MEMO

DATE: December 5, 2018

TO: Planning and Sustainability Commission

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CC: Joe Zehnder, Director
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SUBJECT: Residential Infill Project Economic Analysis for the Revised Proposed Draft

On December 11, 2018 the Planning and Sustainability Commission (PSC) will discuss the revised economic analysis for the Residential Infill Project. Attached is the analysis provided by Johnson Economics. This memo summarizes the analysis and provides key findings.

Background

In April 2018, staff released the Residential Infill Project *Proposed Draft*. The *Draft* included Appendix B: *Economic Analysis of Proposed Changes to the Single Dwelling Zone Development Standards*, conducted by Johnson Economics.

The analysis was based on proposed changes to R7, R5 and R2.5 zone standards with new limitations on floor area and additional housing type allowances in the new 'a' overlay zone.

In September 2018, the PSC directed staff to revise the proposal by incrementally increasing floor area limits for additional units, allowing more housing types, in more locations in the affected zones.

In November 2018, Johnson Economics conducted an update to the *Economic Analysis of Proposed Changes to the Infill Development Standards* that reflects increases in floor area allowances and allowing more housing types in a broader geographic area consistent with direction from the PSC.

Economic Analysis Summary

Both analyses were conducted over a 20-year development horizon. The following table summarizes the results:

	Summary of Analysis Results			
	Staff Proposal, April 2018		**Revised Proposal, Sept 2018**	
$ investment	-$1.5 Billion	(-30%)	+$817 Million	(15%)
New units	+1,713	(31%)	+24,333	(198%)
Replaced units (house is replaced by 1 or more units)	-1,498	(-22%)	+117	(8%)
Total Additional Units	+215	(2%)	+24,450	(179%)
Average rent	$3,000	(-35%)	$1,800	(-56%)

Key findings:

- Increasing allowable units without increasing FARs provides a small market incentive to build an alternative to a single house (in the form of being able to offer individually lower priced, smaller units). This result is borne out in the staff's April 2018 proposal.

- Increasing FARs with the number of units provides a more significant incentive to build housing types other than a single house. This is seen in the September 2018 revised proposal.

- Staff's April 2018 proposal:

    - Significantly reduced the number of replaced units (22% reduction). This is primarily a function of lower FARs limits.

    - Provided a modest increase to the total number of units (215 total units) and reduced construction investment (by 30 percent) over the 20-year time horizon.

    - Resulting units were smaller (e.g. 1,000 sf triplex units and 1,250 sf duplex units) and consequently, less expensive in comparison to a single house (e.g. 2,500 sf).

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    - The resulting rents (e.g. average of $3000 per unit) are not low enough to expect that new construction would be built as a rental product.

- The September 2018 revised proposal:

    - Significantly increases the unit production (by nearly 200 percent) and increases construction investment by 15 percent.

    - Marginally increases the number of replaced units.

    - With the housing type allowances for three and four units, the resulting unit sizes were further reduced (e.g. 1,100 sf triplex units and 875 sf fourplex units).

    - These reductions in unit size bring the average rent near to the market rate for new apartment construction (e.g. average of $1800 per unit).

About the Economic Model:

The economic analysis is based on a **predictive model** that looks at the real market value of parcels against a series of housing prototype proformas to determine the relative likelihood that a parcel will develop.

For example, when the real market value (RMV) of a parcel is less than the residual land value (RLV) of a development type, then that parcel is assumed to develop. These results are then aggregated up into a total. These results are compared against a baseline (the no change scenario). The model is especially sensitive to achievable sales/rental pricing which is a function of market conditions and specific geographies, and allowable floor area.

The following table lists the relevant inputs that were used in the model to conduct both analyses:

	Comparison of Relevant Economic Model Inputs	
	Staff Proposal, April 2018	**Revised Proposal, September 2018**
Floor Area Ratios*	R7 = 0.4; R5 = 0.5; R2.5 = 0.7 Corner triplex = +.15	R7 = 0.4; R5 = 0.5; R2.5 = 0.7 2nd unit = +.10 More than 2 units = +.20
Housing types**	Duplex Triplex	Duplex Triplex Fourplex
Geography	~66% of affected zones	~92% of affected zones

* The modeling did not account for bonus FARs (affordability or house retention incentives)
** Accessory dwelling units were not specifically factored in the model

The analysis did not look specifically at **accessory dwelling unit (ADU)** potential. There are two reasons for this: First, for the purposes of evaluating the revised proposal, the model considered development costs per square foot, number of units, and total allowable square footage. Because the allowable FAR in the proposal is tied to the number and not type of units, the model made no distinction between different development configurations. In other words, it doesn't distinguish between three units in a triplex and three units in a house with two ADUs. Second, ADUs created by homeowners are largely built using home equity sources of financing and are sensitive to other factors that the model cannot readily predict.

Therefore**, the production of ADUs would be in addition to the units included in this analysis**. Current ADU projections, based on 2010-2016 trends, assume 5,000 more ADUs between 2017 and 2035, or about 280 per year. Both staff's April 2018 proposal and September 2018 revised proposal include allowances to double ADU entitlements.

We look forward to our conversation on December 11.

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