



Bureau of Planning and Sustainability

Innovation. Collaboration. Practical Solutions.

---

## MEMO

**DATE:** March 9, 2020

**TO:** Residential Infill Project Team

**FROM:** Tom Armstrong, Supervising Planner, Andrea Pastor, Economic Planner

**CC:**

**SUBJECT:** Deeper Affordability Bonus Feasibility Study

---

### Background

This memo examines the development feasibility of a bonus that increases the maximum FAR to 1.2 for small multifamily buildings with up to six units, where half the units are intended for below market sale or rent to households earning less than 60% Median Family Income (\$52,740 for a family of four in 2019<sup>1</sup>).

This analysis finds that the Deeper Affordability option is not economically feasible without other affordable housing incentives. Therefore, the expectation is that this option would not be utilized by private developers. However, the bonus could be a helpful incentive for nonprofit affordable housing developers.

### Key Questions

- Will raising the FAR bonus to 1.2 increase the feasibility of affordable units for rent or for purchase?
- What is the feasibility gap for a six-plex with three affordable units in different parts of the city?

### Assumptions

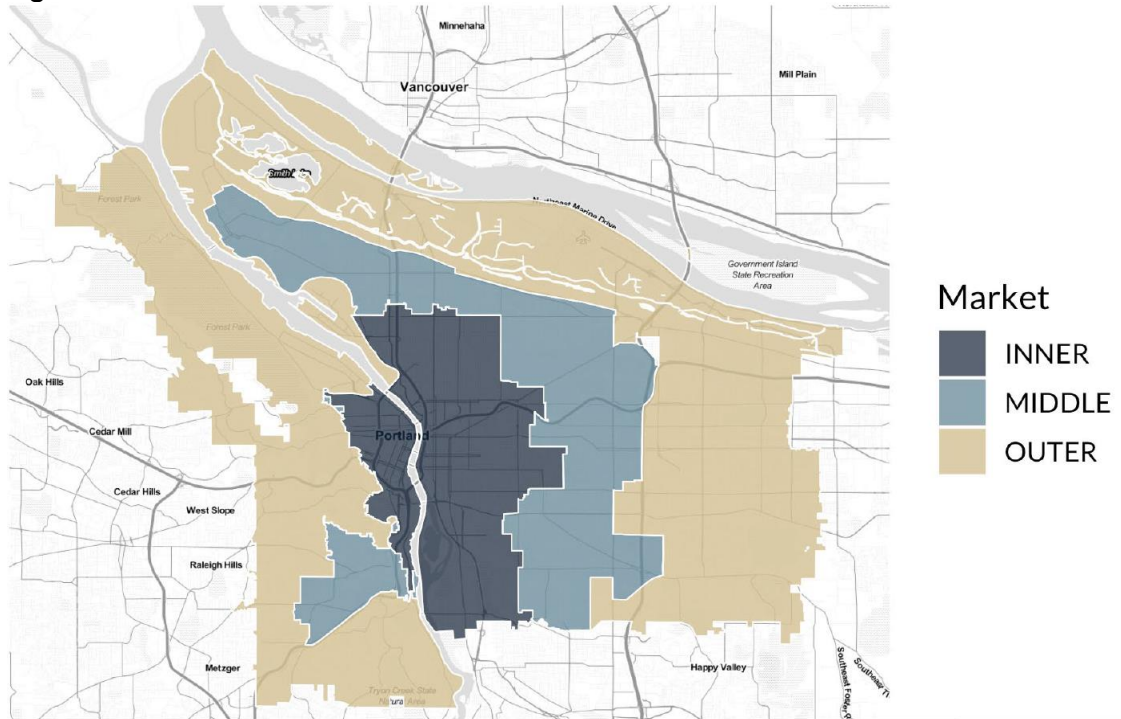
This memo examines how the increased FAR bonus will impact feasibility and the likelihood of development in three broad market areas for comparison. Affordable units are priced the same citywide.

---

<sup>1</sup> Portland Housing Bureau, 2019. <https://beta.portland.gov/phb/income-rent-and-utility-limits>



**Figure 1. Portland Market Areas**



Source: ECONorthwest Analysis for City of Portland, 2019.

- **Property Tax Waivers.** Affordable units are assumed to be exempt from property taxes for 10 years. The net present value of that exemption has been discounted from the cost of construction.
- **Development incentives.** This analysis assumes that System Development Charges (SDCs) and the Construction Excise Tax (CET) will be waived for the units that will be regulated as affordable.
- **Unit mix.** Each unit in the six-plex model is assumed to be the same square footage. Units in this study are all assumed to be 850 sq. ft. and have two bedrooms and one bath.
- **Development costs.** This analysis assumes that the development of a six-plex will trigger commercial building code requirements, increasing the cost per square foot to \$225 for hard and soft costs combined.
- **Return on Cost Threshold.** Assumed to be 6.33% for rental, and 15% for ownership properties, per earlier work done by Johnson Economics.<sup>2</sup>
- **Market Rents.** This work establishes three major geographic zones to estimate market rents per square foot for Inner, Middle and Outer market areas in Portland. These market areas correspond to the rent ranges used in the ECONorthwest feasibility analysis of the affordable four-plex 0.1 FAR bonus<sup>3</sup>. Rents have been relatively flat since late 2018, so this memo uses the same rents for consistency.

<sup>2</sup> Johnson Economics, (2018, November 29). Johnson Economics Memo to the City of Portland, Retrieved from [https://beta.portland.gov/sites/default/files/2019-12/vol\\_3\\_appendix\\_a\\_revised\\_economic\\_analysis.pdf](https://beta.portland.gov/sites/default/files/2019-12/vol_3_appendix_a_revised_economic_analysis.pdf).

<sup>3</sup> ECONorthwest, (2019, July 31). ECONorthwest Memo to the City of Portland, Feasibility Results for Affordability Bonus on Fourplex Development.



- **Affordability Threshold and Affordable Rents/Ownership.** The affordability thresholds used in this analysis are 60% MFI for rental units, and 80% MFI for ownership units. Ownership units assume a 5% down payment, 30-year mortgage with a fixed 5.25% interest, a \$200 monthly HOA, and all in expenses no greater than 30% of the income for a three-person household.

**Table 1. Development Assumptions Varied By FAR Bonus and Tenancy**

Requirements	4-plex Rental	6-plex rental	4-plex Owner	6-plex owner
Development Charges	Not Waived	Waived*	Not Waived	Waived*
Property Taxes	Not Exempted	Exempted*	Not Exempted	Not Exempted
FAR	0.7	1.2	0.7	1.2
Unit Size	731 sq ft.	850 sq ft.	731 sq ft.	850 sq ft.
	<b>Market Rate Rents (per sq ft)</b>		<b>Market Price (per sq ft)</b>	
Inner	\$2.32	\$2.32	\$372	\$372
Middle	\$2.05	\$2.05	\$330	\$330
Outer	\$1.54	\$1.54	\$275	\$275
	<b>Affordable Rents at 60% MFI</b>		<b>Affordable Purchase Price at 80% MFI</b>	
Citywide	\$1,118/month	\$1.32/sf	\$212,626	\$250/sf

\*Waiver or exemption only applies to affordable units  
Source: BPS, Johnson Economics.

## Results

This analysis finds that the affordable six-plex is not financially feasible in the current market. The increase in the rental revenue that can be achieved through larger square footage in market-rate units does not offset the higher development costs associated with building a larger structure. Achievable rent for the affordable units does not increase unless the bedroom count increases.<sup>4</sup>

Development of a six-plex with the 1.2 FAR bonus only produces a positive residual land value in Portland’s Inner market area, but that positive residual value is less than the values for triplex or fourplex in the ECONorthwest memo. For example, in the Inner market area a market-rate developer could afford to buy a 5,000sf lot (with an existing home) for \$322,300 to build a triplex, but could only spend about \$91,700 for a lot to build an affordable six-plex.

<sup>4</sup> Portland Housing Bureau, Inclusionary Housing: A Comprehensive Guide. <https://beta.portland.gov/inclusionary-housing/inclusionary-housing-comprehensive-guide#toc-regulatory-options>. The Portland Housing Bureau has policies dictating parity between market-rate and affordable units for the Inclusionary Housing program. For simplicity’s sake, we assume that all units have units that have the same square footage and bedroom count, however we acknowledge it is possible that different permutations of unit mix within a six-plex will yield different feasibility results.



**Table 2. Residual Land Value by FAR Bonus, Location and Tenancy**

Location	FAR 1.2 Rental		FAR 1.2 Owner	
Inner	\$91,750	\$18/sf	\$46,700	\$9/sf
Middle	-\$45,103	-\$9/sf	-\$55,000	-\$11/sf
Outer	-\$336,000	-\$67/sf	-\$188,300	-\$38/sf

Source: City of Portland, BPS.

An analysis of property sales from 2016-2019 shows that there were no sales in the Inner Portland geography for a 5,000 sq ft lot for under that residual land value. The results are similar in the case of development for units intended to be sold for purchase. Under the larger proposed density bonus of 1.2 FAR this prototype is only feasible in the Inner Portland market. The difference again is due to the higher risk involved in developing projects for sale, which in turn require higher returns to be sufficiently enticing to most private developers.

**Table 3. Property Sales of 5,000 sq ft lots by Geography**

Share of sales	Inner	Middle	Outer
Under \$400K	5%	39%	64%
Under \$300K	0%	9%	21%
Under \$200K	0%	1%	3%
Under \$100K	0%	<1%	<1%

Source: BPS analysis of data from RMLS and Residential Tax Lot Data for 2016-2019

### Discussion

None of the affordable six-plex rental development has a residual land value likely to cover the market rate cost of a lot of single-family zoned land in today’s market in Portland. The deeper affordability FAR bonus is likely to be used primarily by nonprofit housing developers that have alternate development models, potential access to land at below market rate, and different sources of financing.

The highest residual land values for the types of six-plex developments modeled in this analysis was found for developments to be rented. Therefore, the six-plex developments that may occur using a FAR affordability bonus are more likely to be offered as rental units rather than developed for ownership.



**Summary Pro forma  
Rental 6-plex-Inner Portland Market**

		<b>Unit Mix</b>	<b>Size (sq ft)</b>	<b>Rent</b>	<b>Rent psf</b>
Hard + Soft Costs	\$1,350,000	3- Market rate 2 bd/ 1 bath	850	\$1,972	\$ 2.32
Fee exemption (SDC, CET)	-\$104,949	3- Affordable 2 bd/1 bath	850	\$1,118	\$ 1.32
NPV of 10 year prop tax	-\$73,749				
		Vacancy	5%		
Interest rate	5.5%	Effective gross income	\$105,678		
Construction interest	\$29,700	Operating costs	\$33,817		
<b>Total Development Cost</b>	<b>\$1,201,002</b>	Net operating income	<b>\$71,861</b>		
Cap rate	5.25%	Number of units	6		
Value	\$1,368,782	Lot Size sq ft	5000		
Return on cost hurdle	\$76,023	Zoning	R-5		
		FAR	1.2		
Residual land value	\$91,756	Gross building sq ft	6,000		
Residual land value (psf)	\$18	Efficiency ratio	0.85		

**Rental 6-plex-Middle Portland Market**

		<b>Unit Mix</b>	<b>Size (sq ft)</b>	<b>Rent</b>	<b>Rent psf</b>
Hard + Soft Costs	\$1,350,000	3- Market rate 2 bd/ 1 bath	850	\$1,743	\$2.05
Fee exemption (SDC, CET)	-\$104,949	3- Affordable 2 bd/1 bath	850	\$1,118	\$1.32
NPV of 10 year prop tax	-\$73,749				
		Vacancy	5%		
Interest rate	5.5%	Effective gross income	\$97,829		
Construction interest	\$29,700	Operating costs	\$31,305		
<b>Total Development Cost</b>	<b>\$1,201,002</b>	Net operating income	<b>\$66,524</b>		
Cap rate	5.40%	Number of units	6		
Value	\$1,231,922	Lot Size sq ft	5000		
Return on cost hurdle	\$76,023	Zoning	R-5		
		FAR	1.2		
Residual land value	-\$45,103	Gross building sq ft	6,000		
Residual land value (psf)	-\$9	Efficiency ratio	0.85		



<b>Rental 6-plex-Outer Portland Market</b>					
		<b>Unit Mix</b>	<b>Size (sq ft)</b>	<b>Rent</b>	<b>Rent psf</b>
Hard + Soft Costs	\$1,350,000	3- Market rate 2 bd/ 1 bath	850	\$1,309	\$1.54
Fee exemption (SDC, CET)	-\$104,949	3- Affordable 2 bed/1 bath	850	\$1,118	\$1.32
NPV of 10 year prop tax	-\$73,749				
		Vacancy	5%		
Interest rate	5.5%	Effective gross income	\$83,003		
Construction interest	\$29,700	Operating costs	\$26,561		
<b>Total Development Cost</b>	<b>\$1,201,002</b>	Net operating income	\$56,442		
Cap rate	6.00%	Number of units	6		
Value	\$940,705	Lot Size sq ft	5000		
Return on cost hurdle	\$76,023	Zoning	R-5		
		FAR	1.2		
Residual land value	-\$336,320	Gross building sq ft	6,000		
Residual land value (psf)	-\$67	Efficiency ratio	0.85		

<b>Owner 6-plex Inner Portland Market</b>					
		<b>Unit Mix</b>	<b>Size (sq ft)</b>	<b>Sale Price</b>	<b>Rent psf</b>
Hard + Soft Costs	\$1,350,000	3- Market rate 2 bd/ 1 bath	850	\$316,200	\$372
Fee exemption (SDC, CET)	-\$104,949	3- Affordable 2 bd/1 bath	850	\$212,626	\$250
Interest rate	5.0%				
		Transaction cost	\$79,324		
Construction interest	\$24,901	Gross proceeds	\$1,507,154		
<b>Total Development Cost</b>	<b>\$1,269,952</b>				
Net Proceeds	\$237,202	Number of units	6		
Return on cost threshold	\$190,493	Lot Size sq ft	5000		
		Zoning	R-5		
		FAR	1.2		
Residual land value	\$46,709	Gross building sq ft	6,000		
Residual land value (psf)	\$9	Efficiency ratio	0.85		



**Owner 6-plex  
Middle Portland Market**

		<b>Unit Mix</b>	<b>Size (sq ft)</b>	<b>Sale Price</b>	<b>Rent psf</b>
Hard + Soft Costs	\$1,350,000	3- Market rate 2 bd/ 1 bath	850	\$280,500	\$330
Fee exemption (SDC, CET)	-\$104,949	3- Affordable 2 bd/1 bath	850	\$212,626	\$250
Interest rate	5.0%				
		Transaction cost	\$73,969		
Construction interest	\$24,901	Gross proceeds	\$1,405,409		
<b>Total Development Cost</b>	<b>\$1,269,952</b>				
Net Proceeds	\$135,457	Lot Size sq ft	5000		
Return on cost threshold	\$190,493	Zoning	R-5		
		FAR	1.2		
		Gross building sq ft	6,000		
Residual land value	-\$55,035	Efficiency ratio	0.85		
Residual land value (psf)	-\$11				

**Owner 6-plex  
Outer Portland Market**

		<b>Unit Mix</b>	<b>Size (sq ft)</b>	<b>Sale Price</b>	<b>Rent psf</b>
Hard + Soft Costs	\$1,350,000	3- Market rate 2 bd/ 1 bath	850	\$233,750	\$275
Fee exemption (SDC, CET)	-\$104,949	3- Affordable 2 bd/1 bath	850	\$212,626	\$250
Interest rate	5.0%				
		Transaction cost	\$66,956		
Construction interest	\$24,901	Gross proceeds	\$1,272,172		
<b>Total Development Cost</b>	<b>\$1,269,952</b>				
Net Proceeds	\$2,219	Lot Size sq ft	5000		
Return on cost threshold	\$190,493	Zoning	R-5		
		FAR	1.2		
		Gross building sq ft	6,000		
Residual land value	-\$188,273	Efficiency ratio	0.85		
Residual land value (psf)	-\$38				

