Sustainable Connections and the Whatcom Housing Alliance
Green Building and Smart Growth Program

Aysha Nygren
Western Washington University

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Internship Title: Sustainable Connections Green Building and Smarth Growth Program

Student Name: Aysha Nygren

Internship Dates: September 22nd, 2021 to December 10th, 2021

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STUDENT SIGNATURE: Aysha Nygren

DATE: May 18th, 2022
Internship Report

Sustainable Connections and the Whatcom Housing Alliance Green Building and Smart Growth Program

Aysha Nygren

September 22nd, 2021 – December 10th, 2021
Table of Contents

Organization Background Information .................................................................................. 1
Description of Duties ........................................................................................................... 1
  Infill Toolkit Guide ........................................................................................................ 1
  Bellingham and Whatcom County Housing Statistics Research .................................. 2
  Preparation for Whatcom Housing Week ....................................................................... 2
Conclusions ....................................................................................................................... 3
  Affordable Housing Initiatives in Bellingham and Whatcom County ......................... 3
  Educational Goals ....................................................................................................... 4
References ....................................................................................................................... 5
Appendix A: Timelines ..................................................................................................... 6
  Timeline of projects ..................................................................................................... 6
  Daily Time Log ............................................................................................................. 6
Appendix B: Data and Documents Produced ................................................................... 7
Appendix C: Supplemental Documents ........................................................................... 10

List of Figures

Figure 1: ITK Guide page ................................................................................................... 2
Figure 2: Housing metrics graphics .................................................................................. 2
Figure 3: WHA housing week presentation slides ............................................................ 3
Organization Background Information
Sustainable Connections is an organization which partners with local businesses and other organizations to promote and act upon creative solutions for creating healthy communities. They focus on areas of innovation such as food systems, renewable energy, the built environment, and more (Sustainable Connections, 2022a). The Whatcom Housing Alliance, a partner organization to Sustainable connections, is an alliance of organizations committed to creating equitable, affordable, and healthy communities with a greater variety of housing options (Whatcom Housing Alliance, 2020). The Green Building and Smart Growth Program is a collaboration involving both organizations, and others, which seeks to promote some of the goals of both partners while supporting local businesses with similar goals. The program defines smart growth as development which encourages mixed uses, infill development, and community involvement while supporting variety in housing and transportation forms (Sustainable Connections, 2022b).

Description of Duties
As an intern for Sustainable Connections and the Whatcom Housing Alliance’s (WHA) Green Building and Smart Growth program, I contributed to several projects to further the program’s goals. My tasks, which I completed virtually and in partnership with another intern, were to create a guide using Canva on the several housing forms in Bellingham’s Infill Toolkit, compile data in Excel on Bellingham and Whatcom County housing affordability, and contribute to preparations for the WHA’s Whatcom Housing Week.

Infill Toolkit Guide
The purpose of the infill toolkit guide is to provide the public with a basic snapshot of Bellingham’s infill toolkit (ITK) with brief information on the guidelines for each housing form and where it can be applied in Bellingham. Creating this document involved the development of several drafts with additional information and edits added or removed after submission to and discussion with the internship supervisors. I gathered information for this guide from the city’s infill toolkit and website resources as well as an outline provided by the organization, summarizing the guidelines and information for each housing type - such as density and height limits - while formatting the guide to be reader-friendly and aligned with WHA design themes. Also included in the guide was information on proposed amendments to the infill toolkit, information on which I gathered from the Planning Commission’s public hearing for ITK amendments and associated materials. Some of the amendments included updated open space requirements and the combination of the small and smaller house forms into one “small lot” housing type, which are indicated clearly in the Canva guide along with the other proposed amendments (see figure 1 for an example). I worked using Canva to format the guide, adding images of each housing form and other visual aids. Images of the pages and a direct access link to the Canva guide can be found in Appendix B.
Bellingham and Whatcom County Housing Statistics Research

Over the course of my internship, I contributed to the research and compilation of data on housing statistics in Bellingham and Whatcom County with the purpose of finding data to be used in infographics for the WHA. We collected the most up-to-date data available from government websites and other sources on metrics such as median home prices, poverty rates, household incomes, building permits, and construction costs, looking at standalone metrics as well as comparative statistics concerned with changes over time. A sample of the data collected is represented by the graphs shown in figure 2; the left graph shows the proportion of homes in Whatcom County in different price ranges and the right depicts median home prices in Bellingham for various housing sizes. An access link to the Housing Metrics Excel sheet containing all data can be found in Appendix B.

Figure 2. Left: Proportion of homes in Whatcom County under different prices. Right: Median prices for different sized homes in Bellingham. Data from the Washington Center for Real Estate Research (WCRER).

Preparation for Whatcom Housing Week

Whatcom Housing Week is a weeklong series of free informational presentations, open to the public and put on by the WHA, on topics such as affordable housing, density, and climate
change. The 2021 Housing Week was held virtually and took place between October 18th and 22nd. In addition to attending each of the event presentations, I was responsible for hanging informational posters prior to the event to encourage public participation, as well as collecting comparative housing statistics between the United States and Whatcom County to be used for trivia in the WHA All Member Celebration and Awards presentation. An image of the poster can be found in Appendix C along with the slides depicting how my data was used (also shown in figure 3). The Excel spreadsheet with all data I contributed to collecting for Housing Week is provided in Appendix B.

Figure 3. Images of slides from the WHA All Member Celebration and Awards Housing Week presentation. Data I researched and compiled (which can be found in its entirety in Appendix B) was used to create the trivia questions shown in these images.

Conclusions
After the completion of this internship, I have gained valuable experience working with a community partner and have improved my skills in research and communication. I have learned about several initiatives within Bellingham working on affordable housing and have experienced, to a limited degree, possible ways to implement my future degree and ways of engaging with change in my community. The successful completion of my tasks was aided by my educational experiences in the Urban Planning and Sustainable Development program, and my new knowledge and skills will help me going forward in my education.

Affordable Housing Initiatives in Bellingham and Whatcom County
My experience completing this internship has exposed me to several of the housing issues present in my community and the solutions and groups which are contributing to solving them. Some, but not all, of these groups include Sustainable Connections and the WHA, AVT Consulting, Mercy Housing, HomesNOW!, Habitat for Humanity, the City of Bellingham, the
Whatcom Homeless Service Center which leads the Whatcom County Coalition to End Homelessness, along with Homeless Outreach Teams (HOTs). In 2010 the Coordinated Entry system was created in Whatcom County which allows those facing homelessness to submit one application to multiple service providers (Whatcom County Health Department, 2021) and in 2019 and 2020 Whatcom County gained access to new funding options for affordable housing from House Bills 1406 and 1590. In Bellingham specifically, the city is in the process of updating its land use codes for Residential Multi (RM) zones to allow greater densities (partially through instating minimum densities) and the application of infill toolkit housing forms in more areas (City of Bellingham, n.d.a.). Both Sustainable Connections and the WHA work to coordinate efforts between many organizations and some of the initiatives listed above while aiming to improve community involvement. In 2021 the WHA formally supported HB 1590, the residential multi-family project, and Family Definition (Webb & Lathrop, 2021), which is an effort to improve housing choice by creating more flexibility in what is considered a family for residential purposes (City of Bellingham, n.d.b). Housing week was one method of increasing community involvement, discussing each of these initiatives in addition to Bellingham for Everyone, a campaign for educating Bellingham neighbors on housing issues (WHA, 2020). The WHA and Sustainable Connections generally works for improved community education in support of improving workforce housing and other issues (Sustainable Connections, 2022a; WHA, 2020).

The efforts within Bellingham to increase densities in RM zones is directly applicable to the tasks of my internship. The initiative is a necessary development given that many RM zones within Bellingham are not being developed to their intended densities (COB, n.d.a.), which lowers the availability of diverse and affordable housing options. My work with Bellingham’s ITK and knowledge about housing issues in Bellingham from my research suggests to me that the toolkit should be allowed in more neighborhoods within Bellingham aside from those described in the Canva guide (Appendix B), and more action is necessary on the part of the city to provide diverse housing options in more neighborhoods within Bellingham. Half of Bellingham households make 80% of the median family income (MFI), or approximately $56,000 per year, yet only 18% of houses are affordable at that income (City of Bellingham, 2017). Additionally, housing prices in Bellingham have been increasing significantly more than wages, with 57% of renters and 28% of homeowners face housing cost burdens (People First Bellingham, 2021). These and other statistics represent the significant housing issues still facing Bellingham and Whatcom County; affordable housing is something which requires the attention of more than just those who are directly affected by limited housing choices.

**Educational Goals**
Being a part of the UPSD program has prepared me for several of the tasks of this internship. The program equipped me with experience building critical thinking skills and developing effective research strategies and I was able to build upon those skills from this internship as well. The content of many of my courses has aligned with the concepts and issues presented in this
internship, and my work with Bellingham’s infill toolkit in a UPSD course meant I was familiar with the topic before starting this internship. My courses in which I learned new programs such as ArcGIS, Sketchup, and Illustrator allowed me to become more confident in my design abilities as well as comfortable learning new programs, which I applied while learning to use Canva over the course of this internship. The UPSD program effectively framed my mindsight towards community building and understanding multiple perspectives involved in any issue and gave me a base understanding of how formal city governance and reform can take place. This aided in understanding several of the current initiatives in Bellingham and Whatcom County as well as the motivations behind them and an awareness of what urban processes could be contributing to the conditions in Bellingham represented by the data I collected. However, due to the virtual nature of this internship and the majority of my college education, my further development of professional and interpersonal skills as well as experiencing hands-on engagement with my learning has been limited during both my regular courses and this internship. In future opportunities I would like the ability to work more closely with peers and community members to gain a greater sense of involvement, which I feel a virtual education has not provided.

References
Appendix A: Timelines

Timeline of projects
Canva infill toolkit guide: continuous

Housing metrics research: continuous

Housing week posters: Two weeks prior to Housing Week, which took place October 18\textsuperscript{th} through 22\textsuperscript{nd}, 2021.

Housing metrics research for Housing Week: October 11\textsuperscript{th} through 15\textsuperscript{th}, 2021 (5 days).

Daily Time Log

<table>
<thead>
<tr>
<th>Date</th>
<th>Hours</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/23</td>
<td>3</td>
<td>Reviewing assigned tasks and documents/sources provided; initial read of Bellingham’s infill toolkit; research into housing statistics in Bellingham.</td>
</tr>
<tr>
<td>9/25</td>
<td>4.5</td>
<td>Researching housing metrics; reading through information provided for creating the infill toolkit guide.</td>
</tr>
<tr>
<td>9/27</td>
<td>1</td>
<td>Exploring the WHA website, reading about Bellingham for Everyone, looking through the WHAs ADU handbook.</td>
</tr>
<tr>
<td>9/29</td>
<td>3.5</td>
<td>Research, primarily median house prices in Bellingham and Whatcom County.</td>
</tr>
<tr>
<td>9/30</td>
<td>1.25</td>
<td>Rereading Bellingham ITK.</td>
</tr>
<tr>
<td>10/1</td>
<td>0.75</td>
<td>Check-in meeting.</td>
</tr>
<tr>
<td>10/5</td>
<td>1.5</td>
<td>Hanging housing week posters in Fairhaven.</td>
</tr>
<tr>
<td>10/7</td>
<td>1</td>
<td>Median home price research.</td>
</tr>
<tr>
<td>10/9</td>
<td>2.5</td>
<td>Research; getting to know Canva.</td>
</tr>
<tr>
<td>10/10</td>
<td>2</td>
<td>Hanging housing week posters in downtown Bellingham.</td>
</tr>
<tr>
<td>10/11</td>
<td>4.5</td>
<td>Researching housing metrics.</td>
</tr>
<tr>
<td>10/12</td>
<td>3.25</td>
<td>Researching housing metrics.</td>
</tr>
<tr>
<td>10/13</td>
<td>6.5</td>
<td>Hanging housing week posters downtown and Cordata; researching Bellingham, Whatcom County, and national housing metrics.</td>
</tr>
<tr>
<td>10/14</td>
<td>2.5</td>
<td>Researching housing statistics.</td>
</tr>
<tr>
<td>10/15</td>
<td>2</td>
<td>Finishing spreadsheet with housing data for supervisor’s housing week presentation.</td>
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<tr>
<td>10/18</td>
<td>2.5</td>
<td>Attending “All About ADUs” housing week presentation; researching housing statistics.</td>
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<tr>
<td>10/19</td>
<td>1</td>
<td>Attending “What Makes Affordable Housing Pencil” housing week presentation.</td>
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<tr>
<td>10/20</td>
<td>3</td>
<td>Attending three housing week presentations.</td>
</tr>
<tr>
<td>10/21</td>
<td>1</td>
<td>Attending “Density and Climate Change” housing week presentation.</td>
</tr>
<tr>
<td>10/25</td>
<td>2.5</td>
<td>Working on Canva guide, reading WHA’s ADU handbook for formatting ideas.</td>
</tr>
<tr>
<td>10/26</td>
<td>4.5</td>
<td>Creating ITK guide on Canva.</td>
</tr>
<tr>
<td>10/29</td>
<td>2.25</td>
<td>Canva ITK guide.</td>
</tr>
<tr>
<td>10/31</td>
<td>4</td>
<td>Canva ITK guide.</td>
</tr>
<tr>
<td>11/1</td>
<td>3</td>
<td>Canva ITK guide; communicating with supervisors.</td>
</tr>
<tr>
<td>11/3</td>
<td>2.25</td>
<td>Research and emailing.</td>
</tr>
<tr>
<td>11/4</td>
<td>2.5</td>
<td>Planning commission public hearing on ITK amendments.</td>
</tr>
<tr>
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<td>0.5</td>
<td>Intern check-in meeting.</td>
</tr>
<tr>
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<td>1.5</td>
<td>Housing metrics research.</td>
</tr>
<tr>
<td>Date</td>
<td>Hours</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
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<td>3.25</td>
<td>Housing metrics research; adding proposed amendments from public hearing to ITK guide.</td>
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<tr>
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<td>1</td>
<td>Construction costs research.</td>
</tr>
<tr>
<td>11/21</td>
<td>3.5</td>
<td>Housing statistics research.</td>
</tr>
<tr>
<td>11/22</td>
<td>0.75</td>
<td>Reviewing ITK amendments and improving their descriptions in the ITK guide.</td>
</tr>
<tr>
<td>11/24</td>
<td>1.25</td>
<td>Housing statistics research.</td>
</tr>
<tr>
<td>11/26</td>
<td>5</td>
<td>Reviewing ITK amendments commission meeting; reviewing additional content for ITK guide.</td>
</tr>
<tr>
<td>11/28</td>
<td>5.25</td>
<td>Canva guide, photoshopping a logo background.</td>
</tr>
<tr>
<td>11/29</td>
<td>3.75</td>
<td>Zoom meeting; compiling data for a review table on ITK housing types; housing statistics research; work on Canva guide.</td>
</tr>
<tr>
<td>11/30</td>
<td>3.5</td>
<td>Research for construction costs data and other statistics.</td>
</tr>
<tr>
<td>12/1</td>
<td>2</td>
<td>Adding ITK amendments to Canva guide.</td>
</tr>
<tr>
<td>12/2</td>
<td>1.75</td>
<td>Research on ADUs in Bellingham.</td>
</tr>
<tr>
<td>12/4</td>
<td>3</td>
<td>Housing statistics research.</td>
</tr>
<tr>
<td>12/5</td>
<td>2.5</td>
<td>Housing statistics research; reformatting amendments in ITK guide; reading WHA ADU handbook.</td>
</tr>
<tr>
<td>12/6</td>
<td>3</td>
<td>Creating table summary of ITK housing guidelines; finalizing Canva guide; emailing internship supervisors.</td>
</tr>
<tr>
<td>12/8</td>
<td>0.5</td>
<td>Housing statistics research.</td>
</tr>
<tr>
<td>12/9</td>
<td>1</td>
<td>Housing statistics research.</td>
</tr>
<tr>
<td>12/10</td>
<td>1</td>
<td>Organizing housing statistics excel sheet.</td>
</tr>
<tr>
<td>12/11</td>
<td>2.5</td>
<td>Housing statistics research.</td>
</tr>
<tr>
<td>12/12</td>
<td>3</td>
<td>Housing statistics research; creating graphs/charts of data.</td>
</tr>
<tr>
<td>12/14</td>
<td>2.5</td>
<td>Finishing data collection and excel sheet; communicating with supervisors.</td>
</tr>
<tr>
<td></td>
<td>120.25</td>
<td>Total hours</td>
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</tbody>
</table>

### Appendix B: Data and Documents Produced

Housing metrics excel sheet access link: [WHA Housing Metrics Final.xlsx](#)

Housing week data excel sheet access link: [WHA Housing Week Data.xlsx](#)

Canva infill toolkit guide access link: [https://www.canva.com/design/DAEt9QsI5NU/2MakfNw5uFO4A9c35cC9yw/view?utm_content=DAEt9QsI5NU&utm_campaign=designshare&utm_medium=link&utm_source=shareyourdesignpanel](#)

Canva infill toolkit guide page images:
Infill housing is a valuable tool when striving to create sustainable and diverse housing options while utilizing efficiently, an important goal for a growing population. Happy Valley has shown itself to be one of the most welcoming and diverse neighborhoods in Bellingham. Sprawled throughout the Happy Valley Neighborhood there are small and large, old and new single-family homes, duplexes, four-plexes, apartments, town homes and apartment developments, housing from two to four stories, non-profits and public housing units, and diverse ADUs. The Happy Valley Neighborhood contains homes that are relics from the 19th and 20th century and still is a community of the future, a community which can and must be made better through the use of infill housing options.

Why Infill Housing?

- **Inclusivity**: Bellingham is growing, household sizes are shrinking, and housing costs are increasing. To make housing more affordable, we need to build a lot more of it. The current housing shortage in Bellingham results in higher house prices, crowding basements for residents and making it impossible for many to afford homes.

- **Accommodate Neighbors**: On average, in the past 5 years, we’ve gained 3 new neighbors every day in Bellingham, but on average we are only building one unit per day. Infill is a great way to build where there is existing infrastructure and reduce sprawl, and can provide a range of housing units of different sizes and prices.

- **Reduce the Environment**: Increasing housing stock within Bellingham will reduce pressure to develop further to the outskirts of the city. Density reduces commute and helps protect farmlands and open space from being consumed by sprawl.

Pedestrian-Oriented Development

The Infill Toolkit strives to promote pedestrian-oriented development for a more friendly, walkable environment with a view to minimizing non-automobile commuting in the infill housing form.

- Parking should not be located between the housing units and the street unless in conjunction with a living area and a garage.
- When parking is located on a street, their width and that of the roadway must accommodate its design and be sufficient to the width of the housing unit.
- Parking units on an existing street should be prioritized over those on a new lane or common pedestrian corridor.
- Parking located on an existing street should be prioritized over locating parking in areas where it creates conflicts between pedestrians and cars, such as narrow streets or walkways.
- Minimal parking for each unit should be served by a pedestrian path and serving alley, with a loading pad.
- As with all design and landscaping should be used to minimize the prevalence of driveway and garage parking.

Detached Additional Dwelling Units

- DADUs, also called mother-in-law apartments or detached cottages, are located on the same lot as the main house, and provide a smaller detached living space that is ideal for single people, aging relatives, or people with disabilities.

- Standards:
  - Density: 3-15 units per acre
  - Lot size: 12,000 sq ft minimum, or corner lot, or alley access
  - Mixed-use: 300 sq ft max
  - Floor area ratio (FAR): 0.3 max, including primary residence, ADU is a separate footprint in many housing projects
  - Prin and Gains:
    - Can be more efficiently developed with existing single-family detached neighborhoods
    - Increase density, affordability, and reduces sprawl
    - Usually built for homeowners, not developers
    - Can have rental income
    - Increase parking and traffic demand in the neighborhood
    - Limit other limitations may be not be subject to the

Common Pedestrian Corridors

Common pedestrian corridors are characterized by pedestrian-friendly sidewalks and serving alley, with loading pad.

- Architectural design and landscaping should be used to minimize the prevalence of driveway and garage parking.

Housing Standards at a Glance

- ADU
  - 3, 4, 5
- 1-Bedroom
  - 1,000
- 2-Bedroom
  - 1,500
- 3-Bedroom
  - 2,000
- 4-Bedroom
  - 2,500
- 5-Bedroom
  - 3,000

- 1-Bedroom
  - 1,000
- 2-Bedroom
  - 1,500
- 3-Bedroom
  - 2,000
- 4-Bedroom
  - 2,500
- 5-Bedroom
  - 3,000

- 1-Bedroom
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- 2-Bedroom
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- 3-Bedroom
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- 4-Bedroom
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  - 3,000

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- 5-Bedroom
  - 3,000

- 1-Bedroom
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- 2-Bedroom
  - 1,500
- 3-Bedroom
  - 2,000
- 4-Bedroom
  - 2,500
- 5-Bedroom
  - 3,000

- 1-Bedroom
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- 4-Bedroom
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- 5-Bedroom
  - 3,000

- 1-Bedroom
  - 1,000
- 2-Bedroom
  - 1,500
- 3-Bedroom
  - 2,000
- 4-Bedroom
  - 2,500
- 5-Bedroom
  - 3,000
Carriage House

A carriage house is a detached accessory dwelling unit located above a detached garage on the same lot as the main house. Similar to a 50% density bonus, this arrangement can benefit aging family members and single people.

- Lot size: 30,000 sq ft max, or corner lot, or alley access
- Width: 600 sq ft max
- Height limit: 25 ft max

Pros and Cons:
- Can be compatible in character with existing single-family detached neighborhoods
- Increased density allows for affordability and reduces sprawl
- Combined use of garage and apartment maximizes taxable value
- Usually built by homeowner, not developers
- Can provide rental income
- Increased parking and traffic demand in the neighborhood
- Unit size limitations may not be conducive to families

Cottage Housing

A Cottage Housing development is a common arrangement of an attached home with shared open space and parking. This arrangement allows for a smaller urban footprint and may be especially appealing for small families or individuals.

- Standards:
  - Density: 10-25 units per acre, subject to density limits
  - Unit size: 600-1,200 sq ft
  - Floor area ratio: 0.4
  - Green Factor landscape score of 0.4

- Press and Cons:
  - Shared open space adds to walk-up and social interaction
  - Increased density allows for affordability and reduces sprawl
  - Housing community can provide a more walkable environment
  - Unit size limitations may not be conducive to families

Duplex, Triplex and Fourplex

A duplex is a two, three, or four attached housing units, either side by side or on different floors. They share the same lot and have separate entrances to each of the units.

- Standards:
  - Density: 8-12 units per acre, subject to density limits
  - Unit size: 800-1,600 sq ft
  - Floor area ratio: 0.4
  - Green Factor landscape score of 0.4

- Press and Cons:
  - Can be designed to look like single-family homes
  - Smaller square footage allows for affordability and reduces sprawl
  - Home building density can be encouraged to two or three units
  - Land use can be more efficient in multi-family zones for low-income housing and parking in the neighborhood

Townhouses

A townhouse, which is sometimes called a row house, is a home in a row of attached homes. This design allows for many of the amenities of single-family homes with greater density.

- Standards:
  - Density: 30-50 units per acre
  - Max attached units: 3
  - Floor area ratio: 0.7
  - Green Factor landscape score of 0.4

- Press and Cons:
  - Shares many amenities with a detached single-family house
  - Affordability: attached homes
  - Aesthetic: attached homes
  - Increased density allows for affordability and reduces sprawl
  - Home building density can be encouraged to two or three units

Small House and Smaller House "Small Lot"

With smaller lots than most, the Small House and Smaller House models allow for detached single-family development that is cost-effective and more affordable with proposed new floor plans. These two housing types will be combined into the Small Lot housing form.

- Standards:
  - Density: Small 0.33-0.45 units per acre, Smaller 0.18-0.25 units per acre
  - Unit size: 600-800 sq ft
  - Floor area ratio: 0.4-0.6
  - Green Factor landscape score of 0.4

- Press and Cons:
  - Compatibility with existing single-family detached neighborhoods
  - Smaller units allow for affordability and reduced sprawl
  - Increased density allows for affordability and reduces sprawl
  - Housing community can add to walk-up and social interaction

Demonstration Ordinance

Kubish Community Land Trust utilized this ordinance to construct 14 LEED-certified, affordable homes on one acre at Matlath Place.

What is affordable housing? Under federal standards, to qualify for affordable housing a household must make less than 80% of Whatcom County’s median income. For housing to be affordable, monthly mortgage payments should not exceed 30% of household income.
Appendix C: Supplemental Documents

Internship agreement form access link: https://wwu2-my.sharepoint.com/:b:/g/personal/nygrena2_wwu_edu/ES446vtLMCJDk9Jxpg4L9ugF9gFadAPjMja8pXB_xwmEA?e=nTOCWv

WHA Housing Week poster (produced by the WHA):
Housing Week presentation trivia slides (produced by Taylor Webb in the WHA):

- **Median Resale Price in Whatcom County**: $544,700
- **Average Rental Vacancy Rate in Whatcom County 2015-19**: 2.2%
- **Average Owner-Occupancy in Whatcom County 2015-19**: 62%
- **Percentage of Households Severely Burdened by Housing Cost**: 17%
- **1 in 4 Households** face housing issues of overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities.