back to stay in my home. Property taxes in Georgia are 1/4 of taxes here.
- A nice tax break for the Elderly would surely help. Such as: School Tax (my kids had a private education, are with kids of their own) However, this reality will never happen.
- Again have residents pay for services they use, such as garbage, recycling, schools. But the extraneous taxes should be paid by those who use the services
- No property tax increases after 65. We are age 75 and pay way too much now that we are retired. My neighbor who built her house in '83 pays \$3,945 a half on what they say is a house that cost \$50,000. Her husband died and she bought from estate. Our house built '84 is one bedroom smaller and we pay \$5,350 a half. Same builder same modern house. Crock.
- Senior citizens on fixed income, who have lived at the same address, should be given dispensation on property taxes.
- Lower rates, less levies.
- Property taxes need to be frozen.
- Limit the amount of increase
- Build a bracket based on income for reduction or not.
- Just stop increasing property taxes and start reducing property taxes. Put a use tax on bike trails, like public golf courses. Take a hard look at programs that take money sourced from property taxes and ask, "do the majority of people that pay property taxes want to spend money on this?"

As of 5.23.19 at 3:00 p.m.

- Stop increasing taxes
- Yes! If people can't afford the increase in taxes they should not vote for it and then complain later! This is a recurring saga.
- We MUST have the equivalent of a California Prop 13 in Cincinnati, and Hamilton County, and throughout the State of Ohio. Roll back property taxes 1% for every year an owner has occupied his house since original purchase.
- Yes, stop increasing property taxes and have EVERYONE pay.
- Everyone is technically on a fixed income. If my taxes go up, my salary doesn't necessarily go up as well.
- Lower property taxes by shifting to a School District Income Tax (SDIT), and shift city and county taxes to other revenue sources (eg, sales and income taxes) over which people have control.
- The three year reappraisal should be controlled and fixed to the inflation rate or the home improvements put into the property. Then when it is sold the new tax value is put on for the new owner based on the sale price. Perhaps a tax on the seller if there is a big protect also.
- Yes, I am on Homestead and my taxes are very reasonable and I hope the program continues because it is very hard to make monthly bills when you are only living on a small Social Security check every month.
- Tax the land not the homes.
- A shift to a land tax could potentially shift the tax burden away from existing residents and towards the developers that are lifting the value of the neighborhood.
- I'm on a small widows pension, there is no relief to help with the taxes unless you are over the age of 65...why not base your taxes on low income families on what you paid for your property...
- Long-term residents should be eligible for tax discounts - they've spent years taking care of and working to improve the neighborhoods.
- Yes! By all means, see the above. Cap the percentage of any increase driven by outside values/market (factors not directly impacted by improvements in the property itself) to no more than 3-5% per year, and no more than 10% in five years. Make it easier to appeal large increases. Award 'longevity abatements' like tax abatements to those who live in their home for 5-10 years, 10-15, 15-20, and 20+. The longer you live in your home the better your abatement. This rewards continuity and investment (personal human investment and commitment) to a neighborhood.
- Offer prorated tax abatements for specific changes: solar, windows, insulation...
- Cap property taxes or give discounts based on length of time owning the property. Minimize tax abatements, especially for tear downs and new construction.

GOVERNMENT

As of 5.23.19 at 3:00 p.m.

- Reduce the tax rate, manage budget.
- Increased taxes are primarily driven by increases in underlying value. Perhaps a program to help seniors understand reverse mortgages and their use in converting the appreciation in their homes into cash to offset tax increases
- 1. Implement a Proposition 13-like law in Ohio / Cincinnati 2. REDUCTION in EXPENSES WILL REDUCE PROPERTY TAX % --Reduce money spent on schools. Stop the mass delusion (City Council, etc) that giving more and more money to schools makes any significant difference to scholastic outcomes here (it hasn't)
- Have a fixed amt that all people pay and a reduced amt for over a certain age. Why should some pay more and some less for the same services. Help the seniors but why should someone pay more for living in an expensive home that a less expensive one. The inhabitants aren't using any more of the services. I pay enough taxes on my salary compared to others, shouldn't have to do so on my house too.
- We should cap property taxes like California did through Proposition 13. We should focus on taxing income, not assets.
- Number one. Until there has been a plan made and implemented to protect current residents of communities there should be an immediate end to tax abatement for all development. #2 tax abatements within tiff districts should not be utilized at any time period as it has a negative impact on the community as a whole. #3 begin utilizing an equitable development rubric to increase transparency and development as well as the amount of abatement it should be given to a developer. #4 require impact fees for all development and use this to fund an affordable housing trust. These funds could be utilized for the development of affordable housing as well as for seniors or those below the poverty line to maintain their home and avoid code violations. #5 create a radius around all properties have tax abatements and freeze the properties taxes of those within the radius for the duration of the developed properties tax abatement. #6 increase the sales tax on convenient items such as to go fast food as well as tax fast food that is eaten in to fund affordable housing and or a bit of foldable Housing Trust.
- Maybe something similar to rent control in NYC or the Florida property tax freeze on older Florida homes
- Mayor Cranley came to my house while campaigning during my last election and didn't seem to understand my frustrations with property taxes and gentrification in general. I suggest a new Mayor that understands what it is like to not have disposable income. Stop building new stadiums. Stop offering tax abatements as only the well-off can afford those homes anyway. I can't express how gross and inappropriate the FC stadium is regarding the treatment of West end citizens. Regular Cincinnatians will not matter until Cranley is out of office.

As of 5.23.19 at 3:00 p.m.

- Other than rent stable rental units similar to NYC. For home owners it's the cost of owning a home. Perhaps capping the amount of TAs in each neighborhood is a good compromise.
- YES: EQUIVALENT OF CALIFORNIA PROP 13 "Led by a curmudgeonly tax fighter named Howard Jarvis—and the fear of being taxed out of their homes—California voters 40 years ago overwhelmingly passed Proposition 13. "The landmark measure slashed property taxes and limited how much they could go up. It also tied tax rates to the purchase price of a home rather than to the wild fluctuations of California's housing market. "What motivated voters to pass Prop. 13 "was a combination of fear and anger," said Jon Coupal, president of the Howard Jarvis Taxpayers Association. "Fear of losing their homes and anger over this attitude that governments could not reduce their spending." "Prop. 13 officially called the People's Initiative to Limit Property Taxation, remains popular four decades later. It is credited with preserving the California dream for a generation of homeowners. Supporters say it has allowed neighborhoods to stay intact, helping older residents on fixed incomes to remain in their homes rather than being forced out by high tax bills."
<https://www.kpbs.org/news/2018/oct/25/birth-californias-taxpayer-revolt/>
- Government be willing to make tough choices without going to the "old standby" of raising property taxes
- The city needs to learn how to live within a budget. You know, like everyone who works for a living has to in order to pay their bills.
- I think someone needs to oversee the Board of Region...watching the watcher
- There are budget shortfalls because you aren't collecting enough property taxes because you are providing abatements to areas like Hyde Park and Mt. Lookout that don't need any!!!!
- Everything you do is taxed so where to go from here I don't know make another tax I guess but yes need to do something.
- I think better valuation schedules, grandfather clauses can be used to curtail significant increases
- Cut taxes to equivalent to abatement rate.
- New builds requirement to start at the same tax rate as property owners of older homes.
- Public Private Partnership in a city wide Community Benefit Agreement with Top 100 CBC members
- As a new resident paying for "retail" valuation, I'm not entirely sympathetic to those paying legacy valuations which are much lower than market rate. The city could have a loan program for those truly in need to be repaid at time of sale.
- I think regulation on the percent increase from year to year for people already living in the area. You may be able to comfortably afford your mortgage when

As of 5.23.19 at 3:00 p.m.

you buy your house but it's difficult to forecast if that will still be the case 3+ years down the road with the rate the property taxes are increasing at

- It would be impossible for the city to execute any plan that deviates from the norm
- I personally do not know why it is legal for people who do NOT pay property tax, to have a vote on levies like CPS. If you are not paying for the levy, you don't get a vote, is the way I see it. I am tired of paying higher and higher taxes and not getting anything in return.

HARDSHIP

- **Property tax should be prorated based on poverty level income.**
- Stop giving support to individuals and groups who are "improving" the neighborhood. Landlords are kicking out tenants in order to flip and sell houses in Northside, which then can't be afforded by any current resident. It is fundamentally changing the fabric of the neighborhood, and it is creating a housing hardship for the people who are most at risk.
- Do not forget the disabled community too. Blind/Amputees/Deaf who cannot find jobs to support themselves and their homes when the government keeps increasing and cutting the rollbacks. Maybe increase homestead exemption instead of just 600 dollars (I know it's a state thing but maybe a county could follow suit and add some to that, helping reduce the burden of citizens. We all want to stay in the city but Warren County is starting to look attractive.
- Not really. Utilities and maintenance are more expensive than property taxes. Many people today can't afford to own a house, and financially ruin themselves trying to stay in a house they can't afford. I've seen this happen more than once. I support easing property tax burdens in hardship cases. It would be well to reduce the number and amount of property tax abatements that Cincinnati offers to real estate developers.

SCHOOLS AND TAXES

- As far as I know it is unconstitutional to continue to fund public schools with property taxes, they need to figure out funding in another way.
- Eliminating, or reducing, the school tax to seniors would be of great help.
- Privatize the school district (or at least the funding of the new building) rather than making residents without children pay for a brand-new structure and supporting costs.
- Allow anyone who does not have school age children or uses private schools to opt out of paying property tax for schools. Council stop spending money ridiculously; i.e. streetcar, make people who live or own business on streetcar pay tax for that perk, lower parking meter rates, etc.
- Yes! Eliminate the school tax portion of our property taxes after age 62. Other communities in America do this and it allows older families to stay in their homes and not flee the city.

As of 5.23.19 at 3:00 p.m.

- Exempt them from school property taxes
- Cap the number of levies the school board can take and attach increase in rates to consumer price index for a max level

OTHER THOUGHTS

- None that haven't been mentioned.
- Stop raising property taxes and devise a new way to assess or bring in tax revenue through consumption.
- Stop having property owners pay for every dream project. Cap what seniors pay. Only allow property owners to vote on property tax issues.
- No, I think it's great. We have a football stadium that we pay for and don't get to use, everyone gets raises except for retirees. I hope city council and the mayor continue to raise taxes and make more tax cuts for GE, Bengals, Reds, FC Cincinnati to move into the city and let's drive out all these old people who don't contribute anything except their past stories of blah blah blah
- Lower their taxes through homestead.... more than the paltry amount offered now.
- Why are businesses and real estate developers not paying their fair share? Where are my taxes going?? The roads are terrible, CPS is bureaucratically bloated, public transportation has been gutted - what are you doing with all these taxes??
- No. I think if things keep going this way and the realtors working in cahoots with their builder pals continue to raze the homes and build massive ugly McMansions while destroying our green spaces and wildlife habitat, there will be no more HP/MtL as we have known it.
- I will probably move
- I do have ideas.

3. Do you have anything else to share with the Property Tax Working Group?

GOVERNMENT

- Please reduce the property taxes. And make sure that neighborhood has good community services including roads and public transport.
- Please spend part of our area's tax money on fixing roads here.
- Need taxes rolled back!
- The current State/County property tax "valuation" system is inscrutable to property owners. We will NOT be told by the county auditor specifically what houses were used by their computerized drive-by appraisal system to determine the "value" of our house. What we do understand is that a, say, a 3BR/2.5Bath house is just that; that condition of the building, upgrades or not, additions or not, and other factors that the real estate marketplace knows will either increase or decrease the actual sales price of a given house are not taken into account in setting a value for tax purposes. We also learn that the Cincinnati School Board has a person

As of 5.23.19 at 3:00 p.m.

planted on the review board that hears property owners' complaints about valuations to specifically protect every dime that the schools would extract from property owners. Meantime, the City gives abatements that take away from the schools and leave even more of the cost of that failing school system on the backs of those of us who pay ever-higher taxes without even so much as a thanks or kiss-my-you-know-what from the "students." It's time for a California-style Proposition 13 in Ohio, in Hamilton County, in Cincinnati.

- The property tax system in Ohio/Hamilton County is inscrutable, secretive and overbearing. It's time for 100% transparency so citizens can challenge their taxes.
- Driving through my village, we're not exactly posh looking, but we pay hefty. Why? And where is our money going? We have the same police department building and rec center that has been there for as long as I can remember and I'm nearly 50. We pay separately for the pool membership. Working in Blue Ash I pay less in employer taxes and this town is MUCH nicer.
- Yes, please find ways to expand the tax base. The region is cut into too many small townships. Can someone publish how cities with unified governments fare over those with multiple fiefdoms?
- Yes - I believe city leaders, developers, and realtors shared the goal of delivering yet another "gimmee" to wealthy residents. This shameful situation was so predictable that there is simply no other explanation.
- Please take action. I hate seeing the historical integrity of our neighborhoods deteriorating and forcing legacy residents out.
- Please help to stop the constant raising of taxes with little or no advantage to our neighborhood. Our schools are overcrowded, our sewer systems are old and over capacity, our streets are a mess and our traffic patterns and pedestrian safety are in chaos. We also don't have enough police in our district to keep up with basic needs.
- What is the value of the property in the city Residential Commercial Government Industrial etc. vs Government assets such as MSD, WW and Roadways
- My hope is that City Council will do something besides OTR concerns and think about the rest of the city. Property Taxes are outrageous; meanwhile, anyone who wants to tear down a house and build anything on the property gets a huge abatement. It's not right!
- The current single, city-wide approach to abatements is simply unfair to residents of thriving neighborhoods, both by encouraging the destruction of their character and asking residents of that neighborhood to bear a greater property tax burden.
- There needs to be a reckoning and a swift change to the laws that allow this travesty before the neighborhood is gone forever
- Yes. 1. I've read many people who think that abatements are "tax shelters" and "rich" neighborhoods shouldn't have them. We are 58 neighborhoods, but we are ONE city. We are Balkanized enough. We don't need to divide the city by geography, race, income, occupation ("developers are evil"), or ZIP Code. One

As of 5.23.19 at 3:00 p.m.

City; one rule. 2. Right now, the City is being supported by three neighborhoods: HP, ML, and OAK. The City surrendered the tax base of Clifton to hospitals and the University. It's time they paid their share. Their employees come from all over on City streets. I know they pay income tax, but the institutions need to pay some modest amount in prop tax. They have the money, and they use the services. UC isn't Mt. St Joe. 3. This has to be about REDUCING prop tax. And city spending. 4. I'll serve on the working group or a committee.

- Be aware that developers are contributing to landslides above Columbia Park way, particularly in Mt. Lookout and East Walnut Hills. Freeze current development plans RIGHT NOW until a thorough assessment is made of the safety of these planned developments. The one in Mt. Lookout (Redstone) is on a high-risk landslide area.
- I know of several stories of current Hyde Park/Mt. Lookout residents buying new homes just to have the tax abatement, and I am sure there are so many I haven't heard about. The new construction tax abatement in our neighborhood is having a negative impact. Please take action to modify this legislation so it helps the neighborhoods that need it and not those that don't! Tax abatement should only be on additions or modifications to current housing stock for homeowners that want to stay in the neighborhood and can't afford the pricier home (in Mt. Lookout/Hyde Park), not for new construction. I can't speak to what is needed in other neighborhoods.
- Bravo to the group for brilliant tax planning strategies. Your tax incentives make it lucrative for developers to level three homes and build six or eight in their place. This creates jobs and long term, taxable properties into the area. Now please take that extra funding and widen the roads, renew water and sewer services, and help improve the gridlock caused by all the extra taxpayers you crammed into our neighborhoods.
- The tax abatement is a great program for areas that truly need development of new homes to encourage younger people to move into a blighted area. But giving that incentive to areas that people want to live for good schools or shopping areas does not make sense
- I believe property should be taxed on the property not what's on. It's not right because I want a nice home and my neighbor doesn't. I pay more taxes that always been a problem with me. This country is run backwards; punishing the guy for fixing up his home stinks. Hope that this helps you.
- I, like so many others are so sick and tired of Local/County Governments crying deficit and poverty; only to quietly discover a surplus...AFTER the cuts have been made and the budget has been finalized. Just look at the City and the last 10 or so years of budget. Yet, there is always this mysterious pot of gold when our local Government wants to buy something nice. And then give Police a big fat compound pay increase! (Please, don't get me started!)

As of 5.23.19 at 3:00 p.m.

- This is not a problem limited to Clifton, across the board in Cincinnati, the taxes are high.
- Involve the school district representatives and the county auditor
- Find other revenue sources for the city besides the easy out of taxing residents
- I would like to know how my property value nearly doubled overnight
- The city should leverage national programs rather than spend money on what I believe are national issues such as healthcare for the poor, elderly care, etc. We do not have a large enough population or tax base to pay for these services and remain competitive with surrounding communities.
- Please do your job to help with this problem. Also what about Western Hills Viaduct-everyone worries about landslides on Central Parkway-but everyone should worry about WHV. Also sick of dealing with Queen City-they should work weekends/overnights to get this disaster of an obstacle course that west siders drive everyday-should be done. It has been well over 4 years and it looks worse than when I travel to 3rd world countries!!! Sad Decline
- CPS and other school districts statewide need to rely less on property taxes and more on income taxes or state funding. 2/3 of the property tax bill for properties in Cincinnati goes to CPS due to the unconstitutional school funding model set by the State of Ohio.
- I'm not sure if this already exists but I'd like there to be clear public visibility into what our property taxes are going towards. I can justify it a little more if I see it's going towards something to better our community and increase the overall value of my house
- it is NOT fair to penalize home owners, taxes should come from everyone. There is no incentive to own a home. Property taxes are almost as much as monthly house payments any more
- Homeowners cannot continue to be the petty cash fund of every project or organization that needs funding. Additionally, Cincinnati City School Systems reaps a high percentage of the property taxes paid. A sales tax should be created to meet their budget needs. I cannot even send my children to Cincinnati Public Schools because of the lack of quality, yet they are responsible for a large percentage of my tax bill.
- There is a sense of unfairness in the current system.
- The system to file a complaint at the Board of Revision is clearly one-sided. It is stacked against the person filling.
- Property taxes should not determine who can live in a neighborhood. This minimizes diversity and home ownership.
- The tax abatement program in the city is being abused. We must look at what this program is truly doing to our neighborhood. Lot splits, higher density, overtaxed sewer and storm water systems are the result. Then when we need the income to run the city and pay for upgrades and maintenance of our sewers, roads, sidewalks, there is no new money from all the construction.

As of 5.23.19 at 3:00 p.m.

- I do not like the tear downs of perfectly good houses and lots being split.
- Yes - I understand the importance of education, especially as I have two children who will be coming into the school system, but the amount of property tax that goes to schools is just insane. It is CRAZY that the State government comes nowhere close to properly funding the public schools in Ohio. The State government needs to do its part - and its got a long, long, way to go. We also need to figure out abatements and how to make it work. It sounds like the working group has some good ideas, and some that may or may not work, but its a good start. Who gets tax abatements, what areas are eligible and how much and for how long needs to be seriously changed. Why a developer in a thriving community like Mt. Lookout/Hyde Park/Oakley can get full 30 year abatements while tearing down historical properties to stuff in more homes than reasonable on a given plot, while the environmental consequences of development are minimized or complete ignored (see: increasing landslides on Columbia Parkway) is unforgivable. Those that have responsibility to approve (or not) these projects need to take a good hard look at the community impacts before rubber-stamping every developer proposal (with tax abatements included).
- Property taxes are so high that they are almost the same amount as a mortgage. The government needs to find income generators that are not taxes. An example would be for the Rec department to run concession stands at Otto Armleader park that could easily pay for the maintenance!

TAX ABATEMENTS

- Stop the abatements in our area! Abatements were meant for blighted neighborhoods. It's ridiculous that we have homes with abatements and then the rest of us have to carry the load.
- In my experience in going to Oakley community council, every company is asking for tax abatements. This should only be used when bringing lots of jobs to less desirable neighborhoods.
- I feel that the tax abatements should be reserved for those making improvements in depressed neighborhoods. Hyde Park, Mt Lookout and Oakley are not depressed neighborhoods.
- There are 2 million dollar home being built down the street from me and if those people can afford to build them- along with the price of the lot- THEY NEED TO PAY TAXES, don't burden me because I have lived here for 17 years and they are building new! It will make me leave the city.
- I think that the incentives to increase investment in my neighborhood are driving good construction projects and the creation of high value housing that is in high demand currently. Although some of my neighbors are vocal in their expectations of their say in the private property of others, I do not share their opinion. Please keep this highly successful program running to increase the long-term tax base of our great city!

As of 5.23.19 at 3:00 p.m.

- Should be a limit to the amount of properties that get a tax abatement in Hyde park.
- STOP THE TAX ABATEMENTS IN THE NEAR EAST SIDE OF CINCINNATI (HYDE PARK, MT. LOOKOUT, COLUMBIA TUSCULUM, OAKLEY)
- I have read the feedback of those in wealthy neighborhood, who also are suffering from the rising property taxes, they are advocating that abatement should be stopped in their areas as they are not needed. However, if the wealthiest of Cincinnati are feeling the pressure of escalating property taxes due to abatement, how much greater are those in poverty feeling those same pressures. Please do not forget the impact people of color and those in the lower economic status are taking due to gentrification.
- I think it is terribly unfair to have million-dollar homes getting tax abatements.
- End tax abatements.
- Yes, cut out the business of giving tax abatements immediately. Have developers along with new residents who are building inappropriate houses and too many of them pay MORE for the privilege of squeezing into our neighborhoods. Density is ruining our communities. We don't want DENSITY.
- I'm very upset with the dynamics of Oakley changing due to all these teardowns. NONE OF THEM WOULD HAPPEN without the poorly designed Tax Abatement program which was supposed to be for developing/less affluent sections of the city. NOT Oakley, HP, ML etc. come on folks. Let's make serious changes to this and prevent the rich from getting richer (developers making big profits and wealthy people buying homes they don't have to pay taxes on for 10+ years). Who will buy these homes in 10 years when it's no longer tax abated? What will happen to their true value in 10 years? No one will be these brand new homes at 600+K with property taxes at 15K per year when nice older ones are 250-300K and 6-8K taxes per year.
- The tax abatement issue was for blighted neighborhoods, I don't see Hyde Park, Oakley etc. in this equation...basically it's forcing fixed income people to have to make up the taxes you're not receiving from the many tear downs etc...This abatement issue has gotten out of hand...your holding us financially hostage for real estate mongers
- Tax abatement is no longer needed on the east side. All east side neighborhoods are doing fine and do not need that incentive to drive development. Instead, it's driving the destruction of historic properties and building new ones that don't fit the character of the neighborhood in search of tax abatement credits. Tax abatement should only be allowed in neighborhoods that need the additional incentive to encourage new development.
- Stop tax abatements in desirable neighborhoods!
- Stop subsidizing wealthy property buyers who don't need tax relief in Hyde Park and Mount Lookout. That raises the taxes on all other residents. Not fair!

As of 5.23.19 at 3:00 p.m.

- STOP THE TAX ABATEMENT PROGRAM FOR THE NEAR EAST SIDE OF CINCINNATI. I believe this is fine to keep in areas of the city that TRULY need revitalization. THIS IS NOT HYDE PARK AND MOUNT LOOKOUT.
- I can see tax abatements given to Developers who choose to develop in blighted areas. There is something very wrong with tearing down beautiful historic houses in thriving established neighborhoods to throw up \$1000000 high grade cardboard Shacks for tax abatements.
- Yes. When the abated homes no longer qualify for these exceptions, they plummet in value.
- The tax abated new builds in this area are not paying their fair share...need at least 50% of sale price taxed...
- Continue to prohibit the sale and development of "front yards"; reduce tax abatement from 15 years; set design standards in keeping with the neighborhood.
- I think abatements should only be offered to remodeled homes, not tear down new builds
- Tax abatement should not be an all or nothing policy. Neighborhood characteristics such as median price by type of residence, median income, average time to sell, and density should all be factors taken into consideration. Of particular concern is the cutting of mature trees and construction on hills. Given changing climate, the preservation of the existing tree canopy is critical in contributing to air quality, providing shade, and holding hillsides with their extensive root systems. Developers should also be required to maintain contact with the neighbors and neighborhoods they are disrupting. They should be required to minimize disruption and not take up existing street parking with their vehicles. And they should be required to actually be considerate. Currently, there are two developers in my area who never answer phones, never respond to voice mail, never respond to email, and interact with great hostility with residents when approached on the street. Developers are in this only for profit. The quality of a neighborhood is not their concern. Most residential neighborhoods do not need what they bring. Eliminate tax abatement - it benefits no one but developers. Neighborhoods like Mt Lookout and Hyde Park do not need incentives like tax abatement in order to attract residents. They are also overbuilt already. This gets at another issue of tax abatement and development - the radical shifts in neighborhood character that often result. Squeezing two houses into space where there once was one, reducing setbacks, and altering architecture are factors that should be taken into account as well. Another critically important issue is the likelihood of displacement of current residents - regardless of neighborhood. No one should be forced to leave because their home has become too expensive for them, whether rentals or owner occupied. Property taxes are necessary to support city services. But they must be shared equally across ALL property owners. Abatement is a short-sighted policy that transfers the tax burden to legacy

As of 5.23.19 at 3:00 p.m.

residents and favors developers over the people who actually live in and care for their neighborhoods. .

- Tax abatement with new builds need to stop in desirable markets. There is no reason that Hyde Park, Oakley, and Mt Lookout should be included in tax abatement. Property values are high and people will continue to buy without the abatements. Also, we need taxing to be fair. Rich folks buy 750k houses and don't pay their fair share. That's not cool.
- I appreciate tax abatements which can eventually lead to economic gain but we need to be careful that we are rewarding the right behavior. We may need to review the zoning laws to prevent unintended external presence/influence
- Tax abatements on tear downs should be ended. Also there should be no tax abatements for putting cluster homes in Mount Lookout on a hillside that will lead to instability. This is just gaming the system. No tax abatements on any type of multi-family connected housing.
- End tax abatements for new construction of homes valued in excess of \$250,000 throughout the city. I own a historic (high value) property in Oakley - I object to paying such high taxes when others with high- value properties do not. Tax abatements also provide an incentive to destroy viable older homes and subdivide lots -it is happening all over Hyde Park, Oakley, Mount Lookout, and local residents are sick of it.
- We should stop the tax abatements in desirable neighborhoods
- I do not feel that any property tax abatements for new development of residential properties or improvements to residential property are fair to all taxpayers who pay normal values.
- End all the tax abatements
- If tax abatement is intended to encourage developing challenged neighborhoods, then they should not be broadly available. Hyde Park Mt Lookout etc. are NOT challenged and a lot of tax dollars that could help the city are not billable
- I live in a 100 year old house and I worry about my property tax and value with all the tear downs, lot splits, and tax abatements for new, expensive homes. This area should not be for the ultra-wealthy but taxed on the middle class.
- I had the mindset that if TA's could be redirected to only apply to "blighted" neighborhoods and set up to heavily favor renovations vs. tear-downs, the problem would be solved. But gov't pork has a tendency to unleash powerful and destructive greed. My concern is that unless TA's are ended altogether, this force will quickly circumvent any new safeguards.
- Allocate abatements to disadvantaged/blighted areas and repeal the abatements for the remaining areas.
- I support tax abatements as they are currently implemented. CT has benefited significantly
- Houses that are being built in this area mt lookout and Hyde park that are tax abated Are unnecessary and part of the problem.

As of 5.23.19 at 3:00 p.m.

- So regardless, property owners that are legacy residents and senior citizens would have the issue either way. There's no guarantee that their problems go away with the reduction and/or illumination of tax abatements. I still think the best method is to The amount of abatements in each neighborhood as a way of driving growth in neighborhoods that need it the most.
- It is criminally corrupt to force Cincinnati tax-payers to subsidize real-estate development in popular and healthy neighborhoods like Hyde Park and Mt. Lookout by granting property tax abatements to developers.
- The legacy tax idea hurts growth and bringing in new homeowners. I guarantee I will not live here for 20+ years due to my current job. I should not be penalized because I only live here for 5-10 years or even less than 5 years. An area like Oakley should have no tax abated houses period, when new townhouses are selling for over \$600,000.
- Please stop the abatements I. Neighborhoods that do not need revitalization do not deserve abatements. It's simply tearing down our history for developers to make a few bucks.

MARKET

- I think prompting growth of new homes helps our neighborhoods and perhaps an incentive is warranted, but there should be at least some tax due.
- I am of two minds on the abatements. They are spurring development and adding value to the base of real estate in the city. They encourage neighborhood renewal and are taking out the least marketable homes in our area. I am less sympathetic to those who complain that they are destroying neighborhood character; most new builds are attractive, and owners and developers have strong incentive to make them so. On the other hand, they are distorting the markets for existing homes. While it has not been studied well, there are two markets for homes in our area-- new and abated or existing and not abated. The supply of abated, new construction depresses my existing home value, and the high taxes depress them even more. Unfortunately, with the ridiculous increases in levies, I'm not benefitting from lower taxes.
- Please remember that a community is different from 'the market'. The value of a community is its people, their history, and their commitment to it. The market and the community do overlap, but the tyranny of the 'market' should not be a creeping systematic determiner of our local places—particularly residential areas.
- You better figure out how to lower property taxes and give better services soon or I see people exiting the city that can, especially ones with school age children and seniors. Remind renters rent increases with higher property taxes!
- People should be able to sell their house to whomever they want. The owner of the property should be able to do whatever they want with it, including tearing it down. LEED Properties are overall better for the environment than some of the older homes. With geotechnical power, they're much greener.

As of 5.23.19 at 3:00 p.m.

- Resale values of existing homes are low due to the attractiveness of tax abatements.
- Please include homeowners of all guidelines. Don't listen to only those in Oakley and Hyde Park. While my husband and I do make good money the cost of childcare and gentrification has priced us out of purchasing another home in Pleasant Ridge. Mayor Cranley does not understand life outside of his Hyde Park circle.
- It breaks my heart to see what is happening to Hyde Park. Trees: gone. Original architecture: gone. Quaintness: gone. Soon we will be just another soulless suburbia.
- Even if I pay my mortgage off when I retire, my "downsizing" home is going to be very expensive.
- No matter what the County Auditor says, it is very difficult to fight the computerized revaluation of one's house. Specifically, it seems to be impossible to find out the addresses (and therefore the characteristics) of the houses used as by the computerized valuation system as "comparable" in setting the "value" of one's own house. Further, such "comparisons" are far too coarse. We have not made any structural changes to our home in 42+ years -- we have not enlarged it, we have not installed a new kitchen (last done in 1955), we have not modernized the basement, we have not replaced the block-and-tube wiring, we have not overhauled the bathrooms (one of the two was installed in 1910; the other was "modernized" in 1955) -- and yet our house is compared to houses with huge additions, new baths, new kitchens, new roofs, new wiring, full central air, new furnaces (ours was new in 1938 -- before WWII). Comparing houses solely on numbers of bathrooms and bedrooms is absurd; real live buyers in real housing markets look at the features and mechanicals and details of a building, and not just the number of baths and beds.
- Menlo Ave In Hyde Park has been basically destroyed by greedy developers who are benefiting from knocking down classic homes and building monstrous mansions with no green space and no concern for fitting into the architectural style of the street.
- There are two equally important problems regarding the issue of rising property taxes. 1) Concerns about fixed income seniors or legacy residents who can no longer afford to live in their homes. 2) Concerns over the rise of affluent homeowners wanting to live in tax abated houses just to avoid paying their full share of taxes for 10-15 years. Both of these issues must be addressed. They are both a direct result of the steady rise of property taxes in our City. All 52 communities of the City are different. Give decision making to the local community. Allow individual communities the ability to decide whether or not tax abatements should be granted in their community. Every community knows what is best for them.

As of 5.23.19 at 3:00 p.m.

- Move quickly. Developers are taking advantage of the city and making it more expensive & less desirable for those of us who have lived in the city our entire lives.
- We will most likely be leaving the city because of taxes and move to a neighborhood with better services for lower taxes.
- My extremely high Condo fee pays for services I use.
- I'm being priced out of my home. I'm not a senior, but my wage increases do not cover the increases in my property tax each year.
- Please consider again how EPH is being graded, because many of us live next to abandoned properties. Though, with Homestead, my taxes are fine, I have a neighbor who has 2 boarded up homes on either side of her and her taxes are over \$2000 a year?!? Her property may look good, but the neighborhood is going downhill and that should be taken into consideration.
- They should look into switching to a land tax. This will help prevent rich, out of city developers and speculators from buying and sitting on land that someone else could use. This would also discourage tearing down historic buildings to be turned into parking lots. This also would not punish someone for renovating their home with a higher tax bill. This could also prevent large retail companies from suing the city and/or county to reduce their tax bill by comparing their properties to closed retail stores, a tactic known as "dark store theory."
- Equality in values. Seniors should not pay property increases. after age 65. I never vote for levies. Do not take vacations so we can afford to stay in our home of 30+ years.
- Be productive don't drop the ball and let it fall through seniors need help we're on fixed incomes but yet these taxes keep climbing
- Higher property taxes will ultimately make homes harder to sell, which will just lower property values and it all will snowball...
- Eliminate abatements for high price houses.
- At the rate of incline in my taxes it has me looking to move from city and also out of Hamilton County
- My parents, who have lived in their house in Oakley for 43 years struggle to pay their tax bill.
- Property continue to rise and many properties continue to be in poor condition so property value for resale are not matching the county value
- With retirement on the near horizon for me, I am searching neighborhoods with significantly lower property taxes to be my final place of residence aside from the graveyard/urn. It is clear to me that with rising cost of living and retirement, corners need to be cut and the neighborhood with outrageous property taxes is number one on the cut list.
- Builders seek our neighborhood to tear down old houses or wooded areas - the charm we sought after and worked hard to obtain. Additionally, builders have the power to overtake the land we're paying high taxes on, change our landscape and

As of 5.23.19 at 3:00 p.m.

view, and then WE PAY for taxes for them. We are concerned that new builds in the 700ks will not have buyers when the abatements are over because there is not a large consumer group that will be in this buying range when the equity is up with taxes. How will this affect the longevity of our community?

- As the abatement and tear down of bigger homes for small row homes continues, more families will leave to other communities and there will be tax loss.
- The value of homes have increased enabling home owners to sell at top dollar. No need to complain about that. The area is doing fabulous!
- Make developers and businesses pay the same rate as everyone else. Stop putting the burden on residents.
- Also, reign in rampant development. In my neighborhood, developers seem to want a building on every scrap of land. Trees are important too! Enough Already!

OTHER THOUGHTS

- The process of developing a new abatement agreement should include data on non-financial measures of communal well-being.
- I called to see if I could be enrolled in a payment plan. I spoke with one of the rudest people, a woman. She scolded me about going through a ch 13 without putting aside for my taxes. What?
- Hamilton County is losing residents and investment dollars because property taxes are so much higher than neighboring counties.
- Been in this house 40 years and considering moving to another neighborhood.
- The property tax increases will an is forcing me out of the city.
- If this strategy was implemented in a for-profit industry, you would be fired.
- The community needs clarity on tax abatements. It seems poorly structured and hearsay makes it sound like it is reducing tax revenue to schools and causing the rest of the community to foot the bill.
- I hope that these responses will be taken seriously, and this work group can make a difference before it's too late. If not, I can assure you that I will be voting differently in the next local election.
- Thank you for the opportunity to weigh in.
- I hope that people on the committee will really listen to residents' concerns and not just treat the matter as an economic one.
- Please continue to work for the business, especially Mike Brown, he's done so much personally for the communities by always being tue face of charity, and let's keep the taxes so high old people and black people stay out of Hyde park, Oakley and keep them in Westwood and Avondale!
- Cincinnati Public School Budget for 2019 is \$610 million -- well over \$17 k per student. The incompetence starts with the CPS one-page budge announcement <https://www.cps-k12.org/news/whats-new/board-passes-budget-2019-20-fiscal-year> To quote exactly, via cut and paste, a laughable example of (1) poor writing and (2) lack of goals of skilled vocational work (which makes the world go round)

As of 5.23.19 at 3:00 p.m.

while promoting a goal of higher education and service academies (West Point for all!) -- when a large percentage of students show failure to grasp the high school material: "The budget invests more than \$11.8 million in My Tomorrow, the District's initiative to ensure all students graduate with a plan to pursue their chosen pathway: Enrolled in higher education; Enlisted in the military particularly the Service Academies; and ultimately Employed in a rewarding career."

- Stop gouging us!
- An action to protest to the City and County leaders from the Property Tax Working Group is needed.
- Make the meetings at a time when those working can attend. Seems exclusive -- 10:30 am meeting are for those who have nothing better to do than say nasty things about specific new builds or post constant whining messages on Next Door.
- Keep up the good work.
- I have attended the last two meetings and am excited about the progress that has been made so far.
- No one should have to succumb to bully tactics, in the disguise of development (gentrification).
- The current system is unsustainable. The property taxes we pay in Hamilton County/Cincinnati are on par with communities with much higher level of services. If you don't know what I mean, come look at the street I live on. It hasn't been paved in over a decade and it's a mess.
- Thanks for your efforts.
- I am so happy that you are finally addressing this issue. People will leave the city if this continues.
- I want to stay in neighborhood but can't afford it.
- Please feel free to contact me with questions: Megan Meconi
megan@cincinnati-spanish-school.com 513.391.9393
- I hope you really accomplish something tangible. So many of these "working groups" accomplish nothing. I am afraid I am not going to be able to afford my house any longer. I am 58 and have been in my house since 2005.
- I fully support an open dialogue regarding this, and appreciate what you are doing.
- We're moving out of Hamilton County.
- Thank you for the work you are doing. Something needs to be done to make sure the wealthy are paying their fair share of property taxes.
- Call me.
- This survey was a joke. It's not hard, stop giving people buying expensive homes tax abatements.
- Please help longtime residents!
- Thank you for conducting a survey
- Yes I do.

As of 5.23.19 at 3:00 p.m.

- Look what happened to Detroit. Look what happened to Cleveland. Do you want the same here?
- The retired residents help keep neighborhoods safer because they are in and out during the day when most working families are gone.
- Consider ALL residents, not just rich people and sports venues. Don't waste money. Make projects competitive—like federal IMLS grants that require research into need, best practices and evaluation. Don't throw money at things that don't work (esp. in schools. We spend a ridiculous amount for lousy results.)

4. What do you want to learn more about regarding property taxes?

TAXES

- New evaluations are going on now. I'd like to be in the loop on If the rate is going to be increased more than the rest of the county's average.
- How to get them reduced.
- How to get property taxes cut significantly for retirees.
- How to reduce them!!!!!!
- How we can make them higher, so I don't have to see poor people in Kroger's. Let them shop in Madisonville, Westwood and Avondale.
- Is there any chance of property taxes going down?
- How they are assessed by the auditor's office. What are the criteria?
- Ways to prevent an increase in property taxes of homeowners that struggle with pride to own a piece of the American dream.
- Why such a high percentage of taxes go to failing schools, how much of tax dollars go to students vs. teachers and unions, why are the city services so poor, etc. etc.
- Why are our taxes so much higher than similarly valued properties in many other cities throughout the country?
- Everyone, everyone I speak with thinks our taxes are WAY above what they should be. I would like to see how we compare to other "like" cities. Are we higher or is this just a perception.
- Ways in which things can be funded without constantly raising property taxes
- Why do taxes keep going up in general? Many of the roads and infrastructure around Oakley needs updating. Instead things have languished. I'm pretty upset about all this tax abatement stuff. Please do something to make a positive change.
- It seems that every tax levy proposed is placed on the shoulders of homeowners. I could be wrong but it is my understanding that only 38% of the City's population are homeowners. I understand the trickle-down effect thinking but the fact is the tax increases only immediately impact homeowners. So in a nutshell it seems that there are an awful lot of people voting for most of the tax levies that are put on the

As of 5.23.19 at 3:00 p.m.

ballot who will not have to immediately pay anything for the levies they are supporting.

- Cost/benefit analysis on the use of the property taxes
- I'd like to learn how we can reduce our property taxes.
- I want to seek ways to change the rate of our property taxes (and assessment strategies), and abatements to new builds. What I can learn to make this change is most beneficial.
- What is the Property Tax Working Group doing to relieve the burden of the highest property tax rate in Southern Ohio for all private property owners, not just senior citizens?
- The reason why property taxes are increasing while properties themselves are declining-is because they can get away with taxing people for the money they need-because they haven't invested in keeping up areas of town/streets/roads/etc. and that is only way to get money to make the improvements needed-we aren't stupid people!!!
- How to reduce it and how to stay in the city.
- To stop continual increases. It is also not right that since we live in Hamilton County, we have to pay all the levies for the city of Cincinnati, but we do NOT get to vote on them. People that do NOT own homes should NOT get to vote on issues that increase Home Owners taxes!
- Total property values 2. Total taxes 3. Tax per 1000\$ value 4. Total value of abated properties 5 lost tax revenue 6. Taxes per 1000\$ value if abatements repealed
- A better way to do things so people can fix up their homes and stay and be happy instead of waiting on tax and more tax and gas tax if they keep doing that they won't need to fix roads we won't be able to afford to drive so hope you come up with something.
- How to stop any increases for everyone.
- How do I get my house valued closer to the rest of my neighborhood?
- If there is anything property owners can do to help reduce these types of valuations
- How I can stay in my home for about 6k a year
- Why the property taxes are so high on a small house with a postage stamp size lot.
- I have talked to auditors. They use homes near Coldstream as our comparison. Not the same kind of hood.
- How you evaluate property when it is next to boarded up homes or abandoned property and why you aren't considering those problems when evaluating the property that is lived in and is kept up next to these structures.
- As much as you can tell me about REDUCING property taxes. Don't bother me with anything else.

As of 5.23.19 at 3:00 p.m.

- How homes are appraised and how the City sets its property tax millage every year.
- How to stop them going up!
- I want this over inflation of taxes in Oakley to stop immediately. Even if I can pay off my home before age 55, I'm not sure I can afford to stay in it due to the massive income taxes
- Why they keep going up at such a sharp incline.
- Why people vote for levies to pass and then complain later! Doesn't make sense!
- Explicit detail on how house valuations are arrived at. The simple-minded comparisons of houses with X number of bedrooms and Y number of baths is destructive and unrealistic.
- Would love to know the process of property tax changes, and the impact of continually increasing levies.

TAX ABATEMENTS

- They are not equitable.
- Tax abatements, where our tax dollars go, and how we compare to other metropolitan areas.
- I've learned as much as I care to learn.
- We are dismayed by the number of homes torn down and those rebuilt allow new owners to avoid paying property taxes while those of us who have lived in this community for 25+ years see our taxes go up and up.
- I'd like to learn when you will stop the terrible tax abatement policies in the neighborhoods where it is totally unjustified.
- Absolutely.
- How much revenue the city has given up over the past 10 years due to abatements.
- I know more than I want to know.
- How to get developers and new residents to stop trying to make a quick buck at the expense of the original residents.
- Why are abatements granted in Hyde Park or Mt Lookout?
- Why are you choosing to give people buy very expensive homes tax abatements?
- What can be done about the excessive tax abatements for large projects
- Why there is a necessity to have tax abatement in highly desired and developed parts of town, such as Hyde Park and Mount Lookout.
- How much money is lost through the abatements in rich neighborhoods? How does someone qualify for abatement? I heard that remodels qualify too.
- I want to learn how to end tax abatements for high-value properties throughout the city.
- What is the logical thinking behind the tax abatement program for million dollar homes?

As of 5.23.19 at 3:00 p.m.

- Is my understanding correct that property taxes are adjusted to arrive at a certain budget number, so if fewer are paying, those remaining will pay more in order to hit the budget number?
- What is the purpose of abatements given to developers to tear down viable houses and rebuild in a very desirable area of town?
- Why are such abuses of tax abatements not being stopped?
- Tax abatements on tear downs should be ended. Also there should be no tax abatements for putting cluster homes in Mount Lookout on a hillside that will lead to instability. This is just gaming the system. No tax abatements on any type of multi-family connected housing.
- How can we get control of and radically reduce criminally corrupt property tax abatements, right away.
- Why nothing has been done to stop the proliferation of the abuse of these abatements.
- How do tax abatements of new developments help current residents?
- How to stop the abatements in areas that do not need abatements.
- Why does the city seem so fixed on granting developers tax abatements in prosperous neighborhoods? Why can't the state fix school funding after it was mandated so long ago? Seems like a fix would have the possibility of lowering property taxes for all Ohioans.

GOVERNMENT

- More alternatives for limiting the displacement impact of current policies.
- How the tax abatement issue will be fixed. People will still live in highly desirable areas without tax abatements. How city will fix spending to control its expenses, so they don't have to put a levy out there for everything. We shouldn't be responsible for fixing the broken pension system for city employees.
- How the funding for public schools will change and yes, we sent our kids to CPS. Get rid of tax abatement for wealthy people- that was NOT the purpose.
- Rather than "learn", I would like to state to the committee members that you cannot continue to lump all the burden for taxes on residents through property taxes. It's not fair. I feel renters should carry some of the responsibility too. How about looking at efficiency of existing services as opposed to throwing money at a problem (thereby perpetuating that inefficiency)?
- This committee should work to provide specific instruction to ALL property owners as to HOW the valuations -- and therefore the taxes -- on their properties are determined here in Hamilton County/City of Cincinnati. The Hamilton County Auditor claims he does not have time to prepare a document that would provide explanations and examples. That is unacceptable. Government is a monopoly and government take from its citizens. In America, however, citizens have a God-given right to expect government to SECURE their rights, including their right to

As of 5.23.19 at 3:00 p.m.

property, not just take citizens' monies without explanation. Without clear understanding of how taxes are determined, citizens are robbed of information needed to challenge the workings of the tax law.

- Precise budgets for the programs funded by property taxes. Comparison with smaller cities.
- I want to know why we keep paying more and more and not getting the best bang for our bucks.
- Innovative ways other cities have protected low income property owners
- Does the city government look at ways to streamline its operations? There **MUST** be ways to deliver the same services for less money.
- That the city/county is going to fix what it has broken.
- It would be helpful to feel like we have a say. It would be helpful to feel like the system is fair, we can understand it, know where the tax dollars go, and are not going to be blindsided with rampant increases or unfair tax. It is difficult to face a 47% increase when there are tax abatements driving up prices and driving out residents, and when Cincinnati's streets are lined with litter to such a bad degree that it looks like Rumpke's roads, not our fine City's roads. More tax dollars collected individually should give that individual a sense of the communal value their ownership is contributing to.
- What the hell have the government employees at the city and county and state levels done with all of our property tax money, and why do they need so damned much more each year, like ravenous beasts. Just because now-retired "public servants" made pension promises governments cannot keep is no reason to jigger the property tax system so home owners have to pay huge percentages more each year, especially when so many of us are essentially on fixed incomes because of retirement. (2) Why people who do NOT own property get to vote on property tax increases. (3) How to *****severely***** limit the annual percentage increase in property taxes. Ohio **MUST** find citizen leadership to put a California-style Prop 13 on the ballot and get it passed.
- How we can support changing the economic divide which can cause this city to fail
- How to make **EVERYONE** pay their fair share. Maybe there's a way to add a fee to the realtors and builders commissions to make up for the tax shortfall from all of these abated properties that will keep out taxes more reasonable and make them think twice about their disgraceful behavior.
- How to preserve our neighborhoods. Encroaching land development is destroying the community spirit and pride of Cincinnati's Oldest Neighborhood.
- Where does all the money actually go? My street is totally torn up due to the new construction. I assume I'm paying to fix the damage since the abatements will let the buyer and developer off the hook. The developer will enjoy a profit; the buyer will enjoy 10-15 years of taxes.
- Details on the appeal process. We have been successful with two of our four appeals. People need to know how to do this

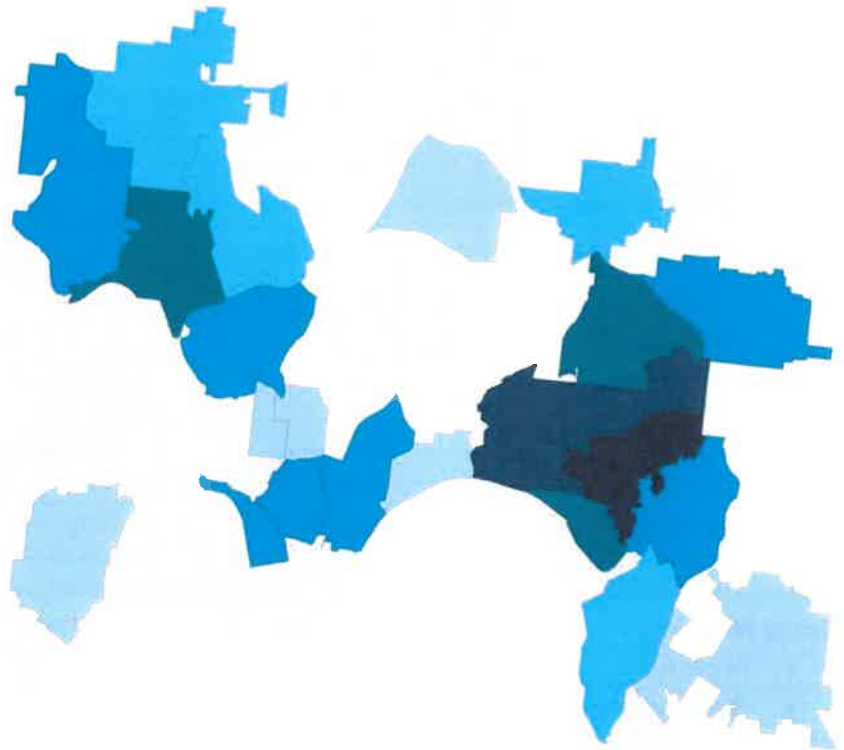
As of 5.23.19 at 3:00 p.m.

- These are government paid in employees, we need transparency.
- Where exactly does all this money go? Where can waste be eliminated?
- I'd like to know if this trend will continue or if there is anything I can do to meet the increases.
- How can the Board of Revision raise someone's taxes just because they want to? Even if my neighbor's house is sold for a certain amount or valued at a certain amount doesn't mean that mine is. My house is basically in the same condition as it was when I purchased it
- I prefer the city dispel the myths of tax abatements. 70% of tax abatements quoted in news are churches and government buildings
- How to lower taxes
- Where they are lower.
- Every time I turn around, another Levy is increased, mainly because there are so few residents paying their fair share of taxes. The homeowner rate in the city is less than 40%, I believe.
- When the fuck will I stop paying for sport stadiums and start paying for things that will improve the lives of me and my neighbors.
- More transparency for the determination of what neighborhoods are considered target neighborhoods
- Data letting people know where property tax rates in Cincinnati stand in comparison to the rest of the region and country.
- How to reduce them. Election levies are voted in by everyone, not just homeowners but we have to bear all the cost.
- Why they stare so high? How increased taxes make it on the ballot
- What the school board uses the preschool promise money actually on.
- How it's determined how much they need to be/increased to year over year
- In Hyde Park has been basically destroyed by greedy developers who are benefiting from knocking down classic homes and building monstrous mansions with no green space and no concern for fitting into the architectural style of the street.
- how my hard earned money is being wasted.

PROPERTY TAX WORKING GROUP | PUBLIC EXPERIENCE SURVEY RESPONSES

Survey opened on July 24, 2019 was open for 45 days. 465 responses were received from 22 neighborhoods.

QUESTION: What neighborhood do you live in?



1-2 responses	3 responses	4-7 responses	31-40 responses	101 responses	211 responses
Clifton Heights (2) East Price Hill (2) East Walnut Hills (2) Bond Hill (1) Corryville (1) Mt. Washington (1)	College Hill East End Mt. Auburn Pleasant Ridge Spring Grove Village	Madisonville (7) Walnut Hills (7) Linwood (5) Clifton (5) Mt. Airy (4) Over-the-Rhine (4)	Oakley (40) Columbia Tusculum (30) Northside (21)	Hyde Park	Mt. Lookout

Other (Fairfax): 4 responses

QUESTION: What do you like best about your neighborhood?

Main Takeaways

Location

- Proximity to downtown
- Proximity to other neighborhoods/amenities

People

- Neighbors
- Diversity

Walkability

Natural Environment

- Trees
- Green spaces
- Views

Built Environment

- Unique architecture
- Historic/old homes
- Redevelopment

Character

- Charm
- Eco-conscious
- Neighborhood/community feel

Amenities

- Schools
- Libraries
- Shops
- Restaurants

Safety

Answers

Bond Hill

- History
- Real estate
- Residents

Clifton

- The older homes.
- Walkability (2)
- People can go to Ludlow and parks and events with a sense of community
- Schools are available nearby
- All the green space, trees, and gardens
- That the neighbors truly know each other. That we have passionate people ready to lend a hand.

Clifton Heights

- Walkability and proximity to downtown
- Walkability to nearby parks, U.C. and 3 different business districts.

College Hill

- Diversity (2)
- New businesses coming into the business district (2)
- Ethnic mix, good neighbors, walkability

Columbia Tusculum

- Age
- Location and Proximity
 - Proximity to downtown (6)
 - Walkability to businesses
 - Close to HP and Mt Lookout and downtown
 - Close to town, but out of the big city bustle.
 - Walkability
 - Easy access to Lunken, shops, etc.
 - Walkability to neighborhood shops and restaurants
- Neighborhood Character and Environment
 - Charming old houses
 - Diversity of housing stock.
 - Eclectic painted lady homes
 - A beautiful street
 - Historic homes
 - History and community
 - History and location.
 - Mature trees and established homes
 - Neighborhood “feel”.
 - Parklike setting.
 - nicely kept property
 - Parks
 - Views (2)
 - Quiet clean streets, Larz Andersen park
 - Safe. Quiet. Nice architecture.
 - The hills and privacy
 - The historic homes
 - The restaurants
- People
 - Friendly neighbors (2)
 - Mix of all ages of people
 - Neighbors (2)

Corryville

- In the city, but not really. It's 15 min from everywhere I typically go.

East End

- Urban feel
- Riverview (2)
- Mixed-use
- Close to downtown
- Safe neighborhood and clean
- Walkability to restaurants/bars

East Price Hill

- Development is happening.

- Great community feel around the incline district.
- The diversity of the community

East Walnut Hills: I'm within walking distance to several restaurants and breweries.

Hyde Park

- Location, Walkability, and Proximity
 - Walkability (34)
 - We like the walkability of the neighborhood and proximity to so many restaurants and shops. (2)
 - Walking my dog.
 - Walkability to square
 - Walkability to local coffee shops and bars and restaurants and central location and close to downtown
 - Walkability to stores and restaurants (2)
 - Walkability to restaurants and stores
 - Easy access to highways and downtown
 - Location (2)
 - Convenient (2). Bus service is ok, but could be better.
 - Easy access to many places
 - A lot of people are walking and running
 - The ability to walk and enjoy the character of the homes. People out on their front porches saying hi, people running, biking and out with their kids. We know all of our neighbors, It is important, that builds the fabric of a neighborhood.
 - I can walk to everything I need. (2)
 - Easily accessible from I-71 (2)
 - Proximity to many amenities including parks, restaurants, shops and downtown.
 - Proximity to Hyde park and Mt. Lookout squares
 - Proximity to diverse attractions/activities in Cincinnati.
 - Proximity to downtown and major highways, walkable, bike trails
 - Proximity to downtown (6)
 - Proximity to downtown, parks, walking, restaurants
 - Proximity to school, shops, restaurants, etc.
 - Proximity to airport, other neighborhoods of interest.
 - Proximity and ease of getting many places including downtown
 - Close to shopping of all types
 - Accessibility to Ault Park, HP Square, ML Square, Oakley, safety and side walks
 - Close to everything (2)
 - The closeness to the square and three shopping areas and lots of restaurants.
- Safety
 - The low crime rate of the neighborhood (5)
 - Safe environment for families with kids.
 - Safe (15)
 - Stable
- People
 - Diversity of people (3)
 - A decent income mix so those of us at lower end don't feel ostracized.
 - Friendly neighbors (6)

- The people
- Neighborhood Character and Environment
 - Trees (5)
 - Beautiful tree lined streets (2)
 - The mature trees
 - There are many large mature trees which helps in making Hyde Park a pleasant walkable neighborhood.
 - Variety
 - Cleanliness (4)
 - Clean and not littered for the most part.
 - Parks (2)
 - Restaurants shops and entertainment (3)
 - Charm of mature neighborhood (4)
 - Diversity of properties
 - Mix of residential and commercial space
 - Neighborhood feel/character (2)
 - Square
 - School (3)
 - Parks
 - Character (3)
 - 1920s feel
 - Historic preservation and urban but community feel
 - Attractive architecture.
 - Family friendly
 - Quiet streets (4)
 - Small friendly community with sidewalks and before recently (last 3 years) not much traffic.
 - Small town feel
 - Scale of neighborhoods
 - Old neighborhood with character (2)
 - Beauty (5)
 - Environment
 - Lots of green space
 - Quaint streets, not a cookie-cutter neighborhood. We just moved from Anderson Twp.
 - Amenities within walking and biking distance.
 - Manageable traffic
 - Yards
 - I like the sidewalks, the shady streets
 - Feeling of community
 - The fact that there are sidewalks.
 - I used to love my neighborhood but new people are moving in and doing a lot of complaining. What happened to the good old days when people had a problem with a neighbor they talked to the neighbor instead of complaining to the city.
 - Historic character
- Housing
 - Well-kept homes (5)
 - Great classic homes (2)
 - Old homes and historic buildings (15)

- Character of the houses (3)
- Small and large well-built homes, many nearly 100 years old like ours
- The variety of types of houses, new and old. (5)
- Old homes that don't all look alike
- Mix of rental and purchased homes/condos that invites a variety of economic groups to live together
- Hyde Park is a charming neighborhood with a variety of beautiful older homes. Each home has it's own character and personality.
- It's my home. I went to school there, I go to church there, the library, restaurants. I don't care if it's the most upscale or lowbrow area in the city. When I get there, I am home.
- Schools

Linwood

- View
- Friendly neighbors (2)
- Close to Ault Park (2)
- Convenient to work, shopping and downtown
- The old houses and the mature trees.
- It is physically split so it does not feel like a neighborhood.
- More affordable house still close to Hyde park, Oakley, Mt. lookout, Columbia Tusculum

Madisonville

- Revitalization
 - New development
 - Redevelopment
 - The job MCURC has been doing
 - Revitalization in the business district (2)
 - Nice to see houses getting fixed up after decades of disinvestment.
- Location
- Convenient to Cincinnati attractions, yet still small unindustrialized neighborhood.
- People
 - Diversity
 - How much people care about our community
 - Friendly people, great neighbors
- The character of the houses.
- Excellent tree canopy, plentiful green spaces, focus on gardening

Mt. Airy

- Hmmm.....that my house is paid off! That's about it - come take a look at our high #'s of Section 8 housing/60% rental/fastest declining neighborhood in the city
- My house
- My home in a small condominium community.
- Ease of getting to interstates.

Mt. Auburn

- Location
 - The location is very well connected by foot and bus

- It's walkable to downtown and OtR while being cleaner and quieter than both of them.
-
- The architecture and trees
- Friendly neighbors.
- Close to downtown (22)

Mt. Lookout

Location, Proximity, and Walkability

- Walkability (58)
 - Lovely tree-lined streets, sidewalks make it walkable
 - Walkable squares (2)
 - The act that it feels like a real neighborhood and a small town all wrapped into one. The ambiance of an established well maintained safe and walkable neighborhood.
 - I can walk to do all my business and know all of the owners.
 - The ease of walking it is as not commercial as other areas.
 - Walkability to shops (2)
 - Tree-lined streets, within walking distance of shops, restaurants, and library.
 -
- Location (16)
 - Location (proximity to downtown/commercial district/fairly quiet
- Access to downtown, restaurants, church, groceries, parks.
- Close to downtown (13)
- Convenience (5)
- Central location (2)
- 10 minute drive to most places, so good location (2)
- Close to everything (4)
 - Close many amenities in my area, all within walking distance (hiking trails, restaurants, coffee shops, etc.)
 - Good access to highways, transit, easy access by foot to Mt. Lookout and Hyde Park Squares and even Columbia Tusculum and Oakley.
 - Close to retail/dining (2)
- Proximity
 - Proximity to activities and downtown, events, people
 - Proximity to Ault Park/parks (14)
 - Proximity to restaurants, stores
- Highway

Neighborhood Character and Environment

- Active neighborhood
- Ambience
- Beautiful (7)
- nice parks, good dining and shopping nearby
- Trees (27)
- Natural beauty. Big mature trees that provide beautiful shade and clean the pollutants out of the air we breathe. Little pockets of green spaces that provide much needed habitat

for our dwindling population of local wildlife. These are what makes our neighborhoods unique and beautiful— not clustering houses.

- Walking on the sidewalks with mature trees providing shade and admiring the variety of architecture
- Tree lined streets
- History, privacy
- Character (7)
- Quiet (11)
- Quiet streets (4)
- Sidewalks (5)
- Parks and green space (19)
 - Beautiful parks with beautiful wildlife.
 - Pockets of green space in a largely
- Diverse architecture
- Aesthetics
- 2 great squares
- Well maintained properties
- Upscale urban
- Unique character, generally well maintained homes in a safe neighborhood with Easy access to pill hill, and shopping.
- Charm
 - Old home charm gives a true neighborhood feel. (2)
- The wooded area behind our home which is currently endangered by overdevelopment.
- Quaintness of the neighborhood.
- The friendliness of the neighborhood. The vintage architecture (1930). Though in the city we are surrounded by nature. the historic look of the homes
- The feeling of country green spaces while being close to the city.
- Our street provides a suburban feel within the city.
- Stability
- Social life, diversity and history.
- Scale, maturity, stable assets, solid value
- Lots of green, space between houses
- Comfortable, friendly, mature neighborhood
- Natural amenities - urban environment with mature trees.
- Mt Lookout has "character" that is worth preserving.

Housing

- Beautiful old homes (27)
 - Older houses with personality — not the tickytac of suburbia.
 - Architecturally interesting and historical houses (2)
 - Charm - The charm that all the unique old homes bring to it.
 - Unique houses— not cookie cutter tract homes packed tightly.
- The older homes with mature landscaping that are well tended and welcoming.
- Homes with porches
- Classic homes
- Diverse/unique architecture
- Mix of homes (5)

- Homes with porches
- Housing stock
- Older homes in a park like setting.
- The character and feel of older well designed and properly proportioned houses (2)
- The way homes are kept up, the homes are older and more interesting.
- The diversity of houses and architecture and the feel of inclusiveness.
- Well built homes
- Scale and density of development, mix of housing types/sizes, lack of McMansions (although declining...)

People (8)

- Friendly/involved/kind neighbors (32)
- Community spirit (11)
- Diverse
- The community. We have raised our children here and have lived in same house for 31 years...looking to move as taxes are always increasing and too high for us in our future retirement!
- Mix of older and younger singles and families
- Variety of interests, different ages
- Feeling a part of my city (unlike suburbs) and neighbors who also share this value
- Kids are similar age to ours, not far from elementary school unique main square, the absolute calm of living here.
- The close friendly atmosphere of the neighborhood.
- A GOOD MIX OF SENIOR & YOUNG FAMILIES
- great place to raise a family

Safety (31)

- Peaceful safe neighborhood
- Safe and friendly, great place to raise kids.
- I love that it is safe, clean, and dog friendly.
- It is safe and clean!
- Low crime rate (4)

Amenities

- Schools (16)
- Useful and convenient businesses in Mt Lookout Square.
- Amenities like restaurants and shops
- Local businesses (4)
- The proximity to other services and activities is very important to us and one of the reasons we moved here over 20 years ago.
- Mt. Lookout Swim Club
- Good restaurants; no congested retail thoroughfare(i.e. Beech Mont Ave)
- Coffee shops, Mt Lookout and Hyde Park squares
-

Other

- The fact that my property taxes were increased by an additional \$6,000.00+ per year and my new home is tax abated. Now that's fair!!!!
- Investment to improve housing
- That I have lived there for a very long time and have friends there and find it convenient for my needs.
- Property value

Northside

- People
 - Sense of community (6)
 - Neighborhood engagement
 - Community involvement
 - Community experience
 - Diversity (6)
 - Its diversity---or when it was more diverse
 - Mix of people and incomes
 -
- Amenities
 - Good restaurants.
 - Happen Inc.
 - Amenities
 - Awesome food scene
 - Liveability
 - Good range of services (restaurants, bars, shops, etc.).
- Environment and Character
 - Pet friendly.
 - The culture
 - Eco-conscious
 - Historic
 - Progressiveness
 - Architecture
 - Entertainment
- Location and Walkability
 - Walkability (8)
 - Proximity to downtown (2)
 - Great public transit access
- That my house is way over valued so I can escape the decline of a once amazing neighborhood.

Oakley

- Location, Proximity, and Walkability
 - Walkability (15)
 - Being able to walk to most of the stores I shop at
 - Close to downtown without being downtown.
 - Close to downtown and restaurants, bars, and shops in walking distance
 - Convenience (3)

- Centrally located (2)
- The location - it's convenient to almost everything. (3)
- The walkability to shops and restaurants.
- Proximity to bars, restaurants and other social venues. (2)
- Walkability to everything and the niche stores around me.
- Close proximity to restaurants shopping and the highways.
- Close to many activities (2)
- Amenities (2)
 - Great places to eat.
 - The shopping
 - Great local businesses
 - good public neighborhood school
 - Access to lots of shopping, restaurants and entertainment
 - The square
- People (2)
 - I know my neighbors and we watch out for each other.
 - Neighbors (2)
 - Friendly
 - Nice
- Neighborhood Character and Environment
 - House charm
 - Charm of neighborhood (before all the demo and building)
 - well-kept properties,
 - Historic homes
 - Wide street, older homes, older shade trees
 - Family friendly (2)
- Safety
 - Low Crime
 - Safety (4)
 - Safe and stable
- I have been in this neighborhood for 25+ years. I like knowing the shop owner and my neighbors.
- Not so much anymore, it's overcrowded now & getting worse. Problem is I'm old & nobody cares. We just cater to the younger generation who know it all & most know nothing. Also the developers who get their money & run.

Other (Fairfax)

- Small and peaceful
- The safety and great school system.
- Nice, safe community with smaller homes with a great school district, until recently. A lot of smaller house are being torn down and bigger houses being built and sold for almost double because of the tax abatement incentives.

Over-the-Rhine

- Diversity
- Close proximity to my employer
- Walkability (2)
- Amenities: library; WMCA; future new Kroger

- The people, the architecture, and the things to do within a walkable distance or via public transit.

Pleasant Ridge

- Access to public transportation
- Neighbors
- Diversity
- Nice homes in different price points
- Neighborhood businesses
- Library
- Active community organizations

Spring Grove Village

- Safest neighborhood in District 5
- Diversity, history, safety and agricultural assets
- Close to everything but quiet
- Long term close knit community

Walnut Hills

- Location
 - Proximity to work and my children's schools
 - Being able to walk to Eden park, groceries (with Food Forest) and restaurants/nightlife.
 - Proximity to downtown and the east side neighborhoods.
- People
 - Neighbors
 - Diversity
 - Friendliness of the people.
 - Great diverse neighborhood with wonderful people.
 - The community
- Affordable housing
- The dense/city feel but with a bit more space.
- The Community Gardens
- Historic Architecture (2)
- All the new commercial and residential development that's taking place.

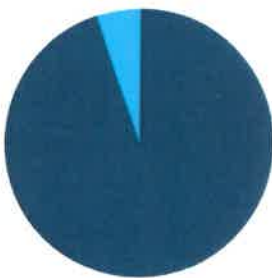
QUESTION: Please select the criteria that apply:

Main Takeaways

- The majority of respondents are not struggling to stay in their home as a senior/person living with disabilities/special needs
- Only 72 people are/know a senior/person living with disabilities/special needs struggling to stay in their homes
- ¼ of respondents are working for a community organization
- Almost all respondents are homeowners

Answers

I am a homeowner.



95% homeowners
5% non-homeowners

- 433 of the 456 respondents are homeowners
- 54 of these homeowners live in a home with multiple generations
- 72 of these homeowners are or know a senior who is financially struggling to stay in their home
- 23 of these homeowners are or know a person living with disabilities/special needs who is financially struggling to stay in their home

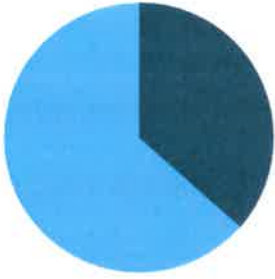
I live in a home with multiple generations.



12% living in a
multi-generational home
88% not living in
multi-generational homes

- 57 respondents are living in a home with multiple generations
- 54 of 57 respondents living in a home with multiple generations are homeowners

I work/volunteer for community organization or organization working on issues related to seniors and/or people living with disabilities/special needs.



- 167 respondents work/volunteer for a community organization
- 26 of the 166 work for an organization working on issues related to seniors and/or people living with disabilities/special needs
- 34 respondents total work/volunteer for an organization working on issues related to seniors and/or people living with disabilities/special needs

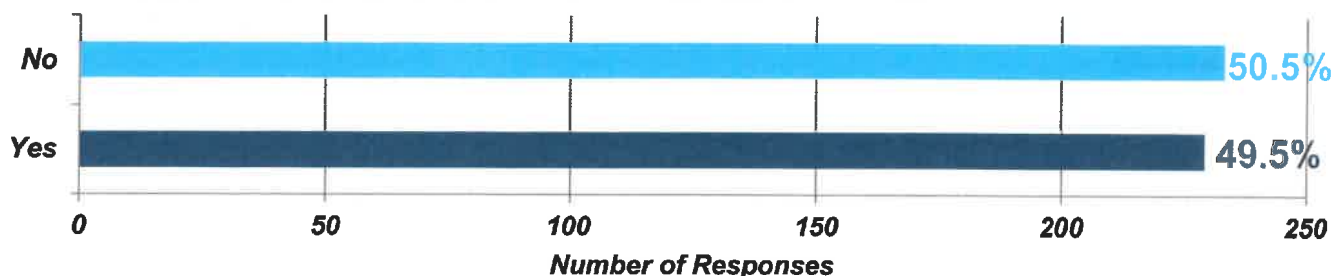
I am or know a senior or person living with disabilities/special needs who is financially struggling to stay in their home.

- 26 respondents are or know a person living with disabilities/special needs who is financially struggling to stay in their home
 - 23 of 26 respondents are homeowners
- 89 respondents are or know a senior who is financially struggling to stay in their home
 - 81 of 89 respondents are homeowners

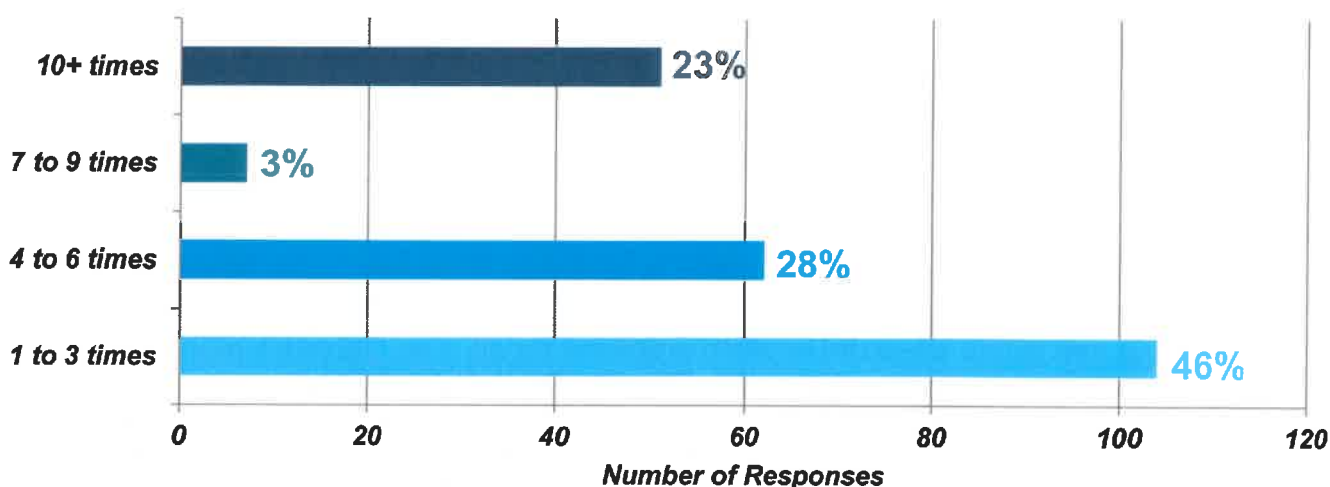
5 respondents said none of these criteria applied to them

As of 9.6.19 - FINAL

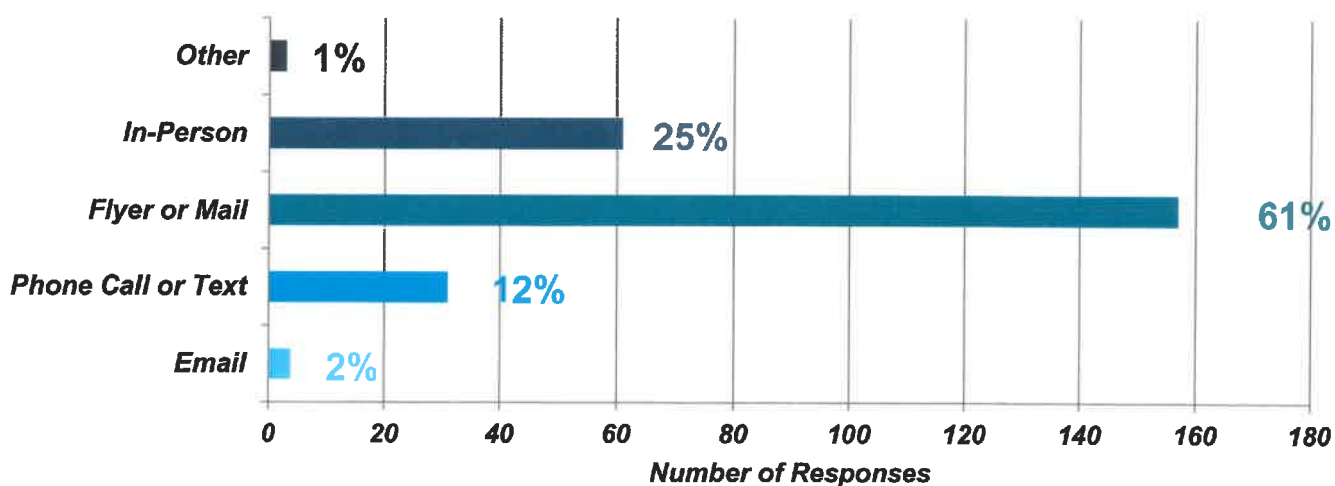
Have you or someone you know had an experience being approached by a developer/investor wanting to purchase your home?



If so, how many times have you or someone you know been approached?



If so, how were you or someone you know approached?



Other responses include: Real estate agents monitoring property tax slip-ups; through a realtor; Developer wanting to know how to approach the community regarding proposed development.

Note: Some respondents noted multiple methods of communication.

The Property Tax Working Group has been exploring how high property taxes are affecting seniors and people living with disabilities/special needs. Can you think of another population group that is struggling to remain in their homes due to rising property taxes?

Main Takeaways

- Everyone (43)
 - Families (2)
 - First time homebuyers (14)
 - Fixed income individuals (12)
 - Landlords
 - Property owners (18)
 - Renters (8)
 - Seniors (4)
 - Single parents (14)
 - Single people (10)
 - Unemployed (4)
 - Working and middle class people/families (41)
 - Working poor/low-income individuals/families (36)
 - Younger generations (47)
- ** (#) = responses

Answers

Everyone (43)

- I would say that EVERY population group is stretched to pay the overly high taxes in the city. It makes every person truly question the logic of living within the city limits.
- The rising real estate taxes are causing problems for all. Our city has a real estate tax problem which needs to be addressed. The Cincinnati Public School system is the largest problem and needs to make cuts to pensions and expenses
- I think the rising property taxes are hard for everyone, especially families. You find a home you can afford and the taxes keep going up.
- Rising property taxes affects everyone. When taxes go up, some portion of your income is affected and can impact your quality of life.
- Regular people with all kinds of employment. High taxes also prevents people from fixing roofs, driveways? Painting etc
- People who work for a living
- Many folks as they are becoming ridiculous. Many things keep getting passed from voters that increases our taxes. Many of those voters don't own their home and aren't saddled with these ever increasing taxes.
- ALL "population groups" are being hurt by ever-higher taxes. Even "first home" owners in Oakley and Madisonville have been blind-sided with tax increases of 40% and more.
- Anyone who lives in the city - the property taxes are very high compared to Indian Hill or other communities they have more / better services
- At the rate taxes are going up, it will soon be most people.
- Everyone who pays property tax. Many have property tax rebates.
- Everyone- it's a huge burden to put all levies and financial responsibility on homeowners when everyone including renters and visitors benefit from the services we homeowners pay for. A sales or use tax would be so much fairer and paid in part by non-Hamilton County people.
- Everyone is paying more in taxes which makes moving out of the city more appealing.

- Everyone is affected by high property taxes. We need to be more financially accountable with our budgets and increases or entitlements.
- Everyone who hasn't received an abatement. (2)
- Everyone! The property tax rates in the city are outrageous and would be the primary reason I would move to Indian Hill or Sycamore Township.
- Everyone in the US. Property taxes are very high in general. we need to push to lower property taxes in Hamilton County as a whole but not in a way that prevents home improvements and relevance for the next 100 years
- Everyone? Working normal people that want to live in a safe neighborhood but are just working class. Yes I could move to another neighborhood further out from downtown, but commute increases and I want to keep my kid in the same school
- Everyone. I'm not voting for any new property taxes.
- Given the uncontrolled increase in property taxes, this answer could apply to anyone living in the city of Cincinnati
- Lets not act like just the common resident doesn't find the property tax rate offensive and has to alter their spending to pay their property taxes. My wife and I are successful (retired attorney and a still working entrepreneur) but we are seriously considering leaving Hamilton County. It is rare that I see higher tax rates when checking the weekly NYT and WSJ home values and taxes.
- It's not just age or special needs related. People are working two jobs to keep up. Singles are struggling. Couples who decide to have one parent home to raise kids struggle.
- It is an issue for all city residents. At a recent Oakley Community Council meeting, a developer mentioned Cincinnati property taxes were similar to what they see in DC. Taxes are pricing all residents out of buying in the city.
- I think everyone... all ages, are struggling to pay these astronomically high taxes. Even if you're not struggling, it's still ridiculous to be paying such high taxes.
- Why limit this to seniors??!! Unfairness is unfairness at any level. It is outrageous that people can tear down a perfectly good home and with the city's support put up a house that is fundamentally unsuitable for the neighborhood and with property taxes that are WELL below other homeowners.
- While I agree that the groups you mentioned are likely struggling with high property taxes more than average, we all are. We used to rent, and we bought our home 3 years ago. Taxes were already bad by then, but according to my calculations, taxes are almost 20% higher since then. They should not be up so much.
- The tax structure is becoming prohibitive for everyone in our area due to the excess of abatements. The "regular people" are having to fill the same bucket while those who can afford new construction or significant remodels pay nothing
- The sudden rise of property taxes is affecting more than just seniors and legacy residents. Many residents across the board are being hit hard in their pocket books, especially in my neighborhood.
- Anyone! Why limit to just seniors and special needs? This community is crawling with people unable to afford/stay in their home or apartment
- All taxpayers are experiencing the same difficulties as seniors and the disabled in keeping up with payments. It doesn't make sense to create a new special interest group that is carved out of real estate tax payments as a way to combat this - as it just increases the burden on everyone else and affects every other group exponentially more.
- Everyone who leaves the city partially does so due to higher taxes in the city

- I think a lot of people who have lived here for a long time and intend to live here for a long time feel stressed. The development going on with very high priced houses is being driven by the financial imbalance of the tax abatement, a development too intended for lower income neighborhoods. We watch valuations be driven higher by these sales and our taxes, already high, go higher. I worry we will lose starter homes, young families etc

Families (21)

- Families also. Our property taxes keep rising also and soon we will not be able to afford to stay within this neighborhood
- Well us! We have three kids in college and these rising property taxes are a struggle.
- Those with multiple, school aged children.
- The everyday family with multiple children that do not use the City School system and rely on the parochial and private school systems
- Yes, families like mine trying to help pay for college and keep up with the never ending increases in our property taxes
- Parents with children in grades k-12. Hyde Park is a great neighborhood, but the schools are not good. Many parents in HP choose to send their children to private school, so we pay rising taxes and tuition.
- Families relocating to Cincinnati from other cities.
- People that are earning a middle class or upper middle class job, especially those raising families.
- People starting a family
- All families as taxes rise families have to divert funds from maintaining their own property to just paying taxes which has a negative impact on our communities.
- Families/individuals across the city whose property taxes necessarily are higher to compensate for abatements.
- Families who pay private school tuition due to CPS failures.
- Families of all ages, trying to save for college, retirement and get through all the day to day expenses.
- Families in general. Taxes are soaring and the cost of child care or school programs are going up too.
- Families in general
- Large Families. We love our neighborhood, but the increasing taxes make us look at homes outside of the city.
- Large families with a fixed income.
- I know of families that have move out because they couldn't afford the cost of living here

First Time Homebuyers (14)

- 1st time home buyers. It is much more difficult to cash flow with the increasing property taxes.
- First time / young homebuyers and those buying older homes that need a lot of maintenance due to years of neglect
- First time homebuyers of unabated homes
- First time homeowners and those just starting out in their career that might have lower finances.
- First time home owners that are not getting abatements.
- First time home buyers. They don't expect expenses to rise exponentially.

- How about people who are even trying to get into the home ownership market? Property taxes have risen so much that it makes it hard for people to even get into the market for starter homes.
- It makes buying a new home difficult for 1st time buyer. I can easily afford my mortgage payment but when you add property taxes it almost doubles.

Fixed Income or Flat Income Individuals (12)

- Any fixed income property owner
- Anyone on a fixed income or doesn't receive 10% annual raises. That's how much my taxes went up in 1 year.
- Anyone on a fixed income could find it difficult to stay in their home because of the real estate taxes.
- Anyone. Wages have been flat while property taxes increased
- Anyone whose income is not increasing at the rate of inflation and tax increases.
- Anyone whose income is growing more slowly than the rate of property tax increases and does not have the accumulated wealth to absorb those increases.
- Anyone who's income can't keep pace with the rate at which we raise property taxes.

Landlords

- we have rental property on our street. The rent goes up as well, when a rental owner can no longer find people who can pay the type of rent required to pay the rental mortgage, the owner is much more likely to sell to a developer for quick money. that affects the entire street.

Middle-Aged Adults (4)

- Even middle aged adults in our neighborhood (age 45-60) have talked about potentially moving away because of increasing property taxes making neighborhood unaffordable for them. I do not want my friendly neighbors who have lived in and contributed to the community for decades to feel financial pressure to leave because of property tax increases. They deserve to be here and should not be punished financially because they have owned homes for decades before the tax abatement laws came into place.
- People Approaching Retirement

Minorities

Other

- I'm not a senior yet, however I've lived in my home for 51 years!
- I am a retired senior and lived in my home for 20 years. During that time, I have had drug dealers living down the street, 2 young men murdered on my street. I paid my taxes and mortgage and continued to be a good Madisonville citizen. Property taxes have doubled in the last 2 years. My pension is just enough to disqualify me for a tax abatement. There are businesses and churches that are buying up property and receiving tax abatements. Eventually, the properties will be turned into for profit properties. So where is my incentive to continue to pay double taxes as a private citizen?
- Just about everybody in Mt. Lookout
- I think anyone living on a street that has new homes being built that receives abatements and the city charges current homeowners higher taxes based on the value of the new homes.

- I think it is disgusting that high-income individuals purchase new construction in highly desirable areas and receive tax abatements. Why should I subsidize homeownership for these individuals? The Oakley housing market is brisk - we don't need incentives for people to come live here. It also encourages the destruction of historic homes.
- Yes. Ya! Our taxes went up 40% last year. We bought a reasonable priced house and now might have to move due to property taxes.
- Yes. At the current rate of increase we will be unable to pay our taxes in 10 years.
- What high property taxes? They are very reasonable in Cincinnati.
- We are now allowed to claim only \$10,000 of state and local taxes. Since we are retired, Property taxes of almost \$20,000 are our biggest single biggest expense.
- We are not struggling financially to stay in our house, but mentally we are (pissed off) We contemplate leaving the area often because of the unfair tax abatements for the rich!
- Those with other priorities than financially sacrificing for the sake of living in a particular neighborhood. i.e. Those with children who the parents decide should go to private schools rather than CPS.
- Tax payers Mt Lookout and Hyde Park are paying too high of property taxes which is a financial struggle
- Even though my husband and I can technically afford the property taxes, they are far too high considering the lack of social services and disorganization of city government and services. It is a disincentive to living here and one reason we are considering moving.
- Education debt for 30-50 year olds
- Feel that anyone who is living in Hyde Park area is struggling, if you live in an older house and keep it updated your taxes go up and in the meantime people are tearing down houses and getting tax abatement. We are paying all the taxes for Cincinnati
- I know some long time Hyde Park residents who are having some trouble. Seniors in smaller homes that bought for much less in the '80s .
- Not just seniors, the average Joe homeowner in Mt. Lookout / Hyde Park pays a hefty amount in property tax, almost making it unaffordable to live in this area.
- No, but I know people who have to consider the high taxes in order to buy. It is affecting the parts of town they can afford to move to. The threat of rising property taxes is on their mind , too, with the way city council and the county commissioners have been behaving.
- I can technically afford it but can't justify it. It makes no sense for me to pay \$18-22k a year locally while families in my neighborhood live in similarly valued platinum LEED homes and pays a fifth of that. Meanwhile I keep hearing the city is under-funded. I also moved to the area for Kilgour which is now over-crowded, partially because of an influx in abated families. (This info was mentioned by a PTA parent who attended a Mt. Lookout City Council meeting.) The lack of common sense and fairness is too much for me to justify when I could move out of the city limits and split the tax burden more evenly with other residents. I drive around Mt. Lookout and Hyde Park feeling SO much resentment at all of the new construction. I feel a piece of our city's soul fades with each one. This isn't just about who can/can't afford to stay in their homes (though that is also important.) It's about FAIRNESS and reason too. I and many other residents feel betrayed by our city that this program remains in effect with no end date on the table.
- Property taxes rise because property values rise. Some individuals want to enjoy appreciation, but don't want to pay the associated taxes. Would we prefer the values of our real estate decline to pay less in taxes?

- Owners of older homes in Mt. Lookout who are carrying the tax burden for tax abatements on new homes in Mt. Lookout. Tax abatements are not necessary in Mt. Lookout due to the desirability of the neighborhood. Tax incentives are not needed in Mt. Lookout to encourage upkeep of existing homes or prudent development of new homes.
- Not just seniors, the average Joe homeowner in Mt. Lookout / Hyde Park pays a hefty amount in property tax, almost making it unaffordable to live in this area.
- No, but I know people who have to consider the high taxes in order to buy. It is affecting the parts of town they can afford to move to. The threat of rising property taxes is on their mind, too, with the way city council and the county commissioners have been behaving.

Property Owners (18)

- Possibly people who purchased homes with a tax abatement that has run out.
- Everyone, that bought their home for a low amount and it keeps going up extraordinarily every 4 years
- All home owners are being impacted negatively by the out of control increases in property taxes. Our taxes are being used to support too many infrastructures. We do not need separate city and county governments and have each community supporting their own first responder systems and school districts. There is tremendous inefficient spending and WASTE in our government. I have never lived anywhere like this. In Indiana, there is a state law that property taxes for primary residences can not exceed 1%. The city of Indianapolis has at least as many amenities if not more than Cincinnati. They also have one unified government and they are doing this at a FRACTION of the budget that Cincinnati has.
- Most home owners who aren't millionaires
- People who could barely afford owning a home 20 years ago, but managed. Now the higher taxes make owning their homes impossible even if they can afford mortgage and modest maintenance.
- people that were originally able to afford their home and taxes struggling to keep up with the tax increases
- All property owners that are forced to subsidize their neighbors.
- Anyone who purchased their home 20 years ago and have seen their property taxes nearly double.
- Existing long term owners
- You could be a long time property owner struggling but not be a senior. Or someone in mid-50s downsized and underemployed.
- I think all homeowners. It is absolutely ridiculous that there are million dollar homes going up everywhere basically at low cost and everyone else foots the tax burden for them. Most people are getting priced out of the neighborhoods that they have come to love and forced to move outside of Cincinnati to afford the taxes.
- Homeowners who's income level is not rising at the same rate as property taxes.
- Home owners trying to sell old homes...everyone who doesn't have a tax abatement is seeing their taxes rise...million dollar homes with a tax abatement
- Inherited Property Owners (2)
 - Those who inherited the family home and are working but barely making enough to cover expenses.
- Longtime Residents (3)

- Longtime residents who may not be seniors but who do not have substantial property tax increases in their budgets.
- Long term residents with limited income
- Long term homeowners who are getting priced out of their neighborhood due to new construction with ridiculous values

Renters (8)

- Renters. All property tax increases are passed along to renters as a rent increase, which affects their housing situation.
- Renters facing rental increases due to property tax increases
- Renters are getting displaced more often than homeowners. I do not believe they or other homeowners are as affected by property tax as they are by the increasing cost to maintain the property/building
- Renters are being pushed out cause rents are rising too high
- Families in multi-unit apartments if rent gets raised.
- As property taxes rise, landlords are raising rents, forcing out many low-income renters.
- first time home buyers
- People not purchasing houses due to the current and future property taxes.
- Section 8 voucher recipients

Seniors (4)

- On a fixed income
- Empty nesters
- Empty nesters who have no vested interest in the public schools.
- I am certainly a middle class ... old ... freakin old person who consistently strives to keep up with property tax in Mt Lookout.. my belief is that if taxes are not controlled, you will lose many of us dwelling in the old bungalows, to those new entrepreneurs who just want to tear down and rebuild

Single Parents (14)

- Myself....Single with 2 children.
- Single women! And single mothers. Women typically make less money than men, and home repair and maintenance costs us more.

Single People (10)

- Single people! I own a house and the ever increasing taxes are now more expensive than my mortgage! I have a fixed income, my salary does not go up with property taxes. Oakley was affordable when I moved here. Now I may have to sell my house.
- Single men or women with one household income.
- Single income individuals
- Single income individual incomes. Whether young or old. With one income increases in property taxes disproportionately affect homeowners.
- Single people with no kids

Unemployed (4)

- Anyone laid off for a while or hit with heavy medical bills.

Working and Middle Class People/Families (41)

- It's certainly not just these groups! Average working people can't absorb property tax increases that outpace their wage increases.
- Ordinary working people, renters. I have been in Northside for close to 40 years. Development is at a frenzy here, driving "tax values" sky high.
- Middle class families. We are on the verge of being priced out of our home due to taxes. My husband works for a church, I am a personal trainer and our income is around \$110,000 a year. We live in a multi-family with my parents who are retired and on a fixed income in Oakley. The taxes have risen so much that we can't take another raise in them or we will have to move. It's not OK.
- Working adults who have been here for 15 years. Tax went from \$4k every 6 months to 10K. Absurd and not enough being done to make it worth it. \$20k a year. Time to go to NKY or a suburb.
- Working adults. The services received for taxes in Cincinnati are pathetic. Police response times are terrible. Public schools are atrocious. Where does the money go?
- The middle class homeowner. With all the teardowns and rebuilds, thus population is dwindling in our area.
- Middle and lower middle class families with very high medical expenses
- Rising property taxes are affecting working families
- Moderate income people.
- Middle-class, parents with high daycare bills that are unable to afford homes due to taxes
- Middle class working people struggle too due to having to compensate for rear down/new build tax abated properties
- Middle class families. We've lived in our house for 12 years and our taxes have increased to a point where it is almost cost-prohibitive to stay. We are actively looking at other communities and seriously considering a move.
- Many average working people are struggling- property taxes are nearly as much as our monthly mortgage!
- All working individuals too- my property taxes are \$14K a year and going up because of how many properties are tax abated.
- Anyone considered middle-class or below is hurt by rising property taxes in our neighborhood.
- Dual income families with houses that have inflated values
- everyday working families like teachers and public servants.
- Just regular middle class families who would like to have leftover savings for something besides saving up to pay off property taxes twice a year!
- Middle class working population, who are not wealthy individuals.

Working Poor/Low-Income Individuals/Families (36)

- Yes, that would be me and many other proud homeowners that are often overlooked because we fall between the cracks. We are the "Working Poor". We must remember when it rains in our neighborhood it rains on us all. Thanks for the opportunity to share.
- The working poor. They had good jobs to get a house, but perhaps lost the job and can't get another equal.
- low income earners with children
- Lower middle class families with kids in high school or college paying high tuition bills
- Individuals living paycheck to paycheck

- Low-income homeowners, especially in gentrifying neighborhoods where the increase in taxes was unexpected to long-time residents.
- Lower income people/middle class. Too many abatement causing more pressure on those who actually pay taxes. High cost of Cincy schools and other levies cause houses in HP/MtL to pay more taxes than a much more expensive house in Indian Hill
- low or moderate income owners living in proximity to new housing development that is at a significantly higher price point than what their property is valued.
- Low income families. Especially those who used to be able to afford their taxes but now they can't because of new developing that drives taxes up too fast
- Low income and minority groups
- Individuals working in lower skilled jobs, where the pay has not kept up with the inflation of property values.
- Low wage earners single parents

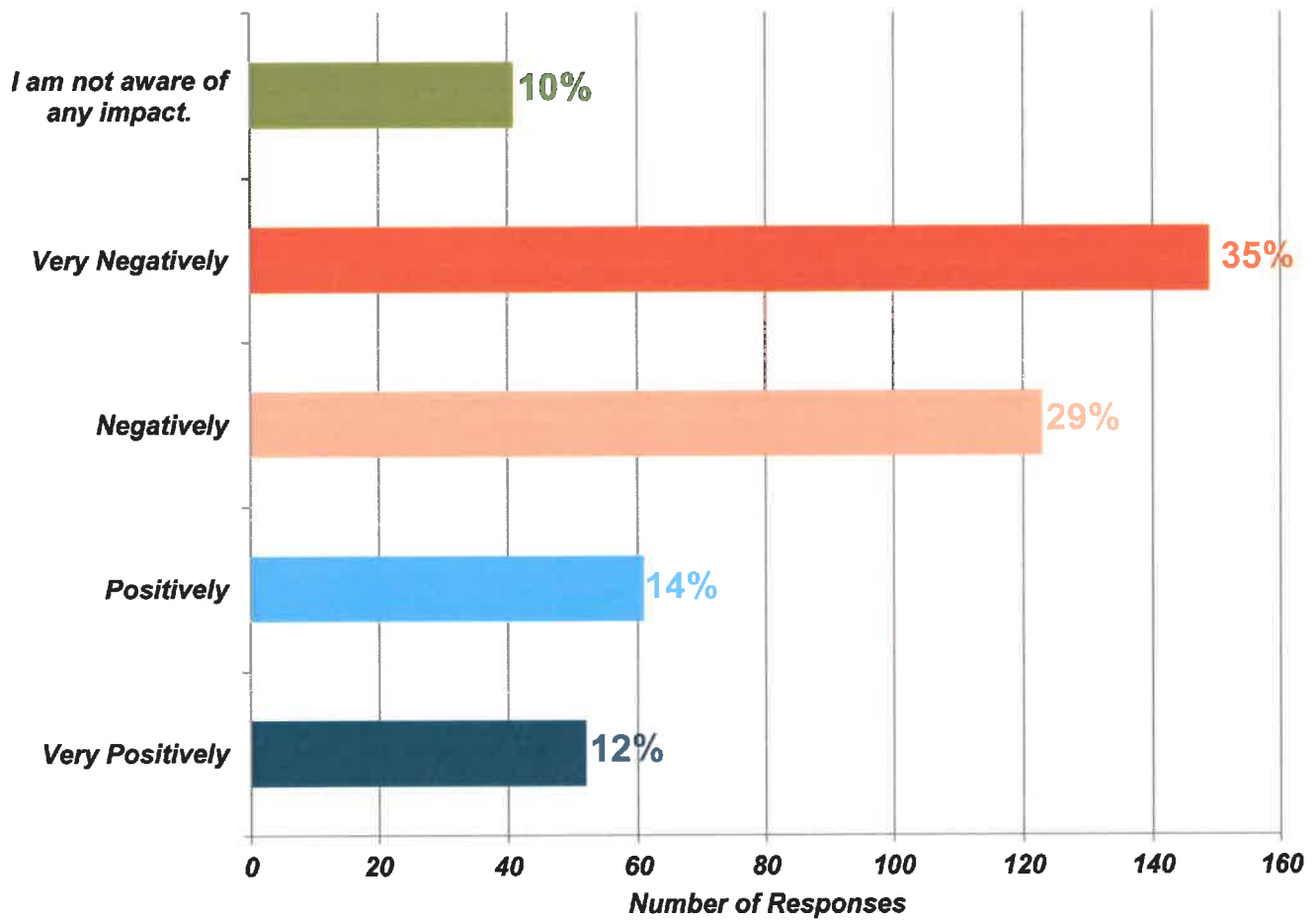
Younger Generations (Families, Professionals, Couples, etc.) (47 responses)

- Families with young children; many homes in our neighborhood that are located on side streets are starter homes where people have their babies and raise their kids; they then move when kids hit late high school and college age
- Younger generations who stretched themselves financially to begin with to move into Hyde Park.
- Younger couples with school age children
- Young professionals may be impacted. If it is a growing family they may be forced to leave the neighborhood to find affordable options with more bedrooms and bathrooms.
- We have a young family and increasing property taxes make it hard to consider staying on in this neighborhood
- Young families wishing to live in neighborhoods with high performing public schools.
- young families wanting to keep their children in local (within walking distance) schools; cannot do so on a one income family
- Young families just starting out. The cost of living in Mt.Lookout is already very high and with two young kids at home, the increase in property taxes greatly affects us financially. We struggled to pay the increase in taxes last year and are still recovering from that additional increase each month.
- Young families cannot afford our neighborhood because of high tax rates, older folks are strapped by the continuing increases, every year it seemed, my home was very affordable when I moved in.
- Young couples that are looking for their next home. Many of our friends want to stay once they start their families but the high property taxes combined with subpar schools pushes many to consider Anderson, Madeira and Loveland.
- The younger people who don't have good jobs or where both can't work.
- Possibly young families who were unprepared for the significant increases in taxes.
- Newlyweds but especially seniors as you noted above.
- New/young homebuyers
- New families.
- As a young couple we are not struggling but we are planning to move to another neighborhood as we find that the taxes we pay are not equal to the quality of public schools/city services of other neighborhoods.
- Young families wishing to buy first or second home but opt for less costly suburbs.

As of 9.6.19 - FINAL

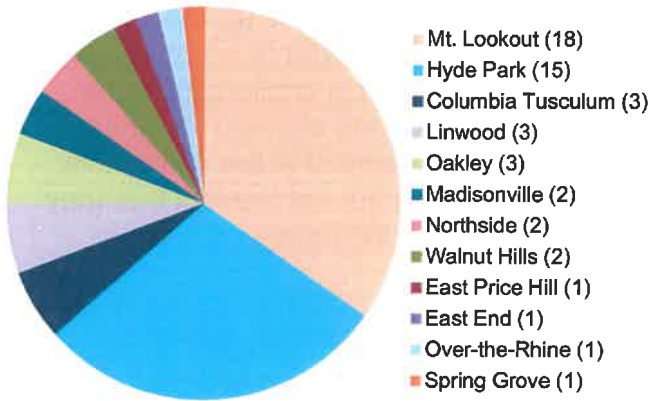
- Younger families (like myself) who pay more in property tax in a year than we pay toward the principal of our mortgage.
- Younger families newer to the neighborhood.
- How about considering young families with children and the expense that comes with raising and family in this community
- Young families burdened with student loans.

How do you think tax abatements have affected your neighborhood?

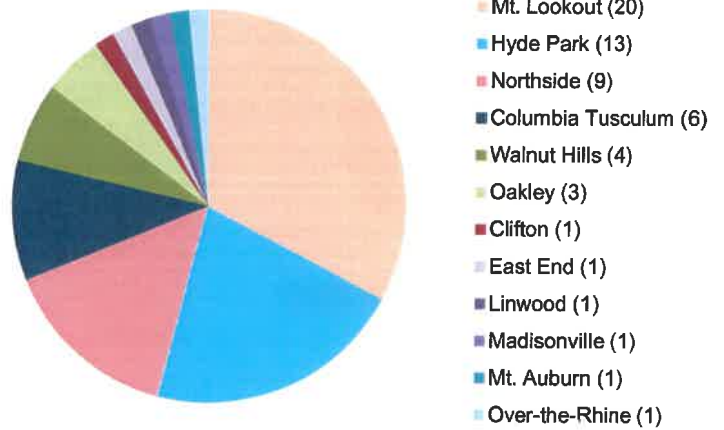


Neighborhood Breakdown of Responses

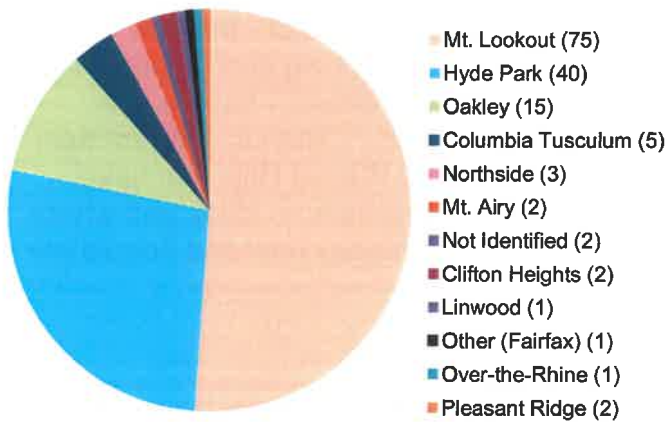
Very Positively (52 Responses)



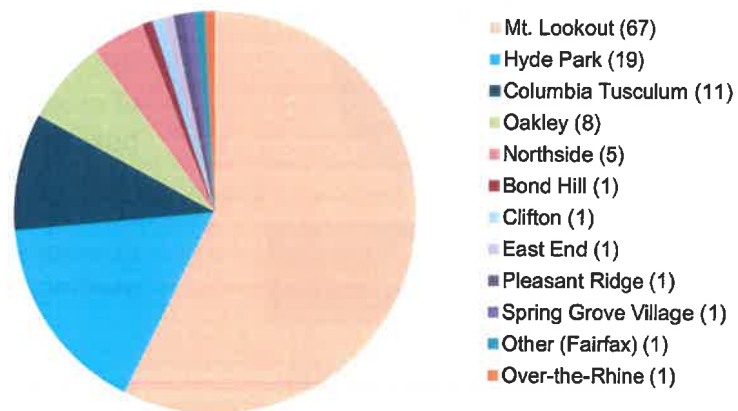
Positively (61 Responses)



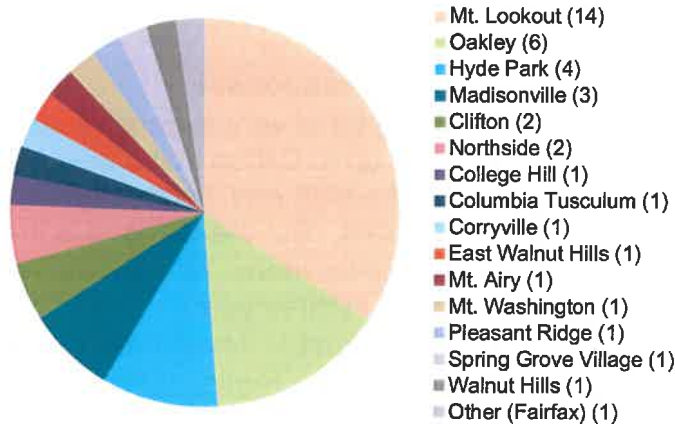
Very Negatively (147 Responses)



Negatively (117 Responses)



I am not aware of any impact (41 Responses)



How do you think tax abatements have affected your neighborhood?

Bond Hill



Negatively: 100%

Negatively (1 response)

- Newer development brings property values up but it also increases tax liabilities for existing residents when newer residents don't have to pay taxes. It is challenging when you have retired middle class workers on fixed incomes bearing the burden of new development in the community. They appreciate the development but not the fact that they have to shoulder the property tax increases.

Clifton



Positively: 25%

Negatively: 25%

Not aware of impact: 50%

Positively (1 response)

- I think that Clifton (Gaslight) is mostly developed already and well-maintained. There are likely not many abatements in this neighborhood. The few I can think of - the new Whitfield apartments and some rehabbing and repurposing of older storefronts in the business district - have had a positive effect on the neighborhood. Clifton is different than neighborhoods like Northside and Walnut Hills that have historically been home to more low-income folks, and where developers are spending a lot of money now and people are starting to be priced out.

Negatively (1 response)

- It is expensive to pay property tax in our neighborhood. We get reassessed very often.

I am not aware of any impact (2 responses)

- I don't see any evidence tax relief or tangible improvements.

Clifton Heights



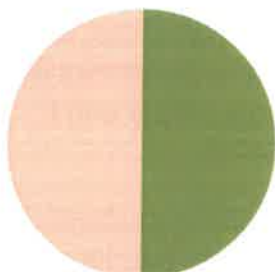
Very Negatively: 100%

Very Negatively (2 response)

- There are a lot of very expensive student apartments that have gone up in Clifton in the past five years or so. They are all at the high end, luxury-style apartments that cost a fortune to rent. But the demand is there, so developers keep putting up more. Meanwhile, my rent has gone up nearly 10% in three years.
- The high interest in development puts more users on the streets and in the Parks, compounding litter, wear & tear on streets & stormwater, greenspace. But the developers don't put any money into the tax system for maintenance on these

public resources. Our streets & parks are treated as opportunity for more development instead of value assets

College Hill



Negatively: 50%

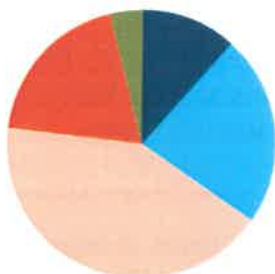
Not aware of impact: 50%

Negatively (1 response)

I am not aware of any impact (1 response)

- I am not aware of how tax abatements have affected people in my own neighborhood. However, I work in neighborhoods where the abatements are negatively effecting long term neighbors who are being approached constantly about selling their properties as new tax abated projects are being awarded. I also work in neighborhoods where zero tax abatements have been awarded, therefore those neighborhoods are not seeing any of the benefits of the abatements. The abatements are not balanced and therefore not equitable.

Columbia Tusculum



Very positively: 12%

Positively: 23%

Negatively: 42%

Very negatively: 19%

Not aware of impact: 4%

Very Positively (3 responses)

- We moved here and chose to build a home in the City partly because of the abatement program. It has been a great stimulus to encouraging people like us to live in the City.
- New houses are energy efficient. Most are attractive and well built. This new housing stock raises existing property values and adds to the diversity of the neighborhoods.
- Tax abatements are still needed in Tusculum to attract development.

Positively (6 responses)

- Promote new development, attract high income earners to contribute to City income tax, and help maintain/grow city population.
- We have more houses in our neighborhood. On the bad side, I have lived in the same house for 44 years. The value of our side has probably gone up by 10 times, but we can't seem to get our street fixed, get gutters, have the street widened or any other thing I think my taxes should also be taking care of.
- Without an abatement, I would have never purchased here. I don't believe others would either leave the area without new homeownership and vitalization.
- I bought my home as a single person, and now am married. The taxes have been so high after abatement expired; we are looking to possibly move.
- I am a single woman working at a local college and my income isn't very high but I'm able

to afford my home due to the tax abatement. If not I would need to live further away and have a longer commute and live in an area with more families and less single people my age.

- Removed old housing stock but not consistent with design and massing.

Negatively (11 responses)

- There is a lot of “chatter” about the net effect on total city property taxes which I won’t debate here (although my sense is that we are giving away funding unnecessarily). However what I don’t ever see mentioned is the impact on non-abated properties when owners are trying to sell. When a buyer is looking at property ... those of us without an abatement take a hit on selling price to make up for it. Either that or we simply can’t compete with “abated” properties and buyers just walk away. We need to eliminate/minimize these abatement ...
- Puts additional burden on those paying property tax. Also, those receiving abatement are higher income individuals who do not need tax abatement as much as middle and lower income residents.
- You have our historic homes being torn down and replaced with new ones for the abatement
- I pay much more in taxes than all of my Neighbors with much more expensive homes, it creates divide amongst the new and old residents of the neighborhood
- New builds are driving up comparable property values, increasing property taxes
- It has artificially raised property values in our area creating a neighborhood of only well to do and no diversity at all. I feel like I live in an all-white neighborhood.
- The tax abatements actually distort property values. Developers are able to ask significantly higher prices per square foot than existing unabated homes because of the tax savings. Unabated homes pay the price in higher taxes and lower property values. We are effectively underwriting the abated home owners. Ultimately we will leave Cincinnati like many others due to this unsustainable situation
- Raises everyone else’s property taxes.
- I am very upset over the tax abatement being doled out to entice developers to tear down homes and cram multiple homes on these same lots. It has to be affecting sales of established homes and their rising taxes.
- Positive with older homes being torn down and building nicer homes. Negative with lot splits and overcrowding of houses

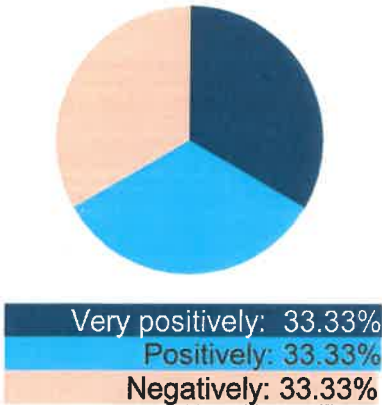
Very Negatively (5 responses)

- It is causing for home in our community to be torn down for the sake of building brand new and expensive homes. We are tearing down our history due to it
- They encourage teardowns of old charming homes to put up McMansions and multi-family developments in single family lots, destroying the character of the neighborhoods, including older trees. They essentially up the taxes of people living in older homes since we are subsidizing their abatements!!!
- I don't understand why people buying a \$600k can't pay taxes. These homes will be underwater in 10 years...literally or financially.
- It will eventually make homes harder to sell. Current owners will be stuck with houses they can't sell and possibly default.
- Historic homes have been knocked down to build ugly new houses so that people can get tax abatement while the people maintaining their historic homes pay all of the taxes.

I am not aware of any impact (1 response)

No comment

East End



Very Positively (1 response)

- I own a home with a tax abatement. We did have to spend additional money to make our house Platinum LEED-certified. We are proud to have a home that conserves energy and pulls in solar energy. All the materials that we used were purchased by companies within a few hundred miles. We did not look for the tax abatement to only lower our taxes. We wanted to be a leader in Environmental engineering design. It's good for the environment.

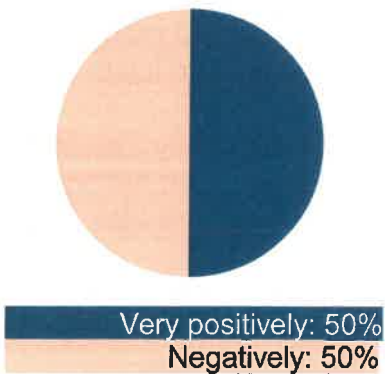
Positively (1 response)

- We would never build and moved to the east end without the tax incentive. We would have stayed in the suburbs. Although our house is tax abated, we now pay city payroll taxes and have a very energy efficient home with a small carbon footprint. I have solar and geothermal power.

Negatively (1 response)

- People purchase homes that they are unable to afford after the abatement expires

East Price Hill



Very Positively (1 response)

- No comment

Negatively (1 response)

- Tax abatements typically go to those who don't actually need them rather than those who do. Abatements to developers have not resulted in positives for the community.

East Walnut Hills



I am not aware of any impact (1 response)

Not aware of impact: 100%

Hyde Park



Very positively: 16%
Positively: 14%
Negatively: 21%
Very negatively: 43%
Not aware of impact: 5%

Very Positively (15 responses)

- The only bad abatement is the LEED Platinum as it is unlimited. All the other are typically creating a higher tax base (\$300k home, torn down, sold for \$1M with LEED gold now creates a \$438k tax base) plus brings in higher spenders for local businesses and higher earnings for the outrageous city income taxes
- The tax abatement in Cincinnati has reversed the 30+ year population decline by offering consumers products that they want...master suites, two+ car garages, new construction, energy efficient homes. Without the tax abatement all the suburbanites would not be moving to the city and many city dwellers would be moving out to the suburbs with lower taxes and homes built for today's living

- Tax abatements incentivize people to move into the city from the suburbs. They appeal to families who would like to live within city limits but do not want the burden of an old home that needs a lot of renovation and or expensive upkeep. Homes in disrepair are also being replaced by new, aesthetically pleasing homes.
- They encourage upkeep and improvements on older homes. I'm less enthusiastic about tax abatements for complete teardowns and replacement with a completely new home.
- Many beautiful new homes have been built while ridding the neighborhood of energy wasting dilapidated homes that were blight.
- Provides new home options for certain people
- What is the purpose of the Property tax working group? If people don't think that tax abatements for renovations on existing homes don't help keep people in our neighborhoods you are mistaken. You would see a lot of people moving out of the city of Cincinnati where the taxes are significantly lower including the city income tax.
- The new construction is a good thing. Progress is good.
- In order to encourage people to invest in their properties to help the overall neighborhood incentives need to be offered. The old neighborhoods are all hitting the ~100 yr. mark so the houses need pricey investments and without an abatement people are going to go elsewhere. I don't have the data to support it, but could abatement be more advantageous for renovations vs new builds in order to maintain the character of the

neighborhoods and not put up ugly new builds

- Old homes are expensive to maintain and at some point they outlive their useful life and are better off being gutted or razed and rebuilt
- The effect has been very positive. I am close to retirement and look forward to selling my home at a great price and until then living in a neighborhood that is accelerating by leaps and bounds.
- Tax abatements drive homeowners, investors, developers and commercial property owners to improve their properties and avoid tax increases for upcoming tax years. The city, county school boards continue to collect tax revenue on the original value of the property and in the case of commercial abatement the school board collects more revenue. When the tax abatements expire the city, county, school board are left with a more valuable property to tax and therefore collect more tax revenue on the property. These improvements would not occur in many cases without the tax abatement incentive. This tax incentive pays back exponentially if longer term view is considered. Improvements are good for the city, school board, county and communities regardless of the specific Cincinnati neighborhood. The city should consider education seminars for the general public including the members of the Cincinnati School Board on the details/benefits of the abatement. Consider a long term view that is focused on overall collections from an individual property vs the collection from an owner at a given point in time.

Positively (13 responses)

- Increases affordability to live in the neighborhood
- Tax abatements encourage the building of energy efficient and sustainable homes in our area. It improves property value and recruits families who would normally move to the suburbs to stay in the City of Cincinnati.
- They're brought the property values up but they've also priced a lot of people out of the neighborhood.
- Depressed properties improved.
- I appreciate all the work that people are doing to tackle this problem. However, realistically, I don't think anything will change. The city government is a mess.
- Positive economic impact. You can't require people to make detrimental financial decisions just to keep an older house.
- Many older homes were not cared for and many of the newer homes are more attractive than the poorly-maintained older homes.
- Abatement is a great way to encourage expansions and renovations. I do not agree with tearing down homes for developers. It should be limited to property owners improving their own properties that are owner occupied
- I currently live in a property tax abated house. Prior to buying the abated house I owned and lived in another house in Hyde Park for 7 years. I purchased it from a developer who gutted it and put on a large addition. When we were looking for a new home, so many of them really needed updates. I think the abatements can provide the extra incentive for owners or developers to take action and keep people in the city. I do see some of the negative impacts too, such as squeezing two houses on to lots that were previously one, taking down old, but healthy trees, and loss of character of the neighborhood.
- Refreshing old housing stock is critical to vitality of neighborhood
- As a senior who will probably move in the next few years, an increase in value will benefit me. But on my street, the house was not torn down, just rehabbed and brought up to

date.

- Encourage renovation. Encourage development of neighborhoods like Walnut Hills, Evanston, and Madisonville. Encourage present homeowners to renovate and remain in Hyde Park.
- We have personally been partly incentivized to update our 100 year old home knowing we'd be eligible for a tax abatement

Negatively (19 responses)

- Developers are demolishing homes without any thought for any historical value and character of the neighborhood. The tax abatement are only benefiting the developers I selling quickly. What will happen in 15yrs when those abatement are over and people can't sell their homes for what they've paid?
- People I know who built new homes are so happy about tax abatements. I don't understand why they are being used in my neighborhood when people already want to live there. My schools need more money- they are jam packed and tax shelters for wealthy home owners for 15 years aren't helping.
- I have a tax abatement and it was way too easy to get. I received mine 8 years ago thinking I wasn't going to get it but it was a no brainer
- It has incentivized developers to tear down quant homes that "fit" the feel of the neighborhood. "In Hyde Park and Mount Lookout, abatements have created an incentive to tear down charming historic homes. Owners of older homes, with higher utility and maintenance costs, see tax bills relentlessly climb, as they pick up the tab for their neighbor's brand new energy-efficient palace. Those trying to sell unabated homes are competing with sellers of homes taxed at discounted rates, forcing down their older home's value."
- Abating taxes to allow tear downs with new builds with reduced property taxes is unfair to long term residents.
- Multiple plastic garages with homes attached are replacing stately historic homes. We also lose the mature trees on those lots. The construction itself is awful. I can't walk around the block - the sidewalk is ripped out and blocked by construction trucks. The finished products look like a Mason subdivision home - bland and cheap.
- Every time builds anew addition on their huge expensive they get a tax abatement and the rest of us have to make up the cost.
- Think the people who are updating their houses and not getting abatement are feeling negative about it because we are constantly fixing up our houses and get no benefits. Do think the new houses being built are bringing new young people to the city
- Increase in market values due to no property taxes there by affecting adjoining properties
- It is changing the architecture of the neighborhood as well as making homes that are older harder to sell because they may require some work. If you purchase new homes, there is a large portion that is tax abated making it the same price to maintain overall as an older home. This is making some of the older homes fall into worse disrepair as the owner can't sell and get their money out of their home.
- I like the idea that people want to invest in the upkeep of their homes in this area. However, I'm wondering what the impact is on other property owners who pay taxes. Does it cause an undue burden and an elevated property tax rate? What is the estimated amount of tax revenue lost from tax abatements in zip codes like 45208?
- In general, the tax abatement have incentivized developers to tear down potentially salvageable structures in order to rebuild either larger homes or multiple homes on one

lot... Thus getting more money for themselves and attracting buyers. What will happen when the tax abatements are expired on these homes - who will buy the million dollar homes on which they will pay taxes based on a million? It's short sighted in the Hyde Park area and not what I believe the tax abatement was initially supposed to be for.

- To me tax abatements fund the pockets of developers, but does nothing to improve the neighborhoods. Traffic has increased significantly on Observatory Avenue due to all the new apartments, condos and retail in the Mt lookout /Tusculum area. Also try driving north on 71 at the Rookwood exit. So many people start leaving their offices now and the hospital people that get off work at the 3 pm shift and you have a traffic jam every afternoon that starts about then. And now they want to add a high rise retail/business area close to the Edwards, Madison Road area and would be removing houses to do that. TALK ABOUT ANOTHER AREA THAT WOULD CAUSE MORE TRAFFIC BACKUPS. AWFUL IDEA.
- I believe RENOVATION abatements have benefitted us positively BUT it has been outweighed by all of the tear downs which are absolutely driven by abatements. We have lived on Michigan Avenue for 4 years and have had 6 tear downs on our block alone. All of the houses were in perfectly great condition - just dated finishes. These homes should NOT get abatements for the new builds in their place! In fact, in Hyde Park and similar areas not battling blighted homes, these homes should be taxed at a HIGHER rate.
- I have a renovation tax abatement and it is help to improve our 100 yr. home vs tear down including an elevator so we could age in our home. There's a lot of info about how tax abatement are impacting tear downs and I don't if that's a factor. I don't know if that's encouraging the lot chopping and tear down vs restore. I don't mind houses on reasonable lots sizes that 'fit' into the neighborhood.
- The abater pays a minuscule amount in property tax while the remaining residents make up the difference. Abatement should be in targeted areas rather than well-established neighborhoods.
- Encourages destruction of historic properties and penalizes owners of older homes.
- Hyde Park is not a neighborhood that needs to incentivize investment. The abatements have encouraged investors (many of whom are real estate agents themselves, which seems inappropriate) to buy property at low prices for cash from individuals that often feel they have no other options, and then sell the flip at a marked up value due to the monthly abatement savings. This "insider trading" of property makes it so there is no affordable housing remaining for middle class homebuyers, plus allows the investors to profit on abatements. These abated flips also serve to artificially inflate the values of surrounding houses in re: to property taxes - which is frustrating. An easy fix: make abatements nontransferable. That way those that actually may need the abatement to make repairs on their house still have it, but it won't serve as a cash cow - at the expense of the neighborhood - for investors.
- Poorly designed McMansions that have maxed the lot size and taken out large, healthy trees. They get abatement, I pay higher taxes.

Very Negatively (39 responses)

- Older homes being torn down; well-off people not paying their fair share of taxes, which in turn affects the funding for our schools and other community resources; negatively impacts property values of homes that do not have a tax abatement
- Many new houses are going up that have dramatically hurt the charm of Hyde Park. And they are the only people who get rewarded with minimal taxes. It is clearly hurting the tax

base and the character of our city neighborhoods.

- Tax abatement is great in areas that need some help. Hyde Park, Oakley, etc. are not those areas. Get rid of tax abatement in these areas. It's negatively affecting. Tax abatement is contributing to the tear down and new builds.
- Tax abatements create an artificial incentive for construction. As a result, many of my neighborhood's charming viable homes have been torn down, lots split, and healthy mature trees cut down. Our community's character and scale is forever changed. New abated mini-mansions help in increasing the property taxes of non-abated neighboring homes, making it more difficult for non-abated homes to sell. Hyde Park has received MORE tax abatements than anywhere in the city. This is a problem. Abatements should only be available to those neighborhoods that truly need them. Tax abatements in healthy and thriving communities, such as Hyde Park, Mt. Lookout and Mt. Adams, are simply tax shelters for the wealthy. These are the very people who can afford to pay their fair share of taxes. Why does our City give wealthy individuals in posh neighborhoods a 15-year tax break when our City struggles every year to balance their fiscal budget? Why does our City allow wealthy individuals to pay less than their fair share to public schools, libraries, parks, zoo, senior and children's services and indigent health care? These groups rely heavily on local property taxes. (A \$1.2 million river-view abated home in Mount Adams pays about the same property tax as the owner of a \$146,000 home in Evanston or Avondale.) The goals of tax abatements are to stimulate community revitalization, retain city residents, attract homeowners, and reduce developer costs of home-ownership and rental projects. My neighborhood does not need artificial incentives to accomplish this. Tax abatements are hurting my community.
- because they don't pay taxes, everyone else has to chip in more
- One house was demolished to build a larger, more expensive house that is abated. A vacant lot had a \$500,000 house built which is tax abated. This neighborhood is mostly post WWII Cape Cod and Colonial houses that are still priced between \$250,000 - 350,000 and we pay property tax. Our city suffers loss of support for schools, mental health, seniors etc. when we abate property tax for high priced houses.
- People are not incentivized to fix old, beautiful homes. Instead, they tear them down, build bog "mcmansions" and don't lower taxes then the rest of us. They're changing the charm of them neighborhood that people move here for.
- The developers come and buy fixer uppers. But they don't fix them up. They tear them down and build mega houses. That get tax abatements. The existing owners end up paying more and struggling. That often means more houses on the market that may be torn down....until no one is paying taxes. Viscous cycle.
- They encourage more tear downs than investment in remodeling or additions. They people we know who have renovated their homes would have done so without the abatements as well, this seems to really just encourage developers to try to swoop in and tear down or puts money in the pockets of those who already are well off.
- Incentivizes the developers to seek out and destroy homes at a faster rate. They build "Leed" homes which is an excuse to jack up their profits. The majority of the new homes built do not reflect the character or scale of their neighbors. Wealthy tax abated homeowners not paying their share of property taxes, which puts the burden on us to make up the difference. This should be illegal.
- Increased taxes; abatements are fueling tear downs of existing charming homes to build massive, out-of-scale, mostly poorly designed profit boxes that do not respond to neighbors' homes; often extra homes are crudely crowded onto a former single lot for

max profit, leaving neighborhood more overbuilt and increasing traffic. Many of these new homes loom over their smaller neighbors who previously had more daylight and privacy and view.

- Demolishing homes and sub-dividing lots lowers our property value and over-populates the area. It is a shame this is rewarded with tax abatements in areas which do not require economic development.
- As stated before it limits those able to purchase a home to upper middle class or higher. This changes the tone of the neighborhood. Also the CPS are suffering because of the tax abatement.
- Hyde Park is an affluent neighborhood that does not need tax abatement to spur development. A program design to help revitalize struggling neighborhoods is being abused to line the pockets of developers in Hyde Park. Entry level homes are constantly being bought, demolished and redeveloped into expensive homes with tax abatement. This allows upper class individuals to avoid paying property taxes which increases taxes for the rest of us, causing severe financial strain for the elderly and lower class residence. If you can afford to purchase a home over \$500k you do not need tax abatement. Furthermore this development is changing the very identity of this classic Cincinnati neighborhood.
- Tax abatements are essentially only for the wealthy who can afford the new homes replacing older ones or elaborate upgrades. Who then has to make up the difference? The rest of us. It is blatantly unfair and unjust. I greatly resent this. I have expressed my thoughts about this topic in a letter to each city councilperson. I did not receive one response - not even an acknowledgement.
- Families cannot afford to live in neighborhoods like Hyde Park anymore. A friend of mine just moved from Oakley to Bethel because she could not afford her property taxes.
- It's just not right or fair. We work so hard and pay full freight and our friends buy a tear down and re do it and barely pay taxes. They brag about it. Old homes on Menlo get torn down by developers and wealthy people buy the new mansions for over a million and get basically no property taxes. Super rich people. And their extra bathrooms and water usage and runoff affects our property with sewage backup.
- They have caused property taxes for non-abated properties to increase at a high rate
- We are losing the charm and look of this unique neighborhood with all the new McMansions squeezed in a new million dollar home down the street pays no property tax and I am struggling to pay 24k a year with a home valued well under a million dollars. In order to build the new house a perfectly lovely home was torn down
- Many homes have been torn down and replaced with mansions that do not fit into the neighborhood and raising my taxes. These homes have abatements so you are giving rich people abatements to move into Hyde Park. Very stupid idea.
- Because 4 houses are being built on my street that will be appraised close to \$1,000,000 that will up the perceived value of my house and I will have to pay higher taxes while the people purchasing the houses will pay little to no taxes. I have lived thru months of construction noise, trash blowing in my yard constant trucks taking up all street parking and blocking the road making it impossible to pass thru
- It is upsetting to know that I just purchased a 116 yr. old home. I went into knowing that I will have to pay to update & maintain the home, while paying much higher property taxes than those who tore down and built homes. The new home going up on the street directly behind me has constant noise, debris in the street and the sidewalk closed to pedestrians.

- When I moved into my 995 square foot house in 1997, my taxes were just under \$2000. Today they are \$4936.
- I have lived in my 995 square foot home since 1997 when the property taxes were just under \$2000. Now they are \$4,936.
- They generate tremendous resentment amongst the local residents, especially seniors like myself. Why should we pack up the tab for the deficit in revenue created when the already-wealthy developers move in? There is only one beneficiary - the developer. They don't give a hoot for the local population.
- I lived in downtown Chicago for 16 years. I owned a property with nearly the same square footage and separately deeded parking. My property value was 40K higher and yet my taxes here are DOUBLE what I paid in Chicago.
- I am not anti- development. None of us would be here if not for growth of the city. The tax abatement has had what I believe is an unexpected result, which is a money grab in neighborhoods that were most likely not the reason the policy was created. I want the neighborhoods that need the abatement to continue to grow and prosper. What is wrong, in my opinion is the destruction of a home that is in great condition for "a new home in Hyde Park" Lots being subdivided, homes on top of each other. It is over the top. We have had 3 homes on our street where longtime (30 year) residents have had to move not because they wanted to, but for taxes. A neighborhood is a mix of people that is the key to strength.
- Tearing down older homes, destroying the character of our neighborhoods, aggressive over development of formerly single-home lots, construction disruption and noise, rude and disrespectful contractors and developers, existing home owners required to pick up the tax tab for wealthy tax cheats building abated houses, revolting architectural choices, collusion between realtors and developers to maximize their own profits no matter the cost to homeowners and the community, making the neighborhood unaffordable for retired residents and young families, cutting down large shade trees, loss of green space, displacing wildlife.
- First of all, the abatement generally helps the wealthy, or the developers. Secondly, it brings in cheaply made houses that take the place of well-built houses from the 30s.
- People are tearing down houses and building new ones, because of the tax abatement
- Historical homes with great early 1920s character are being torn down and multiple new large homes are being packed into lots where one once stood. Also, very modern and not appealing homes are replacing these period properties, ruining the charm of the neighborhood.
- There has been a dramatic increase in tear downs and new builds in our neighborhood. Tax abatements are leading cause of this, in my opinion. The makeup of our neighborhood is changing. It's very sad. Our older neighbors sold their house due to rising taxes. They could no longer afford to stay in their home. Our friends are selling their starter homes and moving to the suburbs due to increases.
- The abatements make it very profitable to tear down a home and put the biggest house you can on a lot. There appear to be no restrictions on the impact to your neighbors. Suncrest is a perfect example of one of the nicest streets in the neighborhood that has been ruined. Both by the new houses that were allowed that hover over the yards of one side of the street and the new suburban style rebuild that looms over the houses, ruining the backyards of that whole block and stripping the street of all its grace and charm. Those of us who spend a lot of money and effort keeping our 100 year old homes livable feel like chumps when these new builds both destroy our neighborhood and don't pay

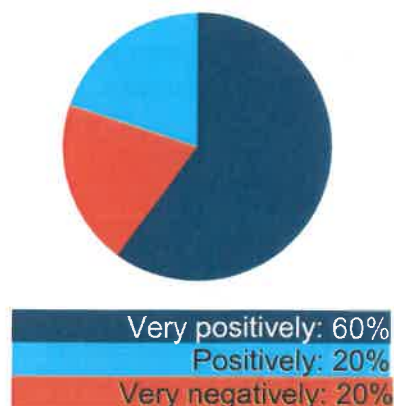
taxes for decades.

- My total mortgage payment is \$300 more than when I bought my house 3 years ago so I am not able to make home improvements as much as a result. Conversely, because of the tax abatement construction is at an all-time high and utterly annoying. So those people pay no tax and have great houses and I'm paying insane taxes and can't make mine nice.
- Some beautiful homes are being torn down to be replaced by ugly homes that pay no property taxes causing the rest of us to pay increased taxes to make up for the non-taxpayers. No value is being created by what developers are doing.
- Rich people are spending a lot on new homes and then getting another break Don't put the burden on the rest of us
- Tax abatements are given to millionaires that tear down expensive homes to build bigger ones. They get a tax abatement but the bigger, more expensive home drives up the property values of neighbors around them and hence the taxes. In essence, the taxes for the millionaires are being paid by the neighbors around them. This makes living in the neighborhood very difficult.
- The County Auditor must be under pressure to kick property "values" higher to get money that would have been collected except for abatements. That hurts regular people who have been in their homes a long time, especially.

I am not aware of any impact (5 responses)

- I'm not sure how abatements have impacted me. I love that developers are investing in dilapidated homes and providing growth to our area, but at the same time, I don't want to pay their taxes also.
- Tax abatement should be linked to owner's income so that above a set level they would not qualify.
- Expensive homes are being built and their owners are not paying their share of taxes. I'm strongly opposed to these abatement.
- Not enough time to actively read and respond to emails
- Abatements help building new homes but they should be limited, new homes are destroying the character of Hyde Park. There should be a regulation when building a very modern house near beautiful older homes.

Linwood



Very Positively (3 responses)

- It has turned the neighborhood around. New families move in and houses are getting renovated. Dispute the abatement, the city ends up collecting higher amounts of taxes. The new families pay income tax. And as lots are subdivided it means more families paying taxes
- Our neighborhood is being rebuilt with new homes with much higher values.

- The relatively recent increase in interest and participation in residential property tax abatements in Cincinnati is primarily driven by the City program's emphasis on qualifying for LEED status - Silver, Gold or Platinum. LEED requirements emphasize environmental best practices and energy-saving systems. LEED houses generate less water run-off to neighboring sites, not more. They use less energy than conventional construction or replacement structures, not more. They improve the quality and value of the housing stock in a neighborhood, thus driving up the value of older homes nearby, by a multiple that would not have occurred but for the city's abatement program. For example, the amount put into a new home is at least 50% greater than what the homeowner would otherwise likely have invested. This leads to significant additional dollars that are earned by city-dwelling construction workers and suppliers located in the city, and much of those dollars are spent in the city. The volume of new construction in Hyde Park, Mt. Lookout and surrounding areas in the past several years would not have taken place without the City's tax abatement program. This has generated or preserved millions of dollars in property tax and particularly earnings tax income for the City that would not otherwise exist or be retained. Curtailing this program would be a major mistake, and would lead to far less investment in new and remodeled homes, ultimately restricting the property tax base and market values

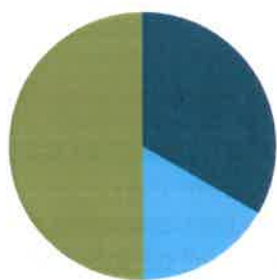
Positively (1 response)

- We applied for a tax abatement and it has helped immensely. We will be staying in the area and are reluctant to move because of this. Also hoping and waiting for development in our neighborhood and rundown homes to be renovated. None of the homes on our street that have been renovated applied for a tax abatement but I'm sure it would be a positive selling point.

Very Negatively (1 response)

- Kicked all my neighbors out, cut down hundreds of trees, builder would now allow me to use my driveway for a year and his employees snuck in and took a shit in my upper tank. Also told me he wouldn't do me a favor if it meant pissing in my asshole since my guys were on fire but he bragged with your tax abatement he made 2 million

Madisonville



Very positively: 33%
Positively: 17%
Not aware of impact: 50%

Very Positively (2 responses)

- Tax abatements attract new residents that will repopulate communities that have seen a loss in population. Bringing back the once vibrant neighborhood. Many residents are confused about the property tax they pay. Abatements do not cause their taxes to increase.
- No comment.

Positively (1 response)

- Despite all of the development taking place in Madisonville, it is still a place where the market hasn't totally committed to yet, so subsidies, including tax abatements, are needed to spur economic and housing development.

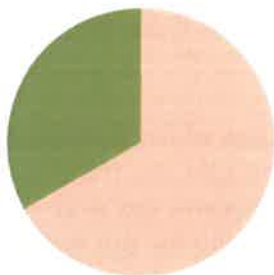
Negatively (1 response)

- The qualifying income for private citizens is so low that if you made that amount, you couldn't afford to be a home owner. The only group benefitting from these abatements are the businesses. Why should I as a long-standing member of the community be doubly responsible for my share of the taxes?

I am not aware of any impact (3 responses)

- No comment

Mt. Airy



Very negatively: 66.66%
Not aware of impact: 33.33%

Very Negatively (2 responses)

- 20 years ago, the city was offering tax abatements in Mt Airy. In the last 5-10 years, we've seen over 4000 people move out of Mt Airy, our rental residences are nearing 60%, and we have a large number of Section 8 housing with landlords that don't care. Are those 4000 that left Mt Airy former tax abatement people that got out when they could? And how did their not paying taxes contribute to our decline? City dollars only stretch so far.
- You can't keep letting any segment (including businesses) off the hook for expenses. That money has to be made up somewhere and it's landing on the backs of hardworking, middle income people. My. Airy has the steepest decline of all Cincinnati neighborhoods - we're beginning to get some help from the city but it is not enough! They are cutting funding right and left. We need to ALL share the burden.

I am not aware of any impact (1 response)

- Despite all of the development taking place in Madisonville, it is still a place where the market hasn't totally committed to yet, so subsidies, including tax abatements, are needed to spur economic and housing development.

Mt. Auburn



Positively: 100%

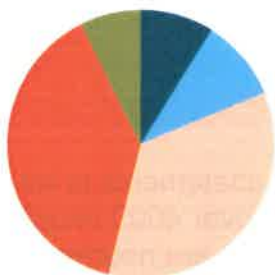
Positively (1 response)

- The abatements are positive in that they have surely helped owners out and their renters if they have them. My landlord is one of the few remaining affordable options in the neighborhood. She could certainly ask more rent for my apartment in particular if she wanted to. I have seen the streets immediately near me in my neighborhood rapidly gentrify over the last 6 years. Most of the property owners in my neighborhood appear to be upper middle class and have benefited significantly from the market change (over the last 10 years in particular), while all the lower income renters have been displaced from my street. I think the property tax abatements should be awarded on a need basis and consider if the owner provides rentals (and at what rate). I do not think the abatements should go towards subsidizing

As of 9.6.19 - FINAL

those who could probably otherwise afford their property tax payments (in both stable or rapidly changing neighborhoods).

Mt. Lookout



Very Positively (17 responses)

- The new homes getting abatements are paying more in taxes than the home that was demolished. It raises the value of the other homes.
- The abatement encourages wealthier people to move in and build higher value homes thus resulting in a long-term boost to the tax base.
- Stimulate growth and reinvestment
- Old houses that have not been taken care of for decades are finally being fixed or rebuilt. More people are moving into the neighborhood. The amount of income tax and spending that they bring into the community far out ways the property tax abatement.

- My family lives in a tax abated home. When looking in the neighborhoods we desired, at the square footage we needed, and to obtain an energy efficient home, a tax abated property was the only way we could afford to buy a house that met all of our criteria. The amenities of a newer home, and the energy efficiency was something we thought could only be affordable way far away in the suburbs. We feel very lucky to live in our community, with the neighbors we have, at a price we can afford. I know other owners of tax abated homes that feel the same way.
- Keeps young families in the community and is allowing for a community to continue thriving. Some development is healthy for the continued success of any community.
- New, more energy efficient homes replace older, failing homes. They encourage inner city development vs. development in suburbs or surrounding areas/counties. Further, they increase the gross tax revenue received by the city. For a simple example, the amount of tax paid by an owner of a \$200k property is far less than that of the owner of a \$1M property, even if the \$1M property has a \$400k tax abatement. That's tax revenue based on \$600k instead of \$200k, a win for the city/county.
- It has brought people into the community that have moved here and never would have. They have improved the value of housing all around our community. They have invested in green friendly spaces that help make Mount Lookout relevant for the next 100 years as a destination location. It has beautified our community and eliminated some of the eye sores. I understand some don't like tax abatements or higher property values that lead to more RE taxes. My advice would be either to embrace it and invest in your own property or sell/take the huge gain all the investment has yielded and enjoy a nearby location, lower taxes and more disposable income. A win for all. But let's not go backwards.
- The population in the City of Cincinnati had been declining for many years prior to the program. Now the city is seeing modest growth and it seems to be really helping everything along
- It has allowed new families to enter the neighborhood to create a new generation of children growing up within the city limits and using all the city has to offer

- I think they are essential to bringing development into the city and into underserved areas like Evanston and Avondale.
- More development and people willing to invest in their homes to keep them valued and keep the neighborhood strong
- Improving and updating housing stock improves the tax base and long term success of the city.
- The worst two eyesore homes on my street were replaced by very nice homes benefiting my entire neighborhood.
- Mt. Lookout has a long history. Without programs like the tax abatement, it would take much longer for it to renew.

Positively (19 responses)

- It has turned low tax and out of useful life homes into new homes with modern features, a higher tax base and keeps our neighborhood desirable.
- Generally speaking, it seems like most of the tear-downs are older neglected homes which are replaced by newer homes thus improving the neighborhood. Nonetheless, those receiving the benefit of new construction tax abatement are the ones that can afford the taxes, while the rest of us keep on paying taxes.
- Focus has been on new development but I'm not convinced that's bad. The good: allows existing owners to remodel easier and put money into the neighborhood.
- On the one hand, nicer homes have been built. On the other hand, some houses are crammed into small spaces and existing homes are not as valuable when it is time to sell.
- I think it has enabled many dilapidated properties to be fixed. But, it has become a tear down rebuild nightmare
- Has ensured homes are kept up to date and changed to ensure meet current needs
- New construction has brought some young families(who can pay \$900,00+ but it has hurt the sale and values of existing homes
- Promotes development and rehabilitation of older homes. Helps maintain property values
- I think it has brought good growth and fresh homes into our neighborhood. BUT I do think it has made it harder to maintain older homes.
- Redevelopment has served to refresh the neighborhood and increase property values. However, the downside is the continuing seemingly unlimited increase in property tax millage...
- attract new homeowners, improve properties, raise property value
- I think it has encouraged families and those who like "new" Construction to develop and invest in the city. However, I believe the tax abatement should only apply the homeowner who makes the improvement only, and is not transferable. It would encourage people to stay in their homes and benefit from the abatement, versus the developer/realtor driven scrapes/rebuilds which are driving up costs. It must be an Owner-occupied renovation /expansion which benefits from the abatement, the moment you sell the property the full real estate tax is applied
- Not pleased w/multiple homes on a single lot but some teardowns have been an improvement.
- Have benefited from tax abatements resulting from several additions - am concerned with new home development incentives creating imbalance in value of adjoining properties
- Redevelopment of vacant lots and rehab/tear down of older homes that were no longer efficient to operate

- The city has been dying. Abatements help with investment. Part of town is irrelevant
- While it is beneficial to encourage improvements to existing housing, it is very detrimental to encourage lot splitting and an increase in housing and population density.

Negatively (67 responses)

- Rich people buying big new expensive houses paying very little tax. They often send kids to schools but don't pay their fair share.
- Tearing down older houses to build either too many (eg, Kilgore Lane off Herschel) or too big or just ugly (eg, white modern on Erie at site of previous nunnery)
- Mt. Lookout / Hyde Park is not a blighted area in need of abatements. Encouraging an abatement for improvements is great but encouraging developers to tear down homes to build only high priced housing that will not add to the tax base / infrastructure is not helping this community.
- Seniors pay a lot more and abatements are cheating methods for contractors and developers
- In my opinion, this is not a neighborhood where owners or developers need to be incentivized to make property improvements. If property tax abatements are offered to Mt Lookout residents, this is forfeiting valuable tax revenue that Cincinnati needs to support Schools, infrastructure, and other city services. Tax abatements should instead be targeted to neighborhoods with high ownership rates, but lower property values. This will grow local net worth, improve neighborhoods that are in need, and forfeit less total city income.
- "abated" property causes me to pay more
- It's unfair. Longtime homeowners pay big taxes and wealthy newcomers buy expensive homes and pay nothing for 30 years! They would buy without it.
- Tax abatements subsidize the true expenses of owning a home in Mt. L/O. Builders charge more for a house than they would in other areas because buyers know that the total cost of owning the home is going to be less than it should be for the next 15 years. The already established resident is going to have to pick up the slack because of the shortfall of collected taxes that occurs when the new buyers of an abated home pays only on the pre-constructed value of their residence for the next 10-15 years.
- I am paying more in taxes every year while new construction gets abatements
- It's encouraging the demolition of lovely old homes and replacement with rather tacky ones that don't fit into the neighborhood...taking down one and putting up more...increasing density.
- I do not believe in these tax abatements. They are a drawing card certainly for people to buy new homes built by developers who, in some cases, have torn down nice homes to make way for new. Granted, some houses need to be razed because they are eyesores, but it has been ridiculous to permit developers to advertise these tax abatements as a way to sell their new homes. Those of us who live in older homes and are paying full taxes are paying for those who have abatements, and that is wrong!
- This neighborhood is desirable enough that people would build new and move here without abatements.
- Most properties in our area of Mt. Lookout and Hyde Park are sold and maintained. Why should a tax abatement be given to a huge condo property whose selling price is only accessible to those who can qualify for a loan for over \$300K?
- Too many developers coming in with little regard for the neighborhood, tearing down single family homes to put up oversized condos.

- Tax abatements seem to be awarded to the very people who do not need them. Do not award to the person who is selling or purchasing a very expensive property. Everything in Mt. Lookout will sell for a very good amount--why would you need a tax abatement for that?
- I agree with encouraging new construction and renovation, but am very concerned seeing the tax abatement used as an incentive to demolish lower-priced homes (that younger buyers might be able to afford) to be replaced with much higher priced, tax-abated properties.
- In this neighborhood, there is no need for tax abatement to attract builders.
- Attractive older homes in Mt. Lookout are being unnecessarily torn down and replaced with new multi-house projects squeezed into lots formerly occupied by one home. That development is being accelerated by tax abatements for new homes. Tax abatements in Mt. Lookout should be reserved for improvements to existing homes or eliminated altogether. New homes are welcome in Mt. Lookout when they respect the surrounding look and density of the neighborhood and the new homeowners pay their fair share of the tax burden. New housing development is not welcome when it is driven by tax abatements and developer profits vs. neighborhood aesthetics and proportion.
- I assume that the tax abatements have encouraged developers to divide the larger lots, and build the new homes, and that has caused older and long-time residents to be disgruntled: the newer homes have added significant additional traffic to neighborhood, have taken away treasured green space, and have affected the water run-off of the hillside, causing nuisance and sometimes damage to older existing homes.
- I think the renovation abatement is helpful, as it encourages people to invest in and improve their homes, but the tear downs are happening too often. It also makes it really difficult for people to sell nice homes, because it is much cheaper to tear down a house and build a new house, due to tax incentives.
- I benefit from a tax abatement as we renovated the inside of our home. However, I find them completely unnecessary in "desirable" areas of town. People are going to renovate and build in these areas regardless of a tax abatement.
- Most homes being torn down and replaced are bought from older citizens and sold to younger with children adding attendance to schools without the tax needed to support them.
- Tax abatements are raising our taxes. There should be a cap on the amount I've tax abatement so that it does not benefit the wealthy.
- Encourages developers to knock home down instead of fixing and ruining old charm of neighborhood. Also encourage developers to build tons of houses in small space where previously only one house stood adding to parking and traffic issues
- Older homes in the neighborhood property taxes are going up and up because of more and more tax abatement and developers trying to cram many homes in a single home lot.
- Allowing wealthy developers to tear down homes, build several new ones in the same space, but with a minimal tax burden for 15 years
- This neighborhood is not an area that need tax abatement s. They teardown good homes to develop larger homes or cluster developments. Abatement s should be given in areas that need development. To big people into the community. First time home buyers etc.
- Just make the property taxes affordable to people who currently live here. Use some common sense.
- Cheaply built houses popping up
- I have owned my home for 30 years and my taxes are ridiculous. They go up and up. I

will be 70 years old and I feel that I cannot stay in my house in the future yet the people up the street and throughout my neighborhood that have built new houses have no or very little taxes to pay.

- Too many property owners not paying the same rate as longer term property owners. Rates are disproportionate between new construction and existing property owners.
- They seem to be motivating a profit/greed mentality that is resulting in homes being torn down
- Future development in our neighborhood is planned and will threaten wildlife, destroy several trees, and contribute to overcrowding and street congestion on Linwood that, frankly, the neighborhood streets will not be able to manage. Lot splits are leading to overcrowding and developers are benefitting financially much more than anyone else. Residents who have lived and committed themselves to this community for decades now have to pay a steep price with the property tax increases.
- Destruction of historical homes and desired aesthetics , unfair tax burden vs. existing residents, overcrowding of lots, hillside instability, overburdened infrastructure such as sewers
- It is encouraging developers to demolish character homes and make high density buildings in areas that cannot accommodate such changes. No tax impact means this is more lucrative than living in the historically significant homes and maintaining green spaces.
- Someone has to pay taxes and since those receiving abatements do not, it is left to the rest of us. In Mt. Lookout and Columbia Tusculum, we have seen many houses torn down so that tax abatement homes could be built. Even if the amount of taxes paid on the house that was torn down were small, they were at least not abated. Tax abatements may make sense to bring in a large business, but they do not make sense when they ruin neighborhoods and cause other residents to make up the difference.
- In a lot of cases they have torn down beautiful old homes, and replaced them with larger modern homes that dwarf the residences next door. They are creating more density, traffic and more run off. I don't blame people who build on tear down sites, but a lot of them are coming into the neighborhood from the suburbs after their kids are educated in public schools and now they come to the city and build huge overvalued homes because they are Leed certified, and get a whopping tax abatement! It's changing the look and feel of the neighborhood, and not necessarily for the better.
- Bringing in new development that is changing the landscape of the neighborhood.
- They (temporarily) make ever larger homes more "affordable", thereby incentivizing the replacement of modest homes with homes that are out context in terms of scale with other homes in the neighborhood.
- I feel like the folks who can afford a new house are getting breaks while our taxes have gone up four-fold in the last 10 years. And yet they pay nothing on dwellings. I feel the revenue has to be passed along to those who don't have \$750k +, new houses.
- It has flushed out many in neighborhood. More importantly, it is creating an artificial ceiling on value for some of the more modest homes as they are reduced to land value for development. This has changed the character, feel and community within Mt. Lookout.
- On a whole, tax abatements were created to help owners improve or add on to their houses. Now, this same abatement is being used for new house construction while those of us who live in the old homes, are burdened with enormous tax bills. I currently pay \$7,000 a year for living in an 1915 Craftsman Bungalow.
- Our taxes have gone up 200% in 10 years to compensate for abatement given to

developers. We own an older home and spend a lot just to maintain it. Developers want to tear down instead of rehabbing no the properties to get the abatement. The house next door to ours has been vacant and for sale for 5 years. It is now dilapidated and would cost too much to rehab. We live on a cul de sac and the whole street fears that developers will tear it down and build a multi-family. This will lower property values on the whole street. It will also likely cause structural problems to our home which is about 10 feet away. The owner is elder and could not afford the taxes and let the house go in disrepair.

- I feel it mainly makes people angry to know how unfairly divided the property taxes are distributed. A house worth \$600,000-\$80,000 pays only a third of the taxes a \$30,000 house does. There's a breaking point in there that will drive people out of the city if this trend doesn't stop.
- Teardowns. Older people cannot afford taxes
- In some cases a beautiful old home is being torn down and replaced with multiple homes. These homes are more affordable at a higher price due to tax abatements. In other cases, older less desirable homes are being replaced with homes that do not fit in the neighborhood environment. All of these new homes come with tax abatement. Mt. Lookout doesn't need it
- Incentive to tear down homes or split lots that add character. Incentive to build large homes on a small lot - changes the character of the neighborhood. Most of all the abatement has worked to well in Mt Lookout. Now it feels like more people live in large abated houses - and we are paying the taxes for them to live here. I would rather see the abatement go to areas in the city that need/want development.
- The rebuilds and benefits of the tax abatement program are driving up home values, therefore increasing the taxes of the local neighbors.
- People who don't need tax help are getting it and the city and school system are cheated out of funds.
- Tax assessments are increasing rapidly and the abatements shift the burden to existing properties.
- Development companies are taking down one house and putting up 5...or taking down a few and putting up way too many. The Linwood project an now this 36 unit thing going in right above the square. I think that if a homeowner who wants to live in their house...update it and take advantage of a tax abatement program...that's OK. But these developments have got to stop. I think about all the traffic this will create. All these density projects come with more cars...more traffic. It is already difficult enough to try to get through Mt. Lookout Square. It gets even worse when school is in session. And how is the sewer system handling all this? I honestly wonder if anyone at city hall is thinking realistically.
- While new homes get tax abatement we are not getting any break for keeping our home in great condition and upgrades
- I think you mean Q6
- Construction traffic, noise, dirt for the last three years and another house is now slated for demo...so will continue next year too
- Due to the new Higher values tax abated homes in our area it seems it has made unabated homes taxes increase
- WHEN ABATEMENTS GIVEN TO BUYERS OF NEW HOMES US OLD OWNERS ARE STUCK WITH HIGHER TAXES TO OFFSET THE GENEROUS DEAL. SOMEONE HAS TO PAY TO MAKE IT UP.

- Builders tearing down existing homes and building expensive new ones and getting tax abatement while my taxes continue to increase from already high to even higher
- Tearing down one has and building multiple units then giving tax abatement to people buying expensive houses. This puts a bigger burden on people without abatements. Also effects city/county income
- The schools are getting crowded and the families should be paying taxes to cover their kids.
- I think the abatements are great when used to fix up older homes. I have used them on my last two houses and the abatements helped me afford the work. In both cases, these lovely older homes will last another 50+ years as a result. That said, I see no reason to tear down a perfectly lovely, functional, old home to cram several builder-grade, cookie-cutter monstrosities on the land where one home previously stood. It erodes the charm and character of the neighborhood. The development on Herschel Place is a perfect example - tear down one house and build five in its place, all stacked on top of each other. Save the generic Drees/Fischer Homes for Mason.
- Tear downs but mostly by having developers buy up property, rebuild and then sell million dollar plus homes to the wealthy people who pay little to no tax while those of us who have lived here for years continue to see our bill rise. In 26 years our taxes have risen by a factor of 4.667 It is our greatest bill and one that has us beginning to look to move
- Availability of tax abatements is causing developers to buy and tear down starter/midsize homes in order to build larger, more expensive homes that act as a tax giveaway to high income residents.

Very Negatively (74 responses)

- We are all paying significantly more taxes in relation to the value of our properties than we were 10 years ago; some neighbors have noted as much as 200% increases in the amount of taxes they are paying over the past 10-15 years
- Tax abatements for new construction in thriving neighborhoods like Hyde Park and Mt. Lookout are an insult to homeowners who pay full property taxes. I could go on about the character and wildlife habitat loss in the area but don't believe the city values these things. Instead, I'll focus on fairness. This program doesn't encourage "revitalization"—it encourages tear down of perfectly good homes. It encourages over-sized homes on small lots. It encourages abuse of the program by greedy developers and realtors as well as opportunistic residents. And subsequently, it encourages anger and resentment across the area— because people aren't inherently as "neighborly" to families living in new abated homes. We're subsidizing their luxury homes, and we know it. They're crowding our schools and streets without paying their share, and we know it. We're living through their painful build-out process and putting up with the dust, filth and noise of construction...and what do we get? Higher taxes. I keep hearing from council members "we'll see the benefit in 15 years." No, I don't believe we will. Wealthy people will continue to tear down homes, split lots and start new abatements, because that's where the incentive is (aka tax shelters). Meanwhile larger, established homes are currently sitting on the market for 1-2 years before finally taking a 30% loss, because no one wants these homes as long as they can build/buy a new Platinum LEED home instead and pay almost no taxes. The transferability of these abatements is another issue. Do abatements need to be fully transferable?? This program is slaughtering our property values and discouraging rehab. We can't justify putting more money into our non-abated homes.

Encourage only REHAB in these neighborhoods if you care about this city and put the 'new build' incentives in neighborhoods that need it. Residents are begging for this and we have been for a while now. I live in a beautiful, established home that requires upkeep, and I feel the only way for me to get a fair tax shake is to move to Indian Hill...and I'm hearing this conversation a lot. I also don't feel I can invest another cent in my home because of the plummeting property values around me. I have younger kids and also feel I can't utilize Kilgour now because it's too crowded with new abated residents...and getting worse as new subdivisions continue to pop up without generating the additional tax revenue needed to support them. I feel betrayed by my city every day this continues to go on, and I'm not alone. The tension in our neighborhoods is becoming palpable. It's time to admit this program is being abused in Hyde Park and Mt. Lookout and close the floodgates on new build abatements.

- Contributed to high level of development which is increasing density, changing character of neighborhood, reducing the supply of 'affordable' homes and substantially reducing the tree population (ironic given many of the homes receiving LEED certification clear the lots of existing trees). They also appear to be shifting the tax burden (of levies which raise a set amount of money) to existing homeowners.
- My taxes and other have to pay more to support the developers and people moving into overpriced property. Million dollar properties are getting abatement & I get tax increases to support them.
- Homes with character are torn down - ones built look like could be built in any suburb in the US. People then leave after their tax abatement is up - showing disregard for those who choose to live here - forever. the neighborhood feels and is "used"
- Tax abatement should not apply to new construction... especially not at the 500-1 million dollar price tags.
- I think they shift the burden for schools and infrastructure to existing homeowners and raise taxes for existing residents while making very expensive new development more affordable for people who can already afford very expensive homes and creating high profits for developers who aren't paying their share for infrastructure. They are also causing my neighborhood to become less and less affordable for working class and middle class families as property values increase artificially because of the abatements. I think abatements in Mt. Lookout are also encouraging the development of hilltops and other areas that aren't environmentally sustainable and are causing mudslides and other damage than the rest of the city's taxpayers have to pay to clean up.
- Good homes are being torn down everywhere so developers can build new homes so people don't have to pay taxes. Our schools are losing tax money, and we are losing green space.
- Older homes have been torn down and replace with several (2-6) new homes where each new home goes for 2-3 times the original home's value. These million dollar homes are getting a tax abatement. Anyone that can afford a million dollar plus home certainly can afford the taxes associated with it. It is not fair that those in older homes have been property tax and those that have the means to pay are getting away of paying minimal tax for their property. I would like to see tax abatements removed for Mt. Lookout and Hyde Park.
- Many tear downs. Rising taxes for the rest of us. Ridiculous tax abatements for million dollar homes. This is not what tax abatements are for. Should be used in blighted areas to encourage new development for people who truly need the help.
- People don't want to buy homes that are older and don't have the abatements. It is

harder to resell a home without abatements. the tear downs change the nature of the neighborhood

- Taking down beautiful old homes. They are building houses that get a tax break and I'm paying all the taxes.
- The abatement has been abused by investors and developers. It has led to the destruction of homes, slicing up of lots, and cramming in of new housing, all of which affects traffic patterns and overcrowd the schools while contributing nothing to the cost of dealing with this. And it's not stopping! It makes no sense to build half a million dollar luxury homes that will add nothing in taxes while ruining the costs, property values, and taxes of other families. Moreover, the abatement has completely taken ownership of the neighborhood out of the hands of its residents. We had no say in the sudden chopping down of lot after lot, the destruction of sidewalks and inconvenienced traffic patterns, etc. People had no say in watching blocks nearly razed (see Grace Ave), so they could live next to torn-up sidewalks and constant truck noise -- all to make money for someone else while negatively impacting their own home value.
- Tax abatements have encouraged the tear downs of homes that have been replaced with homes that don't look and feel that they belong in the neighborhood. In some instances the quality of the new homes is suspect. There is lost tax revenue for schools and other city services that are being provided to the new home owners. If someone can afford a million dollar home they can afford to pay their full share of taxes.
- In Mt. Lookout it seems that any 2 bedroom 1000sqft home around \$200k that comes on the market will be bought by a developer turned into a 3000sqft home around 900k. The smaller homes are often rentals, so it seems available rental properties are reduced. Kilgour is one of the least ethnically and financially diverse schools in CPS and the recent year trend shows less diversity. https://dashboard.cps-k12.org/dashboard/public/school_summary.aspx?school=Kilgour Kilgour lowest percentage among 8 years Economically Disadvantaged in 2017-18 at 13.1% percent, 8 year range of 13.1-18.2%. Lowest percentage among 8 years Minority Students in 2017-18 at 27.5% percent, 8 year range of 33.6-27.5%.
- single houses being torn down and one or more houses being added to lot/ destruction of some historic homes/ destruction of green spaces/people without tax abatements required to make up the deficit in tax revenue
- Less green space, more cars, out of character new homes, dislike between new owners and existing residents, failure of the city to enforce building laws
- The original purpose of the abatements was to encourage investment in parts of the city where buildings were in disrepair and dangerous to people living in them. The abatements have been used to teardown beautiful homes full of character to shoehorn in McMansions for the uber wealthy. This drives up property prices and prices out middle class citizens who have lived in their homes for decades. Taxes should be based upon the price people paid for their homes, not on some artificially inflated rate, designed hand-in-hand between the government and contractors. How about forcing those developers to actually rebuild housing in Avondale and Price Hill, that would be priced in line with the needs of the people in those areas, for every tear down of a \$500k house to put up 2 or more \$1.5 Million monstrosities. And if you can afford a \$1.5 Million house, you can afford the taxes.
- Older, cheaper homes are being bought and torn down for million dollar homes.
- Makes existing housing stock less desirable/more difficult to sell.
- The only people who know how to take advantage of the tax abatements are in real

estate or development. It's ridiculous how they exploit the tax abatements for a neighborhood that does NOT need them. They jack up the prices of houses artificially and justify it by saying that the houses are tax abated. Meanwhile, the rest of us who actually LIVE in the neighborhood suffer the consequences of higher taxes while they get away with higher profits after the sale. THIS ABATEMENT MAKES NO SENSE FOR MT LOOKOUT AND HYDE PARK! GET RID OF IT!

- They've caused people to tear down old homes and build new. They destroy and tear down old trees and pollute the streets. Then the houses don't fit and the neighborhood doesn't like the people who moved in because they disrespect the character of the neighborhood for their own financial gain. Our taxes continue to increase while they pay none. And the biggest irony is they can afford to pay taxes if they live in Mt Lookout! Stop tax abatements here. There's plenty of neighborhoods who need new homes and owners who need the abatement. This is not one of them.
- Why do rich people get tax abatement on high-priced homes? That causes the property taxes for the rest of us to go up, which causes financial strain for the average American... The idea of abatement is wildly abused in Mt. Lookout, Hyde Park, and Oakley.
- - Has lessened the look and feel of neighborhood (big and new, but not usually in keeping with the area style) - falsely increased the value of surrounding homes - has changed expectations for what one should get in a home
- nice, expensive homes being torn down so rich people can build another home on the same lot and pay little to no taxes while those of us who have lived here for 20+ years keep seeing their taxes go up. Tax abatements should be only for those neighborhoods that need incentives for development. Hyde Park and Mt Lookout are not those neighborhoods. People who had afforded a \$500k home do not need tax abatements. It's taking from the poor and giving to the rich.
- Beautiful historic houses which give our neighborhood it's charm are being torn down and replaced with oversized track houses. While this is happening little or no effort is being made by the developers to compensate the neighbors who have to go with sidewalks, deal with closed streets and oversized trucks blocking parking and streets, mud (lots of mud), noise, debris being left in no construction yards and general loss of peace. That give our neighborhood it's charm.
- Escalates property values higher than natural inflation, makes unaffordable for lower incomes
- Beautiful homes have been torn down and replaced by modern homes that don't fit the architectural style of the neighborhood. Lots are being subdivided; large homes have been placed on lots without regard for lot lines. All these factors will decrease the value of the original homes in Mt Lookout.
- The new construction sales (with taxes abated) appear to be averaged in with all other comparable sales, resulting in a higher assessed value from which we are taxed.
- 1. New homes built do not as a whole have the same look and feel of classic HP/ML homes. 2. Influx of tax abated property increases strain on schools, roads, sewers and weren't not getting the tax basis to handle those increases. 3. Yearly increases on property taxes cause those of us who would upgrade into a larger home (we have lived in ours for 5 years and would like to move to a larger property) but can't yet because we have to also account for massive additional increase in property tax (and continuing increases). 4. Overall, it's patently inequitable. Why should someone who can afford to buy a \$1M house pay fewer taxes than someone in a \$250K house? Makes no sense.
- The noise due to constant construction, traffic disruptions are a big problem. I am hearing

that the older homes are having trouble selling because everyone wants new construction now. It makes me sick that our neighborhood is being pillaged by these greedy developers and realtors.

- Mt Lookout does not need incentives like so many other neighborhoods that could benefit greatly from tax abatements. If there is going to be development - have it city neighborhoods that will prosper as a result. Don't congest and destroy Mt Lookout when you have so many other neighborhoods that would flourish and grow as a result of tax abatements and development.
- I see numerous homes being taken down and replaced by unattractive new homes out of character with the neighborhood and getting huge tax abatements. If a person can afford a \$1 million home, he/she can afford to pay full taxes on the house.
- My property taxes have tripled since moving into this neighborhood seven years ago. The new tax abated houses also change the character of the neighborhood.
- Overpopulating areas that didn't need an incentive to attract people to live in these areas causes a strain on the infrastructure (overcrowding schools, higher traffic, more houses to protect for police/fire, etc.) without tax money to help. Plus anyone wanting to sell their home that doesn't have an abatement is up against the houses that do. It is also my personal belief that looking at cluster housing is just unappealing and takes away from the beauty of the neighborhood.
- The tax abatements have led developers to destroy older properties and do lot splits with massive dwellings without extra land that do not belong here
- Tax abatement invite developers to come in with NO REASON OTHER than to exploit poorly designed zoning regulations to extract value out of a property, leaving the community to deal with it.
- false inflation of property taxes means existing homeowners are subsidizing the taxes of the abated homeowners who generally own properties that our much higher value / have higher incomes
- Full disclosure: I have a construction abatement on my 1920's Tudor home (we renovated three years ago). If the home next to me would have used a construction abatement, it would have been restored; instead it was torn down and 5 homes are sandwiched in there BECAUSE THE INCENTIVE IS GREATER TO TEAR DOWN. HUGE homes - all tax-abated for 15 years (new build LEED). Our privacy has been destroyed. We have water issues and four year construction issues (after-hours), workers living on property; overgrown weeds, dust, harassment by workers.
- 1 house replaced by multiple dwellings in a city that already has an overtaxed infrastructure is irresponsible. The city seems to encourage this although they are not reaping a tax benefit due to abatements.
- The new development would proceed even without the abatement. So the abatement is simply reducing tax revenue and placing more burden on homeowners with original (often historically significant) housing stock.
- Many of our lovely neighborhood homes have been torn down and replaced by 2 houses. We have not only lost the charm of Mt Lookout but we have lost a tax paying neighbor. The millionaires who move in are robbing us of money for schools, etc. The gap can only be filled by increasing taxes for the rest of us.
- 1. Neighbor (a retired bank president), bought a house in 5-2016, tore it down, built a larger house, and has apparently paid no prop. Tax in 2017, 2018, 2019. This just increases burden on the rest of us. 2. Developers are buying house, squeezing multiple houses onto lot. Often, the mega-houses are unattractive.

- I can't think of one positive thing that the tax abatements have done for my neighborhood.
- It's a joke. Unlike some other neighborhoods that do need it, Mt. Lookout doesn't need property tax abatements to encourage investment in housing. The abated houses are \$1.0+ Million homes and whoever is buying that doesn't need an abatement either. I spend a ton of money and sweat equity restoring and maintaining my 100 year old home by myself (not using contractors because I worked in construction) yet I'm paying several times more in property taxes than someone who has a brand new and larger house. Getting an abatement for work I do myself is a lost cause because I don't have contractor invoices and paperwork to prove the investment cost and get the abatement. It should be easier for a homeowner investing their own time, energy and resources in their own property (isn't that what you really want to encourage?) to get an abatement than it is for a developer. The only ones making out on this in Mt. Lookout are the developers who, for the most part are not good neighbors. They tear down good houses, try to make ridiculous lot splits; they tear up the streets and sidewalks, take years to finish their projects that can and should be finished in months leaving an eyesore in the neighborhood for years. And with rare exception, the houses they build are too densely packed, too grossed up in architectural proportion and use building materials prevalent in West Chester subdivisions, not in Mt. Lookout. Many of these homes do not fit in the neighborhood and some are poorly constructed.
- We are currently experiencing over development in areas never meant to be developed with lot splitting resulting in overcrowding and housing prices that are strictly out of reach for the average buyer. Overdevelopment is contributing to the tragic loss of green space that has made our neighborhood desirable in the past.
- Developers are razing homes in the area & building homes which do not fit the character of the neighborhood and subdivide property if possible. The tax incentive gives them a selling advantage over older existing home on the market. If a buyer can afford \$500k plus homes paying full property value is in order. The original purpose of abatement was for revitalizing neighborhoods in need of help, not developers with any regard for our older neighborhoods that just want to make a buck on the new homes with no regard to the neighborhood.
- Tearing down existing homes to build new homes in established and well maintained neighborhood hurts the integrity and feel of the neighborhood. Further having the tax abatement means the city doesn't get the tax revenue it would have received but for the tear down which means my taxes will be increased to compensate.
- Directly impacts the older homes values. My understanding the abatement program was designed for blighted areas. Mt. Lookout does not fall in that category. Use to be Anderson was the competition - new homes with all the new amenities and not paying City of Cincinnati taxes. That was okay because they lost the convenience and neighborhood attributes, Abatement gives the new homes all the perks at OUR EXPENSE!!
- I know of many people that move out of the neighborhood to avoid the high property taxes, or who buy a tax-abated home to escape paying taxes. Single family homes are knocked down to build multiple homes, with the buyers being incentivized by the tax-abatement. The builder is just trying to profit where they can, and the
- Tax abatements aren't needed in Mt. Lookout. We already have a desirable area that people want to live in. Developers don't need that kind of incentive to build - and mostly, overbuild. It crowds the area, increases traffic, hurts the character of the area and causes

more problems with things like landslides. They are now building a 7 housing development near me, replacing 3 existing houses. How they can even physically fit that is beyond me.

- The really expensive places get abatements. I pay more than someone with a house 3 times the value.
- Wow. Where to begin. People with plenty of means are getting amazing breaks on their taxes. Several new homes are being crammed onto lots that had one home. The costs to provide services in the city and county are not going down but the bill is being divided among fewer people. It's like we're having ten people for dinner but only 8 are paying and the two not can afford it. The abatement program was poorly thought out which given the incompetency of our local government isn't too surprising.
- Old homes taxes rising and have difficulty selling
- I didn't get any breaks for buying my house. I had to finance my purchase without any help. The properties with tax rebates would have sold without the abatements but not given the developer's such high profits. It only aids the developers profit line.
- It's causing houses to be torn down rather than lived in/repared. Eliminate abatements and Leed in neighborhoods with average income or property values over a certain amount
- The longtime homeowners are being forced out by rising taxes
- Neighbors pay less real estate tax than us and their homes are valued at 2-3 times more. The new houses typically take up a much higher percentage of the lot. My neighbor gets an abatement for energy efficiency and leaves their garage door open all year round. Night and day.
- Tearing down old homes to build new homes rather than remodeling the old homes is affecting the ascetic of the neighborhood. Also larger expensive homes are not selling because of the large tax bills.
- I feel like the tax abatements encourage developers to tear down beautiful, charming old homes and build West Chester-style McMansions in their place. If you're lucky they just build one home. If you're unlucky you get the mini subdivision on Herschel that has no character or charm and ruins the look and feel of the neighborhood. I feel like the abatements encourage people to sell to developers rather than potentially a young couple looking for their first home or someone who would rather fix up an older home or maintain the charm of an old home.
- Others are paying more to offset some paying none. Developers able to acquire homes and then tear them down. Also puts homeowners that don't have one at disadvantage trying to sell home against ones that have. No one in a house over \$500,000 should ever get an exemption. Highly desirable neighborhoods like Hyde Park, Mt Lookout, and Oakley properties should be exempt from tax abatements. Should apply to areas like Evanston that is trying to draw people to live there. This causing overcrowding at schools when can tear down 1 historic house and build 5 in its place or tear woods and build 40-50. It has caused huge traffic problem on roads as Linwood is full at all times of day leading people to fly down residential roads like Herschel.
- This neighborhood is not one where tax abatements are necessary and investors are placing their money here when other areas of the city need the investment much more.
- They've distorted the free market. Recently a woman in Mt Lookout who built a new \$900,000 home told the Mt Lookout Community Meeting folks that she built the home but if it weren't for the tax abatement she couldn't afford the taxes. Think about this statement. How backward is this? It's like saying I bought a new Mercedes but can't

afford the car payments. Government screwed around with housing and we all know it blew up on our economy in 2008. We are en route doing the same thing w abatements. We need to follow the simple but clear rules of SUPPLY & DEMAND. In HP ,Mt Lookout, Clifton etc., demand is greater than supply— yet we are creating more demand by offering unneeded abatements we're throwing jet fuel on a bonfire. It also creates an unfair marketplace. Developers are beating John & Mary Smith to purchasing homes as many developers are either realtors or work closely w realtors. Lastly, why should we subsidize the wealthy building their 1.5 million dollar dream home in Hyde Park?

Answer: We shouldn't. And if we are, we should have our heads examined.

- So many neighbors constantly talk about "new ugly" houses/developments in Mt Lookout. Those in abated houses (paying little to Nothing) talk about going to dinner at Boca and their new Audi SUV, and comment on how they love their new house, all the while we their neighbors are paying \$20,000 in taxes and NOT going to Boca and Driving new Audi SUV's. Animosity galore. Use your 3rd grade "what is right and what is wrong" deductive skills and you will stop tax abatements in Mt Lookout and Hyde Park
- Developers have bought 3 properties on our one short block and crammed in houses which don't meet code
- It has caused the taxes to increase for all of us. Ours has risen to over \$12,000 and on the day the city announced a \$34 million shortfall I received a report that said the tax abated properties amount was \$34 million. So the tax is being paid by those of us who continue to live in the neighborhood. When tax abatements are discussed among neighbors and friends, the universal question is "Why does someone living a million dollar house need a tax abatement. I hear people who are doing that brag about their good fortune and rather than get in a tit for tat discussion, I make myself turn and walk away.
- The abatements encourage tearing down of old homes and creation of large homes for wealthy people who get tax abatements.
- I moved in in 1995, there were 13 houses on spacious lots with large trees and green spaces. We have combined sewers and until recently maybe 3 or 4 storm drains, no curbs. My house is from 1904 according to the tax data. The footprint has changed once before I bought the house. I have totally rehabbed 2 bathrooms and removed a third one. Just other regular maintenance for the most part. Since I moved in one large lot was divided to build a large new home. Two old homes were destroyed, their lots divided into small parcels and 5 new homes were built. All with tax abatements. The sewers are old the street is small the traffic has increased, each new home has 2 cars, the trees are gone and I fear the sewers are overloaded. The street has parked cars all the time. When we have big rains the water washes down drives, through yards to seek the lowest points. It's certainly changed and I would say not for the better. There are many reasons Mt. Lookout is a popular place and one of them was the greenery and beauty of old homes with large lawns and mature trees. I think the tax abatement provisions have spoiled a lovely in the city neighborhood. It makes me very sad.
- I am concerned that tax abatements have encouraged the demolition of existing homes and lot splitting.
- The infrastructure in my neighborhood is deteriorating and not able to handle the influx of new mega-homes on small plots of lands.

I am not aware of any impact (14 responses)

- Have not seen many improvements or other visible impact due to new homes/tax abated homes.

- No need to elaborate
- I don't know what the impact will be! I would say that the new homes constructed have been planned out very well. The architecture of buildings that I have noticed seem to fit in very well with existing homes. However, I don't know how the tax abatements will affect our property taxes in the future. I believe tax abatements give developers and builders an advantage to ask a much higher selling price which will affect surrounding property values. I hope abatements will not result in higher evaluations of existing homes. Existing home owners, especially, seniors who have been in their homes for a long period of time will be hurt the most. Maybe a longevity discount should be given when calculating a new property tax base. Abatements are given over a too long of a period. Most homeowners buying these homes probably will not stay the full abatement period. Abatements should not be transferrable so the true value of a home will be reflected in the future sale price.
- There has been a lot of tear downs and rebuilds in the general neighborhood. Our street is relatively new with some homes build before abatements (1999) and some with abatements. Some lower price properties are being torn down and replaced with high priced properties. This is not necessarily an improvement. It over inflates the prices on homes who don't have to pay their fair share of property taxes and devalues homes that are paying their fair share.

Mt. Washington

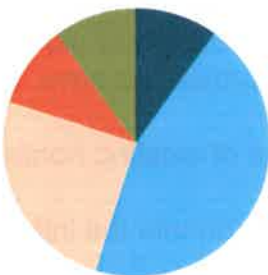


I am not aware of any impact (1 response)

- No comment

Not aware of impact: 100%

Northside



Very Positively (2 responses)

- I was able to purchase my first home because of a tax abatement. Current property taxes by neighborhood should be a crime.
- It gave me the chance to build a cottage for my 92 year old mother rather than go into a facility

Very positively: 10%
Positively: 45%
Negatively: 25%
Very negatively: 10%

Not aware of impact: 10%

Positively (9 responses)

- There are many renovations resulting in abatements, my house included. The abatements are a great selling point for all age groups.
- Allowed some young folks to purchase in our neighborhood
- They've promoted redevelopment of vacant and abandoned single-family houses as well as derelict buildings like the American Can that sat vacant for over a decade.
- Many homes in Northside are being rehabbed after years of neglect by absentee owners and the City/code enforcement. I am not convinced that all these rehabs would not have happened without an abatement, though certainly some may not have happened. However, the effect is that wealthier newcomers pay lower tax amounts than longtime residents, while longtime residents get stuck with a higher tax bill now that their new neighbors' homes are bringing up values neighborhood-wide. Seems to be punishing those who stayed, took care of their homes, and paid their taxes diligently in favor of subsidizing people moving back into the city.
- Tax abatement have incentivized rehabbing homes like the home I own which was previously abandoned and a blight on the neighborhood. My family brings our financial and intangible gifts to the neighborhood and make it a better place to live. Tax statements are part of that incentive for us to move to a neighborhood which still has issues and challenges.
- I think higher income owners have ultimately made the area safer. Police response has increased and gang activity has somewhat moved away.
- Encouraged property improvement, reduced blight
- The can lofts apartments are iconic and tax abatements made it possible
- Houses that were run down are being rehabbed, which increases property values.

Negatively (5 responses)

- Many homes in Northside were tax abated to encourage renovation of older/abandoned properties. Since that time, the market has become extremely competitive and prices have skyrocketed. There is no need for the abatement any longer. However the tax abatement is still in place, and now all the new homeowners aren't paying in to the tax system causing a lack of resources.
- I think tax abatements contribute to over-inflated home prices, because they allow people to buy homes they wouldn't otherwise be able to afford. I would imagine tax abatements also contribute to funding shortages for public schools, resulting in the need for more levies.
- The tax burden is slowly being shifted city wide away from the wealthier and newer homeowner to those with lower incomes who have been around long enough to miss out on these tax loopholes.
- It is the general loss of revenue to schools and local governments when many people are stuck in poverty addiction etc. I am for improvements aimed at the population we actually have, not those folks we'd rather have living here.
- well, the abatements started out as a positive, but then everything shifted so fast and there was no mechanisms/money to purchase 2 families, 4 squares and other larger apartment complexes and KEEP them for the low-income \$400 and less for two bedrooms...now a lot of low-income have been pushed out

Very Negatively (3 responses)

- Seniors and people with disabilities are being forced out as subsidized house flippers destroy the community.
- They don't pay taxes and our taxes are increased
- It is causing people to flip houses, they then charge ridiculously high prices for houses so pushing out the middle income folks, have not seen many of these high end owners showing up to participate in our community. Then they move and try to flip their houses. And what is this doing to funding our schools? And why do these people not have to pay property taxes when I have paid for years. I remodeled my house, could have applied for a tax abatement but chose not to because I'm willing to do my share. Use these in lower price hill, Fairmount and camp Washington.

I am not aware of any impact (1 response)

- I have only owned my home for a year and am still getting acquainted with my neighbors. I personally do not feel informed enough yet to say.

Oakley



Very Positively (3 responses)

- Tax abatements have beautified our neighborhoods in Oakley. It has allowed for my family and other young families to purchase older homes that have been remodeled. The abatements have allowed for early century homes to keep up with the 21st century.
- There are many run-down houses that could be fixed up, but the expense of a large scale renovation and property tax could be cost-prohibitive. Lower property taxes or abatements could possibly also increase the number of owner-occupied homes which would be favorable.
- Houses torn down & replaced with non-conforming styles. Way too many condos, apartments, & townhouses. Plans for more on the old Trail-mobile & Kenner property. The infrastructure can't handle it either. Plus we have to make up shortfall in taxes. Not good planning at all, just catering to a selfish group

Positively (3 responses)

- They are great for drawing new construction to the area
- The abatements have encouraged growth and development. I think the majority of issues are when a single family has been torn down & they replace with multiple dwellings. This can be managed through other codes.
- No comment

Negatively (8 responses)

- It keeps bringing in very expensive houses 500k-650k, and prices alot people out of being able to buy in the area.
- Our taxes have gone up a lot
- Made our property taxes rise a lot

- Make out home values go way up
- There are mini mansions being built all over Hyde Park and Oakley after they tear down a property and build this mansion. That isn't benefitting anyone but the wealthy.
- Within the price range of the neighborhood, the abatement is unnecessary and unfair to those who pay full taxes.
- The tax abatements are on new or newer homes that are expensive. These houses are not required to pay their share of taxes but the older/established homes are being faced with property tax increases every year
- Houses torn down to build high income houses.

Very Negatively (15 response)

- People who build mansions worth near a million dollars get long tax abatments and then the middle class bears the onus of the leftover tax bill. In less than 5 years owning my home in Oakley my property taxes have gone up 50%. If this keeps up then I can't see us being able to stay in our current neighborhood. Our tax bill is almost as high as our mortgage payment.
- People are buying and tearing down perfectly good homes on streets that are vibrant and building much bigger more expensive homes and NOT PAYING properly taxes. These are people who can clearly afford to buy elsewhere and pay more. However our neighborhood is being taken over and it's causing those who've lived here for years to pick up the slack and pay far more than our fair share if the taxes. If our homes were dilapidated and we needed people to come in and fix up the neighborhood that would be different. This tax break is hurting us and our neighbors immensely.
- I can't afford taxes because of all the abated houses. New Houses are selling for 600k. Oakley, Hyde Park, Mt lookout doesn't need abatements. Our neighborhood doesn't need revitalized and we're just subsidizing the rich with these abatements.
- It's very unfair that developers will destroy a neighborhood and don't have to pay taxes and then when things fall thru leaves vacant land/buildings and then don't keep up the property. Us as homeowners suffer and still have to pay taxes.
- Granted people on our street have "flipped" their homes; HOWEVER due to rising taxes I will be forced to sell. What "rebates" i.e. homestead etc. doesn't help!!!!
- Abatement sin desirable neighborhoods like Oakley do nothing but encourage tearing down homes, squeezing multiple homes on lots and they mean the rest of us have to pay more taxes while those in million dollar homes pay even less. There is no reason to incentivize building new homes in already desirable neighborhoods.
- All these "flipped houses" are using cheap material and getting a tax abatement on. They have no accountability if something happens to that property. This is going to hurt the taxpayers who have to make up for that.
- At least 4 houses on my street have been torn down and replaced with \$500,000+ homes; the sidewalks are a mess during construction, and the new houses don't fit in with the neighborhood's character.
- It's terribly unfair that I'm paying more in taxes than most the half million dollar homes in my area. I have 5 rooms and an unfinished basement. My house is very small and the fanciest thing in my house is my dishwasher. No granite counter tops or stainless steel appliances! Plain Jane!
- The abatements have been going on too long now. It seems the folks that have lived in the area the longest are paying, via property taxes, to support the need for upgrade of all the infrastructure. I am afraid as I get older and my income becomes fixed, that I will not

be able to stay in my home because of property. Taxes and utilities. Oakley has become too crowded with vehicles and it is dangerous to drive or walk in the area at certain times,

- We just purchased a new home and with that purchase we are benefiting from a tax abatement on the improvements of our new house, completed by the previous owners. We still pay a considerable amount of property taxes each year. I take serious issue with \$500k+ houses that come with \$200-300k tax abatements. Any person who can afford a house at that price must also pay their fair share of taxes. Tax abatements on new construction homes in neighborhoods like Hyde Park, Mt. Lookout and Oakley have become welfare for the rich. It is also incentivizing developers and buyers to tear down old homes and build new ones, often out of character with the neighborhood. The city, and more importantly, its residents, need that money for infrastructure improvements, investments in our public school system, and subsidies for those aforementioned seniors and those with disabilities who cannot afford their taxes. I understand the need for these abatements in neighborhoods that are struggling, but they are not at all working for anyone in HP/ML/Oakley except for rich developers and rich buyers.
- Everyone else is burdened to pay the fair share of the abated taxes. School taxes are extremely high and if all homes were taxed to their full value everyone else would be able to pay less. As the value of homes in my neighborhood rises new homes are being built for \$600k+ and not paying taxes. My neighborhood (Oakley) is an extremely popular neighborhood and there is no need for abatement incentives here.
- I think it is disgusting that high-income individuals purchase new construction in highly desirable areas and receive tax abatements. Why should I subsidize homeownership for these individuals? The Oakley housing market is brisk - we don't need incentives for people to come live here. It also encourages the destruction of historic homes. Tax abatements should be for those struggling in our communities - not a loophole that subsidizes people that can obtain half-million dollar plus mortgages.

I am not aware of any impact (6 responses)

- I am not aware of direct impact relating to abatements, but am concerned that newer residents and/or developers could be skirting payment of their fair share when it comes to taxes.

Other (Fairfax)



Very negatively: 33.33%
 Negatively: 33.33%
 Not aware of impact: 33.33%

Negatively (1 response)

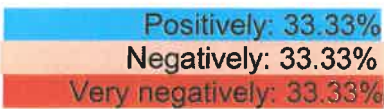
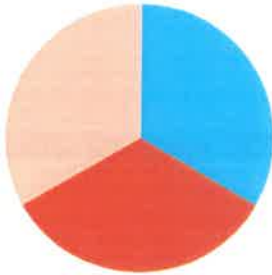
- The tax burden of these abatements then fall on the rest of the tax payers in the neighborhood. Also a lot of these properties are high price point properties of people who can afford these taxes!!

Very Negatively (1 response)

- Most people in our village have lived here for generations but as they become senior citizens they often struggle with paying the taxes that they have paid for decades. Then someone comes in and buys a new home and doesn't pay taxes. Property taxes continue to climb and will eventually lead to fore closures once tax abatements run out. The new homes are built so close to other houses, it makes our village look not like the once charming place it once was...

I am not aware of any impact (1 Response)

Over-the-Rhine



Positively (1 response)

- OTR was one of the most distressed communities when the tax abatement law was passed. It made sense for this to help distressed communities, but quite unnecessary for Mt. Adams, Hyde Park, Mt. Lookout and probably even OTR now that the market forces are strong

Negatively (1 response)

- I have noticed a large disparity in selling prices between the condos in OTR with 10 year abatements, vs. those whose abatements are close to running out. I have also been shopping for a house in Northside, and a tax abated house will typically sell for \$60,000-\$80,000 more than a comparable non-abated house in the same location. I think tax abatements at one time were needed, but are causing way more harm than good in the current housing market.

Very Negatively (1 response)

- Large developers are given tax abatements, as well as other large public subsidies, to build high-end housing that don't serve the needs of existing residents. This in turn drives up property taxes and rents for existing residents. The slumlord who owns my building was given a tax abatement, yet they raise rent 3% annually while the building falls further into disrepair. The loss of tax revenue is also detrimental to those who depend on public services and public schools. Ultimately they enrich already wealthy and politically connected developers at the expense of existing residents which furthers the divide between the rich and poor, and drives more of the existing community into poverty and homelessness.

Pleasant Ridge



Negatively: 25%

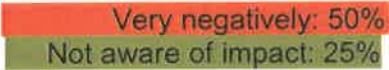
Negatively (1 response)

- Why are we paying high taxes on our home with a value of \$150k so someone in Hyde Park or Walnut hills can live in a completely redone house when they have tons of money?

Very Negatively (2 responses)

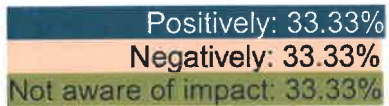
- Increases property values beyond reality. Encourages tear downs which destroy community cohesiveness. Hurts the community by giving Cincinnati fewer dollars for needed services. Rewards speculators while adversely impacting

seniors who want to stay in their homes but must shoulder the taxes being saved by younger rich people.



I am not aware of any impact (1 response)

Spring Grove Village



Very Positively (1 response)

- They've made houses redone by our CDC more attractive to buyers

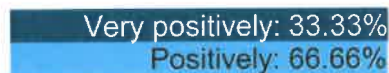
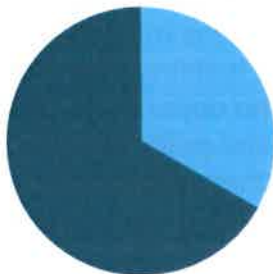
Negatively (1 response)

- When developers tear down good homes, revalue the lot only then build an expensive home with huge tax abatement, it lowers the city's tax revenue used to help all neighborhoods.

I am not aware of any impact (1 response)

- Not sure. I know they helped incentivize recent renovations by the VDC, but don't know much more about their implementation and extent within the neighborhood residential properties and businesses. I'd like more information on this at a neighborhood specific level but don't know where to loo

Walnut Hills



Very Positively (2 response)

- New houses are being built and old, vacant one are being rehabbed, partially due to the abated taxes. I would not have purchased my house without the tax abatement.
- They are encouraging the redevelopment of long vacant buildings that would have not been feasible without them.

Positively (4 responses)

- When I purchased my condo it was tax abated. I enjoyed being able to pay for home improvement projects instead of paying taxes. During that time taxes increased but I didn't monitor it since I wasn't paying for it. When the abatement expired it happened to coincide with several unrelated expenses in my life and I was caught off guard by how much taxes now cost. My home is no longer easily affordable.
- There have been good results but it is starting to change. More irresponsible developers are coming.
- Abatements make it economically viable for people to redevelop neglected buildings and

As of 9.6.19 - FINAL

can encourage business investment. However, there would be less of need for this if taxes are kept at levels that are not excessive.

- Tax abatements enable the financing package to make it feasible for a developer to do a project.

