



CITY OF OREGON CITY HISTORIC REVIEW BOARD AGENDA

Commission Chambers, Libke Public Safety Building, 1234 Linn Ave, Oregon City
Tuesday, April 23, 2024 at 7:00 PM

This meeting will be held in-person at the location above and online via Zoom; please contact ocplanning@orc.org for the meeting link.

CALL TO ORDER AND ROLL CALL

PUBLIC COMMENT

Citizens are allowed up to 3 minutes to present information relevant to the City but not listed as an item on the agenda. To assist in tracking your time, refer to the timer at the dais. Prior to speaking, citizens shall complete a comment form and deliver it to the Staff Member. When the Chair calls your name, proceed to the speaker table and state your name and city of residence into the microphone. The Historic Review Board Officers do not generally engage in dialog with those making comments but may refer the issue to the City Manager.

PUBLIC HEARING

1. GLUA-24-00007: HR 24-00006 Historic Review - New Construction of a dwelling unit in conjunction with an existing office use (**G.R.H. MILLER HOUSE**) in the McLoughlin Conservation District- 406 Promenade
2. GLUA-24-00003 / HR-24-00003 - 607 S McLoughlin Blvd Solar Panels (Narcissa Bowers Residence). Applicant seeks review of a solar panel array installation on the street-facing elevation of 607 S McLoughlin Blvd in the Canemah Historic District.

COMMUNICATIONS

ADJOURNMENT

PUBLIC COMMENT GUIDELINES

Complete a Comment Card prior to the meeting and submit it to the City Recorder. When the Mayor/Chair calls your name, proceed to the speaker table, and state your name and city of residence into the microphone. Each speaker is given three (3) minutes to speak. To assist in tracking your speaking time, refer to the timer on the table.

As a general practice, the City Commission does not engage in discussion with those making comments.

Electronic presentations are permitted but shall be delivered to the City Recorder 48 hours in advance of the meeting.

ADA NOTICE

The location is ADA accessible. Hearing devices may be requested from the City Recorder prior to the meeting. Individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-657-0891.

Agenda Posted at City Hall, Pioneer Community Center, Library, City Website.

Video Streaming & Broadcasts: The meeting is streamed live on the Oregon City's website at www.orcity.org and available on demand following the meeting. The meeting can be viewed on Willamette Falls Television channel 28 for Oregon City area residents as a rebroadcast. Please contact WPMC at 503-650-0275 for a programming schedule.



CITY OF OREGON CITY

Staff Report

625 Center Street
Oregon City, OR 97045
503-657-0891

To: Historic Review Board
From: Christina Robertson-Gardiner, Senior Planner

Agenda Date: 04/23/24

SUBJECT:

GLUA-24-00007: HR 24-00006 Historic Review - New Construction of a dwelling unit in conjunction with an existing office use (G.R.H. MILLER HOUSE) in the McLoughlin Conservation District- 406 Promenade

STAFF RECOMMENDATION:

Staff recommends approval with conditions.

EXECUTIVE SUMMARY:

The applicant proposes a small one-story bungalow with simple vernacular elements that is positioned even with the abutting homes on Center Street. This infill design was chosen to be compatible with the historic 1877 Vernacular resources without competing or replicating its architectural elements. The bungalow design provides a lower mass and uses an architectural design that is recommended for the McLoughlin Conservation District and is readily found in the area.

The subject property is a 4,600-square-foot lot (44'X105') located in the McLoughlin Conservation District. The GRH Miller House fronts the McLoughlin Promenade with its rear yard facing Center Street. The site is zoned MUC-1 (Mixed Use Corridor). The designated structure onsite is currently being used as an office (permitted), and the applicant wishes to construct a dwelling unit in the rear of the house facing Center Street for their parents/in-laws.

BACKGROUND:

See the Staff Report and Recommendation document in the agenda item attachments.

OPTIONS:

1. Approve the proposal with recommended conditions.
2. Approve the proposal with revised conditions.

3. Deny the proposal, close the record, and continue until May 28, 2024, to adopt the final findings.
4. Continue the hearing to May 28, 2024, and provide direction to the applicant on additional information needed. The record stays open.



**Historic Review
Staff Report and Recommendation
April 14, 2024**

FILE NO.: GLUA-24-00007: HR 24-00006 Historic Review

HEARING DATE: April 23, 2024
7:00 p.m. – Robert Libke Public Safety Building
1234 Linn Ave
Oregon, City, Oregon 97045

APPLICANT: Benjamin Keane
406 Promenade
Oregon City, OR 97045

OWNER: 406 Bluff Street LLC
406 Promenade
Oregon City, OR 97045

LOCATION: 406 Promenade
Oregon City, OR 97045

Zoning: MUC-1 and McLoughlin Conservation District

REQUEST: New Construction of a dwelling unit in conjunction with an existing office use (G.R.H. MILLER HOUSE) in the McLoughlin Conservation District- 406 Promenade

REVIEWER: Christina Robertson-Gardiner, Senior Planner, AICP

RECOMMENDATION: Approval with Conditions

CRITERIA: Administration and Procedures are set forth in Chapter 17.50, Chapter 17.40, Historic Overlay District in Chapter 17.40, and Mixed Use Corridor District in Chapter 17.28 of the Oregon City Municipal Code. The City Code Book is available on-line at www.orcity.org.

Please be advised that any issue that is intended to provide a basis for appeal must be raised before the close of the hearing, in person or by letter, with sufficient specificity to afford the Historic Review Board and the parties an opportunity to respond to the issue. Failure to raise an issue with sufficient specificity will preclude any appeal on that issue. The decision of the Historic Review Board may be appealed to the City Commission by parties with standing within fourteen (14) calendar days of the notice of decision. Any appeal will be based on the record. The procedures that govern the hearing will be posted at the hearing and are found in OCMC Chapter 17.50 and ORS 197.763. A city-recognized neighborhood association requesting an appeal fee waiver pursuant to OCMC 17.50.290(C) must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal.

Recommended Conditions of Approval

HRB Discussion Needed

Staff recommends that the Historic Review Board discuss the approach to the front porch design with the applicant and determines if an additional condition needs to be added to express the desired porch details. The side and front elevations of the submitted plans are confusing to read, and this issue can potentially be rectified by the applicant submitting a 3D rendering of the front of the house. Two standard approaches to bungalow porches would be a porch design, which is an extension of the gable eaves connected to the porch posts, or a separate hipped or gabled roof porch extending past the gable roof's eaves.

The application has incorporated a side chimney that matches the exterior of the house with lap siding and does not extend above the roofline. The design guidelines for bungalows in McLoughlin recommend using brick chimneys. Usually, staff does not support bricking the exterior of a chimney that does not extend above the roofline. In this instance, the Board will review the appropriateness of the approach to the chimney, considering the size, massing, and location of the new construction and its potential impact on the district and provide additional conditions if needed.

Prior to issuance of Building Permits:

1. The applicant shall utilize a 4-6 inch reveal smooth fiber cement siding or wood lap siding.
2. Minor changes to window location or size will be acceptable and may be approved at a staff level prior to building permit issuance.
3. The applicant must use wood, aluminum-clad, or fiberglass windows (Marvin Integrity or equivalent). Vinyl windows are not allowed. The applicant shall ensure that the window design incorporates a change in the plane 3/12 trim on the sides and top with a half sill on the bottom. All windows must be 1/1, or smaller square casement/awning/fixed windows. Slider windows or large fixed windows are not permitted.
4. The final porch design shall follow the HRB policies for porches and decks:
 - a. Porch and deck railings shall use vertical balusters and top and bottom rails. Baluster attachment shall be between the rails, not attached on the side of the rail.
 - b. Wood decks and porches shall be painted to match the color of the building. Paint-stain is also acceptable if it matches the color of the building
 - c. No pressure-treated wood shall be visible.
 - d. Composite material (e.g. Trex, Timbertech, Azek) is allowed only for new or existing decks or porches less than 50 years old that are attached to the rear of a structure, to the interior side of a structure, and for detached deck structures in the interior side or rear yard. The composite material color shall match the color of the building
 - e. Aluminum rails on porches and decks are not permitted.
 - f. Deck or porch materials made from 100% vinyl are not permitted
5. The applicant shall utilize simple exterior lighting and doors appropriate to the simple bungalow design. Staff shall review the final specification prior to installation. Highly ornate Victorian or high-styled craftsman lighting will not be approved.

6. The applicant must use French doors. Slider doors are not allowed.
7. The applicant has proposed a 10-foot setback from the front of the porch to High Street. During the Building Permit plan review, the applicant may choose to place the building up to five feet closer to the street without returning to the Board for approval. However, the setback between the new construction and the G.R.H. MILLER HOUSE on the same lot shall be at least 10 feet.
8. Prior to receiving the Building Permit, the applicant shall demonstrate that the residential use occupies no more than fifty percent of the total square footage of the development on the lot.
9. The applicant shall ensure that the submitted elevations for the Building Permit match the correct locations (front-side-rear -etc) and orient the front elevation to High Street. This revision will provide clarity through the Conditions of Approval review and the Building Permit process.

BACKGROUND:

Site and Context

The subject property is a 4,600-square-foot lot (44'X105') located in the McLoughlin Conservation District. The GRH Miller House fronts the McLoughlin Promenade with its rear yard facing High Street. The site is zoned MUC-1 (Mixed Use Corridor). The designated structure onsite is currently being used as an office (permitted), and the applicant wishes to construct a dwelling unit in the rear of the house facing High Street for their parents/in-laws. The MUC Commercial zoning does not allow new single-family residential uses. Therefore, the applicant has chosen to build the unit as part of OCMC 17.020(N) Permitted Uses: *"One or two dwelling units in conjunction with a nonresidential use, provided that the residential use occupies no more than fifty percent of the total square footage of the development."* This means the dwelling unit onsite will be tied to the office use and cannot be part of a separate lot. This approach works for the applicant's short and long-term needs as they currently use the GRH Miller House for their law office (Bowerman Law Group). If the office use was discontinued and reverted back to a dwelling unit, the site would be considered a detached duplex, which is also allowed in the MUC-1 zoning District.



Figure 1: Google Street View

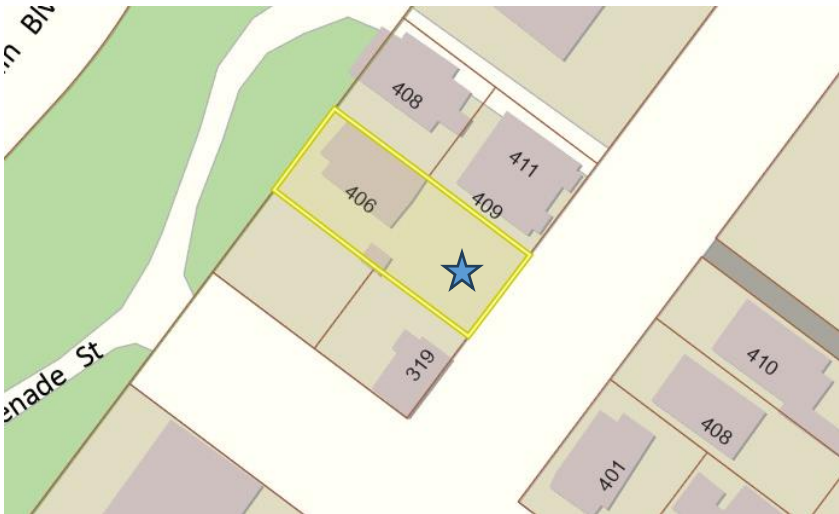


Figure 2: Vicinity Map (new construction proposed in starred location)



Figure 3: Looking at the location of the proposed new construction from High Street.



Figure 4: Looking at the rear of the G.R.H. MILLER HOUSE from High Street/location of proposed new construction.

Historic Resources

G.R.H. MILLER HOUSE -- *Statement of Significance:* G.R.H. Miller was a carpenter who built several houses in Oregon City. In 1867, he built the first steps up the Oregon City bluffs from the lower level. The steps ran from 3rd Street on the bluff to 4th Street on the lower level, near the Oregon City Woolen Mill, and provided workers with direct access to their place of employment. This house is significant for its age, its architectural detailing, and its association with Miller, both as a carpenter and as builder of the first steps up the bluff.



This 1-1/2 story house sits under a cross gable roof formed by a main east-west ridge and large dormers on the north and south sides. A hip roofed porch runs the full width of the west façade, where slender turned columns support the low hip. The porch is surrounded by a latticework balustrade, a recent replacement of the original. The house features enclosed eaves, wide rake and frieze boards, decorative barge and rake moldings, scrollwork in the east and west gable ends, and small pendants at the corners of the porch hip. The house is clad with beveled lap siding finished with corner boards, and the windows are predominantly 1/1 double-hung wood

sash. The west windows have all been replaced, with two large, fixed panes flanking the central entry and a small 4/1 vinyl window in the gable end. All of the windows have wide board surrounds and projecting sills.

Neighboring Historic Resources:

319 4th Street- G.R.H. MILLER HOUSE (rental)

Please note the same name for both homes) staff has provided either the address or the term rental to differentiate the two buildings within this staff report.



Statement of Significance: In 1877, George R.H. Miller, a carpenter, purchased this property and was credited with the construction of the residence. Following Miller's sale to Clara Jack in 1934, the property changed hands another three times in the next ten years. None of these short-term owners appear to have ever lived in the residence. In 1944, Ida Myrtle Kelly purchased this property. She continued to own and occupy the house until her death in 1980.

This modest one story house sits under a cross gable roof with an L-shaped plan resting on a stone foundation. The south side of the house features a shed roof over the entry porch, which appears to be an addition. The porch shed is supported by a series of 6 x 6 columns with a lattice railing that matches the porch skirt. The house is clad primarily with horizontal clapboards, finished with corner boards. The basement level is clad with drop siding. The windows are all 1/1 double-hung wood sash with lamb's tongues and have seen the addition of aluminum storm windows. The gables feature enclosed eaves with narrow rake and frieze boards. Two chimneys are present on the house; one centrally located and one on the north wall of the house with a new galvanized cap.

APPLICANT'S SUBMITTAL:

The applicant proposes a small one-story bungalow with simple vernacular elements that is positioned even with the abutting homes on High Street. This infill design was chosen to be compatible with the historic 1877 Vernacular resources without competing or replicating its architectural elements. The bungalow design provides a lower mass and uses an architectural design that is recommended for the McLoughlin Conservation District and is readily found in the area.

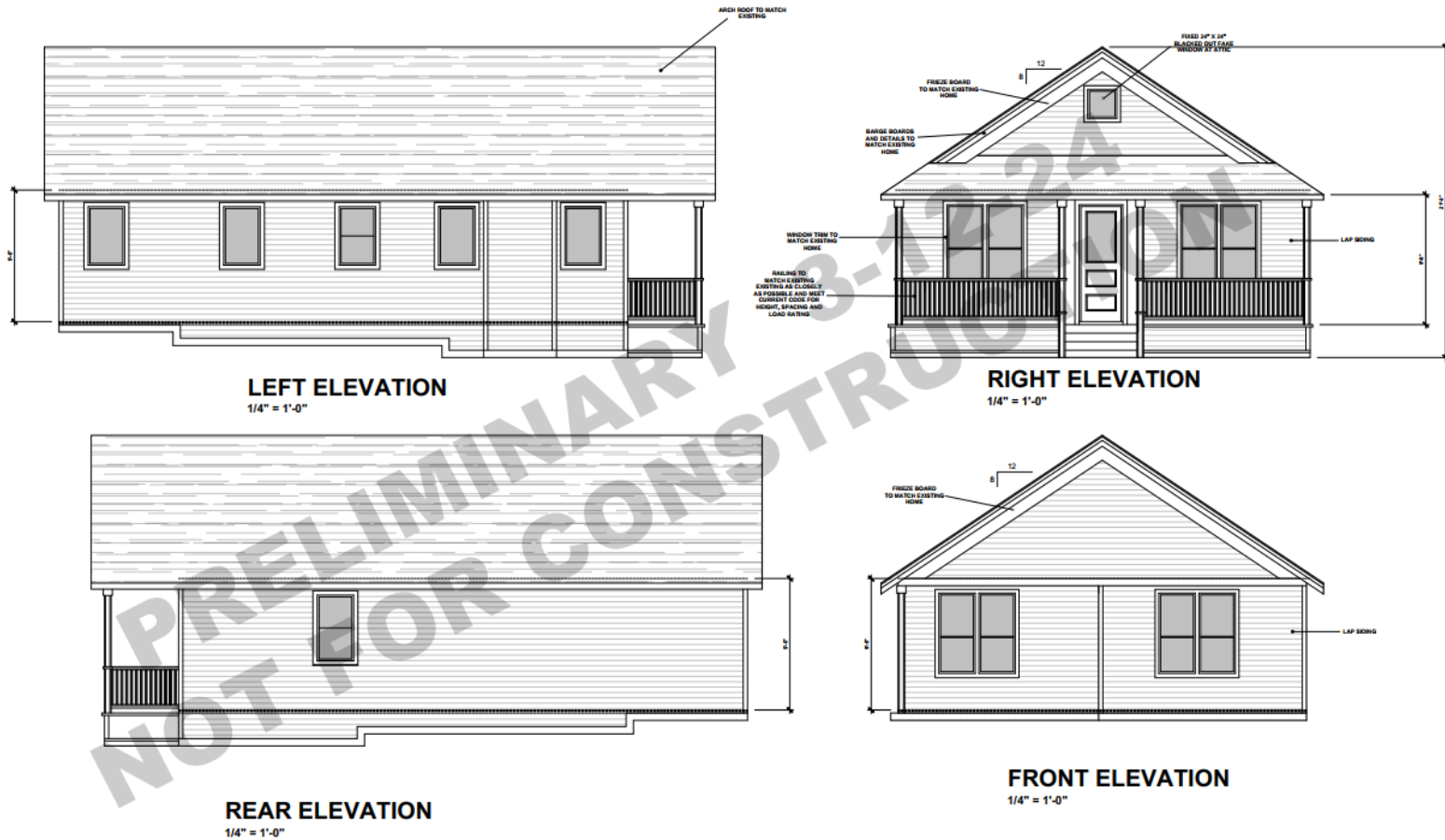


Figure 5- Elevations

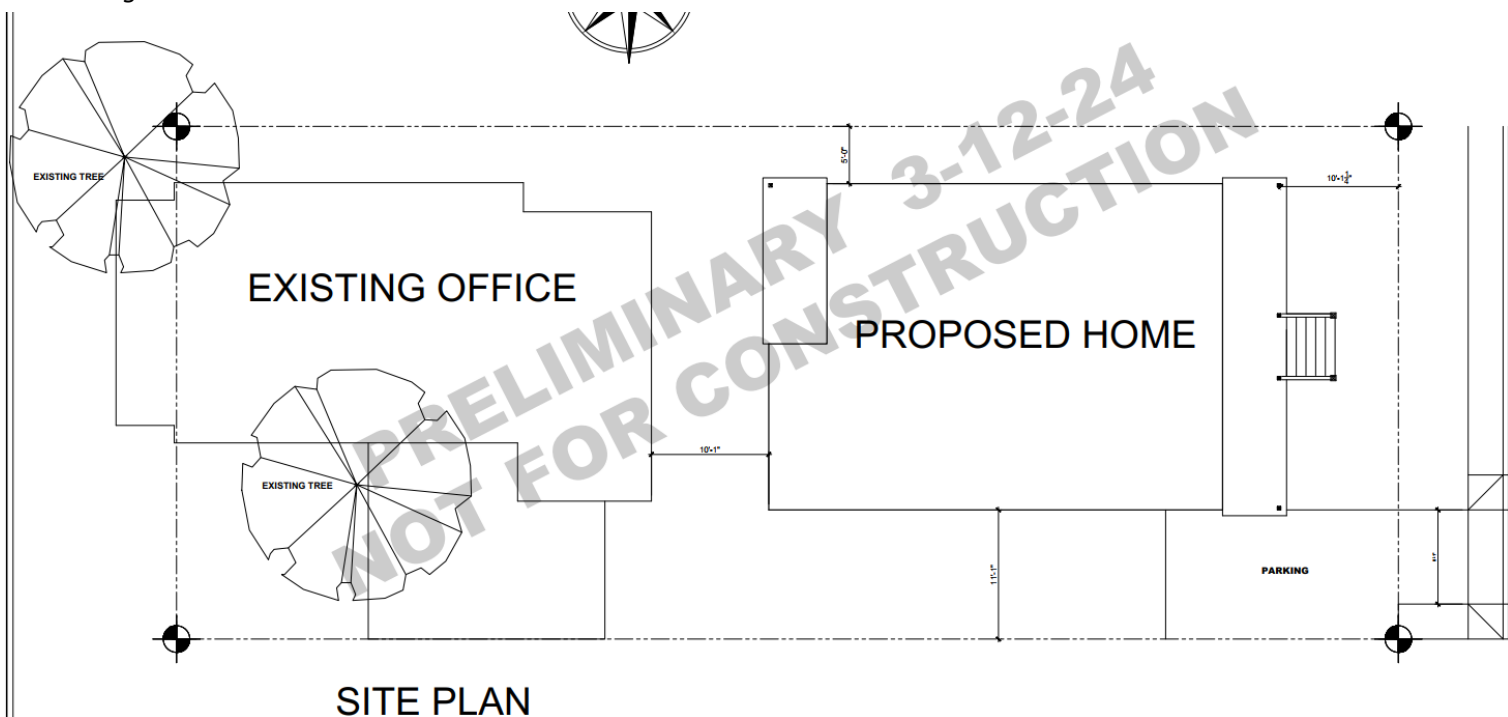
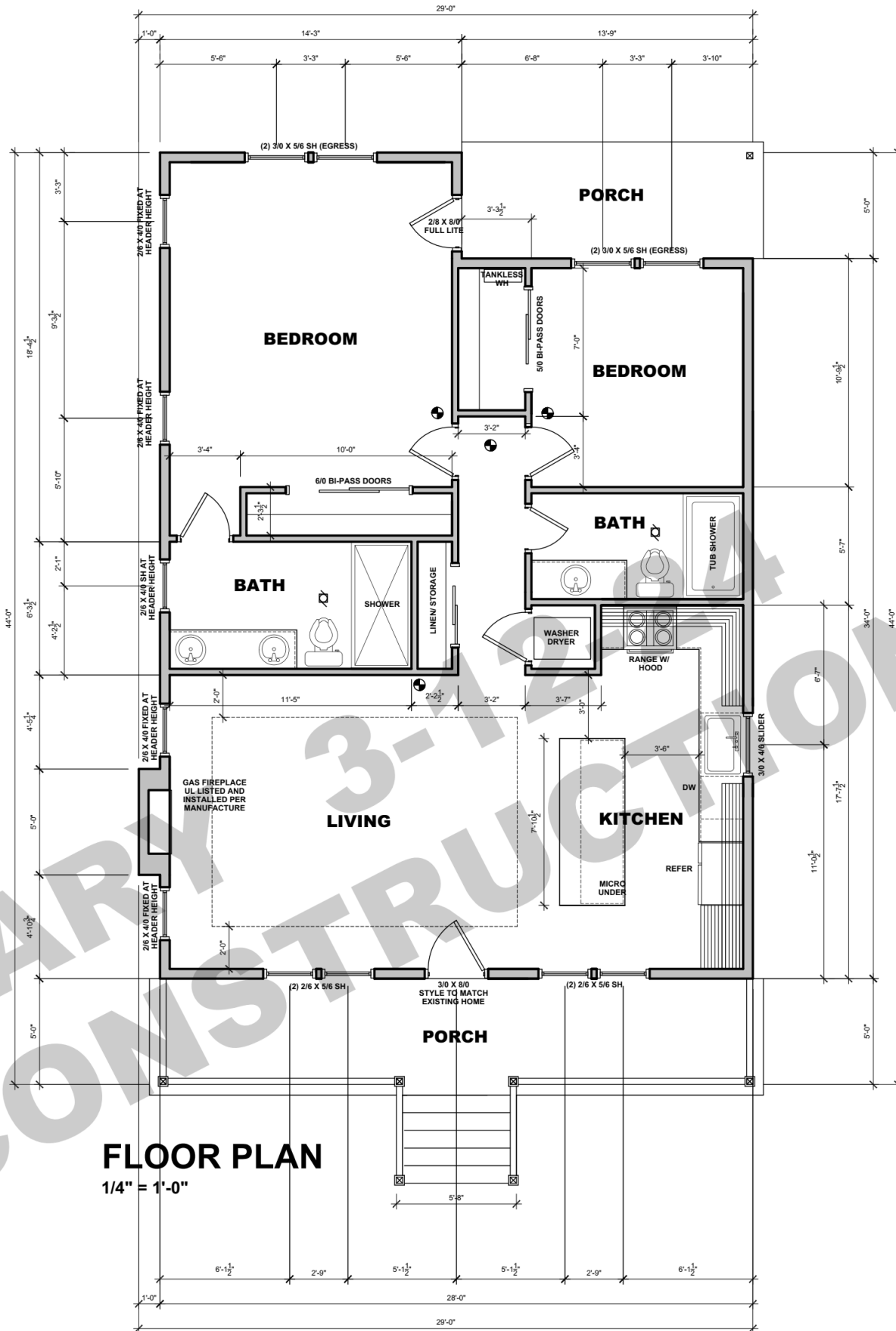


Figure 6: Site Plan



Zoning:

The site is zoned MUC-1 (Mixed Use Corridor). The designated structure onsite is currently being used as an office (permitted), and the applicant wishes to construct a dwelling unit in the rear of the house facing Center Street for their parents/in-laws. The MUC Commercial zoning does not allow new single-family residential uses. Therefore, the applicant has chosen to build the unit as part of OCMC 17.020(N) Permitted Uses: *“One or two dwelling units in conjunction with a nonresidential use, provided that the residential use occupies no more than fifty percent of the total square footage of the development.”* This means the dwelling unit onsite will be tied to the office use and cannot be part of a separate lot. This approach works for the applicant's short and long-term needs as they currently use the GRH Miller House for their law office (Bowerman Law Group). If office use were discontinued and reverted to a dwelling unit, the site would be considered a detached duplex, which is also allowed in the MUC-1 zoning District.

Public Comments:

Notice of the application was mailed to all property owners and residents within 300 feet as well as posted on site. The City received the following comments:

A comment from the Building Department:

“A New Single Family Home Application will need to be submitted. Submittal documents must meet our Application Checklist and Submittal Guidelines and Requirements. Documents can be found on a City Webpage: <https://www.orcity.org/293/Residential-Permits>”

Staff response: While this unit is not strictly seen as a single-family residential use, the Building Division classifies the structure as single-family. The Building and Planning departments will review the unit through the same process, a detached duplex or single-family home, as this is the closest use/process for the proposed development.

Staff Analysis Executive Summary:

The proposal includes a new one dwelling unit/home. The applicant proposes a small one-story bungalow with simple vernacular elements positioned even with the abutting homes on Center Street. The applicant proposes to utilize an 8:12 roof pitch. This infill design was chosen to be compatible with the historic 1877 Vernacular resources without competing or replicating its architectural elements. The bungalow design provides a lower mass and uses an architectural design that is recommended for the McLoughlin Conservation District and is readily found in the area.

Staff finds that the massing and 8/12 roof pitch are appropriate for either a vernacular or bungalow design. Conditions of Approval are recommended for all building materials and elements. The applicant has chosen to setback the building 10 feet from the front of the porch to High Street. As the homes on each side vary from 0 feet to 10-foot setbacks- this approach balanced both setbacks and provided a 10-foot separation from the GRH Miller House (406 Promenade). Staff has provided an additional condition that allows the applicant to move the house closer to the street if the applicant wishes; this would allow greater distance between the two buildings on the lot and would still be compatible with the neighboring properties. The MUC-1 zone does not have a minimum setback; therefore, no preservation incentive is needed for this option.

The applicant has indicated that they will look to provide a small parking space next to the new dwelling unit utilizing a small one-car driveway. This is not shown on the site plan and is permitted through development services as part of the building permit process, which is an acceptable approach for this area.

Staff recommends that the Historic Review Board discusses the approach to the front porch design with the applicant and determine if an additional condition needs to be added to express the desired porch details. The side and front elevations of the submitted plans are confusing to read, and this issue can potentially be rectified by the applicant submitting a 3D rendering of the front of the house.

Two standard approaches to bungalow porches would be a porch design, which is an extension of the gable eaves connected to the porch posts, or a separate hipped roof porch extending past the gable roof's eaves.

CODE RESPONSES:

17.40.060 - Exterior alteration and new construction.

- A. *Except as provided pursuant to subsection I of this section, no person shall alter any historic site in such a manner as to affect its exterior appearance, nor shall there be any new construction in an historic district, conservation district, historic corridor, or on a landmark site, unless a certificate of appropriateness has previously been issued by the historic review board. Any building addition that is thirty percent or more in area of the historic building (be it individual or cumulative) shall be considered new construction in a district. Further, no major public improvements shall be made in the district unless approved by the board and given a certificate of appropriateness.*

Applicable: The proposal for new construction in a historic district is being reviewed by the Historic Review Board.

- B. *Application for such a certificate shall be made to the planning staff and shall be referred to the historic review board. The application shall be in such form and detail as the board prescribes.*

Complies as Proposed: The applicant submitted the required materials.

- C. *Archeological Monitoring Recommendation. For all projects that will involve ground disturbance, the applicant shall provide,*

1. *A letter or email from the Oregon State Historic Preservation Office Archaeological Division indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the Oregon State Historic Preservation Office and that the Oregon State Historic Preservation Office had not commented within forty-five days of notification by the applicant; and*
2. *A letter or email from the applicable tribal cultural resource representative of the Confederated Tribes of the Grand Ronde, Confederated Tribes of the Siletz, Confederated Tribes of the Umatilla, Confederated Tribes of the Warm Springs and the Confederated Tribes of the Yakama Nation indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the applicable tribal cultural resource representative and that the applicable tribal cultural resource representative had not commented within forty-five days of notification by the applicant.*

If, after forty-five days notice from the applicant, the Oregon State Historic Preservation Office or the applicable tribal cultural resource representative fails to provide comment, the city will not require the letter or email as part of the completeness review. For the purpose of this section, ground disturbance is defined as the movement of native soils.

Complies as Proposed: Ground disturbance is proposed; notice was provided to SHPO and the tribes listed.

D. [1.] *The historic review board, after notice and public hearing held pursuant to Chapter 17.50, shall approve the issuance, approve the issuance with conditions or disapprove issuance of the certificate of appropriateness.*

Applicable: The proposal is being reviewed by the Historic Review Board.

2. *The following exterior alterations to historic sites may be subject to administrative approval:*

a. *Work that conforms to the adopted Historic Review Board Policies.*

Not Applicable: The proposal is not subject to administrative approval.

E. *For exterior alterations of historic sites in an historic district or conservation district or individual landmark, the criteria to be used by the board in reaching its decision on the certificate of appropriateness shall be:*

Not Applicable: The proposal is not an exterior alteration.

F. *For construction of new structures in an historic or conservation district, or on an historic site, the criteria to be used by the board in reaching its decision on the certificate of appropriateness shall include the following:*

1. *The purpose of the historic conservation district as set forth in Section 17.40.010;*

Finding: Complies with Condition.

The purpose of the district is

- A. Effect and accomplish the protection, enhancement and perpetuation of such improvements and of districts which represent or reflect elements of the city's cultural, social, economic, political and architectural history;
- B. Safeguard the city's historic, aesthetic and cultural heritage as embodied and reflected in such improvements and districts;
- C. Complement any National Register Historic districts designated in the city;
- D. Stabilize and improve property values in such districts;
- E. Foster civic pride in the beauty and noble accomplishments of the past;
- F. Protect and enhance the city's attractions to tourists and visitors and the support and stimulus to business and industry thereby provided;
- G. Strengthen the economy of the city;
- H. Promote the use of historic districts and landmarks for the education, pleasure, energy conservation, housing and public welfare of the city; and
- I. Carry out the provisions of LCDG Goal 5.

The dwelling unit is proposed in the McLoughlin Conservation District. The single-family use matches the district's dominant use. By meeting the conditions of approval, the home will complement the district. Staff has determined that it is possible, likely, **and reasonable that the applicant can meet this standard through the Conditions of Approval.**

2. *The provisions of the city comprehensive plan;*

There are several goals and policies in the Comprehensive Plan that pertain to this proposal:

POLICY 2.3 Facilitate historic preservation programs for retention of federal, state, and locally designated historic districts and sites.

STRATEGY 2.3.A Promote the designation of qualifying properties outside Historic and Conservation Districts as historic.

STRATEGY 2.3.B Maintain Oregon City's status as a Certified Local Government in the National Historic Preservation Program.

STRATEGY 2.3.C Encourage property owners to preserve historic structures in a state as close to their original construction as possible while allowing the structure to be used in an economically viable manner

Finding: Complies with Condition. The proposed home has been designed in the Vernacular style and will be located along 4th Ave. in the McLoughlin Conservation District, which is primarily a street with single family homes on lots of 5,000 to 10,000 square feet. The design will be compatible with the conditions of approval in this staff report. The house is proposed to face High Street, beyond the existing GHR Miller House (406 Promenade) and the abutting GHR Miller House 319 4th Street (rental) The 29 feet by 39 feet with a 5-foot porch is consistent with either a bungalow or vernacular home and is consistent with 406 Promenade GRH Miller with dimensions of approx. (22 feet-main volume by 41 feet with a 5-foot porch). The full width of the GRH Miller House, which includes a 5-foot side addition, is 27 feet. The GRH Miller House (rental) at 319 4th Street utilizes a slightly small footprint abutting the proposed new construction. 20 feet by 31 feet.

Staff finds that the proposed home will not adversely impact either home, with the findings and conditions recommended in this staff report. Facing the proposed new construction to High Street will provide a compatible infill property on this block that is scaled and sited to not overwhelm either of the abutting historic structures.

Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

1. *The economic effect of the new proposed structure on the historic value of the district or historic site;*

Finding: Complies with Conditions. The proposed structure has been designed to be compatible with the district. See findings in Section titled ‘Design Guidelines for New Construction’ in this staff report. As conditioned, the design will continue to enhance the McLoughlin Conservation District and contribute to the existing context of the District.

Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

2. *The effect of the proposed new structure on the historic value of the district or historic site;*

Finding: Complies with Condition. See findings in Section titled ‘Design Guidelines for New Construction in this staff report.

As conditioned, the design will continue to enhance the McLoughlin Conservation District and contribute to the existing context of the District.

Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

3. *The general compatibility of the exterior design, arrangement, proportion, detail, scale, color, texture and materials proposed to be used in the construction of the new building or structure;*

Finding: Complies with Condition. See findings in Section titled ‘Design Guidelines for New Construction in this staff report.

As conditioned, the design will continue to enhance the McLoughlin Conservation District and contribute to the existing context of the District.

Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

4. *Economic, social, environmental and energy consequences;*

Finding: Complies as Proposed. Choosing to build in an established neighborhood close to services is socially, economically, and energy-efficient, and it is less environmentally impactful.

7. Design guidelines adopted by the historic review board.

1. STYLE

New construction shall complement one of these styles to support the historic context. Use of other styles dilutes and distracts from the historic context of the district. While there may be several styles dominant within the district, the specific choice of a style shall be compatible with adjacent properties, the block, and the neighborhood. It also must be fitting for the particular function of the building and its size.

Finding: Complies as Proposed. Proposed style: McLoughlin Bungalow. The design is differentiated from the neighboring house by its proposed size, materials, window details, and front door placement. Both Vernacular and Bungalow homes exist in this portion of the McLoughlin Conservation District.

2. SITE

Siting principles involve both how the site is used and how the building(s) is placed within the site. The specific lot location and its topography can dictate many requirements. Residential buildings are to face the street squarely with their primary face in full view, and to be set back from lot lines and be spaced from one another similar to the immediate neighborhood. The primary structure is to be placed in the primary position with accessory structures in a service or ancillary position, except where topography is an issue. Yard area between the house and street to primarily be planted with minimal paving only for pedestrian access and for vehicle movement. More private activity spaces to be located at the less public areas of the site.

In the McLoughlin Neighborhood the second most prevalent style is the Bungalow, built between 1905-1929 largely built between 1911-1919, and then continuing from 1920-29. Compared to the Vernacular style, the historic bungalows have undergone few exterior alterations. Important style characteristics as found on houses in the McLoughlin District to be used for new construction are noted below.

CHARACTERISTICS OF THE STYLE Site

- Uniform front setback with similar sized side yards.
- Lots are usually 50x100 and contain a single house.
- Fences: Few fences around bungalows; some backyard privacy fences, of wood.
- Landscaping: primarily of lawn in front, sides and back; shrubs, smaller trees.
- Garages: detached, toward the rear of the house, accessible
- from the side of the lot; under the house where on a steep slope

Building Form

- Building form is difficult to modify for additions, but has versatile floor plan.
- More emphasis on the horizontal than Vernacular or Queen Anne, this extends into porch, dormer and window design; more 'ground hugging'.
- Shape: floor plans are either rectangular, or square.
- Height: 1 or more often 1½ stories high; possible basement.
- Roof: Low-pitched (6:12 minimum) gable roof; front or side
- facing; occasionally hipped. Roof that often continues down
- to create a cover over the prominent front porch.
- Proportions: Height to width approximately 1:1½; Height to Depth: 1: no more than 2 for main building portion not including front porch.

HOUSE HEIGHT AND PLACEMENT:

The proposed height is approximately 21 feet to the peak (9 feet to the eave), which is consistent with historic home heights in the district.

Finding: Complies with Conditions. The site has a 4,600 sf lot of records. The proposed second buildings meet all dimensional requirements of the MUC-1. The new home faces High Street. The abutting tax lots on either side of the unit are much smaller (approx. 2,200 and 2,600 square feet), and this infill approach is consistent with the block development pattern.

The house is proposed to face High Street, beyond the existing GHR Miller House (406 Promenade) and the abutting GHR Miller House 319 4th Street (rental) The 29 feet by 39 feet with a 5-foot porch is consistent with either a bungalow or vernacular home and is consistent with 406 Promenade GRH Miller with dimensions of approx. (22 feet-main volume by 41 feet with a 5-foot porch). The full width of the GRH Miller House, which includes a 5-foot side addition, is 27 feet. The GRH Miller House (rental) at 319 4th Street utilizes a slightly small footprint abutting the proposed new construction 20 feet by 31 feet.

Staff finds that the proposed home will not have an adverse impact on either home, with the conditions recommended in this staff report. Facing the proposed new construction to High Street will provide a compatible infill property on this block that is scaled and sited to not overwhelm either of the abutting historic structures.

No existing trees are proposed to be removed, however, if removal of trees over 6" DBH and/or significant right of way improvements are required to comply with other parts of the municipal code, the applicant shall be required to submit those changes for review by the Board.

No landscaping has been proposed. The applicant may include a paved or stone walkway on the property to the front porch stair, along with lawn, shrubs, ground cover, and tree species found in the district without further HRB review.

Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

3. DESIGN COMPOSITION

Include a range of more detailed design issues that address groups of elements, individual elements, their design and how they relate to the overall composition and finish. The principles place a traditional emphasis on the design's composition as seen from the exterior, rather than as a result of interior functional planning requirements. They also outwardly convey a sense of quality craftsmanship.

The design composition principles, being more detailed, and stylistically dependent, are typically developed after the previous principles are resolved. These principles also reflect historically appropriate materials, respective finishes, and unobtrusive integration of new technology.

Design Composition

- Front façade can be symmetrical or asymmetrical.
- Porch: full or wrap-around front porches; supported with substantial pillars; simply detailed.

- Roof Overhang: wide, over-hanging eaves and exposed raftertails; decorative knee brackets under eaves.
- Dormers: single front facing; with lower slope gable or shed roof.
- Chimneys: projecting on side of house, usually brick.
- Siding: horizontal board siding; typically bevel profile (occasionally shiplap), shingle siding; or a combination, such as horizontal boards on the first floor with shingles on the second floor, or just in the gable or dormer.
- Bays: possible single story, cantilevered, and rectangular usually located on the side of the house.
- Windows: double-hung; 1:1 or with multiple panes in upper sash; large fixed window flanked by two smaller double- hung windows.
- Windows At Dormers: smaller, often grouped at shed dormers; fixed or casement style where smaller.
- Finishes: generally earth tones; no white doors or window

Finding: Complies with the below material conditions. The application has incorporated a side chimney that matches the exterior of the house with lap siding and does not extend above the roofline. The design guidelines for bungalows in McLoughlin recommend using brick chimneys. Usually, staff does not support bricking the exterior of a chimney that does not extend above the roofline. In this instance, the Board will review the appropriateness of the approach to the chimney, considering the size, massing, and location of the new construction and its potential impact on the district and provide additional conditions if needed.

The applicant shall utilize a 4-6 inch reveal smooth fiber cement siding or wood lap siding.

Minor changes to window location or size will be acceptable and may be approved at a staff level prior to building permit issuance.

The applicant must use wood, aluminum-clad, or fiberglass windows (Marvin Integrity or equivalent). Vinyl windows are not allowed. The applicant shall ensure that the window design incorporates a change in the plane 3/12 trim on the sides and top with a half sill on the bottom.

The final porch design shall follow the HRB policies for porches and decks:

- Porch and deck railings shall use vertical balusters and top and bottom rails. Baluster attachment shall be between the rails, not attached on the side of the rail.
- Wood decks and porches shall be painted to match the color of the building. Paint-stain is also acceptable if it matches the color of the building
- No pressure-treated wood shall be visible.
- Composite material (e.g. Trex, Timbertech, Azek) is allowed only for new or existing decks or porches less than 50 years old that are attached to the rear of a structure, to the interior side of a structure, and for detached deck structures in the interior side or rear yard. The composite material color shall match the color of the building
- Aluminum rails on porches and decks are not permitted.
- Deck or porch materials made from 100% vinyl are not permitted

All windows must be 1/1, or smaller square casement/awning/fixed windows. Slider windows or large fixed windows are not permitted.

The applicant shall utilize simple exterior lighting and doors appropriate to the simple bungalow design. Staff shall review the final specification prior to installation. Highly ornate Victorian or high-styled craftsman lighting will not be approved.

The applicant must use French doors. Slider doors are not allowed.

17.40.065 - Historic Preservation Incentives.

A. Purpose. *Historic preservation incentives increase the potential for historically designated properties to be used, protected, renovated, and preserved. Incentives make preservation more attractive to owners of locally designated structures because they provide flexibility and economic opportunities.*

B. Eligibility for Historic Preservation Incentives. *All exterior alterations of designated structures and new construction in historic and conservation districts are eligible for historic preservation incentives if the exterior alteration or new construction has received a certificate of appropriateness from the Historic Review Board per OCMC 17.50.110(c).*

C. Incentives Allowed. *The dimensional standards of the underlying zone as well as for accessory buildings (OCMC 17.54.100) may be adjusted to allow for compatible development if the expansion or new construction is approved through historic design review.*

D. Process. *The applicant must request the incentive at the time of application to the Historic Review Board.*

Finding: Not Applicable: No preservation incentives have been proposed as part of this application.

I. PUBLIC NOTICE

A public notice was sent to neighbors with 300 feet of the subject property, posted online, emailed to various entities, and posted onsite.

II. CONCLUSIONS AND RECOMMENDATIONS

Based on the following findings, staff recommends that the Historic Review Board approve the proposed development of GLUA 24-0007 -HR 24-0006 with conditions for the property located at 406 Promenade Oregon City, OR 97045, Clackamas County Map 2-2E-31AC-04800

Exhibits

1. Applicant Submittal
2. Survey Forms
 - a. GRH Miller House (406 Prom)
 - b. GRH Miller House -rental (319 4th Avenue)
3. Public Comments
 - a. Building Department

**Community Development – Planning**

698 Warner Parrott Road | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

Item #1.

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)	Type II (OCMC 17.50.030.B)	Type III / IV (OCMC 17.50.030.C & D.)
☐ Compatibility Review ☐ WRG ☐ Comm. Fac	☐ Master Plan / PUD / GDP or Amendment ☐ Detailed Development Plan (DDP)	☐ Annexation ☐ Code Interpretation / Similar Use
☐ Lot Line Adjustment	☐ Floodplain Review	☐ Master Plan / PUD / GDP Amendment
☐ Non-Conforming Use Review	☐ Geologic Hazard Overlay	☐ Conditional Use
☐ Natural Resource (NROD)	☐ Minor Partition (<4 lots)	☐ Comprehensive Plan / Legislative Amendment (Code /Map)
☐ Verification	☐ Minor Site Plan & Design Review	☐ Detailed Development Plan DDP
☐ Minor Site Plan & Design Review	☐ Non-Conforming Use Review	☒ Historic Review
☐ Extension of Approval	☐ Site Plan and Design Review / DDP	☐ Municipal Code Amendment
☐ Historic Review – Remodel	☐ Subdivision (4+ lots)	☐ Parking Adjustment
☐ Detailed Dev. Plan (DDP)	☐ Minor Variance	☐ Variance ☐ Sign Variance
	☐ Natural Resource (NROD) Review	☐ Natural Resource (NROD) Review
	☐ Public Improvement Modification	☐ Zone Change (Text/Map)
	☐ Willamette Greenway	☐ Willamette Greenway
	ELD Process (OCMC 17.50.030.E)	Legislative Action (OCMC 17.50.170)
	☐ Expedited Land Division	☐ Legislative

File Number(s):	Application Date: 3/24/2024
Project Name:	
Proposed Land Use or Activity: New SDU	# of Lots Proposed (If Applicable):
Physical Address(es) of Site: 406 Bluff Street	
Clackamas County Map and Tax Lot Number(s): Map No. 22E31AC; Tax Lot No. 22E31AC04800	

Applicant(s)

Applicant(s) Signature:		
Applicant(s) Name Printed: Benjamin Keane, 406 Bluff Street, LLC		Date: 3/24/24
Mailing Address: 406 Bluff Street, Oregon City, OR 97045 ; PO Box 100, Oregon City, OR 97045		
Phone: 850-698-5455	Fax: 503-765-7515	Email: ben@bowermanlawgroup.com

Property Owner(s) – See reverse for more than two Owners**Property Owner #1**

Property Owner#1 Signature:		
Property Owner#1 Name Printed: Benjamin Keane, 406 Bluff Street, LLC		Date: 3/24/24
Mailing Address: 406 Bluff Street, Oregon City, OR 97045; PO Box 100, Oregon City, OR 97045		
Ownership Address: SAME		
Phone: 850-698-5455	Fax: 503-765-7515	Email: ben@bowermanlawgroup.com

Property Owner #2

Property Owner#2 Signature:		
Property Owner#2 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Representative(s)

Representative(s) Signature:		
Representative(s) Name Printed:		Date:
Mailing Address:		
Phone:	Fax:	Email:

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

**Community Development – Planning**

698 Warner Parrott Road | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

Item #1.

Multiple Property Owner(s) - Additional Signatures Required

Property Owner #3		
Property Owner#3 Signature		
Property Owner#3 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Property Owner #4		
Property Owner#4 Signature		
Property Owner#4 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Property Owner #5		
Property Owner#5 Signature		
Property Owner#5 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Property Owner #6		
Property Owner#6 Signature		
Property Owner#6 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Property Owner #7		
Property Owner#7 Signature		
Property Owner#7 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Property Owner #8		
Property Owner#8 Signature		
Property Owner#8 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Property Owner #9		
Property Owner#9 Signature		
Property Owner#9 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

Property Owner #10		
Property Owner#10 Signature		
Property Owner#10 Name Printed:		Date:
Mailing Address:		
Ownership Address:		
Phone:	Fax:	Email:

TYPE III –HISTORIC REVIEW BOARD SUBMITTAL

Date

APPLICANT: Benjamin and Lindsay Keane

OWNER: Benjamin Keane

LOCATION: 406 Bluff Street, Oregon City, OR 97045

REQUEST: New construction in the McLoughlin Conservation District

I. BACKGROUND:

1. Existing Conditions

Empty back half of lot with existing dwelling and a small detached shed.

2. Project Description

Single dwelling unit in vernacular bungalow style

CODE RESPONSES:

17.40.060 - Exterior alteration and new construction.

A. Except as provided pursuant to subsection I of this section, no person shall alter any historic site in such a manner as to affect its exterior appearance, nor shall there be any new construction in an historic district, conservation district, historic corridor, or on a landmark site, unless a certificate of appropriateness has previously been issued by the historic review board. Any building addition that is thirty percent or more in area of the historic building (be it individual or cumulative) shall be considered new construction in a district. Further, no major public improvements shall be made in the district unless approved by the board and given a certificate of appropriateness.

D. [1.] The historic review board, after notice and public hearing held pursuant to Chapter 17.50, shall approve the issuance, approve the issuance with conditions or disapprove issuance of the certificate of appropriateness.

F. For construction of new structures in an historic or conservation district, or on an historic site, the criteria to be used by the board in reaching its decision on the certificate of appropriateness shall include the following:

- 1. The purpose of the historic conservation district as set forth in Section 17.40.010;*
- 2. The provisions of the city comprehensive plan;*
- 3. The economic effect of the new proposed structure on the historic value of the district or historic site;*

4. *The effect of the proposed new structure on the historic value of the district or historic site;*
5. *The general compatibility of the exterior design, arrangement, proportion, detail, scale, color, texture and materials proposed to be used in the construction of the new building or structure;*

Applicant response:

The applicant will meet the criteria for new construction of a vernacular bungalow style home in the appropriate historic design and should positively impact the value of the district.

6. *Economic, social, environmental and energy consequences;*
7. *Design guidelines adopted by the historic review board.*

Design Guidelines for New Construction – McLoughlin

<https://www.orcity.org/planning/design-guidelines-new-construction>

1. STYLE

There are three predominant architectural styles in the McLoughlin district, Vernacular, Bungalow, and Queen Anne - Queen Anne Vernacular. These form the context for the neighborhood. There is a minority of other styles, each small in number. For the purpose of reinforcing existing context, these three primary styles are to be used in new residential construction.

New construction shall complement one of these styles to support the historic context. Use of other styles dilutes and distracts from the historic context of the district.

While there may be several styles dominant within the district, the specific choice of a style shall be compatible with adjacent properties, the block, and the neighborhood. It also must be fitting for the particular function of the building and its size.

Applicant response:

Plans are drawn up for a vernacular bungalow style to match the two adjacent properties and the size of the existing structure.

2. SITE

Siting principles involve both how the site is used and how the building(s) is placed within the site. The specific lot location and its topography can dictate many requirements.

Residential buildings are to face the street squarely with their primary face in full view, and to be set back from lot lines and be spaced from one another similar to the immediate neighborhood. The primary structure is to be placed in the primary position with accessory structures in a service or ancillary position except where topography is an issue. Yard area between the house and street to primarily be planted with minimal paving only for pedestrian access and for vehicle movement. More private activity spaces to be located at the less public areas of the site.

CHARACTERISTICS OF THE STYLE Site

☐ Uniform front setback, house placed with similar sized side yards, except on sloping sites.

- ☐ Lots are usually 50x100 and contain a single house.
- ☐ Property edges may be defined by wooden fencing; low, open pickets in front, and taller privacy fencing on the sides and back yard.
- ☐ Planting: lawn is between the sidewalk and the front of the house, along the sides and behind the property; a mix of lawn, shrubs, trees and flowers. Mature trees are usually behind the house, occasionally in front or in the curb strip.
- ☐ House Placement: to suit the existing topography and most level lot portion; at near street level; on high banks, with flights of concrete steps; No extensive cut and fill for siting.
- ☐ Retaining walls: stone, mortared basalt, or concrete.
- ☐ Garages: detached and behind the front façade of the house.
- ☐ Alleys: use of graveled, or casual alley access without curbs.

Applicant Response:

Attached architectural design plans match all listed site requirements.

3. BUILDING FORM

Address the overall size, shape and bulk of the building. The architectural style used for the building defines many aspects of its appropriate form and proportions. Excessive variation in the size, shape, or configuration creates an inappropriate solution that is stylistically incorrect and not complementary to the district. The building form needs to relate to the buildings in the immediate neighborhood, and to take into account both similarities and changes on the block. The new building form shall reference the principles, proportions and scale of an historically appropriate style.

BUILDING FORM CHARACTERISTICS OF THE VERNACULAR STYLE IN MCLOUGHLIN

Form easily allows additions and alterations such as increases in family size, activities or changing technology.

f Shape: rectangular or square in plan, combinations to form L-plan, T-plan; Rectangular or square form reinforced on façade.

f Height: 1, 1½, 2 (maximum) stories in height; Basement option.

f Proportions: Height (eave) to maximum width: 1:1 Height to Depth: can vary greatly.

f Roof: gable, or cross-gable roof of not less than 8:12 pitch, often steeper.

Applicant Response:

Shape is rectangle bungalow. Height one story (21'3"), no basement. 8:12 pitch roof.

4. DESIGN COMPOSITION

Include a range of more detailed design issues that address groups of elements, individual elements, their design and how they relate to the overall composition and finish. The principles place a traditional emphasis on the design's composition as seen from the exterior, rather than as a result of interior functional planning requirements. They also outwardly convey a sense of quality craftsmanship. The design composition principles, being more detailed, and stylistically dependent, are typically developed after the previous principles are resolved. These principles also reflect historically appropriate materials, respective finishes, and unobtrusive integration of new technology.

DESIGN COMPOSITION CHARACTERISTICS OF THE VERNACULAR STYLE IN MCLOUGHLIN

- Lacks rigid system of exterior detailing that makes it a clearly definable architectural style; allows design flexibility and is inherently varied.
- Designed and built without assistance of a trained architect. Collaborative design evolved with homeowner and builder, based on familiar styles, features and products. ☐ Can combine minor features from architectural styles used during the historic period.
- Porch: full-length at the front entry; possible wrap around (typically not curved).
- Materials: local, readily available.
- Windows: 1:1, double hung windows.
- Siding: horizontal board siding; typically shiplap, or channel; occasionally bevel.
- Ornament: Exterior decoration is modest, consisting of scroll-work brackets at the top of porch pillars, decoratively cut or laid shingles, often in the peak of a front-gable roof, plain cornerboards and simple window trim. Some houses feature spindlework in the peaks of their gable roofs, often arranged in a sunburst pattern.

Applicant Response:

Vernacular style bungalow with horizontal board siding material and 1:1 double hung window. Exterior features such as porch railing and front gable will meet vernacular style requirements and characteristics.

17.40.065 - Historic Preservation Incentives.

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B. Eligibility for Historic Preservation Incentives. All exterior alterations of designated structures and new construction in historic and conservation districts are eligible for historic preservation incentives if the exterior alteration or new construction has received a certificate of appropriateness from the Historic Review Board per OCMC 17.50.110(c).

C. Incentives Allowed. The dimensional standards of the underlying zone as well as for accessory buildings (OCMC 17.54.100) may be adjusted to allow for compatible development if the expansion or new construction is approved through historic design review.

D. Process. The applicant must request the incentive at the time of application to the Historic Review Board.

Applicant Response:

Not applicable

ALSO

See full design guidelines here:

<https://www.orcity.org/planning/design-guidelines-new-construction>

Relevant Character Guidelines:

Accessory Buildings:

Accessory buildings are subservient to the primary building and provide auxiliary use. They are to be located at less visible areas such as the side or back of the primary building. Where topography issues arise, detached garages may be located in the front yard if offset from the main façade.

Applicant Response:

If any garage is added it would be a single car detached, offset from main façade.

Windows (see page 63 of Guidelines)

Applicant Response:

Staff will review your application based on these guidelines. If you propose anything that does not meet these character guidelines, please include an explanation in your application of how your design differs and why you think it is still compatible with the District.

17.29.050 - Dimensional standards—MUC-1.

modified A. Minimum lot areas: None.

B. Maximum building height: **1 and ½ story is planned.**

C. Minimum required setbacks if not abutting a residential zone: None.

D. Minimum required interior and rear yard setbacks if abutting a residential zone: Twenty feet, plus one foot additional yard setback for every one foot of building height over thirty-five feet.

E. Maximum allowed setbacks.

1. Front yard: Five feet.

2. Interior side yard: None.

3. Corner side setback abutting street: Thirty feet.

4. Rear yard: None.

Public utility easements may supersede the minimum setback. Maximum setback may be increased per OCMC 17.62.055.D.

F. Maximum lot coverage of the building and parking lot: Eighty percent.

G. Minimum required landscaping (including landscaping within a parking lot): Twenty percent.

H. Residential minimum net density of 17.4 units per acre, except that no minimum net density shall apply to residential uses proposed above nonresidential uses in a mixed-use configuration or to live/work dwellings.

I. Standalone residential development of fewer than five units are exempt from maximum setbacks and minimum density requirements of the underlying zone.

KEANE ADU

402 BLUFF ST, OREGON CITY, OR

JURISDICTION APPROVAL STAMP (KEEP CLEAR)

CODE INFORMATION

ALL WORK TO CONFORM TO THE 2021 OREGON RESIDENTIAL SPECIALTY CODE (ORSC 2021)
ALL PLUMBING WORK TO CONFORM TO 2021 OREGON PLUMBING SPECIALTY CODE (OPSC 2021)
ALL MECHANICAL TO CONFORM TO THE 2019 OREGON MECHANICAL SPECIALTY CODE (OMSC 2019)

TYPICAL DOOR FRAMING NOTES

ALL DOORS FRAME PER DETAIL ON PLANS

ALL SWING TYPE DOOR OPENINGS TO BE FRAMED 2" OVER WIDTH OF CALL OUT SIZE AND 82 1/2" IN HEIGHT UNLESS NOTED OTHERWISE ON PLANS

ALL BI PASS CLOSET DOOR OPENINGS TO HAVE TRIM W/ MDF WRAP AND SHOULD BE FRAMED CALL OUT SIZE WIDTH AND 82" IN HEIGHT UNLESS NOTED OTHERWISE ON PLANS

ALL 8" FOLD OPENINGS WITH SHEET ROCK WRAP SHOULD BE FRAMED 1" OVER CALL OUT WIDTH AND 82 1/2" IN HEIGHT UNLESS NOTED OTHERWISE ON PLANS

ALL POCKET DOOR OPENINGS SHOULD BE FRAMED 2" OVER DOOR CALL OUT SIZE 84" IN HEIGHT UNLESS NOTED OTHERWISE ON PLANS

ALL EXTERIOR AND INTERIOR DOUBLE SWINGING DOORS WITH ALTRICAL IN BETWEEN DOORS SHOULD BE FRAMED 3" OVER CALL OUT SIZE IN WIDTH AND 82 1/2" IN HEIGHT UNLESS NOTED OTHERWISE ON PLANS

ALL EXTERIOR ATRIUM DOUBLE DOORS WITH ONE SIDE FIXED SHOULD BE FRAMED AT 4" OVER CALL OUT SIZE

TYPICAL WINDOW FRAMING NOTES

ALL WINDOWS SHOULD BE FRAMED CALL OUT SIZE. TAKE EXTREME CARE IN FRAMING OPENINGS SQUARE AND TRUE, AND THE WINDOW SETTING POSITION FOR EQUAL REVEAL AROUND THE WINDOW.

QUALITY FRAMING NOTES

PROVIDE MINIMUM DOUBLE STUDS ON EACH SIDE OF DOOR AND WINDOW OPENINGS TO ALLOW SPACE FOR CASING TRIM

CROWN ALL STUDS SAME DIRECTION, DO NOT USE OVERLY CROWNED MATERIALS

ALLOW 5/8" ON EACH SIDE OF STAIRS FOR DRYWALL WITH NO SKIRTS

WHEN SKIRTS ARE CALLED OUT, ALLOW 1 1/2" ON EACH SIDE OF STAIRS

ALL OPENINGS SHOULD BE FRAMED LEVEL AND SQUARE

ALL WALLS SHOULD BE STRAIGHT AND LEVEL

PROVIDE BACKING FOR DRYWALL, TUBS AND SHOWERS

FRAMING NOTES

- ALL EXTERIOR WALL OPENINGS & BEARING WALL OPENINGS TO HAVE 4 X 10 HEADERS UNLESS OTHERWISE INDICATED.
- ALL EXTERIOR WALLS TO BE BUILT OF 2 X 6 STUDS @ 16" O.C. TYPICALLY UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS ARE TO BE BUILT OF 2 X 4 STUDS @ 16" O.C. TYPICALLY UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS SUPPORTING TWO OR MORE FLOORS AND 1 OR MORE ROOF/CEILING ASSEMBLIES SHALL BE 2 X 6 STUDS @ 16" O.C. FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT LESS IN SIZE THAN THE STUDING ABOVE. WHEN EXCEEDING 4'-0" IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF STUDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY UNLESS SPECIFIED OTHERWISE.
- ALL METAL CONNECTORS TO BE "SIMPSON" OR EQUIVALENT. U.N.O. JOISTS HUNG ON FLUSH BEAMS TO BE ATTACHED WITH U210 OR EQUIVALENT. MULTIPLE JOISTS USE U210-U210-3 AS REQUIRED. USE OF 10d X 1-1/2" NAILS ARE ALLOWED WITH THESE TYPE OF HANGERS UNLESS NOTED ON THE PLANS. SEE NAIL CONVERSION CHART FROM CONNECTOR MANUF. CATALOG FOR OTHER NOTES AND RESTRICTIONS THAT MAY APPLY. "USP" CONNECTORS CONSIDERED APPROVED EQUAL.
- PROVIDE DOUBLE JOISTS UNDER ALL WALLS ABOVE, RUNNING PARALLEL TO JOISTS AND SOLID BLOCKING BELOW ALL BEARING WALLS RUNNING PERPENDICULAR TO FLOOR JOISTS.
- PROVIDE POSITIVE VENTILATION AT EACH END OF EACH RAFTER SPACE AT VAULTED CLG AREAS, AND INSULATION BAFFLES AT EAVE VENTS BETWEEN RAFTERS. RAFTER VENTILATION IS ALSO REQUIRED AT BLOCKING LOCATIONS ABOVE THE PLATE. NOT LESS THAN A 1 INCH SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING.
- FIRE BLOCKING SHALL BE PROVIDED AT CEILING AND FLOOR LEVELS, HORIZONTALLY AT INTERVALS OF 10 FEET, BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES AT SOFFITS, DROPPED AND COVERED CEILINGS, IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM RUN, ENCLOSED SPACES UNDER STAIRS, DRAFTSTOP FLOOR/CEILING ASSEMBLIES WHERE CEILING IS SUSPENDED UNDER THE FLOOR FRAMING OR FLOOR FRAMING IS CONSTRUCTED OF OPEN WEB OF PERFORATED MEMBERS SO THAT THE AREA DOES NOT EXCEED 1,000 SQ.FT. MATERIALS SHALL NOT BE LESS THAN 1/2" GYPSUM BOARD OR 3/8" WOOD STRUCTURAL PANEL.
- HIPS, VALLEYS AND RIDGES SHALL NOT BE LESS IN DEPTH THAN THE END CUT OF THE RAFTER.
- UNLESS NOTED OTHERWISE, CONNECT POST TO BEAM CONNECTIONS WITH "SIMPSON"CB SERIES CAPBASE (OR "USP" OR APPROVED EQUAL) CONNECTORS. EXTERIOR APPLICATIONS USE "SIMPSON" EPB SERIES BASES U.N.O. AND AT INTERIOR GARAGE POSTS USE "SIMPSON" CB SERIES BASES AT FINISH FLOOR. (POST NOT EMBEDDED) "USP" CONNECTORS CONSIDERED APPROVED EQUAL.

A. POSTS, BEAMS, HEADERS JOISTS AND RAFTERS	NO. 2 DOUGLAS FIR
B. SILLS, PLATES, BLOCKING BRIDGING ETC.	NO. 3 DOUGLAS FIR
C. STUDS	STUD GRADE D.F.
D. STUDS OVER 10" HIGH	NO. 2 OR BETTER D.F.
E. POST & BEAM BEARING	UTILITY GRADE D.F.
F. PLYWOOD SHEATHING	1/2" CDX PLY 3216
G. GLULAM BEAMS (EXT. ADH @ EXT. CONDITIONS)	Fb=2400; DRY ADH.
H. PSL MATERIALS *	Fb = 2900 E = 2.0 Fv = 260
I. LVL MATERIALS **	Fb = 2600; E= 1.9 Fv = 285
* PSL INDICATES PARALLEL STRAND LUMBER	
** LVL INDICATES LAMINATED VENEER LUMBER	
I. METAL HANGERS & FASTENERS USED WITH P.T. LUMBER TO BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.	

EXTERIOR DECK MATERIALS SHALL BE DOUG FIR NO. 2 GRADE OR BETTER. PRESERVATIVE-TREATED, CUTS, NOTCHES AND DRILLED HOLES OF P.T. WOOD MEMBERS SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M4.

FASTENERS FOR PRESERVATIVE-TREATED WOOD INCLUDING NUTS AND WASHERS, FOR PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED, ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.

FOUNDATION NOTES

- FOOTINGS ARE TO BEAR ON UNDISTURBED LEVEL SOIL, DEVOID OF ANY ORGANIC MATERIAL, AND STEPPED AS REQUIRED TO MAINTAIN THE REQUIRED DEPTH BELOW THE FINAL GRADE.
- SOIL BEARING PRESSURE ASSUMED TO BE 1500 PSF.
- MAXIMUM SLOPE OF CUTS AND FILLS TO BE TWO (2) HORIZONTAL TO ONE (1) VERTICAL FOR BUILDINGS, STRUCTURES, AND FOUNDATIONS.
- ANY FILL UNDER GRADE SUPPORTED SLABS TO BE A MIN. OF 4" IN GRANULAR MATERIAL COMPACTED TO 95%.
- CONCRETE - MIX AND 28 DAY STRENGTH OF CONCRETE.

BASEMENT WALLS & FOUNDATIONS NOT EXPOSED TO WEATHER:	2,500 PSI
BASEMENT & INTERIOR SLABS ON GRADE:	2,500 PSI
FOUNDATIONS EXPOSED TO THE WEATHER, AND GARAGE SLABS	3,000 PSI
PORCHES, STEPS, & CARPORT SLABS EXPOSED TO WEATHER:	3,500 PSI

MORTAR & GROUT TO BE MIXED PER PER RIGHTS

- GARAGE FLOORS TO SLOPE 1/8"FT MIN. TOWARDS OPENING AS REQUIRED FOR DRAINAGE. CONCRETE SLABS TO HAVE CONTROL JOINTS AT 20 FT. (MAX) INTERVALS EA. WAY. SLABS ARE TO BE 5% AIR ENTRAINED.
- CONCRETE SIDEWALKS TO HAVE 3/4" IN. TOOLED JOINTS AT 9 FT. (MIN) O.C.
- REINFORCING STEEL TO BE A-615 GRADE 60. WELDED OPTIONAL WIRE MESH TO BE A-185.
- EXCAVATE SITE TO PROVIDE A MIN. OF 18" CLEARANCE UNDER ALL ORDERS.
- COVER ENTIRE CRAWL SPACE WITH CLASS 1 VAPOR RETARDER WITH JOINTS LAPPED 12" AT SEAMS AND EXTENDING UP FOUNDATION WALLS 12" & 8 MIL POLYETHYLENE FILM. INSTALL A RADON VENT BETWEEN GROUND COVER AND SOIL PER IRC APPENDIX F. SEE SHEET R1, AS REQD WHERE VENT AREA IS LESS THAN 1/150 OF CRAWLSPACE AREA OR OPERABLE LOUVERS ARE INSTALLED AT CRAWLSPACE VENTS
- PROVIDE A MIN. OF 150 FT. OF VENTILATION AREA FOR EACH 150 SQ. FT. OF CRAWL SPACE AREA. VENTS ARE TO BE COVERED WITH 1/8" IN MESH CORROSION RESISTANT SCREEN. ONE VENT REQUIRED WITHIN 1 FT OF EACH CORNER. POST NOTICE RE: OPENING VENTS AT THE ELECTRICAL PANEL. VENTILATION AREA MAY BE REDUCED TO 1 SQUARE FOOT FOR EACH 1,500 SQUARE FEET OF UNDER-FLOOR SPACE AREA WHEN THE GROUND SURFACE IS COVERED BY A CLASS 1 VAPOR RETARDER.
- THIS REDUCTION IN VENTILATION IS NOT ALLOWED WHEN NATURALLY VENTED CRAWL SPACES WHERE RADON-MITIGATING CONSTRUCTION IS REQUIRED.
- ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED OR PROTECTED WITH 55# ROLL ROOFING.
- SEW PPOCKETS IN CONCRETE TOWARD 12" IN W/SPACES 18" ONCS AND ENDS WITH A MIN. BEARING OF 7 MOSES.
- WATERPROOF BASEMENT WALLS BEFORE BACKFILLING. PROVIDING A 1 IN. DIA. PERFORATED DRAIN TILE AT OR BELOW THE TOP OF THE FOOTING OR BELOW THE BOTTOM OF THE SLAB AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM.
- PROVIDE MIN. 18" X 24" CRAWL SPACE ACCESS THROUGH FLOOR OR MIN. 16" X 24" CRAWLSPACE ACCESS THROUGH WALL.

PRESCRIPTIVE ENVELOPE REQUIREMENTS

TABLE N1101.1 (1) PRESCRIPTIVE ENVELOPE REQUIREMENTS

INSULATION	BUILDING	EQUIV. VALUE ^B
	WALL INSULATION - ABOVE GRADE	R-21 INTERMEDIATE ^C
GLAZING/DOORS	WALL INSULATION - BELOW GRADE *	R-15 C.I. / R-21
	ROOF INSULATION - FLAT CEILING ¹	R-49
	ROOF INSULATION - VAULTED CEILING ²	R-30 RAFTER or R-30A ³ SCISSOR TRUSS
	UNDERFLOOR	R-30
	SLAB-EDGE PERIMETER ³	R-15
	HEATED SLAB INTERIOR ¹	R-10
	MAXIMUM WINDOW AREA	NO LIMIT
	WINDOW CLASS / SLIDING GLASS DOORS	U = .27
	SKYLIGHTS	U = .50
	EXTERIOR DOORS ⁴	U = .20
	EXTERIOR DOORS WITH 2.5 ft. ² GLAZING ¹	U = .40

- a. As allowed in Section N1104.1, thermal performance of a component may be adjusted provided that overall heat loss does not exceed the total resulting from conformance to the required U-factor standards. Calculations to document equivalent heat loss shall be performed using the procedure and approved U-factors contained in Table N1104.1(1). R-values used in this table are nominal for the insulation only in standard wood-framed construction and not for the entire assembly.
- b. Wall insulation requirements apply to all exterior wood-framed, concrete or masonry walls that are above grade. This includes cripple walls and rim joist areas. Nominal compliance with R-21 insul. and Intermediate Framing (N1104.5.2) with insulated headers.
- c. Below-grade wood, concrete or masonry walls include all walls that are below grade and do not include those portions of such wall that extend more than 24 inches above grade. R-21 for insulation in framed cavity; R-15 continuous insulation.
- d. Insulation levels for ceilings that have limited attic/rafter depth such as dormers, bay windows or similar architectural features totaling not more than 150 square feet in area may be reduced to not less than R-21. When reduced, the cavity shall be filled (except for required ventilation spaces). R-49 insulation installed to minimum 6-inches depth at top plate at exterior of structure to achieve U-factor.
- e. Vaulted ceiling surface area exceeding 50 percent of the total heated space floor area shall have a U-factor no greater than U-0.026 (equivalent to R38 rafter or scissor truss with R-38 advanced framing).
- f. A = Advanced frame construction. See Section N1104.6
- h. Heated slab interior applies to concrete slab floors (both on and below grade) that incorporate a radiant heating system within the slab. Insulation shall be installed underneath the entire slab.
- j. Sliding glass doors shall comply with window performance requirements. Windows exempt from testing in accordance with Section NF1111.2, Item 3 shall comply with window performance requirements if constructed with thermal break aluminum or wood, or vinyl, or fiberglass frames and double-pane glazing with low-emissivity coatings of 0.10 or less. Buildings designed to incorporate passive solar elements may include glazing with a U-factor greater than 0.35 by using Table N1104.1(1) to demonstrate equivalence to building thermal envelope requirements.
- k. A maximum of 28 square feet of exterior door area per dwelling unit can have a U-factor of 0.54 or less.
- Glazing that is either double pane with low-e coating on one surface, or triple pane shall be deemed to comply with this requirement.
- l. Minimum 24-inch horizontal or vertical below-grade.

ROOF NOTES

- THE TOTAL NET FREE VENTILATION AREA SHALL NOT BE LESS THAN 1/300 OF THE AREA OF THE SPACE VENTILATED, PROVIDED THAT AT LEAST 40% BUT NOT MORE THAN 50% OF THE REQUIRED AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE BEING VENTILATED AT LEAST 3' ABOVE THE EAVE VENTS. THE REMAINING BALANCE OF THE REQUIRED VENTING WILL BE PROVIDED BY EAVE VENTS.
- ALTERNATIVE METHOD: VENTILATION SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED.

- VENTS:
- ROOF VENTS ARE BASED ON 49 SQ IN NET FREE VENTILATION AREA PER VENT.
 - EAVE VENTS ARE BASED ON 16 SQ IN NET FREE VENTILATION PER VENT.

MAIN ROOF:

AREA	294,436 SQ IN
REQUIRED VENTING	981 SQ IN
ROOF VENTS UPPER	833 SQ IN (33)
ROOF VENTS LOWER	392 SQ IN (8)

- PROVIDE POSITIVE VENTILATION AT EACH END OF EACH RAFTER SPACE AT VAULTED CLG AREAS, AND INSULATION BAFFLES AT EAVE VENTS BETWEEN RAFTERS. RAFTER VENTILATION IS ALSO REQUIRED AT BLOCKING LOCATIONS ABOVE THE PLATE.
- PROVIDE FIRE BLOCKING, DRAFT STOPS, & FIRE STOPS AS PER OREGON DWELLING SPECIALTY CODE SEC.
- HIPS, VALLEYS & RIDGES SHALL NOT BE LESS IN DEPTH THAN THE END CUT OF THE RAFTER.

ADDITIONAL MEASURES

TABLE N1101.1 (2) - ADDITIONAL MEASURES

1	HIGH EFFICIENCY HVAC SYSTEM *
	a. GAS-FIRED FURNACE OR BOILER ATUE 94 PERCENT, OR b. AIR-SOURCE HEAT PUMP HSPF 10.0/14.0 SEER COOLING, OR c. GROUND-SOURCE HEAT PUMP COP 3.0 OR ENERGY STAR RATED
2	HIGH EFFICIENCY WATER HEATING SYSTEM
	a. NATURAL GAS PROPANE WATER HEATER WITH MINIMUM UEF 0.90, OR b. ELECTRIC HEAT PUMP WATER HEATER WITH MINIMUM 2.0 COP, OR c. NATURAL GAS PROPANE TANKLESS INSTANTANEOUS HEATER WITH MINIMUM 0.90 UEF AND DRAIN WATER HEAT RECOVERY UNIT INSTALLED ON MINIMUM OF ONE SHOWER/TUB-SHOWER
3	WALL INSULATION UPGRADE EXTERIOR WALLS - U-0.045 R-21 CONVENTIONAL FRAMING WITH R-6.0 CONT. INSULATION.
4	ADVANCED ENVELOPE WINDOWS—U-0.21 (AREA WEIGHTED AVERAGE) AND FLAT CEILING ¹ —U-0.071 R=60; AND FRAMED FLOORS—U-0.026 R-38 OR SLAB EDGE INSULATION TO F-0.48 OR LESS (R-10 FOR 48"; R-15 FOR 36" OR 36" FULLY INSULATED SLAB)
5	DUCTLESS HEAT PUMP FOR DWELLING UNITS WITH ALL-ELECTRIC HEAT, PROVIDE: DUCTLESS HEAT PUMP OF MIN. HSPF 10 IN PRIMARY ZONE REPLACES ZONAL ELECTRIC HEAT SOURCES, AND PROGRAMMABLE THERMOSTAT FOR ALL HEATERS IN BEDROOMS
6	3 ACH AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION ACHIEVE A MAX. OF 3.0 ACH50 WHOLE-HOUSE AIR LEAKAGE WHEN THRD-PARTY TESTED AND PROVIDE A WHOLE-HOUSE VENTILATION SYSTEM INCLUDING HEAT RECOVERY WITH A MIN. SENSIBLE HEAT RECOVERY EFFICIENCY OF NOT LESS THAN 65%.

- a. Appliances located within the building thermal envelope shall have sealed combustion air installed. Combustion air shall be ducted directly from the outdoors.
- b. The max. vaulted ceiling surface area shall not be greater than 50% of the total heated space floor area unless vaulted area has a U-factor no greater than U-0.026.

MECHANICAL NOTES

- ALL DUCT SYSTEMS AND AIR HANDLING EQUIPMENT APPLIANCES SHALL BE LOCATED FULLY WITHIN THE BUILDING THERMAL ENVELOPE. UP TO 5% OF DUCTWORK LENGTH SHALL BE PERMITTED TO BE LOCATED OUTSIDE THE ENVELOPE, INSULATED TO A MIN. R-6. VENTILATION AND EXHAUST DUCTWORK ARE EXEMPT.
- DUCTS DEEPLY BURIED IN INSULATION FILLING GAPS AND VOIDS BETWEEN DUCT AND CEILING, WITH A MINIMUM OF R-10 INSULATION INSTALLED ABOVE THE DUCT IN A UNCONDITIONED ATTIC SPACE IS ALLOWED. PROVIDE INSULATION DEPTH MARKERS ON THE DUCTS EVERY 10 FEET.
- WHOLE-HOUSE BALANCED MECHANICAL VENTILATION SYSTEM SHALL BE PROVIDED.
- LOCAL EXHAUST OR SUPPLY FANS ARE PERMITTED TO SERVE AS PART OF SUCH A SYSTEM. OUTDOOR AIR VENTILATION PROVIDED BY A SUPPLY FAN DUCTED TO THE RETURN SIDE OF AN AIR HANDLER SHALL BE CONSIDERED AS PROVIDING SUPPLY VENTILATION FOR THE BALANCED SYSTEM. FANS SHALL BE ENERGY STAR CERTIFIED. KITCHEN RANGE HOOD/ DOWNDRAFTS MIN 150cm. BATH AND SPA ROOMS 80cm OR 20cm CONTINUOUS. TOILET ROOMS WITHOUT BATHING 50cm. POWDER AND BATH ROOMS SHALL BE CONTROLLED BY A DEHUMIDIFIER, TIMER OR SIMILAR MEANS OF AUTOMATIC CONTROL. INTERMITTENT FANS SHALL BE RATED AT A MAX OF 3 SONES. CONTINUOUS FANS MAX 1 SONES.

CONTINUOUS WHOLE-HOUSE OUTDOOR SUPPLY AIRFLOW RATE DWELLING UNIT FLOOR AREA (SQUARE FEET)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	7+
1,500 OR LESS	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150
7,500 +	105	120	135	150	165

**SOLAR INTERCONNECTION PATHWAY REQUIRED.
A SQUARE METAL JUNCTION BOX NOT LESS THAN 4" BY 4" WITH A METAL BOX COVER SHALL BE PROVIDED WITH 24" HORIZONTALLY OR VERTICALLY OF THE MAIN ELECTRICAL PANEL. A MINIMUM 3/4" RIGID METAL RACEWAY SHALL BE EXTENDED FROM THE JUNCTION BOX TO A CAPPED ROOF TERMINATION OR TO AN ACCESSIBLE LOCATION IN ATTIC WITH A VERTICAL CLEARANCE OF NOT LESS THAN 36"**

CAREFULLY REVIEW ALL DETAILS IN THE FULL SET OF PLANS. ALL DETAILS ARE USED. CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL DETAILS. CONTACT SITE SUPERVISOR SHOULD ANY CONFLICTS ARISE

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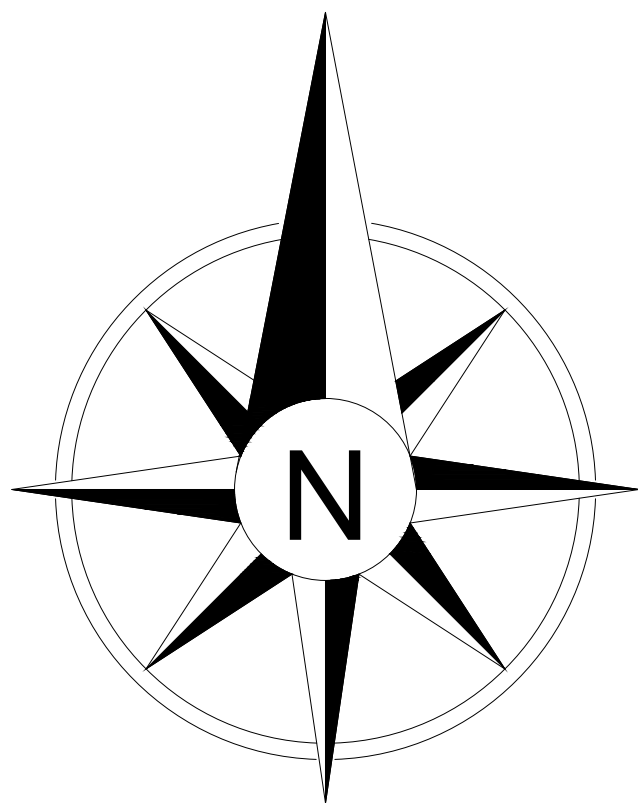
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COVER PAGE/ NOTES

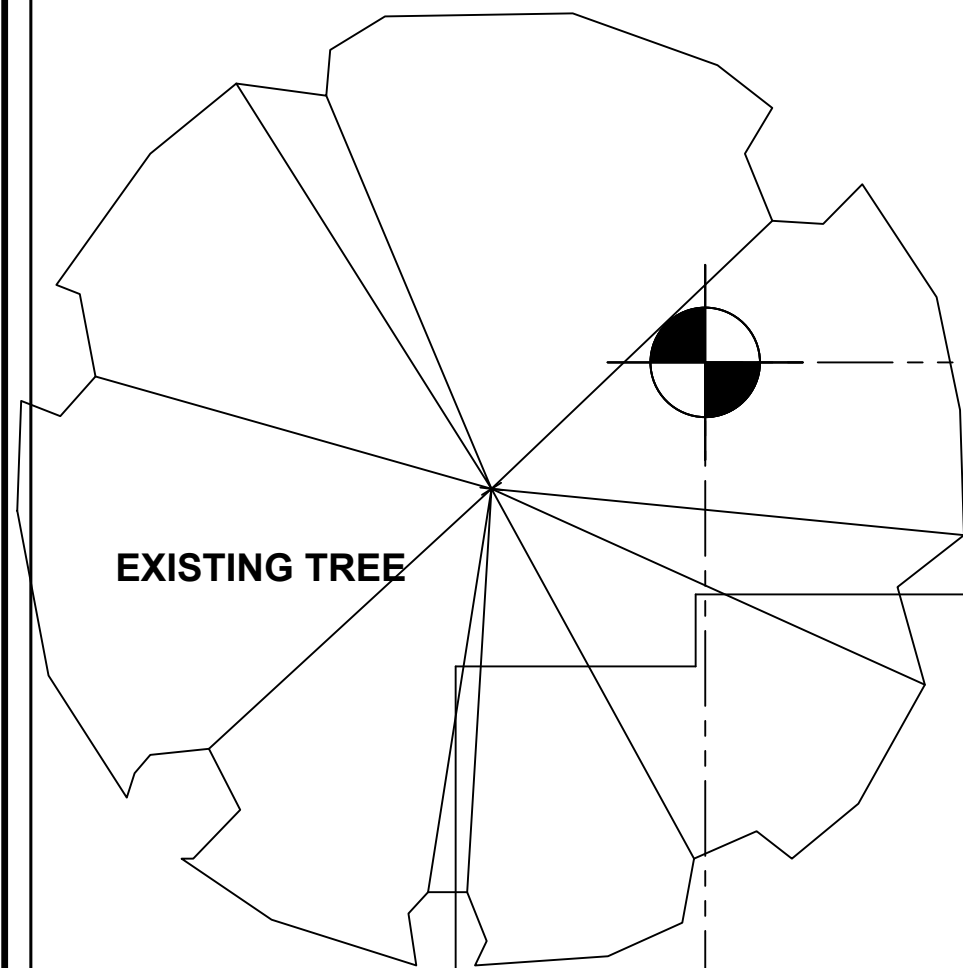
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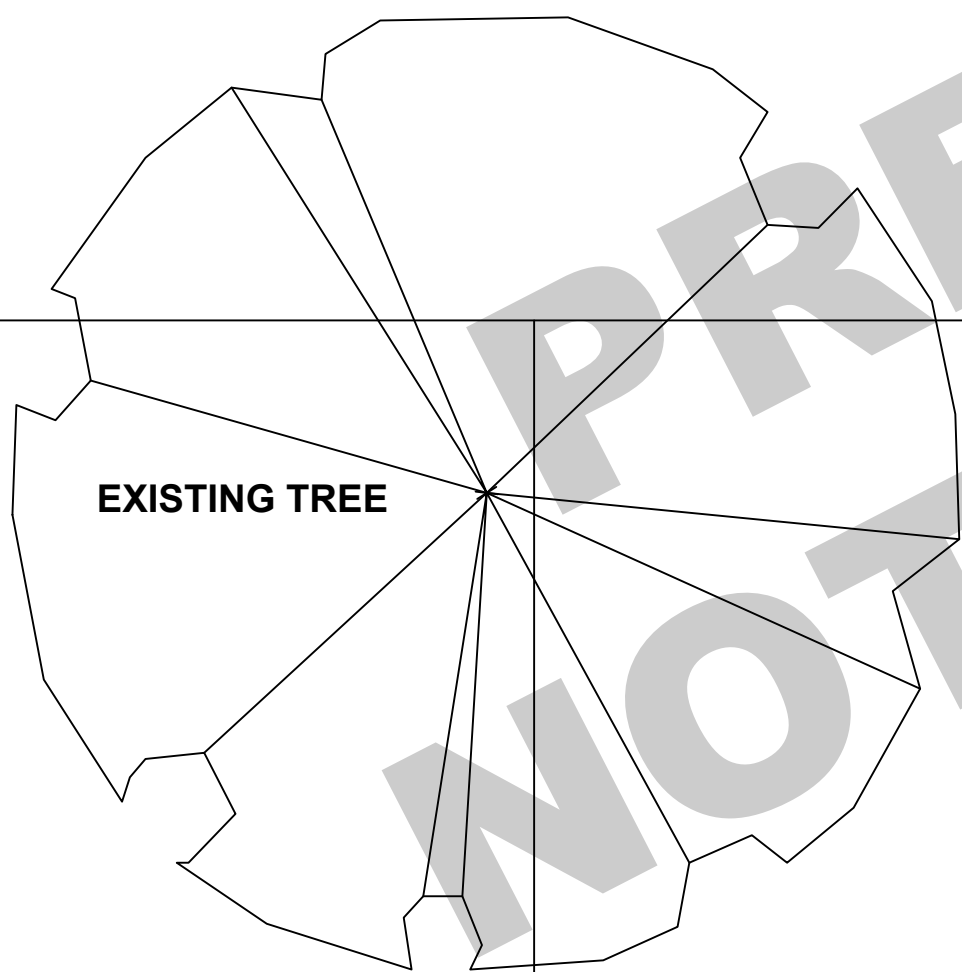
402 BLUFF ST, OREGON CITY, OR



JURISDICTION APPROVAL STAMP (KEEP CLEAR)



EXISTING TREE



EXISTING TREE

EXISTING OFFICE

PROPOSED HOME

PARKING

SITE PLAN

1/4" = 1'-0"

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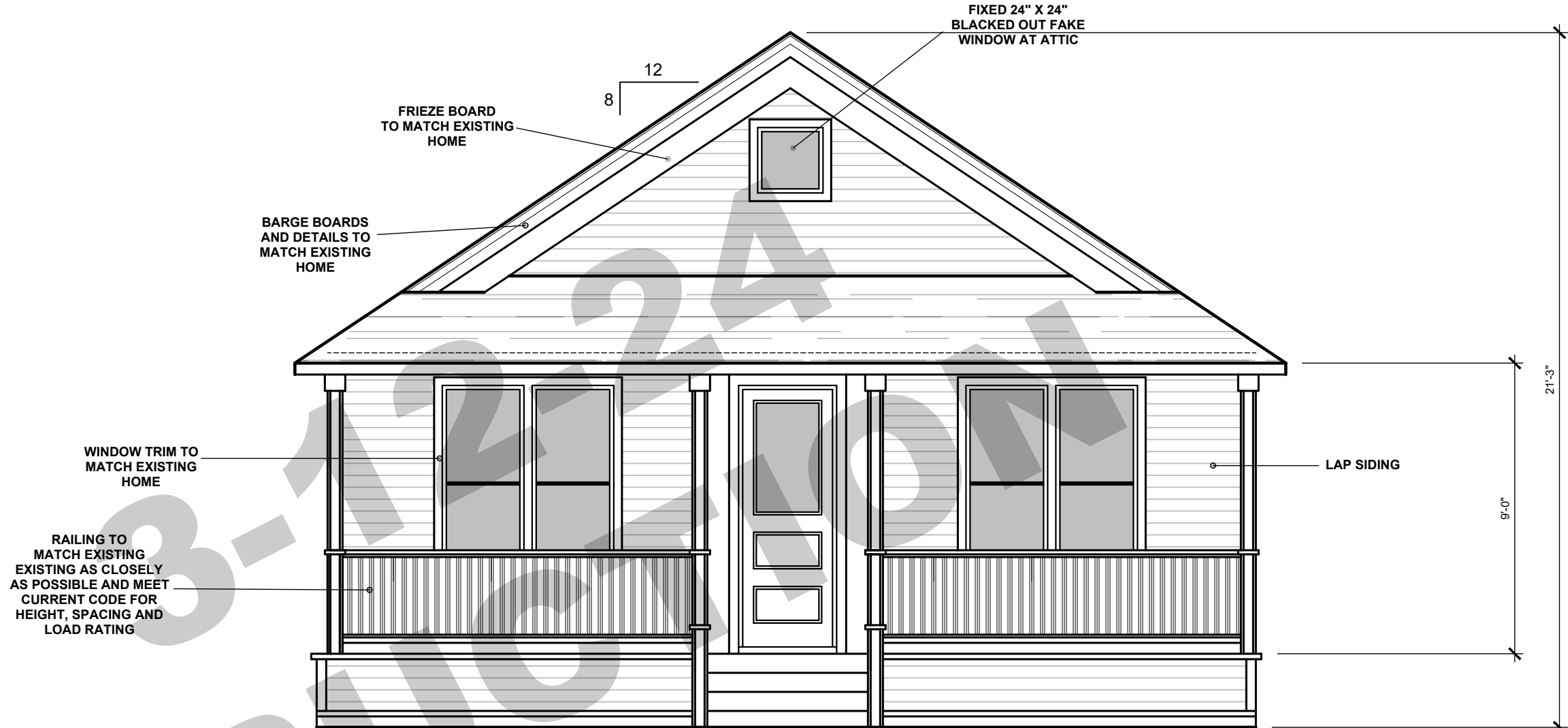
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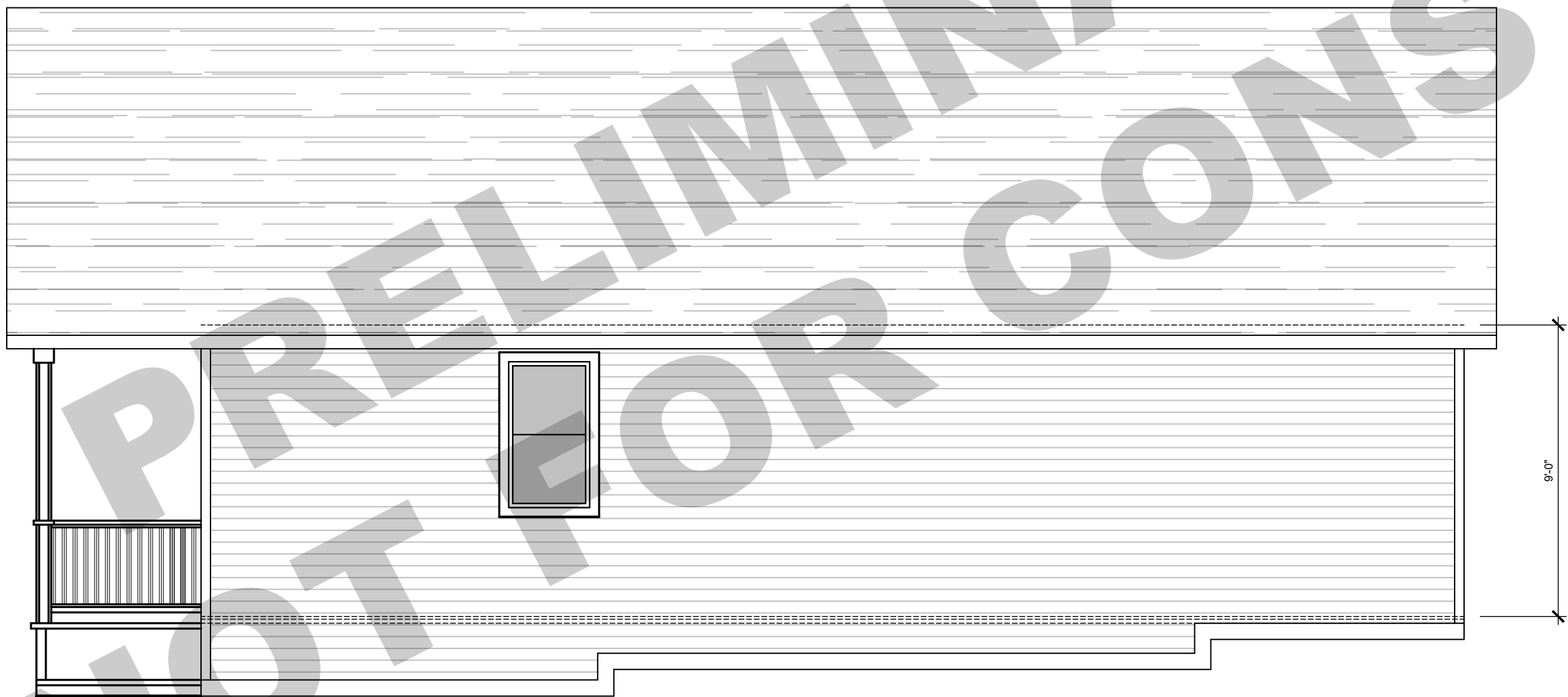
JURISDICTION APPROVAL STAMP (KEEP CLEAR)



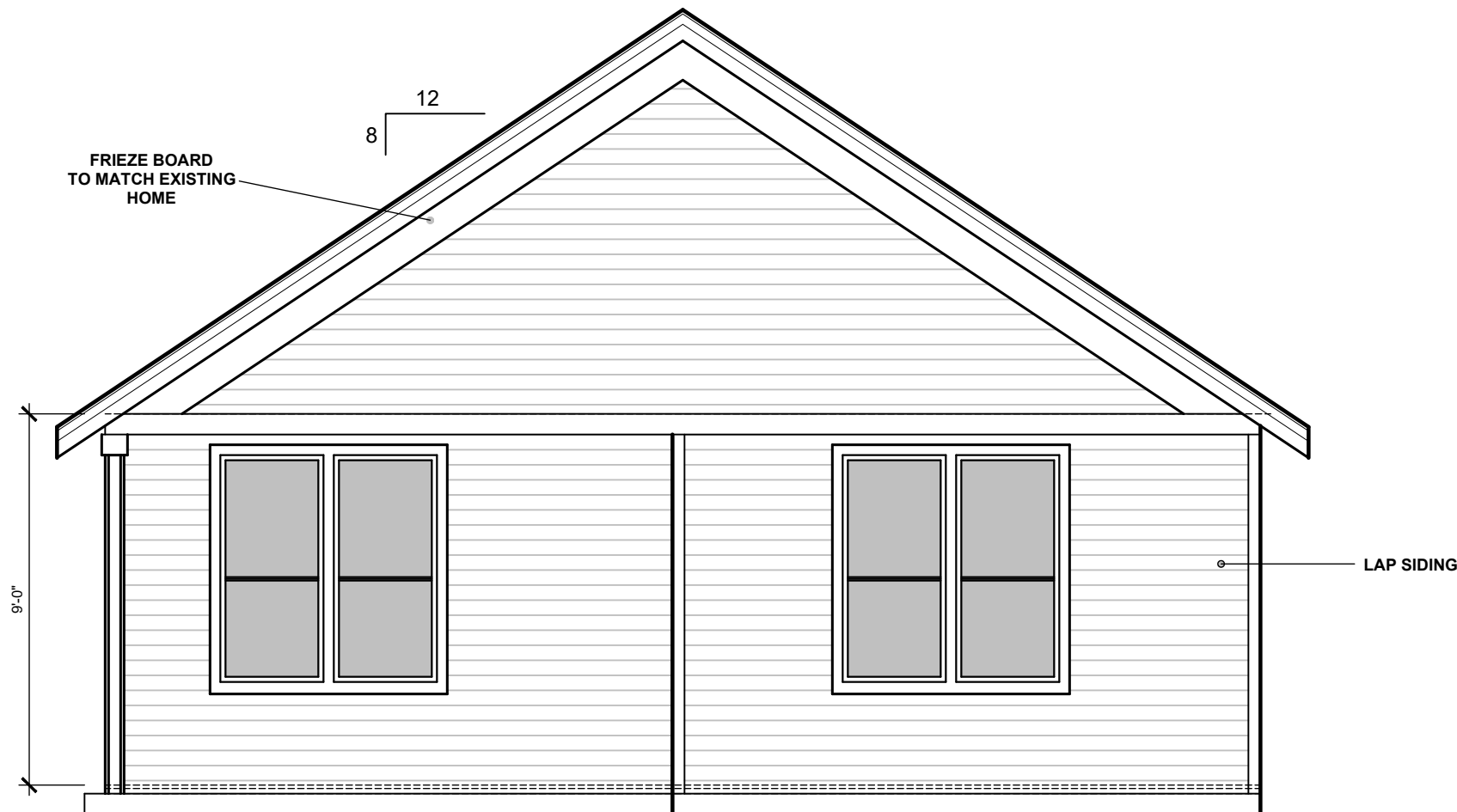
LEFT ELEVATION
1/4" = 1'-0"



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



REAR ELEVATION
1/4" = 1'-0"



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

CAREFULLY REVIEW ALL DETAILS IN THE FULL SET OF PLANS. ALL DETAILS ARE USED. CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL DETAILS. CONTACT SITE SUPERVISOR SHOULD ANY CONFLICTS ARISE

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ELEVATIONS

CUSTOMER JOB: _____
LOCATION: _____
DATE: _____
DWG: _____

A-3

GENERAL NOTES

ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED ISSUE OF THE BUILDING CODE AND ANY APPLICABLE STATE, COUNTY OR LOCAL REGULATIONS THAT MAY APPLY.

THE CONTRACTOR IS RESPONSIBLE TO CHECK THE PLANS AND SITE CONDITIONS AND TO NOTIFY THE DESIGNER OF ANY ERRORS OR OMISSIONS PRIOR TO THE START OF CONSTRUCTION.

WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS.

ALL POSTS, BEAMS, HEADERS, JOIST AND RAFTERS TO BE #2 DF UNLESS NOTED.

ALL PLATES, SILLS, BLOCKING, BRIDGING ETC. TO BE #3 DF UNLESS NOTED.

UNLESS NOTED ALL EXTERIOR WINDOW AND DOOR HEADERS TO BE PER ENGINEERING SHEETS S1 AND S2

PROVIDE DOUBLE JOIST UNDER ALL PARALLEL WALLS IF APPLIES.

PROVIDE SOLID BLOCKING UNDER ALL BEARING WALLS.

PROVIDE SOLID FRAMING UNDER ALL BEAMS AND HEADERS.

(2) STUDS MIN WITH (3) STUDS AND BUILD UP AND BEAM MEMBERS. SOLID POSTS REQUIRED AS INDICATED ON PLANS.

NAILING SCHEDULES ARE PER ENGINEERING OR BRACED WALL METHODS AS INDICATED ON THE PLANS SHEET S1 AND S2. S2 IF APPLICABLE

DECKS AND BALCONY GUARDRAILS TO BE 36" HIGH WITH MAXIMUM OPENING SPACES NO LARGER THAN THAT WHICH CAN KEEP A 4" SPHERE FROM PASSING THROUGH. (IF DECK OR RAILS APPLY TO PLANS)

ALL WINDOWS WITH IN 18" OF FLOOR OR WITHIN 24" OF DOORS ARE TO BE TEMPERED. WINDOWS LESS THAN 24" OFF FLOOR TO HAVE CHILD PROTECTION ALL SHOWER AND TUB ENCLOSURES ARE TO HAVE TEMPERED SAFETY

PROVIDE 1/2" "GREEN BOARD" GYPSUM AROUND TUB, SHOWER AND MOISTURE EXCLUDING FIRE PARTITIONS

ALL EXHAUST VENTS TO BE VENTED TO THE OUTDOORS A MINIMUM OF 3' FROM ANY OPENING.

ALL LIGHTING OR ELECTRICAL SHOWN ON PLANS IS MEANT TO BE USED AS A GUIDE ONLY. ELECTRICAL SWITCHES AND OUTLETS ARE TO BE INSTALLED AS PER LOCAL CODE AND OWNERS' BUILDERS REQUIREMENTS.

SMOKE DETECTORS TO BE 110V INTERCONNECTED WITH BATTERY BACKUP AND INSTALLED IN ACCORDANCE WITH THE ELECTRICAL CODE. CARBON SENSING AS REQUIRED BY CODE

PROVIDE GFCI OUTLETS IN KITCHENS, BATHROOMS, GARAGE, AND WP GFCIS ON EXTERIOR OF HOME ARC FAULT BREAKERS AS REQUIRED BY CODE.

PROVIDE OUTSIDE VENTING OF DRYER AND LABEL PER CODE.

PROVIDE EXTERIOR LANDINGS WITH A LENGTH IN THE DIRECTION OF TRAVEL OF NO LESS THAN 36"

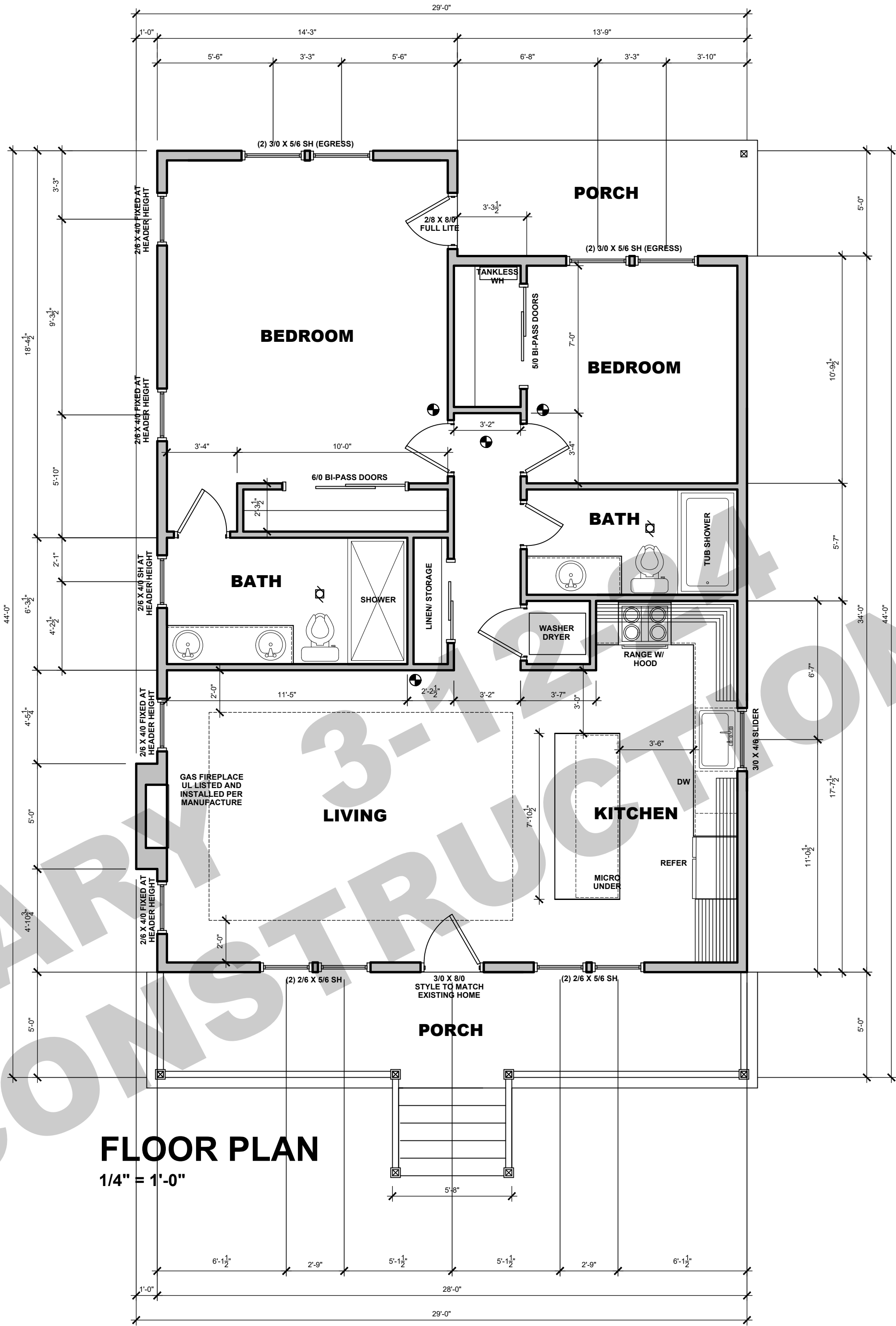
ALL WINDOWS TO BE GLAZED IN ACCORDANCE WITH ENERGY CODE

BEDROOMS AND BASEMENT EGRESS MUST BE MIN OF 621 SQ INCH OF OPENING WITH A MAX SILL HEIGHT OF 44"

APPLY VAPOR BARRIER AT INTERIOR SIDE OF ALL EXTERIOR WALLS PER CODE BENEATH FINISH MATERIAL.

CLEANOUTS IN CRAWL SPACE MUST BE LOCATED WITHIN 5' OF THE ACCESS OPENING PER OPSC 707.8 AND 707.9

PLUMBING FIXTURES WATER SAVINGS RATING REQUIRED PER OPSC TABLE 401.3



FLOOR PLAN

1/4" = 1'-0"

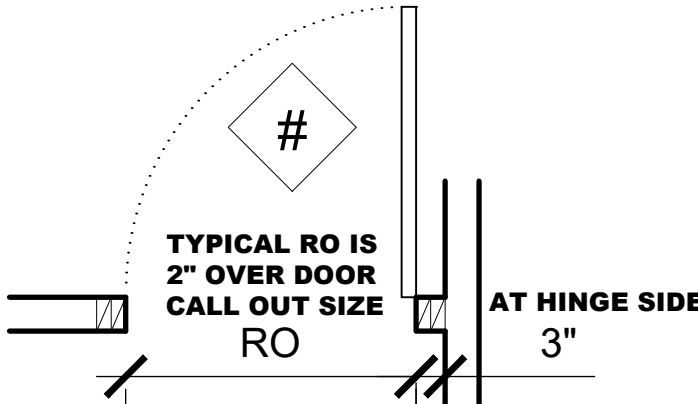
FIRST FLOOR PLAN

1/4" = 1'-0"

1028 SQ FT

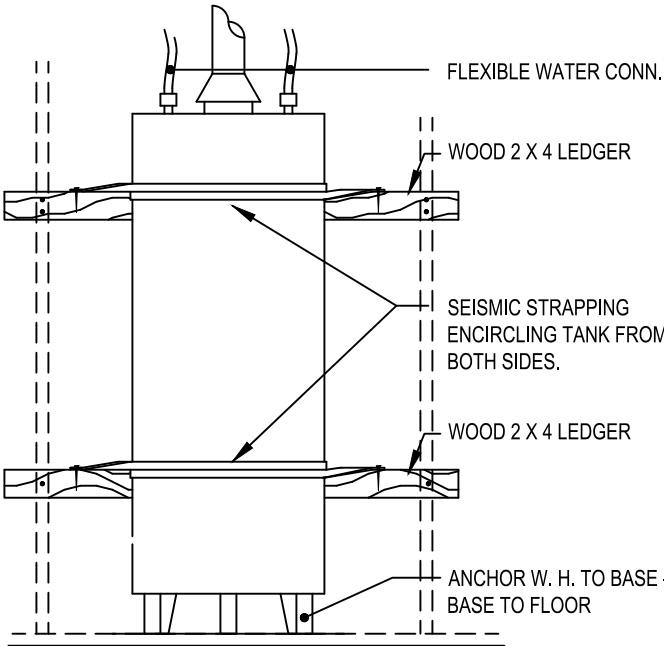
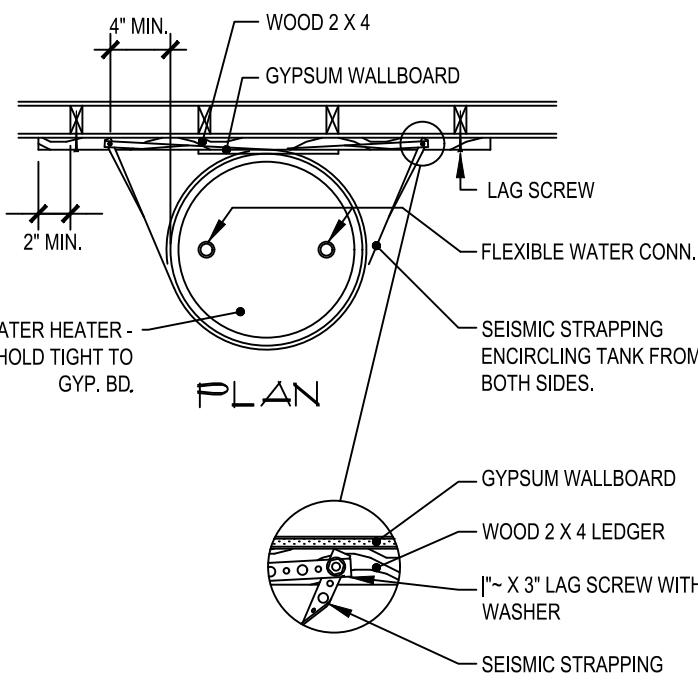
JURISDICTION APPROVAL STAMP (KEEP CLEAR)

\$	SINGLE POLE SWITCH	⚡	EXHAUST FAN 80 CFM
⚡	THREE-WAY SWITCH	📺	TELEPHONE OUTLET
🔌	FOUR-WAY SWITCH	📺	TELEVISION OUTLET
🔌	DUPLEX RECEPTACLE	⚡	ELECTRICAL PANEL
🔌	DUPLEX RECEPTACLE SPLIT WIRE	⚡	ELECTRICAL METER
🔌	220 VOLT RECEPTACLE	🚰	WALL MOUNTED
🔌	WATERPOOF	🔌	RECESSED LED
🔌	JUNCTION BOX	🔌	UNDER CABINET
🔌	WATERPOOF	🔌	CEILING FAN
🔌	GROUND FAULT INTERRUPTER	🔌	WHERE REQUIRED
🔌	CEILING MOUNTED		
🔌	INDICATION TYPE SMOKE DETECTOR		
🔌	110V W/BATT. INTERCONNECTED		
🔌	WITH CARBON MONOXIDE DETECT		
🔌	WHERE REQUIRED		
🔌	DOOR SENSOR		
🔌	THERMOSTAT		



TYPICAL AT ALL DOORS UNLESS OTHERWISE SPECIFIED ON PLANS

DOOR OPENING DETAIL



ELEVATION

WATER HEATER SUPPORT

CAREFULLY REVIEW ALL DETAILS IN THE FULL SET OF PLANS. ALL DETAILS ARE USED. CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL DETAILS. CONTACT SITE SUPERVISOR SHOULD ANY CONFLICTS ARISE

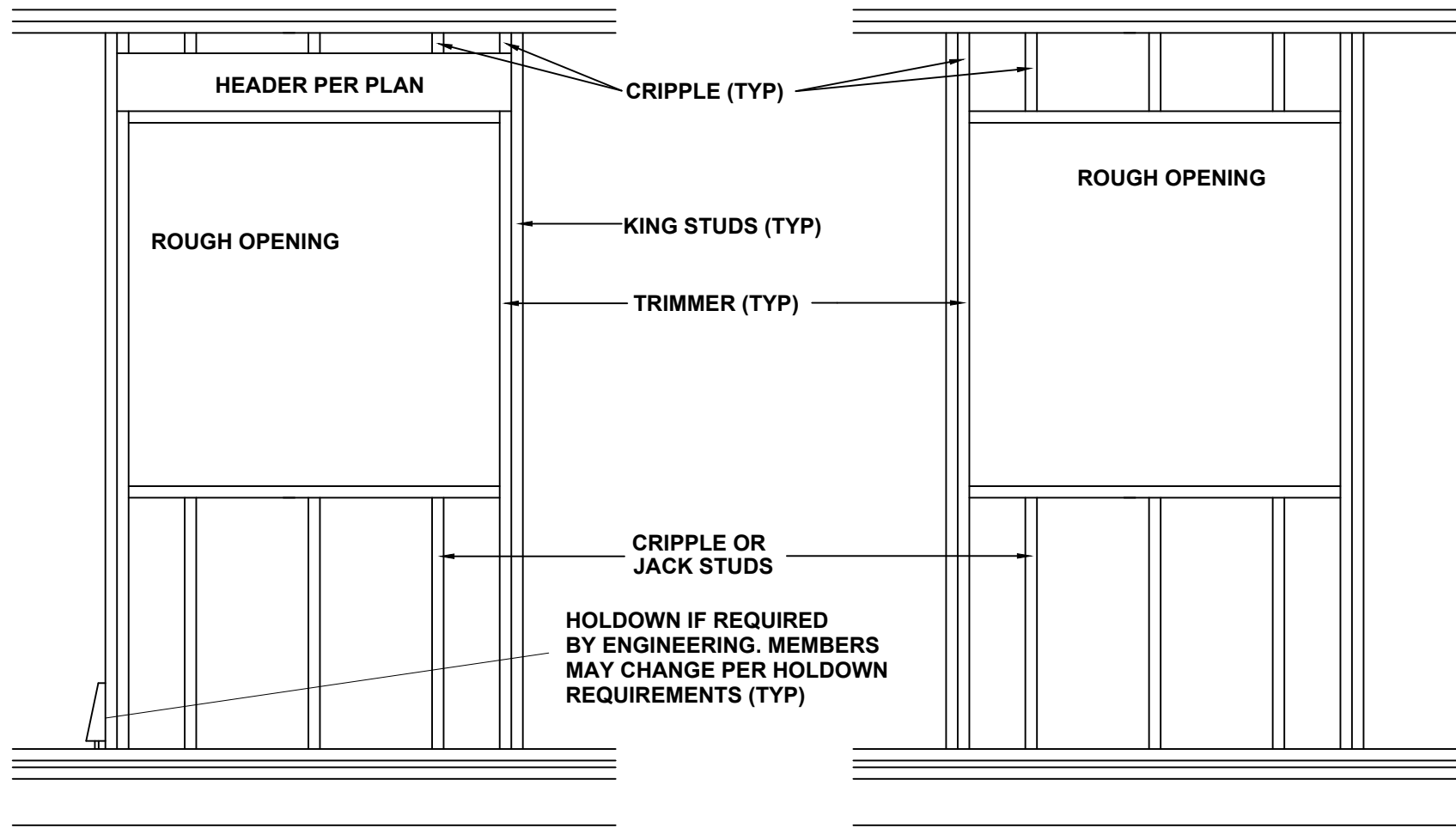
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FIRST FLOOR PLAN

CUSTOMER JOB:
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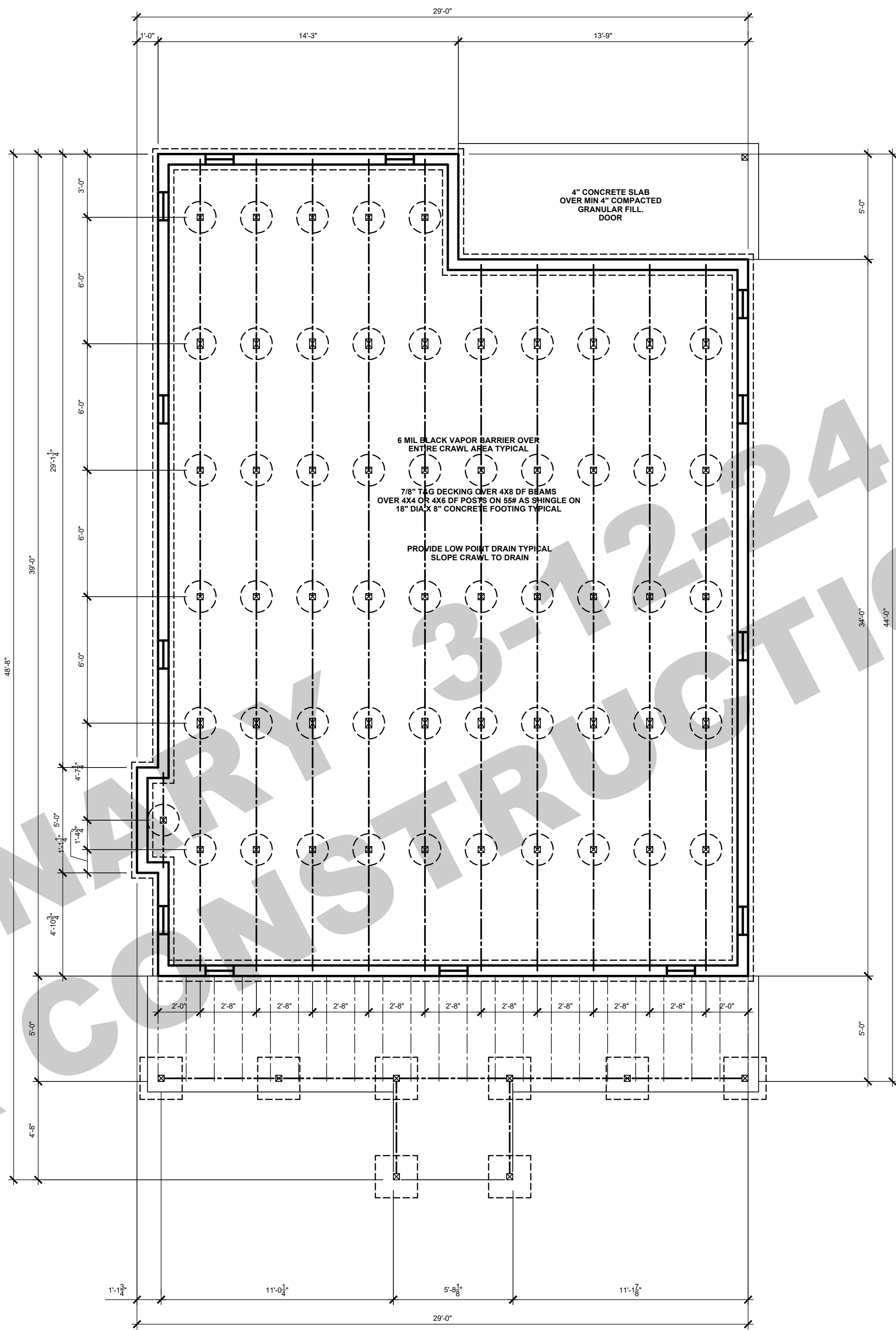
A-4

ANY OPENING 6' OR GREATER TO HAVE
TWO KING STUDS AND TWO TRIMMERS



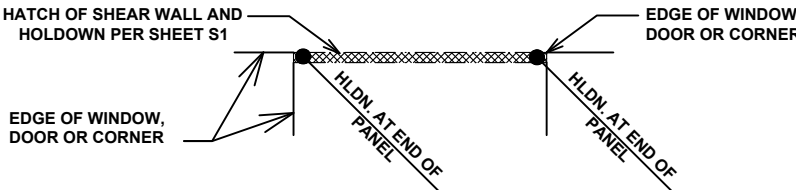
TYPICAL BEARING
OPENING

TYPICAL NON-BEARING
OPENING



FOUNDATION PLAN
1/4" = 1'-0"

JURISDICTION APPROVAL STAMP (KEEP CLEAR)



SHEAR WALL / HOLDOWN NOTATION DIAGRAM
SEE SHEETS S1 AND S2 (S2 IF PROVIDED) AT THE BACK OF THIS PLAN SET
FOR ALL DETAILED ENGINEERING AND FRAMING REQUIREMENTS

- FOUNDATION NOTES
1. REFER TO MAIN FLOOR SHEAR WALL PLAN FOR HOLDOWN SIZE.
 2. THIS DRAWING IS FOR LATERAL INFORMATION ONLY. REFER TO ARCHITECTURAL PLANS FOR ALL OTHER INFORMATION.
 3. TYPICAL PIER PAD BE 18" DIAM. X 8" CONCRETE FOOTING WITH 4X4 DFL-#2 POST. POST AND CONCRETE FOOTING TO BE SEPARATED BY ASPHALT SHINGLE.
 4. TYPICAL CRAWL SPACE BEAM TO BE M1 U.N.O. SINGLE GUSSET PLATE TO BE USED ON BOTH SIDES OF ATTACHMENT TO POST.
 5. EXTERIOR BEAMS TO BE M2 TYPICAL U.N.O.

MATERIALS:
CONCRETE, MIN. 28-DAY CONCRETE STRENGTH = 2500 psi
GRADE BEAMS, PIERS, AND SPREAD FOOTINGS SHALL BE POURED ONTO UNDISTURBED, NATIVE SOIL WHICH IS FREE FROM ANY MATERIAL THAT WILL ADVERSELY AFFECT THE SOIL DESIGN BEARING PRESSURE REFERENCED ABOVE. ALL NON-STRUCTURAL WEATHER PROOFING AND FINISH MATERIAL TO BE DETERMINED "BY OTHERS".

SLAB CONTROL JOINTS: PER OWNERS REQUIREMENTS OR DIRECTION:

MISC. SITE PREPARATIONS:
OBTAIN AND OBEY ALL APPLICABLE REGULATIONS REGARDING GRADING AND EXCAVATION. IDENTIFY, MARK, AND PROTECT FROM DAMAGE ALL EXISTING UNDERGROUND PIPES, CONDUITS, AND CABLE (WATER SUPPLY, SANITARY SEWER, GAS, STEAM, ELECTRICAL AND COMMUNICATION CABLE). REMOVE SOIL WITH ORGANIC MATTER, PERFORM BACKFILL AND COMPACTION IN A SYSTEMATIC PATTERN, TO ASSURE COMPLETE AND CONSISTENT WORK. IF ANY OVER-EXCAVATION ACCIDENTALLY OCCURS, CORRECT IT WITH WELL-COMPACTED BACKFILL. PROVIDE TESTING AND INSPECTION OF BACKFILL AND COMPACTION. LAYER BACKFILL IN 6 IN. TO 12 IN INCREMENTS. COMPACT ALL FILL. USE STABILIZED FILL MATERIAL OF AN APPROVED TYPE AND FROM AN APPROVED SOURCE. TEST AND APPROVE MATERIAL DELIVERED FROM OTHER SITES. DO NOT ALLOW ANY DEBRIS TO BE MIXED WITH FILL. CURE CONCRETE TO FULL REQUIRED STRENGTH BEFORE BACKFILLING. PROVIDE DRAINAGE CATCHERS PER ARCHITECTURAL DRAWINGS.

SPECIAL INSPECTION: NONE

BEAM SCHEDULE:

BEAM SIZE	SIZE
M1	4X8 DFL-#2
M2	P.T. 4X12 DFL-#2

FOOTING	SCHEDULE	REINFORCING BARS	CAPACITY
F1	2'-0"x2'-0"x8"	(2) #4 BARS EACH WAY	5500#
F2	2'-3"x2'-3"x8"	(2) #4 BARS EACH WAY	7000#
F3	2'-6"x2'-6"x8"	(3) #4 BARS EACH WAY	8600#
F4	2'-9"x2'-9"x8"	(3) #4 BARS EACH WAY	10500#
F5	3'-0"x3'-0"x8"	(3) #4 BARS EACH WAY	12500#
F6	3'-6"x3'-6"x10"	(4) #4 BARS EACH WAY	16000#
F7	4'-0"x4'-0"x1'-0"	(6) #4 BARS EACH WAY	21000#
F8	4'-6"x4'-6"x1'-0"	(6) #4 BARS EACH WAY	27000#
F9	5'-0"x5'-0"x1'-0"	(7) #4 BARS EACH WAY	33750#

(1): 3" CLEAR FROM BOTTOM OF FOOTING

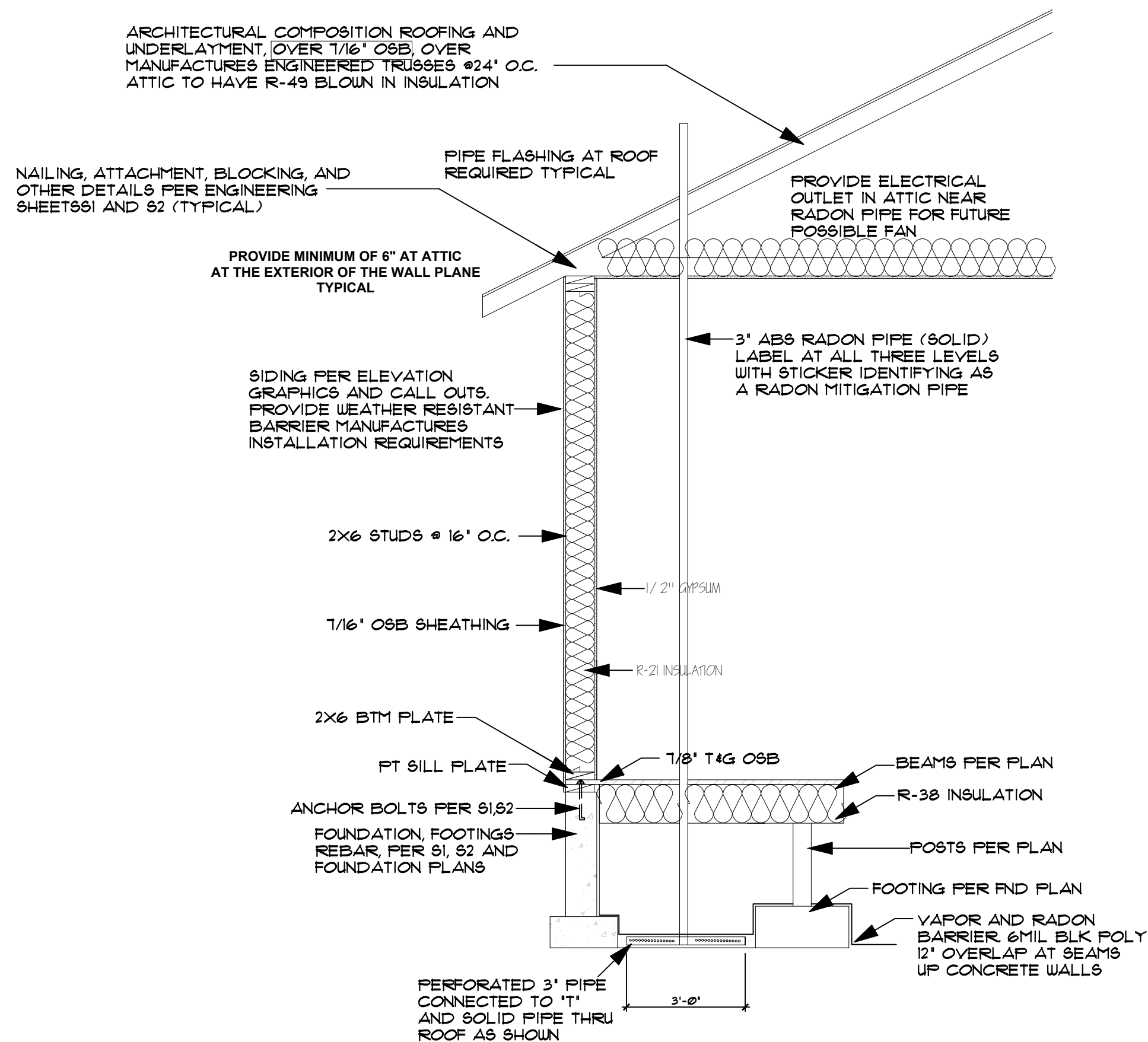
CAREFULLY REVIEW ALL DETAILS IN THE FULL
SET OF PLANS. ALL DETAILS ARE USED.
CONTRACTOR IS RESPONSIBLE FOR FOLLOWING
ALL DETAILS. CONTACT SITE SUPERVISOR
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FOUNDATION PLAN

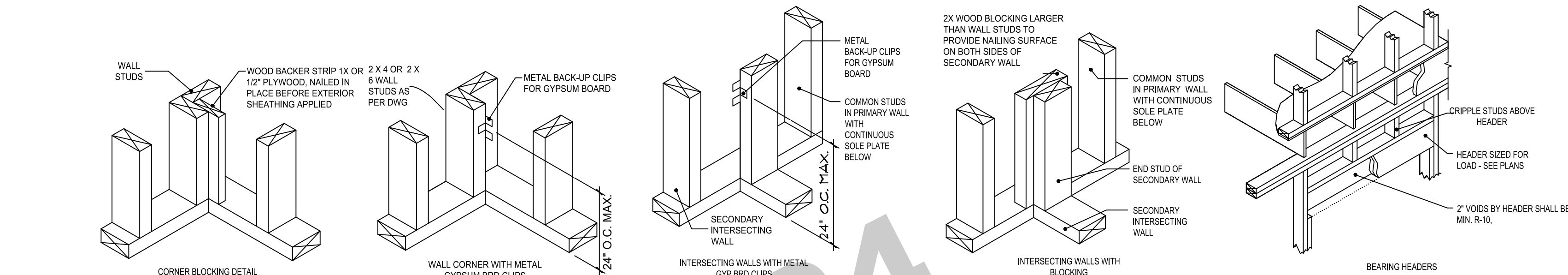
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DWG:

A-5

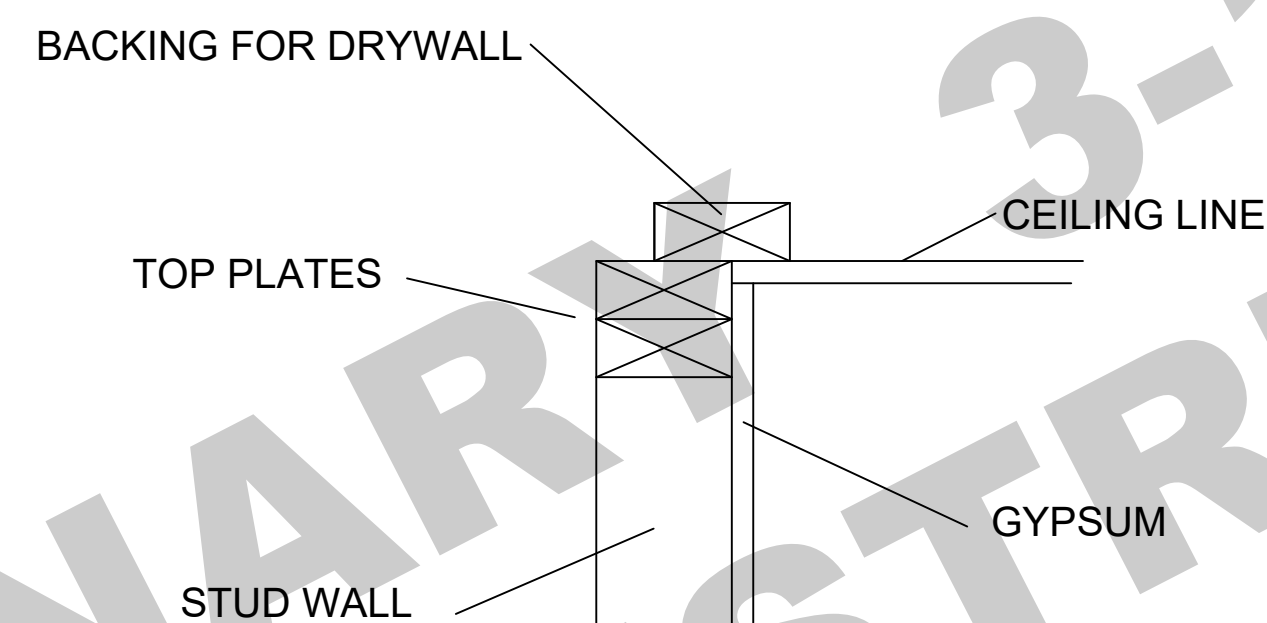


TYPICAL SECTION

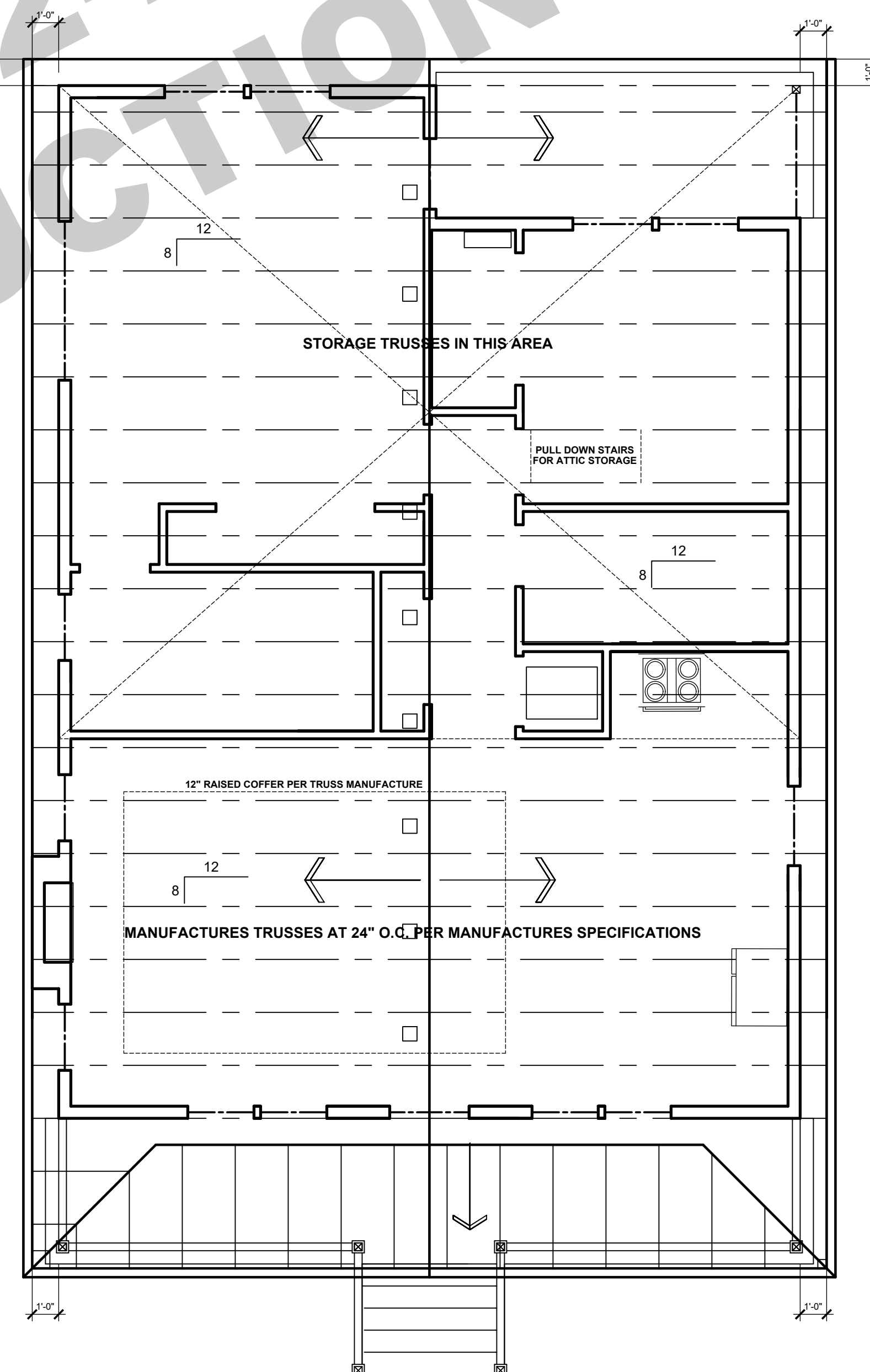
1/4" = 1'-0"



INTERMEDIATE FRAMING DETAILS



CEILING BACKING DETAIL



ARCHITECTURAL COMPOSITION ROOFING AND UNDERLAYMENT, OVER 7/16" OSB, OVER MANUFACTURES ENGINEERED TRUSSES @24" O.C. ATTIC TO HAVE R-49 BLOWN IN INSULATION

ROOF SLOPE TO MATCH ELEVATIONS AND ROOF PLANS ATTACHED. ROOF MAY HAVE SEVERAL SLOPES

7" TRUSS HEEL TYPICAL 6" FOR INSULATION PER CODE AND 1" FOR VENTILATION TYPICAL

SIDING PER ELEVATION GRAPHICS AND CALL OUTS. PROVIDE WEATHER RESISTANT BARRIER MANUFACTURES INSTALLATION REQUIREMENTS

2X6 STUDS @ 16" O.C.

7/16" OSB SHEATHING

MANUFACTURED TRUSSES PER ENGINEERING

12" RAISED COFFER PER TRUSS MANUFACTURE

FLOOR FRAMING PER PLAN ENGINEERING

FOUNDATION PER PLAN ENGINEERING

6 MIL BLACK VAPOR BARRIER OVER ENTIRE CRAWL AREA TYPICAL

PROVIDE LOW POINT DRAIN TYPICAL SLOPE CRAWL TO DRAIN

7" T&G DECKING OVER 4X4 OF BEAMS OVER 4X4 OR 4X6 OF POSTS ON 8" AS SHINGLE ON 18" DIA X 8" CONCRETE FOOTING TYPICAL

VAPOR AND RADON BARRIER 6MIL BLK POLY PER RADON GEN NOTES

7" TRUSS HEEL TYPICAL 6" FOR INSULATION PER CODE AND 1" FOR VENTILATION TYPICAL

BUILDING SECTION

1/4" = 1'-0"

CAREFULLY REVIEW ALL DETAILS IN THE FULL SET OF PLANS. ALL DETAILS ARE USED. CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL DETAILS. CONTACT SITE SUPERVISOR SHOULD ANY CONFLICTS ARISE

DRAFTING SERVICES PROVIDED BY
Michael Stone
Drafting And Home Designs
503-477-1864

THE ENGINEER HOLDS NO RESPONSIBILITY ABOVE THE VALUE OF THE DESIGN. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE ENGINEER IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF ANY OTHER PROJECTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF ANY OTHER PROJECTS.

ROOF, SECTION DETAILS

CUSTOMER JOB:
LOCATION:
DATE:
DWG:

A-6











OREGON CITY HISTORIC RESOURCE SURVEY FORM

Street Address: 406 PROMENADE ST				City: OREGON CITY			
USGS Quad Name: Oregon City			GPS Latitude: 45 21 20 N		Longitude: 122 36 33 W		
Township: 02S	Range: 02E	Section: 31	Block: 32	Lot: 3x, 4x	Map #: 22E31AC	Tax Lot #: 4800	
Date of Construction: c. 1910		Historic Name: Miller, G.R.H., House			Historic Use or Function: Domestic - single dwelling		
Grouping or Cluster Name: NA		*Current Name or Use: Domestic - single dwelling			Associated Archaeological Site: Unknown		
Architectural Classification(s): Vernacular / Queen Anne				Plan Type/Shape: Rectangle		Number of Stories: 1.5	
Foundation Material: Unknown				Structural Framing: Unknown		Moved? No	
Roof Type/Material: Gable / Composition shingle				Window Type/Material: Wood fixed and 1/1 wood double-hung			
Exterior Surface Materials Primary: Lap				Secondary:		Decorative:	
Exterior Alterations or Additions/Approximate Date: West windows replaced, new porch balustrade.							
Number and Type of Associated Resources: None							
Integrity: Good		Condition: Good		Local Ranking: Designated Historic Site		National Register Listed? No	
Potentially Eligible: ☐ Individually or ☒ As a contributing resource in a district Not Eligible: ☐ Intact but lacks distinction ☐ Altered (choose one): ☐ Reversible/Potentially eligible individually or in district ☐ Reversible/Ineligible as it lacks distinction ☐ Irretrievable loss of integrity ☐ Not 50 years old							
Description of Physical and Landscape Features:							
This 1-1/2 story house sits under a cross gable roof formed by a main east-west ridge and large dormers on the north and south sides. A hip roofed porch runs the full width of the west façade, where slender turned columns support the low hip. The porch is surrounded by a latticework balustrade, a recent replacement of the original. The house features enclosed eaves, wide rake and frieze boards, decorative barge and rake moldings, scrollwork in the east and west gable ends, and small pendants at the corners of the porch hip. The house is clad with beveled lap siding finished with cornerboards, and the windows are predominantly 1/1 double-hung wood sash. The west windows have all been replaced with two large fixed panes flanking the central entry and a small 4/1 vinyl window in the gable end. All of the windows have wide board surround and projecting sills.							
Statement of Significance:							
G.R.H. Miller was a carpenter who built several houses in Oregon City. In 1867, he built the first steps up the Oregon City bluffs from the lower level. The steps ran from 3rd Street on the bluff to 4th Street on the lower level, near the Oregon City Woolen Mill, and provided workers with direct access to their place of employment. This house is significant for its age, its architectural detailing, and its association with Miller, both as a carpenter and as builder of the first steps up the bluff.							

Researcher/Organization: Alex McMurry / HPNW				Date Recorded: 3/25/2002	
Survey Form Page 1	Address: 406 PROMENADE ST		Local Designation #		SHPO #

**OREGON INVENTORY OF HISTORIC PROPERTIES
HISTORIC RESOURCE INVENTORY FORM**

HISTORIC NAME: G.R.H. Miller House

DATE OF CONSTRUCTION: c. 1877

COMMON NAME: _____

ORIGINAL USE: Residence

ADDRESS: 406 McLoughlin Promenade

PRESENT USE: Residence

OWNER: Willamette Optical Building/Shirley B.

ARCH./BLDR.: G.R.H. Miller (bldr.)

Newhouse, 421 High Street, Oregon City, OR 97045

STYLE: Vernacular

T/R/S: 2-2E-31AC TAX LOT: 4800

BLDG. STRUC. DIST. SITE OBJ. (CIRCLE)

ADDITION: Plat of Oregon City

THEME: Architecture, 19th Century

LOT: 3 BLOCK: 32 QUAD: Oregon City

PLAN TYPE/SHAPE: Rectangular

NO. OF STORIES: 1

FOUNDATION MATERIAL: Unknown

BASEMENT (Y/N): Yes

ROOF FORM & MATERIALS: Gable roof.

WALL CONSTRUCTION: Wood

STRUCTURAL FRAME: Stud

PRIMARY WINDOW TYPE: Fixed glass on front. Some double-hung windows and casements.

SURFACING MATERIALS: Clapboard. Cornerboards.

DECORATIVE FEATURES: Scroll-cut ornament and pendant at gable end. Pendants on porch

OTHER: eaves. Wooden porch posts.

CONDITION: EXCELLENT _____ GOOD _____ FAIR X DETERIORATED _____ MOVED _____ (date)

EXTERIOR ALTERATIONS/ADDITIONS (dated): Fixed glass windows on front elevation, wooden porch posts, balustrades and porch steps are not original, n.d.

NOTEWORTHY LANDSCAPE FEATURES: Large trees on side of house.

ASSOCIATED STRUCTURES: None.

KNOWN ARCHAEOLOGICAL FEATURES: None.

GEOGRAPHIC SETTING: Occupies a double-frontage lot which fronts on both the McLoughlin Promenade (a public pedestrian way) and on High Street, a mix of residential and commercial uses. No other landmarks on this block. Half of this block is occupied by the Promenade Office Building.

STATEMENT OF SIGNIFICANCE: (Historical and/or architectural importance, dates, events, persons, contexts): G.R.H. Miller was a carpenter who built several homes in Oregon City. In 1867, Miller built the first steps up the Oregon City bluffs from the lower level. The steps ran from 3rd Street on the bluff to 4th Street on the lower level, near the Oregon City Woolen Mill, and provided workers with direct access to their place of work. The house is significant for its age, its architectural detailing, and its association with Miller, both as a carpenter and as builder of the first steps up the bluff.

SOURCES: Pioneer National Title Company Records, Oregon City. Sanborn Insurance Map, 1890. Oregon City Tax Assessor's Records, 1877-78, 1892. Oregon Census, 1870.

NEGATIVE NO: III-A-3A, 4A

RECORDED BY: Patricia Erigero

SLIDE NO: _____

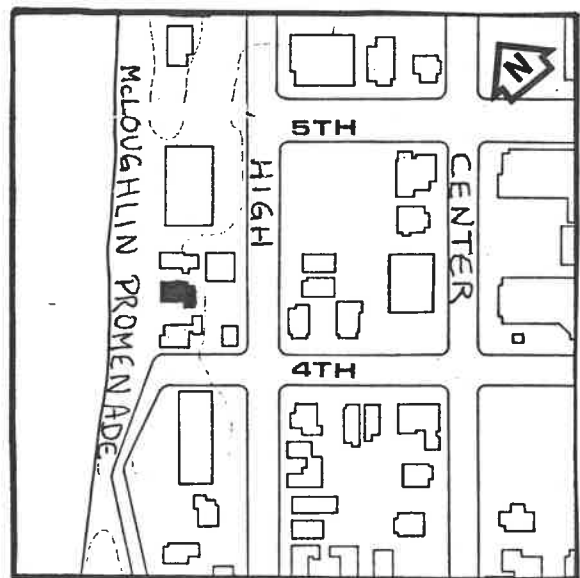
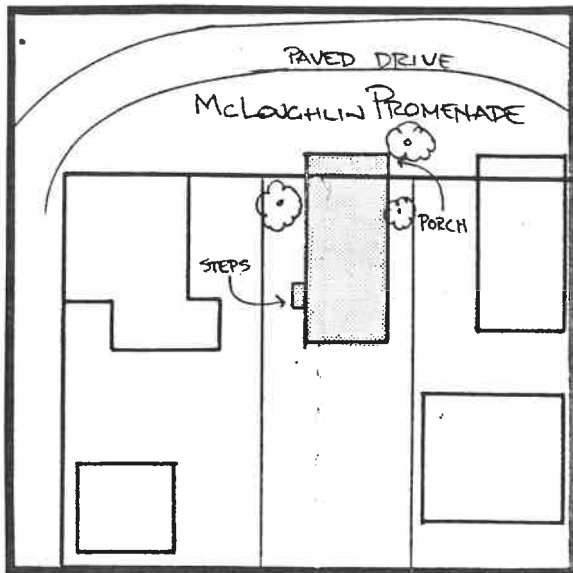
DATE: May 1982

SHPO INVENTORY NO.: _____

OREGON INVENTORY OF HISTORIC PROPERTIES HISTORIC RESOURCE INVENTORY FORM - TWO

NAME: G.R.H. Miller HouseT/R/S: 2-2E-31AC TAX LOT 4800ADDRESS: 406 McLoughlin PromenadeQUADRANGLE: Oregon CityNEGATIVE NO. III-A-3A, 4A

SLIDE NO. _____



GRAPHIC AND PHOTO SOURCES: Base Map of McLoughlin Neighborhood, 1987.
Dennis Egner Photograph.

SHPO INVENTORY NO.: _____

OREGON CITY HISTORIC RESOURCE SURVEY FORM

Street Address: 319 4TH ST				City: OREGON CITY			
USGS Quad Name: Oregon City			GPS Latitude: 45 21 19 N		Longitude: 122 36 33 W		
Township: 02S	Range: 02E	Section: 31	Block: 32	Lot: 4x	Map #: 22E31AC	Tax Lot #: 5000	
Date of Construction: c. 1877		Historic Name: Miller, G.R.H., House			Historic Use or Function: Domestic - single dwelling		
Grouping or Cluster Name: NA		*Current Name or Use: Domestic - single dwelling			Associated Archaeological Site: Unknown		
Architectural Classification(s): Vernacular				Plan Type/Shape: L-shaped		Number of Stories: 1.0	
Foundation Material: Stone				Structural Framing: Unknown		Moved? No	
Roof Type/Material: Cross gable / Composition shingle				Window Type/Material: 1/1 wood double-hung			
Exterior Surface Materials Primary: Lap				Secondary: Drop		Decorative:	
Exterior Alterations or Additions/Approximate Date: Front porch appears to have been altered.							
Number and Type of Associated Resources: Garage to north (1)							
Integrity: Fair		Condition: Good		Local Ranking: Designated Historic Site		National Register Listed? No	
Potentially Eligible: ☐ Individually or ☒ As a contributing resource in a district Not Eligible: ☐ Intact but lacks distinction ☐ Altered (choose one): ☐ Reversible/Potentially eligible individually or in district ☐ Reversible/Ineligible as it lacks distinction ☐ Irretrievable loss of integrity ☐ Not 50 years old							
Description of Physical and Landscape Features:							
This modest one story house sits under a cross gable roof with an L-shaped plan resting on a stone foundation. The south side of the house features a shed roof over the entry porch, which appears to be an addition. The porch shed is supported by a series of 6 x 6 columns with a lattice railing that matches the porch skirt. The house is clad primarily with horizontal clapboards, finished with cornerboards. The basement level is clad with drop siding. The windows are all 1/1 double-hung wood sash with lamb's tongues, and have seen the addition of aluminum storm windows. The gables feature enclosed eaves with narrow rake and frieze boards. Two chimneys are present on the house; one central located and one on the north wall of the house with a new galvanized cap.							
Statement of Significance:							
In 1877, George R.H. Miller, a carpenter, purchased this property and is credited with the construction of the residence. Following Miller's sale to Clara Jack in 1934, the property changed hands another three times in the next ten years. None of these short-term owners appear to have ever lived in the residence. In 1944, Ida Myrtle Kelly purchased this property. She continued to own and occupy the house until her death in 1980.							

Researcher/Organization: Alex McMurtry / HPNW				Date Recorded: 4/12/2002			
Survey Form Page 1		Address: 319 4TH ST		Local Designation #		SHPO #	



LAND USE APPLICATION TRANSMITTAL – RESPONSE FORM

Date: 4/12/24

Land Use Application File Number: GLUA-24-00007

NAME: Tracy Turner

AGENCY: City of Oregon City/Building

EMAIL ADDRESS: tturner@orcify.org

The land use application material is referred to you for your information, study and official comments. Your recommendations and suggestions will be used to guide the Planning staff when reviewing this proposal. If you wish to have your comments considered and incorporated into the staff report, please return a copy of this form to facilitate the processing of this application and to ensure prompt consideration of your recommendations.

Please check the appropriate spaces below.

☒	The proposal does not conflict with our interests.
☐	The proposal conflicts with our interests for the reasons attached. (Please attach additional information)
☐	The proposal would not conflict our interests if the changes noted below or attached are addressed.

Please add any specific comments below or attach a separate document with more information.
A New Single Family Home Application will need to be submitted. Submittal documents must meet our Application Checklist and Submittal Guidelines and Requirements. Documents can be found on a City Webpage: <https://www.orcity.org/293/Residential-Permits>

CONTACT THE PLANNING DIVISION IF YOU HAVE ANY QUESTIONS ABOUT THIS APPLICATION



CITY OF OREGON CITY

Staff Report

625 Center Street
Oregon City, OR 97045
503-657-0891

To: Historic Review Board
From: Jude Thaddaeus, Assistant Planner

Agenda Date: 4/23/2024

SUBJECT:

GLUA-24-00003/ HR-24-00003 Solar panel proposal at 607 S McLoughlin Blvd

STAFF RECOMMENDATION:

Staff seeks direction from the Historic Review Board for either approval of the proposed array configuration, or an alternative configuration.

EXECUTIVE SUMMARY:

The applicant proposes to install thirteen (13) solar panels on the roof of the Narcissa Bowers Residence at 607 S McLoughlin Blvd, a non-eligible/non-contributing resource in the Canemah Historic District. Seven (7) of the solar panels are proposed to be installed on the southern, McLoughlin Blvd-facing roof elevation, which is the roof plane with the highest solar irradiance.

BACKGROUND:

The Narcissa Bowers Residence at 607 S McLoughlin Blvd is a non-eligible/non-contributing resource fronting S McLoughlin Blvd on the north side of the highway in the Canemah Historic District. The structure was surveyed in 1983 and deemed to be heavily modified to the point where little of the original structure's historic integrity remained at that time. The applicant plans to locate seven of the thirteen solar panels on the front, southern-facing S McLoughlin Blvd façade, on the roof plane with the greatest solar irradiance, with the remaining six located on the rear-facing roof plane.

Pursuant to Historic Review Board Policy #12: *Solar Technology*, solar panels on sloped roof locations like the subject property, “*are permitted on secondary facades of historic buildings and on accessory structures.*” Six of the thirteen proposed solar panels appear to meet applicable standards, being shown on a secondary, rear-facing roof plane. However, seven of the thirteen panels are proposed to be located on the primary, street-facing roof plane due to its direct southern exposure and higher solar irradiance than all other secondary roof planes.

While the project does not appear to comply with the HRB policy, the Historic Review Board may consider the resource’s non-eligible, non-contributing status within the

district, the potential need for the panels to be located on the southern exposure for maximum solar efficiency (if adequately demonstrated), and the Oregon City Comprehensive Plan's prioritization of supporting both the economic viability of historic structures and the promotion of new development siting to take advantage of solar energy opportunities, against any adverse impacts to the structure and district in question.

The Board may want to consider a condition of approval to require an alternatives analysis for locating the front-facing panels on the western, left-facing roof planes. The Board may also want to consider a condition of approval for the applicant to demonstrate the viability of the solar panel project on a cost/benefit basis for keeping the proposed configuration vs. other alternatives.

See the Staff Report and Recommendation document in the agenda item attachments.

OPTIONS:

1. Approve the proposal with either or both of the recommended conditions;
2. Approve the proposal with revised conditions;
3. Deny the proposal, close the record, and continue to May 28, 2024, to adopt final findings;
4. Continue the hearing to May 28, 2024, and provide direction to the applicant on additional information needed. The record stays open.



Historic Review Staff Report for a Solar Installation on a Designated Historic Site in the Canemah Historic District April 15, 2024

FILE NO.: GLUA-24-00003 and HR 24-00003: Historic Review

HEARING DATE: April 23, 2024
7:00 p.m. – Virtual Meeting over Zoom

APPLICANT: ION Solar Inc
4801 N University Ave, Unit 900
Provo, Utah 84604

OWNER: Jonny Brainard
607 S McLoughlin Blvd
Oregon City, OR 97045

LOCATION: 607 S McLoughlin Blvd
Oregon City, OR 97045

ZONING: Historic Commercial (HC) and Canemah National Register District

REQUEST: Historic Review for solar panel installation of street-facing roof planes on a non-contributing designated structure in the Canemah Historic District

REVIEWER: Jude Thaddaeus, Assistant Planner

RECOMMENDATION: Approval with Conditions

CRITERIA: Administration and Procedures are set forth in Chapter 17.50, Historic Overlay District in Chapter 17.40, of the Oregon City Municipal Code. The City Code Book is available on-line at www.orcity.org.

Please be advised that any issue that is intended to provide a basis for appeal must be raised before the close of the hearing, in person or by letter, with sufficient specificity to afford the Historic Review Board and the parties an opportunity to respond to the issue. Failure to raise an issue with sufficient specificity will preclude any appeal on that issue. The decision of the Historic Review Board may be appealed to the City Commission by parties with standing within fourteen (14) calendar days of the notice of decision. Any appeal will be based on the record. The procedures that govern the hearing will be posted at the hearing and are found in OCMC Chapter 17.50 and ORS 197.763. A city-recognized neighborhood association requesting an

appeal fee waiver pursuant to OCMC 17.50.290(C) must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal.

Summary and Recommended Conditions of Approval

The Narcissa Bowers Residence at 607 S McLoughlin Blvd is a minimal traditional altered bungalow-style c.1909 structure with a low pitch hip roofline, and projecting gable above an altered front porch that was enclosed prior to 1983 and an artificial rock veneer added to the front façade. The roof on the house is a dark composition shingle. A total of 13 panels are proposed, 7 on the front S McLoughlin Blvd-facing southern gable and 6 on the rear-facing northern gable, which cannot be seen from the street.

The Board approved panels facing the street and visible from the right of way in the past as long as they were not distracting from or too prominently visible when viewing the primary façade or entryway of the structure. The panels proposed on the Narcissa Bowers Residence will be visible from the right-of-way at S McLoughlin Blvd.

The 1983 Oregon Inventory of Historic Properties Historic Resource Inventory Form states that the structure has been severely altered and retains few of its original characteristics, and that it is located on a heavily traveled state highway, in an area of mixed commercial and residential uses. The most recent Oregon Historic Site Form lists the structure as “not eligible / non-contributing.”

The Solar Study Analysis shows that the 7 street-facing panels are proposed to face the roof plane of the highest solar irradiance.

As energy prices rise and renewable technology becomes more affordable, more common, and more critical to society’s response to climate change, the Board will have to balance these factors with the concerns of historic integrity. Because the panels are only placed on the roof and will not cover or destroy historical materials or features and are designed to be removed in the future without causing irreparable damage to the structure, the Board may find that the panels will not affect the integrity of the structure.

In addition, the proposed southern gable is of low pitch and set back more than 30 feet from the right of way. Its view from the street looking east is partially blocked by a significantly taller neighboring structure that is set back approximately 10 feet from the right of way. The cross gable over the enclosed front porch also blocks the view of the street-facing solar panels looking west along McLoughlin Blvd, a 40mph state highway.

Staff is requesting confirmation from the Historic Review Board that these are significant mitigating factors to allow street visible solar panel placement. If the Board finds that these panels will impact the historic integrity of the home, the proposal’s impacts may be mitigated by limiting the number of panels on the upper roof plane.

Prior to issuance of Building Permits:

1. The applicant shall submit documentation showing that the panels will be no more than 5” above the roof surface.

2. The applicant shall submit documentation confirming that the number and location of the southern, S McLoughlin-facing solar panels is either necessary for the viability of the project, or an alternative solar panel configuration on other roof surfaces that meet Historic Review Board standards.
3. The panel frames shall be black, no unfinished/shiny metal frames or visible parts are permitted.
4. Ground- or wall-mounted equipment shall not obscure any architectural features and shall not be installed in a manner that destroys historic millwork or other historic materials. The applicant shall submit a sketch or mock-up of the equipment placement to staff to demonstrate compliance with this condition.
5. The applicant shall ensure that the ground-mounted equipment is blocked from pedestrian view by the use of fencing or landscaping.

I. BACKGROUND:

Site and Context

The subject property is the Narcissa Bowers Residence, a c.1909 Bungalow-style home fronting S McLoughlin Blvd to the south and an alley to the west, between Jerome St to the east and Apperson St to the west in the Canemah Historic District.



Vicinity Map



Street view

Historic Resource

Narcissa (May) Bowers - 607 S McLoughlin Blvd (1909)



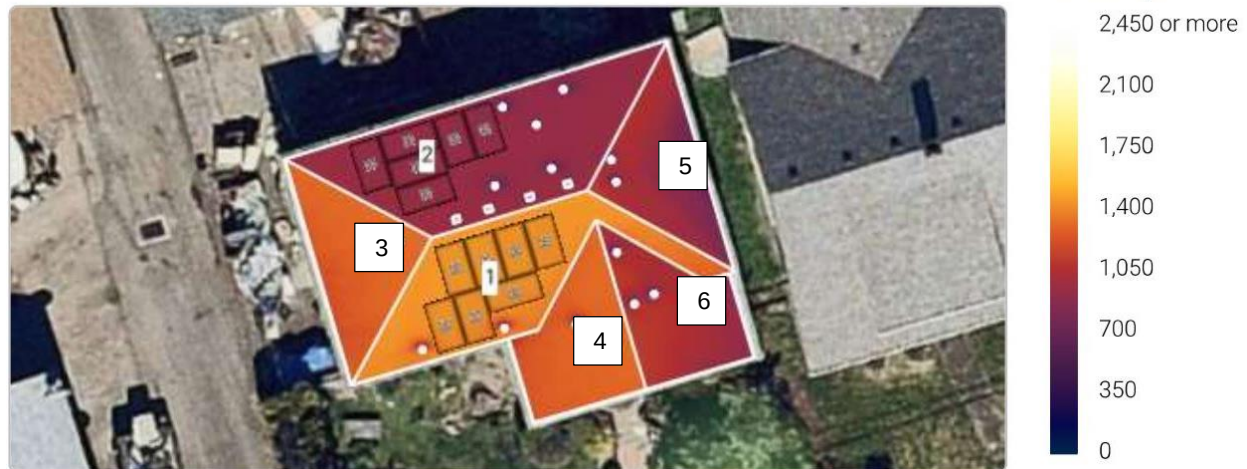
Statement of Significance: *Narcissa (May) Bowers was the widow of Canemah laborer William Bowers, a native New Yorker. Narcissa was born in Oregon in 1856. She purchased this house in her old age. The house has been severely altered and retains few of its original characteristics.*

The one-story cross-gabled low-pitched home appears to be in fair condition but has undergone significant alterations in the mid-twentieth century, including the enclosure of the front porch, addition of artificial rock veneer, and replacement of windows.

Project Description:

The applicant is proposing a 13-module solar photovoltaic array on the roof of the house. Panels are proposed on two different roof planes, and ground equipment is proposed on western, left side façade near the rear corner of the structure.

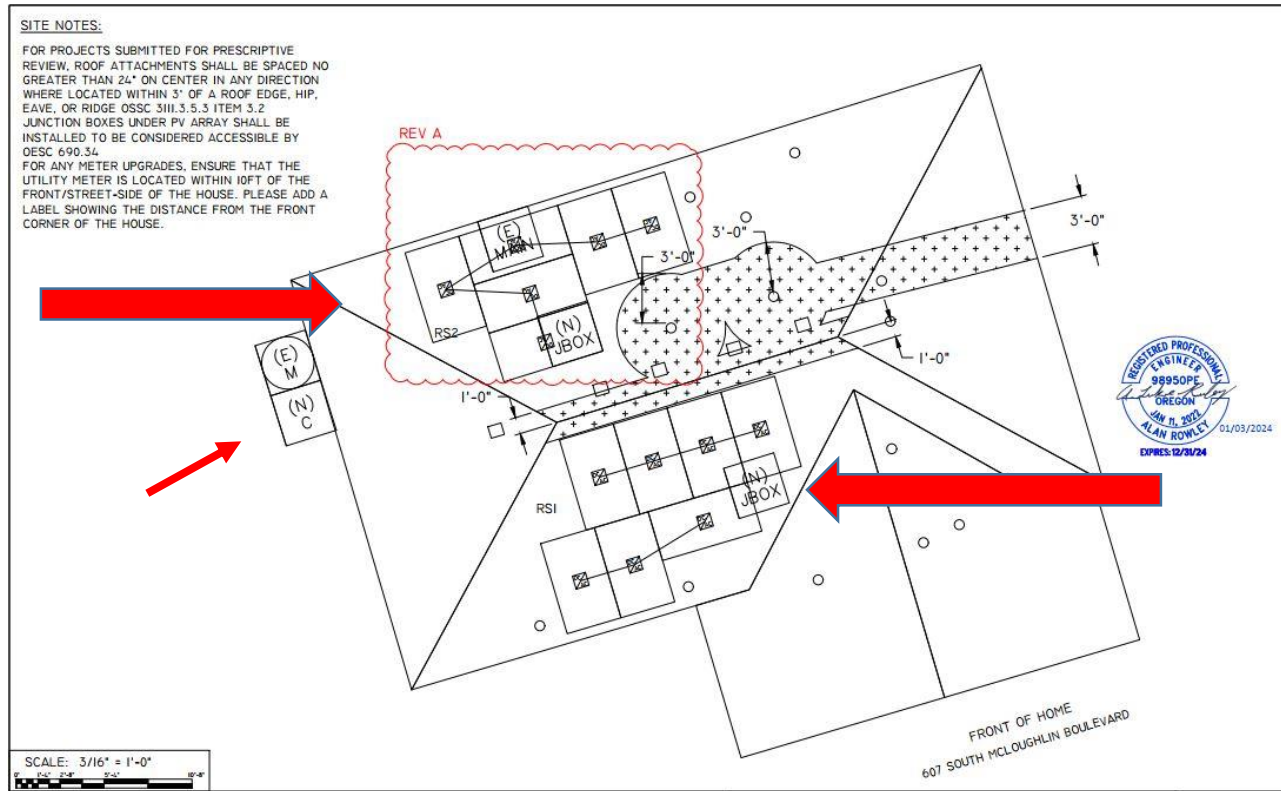
Annual irradiance



As shown by the image above, roof section 1 is the southern-facing elevation and receives much higher solar irradiance than roof sections 2 (rear/north-facing), 5, and 6 (right/east-facing). Roof sections 3 and 4 (left/west-facing) receive more solar irradiance than 2, 5, and 6, but less than 1.

The applicant has proposed to place solar panels on the roof of the historic structure. In 2019, the City adopted an HRB Policy for solar technology on historic homes, which allowed solar panels without HRB review if the panels met the following standards:

- Sloped roof location: Solar panels are permitted on secondary facades of historic buildings and on accessory structures.
- Design: Panels on sloped roofs shall project five inches or less from the roof surface and be installed flat; they shall not alter the slope of the roof.
- Color: Panels and mounting systems shall be the same color as established roof materials.
- Mechanical equipment associated with the photovoltaic system shall be as unobtrusive as possible.



Proposed Roof plan

The panels proposed on this home are proposed on the rear side and front-facing roof slopes and placed such that they will be visible when viewing the primary façade of the house from the right of way. Thus, staff was unable to make a finding that the panels were on a secondary façade. Therefore, HRB review is required for this proposal.



The location of the panels is a key factor in determining whether they will impact the historic character of the home. The Secretary of Interior Standards has generally been applied to allow solar equipment that is minimally visible and/or on secondary portions of structures or sites (see Exhibit 5). The federal guidance provides some examples, including the “Vermont residence”, where panels are placed atop a low-pitch gable roof on a 3-story building. “Though visible, these few panels have relatively little impact on the historic character of the property. However, if the roof had been a more prominent feature of the property, this installation may not have been appropriate.”

“Vermont residence” example

Zoning:

The property is zoned Historic Commercial (HC) and Mixed Use Corridor in the Oregon City Comprehensive Plan.

Notice and Public Comment:

Public notices were mailed to property owners within 300 feet of the subject site, posted on the subject site, and published on the City website at the following link:

<https://oregoncity.teamunicode.com/communitydevelopment/project/glua-24-00003-hr-24-00003>.

Public comments that were received are summarized below and responded to within this staff report.

The Oregon City Building Division and Oregon Department of Transportation indicated that the proposal does not conflict with their interests.

Any additional public comments received by 4pm on April 21st, 2024 – the end of the Public Notice & Comment Period – will be addressed and added to the final staff report.

CODE RESPONSES:

17.40.060 - Exterior alteration and new construction.

- A. *Except as provided pursuant to subsection I of this section, no person shall alter any historic site in such a manner as to affect its exterior appearance, nor shall there be any new construction in an historic district, conservation district, historic corridor, or on a landmark site, unless a certificate of appropriateness has previously been issued by the historic review board. Any building addition that is thirty percent or more in area of the historic building (be it individual or cumulative) shall be considered new construction in a district. Further, no major public improvements shall be made in the district unless approved by the board and given a certificate of appropriateness.*

Finding: Applicable: The proposal for exterior alteration in a historic district is being reviewed by the Historic Review Board.

- B. Application for such a certificate shall be made to the planning staff and shall be referred to the historic review board. The application shall be in such form and detail as the board prescribes.*

Finding: Complies as Proposed: The applicant submitted the required materials.

- C. Archeological Monitoring Recommendation. For all projects that will involve ground disturbance, the applicant shall provide,*
- 1. A letter or email from the Oregon State Historic Preservation Office Archaeological Division indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the Oregon State Historic Preservation Office and that the Oregon State Historic Preservation Office had not commented within forty-five days of notification by the applicant; and*
 - 2. A letter or email from the applicable tribal cultural resource representative of the Confederated Tribes of the Grand Ronde, Confederated Tribes of the Siletz, Confederated Tribes of the Umatilla, Confederated Tribes of the Warm Springs and the Confederated Tribes of the Yakama Nation indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the applicable tribal cultural resource representative and that the applicable tribal cultural resource representative had not commented within forty-five days of notification by the applicant.*

If, after forty-five days notice from the applicant, the Oregon State Historic Preservation Office or the applicable tribal cultural resource representative fails to provide comment, the city will not require the letter or email as part of the completeness review. For the purpose of this section, ground disturbance is defined as the movement of native soils.

Finding: Not Applicable. The project does not include disturbance of native soils.

- D. The historic review board, after notice and public hearing held pursuant to Chapter 17.50, shall approve the issuance, approve the issuance with conditions or disapprove issuance of the certificate of appropriateness.*

Finding: Applicable: The proposal is being reviewed by the Historic Review Board.

- E. The following exterior alterations to historic sites may be subject to administrative approval:*
- a. Work that conforms to the adopted Historic Review Board Policies.*

Finding: Not Applicable: The proposal is not subject to administrative approval.

- F. For exterior alterations of historic sites in an historic district or conservation district or individual landmark, the criteria to be used by the board in reaching its decision on the certificate of appropriateness shall be:*

- 1. The purpose of the historic overlay district as set forth in [Section 17.40.010](#);*

OCMC 17.40.010:

It is declared as a matter of public policy that the protection, enhancement, perpetuation and use of improvements of special character or special historical or aesthetic interest or value is a

public necessity and is required in the interest of the health, prosperity, safety and welfare of the people. The purpose of this chapter is to:

- A. Effect and accomplish the protection, enhancement and perpetuation of such improvements and of districts which represent or reflect elements of the city's cultural, social, economic, political and architectural history;*
- B. Safeguard the city's historic, aesthetic and cultural heritage as embodied and reflected in such improvements and districts;*
- C. Complement any National Register Historic districts designated in the city;*
- D. Stabilize and improve property values in such districts;*
- E. Foster civic pride in the beauty and noble accomplishments of the past;*
- F. Protect and enhance the city's attractions to tourists and visitors and the support and stimulus to business and industry thereby provided;*
- G. Strengthen the economy of the city;*
- H. Promote the use of historic districts and landmarks for the education, pleasure, energy conservation, housing and public welfare of the city; and*
- I. Carry out the provisions of LCDC Goal 5.*

Finding: Complies with Condition. Staff finds that the addition of solar panels on the property will improve property value and support the goals for energy conservation and economy. The location of the panels is the key factor determining whether they will impact the historic character of the home. See findings in criterion #6 and #9 of this section.

Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

2. The provisions of the city comprehensive plan;

Finding: Complies with Condition.

There are a few goals and policies in the Comprehensive Plan that pertain to this proposal:

Goal 2, Policy 2.3.C:

Encourage property owners to preserve historic structures in a state as close to their original construction as possible while allowing the structure to be used in an economically viable manner.

Goal 4, Policy 4.2.C:

Encourage siting and construction of new development to take advantage of solar energy, minimize energy usage, and maximize opportunities for public transit.

The Comprehensive Plan Goals and Policies, at first glance, appear to be somewhat conflicting in this case; calling for the preservation of historic structures, while allowing them to be used in an economically viable manner. The Comprehensive plan also calls out siting and construction of new development to take advantage of solar energy. The historic structure in question has been deemed non-contributing and severely altered and retains few of its original characteristics.

If the solar panel location on the street-facing façade is the most *economically viable* configuration in a *siting* that *takes the greatest advantage of solar energy*, would their location on the S McLoughlin façade adversely affect the remaining characteristics of the original construction?

Staff is seeking direction from the Historic Review Board on whether – and under what circumstances – these two Comprehensive Plan Goals already either,

1. Fit together in this proposal, thus allowing for placement of solar panels on the street-facing, most solar irradiant roof section of the home, or
2. Must be reconciled through an alternative solar array configuration.

Staff has determined that it is possible, likely, and reasonable that the applicant can meet these standards through the Conditions of Approval.

3. *The economic use of the historic site and the reasonableness of the proposed alteration and their relationship to the public interest in the structure's or landmark's preservation or renovation;*

Finding: Complies with Condition: The site is used as a residence and the use is not proposed to change. The public interest in the structure's preservation is preserving the Bungalow architecture and historic character of the house, which is made up of its historic materials and design. See findings in criteria #6 and #9 of this section. Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

4. The value and significance of the historic site;

Finding: Complies with Condition: The value and significance of the historic site is the age of the structure, a 1909 Bungalow in the Canemah District. See findings in criteria #6 and #9 of this section. Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the Conditions of Approval.

5. *The physical condition of the historic site*

Finding: Complies as Proposed. The structure has been heavily altered over time, but remains in fair condition. The proposal for solar energy may prolong and support the continued use of the property.

6. The general compatibility of exterior design, arrangement, proportion, detail, scale, color, texture and materials proposed to be used with the historic site;

Finding: Complies with Condition: The Narcissa Bowers Residence is a Bungalow-style structure with a low pitch hip roof and cross gable. The roof on the structure is a dark composition shingle. A total of 13 panels are proposed, with 7 on the street-facing roof planes.

The Board has approved panels facing the street and visible from the right of way in the past, as long as they were not distracting from or too prominently visible when viewing the primary façade or entryway of the structure. The panels proposed on the Narcissa Bowers Residence will be visible from the right-of-way, albeit substantially higher than the typical pedestrian view

The applicant submitted an analysis showing that locating the panels on the rear roof plane where they would meet the HRB policies would provide less than half of the annual power generation.

The panels proposed on the main southern-facing hip roof will be visible from some angles but partially obscured from wide view by the porch cross gable and much taller adjacent residence that sits more than 20 feet closer to the street.



Subject site looking East (first image) and West (second image) from S McLoughlin Blvd

As energy prices rise and renewable technology becomes more affordable, more common, and more critical to society's response to climate change, the Board will have to balance these factors with the concerns of historic integrity. Because the panels are only placed on the roof and will not cover or destroy historical materials or features, and are designed to be removed in the future without causing irreparable damage to the structure, the Board may find that the panels will not affect the integrity of the structure. In fact, the investment may prolong the overall preservation of the home.

If the Board finds that these panels will impact this historic integrity of the home as proposed, the circumstance may be mitigated by limiting the number of panels on the upper roof plane, or moving the panels to the next most viable and irradiant roof planes.

- The applicant shall submit documentation showing that the panels will be no more than 5" above the roof surface.
- Ground- or wall-mounted equipment shall not obscure any architectural features and shall not be installed in a manner that destroys historic millwork or other historic materials. The applicant shall submit a sketch or mock-up of the equipment placement to staff to demonstrate compliance with this condition.
- The panel frames shall be black, no unfinished/shiny metal frames or visible parts are permitted.

Staff has determined that it is possible, likely, and reasonable that the applicant can meet this standard through the Conditions of Approval.

7. Pertinent aesthetic factors as designated by the board;

Finding: Complies as Proposed. Staff does not suggest consideration of any aesthetic factors other than those already reflected in the code.

8. *Economic, social, environmental and energy consequences;*

Finding: Complies as Proposed. The home value may be increased, and CO2 emissions will decrease. The consequences of the proposal are positive to the economy, environment, and energy conservation. Social impacts are inconsequential.

9. *Design guidelines adopted by the historic review board.*

Finding: Complies with Condition: The following design guidelines from the City's Design Guidelines for Alterations, which include the Secretary of Interior Standards, are applicable to this proposal:

Secretary of Interior Standard #2: The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

No distinctive materials will be removed. A moderate portion of the total roof area will be covered, but not altered.

Secretary of Interior Standard #9: New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

Staff finds that the alterations would not destroy historic materials, features, or spatial relationships.

Compatibility with massing is not applicable; the proposal will not alter the massing of the structure. Compatibility of the proposal with historic materials, features, size, scale and proportion is as follows:

Compatibility with Historic Materials: The smooth, black, shiny panel would be placed over the gray composition roof. The material is modern but is not necessarily incompatible. Composition shingles are not a historic feature but are typical of both historic and new roofs. Staff recommends conditions of approval to ensure the panels are low profile and no unfinished, shiny metal is used on the panel frames.

Compatibility with Historical Features: The panels would be placed on the low-pitch roof on a house sited 10-12 feet above the sidewalk grade. The panels would not alter the pitch of the roof but would change the appearance of the roof and would be visible from the street. Generally, the Secretary of Interior Standards have been applied to find

that roof-mounted solar panels may be compatible if they are on a rear-facing area, are minimally visible, or on a new addition to a historic building.

Compatibility with Size/Scale/Proportion: The size and proportion of the panels appear to be uniformly rectangular. Staff recommends conditions of approval to ensure the panels are low profile and no unfinished, shiny metal is used on the panel frames.

Secretary of Interior Standard #10: New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The applicant did not provide a detailed response to this criterion. If approved, a condition of approval is recommended requiring that ground- or wall-mounted equipment not obscure any architectural features and shall not be installed in a manner that destroys historic millwork or other historic materials. The applicant should be required to submit a sketch or mock-up of the equipment placement to staff to demonstrate compliance with this condition, if approved.

Oregon City Guideline: Traditional landscape elements evident in the District (grass, trees, shrubs, picket fences, etc.) should be preserved, and are encouraged in site redevelopment. Inappropriate landscape treatments such as berms and extensive non-vegetative ground cover (e.g. mulch and bark dust) are discouraged.

Finding: Not Applicable. The applicant has not proposed removing any significant landscaping or trees on the site or in the district.

Staff has determined that it is possible, likely, and reasonable that the applicant can meet this standard through the Conditions of Approval.

17.40.065 - Historic Preservation Incentives.

A. Purpose. Historic preservation incentives increase the potential for historically designated properties to be used, protected, renovated, and preserved. Incentives make preservation more attractive to owners of locally designated structures because they provide flexibility and economic opportunities.

B. Eligibility for Historic Preservation Incentives. All exterior alterations of designated structures and new construction in historic and conservation districts are eligible for historic preservation incentives if the exterior alteration or new construction has received a certificate of appropriateness from the Historic Review Board per OCMC 17.50.110(c).

C. Incentives Allowed. The dimensional standards of the underlying zone as well as for accessory buildings (OCMC 17.54.100) may be adjusted to allow for compatible development if the expansion or new construction is approved through historic design review.

D. Process. The applicant must request the incentive at the time of application to the Historic Review Board.

Finding: Not Applicable: No incentives are proposed.

II. PUBLIC NOTICE

A public notice was sent to neighbors with 300 feet of the subject property, posted online, emailed to various entities, and posted onsite.

III. CONCLUSIONS AND RECOMMENDATIONS

Based on the aforementioned findings, Staff is seeking direction from the Historic Review Board to determine if GLUA-24-00003 / HR-24-00003, as proposed, does or does not adversely affect the non-eligible/non-contributing historic resource for the property located at 607 S McLoughlin Blvd, Oregon City, Oregon 97045.

Exhibits

1. Applicant Submittal
2. Solar Irradiance Report
3. Historic Inventory Form
4. [Secretary of Interior Guidance on Solar Panels](#) (link)



LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)

- ☐ Compatibility Review
- ☐ Lot Line Adjustment
- ☐ Non-Conforming Use Review
- ☐ Natural Resource (NROD) Verification
- ☐ Site Plan and Design Review
- ☐ Extension of Approval

Type II (OCMC 17.50.030.B)

- ☐ Detailed Development Review
- ☐ Geotechnical Hazards
- ☐ Minor Partition (<4 lots)
- ☐ Minor Site Plan & Design Review
- ☐ Non-Conforming Use Review
- ☐ Site Plan and Design Review
- ☐ Subdivision (4+ lots)
- ☐ Minor Variance
- ☐ Natural Resource (NROD) Review

Type III / IV (OCMC 17.50.030.C)

- ☐ Annexation
- ☐ Code Interpretation / Similar Use
- ☐ Concept Development Plan
- ☐ Conditional Use
- ☐ Comprehensive Plan Amendment (Text/Map)
- ☐ Detailed Development Plan
- ☒ Historic Review
- ☐ Municipal Code Amendment
- ☐ Variance
- ☐ Zone Change

File Number(s): _____

Proposed Land Use or Activity: Installation of solar panels on an existing residential roof.

Project Name: Brainard Solar Install Number of Lots Proposed (If Applicable): 1

Physical Address of Site: 607 S McLoughlin Blvd, Oregon City, Oregon, 97045

Clackamas County Map and Tax Lot Number(s): 21E36DD02500 / 00416473

Applicant(s):

Applicant(s) Signature: Dustin Davidson

Applicant(s) Name Printed: Dustin Davidson Date: 02 / 16 / 2024

Mailing Address: 44 E 800 N, Orem, Utah, 84057

Phone: (385) 396-4478 Fax: _____ Email: permits@ionsolar.com

Property Owner(s):

Property Owner(s) Signature: Jonathon Brainard

Property Owner(s) Name Printed: Jonathon Brainard Date: 02 / 16 / 2024

Mailing Address: 607 S McLoughlin Blvd, Oregon City, Oregon, 97045

Phone: (503) 732-8687 Fax: _____ Email: jonnbrain@gmail.com

Representative(s):

Representative(s) Signature: _____

Representative (s) Name Printed: _____ Date: _____

Mailing Address: _____

Phone: _____ Fax: _____ Email: _____

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

City of Oregon City
Historic Review for Solar Panel Installations on a Historic Structure

Project Location:

607 S McLoughlin Blvd, Oregon City, OR, 97045. Taxlot #: 21E36DD02500. Parcel #: 00416473.

Project Description:

We are seeking approval to install solar panels at 607 S McLoughlin Blvd. The proposed solar system is roof mounted consisting of 13 panels (276.9 sq ft) and will cover 18.05% of the roof surface.

Compliance with Oregon City Historic Review Board Policy #12: Solar Technology

Solar technology that meets the criteria in the list below may be utilized on historic properties through staff review. Any proposal that deviates from this policy shall be considered by HRB.

- *Sloped roof location: Solar panels are permitted on secondary facades of historic buildings and on accessory structures*

In our proposed solar system 6 out of the 13 panels will be installed on the backside of the roof and will not be visible from the street.

- *Design: Panels on sloped roofs shall project five inches or less from the roof surface and be installed flat; they shall not alter the slope of the roof.*

In our proposed solar system the solar panels will be flush mounted 5 inches above the roof surface. The panels and hardware will not increase the roof height or alter the slope of the roof.

- *Color: Panels and mounting systems shall be the same color as established roof materials. Mechanical equipment associated with the photovoltaic system shall be as unobtrusive as possible.*

In our proposed solar system the panels are solid black in color and the appearance of the hardware is minimal.

If the proposal does not comply with HRB Policy 12, please explain why deviation from the policy is necessary in this case. Please include any site-specific or structure-specific challenges:

In our proposed solar system 7 of the 13 solar panels will be installed on the front of the roof, facing the street. We deviated from HRB Policy 12 because this portion of the roof receives the most sunlight and was done to maximize the solar output for the homeowner.

Please explain how alternative configurations that would comply with HRB Policy 12 were explored, and were deemed inappropriate given the circumstances described below:

In our proposed solar system we looked at only installing panels on the backside of the roof but was deemed inappropriate because the lower sunlight exposure made the homeowner's investment in green energy insufficient to meet their needs.

Please explain how this project represents a satisfactory alternative to compliance with HRB Policy 12.

Our proposed solar project represents a good alternative to HRB Policy 12 because it aligns with the overall preservation goals despite not strictly adhering to the roof location requirement. The installation will be done in a way that the solar panels will not detract from the overall historic significance of the property. And our project will allow the homeowner to invest in green energy and prolong the support and continued use of the property.







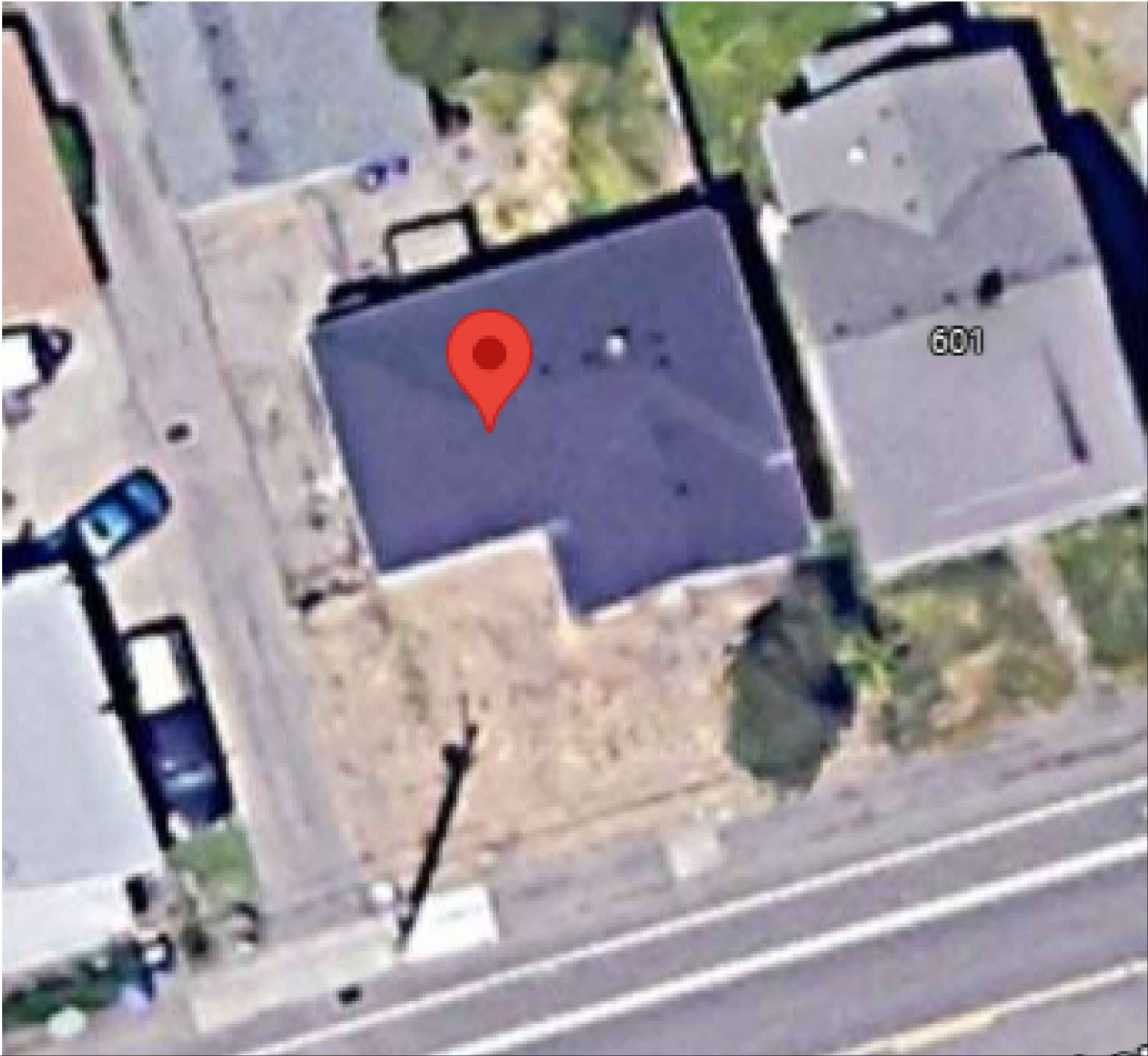


Front Roof Section



Back Roof Section

AERIAL SITE VIEW



SCOPE OF WORK

INSTALLATION OF UTILITY INTERACTIVE PHOTOVOLTAIC SOLAR SYSTEM

5.46 kW DC & 3.77 kW AC PHOTOVOLTAIC SOLAR ARRAY

PV MODULES: (13) SILFAB SOLAR SIL-420 HC+

INVERTER(S): (13) ENPHASE IQ8PLUS-72-2-US

ROOF TYPE: COMPOSITION SHINGLE - 1 LAYER(S)

PV MOUNTING HARDWARE: ECOFASTEN CLICKFIT STANDARD

SHEET LIST

G-1	COVER SHEET
V-2	SITE PLAN (AD. LIB)
S-3	ROOF PLAN
S-4	STRUCTURAL DETAILS
S-5	STRUCTURAL CALCULATIONS & NOTES
E-6	ELECTRICAL DETAILS (LINE DIAGRAM)
E-7	ELECTRICAL CALCULATIONS & NOTES
E-8	ELECTRICAL LOAD CALCULATIONS (AD. LIB)
E-9	ELECTRICAL LABELS & LOCATIONS
E-10	ELECTRICAL DIRECTORY PLACARD (AD. LIB)

JURISDICTION CODES AND STANDARDS

GOVERNING CODES

1. ALL WORK SHALL COMPLY WITH:

2021 OREGON ELECTRICAL SPECIALTY CODE (OESC)

2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC)

2021 OREGON RESIDENTIAL SPECIALTY CODE (ORSC)

2018 INTERNATIONAL FIRE CODE (IFC)

2021 OREGON PLUMBING SPECIALTY CODE

AND ALL STATE AND LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.

SITE CLASSIFICATION NOTES, OSHA REGULATION

OCCUPANCY CLASS: SFR

CONSTRUCTION CLASS: V-B

ZONING TYPE: RESIDENTIAL

1. A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.

2. THIS PROJECT HAS BEEN REVIEWED AND WILL NOT DIRECT CONCENTRATED SOLAR RADIATION OR GLARE ONTO NEARBY PROPERTIES OR ROADWAYS.

3. FOR PROJECTS SUBMITTED FOR PRESCRIPTIVE REVIEW, ROOF ATTACHMENTS SHALL BE SPACED NO GREATER THAN 24" ON CENTER IN ANY DIRECTION WHERE LOCATED WITHIN 3' OF A ROOF EDGE, HIP, EAVE, OR RIDGE OSSC 3111.3.5.3 ITEM 3.2

JUNCTION BOXES UNDER PV ARRAY SHALL BE INSTALLED TO BE CONSIDERED ACCESSIBLE BY OESC 690.34

ELECTRICAL CRITERIA, NOTES

TEMPERATURE SOURCE: ASHRAE

WEATHER STATION: AURORA STATE AP

EXTREME MIN. TEMPERATURE: -5

ASHRAE 0.4% HIGH TEMP: 37

1. DRAWINGS HAVE BEEN DETAILED ACCORDING TO UL LISTING REQUIREMENTS.

2. TERMINALS AND LUGS WILL BE TIGHTENED TO MANUFACTURER TORQUE SPECIFICATIONS (WHEN PROVIDED) IN ACCORDANCE WITH NEC 110.14(D) ON ALL ELECTRICAL.

3. PV MODULE CERTIFICATIONS WILL INCLUDE UL1703, IEC61646, IEC61730.

4. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING AS REQUIRED BY FIELD CONDITIONS.

5. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION [NEC 110.26].

6. WHERE PV CABLES ON ROOFTOP WOULD OTHERWISE BE EXPOSED TO PHYSICAL DAMAGE, 3/4" EMT SHALL BE USED TO PROTECT CABLES

STRUCTURAL CRITERIA, NOTES

DESIGN LOAD STANDARD: ASCE 7-16

WIND EXPOSURE CATEGORY: C

WIND SPEED (3-SEC GUST): 97 MPH

GROUND SNOW LOAD: 36 PSF

DESIGN ROOF SNOW LOAD: 26 PSF

SEISMIC DESIGN CATEGORY: D

SEISMIC RISK FACTOR: II

Item #2.

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ION DEVELOPER, LLC

44 E 800 N OREM, UT 84057

888.781.7074

DAVID STANLEY CONRAD

C - ELECTRICAL CONTRACTOR

C1524

SITE INFORMATION:

JONATHAN D & HANNAH M BRAINARD

607 SOUTH MCLOUGHLIN BOULEVARD

OREGON CITY, OREGON 97045

(13) SILFAB SOLAR SIL-420 HC+

(13) ENPHASE IQ8PLUS-72-2-US

5.46KW DC, 3.77KW STC-AC,

4.873KW CEC-AC

DRAWING BY

KYLE LARSON

DATE

16-JAN-2024

PROJECT ID

00BTX8

SHEET NAME

COVER SHEET

SHEET NUMBER

G-1

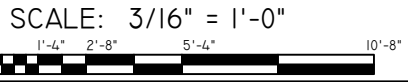
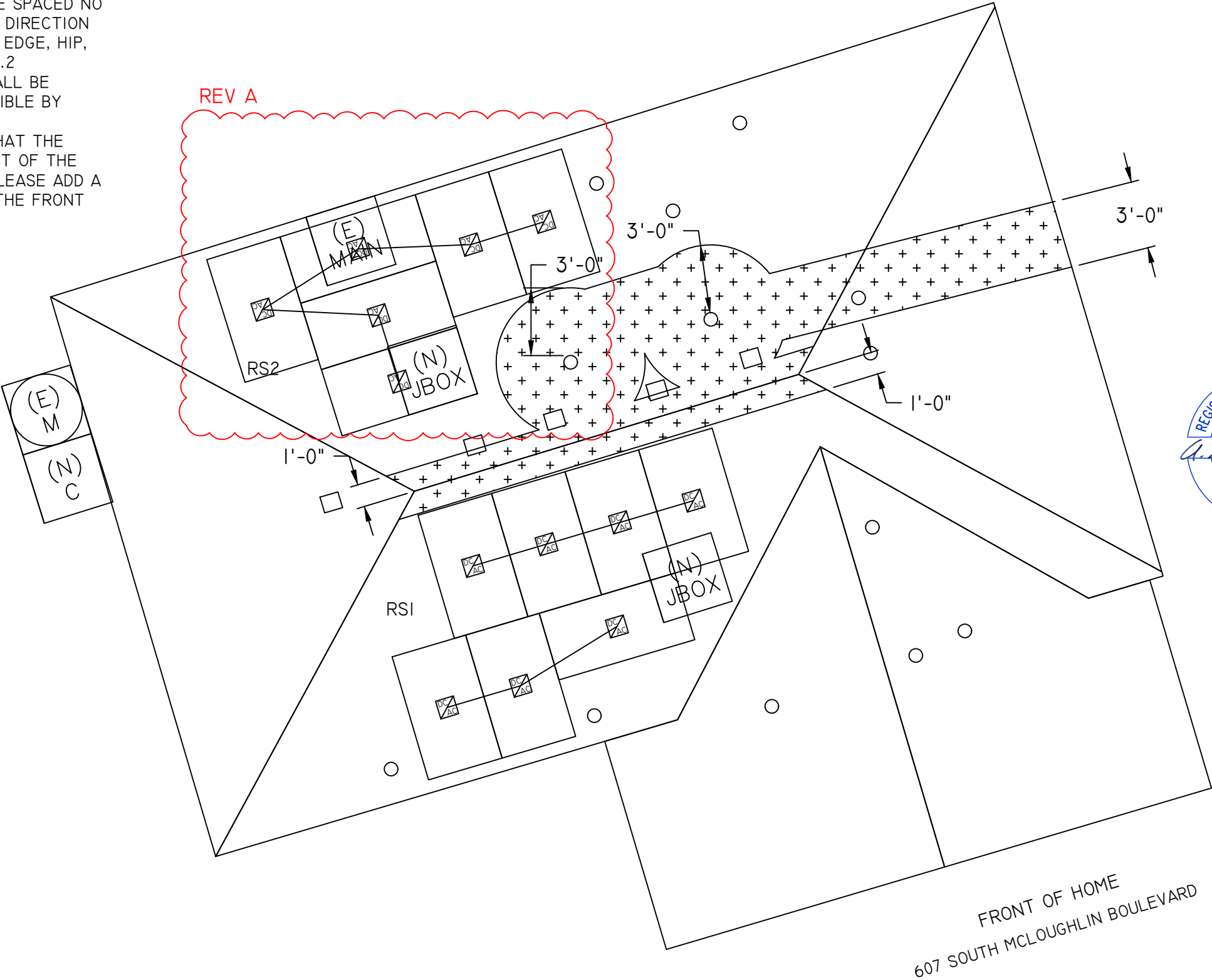
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SITE NOTES:

FOR PROJECTS SUBMITTED FOR PRESCRIPTIVE REVIEW, ROOF ATTACHMENTS SHALL BE SPACED NO GREATER THAN 24" ON CENTER IN ANY DIRECTION WHERE LOCATED WITHIN 3' OF A ROOF EDGE, HIP, EAVE, OR RIDGE OSSC 3III.3.5.3 ITEM 3.2 JUNCTION BOXES UNDER PV ARRAY SHALL BE INSTALLED TO BE CONSIDERED ACCESSIBLE BY OESC 690.34 FOR ANY METER UPGRADES, ENSURE THAT THE UTILITY METER IS LOCATED WITHIN 10FT OF THE FRONT/STREET-SIDE OF THE HOUSE. PLEASE ADD A LABEL SHOWING THE DISTANCE FROM THE FRONT CORNER OF THE HOUSE.



SYSTEM LEGEND

	(E) UTILITY METER / MAIN SERVICE PANEL		(N) PV COMBINER PANEL		(N) JUNCTION BOX		SUNEYE LOCATION
	(E) MAIN SERVICE PANEL		(N) PV LOAD CENTER		(N) AC DISCONNECT (VISIBLE-OPEN LOCKABLE LABELED DISCONNECT)		FIRE SETBACK
	(E) SUBPANEL		(N) PV PRODUCTION METER		(N) MICROINVERTER		(N) PV MODULE
			(N) DC-DC / STRING INVERTER		(N) DC DISCONNECT		STRUCTURALLY DISQUALIFIED

ROOF SECTION CRITERIA AND SPECIFICATIONS

ROOF SECTION	PV MODULE QTY	AZIMUTH	PITCH	TSRF
RS1	7	164	25	94%
RS2	6	343	25	63%



Item #2.

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C - ELECTRICAL CONTRACTOR
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(13) SILFAB SOLAR SIL-420 HC+
(13) ENPHASE IQ8PLUS-72-2-US
5.46KW DC, 3.77KW STC-AC,
4.873KW CEC-AC

DRAWING BY

KYLE LARSON

DATE

16-JAN-2024

PROJECT ID

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SHEET NAME

ROOF PLAN

SHEET NUMBER

S-3

RE

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STRUCTURAL INSTALLATION SCHEDULE AND CRITERIA

ROOF MEMBRANE		SPAN AREA	TAG	SPAN
ROOF TYPE:	COMPOSITION SHINGLE	RAIL - PORTRAIT - MODULE ORIENTATION		
ROOF SHEATHING TYPE:	1/2" PLYWOOD	X- SPACING	P-X1	48 IN. O.C. MAX.
		X-CANTILEVER	P-X2	16 IN. MAX.
		Y- SPACING	P-Y1	41.3 IN. MIN. - 45.3 IN. MAX.
		Y-CANTILEVER	P-Y2	15 IN. MIN. - 17 IN. MAX.
ARRAY PARAMETERS		RAIL - LANDSCAPE - MODULE ORIENTATION		
TOTAL ROOF AREA (SQ. FT.)	1534	X- SPACING	L-X1	48 IN. O.C. MAX.
TOTAL PV MODULE AREA (SQ. FT.)	276.9	X-CANTILEVER	L-X2	16 IN. MAX.
% PV MODULE ROOF COVERAGE	18.05%	Y- SPACING	L-Y1	21.1 IN. MIN. - 25.1 IN. MAX.
		Y-CANTILEVER	L-Y2	7.9 IN. MIN. - 9.8 IN. MAX.
PV RACKING				
RACKING:	ECOFASTEN CLICKFIT STANDARD			
RACKING TYPE:	RAIL			
STANDOFF:	CLICKFIT L-FOOT			
STANDOFF TYPE:	L-FOOT & FLASHING			
FASTENER:	5/16" X 3-1/2" ZINC PLATED STEEL LAG SCREW			

STRUCTURAL FRAMING					
ROOF SECTION	STRUCTURE TYPE	RAFTER / TC SIZE (IN)	RAFTER / TC SPACING (IN)	STRUCTURAL UPGRADE	UPGRADE SIZE & LENGTH (FT)
RS1	CONVENTIONAL FRAMING	2x4	24	NONE - SINGLE PLY (1X)	NONE
RS2	CONVENTIONAL FRAMING	2x4	24	NONE - SINGLE PLY (1X)	NONE

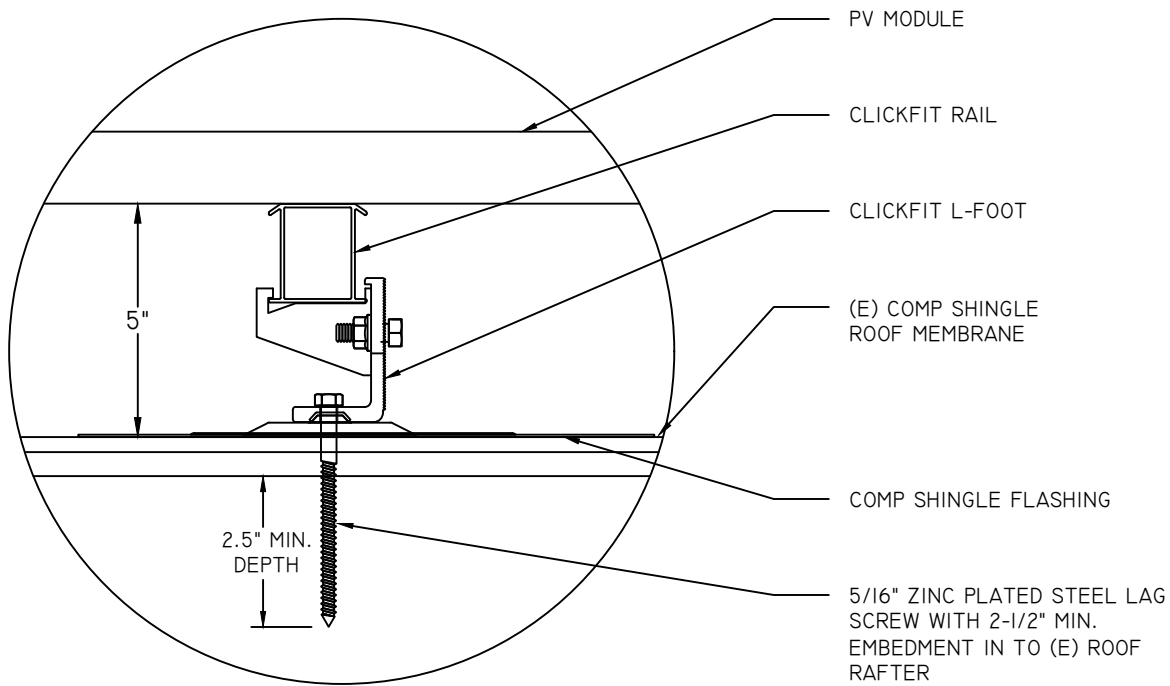
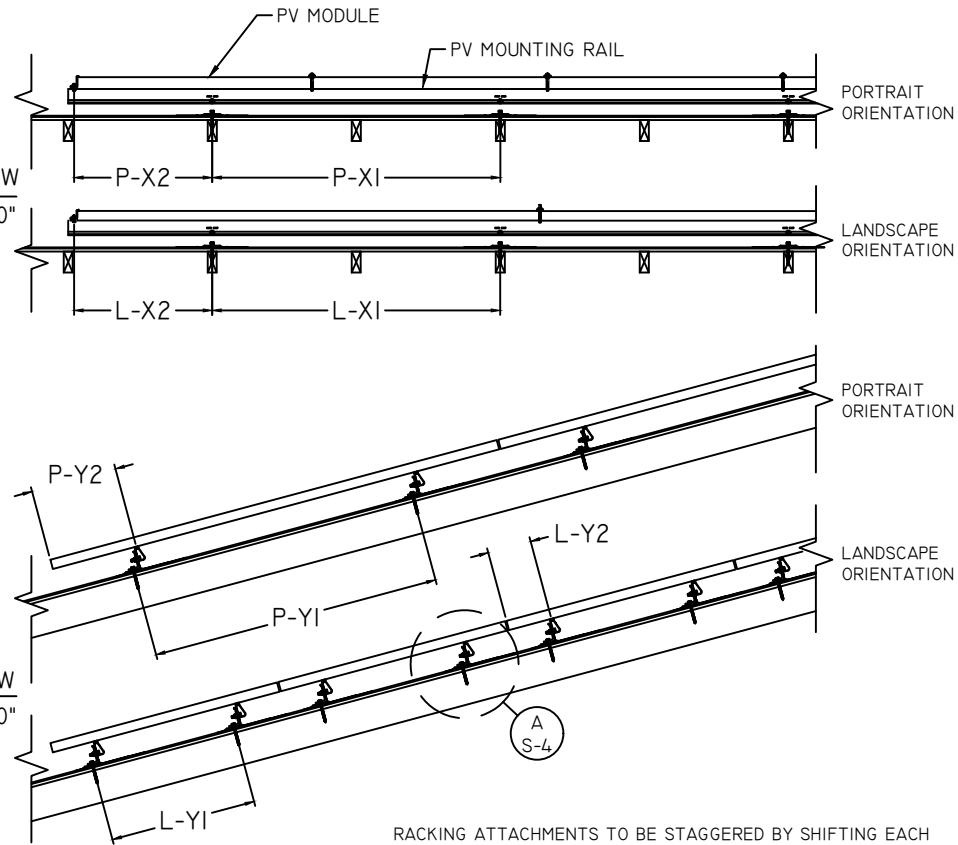


PV ARRAY DETAIL, FRONT VIEW

Scale: 3/8" = 1'-0"

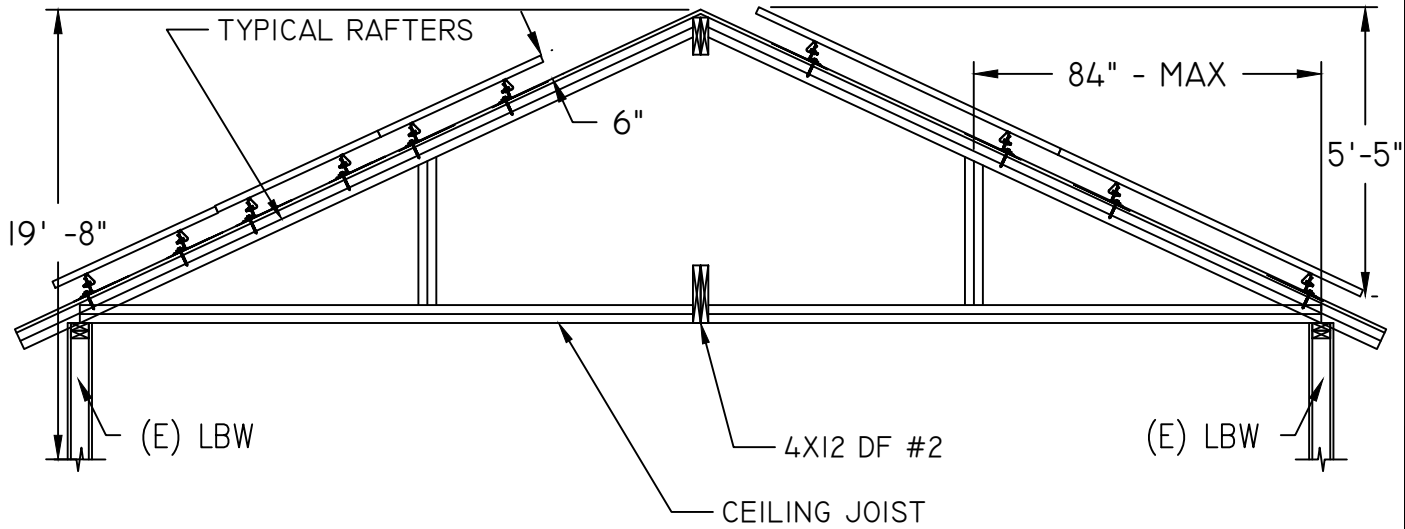
PV ARRAY DETAIL, SIDE VIEW

Scale: 3/8" = 1'-0"



A COMP SHINGLE - CLICKFIT LFOOT / FLASHING - STANDOFF DETAIL
Scale: 3" = 1'-0"

CONVENTIONALLY FRAMED STRUCTURE



I STRUCTURAL SIDE VIEW
Scale: 3/8" = 1'-0"
RAFTER 2X4 @ 24" OC
CEILING JOIST 2X8 @ 24" OC



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DRAWING BY
KYLE LARSON

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SHEET NAME
STRUCTURAL DETAILS

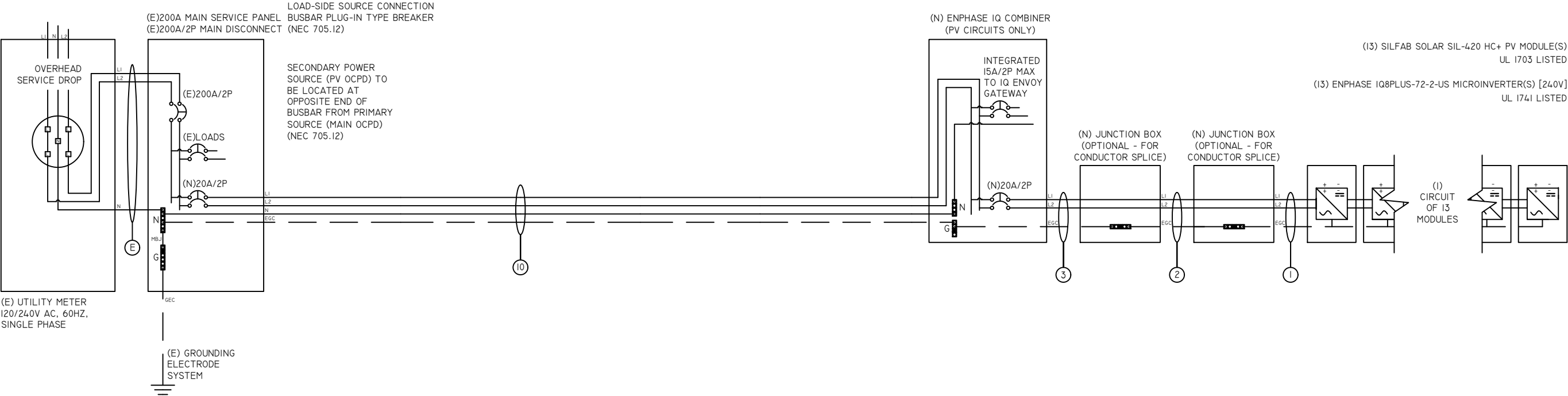
SHEET NUMBER
S-4

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CONDUCTOR AND RACEWAY SCHEDULE

TAG	QTY	SIZE	- #	TYPE	DESIGNATOR	I / V	TAG	QTY	SIZE	- #	TYPE	DESIGNATOR	I / V	TAG	QTY	SIZE	- #	TYPE	DESIGNATOR	I / V	TAG	QTY	SIZE	- #	TYPE	DESIGNATOR	I / V
10	(1)	10	AWG	THHN / CU.	THWN-2, BLACK (L1)	15.73A AC (MAX)	3	(1)	10	AWG	THHN / CU.	THWN-2, BLACK (L1)	15.73A AC (MAX)	2	(1)	10	AWG	2C, NM-B W/G, CU.	(L1, L2, EGC)	15.73A AC (MAX)	1	(1)	12	AWG	2C, TC-ER, CU.	(L1, L2)	15.73A AC (MAX)
	(1)	10	AWG	THHN / CU.	THWN-2, RED (L2)	240V AC		(1)	10	AWG	THHN / CU.	THWN-2, RED (L2)	240V AC					(CABLE)	240V AC			(1)	6	AWG	SOLID BARE CU.	(EGC)	240V AC
	(1)	10	AWG	THHN / CU.	THWN-2, WHITE (N)			(1)	10	AWG	THHN / CU.	THWN-2, GREEN (EGC)															
	(1)	10	AWG	THHN / CU.	THWN-2, GREEN (EGC)			(1)	3/4	IN.	EMT	(RACEWAY)															
	(1)	3/4	IN.	EMT	(RACEWAY)	EXTERIOR						EXTERIOR							INTERIOR								EXTERIOR

ELECTRICAL LINE DIAGRAM

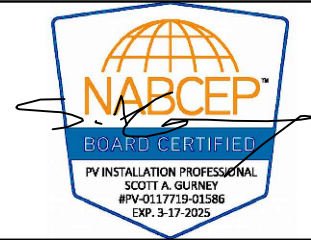


ELECTRICAL LINE DIAGRAM NOTES

Item #2.

ION

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DAVID STANLEY CONRAD
C - ELECTRICAL CONTRACTOR
C1524

SITE INFORMATION:

JONATHAN D & HANNAH M BRAINARD
607 SOUTH MCLOUGHLIN BOULEVARD
OREGON CITY, OREGON 97045

(I3) SILFAB SOLAR SIL-420 HC+

(I3) ENPHASE IQ8PLUS-72-2-US
5.46KW DC, 3.77KW STC-AC,
4.873KW CEC-AC

DRAWING BY

KYLE LARSON

DATE

16-JAN-2024

PROJECT ID

00BTX8

SHEET NAME

ELEC. LINE DIAG.

SHEET NUMBER

E-6

RE

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PV SYSTEM ELECTRICAL SPECIFCATIONS AND CALCULATIONS

DESIGN LOCATION AND TEMPERATURES	
TEMPERATURE DATA SOURCE	ASHRAE
STATE	OREGON
JURISDICTION	OREGON CITY
WEATHER STATION	AURORA STATE AP
ASHRAE EXTREME LOW TEMP (°C)	-5
ASHRAE 0.4% HIGH TEMP (°C)	37
DESIGNED MAX. SYSTEM VDROP / VRISE	4.00%

PV MODULE SPECIFICATIONS	
SILFAB SOLAR SIL-420 HC+	
RATED POWER (PMAX) (W)	420
MAXIMUM POWER VOLTAGE (VMP)	39.19
MAXIMUM POWER CURRENT (IMP)	10.72
OPEN CIRCUIT VOLTAGE (VOC)	45.67
SHORT CIRCUIT CURRENT (ISC)	11.46
PMP/VMP TEMP. COEFFICIENT	-0.36
VOC TEMP. COEFFICIENT	-0.28
SERIES FUSE RATING	20

ADJ. MODULE VOC @ ASHRAE LOW TEMP	49.5
ADJ. MODULE VMP @ ASHRAE 2% AVG. HIGH TEMP	33.0

INVERTER SPECIFICATIONS	
ENPHASE IQ8PLUS-72-2-US	
TYPE	MICROINVERTER
MAX. OR RECOMMENDED MODULE POWER (W)	440
MAXIMUM INPUT DC OPEN-CIRCUIT VOLTAGE (VOC)	60
MINIMUM START VOLTAGE (V)	30
MAXIMUM START VOLTAGE(V)	58
MAXIMUM INPUT CURRENT (ISC) (A)	15
MAX CONTINUOUS OUTPUT POWER (VA)	290
MAX. CONTINUOUS OUTPUT CURRENT (A)	1.21
NOMINAL (L-L) OUTPUT VOLTAGE	240
CEC WEIGHTED EFFICIENCY (%)	97.0%

SYSTEM ELECTRICAL SPECIFICATIONS	
CIR I	
NUMBER OF MODULES PER CIRCUIT	13
DC POWER RATING PER CIRCUIT (STC)(W DC)	5460
TOTAL MODULE QUANTITY	13 PV MODULES
STC DC POWER RATING OF ARRAY	5460W DC
INVERTER OUTPUT CIRCUIT CURRENT(A AC)	15.73
125% INVERTER OUTPUT CIRCUIT CURRENT(A AC)	19.66
CIRCUIT OCPD RATING (A)	20
	15.73A
COMBINED INVERTER CONTINUOUS OUTPUT CURRENT AC	
PV POWER PRODUCTION SYSTEM OCPD RATING (X125%)	20A
MAX. ARRAY STC-AC POWER (W)	3770W AC (STC)
MAX. ARRAY CEC-AC POWER (W)	4873W AC (CEC)

AC VOLTAGE RISE CALCULATIONS	DIST (FT)	COND.	VRISE(V)	VEND(V)	%VRISE
VRISE SEC. 1 (MICRO TO JBOX) *	28.8	12 Cu.	1.8	241.8	0.76%
VRISE SEC. 2 (JBOX TO COMBINER BOX)	46	10 Cu.	1.7	241.7	0.72%
VRISE SEC. 3 (COMBINER BOX TO POI)	10	10 Cu.	0.4	240.4	0.16%
TOTAL VRISE			3.9	243.9	1.64% OK
* 8 MICROINVERTER MAX SUB-BRANCH CIRCUIT SIZE TO COMPLY WITH VRISE CALCULATIONS.					

RACEWAY / CONDUCTOR CALCULATIONS			
MICROINV. TO JUNCTION BOX (1)			
MAX INVERTER OUTPUT CIRCUIT CURRENT =	15.7 A AC		
CONDUCTOR SIZE / INSULATION / TYPE =	12 AWG	2C, TC-ER, CU.	
CONDUCTOR AMP. RATING @ 90°C =	30 A		
PER NEC 690.8(B)(1)(W/OUT CORRECTION FACTORS)			
MAX INVERTER OUTPUT CURRENT X125%=	20.0	A AC	

PER NEC 690.8(B)(2)(WITH CORRECTION FACTORS)			
AMB. TEMP. AMP. CORRECTION =	0.91		
# OF CONDUCTORS IN RACEWAY CORRECTION =	1.0		
ADJUSTED CONDUCTOR AMPACITY (A) =	27.3 A AC		
LARGER AMPACITY OF 690.8(B)(1) OR (B)(2) = 20.0 < 27.3			
(B)(1) - W/OUT CORRECTION FACTORS			
LARGER AMPACITY COMPLIANCE =	30.0	>	20.0 OK

RACEWAY SIZE / TYPE =	3/4 IN.	EMT OR NO RACEWAY	
CONDUCTOR(S) / CABLE(S) CROSS-SECTION AREA (IN.^2) =	0.142 IN.2		
CROSS-SECTIONAL AREA OF RACEWAY(IN.^2) =	0.533 IN.2		
% ALLOWABLE RACEWAY FILL (NEC CH. 9, TBL I) =	53%	>	27% OK

JUNCTION BOX TO JUNCTION BOX (2)			
MAX INVERTER OUTPUT CIRCUIT CURRENT =	15.7 A AC		
CONDUCTOR SIZE / INSULATION / TYPE =	10 AWG	2C, NM-B W/G, CU.	
CONDUCTOR AMP. RATING @60°C =	30 A		
PER NEC 690.8(B)(1)(W/OUT CORRECTION FACTORS)			
MAX INVERTER OUTPUT CURRENT X125%=	20.0	A AC	

PER NEC 690.8(B)(2)(WITH CORRECTION FACTORS)			
AMB. TEMP. AMP. CORRECTION =	0.82		
# OF CONDUCTORS IN RACEWAY CORRECTION =	1.0		
ADJUSTED CONDUCTOR AMPACITY (A) =	24.6 A AC		
LARGER AMPACITY OF 690.8(B)(1) OR (B)(2) = 20.0 < 24.6			
(B)(1) - W/OUT CORRECTION FACTORS			
LARGER AMPACITY COMPLIANCE =	30.0	>	20.0 OK

RACEWAY SIZE / TYPE =	NO RACEWAY		
-----------------------	------------	--	--

JUNCTION BOX TO COMBINER BOX (3)			
MAX INVERTER OUTPUT CIRCUIT CURRENT =	15.7 A AC		
CONDUCTOR SIZE / INSULATION / TYPE =	10 AWG	THHN / THWN-2, CU.	
CONDUCTOR AMP. RATING @75°C =	30 A		
PER NEC 690.8(B)(1)(W/OUT CORRECTION FACTORS)			
MAX INVERTER OUTPUT CURRENT X125%=	20.0	A AC	

PER NEC 690.8(B)(2)(WITH CORRECTION FACTORS)			
AMB. TEMP. AMP. CORRECTION =	0.88		
# OF CONDUCTORS IN RACEWAY CORRECTION =	1.0		
ADJUSTED CONDUCTOR AMPACITY (A) =	26.4 A AC		
LARGER AMPACITY OF 690.8(B)(1) OR (B)(2) = 20.0 < 26.4			
(B)(1) - W/OUT CORRECTION FACTORS			
LARGER AMPACITY COMPLIANCE =	30.0	>	20.0 OK

RACEWAY SIZE / TYPE =	3/4 IN.	EMT	
CONDUCTOR(S) / CABLE(S) CROSS-SECTION AREA (IN.^2) =	0.063 IN.^2		
CROSS-SECTIONAL AREA OF RACEWAY(IN.^2) =	0.533 IN.^2		
% ALLOWABLE RACEWAY FILL (NEC CH. 9, TBL I) =	40%	>	12% OK

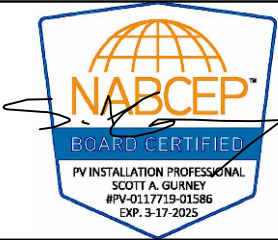
COMBINER BOX TO MAIN PV OCPD (10)			
COMBINED INVERTER CONTINUOUS OUTPUT CURRENT =	15.7 A AC		
CONDUCTOR SIZE / INSULATION / TYPE =	10 AWG	THHN / THWN-2, CU.	
CONDUCTOR AMP. RATING @75°C =	35 A		
PER NEC 690.8(B)(1)(W/OUT CORRECTION FACTORS)			
MAX COMBINED INVERTER CONTINUOUS OUTPUT CURRENT X125% =	20.0	A AC	

PER NEC 690.8(B)(2)(WITH CORRECTION FACTORS)			
AMB. TEMP. AMP. CORRECTION =	0.88		
# OF CONDUCTORS IN RACEWAY CORRECTION =	1.0		
ADJUSTED CONDUCTOR AMPACITY (A) =	30.8 A AC		
LARGER AMPACITY OF 690.8(B)(1) OR (B)(2) = 20.0 < 30.8			
(B)(1) - W/OUT CORRECTION FACTORS			
LARGER AMPACITY COMPLIANCE =	35.0	>	20.0 OK

RACEWAY SIZE / TYPE =	3/4 IN.	EMT	
CONDUCTOR(S) / CABLE(S) CROSS-SECTION AREA (IN.^2) =	0.084 IN.^2		
CROSS-SECTIONAL AREA OF RACEWAY(IN.^2) =	0.533 IN.^2		
% ALLOWABLE RACEWAY FILL (NEC CH. 9, TBL I) =	40%	>	16% OK



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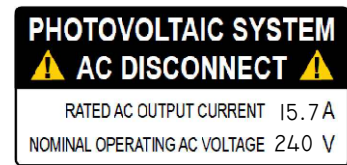


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DRAWING BY KYLE LARSON	
DATE 16-JAN-2024	
PROJECT ID 00BTX8	
SHEET NAME ELECTRICAL CALCS.	
SHEET NUMBER E-7	RE Page 74

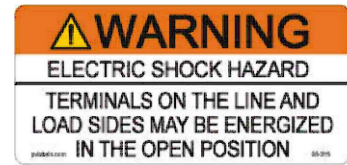
ELECTRICAL FIELD-APPLIED HAZARD MARKINGS



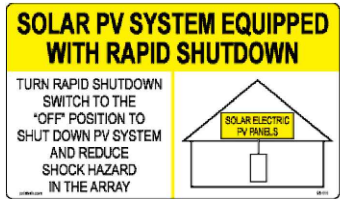
A AT EACH PV SYSTEM DISCONNECTING MEANS. [NEC 690.54, NEC 690.13(B)]



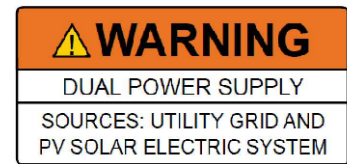
F SIGN LOCATED ON OR NO MORE THAN 3 FT FROM THE RAPID SHUT DOWN DISCONNECT SWITCH(S). IF MORE THAN ONE PV RSD IS IN AN ENCLOSURE, EACH SHALL BE LABELED. [NEC 690.56(C), NEC 690.12(C)]



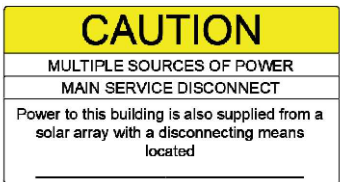
B FOR PV DISCONNECTING MEANS WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION. [NEC 690.13(B), NEC 705.22]



G FOR BUILDINGS WITH PV SYSTEMS. TO BE LOCATED AT EACH SERVICE EQUIPMENT LOCATION TO WHICH THE PV SYSTEM IS CONNECTED. [NEC 690.56(C)]



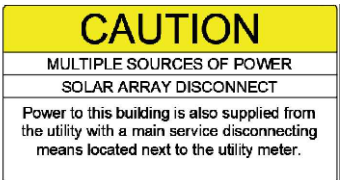
C AT EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SUPPLIED FROM MULTIPLE SOURCES. [NEC 705.12(C)]



J PERMANENT DIRECTORY TO BE LOCATED AT MAIN SERVICE EQUIPMENT DENOTING THE LOCATION OF THE PV RAPID SHUTDOWN SYSTEM DISCONNECTING MEANS IF SOLAR ARRAY RAPID SHUT DOWN DISCONNECT SWITCH IS NOT GROUPED AND WITHIN LINE OF SITE OF MAIN SERVICE DISCONNECTING MEANS. [NEC 705.10, NEC 690.56(C)(1)]



D PLACED ADJACENT TO PV SYSTEM PLUG-IN TYPE BREAKER TO A BUSBAR FOR A LOAD SIDE CONNECTION. [NEC 705.12(B)(3)(2)]



I PERMANENT DIRECTORY TO BE LOCATED AT SOLAR ARRAY RAPID SHUTDOWN SWITCH DENOTING THE LOCATION OF THE SERVICE EQUIPMENT LOCATION IF SOLAR ARRAY RAPID SHUT DOWN DISCONNECT SWITCH IS NOT GROUPED AND WITHIN LINE OF SITE OF MAIN SERVICE DISCONNECTING MEANS. [NEC 705.10]



- ALL CAUTION, WARNING, OR DANGER SIGNS OR LABELS SHALL:
1. COMPLY WITH ANSI Z535.4-2011 STANDARDS.
 2. BE PERMANENTLY AFFIXED TO THE EQUIPMENT OR WIRING METHOD AND SHALL NOT BE HANDWRITTEN.
 3. SHALL BE OF SUFFICEINT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
 4. UNLESS OTHERS SPECIFIED MINIMUM TEXT HEIGHT TO BE $\frac{1}{8}$ " (3MM).

Item #2.
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(13) ENPHASE IQ8PLUS-72-2-US
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4.873KW CEC-AC

DRAWING BY

KYLE LARSON

DATE

16-JAN-2024

PROJECT ID

00BTX8

SHEET NAME

ELECTRICAL LABELS

SHEET NUMBER

E-9

RE

Page 75

Material Descriptions and Photos

Silfab SIL-420 HC+ Solar Panels

The solar panels are 6.275' x 3.4' x 1.37" and are solid black.



Panels installed on Beverly Dr.



Panels installed on Charman St.

Enphase IQ8Plus-72-2-US Microinverters

The microinverters are black and are mounted under the solar panels.



EcoFasten ClickFit Rail Mounting Hardware

The mounting hardware is silver and black. The components visible after installation are black.



Enphase IQ Combiner Box

The combiner box is silver/grey and will be mounted to the right of the utility meter.



Signature Certificate

Reference number: NVD83-PCUBA-7JDOD-DQ7MG

Signer

Timestamp

Signature

Dustin Davidson

Email: dustin.davidson@ionsolar.com

Sent:

16 Feb 2024 22:05:47 UTC

Signed:

16 Feb 2024 22:05:47 UTC



IP address: 8.33.47.146

Location: Orem, United States

Jonathon Brainard

Email: jonnbrian@gmail.com

Sent:

16 Feb 2024 22:05:47 UTC

Viewed:

16 Feb 2024 22:15:39 UTC

Signed:

16 Feb 2024 22:16:36 UTC



Recipient Verification:

✓Email verified

16 Feb 2024 22:15:39 UTC

IP address: 104.28.116.48

Location: Portland, United States

Document completed by all parties on:

16 Feb 2024 22:16:36 UTC

Page 1 of 1



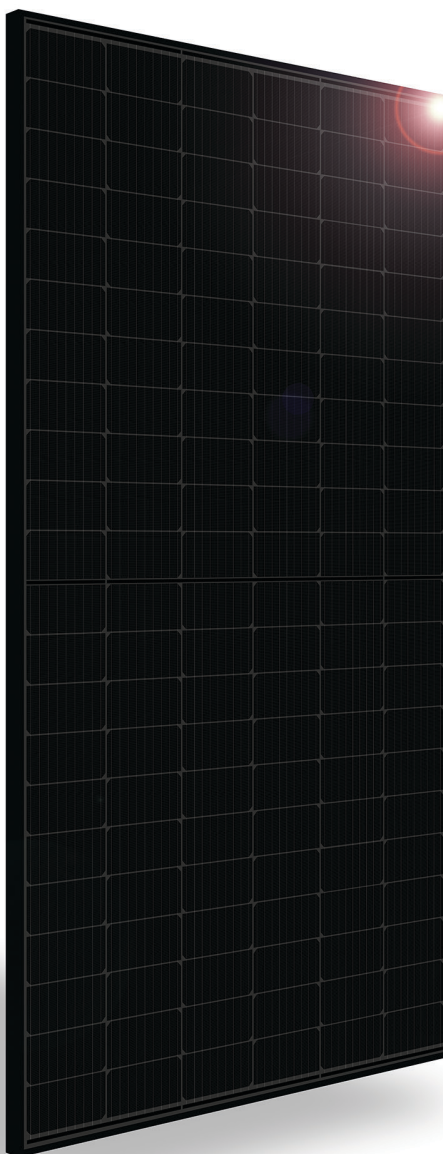
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SILFAB PRIME

SIL-420 HC+



RELIABLE ENERGY. DIRECT FROM THE SOURCE.

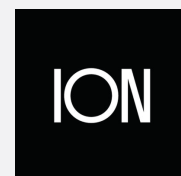
Designed to outperform.

Dependable, durable, high-performance solar panels engineered for North American homeowners.

[SILFABSOLAR.COM](https://silfabsolar.com)



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* Chubb provides error and omission insurance to Silfab Solar Inc.

ELECTRICAL SPECIFICATIONS		420	
Test Conditions		STC	NOCT
Module Power (P _{max})	Wp	420	313
Maximum power voltage (V _{pmax})	V	39.19	36.42
Maximum power current (I _{pmax})	A	10.72	8.59
Open circuit voltage (V _{oc})	V	45.67	42.84
Short circuit current (I _{sc})	A	11.46	9.24
Module efficiency	%	21.2%	19.7%
Maximum system voltage (V _{DC})	V	1000	
Series fuse rating	A	20	
Power Tolerance	Wp	±3%	

Measurement conditions: STC 1000 W/m² • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
 Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by ±3%.

MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	21.3kg ±0.2kg	47lbs ±0.4lbs
Dimensions (H x L x D)	1914 mm x 1036 mm x 35 mm	75.3 in x 40.8 in x 1.37 in
Maximum surface load (wind/snow)*	5400 Pa rear load / 5400 Pa front load	112.8 lb/ft ² rear load / 112.8 lb/ft ² front load
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	132 Half cells - Si mono PERC 9 busbar - 83 x 166 mm	132 Half cells - Si mono PERC 9 busbar - 3.26 x 6.53 in
Glass	3.2 mm high transmittance, tempered, anti-reflective coating	0.126 in high transmittance, tempered, anti-reflective coating
Cables and connectors (refer to installation manual)	1350 mm, ø 5.7 mm, MC4 from Staubli	53 in, ø 0.22 in (12AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized Aluminum (Black)	
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)	
Junction Box	UL 1730 Certified, IEC 62790 Certified, IP68 rated	

TEMPERATURE RATINGS		WARRANTIES	
Temperature Coefficient I _{sc}	+0.064 %/°C	Module product workmanship warranty	25 years**
Temperature Coefficient V _{oc}	-0.28 %/°C	Linear power performance guarantee	30 years
Temperature Coefficient P _{max}	-0.36 %/°C		≥ 97.1% end 1st yr ≥ 91.6% end 12th yr ≥ 85.1% end 25th yr ≥ 82.6% end 30th yr
NOCT (± 2°C)	45 °C		
Operating temperature	-40/+85 °C		

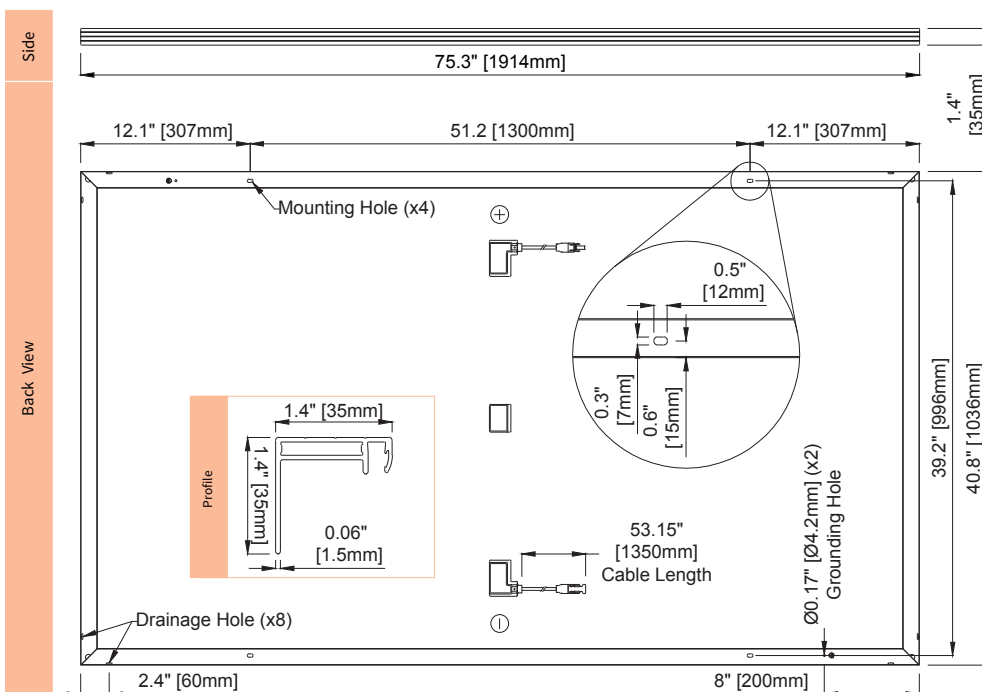
CERTIFICATIONS		SHIPPING SPECS	
Product	UL 61215-1:2017 Ed.1***, UL 61215-2:2017 Ed.1***, UL 61730-1:2017 Ed.1, UL 61730-2:2017 Ed.1, CSA C22.2#61730-1:2019 Ed.2, CSA C22.2#61730-2:2019 Ed.2, IEC 61215-1:2016 Ed.1***, IEC 61215-2:2016 Ed.1***, IEC 61730-1:2016 Ed.2, IEC 61730-2:2016 Ed.2, IEC 61701:2020 (Salt Mist Corrosion), IEC 62716:2013 (Ammonia Corrosion), CEC Listing, UL Fire Rating: Type 2	Modules Per Pallet:	26 or 26 (California)
Factory	ISO9001:2015	Pallets Per Truck	32 or 30 (California)
		Modules Per Truck	832 or 780 (California)

* ⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

** 12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at silfabsolar.com.

PAN files generated from 3rd party performance data are available for download at: silfabsolar.com/downloads.

*** Certification in progress.



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Silfab - SIL-420-HC-20230726

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IQ8 and IQ8+ Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.



Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.



IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.



Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-DCC-2 adapter cable with plug-n-play MC4 connectors.



IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

Easy to install

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

High productivity and reliability

- Produce power even when the grid is down*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support**
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

IQ8 and IQ8+ Microinverters

Item #2.

INPUT DATA (DC)		IQ8-60-2-US	IQ8PLUS-72-2-US
Commonly used module pairings ¹	W	235 – 350	235 – 440
Module compatibility		60-cell/120 half-cell	60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell
MPPT voltage range	V	27 – 37	29 – 45
Operating range	V	25 – 48	25 – 58
Min/max start voltage	V	30 / 48	30 / 58
Max input DC voltage	V	50	60
Max DC current ² [module Isc]	A	15	
Overvoltage class DC port		II	
DC port backfeed current	mA	0	
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	
OUTPUT DATA (AC)		IQ8-60-2-US	IQ8PLUS-72-2-US
Peak output power	VA	245	300
Max continuous output power	VA	240	290
Nominal (L-L) voltage/range ³	V	240 / 211 – 264	
Max continuous output current	A	1.0	1.21
Nominal frequency	Hz	60	
Extended frequency range	Hz	50 – 68	
AC short circuit fault current over 3 cycles	Arms	2	
Max units per 20 A (L-L) branch circuit ⁴		16	13
Total harmonic distortion		<5%	
Overvoltage class AC port		III	
AC port backfeed current	mA	30	
Power factor setting		1.0	
Grid-tied power factor (adjustable)		0.85 leading – 0.85 lagging	
Peak efficiency	%	97.5	97.6
CEC weighted efficiency	%	97	97
Night-time power consumption	mW	60	
MECHANICAL DATA			
Ambient temperature range		-40°C to +60°C (-40°F to +140°F)	
Relative humidity range		4% to 100% (condensing)	
DC Connector type		MC4	
Dimensions (HxWxD)		212 mm (8.3”) x 175 mm (6.9”) x 30.2 mm (1.2”)	
Weight		1.08 kg (2.38 lbs)	
Cooling		Natural convection – no fans	
Approved for wet locations		Yes	
Pollution degree		PD3	
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure	
Environ. category / UV exposure rating		NEMA Type 6 / outdoor	
COMPLIANCE			
		CA Rule 21 (UL 1741-SA), UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01	
Certifications		This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2018 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer’s instructions.	

(1) No enforced DC/AC ratio. See the compatibility calculator at <https://link.enphase.com/module-compatibility>
 (2) Maximum continuous input DC current is 10.6A (3) Nominal voltage range can be extended beyond nominal if required by the utility. (4) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

Enphase IQ Combiner 4/4C

X-IQ-AM1-240-4
X-IQ-AM1-240-4C

The **Enphase IQ Combiner 4/4C** with IQ Gateway and integrated LTE-M1 cell modem (included only with IQ Combiner 4C) consolidates interconnection equipment into a single enclosure and streamlines IQ microinverters and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.

Smart

- Includes IQ Gateway for communication and control
- Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), included only with IQ Combiner 4C
- Includes solar shield to match Enphase IQ Battery aesthetics and deflect heat
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

- Centered mounting brackets support single stud mounting
- Supports bottom, back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80A total PV or storage branch circuits

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty
- Two years labor reimbursement program coverage included for both the IQ Combiner SKU's
- UL listed



To learn more about Enphase offerings, visit enphase.com

Enphase IQ Combiner 4/4C

Item #2.

MODEL NUMBER

IQ Combiner 4 (X-IQ-AM1-240-4)	IQ Combiner 4 with Enphase IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes a silver solar shield to match the IQ Battery system and IQ System Controller 2 and to deflect heat.
IQ Combiner 4C (X-IQ-AM1-240-4C)	IQ Combiner 4C with Enphase IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.) Includes a silver solar shield to match the IQ Battery and IQ System Controller and to deflect heat.

ACCESSORIES AND REPLACEMENT PARTS (not included, order separately)

Ensemble Communications Kit COMMS-CELLMODEM-M1-06 CELLMODEM-M1-06-SP-05 CELLMODEM-M1-06-AT-05	- Includes COMMS-KIT-01 and CELLMODEM-M1-06-SP-05 with 5-year Sprint data plan for Ensemble sites - 4G based LTE-M1 cellular modem with 5-year Sprint data plan - 4G based LTE-M1 cellular modem with 5-year AT&T data plan
Circuit Breakers BRK-10A-2-240V BRK-15A-2-240V BRK-20A-2P-240V BRK-15A-2P-240V-B BRK-20A-2P-240V-B	Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers. Circuit breaker, 2 pole, 10A, Eaton BR210 Circuit breaker, 2 pole, 15A, Eaton BR215 Circuit breaker, 2 pole, 20A, Eaton BR220 Circuit breaker, 2 pole, 15A, Eaton BR215B with hold down kit support Circuit breaker, 2 pole, 20A, Eaton BR220B with hold down kit support
EPLC-01	Power line carrier (communication bridge pair), quantity - one pair
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 4/4C
XA-PLUG-120-3	Accessory receptacle for Power Line Carrier in IQ Combiner 4/4C (required for EPLC-01)
XA-ENV-PCBA-3	Replacement IQ Gateway printed circuit board (PCB) for Combiner 4/4C
X-IQ-NA-HD-125A	Hold down kit for Eaton circuit breaker with screws.

ELECTRICAL SPECIFICATIONS

Rating	Continuous duty
System voltage	120/240 VAC, 60 Hz
Eaton BR series busbar rating	125 A
Max. continuous current rating	65 A
Max. continuous current rating (input from PV/storage)	64 A
Max. fuse/circuit rating (output)	90 A
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)
Max. total branch circuit breaker rating (input)	80A of distributed generation / 95A with IQ Gateway breaker included
IQ Gateway breaker	10A or 15A rating GE/Siemens/Eaton included
Production metering CT	200 A solid core pre-installed and wired to IQ Gateway
Consumption monitoring CT (CT-200-SPLIT)	A pair of 200 A split core current transformers

MECHANICAL DATA

Dimensions (WxHxD)	37.5 x 49.5 x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets.
Weight	7.5 kg (16.5 lbs)
Ambient temperature range	-40° C to +46° C (-40° to 115° F)
Cooling	Natural convection, plus heat shield
Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
Wire sizes	• 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors • 60 A breaker branch input: 4 to 1/0 AWG copper conductors • Main lug combined output: 10 to 2/0 AWG copper conductors • Neutral and ground: 14 to 1/0 copper conductors Always follow local code requirements for conductor sizing.
Altitude	Up to 3000 meters (9,842 feet)

INTERNET CONNECTION OPTIONS

Integrated Wi-Fi	802.11b/g/n
Cellular	CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G based LTE-M1 cellular modem). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations.
Ethernet	Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)

COMPLIANCE

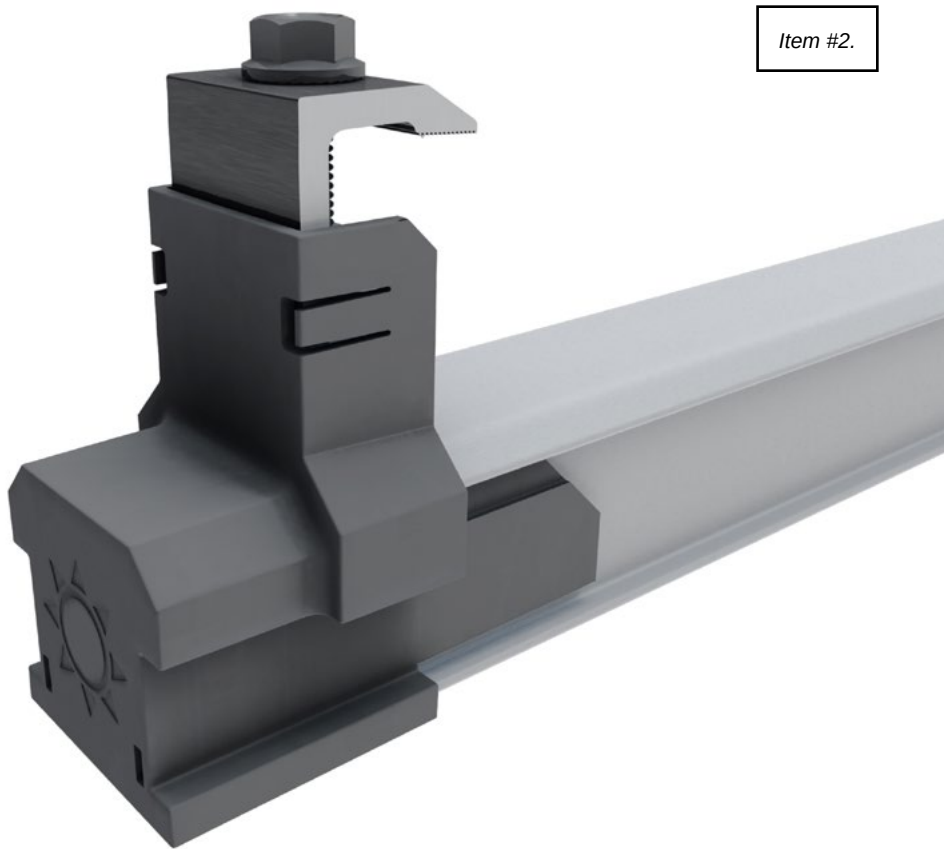
Compliance, IQ Combiner	UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5
Compliance, IQ Gateway	UL 60601-1/CANCSA 22.2 No. 61010-1

To learn more about Enphase offerings, visit enphase.com

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Page 86



CLICKFIT®

COMPLETE RAIL-BASED RACKING SYSTEM

ClickFit is one of the fastest installing rail-based systems in the industry. Thanks to its Click-In rail assembly, the rails can be connected to any of EcoFasten's composition shingle, tile, and standing seam metal roof mounts in seconds without the need for fasteners or tools. The ClickFit system is made of robust materials and coated steel, to ensure corrosion-resistance and longevity. ClickFit conforms to UL 2703 and has been tested in extreme weather conditions including wind, fire, and snow.

FEATURES & BENEFITS

- Pre-installed rail fastening bolt
- Fully integrated bonding
- Click-On Mid & End Clamps
- Compatible with a variety of EcoFasten roof attachments
- Florida Product Approved for composition shingle roofs

FAST INSTALLING SYSTEM FEATURING CLICK-IN RAIL ASSEMBLY



ROOF TYPE

**Composition Shingle,
Tile & Standing
Seam Metal**



RACKING

Rail-Based



ATTACHMENT

**Structural-Attach
Direct-Attach**





INTERNAL SPLICE

Tool-free bonded Internal Splice installs in seconds.

EBOS ACCESSORIES

Secure Module Level Power Electronics to the top of the rail using the ClickFit MLPE Mount. PV wires can be managed using the ClickFit Wire Clip and the ClickFit Wire Management Clamp.

[Additional eBoS accessories are available.](#)



MID CLAMP

Click-on Mid Clamp features integrated bonding pins and fits module frames from 30-50 mm in height.



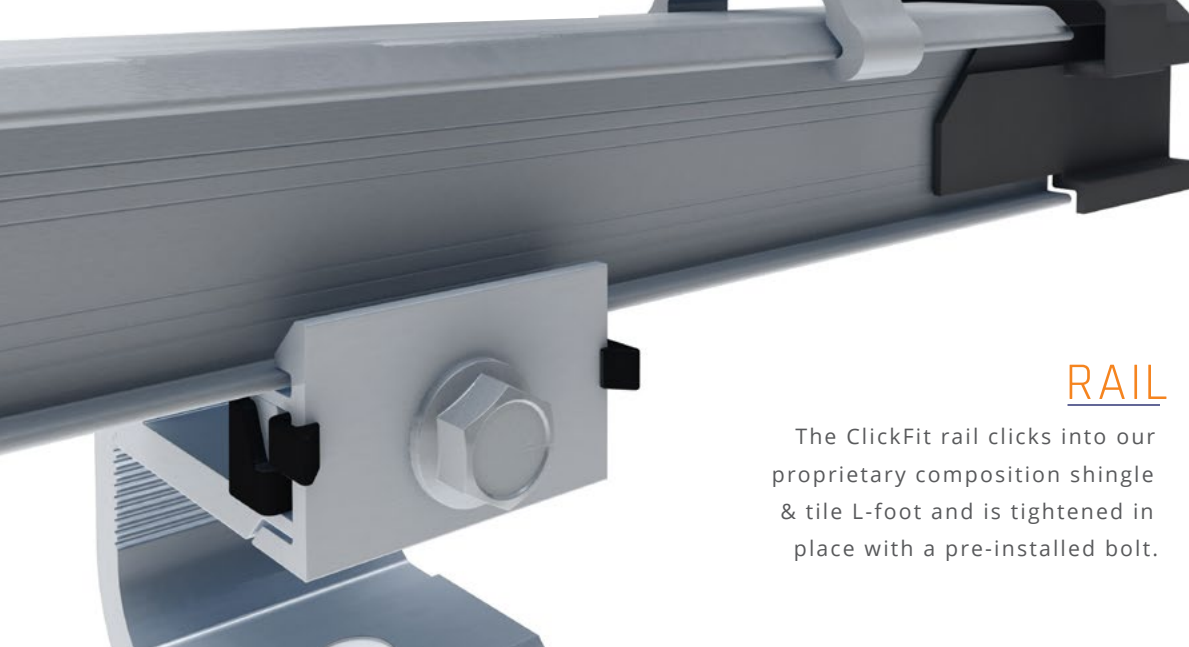
END CLAMP

One Click-on End Clamp fits modules from 30-40mm in height.



END CAP

Slide-on End Cap provide an aesthetic finish and allow for End Clamps to be accurately positioned on the rail in seconds.



RAIL

The ClickFit rail clicks into our proprietary composition shingle & tile L-foot and is tightened in place with a pre-installed bolt.

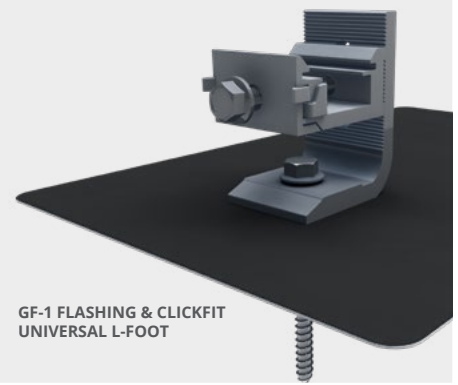


COMPOSITION SHINGLE ROOFS



L-FOOT WITH GF-1

Combine the versatile ClickFit Universal L-Foot with the watertight GF-1 flashing for a fast installation on composition shingle roofs.



SMART FOOT

Smart Foot can be attached directly to composition shingle roofs without a metal flashing. The integrated flashing utilizes our proprietary **UltraGrip Technology™**, creating a watertight seal.





ECOFASTEN

EcoFasten has established a reputation for being one of the industry's leading innovators by providing expert solutions for mounting solar PV on any type of roof. Our broad portfolio of solutions stem from the needs of, and direct inputs by solar PV installers. We take pride in providing the right solution for every application. We educate our customers, so they purchase the best, most cost-effective solutions to fit their needs, and we complement that with on-site installation training to ensure 100% satisfaction. We are honest with ourselves, our customers and our employees, fostering a culture of idea-sharing, innovation and creativity.



[VIEW THE COMPLETE PARTS LIST](#)



Final Array Layout

Jonathan D & Hannah M Brainard
607 South Mcloughlin Boulevard
Oregon City, Oregon 97045

January 16, 2024



System Size (DC):	5.46 kW
Panels:	(13) Silfab Solar SIL-420 HC+
Inverters:	(13) Enphase IQ8PLUS-72-2-US
First Year Estimated Production:	5108 kWh



Installation Summary

Item #2.

Site Evaluation Results:

Roof Condition:

The existing roof is sufficient for the PV Solar Installation.

Electrical Condition:

The existing electrical equipment is sufficient for the PV Solar Installation. No Electrical Service Upgrade work will be completed for the project.

Structural Condition:

The existing structural framing is sufficient for the PV Solar Installation.

Additional Construction Work Required For Solar Installation:

None

Homeowner Obligations Before Install:

None

Aurora Shade Report

Customer

Jonathan Brainard

Designer

Kyle Larson

Organization

Ion Solar

Address607 S McLoughlin Blvd
Oregon City, OR 97045,
USA**Coordinates**

(45.347011, -122.623454)

Date

16 January 2024

Annual irradiancekWh/m²/year

2,450 or more

2,100

1,750

1,400

1,050

700

350

0

**Summary**

Array	Panel Count	Azimuth (deg.)	Pitch (deg.)	Annual TOF (%)	Annual Solar Access (%)	Annual TSRF (%)
1	7	164	25	98	96	94
2	6	343	25	66	95	62
Weighted average by panel count	-	-	-	-	95.1	79.3

Monthly solar access (%) across arrays

Array	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	87	92	95	96	97	97	98	97	95	96	93	86
2	90	91	92	95	95	95	96	96	95	92	90	89

Customer
Jonathan Brainard

Address
607 S McLoughlin Blvd
Oregon City, OR 97045,
USA

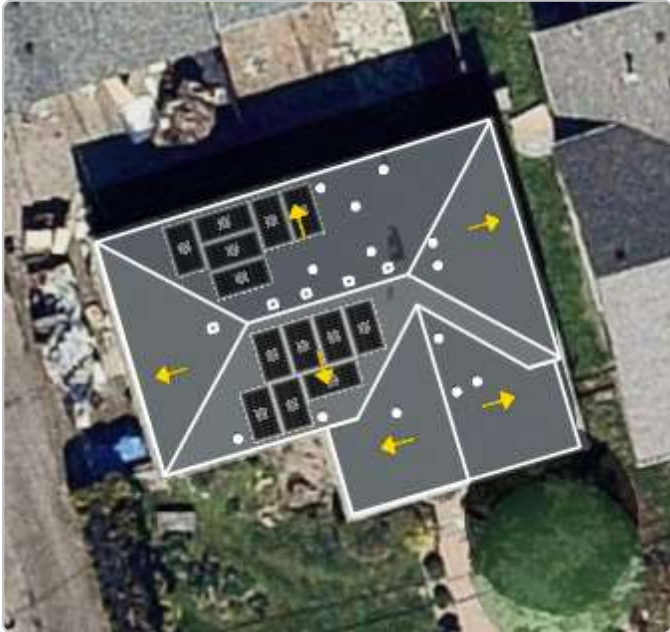
Designer
Kyle Larson

Coordinates
(45.347011, -122.623454)

Organization
Ion Solar

Date
16 January 2024

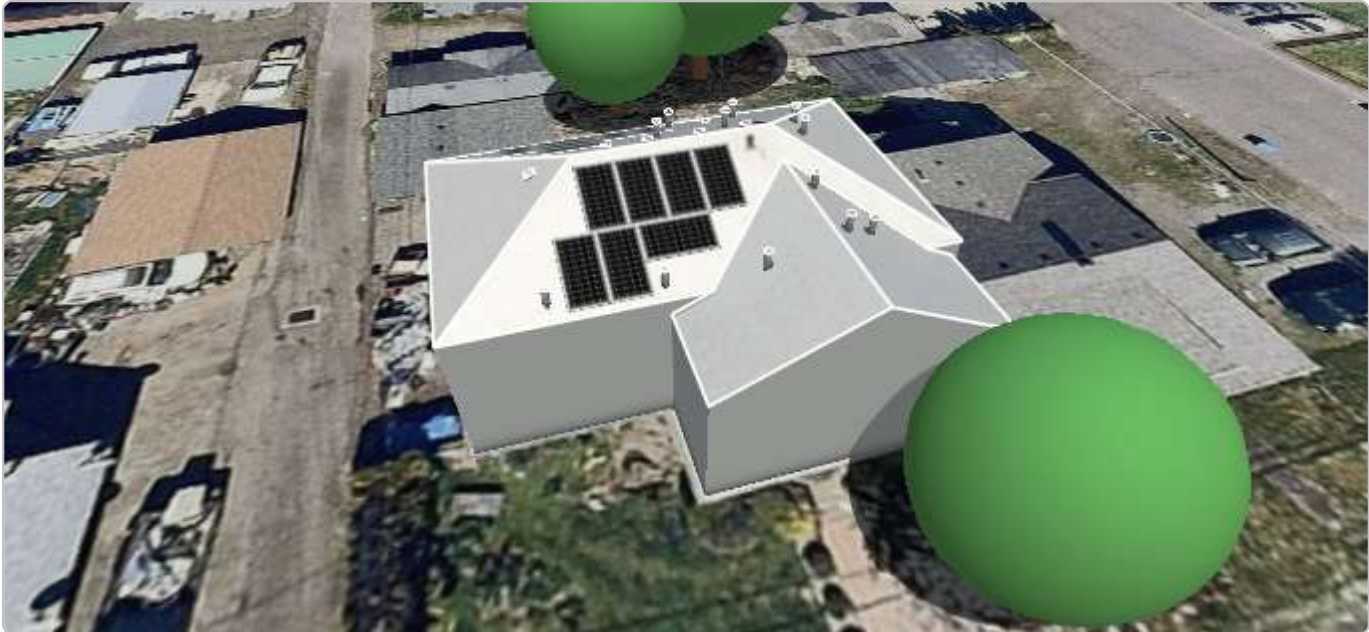
Zoomed out satellite view



3D model



3D model with LIDAR overlay 17 ft



Customer

Jonathan Brainard

Designer

Kyle Larson

Organization

Ion Solar

Address607 S McLoughlin Blvd
Oregon City, OR 97045,
USA**Coordinates**

(45.347011, -122.623454)

Date

16 January 2024

Street view and corresponding 3D model

I, **Kyle Larson**, certify that I have generated this shading report to the best of my abilities, and I believe its contents to be accurate.

OREGON INVENTORY OF HISTORIC PROPERTIES
HISTORIC RESOURCE INVENTORY FORM

Item #2.

HISTORIC NAME: Narcissa Bowers Residence

DATE OF CONSTRUCTION: 1909

COMMON NAME: _____

ORIGINAL USE: Residence

ADDRESS: 607 S. McLoughlin Boulevard

PRESENT USE: Residence

OWNER: R.J. Glowack, 607 S. McLoughlin Blvd.

ARCH./BLDR.: Unknown

STYLE: Altered Bungalow

T/R/S: 2-1E-36DD TAX LOT: 2500

BLDG. STRUC. DIST. SITE OBJ. (CIRCLE)

ADDITION: Plat of Canemah

THEME: Architecture, 20th Century

LOT: 7 BLOCK: 3 QUAD: Oregon City

PLAN TYPE/SHAPE: Rectangular

NO. OF STORIES: 1

FOUNDATION MATERIAL: Concrete

BASEMENT (Y/N): Yes

ROOF FORM & MATERIALS: Cross-gabled, low-pitched roof. Composition.

WALL CONSTRUCTION: Wood STRUCTURAL FRAME: Stud

PRIMARY WINDOW TYPE: Front casement windows; some older fixed and double-hung toward rear.

SURFACING MATERIALS: Masonite shingles. Artificial rock veneer at front.

DECORATIVE FEATURES: None.

OTHER: _____

CONDITION: EXCELLENT _____ GOOD _____ FAIR X DETERIORATED _____ MOVED _____ (date)

EXTERIOR ALTERATIONS/ADDITIONS (dated): Original porch (projecting gable) now enclosed. Front casement windows, probably mid-20th century.

NOTEWORTHY LANDSCAPE FEATURES: Nice front yard.

ASSOCIATED STRUCTURES: Shed.

KNOWN ARCHAEOLOGICAL FEATURES: None.

GEOGRAPHIC SETTING: Located on South McLoughlin Boulevard, a heavily-traveled State highway. An area of mixed commercial and residential uses.

STATEMENT OF SIGNIFICANCE: (Historical and/or architectural importance, dates, events, persons, contexts): Narcissa (May) Bowers was the widow of Canemah laborer William Bowers, a native New Yorker. Narcissa was born in Oregon in 1856. She purchased this house in her old age. The house has been severely altered and retains few of its original characteristics.

SOURCES: Federal Census, 1900, 1910. Pioneer National Title Company Records, Oregon City. Sanborn Insurance Map, 1900, 1911. Clackamas County Tax Rolls, 1901, 1905, 1910, 1915.

NEGATIVE NO: IV-E-16, 17

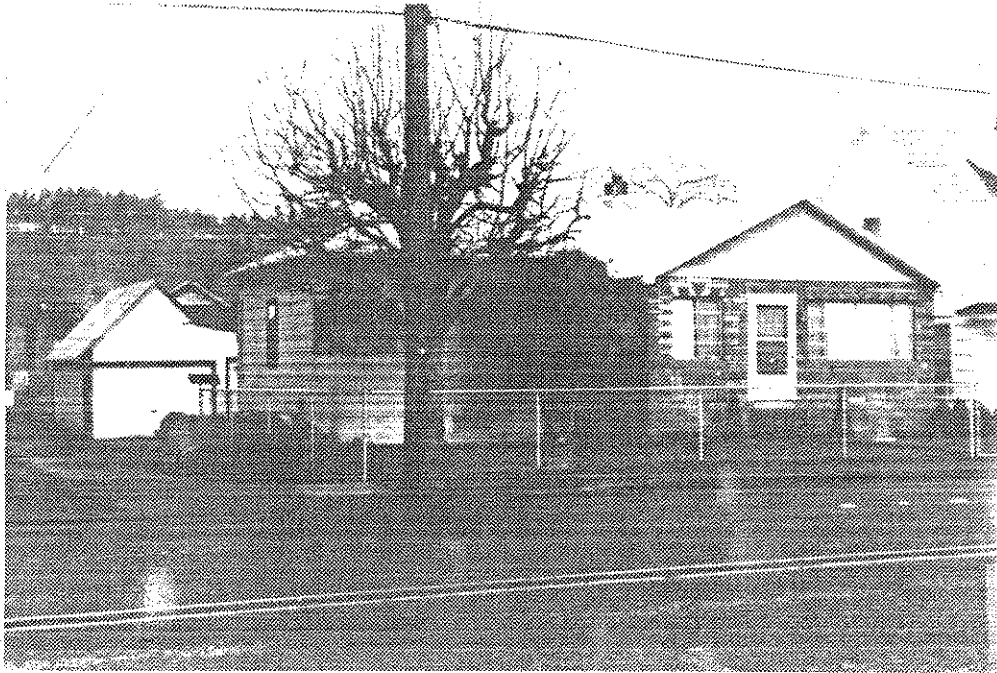
RECORDED BY: Patricia Erigero

SLIDE NO: _____

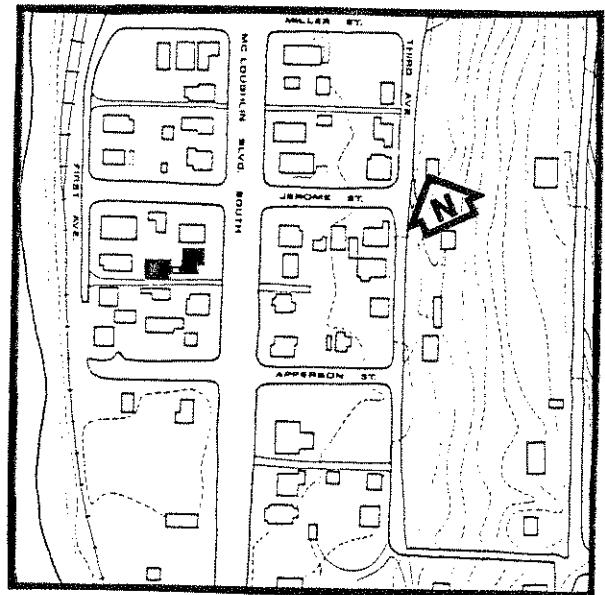
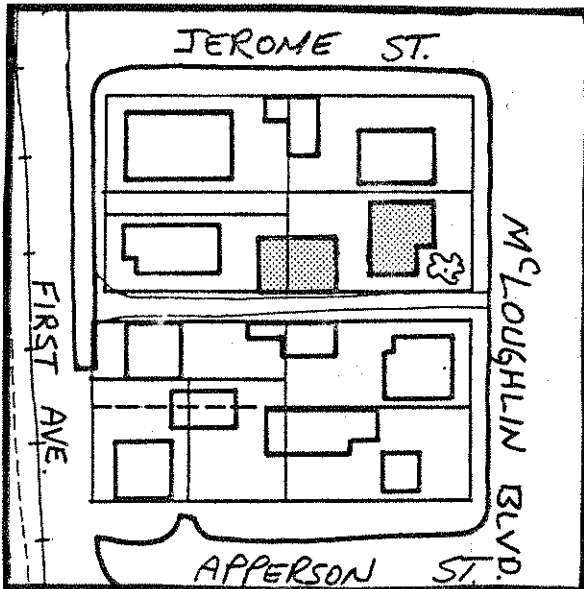
DATE: 1983

SHPO INVENTORY NO.: _____

OREGON INVENTORY OF HISTORIC PROPERTIES HISTORIC RESOURCE INVENTORY FORM - TWO

NAME: Narcissa Bowers ResidenceT/R/S: 2-1E-36DD TAX LOT 2500ADDRESS: 607 S. McLoughlin BoulevardQUADRANGLE: Oregon CityNEGATIVE NO. IV-E-16, 17

SLIDE NO. _____



GRAPHIC AND PHOTO SOURCES: Base Map of Canemah. Oregon City Planning Department
Photograph, 1988.

SHPO INVENTORY NO.: _____

Oregon Historic Site Form

Bowers, Narcissa Item #2.
607 S McLoughlin Blvd
Oregon City, Clackamas County

LOCATION AND PROPERTY NAME

address: <u>607 S McLoughlin Blvd</u> ☐ apprx. addr <u>Oregon City</u> ☐ vcnty <u>Clackamas County</u> Optional Information assoc addresses: (former addresses, intersections, etc.) location descr: (remote sites)	historic name: <u>Bowers, Narcissa, House</u> current/ other names: <u>Glowack, Mr & Mrs Hattie, House</u> block nbr: _____ lot nbr: _____ tax lot nbr: _____ township: <u>2 S</u> range: <u>1 E</u> section: <u>36</u> 1/4: _____ zip: _____
---	--

PROPERTY CHARACTERISTICS

resource type: <u>Building</u> height (# stories): <u>1</u> elig. evaluation: <u>not eligible/non-contributing</u> primary constr date: <u>1909</u> (c.) ☒ secondary date: _____ (c.) ☐ (optional--use for major addns) primary orig use: <u>Single Dwelling</u> secondary orig use: _____ primary style: <u>Minimal Traditional</u> secondary style: _____ primary siding: <u>Shingle</u> secondary siding: _____ plan type: _____ comments/notes: <u>Heavily altered; 1 NC secondary building; false stone front addition, replacement windows</u>	total # eligible resources: <u>0</u> total # ineligible resources: <u>2</u> NR status: <u>Listed in Historic District</u> (indiv listed only; see Grouping for hist dist) NR date listed: _____ orig use comments: _____ prim style comments: _____ sec style comments: _____ siding comments: <u>Asbestos shingle</u> architect: _____ builder: _____
--	---

GROUPINGS / ASSOCIATIONS

survey project name or other grouping name	Canemah Historic District, Listed on 10/11/1978	Listed Historic District
	Canemah Historic District RLS Survey Update, 2007	Survey & Inventory Project

farmstead/cluster name: _____

external site #: _____
(ID# used in city/agency database)

SHPO INFO FOR THIS PROPERTY

NR date listed: _____ NHD

ILS survey date: _____

RLS survey date: 6/1/2007

Gen File date: _____

106 Project(s)



South facade, looking north

Oregon Historic Site Form

Bowers, Narciss
607 S McLoughlin Blvd
Oregon City, Clackamas County

Item #2.

ARCHITECTURAL / PROPERTY DESCRIPTION

(Include expanded description of the building/property, setting, significant landscape features, outbuildings, and alterations)

HISTORY

(Chronological, descriptive history of the property from its construction through at least the historic period [preferably to the present])

RESEARCH INFORMATION

(Check all of the basic sources consulted and cite specific important sources)

- | | | | |
|---|---|---|---|
| ☐ Title Records | ☐ Census Records | ☐ Property Tax Records | ☐ Local Histories |
| ☐ Sanborn Maps | ☐ Biographical Sources | ☐ SHPO Files | ☐ Interviews |
| ☐ Obituaries | ☐ Newspapers | ☐ State Archives | ☐ Historic Photographs |
| ☐ City Directories | ☐ Building Permits | ☐ State Library | |

Local Library: _____ University Library: _____

Historical Society: _____ Other Repository: _____

Bibliography: