Richmond 300 and Land Value Tax: Enabling & Encouraging Growth

Introduction

Richmond, VA is currently enjoying an economic and population boom as households relocate away from unaffordable housing markets in NoVa, Baltimore & D.C. In response, the City of Richmond is looking to adopt policy tools which can help enable inclusive growth, especially those to expand the supply of much-needed housing. The City's "Richmond 300" masterplan, adopted in 2020, seeks (among other things) to direct that growth, while ensuring that longtime residents are not priced out, and older residents have the opportunity to age in place.

Central to Richmond 300 are six "Big Moves," one of the most ambitious of which commits to updated zoning in the Code of Ordinances. While the specifics of that effort are still forthcoming, its intent is to "*direct growth to appropriate areas while maintaining existing neighborhoods.*" Practically, this means that areas slated for growth will be 'upzoned' to allow the construction of mixed-use & multifamily residences in new parts of the city.

But just as the proposed rezoning will reshape how the City ultimately looks and functions, it will also rearrange property values. This is especially true for the many parcels that will be "upzoned" through the granting of more generous planning permissions. Owners of these parcels will, with the passage of the new ordinance, find that they have received a 'windfall' increase in land value, in many cases due to a new potential for redevelopment into multifamily housing.

Ideally, the new (and significant) value created through rezoning will be captured by the City to help fund much needed infrastructural and other investments. This outcome is not guaranteed, however. In fact, in the absence of specific and effective value capture strategies, much of the financial gain will accrue to the private property owners whose parcels have been rezoned.

A variety of value capture tools are available to policymakers in cities like Richmond. The research described here considers the likely impacts of one such tool - a Land Value Tax (LVT) - an approach that has the potential, not only to recoup the value created through the rezoning, but is also shown to support the kind of infill, right-sized growth that is the focus of Richmond 300.

This study focuses on 12 case study sites throughout Richmond, selected to illustrate the varied impacts expected in conjunction with the proposed upzoning. For each property, this report summarizes how Richmond 300 will change land and building values, how this would shift property tax bills under current settings, and how property owners' liabilities would change if an LVT was in place. And because the timing of value capture efforts relative to value creation is so critical to both their success and acceptance among taxpayers, the effects of adopting an LVT *before* and *after* the new ordinance is announced are explicitly considered.

Literature Review:

What is a Land Value Tax?

A traditional property tax, such as the one currently in place in Richmond, applies a single tax rate to the combined total of land and improvement values of each parcel to determine owners' tax liabilities. A related, but far more growth-friendly policy proposal is a Land Value Tax (LVT), which splits the property tax system in two, raising the tax rate charged against land values (LV) while cutting taxes on homes, buildings and other structures (i.e. improvement values, IV).

Generally speaking, by penalizing vacant and underutilized land while easing the tax burden on investment in homes and other buildings, such LVT shifts have been shown to boost housing supply, especially of multifamily infill, increase renovation & maintenance and stimulate business activity[1]. Recognizing the desirability of such outcomes for the City, Senate Bill 725 was passed in 2020 empowering Richmond to tax land & buildings at different rates[2].

Consideration of an LVT is particularly appropriate for Richmond at this moment in history. Given the masterplan's commitment to rezoning large swaths of the City, an act which will result in the creation of significant new land value, adoption of an LVT will facilitate the capture of that value through the collection of tax revenues - a parsimonious approach that relies on a familiar mechanism (i.e. property taxes) at a time of significant citywide change.

Upzoning's Effect on Land and Property Values

By rearranging which types of housing are allowed to be built where, Richmond 300 can be expected to significantly shift property values, with downstream implications for property tax bills, especially under the proposed LVT shift that this report analyzes. Crucially, the impact on any individual property's tax bill will depend on all three of the following factors:

- How land & improvement values change for *that* property
- How land & improvement values change on *all other* properties
- How the City adjusts its approach to taxation in response to changes in total taxable property value

[1] A full explanation of LVT and its benefits can be found here.
[2] As well as Fairfax, Poquoson, and Roanoke.

Three mechanisms by which upzoning changes property values

Economic models and empirical studies of land use regulations have identified three mechanisms by which zoning (and therefore upzoning) changes land and building values[3]:

1. **Amenity Effect**: Zoning can successfully manage externalities and make an area more attractive, raising property values, for example by keeping polluting factories away from residential areas. However, population density can also produce positive spillovers, for example through agglomeration economies. Upzoning can therefore have a positive or negative effect on property values through the amenity effect[4]
2. **Profit Effect**: Zoning limits what any individual parcel may legally build, for example by setting a maximum height or floor area ratio. An upzoning which removes one or more binding land use regulations on a property will make it more valuable through the profit effect, due to the increased redevelopment potential[5]
3. **Scarcity Effect**: Zoning restricts where and how much housing can be built, increasing the price of housing within a given market. Rezonings which enable large volumes of housing can therefore reduce property values throughout a market[6].

The impact of a rezoning on any individual property's value will depend on the specific combination of these three effects. Profit effects are larger for properties which have more redevelopment potential, for example, by being in a more desirable location or having fewer existing buildings in place (as the opportunity cost of demolishing these structures makes redevelopment less viable, relative to an adjacent vacant lot)[7].

Scarcity effects depend on the quantity of additional housing that is enabled by any given rezoning, relative to the amount of latent housing demand from households interested in moving into newly-built housing. Small changes which upzone a few select properties are often referred to as 'spot upzoning', in contrast to 'blanket upzoning' of entire areas at once. Appendix 2 explains that Richmond 300 is more characteristic of a blanket upzoning, albeit with high levels of demand from households relocating from expensive housing markets elsewhere in the DMV area. Appendix 3 explores the unique case of a spot upzoning applied to case study Site G, based on a detailed appraisal that was kindly provided by Placer Realty Associates.

Several recent studies provide empirical testing of these effects. Greenaway-McGrevy, Pacheco & Sorensen (2021) found that the 2016 upzoning of Auckland, New Zealand, raised the value of vacant and under-developed properties (a profit effect) but suppressed price growth on built-up parcels (a small scarcity effect). Likewise, Kuhlmann (2021) studied the 2018 blanket upzoning of Minneapolis which allowed up to three units of housing on all properties previously zoned for single family housing, and found a rapid 3% to 5% increase in sales prices relative to neighboring areas. Again, underbuilt properties had larger upswings in value, indicating that profit effects were larger on sites which were less intensively used. Appendix 2 quantifies the scale of the upzoning indicated under the Richmond 300 Future Land Use Plan and compares it to these results for Auckland and Minneapolis, to justify the assumptions made in the following section.

[3] Turner, Haughwout & van der Klaauw (2014) provide a rigorous evaluation of these three effects, which they label the 'external effect', 'own-lot effect' and 'supply effect' respectively.
[4] See for example Cheshire & Vermeulen (2009), Brueckner (1990), Helsley & Strange (1995) and McDonald & McMillen (2012) for analysis of the amenity effect. See Ahlfeldt (2019) for the positive impact of density on land values.
[5] See for example Bertaud & Brueckner (2005), McDonald & McMillen (2012) or the literature on real option value such as Titman (1985), Clapp & Salavei (2010) or Clapp, Jou & Lee (2012)
[6] See for example Quigley & Rosenthal (2005), Gyourko & Molloy (2015), Fischel (2001)
[7] Clapp & Lindenthal (2020)

Key Concept: The Intensity Ratio

One intuitive way of understanding how productively any given piece of land is being used is to calculate the following intensity ratio (IR):

$$Intensity\ Ratio\ (IR)\ =\ \frac{Improvement\ Value\ (IV)}{Total\ Value\ (TV)}$$

By comparing the value of buildings and other structures to the total value of a property, the IR provides an indication of how much value has been invested in productive assets on top of the land.

This is used in two ways in the analysis which follows:

- Profit effects are expected to be larger for vacant land relative to built-out parcels. This is due to the added opportunity costs associated with demolishing existing structures during redevelopment. Greenaway-McGrevy, Pacheco & Sorensen (2021) provides direct estimates of the uplift in property values at different IR values.
- In addition, the IR helps to explain whether and why any given property receives a tax increase or cut under an LVT shift. Because this policy rewards productive use of land, it will tend to increase tax bills for properties with a low IR, and reduce them for properties with a high IR.

Summing across total property values, Richmond currently has an IR of 0.727 on average[8]. This means that an LVT shift will cut taxes for any property where improvements are more than 72.7% of total property value, and raise taxes on those properties which are below this point. The analysis described in the next section shows that this citywide IR is expected to fall to 0.707 after Richmond 300 is implemented, as upzoned properties enjoy a windfall increase in their land value.

[8] $26.28 billion IV divided by $36.15 of TV = 0.727

Data, Methods and Assumptions

Using Richmond's Parcels dataset, tax bills were calculated for every property in the City, both for the current 2023 tax rate of $1.20 per $100 of assessed value, and for a split-rate LVT shift scenario where the tax rate on land value is increased such that 80% of city revenues are generated from land (compared to 27% at present). Detailed methods for tax bill calculations are described in Appendix 1.

The twelve case study sites examined below were selected in conjunction with RA Realtors with the intent to cover a range of property types (single & multi family residences, mixed and commercial uses) plus several sites that are slated for upzoning under the Richmond 300 future land use plan. Further information on each of the case study sites was obtained from Google StreetView, real estate listings websites like Zillow and Redfin, and the City of Richmond Property Search tool.

Key Assumptions

As explained above, Richmond 300 will significantly shift land and building values throughout the City, possibly generating additional taxable property value, while changing intensity ratios (IRs) both for the case study sites and for the city as a whole. The analysis therefore relies on the follow key assumptions about how the market and the City will respond to these changing dynamics:

1. **80:20 Split Rate Land Value Tax**: This report analyzes a scenario where tax rates have been adjusted to ensure an 80:20 split in the share of City revenues that are generated by land vs improvements (compared to the current ratio of 27:73).[9]
2. **Revenue-neutrality:** It is assumed that the City of Richmond will aim to maintain revenues at their 2023 level of $434 million, regardless of which scenario is being analyzed. Any increases in taxable property value due to upzoning under Richmond 300 are therefore assumed to be offset by reductions in property tax rates, such that the City always raises the same target revenue.
3. **Zero Amenity Effect**: Economic evidence provides indications that upzoning can generate both positive (e.g. agglomeration economies) and negative (e.g. noise & traffic) amenity effects. Amenity effects are therefore assumed to be null.
4. **Zero Scarcity Effect**: House prices will only measurably decline in cases where large amounts of zoned capacity are added relative to the quantity of latent housing demand. As Appendix 2 shows, the planned future land use plan for Richmond only adds a moderate level of additional housing capacity, while there already exist many households relocating into Richmond from NoVa, Baltimore & D.C. It is therefore assumed that there will be zero scarcity effects overall, meaning that the model does not assume any immediate declines in house prices after the upzoning is implemented.
5. **Positive profit effects**: Properties which are slated for upzoning are assumed to enjoy a windfall uplift in market value due to having additional capacity to redevelop more intensive

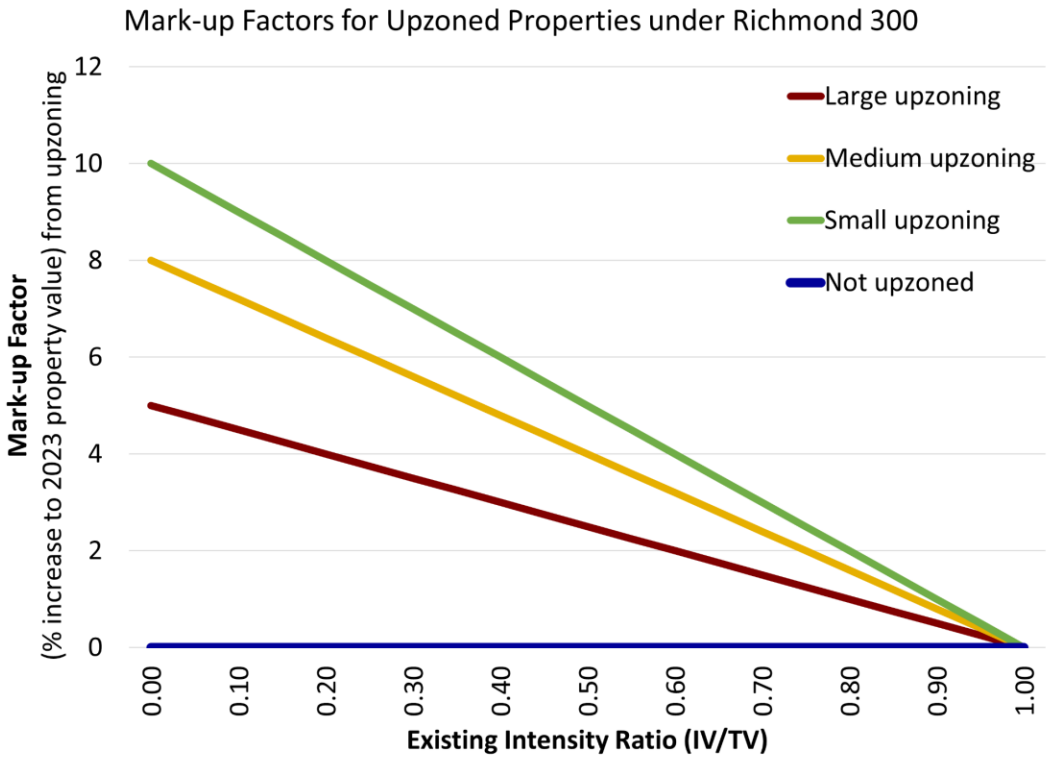
[9] Any level of LVT shift is possible, such that anywhere between 27% and 100% of revenues could derive from land. However, while these shift the magnitude of changes in tax bills, the direction of change for any individual property is unaffected. Any property which receives a tax cut from a small LVT shift will also benefit from a more substantial LVT shift, just by a larger amount.

forms of housing. The profit effect is modeled by applying a matrix of 'mark-ups' to upzoned properties, per the following rules:

a. Mark-ups are larger for properties which are granted more generous planning permissions under the Richmond 300 plan. For a vacant parcel, a small upzoning (such as being rezoned from single family to 2 to 4 stories of multifamily housing) is assumed to generate a +5% uplift in value, a medium upzoning (up to 10 stories of multifamily housing) generates a +8% profit effect on vacant land, and a large upzoning (up to apartment buildings) of vacant land creates a windfall +10% profit effect.[10]
b. Mark-ups decline with each property's intensity ratio (IR), towards a +0% profit effect for a property with an IR of 1.

Figure 1 depicts the mark-up factors applied to properties which are slated for different levels of upzoning under the Richmond 300 plan. More details can be found in Appendix 2.

Figure 1: Assumed Mark-up Factors for Properties Upzoned Under Richmond 300



These mark-up factors are used to estimate the value of every property after the Richmond 300 upzoning is implemented. Windfall gains due to the profit effect are entirely assigned to land values, as existing structures would likely be removed or demolished during redevelopment, hence it is the land parcel itself that carries the enhanced redevelopment potential. In total, 13,534

[10] These values are set to follow the patterns observed in Greenaway-McGrevy, Pacheco & Sorensen (2021) while producing an average upzoning windfall of +2.3% consistent with comments on Kuhlmann (2021) in Appendix 2.

properties are estimated to enjoy a land value uplift under Richmond 300, increasing their average total value by +2.3% on average. Citywide taxable land value therefore increases by +$293m to $10.2bn (as is shown in Table 1). Improvement values are unchanged at $26.3bn, meaning that Richmond 300 will increase the City's total taxable value to $36.4bn. Table 2 shows that the additional taxable value created by Richmond 300 enables the current $1.20 property tax rate (per $100 of assessed value) to be cut to $1.19.[11]

As indicated in Table 3 all tax & zoning scenarios are revenue-neutral, meaning that the City raises $434 million of tax revenue in all scenarios. Under the LVT scenarios, 80% of City revenues ($347m) are derived from land, regardless of the zoning scheme in place.

[11] An LVT shift under the existing zoning ordinance requires a tax rate of $3.52 per $100 of land value, which enables the tax rate on improvements to be cut to $0.33. Richmond 300 generates additional land value, and thus enables the LVT rate to be trimmed to $3.42 while still raising the same revenues.

Table 1: Assessed Values of Land & Improvements

	Current Zoning Ordinance		After Richmond 300	
Assessed Values ($)	**Current Property Tax**	**80:20 Split-Rate LVT**	**Current Property Tax**	**80:20 Split-Rate LVT**
Land	$9,867,910,000	$9,867,910,000	$10,160,910,000	$10,160,910,000
Improvements	$26,277,420,000	$26,277,420,000	$26,277,420,000	$26,277,420,000
Total	$36,145,330,000	$36,145,330,000	$36,438,330,000	$36,438,330,000

Table 2: Tax Rates under each Scenario

	Current Zoning Ordinance		After Richmond 300	
Tax Rates (per $100)	**Current Property Tax**	**80:20 Split-Rate LVT**	**Current Property Tax**	**80:20 Split-Rate LVT**
Land	$1.20	$3.52	$1.17	$3.42
Improvements	$1.20	$0.33	$1.17	$0.33

Table 3: Revenues under each Scenario

	Current Zoning Ordinance		After Richmond 300	
Assessed Values ($)	**Current Property Tax**	**80:20 Split-Rate LVT**	**Current Property Tax**	**80:20 Split-Rate LVT**
Land	$118,414,920	$346,995,168	$120,950,433	$346,995,168
Improvements	$315,329,040	$86,748,792	$312,793,527	$86,748,792
Total	$433,743,960	$433,743,960	$433,743,960	$433,743,960

Results: Case Study Sites

The following section presents the results of this analysis for the twelve case study sites. For each site, the property is introduced with a description of its current use, zoning, assessed values for land and improvements, current tax bill, and how the bill would change under the proposed LVT shift.

Three categories of change area then analyzed and discussed:

- Result #1: Upzoning with current property tax settings
- Result #2: Upzoning with an LVT *already in place*
- Result #3: Upzoning *followed by* shifting to LVT

Table 4 provides a high-level summary of each of the twelve case study sites, including a brief description, assessed value and intensity ratio, as well as a comparison of how the site's tax bill would be changed by shifting from current property taxes to the proposed LVT shift.

Table 4: Impact of an LVT Shift on Tax Bills

Site	Description	Assessed Total Value	Intensity Ratio (IV/TV)	Current Property Tax	Tax after LVT Shift	% Change
A. 1707 Fairfax	Single family home, Old South	$162,000	0.78	$1,944	$1,682	-13%
B. 3915 Old Brook Rd	Row home in the North	$103,000	0.76	$1,236	$1,137	-8%
C. 5613 Riverside	Row home in Cedarhurst	$314,000	0.79	$3,768	$3,108	-18%
D. Locke Lane	Condo complex in the Far West	$420,000	0.87	$5,040	$3,139	-38%
E. 2230 Venable	Income restricted multifamily	$5,160,000	0.85	$61,920	$41,887	-32%
F. 111 Stafford	Quadplex in The Fan	$651,000	0.61	$7,812	$10,274	+32%
G. 4229 Chamberlayne	Single family home, Ginter Park	$271,000	0.80	$3,252	$2,647	-19%
H. 4910 Forest Hill	New mixed use in Forest View	$752,000	0.60	$9,024	$12,169	+35%
I. 815 Porter	Manchester Heights condo	$9,329,000	0.83	$116,613	$84,531	-28%
J. 3600 Broad	Large mixed-use building	$36,901,000	0.84	$442,812	$304,394	-31%
K. 110 13th St	Downtown parking garage	$6,504,000	0.52	$81,300	$125,123	+54%
L. 3207 Norfolk	Surface parking, Scott's Addition	$2,332,000	0.03	$27,984	$79,485	+184%

Residential properties (cases A-E, G & I) tend to have IRs above the citywide average of 0.73, meaning that a LVT shift reduces their tax bill (by -8% to -38%). One notable exception is site F, a quadplex in The Fan, where land values are sufficiently high that the site's IR is only 0.61 and its tax bill increases by +32% under the proposed LVT shift. Taxes also increase for both car parking sites, although the surface parking lot at site L receives a larger increase (+184%) than the parking garage at site K (+54%).

The following section considers each property in detail.

Case Study Site A:Single family home at 1707 Fairfax Ave

The first case study site is a single storey brick house that was built in 1964 in the Old South. This use is highly consistent with the site's R-5 Single Family zoning. With 1,371 square feet (sqft) of liveable floorspace spread across a 3-bed, 1-bath dwelling, these improvements are valued at $126,000. Underneath this is a 12,000 sqft lot valued at $36,000, giving the site a total value of $162,000 and an IR of 0.78.

1707 Fairfax received a tax bill of $1,944 in 2023, which would fall to $1,682 under the 80:20 LVT. This tax reduction of -$262 (-13%) reflects the fact that this site has an IR of 0.78, above the citywide average (of 0.73).

Figure 2: Location and Exterior Views of Site A

City of Richmond Virginia
Division of Collections
PO Box 26505
Richmond, VA 23261-6505

[redacted]
1707 FAIRFAX AVE
RICHMOND VA 23224-6825

2023 First Half Real Estate Tax Bill

Bill Number 23046523

Please record Bill Number in memo section of check and include in all online banking transactions

Property Information		Tax Information	
Tax Year:	2023	Total Adjusted Annual Charges:	$0.00
Bill Number:	23046523	Current Interest:	$0.00
Parcel ID Number:	S0000455015	Current Penalty:	$0.00
Property Address:	1707 Fairfax Ave		
Mortgage Company:		Amount Due January 14, 2023	$0.00

Annual Valuation

Class / Type	Total
Building	$126,000.00
Land	$36,000.00
Total	$162,000.00

Summary of Adjusted Annual Charges

Description	Tax Rate	Annual Charges
REAL ESTATE TAX	$1.20	$1,944.00
ELDERLY RELIEF CODE		-$1,944.00
PAYMENTS RECEIVED TO DATE		$0.00

Result #1: Richmond 300 with current property tax settings
This site will remain zoned Single Family under Richmond 300, so does not receive a windfall gain in land value. However, as the City cuts tax rates in response to increasing taxable values on upzoned sites, 1707 Fairfax would enjoy a tax cut of -$16 (-0.8%) as its bill falls to $1,928.

Result #2: Richmond 300 with an LVT in place
If Richmond had an 80:20 LVT in place, this site would pay $1,682 in taxes. This enables the City to capture even more of the windfall gains created by upzoning, enabling greater tax cuts, and lowering taxes on 1707 Fairfax to $1,645, a reduction of -$37 (-2.2%).

It can therefore be seen that having an LVT in place *prior* to the Richmond 300 rezoning ensures that the City captures more of the windfall land value gains that are created by the upzoning, and more than doubles the size of the tax relief that can therefore be provided to properties like 1707 Fairfax.

Result #3: Richmond 300 followed by shifting to LVT
Under current tax settings, this site would pay $1,928 in taxes after the implementation of the Richmond 300 upzoning. At this point in time, an LVT shift causes a tax cut of -$283 (-15%) for a tax bill of $1,645.

Table 5 summarizes all of the above results, showing the site's value and annual tax bill under each combination of zoning and tax structure.

Table 5: Tax Changes for 1707 Fairfax Ave

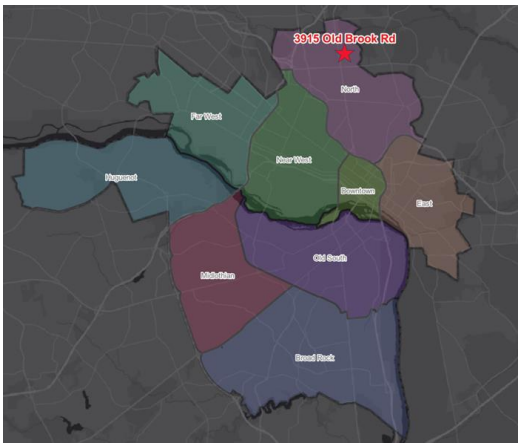
1707 Fairfax Ave	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$162,000	$1,944	$1,682	-$262
After Richmond 300	$162,000	$1,928	$1,645	-$283
$ Impact of Richmond 300	+$0	-$16	-$37	-$299

Case Study Site B: Row home at 3915 Old Brook Road

Less than a mile north of 4229 Chamberlayne (see Figure 1), the two story row home at 3915 Old Brook Road was built in 1976 and has recently been renovated and sold for $170,000 in February 2023.

This 4-bed, 1.5-bath house has 1,248 sqft of liveable floorspace with an assessed IV of $78,000. The 1,846 sqft lot is zoned R-48 Multifamily and has an assessed LV of $25,000. Thus, the site has a total value of $103,000 resulting in a 2023 tax bill of $1,236. With an IR of 0.76, slightly above the citywide average, 3915 Old Brook Road receives a -$99 tax cut (-8%) under the LVT shift, reducing its tax bill to $1,137.

Figure 3: Location and Exterior Views of Site B



City of Richmond Virginia
Division of Collections
PO Box 26505
Richmond, VA 23261-6505

3915 OLD BROOK RD
RICHMOND VA 23227

2023 Second Half Real Estate Tax Bill

Bill Number 23043901

Please record Bill Number in memo section of check and include in all online banking transactions

Property Information		Tax Information	
Tax Year:	2023	Total Adjusted Annual Charges:	$618.00
Bill Number:	23043901	Current Interest:	$0.00
Parcel ID Number:	N0180500004	Current Penalty:	$0.00
Property Address:	3915 Old Brook Road		
Mortgage Company:	CORELOGIC/fka FIRST AMERICAN TAX SERVICE	Amount Due June 14, 2023	$618.00

Annual Valuation

Class / Type	Total
Building	$78,000.00
Land	$25,000.00
Total	$103,000.00

Summary of Adjusted Annual Charges

Description	Tax Rate	Annual Charges
REAL ESTATE TAX	$1.20	$1,236.00
PAYMENTS RECEIVED TO DATE		-$618.00

Result #1: Richmond 300 with current property tax settings

Under Richmond 300, the site retains its single family residential zoning, meaning there is no change in property value. Windfall gains in taxable value in other parts of the city enable the property tax rate to be cut from $1.20 to $1.19, reducing the tax bill for 3915 Old Brook Road from $1,236 to $1,226, a tax savings of -$10 or -0.8%.

Result #2: Richmond 300 with an LVT in place

With current zoning and an LVT already in place, this site pays $1,137 in taxes before the city is rezoned. Because the additional land value created by Richmond 300 largely embeds into land value, the tax rate on LV to be cut from $3.52 to $3.42, which reduces this site's tax bill to $1,111. These tax savings of -$25 (or -2.2%) are larger than those in Result #1, which demonstrates the way in which an LVT helps to capture more of the gains from upzoning, and therefore create even greater tax savings for those properties which are not given additional planning permissions.

Result #3: Richmond 300 followed by shifting to LVT

Result #1 shows that with Richmond 300 in place, 3915 Old Brook Road would pay $1,226 under a traditional property tax. Implementing a revenue-neutral LVT shift would then reduce this site's tax bill to $1,111. Because this site has an IR above the citywide average, the LVT shift produces a tax cut of -$115 or -9.4%.

Table 6 summarizes all of the above results. On net, the Richmond 300 plan and an LVT shift reduce the tax bill for 3915 Old Brook Road total tax bill by -$125 or -10% compared to current levels.

Table 6: Tax Changes for 3915 Old Brook Road

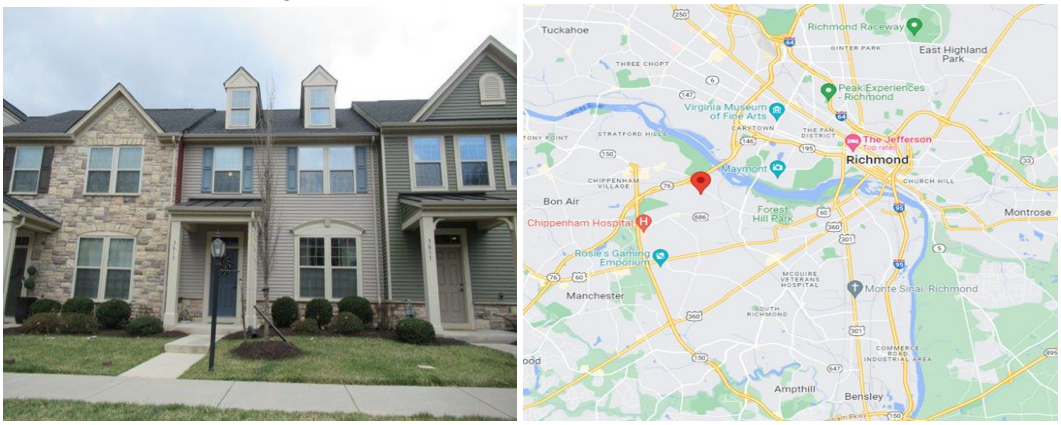
3915 Old Brook Road		Annual Tax Bill		
	Property Value (TV)	Current Property Tax	80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$103,000	$1,236	$1,137	-$99
After Richmond 300	$103,000	$1,226	$1,111	-$115
$ Impact of Richmond 300	+$0	-$10	-$25	-$125

Case Study Site C: Row home at 5613 Riverside Heights Way

Site C is located at 5613 Riverside Heights Way in Cedarhurst. Built in 2015, this 3-bed, 2.5-bath row home comprises 1,584 sqft of liveable area with an IV of $249,000. This property is located on a lot of only 2,467 sqft and zoned for R-6 Residential (Single Family Attached), with a LV of $65,000.

Site C has a TV of $314,000 and an IR of 0.79, meaning that its current tax bill of $3,768 falls by -18% to $3,108 under an LVT shift, a tax cut of -$660.

Figure 4: Location and Exterior Views of Site C



Result #1: Richmond 300 with current property tax settings

5613 Riverside Heights pays taxes of $3,768 currently, but would receive a -$30 (-0.8%) tax cut from the implementation of Richmond 300, reducing its tax bill to $3,738.

Result #2: Richmond 300 with an LVT in place

Under the 80:20 LVT this site would pay $3,108 in property taxes but Richmond 300 enables its tax bill to be cut to $3,042, a -$66 (-2.1%) tax cut. Similar to Site B, 5613 Riverside Heights Way demonstrates that implementing LVT *first* enables even greater tax relief to be provided to non-upzoned sites as a result of the Richmond 300 future land use plan.

Result #3: Richmond 300 followed by shifting to LVT

With current tax settings and Richmond 300 in place, Site B pays $3,738 in annual property taxes. If an LVT shift is implemented at that point, this tax bill falls to $3,042, a -$696 (-19%) tax cut.

Table 7 summarizes all of the above results for Site C.

Table 7: Tax Changes for 5613 Riverside Heights Way

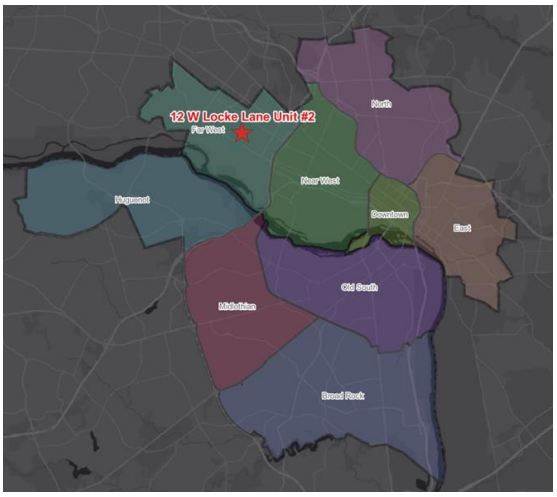
5613 Riverside Heights Way	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$314,000	$3,768	$3,108	-$660
After Richmond 300	$314,000	$3,738	$3,042	-$696
$ Impact of Richmond 300	+$0	-$30	-$66	-$726

Case Study Site D: Unit #2 in the Condominium at 12 W Locke Lane Unit #2

Located in the Far West, 12 W Locke Lane is a 1930s brick condominium complex with a shared BBQ space and outdoor pool area. Each unit in this building is taxed separately, and Unit #2 is taken as case study Site D. This unit has a modern interior of 1,524sqft and a 3-bed, 2.5-bath layout, valued at IV $365,000. While the property as a whole occupies 7 acres of land zoned R-48 Multi-family, the land value is divided among individual units, and site D has LV of $55,000.

Overall, this site has a TV of $420,000 and a 2023 tax bill of $5,040. With the proposed LVT shift, this bill would fall to $3,139. Tax savings of -$1,901 (-38%) reflect this site's productive use of land.

Figure 5: Location and Exterior Views of Site D



Result #1: Richmond 300 with current property tax settings
12 Locke Lane is not upzoned by the Richmond 300 plan, meaning that under current property tax settings its tax bill falls from $5,040 to $4,999, a reduction of -$41 (-0.8%).

Result #2: Richmond 300 with an LVT in place
With an LVT in place, Site D would pay $3,139 in property taxes, but the Richmond 300 upzoning reduces this tax bill to $3,083, tax relief of -$56 (-1.8%).

Result #3: Richmond 300 followed by shifting to LVT
If Richmond 300 were in place, a single-rate property tax results in 12 Locke Lane paying $4,999. A subsequent LVT shift sees this bill fall to $3,083, with this generous tax saving of -$1,916 (-38%) reflecting the site's productive land use.

Table 8 summarizes the above results.

Table 8: Tax Changes for 12 W Locke Lane Unit #2

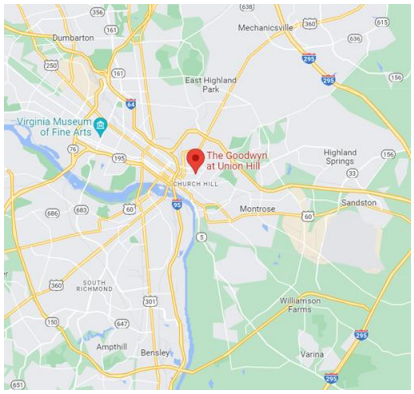
12 W Locke Lane Unit #2	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$420,000	$5,040	$3,139	-$1,901
After Richmond 300	$420,000	$4,999	$3,083	-$1,916
$ Impact of Richmond 300	+$0	-$41	-$56	-$1,957

Case Study Site E: The Goodwyn at 2230 Venable Street

Located at 2230 Venable Street in Union Hill, The Goodwyn is a multifamily housing complex comprising 52 units of between 1-3 bedrooms, spread across five separate buildings. A number of units are designated as affordable, being restricted to households at various income levels.

This property is assessed and taxed as a whole, being assigned an LV of $780,000 and IV of $4,380,000 in 2023, implying a TV of $5,160,000. Providing many housing units on a single piece of land, The Goodwyn has a relatively high IR of 0.85, meaning that the 2023 tax bill of $61,920 would fall by a third to $41,887 under the proposed LVT shift, a reduction of -$20,033 (or $400 per household).

Figure 6: Location and Exterior Views of Site E



Result #1: Richmond 300 with current property tax settings
Like other properties which are not upzoned under Richmond 300, current tax settings mean that The Goodwyn would see its tax bill fall from $61,920 to $61,422 due to the tax rate reductions enabled by upzoned properties elsewhere, a reduction of -0.8%

Result #2: Richmond 300 with an LVT in place
With an LVT in place, The Goodwyn would have a tax obligation of $41,887. Richmond 300 would cause this to fall by a *further* -$791 (-1.9%), to $41,097, demonstrating the compounding benefits of a land value tax for properties which are being used productively and which are not targeted for upzoning.

Result #3: Richmond 300 followed by shifting to LVT
Under current tax settings and the land use plan set out in Richmond 300, site E would pay $61,422 in taxes. An LVT shift would then lower this to $41,097, a reduction of -$20,326 (-33%).

Table 9 summarizes the impacts of Richmond 300 and an LVT shift for The Goodwyn.

Table 9: Tax Changes for 2230 Venable Street

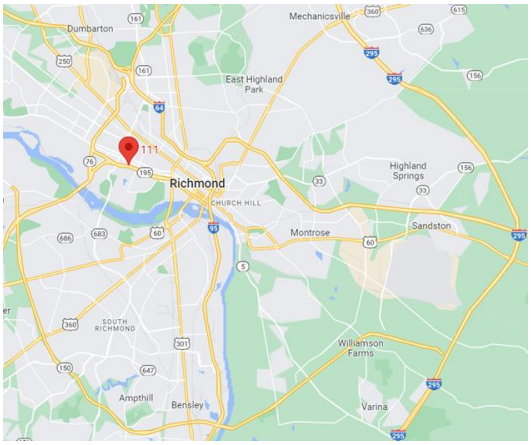
2230 Venable Street		Annual Tax Bill		
	Property Value (TV)	Current Property Tax	80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$5,160,000	$61,920	$41,887	-$20,033
After Richmond 300	$5,160,000	$61,422	$41,097	-$20,326
$ Impact of Richmond 300	+$0	-$498	-$791	-$20,823

Case Study Site F: 111 S Stafford Ave

Site F is a quadplex located at 111 S Stafford Ave, right in the heart of The Fan. Built in 1921, this building contains four 2-bed 1-bath units, assessed collectively at IV of $396,000. Despite occupying only 2,321sqft of land, site F is zoned R-63 Multi Family Urban Residential zoning (which allows 4 storeys and up to 10 housing units) in an area where land values are commonly around $100 per sqft, and therefore has an LV of $255,000.

This site has an assessed TV of $651,000 and an IR of 2023 tax bill of 0.61, below the citywide average. This means that an LVT shift would increase its tax bill from $7,812 currently to $10,274, an increase of +$2,463 (+32%) or $615 per unit.

Figure 7: Location and Exterior Views of Site F



Result #1: Richmond 300 with current property tax settings

111 Stafford is the final case study site that is not designated for upzoning under the Richmond 300 land use plan. This means that with a single-rate property tax, this site also receives a -0.8% decrease in its tax bill when other parts of the city are upzoned, reducing its tax obligation from $7,812 at present to $7,749.

Result #2: Richmond 300 with an LVT in place

As mentioned above, under the proposed LVT, Site F would pay $10,274 in taxes. With this LVT in place, the Richmond 300 upzoning enables this tax bill to be cut to $10,016, a reduction of -$259 (-2.5%).

Again, it is clear that having an LVT in place prior to rezoning enables more of the windfall land value gains to be captured, expanding the tax relief that can be provided to non-upzoned properties.

Result #3: Richmond 300 followed by shifting to LVT

Result #1 showed that current tax settings result in a tax bill of $7,749 after Richmond 300 is implemented. Transitioning to an LVT at this point results in a +$2,266 increase in 111 Stafford's tax bill (+29%), to $10,016.

Table 10: Tax Changes for 111 S Stafford Ave

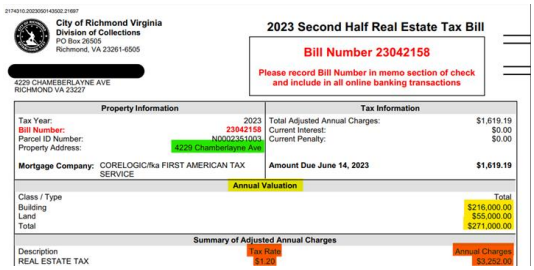
111 S Stafford Ave	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$651,000	$7,812	$10,274	+$2,462
After Richmond 300	$651,000	$7,749	$10,016	+$2,266
$ Impact of Richmond 300	+$0	-$63	-$259	+$2,204

Case Study Site G: Single Family Home at 4229 Chamberlayne Ave

Located in the Ginter Park neighborhood in the north of Richmond (see Figure 8), 4229 Chamberlayne Ave is a two-story brick house built in 1937. The property was sold in January 2023 for $285,000, and was independently appraised by Placer Realty Associates at having had an indicated value of $300,000 on 31 July 2023.

4229 Chamberlayne is a 3-bed, 2-bath home comprising 1,778 square feet of built floorspace, which was given an assessed improved value of $216,000. The 8,260 sqft of land on which the home is built is zoned R-48 Multifamily and assessed at$55,000. The property therefore has a total value of $271,000, and received a property tax bill of $3,252 in 2023. Because this property has an IR of 0.80, above the city average, an LVT shift reduces its tax bill, which falls to $2,647 under the modeled LVT, a tax cut of -$605 or -19%.

Figure 8: Location and Exterior Views of Site G



City of Richmond Virginia
Division of Collections
PO Box 26505
Richmond, VA 23261-6505

2023 Second Half Real Estate Tax Bill

Bill Number 23042158

Please record Bill Number in memo section of check and include in all online banking transactions

4229 CHAMBERLAYNE AVE
RICHMOND VA 23227

Property Information		Tax Information	
Tax Year:	2023	Total Adjusted Annual Charges:	$1,619.19
Bill Number:	23042158	Current Interest:	$0.00
Parcel ID Number:	N0002351003	Current Penalty:	$0.00
Property Address:	4229 Chamberlayne Ave		
Mortgage Company:	CORELOGIC/fka FIRST AMERICAN TAX SERVICE	Amount Due June 14, 2023	$1,619.19

Annual Valuation

Class / Type	Total
Building	$216,000.00
Land	$55,000.00
Total	$271,000.00

Summary of Adjusted Annual Charges

Description	Tax Rate	Annual Charges
REAL ESTATE TAX	$1.20	$3,252.00

4229 Chamberlayne is the first of the case study sites which will be upzoned under Richmond 300. It is designated for Corridor Mixed Use, which will allow commercial and residential mixed-use developments of up to 10 stories. This is estimated to generate a windfall land value gain of +$2,750 (a +1.0% increase) to the property's land value, bringing total assessed value to $273,750 (and a commensurate reduction of the IR to 0.79).

Result #1: Upzoning with current property tax settings

With current property tax settings in place, upzoning 4229 Chamberlayne increases the tax bill from $3,252 to $3,259, an increase of +$7 or +0.2%. Thus, under current tax settings this property owner captures a +$2,750 upzoning windfall, of which the City only captures an additional +$7 per year. Even assuming no further increase in property value or tax rates over time, it would take the City over 390 years to recapture the upzoning windfall with the current (single rate) property tax[12].

Result #2: Upzoning with an LVT in place

With the LVT in place, 4229 Chamberlayne would pay an annual tax bill of $2,647 under today's zoning ordinance. Upzoning would add +$2,750 in windfall land value gains, but would simultaneously increase the tax bill to $2,685, an increase of +$38 (+1.4%). Under the LVT, it would only take 70 years for the City to capture the rezoning windfall (compared to 390 under a single-rate property tax). Thus, having an LVT in place can help Richmond to capture more of the land value uplift that will be created by the Richmond 300 rezoning.

Result #3: Upzoning followed by an LVT shift

If Richmond rezones before adopting an LVT, 4229 Chamberlayne will face a tax bill of $3,259 (per Result #1). Even after being upzoned, this site has an IR which is higher than that for the city as a whole, meaning that it receives a tax reduction from a subsequent LVT shift. The tax bill would fall to $2,685, a reduction of -$573 or -18%.

Table 11 summarizes the above results. After implementation of both Richmond 300 and the proposed LVT shift, this property's total tax bill has fallen by a total of -$567 or -17% compared to its actual 2023 tax bill.

Table 11: Tax Changes for 4229 Chamberlayne Ave

4229 Chamberlayne Ave		Annual Tax Bill		
	Property Value (TV)	Current Property Tax	80:20 LVT	$ Impact of LVT Shift
Before upzoning	$271,000	$3,252	$2,647	-$605
After upzoning	$273,750	$3,259	$2,685	-$573
$ Impact of upzoning	+$2,750	+$7	+$38	-$567

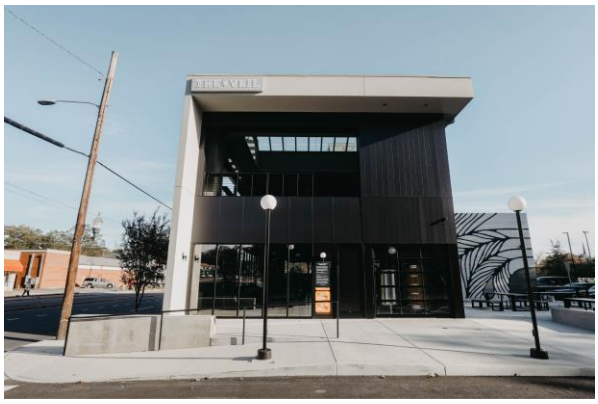
[12] This result is not discounted and should be treated simply as indicative of the ratio between windfall gains and the changing tax bill.

Case Study Site H: Recent Mixed Use Development at 4910 Forest Hill Ave

Completed in 2020, the mixed-use development at 4910 Forest Hill Ave comprises 4,983sqft of floorspace, with The Veil Brewing Co. as a major tenant. Located on 21,731sqft of land in an area where land values are around $15/sqft, this site has an assessed LV of $304,000 while the buildings are valued at IV of $448,000, for a TV of $752,000.

2023 taxes on the 4910 Forest Hill site were $9,024 and would increase by +35% to $12,69 under a LVT shift. Despite the new building, this site still has an IV of 0.60, well below the citywide average of 0.73, partly due to the parking lot of around 6,000sqft located at the back of the property.

Figure 9: Location and Exterior Views of Site H



Result #1: Richmond 300 with current property tax settings

Site H currently pays taxes of $9,024 per year, and will be upzoned to Community Mixed-Use under the Richmond 300 plan, allowing up to 6 storeys of mixed-use development with retail or office space on the ground floor and multifamily residential above. This is estimated to add +$24,320 to the value of 4910 Forest Hill. This will increase the site's tax obligation to $9,241, an increase of +$217 (+2.4%).

Result #2: Richmond 300 with an LVT in place

With an LVT in place, this site would pay taxes of $12,169 under current zoning, and its upzoning under Richmond 300 would add $522 (+4.3%) to this, for an annual tax obligation of $12,691.

Result #3: Richmond 300 followed by shifting to LVT

Under current tax settings and having been upzoned to Community Mixed-Use, this site would pay $9,241 in property taxes. An LVT shift would increase this tax bill to $12,691, an increase of +$3,450 or +37%.

Table 12: Tax Changes for 4910 Forest Hill Ave

4910 Forest Hill Ave	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$752,000	$9,024	$12,169	+$3,145
After Richmond 300	$776,320	$9,241	$12,691	+$3,450
$ Impact of Richmond 300	+$24,320	+$217	+$522	+$3,667

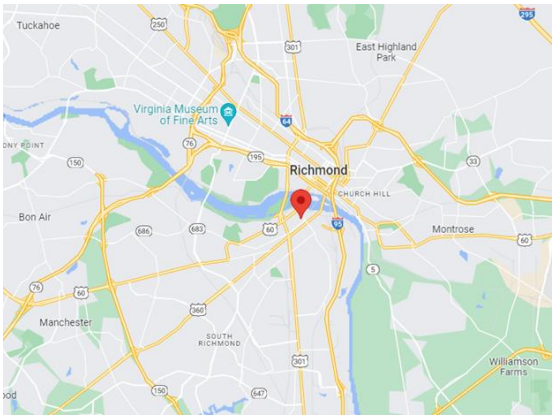
Case Study Site I: Old Manchester Lofts at 815 Porter Street

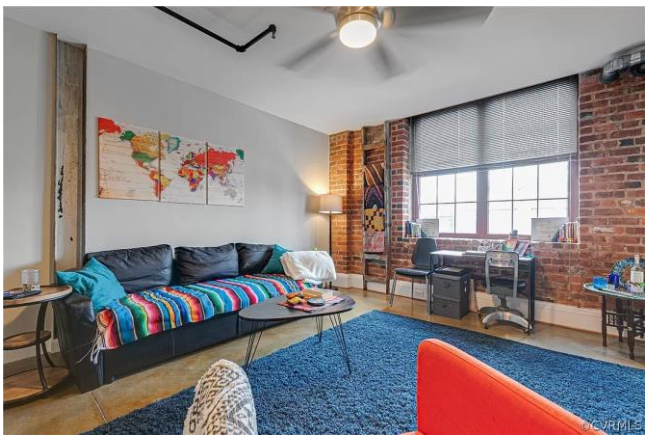
Located just south of downtown, across the James River, Old Manchester Lofts is an old bakery built in 1895, which has been adapted into a condominium complex. This four storey building comprises 80 dwelling units ranging from 1 to 3 bedrooms, which are assessed at an average IV of $171,000 and assigned an equal share of the 1.4 acres of land, at LV of $35,000 per unit.

Thus, for the property as a whole, 815 Porter is valued at $16,462,000, split between land and improvements with an IR of 0.83. It therefore pays a total of $197,544 in property taxes per year, which would fall to $143,561 under the 80:20 LVT shift. This decline of -$53,983 (-27%) reflects the high number of dwelling units sharing the single piece of land.

Site I is set to be upzoned to Destination Mixed-Use under the Richmond 300 plan, which will allow high-density retail, office or multifamily housing uses of more than five storeys.

Figure 10: Location and Exterior Views of Site I





Result #1: Richmond 300 with current property tax settings

The upzoning above is expected to add +$280,000 to the total value of Old Manchester Lofts (shared across all 80 units). With current tax settings, this would increase the annual property tax bill from $197,544 to $199,289. The windfall gains in land value are sufficient to cover the additional +$1,745 (+0.9%) in taxes over 160 years.

Result #2: Richmond 300 with an LVT in place

Alternatively, with an LVT in place, Site I would pay $143,561 per year, rising to $150,284 when the city is upzoned by Richmond 300. This increase of +$6,723 (+4.7%) recaptures the upzoning windfall within 42 years, much more rapidly than under a single-rate property tax.

Result #3: Richmond 300 followed by shifting to LVT

With a traditional property tax, Old Manchester Lofts would pay $199,289 in taxes after Richmond 300 is implemented. Shifting to a LVT at this point would lower the site's tax bill by -$49,005 (-25%), to $150,284. Again, it is seen that this site enjoys a tax reduction due to its productive land use.

Table 13: Tax Changes for 815 Porter St

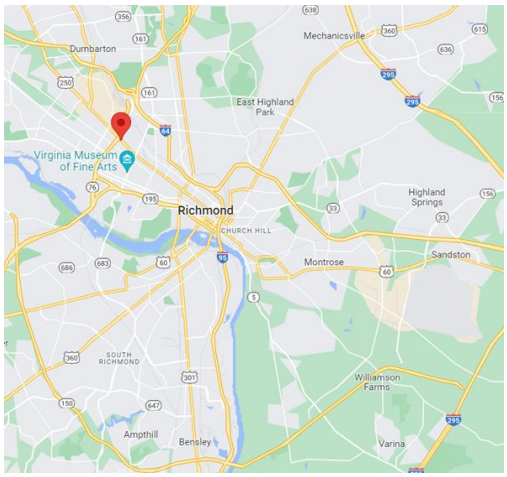
815 Porter St	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Richmond 300	$16,462,000	$197,544	$143,561	-$53,983
After Richmond 300	$16,742,000	$199,289	$150,284	-$49,005
$ Impact of Richmond 300	+$280,000	+$1,745	+$6,723	-$47,260

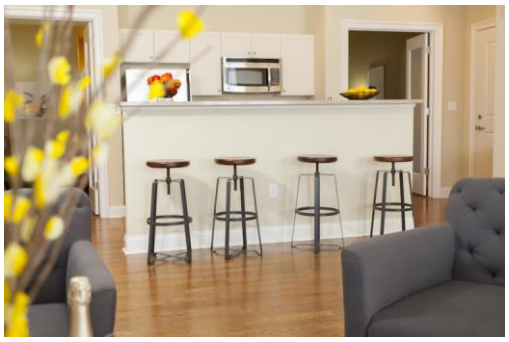
Case Study Site J: Mixed-Use at 3600 W Broad Street

This large mixed-use building located at the eastern corner of Scott's Addition, on W Broad Street, a busy arterial connecting Far West with Richmond's downtown. Originally constructed in 1955 as an office building, Site J has hosted the Seaboard Coast Line Railroad headquarters and Traveler's Insurance headquarters, but in 2011 was renovated by its owner, PMC Property Group, into a mix of office, retail and residential. Today, the 255,000 sqft of built floorspace include a commercial & retail uses on the ground floor, including a Crunch Fitness gym, and seven floors of 1-2 bedroom apartments typically renting for around $1,300 to $2,000 per month.

3600 W Broad Street has an assessed value of $36,901,000 and therefore pays a property tax bill of $442,812 in 2023[13]. This assessed value includes IV of $31,171,000 and LV of $5,730,000, giving Site J a relatively high IR of 0.84. It therefore receives a tax cut of -$138,418 (-31%) under an LVT shift, for a tax bill of $304,394.

Figure 11: Location and Exterior Views of Site J





[13] Site J received a rehabilitation tax credit of -$43,650, but this is excluded for the purposes of this analysis.

Result #1: Richmond 300 with current property tax settings

Like 815 Porter, Site J is designated for Destination Mixed-Use under the Richmond 300 plan, which is estimated to create a windfall land value uplift of +$573,000. With current property tax settings this would increase the site's property tax bill from $442,812 to $446,072. This additional tax bill of +$3,260 (+0.7%) captures 0.6% of the upzoning windfall, which is sufficient to cover 176 years of these additional taxes.

Result #2: Richmond 300 with an LVT in place

With an LVT in place, Site J would pay taxes of $304,394. Being upzoned would increase this tax to $318,151, an increase of +$13,758 (+4.6%). Having an LVT in place ensures that the additional tax bill that comes alongside upzoning captures 2.4% of the windfall each year, reducing the number of years' worth of taxation required to recapture the LV uplift, to 42.

Result #3: Richmond 300 followed by shifting to LVT

Under current property taxes and with Richmond 300 in place, 3600 W Broad would pay $446,072 in property taxes. Despite the upzoning having reduced the sites IR to 0.83, this still well above the citywide average, meaning that an LVT shift at this point would still reduce Site J's tax bill by -$127,912 (-29%), to $318,151.

Table 14: Tax Changes for 3600 W Broad St

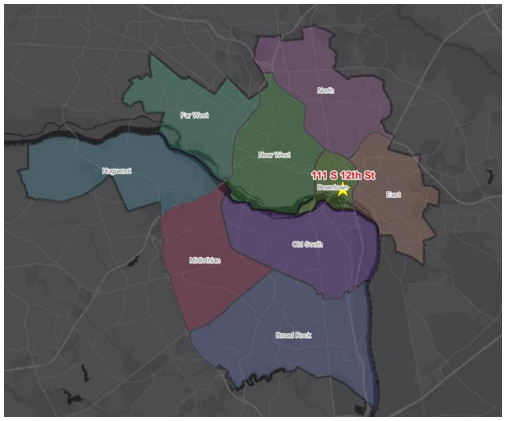
3600 W Broad St	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Upzoning	$36,901,000	$442,812	$304,394	-$138,418
After Upzoning	$37,474,000	$446,072	$318,151	-$127,921
$ Impact of Upzoning	+$573,000	+$3,260	+$13,758	-$124,661

Case Study Site K: Downtown Parking Garage at 110 S 13th Street

Located just a few blocks south of the Capitol, 110 S 13th Street is a 6-storey, 222,380sqft, parking garage built atop 0.9 acres of land. This site is owned by RVA Shockoe Garage LP and is currently zoned for B-5 Business use.

Built in 1974, the structure of the parking garage is rather dated, and was therefore assessed at IV of $3,353,000 in 2023. Conversely, the site's prime location saw the land valued at $3,151,000. This gives the site a TV of $6,504,000 and a relatively low IR of 0.52. This means that an LVT shift would see its current tax bill of $81,300 rise to $125,123, an increase of +$43,832 or +56%. Site K would therefore face strong incentives for redevelopment under the LVT system.

Figure 12: Location and Exterior Views of Site K



Result #1: Richmond 300 with current property tax settings

Site K is designated for upzoning under Richmond 300, to Downtown Mixed-Use. This is estimated to create +$315,100 of land value uplift on the site, which would increase its tax bill by +$3,123 (+3.8%), to $84,423. The upzoning windfall is equivalent to 100 years' worth of the accompanying tax increase.

Result #2: Richmond 300 with an LVT in place

Under an LVT, 110 S 13th Street would pay $125,123 in annual property taxes. Upzoning would increase this bill to $132,689, an increase of +$7,566 (+6.0%), sufficient to recapture the windfall within only 17 years.

Result #3: Richmond 300 followed by shifting to LVT

Alternatively, under current tax settings and having been upzoned, Site K would pay $84,423 in property taxes. An LVT shift at this point would increase its tax bill by +$48,265 (+57%), to $132,689. Again, there would be a clear incentive for the property owner to make use of the expanded planning envelope of the Downtown Mixed-Use zoning, helping ensure that the growth goals of Richmond 300 actually come to fruition.

Table 15: Tax Changes for 110 S 13th St

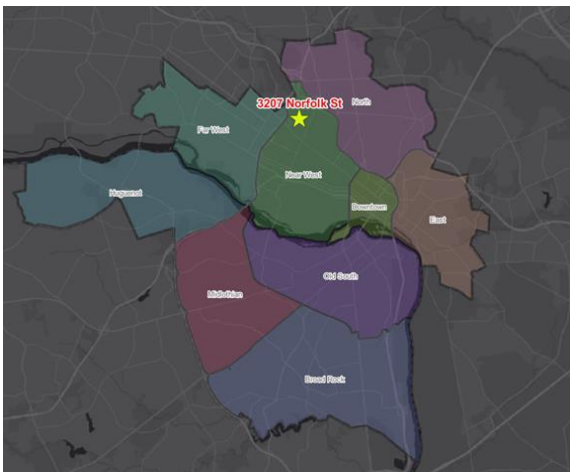
110 S 13th St	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Upzoning	$6,504,000	$81,300	$125,123	+$43,832
After Upzoning	$6,819,100	$84,423	$132,689	+$48,265
$ Impact of Upzoning	+$315,100	+$3,123	+$7,566	+$51,389

Case Study Site L: Surface Parking Lot at 3207 Norfolk Street

3207 Norfolk Street is a 1.4-acre surface parking lot located right in the heart of Scott's Addition. Owned by 'HCL Parking LLC, this site has remained undeveloped even as the surrounding neighborhood has transitioned from a languishing manufacturing zone into a revitalized hub of craft breweries. Adjacent to 3207 Norfolk Street, the Otis apartment complex completed construction in early 2023.

Comprising almost an entire city block in a thriving area, 3207 Norfolk has assessed land value of $2,253,000. A small number of built structures on the site add $79,000 of IV, resulting in a taxable valuation of $2,332,000. As expected for a site with such a low IR (of 0.03), the 80:20 LVT shift increases the annual property tax bill from the current $27,984 to $79,485, an increase of +$51,501 or +184%. This demonstrates the way in which land value taxes increase holding costs for the owners of high-value value, while increasing the financial rewards for redeveloping into a more productive use.

Figure 13: Location and Exterior Views of Site L



Result #1: Richmond 300 with current property tax settings
3207 Norfolk is currently zoned as M-1 Light Industrial, and will be upzoned to Industrial Mixed-Use under Richmond 300, enabling a three to eight storey mix of retail, office and residential uses. This upzoning is estimated to increase the site's land value by +$180,240, or a +7.7% increase in total property value. With the current property tax settings, this causes the tax bill to rise from $27,984 to $29,904, an increase of +$1,920 or +6.8%. Again, with a single rate property tax, the windfall gain in land value is sufficient to cover the increased tax bill for 94 years.

Result #2: Richmond 300 with an LVT in place
With an LVT in place, 3207 Norfolk would be paying $79,485 in property taxes, as a reflection of the site's high land value and low level of improvements. Implementing Richmond 300 at this point would actually reduce the tax bill to $83,356, a reduction of +$3,871 or +4.8%. With LVT in place, the windfall increase in land value would be captured by the increased tax rate within 46 years, half of the time in Result #1.

Result #3: Richmond 300 followed by shifting to LVT
Under a single-rate property tax and with Richmond 300 in place, this parking lot would pay $29,904 in annual taxes. Shifting to LVT increases this bill to $83,356, an increase of +$53,452 (+179%). Again, the large increase in taxes from an LVT shift reflects the low IR and lack of improvements built on the site.

Table 16 summarizes the various impacts of LVT and Richmond 300 for this vacant parking lot.

Table 16: Tax Changes for 3207 Norfolk

3207 Norfolk Street	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before Upzoning	$2,332,000	$27,984	$79,485	+$51,501
After Upzoning	$2,512,240	$29,904	$83,356	+$53,452
$ Impact of Upzoning	+$180,240	+$1,920	+$3,871	+$55,372

Key Findings & Conclusions

Table 17 provides a snapshot of Result #1 for all of the above case studies, indicating how Richmond 300 will produce windfall gains and changes in tax bills under the current property tax system. By contrast, Table 18 depicts the impacts of Richmond 300 with a LVT in place, corresponding to the outcomes for Result #2.

Table 17: Impact of Richmond 300 with Current Property Tax

Site	Description	Up-zoned?	Windfall Gain	Current Property Tax	Property Tax After Upzoning	% Change in Tax Bill
A. 1707 Fairfax	Single family home, Old South	No	$0	$1,944	$1,928	-0.8%
B. 3915 Old Brook Rd	Row home in the North	No	$0	$1,236	$1,226	-0.8%
C. 5613 Riverside	Row home in Cedarhurst	No	$0	$3,768	$3,738	-0.8%
D. Locke Lane	Condo complex in the Far West	No	$0	$5,040	$4,999	-0.8%
E. 2230 Venable	Income restricted multifamily	No	$0	$61,920	$61,422	-0.8%
F. 111 Stafford	Quadplex in The Fan	No	$0	$7,812	$7,749	-0.8%
G. 4229 Chamberlayne	Single family home, Ginter Park	Yes	+$2,750	$3,252	$3,259	+0.2%
H. 4910 Forest Hill	New mixed use in Forest View	Yes	+$24,320	$9,024	$9,241	+2.4%
I. 815 Porter	Manchester Heights condo	Yes	+$280,000	$197,544	$199,289	+0.9%
J. 3600 Broad	Large mixed-use building	Yes	+$573,000	$442,812	$446,072	+0.7%
K. 110 13th St	Downtown parking garage	Yes	+$315,100	$81,300	$84,423	+3.8%
L. 3207 Norfolk	Surface parking, Scott's Addition	Yes	+$180,240	$27,984	$29,904	+6.9%

Table 18: Impact of Richmond 300 with 80:20 Land Value Tax

Site	Description	Up-zoned?	Windfall Gain	LVT Bill Before Upzoning	LVT Bill After Upzoning	% Change in Tax Bill
A. 1707 Fairfax	Single family home, Old South	No	$0	$1,682	$1,645	-2.2%
B. 3915 Old Brook Rd	Row home in the North	No	$0	$1,137	$1,111	-2.2%
C. 5613 Riverside	Row home in Cedarhurst	No	$0	$3,108	$3,042	-2.1%
D. Locke Lane	Condo complex in the Far West	No	$0	$3,139	$3,083	-1.8%
E. 2230 Venable	Income restricted multifamily	No	$0	$41,887	$41,097	-1.9%
F. 111 Stafford	Quadplex in The Fan	No	$0	$10,274	$10,016	-2.5%
G 4229 Chamberlayne	Single family home, Ginter Park	Yes	+$2,750	$2,647	$2,685	+1.4%
H. 4910 Forest Hill	New mixed use in Forest View	Yes	+$24,320	$12,169	$12,691	+4.3%
I. 815 Porter	Manchester Heights condo	Yes	+$280,000	$143,561	$150,284	+4.7%
J. 3600 Broad	Large mixed-use building	Yes	+$573,000	$304,394	$318,151	+4.5%
K. 110 13th St	Downtown parking garage	Yes	+$315,100	$125,123	$132,689	+6.0%
L. 3207 Norfolk	Surface parking, Scott's Addition	Yes	+$180,240	$79,485	$83,356	+4.9%

Overall, these case studies reveal that a shift from traditional property taxes to a Land Value Tax (LVT) would offer more generous tax reductions for intensively-used properties, creating a more favorable tax environment for renovation, redevelopment, and efficient land use. This approach to taxation rewards productivity by drawing greater revenues from land, while cutting taxes on buildings and other improvements, which can otherwise disincentivize investment.

Under Richmond 300, parcels which are rezoned to allow more intensive development are anticipated to enjoy a windfall increase in land values due to the profit effect. Properties that are upzoned, particularly those reclassified to high-density categories such as Destination or Downtown Mixed-Use, are poised to experience the most substantial gains. These windfall increases are especially pronounced for sites with minimal existing development, which typically have a lower improvement ratio (IR), making them more sensitive to changes in allowable land use.

However, these same properties would face a larger tax burden under an LVT than they would under a traditional property tax. By implementing an LVT prior to the full rollout of Richmond 300, the City can capture a greater share of these windfall gains, and deploy these additional revenues for public benefit. For example, revenues can be maintained at current levels while delivering substantial tax relief, of between -1.8% to -2.5%, for non-upzoned properties. This level of relief more than doubles the windfall land value capture that would occur under a conventional, single-rate property tax system.

It is clear that transitioning Richmond's property tax system to a land value tax will simultaneously amplify the intended benefits of Richmond 300, boosting the construction of infill housing in upzoned areas, while helping capture the resulting windfall gains in land value, and enabling tax relief for the remainder of the city.

Appendix 1: Data & Methods for Tax Bill Calculations

The primary analysis described here examines how property tax bills would change if Richmond adopted an LVT. Central to this effort is Richmond's Parcels dataset, which was provided to RSF's research team by the Office of the Assessor of Real Estate. This comprehensive dataset contains assessed land values (some $9.87 billion in all) and improvement values (totaling $26.28 billion) for each of Richmond's 75,783 properties (as of January 2023

The assessor's dataset does not include information on current tax bills, however. As such, each parcel's bill was manually calculated by multiplying taxable value by the 2023 tax rate of $1.20 per $100 of assessed value. Data on Area Tax and Special Assessment Districts (provided by the assessor's office) were then added to relevant tax bills[14,15]. Finally, 4,359 properties identified as either tax exempt or as possessing no assessed value were assigned a tax liability of $0. These calculations yield $433.7M in property tax revenues for the City of Richmond, a total considered sufficiently close to the $454 million reported in the ACFR to proceed with the tax shift analyses.

Implementation of an LVT can take a variety of specific forms. A "true land value tax," for example, completely untaxes improvement values, placing the entirety of the tax burden on land values. More modest policies, in contrast, put a greater emphasis (i.e. higher rate) on land values compared to improvements, but the latter are still taxed to some degree. Tax bills were also calculated for a split-rate LVT system where 80% of city revenues are generated from land, compared to the current 27% share. With current assessments in place, this requires a $3.52 tax rate on land values and enables taxes on improvements to be cut to $0.33. Richmond 300 creates additional land value and enables the LVT rate to be cut to $3.19 while maintaining revenue-neutrality.

Tax bills are calculated under each combination of tax and zoning settings, and compared for each case study site in the results section.

[14] Subsequent tax shift calculations assume that these adjustments will not be changed by the LVT shift.

[15] The analysis entirely excludes the rehabilitation tax credit and tax relief for elderly & disabled owners due to a lack of publicly available property-level data. Note that a LVT shift has a similar goal to the rehabilitation tax credit: ensure that the tax system does not discourage maintaining or constructing housing.

Appendix 2: Quantifying Richmond 300

To inform the key assumptions which underpin the above analysis, it is necessary to quantify the 'scale' of the rezoning proposed under Richmond 300 both for individual properties and for the city as a whole. First, the Future Land Use map was used in a spatial join to identify the intended land use designation for every property in the city. Current and future zoning land use regulations could then be compared for each property to determine whether Richmond 300 is likely to 'upzone' the site by relaxing its planning controls, expanding its redevelopment potential.

The Richmond 300 Vision and Core Concepts chapter explains the intended uses within each future land use designation. The impact of each designation on housing capacity can be summarized as follows:

- **Residential**: single family housing (SFH) with an accessory dwelling unit (ADU). With ADUs already legal by-right, this designation does not add additional legal capacity for housing.
- **Neighborhood Mixed-Use**: allows 2 to 4 stories of mixed use, including between 3 and 10 units of multifamily housing (MFH). For sites currently zoned for single family residential, this is classified as a small upzoning.
- **Community & Corridor & Industrial Mixed-Use:** these designations have similar housing implications, as they all allow medium-density mixed-use developments of between 2 to 10 stories, including housing. For sites currently zoned for single family residential or duplex uses, this category is classified as a medium upzoning.
- **Destination & Downtown Mixed-Use:** allow apartment buildings of more than 5 stories, and are therefore considered a large upzoning relative to current residential uses.
- **Public Open Space, Institutional and Industrial**: these designations are assumed not to contribute to additional housing capacity in Richmond.

Excluding roads, Richmond occupies 33,000 acres of land. Of this, 26,600 acres (80%) make no meaningful addition to housing capacity, for the following reasons:

  - 14,700 acres (45% of the city) remains zoned for single family residential
  - 9,700 acres (29%) is Public Open Space, Institutional or Industrial
  - 2,200 acres (7%) is designated for land uses which allow multifamily housing, but without any additional capacity relative to current zoning

6,300 acres, or one-fifth of Richmond's land (excluding roads), is designated for additional housing capacity under the Future Land Use Plan. These categories of 'upzoning' are described in Table A2, along with their categorization into 'small', 'medium' and 'large' classifications of upzoning, which are used for the adjustment factors described in the main report above.

Table A2: Categories of Land Upzoned Under Richmond 300

Categories of Upzoned Properties	Acres	% of City	Classified Scale of Upzoning
SFH upzoned to Neighborhood Mixed-Use	1,215	4%	Small
SFH/Duplex upzoned to Community/Corridor/Industrial Mixed-Use	241	1%	Medium
SFH upzoned to Destination & Downtown Mixed-Use	302	1%	Large
MFH upzoned to Community/Corridor/Industrial Mixed-Use	210	1%	Small
Industrial to Community/Corridor/Industrial Mixed-Use	1,243	4%	Medium
Industrial to Destination & Downtown Mixed-Use	369	1%	Large
B-2 & B-3 to Community/Corridor/Industrial Mixed-Use	832	3%	Medium
B-2 & B-3 to Destination & Downtown Mixed-Use	186	1%	Large
Multiple zoning to Residential	1,211	4%	Small
Others to Residential	538	2%	Small
Total Upzoned	**6,347**	**19%**	

Based on the classifications above, 3,174 acres (10% of the city) receives a small upzoning, 2,316 medium (7%), and 857 (3%) acres are significantly upzoned under the Richmond 300 plan.

By comparison, the Unitary Plan in Auckland, New Zealand, upzoned 75% of residential land and added legal capacity for 750,000 additional dwellings (to a city with a population of 1.7 million and a 'potential population' of 30 million[16])[17]. Studying the impacts of this policy, Greenaway-McGrevy, Pacheco & Sorensen (2021) identify sizable profit effects but relatively minor scarcity effects for properties with a high ratio of improvements to total property value (the 'IR' discussed above).

Similarly, in 2019 Minneapolis was the first American city to effectively abolish single-family zoning, allowing up to three attached dwelling units per parcel. This can also be characterized as a significant upzoning, as it "effectively triples the housing capacity of some neighborhoods". Preliminary analysis suggests that this produced an immediate profit effect for upzoned parcels, which increased in value by 3% to 5%.

While Richmond 300 does add additional housing capacity within around one-fifth of the city, it can be interpreted as a somewhat more modest upzoning than the Auckland and Minneapolis examples. Profit effects are therefore likely to be in the range of 2% to 3% on average, with larger impacts on vacant or underutilized lots (those with a low IR), and smaller effects on more built-out parcels. These insights are used to justify the key assumptions described in the main body of this report.

[16] Australia (25.5 million) and New Zealand (4.5 million) have a reciprocal free immigration zone
[17] Balderston & Fredrickson (2014) Capacity for Growth Study 2013

Appendix 3: Spot-Upzoning of 4229 Chamberlayne Ave

In the course of completing this project, the case study Site G at 4229 Chamberlayne Ave was professionally appraised by Placer Realty Associates as if it had been upzoned to Corridor Mixed Use under Richmond 300. However, this appraisal assumed a state of the world where only this single site had been upzoned, effectively a 'spot upzoning' of the site. Because there is no additional housing capacity being created elsewhere in the city, this site enjoys a large profit effect. This result does not represent how property values will shift under the full Richmond 300 plan, but provides an indicative example of the effects of implementing LVT and a blanket upzoning in different orders, and the likely reactions of property owners at each stage.

4229 Chamberlayne is currently valued at $271,000, comprising LV of $55,000 and a single family home valued at IV of $216,000. The Placer Realty Associates that this would add an additional +$84,000 to the value of the site.

This was supplemented with a highly-detailed appraisal as-if upzoned by Placer Realty Associates. This method used the sales comparables approach, using recent sales of properties with current zoning similar to what is allowed under Corridor Mixed Use. From this appraisal, it was anticipated that a spot upzoning of 4229 Chamberlayne would create a windfall gain in property value of +$84,000 to $355,000.

Because this value represents the redevelopment capacity of the site, it is assumed to entirely comprise land value, with the structures being rapidly devalued to $0 due to the expectation that they would be demolished during redevelopment. After the spot upzoning, 4229 Chamberlayne is valued at LV of $355,000, with zero IV.

Crucially, this method represents a spot upzoning, as it reflects market values if only this was upzoned (in which case there is a big profit effect and zero scarcity effect). This provides useful insights, but does not represent what would happen if thousands of other sites were also upzoned as per Richmond 300. A blanket upzoning, which is analyzed in the main body of this report, adds a large amount of housing capacity, which will spread-out profit effects across many properties, with less drastic results than those discussed in this spot upzoning case.

Result #1: Richmond 300 with current property tax settings

With the current property tax structure, upzoning this Chamberlayne site sees its tax bill increase from $3,252 to $4,260, an increase of $1,008. Thus, under current tax settings, the spot upzoning adds +$84,000 in property value, but only increases the tax bill by +$1,000. It can be seen that relatively little of the windfall gain from upzoning is captured under current tax settings.

Result #2: Richmond 300 with an LVT in place

With LVT in place, however, the site would be paying a tax bill of $2,647 before the upzoning, increasing significantly to $12,496 after the site is upzoned. The LVT therefore captures much more of the windfall gains from rezoning, simultaneously increasing its tax bill by +$9,849 at the same time as the site's value increases by +$84,000.

Thus, the City captures much more of the windfall gains when upzoning with an LVT in place. The owner will also have a stronger incentive to sell to a developer, both to pocket the windfall gain and reduce future tax obligations. The purchasing developer is likely to be highly motivated to redevelop the site into multifamily housing, as intended by the new zoning.

Result #3: Richmond 300 followed by shifting to LVT

With the spot upzoning in place, the site would be worth $355,000 and pay an annual tax bill of $4,260. Proceeding with an LVT shift at this point would cause this tax bill to jump to $12,496, an increase of +$8,236 or +194%.

This is likely to be strongly resisted by the property owner, who may have adjusted their expectations of the property's value, and feel like they are receiving a large tax increase for no reason. This indicates that it may be much easier to implement a land value tax shift *before* proceeding with the Richmond 300 rezoning, rather than putting the LVT in place and *then* proceeding to rezone the city.

Table A3 summarizes each of the effects of LVT and a spot upzoning of 4229 Chamberlayne Ave:

Table A3: Tax Changes for Spot Upzoning of 4229 Chamberlayne Ave

4229 Chamberlayne Ave	Property Value (TV)	Annual Tax Bill: Current Property Tax	Annual Tax Bill: 80:20 LVT	$ Impact of LVT Shift
Before upzoning	$271,000	$3,252	$2,647	-$605
After upzoning	$355,000	$4,260	$12,496	+$8,236
$ Impact of upzoning	+$84,000	+$1,008	+$9,849	+$9,244