



Upzoning Under SB 50: The Influence of Local Conditions on the Potential for New Supply

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As California's housing crisis worsens, policy-makers are increasingly exploring new ways to expand housing supply, particularly in areas with access to public transit and in cities that have a jobs/housing imbalance. One policy that could help is known as "upzoning." Upzoning occurs when the zoning code that governs a parcel of land is relaxed to allow for greater building height or density: this can increase housing supply by making it possible for developers to build more units on a piece of land than they were previously allowed.

There are at least two bills being considered in the California state legislature that propose to upzone land in cities across the state: Senate Bill 50 and Senate Bill 4 (See Box A). Each of these bills aim to encourage more housing development to address the state's severe housing shortage. SB 50, proposed by Senator Wiener, focuses on relaxing zoning requirements around transit stations and job-rich areas.¹ SB 4, proposed by Senators McGuire and Beall, seeks to eliminate single-family zoning by allowing construction of two-unit buildings across the state. SB 4 also proposes to slightly increase density around rail stations above what is currently allowed.²

In this brief, we explore what might happen were SB 50 to pass by taking a detailed look at local market conditions in four case study neighborhoods. Local context shapes financial and physical feasibility. When SB 827, the predecessor to SB 50, was under consideration, estimates of its impact on new housing supply were optimistic. Yet, most of these estimates focused on aggregate devel-

opment potential and did not consider the on-the-ground reality of other zoning provisions that may influence development, what types of projects might pencil out, or what the existing stock looks like.

For example, Urban Footprint, producers of a software application that can analyze planning policies geographically, focused on three BART stations in the East Bay and found upzoning would have a dramatic impact. In the area around MacArthur Station, they estimate that the number of new housing units would increase from 4,447 units today to 27,156 under SB 827. Around the Rockridge Station, new housing would increase from 4,096 to 25,500 units. And in Orinda, Urban Footprint projected an increase from 731 to 12,090 units around that BART station.³ A report from the McKinsey Global Institute similarly analyzed the maximum number of units it would be physically possible to locate on parcels around transit stations in California given current zoning restrictions.⁴ They estimated that it would be possible to build up to three million units within a half-mile of high-frequency public transit stations. A study by the Urban Displacement Project and Mapcraft Labs focused on the Bay Area and produced estimates for how many additional units could be feasibly be produced across the entire region. The authors concluded that "SB 827 would have produced a six-fold increase in financially-feasible market-rate housing capacity and a seven-fold increase in financially-feasible inclusionary unit capacity."⁵

In this brief, we present an explanation of the local factors that will influence the implementation of SB 50 should it pass, and provide stakeholders with a more nuanced look at how SB 50 could impact the development calculus faced by a real estate developer in

Box A: Summary of Upzoning Legislation

SB 50 is focused on increasing housing supply near high-quality public transit and in job-rich areas. A transit station is considered high-quality if it is served by any kind of fixed rail or if it is a bus station that has:

- » average headways⁶ of 15 minutes or less during the morning peak (6-10am) and evening peak (3-7pm)
- » average headways of 20 minutes or less during weekdays (6am-10pm)
- » average headways of 30 minutes or less on weekends (8am-10pm)

Job-rich areas are defined in the bill's amendments based on proximity to jobs, high area median income relative to the region, and high-quality public schools.

Under SB 50, different upzoning measures apply to parcels within a half-mile of rail stations and a quarter-mile of bus stations. Box Table 1 provides an overview of the bill's provisions. The legislation's main effect is to remove all caps on residential density and most minimum parking requirements, and raise the height limit and the Floor Area Ratio (FAR) limits.

Box Table 1: Upzoning Proposed Under SB 50

	0-0.25 mi of Rail Station	0.25-0.5 mi of Rail Station	0-0.25 mi of Bus Station
Density Restriction	No maximum residential density	No maximum residential density	No maximum residential density
Parking Requirement	No minimum parking requirement	No minimum parking requirement	Minimum parking requirement of 0.5 spots per unit (unless current minimum is less)
Maximum Height Limit	55 feet (unless current height limit is higher)	45 feet (unless current height limit is higher)	No change
Maximum FAR	3.25 (unless current max FAR is higher)	2.5 (unless current max FAR is higher)	No change

The bill also includes restrictions and mitigations that are designed to minimize the potential negative impact of upzoning on lower-income, rental neighborhoods vulnerable to displacement. The bill lays out a restriction on the demolition of buildings that are affordable or have been occupied by renters in the last seven years. Additionally, there is a process to delay implementation of SB 50 in sensitive communities, allowing them to develop a community plan. The bill also proposes an inclusionary zoning stipulation that requires the developer to build a certain number of affordable units in the development.

SB 4 seeks to eliminate zoning that restricts development to single-family homes. The bill would enact a ministerial approval process for construction of a "neighborhood multi-family project" of up to two units in a nonurban community, or a project of up to four units in an urban community. In other words, the local agency has to approve the project without any discretionary oversight, unless it conflicts with objective standards, in which case the local agency has to inform the developer within a certain time frame.

SB 4 encourages development within a half-mile of rail or ferry stations by allowing projects to increase their height by one story above the current height limit. The bill also eliminates parking requirements for these transit-oriented development (TOD) projects, but to qualify for this bonus, the bill requires TOD projects with 10 units or more to have a minimum of 30 percent of units affordable to households earning 80 percent of the area median income.

certain types of neighborhoods. We examine four case studies that represent three different types of neighborhoods likely to be most impacted if SB 50 becomes law. While not representative of the entire state, we believe that these case studies reveal factors that are relevant to understanding the impacts of upzoning on new development, even if the intersection of those factors differ based on neighborhood history, geography, and housing, demographic, or socio-economic conditions. In addition, this brief does not lay out specific recommendations: rather, it seeks to provide a shared understanding of the practice of upzoning, what may or may not be

built and why, and raise issues that policy-makers should consider in their discussions of SB 50 and other upzoning legislation.

Methodology

Because of the role of local market conditions in influencing the likely impacts of upzoning, we decided to focus on a few representative case study neighborhoods in cities across California to unpack what it would mean to upzone a neighborhood around a high-quality transit stop. The case study approach has its

strengths and weaknesses. The strength of this approach is that we can more accurately and thoroughly assess how local conditions influence the development potential of upzoning. However, given the diversity of California's neighborhoods, these case studies may not reflect all of the different kinds of places that may be affected.

The case study approach is most effective when selecting neighborhoods that are “representative” of a specific neighborhood typology, meaning that they share comparable baseline characteristics. We selected our case studies by analyzing data on the demographic, economic, and built-form characteristics of neighborhoods served by high-quality transit. We clustered 10,550 qualifying station areas according to these data to produce a neighborhood typology.⁷ We found that we could group high-quality transit areas into five relatively distinct neighborhood types based on variables including race, income, education, density, age of buildings, type of buildings, cost of housing, and job accessibility (See the Appendix for the full list of variables used in the clustering analysis). The clusters can be characterized as: (1) high density/high income, (2) high density/low income, (3) low density/high income, (4) low density/low income, and (5) low density/diverse.

Out of the five resulting clusters, we assumed that since the two high-density clusters (1 and 2) contained a significant share of large multi-family buildings, it is probable that developers can already construct the kind of buildings allowed by SB 50. We did not look further into these two types of neighborhoods since the impact of SB 50 would likely be small. The three remaining clusters (3, 4, and 5) are more likely to be impacted by upzoning because they are less dense and have older buildings, meaning that it would be possible to intensify land use through upzoning around these stations. Two of these three clusters (low density/low income and low density/diverse) also have a greater share of lower-income renters and people of color, suggesting that specific consideration should be given to the potentially negative impacts that upzoning may create in these areas. The third cluster (low density/high income) could be characterized as “high opportunity” neighborhoods, in that they have low poverty and unemployment rates, good accessibility to jobs, and are more likely to be majority white. In addition, their lower density—coupled with high rents—might allow for a meaningful impact of upzoning.

We selected four case study neighborhoods from the three cluster types to gain a deeper understanding of how upzoning would affect the development picture. The case studies we selected for this analysis are the Menlo Park Caltrain station (representing the low density/high income cluster), the Fruitvale BART station in Oakland and the Soto St. Metro station in the Boyle Heights neighborhood of Los Angeles (both representing the low density/low income cluster), and the Allesandro Ave-Oak Glen Pl. bus station in the Silver Lake/Echo Park neighborhood of Los Angeles (representing the low density/diverse cluster, as well as a high-frequency bus transit neighborhood as opposed to a fixed rail station). Table 2 in the Appendix presents data on the characteristics of each of these four case study neighborhoods. It is important to note that although we have selected these neighborhoods to represent the three clusters, every neighborhood has its own history, topography, and characteristics that impact development.

Using these case study neighborhoods, we sought to answer the following questions:

- » How much land around each of these stations would be eligible for upzoning?
- » What is the potential for upzoning, given parcel sizes and what already exists on the land?
- » How will SB 50 influence the zoning restrictions that impact what can be built?
- » How does financial feasibility differ across neighborhoods?

The rest of the brief answers these questions, highlighting both the potential of SB 50 to significantly increase the supply of housing (including new affordable units), as well as important caveats that policy-makers should consider as they refine the legislation.

Current Zoning Matters: High-Quality Transit Neighborhoods Have Different Amounts of Land Available for Residential Development

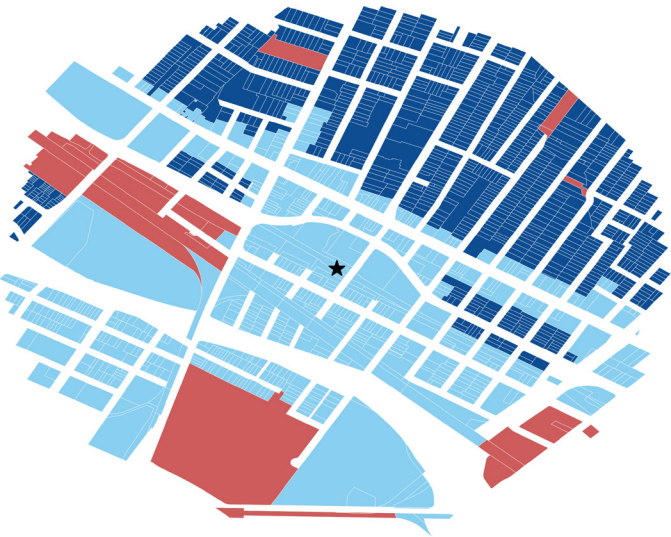
The first question driving this analysis was, “How much land around each of these stations would be eligible for upzoning?” SB 50 applies to parcels that are zoned for any type of residence as a permitted use.⁸ This means that a parcel must be either zoned residential or commercial. If it is zoned “commercial”, the city’s code must allow for residential development as a permitted use. The zoning codes in Oakland, Menlo Park, and Los Angeles allow residential to be built on commercially-zoned land, but this may not be true in all jurisdictions. Figure 1 shows where residential is a permitted use in the half-mile radius around the four case study stations. Since the Silver Lake station is a bus stop, SB 50 would only apply within a quarter-mile radius of the stop, which is designated by the black circle on the map.⁹

Dark blue designates areas where residential is the only permitted use (e.g. a single-family or multi-family zoning) and light blue designates areas that are mixed-use (e.g. commercial or transit-oriented development). We find that a significant share of the land around transit is zoned for either industrial or “office” use, neither of which would be affected by SB 50. For example, in the Fruitvale neighborhood, 11 percent of land is zoned for industrial, and in Menlo Park, 12 percent of the land is zoned for office.

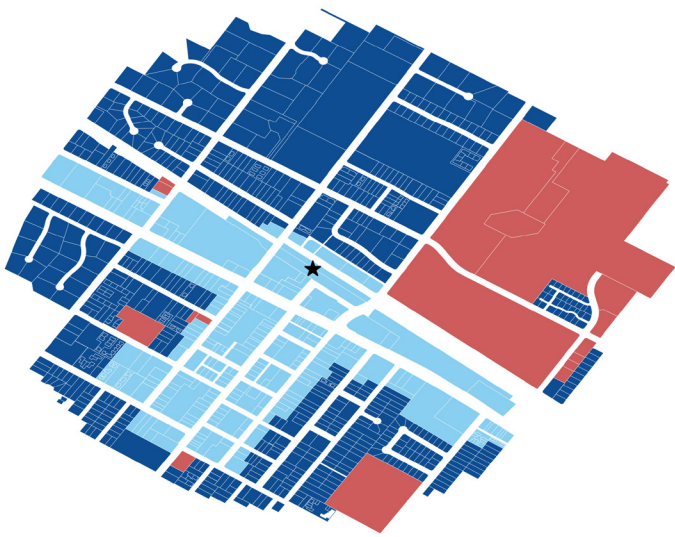
Overall, the share of land that would be covered under SB 50 varies across the four case studies: from 57 percent in Fruitvale and Boyle Heights, to 62 percent in Silver Lake. Table 1 contains a more refined breakdown of these numbers. Part of this difference is due to historical land use in the area. Fruitvale was historically an industrial area, some of which persists, but is slowly being converted to a housing-business mix. Former industrial sites that have been reclassified as mixed-use could be used for new housing, but will also likely require more environmental remediation, which can raise the costs of construction. The Silver Lake bus stop, on the other hand, is in an almost entirely residential area.

Figure 1: Residentially-Zoned Areas within Station Neighborhoods

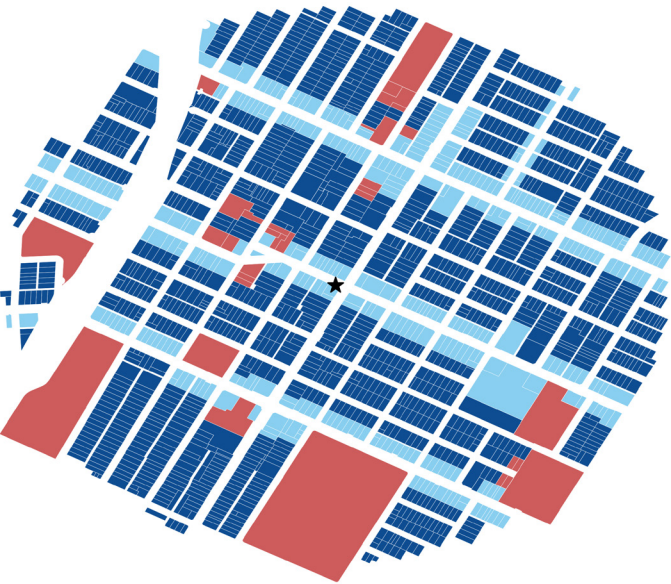
Fruitvale



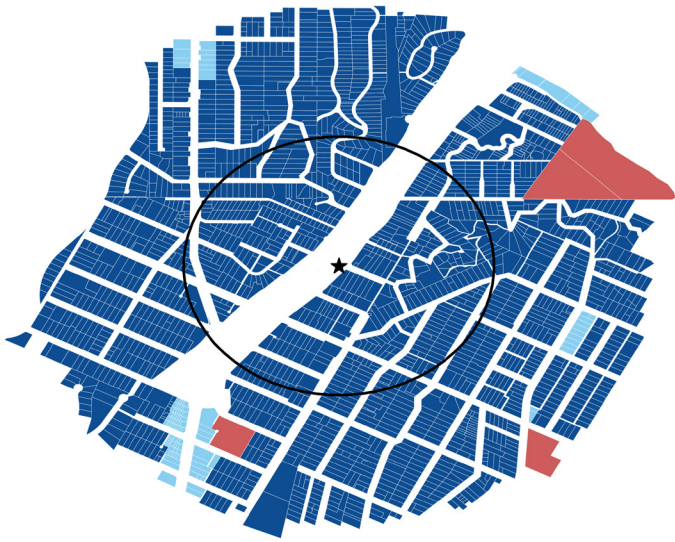
Menlo Park



Boyle Heights



Silver Lake



- Residential only (e.g. single-family or multi-family zoning)
- Mixed use including residential (e.g. commercial, transit-oriented development, etc.)
- Not available for residential (e.g. office, industrial, etc.)
- ★ Transit station

Note: Maps represent a half-mile radius around transit stop. Because Silver Lake is a bus station, the black circle designates the quarter-mile buffer.

Table 1: Share of Land Area with Residential as a Permitted Use

	Fruitvale		Menlo Park		Boyle Heights		Silver Lake	
Land Use	Acres	Share	Acres	Share	Acres	Share	Acres	Share
Residential a Permitted Use	289	57%	311	60%	289	57%	81	62%
Single-Family Residential	0	0%	112	22%	0	0%	34	26%
Multi-Family Residential	122	24%	104	20%	219	43%	47	36%
Mixed-Use	49	10%	95	18%	0	0%	0	0%
Commercial	118	23%	0	0%	70	14%	0	0%
Residential NOT a Permitted Use	58	11%	100	19%	84	17%	19	14%
Industrial	55	11%	0	0%	0	0%	0	0%
Public Facilities	0	0%	27	5%	64	12%	19	14%
Office	0	0%	64	12%	0	0%	0	0%
Open Space	4	1%	10	2%	17	3%	0	0%
Parking	0	0%	0	0%	4	1%	0	0%
Street Network	160	32%	110	21%	137	27%	31	24%
Total	507	100%	522	100%	511	100%	131	100%

Source: Author's calculations; see appendix for data sources; Note: For Fruitvale, Menlo Park, and Boyle Heights the total is the land within the half-mile radius, and for Silver Lake the total is the land within the quarter-mile radius. "Parking" refers to zoning and not actual parking structures: for example, in Fruitvale, the parking lot is designated TOD and allows mixed-use.

A Significant Share of Parcels around Transit Are Small, Limiting the Likelihood that SB 50 Will Lead to Large (50 units +) Multi-Family Developments

A second question was, "How big are the existing parcels?" The maps in Figure 1 show the outlines of the parcel boundaries. Because Fruitvale and Menlo Park have more commercially-zoned land, they also tend to have larger parcel sizes (and more vacant land), while Boyle Heights and Silver Lake's current building stock is characterized by smaller lots and denser development.

Parcel size and configuration are critically important in shaping the potential for real estate development. Smaller parcels in particular will reduce the impact of upzoning policies. For example, to reach the maximum height limit of five stories allowed in SB 50, buildings need to be large enough to support all of the necessary building infrastructure. Most five-story buildings need to have an elevator, which the structure needs to be able to accommodate and finance. To provide a sense of the necessary parcel size, we analyzed form-based codes and found that the minimum lot dimensions recommended for a five-story, mid-rise structure approximated a lot width of 75–100 feet and a lot depth of 100–180 feet.¹⁰ Those dimensions equate to minimum lot sizes from 7,500 square feet up to 18,000 square feet. This lot size is recommended to accommodate the bulk of the building.

We examined the size of parcels in each of the case study neighborhoods and found that most parcels around these transit stations are sized for detached single-family homes (around 5,000 square

feet or less). Individually, the smaller 5,000 square-foot parcels may support construction of a multi-family building with up to 12 units, though not much denser. This land pattern can support slightly denser development than detached single-family homes, but assembling these parcels to build much larger structures would be challenging, even if SB 50 allowed for more stories. In order to assemble parcels, a developer would need to identify contiguous parcels with owners that are willing to sell and that have not been occupied by renters in the last seven years.

Within these case studies, the lower-income neighborhoods (Boyle Heights and Fruitvale) contain smaller residential parcels than the higher-income neighborhoods (Silver Lake and Menlo Park). For example, comparing the blue bars in Figure 2B (acreage in parcels less than 5,000 square feet), Fruitvale and Boyle Heights had much more land in these smaller parcel sizes than the other two neighborhoods. Menlo Park has over half of its land in parcels greater than 20,000 square feet (171 acres across 148 parcels).

In addition to the parcel geometry, the current utilization of the land area will also influence the potential for development. If there is more vacant or underutilized land, then there are more opportunities for development, but if every parcel is built on, then the land is more expensive due to existing improvements. SB 50 also places restrictions on demolition, which would make it harder to build on land with existing structures. To assess the potential for new development in the case study neighborhoods, we examined how many of the residentially-zoned parcels are underutilized. We consider a parcel as "underutilized" if it has more than 5,000 square feet that is not occupied by a building. 5,000 square feet is around the smallest footprint that could support a four to five-

Figure 2A: Number of Parcels by Size

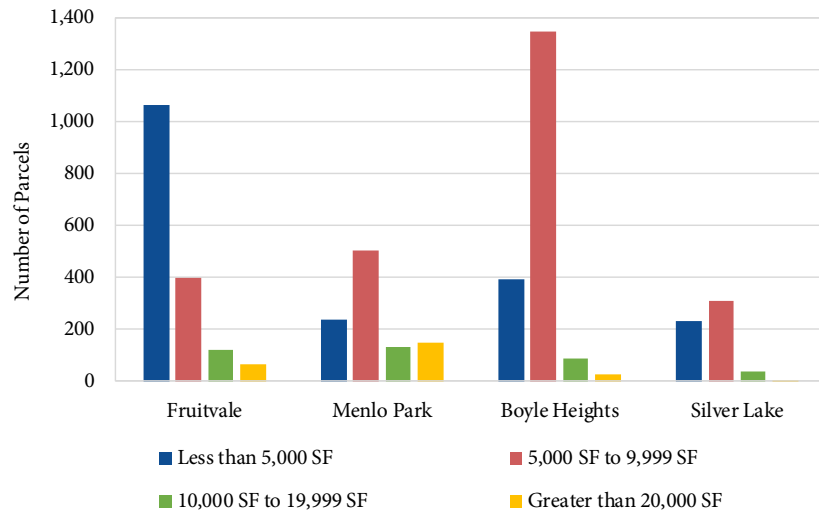
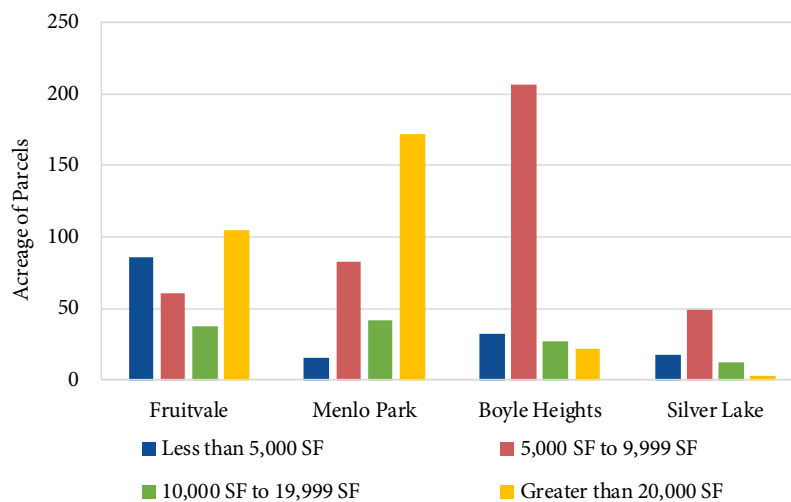


Figure 2B: Acreage by Parcel by Size



Source: Author's calculations; see appendix for data sources

story building. An important caveat here is that unbuilt land may not necessarily be in a shape that is developable (e.g. the unbuilt land could be spread around the parcel or in terrain that is hilly or otherwise undevelopable, as is the case in the Silver Lake neighborhood).

Table 2 shows that Menlo Park and Silver Lake have more underutilized parcels overall, and that those underutilized parcels comprise a greater share of the total number of parcels over 5,000 square feet. The total unbuilt area of those underutilized parcels shows that there is more land available around those stations as well. Some of these parcels are unlikely to be developed, however, since they represent institutional or community uses. In Menlo Park, for example, there are two parcels that are each around 10 acres (a combined six percent of the land zoned residential in the station area) that contain a monastery and religious retreat center. Buildings only occupy around 10 percent of these parcels, leaving over 18 acres undeveloped.

Figure 3 illustrates a similar concept: the improvements to value ratio. The ratio is calculated by dividing the value of the improvements (how much a structure on the property is worth) by the total value of the property (the value of the improvements + the value of the land). For example, if a property had a house worth \$500,000 (the improvements) and the land is worth \$500,000, then the improvements to value ratio is 50 percent. If the parcel is vacant or being used as a surface parking lot, the ratio is zero percent.

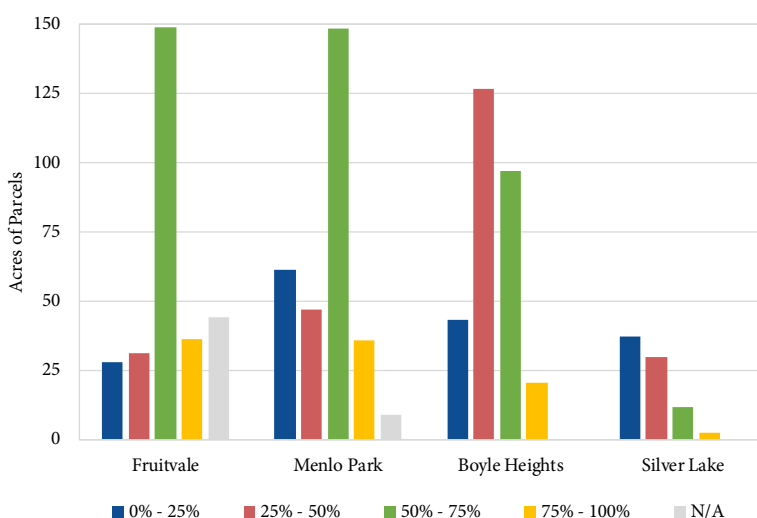
Again, Menlo Park and Silver Lake have the most land that is in the lowest improvement ratio category, which suggests that they have a lot of underutilized land that could be built on. These findings indicate that the higher-income Menlo Park and mixed-income, diverse Silver Lake may provide more potential development opportunities than the lower-income Fruitvale and Boyle Heights neighborhoods. In all neighborhoods, however, there is a substantial amount of land that could be built on and SB 50 could unlock significant development potential on these sites.

Table 2: Share of Underutilized Parcels

Neighborhood	Residential Parcels over 5,000 SF	“Underutilized” Residential Parcels over 5,000 SF	Percentage	Total Unbuilt Area of “Underutilized” Parcels (SF)
Fruitvale	583	257	44%	4,727,591
Menlo Park	785	430	55%	8,041,888
Boyle Heights	1,462	297	20%	2,396,853
Silver Lake	351	213	61%	1,587,440

Source: Author's calculations; see appendix for data sources

Figure 3: Improvements/ Value Ratio for Parcels by Average



Source: Author's calculations; see appendix for data sources

Table 3: Renter-Occupied Apartments

	Fruitvale		Menlo Park		Boyle Heights		Silver Lake	
	Acres	Share	Acres	Share	Acres	Share	Acres	Share
Contains Residential Renters	47	16%	90	30%	117	41%	27	33%
No Residential Renters	241	84%	211	70%	170	59%	54	67%
Total	288	100%	301	100%	287	100%	81	100%

Source: Author's calculations; see appendix for data sources. Acres do not match Table 1 due to missing data on some parcels.

That said, a significant share of these lower valued lots are occupied, meaning that it is not a straightforward process to acquire and build on the land. Both SB 50 and SB 4 include a provision that forbids the demolition of buildings occupied by renters (SB 50 looks back seven years and SB 4 looks back 10 years), in an effort to prevent displacement.¹¹ In all four of these neighborhoods over half of the population rents, which means this provision will have a big impact. To get a sense for how much land this would affect, we looked at assessor's data and designated parcels as renter-occupied if the assessor's data said it was not owner-occupied and it contained at least one bedroom. Table 3 shows that in Boyle

Heights, over 40 percent of the land available for residential use is currently occupied by renters. (It is not possible to tell from the data whether there has been a renter in the building in the past seven years, which would only increase the share of properties protected in each neighborhood.) The share is lower in Fruitvale due to large quantities of former industrial land that are not occupied. In general, these results should be considered underestimates of renter occupation. Figure 4 shows the parcels occupied by renters in red (gray parcels allow residential use and are not renter-occupied), which demonstrates how this provision will make it harder for developers to assemble parcels to build larger structures.¹²

Figure 4: Renter-Occupied Parcels

Fruitvale



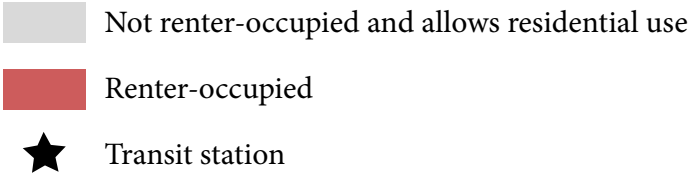
Menlo Park



Boyle Heights



Silver Lake



Even with SB 50, Existing Zoning Regulations May Still Constrain Development in Some Cities

SB 50 explicitly addresses four of the most common zoning regulations that constrain residential development: height limits, floor-area ratios (FARs), density limits, and minimum parking requirements. Maximum densities limit the number of households that can occupy a parcel. Typically they are expressed in dwelling units per square feet of lot area. For example, in Menlo Park the R1U Single-Family Urban Residential zone has a maximum density of one dwelling unit per 7,000 square feet of lot area. Minimum parking requirements are typically expressed in terms of spaces per unit. Parking can severely limit the usable area of the lot because it requires access to the street and internal circulation. Height limits constrain how tall a building can be and the floor-area ratio limits the bulk of the building and is calculated by dividing the total floor area of the building by the size of the lot. For example, a FAR of 1.0 would allow a developer to build either a one-story building that occupies the entire lot, a two-story building that occupies half of the lot, a three-story building that occupies a third of the lot, and so on. These constraints work together to limit the size of the building and how many people can live in it. Relaxing these constraints is believed to have an impact on housing supply because it allows a developer to build a larger structure on the same parcel and divide it into more units, allowing more people to live there.

But there are additional standards embedded in local zoning codes that SB 50 does not explicitly address. These standards also work to constrain the maximum “building envelope,” or how much of the lot the building can occupy and how tall it can be. Examples of these additional zoning standards include:

- » Front, side, and rear setback requirements (how close to the edge of the parcel the building can extend in all directions)
- » Daylight plane restriction to limit the casting of shadows (similar to a setback, but it restricts how tall a building can be at certain distances from the parcel boundary)
- » Maximum lot coverage (limiting how much of the parcel the building footprint can occupy)
- » Minimum yard/open space requirement (specifying how much of the lot needs to be left undeveloped and may exclude impermeable land that has been paved for parking)

These additional zoning requirements differ widely across cities. For example, Table 4 lays out the additional zoning restrictions for a parcel zoned R1U Single Family Urban in Menlo Park.

If these additional zoning requirements remain in place, they would continue to severely constrain the development envelope. For example, consider a 5,000 square foot parcel in Menlo Park that is 50 feet wide and 100 feet deep and located within a quarter to half-mile of the rail station. The building footprint would be constrained by the maximum building coverage of 35 percent, resulting in a footprint of 1,750 square feet. Due to the daylight plane, this maximum footprint could only apply to the first two

Table 4: Additional Zoning Requirements in Menlo Park

Minimum Front Setback	20'
Minimum Rear Setback	20'
Minimum Side Setback	5-12'
Maximum Building Coverage	1 story building: 40% 2+ story building: 35%
Daylight Plane	45° starting at 19' 6" above side setback

stories, and the third floor would have to be smaller (see the left side of Figure 5). The maximum third floor area would be 1,200 square feet, and it would not be possible to build a fourth floor. The total gross square footage of this building would be 4,700 square feet. Assuming a building efficiency of 75 percent (25 percent is devoted to common spaces like an entrance foyer, stairs, and hallway), that leaves around 3,500 square feet of leasable space. This means that even with SB 50, the lot could only be divided into five units that average 700 square feet each.

Compare that result to a parcel that was only subject to the height limit and FAR imposed by SB 50 (the right side of Figure 5). The limiting factor would be the FAR of 2.5, which would allow 12,500 gross square feet of development. This could be spread across four floors within the 45' height limit, resulting in a building footprint of 3,125 square feet. This footprint could be accomplished with 5' setbacks on either side and a combined 22' to divide across the front and back (for example, a 5' front setback and 17' rear setback). Assuming again 75 percent building efficiency results in 9,375 square feet of leasable space, which could generate 13 units that average over 700 square feet each—more than twice as many units.

Figure 5: Comparison of Building Envelopes

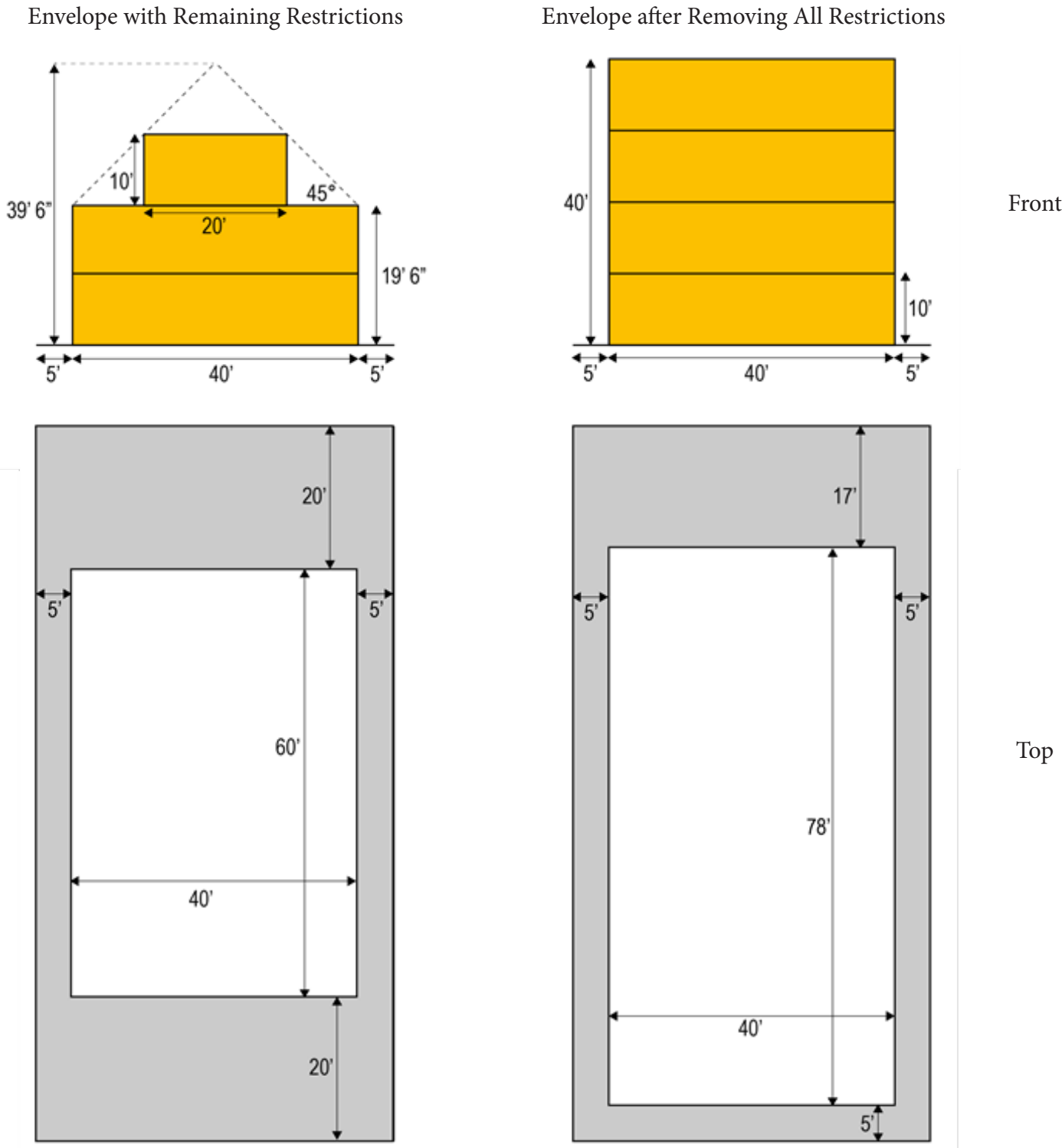


Figure 6: 2711 Shattuck Façade and Ground Floor Site Plan



A recent development in Berkeley provides a helpful example of this size of project. The building, shown in Figure 6 and developed by Panoramic Interests, sits on a narrow 5,200 square foot lot and is four-stories tall.¹³ The footprint of the building is small, but it still fits 22 studios at around 300 square feet each. There are no side setbacks in this example, but the building is set back from the sidewalk and there is a large rear setback that accommodates a patio and parking for bicycles and one car.

The variation of these requirements across cities is one of the factors that makes it very difficult to assess the overall production potential of an upzoning policy. Because each city has its own zoning standards, even for the same “R1” code, a more comprehensive assessment of the development impact of SB 50 would necessitate a database of all of those standards for every city, something that currently does not exist.

One potential solution to overcome these constraints is to ensure that SB 50 works in tandem with the state’s Density Bonus Law (Section 65915–65918 of California State Law). The Density Bonus Law grants developers up to three additional incentives or conces-

sions if 30 percent of the project’s units are affordable to lower-income households (60 percent of area median income) that could be used to address the additional zoning constraints described above. For example, these concessions could be used to waive the daylight plane requirement, the maximum lot coverage, and the front setback to build up to the maximum FAR. The application of the Density Bonus Law according to the SB 50 language is unclear, however, since SB 50 does not state whether the project needs to have 30 percent affordable units to receive all three concessions or whether the project would automatically receive the concessions allowed under the Density Bonus if it meets SB 50 inclusionary requirements.

It is also unclear how SB 50 would integrate into a city’s existing specific plans. A specific plan is a planning document that applies to a certain area within a city and systematically implements the city’s general plan.¹⁴ Specific plans often contain land use plans, infrastructure plans, and development and design standards. Cities devote considerable resources to prepare Environmental Impact Reports (EIRs) for their specific plans to comply with the California Environmental Quality Act (CEQA). Subsequent develop-

ment projects can essentially piggyback on that EIR and receive what is called programmatic-level CEQA approval. That way developers who are pursuing larger projects do not need to go through an entire CEQA process as long as they adhere to the guidelines in the specific plan. This can be a big incentive to development since the uncertainty caused by CEQA is a major deterrent to large projects. As a result, where a specific plan is in place developers may choose to use the specific plan's guidelines instead of SB 50, even if the upzoning would allow more units on the property.

Menlo Park provides a good example. In 2012 the city enacted the El Camino Real Downtown Specific Plan, which covers a significant portion of the half-mile radius around the Caltrain station.¹⁵ Among other regulations, the specific plan imposes a maximum density on residential development (ranging from 18.5 to 60 dwelling units per acre), height limits (primarily 38' but up to 60' in select areas), and parking minimums (one space per unit). The SB 50 legislation would loosen all three of those restrictions for most of the specific plan area, but it is unlikely that the programmatic-level CEQA approval would apply if developers do not adhere to the specific plan guidelines. If the approval does not extend, then developers may choose to follow the more restrictive specific plan guidelines to avoid CEQA review, which would limit the impact of SB 50.

Another lingering question is how SB 50 would apply in Los Angeles, which recently implemented a "Transit Oriented Communities (TOC)" program. The TOC program provides a density bonus to projects that contain five or more dwelling units, are near a major transit stop, and include on-site affordable units.¹⁶ The bonus depends on the type of transit stop and the proximity to it, but includes a 50-80 percent increase in units, an increase in FAR, and a decrease in parking requirements. It is not clear how SB 50 will interact with parcels that qualify for LA's TOC program, though an early conversation with Senator Wiener's staff suggested that SB 50 would not apply to TOC areas. However, TOC only applies to projects that contain five or more units. SB 50 does not specify a minimum size to which its upzoning provisions apply: as a result, SB 50 may still apply to parcels that are zoned for one to four units where the programs overlap.

Upzoning, and SB 50, could be a powerful tool to produce more housing, but lawmakers will have to consider how they expect the law to interact with these local conditions and regulations for it to achieve the desired goal of building more housing around high-quality transit areas.

Financial Feasibility Differs Across Neighborhoods

Just because a building is allowed to be built does not mean it will be. Even after a developer finds an adequate parcel and navigates the local zoning code, the project still has to make financial sense to be viable. Financial feasibility is determined in part by the "cost of capital," which is driven by market conditions. For example, developers rely on institutional investors like pension funds to provide capital that requires a certain rate of return. Lenders require a minimum loan-to-value ratio before providing debt on a project, and require the developer to conduct a market analysis to make sure the project will produce enough cash flow from rents or sales to pay back the loan. Developers also build in some degree of profit to pay for staff and to compensate for the risk they are assuming in acquiring the land and building the property. Overall, there are a number of factors that determine whether a real estate development will "pencil out," which simply means that the long-term rental potential will offset the costs of development. Table 5 lists some of these factors.

These factors differ dramatically across markets meaning that the same development may pencil out in one neighborhood but not another, even with the benefits of upzoning.

To illustrate how important financial feasibility is to project viability, we assessed whether a developer would choose to build a similar 12-unit, four-story building on a lot in Menlo Park and in Fruitvale, pursuant to the benefits of upzoning as allowed under SB 50. Table 6 lays out a simple pro-forma calculation that a developer might make when considering these projects. We selected two parcels that were around 5,000 square feet in area, both of which had an existing structure on them. We assumed that the developer

Table 5: Factors Affecting Financial Feasibility

Developmental Factors	Operational Factors
Land costs	Rental/house prices
Construction costs	Operating costs (maintenance, property taxes, insurance, etc.)
Soft costs (architects, engineers, consultants, etc.)	Vacancy rates
Government fees (impact fees, permit fees, etc.)	
Approval process (delays can increase costs)	
Financing terms	

Figure 6: Illustrative Pro-Forma Calculation

	Menlo Park Example	Fruitvale Example
Lot Size	5,043 sq ft	4,933 sq ft
Maximum Building Height	45 ft	45 ft
Max FAR	2.5	2.5
Parking	None	None
Building Details		
Building Footprint	3,125 sq ft	3,083 sq ft
Stories	4	4
Gross Square Feet	12,608 sq ft	12,333 sq ft
NSF / GSF Ratio	75%	75%
Net Leasable Square Feet	9,456 sq ft	9,249 sq ft
Units	12	12
Average Unit Size	788 sq ft	788 sq ft
Total Cost		
Land Cost	\$2,331,840	\$569,526
Per SF Hard Cost	\$285 /sq ft	\$285 /sq ft
Per SF Soft Cost	\$110 /sq ft	\$110 /sq ft
Total Cost	\$7,311,803	\$5,440,864
Income and Expenses		
Rent/SF/Month	\$4.50	\$3.60
Rent/Unit/Month	\$3,546	\$2,775
Total Rent/Year	\$510,604	\$399,573
Vacancy Rate	5%	5%
Gross Income	\$485,074	\$379,594
Expense estimate	\$7,000 /unit/ year	\$6,000 /unit/ year
Gross Expenses	\$84,000	\$72,000
Net Operating Income	\$401,073.56	\$307,594.35
Financials		
Value	\$12,340,725	\$6,151,887
Capitalization Rate	3.25%	5.00%
Return on Cost	5.49%	5.65%
Profit Margin	40.75%	11.56%

Source: Author's calculations; see appendix for data sources

would be able to build up to the maximum FAR of 2.5 on the parcel. The analysis also assumes the building is a rental project; a for-sale project would have different financial assumptions.

In this example, we assumed that construction costs as well as operating expenses would be roughly the same in Fruitvale and Menlo Park, although Menlo Park is assumed to have slightly higher operating expenses.¹⁷ In addition, we assumed that soft costs would be 35–40 percent of the hard costs to account for additional expenses like impact fees.¹⁸ Land prices are much higher in Menlo Park than Fruitvale and it would cost a developer four times as much to buy the land in Menlo Park as in Fruitvale.¹⁹ However, the developer could also demand higher rents: rents in Menlo Park are on average 25 percent higher than in Fruitvale. Perhaps the most important determinant of feasibility, however, is a project's capitalization rate.²⁰ To determine whether the project is feasible, developers compare the return on cost (which is the first year's net operating income [rents minus expenses] divided by the total project cost) to the capitalization rate (a market-determined measure that equates to the net operating income divided by the value of the project). If the return on cost is a sufficient spread above the capitalization rate (say 50 basis points or 0.5 percent), then the project makes sense financially.

Despite higher land values, in this example, the Menlo Park project pencils out by a wide margin, since the return on cost is 5.5 percent and the capitalization rate is 3.25 percent. The Fruitvale project, on the other hand, is just on the cusp of viability (the spread is only 65 basis points). This comparison is meant to be an illustrative example only: rents, capitalization rates, and costs are all simplified estimates. Since this example makes favorable assumptions about how many units can fit on the site, it may not be possible in reality. For example, we did not include any parking in the project, but developers would still likely include some parking

to satisfy investors' underwriting standards. Any parking would add additional costs and reduce the number of units on the site. That being said, the example shows that SB 50 could increase the housing supply substantially in certain areas, while in other markets upzoning alone will not necessarily result in a dramatic increase in housing supply.

The differences in financial viability also influence what level of inclusionary may be possible. Under the recently released bill amendments,²¹ smaller projects like these would be subject to an in-lieu fee and not required to build affordable units on-site. However, it is still helpful to illustrate how different levels of inclusionary units intersect with financial pro-forma analysis to determine what is feasible. To show this dynamic, we imposed a 20 percent inclusionary requirement of affordable units at 80 percent of AMI. In Oakland, 80 percent of AMI for a household of three is \$80,650, which equates to a monthly rent of \$2,016 (compared to the market rent of \$2,775). In Menlo Park, 80 percent of AMI for a household of three is \$105,700, which equates to a monthly rent of \$2,643 (compared to the market rent of \$3,546).

Table 7 shows that requiring two units to be affordable (rounding down from 20 percent) results in the Menlo Park project still being very feasible, but pushes the Fruitvale project into definite infeasibility. If our sample project needed to include affordable housing, then the Fruitvale project would likely not pencil out, even as the Fruitvale neighborhood would benefit from more affordable housing options. This simple example illustrates the difficulty in setting a state-wide inclusionary zoning percentage that can maximize the number of inclusionary units while not preventing new housing from being built. In a future brief, we will focus on this issue of inclusionary housing in more detail to highlight the importance of focusing the state on using a wide range of tools to ensure that new developments include units for lower-income households.

Table 7: Impact of Adding Inclusionary Units

	Menlo Park Project	Fruitvale Project
Market Rate Units	12	12
80% AMI Units	0	0
Value	\$12,340,725	\$6,151,887
Cap Rate	3.25%	5.00%
Return on Cost	5.49%	5.65%
Profit Margin	40.75%	11.56%
Market Rate Units	10	10
80% AMI Units	2	2
Value	\$10,283,938	\$5,126,573
Cap Rate	3.25%	5.00%
Return on Cost	4.57%	4.71%
Profit Margin	28.29%	-6.13%

Conclusion

It is not a simple exercise to understand what the impact of an upzoning policy will be given all of the factors that influence development. As this brief lays out, existing land use, parcel configuration, additional zoning restrictions, and financial considerations will all play a role in how much new housing will be produced under SB 50. All of the research presented here suggests that there will be different impacts in different places. Nevertheless there are important factors that the state legislature should consider as they debate SB 50 and/or other upzoning proposals.

First, we do find that SB 50 will unlock development potential around high-quality transit sites, and that there is significant promise to converting vacant and/or underutilized parcels into housing. Some of our case study neighborhoods had a significant share of their land area—between 20 to 50 percent—comprising parcels over 5,000 square feet with no buildings on them. This offers up a real opportunity for additional housing, including affordable units. Concerns over how SB 50 may lead to the Manhattan-ization of neighborhoods are also likely overstated. We find that a large share of parcels around our case study transit areas are small—5,000 to 10,000 square feet—and will not likely support large multi-family developments of 200+ units. SB 50 could thus result in a more gradual densification of housing in transit-rich neighborhoods, as underutilized sites become buildings with 10-20 units. This study also does not take into account potential constraints from renter occupancy and demolition prohibitions.

A second important finding, however, is that SB 50 on its own does not remove all the constraints to development on a parcel, and there need to be other limitations on setbacks or daylight planes to ensure that if a parcel does attract new development, it maximizes new supply. In addition, we find that there is variation across case study neighborhoods in terms of how much land is zoned to allow residential uses. Larger parcels around station areas may be zoned industrial or as office space, meaning that they would not be eligible under SB 50, even if they would be strong candidates for new housing development. Cities resistant to new housing could still limit new developments by imposing other restrictions on what is built on a lot, or ensuring that land in transit-eligible areas is zoned for non-residential uses only. Considering how SB 50 will intersect with other laws at both the local and state level, such as Los Angeles's Transit Oriented Communities program, a city's specific plan, or the state's Density Bonus Law, could help to ensure that all of these efforts to address the housing crisis are complementary.

A third finding is that the likelihood of new developments "penciling out" varies significantly across neighborhoods and their unique housing market conditions. This has implications for the level of inclusionary that will be viable, as well as how much new housing the market will support in different neighborhood types. A future brief will explore the issue of inclusionary in more detail (using the thresholds recently added to the bill language), but the example provided here shows the importance of discussing approaches of how to tailor inclusionary requirements to market conditions, rather than setting one target for the entire state.

Finally, this brief only considers the upzoning factors that will influence the impact of SB 50 on development potential. Other aspects of the bill—including tenant protections and the definition of "sensitive communities," the definition of "job-rich" areas, and the inclusionary requirements—will all influence the scale and impact of new developments. Future briefs in this series will consider these important elements of the bill in more detail to bring data-driven analysis to the conversation, and to support the goal of passing legislation that effectively balances housing, equity, and environmental goals.

Appendix A

Table A1: State-wide Clusters: Characteristics of Residents and Housing Stock

Cluster	High Density High Income	High Density Low Income	Low Density Low Income	Low Density High Income	Low Density Diverse
Number of stops	963	1,557	3,305	2,186	2,539
Average population	9,231	12,104	10,699	11,692	9,280
Percent of population that rents	74.7%	92.0%	69.6%	71.1%	40.1%
Percent NH White	46.0%	20.7%	7.7%	57.0%	32.9%
Percent Hispanic	16.8%	41.0%	66.8%	14.8%	27.6%
Percent Black	7.6%	9.7%	15.7%	5.1%	7.1%
Percent Asian	25.4%	25.2%	7.3%	17.9%	27.9%
Percent below 200% of poverty rate	31.4%	61.2%	60.4%	24.2%	25.8%
Unemployment rate	6.4%	10.8%	11.9%	6.1%	7.4%
Percent with bachelor's degree	60.9%	29.6%	12.2%	62.7%	39.0%
Percent of households with children	12.4%	20.7%	45.9%	16.8%	33.1%
Percent single-family detached house	6.2%	6.5%	41.7%	17.6%	57.2%
Percent small multi-family (2-4 units)	4.1%	8.0%	16.2%	25.6%	8.9%
Percent medium multi-family (5-18 units)	10.2%	22.5%	18.6%	30.9%	8.8%
Percent big multi-family (20+ units)	75.7%	59.2%	12.2%	19.1%	10.1%
Percent of housing units vacant	12.6%	9.0%	5.9%	7.2%	5.1%
Percent of units built before 1950	17.9%	41.4%	40.4%	50.5%	33.4%
Percent of units built after 2000	36.5%	13.1%	5.8%	4.9%	6.0%
Average population/square mile	11,639	26,631	15,634	21,620	11,142
Median tract rent / median county rent	1.32	0.76	0.81	1.14	1.12
Jobs within commuting distance	1,092,714	1,465,269	1,187,058	1,093,013	790,501

Table A2: Neighborhood Case Studies: Characteristics of Residents and Housing Stock

Cluster	Fruitvale Station	Soto Station	Menlo Park Station	Silver Lake/ Allesandro Ave Station
Population	11,451	13,064	8,892	8,664
Percent of population that rents	74.6%	83.0%	63.1%	50.1%
Percent NH White	9.9%	2.2%	74.1%	49.1%
Percent Hispanic	65.7%	94.3%	6.3%	32.8%
Percent Black	8.4%	1.0%	0.6%	1.8%
Percent Asian	13.4%	2.0%	14.1%	11.0%
Percent below 200% of poverty rate	55.5%	79.3%	8.9%	20.2%
Unemployment rate	11.8%	15.1%	2.4%	4.1%
Percent with bachelor's degree	21.6%	6.2%	82.9%	55.5%
Percent of households with children	42.5%	46.7%	31.3%	23.3%
Percent single-family detached house	28.3%	36.8%	32.4%	68.7%
Percent small multi-family (2-4 units)	20.9%	17.6%	23.8%	16.6%
Percent medium multi-family (5-18 units)	27.6%	14.3%	9.9%	0.0%
Percent big multi-family (20+ units)	12.8%	15.6%	25.7%	8.1%
Percent of housing units vacant	8.6%	7.4%	6.9%	6.0%
Percent of units built before 1950	17.4%	1.3%	11.2%	4.6%
Percent of units built after 2000	54.7%	56.9%	18.5%	61.2%
Density (population/square mile)	11,602	21,312	6,991	8,052
Median tract rent / median county rent	0.82	0.72	1.07	1.32
Jobs within commuting distance	930,678	1,456,604	500,607	1,707,780

Table A2: Data Sources

Source	Information
Alameda County, Los Angeles County, San Mateo County	Parcel data
Cities of Oakland, Menlo Park, Atherton, and Los Angeles	Zoning information
ACS Census 2017 5-Year Estimates	Demographic data
Yardi	Rent, cap rate, and operating expenses data
Local developers	Construct cost estimates
LandVision	Value of land and improvements, renter-occupancy status
Open Street Maps	Building footprints
Zillow	Land prices
idevelop.city	Parcel information
US Department of Housing and Urban Development	Affordable rents

Endnotes

1. https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB50
2. https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB4
3. <https://urbanfootprint.com/how-might-sb-827-impact-california/>;
<https://www.nytimes.com/2018/03/19/us/california-today-can-californians-drive-less.html>
4. <https://www.mckinsey.com/featured-insights/urbanization/closing-californias-housing-gap>
5. <https://www.urbandisplacement.org/blog/sb-827-2.0-what-are-implications-bay-area-communities>
6. A headway is how frequently buses arrive at a certain stop. If the headway is 15 minutes, then a bus arrives every 15 minutes.
7. For more information on the clustering process see: http://upzoning.berkeley.edu/station_neighborhoods.html
8. It is unclear whether the policy would apply when residential is a conditional use.
9. The full map is shown for comparability. The analysis only considers parcels that fall within the quarter-mile boundary.
10. Richmond Livable Corridors, City of Richmond, CA Form-Based Code, p. 120-28; Cincinnati Form-Based Code, p. 2-30.
11. We are not aware of an existing data source that tracks this information.
12. In the LandVision data, the assessor's data contains a field for whether the parcel is owner-occupied. We consider a parcel to be occupied by renters if the parcel is not occupied by the owner and there is at least one bedroom on the parcel.
13. <https://www.panoramic.com/cityspaces-location/shattuck-berkeley/>
14. http://opr.ca.gov/docs/specific_plans.pdf
15. <https://www.menlopark.org/149/El-Camino-Real-and-Downtown-Specific-Pla>
16. <https://planning.lacity.org/ordinances/docs/toc/TOCGuidelines.pdf>
17. Construction costs come from estimates provided by local developers.
18. Impact fees are different between Menlo Park and Fruitvale but the other soft costs like architecture and consulting fees and financing costs are likely similar.
19. Estimates for land costs come from Zillow.
20. Estimates for rents, operating expenses, and cap rates come from Yardi.
21. https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB50

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