INTRODUCTION
The City of Seattle is proposing to implement Mandatory Housing Affordability (MHA) requirements for new multifamily and commercial development. The City has already passed legislation adopting a framework for these requirements. Next, the City is proposing zoning changes to implement the requirements. Under MHA, developers would be required to contribute to affordable housing by including affordable housing within new development or paying into a fund that supports development of affordable housing. The zoning changes provide for additional development capacity in the form of an increase in the amount of height or floor area in zones where MHA would apply. The purpose of the MHA requirements and the zoning changes is to increase the supply of new affordable and market-rate housing, both of which support the City’s growth management and housing policies. The intended outcome of MHA over the next 10 years is to create 6,000 rent- and income-restricted homes affordable to households with incomes no higher than 60 percent of area median income (approximately $54,000 for a four-person household).

PURPOSE AND USE OF THE MODEL
The Housing Affordability Livability Agenda (HALA) Advisory Committee asked City staff to model an approach that could meet the goal of creating 6,000 affordable homes. City staff developed a model for the purpose of estimating affordable housing unit production through proposed MHA requirements. We used this model to analyze and understand the tradeoffs among various policy choices (e.g., set-aside amounts, payment and performance, rent incomes at 60 percent vs 80 percent of area median income) and to ensure that recommended MHA requirements are projected to meet the goal. The model attempts to estimate a future condition using the best available data. But because many of the factors needed to estimate production of housing and commercial development over the next 10 years are uncertain or unknown, the model must also make a series of assumptions. We expected that, after fully implementing MHA, we will replace this predictive model with monitoring of actual affordable housing production receipts of MHA payments to track progress towards the 6,000-unit goal.

The model’s primary purpose is to inform policy discussions prior to MHA implementation. It is important to note that this model is not intended to duplicate or replace the City’s Comprehensive Planning growth estimates. While the Comprehensive Plan addresses Seattle as a whole over a 20-year horizon, this MHA model addresses certain areas and types of development that would be subject to MHA requirements over a 10-year period of time. Nevertheless, the model is consistent with the Seattle 2035 proposed Comprehensive Plan.

This document summarizes the approach and assumptions used in the model and explains how the model estimates affordable housing production.

MODELING APPROACH
The production model estimates likely affordable housing production by:

1. Estimating the amount of growth, broken down by building use (residential, commercial, etc.), that will occur over the next 10 years, based on data from the last 10 years

2. Allocating these growth estimates by zone type and by high-, medium-, and low-cost areas based on development patterns over the last 10 years

3. Applying general assumptions about the percentage of development projects that will use the payment option and the percentage that will use the performance option

4. Calculating the number of units produced through the performance option

5. Calculating revenue produced through the payment option and the number of units that would be created from payment revenue

MODELING ASSUMPTIONS
Below are key assumptions for the modeling approach described above. The performance and payment amounts that were used for purposes of modeling are discussed in the following section.

GROWTH ESTIMATES
- The amount and type of commercial development that would occur annually over 10 years would be consistent with annual development between 2000

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1 All properties in the city have a zone designation which specifies the amount and character of development that is allowed. Common zone types include Single Family, Lowrise, Midrise, Highrise, Commercial, Mixed-Use, and Downtown.

2 A consultant, David Rosen & Associates, created a map dividing the city into three markets based on average rent data gathered by Dupre + Scott Apartment Advisors.
and 2013 according to King County Assessor’s data.3

- We excluded from the modeling buildings with uses listed as Government, Industrial/Warehouse, or Other by the King County Accessor’s Office, since those uses would be exempt from MHA requirements.

- Total market-rate housing development over 10 years would be equal to the HALA goal of 30,000 units. Production of income- and rent-restricted units would be in addition to the 30,000 market rate housing units.

- The total amount of residential and commercial growth estimated is consistent with the Seattle 2035 Comprehensive Plan 20-year growth estimate, assuming an allowance for more rapid growth during the first 10 years of the Comprehensive Plan horizon.

- Four percent of new market-rate homes would be in Single Family zones and therefore not subject to MHA. (This assumes growth in Single Family zones decreases by one-third, from six percent growth between 2000 and 2013, due to fewer undeveloped single-family parcels.)

- New multifamily units would average 915 gross square feet in area (based on DRA “Seattle Affordable Housing Incentive Program Economic Analysis” report).

AREA AND ZONE BREAKDOWN

- Estimated growth was allocated into cost areas based on the proportion of housing and employment growth that occurred between 2005 and 2014 in urban centers and urban villages located within each cost area. Growth outside urban centers and urban villages was divided equally between low- and medium-cost areas. (Only a very small area outside of urban centers and urban villages is in a high-cost area; it is zoned almost exclusively for single-family residential development and, accordingly, we did not estimate any multifamily development in these areas.) No future employment growth was assumed for those urban villages with negative job growth between 2005 and 2014.

- Outside of Downtown and South Lake Union, the portion of growth in each zone was assumed to be proportional to the amount that occurred in each zone for the period of 2005-2014, except that development in areas currently zoned for single-family but proposed to be rezoned would predominately be lowrise.

- In Downtown and South Lake Union, the portion of growth in each zone was assumed to be proportional to the amount of development capacity in each zone based on the City’s Development Capacity Model.

- While MHA will apply to contract rezones, we did not attempt to estimate the number or scale of contract rezones that would happen over this period or their effect on production numbers.

SHARE OF PERFORMANCE AND PAYMENT

- Projects would use performance and payment options in following ratios:

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>Outside Downtown and SLU</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Downtown and SLU</td>
<td>10%</td>
</tr>
<tr>
<td>Commercial</td>
<td>Outside Downtown and SLU</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Downtown and SLU</td>
<td>5%</td>
</tr>
</tbody>
</table>

CREATING AFFORDABLE HOUSING WITH PAYMENT REVENUE

- New affordable housing funded by the Office of Housing (OH) is assumed to require a contribution of $80,000 per unit from OH (based on a model project leveraging four percent low-income housing tax credits and no additional public funds).

- 10 percent of payment revenue would be used for program administration.

DRAFT MHA REQUIREMENTS USED FOR MODELING

The following table summarizes the draft MHA requirements we used to estimate expected production of affordable housing over 10 years. We expect this approach will be refined as part ongoing public discussions through early 2017.

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3 We reduced from the King County Assessor first by 10 percent to account for floor area demolished over that period and then by six percent to account for development, such as certain street-level retail, that would likely be exempted from MHA requirements.
### MODELED OUTCOME OF DRAFT APPROACH
The following table summarizes the projected number of affordable housing units generated based on the assumptions and methodology described above.

<table>
<thead>
<tr>
<th></th>
<th>Performance (units)</th>
<th>Payment</th>
<th>Total production (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Millions of dollars</td>
<td>Units generated from $</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside Downtown and SLU</td>
<td>900</td>
<td>$202</td>
<td>2,280</td>
</tr>
<tr>
<td>Downtown and SLU</td>
<td>40</td>
<td>$76</td>
<td>860</td>
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<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Outside Downtown and SLU</td>
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<td>$70</td>
<td>790</td>
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<tr>
<td>Downtown and SLU</td>
<td>60</td>
<td>$124</td>
<td>1,390</td>
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<tr>
<td>Total</td>
<td>1,000</td>
<td>$472</td>
<td>5,320</td>
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</tbody>
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