Planning & Transportation Commission

Staff Report (ID # 9068)

Report Type:	Study Session	**Meeting Date:**	4/25/2018

Summary Title: Key Issues for Implementing the Council Housing Work Plan Referral

Title: Public Hearing: Implementing the Council Housing Work Plan Referral: Discussion of Key Issues for the 2018 Comp Plan and Housing Ordinance

From: Hillary Gitelman

Recommendation

Staff recommends the Planning and Transportation Commission (PTC):

1. Review key issues to be addressed in the zoning code to encourage production of a diversity of housing types in appropriate locations, as specified by the Council referral of 2018 Housing Work Plan items
2. Provide input to staff to be synthesized in a framework for an ordinance for the PTC's consideration at a future meeting

Report Summary

The Background section of this report provides context for the local and regional housing crisis. In short, incomes are not aligned with the cost of housing (rent and sale prices) in Palo Alto, such that local workers cannot afford to live in the city. So far, the City is not on track to meet its housing goals in the current Regional Housing Needs Allocation (RHNA) cycle. The Council's adopted Housing Work Plan seeks to reverse this trend and provide opportunities for housing production, affordability, and preservation.

The Discussion section of this report analyzes the current Zoning code standards for their potential effects on housing production, including how:

- Development standards in mixed use districts prioritize office and hotel development over housing development
- Commercial retail/mixed use requirements present challenges to housing developers
- Layers of regulations may be constraining unit yield on individual sites

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- A detailed study of Downtown infill potential revealed that high costs, floor area ratio (FAR) and lot coverage requirements, and the fact the remaining sites Downtown are small, are constraining housing development
- The current design review and entitlement process adds time, cost, and uncertainty to housing development

This section also includes a series of questions for the Commission's consideration to weigh the tradeoffs and options associated with the issues described above and the Comprehensive Plan policies/Council referral items. Finally, the report presents key issues and general strategies for how to address these issues and implement the zoning revisions raised by the Council:

1. Streamline the approval process
2. Address development constraints
3. Increase residential densities
4. Provide applicants with more flexibility

Background

Housing Crisis. Housing affordability is a huge issue in Palo Alto, where the median rent for a two bedroom apartment is $3,500, the median sale price for a condo is $1.65 million, and the median sales price for a single family home is $3.07 million. By comparison, the average Palo Alto Unified School District teacher earns $110,191 per year, according to PAUSD; likewise, the average City of Palo Alto employee salary is $110,048 annually, as stated in the Work Plan. These figures suggest that many community-based workers need access to below-market rate (BMR) housing if they can consider Palo Alto as a place to live.

Housing Work Plan. On February 12, 2018, the City Council approved a Housing Work Plan, which outlines steps to implement the City's vision and adopted policies and programs for housing production, affordability, and preservation. The Work Plan synthesizes policies and programs from the adopted Comprehensive Plan, adopted Housing Element, and a City Council colleagues' memo.

The Work Plan describes the City's progress towards the housing production goals at various income levels (i.e. RHNA) in its Housing Element, and the City's progress towards the housing projections developed during preparation of the updated Comprehensive Plan. In both cases, the City is far behind where it should be in order to meet its goals, as shown in Table 1. The approved Housing Work Plan indicates that action is needed to spur the production of housing.

Table 1: Summary of City Housing Goals

Source	*Goal*		*Progress as of December 31, 2017*	
	Timing	*# Units*	*Units*	*% of Goal*
Housing Element (Affordable Units)	2014-2023	1,401	143	10%
Housing Element	2014-2023	1,988	393	20%

(Total Units)				
Comprehensive Plan Projections	2015-2030	3,545-4,420	353	±10%(1)
Note: (1) The Housing Work Plan estimates that the City will have to increase its rate of housing production to approximately 300 units per year to achieve the Comprehensive Plan projection.				

Source: Palo Alto Draft Housing Work Plan & Updated Information, April 2018

For more detailed information about the Work Plan, see the materials below:

February 5, 2018 City Council Staff Report and Draft Housing Work Plan:
https://www.cityofpaloalto.org/civicax/filebank/documents/63054

February 12, 2018 (as continued) City Council Action Minutes:
https://www.cityofpaloalto.org/civicax/filebank/documents/63659

Council Referral to PTC. The Council referred the following specific items to the PTC for a 2018 zoning amendment ordinance:[1]

2018 COMPREHENSIVE PLAN/HOUSING ORDINANCE *(from the approved Draft Housing Work Plan, as amended by the February 12, 2018 Council motion)*

2.4. Provide incentives and remove constraints for multifamily housing in the Downtown (CD-C), Cal Ave., (CC(2)/PTOD) and El Camino Real (CN and CS) districts

2.4.1. Review and revise development standards (e.g., landscaping, open space)
2.4.2. Consider eliminating dwelling unit densities and relying on FAR and average unit sizes
2.4.3. Review and revise permitted uses and use mix (e.g., allow 100% residential w/retail)
2.4.4. Review and revise level of permitting and site plan review requirements
2.4.5 Allow parking reductions based on TDM plans and on payment of parking in-lieu fees for housing (Downtown and Cal Ave.). Review and update as necessary the TDM Ordinance to include additional metrics , goals, and enforcement
2.4.6. Convert some non-residential FAR to residential FAR
2.4.7. Remove any constraints to special needs housing (Program H4.2.1)
2.4.8. Increase housing Floor Area Ratio (FAR)

2.5. Support multifamily housing in the RM districts:

2.5.1. Consider establishment of minimum densities in all RM zones
2.5.2. Allow redevelopment (replacement) of existing residential units on sites that are nonconforming because of the number of units or FAR

2.6. Provide incentives and remove constraints in all zoning districts:

2.6.1. Adjust parking requirements to reduce costs (based on parking study); identify the

[1] In addition to the items listed here, the Council asked staff to work with the PTC on a response to SB 35, the "by right" housing bill, which staff would like to defer until after the PTC's input and recommendation on zoning changes to stimulate housing. Also, please note that the City Council referred other Housing Work Plan items, such as changes to the City's inclusionary housing requirements, to the Policy & Services Committee rather than the PTC.

appropriate amount of parking for various housing types and locations, taking into account parking mitigations

Additionally, the Council's adopted Work Plan outlined objectives for a 2019 Ordinance. These elements are likely to be referred to the PTC toward the end of this calendar year so that they may be addressed in 2019.

2019 COMPREHENSIVE PLAN/HOUSING ORDINANCE *(from the approved Draft Housing Work Plan, as amended by the February 12, 2018 Council motion)*

2.7. Consider changes to TDR Ordinance to increase its use for residential FAR/density
2.8. Review and revise allowed uses and permit requirements (i.e., by right, use permits) for smaller units, co-housing, etc., in all zoning districts
2.9. Develop protections for cottages and duplexes in the R-1, R-2, and RM-15 districts and consider zoning changes to allow additional cottage clusters, duplexes, and fourplexes where appropriate
2.10. Review PTOD and Village Residential zoning overlay process to remove constraints/complexity, and expand usage
2.11. Explore excluding underground FAR from parking requirements in the R-1*

*This item was added during the Council motion without a timeline for adoption; staff recommends including it in the 2019 ordinance, along with other items affecting low-density districts.

In addition to the zoning revisions, the PTC is also contributing to the Housing Work Plan (and helping implementation of the Comp Plan and Housing Element programs and policies) through its recent review of the Affordable Housing Overlay, Workforce Housing, and Accessory Dwelling Unit Ordinances.

To focus the Commission's time over the next series of meetings, tonight's meeting will address the 2018 Ordinance items, with the exception of parking (referral #2.6.1) which will be discussed May 30th. The Commission will provide feedback to staff on strategies for zoning revisions over a series of three meetings and a recommendation to the Council by the end of September. This timeline ensures that an ordinance may be considered for adoption by the Council during this calendar year.

Discussion

This section discusses how the City's current zoning code is or is not supporting housing production, in the context of the Council's Work Plan referral items. Staff is asking the Commission to provide direction on strategies which will inform revisions to the Downtown (CD-C), California Avenue (CC(2)/PTOD)[2], El Camino Real (CN, CS), and Multiple-Family Residential (RM) zoning districts.

[2] The Zoning Ordinance allows for application of the PTOD overlay within the California Avenue area, east of the Caltrain tracks, through a rezoning request. Note that this report analyzes current and potential standards for the combined CC(2)/PTOD district, and not the base CC(2) district.

Zoning Regulations Overview – How Ordinances Create Incentives and Disincentives

Zoning regulations can support the development of desired projects by streamlining the permit process and providing flexibility in development standards or additional density for those uses. Conversely, zoning can be used to discourage the types of uses that a community does not want. A discretionary review requirement, layers of development or performance standards, impact fees, or site improvement requirements may provide disincentives for an undesirable use by adding time, costs, or conditions to a project. These issues are explored below, as they relate to current development standards in selected commercial/mixed-use districts (see Table 2). In summary, between the high costs of construction, high land values, length and uncertainty in the review process, and layers of design and development standards, the City is not seeing many housing applications.

Issue #1: Current Code Prioritizes Office and Hotel Development over Housing

The City's commercial district regulations create some bias toward development of non-residential uses, in particular hotels, over residential uses. While this makes sense— historically, the City's neighborhood centers and corridors were primarily commercial in nature—the character of these places has changed over time and, in turn, the City has evolved its policies. The recently adopted Comprehensive Plan identifies the Downtown, California Avenue, and El Camino Real districts as appropriate locations for multifamily and residential mixed use development because of their commercial amenities and proximity to transit. However, the commercial district regulations do not yet reflect this policy change.

For example, the CD(C) (Downtown) regulations offer more generous standards for non-residential uses (e.g., office): no setback or coverage restrictions; no mixed use requirement; and no open space requirement. Each of the commercial districts—CD(C), CC(2), CN and CS—allow the highest FAR values for hotels (2.0 vs. 0.5 or 1.0 for residential or other non-residential, such as office). The CN and CS districts similarly apply less restrictive development standards (e.g., no landscaping or open space requirements) for non-residential uses, compared with residential mixed use development standards. Moreover, exclusively residential projects are prohibited in the CN, CS, and CC districts.

In the CS District, hotels are permitted 2.0 FAR, while residential uses are permitted only 0.6 FAR. This discrepancy has provided an incentive for hotel development in the district.

Not surprisingly, the CS district has seen a greater number of hotel rooms than multi-family housing units in recent years. Since 2014, a total of 482 hotel rooms were approved or are pending on CS district sites on El Camino Real or San Antonio Road, compared with 168

multifamily housing units on CS sites.[3] While hotels present benefits in the form of tax revenue without substantial spending (e.g., public safety, schools, and traffic), they may be unintentionally supplanting opportunities for residential development.

Issue #2: Commercial Mixed Use Requirements Challenge Housing Developers

Residential uses are generally only permitted as part of mixed use developments in the Downtown, California Avenue, and many places along El Camino Real. This presents a challenge to affordable and market-rate housing developers who are not in the retail business—from both a financial standpoint (their financing often does not include commercial development) and physically (they are less equipped to implement the mechanical, electric, and plumbing needs of restaurant and retail uses, and accommodate multiple occupancy categories).

801 Alma was originally conceived to include ground-floor retail. However, the financing and logistics proved too complicated; ultimately, a 100% residential project was approved and constructed.

Moreover, when 100% residential uses are permitted in the code, they are constrained by more rigorous development standards. In the CD-C district, exclusively residential uses are allowed on Housing Element opportunity sites; however, they must conform with the development standards for the RM districts, which are much more stringent and therefore reduce the developable area of the site.

Questions for the Commission:
Where should mixed use development be prioritized? Where could 100% residential uses be permitted?

Issue #3: Layers of Regulations Constrain Unit Yield

Layers of development standards make interpreting the City's code complicated and reduce the development "envelope" available on a site. While most regulations are based on reasonable community desires (e.g., providing access to light, air, and landscaping), in combination they have the drawback of constricting the developable site area. This is illustrated in Table 2 which reports the extent of design standards that apply in each relevant zoning district.

Table 2: Existing Development Standards, by Commercial Zoning District

Standard	*CD-C (Downtown)*	*CC(2)/PTOD (Cal Ave.)*	*CN District (El Camino)*	*CS District (El Camino)*

[3] Hotels: 294 hotel rooms were approved at 744 San Antonio Road; 89 hotel rooms proposed a 4256 El Camino Real; and 99 hotel rooms proposed at 3200 El Camino Real. Multi-family unit approvals: 2500 El Camino Real Stanford Housing Project (70 units), 3159 El Camino Real Mixed Use (48 units); 441 Page Mill Road (16 units); 3225 El Camino Real Mixed Use (8 units); 3877 El Camino Real (6 units); 3001 El Camino Real (20 units).

Standard	*CD-C (Downtown)*	*CC(2)/PTOD (Cal Ave.)*	*CN District (El Camino)*	*CS District (El Camino)*
Maximum Intensity (FAR)				
Commercial	1.0	0.25-0.35	0.5	0.4
Residential	1.0	1.0	0.5	0.6
Subtotal Mixed Use	2.0	1.25	1.0	1.0
Hotel FAR	2.0	2.0	2.0	2.0
Bonus and/or TDR	1.0	0.5	N/A	N/A
Total Maximum FAR	3.0	1.5	0.9	1.0
Residential Density (du/acre)	40	40 (50 w/BMR units)	15 (20 for Housing Element sites)	30
Height (feet)	50	40 (or 50 w/ BMR units or hotels)	40	50
w/in 150' of res. zone	40	n/a	35	35
Abutting RM-40 or res. PC	50	n/a	35	50
Daylight Plane	Identical to most restrictive abutting residential zone	If adjacent to R-1 or R-2 zone, or Caltrain ROW	Identical to most restrictive abutting residential zone	Identical to most restrictive abutting residential zone
Minimum Setbacks (feet)				
Front	0	0	0-10	0-10
Rear	10 (res. only)	0-20	10 (res. only)	10 (res. only)
Interior	0	0-6	0-10	0-10
Street Side	0	0-5	5	5
Build to Lines	n/a	n/a	50% of frontage 33% of side street	50% of frontage 33% of side street
Maximum Lot Coverage	100%	n/a	50%	50%
Minimum Landscaping	20%	n/a	35%	30%
Usable Open Space (sq. ft./dwelling unit)	200 (<5 units) 150 (6+ units)	200 (<5 units) 100 (6+ units), or less w/BMR units	20 (<5 units) 150 (6+ units)	20 (<5 units) 150 (6+ units)

This issue is most acute in the El Camino Real districts, CN and CS, which have a long list of required standards—lot coverage, landscaping standards, setbacks, daylight planes, height transitions, etc. The CN and CS districts limit coverage to 50%, including a 35% and 30% landscaping requirement, respectively. While certain accommodations may make sense for

Snapshot of Open Space Requirements - As shown in Table 2, the CN, CS, and CC(2)/PTOD districts identify tiered standards for open space based on the size of the residential project, with a substantial jump between small and larger projects. The CD-C district tiers the standards inversely, with a larger standard for smaller projects, for reasons that are not clear.

Snapshot of Landscape Coverage Requirements - Although the CD-C and CC(2)/PTOD districts do not specifically limit lot coverage, they do require 20% landscape open space coverage, which acts as a lot coverage limit. While landscaping has environmental and aesthetic benefits, it also prevents applicants from taking advantage of other generous standards provided by these districts (e.g., zero lot lines).

adjacencies to residential uses (i.e., daylight plane requirements), as written this standard limits the developable envelope.

These layers of regulations (as well as allowable residential FAR) may be one of the reasons why the City rarely sees applications for development in the El Camino Real districts. Moreover, the El Camino Real sites are often small in size—development regulations may reduce the net developable area to the point that it is financially and/or physically infeasible to develop. A property owner may be better of maintaining and collecting rent on an existing low intensity use.

Questions for the Commission:
Which development standards are most important in each district? Which could be relaxed in each district?

One of the key purposes of the Housing Element (Policy H4.2.1) is to remove constraints to special needs housing. The text box below identifies the current code's limited opportunities for flexibility and incentives for special needs populations.

Question for the Commission:
What incentives could be provided for 100% BMR projects and projects that include units for persons with physical or developmental disabilities?

What the City is Doing Now to Remove Constraints to Special Needs Housing:

- Small lot consolidation program offers reduced parking requirements for units <500 sq. ft., which may correspond to housing for special needs populations
- Emergency shelters for the homeless permitted in the ROLM(E) district, east of Highway 101
- Reasonable accommodation provisions allow exceptions to setback, lot coverage and FAR to accommodate disabilities
- Revisions to State Density Bonus Law now applies to housing for transitional foster youth, disabled veterans, and homeless
- The CD-C (Downtown) zone exempts disability related remodels from counting toward floor area, up to 500 sq. ft. per site.

Issue #4: Lessons from Downtown: Small Sites, High Costs, FAR and Coverage Requirements Constrain Housing Production

Dyett & Bhatia and Economic & Planning Systems prepared an economic report (see Attachment #1) during the Comp Plan update process to determine the capacity for infill development in Downtown Palo Alto and to identify the obstacles to redevelopment, including both physical and economic limitations. Although this study focused on the Downtown specifically—and was considered as part of the Comp Plan policies for Downtown—its findings may be useful for analysis of other districts as well, particularly California Avenue, El Camino Real, and other commercial mixed use areas of the city.

Major findings are shown in the text box below, shedding light on the challenges for the City's remaining harder-to-develop smaller sites and for all development in the context of high land values, high construction costs, and constraining development standards (namely, FAR and coverage).

FINDINGS FROM THE DOWNTOWN CAP STUDY - INFILL RESIDENTIAL ANALYSIS

- Confirms known trends: Rental and sales prices are high; multi-family housing starts have been low; Downtown is fairly built-out; but, opportunity is there for development.
- Site conditions present challenges to infill redevelopment: The report identifies 529 existing dwelling units in Downtown, and estimates that up to 1,819 or 2,018 additional units could theoretically be developed Downtown, based solely on current density and FAR limits. After factoring in actual site conditions (e.g., land and structure values, age of structures, and potential for parcel consolidation), the potential unit count drops precipitously—to just 252 to 441 additional units, depending on market conditions and how aggressively owners and developers redevelop sites.
- Incentives are not aligned for redevelopment: Current market trends support higher density residential uses. However, ground-up new construction would need to support the high cost of construction, as well as overcome the value of any existing use on the site. The report concludes that a ground-up project generally must at least *double* the existing residential density/intensity to overcome the high value of simply maintaining and earning income from an existing use.
- Development limited by parcel size and floor area/coverage: Development is likely to be limited by parcel size and development standards that limit the buildable area and building size (specifically, FAR and lot coverage; existing height limits do not appear to be reducing attainable density). Many multi-family residential development examples found in the market are located either on large parcels, or on parcels with fewer or less stringent development standards (setbacks, height, and upper-story step-backs, etc.).
- Report Recommendations: As a result, residential redevelopment projects likely will require assembly of smaller residential parcels, redevelopment of nonresidential uses on larger sites, or relaxed development standards to support multi-family residential development. This could be achieved through:
    - Encouraging State Density Bonus Law projects that support increases in density and relief from development standards, in exchange for providing affordable housing
    - Increasing allowable residential densities; reducing parking requirements; and/or reducing development standards and increasing coverage or floor area, especially on smaller sites.
    - Creating incentives for parcel assembly through zoning or other mechanisms.

To take these findings a step further, consider how the code currently regulates density in two ways: residential density (dwelling units/acre) and intensity (FAR). As shown in Figure 1, residential density can be an imperfect metric on which to consider a project's potential impact.

FAR values can be more easily illustrated and compared between projects to demonstrate the relationship between total floor area and the site area, and the resulting massing.

Figure 1: Residential Density vs. FAR

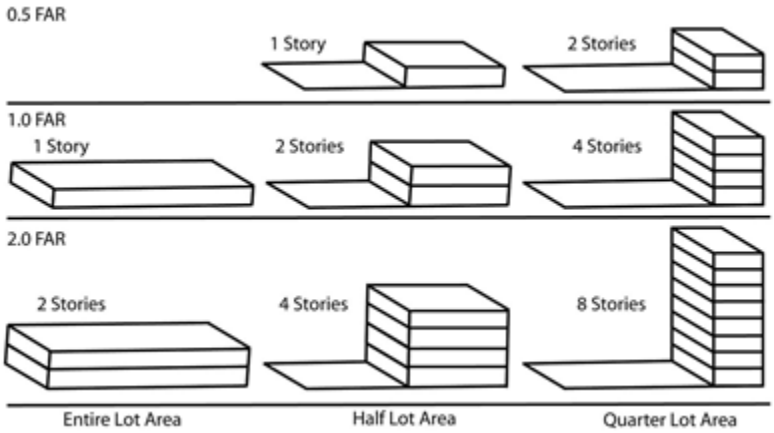
Residential Density

Hypothetical 1-Acre Project

Senior Housing	*Student Housing*
• 50 units	• 10 units
• Studios and 1-bedrooms	• 5-bedroom suites
• 50 bedrooms	• 50 bedrooms
= 50 units/acre	**= 10 units/acre**

Residential density values vary based on the number of units and do not reflect the unit size or number of bedrooms in each unit.

Floor Area Ratio (FAR)



(Source: City of Seattle Land Use Code)

Equal FAR values can appear as very different massing and height configurations, but are independent of unit count and bedroom sizes.

Issue #5: Multiple Review Processes Add Time and Uncertainty

Whether a use is permitted through an administrative (staff-level) approval or a public review process can present an incentive or disincentive to its development. The public review process provides opportunities for community input and feedback from decision-makers, but also adds time, expense, and uncertainty from the perspective of applicants, which may affect their decision to pursue a development in Palo Alto.

Currently, residential mixed use projects in Downtown and El Camino Real (in the CD-C, CN, and CS zones) require Site and Design Review which includes design review by the Architectural Review Board (ARB) and PTC, who each make a recommendation to the Council. This process requires at least three meetings, though five meetings are typical for substantial projects. Applicants can expect this process to take 18 months; then, they can start the building permit review process. One exception to this procedure is for residential mixed use

Residential Design Review Process

Downtown and El Camino Real (CD-C, CN, CS):

- Mixed use projects with 9 or fewer units: Architectural Review w/ ARB
- All other projects: Site & Design Review w/ ARB, PTC, and Council

California Avenue (CC(2)/ PTOD) 2-step:

1. Rezoning to PTOD: PTC and City Council review and approval to establish limits on allowable or required uses, and intensity.
2. Major architectural review w/ ARB

projects with nine or fewer units, which only require Architectural Review by the ARB (at least one meeting, though three meetings are typical for substantial projects).

Around California Avenue, if a property owner wants to increase the intensity of a CC(2) site and pursue the PTOD overlay, first they must undergo a rezoning to define the uses and intensities, which is reviewed and approved by the PTC and Council. Concurrently, the ARB conducts architectural review of the project design. At a minimum, there are three public meetings though again, realistically, five meetings could be expected. Only two applicants have sought out this rezoning since its inception in 2006—perhaps as a result of the potential for a lengthy and uncertain process.

Question for the Commission:
What types of projects should be eligible for by right approval or streamlined review?

Strategies for Addressing the Council Referral

There are a variety of ways to revise the Zoning Ordinance to support housing production and implement the Comp Plan and Housing Element policies and meet the intent of the Council referral item. These strategies reveal the desires of the community and suggest tradeoffs that the Commission will need to consider, such as the value of landscaping vs. housing units vs. the potential for shadows, etc.

Potential Zoning Revisions
According to initial stakeholder conversations, making just a couple modifications to the code—removing residential density and reducing parking requirements, in particular--could allow projects to build out with a few additional units. On typical mid-sized sites (10,000 sq. ft.), these changes could allow a designer to fit 4 to 5 units in a small apartment building that fits in contextually with surrounding uses, rather than 3 units in separate buildings. Although these units would not necessarily represent subsidized BMR housing, by their design they may be affordable to lower or moderate income households.

Staff recommends grouping the Council referral item into four overarching strategies. Potential implementation measures are described in the sub-bullets for the Commission's consideration.

1. **Streamline the approval process**
   - Consider tradeoffs of the dual Architectural Review and Site & Design Review process
   - Consider making PTOD a floating zone that does not required separate legislative action
2. **Address development constraints**
   - Be strategic about where retail is required vs. where 100% residential is acceptable
   - Confront tradeoffs: identify which development standards are most important, by district; where should standards differ and where can they align across districts
3. **Increase residential densities**

- Consider whether to provide increased FAR outright or in exchange for certain amenities that can be codified in the code (e.g., open space, lot consolidation, on-site renewable production)

4. **Provide applicants with more flexibility**
   - Identify when to provide incentives (i.e., in exchange from what types of projects, lot consolidation, amenities, etc.)

Table 3 summarizes each of the implementation strategies with the corresponding ordinance components listed in the City Council's referral. Notably, all of these strategies are either explicitly called for or supported by policies and programs in the Housing Element and Comp Plan.

Table 3: 2018 Comp Plan and Housing Production Ordinance, by District and Key Issue

Key Issue	*Downtown (CD-C), Cal Ave., (CC(2)/PTOD), and El Camino Real (CN and CS) Zones (1)*	*RM Districts*	*All Zoning Districts*
A. Streamline Processes	• 2.4.4: Review and revise level of permitting and site plan review required	n/a	n/a
B. Remove Development Constraints	• 2.4.3: Review and revise permitted uses and use mix (e.g., allow 100% residential w/retail) • 2.4.1: Review and revise development standards (e.g., landscaping, open space) • 2.4.7: Remove constraints to special needs housing in particular (based on Housing Element Program H4.2.1)	n/a	2.6.1: Adjust parking requirements to reduce costs (based on parking study); identify the appropriate amount of parking for various housing types and locations, taking into account parking mitigations (2)
C. Amend Residential Densities	• 2.4.2: Consider eliminating dwelling unit densities and relying on FAR and average unit sizes • 2.4.5: Convert some non-residential FAR to residential FAR • 2.4.8: Increase housing FAR in the Downtown, Cal Ave, and El Camino Real areas	2.5.1: Consider establishment of minimum densities	n/a
D. Provide Flexibility	• 2.4.5: Allow parking reductions based on TDM plans and on payment of parking in-lieu fees for housing (Downtown and Cal Ave.). Update the TDM Ordinance to the extent that it does not already include metrics of measurements, accomplishments, and enforcement; include these metrics	2.5.2: Allow redevelopment (replacement) of existing residential units on sites that are nonconforming because of the number of units or FAR	n/a

Key Issue	*Downtown (CD-C), Cal Ave., (CC(2)/PTOD), and El Camino Real (CN and CS) Zones (1)*	*RM Districts*	*All Zoning Districts*
(1) Numbers refer to Council Referral Item #			
(2) Parking will be addressed at the Commission's May 30, 2018 meeting.			

Source: Palo Alto Planning & Community Environment, April 2018

Environmental Review

The City Council certified a Final EIR on November 13, 2017 to analyze potential impacts associated with the Comprehensive Plan. The 2018 Ordinance will be evaluated pursuant to the California Environmental Quality Act (CEQA) once a draft is prepared. It is anticipated that the Ordinance will be consistent with the Comprehensive Plan and its Final EIR. If needed, an Addendum to the EIR would be prepared to address any new or unaniticpated impacts. At this time, no substantially greater or more severe impacts are anticipated and no development is proposed, beyond what is allowed by the Comprehensive Plan.

Public Notification, Outreach & Comments

Staff has reached out to architects, developers, and others who regularly use the City's zoning ordinance to get their perspectives on these options as well, and will be prepared to share that input at a future meeting. The following groups have been contacted; staff will provide an update on any feedback received at the public hearing. (Names in boldface have been scheduled or completed.)

1. Architarian Design
2. Bentall Kennedy
3. David Baker Architects
4. **Eden Housing**
5. **FGY (Fergus, Garber, Young) Architects**
6. Golden Gate Homes LLC
7. **Hayes Group**
8. Lighthouse Public Affairs
9. Lytton Gardens/Covia
10. **Mid Pen Housing**
11. Palo Alto Housing
12. R&M Properties
13. **Sobrato Organization**
14. **Summerhill Homes**
15. **SV@Home**
16. Thoits Brothers
17. **TOPOS Architects**
18. Young & Borlik Architects

Next Steps

Staff will consolidate feedback received from tonight's meeting to inform the ordinance framework. Staff will return next month for a discussion focused on parking. An anticipated timeline for development of the ordinance is provided in the table below. (Please note that at the Commission's suggestion, staff moved the Community meeting to an earlier date. However we were unable to move it ahead of the June 13 meeting with the PTC because of the desire to reflect the PTC's input on the ordinance framework in the community discussions. This is consistent with the Council's direction to hold the meeting when there is an opportunity for the community to respond to draft contents of a proposed ordinance.)

Table 4: Anticipated Timeline

Meeting Type	*Topic*	*Date*
PTC Study Session	Review objectives for housing work plan and city council direction	March 14 (completed)
PTC Study Session	Overview of issues, including key findings from an analysis of residential capacity in Downtown	April 25 (Tonight's Meeting)
PTC Study Session	Parking, including key findings from an analysis of residential parking demand	May 30
PTC Study Session	Framework for ordinance	June 13
Community Meeting	Present and receive feedback on ordinance framework	Week of June 25th
PTC Hearing	Review Draft Ordinance	August 8
PTC Hearing (continued, if needed)	Recommendation on Draft Ordinance (as revised)	August 29

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Attachments:

- Downtown Cap Study - Residential Analysis (PDF)

[4] Emails may be sent directly to the PTC using the following address: planning.commission@cityofpaloalto.org

City of Palo Alto



Downtown Development Evaluation

Residential Capacity and Feasibility Analysis

October 30, 2017

Prepared by

DYETT & BHATIA
Urban and Regional Planners

EPS

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Executive Summary

This report provides a closer look at the Downtown Study Area's potential to accommodate residential development, so that the City may more fully understand Downtown's potential for housing in the context of the city overall and determine how to best support and encourage residential development in the Downtown core.

Existing Development Regulations

This report begins with an evaluation of existing zoning regulations, and the degree to which development is currently limited by these regulations. In general, the analysis finds that development is unlikely to be constrained by existing regulations. Less than one-third of Downtown residential development currently reaches the maximum height permitted; about 20 percent approaches the maximum FAR permitted; and less than 15 percent approaches the maximum residential density permitted. The report also finds that only a small percentage of Downtown parcels are subject to lot maximum coverage requirements, and about one-third are subject to setbacks.

Development Capacity

The Downtown Study Area currently contains 529 residential units. This report estimates a "theoretical development capacity" of up to 1,819 or 2,018 additional units that could potentially be developed Downtown, based solely on current density and FAR limits, respectively (and not accounting for actual physical or regulatory constraints). After factoring in actual site conditions (e.g., land and structures values, age of structures, and potential for parcel consolidation), the potential unit count drops by more than half—to just 252 to 441 additional units, depending on market conditions and how aggressively owners and developers redevelop sites. These findings indicate that the capacity for new residential development Downtown is restricted primarily by the fact that Downtown is fairly well built-out with existing high-value property development.

Market Assessment and Financial Feasibility

This analysis also looks at residential development trends in the city overall and in the Downtown. It provides a review of the market performance of existing residential products, and presents high-level residential real estate feasibility analysis that tests the economic viability of new housing development in the Downtown. It finds that current market trends do support higher density residential uses, but that ground-up new construction will need to support the high cost of construction as well as overcome the value of any existing use on the site. In sum, a ground-up project generally must at least double the existing density to overcome the high value of an existing use.

In addition, development is likely to be limited by parcel size and development standards that limit the buildable area and building size. Many multifamily residential development examples found in the market are located either on large parcels, or on parcels with fewer or less stringent development standards (setbacks, height, and upper-story step-backs, etc.). Identifying potential development opportunity parcels that also have low-density, low-value existing uses can prove challenging.

Going forward, residential redevelopment projects likely will require:

- assembly of smaller residential parcels;
- redevelopment of nonresidential uses on larger sites; or
- relaxed development standards to support multifamily residential development.

If the City is interested in supporting increased residential infill development, particularly the redevelopment of existing uses Downtown, then strategies may include:

- increasing allowable residential densities;
- reducing parking requirements;
- reducing building setbacks (in the SOFA RM-30, RT-35, and RT-50 districts); and/or
- creating incentives for parcel assembly through zoning or other mechanisms.

1 Introduction

Phase I of the Downtown Development Cap Study for the City of Palo Alto presented background research and analysis of land use and development trends, parking, and economic conditions in Downtown Palo Alto as a way of evaluating the 1986 non-residential development cap policy. A final Phase I report, completed in December 2014, summarized non-residential development capacity, development potential and preliminary policy considerations.

Residential uses were excluded from the original downtown development cap and consequently were addressed only briefly in the recently completed Phase I study. This study, a follow-up to that effort, focuses on residential development. It identifies the Downtown study area's potential to accommodate additional residential development, both over the short- to medium-term and long-term horizon, to support vibrancy in the urban core as well as to promote the housing development goals of the City.

1.1 Report Purpose

Residential uses are essential to sustaining a vibrant mixed-use neighborhood and to supporting the local commercial base. The City aims to encourage the development of residential units as Downtown properties are redeveloped; specifically, the City aims to support units near the Palo Alto Caltrain Station, to enable more residents to walk or bicycle to transit, Stanford University, and shopping destinations.

This analysis assesses the potential of the Downtown study area to accommodate more residential development. It looks at existing land uses, zoning, and other factors that affect the likelihood of new residential development. The study includes a review of existing regulations pertaining to all types of residential uses as well as a review of potential housing sites identified by the 2015 –2023 Housing Element.

Like the December 2014 Phase I study, this study examines both the "supply" perspective (how much residential development could, and is likely to, be built based on regulatory and physical factors) and a "demand" perspective (how much residential development the market will likely support and the specific types of housing that are financially feasible under current zoning and market conditions). The study concludes with a discussion of key findings and preliminary policy ideas that decision-makers may want to consider based on the analyses and conclusions presented here.

1.2 Report Organization

This report is organized as follows:

- **Chapter 2: Residential Development Capacity** describes the capacity for new residential development, both at a theoretical maximum and at a more realistic level that considers a variety of constraining factors.
- **Chapter 3: Residential Market Assessment** describes real estate market trends, conducts a financial feasibility analysis of residential development types, and examines development potential within the Downtown study area from a market perspective.
- **Chapter 4: Conclusions and Policy Considerations** proposes potential policy ideas that decision-makers may wish to explore, based on the findings of this study and other analyses completed for the Downtown Development Cap effort.
- **Appendix A:** Recent Residential and Residential Mixed-Use Projects (2006 – 2016)
- **Appendix B:** All Proposed Projects
- **Appendix C:** Housing Element Sites
- **Appendix D:** Additional Project Profiles

2 Residential Development Capacity

Using the parcel-based database of existing land uses developed as part of Phase I of the Downtown Cap Study, this chapter maps and counts existing residential units within the Downtown study area, identifying the total units, and the total area in residential square feet, on each parcel. This chapter also identifies the total residential units and floor area theoretically possible under existing zoning, with the understanding that achieving this total is unrealistic due to a variety of development constraints. Where applicable, potential bonus density also is taken into account.

This chapter identifies three possible scenarios of future residential build-out: the scenario identified in the 2015 –2023 Housing Element, and two additional scenarios (scenarios A and B) that the planning team has determined to be realistic scenarios, after accounting for a range of physical and regulatory constraints. In its assessment of potential housing sites, the planning team begins with the set of sites listed in the Draft Housing Element, then modifies the list of criteria to arrive at a broader range of estimates of the amount of housing that the Downtown study area could support.

Data and Methodology

Data collection is an essential part of the study, as it involves looking at far more than the available data on each parcel, its existing structures, and its land use and zoning regulations. For this study, Dyett & Bhatia and Economic & Planning Systems (EPS) together collected a range of information on each parcel, including physical constraints and qualitative observations about existing structures, to develop a more robust dataset. Using a variety of sources, the team tracked a broad range of information and observations about each parcel. These sources include:

- The County Assessor's Data;
- Available maps and imagery, including GIS data, satellite images, and Google street view;
- On-line directories, where property addresses are available;
- Web-based real estate resources, including:
  - www.loopnet.com
  - www.propertyshark.com
  - www.prospectnow.com/property/santa-clara-ca
  - www.zillow.com
  - commercial-real-estate.findthedata.com
- Information provided by Palo Alto staff;

- City of Palo Alto permit listings; and
- On-line media reporting about development projects that are proposed or under construction.

By factoring in a combination of parcel data, site conditions and improvements, and observations about feasibility and developability, the team visualized possible changes on each site and made an informed determination as to what combination of factors would most likely precipitate that change.

2.1 Existing Development

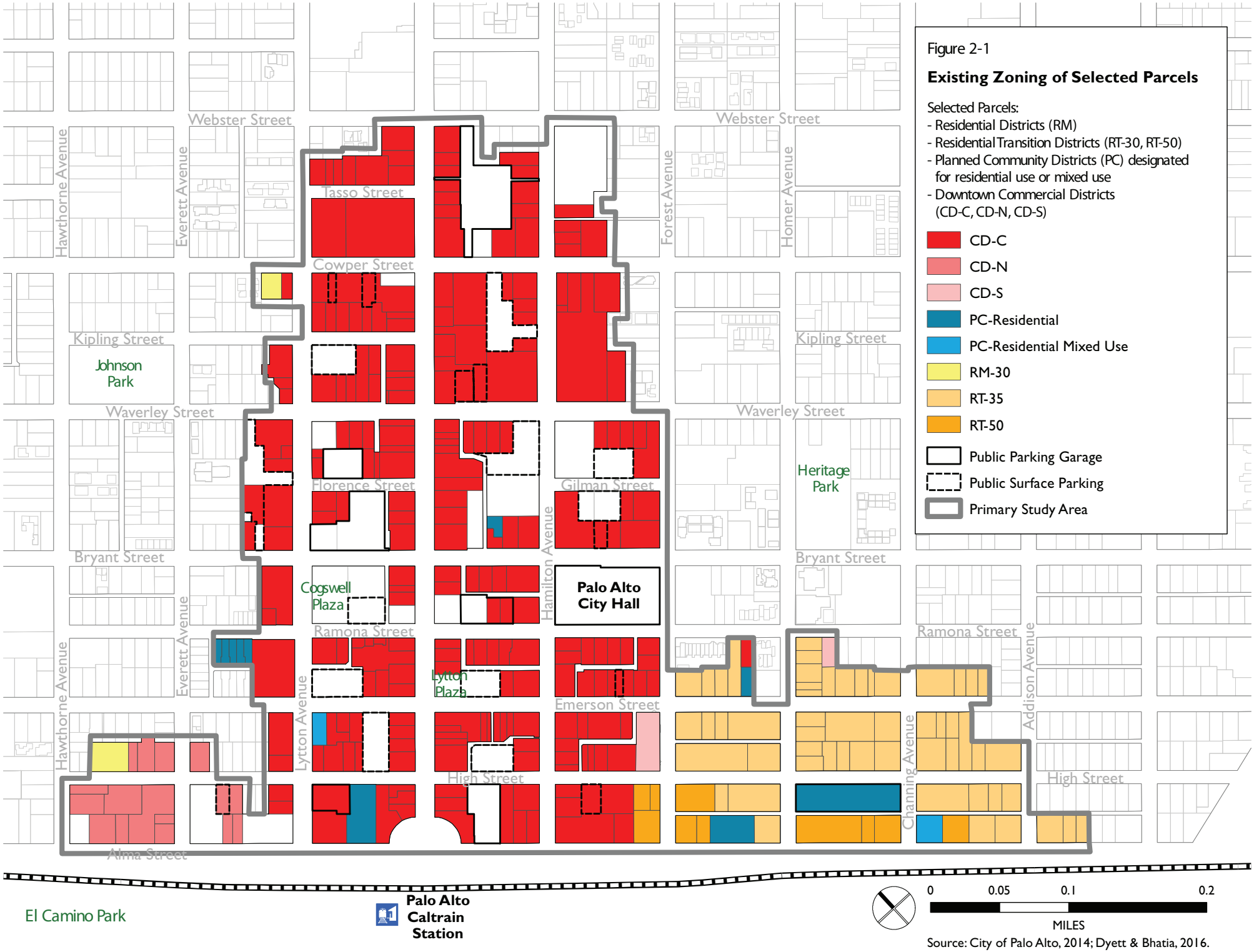
The analysis of development capacity begins with an assessment of how much total residential area currently exists or is proposed in the Downtown study area.

SELECTED PARCELS

For this study, "Selected Parcels" include all those on which residential uses are permitted under current zoning, either as a single use or as part of a mixed-use development. **Figure 2-1**: Existing Zoning shows the zoning in the Selected Parcels of the Downtown Study Area. This includes all parcels in the study area, with the exception of PF (Public Facilities) parcels and PC (Planned Community) parcels designated as commercial only. Of the 367 parcels in the study area, 334, or about 91 percent, are in the set of Selected Parcels.

EXISTING AND PROPOSED RESIDENTIAL UNITS

Within the 334 Selected Parcels, there are currently approximately 529 existing or proposed residential units located on 47 parcels. **Figure 2-2** identifies the current land uses on all of these 47 parcels, showing whether they are stand-alone residential developments or whether they are part of a mixed-use development. **Figure 2-3** identifies the existing or proposed unit densities (in dwelling units per acre); and Table 2-1 tallies the unit count by zoning district.



Source: City of Palo Alto, 2014; Dyett & Bhatia, 2016.

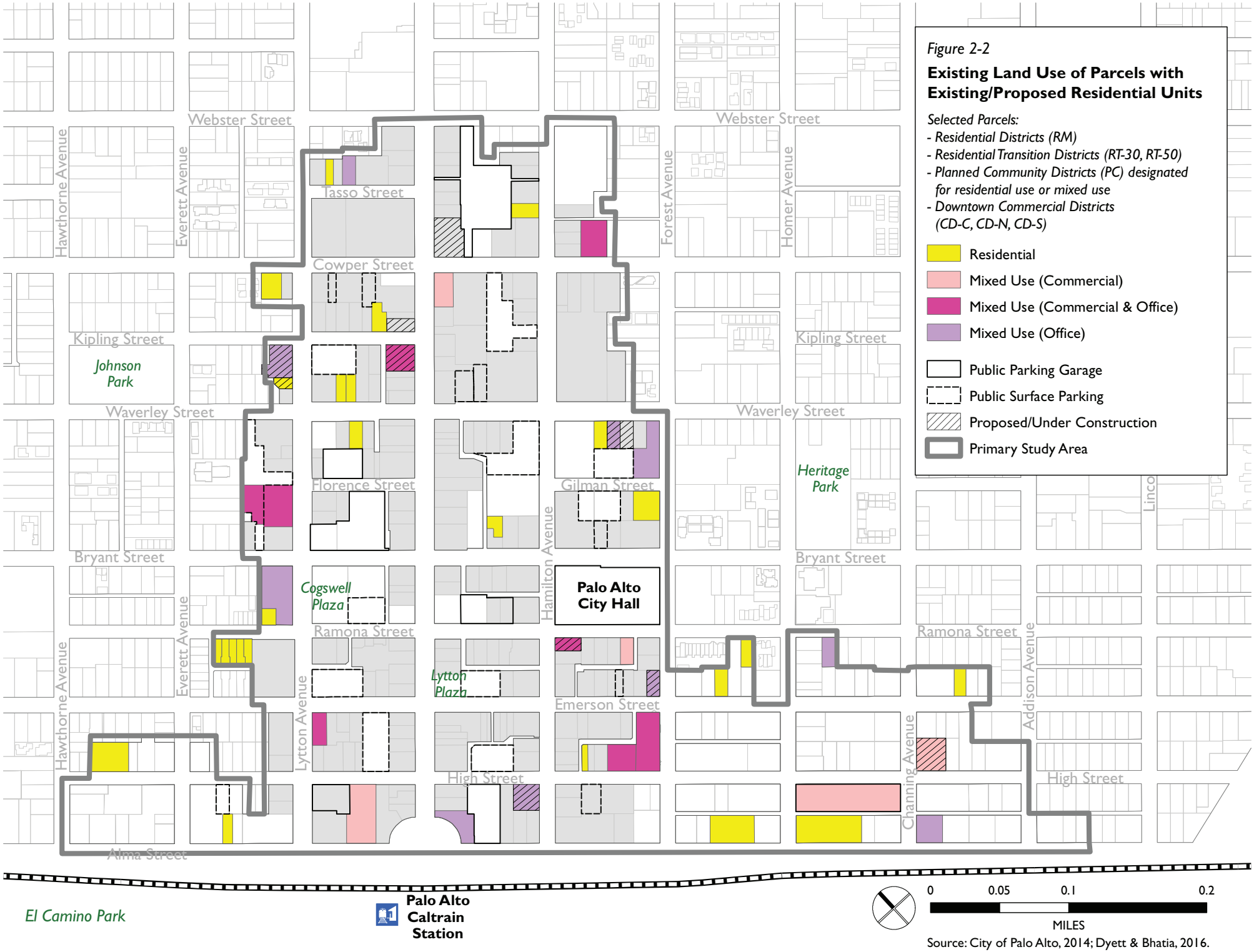


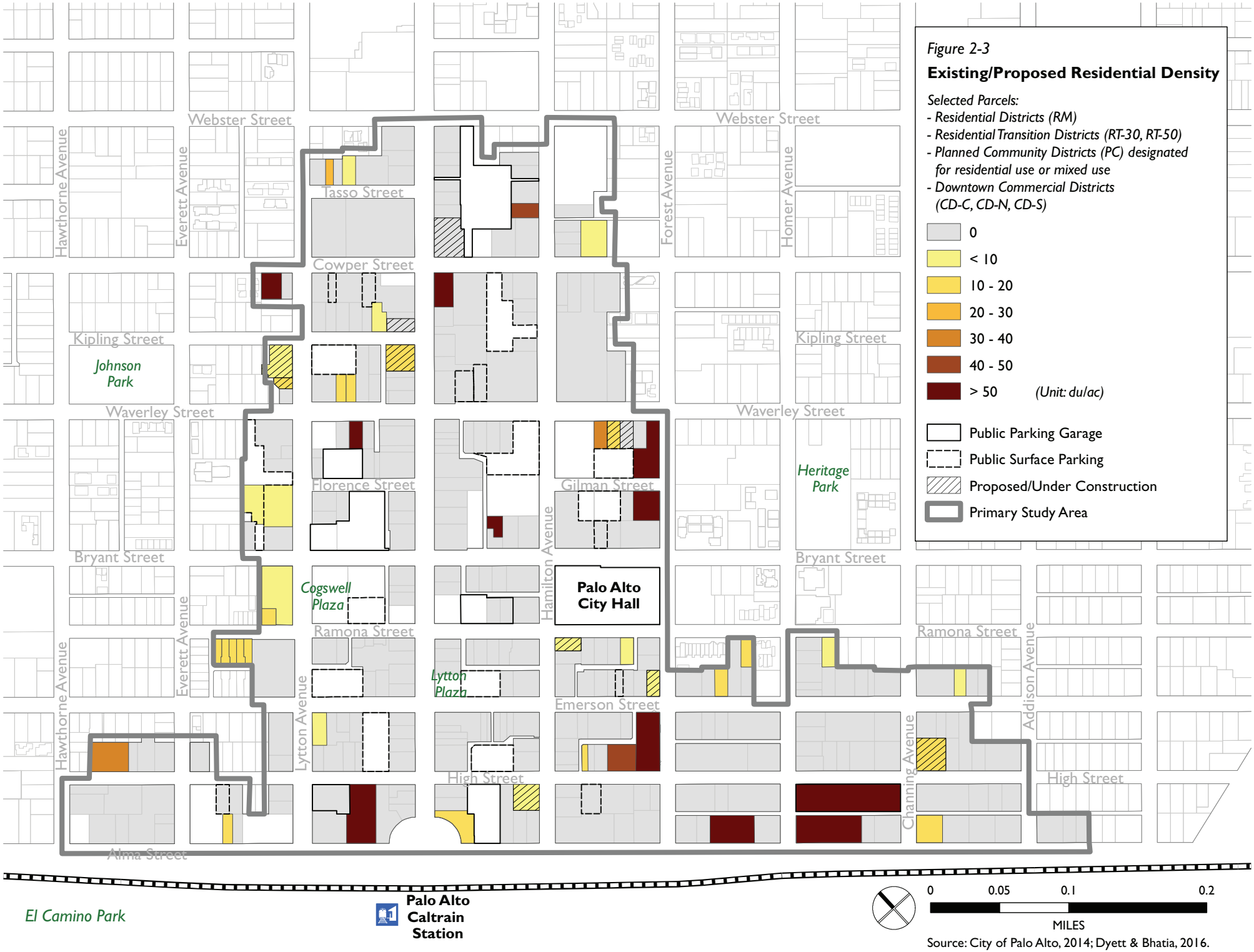
Figure 2-2

Existing Land Use of Parcels with Existing/Proposed Residential Units

Selected Parcels:
- *Residential Districts (RM)*
- *Residential Transition Districts (RT-30, RT-50)*
- *Planned Community Districts (PC) designated for residential use or mixed use*
- *Downtown Commercial Districts (CD-C, CD-N, CD-S)*

Residential
Mixed Use (Commercial)
Mixed Use (Commercial & Office)
Mixed Use (Office)
Public Parking Garage
Public Surface Parking
Proposed/Under Construction
Primary Study Area

Source: City of Palo Alto, 2014; Dyett & Bhatia, 2016.



Source: City of Palo Alto, 2014; Dyett & Bhatia, 2016.

Table 2-1: Existing Residential Units

Current Zoning	*Total Parcels*	*Parcels with Existing and Proposed Residential Units*	*Total Existing and Proposed Residential Units*
CD	256	30	275
CD-C	238	27	238
CD-N	16	1	1
CD-S	2	2	36
PC	12	11	169
PC (Residential)	10	9	164
PC (Residential Mixed Use)	2	2	5
RM-30	2	2	26
RT	64	4	59
RT-35	54	3	9
RT-50	10	1	50
Total	**334**	**47**	**529**

Note: 1. In this study, a parcel with two zoning designations is treated as two separate parcels. Existing/Proposed residential units are counted where residential uses are located.

Source: Dyett & Bhatia 2016; City of Palo Alto 2015

Figure 2-2 shows that 25, or about half, of all the parcels with residential uses are residential-only projects, and 22 parcels are a range of different mixes of uses. Figure 2-3 shows that the residential projects include a wide range of unit densities. These figures also show that of the 13 projects in the Downtown study area that are proposed or under construction, nine are residential or residential mixed-use projects (see Appendices A and B for more detail).

2.2 Existing Zoning

Size of new development is regulated by zoning primarily through FAR; density; building height; lot coverage; and building setbacks.[1] A review of existing development shows the following:

- Of the 251 parcels with a building height limit of 50 feet, only 31 of those parcels (about 12 percent) approach that limit with buildings of four or more stories.
- Of the 70 parcels with a building height limit of 35 feet, only 3 of those parcels (about 4 percent) approach the limit with buildings of three or more stories.
- About 20 percent of all parcels currently have an FAR that approaches the maximum permitted FAR.[2]

[1] Existing regulations are summarized in the Downtown Development Cap Evaluation Background Report: Development Trends, parking and Traffic (December 2014).

[2] This figure includes parcels with an FAR that is 85 percent or more of the maximum FAR.

- About 13 percent of all parcels with a specified maximum residential density currently have a residential density that approaches the maximum.[3]
- The buildout of 17 parcels is limited by maximum lot coverage requirements (all CD-S and CD-N parcels).
- 63 parcels are limited by front, side, and rear setbacks (all RM-30, RT-35, and RT-50 parcels, located primarily in the SOFA area); and 16 parcels are limited by a front setback only (CD-N parcels, all located north of Lytton Avenue).

These findings indicate that building height, FAR, and residential density may not be factors limiting development. However, lot coverage and small lot size combined with building setback requirements may limit residential development in some areas. For example, a typical RT-35 lot of 50 feet in width would be significantly limited by the required 15-foot front and side setbacks and 10-foot rear setback.

Additionally, the GF combining district, which applies to 100 parcels along or near the University Avenue corridor, limits the amount of residential building area, as it requires active, pedestrian-oriented uses at the ground floor.

This study presents two different approaches to determining the hypothetical number of residential units allowed by existing zoning, discounting the limitations described above. The first is based on the maximum allowed densities specified for each zoning district; and the second is based on the maximum residential FAR. These are described below.

ESTIMATE BASED ON ALLOWABLE RESIDENTIAL DENSITIES

Table 2-2 lists the maximum allowed densities for each zoning district within the selected parcels.

Table 2-2: Maximum Allowed Residential Densities

Zoning District	*Maximum Allowed Residential Density (du/ac)*
CD-C	40
CD-N	30
CD-S	30
PC	N/A[1]
RM-30	30
RT-35	25-50[2]
RT-50	25-50[2]

1. Allowed residential density is determined on a project-specific basis.
2. Residential density bonuses are granted with a certain percentage of restricted affordable units; see Palo Alto Municipal Code Section 18.15.

Source: City of Palo Alto

[3] This figure includes parcels with a residential density that is 85 percent of more of the maximum density.

Table 2-3 translates the densities listed in Table 2-2 into potential additional residential units. To calculate the maximum allowed residential units within each zoning district, the maximum number of units on each individual parcel was first calculated and then rounded down to the nearest whole unit. Then, the maximum number of units on all parcels within each zoning district were added together.

For the RT-35 and RT-50 districts, the zoning code does not specify maximum densities; however, the Palo Alto Housing Element specifies maximum allowed residential density and realistic capacity density ranges of 20-50 for both RT-35 and RT-50. The calculations presented here assume 35 and 50 du/ac, respectively. As maximum densities for projects on PC-designated parcels vary by project, Table 2-3 does not state potential units for these 12 parcels, which represent about 4.5 percent of all the selected parcels' acreage.

The potential additional residential units for each zoning district were then calculated by subtracting the existing residential units from the maximum allowed. However, where the number of existing units on any given parcel exceeded the maximum allowed, the potential for that parcel was determined to be zero. Excluding the PC parcels, the zoning code's stated density ranges suggest that the selected parcels could *theoretically* accommodate approximately 2,018 units beyond what currently exists. However, the likelihood of these parcels all developing to their maximum residential density potential is low; this exercise merely illustrates the potential. Subsequent sections present various realistic development buildout scenarios.

Table 2-3: Hypothetical Additional Residential Units by Maximum Density

	Existing			*Maximum Allowed Residential Density (du/ac)*	*Maximum Allowed Residential Units*	*Potential Additional Residential Units*[1]
Zoning District	*Total Parcels*	*Total Residential Units*	*Total Lot Acreage*			
CD-C	238	238	42.7	40	1,580	1,491
CD-N	16	1	3.0	30	77	76
CD-S	2	36	0.6	30	22	3
PC-Residential	10	164	2.5	--	--	--
PC-Residential Mixed Use	2	5	0.4	--	--	--
RM-30	2	26	0.4	30	18	0
RT-35	54	9	11.1	25-50[2]	369	360
RT-50	10	50	2.4	25-50[2]	118	88
Total	**334**	**529**	**63.2**	**--**	**2,184[3]**	**2,018[3]**

Note:

1. Potential Additional Residential Units is 0 when Existing Residential Units ≥ Maximum Allowed Residential Units.

2. Residential Densities and Floor Area Ratio (FAR) calculations in Residential Transition zoning districts vary depending on the type of project. This calculation uses 35 du/ac for RT-35 and 50 du/ac for RT-50 as the maximum allowed residential density, consistent with the ranges stated in the Housing Element

3. Sum excludes PC parcels.

ESTIMATE BASED ON ALLOWABLE RESIDENTIAL FAR

In addition to maximum residential densities, the zoning code establishes maximum residential floor area ratios (FARs) for each zoning district within the selected parcels. Table 2-4 lists these standards, with and without TDR/bonus.

Table 2-4: Maximum Allowed Residential FAR

Zoning District	*Maximum Allowed Residential FAR*	*Maximum Allowed Residential FAR (including TDR/Bonus)*
CD-C	1.0	2.0
CD-N	0.5	1.6
CD-S	0.6	1.6
PC[1]	--	--
RM-30	0.6[2]	--
RT-35	1.15	1.15
RT-50	1.3	1.3

Note:

1. On a PC-designated parcel within an RT-35 or RT-50 district, the maximum allowed total FAR is 1.5 and 2.0 respectively; however, this does not occur within the study area.
2. Residential-only Maximum Allowed Residential FAR = Maximum Allowed Total FAR

Table 2-5 translates the residential FARs listed in Table 2-4 into potential additional residential units. For these calculations, the base maximum allowed residential FAR was used—not the maximum with the bonus. To calculate the maximum allowed residential units within each zoning district, the maximum residential square footage of each individual parcel was calculated and then added together. Like in the analysis based on unit densities, the maximum allowed FAR for projects on PC-designated parcels varies by project, so Table 2-5 does not state potential areas or units for these parcels.

The potential additional residential area in square feet was then calculated by subtracting the existing residential area from the maximum allowed. However, where the existing residential area on any given parcel exceeded the maximum area allowed, the potential for that parcel was determined to be zero. To translate that area into units, a maximum average unit size of 1,250 square feet was used. (While the zoning code does not state a maximum average unit size in the commercial districts, it does state a maximum average unit size of 1,250 square feet for RT districts.)

Excluding the PC parcels, the zoning code's stated maximum FARs suggest that the selected parcels could *theoretically* accommodate approximately 1,819 units beyond what currently exists. This figure is about 10 percent less than the estimate based on allowable unit densities.

Table 2-5: Hypothetical Additional Residential Area by Maximum Residential FAR

Zoning District	Existing				Max Allowed Residential FAR	Max Allowed Residential Sq Ft	Potential Additional Residential	
	Total Parcels	Total Units	Total Residential Sq Ft	Total Lot Acreage			Sq Ft[1]	Units [2, 3]
CD-C	238	238	178,626	42.7	1.0	1,858,129	1,726,530	1,289
CD-N	16	1	2,700	3.0	0.5	65,151	63,041	46
CD-S	2	36	35,770	0.6	0.6	16,133	0	0
PC-Residential	10	164	194,275	2.5	--	--	--	--
PC-Residential Mixed Use	2	5	9,587	0.4	--	--	--	--
RM-30	2	26	25,717	0.4	0.6[4]	14,709	0	0
RT-35	54	9	12,820	11.1	1.15	555,055	542,235	409
RT-50	10	50	63,185	2.4	1.3	135,980	101,854	75
Total	**334**	**529**	**522,680**	**63.2**	**--**	**--**	**2,433,660[5]**	**1,819[5]**

Note:

1. Potential Additional Residential Sq Ft is 0 when Existing Residential Sq Ft ≥ Maximum Allowed Residential Sq Ft
2. The calculation uses 1,250 square feet as the average residential unit size.
3. Potential Additional Residential Units is 0 when Potential Additional Residential Sq Ft < 1,250 Sq Ft.
4. Maximum Allowed Residential FAR = Maximum Allowed Overall FAR
5. The sum excludes PC parcels.

While the two approaches demonstrate the maximum residential capacity possible under the current zoning, they do not account for land use controls, site improvements, financial feasibility, market trends, or other variables. Nor do the approaches address the realistic residential capacity in mixed use developments where the total maximum FAR is limited. To provide a more realistic assessment of likely development capacity and buildout potential, the following sections consider the criteria of the 2015 –2023 Palo Alto Housing Element, and also provide two potential scenarios with expanded sets of housing opportunity sites.

2.3 Housing Element Criteria and Sites

The next step in this analysis is to determine sites within the Selected Parcels that are most likely to accommodate any additional units for which there is a market. The analysis begins by mapping the set of potential housing sites identified in the 2015 –2023 Housing Element and listing the criteria used to generate this set. Table 2-6 lists the Housing Element's criteria for identifying parcels suitable for residential or residential mixed-use redevelopment, per Chapter 3 of the Housing Element.

Table 2-6: Housing Element Criteria

Major Criteria (listed in 2015 –2023 Housing Element)	
Structure Age	At least 20 years old (1995 or earlier)
Lot Size	Min. 10,000 square feet
Unit Yield	Min. 5 units
A/V Ratio[1]	< 1.5 or >1.5 when land value is assessed artificially low[2]
Windshield Survey	Underdeveloped residential/commercial sites that are 1 or 2 stories[3]. Underdeveloped commercial sites are defined as Class B office space structures or older buildings with wood construction.
Minor Criteria (considered in Housing Element, but not listed)[4]	
Historic Resource	Exclude all historic and potentially historic resources *(Historic categories 1 through 4; potential historic resources in SOFA)*
Existing Land Use	Exclude proposed/under construction projects (or considered the as built condition when applying criteria)
Zone	Exclude PC District (one site: 550 Hamilton Ave)
Lot Consolidation	Include groups of smaller, adjacent lots (does not universally apply)

Note:

1. A/V Ratio, or Assessed Value Ratio, expresses the ratio between the assessed value of structures or permanent improvements on a lot and the assessed value of the land. Lower A/V ratios typically indicate that a parcel may be underutilized.
2. Parcels under the same ownership for more than 10 years generally have a recorded land value far below their actual current land value.
3. These criteria were chosen based on the types of sites that had been redeveloped with mixed-use or residential projects within the past several years, as of the preparation of the 2015 –2023 Housing Element.
4. Characteristics found in parcels that meet the "Major Criteria" but not chosen as Housing Element sites.

Source: Palo Alto Housing Element, 2014.

To determine the realistic capacity for units on the sites that satisfy the above criteria, the Housing Element determined a Realistic Capacity Density for each district, which reflects an average of 80 percent of maximum density allowed under zoning (see page 61 of the Housing Element). These figures, which take into account development trends, site constraints, and the potential for non-residential uses as part of mixed-use development, are listed in Table 2-7.

Table 2-7: Housing Element's Realistic Capacity Density

Zoning District	*Maximum Allowed Residential Density (du/ac)*	*Realistic Capacity Density (du/ac)*
CD-C	40	20
CD-N	30	20
CD-S	30	20
PC	--	--
RM-30	30	20

Table 2-7: Housing Element's Realistic Capacity Density

Zoning District	*Maximum Allowed Residential Density (du/ac)*	*Realistic Capacity Density (du/ac)*
RT-35	25-50	25-30[1]
RT-50	25-50	25-30[1]

Note:
1. Realistic capacity for RT zoning districts is calculated based on development standards for mixed-use projects.

Source: Palo Alto Housing Element, 2014.

Using the criteria in Table 2-6 and the realistic capacity factors in Table 2-7, **the Housing Element estimates 252 additional residential units** on 48 parcels within the selected parcels. Those parcels are shown in **Figure 2-4**. With the exception of one parcel, on which there is one single-family house, there are currently no existing or proposed residential units located on the parcels identified. Appendix C includes information of the full set of Housing Element sites in Palo Alto.

2.4 Potential Development Capacity Scenarios

This study aims to expand the selection of Downtown sites identified by the 2015 –2023 Housing Element. The study looks at a variety of site-specific data to determine how best to expand the criteria, and ultimately, the set of parcels considered to be opportunity sites for future residential and residential mixed-use development. The two scenarios described here begin with the entire set of parcels that were *not* already identified by the Housing Element, establish criteria for which parcels to include, and ultimately identify new sites that are then added to the Housing Element sites. Scenario A describes a set of criteria that expands the set of potential sites, while Scenario B describes a set that further expands the set of potential sites.

SCENARIO A: LOW

Scenario A expands the set of potential sites by raising the realistic residential capacity determined by the Housing Element. This adjustment is based on the density of various existing and proposed residential mixed use projects in the vicinity of the Downtown study area, as well as the fact that developers today may seek higher densities to further maximize their returns in the current economy, which otherwise favors office development. Table 2-8 summarizes the adjusted residential capacity density in Scenario A.

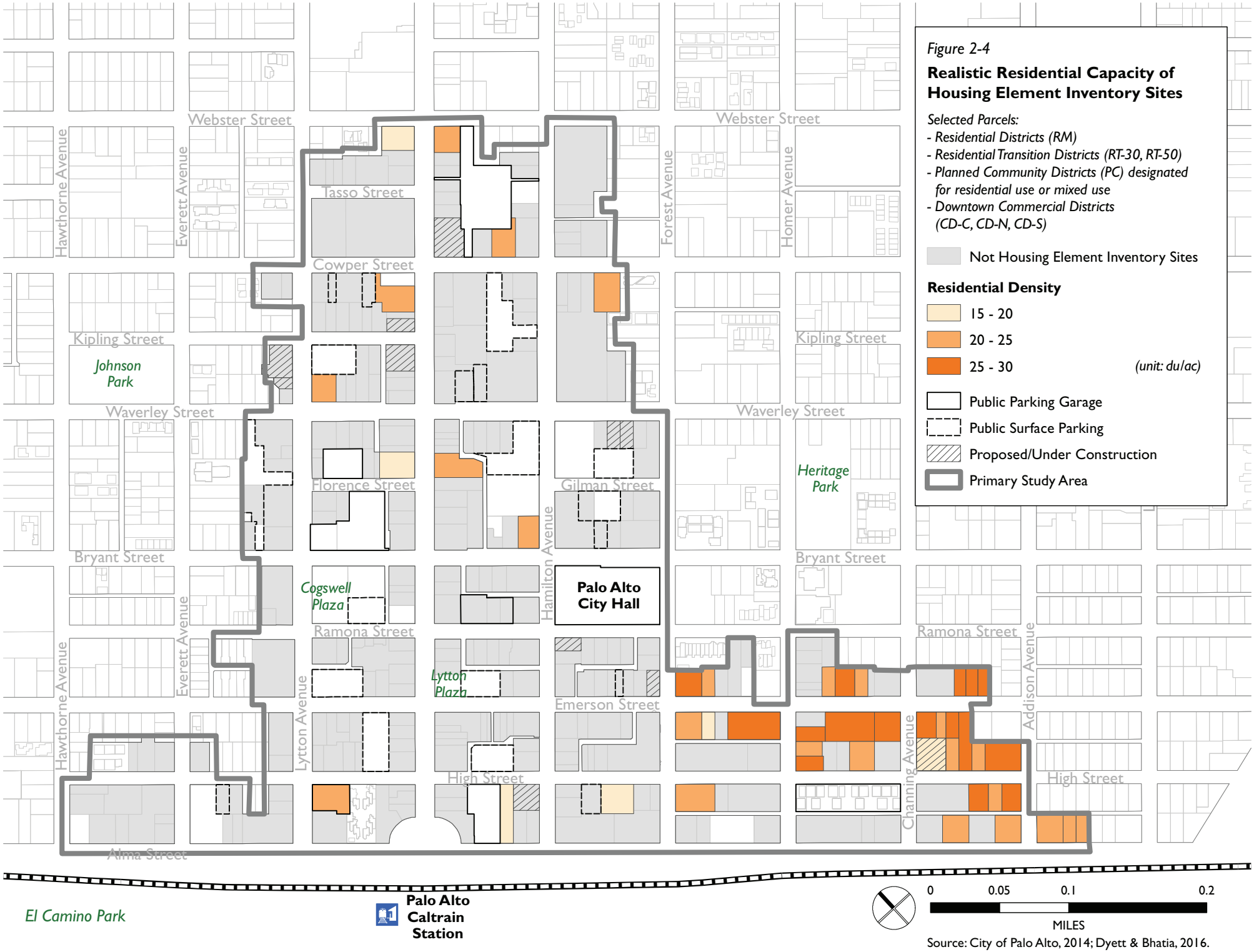


Figure 2-4

Realistic Residential Capacity of Housing Element Inventory Sites

Selected Parcels:
- *Residential Districts (RM)*
- *Residential Transition Districts (RT-30, RT-50)*
- *Planned Community Districts (PC) designated for residential use or mixed use*
- *Downtown Commercial Districts (CD-C, CD-N, CD-S)*

Not Housing Element Inventory Sites

Residential Density

15 - 20
20 - 25
25 - 30 *(unit: du/ac)*

Public Parking Garage
Public Surface Parking
Proposed/Under Construction
Primary Study Area

Source: City of Palo Alto, 2014; Dyett & Bhatia, 2016.

Table 2-8: Scenario A: Adjusted Residential Capacity

Zoning District	*Maximum Allowed Residential Density (du/ac)*	*Realistic Capacity Density proposed by Housing Element (du/ac)*	*Adjusted Scenario A Capacity Density (du/ac)*
CD-C	40	20	30
CD-N	30	20	25
CD-S	30	20	25
PC	--	--	--
RM-30	30	20	25
RT-35	25-50	25-30[1]	30
RT-50	25-50	25-30[1]	40

Note:

1. Realistic capacity for RT zoning districts is calculated based on development standards for mixed-use projects.

Source: Palo Alto Housing Element, 2014.

Site Selection

Table 2-9 summarizes the criteria and processes of site selection. First, after excluding the sites already identified by the Housing Element, Scenario A applies only a subset of the Housing Element's criteria to the remaining 288 parcels: it includes sites with structures over 20 years old and those with an A/V ratio of less than 1.5. It then further excludes any historic and potentially historic buildings (Class 1 through 4); Class A offices; and Class B offices above 2 stories. This yielded 62 parcels.

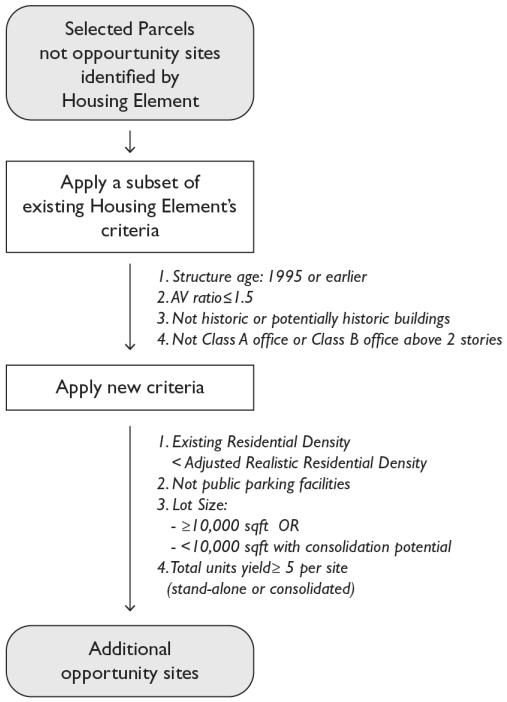
Next, Scenario A applies an additional set of criteria to the remaining parcels. It includes only the following parcels:

- Parcels where the existing residential density is less than the adjusted capacity, as shown in Table 2-9.
- Parcels that are not public parking facilities.
- Parcels that are either over 10,000 square feet in size, or that could potentially become part of a 10,000-square foot site if consolidated with adjacent properties.
- Total units yield per site is larger than or equal to 5 units.

This set of criteria yielded a total of 23 additional parcels. However, considering the consolidated parcels as *single* parcels, Scenario A yields an additional 14 sites, and translates to a total of **106 units**.

Added to the 252 units on the sites identified in the Housing Element, this amounts to 358 units. The sites are mapped in Figure 2-5.

Table 2-9: Criteria and Flowchart for Scenario A

Procedure	*Remaining Parcels*	*Total Unit Yield*	*Flowchart*
1. Selected parcels not identified by the Housing Element	288	--	
2. Apply partial HE criteria	61	--	
3. Apply new criteria	23	106	
Individual large lots (>10,000 sq ft)	4	41	
Small lots (<10,000 sq ft) with consolidation potential	19	65	

Site Characteristics

As shown in Figure 2-5, the additional parcels are mostly located near the edge of the study area, with a few along University Avenue. The existing uses of these additional parcels include commercial, office, and commercial-office mixed use. The zoning designations include CD-C, CD-N, RT-35, and RT-50. None of the parcels have existing residential units.

Small lots identified in Scenario A may achieve a total of or more than five additional residential units per site through site consolidation with other small lots, large lots, Housing Element sites, or a combination of lot types. The potential site compositions are:

- Small lots only: 5 sites (10 parcels);
- Small lots + Housing Element sites: 6 sites (8 parcels); and
- Small lots + large lots (not Housing Element sites): 1 site (1 parcel).

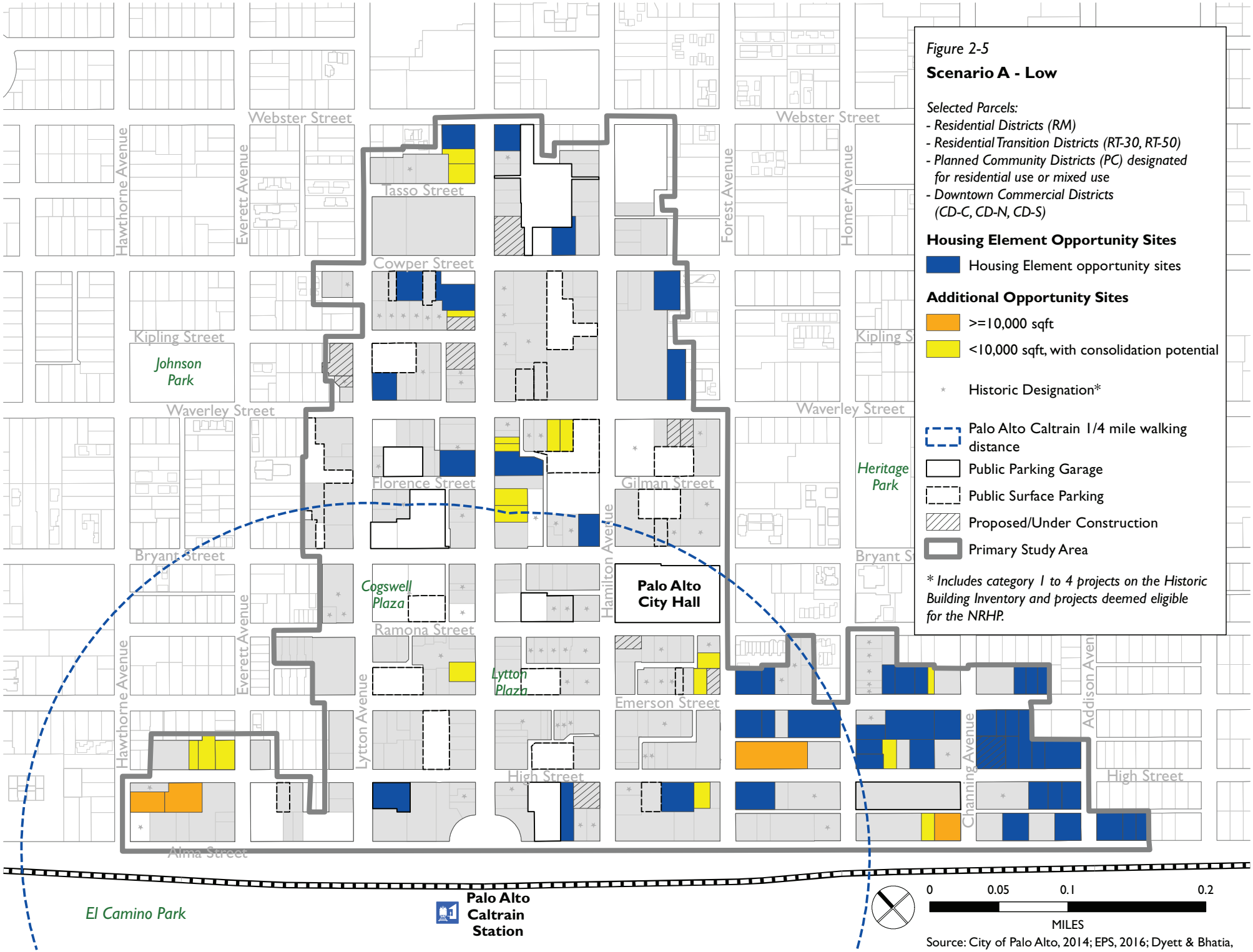


Figure 2-5

Scenario A - Low

Selected Parcels:
- *Residential Districts (RM)*
- *Residential Transition Districts (RT-30, RT-50)*
- *Planned Community Districts (PC) designated for residential use or mixed use*
- *Downtown Commercial Districts (CD-C, CD-N, CD-S)*

Housing Element Opportunity Sites

Housing Element opportunity sites

Additional Opportunity Sites

>=10,000 sqft

<10,000 sqft, with consolidation potential

Historic Designation*

Palo Alto Caltrain 1/4 mile walking distance

Public Parking Garage

Public Surface Parking

Proposed/Under Construction

Primary Study Area

** Includes category 1 to 4 projects on the Historic Building Inventory and projects deemed eligible for the NRHP.*

Source: City of Palo Alto, 2014; EPS, 2016; Dyett & Bhatia, 2016.

Density Bonus

All sites in Scenario A may accommodate Very Low income to Low income households, as defined by the State density bonus law (California Government Code section 65915). If all Scenario A sites and all Housing Element sites in the Downtown study area were to be built out at the maximum permitted density, rather than the adjusted density, *and* receive a 35 percent density bonus by accommodating affordable units, 351 additional units would result.

Adding these 351 units to the 252 units identified on the sites listed in the Housing Element and the 106 additional units in Scenario A **yields a total of 709 new units**.

SCENARIO B: HIGH

Scenario B expands the set of potential sites by adjusting the threshold of criteria used in the Housing Element. In Scenario B, parcels with A/V ratios less than 1.8 will be considered. Accounting for transit accessibility, a weighted increase of residential capacity and minimum yield residential unit are applied to selected parcels based on their distance to the Palo Alto Caltrain Station. Table 2-10 summarizes the adjusted residential capacity density in Scenario B.

Table 2-10: Scenario B: Adjusted Residential Capacity

Zoning District	*Maximum Allowed Residential Density (du/ac)*	*Realistic Capacity Density proposed by Housing Element (du/ac)*	*Adjusted Scenario B Capacity Density (du/ac)*	
			Within ¼ mile radius of Caltrain Station	*Outside of ¼ mile radius of Caltrain Station*
CD-C	40	20	40	30
CD-N	30	20	30	25
CD-S	30	20	30	25
PC	--	--	--	--
RM-30	30	20	30	25
RT-35	25-50	25-30[1]	35	30
RT-50	25-50	25-30[1]	50	40

Note:

1. Realistic capacity for RT zoning districts is calculated based on development standards for mixed-use projects.

Source: Palo Alto Housing Element, 2014.

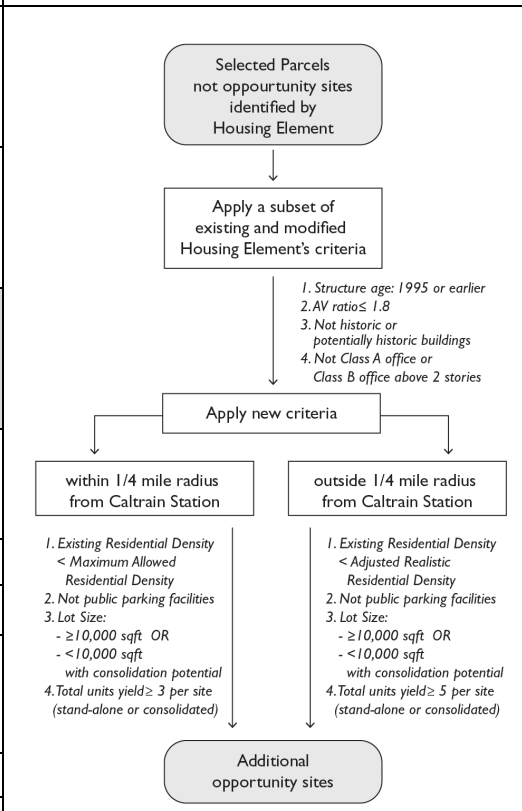
Site Selection

Table 2-11 summarizes the criteria and processes of site selection. First, after excluding the sites already identified by the Housing Element, Scenario B applies a modified—but more aggressive—subset of the Housing Element's criteria to the remaining 288 parcels: it includes sites with structures over 20 years old and those with an A/V ratio of less than 1.8. It then further excludes any historic and potentially historic buildings, Class A offices, and Class B offices above two stories. This yielded an additional 66 parcels.

Next, Scenario B applies the same set of additional criteria as Scenario A. This set of criteria yielded a total of 39 additional parcels. However, considering the consolidated parcels as *single* parcels, Scenario B yields an additional 25 sites**, and translates to a total of 189 units**.

Added to the 252 units identified in the Housing Element, the scenario yields a total of 441 housing units. The criteria and process are summarized in Table 2-9 and the sites are mapped in Figure 2-6.

Table 2-11: Criteria and Flowchart for Scenario B

Procedure	*Remaining Parcels*	*Total Unit Yield*	*Flowchart*
1. Selected parcels not identified by the Housing Element	288	--	
2. Apply partial & modified HE criteria	66	--	
3. Apply new criteria	39	189	
Individual large lots (>10,000 sq ft)	5	68	
Within ¼ mile	3	39	
Outside ¼ mile	2	20	
Small lots (<10,000 sq ft) with consolidation potential	34	130	
Within ¼ mile	21	90	
Outside ¼ mile	13	40	

Site Characteristics

As shown in Figure 2-6, the additional parcels are mostly located near the edge of the study area, with a few along University Avenue. The existing uses of these additional parcels include commercial, office, commercial-office mixed use, and one residential mixed use. The zoning designations include CD-C, CD-N, RT-35, and RT-50. The one residential mixed-use parcel accommodates one existing residential unit.

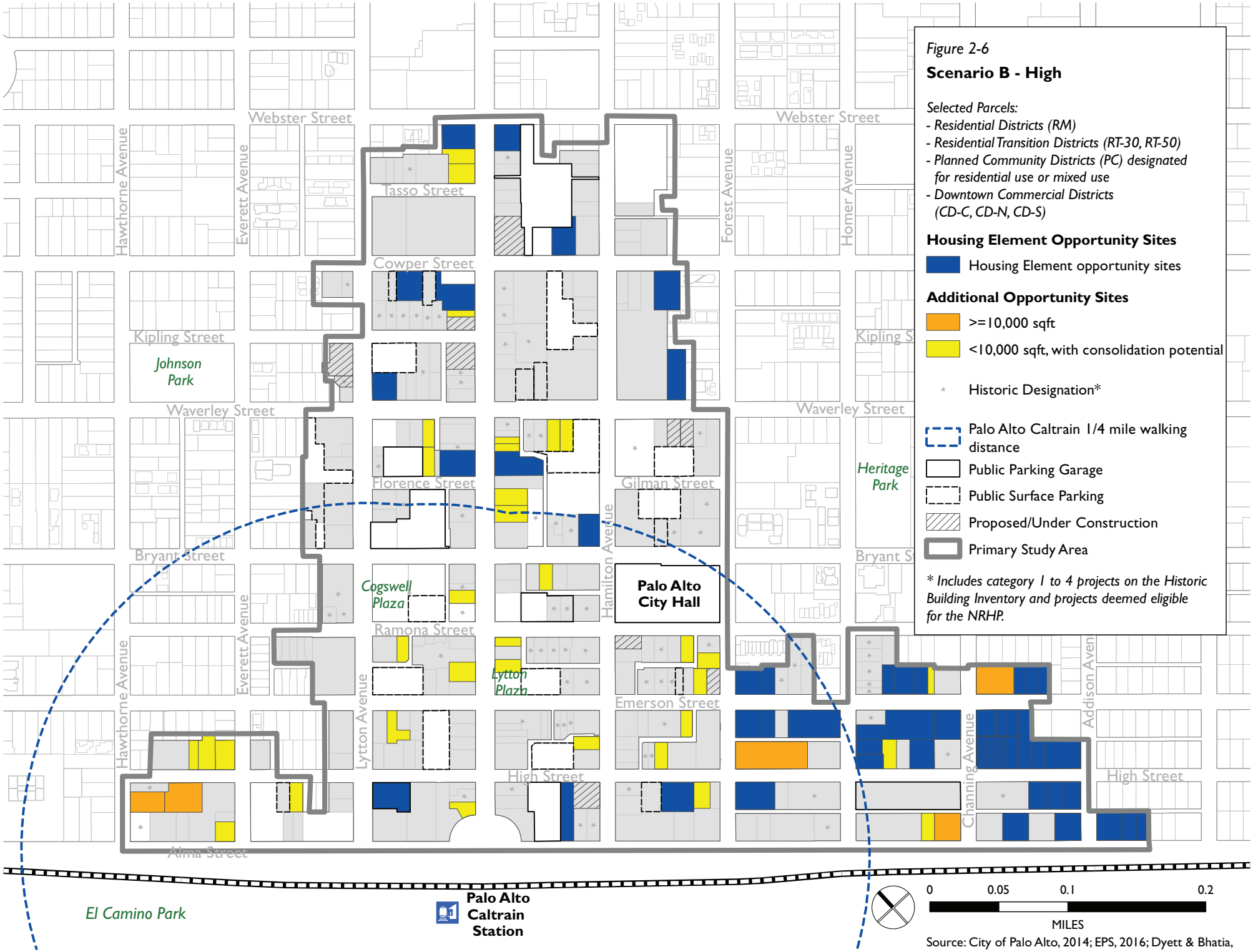


Figure 2-6

Scenario B - High

Selected Parcels:
- *Residential Districts (RM)*
- *Residential Transition Districts (RT-30, RT-50)*
- *Planned Community Districts (PC) designated for residential use or mixed use*
- *Downtown Commercial Districts (CD-C, CD-N, CD-S)*

Housing Element Opportunity Sites

Housing Element opportunity sites

Additional Opportunity Sites

>=10,000 sqft

<10,000 sqft, with consolidation potential

Historic Designation*

Palo Alto Caltrain 1/4 mile walking distance

Public Parking Garage

Public Surface Parking

Proposed/Under Construction

Primary Study Area

** Includes category 1 to 4 projects on the Historic Building Inventory and projects deemed eligible for the NRHP.*

Source: City of Palo Alto, 2014; EPS, 2016; Dyett & Bhatia, 2016.

Small lots identified in Scenario B may achieve a total of or more than three additional residential units per site within ¼ mile walking distance from Caltrain, or five outside of ¼ walking distance from Caltrain, through site consolidation with other small lots, large lots, Housing Element sites, or a combination of lot types. The potential site compositions are:

- Small lots only: 19 sites (25 parcels);
- Small lots + Housing Element sites: 5 sites (6 parcels)
- Small lots + large lots (not Housing Element sites): 1 site (1 parcel); and
- Small lots + large lots (not Housing Element sites) + Housing Element sites: 1 site (2 parcels)

Density Bonus

All sites in Scenario B may accommodate Very Low income to Low income households, as defined by the State Density Bonus Law (California Government Code section 65915). If all Scenario B sites and all Housing Element sites in the Downtown study area were to be built out at the maximum permitted density, rather than the adjusted density, *and* receive a maximum of 35 percent density bonus by accommodating affordable units, 368 additional units would result.

Adding these 368 units to the 252 units identified on the sites listed in the Housing Element and the 189 additional units in Scenario B **yields a total of 809 new units**.

PARKING CALCULATION

Table 2-12 identifies the required parking for the additional residential development in each development capacity scenario using the City's current requirement of 1.25 parking spaces per 1-bedroom unit, and guest parking of 1 space plus 10 percent of total number of units per site. Where site compositions include Housing Element sites, guest parking is calculated as 10 percent of the total units yielded from all non-Housing Element parcels. All calculations resulting in fractional units are rounded up to the next whole number.

Table 2-12: Required Residential Parking by Scenario

Site Composition	*Number of Parking Space Required*	
	Scenario A	*Scenario B*
Resident Parking	**106**	**189**
Including Housing Element sites	22	35
Not including Housing Element sites	84	154
Guest Parking	**25**	**58**
Including Housing Element sites	6	8
Not including Housing Element sites	19	50
Total	**131**	**247**

The realistic amount of required parking spaces will vary based on the number of bedrooms per housing unit and the total number of units accommodated on each site. The calculation also does not account for the required parking spaces for non-residential uses in each development.

Considering the high market value of housing and an overall shortage of parking facilities in Downtown, most of the parking spaces will likely to be accommodated by subterranean parking structure on-site. The pro forma analysis in Chapter 3.4 provides a closer look at the financial feasibility of housing developments with different parking configurations.

Density Bonus and Parking Reduction

According to the State density bonus law (California Government Code section 65915), the City shall not require a vehicular parking ratio exceeding 0.5 space per bedroom for any development that is within one-half mile of a major transit stop and that includes the maximum percentage of Low- or Very Low income units allowed through density bonus. While neither scenario proposes development capacity to exceed the maximum allowed density (except when a density bonus is included), it is important to consider the potential of reducing parking requirement in a transit-oriented, multi-modal environment in Downtown Palo Alto.

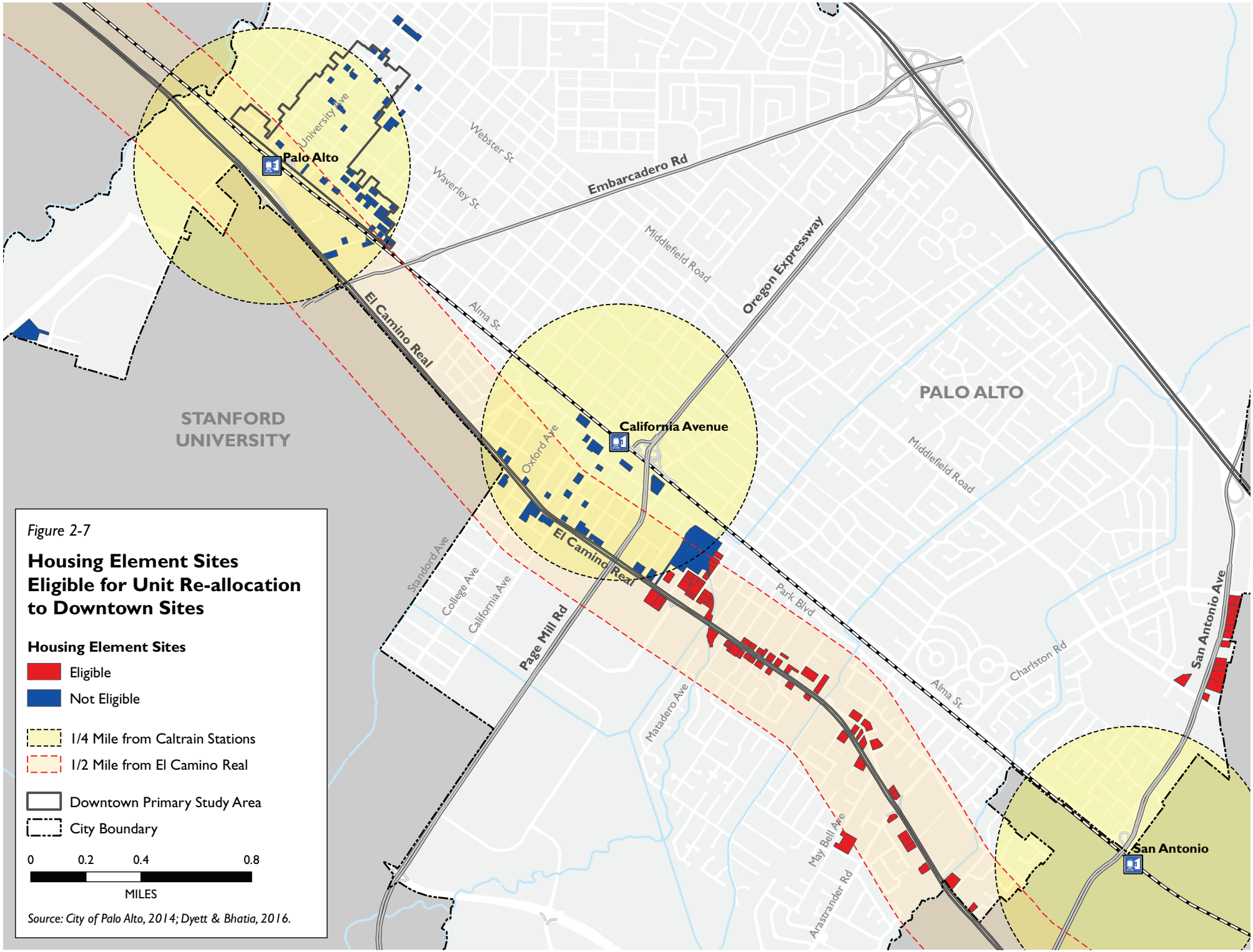
2.5 Reallocation of Housing Units to Downtown Sites

After developing the potential development capacity scenarios in Downtown Palo Alto, the study assessed whether these Downtown sites can accommodate units previously allocated outside of Downtown in the Housing Element, specifically those allocated in the San Antonio/South El Camino Real area. By accommodating these units in Downtown, more residents would be able to take advantage of the transit system, bicycle facilities, civic amenities, and the pedestrian-oriented environment in Downtown. Additionally, as most parcels in the Downtown Study Area are within a half-mile radius from the Caltrain Station, housing development with affordable units may receive additional parking requirement relief as stated in the State density bonus law.

The following criteria are used to identify existing Housing Element sites eligible for unit re-allocation to Downtown:

- Parcels that are within quarter-mile distance from El Camino Real and San Antonio Avenue;
- Parcels that are not within Downtown Cap Study, SOFA II CAP, and California Avenue PTOD areas; and
- Parcels that are outside of half-mile radii of Caltrain Stations (Palo Alto, California Avenue, and San Antonio stations).

Using the above set of criteria, 75 sites (parcels) are selected in the San Antonio/South El Camino Real area, which translates to a total of 774 units, as determined by the Housing Element. **Figure 2-7 shows** the selected Housing Element sites with the above criteria.


Palo Alto
California Avenue
San Antonio
STANFORD UNIVERSITY
PALO ALTO
University Ave
Webster St
Waverley St
Embarcadero Rd
Middlefield Road
Oregon Expressway
El Camino Real
Alma St
Oxford Ave
Standord Ave
College Ave
California Ave
Page Mill Rd
Park Blvd
Charlston Rd
Matadero Ave
May Bell Ave
Arastrander Rd
San Antonio Ave
Figure 2-7
Housing Element Sites Eligible for Unit Re-allocation to Downtown Sites
Housing Element Sites
Eligible
Not Eligible
1/4 Mile from Caltrain Stations
1/2 Mile from El Camino Real
Downtown Primary Study Area
City Boundary
0 0.2 0.4 0.8
MILES
Source: City of Palo Alto, 2014; Dyett & Bhatia, 2016.

The additional capacities yielded in Scenario A and Scenario B can accommodate approximately 14 and 24 percent, accordingly, of the total units eligible for re-allocation to the Downtown. In situations where all sites receive the maximum density bonus of 35 percent through provision of affordable housing, the percentage may be increased to 59 and 72 percent, accordingly.

3 Residential Market Assessment

This Residential Market Assessment considers the historical market performance and potential for residential uses, primarily multifamily and mixed-used projects, to better understand potential for housing development in the Downtown. The assessment commences with an overview of citywide housing trends then focuses in on the Downtown market. The review of the Downtown housing market includes an evaluation of the market performance of existing residential products, including a range of multifamily projects developed over recent decades. The market data are used to inform a high-level residential real estate feasibility analysis that tests the economic viability of new housing development in the Downtown.

3.1 Citywide Housing Trends

HOUSING STOCK AND PERMITTING

According to the US Census Bureau's American Community Survey, there are approximately 28,000 housing units in the City of Palo Alto, about 60 percent of which are owner-occupied and about 40 percent of which are occupied as rental units.[4] Approximately 67 percent of the city's dwelling units are single-family homes, while about 16 percent of units are in small- to mid-size apartment or condominium buildings (2-19 units), and 17 percent are in large buildings with 20 or more units.[5] While only about a third of the city's housing is in a multifamily format, housing growth in Palo Alto has been more heavily weighted toward multifamily homes overall since 1980. Residential permit data indicate that since then, nearly 60 percent of citywide permits for new units have been in multifamily structures.[6]

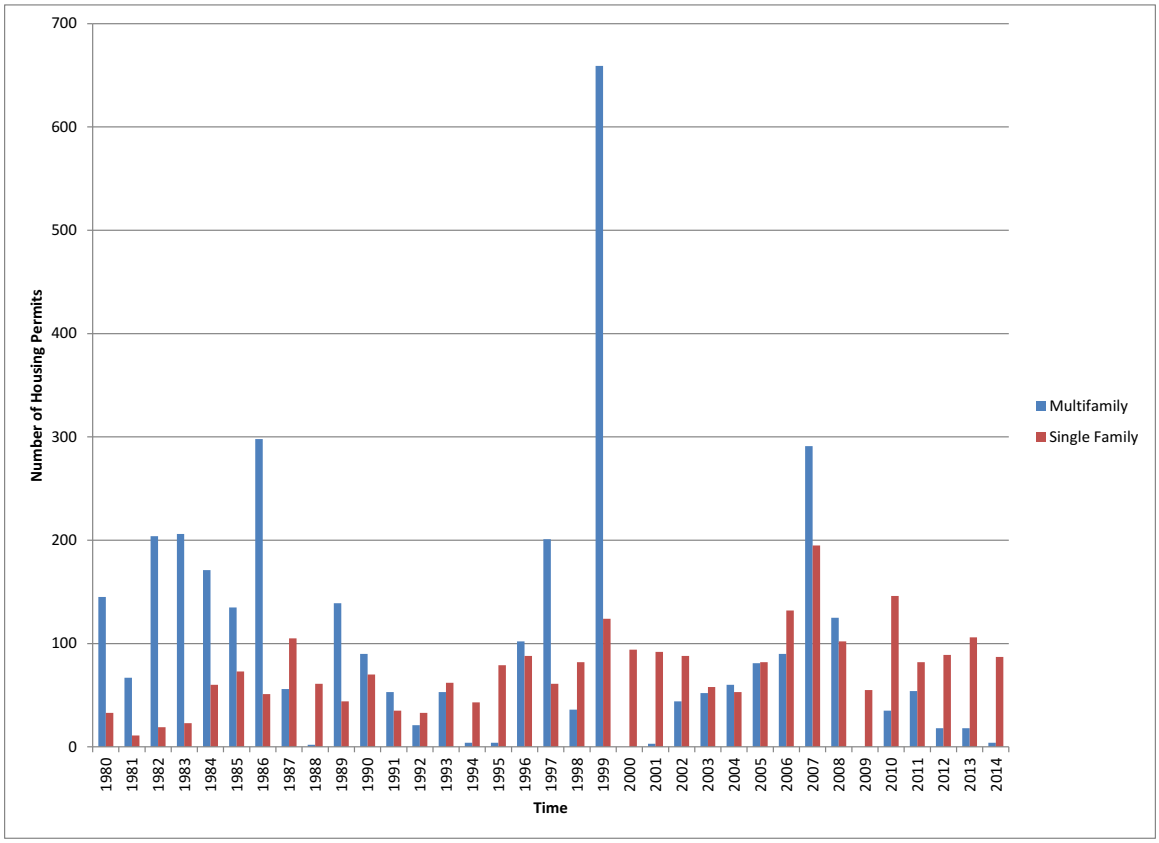
Despite a 35-year trend in which multifamily housing permitting exceeded single family permitting in Palo Alto, shown in Figure 3-1 below, multifamily permitting in Palo Alto has dropped off dramatically in recent years. Looking back over time, the multifamily market has exhibited numerous cycles of activity, with periods of high growth followed by lulls. The 35-year peak for multifamily permitting in Palo Alto occurred in 1999, when approximately 675 units were permitted in a single year. Similar to recent trends, that banner year was followed by a year in which zero multifamily permits were issued.

[4] American Community Survey 2014

[5] Ibid.

[6] U.S. Department of Housing and Urban Development, Building Permits Database

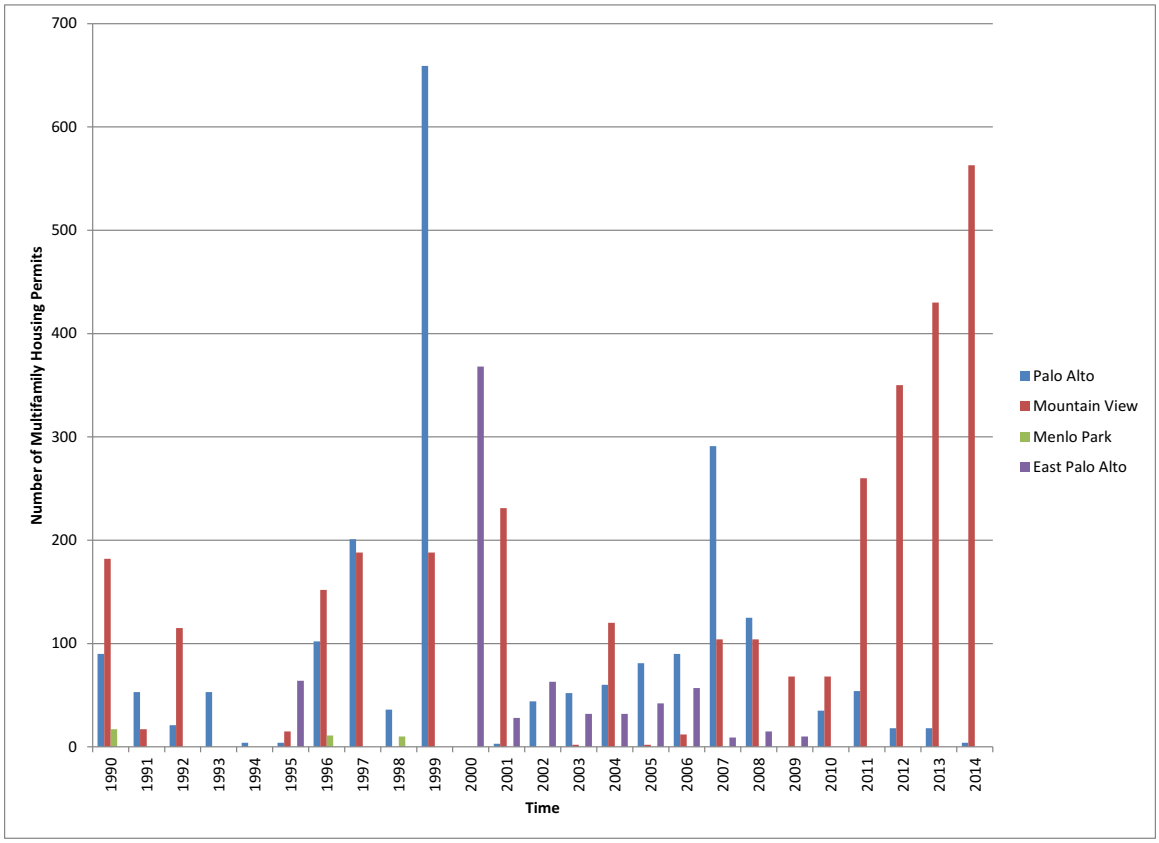
Figure 3-1: Housing Permit Trend in Palo Alto 1980-2014



U.S. Department of Housing and Urban Development, Building Permits Database

Between 2009 and 2014, with overall permitting down in the wake of the national financial crisis, multifamily permits accounted for less than 20 percent of the total. Even in 2014, with a much improved economy, only four multifamily permits were issued, an indication that constraints on development likely are limiting supply. This recent decline in multifamily permitting does not appear to be attributable to waning market demand. Neighboring cities have seen significant multifamily permitting in recent years. For example, the City of Mountain View permitted an average of approximately 400 units per year between 2011 and 2014. Neither Menlo Park nor East Palo Alto experienced notable multifamily permitting over the past 10 years (Figure 3-2).

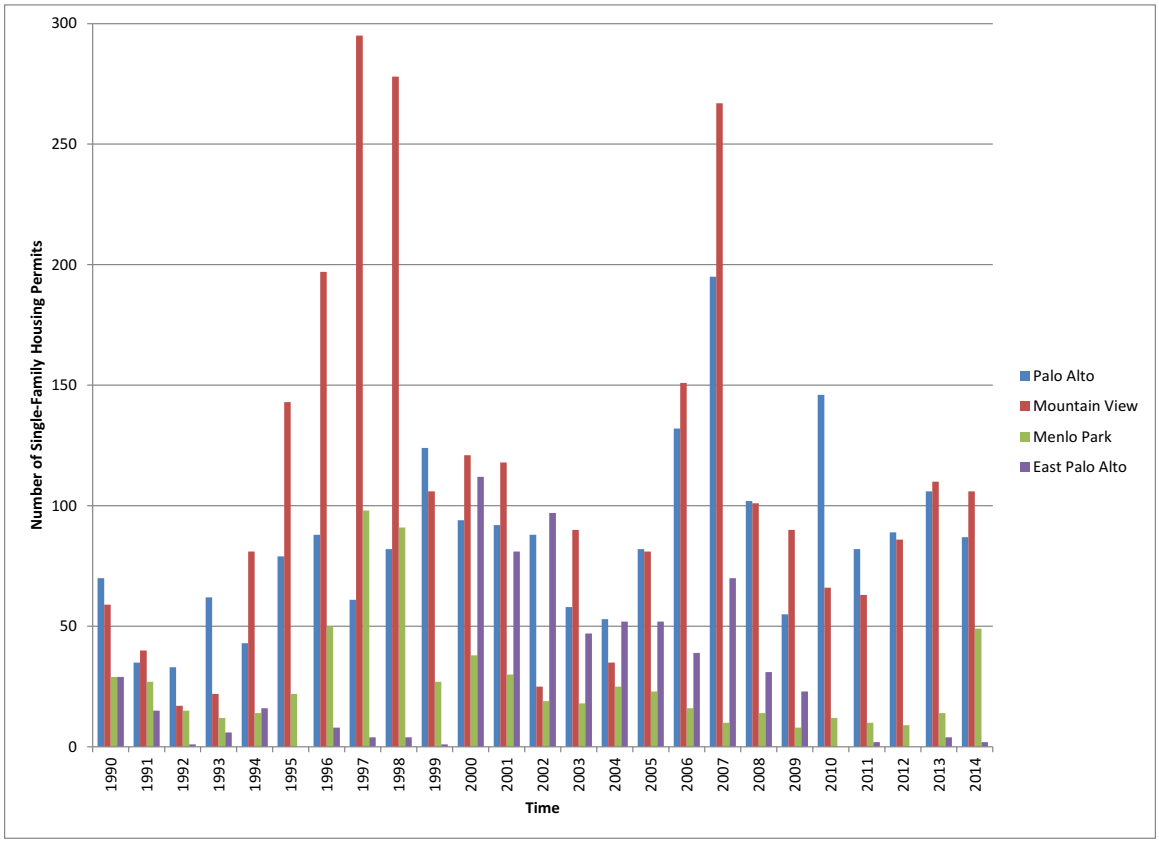
Figure 3-2: Multifamily Permitting



Source: HUD

Single family permitting in Palo Alto over the past few years has been somewhat more steady, remaining fairly consistent with the historical average of 75 units per year. As illustrated in Figure 3-3 below, Palo Alto has permitted between 50 and 200 single family permits per year over the past 10 years, largely keeping pace with the City of Mountain View and both Menlo Park and East Palo Alto.

Figure 3-3: Single-Family Permitting



Source: HUD

3.2 Residential Rental Market

Market data concerning the 14 major apartment complexes (50 units of more) indicate that across 2,750 units the average rent in Palo Alto is $3,239 per month (2015 data) for an 868 square foot apartment, approximately $3.73 per square foot per month. These units were built between 1930 and 2001, with an average age of about 48 years. Average rents citywide are up about nine percent in the past year (4Q2014 – 4Q2015), while studio apartment rents are up 23 percent over the same period. Looking back four years, citywide average rents are up about 36 percent, with studio apartment rents up 59 percent.[7] Vacancy in the major apartment complexes is less than five percent.

Only one significant (50+ unit) apartment building in the city has traded during the past four years. Formerly "Park Towers," the 90-unit Mia building at 535 Everett sold in 2014 for $36.5 million ($405,555 per unit; $795 per square foot). The building is outside of the Downtown Primary Study Area, but nearby.

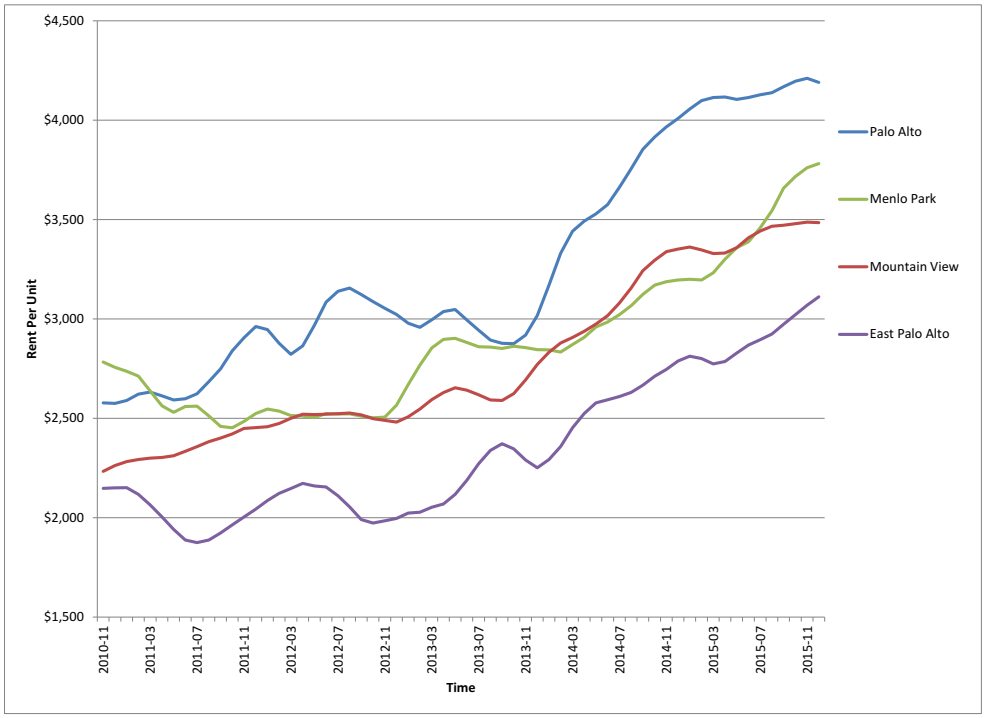
[7] RealAnswers 4Q2015

Available data from CoStar Group identify 310 multifamily rental units in the Downtown Primary Study Area. Of these, available data reveal that 157 units in two projects are designated affordable. The 50-unit 801 Alma is an affordable project completed by Eden Housing in 2013. Other notable apartment complexes in Downtown Primary Study Area include Alma Place, which includes 107 affordable units built in 1998. The most significant market rate rental building in the Downtown Study Area is the historic Hotel President Apartments, which consists of 75 market rate apartments. Just outside the Downtown Primary Study, the Marc (located at 501 Forest Ave.) and Mia apartment building offer additional examples of the market potential for Downtown rental housing.

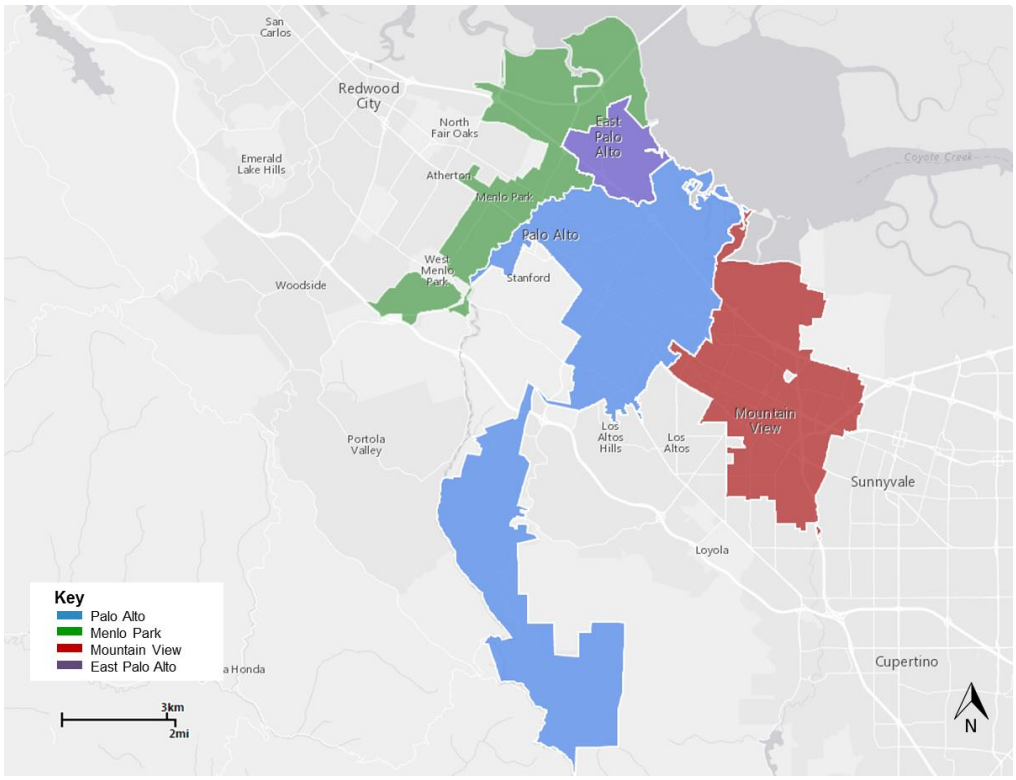
RENT TRENDS

Since 2010, multifamily rental rates in Palo Alto have generally kept pace or exceeded neighboring communities, as illustrated in Figure 3-4 below. According to Zillow, median rents reported citywide in Palo Alto are currently over $4,200 per month, up from approximately $2,600 per month in 2011, a 60+ percent increase over that five year period.

Figure 3-4: Multifamily Apartment Rent Trend by City



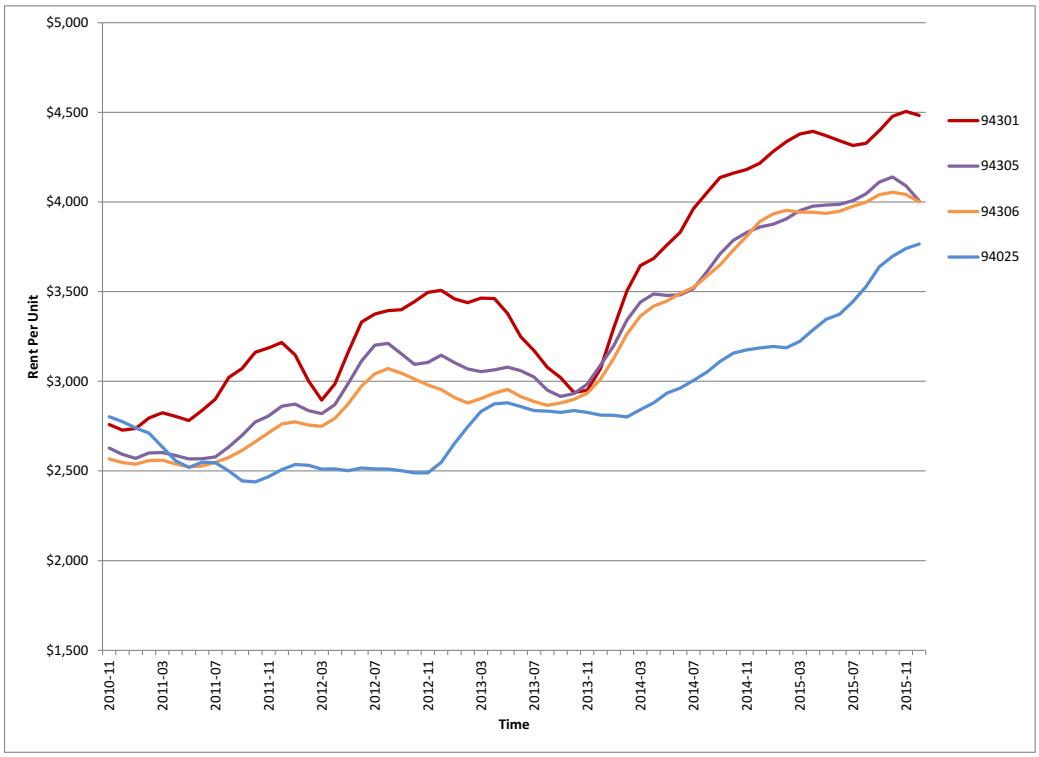
Source: Zillow Rent Index



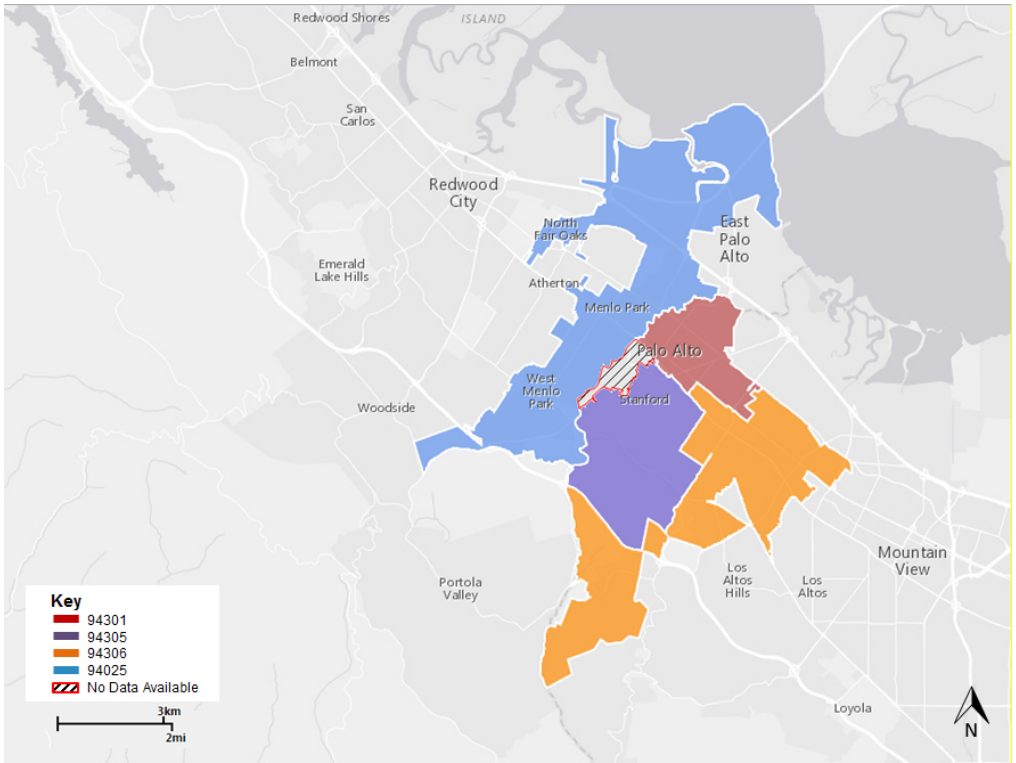
While comprehensive rent data were not available for the Downtown Primary Study Area specifically, EPS analyzed the rent trends for the zip codes in and around the Downtown Area.

The 94301 zip code encompasses the majority of the Downtown Primary Study Area and lies completely within the Palo Alto city limits, but also extends northwest nearly to Highway 101 and southeast to the Oregon Expressway. However, noting this imperfect proxy for the Downtown Primary Study Area, the zip code level date provides an effective comparison of rental trends specifically impacting the Study Area. As shown below in Figure 3-5, the 94301 zip code average rental rates have consistently exceeded neighboring zip codes since 2010 and has experienced approximately 50 percent increase in average rents over the past two years. Average rents in the 94301 are now approximately $4,500 per month, which is above Palo Alto in aggregate as well as above all neighboring zip codes.

Figure 3-5: Multifamily Apartment Rent Trend by ZIP Code



Source: Zillow Rent Index



DOWNTOWN PROJECT PROFILES

As noted at the beginning of this section, there are 14 major apartment buildings (50 units or more) spread throughout Palo Alto. Three of these major apartment projects are located within the Downtown Study Area and are profiled in greater detail below.

The Marc

501 Forest Avenue
Palo Alto, CA 94301

Year Built: 1965

118 Units
12 Stories
98,830 Square Feet

Unit Type	Count	Size (SF)	Monthly Rents	Mo. Rent PSF
1 Bed / 1 Bath	70	675	$3,710 - $4,885	$6.08
2 Bed / 2 Bath	44	945	$3,710 - $4,885	$5.56
2 Bed / 2.5 Bath	4	2,500	$7,920 - $14,500	$4.05
Total / Average	**118**	**837**	**$4,735**	**$5.65**

Notes:
The Marc sold in 2006 for $50 million ($424,000 per unit, $506 per square foot).

Photo Credit: Pacific Urban Residential Communities

Mia

535 Everett Avenue
Palo Alto, CA 94301

Year Built: 1964

90 Units,
6 Stories
45,900 Square Feet

Unit Type	Count	Size (SF)	Monthly Rents	Mo. Rent PSF
Studio	45	420	$2,375 - $3,000	$6.15
Studio	45	600	$2,825 - $3,600	$5.14
Total / Average	**90**	**510**	**$2,833**	**$5.56**

Notes:
Mia sold in 2014 for $36.5 million ($405,555 per unit; $795 per square foot).
All apartments are furnished.

Photo credit: realtor.com

President Hotel Apartments

488 University Avenue
Palo Alto, CA 94303

Year Built: 1930

75 Units
6 Stories
27,500 Square Feet

Unit Type	Count	Size (SF)	Monthly Rents	Mo. Rent PSF
Studio	50	250	$1,100	$4.40
Studio	20	550	$1,900 - $2,400	$3.76
1 Bed / 1 Bath	5	800	$3,000	3.75
Total / Average	**90**	**366**	**$1,484**	**$4.05**

Notes:
Historic Inventory building.

Photo Credit: City of Palo Alto

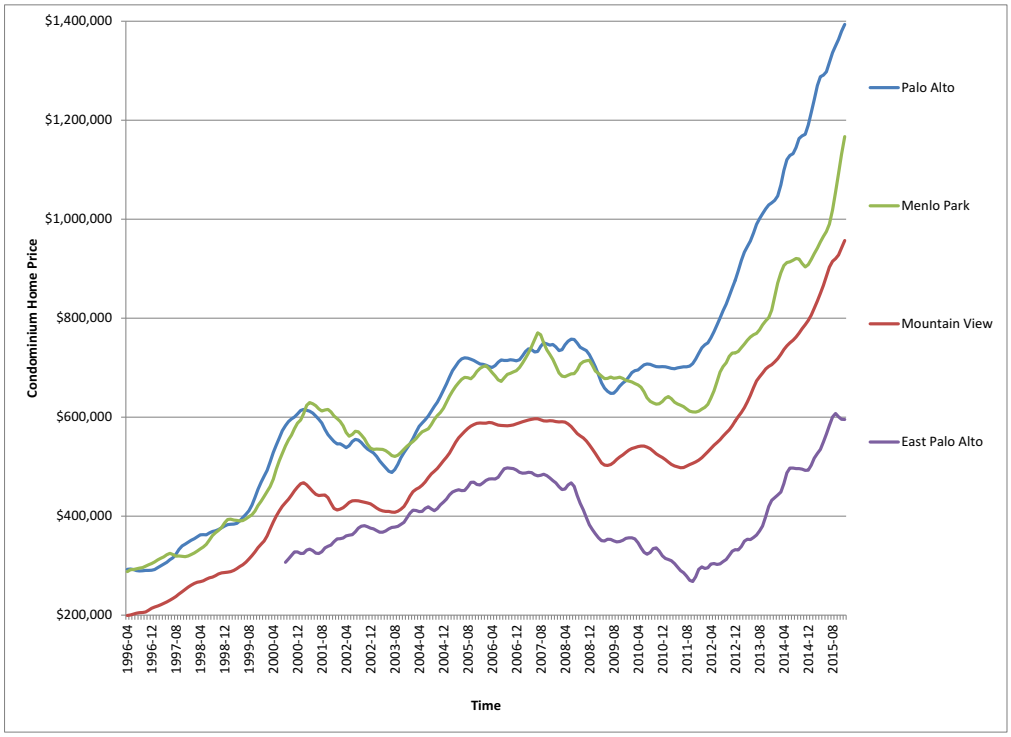
3.3 For-Sale Housing Market

Minimal development of for-sale residential housing has occurred Downtown recent years, largely owing to the lack of undeveloped land. Given the paucity of recent projects, this for-sale assessment seeks to identify housing projects developed in and around the Downtown over recent decades. The data gathering exercise focused on major projects, but also identified examples of smaller infill projects and mixed-use projects as well. The for-sale assessment commences with a review of home price trends in the marketplace, then focuses in on the Downtown.

PRICE TRENDS

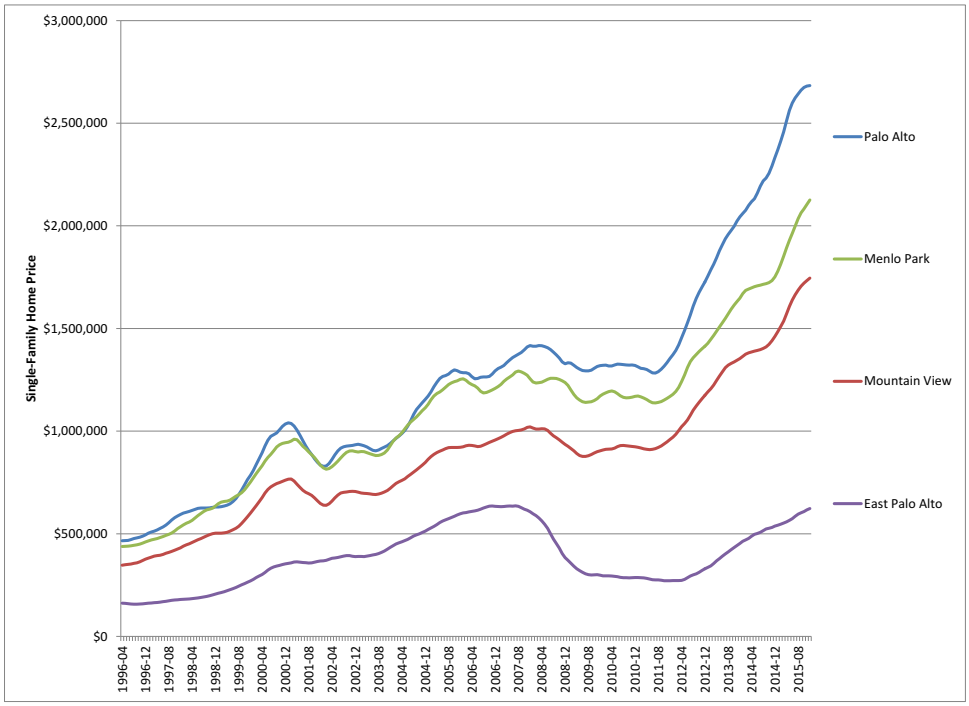
Residential properties in the City of Palo Alto and the Downtown area in particular trade at a significant premium over similar homes in the broader market area. As shown in **Figure 3-6** below, the median price of a condominium in Palo Alto is about $1.4 million, as compared with about $1.2 million in Menlo Park, $1.0 million in Mountain View, and $600,000 in East Palo Alto. As shown in **Figure 3-7** below, the median price of single family homes in Palo Alto is about $2.7 million, versus $2.1 million in Menlo Park, $1.7 million in Mountain View, and $620,000 in East Palo Alto. Since June 2011, prices for condominiums in Palo Alto are up 99 percent, while prices for single family homes are up 109 percent. The rate of price escalation has been similarly strong throughout the region, though East Palo Alto pricing has increased at a greater rate due to a relatively low starting price basis.

Figure 3-6: Condominium Home Price Trend by City



Source: Zillow Home Value Index

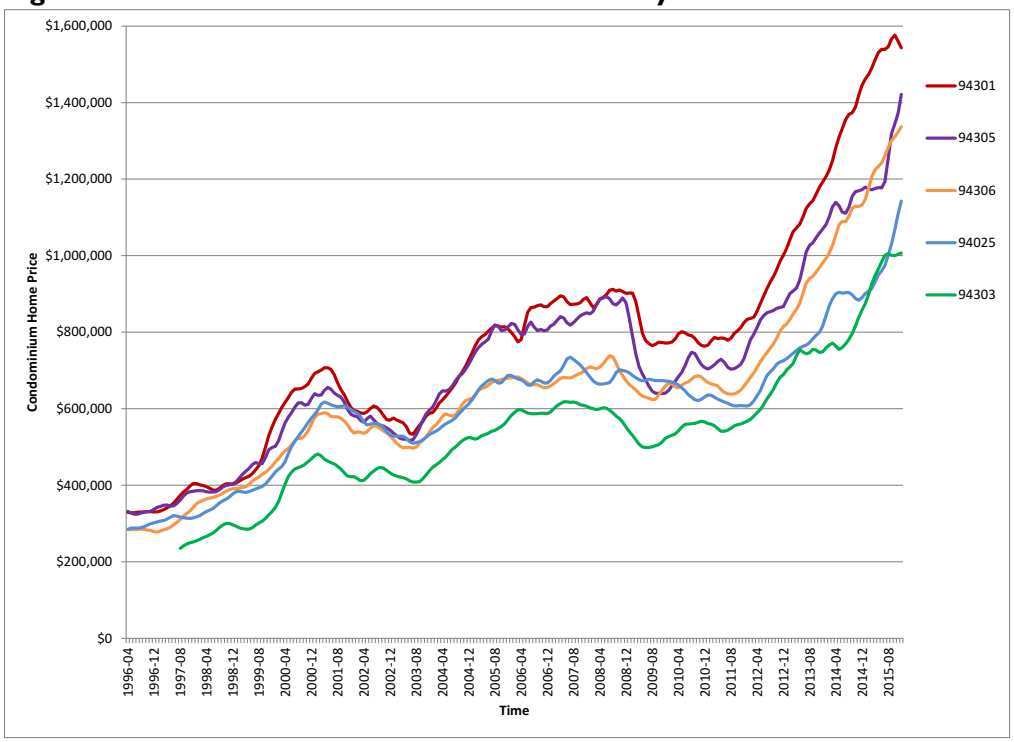
Figure 3-7: Single-Family Home Price Trend by City



Source: Zillow Home Value Index

ZIP code data reveal more localized home price variation, including providing a better sense of the residential price trend in an around the Palo Alto Downtown. The 94301 ZIP code area, which includes Downtown Palo Alto, has achieved higher condominium price points than the citywide average. Furthermore, condominiums in the 94301 area have experienced a 97 percent increase in average sales prices since June 2011. By comparison, single family sales in Downtown Palo Alto are exceeded only by those in Atherton, an extremely high-priced single-family community just north of Palo Alto. However, it should be noted that on a price per square foot basis, Downtown Palo Alto exceeds Atherton sales. The graphs and maps below (Figures 3-8 – 3-11) illustrate the strength of the residential market in and around Palo Alto, and especially the strength of Downtown Palo Alto in comparison to neighboring communities.

Figure 3-8: Condominium Home Price Trend by ZIP Code



Source: Zillow Home Value Index

Figure 3-9: Condominium ZIP Code Map

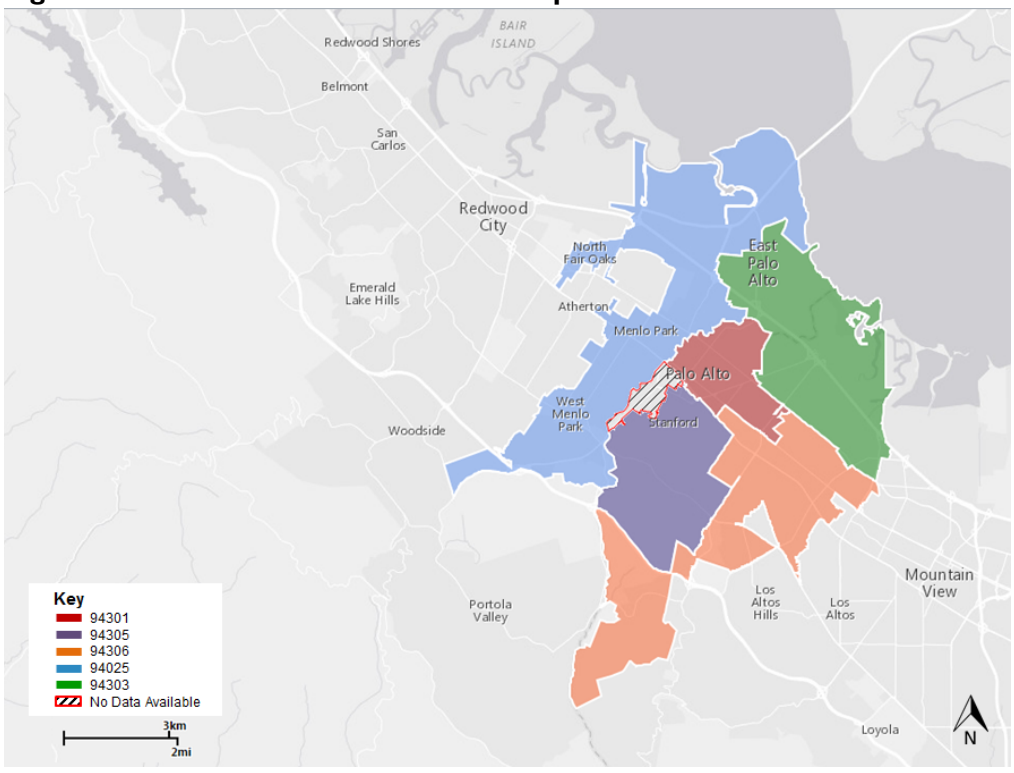
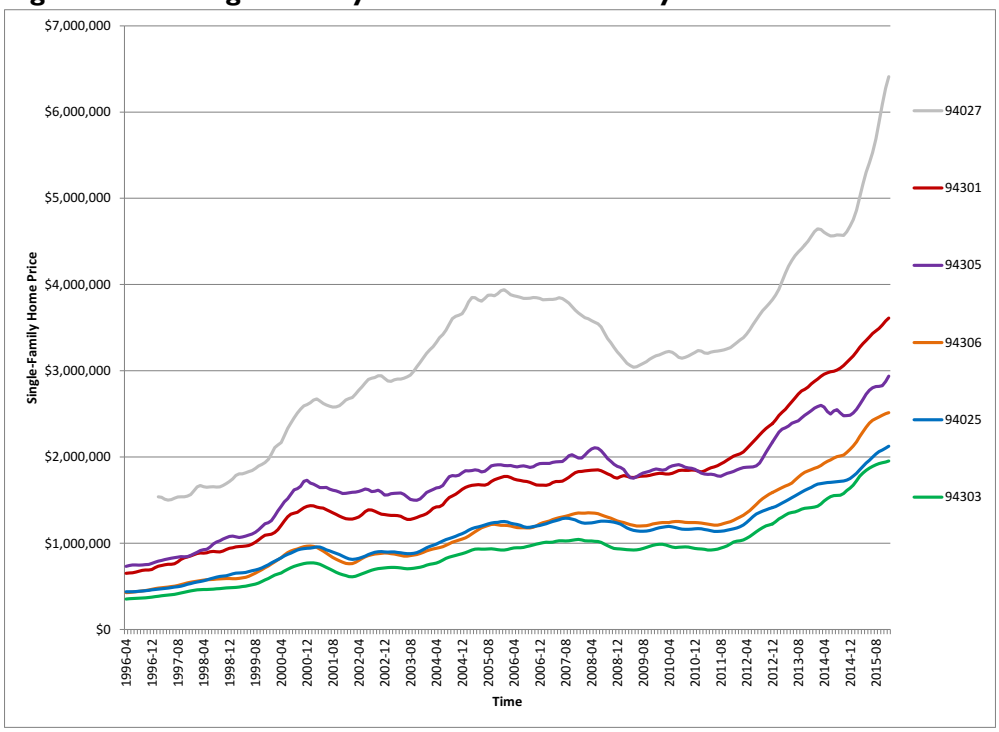
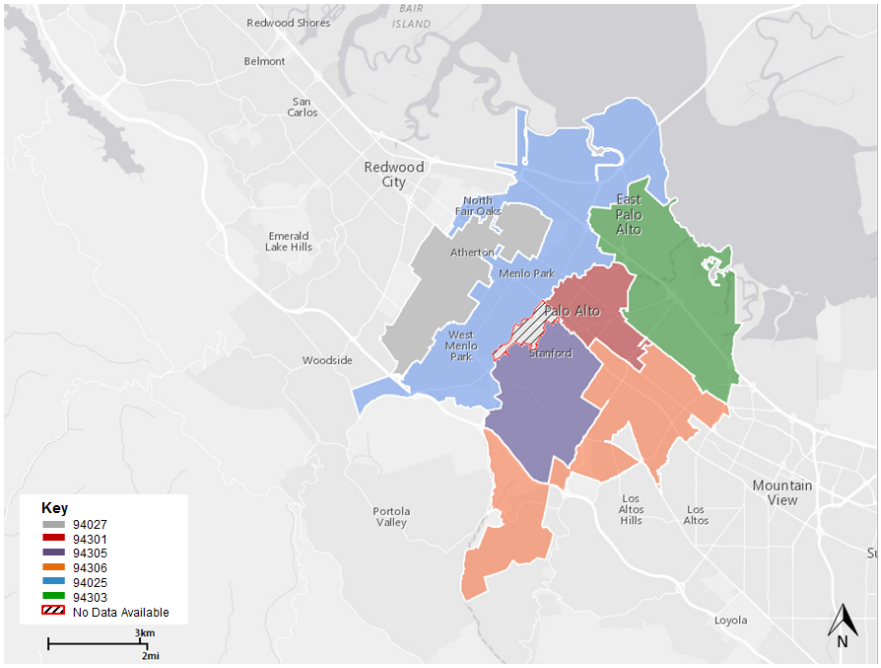


Figure 3-10: Single-Family Home Price Trend by ZIP Code



Source: Zillow Home Value Index

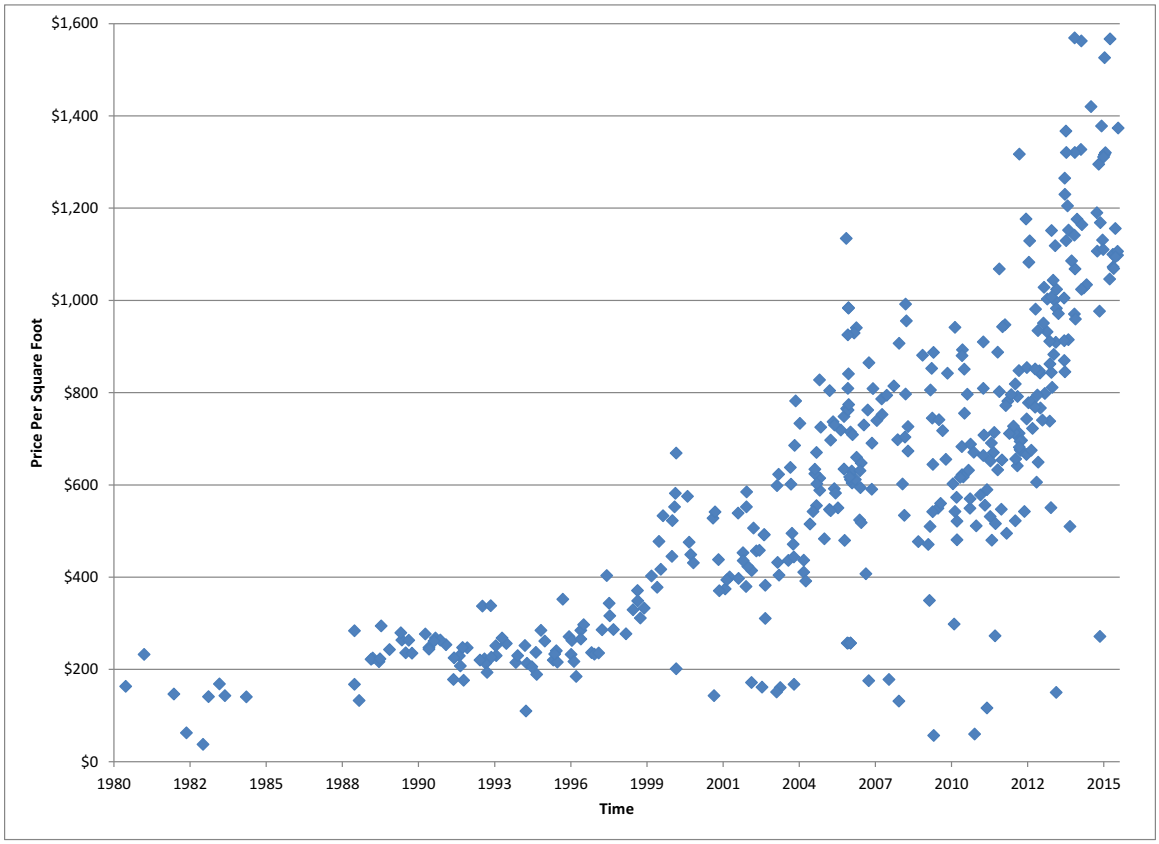
Figure 3-11: Single-Family Home ZIP Code Map



Downtown Residential Sales

A sample of residential transaction data from the Downtown Palo Alto vicinity reveals that recent sales commonly have been well over $1,000 per square foot, with a number of recent transactions between $1,200 and $1,600 per square foot. Figure 3-12 presents condominium and townhome sales data for the Downtown vicinity, including transactions occurring from 1980 through January 2016.[8]

Figure 3-12: Condominium and Townhome Transactions in the Vicinity of Downtown (Price Per Square Foot)



Source: Redfin.com

[8] If a single property has transacted multiple times, only the most recent sale is reported by Redfin and presented here.

PROJECT PROFILES

The following project profiles provide a brief overview for a selection of the for-sale multifamily product types found in and around Downtown Palo Alto. These particular projects were selected to reflect a range of development types, use mixes and densities. The analysis relies on the project profiles included here to inform the development prototypes tested in the Financial Feasibility Analysis (Section 3.4). The project profiles provide important information concerning density, height, land use mix, and parking. Where data are available, building attributes are provided including number of units, year built, number of stories, and how the project provides parking. While all of the projects summarized below (Figure 3-13) are located in Downtown Palo Alto, note that not all are strictly within the Study Area boundary. Additional project profiles are provided in Appendix D.

Figure 3-13: Summary of For-Sale Multifamily Projects in Downtown Palo Alto

Project Name	Number of Units	Year Built	Number of Stories	Parking
Forest Plaza	35	1981	5	Subterranean
621-649 Forest	21	1974	2	Subterranean
Weatherly at University Park	30	2004	4	Subterranean
800 High Street	60	2006	4	Subterranean

Forest Plaza

165-185 Forest Avenue
685 High Street
Palo Alto, CA 94301

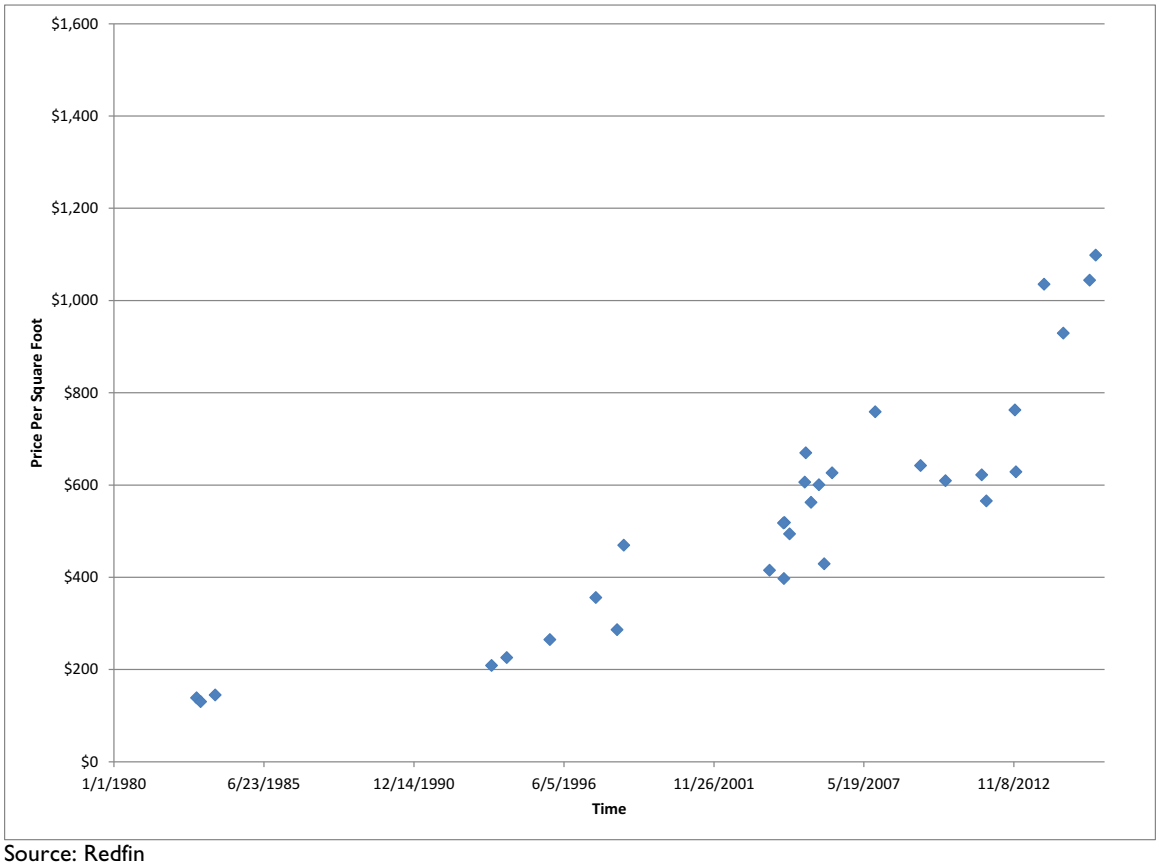
Year Built: 1981

35 Units
5 Stories

Ground Floor Commercial

Subterranean Parking

Figure 3-14 Transactions at Forest Plaza



Source: Redfin

621-649 Forest

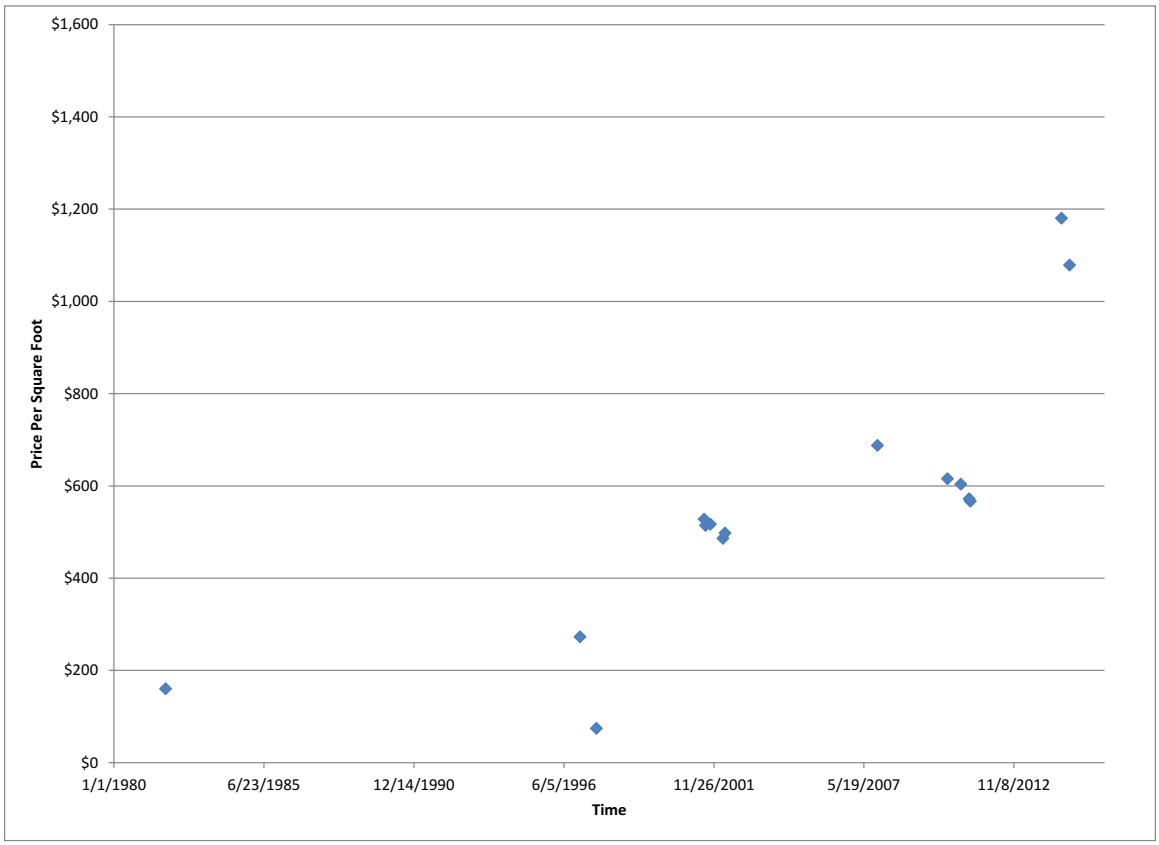
621-649 Forest Avenue
Palo Alto, CA 94301

Year Built: 1974

21 Units
2 Stories

Subterranean parking

Figure 3-15 Transactions at 621-649 Forest



Weatherly at University Park

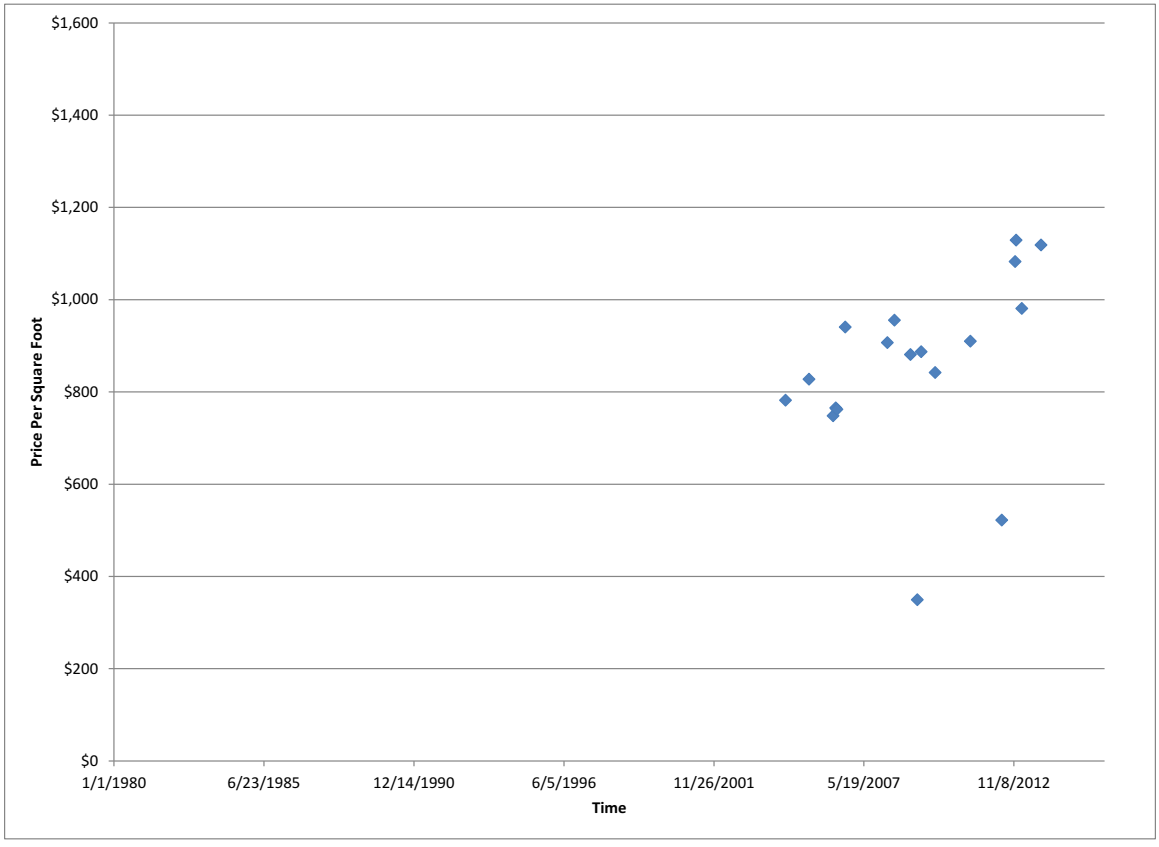
315 Homer
Palo Alto, CA 94301

Year Built: 2004

30 Units
4 Stories

Subterranean parking

Figure 3-16 Transactions at Weatherly at University Park



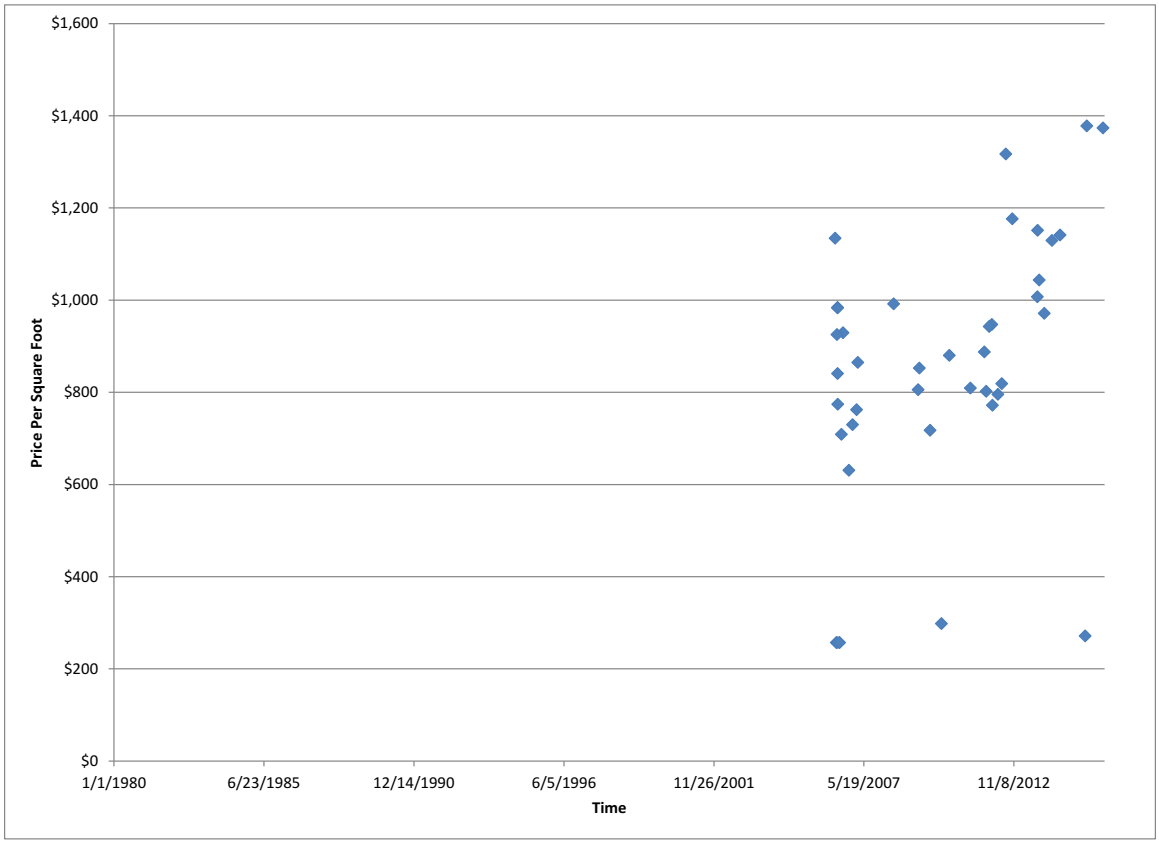
800 High Street

800 High Street
Palo Alto, CA 94301

Year Built: 2006

60 Units
4 Stories

Figure 3-17 Transactions at 800 High Street



OTHER NOTABLE PROJECTS

In addition to the project profiles highlighted in the section above, EPS evaluated relatively recently completed infill developments that were successfully brought to market on small or irregular parcels or in areas that required a mix of uses. The following four projects identify product typologies that could be replicated or modified to fit existing redevelopment sites within the Study Area. Brief descriptions of each development are provided below. Note that two of the development types (the mixed-use condominium over commercial and linear townhome project) help inform the prototypes used for the feasibility analysis.

260 Homer Avenue and 819 Ramona Street

Photo Credit: Menlo Equities

A five-story, mixed-use office and residential project with a steel structure over concrete podium, the building includes a parking structure with 3 levels above grade and two levels subterranean. The first two above grade levels consist of commercial office space and the third level features residential units. Residential units sold for prices ranging from $4 million to $5.5 million (~ $1030 to $1560 PSF) between 2010 and 2012.

The Hamilton

The Hamilton is located at 555 Byron Avenue and was developed in 1997 as senior condominiums. Condominiums sold for between $500-750 per square foot between 2005 and 2007.

Lytton Park

Located on a 9,500 square foot, narrow parcel that included a single story apartment building with 8 units prior to redevelopment, 559 Lytton Avenue was built in 2013. The developer elected to build 4 townhomes in 2 structures. Units include two tuck-under parking spaces each and very high-end finishes. Units have sold for between $1,200 and $1,400 per square foot in 2013.

455 Forest Avenue

Similar to the project on Lytton profiled above, 455 Forest Avenue includes 4 townhome unit located between Cowper Street and Waverly Street. The project includes approximately 9,975 square feet for gross building area on a 10,000 square foot lot. The prior use was a rooming house with a lower FAR though precise square footage for the prior use was not available at the time of this analysis.

265 Lytton Ave

Photo Credit: DES Architects

265 Lytton was constructed in 2012 and features two stories of commercial retail office with the top floor containing 4 residential units. The total square footage of the project is 37,800 The project retained the historic two-story Tinney building and a mature oak tree mid-block on Lytton, with the newly constructed building wrapping around the existing structure and tree in an L-shape, providing an interior courtyard. The project includes 31 parking spaces located in a

subterranean garage. Residential units sold for between $1,100 and $1,500 per square foot in 2011 prior to completion of the project.

135 Hamilton Ave

Photo Credit: Keenan Land Company

Located on a previously vacant, approximately 10,000 square foot lot at the corner of High Street and Hamilton Avenue, the mixed-use project includes a total of 28,085 square feet of rentable/saleable space spread between three floors of retail and Class A office and two residential units located on the top floor. The residential units total approximately 3,000 square feet each. The project includes three levels of underground parking.

3.4 Financial Feasibility Analysis

This study relies on an illustrative pro forma financial analysis to evaluate the potential feasibility of new residential and mixed use real estate development projects in Downtown Palo Alto. The pro forma analysis approximates the cash-flow (i.e., costs and revenues) of prototypical projects to evaluate land value and redevelopment potential.[9] The analysis finds significant value associated with buildable Downtown sites, particularly where large-parcel/site-efficient projects may be developed.

The pro forma analysis provides an illustration of redevelopment potential in the Downtown. By comparing the estimated value of a hypothetical development site (which including an existing building) to the estimated value of new, higher-density buildings (residential and mixed use), the analysis evaluates the range of density and allowable uses that may be needed to justify full, ground-up redevelopment of an existing building.

While the existing residential projects profiled in the section above (additional existing for-sale multifamily projects are profiled in **Appendix A**) in and around Downtown Palo Alto are often located on larger parcels, the reality is that such sites are rare or nonexistent today. Sites zoned for residential uses commonly are relatively small and restrict projects to low development densities. Furthermore, many sites currently contain existing dwelling units. With the observed site supply challenges providing context for analysis, EPS conducted two financial feasibility comparisons, as described below.

1. The first comparison tests whether the development value generated by a diversity of multifamily prototypes is sufficient to overcome the existing value of a single family home. In other words, is the land value generated from new residential development sufficient to overcome the existing value of a residential site, which includes the value of both improvements and land. As noted above, single family home parcels typically are not large enough to support these prototypes. Therefore, the analysis assumes land is assembled and land value and existing value estimates are reported and compared on a per-acre basis.
2. The second methodology compares these same prototypes with sites made up of parcels that are not currently occupied by residential uses and provide sufficient acreage to support new multifamily development. These test sites reflect actual development sites identified Downtown. While the comparison reflects a change of land use (and could involve potential entitlement challenges not captured by the analysis), the exercise provides examples of actual sites that could potentially support new residential and mixed-use products. Both feasibility comparisons are provided in more detail below.

[9] Residual Land Value is a common feasibility metric that considers the market value of a built project and subtracts out the total cost of development (excluding land) to estimate land value.

COMPARISON ONE: RESIDENTIAL AND MIXED-USE REDEVELOPMENT OF EXISTING RESIDENTIAL USES

In this test, the hypothetical existing building considered in the pro forma analysis is a 2,500-square-foot single family residential building on a 5,000 square foot parcel with average rent of $6.00 per square foot. The value of this existing building is estimated at about $2.45 million (about $980 per square foot), as shown in Table 3-15 and detailed in Table 3-16. Table 3-15 also summarizes the resulting value estimates for four distinct redevelopment alternatives, as a basis for comparing the likelihood of various intensification scenarios.

Because the residential prototypes considered require larger parcels (than the 5,000 square foot single family home lot), it is important to note that parcel assembly and/or redevelopment of larger parcels with varying existing uses likely would be required. For the purposes of this analysis, residential land value is compared to existing residential value on a per-acre basis. Assuming parcel assembly is achievable, the per-acre value hurdle associated with the existing residential uses likely is on the order of $21.34 million (i.e., $2.45 million home value multiplied by 8.7 units per acre).

Redevelopment of existing single family structures with an 80,000 square foot residential apartment building appears financially attractive, with the new development supporting approximately $25 million per acre in land value. However, the financial viability of redevelopment is less likely when the replacement project is a lower density product such as the prototype garden apartment studied, which is estimated to support less than $20 million in per-acre land value.

Table 3-15 Summary of Pro Forma Scenarios

				Project Value		Land Value	
Pro Forma Scenario	**Lot Sq. Ft.**	**Building Sq. Ft. (BGA)**	**FAR**	**Total**	**Per Acre**	**Total**	**Per Acre**
Existing Residential	5,000	2,500	0.3	$2,450,000	**$21,344,400**	N/A	N/A
Multifamily Apartment	50,000	80,000	1.6	$79,200,000	N/A	$28,160,000	**$24,530,000**
Commercial/Condo Mixed Use Building	17,000	25,000	1.5	$26,630,000	N/A	$10,560,000	**$27,070,000**
Garden Apartment	30,000	30,000	1.0	$32,090,000	N/A	$13,720,000	**$19,920,000**
Linear Townhome	10,000	8,000	0.8	$10,550,000	N/A	$5,510,000	**$24,000,000**

The first feasibility comparison test analysis considers new development of a prototypical 80,000-square-foot apartment building with structure subterranean parking on a 50,000 square foot parcel. The analysis assumes rent of $6.50 per square foot per month. In this example, pro forma analysis of the new building suggests a residual land value of about $28.2 million or about $24.5

million on a per-acre basis, greater than the per acre total value of the existing building of approximately $21.3 million (see **Figure 3-17-17**).[10] In cases where the residual land value of the new project is greater than the total value of the existing property, there is economic rationale for the current owner to redevelop the property or sell the property to a developer (recognizing, however, that property owners have a variety of investment goals as well as non-financial motivations).

In the second feasibility test, we evaluate the potential value of a 25,000-square-foot mixed-use project with subterranean parking. The analysis assumes an average commercial rental rate of $6.75 per square foot per month and four for-sale residential units valued at $1,600 per square foot. In this example, the analysis estimates the value of the mixed-use project at nearly $27 million, with a residual land value per acre of about $27.1 million. In this test, the combination of high commercial rents, high condominium price points, and densification from 0.3 FAR to 1.5 FAR, the residual land value exceeds the per acre value of the existing residential uses (see **Figure 3-18**).

In the third test, we evaluate the potential value of a 30,000-square-foot garden apartment-style residential project with subterranean parking. The analysis assumes an average rent of $6.50 per square foot per month. In this example, the analysis estimates the value of the project at about $32.1 million, with a residual land value of about $19.9 million per acre. However, despite the increase in FAR (0.3 FAR to 1.0 FAR) and high residential rents, the addition of 0.7 FAR (over the existing single-family use) is insufficient to achieve residual land value that exceeds the value of the existing single family use (see **Figure 3-19**). This primarily is due to the relatively low density of the garden apartment prototype, the high cost of construction, and the high hurdle value associated with the existing residential uses.

In the fourth feasibility test, we evaluate the potential value of a 10,000-square-foot, four-unit townhome project with "tuck under" parking. The analysis assumes market pricing averages $1,600 per square foot. In this example, the analysis estimates the value of the project at approximately $10.6 million, with per-acre residual land value of about $24 million. In this example, despite the relatively modest increase in FAR (0.3 FAR to 0.8 FAR), the high value of the project and modest cost, primarily due to the cost of parking, are sufficient to exceed the value of the existing use (see **Figure 3-20**).

Given analytical assumptions that run proportionally with site development intensity (FAR), the pro forma analysis is generally scalable. That is, the study finds that in general a developer may be willing to buy existing, functional residential buildings and demolish them to construct new higher-value buildings that are three to four times the size of the original structure. However, as shown in the garden apartment prototype example, despite a tripling of FAR, the residual land value is insufficient to overcome the value of the existing residential use.

The hypothetical cash flow analyses presented here are designed as illustrative examples and are based on highly-generic, prototypical projects. Actual development outcomes on specific sites will

[10] Note that the capitalization rate for a new building is assumed to be lower than an existing building, due to the risk of obsolescence associated with the older structure.

vary widely depending on a variety of unique and unknown factors, including but not limited to the entitlement process, property attributes (e.g., size, condition, geometry, and location), ownership considerations, existing uses, and other factors.

Table 3-16 Valuation of Hypothetical Existing Residential Building

DEVELOPMENT PROGRAM ASSUMPTIONS			
Site (Square Feet)			5,000
FAR			0.50
Gross Building Area (Square Feet)			2,500
Rentable Area (Square Feet)	100%	of GBA	2,500
BUILDING VALUE			
Gross Potential Rent (FS)	$6.00	per SF/Month	$180,000
Gross Revenue			$180,000
Operating Expenses	$1.50	per SF/Month	-$45,000
Net Operating Income			$135,000
Income Capitalization	5.50%	Capitalization Rate	$2,454,545
Building Value			**$2,454,545**

Figure 3-17 Residual Land Valuation of Hypothetical New Apartment Building

DEVELOPMENT PROGRAM ASSUMPTIONS			
Site (Square Feet)			50,000
Residential Units			80
Gross Building Area (Square Feet)	1,000	SF per Unit	80,000
Rentable Area (Square Feet)	85%	of GBA	68,000
Parking Spaces	1.00	per Unit	80
BUILDING VALUE			
Gross Potential Rent (FS)	$6.50	per SF/Month	$5,304,000
Losses to Vacancy	5.0%	of GPR	-$265,200
Other Revenue (Parking)	$50	per Space/Month	$48,000
Gross Revenue			$5,086,800
Operating Expenses	$10,000	per Unit	-$800,000
Net Operating Income			$4,286,800
Building Value	5.25%	Capitalization Rate	$81,653,333
Disposition Cost	3.0%	of Building Value	-$2,449,600
Net Building Value			**$79,203,733**
DEVELOPMENT COSTS			
Construction Costs			
Basic Site Work	$40	per site SF	$2,000,000
Building Direct Cost	$275	Cost/SF (GBA)	$22,000,000
Parking Direct Cost	$75,000	per Space	$6,000,000
Total Construction Cost			*$30,000,000*
Soft Costs			
Architecture and Engineering	10.0%	of Construction Cost	$3,000,000
Entitlement	$20	Cost/SF (GBA)	$1,360,000
Other Professional Services	5.0%	of Construction Cost	$1,500,000
Permits and Fees	$50	Cost/SF (GBA)	$3,400,000
Taxes and Insurance	2.0%	of Construction Cost	$600,000
Financing	4.0%	of Construction Cost	$1,200,000
Total Soft Costs			*$11,060,000*
Developer Costs			
Marketing/Leasing	3.0%	of Hard and Soft Costs	$1,231,800
Developer Fee (overhead)	3.0%	of Hard and Soft Costs	$1,231,800
Developer Contingency	5.0%	of Hard and Soft Costs	$2,053,000
Total Developer Costs			*$4,516,600*
Total Development Cost			**$45,576,600**
LAND VALUE			
Developer Return Requirement	12%	of Development Cost	$5,469,192
Residual Land Value	**$352**	**per square foot (GBA)**	**$28,157,941**
	$24,531,198	per acre	

Figure 3-18 Residual Land Valuation of Hypothetical New Commercial/Condo Mixed-Use Building

DEVELOPMENT PROGRAM ASSUMPTIONS			
Site (Square Feet)			17,000
Building Footprint			12,000
FAR			1.5
Gross Building Area (Square Feet)			25,000
Residential Square Footage			7,200
Commercial Square Footage (less Res. Amenity)			16,800
Rentable Area (Square Feet)	90%	of GBA	15,120
Parking Spaces			23
BUILDING VALUE			
Residential (Four Units)	$1,600	per SF	$10,240,000
Commerical	$6.75	per SF/Month (FS)	$1,224,720
Losses to Vacancy	5.0%	of GPR	-$61,236
Other Revenue (Parking)	$50	per Space/Month	$12,480
Gross Revenue			$1,175,964
Operating Expenses	$1.50	per SF/Month	-$272,160
Net Operating Income			$903,804
Building Value	5.25%	Capitalization Rate	$27,455,314
Disposition Cost	3.0%	of Building Value	-$823,659
Net Building Value			**$26,631,655**
DEVELOPMENT COSTS			
Construction Costs			
Basic Site Work	$40	per site SF	$680,000
Building Direct Cost			
Residential Component	$285	Cost/SF (GBA)	$2,052,000
Office Component	$240	Cost/SF (GBA)	$4,032,000
Parking Direct Cost	$75,000	per Space	$1,710,000
Total Construction Cost			*$8,474,000*
Soft Costs			
Architecture and Engineering	10.0%	of Construction Cost	$847,400
Entitlement	$20	Cost/SF (GBA)	$500,000
Other Professional Services	5.0%	of Construction Cost	$423,700
Permits and Fees	$50	Cost/SF (GBA)	$1,250,000
Taxes and Insurance	2.0%	of Construction Cost	$169,480
Tenant Improvements	$40	Cost/SF (GBA)	$672,000
Financing	4.0%	of Construction Cost	$338,960
Total Soft Costs			*$4,201,540*
Developer Costs			
Marketing/Leasing	3.0%	of 10-yr. lease value/unit sale	$656,245
Developer Fee (overhead)	3.0%	of Hard and Soft Costs	$380,266
Developer Contingency	5.0%	of Hard and Soft Costs	$633,777
Total Developer Costs			*$1,670,288*
Total Development Cost			**$14,345,828**
LAND VALUE			
Developer Return Requirement	12%	of Development Cost	$1,721,499.41
Residual Land Value	**$423**	**per square foot (GBA)**	**$10,564,327**
	$27,069,534	per acre	

Figure 3-19 Residual Land Valuation of Hypothetical New Garden Apartment

DEVELOPMENT PROGRAM ASSUMPTIONS			
Site (Square Feet)			30,000
Residential Units			30
Gross Building Area (Square Feet)	1,000	SF per Unit	30,000
Rentable Area (Square Feet)	90%	of GBA	27,000
Parking Spaces	1.00	per Unit	30
BUILDING VALUE			
Gross Potential Rent (FS)	$6.50	per SF/Month	$2,106,000
Losses to Vacancy	5.0%	of GPR	-$105,300
Other Revenue (Parking)	$100	per Space/Month	$36,000
Gross Revenue			$2,036,700
Operating Expenses	$10,000	per Unit	-$300,000
Net Operating Income			$1,736,700
Building Value	5.25%	Capitalization Rate	$33,080,000
Disposition Cost	3.0%	of Building Value	-$992,400
Net Building Value			**$32,087,600**
DEVELOPMENT COSTS			
Construction Costs			
Basic Site Work	$40	per site SF	$1,200,000
Building Direct Cost	$240	Cost/SF (GBA)	$7,200,000
Parking Direct Cost	$75,000	per Space	$2,250,000
Total Construction Cost			*$10,650,000*
Soft Costs			
Architecture and Engineering	10.0%	of Construction Cost	$1,065,000
Entitlement	$20	Cost/SF (GBA)	$540,000
Other Professional Services	5.0%	of Construction Cost	$532,500
Permits and Fees	$50	Cost/SF (GBA)	$1,350,000
Taxes and Insurance	2.0%	of Construction Cost	$213,000
Financing	4.0%	of Construction Cost	$426,000
Total Soft Costs			*$4,126,500*
Developer Costs			
Marketing/Leasing	3.0%	of Hard and Soft Costs	$443,295
Developer Fee (overhead)	3.0%	of Hard and Soft Costs	$443,295
Developer Contingency	5.0%	of Hard and Soft Costs	$738,825
Total Developer Costs			*$1,625,415*
Total Development Cost			**$16,401,915**
LAND VALUE			
Developer Return Requirement	12%	of Development Cost	$1,968,230
Residual Land Value	**$457**	**per square foot (GBA)**	**$13,717,455**
	$19,917,745	per acre	

Figure 3-20 Residual Land Valuation of Hypothetical New Linear Townhome

DEVELOPMENT PROGRAM ASSUMPTIONS			
Site (Square Feet)			10,000
Residential Units			4
Gross Building Area (Square Feet)	2,000	SF per Unit	8,000
Saleable Area (Square Feet)	85%	of GBA	6,800
Parking Spaces	2.00	per Unit	8
BUILDING VALUE			
Residential Revenue	$1,600	per SF	$10,880,000
Building Value			$10,880,000
Disposition Cost	3.0%	of Building Value	-$326,400
Net Building Value			**$10,553,600**
DEVELOPMENT COSTS			
Construction Costs			
Basic Site Work	$40	per site SF	$400,000
Building Direct Cost	$270	Cost/SF (GBA)	$2,160,000
Parking Direct Cost	$50,000	per Space	$400,000
Total Construction Cost			*$2,960,000*
Soft Costs			
Architecture and Engineering	10.0%	of Construction Cost	$296,000
Entitlement	$20	Cost/SF (GBA)	$136,000
Other Professional Services	5.0%	of Construction Cost	$148,000
Permits and Fees	$50	Cost/SF (GBA)	$340,000
Taxes and Insurance	2.0%	of Construction Cost	$59,200
Financing	4.0%	of Construction Cost	$118,400
Total Soft Costs			*$1,097,600*
Developer Costs			
Marketing/Leasing	3.0%	of Hard and Soft Costs	$121,728
Developer Fee (overhead)	3.0%	of Hard and Soft Costs	$121,728
Developer Contingency	5.0%	of Hard and Soft Costs	$202,880
Total Developer Costs			*$446,336*
Total Development Cost			**$4,503,936**
LAND VALUE			
Developer Return Requirement	12%	of Development Cost	$540,472
Residual Land Value	**$689**	**per square foot (GBA)**	**$5,509,192**
	$23,998,039	per acre	

COMPARISON TWO: RESIDENTIAL AND MIXED-USE REDEVELOPMENT OF OPPORTUNITY SITES

In order to better test the potential for redevelopment of existing uses with new residential and mixed-use projects Downtown, EPS selected two opportunity sites on which prototype projects might be developed. This test provides another perspective on residential development feasibility.

The first site selected is located on University Avenue and is approximately 17,000 square feet. The existing structure is approximately 17,000 square feet in rentable building area and is used as commercial retail. The pro forma analysis comparison assumes the site would be redeveloped as a commercial/condominium residential mixed-use building with 25,000 square feet of saleable/rentable building area. Despite site intensification, the residual land values generated by the new mixed-use project are only slightly higher than the existing building value. The analysis assumes the existing use is valued at $650 per square foot. The outcome of the analysis is attributable to the high value associated with existing uses in this location as well as the parking requirements in the redeveloped structure (the existing use does not currently have on-site parking). **Figure 3-21** presents the results of opportunity site testing.

The second opportunity site tested assumes a parcel assembly of three small- to mid-size parcels to create a 30,000 square foot development parcel. The existing uses on the site include low intensity commercial with surface parking. The total existing building square footage of the second opportunity site (aggregate across three parcels) is approximately 19,000. As shown in **Figure 3-21**, the garden apartment prototype generates higher residual land values than the value the existing uses. This result occurs despite the finding that the garden apartment prototype generates the lowest per-acre land value of the four residential prototypes assessed (see **Figure 3-15**). This outcome is largely attributable to the existing uses present within the second opportunity site are relatively low intensity (single story buildings and surface parking). However, it also should be noted that the parcel assembly and/or permitting for residential uses for this site could pose significant development challenges and require significant entitlement costs.

Figure 3-21 Case Study/Opportunity Site Analysis

Case Study/Opportunity Sites	Site Square Footage	Building SF	Building Value per SF	Building Value	Land Value
Existing Development #1	17,000	16,000	$650	**$10,400,000**	
Commercial/Condo Mixed Use	17,000	25,000	$1,098	$26,630,000	**$10,560,000**
Existing Development #2	30,000	19,000	$650	**$12,350,000**	
Garden Apartment	30,000	30,000	$1,103	$32,090,000	**$13,720,000**

4 Key Findings

4.1 Residential Site Assessment and Development Capacity

The first section of this report aims to identify the potential to add residential units, in addition to Housing Element's projection, in the Downtown study area through comprehensive site-based analyses. Ultimately, the analyses should help determine the maximum possible opportunity sites for new residential mixed-use projects, and further accommodate the projected population growth in both Downtown and the City of Palo Alto. Analyses in this chapter find the following:

- **Realistic Development Capacity under Current Zoning.** Scenarios A and B show a rather limited development capacity in downtown – 17 and 22 percent, respectively, of the theoretical capacity determined by zoning. Eligible sites, however, dropped by roughly 80 percent after excluding sites with high AV ratio, high-value office buildings, and historic/potentially historic buildings, among other factors. Small lot sizes also limit the development potential of the remaining parcels. This indicates that Downtown capacity is restricted primarily by the fact that Downtown is fairly well built-out with existing high-value property development.
- **Development Capacity and Provision of Affordable Housing.** Scenarios A and B may yield 457 and 557 units, respectively, if both the existing Housing Element sites and additional sites identified by the development scenarios achieve the maximum density bonus by including affordable housing. However, many factors, including construction cost, financing, market demand, and site constraints, will ultimately determine whether it is physically and financially feasible to include affordable units on each site.
- **Parking**. The total parking requirement for the additional housing units in Downtown varies greatly based on the number of bedrooms per unit and the total number of units included on each site. Most sites, restricted by lot size and configuration, will likely have to provide parking in an underground structure, or take advantage of State Density Bonus Law parking requirements, which impacts project feasibility because of its cost.
- **Development Capacity Relative to Housing Element Sites in San Antonio Area.** Even when more liberal parameters are applied, the Downtown study area does not have enough sites to accommodate the housing units currently allocated to the San Antonio/South El Camino Real area in the City's most recent Housing Element. This is the case even if it is assumed that sites take advantage of the State Density Bonus.

4.2 Residential Market Study and Pro Forma Analysis

The second section of this report focuses on the residential market in Downtown Palo Alto. It begins with a look at citywide trends and the City's strength relative to neighboring communities, then turns to the Downtown study area. The analysis includes an evaluation of the market performance of existing residential products, including a range of multifamily projects developed over recent decades. The market data are then used to inform a high-level residential real estate feasibility analysis that tests the economic viability of new housing development in the Downtown. Specifically, this study evaluates the range of product types, densities, and allowable uses that may be needed to justify full, ground-up redevelopment of an existing building. Key findings from this analysis include:

- **Overcoming Existing High Values.** Downtown Palo Alto features a mix of uses at varying densities with very few remaining vacant parcels. While the pro forma analysis indicates that current market trends do support higher density residential uses, ground-up new construction will need to support the high cost of construction, and also, due to the limited land supply, the value of an existing use. The findings from this analysis indicate that a ground-up project generally must at least double the existing density to overcome the high value of an existing use. In the pro forma analyses, residential developments exhibiting the greatest financial feasibility typically had FARs greater than 1.0. Currently, allowable FAR for residential development in the Downtown ranges from 0.5 (in the CD-N district) to 1.3 (in the RT-50 district).
- **Importance of Parcel Size and Development Standards.** Many multifamily residential development examples found in the market are located either on large parcels, or on parcels with fewer or less stringent development standards (setbacks, height, and upper-story step-backs, etc.). Identifying potential development opportunity parcels that also have low-density, low-value existing uses can prove challenging. Supporting this notion, most of the significant residential projects Downtown were developed in the 1960s through the 1980s. Going forward, residential redevelopment projects likely will require assemblage of smaller residential parcels, redevelopment of nonresidential uses on larger sites, or relaxed development standards to support multifamily residential development.

4.3 General Conclusions

The planning and real estate work conducted as part of this study suggests that a key limitation to the construction of new, residential and residential/mixed-use projects in Downtown Palo Alto is not a lack of market demand but rather a dearth of supply of suitable redevelopment sites. While sites in the Downtown, developed at their theoretical maximum under current zoning, have substantial capacity, realistic capacity (based on a range of physical site characteristics and existing uses) is considerably lower. The combination of limiting physical characteristics, the large hurdle of overcoming the value of existing uses, and the strength of competing uses (specifically for office space) makes significant residential development in Downtown Palo Alto a challenge.

If the City is interested in supporting increased residential infill development, particularly the redevelopment of existing uses Downtown, then strategies may include increasing allowable

residential densities; reducing parking requirements; and/or reducing building setbacks. On large sites with low-density existing commercial uses, these measures may help to overcome high land values and provide sufficient financial incentive for the real estate development community to invest in new residential projects, given current market conditions. Creating incentives for parcel assembly through zoning or other mechanisms would also help overcome one of the large barriers to housing construction in Downtown Palo Alto.

The City should not rely on the Downtown area to absorb the housing units currently associated with the San Antonio/South El Camino Real area, at least as long as current economic conditions continue to place a premium on office development Downtown. Increasing allowable density/FAR for residential projects would improve Downtown's potential residential capacity, but site constraints would persist, as described above. Palo Alto should actively support housing development in as many locations citywide as is feasible and appropriate, while letting various districts in the city continue to foster mixed use development near transit that will improve the balance of housing, jobs, and commercial opportunities for residents and workers.

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