



MILWAUKIE PLANNING
 6101 SE Johnson Creek Blvd
 Milwaukie OR 97206
 503.786.7600
 planning@milwaukieoregon.gov

Preapplication Request Form

File #: 22-004PA

Meeting Date: 6 / 9 / 22 Time: 10 AM Location: 6101 SE Johnson Creek Blvd Today's Date: 5 / 16 / 22

Applicants and representatives are expected to present a detailed explanation of their proposal at the conference.

The purpose of the preapplication conference is to acquaint the applicant or applicant's representative with the requirements of the municipal code in preparation for submission of a land use application, including relevant approval criteria, development standards, and procedures. The preapplication conference is not an exhaustive review of all potential issues or requirements. Furthermore, the information provided by the City is not binding, and it does not preclude the City from raising new issues or identifying additional requirements during the land use review process. *(MMC 19.1002 Preapplication Conference)*

Although the primary purpose is as stated above, preapplication conferences may also be used as part of a due diligence process to obtain a higher degree of certainty about a property development. An applicant is not required to be the property owner to request a preapplication conference.

SITE INFORMATION:

Site Address: Multiple (see narrative) Map & Tax Lot(s): Multiple Zone: RMD

PROPOSAL (brief description):

The Milwaukie Courtyard Housing Project (MCHP) is 34 missing middle townhomes across 4 sites in the Ardenwald neighborhood.

APPLICANT:

Project Contact Name: Jennifer Dillan Company: HomeWork Development

Mailing Address: 1017 N Revere Street Portland OR Zip: 97227

Phone(s): 503-975-3035 Email: jennifer@wildhairdev.com

of Expected Attendees: 4

Owner Architect Contractor
 Representative Engineer Other: _____

REQUESTED MEETING TYPE:

- Preapplication Meeting—1st meeting free; 2nd meeting \$50; Subsequent meetings \$100/mtg.**
 - Optional meeting with 2 City staff. No meeting notes are provided by staff.
 - Staff will coordinate meeting date and time once Submittal Information (listed on reverse) is received.
- Preapplication Conference—\$200**
 - Optional or required meeting with 3 or more staff. Meeting notes are provided by staff 2 weeks after the conference.
 - City staff from the Planning, Building, Engineering, and Public Works departments usually attend. Other public agencies (such as the Fire District) may attend as necessary.
 - Appointment times are Thursdays from 10:00 a.m.–11:00 a.m.
 - Appointments are scheduled on a first-come, first-served basis. Preapplication Requests must be submitted during counter hours, and by 12:30 p.m. every Thursday for the first appointment available.
 - Appointments must be made no less than **three weeks** before the desired meeting date for **Major projects** (e.g. commercial, industrial, multi-family, subdivisions) and no less than **two weeks** in advance of the desired meeting date for **Minor projects*** (e.g. single family, ADUs, partitions).
- Transportation Impact Study Review—\$100**
 - Mandatory second meeting if the project requires a Transportation Impact Study (TIS).
 - To be scheduled after completion of a TIS by the applicant's engineer.

IMPORTANT INFORMATION ON REVERSE SIDE

PREAPPLICATION REQUEST CHECKLIST:

Once submitted, application materials and applicant information become public record as well as constitute permission for staff to access the site in preparation for the meeting/conference.

Preapplication Meeting: Please submit 3 hard copies of the required information.

Minimum Requirements:

- Completed Request Form and accompanying fee (if any)
- Preliminary site plan and building plans, showing existing and proposed features. (Plans do not need to be professionally prepared, just accurate and reliable.)
- A detailed narrative description of the proposal that clearly identifies the location, existing and proposed uses, and any proposed construction.
- A list of all questions or issues the applicant would like the City to address.

Preapplication Conference: Please submit 8 hard copies and 1 electronic copy of the required information. Please refer to the [Development Project Checklist](#) for a list of items that may be applicable to your project.

Minimum Requirements

- Completed Request Form and accompanying fee.
- Narrative: A detailed description of your proposal and any specific questions you have. Include a brief description of the physical context of the site, including a map showing the site and surrounding properties.
- A list of all questions or issues the applicant would like the City to address.
- Proposed elevations
- Site/Plot Plan (8½ x 11 or 11 x 17) that includes (if applicable)
 - Parcel and building setback dimensions
 - Existing and proposed structures
 - Location and dimension of existing and proposed easements, access, and driveways
 - Location of existing and proposed utilities: storm, sanitary sewers, and water (including size of service and street location)
 - Width of adjacent right-of-way
 - Existing streets abutting the property
 - Vehicle and bicycle parking layout (including calculation of required number of spaces, based on use and square footage of building)
 - Slope map (if slope is 25% or more)
 - Significant tree locations (all trees with a caliper over 6 inches)
 - Proposed stormwater detention system with topographic contours
 - Location of onsite and adjacent natural resources
 - Circulation system for vehicles, pedestrians, and bicycles

For Office Use Only:

*Project Type: Minor Developments (e.g. single family, ADUs, partitions): 2 weeks required for review
 Major Developments (e.g. commercial, industrial, multi-family, subdivisions): 3 weeks required for review

Routing: File Planning (2) Engineering (2) Building
 Development Manager Public Works Fire CD Director (development)

NARRATIVE

The Milwaukie Courtyard Housing Project (MCHP) is a path to net zero, neighborhood-scale workforce housing development project in Milwaukie, Oregon. It is being constructed as a singular project, across 4 sites in the residential Ardenwald neighborhood. Composed of 34 for-sale townhouses, each home is designed to be a clean, replicable 2-bdrm/1.5 bath Mass Plywood (MPP) home, repeated in a single unit and 2-gang (duplex) configuration. The houses are oriented towards a central green space to encourage community interaction. As a path to net zero project, it includes carbon sequestration from mass timber, and energy efficient design, construction, and operation. Research is underway (funded by Energy Trust of Oregon's 2021 Net Zero Fellowship grant) to install solar microgrids on the sites. Our nonprofit partner, Proud Ground, will ensure permanently affordable homeownership through a community land trust model.

MCHP homes will be constructed with MPP panels that will be pre-constructed off site with structural core, weather barrier, insulation, cladding and finish and brought on site. Using this innovative, panelized design, this project is designed to optimize opportunities in zoning density, sustainability, local forest sourcing, and affordability so that average working families (making 80-100% AMI) can afford to buy a home and start to build wealth. The MPP panelized designs are optimized for the aesthetics, affordability, energy efficiency, resilience, and biophilic benefits of wood. This is a pilot project for subsequent, replicable developments to leverage and optimize imminent up-zoned residential codes, due to be ratified in April 2022.

In terms of the panelized system, they will be pre-constructed off site with structural core, weather barrier, insulation, cladding and finish and brought on site. We are currently confirming engineering consultants for the effort and will be working through structural requirements.

Not only is the project new from a code perspective, but also incorporates standardization and replicability (all 34 units will be identical). Each of the properties will be serviced by 1 meter.

Solar microgrid energy and water infrastructure

We are seeking to meet DOE's Zero Energy Ready Home (ZERH) standard. The cluster housing approach results in decreased land costs per unit, reduced travel distances to work and play (lowered transportation carbon emissions), and provides **shared 'grid-enhancing' solar microgrid energy and water infrastructure**. This infrastructure will provide benefits to the larger grid during normal conditions while being capable of sustaining operations within the cluster during grid-disrupting events. MCHP will be large enough to take advantage of economies of scale but small enough to facilitate construction without requiring significant municipal investment.

HomeWork Development received a 2021 Net Zero Fellowship Grant from Energy Trust of Oregon to **prototype net zero, mass plywood panel, workforce housing, cluster infill with solar microgrids** to meet community energy, affordability and climate resilience goals.

THE PROPERTIES

1. 3736 SE Harvey Street / 24,000 sf
 - a. owner and co-developer: Jennifer Dillan
2. 10325 SE 36th Ave / 18,371 sf
 - a. owner and architect: Mark Fretz
3. No Situs: adjacent to 10325 SE 36th property / 8,573 sf
 - a. owner: Providence Hospital
4. 10263 SE 36th Ave / 7,405 sf
 - a. Owner: Providence Hospital

THE TEAM

Our interdisciplinary team has expertise in affordable housing development, architectural design, envelope design, energy modeling, efficient passive and mechanical systems, manufacturing and construction delivery.

- ❖ Development – **HomeWork Development** is led by Jessy Ledesma. With 15 years of development experience in the Portland area, Jessy has transacted over \$175 million in development volume across 16 projects. This includes 525 affordable housing units and 200,000 SF of commercial developments. Jessy founded HomeWork Development in early 2021, with a vision to build a new model for an inclusive, thoughtful, and responsive development industry. She holds a Bachelor of Architecture from the University of Oregon, with a minor with distinction from the Clark Honors College.
- ❖ Co-Development – Jennifer Dillan of **Wild Hair Development** is co-developer and landowner. She holds a Master of Real Estate Development and 25 years of marketing experience. Jennifer was Marketing & Development Manager at Kaiser + Path during the construction of mass timber projects Carbon12 and The Canyons. From 2020-2021, she served on the City of Milwaukie's Comprehensive Plan Implementation Committee and was a member of the 2019 Cottage Cluster Feasibility Study.
- ❖ Architect of Record – **Mildren Design Group** is led by Principals Tuan Luu and Sabine O'Halloran, with over 27 years of architecture experience each across many real estate asset types. Simone O'Halloran is a graduate research assistant at the UO / TallWood Design Institute, focusing on mass timber, and will function as the Designer at Mildren Group for this project.
- ❖ Community Land Trust – **Proud Ground** became the first city-wide entity to provide permanently affordable homeownership opportunities. Today, Proud Ground is one of the largest Community Land Trusts in the country.
 - Diane Linn has served for over 38 years in the private, public and nonprofit leadership positions. She has served as Executive Director since 2014, and as elected Multnomah County Chair and County Commissioner from 1998 to 2004. Proud Ground to offer home buyer outreach, education, and long-term affordability via their community land trust model.
- ❖ **Providence** – will contribute design guidance for healthy housing initiatives and scalability across the region and West Coast. In addition, Providence is the owner of two of the parcels.

- ❖ Research, Design and Engineering Consultants – **TallWood Design Institute (TDI)** is a collaboration between the University of Oregon and Oregon State University established to respond to applied research needs to support the use of mass timber in the design and construction industry. TDI has significant expertise and experience in all aspects of mass timber research, testing and outreach including fire, acoustics, and Life Cycle Analysis.
 - Judith Sheine (UO Professor of Architecture, TDI Director of Design) researches the relationships between design and construction technologies with a focus on mass timber products and systems.
- ❖ **The UO Energy Studies in Buildings Laboratory (ESBL)** has a 40-year history of research in energy efficiency.
 - Mark Fretz (UO Research Assistant Professor of Architecture – ESBL/IHBE) has a background in public health and architecture and has worked on numerous housing projects as an associate with ZGF Architects. He recently was a stakeholder advisor for the City of Milwaukie’s 2019 Cottage Cluster Feasibility Study and currently has a 2020 WIG award for the use of MPP in seismic and energy housing retrofits.
- ❖ Structural Engineering – **DCI Engineers** are our structural engineering partners with deep expertise in mass timber construction. Shirley Chalupa will lead the engineering team.
- ❖ Precon and Construction Costing – **Swinerton / Timberlab** are the mass timber panel fabrication and construction partners. In 2021, Timberlab, Inc., an affiliate of Swinerton was launched. William Silva, Director of Preconstruction, has deep expertise in mass timber construction and preconstruction development.
- ❖ Mass Timber Sourcing and Manufacturing – **Freres Lumber Co** will supply MPP product, manufacturing of panels, and technical expertise.

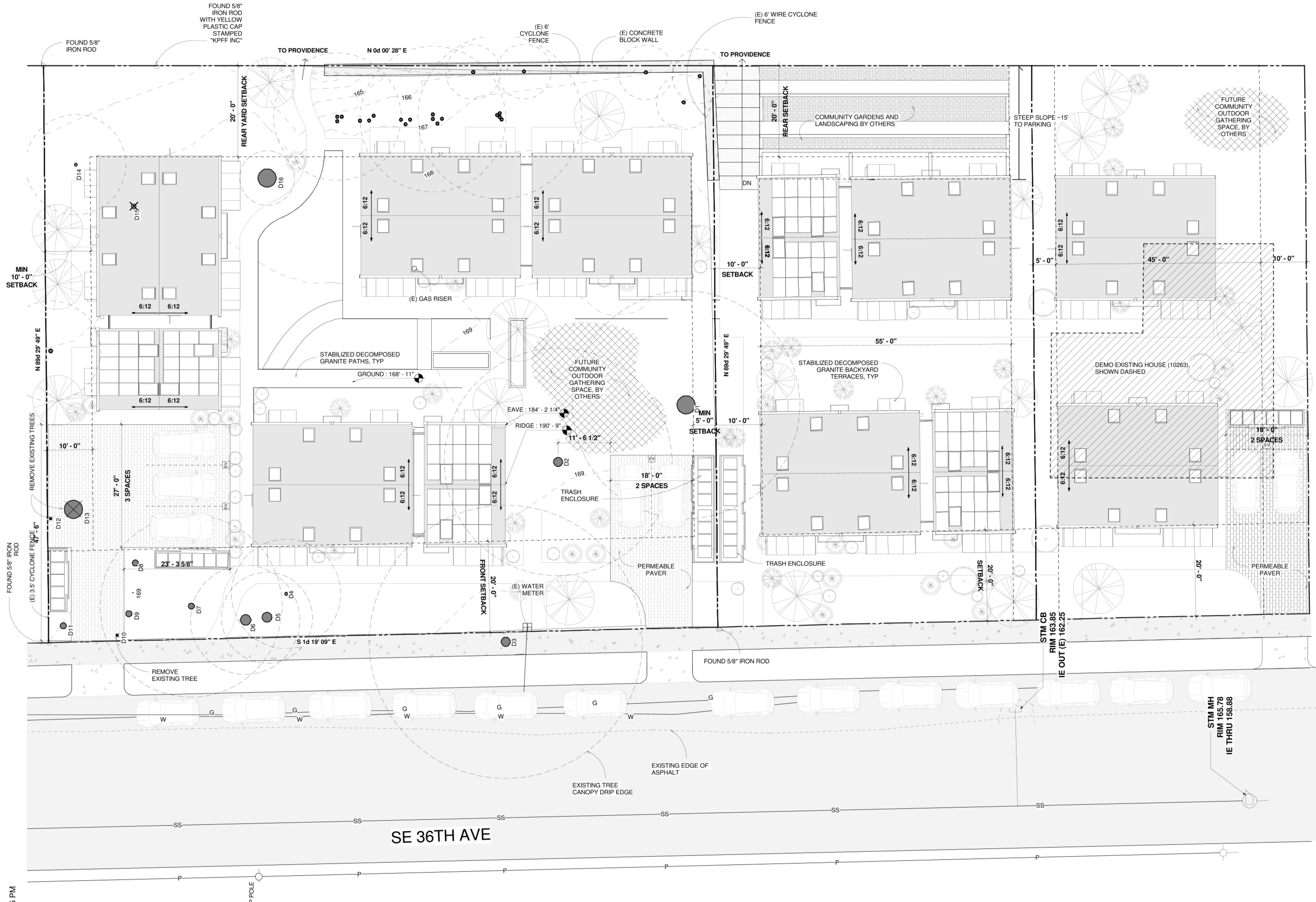
Questions

1. SDCs
 - a. Right now SDC fees are scaled for a large home, not 34 small ones operating on a shared lot. We are planning to build the units as a panelized system, that is, panels manufactured off-site in a warehouse and assembled along with roofing on-site. They would be engineered units following a performance based code path. How does that change the structural review fees if no longer a prescriptive path?
 - b. Is the Transportation SDC 50% since onsite parking is reduced to .50?
2. Permitting fees
 - a. Attached is our calculation worksheet for SDCs as well as permitting costs. Note that I have populated the SDC section with the numbers you have provided. The permitting costs you see are per unit, but it seems that some (such as engineering) would be by lot.
 1. Can you please confirm we have used the most updated fee schedule for our calcs?
 2. Given that all duplexes are identical (2 identical units but mirrored), which SDC fees are 1X, or by lot (there are 4 legal lots), or by number of homes (34)?
 3. Did we calculate valuation as intended?

- b. We are assuming we will need one electrical meter and water/sewer connection for the two Providence lots, and one each for 10325 SE 36th and Harvey St properties.
3. ROW
- a. Is the right of way sufficient on 36th for us to add 90 degree parking in the right of way?
 - i. Can we draw parking units from adjacent property that is owned by Providence to satisfy our requirements?
 - b. We would like to review ROW and utility upgrade requirements.
 - i. Milwaukie currently requires paved driveway and driveway approach plus covered parking on site (garage or carport) from a street improvement document dated July 16, 2009. Might include: right of way dedication, curbs, gutters, sidewalks, driveway approach, storm drainage improvements and paving
 - ii. Please confirm the required ROW upgrades for both 36th and Harvey
 - iii. Can our transportation SDCs go toward those direct costs?
 - iv. Also need to confirm any utility upgrade costs that will be paid to the City (rather than included in our GC contract)
4. Single Family and Duplex Design Standards (the five detailed design requirements)
- a. Our design has been thoughtfully optimized for aesthetics, cost, environmental performance and neighborhood scale and vernacular using carefully considered materials and construction processes. Currently, we meet the required design standards (part 1) and duplex design standards (part 4); however, we only meet **3** of the required 5 “detailed design requirements” (A, J, L). The other detailed design requirements add significant cost. We should discuss what is the process for requesting an exception/variance and whether or not this triggers a full LUR.

Notes:

- We have a site survey for 10325 which includes slope and existing utilities, but no surveys for the other properties yet.
- We do not have the width of adjacent ROW for Harvey site
- Still need civil to evaluate the proposed stormwater systems. However, if we treat all stormwater and greywater on site? Could this lower SDCs?



**MILWAUKIE
COURTYARD
HOUSING PROJECT**

10325 SE 36th Avenue
Milwaukie, Oregon 97222



**PLAN,
PROPOSED
ROOF SITE
PLAN**

A1.15

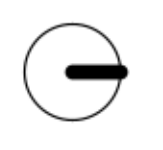
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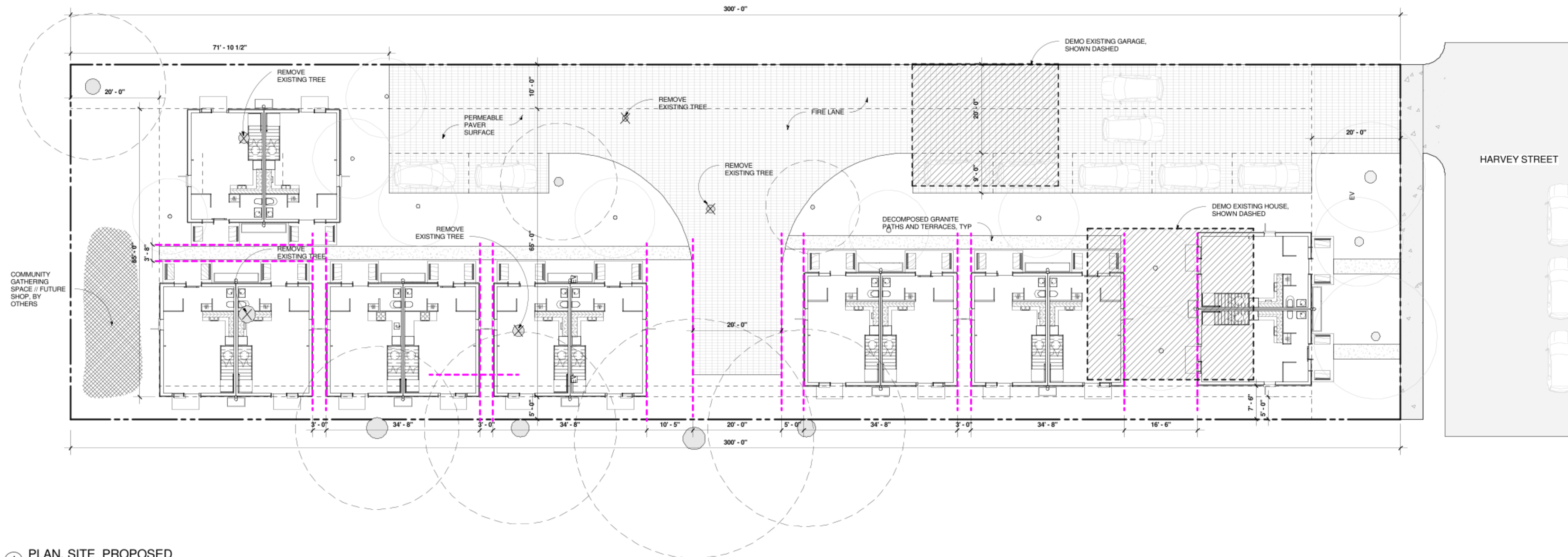
ISSUE DATE

**SCHEMATIC
DESIGN**

5/12/2022 7:28:35 PM

1 **PLAN, SITE PROPOSED, ROOF**
A1.15 1" = 10'-0"





① PLAN, SITE PROPOSED
1/16" = 1'-0"

SITE LEGEND

	EXISTING TREE
	NEW TREE
	REMOVE TREE
	PERMEABLE PAVING
	STABILIZED DECOMPOSED GRANITE



**MILWAUKIE
COURTYARD
HOUSING PROJECT**

3736 SE Harvey Street
Milwaukie, Oregon 97222

**PLAN, MASTER
SITE**

A1.10

SCALE | 1/16" = 1'-0"

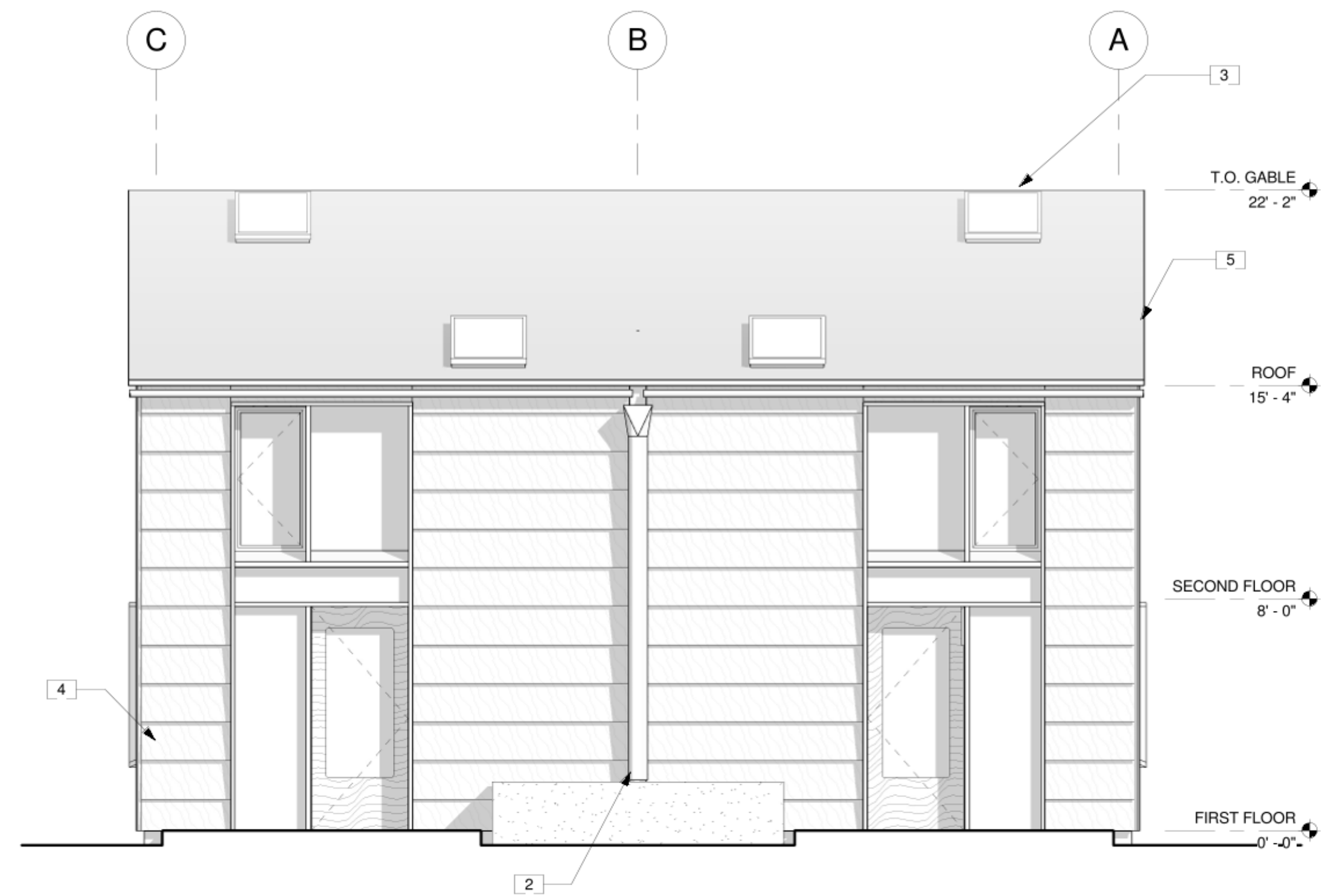
ISSUE DATE

**SCHEMATIC
DESIGN**

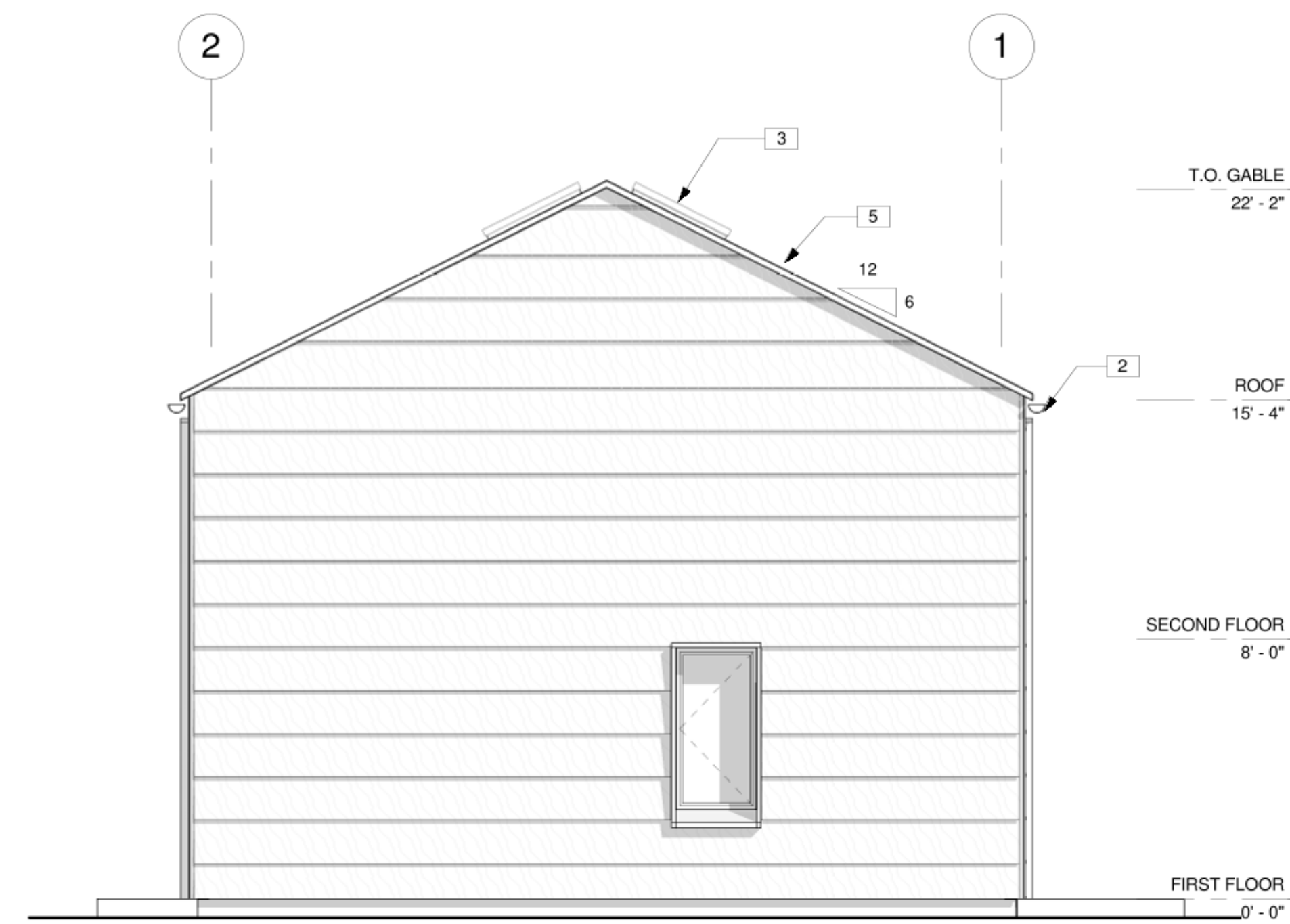
MILWAUKIE
COURTYARD
HOUSING
PROJECT

KEYNOTES

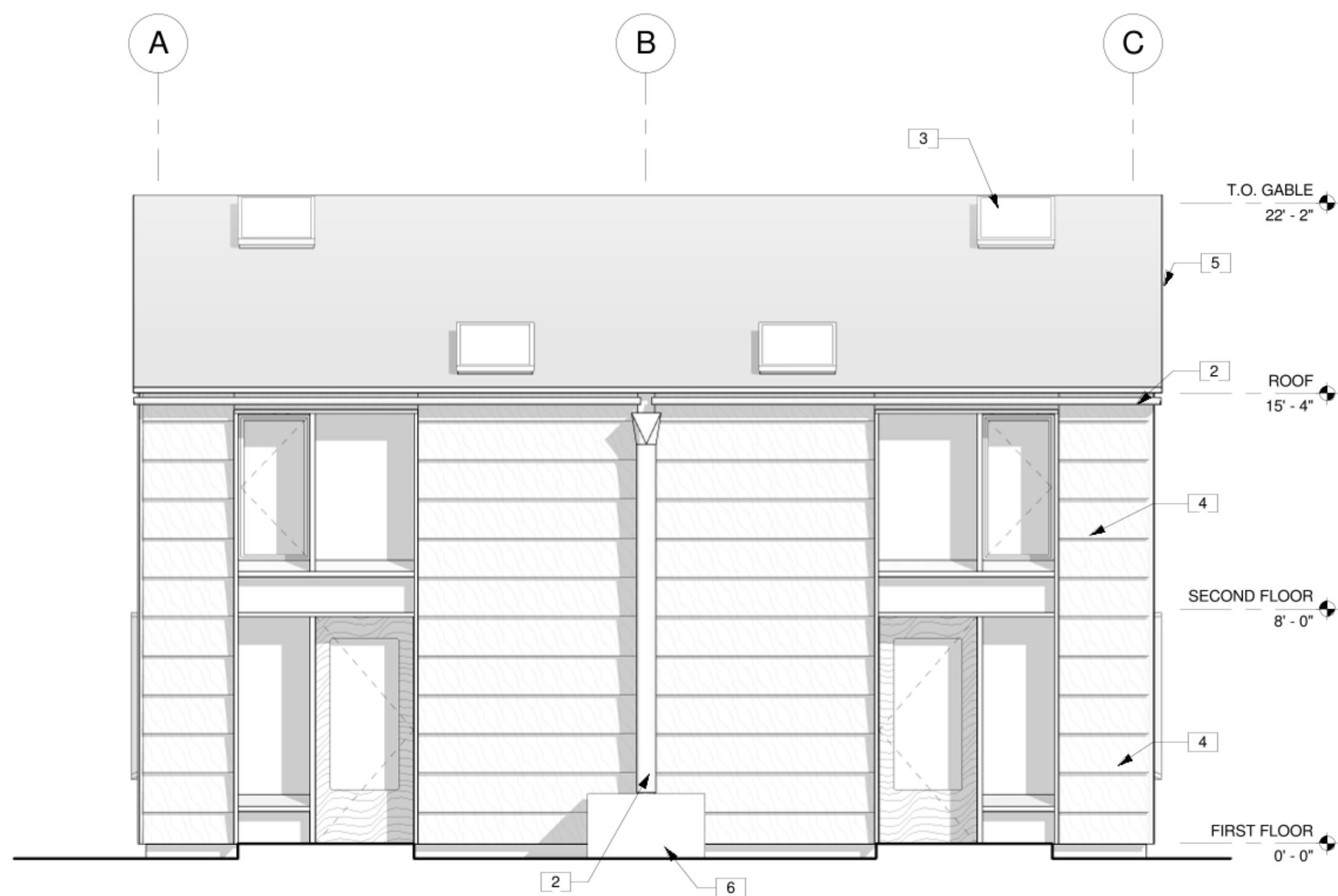
- 1 Concrete Slab - See Structural
- 2 GALVANIZED GUTTER
- 3
- 4
- 5 ASPHALT SHINGLE ROOFING
- 6 GALVANIZED DOWNSPOUT - PAINTED TO MATCH



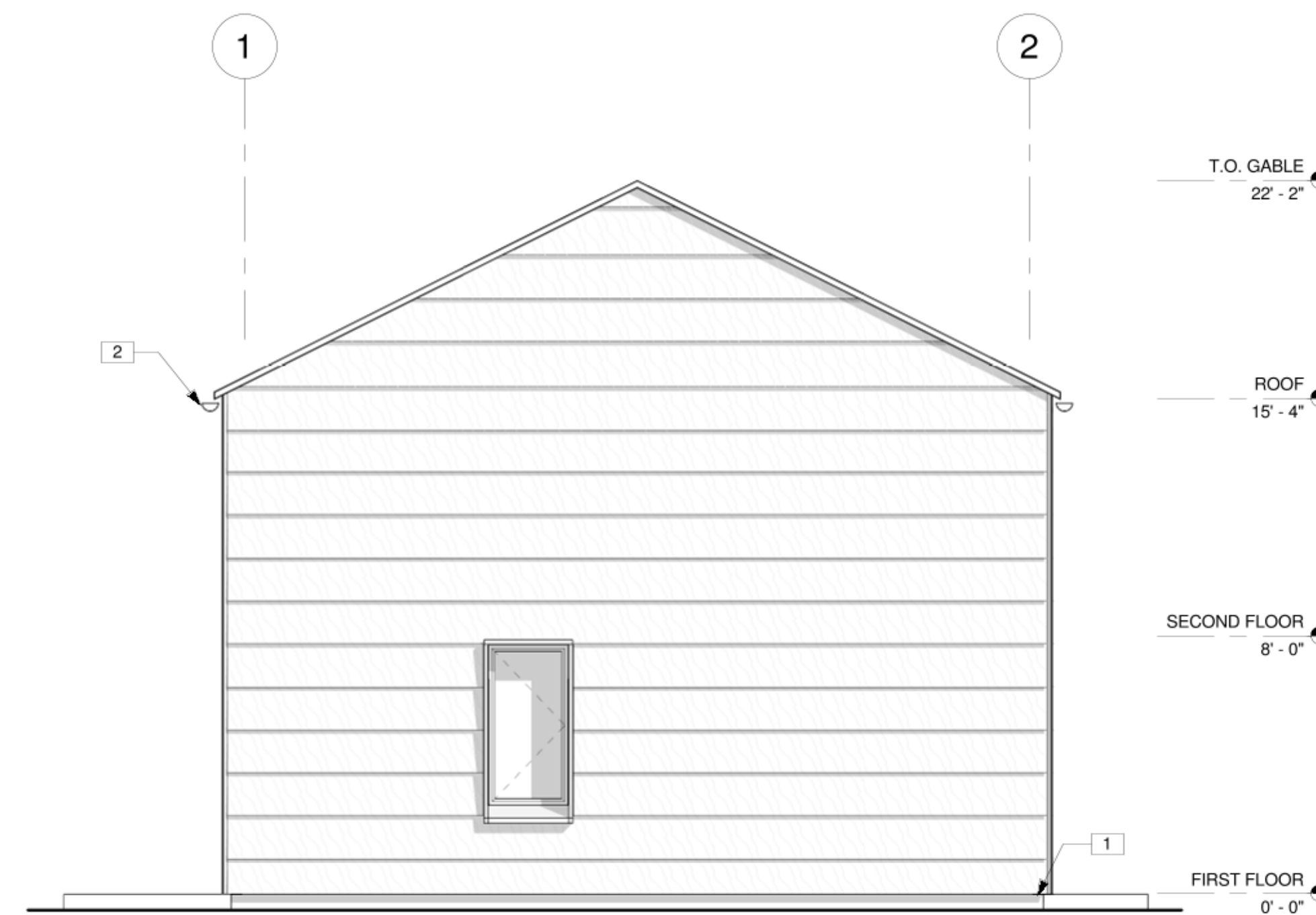
1 ELEVATION, FRONT
1/4" = 1'-0"



3 ELEVATION, LEFT
1/4" = 1'-0"



2 ELEVATION, BACK
1/4" = 1'-0"



4 ELEVATION, RIGHT
1/4" = 1'-0"

Enter address here



EXTERIOR
ELEVATIONS

A3.1

SCALE | 1/4" = 1'-0"

ISSUE DATE | 01.02.2022

50% SD



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Single-Family & Duplex Design Standards

The City of Milwaukie has adopted design standards for single-family dwellings and duplexes which require a minimum level of design. Detailed standards are located in Milwaukie Municipal Code (MMC) Subsection 19.505.1. The standards apply to all new single-family dwellings and duplexes with street-facing façades within 50 ft of a front or street side lot line. If you are considering a rowhouse development, please contact the Planning Department.

This handout provides an overview of the following standards for single-family and duplex dwellings:

- Part 1:** Required Design Standards
- Part 2:** Detailed Design Features
- Part 3:** Attached Garage and Carport Standards
- Part 4:** Additional Design Standards for Duplexes

Part 1: Required Design Standards

All new single-family and duplex dwellings must meet the standards in Table 1. Additional details about each standard are located in MMC 19.505.1.

TABLE 1. REQUIRED DESIGN STANDARDS

Required Elements	Proposed	Comments Staff Use Only
All new single-family dwellings and duplexes:		
<p>Building Articulation: All new structures and expansions that add 200 sq ft or more to the street-facing façade, or add 20 linear ft or more to the street-facing façade, must comply with the following requirements, based on the building's street frontage width:</p> <ul style="list-style-type: none"> • Up to 30 ft: Not required • 30-60 ft: Minimum 1 element • More than 60 ft: Minimum 1 element every 30 ft <p>Elements: (choose 1 or more for buildings more than 30 ft wide):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Porch at least 5 ft deep <input type="checkbox"/> Balcony at least 2 ft deep and accessible from an interior room <input type="checkbox"/> Bay window that extends at least 2 ft wide <input type="checkbox"/> Section of façade recessed by at least 2 ft deep and 6 ft long <input type="checkbox"/> Gabled dormer 	<p>Meet with porch.</p>	
<p>Eyes on the Street: All new structures and expansions that add 200 sq ft or more to any street-facing façade must comply with this standard. For expansions that add more than 75 sq ft and less than 200 sq ft, the expanded façade area must meet this standard.</p> <ul style="list-style-type: none"> • At least 12% of any street-facing building face (whether front or street-side face) must be windows or entrance doors. Up to 50% of garage door windows count towards this requirement. 	<p>Meet with 19.4% of facade windows/entrance doors</p>	
<p>Main entrance: All new structures and expansions that include a new main entrance must meet these standards.</p> <ul style="list-style-type: none"> • All buildings must include a main entrance oriented to the street or that opens onto a porch of at least 25 sq ft. • Entrance cannot be more than 8 ft behind the longest street-facing wall of the building. 	<p>Meet. Porch 53 SF and entrance in compliance.</p>	

Part 2: Detailed Design Features

In addition to the required standards of Table 1, new single-family dwellings and duplexes must incorporate a minimum of 5 detailed design features from Table 2, below. These requirements are not applicable to expansions of an existing structure. An architectural feature may be used to comply with more than one standard. See page 3 for examples of each design feature.

TABLE 2. DETAILED DESIGN REQUIREMENTS

All dwellings shall include at least 5 of the following design features:		
Detail Design Features (check 5 or more)	Description	Comments Staff Use Only
<input checked="" type="checkbox"/> A. Covered porch	Minimum 5' deep and 5' wide	
<input type="checkbox"/> B. Recessed entry	Minimum 2' deep and 5' wide	Nope.
<input type="checkbox"/> C. Offset building face	Minimum 16" from one exterior wall surface to the other	Nope.
<input type="checkbox"/> D. Dormer	Minimum 4' wide and integrated into roof form	Nope.
<input type="checkbox"/> E. Roof eaves	Minimum 12" projection from intersection of roof/ exterior walls	Nope.
<input type="checkbox"/> F. Roof line offsets	Minimum 2' from top surface of one roof to the other	Nope.
<input type="checkbox"/> G. Tile or wood shingle roofs		Nope.
<input checked="" type="checkbox"/> H. Horizontal lap siding	Between 3"-7" wide (visible portion once installed) and made of wood, vinyl or fiber-cement	We partly meet this. We have wood lap siding, just not their spacing, might be able to consider this for street units but will increase costs.
<input type="checkbox"/> I. Brick, cedar shingles, or stucco siding at street-facing façade	Minimum 40% of building elevation visible from the street	Nope.
<input checked="" type="checkbox"/> J. Gable, hip, or gambrel roof design		
<input type="checkbox"/> K. Window trim	Minimum 3" wide and 5/8" deep at all windows on any street-facing façade	Nope.
<input checked="" type="checkbox"/> L. Window recesses	Minimum 3" from face of façade (all windows)	
<input type="checkbox"/> M. Balcony	Minimum 3' deep x 5' wide, accessible from an interior room	Nope.
<input type="checkbox"/> N. Roof pitch to south	Minimum 500 sq ft area, 30° to true north/south	Nope.
<input type="checkbox"/> O. Bay window	Minimum 2' deep and 5' long	Nope.
<input type="checkbox"/> P. Attached garage 35% or less of front façade*	35% or less measured from inside garage door frame	Nope.

* To be considered a detailed design feature, the width must not exceed 35%. If the width is increased to 40%, at least 5 other detailed design elements in Table 2 must be included in the design of the street-facing façade. If the width is increased to 50%, at least 7 other detailed design elements must be included. Please see Part 3, Attached Garage and Carport Standards, for more information.

EXAMPLES OF DETAILED DESIGN FEATURES

The images below are intended to illustrate examples of design features, not a particular style.

			
<p>A. Covered porch <i>Minimum 5' deep and 5' wide</i></p>	<p>B. Recessed entry <i>Minimum 2' from exterior wall to door and 5' wide</i></p>	<p>C. Offset building face <i>Minimum 16" from one exterior wall surface to the other</i></p>	<p>D. Dormer <i>Minimum 4' wide</i></p>
			
<p>E. Roof eaves <i>Minimum 12" projection from intersection of roof/ exterior walls</i></p>	<p>F. Roof line offsets <i>Minimum 16" from top surface of one roof to the other</i></p>	<p>G. Tile or wood shingle roofs</p>	<p>H. Horizontal lap siding <i>Between 3"-7" wide (visible portion once installed) & made of wood, vinyl or fiber-</i></p>
			
<p>I. Siding at street <i>Minimum 40% of building elevation visible from the street</i></p>	<p>J. Roof design <i>Gable, hip, or gambrel roof design</i></p>	<p>K. Window trim <i>Minimum 3" wide and 5/8" deep at all windows</i></p>	<p>L. Window recesses <i>Minimum 3" from face of façade (all windows)</i></p>
			
<p>M. Balcony <i>Minimum 3' deep x 5' wide, accessible from an interior room</i></p>	<p>N. Roof pitch to south <i>Minimum 500 sq ft area, 30° to true north/south</i></p>	<p>O. Bay window <i>Minimum 2' deep and 5' long</i></p>	<p>P. Attached garage 40% or less of front façade <i>40% or less measured from inside garage door frame</i></p>

Part 3: Attached Garage and Carport Standards

New attached garages and carports which will face the street must meet the standards below. Garages more than 50 ft from the street are exempt from these standards. For carports, the distance from the street is measured from the columns of the carport. See MMC Subsection 19.505.2 for details. See MMC 19.505.5 for garage standards in rowhouse development.

A. The front of the garage/carport can be no closer to the front lot line than the longest street-facing wall of the house that encloses living area, except that:

- If there is a covered front porch, the garage/carport can extend up to 5 ft in front, but no further than the front of the porch.
- A garage may extend up to 5 ft in front of the house if the garage is part of a 2-story façade that has a window at least 12 sq ft in area on the second story that faces the street.

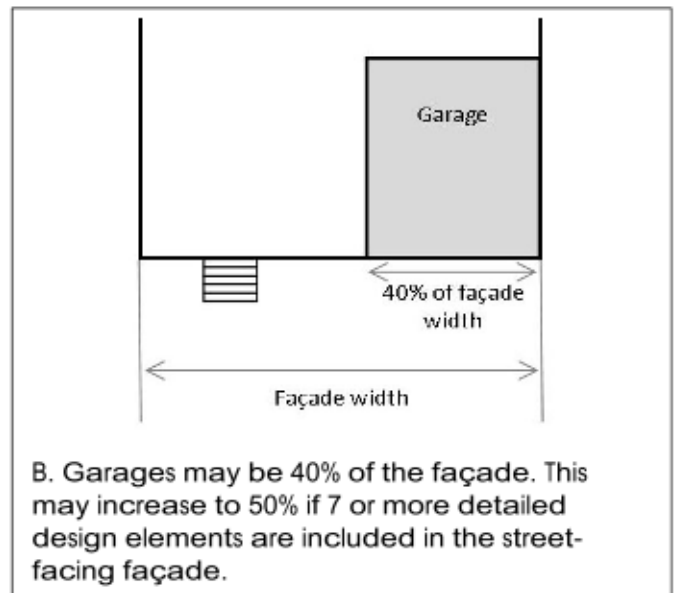
B. The width of the street-facing garage door(s) may not exceed 40% of the total width of the street-facing façade that is on the same street frontage as the garage door (measured from inside of garage door frame), with the following exceptions:

- All dwellings are allowed one 12-ft-wide garage door regardless of this requirement.
- The maximum allowed garage width may be increased to 50% of the total width of the street-facing façade if a total of 7 detailed design elements in Part 2 are included in the design of the street-facing façade.

C. Garages may be side-oriented to the front lot line if the eyes on the street standard in MMC 19.505.1.C.2 is met.



A. Garages that are part of 2-story façades with windows, or houses with covered porches, can extend 5 ft beyond the house, but no further than the front porch.



B. Garages may be 40% of the façade. This may increase to 50% if 7 or more detailed design elements are included in the street-facing façade.

Part 4: Additional Design Standards for Duplexes

In addition to the standards listed above, duplexes must also comply with the following:

- Exterior finish must be the same for both units.
- Eaves must be uniform for entire structure.
- Windows and door trim must be the same in type, size, and location for the entire structure.
- Windows must match in proportion and orientation for the entire structure.
- For corner lots, each entrance is required to face a separate street frontage. Where an existing house is being converted, 1 main entrance with internal access to both units is allowed.
- For duplexes facing 1 frontage:
 - Only 1 entrance is required to face the frontage.
 - Where more than 1 entrance to the structure faces the street, each separate entrance is required to meet the main entrance standards described in Part 1.
 - A second entrance from a side or rear yard is not allowed within 10 ft of the side or rear property line.

Milwaukie Entitlement Costs	Quantity	Fee	Subtotal	Notes
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Street improvements				*Milwaukie currently requires paved driveway and driveway approach plus covered parking on site (garage or carport) from street improvement document dated July 16, 2009. Might include: right of way dedication, curbs, gutters, sidewalks, driveway approach, storm drainage improvements and paving.
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Plumbing Permit				
SFR (2) bath	1	\$672.00	\$672.00	
Catch basin or area drain	1	\$49.00	\$49.00	
Drywell, leach line or trench drain	1	\$110.00	\$110.00	
Sanitary Sewer (per 100 lin.ft)	1	\$111.45	\$111.45	
Storm Sewer (per 100 lin.ft)	1	\$111.45	\$111.45	
Water service (per 100 lin.ft)	1	\$111.45	\$111.45	
Rain drain connector	1	\$49.00	\$49.00	
Backflow preventer	1	\$31.20	\$31.20	
Clothes washer	1	\$31.20	\$31.20	
Dishwasher	1	\$31.20	\$31.20	
Expansion tank	1	\$31.20	\$31.20	
Hose bibb	1	\$31.20	\$31.20	
Sink/basin/lavatory	3	\$31.20	\$93.60	
Interior piping 1st floor / 100 Lin ft	1	\$95.85	\$95.85	
Interior piping 2nd floor / 100 Lin ft	1	\$33.40	\$33.40	
Subtotal Plumbing Permit Fee			\$1,593.20	
Plan Review (30% of Permit Fee)			\$477.96	
State Surcharge (12% of Permit Fee)			\$191.18	
Technology Fee (5% of Permit Fee)			\$79.66	
Total Plumbing Permit Fee			\$2,342.00	

Electrical Permit				
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Milwaukie Entitlement Costs	Quantity	Fee	Subtotal	Notes
Residential 1,000 sq. ft. or less	1	\$293.60	\$293.60	
Ea. Additional 500 sq. ft. or portion	1	\$59.80	\$59.80	
200 amp or less services	1	\$175.05	\$175.05	
Renewable Energy - 5kva or less	1	\$151.15	\$151.15	
Subtotal Electrical Permit Fee			\$679.60	
Plan Review (25% of permit fee)			\$169.90	
State surcharge (12% of permit fee)			\$81.55	
Technology Fee (5% of permit fee)			\$33.98	
Initial permit application			\$100.00	
Total Electrical Permit Fee			\$1,065.03	
Building Permit Fee				
Valuation	1.93%	\$175,000.00	\$3,384.53	*This is the current valuation of 2-bed unit
Total Building Permit Fee (per table)			\$3,384.53	
Mechanical Permit Fee				
Range hood	1	\$12.55	\$12.55	
Exhaust system/bath fan	2	\$10.25	\$20.50	
Hydronic piping system	1	\$22.30	\$22.30	
Air conditioning /Heat pump	1	\$47.95	\$47.95	*requires site plan
Radon mitigation	1	\$22.30	\$22.30	
Valuation	2.47%	\$175,000.00	\$4,326.89	*This is the current valuation of 2-bed unit
Total Mechanical Permit Fee (per table)			\$4,452.49	
System Development Charges				
Water SDC			\$21,025.00	1.5" for each of the two 36th Ave sites and a 2" for the Harvey site.
Wastewater SDC (sewer)			\$40,608.00	
Wastewater treatment			\$204,624.00	Reimbursement
Stormwater SDC			\$6,803.48	

Milwaukie Entitlement Costs	Quantity	Fee	Subtotal	Notes
Water Meter Set Fee			\$1,960.00	Reimbursement
Review Fee			\$600.00	Admin
Transportation SDC			\$46,921.24	cut in half for reduced parking? Need to confirm
Parks and Rec SDC			\$114,702.00	
Total SDCs			\$437,243.72	

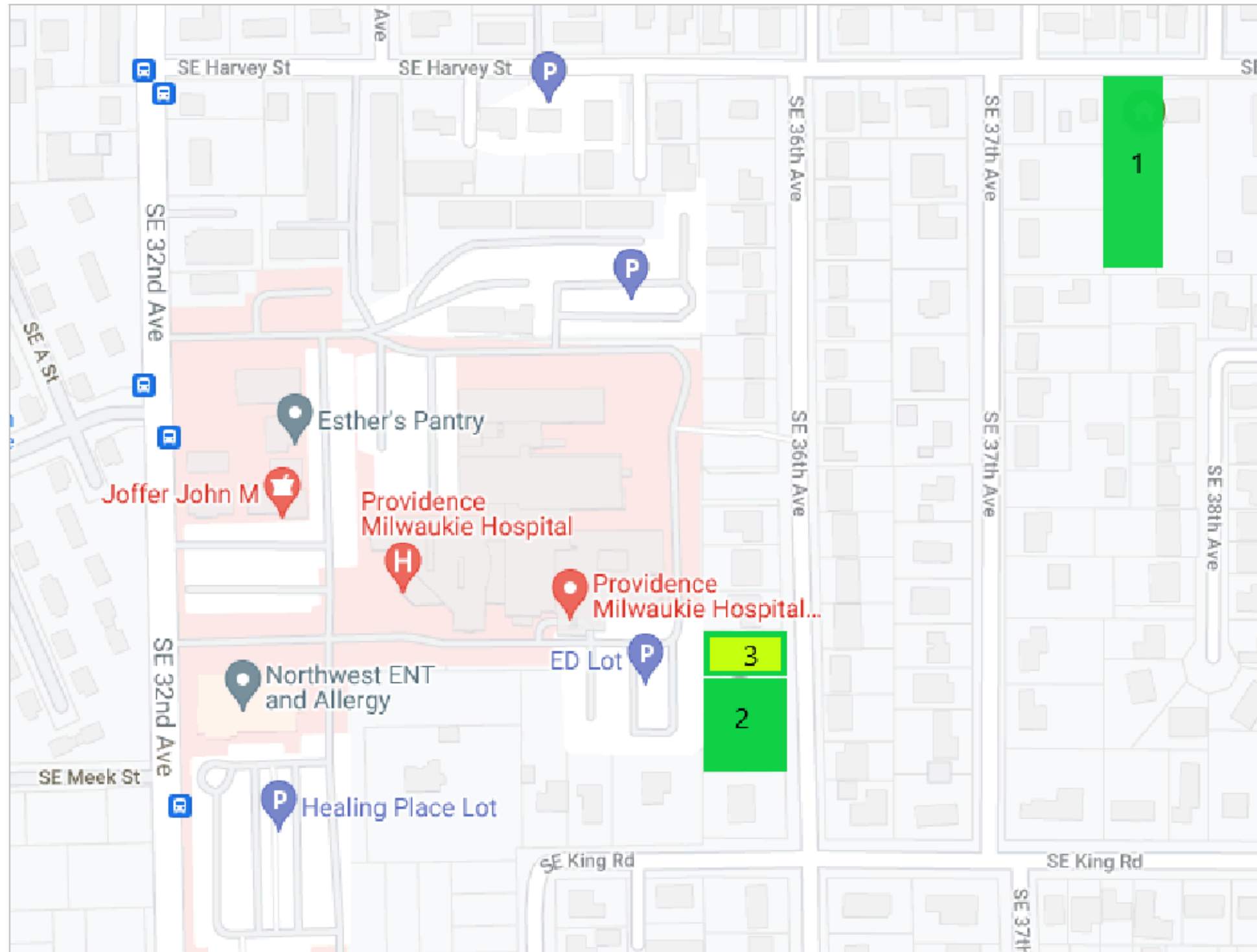
Engineering Fees				is this section per lot?
Erosion Control Fee			\$0.00	
Grading Permit Fee	1	\$150.00	\$150.00	* Minor (0 to 100 cy)
Sidewalk Permit	1	\$50.00	\$50.00	
Healthy Tree Removal Fee			\$0.00	*can range from \$60-\$200 per inch DBH depending on DBH
Residential water connection (5/8" or 3/4")	1	\$897.00	\$897.00	
Sewer connection per EDU	1	\$8,005.00	\$8,005.00	
3/4" meter equipment	1	\$250.00	\$250.00	
Total Engineering Fees			\$9,352.00	

Total Entitlement Fees (w/o SDCs)	\$20,596.06
Total Entitlement Fees w/ current SDCs	\$457,839.78

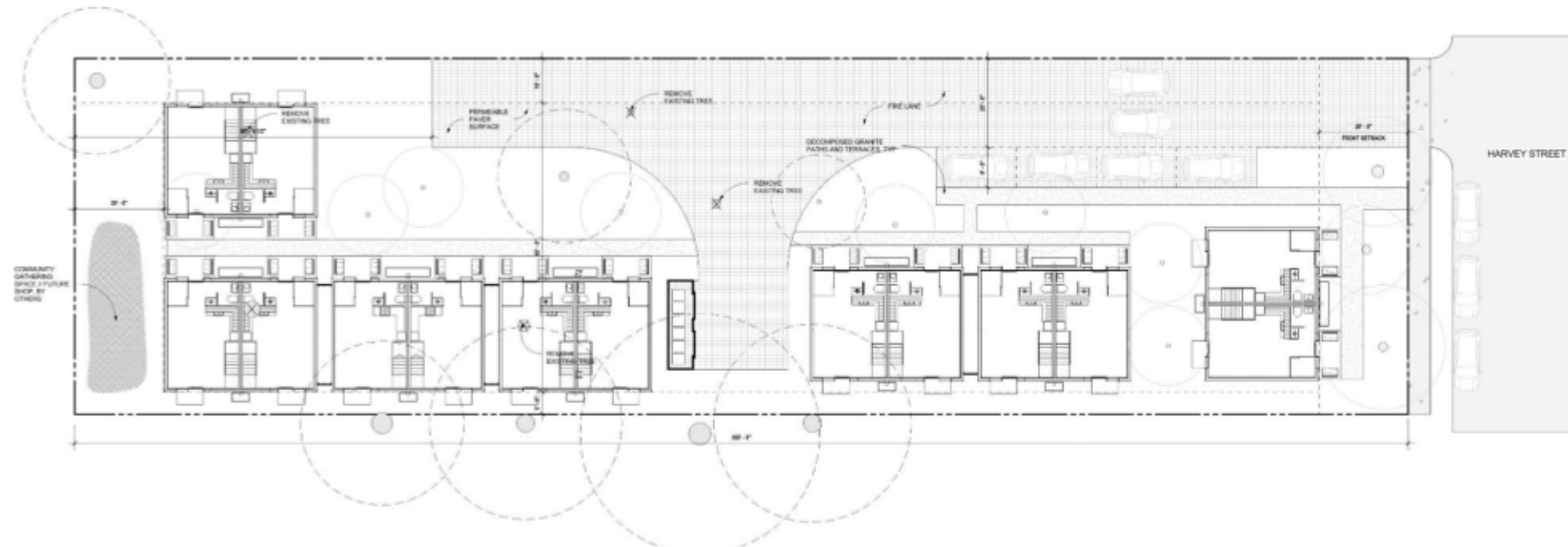
Site-related Fees

Right-of-Way Permit \$250.00

Site Plan, Conceptual Plans, Floor Plans, Renderings, Elevations

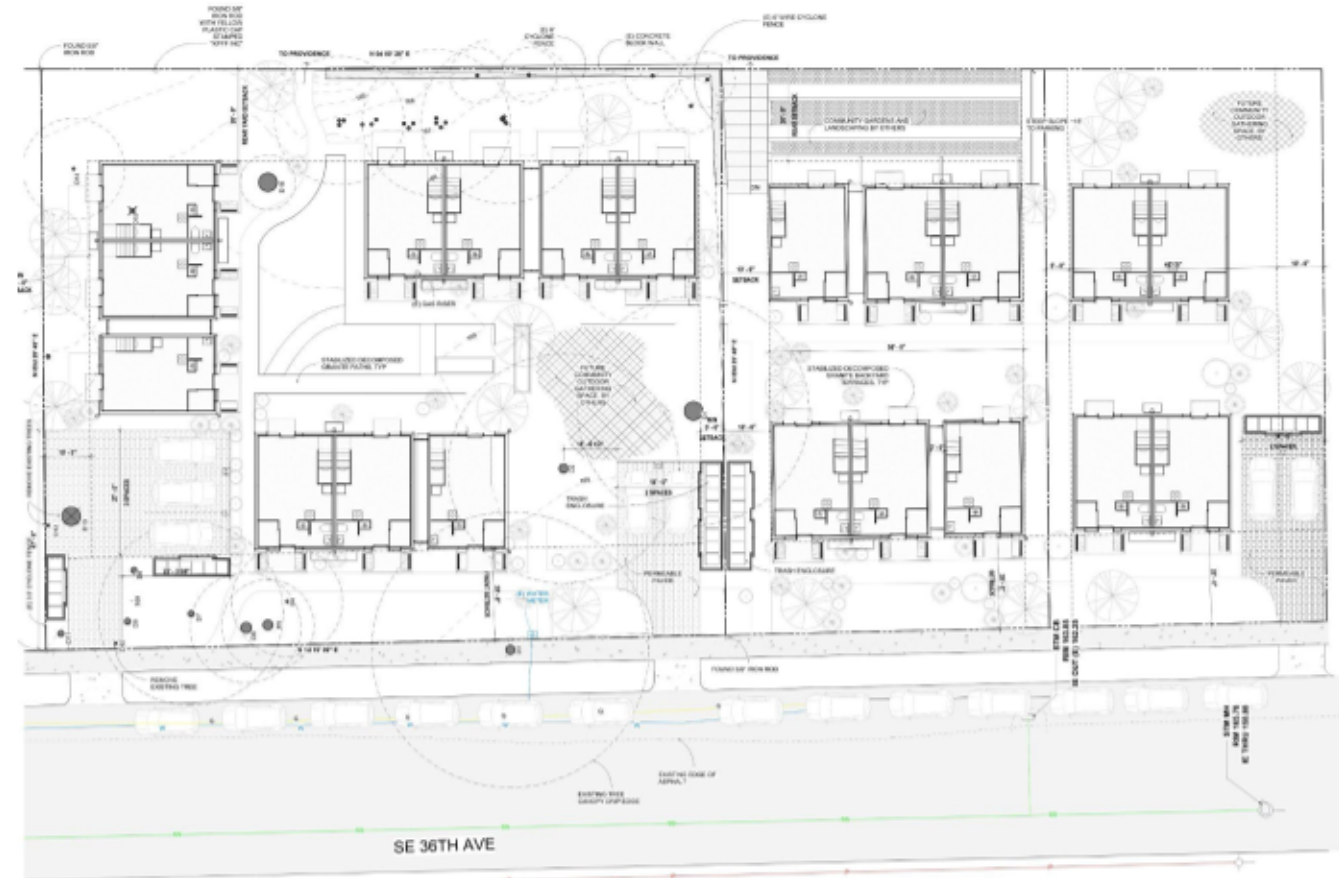


34 'Missing Middle' homes scattered across 4 sites in Milwaukie, Oregon. Lot #2 consists of two properties.



3

3736 Se Harvey Street



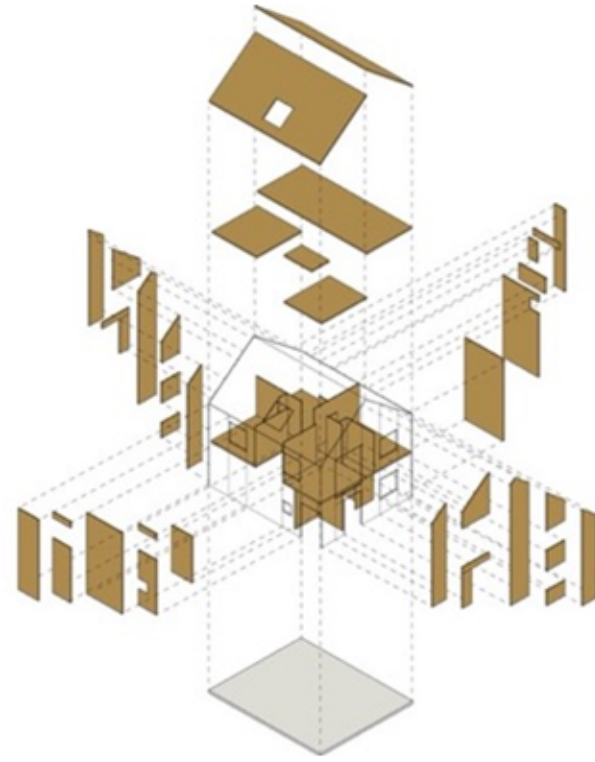
3 lots – 10325 SE 36th Ave / 18,371 sf
 No Situs: adjacent to 10325 SE 36th property / 8,573 sf
 10263 SE 36th Ave / 7,405 sf



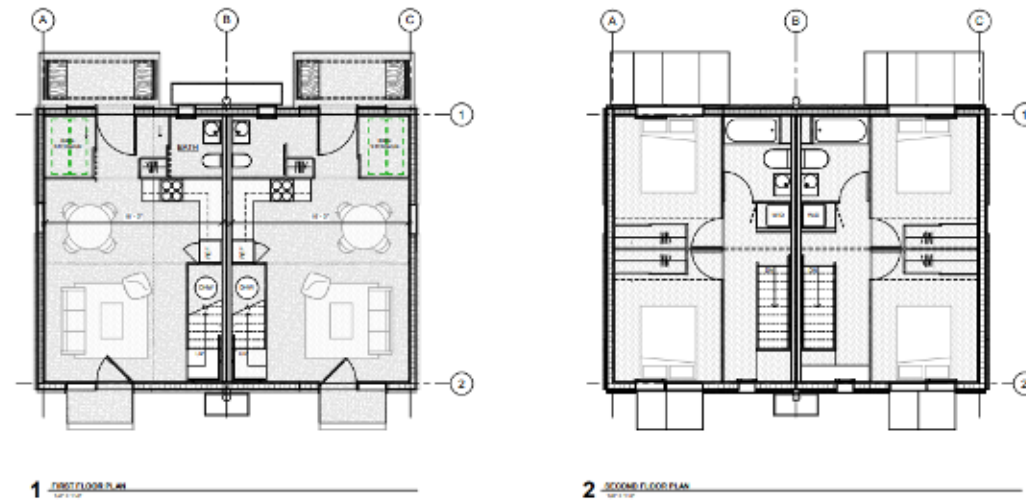
An early cross sectional study of a one bedroom townhome



Caption: A rendering of the courtyard and house facades on Site #2

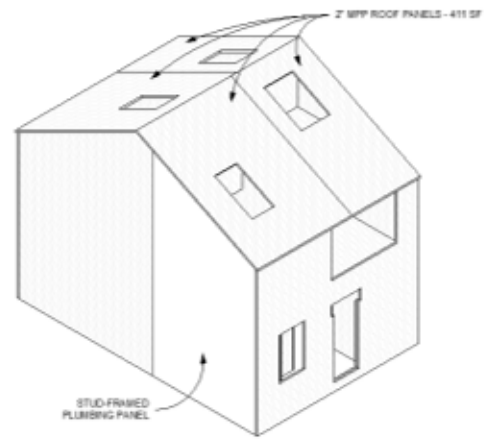


Exploded view shows the mass timber elements of the building

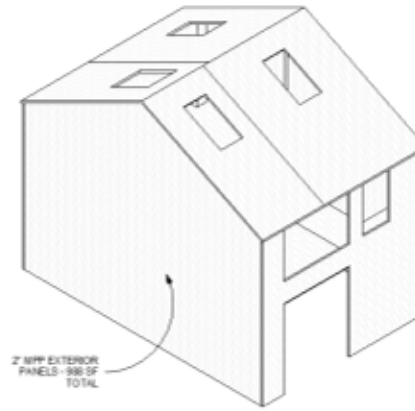


2 bed / 1.5 bath townhome layouts in a duplex configuration

Caption: Townhome elevations

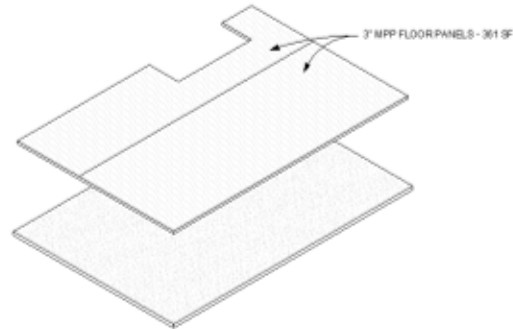


1 MPP EXTERIOR PANELS AXON NE

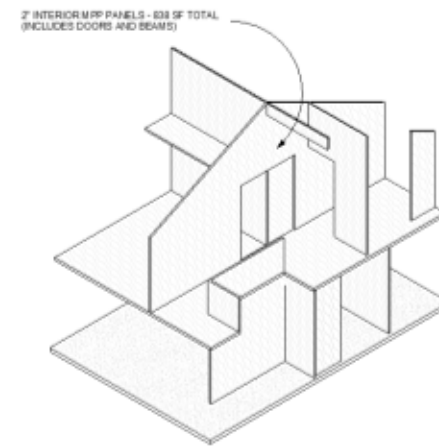


2 MPP EXTERIOR PANELS AXON SW

Exterior panel axons



3 MPP FLOOR PANELS AXON NW



4 MPP INTERIOR PANELS AXON SE

Floor and interior panels axons