



Residential Infill Project

Planning and Sustainability Commission Briefing

Economic Analysis of Revised Proposal

December 11, 2018



Bureau of Planning and Sustainability
Innovation. Collaboration. Practical Solutions.



Follow along...

The PSC materials are available on the project website:

www.portlandoregon.gov/bps/76961

Or go to www.portlandoregon.gov/bps/infill

Look for “documents and resources”

and then look for

“Planning and Sustainability Commission Materials”

Agenda

- Housing mix background
- Comparison of proposals
- Market trends
- Economic analysis methodology
- Results from revised proposal
- Summary of key findings



Current Housing Mix

57%



28%



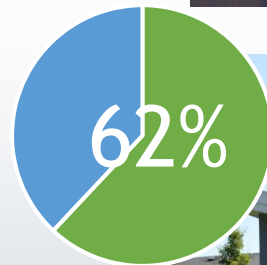
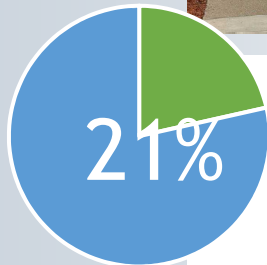
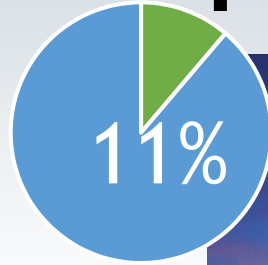
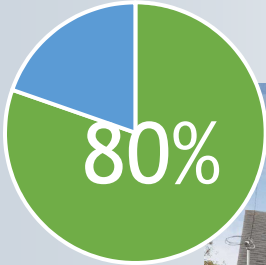
13%



2%



Current Ownership Tenure Mix



2035 Growth Share

+21%



+72%



+5%



+2%



Comparing Proposals

April 2018

FAR

- R2.5 = .7
- R5 = .5
- R7 = .4

Up to 3 units

- Duplex
- Corner Triplex

September 2018

FAR

- R2.5 = .7 to .9
- R5 = .5 to .7
- R7 = .4 to .6

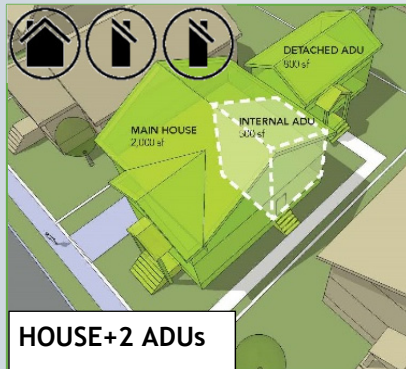
■ Up to 4 units

- Duplex
- Triplex
- Fourplex

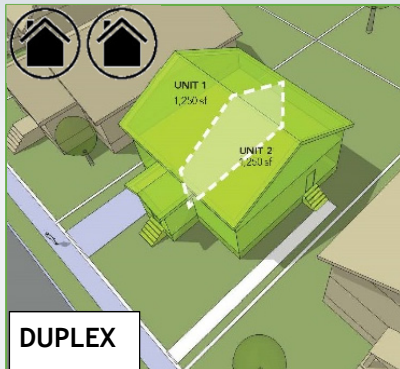


April proposal: One FAR

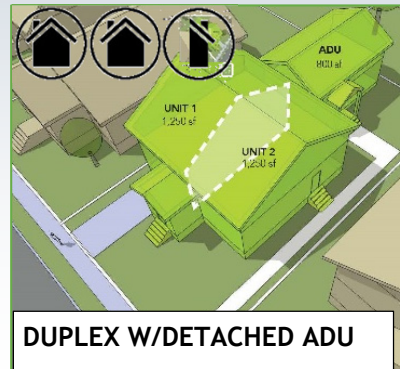
2,500sf + 750sf



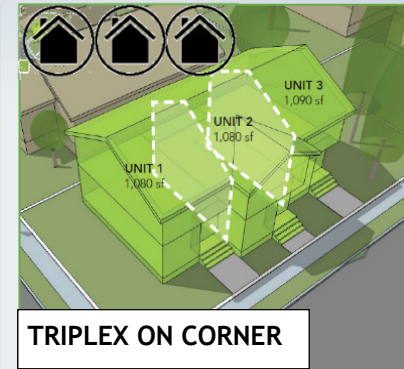
2,500sf + 750sf



2,500sf + 750sf

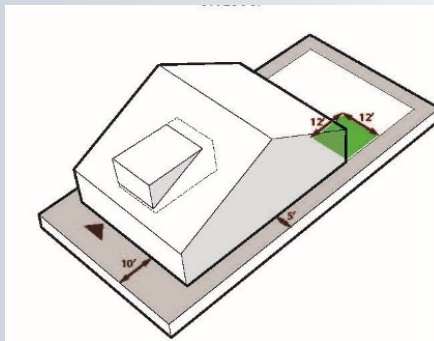


3,250sf



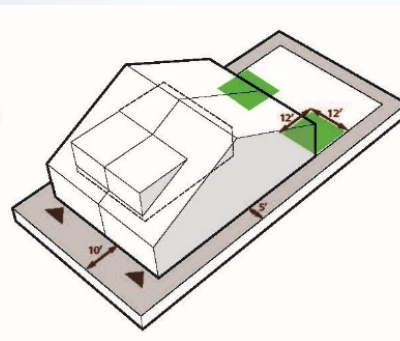
September proposal: Increase FAR by unit

2,500sf



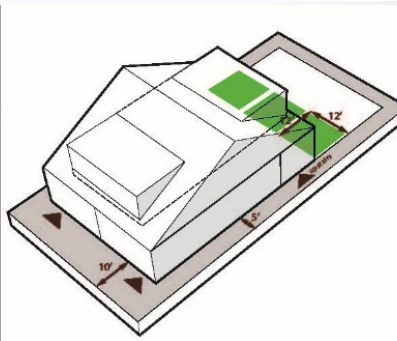
- House

3,000sf

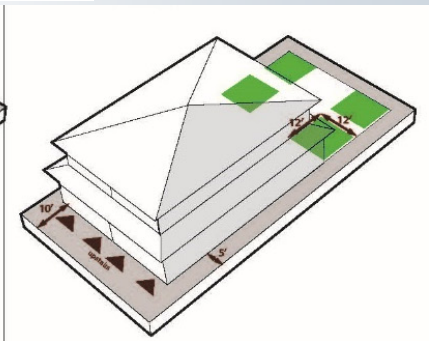


- House +ADU
- Duplex

3,500sf



- House +2 ADUs
- Duplex +1 ADU
- Triplex



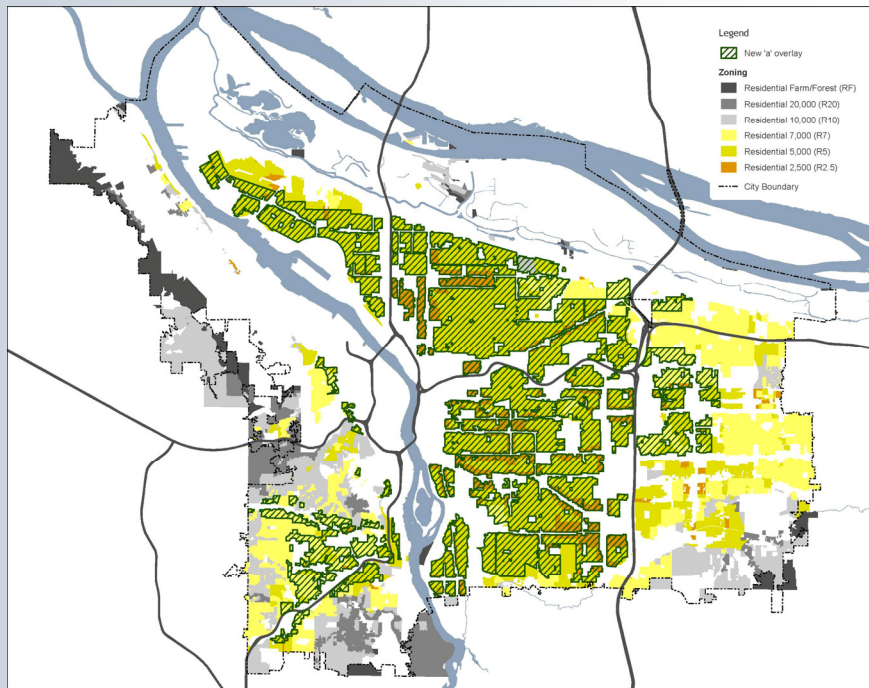
- Fourplex



Comparing Proposals

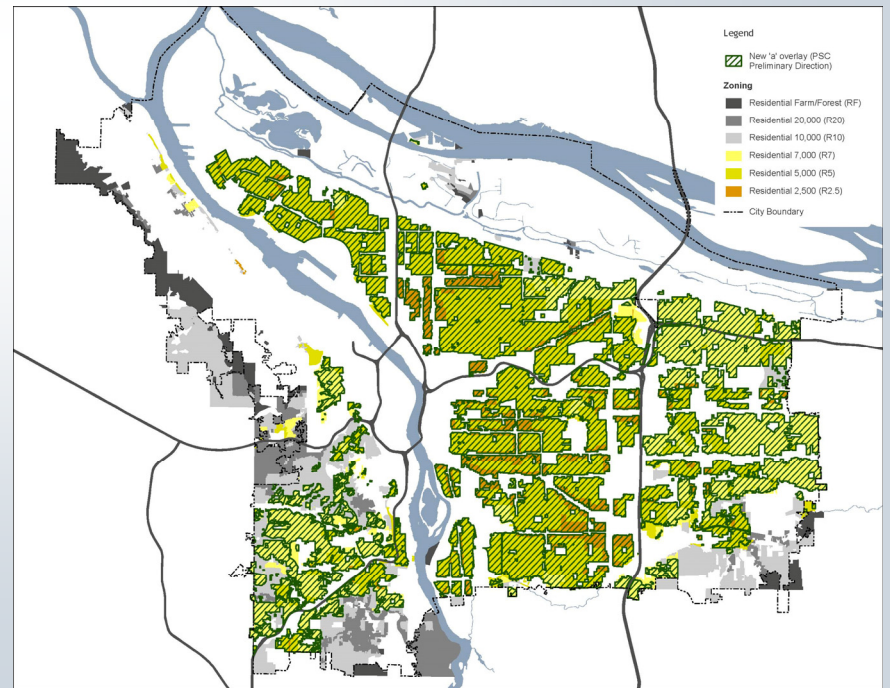
April 2018

~66% of R2.5-R7 zones



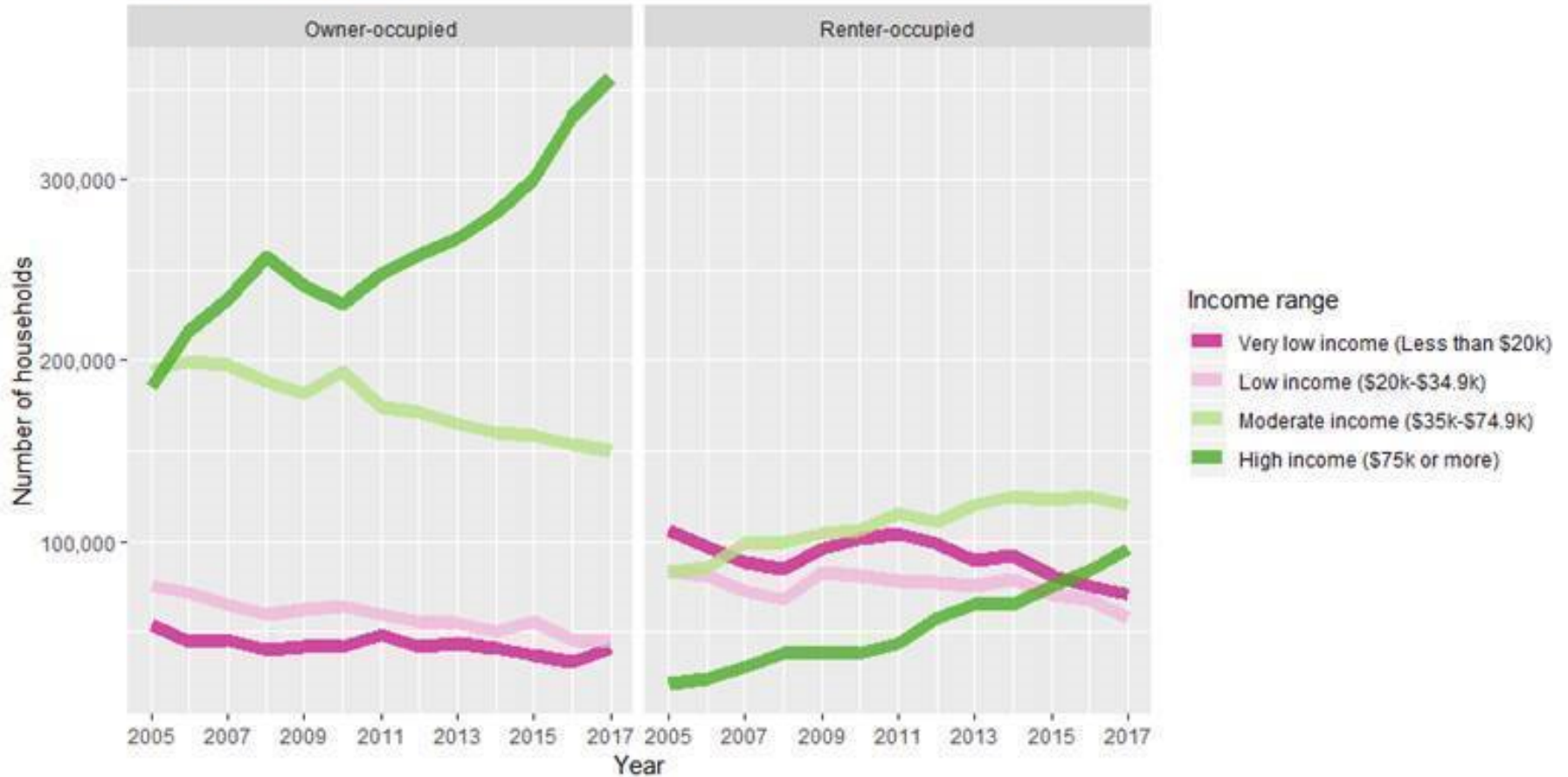
September 2018

~96% of R2.5-R7 zones



Housing Affordability

Change in number of households by household income
Portland-Vancouver MSA, 2005-2017

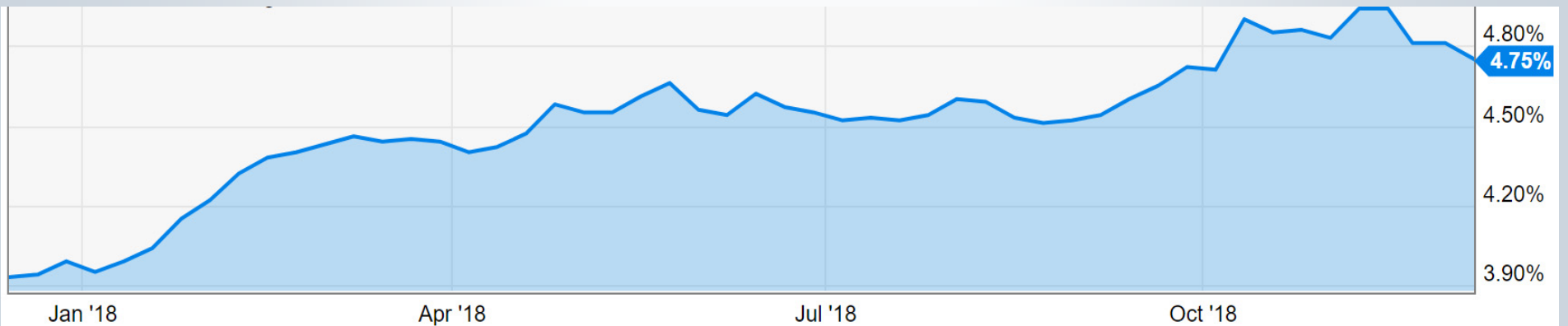
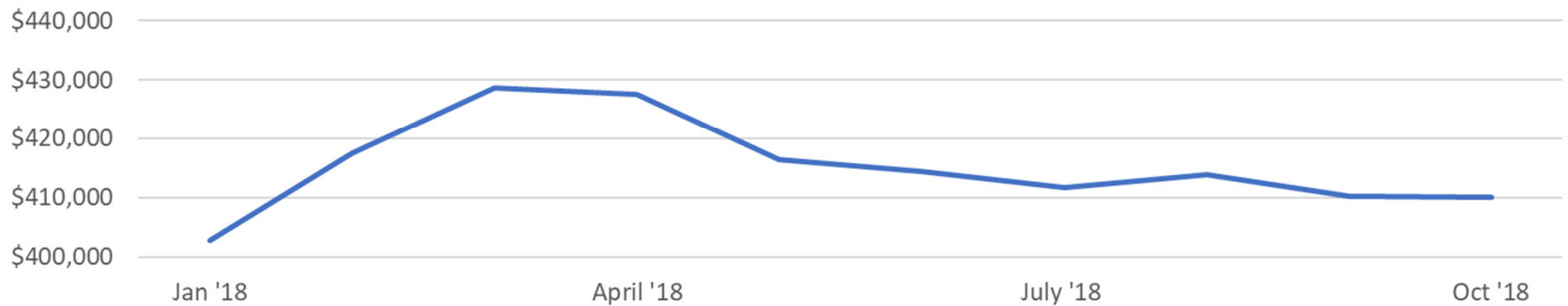


Source: ACS 1-year estimates, Table B25118; Portland Bureau of Planning and Sustainability.
Note: Adjusted for inflation in 2017 dollars using CPI-U West.



2018 Housing Price and Interest Rate Changes

2018 Median Sales Price



2018 Housing Price and Interest Rate Changes

March 2018

Average House Price - \$428,000

Interest Rate - 4.4% APR

October 2018

Average House Price - \$410,000

Interest Rate - 4.8% APR

Mortgage Repayment Summary

\$2,214.61

Monthly Payment

PMI

not required

\$85,600.00

Down payment amount

20.00%

Down payment %

Mortgage Repayment Summary

\$2,220.90

Monthly Payment

PMI

not required

\$82,000.00

Down payment amount

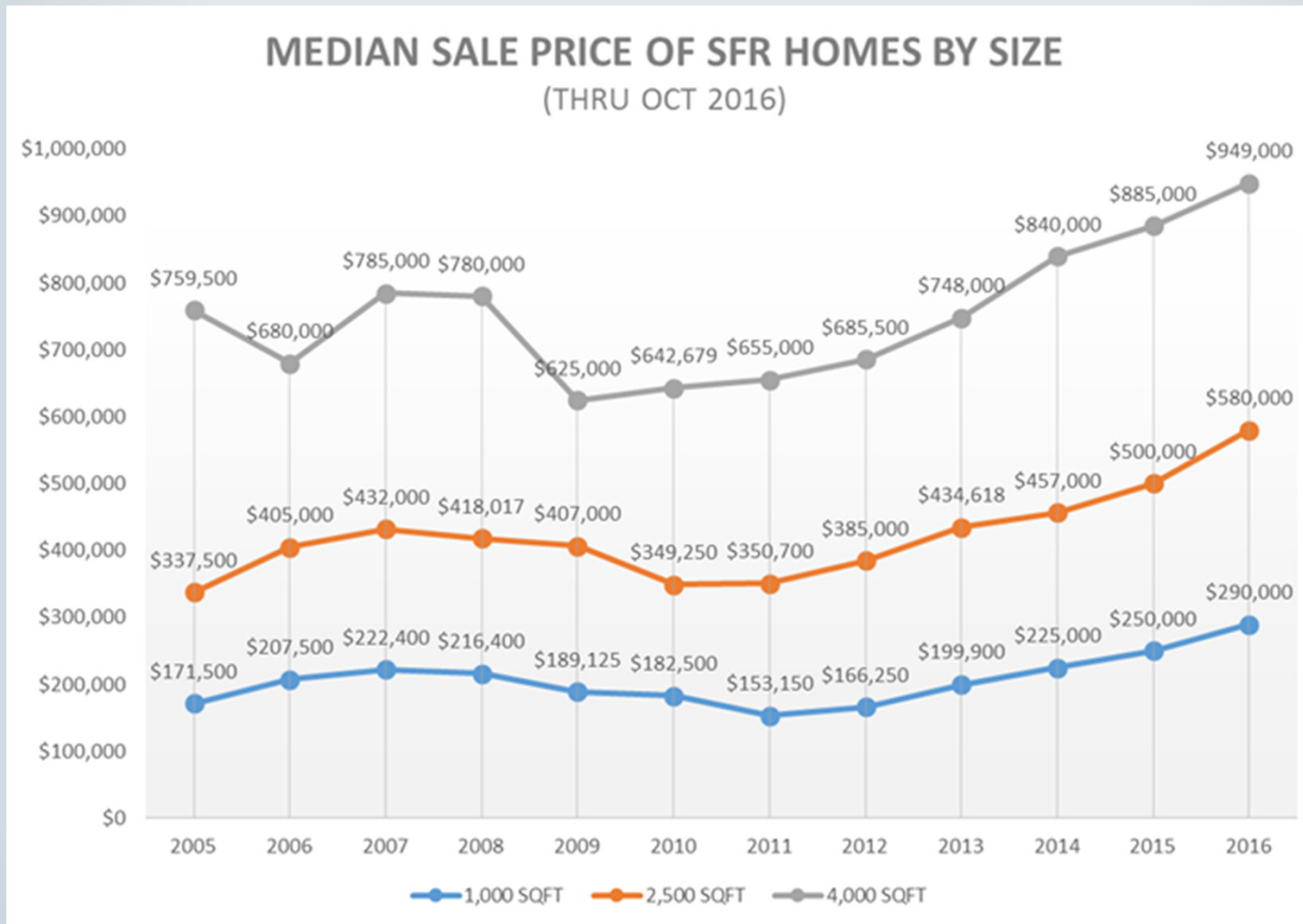
20.00%

Down payment %



How do scale and cost relate?

By absolute unit size



Description of Economic Analysis

Comparison of development allowances
Revised proposal vs. current allowances

| Units | Allowed Housing Type | R7 | R5 | R2.5 |
|------------------------------|--|-------------------------------|-------------------------------|-------------------------------|
| Minimum Lot Size (1-2 Units) | | 4,200 SF | 3,000 SF | 1,600 SF |
| 1 | Single Family Home | Base FAR: 0.4 | Base FAR: 0.5 | Base FAR: 0.7 |
| 2 | Duplex or Single Family Home + ADU | Base FAR: 0.5 W/Bonus: 0.6 | Base FAR: 0.6 W/Bonus: 0.7 | Base FAR: 0.8 W/Bonus: 0.9 |
| Minimum Lot Size (3+ Units) | | 5,000 SF | 4,500 SF | 3,200 SF |
| 3 | Triplex, Duplex +ADU, or House +2 ADUs | Base FAR: 0.6 W/Bonus: 0.7 | Base FAR: 0.7 W/Bonus: 0.8 | Base FAR: 0.9 W/Bonus: 1.0 |
| 4 | Fourplex | | | |
| Current Allowed FAR | | 1.1 FAR | 1.35 FAR | 1.75 FAR |



Description of Economic Analysis

Development prototype proformas

Physical program

- Site size
- FAR allowance
- Number of units

Development Costs

- Hard costs (materials and labor)
- Soft costs (permitting, design, engineering, etc.)

Revenue/income

- Sale price
- Rents
- Number of units

Development feasibility indicators

- Residual land value



Description of Economic Analysis

Development prototype proformas

Physical program

- Site size
- FAR allowance
- Number of units

Development Costs

- Hard costs (materials and labor)
- Soft costs (permitting, design, engineering, etc.)

Revenue/income

- Sale price
- Rents
- Number of units

Development feasibility indicators

- Residual land value

| New Zoning Assumptions | | | | | |
|------------------------|---------------------------|---------------------------|---------------------------|------------------------|----------------------------|
| Condo_Middl e_SFR_2 | Condo_Middl e_Skinny_2 | Condo_Middl e_Duplex_2 | Condo_Middl e_4-Plex_2 | Condo_2.5_4- Plex_2 | Condo_Middl e_Triplex_2 |

| PROGRAM | Property Assumptions | | | | | | |
|------------------------------|---------------------------|------------|------------|------------|------------|------------|------------|
| | Site Size (SF) | 4,200 | 4,200 | 4,200 | 4,500 | 3,800 | 4,500 |
| Density | 10 | 10 | 21 | 39 | 46 | 29 | |
| Unit Count | 1 | 1 | 2 | 4 | 4 | 3 | |
| Ave Unit Size | 2,100 | 2,940 | 1,260 | 731 | 713 | 1,050 | |
| Building Square Feet | 2,100 | 2,940 | 2,520 | 2,925 | 2,850 | 3,150 | |
| Stories | 2 | 2 | 2 | 2 | 2 | 2 | |
| Bldg Footprint | 1,050 | 1,470 | 1,260 | 1,463 | 1,463 | 1,575 | |
| FAR | 0.50 | 0.70 | 0.60 | 0.65 | 0.75 | 0.70 | |
| Parking Ratio/Unit | 1.50 | 1.00 | 1.00 | 0.50 | 1.00 | 1.00 | |
| Total Parking Spaces | 2 | 1 | 2 | 2 | 2 | 2 | |
| Parking SF/Space - Surface | 350 | 350 | 350 | 350 | 350 | 350 | |
| Parking SF/Space - Structure | 350 | 350 | - | - | - | - | |
| Parking Spaces - Surface | - | 1 | - | - | - | - | |
| Parking Spaces - Structure | 2 | - | 2 | 2 | 2 | 2 | |
| Structured Parking % | 100% | 0% | 100% | 100% | 100% | 100% | |
| COST ASSUMPTIONS | Base Construction Cost/SF | \$204 | \$204 | \$204 | \$204 | \$204 | |
| | Adjustment Factor | 0% | 0% | 0% | 0% | 0% | |
| | Construction Cost/SF | \$204 | \$204 | \$204 | \$204 | \$204 | |
| | Base Parking Costs/Space | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | |
| | Adjustment Factor | 0% | 0% | 0% | 0% | 0% | |
| | Parking Cost/Space | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | |
| | | | | | | | |
| INCOME | Income Assumptions | | | | | | |
| | Sales Price/SF | \$278 | \$278 | \$278 | \$278 | \$278 | |
| | Adjustment Factor | 0% | 0% | 0% | 0% | 0% | |
| | Achievable Pricing | \$278 | \$278 | \$278 | \$278 | \$278 | |
| Parking Charges/Space | \$21,875 | \$21,875 | \$21,875 | \$21,875 | \$21,875 | \$21,875 | |
| EXPENSES | Expenses | | | | | | |
| | Sales Commission | 4.0% | 4.0% | 4.0% | 4.0% | 4.0% | |
| SUPPORTABLE PROPERTY VALUE | Cost | | | | | | |
| | Cost/Construct w/o prkg. | \$427,350 | \$598,290 | \$512,820 | \$595,238 | \$579,975 | \$641,025 |
| | Total Parking Costs | \$30,000 | \$0 | \$40,000 | \$40,000 | \$40,000 | \$40,000 |
| | Estimated Project Cost | \$457,350 | \$598,290 | \$552,820 | \$635,238 | \$619,975 | \$681,025 |
| | Income | | | | | | |
| | Gross Income - Units | \$583,128 | \$816,379 | \$699,754 | \$812,214 | \$791,388 | \$874,692 |
| | Gross Income - Parking | \$32,813 | \$0 | \$43,750 | \$43,750 | \$43,750 | \$43,750 |
| | Gross Sales Income | \$615,941 | \$816,379 | \$743,504 | \$855,964 | \$835,138 | \$918,442 |
| | Less: Commission | (\$24,638) | (\$32,655) | (\$29,740) | (\$34,239) | (\$33,406) | (\$36,738) |
| | Effective Gross Income | \$591,303 | \$783,724 | \$713,763 | \$821,725 | \$801,732 | \$881,704 |
| Property Valuation | | | | | | | |
| Return on Sales | 29.29% | 30.99% | 29.11% | 29.36% | 29.32% | 29.47% | |
| Threshold Return on Cost | 15.00% | 15.00% | 15.00% | 15.00% | 15.00% | 15.00% | |
| Residual Property Value | \$56,826 | \$83,209 | \$67,844 | \$79,306 | \$77,184 | \$85,674 | |
| RPV/SF | \$13.53 | \$19.81 | \$16.15 | \$17.62 | \$20.31 | \$19.04 | |

Description of Economic Analysis

Pricing bin analysis

| Pricing Bin | # of Parcels | Residential Rent/SF | Sales Price/SF |
|-------------|--------------|---------------------|----------------|
| 1 | 7,525 | \$1.47 | \$209 |
| 2 | 19,516 | \$1.54 | \$219 |
| 3 | 8,776 | \$1.64 | \$234 |
| 4 | 6,889 | \$1.75 | \$249 |
| 5 | 11,326 | \$1.85 | \$263 |
| 6 | 17,059 | \$1.95 | \$278 |
| 7 | 15,700 | \$2.05 | \$292 |
| 8 | 13,824 | \$2.17 | \$309 |
| 9 | 13,043 | \$2.32 | \$330 |
| 10 | 4,570 | \$2.61 | \$372 |
| 11 | 300 | \$2.72 | \$387 |
| Total/Avg. | 118,528 | \$1.91 | \$273 |



Description of Economic Analysis

Pricing bin results

| Pricing Bin | # of Parcels | Residential Rent/SF | Sales Price/SF | Baseline | | New Zoning | | Net Change | | |
|-------------------|----------------|---------------------|----------------|---------------|----------------|---------------|----------------|---------------|------------------|-------------|
| | | | | Units | Avg. Rent | Units | Avg. Rent | Units | Avg. Rent | % Price |
| 1 | 7,525 | \$1.47 | \$209 | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0% |
| 2 | 19,516 | \$1.54 | \$219 | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0% |
| 3 | 8,776 | \$1.64 | \$234 | 235 | \$3,178 | 641 | \$1,683 | 406 | (\$1,496) | -47% |
| 4 | 6,889 | \$1.75 | \$249 | 192 | \$3,396 | 537 | \$1,799 | 345 | (\$1,597) | -47% |
| 5 | 11,326 | \$1.85 | \$263 | 331 | \$3,618 | 1,001 | \$1,902 | 670 | (\$1,715) | -47% |
| 6 | 17,059 | \$1.95 | \$278 | 567 | \$3,854 | 2,396 | \$1,758 | 1,829 | (\$2,096) | -54% |
| 7 | 15,700 | \$2.05 | \$292 | 1,639 | \$4,008 | 6,280 | \$1,873 | 4,641 | (\$2,135) | -53% |
| 8 | 13,824 | \$2.17 | \$309 | 1,179 | \$4,224 | 5,381 | \$1,667 | 4,202 | (\$2,557) | -61% |
| 9 | 13,043 | \$2.32 | \$330 | 5,755 | \$4,046 | 13,467 | \$1,777 | 7,712 | (\$2,269) | -56% |
| 10 | 4,570 | \$2.61 | \$372 | 3,685 | \$4,568 | 8,213 | \$1,977 | 4,528 | (\$2,590) | -57% |
| 11 | 300 | \$2.72 | \$387 | 82 | \$4,679 | 199 | \$2,082 | 117 | (\$2,598) | -56% |
| Total/Avg. | 118,528 | \$1.91 | \$273 | 13,665 | \$4,159 | 38,115 | \$1,823 | 24,450 | (\$2,336) | -56% |



Description of Economic Analysis

Pricing bin results

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| | | | | Units | Avg. Rent | Units | Avg. Rent | Units | Avg. Rent | % Price |
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| 2 | 19,516 | \$1.54 | \$219 | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0% |
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| 7 | 15,700 | \$2.05 | \$292 | 1,639 | \$4,008 | 6,280 | \$1,873 | 4,641 | (\$2,135) | -53% |
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Description of Economic Analysis

Pricing bin results

| Pricing Bin | # of Parcels | Residential Rent/SF | Sales Price/SF | Baseline | | New Zoning | | Net Change | | |
|-------------|--------------|---------------------|----------------|----------|-----------|------------|-----------|------------|-----------|---------|
| | | | | Units | Avg. Rent | Units | Avg. Rent | Units | Avg. Rent | % Price |
| 1 | 7,525 | \$1.47 | \$209 | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0% |
| 2 | 19,516 | \$1.54 | \$219 | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0% |
| 3 | 8,776 | \$1.64 | \$234 | 235 | \$3,178 | 641 | \$1,683 | 406 | (\$1,496) | -47% |
| 4 | 6,889 | \$1.75 | \$249 | 192 | \$3,396 | 537 | \$1,799 | 345 | (\$1,597) | -47% |
| 5 | 11,326 | \$1.85 | \$263 | 331 | \$3,618 | 1,001 | \$1,902 | 670 | (\$1,715) | -47% |
| 6 | 17,059 | \$1.95 | \$278 | 567 | \$3,854 | 2,396 | \$1,758 | 1,829 | (\$2,096) | -54% |
| 7 | 15,700 | \$2.05 | \$292 | 1,639 | \$4,008 | 6,280 | \$1,873 | 4,641 | (\$2,135) | -53% |
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| 9 | 13,043 | \$2.32 | \$330 | 5,755 | \$4,046 | 13,467 | \$1,777 | 7,712 | (\$2,269) | -56% |
| 10 | 4,570 | \$2.61 | \$372 | 3,685 | \$4,568 | 8,213 | \$1,977 | 4,528 | (\$2,590) | -57% |
| 11 | 300 | \$2.72 | \$387 | 82 | \$4,679 | 199 | \$2,082 | 117 | (\$2,598) | -56% |
| Total/Avg. | 118,528 | \$1.91 | \$273 | 13,665 | \$4,159 | 38,115 | \$1,823 | 24,450 | (\$2,336) | -56% |



How do unit size and cost relate?

Single Family



Duplex



| Average Size | 2,500 Square Feet | 1,500 Square Feet |
|----------------------|-------------------|-------------------|
| Average Sale Price | \$772,500 | \$463,500 |
| Average Price per SF | \$309/SF | \$309/SF |
| Average Rent | \$5,400/month | \$3,255/month |
| Average Rent per SF | \$2.17/SF | \$2.17/SF |



How do unit size and cost relate?

Single Family



170% MFI

Duplex



110% MFI

| | | |
|----------------------|-------------------|-------------------|
| Average Size | 2,500 Square Feet | 1,500 Square Feet |
| Average Sale Price | \$772,500 | \$463,500 |
| Average Price per SF | \$309/SF | \$309/SF |
| Average Rent | \$5,400/month | \$3,255/month |
| Average Rent per SF | \$2.17/SF | \$2.17/SF |



How do unit size and cost relate?

Triplex



Fourplex



| | | |
|----------------------|-------------------|-----------------|
| Average Size | 1,166 Square Feet | 875 Square Feet |
| Average Sale Price | \$360,500 | \$270,375 |
| Average Price per SF | \$309/SF | \$309/SF |
| Average Rent | \$2,500/month | \$1,900/month |
| Average Rent per SF | \$2.17/sf | \$2.17/SF |



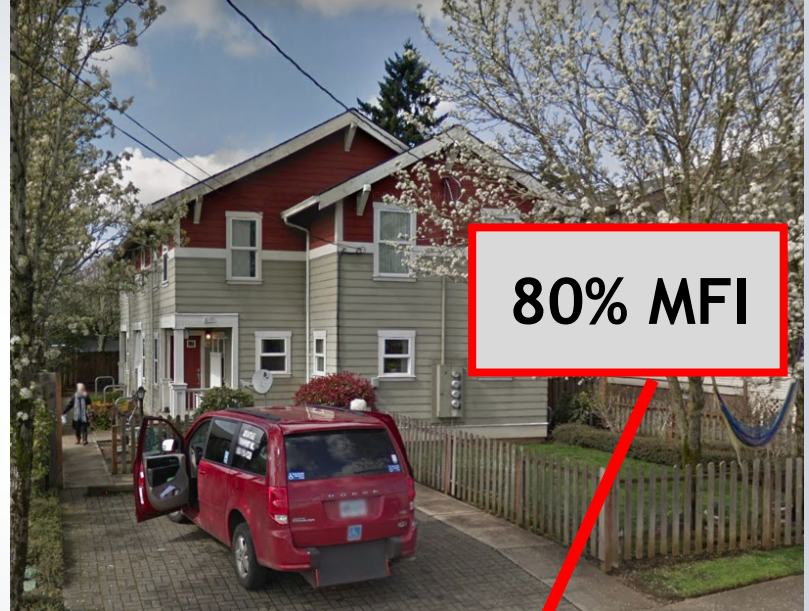
How do unit size and cost relate?

Triplex



90% MFI

Fourplex



80% MFI

| | | |
|----------------------|-------------------|-----------------|
| Average Size | 1,166 Square Feet | 875 Square Feet |
| Average Sale Price | \$360,500 | \$270,375 |
| Average Price per SF | \$309/SF | \$309/SF |
| Average Rent | \$2,500/month | \$1,900/month |
| Average Rent per SF | \$2.17/sf | \$2.17/SF |

120% MFI

100% MFI

Description of Economic Analysis

Summary results

SUMMARY OF PREDICTED DEVELOPMENT ACTIVITY WITH PROPOSED MODIFICATIONS IN ZONING CODES 20 Year Study Period , No Pricing Changes

| | Predicted Development Yield | | | | |
|-------------------|-----------------------------|-----------|----------------|-----------|--------------|
| | Construction Investment | New Units | Replaced Units | Net Units | Average Rent |
| BASELINE | | | | | |
| New Construction | \$5,233,460,967 | 13,665 | (1,384) | 12,281 | \$4,159 |
| NEW ZONING | | | | | |
| New Construction | \$6,105,186,215 | 38,115 | (1,501) | 36,614 | \$1,823 |
| NET IMPACT | | | | | |
| Total | \$871,725,248 | 24,450 | -117 | 24,333 | -\$2,336 |
| % Change | 17% | 179% | 8% | 198% | -56% |



Econ Analysis Comparison

Proposed draft vs. revised proposed draft

| | 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%) | +24,450 | (179%) |
| Replaced units (house is replaced by 1 or more units) | -1,498 | (-22%) | +117 | (8%) |
| Total Additional Units | +215 | (2%) | +24,333 | (198%) |
| Average rent | \$3,000 | (-35%) | \$1,800 | (-56%) |



Findings Summary - Staff Proposed Draft

Increasing allowable units without increasing FARs provides a small market incentive to build an alternative to a single family house.

- Significant reduction of replaced units (lower FAR)
- Modest increase in new units
- Reduced total construction investment
- Units smaller and less expensive than a new single house
- Units predominantly ownership with limited new rental housing



Findings Summary - Revised Proposed Draft

Increasing FAR allowances with the number of units provides a more significant incentive to build housing types other than a single house.

- Significant increases in unit production
- Greater construction investment
- Modest increase in replaced units
- Units smaller and less expensive than a new single house.
- Allowances for three and four units further reduced unit sizes.
- Resulting unit sizes bring the average rent into a range that could support new construction rental units.



Findings Summary - Revised Proposed Draft

- Broader market depth and need for ownership units at prices supported in two, three, four bedroom development types than single house prices for both current and future Portlanders.
- Diversity in housing types will occur because every development type serves separate markets:
 - ❑ Single house demand
 - ❑ Duplex - fee simple and larger attached units
 - ❑ Triplex - smaller 2 and 3 bedroom ownership options and potential for three bedroom rentals
 - ❑ Fourplex - smaller 2 bedrooms ownership options and housing choice for renters.



Additional Q&A