RKG Associates, Inc.
Economic, Planning and Real Estate Consultants
2121 Eisenhower Ave, Suite 402
Alexandria, VA 22314



ZONING CODE FEASIBILITY ANALYSIS

Richmond, Virginia

DRAFT

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Section 1: Executive Summary

Code Studios retained RKG Associates on behalf of the City of Richmond to analyze the development potential of zoning code changes proposed under Draft 2. Draft 2 proposes a comprehensive reorganization of the city's residential and mixed-use zoning, consolidating and positioning districts while introducing new dimensional standards, use permissions, and density allowances across the city. The analysis presented here evaluates the feasibility of housing development in proposed zones where residential development is allowed by right.

This analysis aims to determine where development is likely to occur under the new zoning code, based on current economic conditions. Some areas of the city are much more likely to attract development than others simply because market dynamics are stronger in some neighborhoods and lower in others while costs are less fluid. Zoning won't change that basic economic reality, but it can control whether denser development occurs around existing commercial nodes, with lower-density development and infill occurring within neighborhoods.

What This Analysis Does and Does Not Answer

It is important to highlight the limitations of this analysis. This is a supply-side analysis designed to identify where development could happen under current market conditions if the proposed zoning changes are enacted. It does not estimate whether more or less housing will be built in Richmond than current activity levels. Housing production is ultimately a function of demand. Adjusting zoning regulations in a neighborhood where few people want to move — due to economic conditions, perceived safety, distance from amenities and employment, or other factors — will have little impact on housing construction there. Rezoning may make development easier in certain desirable locations allowing construction to better meet demand, but estimating where existing zoning is actively suppressing that demand is beyond the scope of this analysis.

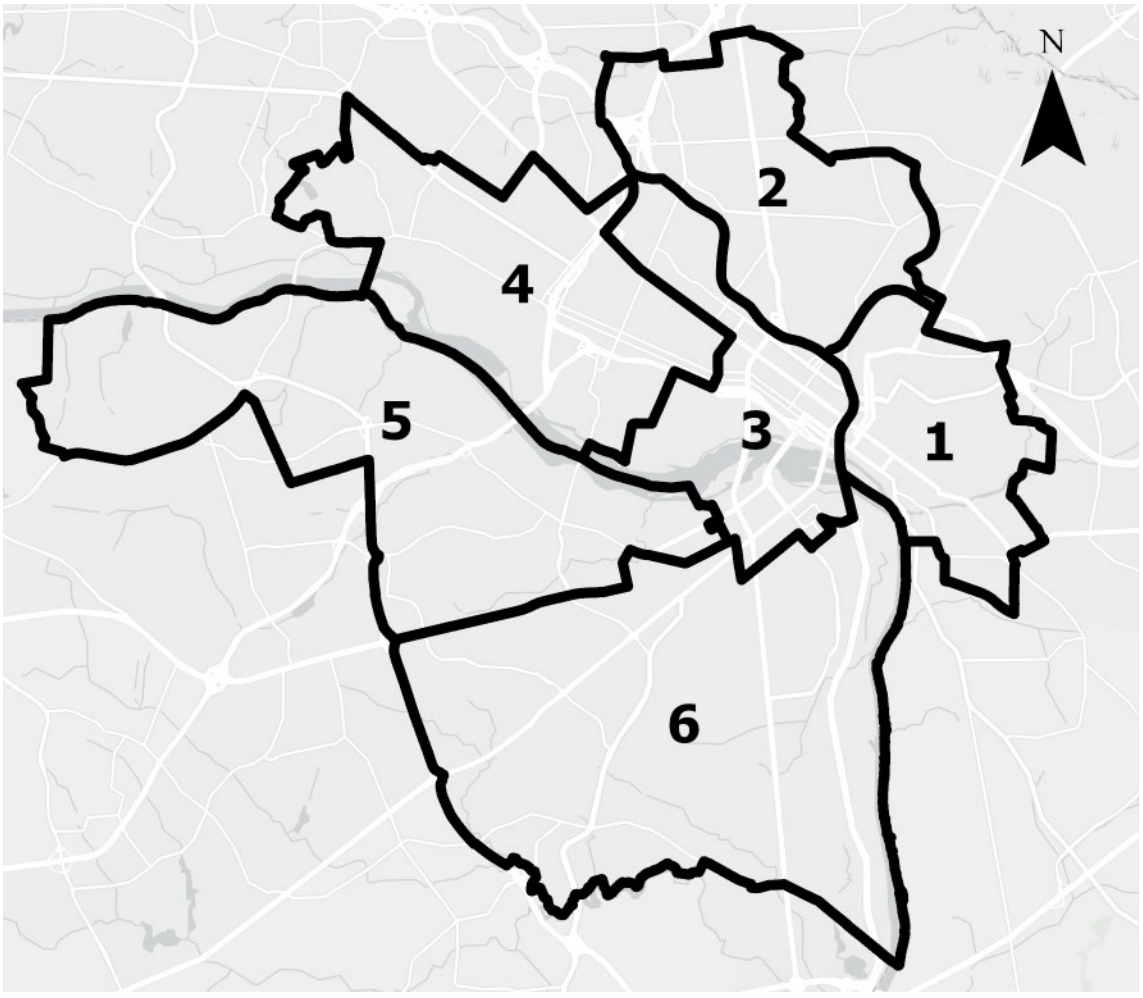
The rate-of-change estimates presented in this report describe where development activity is likely to concentrate given current market conditions. They are not forecasts of total housing output. If demand rises citywide, more parcels will convert than these estimates suggest; if demand softens, fewer will. Findings are presented at the subarea and zone level.

Subarea Market Context

For the purposes of this analysis, Richmond is divided into six subareas whose boundaries reflect shared socioeconomic and housing market conditions — distinct rent, tenure,

scale, and price gradients — rather than strict geography. This matters more than neighborhood names alone. Subarea 3, for example, includes Scott's Addition, Downtown, and Manchester, which sit on opposite sides of the James River but share a fast pace of development and command rents and sale prices that exceed most of the city. The only subarea that rivals Subarea 3 on price is Subarea 4, which includes the Fan. Market conditions vary dramatically across subareas — this variation, not zoning, is the primary driver of where development feasibility exists. A map of the subareas is shown below.

Figure 1 Map of the six subareas



Summary of Findings Across Zone Types

MX Zones (Mixed Use) Five- to seven-story stick-frame construction is the optimal building height under current economic conditions. Shorter buildings are less likely to maximize land value; taller buildings require more expensive steel or concrete construction that Richmond rents cannot support. Subarea 3 is most likely to see development, with some

activity in Subarea 4, though the high assessed values of existing structures in neighborhoods like the Fan reduce the likelihood of redevelopment there.

RM Zones (Residential Multifamily) Multifamily residential zones function primarily to preserve what has already been built rather than to trigger new development. Only around 5% of RM parcels are realistic redevelopment candidates under current market conditions. Despite its unlimited unit allowance, most RM-C parcels are too small to accommodate significantly more units than RM-B, which is capped at 12 units per building, making the two zones economically equivalent in practice. RM-A is even less likely to see redevelopment: its 6-unit cap makes the numbers harder to pencil out, and feasibility is limited to a small number of parcels in Subareas 3 and 4.

RA Zones (Residential Attached) Most RA parcels are occupied rowhouse fabric with limited redevelopment opportunities, but vacant lot infill offers genuine potential across all six subareas. About 13% of RA parcels meet the feasibility threshold, almost entirely through vacant-lot infill; teardown of an occupied structure is viable only in the stronger Subareas 3 and 4. RA zones will produce a modest but real amount of housing over time, primarily through infill on vacant and under-utilized lots.

RD Zones (Residential Detached) Development in detached residential zones will be gradual and market-driven, not transformative. The best-performing scenario — flexible subdivision allowing front-back or side-by-side configurations — generates an estimated 296 parcels annually across all three RD zones combined, representing less than 1% of the total RD parcel inventory per year. A counterintuitive but consistent finding across all RD zones is that preserving the existing structure while adding units outperforms teardown and rebuild: demolition costs eliminate the economic contribution of the existing structure, making teardowns viable only in Richmond's strongest submarkets.

- **RD-A** parcels are the largest detached residential parcels and have the most physical potential for subdivision, but the average assessed value of $687,000 creates an acquisition cost that developers cannot overcome in most scenarios. RD-A produces virtually no development activity under any scenario.
- **RD-B** parcels are more moderately valued and benefit meaningfully from flexible subdivision allowances, with an estimated 134 annual conversions under that scenario concentrated in Subareas 4 and 5. Teardowns still don't pencil out for most parcels except a limited number in Subarea 4. Development will primarily take the form of subdivision and ADU construction alongside preserved existing structures.
- **RD-C** parcels are the smallest and least expensive, which makes acquisition economics most favorable. Physical constraints rather than cost are the primary obstacle to development, and RD-C shows the broadest activity across subareas —

an estimated 158 annual conversions under flexible subdivision, with meaningful activity in Subareas 1, 2, 3, and 4.

Table 1 Description of Proposed Richmond Residential Zones

Zone Family	*Description*	*Total Parcels*	*Share of Residential Zoned Acreage*
CG	Auto-oriented commercial with residential allowed	117	0.5%
IX	Industrial mixed-use, up to seven stories	887	4.9%
MX (6 zones)	Mixed-use buildings from three stories to unlimited height	6,263	16.5%
RM (3 zones)	Multifamily residential buildings	8,242	12.3%
RA	Rowhouses and townhomes	10,232	5.4%
RD (3 zones)	Single-family detached residential	43,947	60.3%

Source: RKG analysis of Richmond parcel data and proposed zoning code

The Dominant Finding

Subareas 3 and 4 account for the large majority of market-rate development potential across every zone type analyzed. In Subareas 1, 2, 5, and 6, construction costs exceed achievable revenues under current market conditions — a gap that zoning changes alone cannot close. Where public subsidy is required today to make housing construction pencil out, it will remain required regardless of what the new code permits.

That said, the additional flexibility introduced by Draft 2 creates more development pathways in more locations than currently exist. Market fundamentals can shift. If rents and sale prices rise in subareas that are currently marginal, the new code will already be in place to direct that growth toward the right locations — denser near commercial corridors, lower-scale within established neighborhoods. The value of getting the zoning right is not only what it produces today but what it enables if and when conditions change.

Section 2: Project Background

About the Richmond Zoning Code Rewrite

Code Studios retained RKG Associates on behalf of the City of Richmond to analyze the development potential of proposed changes to the city's zoning code under Draft 2. This analysis is intended to validate and provide context for proposed changes by balancing the aspirations of a zoning code refresh with market realities — showing where development is likely to occur under the new ordinance and where market conditions will limit its impact regardless of what the zoning permits.

Scope of This Analysis

This analysis covers the full range of zones where residential development is allowed by right, from the single-family Residential Detached zones through the multifamily Residential Multi-Unit zones, the Residential Attached zone, and the Mixed Use, Industrial Mixed Use, and Commercial General zones where multifamily development is permitted alongside other uses. This comprehensive approach is intended to show where residential development is most likely to occur under the new ordinance.

Feasibility, in this context, means whether the economics of a potential development would motivate a developer or property owner to act on what the zoning allows. Zoning does not guarantee that development occurs. Optimally, it allows the market to produce as much housing as demand supports while directing that growth toward locations the community has identified as appropriate — higher-density development along commercial corridors and near transit, lower-density infill within established neighborhoods.

The financial models underpinning this analysis are built on market-rate fundamentals. They show that some parts of the city do not command rents or sale prices high enough to support market-rate construction, but this does not mean nothing will be built in those neighborhoods. Affordable housing and subsidized development, including LIHTC and other programs, can work in any neighborhood with the right capital stack and a motivated developer. Commercial development in MX, IX, and CG zones was not modeled; the addition of ground-floor retail or office can alter project economics in ways this analysis does not capture.

The Supply-Side Framework

Zoning creates a ceiling for what can be built and guides where development happens, but market conditions determine what actually gets built. Even with permissive zoning, development may not follow for several reasons: sellers may not sell at prices developers

can pay, construction costs may exceed what rents or sale prices can support, and economic conditions in some neighborhoods may make market-rate returns unachievable. This dynamic cuts in both directions — high property values in desirable neighborhoods can make acquisition prohibitively expensive for developers, while low property values in weaker markets make it difficult to sell or rent new units at prices that justify construction costs.

This is a supply-side analysis. It identifies where development could happen under current market conditions if the proposed zoning changes are enacted. It does not forecast whether overall housing production in Richmond will increase or decrease relative to what is being built today. That question depends on demand — how many households want to live in Richmond, in which neighborhoods, and at what price points — which is beyond the scope of this work. The rate-of-change estimates presented in each zone section reflect where development activity is likely to concentrate given current conditions. If demand rises, more parcels will convert than these estimates suggest; if demand softens, fewer will.

The Subarea Framework

Rather than following administrative boundaries such as neighborhoods or council districts, subareas are defined by rent and sale price gradients — the underlying market conditions that determine whether development reaches financial feasibility. Real estate transaction data collected through Redfin was combined with Census data and publicly available parcel assessment records to draw boundaries that reflect market realities. The table below provides a brief characterization of each subarea.

Subarea	Characterization
Subarea 1	The eastern submarket — Church Hill, Creighton, and Montrose — a moderate-market area where feasibility is limited largely to vacant-lot infill.
Subarea 2	The northern submarket — John Marshall, Ginter Park, Northern Barton Heights, Carver, and Gilpin — a weaker-market area with little room for market-rate redevelopment beyond scattered infill.
Subarea 3	The central core — Downtown, Scott's Addition, the Diamond District, Byrd Park, and the Manchester riverfront — the city's strongest and fastest-developing

Subarea	Characterization
	submarket, where rents and sale prices support new construction across nearly every zone.
Subarea 4	The west and near-west — the Fan, Windsor Farms, Three Chopt, and University of Richmond — the only submarket that rivals Subarea 3 on price, where high values support redevelopment but also raise acquisition costs on improved parcels.
Subarea 5	The southwest, across the James — Huguenot, Stratford Hills, Bon Air, and Forest View — a weak-market area where rents cannot support teardown redevelopment, confining activity to limited vacant-lot infill.
Subarea 6	The southern submarket — Midlothian, McGuire Manor, Pocoshock, and Brookbury — weak on rents but land-rich, where a relatively large supply of vacant parcels makes modest infill the realistic development path.

These distinctions matter because they establish the baseline against which all zone-level findings are interpreted. Subareas 3 and 4 consistently support market-rate development across virtually every zone type analyzed. The remaining subareas face cost and revenue conditions that limit market-rate feasibility regardless of zoning — a constraint that applies equally throughout the zone-level sections that follow.

Section 3: Analytical Framework

Overview

This analysis addresses two fundamentally different development questions that together cover the full range of residential zones in Richmond's proposed zoning code. For zones that allow multifamily development — RM, MX, IX, and CG — the central question is whether a developer can acquire an existing parcel, clear what is on it, and build a new structure at a density that justifies the investment. The unit of analysis is the parcel, the actor is a developer, and the transaction is a market acquisition followed by new construction.

The Residential Attached zone occupies a middle position: most RA parcels are occupied rowhouse and townhome fabric where the development model resembles RD more than

RM — screening for vacant lots and low-improvement parcels where infill construction is physically and economically viable rather than modeling large-scale clearance and rebuild.

For the Residential Detached zones — RD-A, RD-B, and RD-C — the question is fundamentally different still. These zones are not primarily about clearing and rebuilding. They are about what happens to a single-family lot when zoning allows it to accommodate more than one household. The actor may be a developer looking to subdivide and sell, or it may be a homeowner deciding whether to add a rental unit. The transaction may be a sale, a subdivision, a construction loan taken out by an existing owner, or nothing at all. The range of possible outcomes on any given RD parcel is wider, more varied, and more dependent on individual owner circumstances than anything modeled in the other zone types.

The Three-Stage Screening Approach

Parcels were screened in three sequential stages, each narrowing the pool to the parcels that could realistically develop. A parcel had to clear all three to be identified as a candidate.

The first stage is **physical**. Before any financial question is asked, a parcel must be capable of accommodating the building type its zone allows — large enough, wide enough, and of a geometry that supports new construction under the applicable setback and coverage rules. Parcels that cannot physically hold what the zoning permits are removed at the outset, regardless of their economics. Because this screen depends on the building form each zone contemplates, its thresholds differ by zone; the detailed criteria are described under Physical Feasibility below.

The second stage filters by **improvement-to-land ratio (ILR)**, the value of the existing structure relative to the land beneath it. A high ILR signals that the existing building is a high-performing asset whose owner is unlikely to sell at a price a developer could pay; a low ILR signals a vacant or underused parcel where acquisition is more plausible. ILR efficiently eliminates the large share of parcels where existing improvement value makes acquisition unworkable, without requiring a full pro forma for every parcel in the city. Thresholds vary by zone type, calibrated to the different economics of multifamily versus single-family development.

The third stage is the binding economic test: a pro forma-derived **maximum supportable acquisition cost** — the most a developer could pay for a parcel and still earn a market-rate return after construction, financing, and profit. Parcels whose assessed value exceeds this threshold are unlikely to develop; those below it are realistic candidates. This is the primary

determinant of developer economics, and it is described in detail under The Proforma Model below.

Physical Feasibility and Spatial Screening

Before financial feasibility was considered, parcels were screened to determine whether they could physically accommodate new construction. Physical feasibility criteria vary by zone type but address the same fundamental questions: Is the parcel large enough for the building type the zone allows? Does its geometry support new construction given setback and coverage requirements? Is there sufficient lot width to meet minimum dimensional standards?

In the Residential Detached zones, lot size and width constraints are particularly binding. The minimum lot widths required under Draft 2 — 90 feet for RD-A, 50 feet for RD-B, and 25 feet for RD-C — determine not just whether a parcel can be developed but whether it can be subdivided to create an additional buildable lot alongside an existing structure. Many parcels that appear financially viable on paper are eliminated at this stage because their geometry cannot accommodate what the proforma assumed.

In the other residential zones, similar physical constraints shape the realistic candidate pool. RA parcels are predominantly narrow rowhouse lots where lot width limits standalone redevelopment to vacant or low-improvement sites. In the RM zones, minimum parcel sizes and coverage requirements mean that many smaller parcels can only support buildings at the lower end of what the zoning allows, limiting the unit counts the proforma assumed.

In MX zones, where larger buildings are modeled, parcel size becomes the primary constraint — many MX-zoned parcels are too small to support the building footprints that make higher-density development financially viable as standalone sites. In these cases, assemblage of neighboring parcels into a single development site can unlock feasibility, but doing so requires coordinating with multiple sellers simultaneously, which adds complexity and risk that not all developers are willing to take on.

The Proforma Model and Maximum Acquisition Cost

For every type of zone, the core analytical question is the same: how much would a developer be willing to pay to acquire a parcel and build new housing on it? This maximum acquisition cost is the linchpin of the analysis. It is derived from a proforma model that works backward from achievable revenue — rents or sale prices supportable in a given subarea — subtracting construction costs, financing, soft costs, etc. What remains is the most a developer could pay for land and existing improvements and still achieve a market-

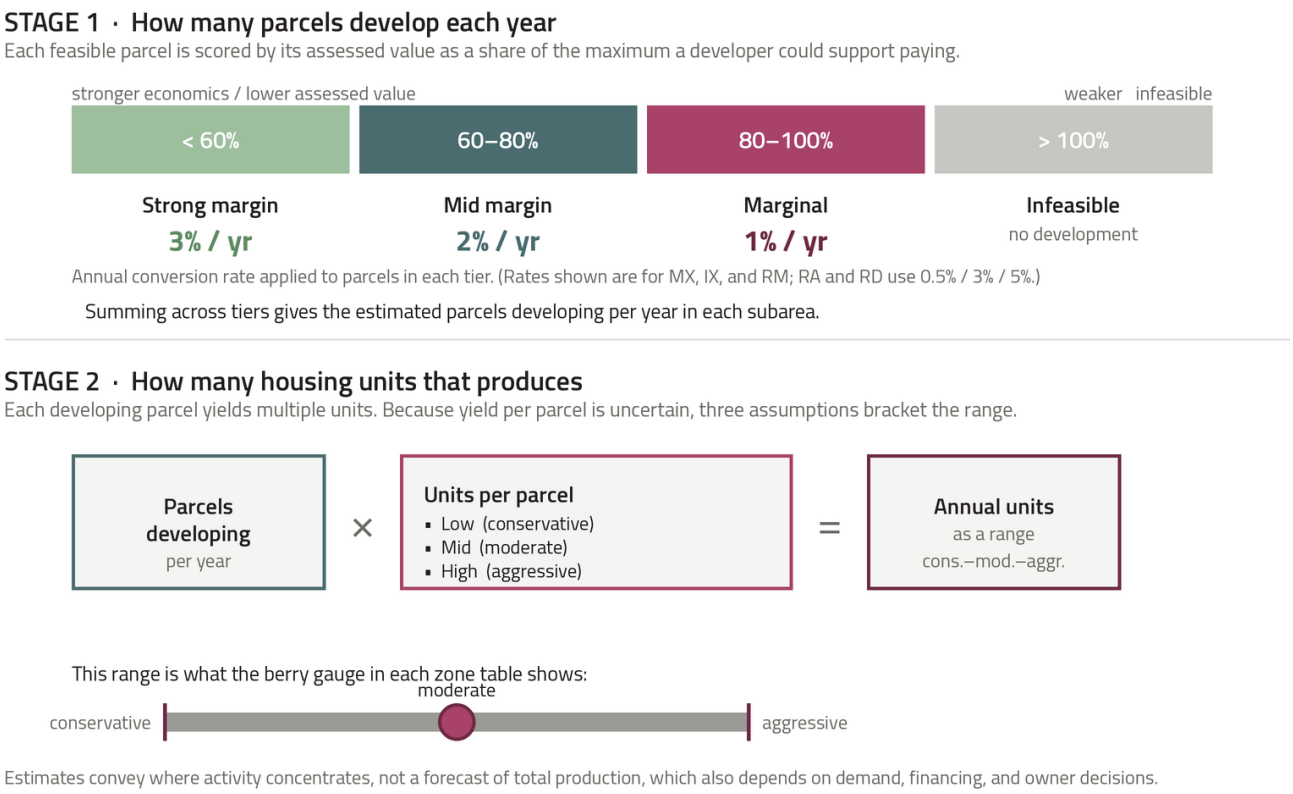
rate return. Where that number exceeds a parcel's assessed value, development is potentially viable. Where it falls short, development is unlikely regardless of what the zoning permits.

The proforma is calibrated separately for each zone type and subarea combination to reflect real differences in what the market will bear. A multifamily building in Subarea 3 commands higher rents than the same building in Subarea 1, which supports a higher maximum acquisition cost and a larger pool of viable parcels. Construction costs, by contrast, are largely fixed regardless of location, which is why the feasibility gap in lower-rent subareas is structural and cannot be resolved by zoning changes alone.

Rate of Change and Annual Development Estimates

Identifying parcels that are financially and physically viable for redevelopment establishes a theoretical ceiling — the universe of sites where development could occur. To translate that into a more realistic picture of how much development is likely to occur in a given year, an annual rate of change is applied to each feasibility tier. Parcels where the maximum acquisition cost substantially exceeds current assessed value are assigned higher conversion rates than parcels where the margin is narrow, reflecting the basic market logic that stronger profit potential attracts faster action. These annual estimates are intended to convey where development activity is likely to concentrate under current market conditions, not to forecast total housing production. The number of parcels that actually convert in any given year will depend on factors this analysis does not model — overall housing demand, interest rates, construction labor availability, and individual owner circumstances — and could be higher or lower than these estimates suggest.

The annual estimates are built in two steps, summarized in the figure below. First, each feasible parcel is scored by how far its assessed value sits below the maximum a developer could support paying — the wider that margin, the more likely the parcel is to redevelop — and an annual conversion rate is applied accordingly to estimate how many parcels develop each year. Second, that parcel count is multiplied by an assumed number of units per parcel to estimate annual housing units; because per-parcel yield is uncertain, low, moderate, and high assumptions bracket the result. This range is what the zone tables report and what the gauge in each table depicts.



Section 4: Findings by Zone

Commercial General (CG)

Commercial General is the smallest of the residential-permitting zones and the only one that produces no feasible development anywhere in the city. Its 117 parcels sit entirely in Subareas 5 and 6, the auto-oriented commercial corridors where achievable rents fall well short of what new construction requires. Modeling a three-story stick-frame building at CG's 50% lot coverage — the most favorable construction assumption available — produces a negative maximum supportable acquisition cost for every CG parcel: the economics fail before land is even purchased. No acquisition price, however low, makes these projects pencil.

CG is therefore not a meaningful contributor to housing production under the proposed code, and no parcel-level analysis is presented for it. This is a finding about market conditions, not zoning. The residential allowances CG extends are sound in principle; they simply land in the two submarkets least able to support new construction under current market conditions.

Industrial Mixed Use (IX)

Industrial Mixed-Use permits multifamily development by right and is analyzed under the same building envelope as the tallest mixed-use designation — 80% lot coverage and a seven-story, 105-foot height limit — so its development economics closely track those of MX-7. As in the mixed-use zones, feasibility is governed almost entirely by submarket, and the result follows the same pattern: Subarea 3 carries essentially all of the opportunity, and the rest of the city does not pencil.

Of the 887 IX-zoned parcels citywide in the current iteration of the zoning code, 178 are individually feasible for standalone redevelopment — 171 at high probability and 7 at medium probability — and all 178 lie in Subarea 3, the Scott's Addition, Diamond District, and Roseneath corridor. A further 134 parcels across 41 clusters could support development through assemblage, again entirely within Subarea 3. This concentration reflects two facts about IX geography: Subarea 3 holds the most IX land to begin with, with 484 of the 887 parcels, and it is the one submarket where achievable rents support new construction, turning the corridor's older, low-value warehouse and light-industrial parcels into genuine redevelopment candidates. The realistic pace will nonetheless be modest — roughly five parcels redeveloping per year, yielding an estimated 400 new units annually under the moderate scenario, within a range of approximately 344 to 468.

Elsewhere, IX does not pencil, for the reasons established across the other zones. Subareas 1, 2, and 6 hold meaningful IX acreage but no feasible parcels, and Subarea 4 contains essentially no industrial land at all, being made up of established residential neighborhoods. IX is therefore a real but contained opportunity — a well-located pocket of by-right multifamily capacity in Richmond's fastest-developing corridor whose contribution to citywide housing production will be steady rather than large.

Table 2 Development Feasibility Industrial Mixed Use (IX) Parcels

Subarea	Total Feasible Parcels	Annual Dev. Projects	Est. Annual Units Delivered conservative — moderate — aggressive
Subarea 3	178	5	344 — **400** — 468

Total Feasible Parcels includes feasible improved (redevelopment) and vacant parcels. The gray bar spans the conservative–aggressive range; the berry dot and bold value mark the moderate (most-likely) estimate. All feasible IX parcels are in Subarea 3; Subareas 1, 2, 4, 5, and 6 show none.

Mixed Use Zones (MX)

Feasibility in Richmond's Mixed Use zones is geographically concentrated. Only Subareas 3 and 4 — covering commercial corridors like Scott's Addition, the Diamond District, and Manchester — command rents high enough to support new market-rate construction

without public subsidy. A limited number of parcels in areas bordering these subareas also show viable economics, though their development potential is modest in both number and scale. In the remaining four subareas, rezoning to MX will not by itself trigger development; the gap between achievable rents and construction costs is too wide to close through zoning alone. Even within Subareas 3 and 4, many Fan District parcels zoned MX carry land values that reflect their existing commercial use — high enough that a developer cannot acquire and redevelop them at a profit under current conditions.

Where development does occur, expect mid-rise stick-frame construction in the five- to seven-story range rather than towers. Taller construction requires significantly higher rents to justify the more expensive building systems it demands, and those conditions exist only on the largest sites in the strongest submarkets. Finally, a parcel being financially feasible on paper does not mean development is imminent. Activity will concentrate where land is already underutilized, owners are willing to sell at prices the market can support, and assemblage of multiple parcels is not required. The MX zones offer genuine capacity for additional housing in Richmond but realizing that capacity will be a gradual process shaped as much by individual site circumstances as by the zoning itself.

Table 3 Development Feasibility Mixed Use Zones (MX) Parcels

Subarea	Total Feasible Parcels	Annual Dev. Projects	Est. Annual Units Delivered conservative — moderate — aggressive
Subarea 3	607	17	1,092 — **1,269** — 1,486
Subarea 4	254	7	432 — **501** — 587
Total	**861**	**24**	1,524 — **1,770** — 2,073

Total Feasible Parcels includes feasible improved (redevelopment) and vacant parcels. The gray bar spans the conservative–aggressive range; the berry dot and bold value mark the moderate (most-likely) estimate. Subareas 1, 2, 5, and 6 show no feasible MX parcels.

Residential Multi-Unit Zones (RM)

RM zoning functions more as a preservation zone than a redevelopment catalyst. Of the 8,242 distinct RM-zoned parcels citywide, roughly 8% are vacant or underutilized; the large majority are already built out, split between existing multifamily buildings and single-family and townhome structures. As in most other residential zones, it is generally cost-prohibitive to demolish an occupied structure and replace it with new housing, so the realistic redevelopment opportunity is concentrated in the modest inventory of vacant lots and the small number of improved parcels where land value has risen far enough above structure value to motivate a teardown.

After running the model, 295 RM parcels — about 5% of the analyzed universe — are feasible for new multifamily development, and the geography is stark: every feasible parcel falls in Subareas 3 and 4, with none in Subareas 1, 2, 5, or 6. Of these, 122 are feasible on a standalone basis (37 at high probability and 85 at medium probability), while a further 173 become viable only through assemblage of adjacent parcels — a path that depends on multiple owners choosing to sell at compatible times and prices. Across the three RM subtypes the feasibility rate is similar — roughly 4% to 6% — which reflects a notable finding: RM-C's unlimited unit allowance produces little more feasible development than RM-B's 12-unit cap, because most RM-C parcels are too small to use the additional capacity. The result is a modest stream of new housing, in the order of eight developments per year, concentrated entirely in the city's two strongest submarkets.

Table 4 Development Feasibility Residential Multi-Unit Zones (RM) Parcels

Subarea	Total Feasible Parcels (Teardown / Vacant)	Annual Dev. Projects	Est. Annual Units Delivered conservative — moderate — aggressive
Subarea 3	207 (152 / 55)	6	18 — **37** — 55
Subarea 4	88 (81 / 7)	2	9 — **17** — 26
Total	**295 (233 / 62)**	**8**	27 — **54** — 81

Teardown / Vacant = feasible teardowns / feasible vacant lots. The gray bar spans the conservative–aggressive range; the berry dot and bold value mark the moderate (most-likely) estimate. Subareas 1, 2, 5, and 6 show no feasible RM parcels under current market conditions.

Residential Attached Zones (RA)

RA parcels are overwhelmingly occupied rowhouse fabric with limited redevelopment opportunities. Nearly all of the 10,232 RA-zoned parcels are already built out — only about 12% are vacant or underutilized, and the narrow lots that define this zone, with a median width of just 25 to 28 feet, make meaningful densification on a single parcel structurally impossible without assemblage.

Redevelopment of existing structures is very limited and generally confined to Subareas 3 and 4. The median RA parcel carries an improvement-to-land ratio above 2.0, meaning the residual land value will almost always fail to recover the loss of the existing structure across most of the city. Only 412 teardown parcels citywide screen as feasible, nearly all concentrated in those two subareas.

Vacant-lot infill is the more realistic development path, and it works across more of Richmond. Of the 893 feasible vacant lots, development pencils out in all six subareas. Subarea 6 shows vacant-lot potential comparable to Subarea 1 despite weaker market

conditions, simply because it has more undeveloped land available than the more dynamic subareas.

The RA zone will produce a modest but real amount of new housing gradually. The actual annual pace of change is estimated at roughly 10 teardown redevelopments and 26 vacant-lot developments per year; at that rate, buildout of the feasible parcel pool would occur over a long time horizon.

Table 4 Development Feasibility Residential Attached Zones (RA) Parcels

Subarea	Total Feasible Parcels (Teardown / Vacant)	Annual Dev. Projects	Est. Annual Units Delivered conservative — moderate — aggressive
Subarea 1	259 (3 / 256)	8	16 — 20 — 24
Subarea 2	183 (3 / 180)	5	10 — 13 — 15
Subarea 3	371 (234 / 137)	10	20 — 25 — 30
Subarea 4	232 (172 / 60)	6	12 — 15 — 18
Subarea 5	15 (0 / 15)	0	—
Subarea 6	245 (0 / 245)	7	14 — 18 — 21
Total	**1,305 (412 / 893)**	**36**	72 — **91** — 108

Teardown / Vacant = feasible teardowns / feasible vacant lots. Units are low-density infill (1–2 units + ADU per development), not apartment units; the gray bar spans the conservative–aggressive range and the berry dot marks the moderate estimate. Teardown feasibility is limited to Subareas 3 and 4.

Residential Detached Zones (RD)

Development in the detached residential zones will be gradual and incremental rather than transformative. These zones are not primarily about clearing and rebuilding; they are about what happens to a single-family lot when the new code allows it to hold more than one household. The actor may be a developer subdividing and selling, or an existing homeowner adding rental units, and the realistic outcome on any given parcel depends heavily on individual owner circumstances. Across every scenario tested, the same hierarchy holds: physical geometry sets the outer limit of what is possible, but acquisition economics — driven overwhelmingly by submarket — determine what actually happens.

The analysis modeled four distinct development pathways the new code could enable, summarized in Table 6. Two findings dominate. First, preservation outperforms demolition. Allowing a developer or homeowner to add units while keeping the existing structure

consistently produces more housing than allowing teardowns, because demolition erases the residual value of the existing home and turns it into pure cost. Teardown redevelopment pencils out only in Richmond's strongest submarkets — concentrated almost entirely in RD-B parcels in Subarea 4, with a handful of additional parcels in RD-C Subareas 3 and 4 — and produces the lowest output of any pathway despite offering the most building flexibility. Second, the form of subdivision allowed matters enormously. Restricting subdivision to side-by-side configurations limits activity to the small share of lots wide enough to split while keeping the existing structure in place; allowing flexible front-back or side-by-side configurations removes that geometric bottleneck and increases estimated output more than tenfold, from roughly 27 to 296 parcels annually.

The three zones behave very differently, and the difference is almost entirely a function of property value rather than physical capacity:

- **RD-A** parcels are the largest and have the most physical room to subdivide, but an average assessed value near $687,000 puts acquisition out of reach in nearly every scenario. RD-A produces virtually no development activity under any scenario.
- **RD-B** parcels are more moderately valued and benefit meaningfully from flexible subdivision, with an estimated 134 annual conversions concentrated in Subareas 4 and 5. RD-B is also the only zone where teardown redevelopment is realistically viable, and only in Subarea 4 — a clear illustration that citywide zoning changes alone do not produce uniform development.
- **RD-C** parcels are the smallest and least expensive, which makes their acquisition economics the most favorable of the three. Here, physical constraints rather than cost are the binding obstacle, and RD-C shows the broadest geographic activity of any RD zone — an estimated 158 annual conversions under flexible subdivision, with meaningful activity in Subareas 1, 2, 3, and 4.

A separate question is whether existing homeowners — rather than developers — will use the new allowances to add rental units to their lots without subdividing. This pathway removes the developer from the transaction entirely and instead depends on whether achievable rents justify the substantial capital required to build a new principal unit plus an accessory dwelling. The model estimates roughly 265 such conversions annually, again concentrated in RD-C's stronger rental submarkets, where lower acquisition and construction thresholds make the investment pencil out. As with subdivision, the constraint is economic, not regulatory: in higher-value RD-A neighborhoods the rents achievable from two units cannot justify the cost of building them.

These projections describe financial feasibility, not certainty of uptake. Front-back configurations, in particular, place a full dwelling behind an existing home, a pattern with

limited precedent in Richmond, and whether homeowners will sell or build for this purpose remains an open question. The binding physical constraint across all three zones is lot geometry — the minimum lot widths of 90 feet for RD-A, 50 feet for RD-B, and 25 feet for RD-C determine not just whether a parcel can be developed but whether it can be subdivided at all — but within the universe of physically eligible parcels, submarket economics do the decisive work. Full parcel-level results by zone, subarea, and scenario are provided in the Appendix.

Table 5 Residential Detached Zones (RD) Development Pathways Compared

Development Pathway	What the Code Would Allow	Annual Parcels	% of RD Inventory	Where It Concentrates
Side-by-side subdivision	Split lot only where the existing structure can remain, with full-width lots on each side	~27	0.06%	RD-C, Subareas 1–2
Flexible subdivision	Split lot in any configuration (front-back or side-by-side) keeping the existing structure	~296	0.67%	RD-C (1, 2, 4); RD-B (4, 5)
Teardown (two units + ADU)	Demolish existing structure, build two principal units plus an ADU	~23	0.09%	RD-B Subarea 4 (RD-C 3–4 marginal)
Preservation rental model	Homeowner keeps existing home, adds a new principal unit + ADU as rentals	~265	0.60%	RD-C (1, 2, 4); RD-B (2, 4)

Source: RKG analysis of Richmond parcel data and proposed zoning code. Figures are modeled annual estimates of financially feasible conversions, not forecasts of total housing production

Section 5: Cross-Zone Summary

The preceding sections analyzed each zoning family on its own terms. Viewed together, the six analyses tell a more unified story than their differences might suggest. The same forces govern outcomes in every zone, and three patterns recur with enough consistency to be treated as the central findings of this study.

Geography Over Zoning

Across every zone family analyzed, market-rate development feasibility concentrates in Subareas 3 and 4 — and for anything requiring new multifamily construction, it concentrates there almost completely. In the MX zones, every feasible parcel falls in Subareas 3 and 4. In the RM zones, all realistic redevelopment candidates fall in Subareas 3 and 4. In the IX zone the concentration is starker still: all 178 standalone-feasible parcels and all 134 viable assemblage parcels lie in Subarea 3, with no feasible parcel anywhere else. At the opposite extreme, the CG zone exists only in Subareas 5 and 6, and not one of its 117 parcels is feasible — the maximum supportable acquisition cost is negative for every parcel, meaning the economics fail even before land is purchased.

This pattern is not an artifact of zoning. It reflects the rent and sale-price gradients described earlier: Subareas 3 and 4 command revenues high enough to cover construction costs, and the rest of the city largely does not. Because construction costs are relatively fixed across the city while achievable revenues vary sharply, the binding constraint on development is almost always the submarket, not the zoning designation. A parcel rezoned to permit greater density in Subarea 1 or 5 remains infeasible for the same reason it was infeasible before: the rents it can command will not support the cost of building.

The detached and attached residential zones are the partial exceptions that prove the rule. Because RD and RA development can take the form of low-intensity infill and subdivision rather than ground-up multifamily construction, their economics do not depend on the same revenue threshold. RA vacant-lot infill pencils out across all six subareas, and RD subdivision and preservation activity extends modestly into Subareas 1 and 2. But this is precisely because these pathways avoid the cost of new multifamily construction — not because weaker submarkets can support it. Wherever the analysis modeled new apartment-style construction, feasibility collapsed outside Subareas 3 and 4.

The Limits of Rezoning

A consistent and sobering finding is how little of Richmond's land area can currently support new market-rate housing. In four of the six subareas — 1, 2, 5, and 6 — the gap between achievable revenues and construction costs is wide enough that no zone, and no

modeled scenario, produces meaningful market-rate multifamily development. This held even under optimistic assumptions; the CG result, for instance, used a modest construction-cost assumption and still proved financially infeasible. Where the gap is this structural, it is not a margin that a density bonus or a use permission can close. Closing it requires either a change in market fundamentals — higher rents and sale prices — or public subsidy. In short, zoning is not the lever necessary in some areas of the City.

This finding should temper expectations about what rezoning alone can accomplish in the city's weaker submarkets. It does not mean those areas are unimportant or that the zoning applied to them is wrong; it means that in those locations the new code establishes a framework for development that will become feasible only if and when market conditions improve, rather than unlocking development that the current code is suppressing.

Capacity Versus Production

The most important distinction running through every zone analysis is the difference between capacity and production. The proposed code creates substantial theoretical capacity for new housing, particularly in the MX zones, where the feasible parcels in Subarea 3 alone carry capacity on the order of tens of thousands of units. But theoretical capacity is the universe of what could be built, not a forecast of what will be. The annual rate-of-change estimates throughout this report — a handful of MX teardowns per year, roughly eight RM conversions, a few hundred RD subdivisions citywide — are a small fraction of the capacity the zoning permits, because production is governed by housing demand, financing conditions, construction costs, and individual owner decisions that zoning does not control.

The proposed code does its work by determining where development is directed when it occurs — denser around the commercial corridors of Subareas 3 and 4, lower-scale infill and subdivision within established neighborhoods — rather than by determining how much housing Richmond produces. That total is a function of demand, and demand is outside the reach of the zoning code. A well-designed code ensures that whatever development the market generates is channeled to appropriate locations and built at an appropriate scale; it cannot manufacture demand where none exists. The value of getting the code right is therefore twofold: directing today's limited development to the places best suited to absorb it and having the right framework already in place should market conditions in the city's weaker submarkets improve.

Appendix

Appendix A: Methodology Notes and Limitations

This appendix consolidates the methodological assumptions and limitations noted throughout the zone analyses, collected here so that readers evaluating the analysis in detail can find them in one place. These notes define the boundaries of what the feasibility screen can and cannot determine. None of them alter the report's central conclusions, which are structural and held under conservative assumptions; each clarifies how precisely a given finding should be interpreted.

Assessed Value as a Proxy for Market Value

The feasibility screen compares each parcel's maximum supportable acquisition cost against its assessed value. Assessed value serves as a stand-in for the price at which a parcel could actually be acquired, because it is the only valuation available consistently across every parcel in the city. In individual cases, assessed value will diverge from true market value — some parcels would sell for more, others for less — so the screen is best understood as a reliable indicator of feasibility patterns across the parcel population rather than a precise determination for any single site.

Single Reference Parcel

The proforma economics underlying each zone's feasibility threshold were derived from a standardized reference parcel rather than re-run for every parcel individually. This approach makes a citywide analysis tractable and keeps the assumptions transparent and consistent, but it means that parcels differing substantially from the reference in size, shape, or configuration may behave differently in practice than the screen suggests. The thresholds are calibrated to typical conditions in each zone and subarea; atypical parcels are correspondingly less precisely modeled.

Calibration of Unit Yields

Estimates of unit capacity are derived from building envelope geometry — lot coverage, height, and efficiency assumptions — and then calibrated against observed development in Richmond's most active corridors. Raw geometry-based estimates were found to over-predict realized unit counts by roughly a factor of two when compared against actual projects in the Scott's Addition and Diamond District areas; the unit-cap and efficiency assumptions used in this analysis correct for that tendency. Unit-yield figures should nonetheless be read as planning-level estimates of capacity, not as project-specific entitlement counts.

Assemblage Coordination

A meaningful share of the development potential identified in some zones depends on the assemblage of multiple adjacent parcels into a single development site. The analysis identifies where assemblage is physically and economically viable, but it cannot model the practical difficulty of executing it. Assembling parcels requires multiple independent owners to agree to sell at compatible times and prices, a coordination problem that introduces real-world friction the feasibility screen does not capture. Assemblage-dependent opportunities should therefore be regarded as more contingent than standalone feasible parcels.

Subarea Boundary Precision

The six subareas are defined to capture shared housing-market conditions rather than precise geographic lines, and the rent and price gradients that drive feasibility do not change abruptly at their borders. Parcels near a subarea boundary may face market conditions closer to the adjacent subarea than to the one they are assigned to. The subarea framework is a deliberate simplification that makes citywide patterns legible; it is not a substitute for parcel-specific market study at the boundaries.

Data Quality

The analysis relies on the City's parcel and assessment data, which carries the inconsistencies inherent in any large administrative dataset. Two adjustments were necessary and are worth noting. First, the raw parcel records contain duplicate and auxiliary entries — particularly for commercial condominiums and parcels with multiple billing records — which were deduplicated to one record per physical parcel before analysis; the parcel counts in this report reflect that deduplicated universe. Second, certain dataset fields intended to classify parcels by physical subtype proved unreliable for distinguishing genuinely vacant land from occupied structures, so broader land-use classifications were used for those determinations instead. These adjustments improve accuracy but reflect the underlying reality that administrative data is not purpose-built for feasibility analysis.

Appendix B: Residential Detached Development Pathways

Flexible Subdivision

Table A1. RD-A — 7,272 total parcels | min. lot width 90 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	0	0	0	1	0
Subarea 2	642	6	1	0	0
Subarea 3	0	0	0	0	0
Subarea 4	1,318	55	15	21	2
Subarea 5	3,927	196	17	5	2
Subarea 6	396	20	3	0	0
Total	6,283	277	36	27	4

Table A2. RD-B — 22,925 total parcels | min. lot width 50 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	17	10	101	94	8
Subarea 2	1,060	399	237	230	21
Subarea 3	10	4	8	36	2
Subarea 4	1,031	330	428	642	47
Subarea 5	2,236	841	690	145	32
Subarea 6	6,270	1,346	541	25	24
Total	10,624	2,930	2,005	1,172	134

Table A3. RD-C — 13,800 total parcels | min. lot width 25 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	112	103	384	1,195	72
Subarea 2	896	488	509	500	43
Subarea 3	13	8	55	292	16
Subarea 4	443	140	212	242	19
Subarea 5	408	73	25	6	1
Subarea 6	674	305	162	4	7
Total	2,546	1,117	1,347	2,239	158

Teardown

Table A4. RD-A — 7,272 total parcels | min. lot width 90 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	1	0	0	0	0
Subarea 2	649	0	0	0	0
Subarea 3	0	0	0	0	0
Subarea 4	1,381	7	20	1	1
Subarea 5	4,145	0	0	0	0
Subarea 6	419	0	0	0	0
Total	6,595	7	20	1	1

Table A5. RD-B — 22,925 total parcels | min. lot width 50 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	222	0	0	0	0
Subarea 2	1,926	0	0	0	0
Subarea 3	22	20	16	0	1
Subarea 4	1,659	330	350	92	17
Subarea 5	3,912	0	0	0	0
Subarea 6	8,182	0	0	0	0
Total	15,923	350	366	92	18

Table A6. RD-C — 13,800 total parcels | min. lot width 25 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	1,794	0	0	0	0
Subarea 2	2,393	0	0	0	0
Subarea 3	191	156	21	0	1
Subarea 4	841	129	60	7	3
Subarea 5	512	0	0	0	0
Subarea 6	1,145	0	0	0	0
Total	6,876	285	81	7	4

Preservation Rental Model

Table A7. RD-A — 7,272 total parcels | min. lot width 90 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	0	0	0	1	0
Subarea 2	588	51	9	1	1
Subarea 3	0	0	0	0	0
Subarea 4	1,335	43	11	20	2
Subarea 5	4,145	0	0	0	0
Subarea 6	419	0	0	0	0
Total	6,487	94	20	22	3

Table A8. RD-B — 22,925 total parcels | min. lot width 50 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	30	79	84	29	4
Subarea 2	499	392	543	492	43
Subarea 3	13	6	17	22	2
Subarea 4	1,048	333	442	608	45
Subarea 5	3,912	0	0	0	0
Subarea 6	8,182	0	0	0	0
Total	13,684	810	1,086	1,151	94

Table A9. RD-C — 13,800 total parcels | min. lot width 25 ft

Subarea	Above Value	80–100% of Value	60–80% of Value	< 60% of Value	Annual Rate of Change
Subarea 1	182	224	519	869	60
Subarea 2	376	375	526	1,116	73
Subarea 3	16	11	115	226	15
Subarea 4	430	140	212	255	20
Subarea 5	512	0	0	0	0
Subarea 6	1,145	0	0	0	0
Total	2,661	750	1,372	2,466	168