

MEMORANDUM

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From: Mike Andrews

Subject: Regional Housing Bond
Financial Modeling Summary Memorandum

The purpose of this memorandum is to describe the underlying logic of the financial model created to determine likely outcomes from a regional housing bond, and describe the rationale for key inputs used within the model. Goals for unit production established in the Framework have been established using this model and inputs.

Logic behind the model:

The regional housing bond will provide development capital for the creation of affordable rental housing. This type of capital is typically used to fill the gap that exists between the total project cost (land, constructions costs, soft costs, reserves) and the amount of capital the project is able to attract through permanent loan or tax credits.

Ability of a project to borrow a permanent loan is based on the revenue or rents being sufficiently greater than operating expenses. This is called the Net Operating Income (“NOI”). Borrowing typically relies upon 80% of the NOI as debt service payments. Interest rate, loan amortization period, and debt service payment determine the amount of money that can be borrowed.

Policy and practical real estate factors will influence the amount of revenue collected through rents and the cost to operate a project. As a result, these choices have a direct bearing on the borrowing capacity reflected in this model.

The Low Income Housing Tax Credit (“LIHTC”) is a federal tax incentive used to attract equity to residential rental projects. The amount of credit created by each project is a function of its basis, or those capital costs that are depreciable. Investors will purchase the tax credits from developers, who use this equity to create the affordable housing project. The premise of this federal tax incentive is that affordable housing projects intentionally keep rents low, typically well below market. As a result, these project do not generate sufficient revenue to provide a



lender and investor a market return. The LIHTC creates a benefit to investors that doesn't rely on revenue to attract equity to affordable housing. Therefore rents can be kept low while also generating a return for the LIHTC investor.

Typical affordable rental housing uses debt and LIHTC to generate capital for the project. When these two sources are not sufficient to develop the project, development subsidy is used. Each project solves for the amount of development subsidy needed.

The regional housing bond is a source of development subsidy. However, the approach used in modeling realistic outcomes from a regional housing bond is reversed. Starting with the size of the bond, and then relying upon inputs that define key economic drivers for debt and equity, the model solves for the number of units that can be created based on the size of the bond.

Once fully deployed, the bond will have financed a variety of projects, each with its own development and operating budget profile. In order to capture the variation anticipated with individual projects, weighted averages were used for several key inputs. These averages (primarily construction cost, acquisition cost and operating expenses) were tested against actual recent costs for validity.

We have assumed the bond will be deployed over five years. Recognizing escalation impact on construction and acquisition costs was important to achieving a reasonable estimate of unit production. Escalation was applied to the construction and acquisition costs for a five year period, and then a flat line expenditure of bond funds was used to determine impact of escalation.

Key inputs will dictate the economic feasibility and public benefit of the projects funded with the bond. The remainder of this memo will summarize the key inputs and the rational basis for the value used in the model.

Key Inputs:

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| Bond Amount | \$652,800,000 Gross bond amount achievable at an average cost of \$60 annually to homeowners. |
| New or Acquisition | 50 / 50 split This balance was selected to allow for immediate production, lesser cost related to acquisition, and preservation of unregulated low cost housing. |
| Administrative fee | 7% or \$52,224,000 Cost of Issuance, legal requirements and programmatic functions related to implementing the regional housing bond were assembled. Staffing levels and durations were estimated |



based on the estimated deal flow and length of the program. This information was used to create an estimated staffing cost for implementation (within Metro and jurisdictional partners). Estimated cost for staffing and direct costs are within this administrative budget.

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| Affordability targets | 42% at 30% AMI, 48% at 60% AMI, 10% at 80% AMI Affordability targets are used to set rent restrictions for units. Additional affordability is anticipated through rent subsidy that will reduce the tenant paid rent for households living in a 60% rent unit to 30% to achieve the targets. |
| Area Median Income | \$81,400 2018 median family income for a four person family for the Portland-Vancouver-Hillsboro OR-WA MSA. Set by U.S. Department of Housing and Urban Development. |
| Rents | 18% at 30% AMI, 62% at 60% AMI, 10% at 80% AMI, and 11% at Payment Standards assuming Project Based Vouchers. |
| Project Based Vouchers & local rent subsidy | 400 Project Based Vouchers ("PBV") – 200 from Washington County and 200 from Clackamas County. An additional 193 PBV will be needed from Washington County and 41 from Clackamas County. From Multnomah County, local rent subsidy is assumed to cover the difference between 60% AMI rents and tenant paid rents affordable to households at 15% AMI. The value of this local rent subsidy is \$4.136MM in the first year. |
| Utility Allowances | \$117 average Utility Allowance ("UA") for all units. Schedule is based on UAs published by the housing authorities in the region. Actual UAs will vary depending upon efficiency of projects, fuel source, and decision for tenant or building to pay utilities. |
| Vacancy Factor | 5% Industry standard for underwriting. |
| Operating Expenses | \$6500 per unit per year Existing actual expenses were provided by public partners who currently invest in affordable housing and owners of affordable housing. Actual expenses reflect a significant range based on building characteristics, population, and income level. \$6300 reflects a weighted average for modeling that allows for a range of actual expenses that capture most of the actual expenses indications gathered. |
| Replacement Reserves | \$250 for new construction and \$350 for acquisition Industry standard for underwriting. |



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| Escalation | 2% for revenue, 3% for expenses Industry standard for underwriting. |
| Construction Costs | \$253,186 as the trended construction cost per unit. Assumed \$215,000 in 2018 construction costs trended at 5.5% annually for 5 years. The 2018 number is based on input from builders and review of projects recently completed. The \$215,000 reflects a weighted average for wood frame, slab on grade buildings and podium construction. Bedroom sizes range from 0 to 4 bedrooms. |
| Cost to acquire buildings | \$179,260 as the trended acquisition cost per unit. Assumed \$150,000 in 2018 dollars trended at 6.0% annually. Input based on review of sales data and ECONorthwest review of Costar data for the region |
| Rehab of acquired: | \$45,920 as trended rehab cost per unit. Assumes \$40,000 in 2018 dollars trended at 5.0%. Discussed with Technical Advisory Table. Acquisitions will need to carefully considered for capital needs prior to purchase. |
| Soft Costs | 30% of depreciable basis. Assumed based on norms for LIHTC projects ratio of soft cost. |
| LIHTC Utilization: | 95% of total projects Input based on desire to leverage additional capital and retain some funds for smaller projects. Only 4% LIHTCs are assumed in the model due to the competition and scarcity of 9% LIHTCs. |
| LIHTC pricing | \$0.98 per credit LIHTC pricing is shifting and difficult to predict. Portland has the benefit of being a strong desirable market for investors. Recent projects have secured pricing greater than \$1.00, and smaller projects receive pricing in the low \$0.90 range. This input reflects judgement about future market conditions. |
| Debt Pricing | 6.0%, 30 year fixed amortization, 1.27 DCR Debt markets are also changing. Current rates for a 30 year fixed are sub 5.5%. Rates will likely rise over the duration of the bond deployment. 30 year fixed is conservative as 35 or 40 year amortizations are becoming more regular with use of credit enhancement programs. |
| Other Development Subsidy | \$0 No additional development subsidy has been assumed from local jurisdictions or the state. It is very likely additional capital will be available. |

