Planning Commission Meeting

7PM
Public Safety Building
401 E Third St
Hybrid: Instructions To Join Electronically At Www.Newbergoregon.Gov
Email Comments To: Fe.Bates@Newbergoregon.Gov
February 13, 2025

1. **CALL MEETING TO ORDER**

2. **ROLL CALL**

3. **PUBLIC COMMENTS**
   (5-minute maximum per person - for items not on the agenda)

4. **CONSENT CALENDAR**
   a. 1/9/25 Planning Commission Meeting Minutes

5. **QUASI-JUDICIAL PUBLIC HEARINGS**
   (complete registration form to give testimony - 5-minute maximum per person except for principals, unless otherwise set by majority motion of the Planning Commission).
   PUD24-0009 Nagomi at Springbrook 100-Unit Planned Unit Development at 3809 NE Springbrook Road
   PUD24-0001 Staff Report, Order, and Exhibits.pdf
   Attachment 1 - Application and Supplemental Materials.pdf
   Attachment 2 - Preliminary Plat.pdf
   Attachment 3 - Agency Comments.pdf

6. **ITEMS FROM STAFF**
   a. **Anticipated Schedule of Planning Commission Activities**
   b. **Staff Updates for Planning Commission**

7. **ITEMS FROM COMMISSIONERS**

8. **ADJOURNMENT**

Planning Commission Meeting

January 9, 2024

CALL MEETING TO ORDER
Meeting called to order at 7:00 p.m.

ROLL CALL
Commissioners Present:

Jason Dale
Linda Newton-Curtis (Chair)
Layne Quinn (Vice Chair)
Mathew Mansfield
Randy Rickert
Jose Villalpando
Kriss Wright

Commissioners Absent:

Elise Steffen (Student)

City Council Representative:

Jeri Turgesen

Staff Present:

Planning Manager: Clay Downing
Assistant Planner: Leanne Wagener
Associate Planner: Jeremiah Cromie
Community Development Director: Scot Siegel
Administrative Assistant: Fé Bates

INTRODUCTION OF NEW COMMISSIONERS

ELECTION OF NEW CHAIR AND VICE CHAIR
Chair Dale asked Vice Chair Linda Newton-Curtis if she would like to step up to Chair as since the standing custom has been for the Vice Chair to become the Chair, Commissioner Newton-Cutis accepted.

Commissioner Wright Nominated Linda Newton-Curtis as Chair of the Planning Commission, seconded by Commissioner Rickert.
Voice Vote: Unanimous YES

Commissioner Wright asked if Layne Quinn would except the position of Vice Chair, and Commissioner Quinn accepted.

Commissioner Wright Nominated Layne Quinn as Vice Chair of the Planning Commission, seconded by Commissioner Dale.
Voice Vote: Unanimous YES

PUBLIC COMMENTS

None

CONSENT CALENDAR

Approve December 12 Minutes

Action:	Approve the minutes from December 12, 2024
Motion:	Commissioner Griffiths
Second:	Commissioner Rickert
Voice Vote:	Unanimous Yes

QUASI-JUDICIAL PUBLIC HEARINGS

CUP24-0007: Conditional Use Permit to use a single-family dwelling as a vacation rental at 315 W Lindgren Dr.

Assistant Planner Wagener presented the Staff report to the Planning Commission and answered Commissioners questions about it.

Chair opened the floor Public Testimony:
PROPONENT: Applicant *Rick & Susan DeMatei* testified to the Commissioners in regard to their application and answered questions from Planning Commissioners.

Chair Closed the Public Testimony and asked for final comments from Staff:
Staff recommended approval of CUP24-0007 a conditional use permit to use a single-family dwelling as a vacation rental home at 315 W Lindgren Dr.

Chair Opened the floor for Planning Commissioners' deliberation:
After discussion the Planning Commission chose to:

Action:	Approve CUP24-0007 as a vacation rental home at 315 W Lindgren Dr.
Motion:	Commissioner Wright
Second:	Commissioner Quinn
Roll Call Vote:	7 YES ; __ NO; 1 Absent ; __ Abstained

CUP24-0008: Conditional Use Permit to use a single-family dwelling as a vacation rental at 510 N School St.

Assistant Planner Wagener presented the Staff report to the Planning Commission and answered Commissioners questions about it.

Chair opened the floor Public Testimony:
There was no public testimony.

Chair Closed the Public Testimony and asked for final comments from Staff:
Staff recommended approval of CUP24-0008 a conditional use permit to use a single-family dwelling as a vacation rental home at 510 N School St.

Chair Opened the floor for Planning Commissioners' deliberation:
Commissioner Write asked questions that needed to be answered by the applicant who was not present. Commission asked Staff if they could continue the hearing to the next meeting so the applicant could respond to the concerns. After discussion the Planning Commission chose to:

Action: Approve CUP24-0008 as a vacation rental home at 510 N School St.
Motion: Commissioner Wright
Second: Commissioner Dale
Roll Call Vote: 6 YES ; 1 NO; 1 Absent ; __ Abstained

CUP24-0004/DR224-0006/MISC124-0018: Conditional Use, Design Review & Stream Corridor Overlay Permit to Develop the West Branch Apartment Development on the corner of Hayes and Springbrook.
Associate Planner Cromie presented the Staff report to the Planning Commission and answered Commissioners questions about it.

Chair opened the floor Public Testimony:
PROPONENT: Applicant *DMKS LLC representative AKS* testified to the Commissioners in regard to the application and answered questions from Planning Commissioners.

OPPONENT: Commissioners heard testimony against the project regarding the effects it will have on the neighboring Grange Hall and the effect the additional light will have on the Drive-In; from:
Staras Gibson, Stephen Brunner, Zach Pelz, Sonia French, Brandon Slyter

Commissioners asked the applicant back up to ask some clarifying questions that were brought up from the testimony.

Chair Closed the Public Testimony and asked for final comments from Staff:
Staff recommended approval of CUP24-0004/DR224-0006/MISC124-0018: Conditional Use, Design Review & Stream Corridor Overlay Permit to Develop the West Branch Apartment Development on the corner of Hayes and Springbrook.

Chair Opened the floor for Planning Commissioners' deliberation:
After discussion and questions with staff the Planning Commission chose to:

Action: Approve CUP24-0004/DR224-0006/MISC124-0018 for a 96-unit Multifamily development
Motion: Commissioner Quinn

Second: Commissioner Dale
Roll Call Vote: 4 YES ; 3 NO; _1__ Absent ; __ Abstained

LEGISLATIVE PUBLIC HEARINGS

CA24-0002: Code Maintenance Package
Community Development Director Siege presented the staff report to the Planning Commission and answered Commissioners questions about it.

Chair opened the floor Public Testimony: NONE

Chair Closed the Public Testimony and asked for final comments from Staff:
Staff Recommends approving RES2025-398 which recommends City Council adopt the Code Amendments which clarify regulations and brings the code into compliance with State Land Use Requirements.

Chair Opened the floor for Panning Commissioners deliberation:
Commissioners agreed that the proposed changes to the code is beneficial for the City.

Action: Recommend adopting RES2025-398 as written by Staff.
Motion: Commissioner Wright
Second: Commissioner Mansfield
Roll Call Vote: 7 YES ; __ NO; 1 Absent ; __ Abstained

ITEMS FROM STAFF

Planning Manager Clay Downing informed the Commission of the anticipated schedule for the next Planning Commission meeting.

Associate Planner Cromie informed the Commission that the Craft Industrial District was approved by the City Council and if no appeals are submitted it will go in effect February 7th.

ITEMS FROM COMMISSIONERS

ADJOURNMENT

Meeting adjourned at _10:26__ p.m.

Attest:

Planning Commission Chair	Fé Bates, Planning Commission Secretary

STAFF REPORT
Planned Unit Development
3809 NE Springbrook Road (File No. PUD24-0001)

FILE NO:	PUD24-0001
REQUEST	100-unit planned unit development at 3809 NE Springbrook Road
LOCATION:	3809 NE Springbrook Road
TAX LOT:	R3209 02300
APPLICANT:	Ichijo USA Co. LTD c/o Masaki Narita
OWNER:	Ross D Kerr, Rolland G Kerr Jr.
ZONE:	Low Density Residential (R-1), High Density Residential (R-3)
PLAN DISTRICT:	Low Density Residential (LDR), High Density Residential (HDR)
OVERLAY:	Airport Overlay Subdistrict (AO) Stream Corridor Overlay Subdistrict (SC)

ATTACHMENTS:

Planning Commission Order 2025-01

Exhibit “A”: Findings
Exhibit “B”: Conditions of Approval

Attachment 1: Application and Supplemental Materials
Attachment 2: Preliminary Plat
Attachment 3: Agency Comments

Table of Contents

STAFF REPORT: APPLICATION INFORMATION
Planned Unit Development
3809 NE Springbrook Road (File No. PUD24-0001)

DESCRIPTION OF APPLICATION:

Ichijo USA Co. LTD c/o Masaki Narita (Applicant), on behalf of Ross D Kerr and Rolland G Kerr Jr. (Owners), proposes a 100-unit single family residential planned unit development (PUD) at 3809 NE Springbrook Road (Tax Lot R3209 02300) at a density of 5.2 dwelling units per acre. The proposed PUD includes 17 three-bedroom dwellings and 83 four-bedroom dwellings. The subject property is located within the City of Newberg's Urban Growth Boundary and city limit and was annexed through Ordinance No. 2024-2931 (File No. ANX24-0001).

Attachment 1 contains the Applicant's narrative, plans, and supporting documents. Attachment 2 illustrates the preliminary plat submitted with the application. According to the application materials, the proposed PUD will meet the City of Newberg's Development Code except for the following requirements that the Applicant is proposing to adjust through the PUD process:

- R-1 Zoning District Modification Requests

    1. NMC 15.405.030(D)(a) – requires that each lot or development site shall have either frontage on a public street for a distance of at least 25 feet or have access to a public street through an easement that is at least 25 feet wide.

        i. *Request: 20-foot shared access easement for Lots 82 and 83, and a 20.1-foot frontage for Lot 12.*

    2. NMC 15.405.040(B) – limits maximum lot coverage for residential uses to 40 percent and combined maximum lot and parking coverage to 60 percent in the R-1 zoning district.

        i. *Request: Maximum lot coverage of 50% in the R-1 zoning district.*

- R-1 and R-3 Zoning District Modification Requests

    1. NMC 15.240.020(K) – limits building height to a sun exposure plane.

        i. *Request: Intrusions into the sun exposure plane for certain lots.*

The proposed PUD is also in the Airport Overlay Subdistrict and Stream Corridor Overlay Subdistrict and is required to comply with NMC 15.340 and NMC 15.342 which is addressed elsewhere in this staff report.

Aerial Photo of Site

3809 NE Springbrook Road

- Subject Property
- Taxlots
- City Limits
- Urban Growth Boundary
- Urban Reserve Area

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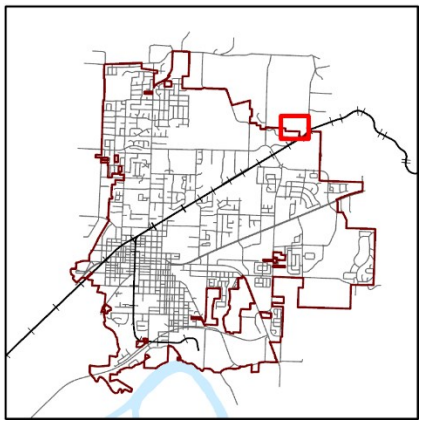
0 200 400 Feet



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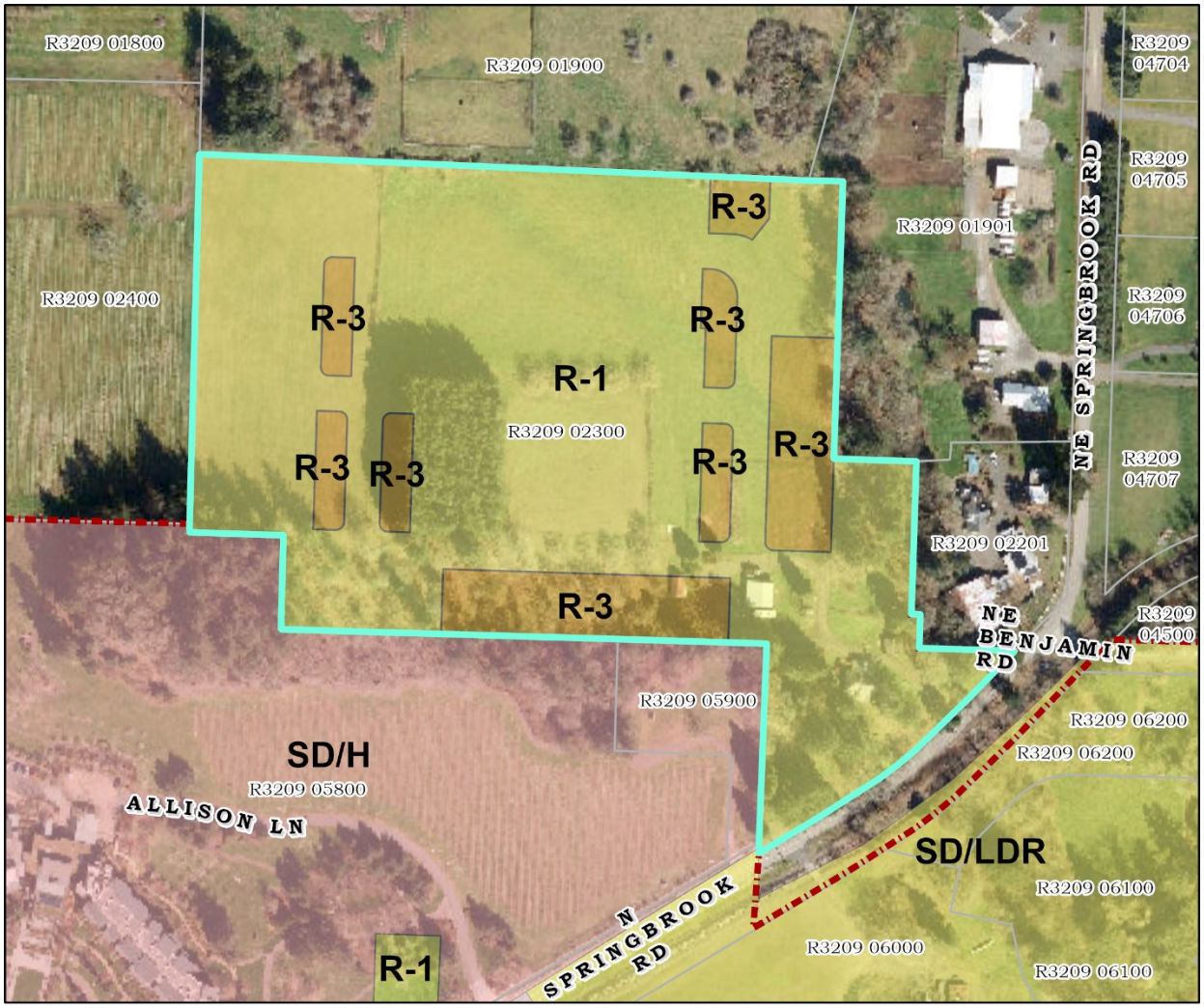
This map is intended for general planning purposes only.
Map updated: 11/13/2023

Zoning Map



3809 NE Springbrook Road - Zoning

- Subject Property
- Taxlots
- City Limits

ZONING

- R-1 Low Density Residential
- R-3 High Density Residential
- SD/H Springbrook District - Hospitality
- SD/LDR Springbrook Distrct - Low Density Residential
- SD/V Springbrook District - Village

N
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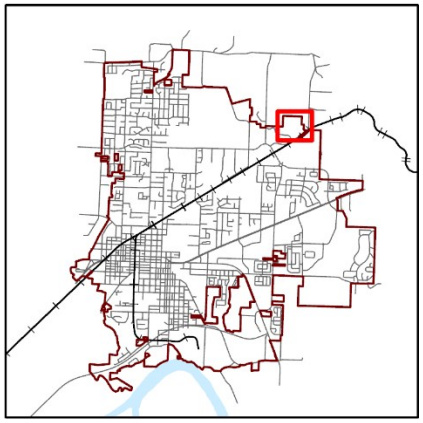
0 250 500 Feet



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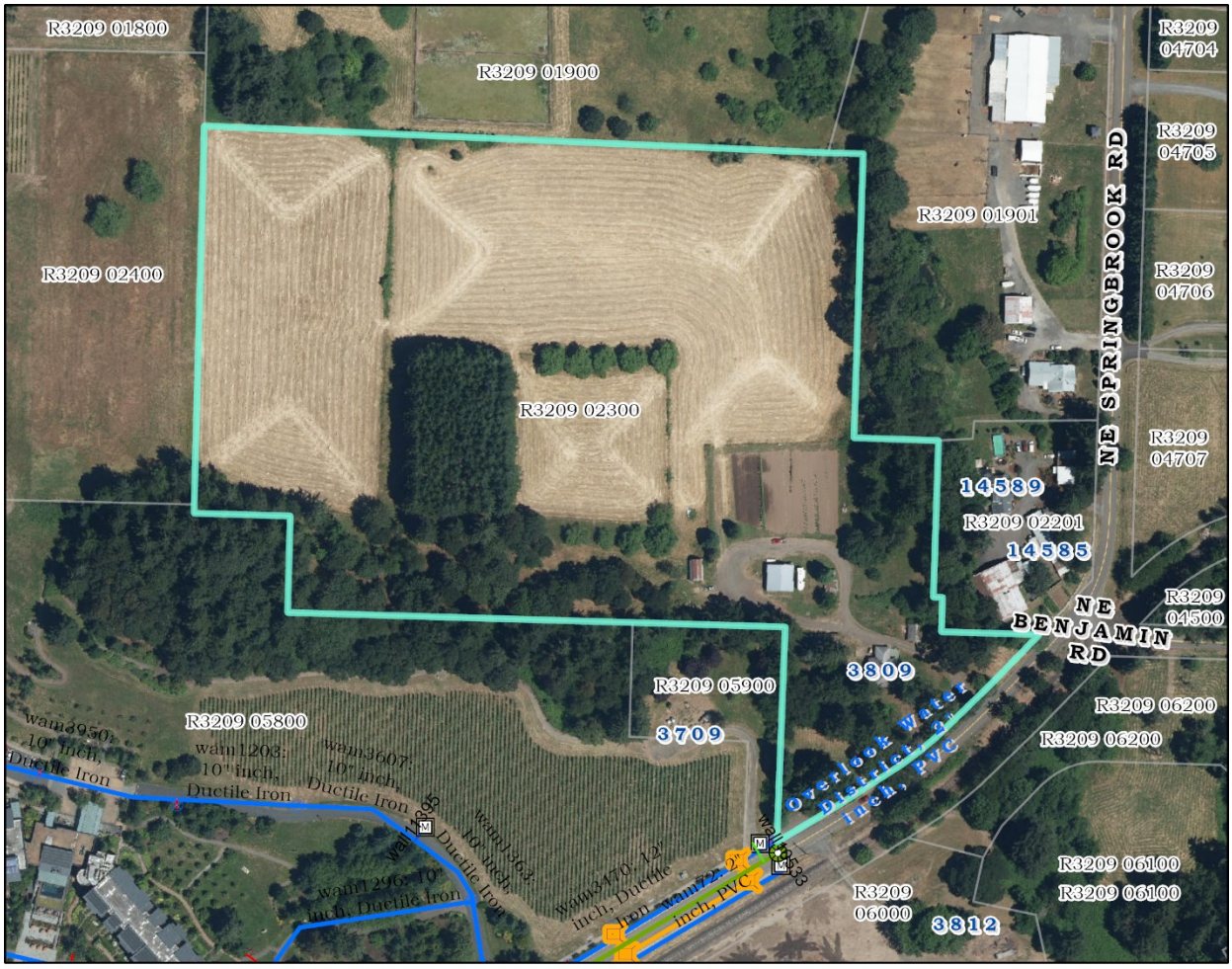
Date Exported: 12/9/2024 9:46 AM

Site Utilities Map

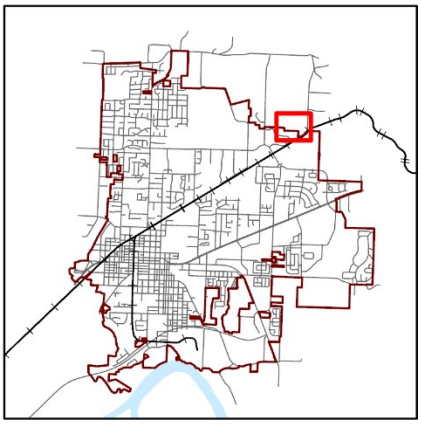


3809 NE Springbrook Road - Utilities

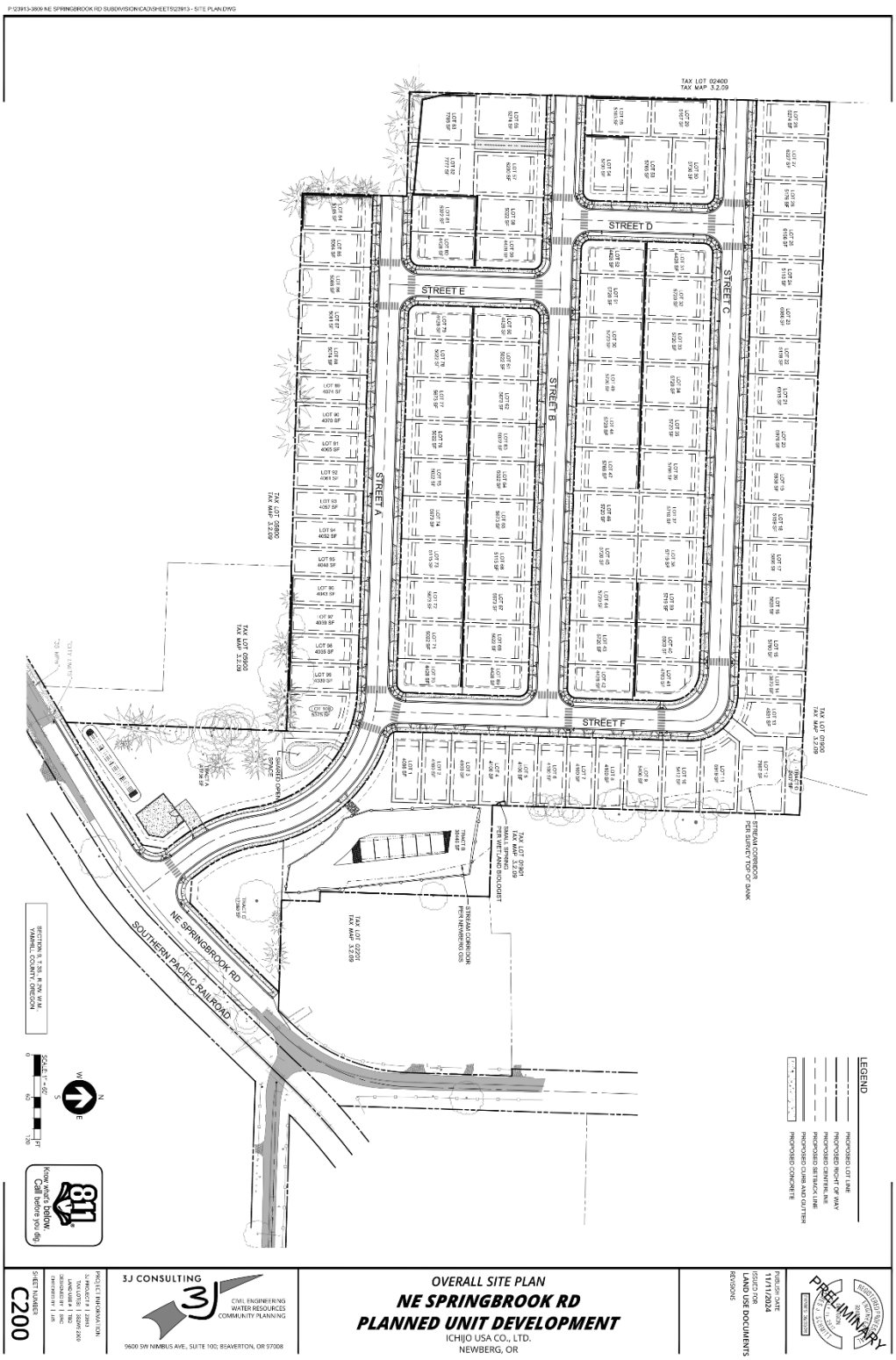
- Subject Property
- Taxlots
- Sewer Manholes
- Sewer Laterals
- Gravity Main
- Active Storm Inlet
- Collector Storm Pipe
- Water Meter
- Water Valves
- CITY OF NEWBERG, Potable Main
- Hydrant Lateral
- Service Lateral

N W E S

0 250 500 Feet



Site Plan


P:\23913-3909 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - SITE PLAN.DWG
TAX LOT 02400
TAX MAP 3.2.09
STREET D
STREET E
STREET C
STREET B
STREET A
STREET F
TAX LOT 00800
TAX MAP 3.2.09
TAX LOT 00900
TAX MAP 3.2.09
TAX LOT 01000
TAX MAP 3.2.09
TAX LOT 01001
TAX MAP 3.2.09
TAX LOT 02201
TAX MAP 3.2.09
TRACT B
TRACT A
STREAM CORRIDOR PER WETLAND BIOLOGIST
STREAM CORRIDOR PER SURVEY TOP OF BANK
STREAM CORRIDOR PER APPENDIX C5B
NE SPRINGBROOK RD
SOUTHERN PACIFIC RAILROAD
SECTION 5, T 3S, R 2W, W.M.
YAMHILL COUNTY, OREGON
SCALE: 1" = 40'
Know what's below. Call before you dig.
811
LEGEND
PROPOSED LOT LINE
PROPOSED RIGHT OF WAY
PROPOSED CENTER LINE
PROPOSED SETBACK LINE
PROPOSED CURB AND GUTTER
PROPOSED CONCRETE
SHEET NUMBER
C200
PROJECT INFORMATION
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100, BEAVERTON, OR 97008
OVERALL SITE PLAN
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT
ICHIJO USA CO., LTD.
NEWBERG, OR
PLOT DATE
11/11/2024
ISSUED FOR
LAND USE DOCUMENTS
REVISIONS
PRELIMINARY

SITE INFORMATION:

1. Location: 3809 NE Springbrook Road (R3209 02300)
2. Size: ±19.16 acres (±830,311 square feet)
3. Current Land Uses: Residential (Single-family dwelling), Agricultural
4. Natural Features: Agricultural landscaping, wooded areas, and Stream Corridor Overlay Subdistrict along the eastern boundary of the site.
5. Adjacent Land Uses:
    a. North: Agricultural
    b. South: Commercial, Agricultural
    c. East: Residential, Commercial
    d. West: Commercial, Agricultural
6. Zoning: The following zoning districts abut the subject property.
    a. North: Unincorporated
    b. East: Unincorporated, Springbrook District/Low Density Residential (SD/LDR)
    c. South: Springbrook District/Hospitality (SD/H), Springbrook District/Low Density Residential (SD/LDR)
    d. West: Unincorporated, Springbrook District/Hospitality (SD/H)
7. Comprehensive Plan Designations: The following Comprehensive Plan districts abut the subject property.
    e. North: Outside the Urban Growth Boundary
    f. East: Outside the Urban Growth Boundary, Springbrook District/Low Density Residential (SD/LDR)
    g. South: Specific District/Hospitality (SD/H), Springbrook District/Low Density Residential (SD/LDR)
    h. West: Low Density Residential (LDR), Springbrook District/Hospitality (SD/H)
8. Access and Transportation: The property's boundaries have frontage on the public right-of-way on N Springbrook Road to the south. Vehicular access is available from this frontage.

9. Utilities:

   A. Water: The City's online GIS indicates that there is an active public 12-inch water main in Springbrook Road which dead ends approximately at the southwest corner of the property boundary.

   B. Wastewater: The City's online GIS mapping shows there is an existing 15-inch wastewater gravity main in NE Springbrook Road, which dead ends approximately at the southwest corner of the property boundary.

   C. Stormwater: The City's online GIS mapping shows there is an existing 12-inch stormwater main in NE Springbrook Road, which dead ends approximately at the southwest corner of the property boundary.

   D. Overhead Lines: There are overhead utility lines along the NE Springbrook Road property frontage.

PROCESS:

The planned unit development request is a Type III application and follows the procedures in NMC 15.100.050. The Planning Commission will hold a quasi-judicial hearing on the application. The Commission is to make a decision on the application based on the criteria listed in the attached findings. The Planning Commission's decision is final unless appealed.

Important dates related to this application are as follows:

1.	12/2/2024:	The Community Development Director deemed the application complete. Application materials are provided in Attachment 1.
2.	12/10/2024:	Application was routed for a 15-day referral review.
3.	1/23/2025:	The Applicant mailed public notice pursuant to NMC 15.100.200.
4.	1/24/2025:	The Applicant posted public notice pursuant to NMC 15.100.200.
5.	1/30/2025:	The *Newberg Graphic* published notice of the Planning Commission hearing and City published notice in four public places.
6.	2/13/2025:	The Planning Commission will hold a quasi-judicial hearing to consider the application.

AGENCY COMMENTS:

The application was routed to several public agencies for review and comment which are provided in Attachment 3. Comments and recommendations from city departments have been incorporated into the findings and conditions.

As of the writing of this report, the city received the following agency comments:

1. Community Development Director: Reviewed, no conflict.

2. Newberg Dundee Police Department: Reviewed, no conflict.

3. Public Works Engineering: Comments were provided and are incorporated into the Findings and Conditions of Approval.

PUBLIC COMMENTS:

As of the time of writing this staff report no public comments have been received.

ANALYSIS

The Applicant is proposing a 100-lot residential planned unit development on a property that is zoned R-1 and R-3 with limited residential streets. The Applicant is requesting three modifications to the Newberg Municipal Code development standards, which is allowed through the PUD process. The modification requested is to frontage width limitations for three lots in the R-1 zoning district, the lot coverage limitations of all lots in the R-1 zoning district, and the sun exposure plane height limitation of some proposed dwellings.

PRELIMINARY STAFF RECOMMENDATION:

The preliminary staff recommendation is made in the absence of public hearing testimony and may be modified subsequent to the close of the public hearing. At this writing, staff recommends the following motion:

Move to adopt Planning Commission Order 2025-01, which approves the requested planned unit development with conditions.

PLANNING COMMISSION ORDER 2025-01

AN ORDER APPROVING PUD24-0001 FOR THE NAGOMI AT SPRINGBROOK PLANNED UNIT DEVELOPMENT AT 3809 NE SPRINGBROOK ROAD, YAMHILL COUNTY TAX LOT NUMBER R3209 02300

RECITALS

1. Ichijo USA Co. LTD c/o Masaki Narita submitted an application for preliminary plan approval of a Planned Unit Development (PUD) for 100 lots of residential use and four (4) tracts on Low Density Residential (R-1) and High Density Residential (R-3) zoned property at 3809 NE Springbrook Road with the Yamhill County Tax Lot number R3209 02300.

2. The Newberg Planning Commission held a properly noticed hearing on February 13, 2025, to consider the application. The Commission considered testimony and deliberated.

3. The Newberg Planning Commission finds that the application meets the applicable Newberg Development Code criteria as shown in the findings in Exhibit "A".

The Newberg Planning Commission resolves as follows:

1. The PUD preliminary plan application PUD24-0001 is hereby approved, subject to the conditions contained in Exhibit "B". Exhibit "B" is hereby adopted and by this reference incorporated.

2. The findings shown in Exhibit "A" are hereby adopted and by this reference incorporated.

3. This Order shall be effective February 28, 2025, unless appealed prior to that date.

4. This order shall expire one year after the effective date above if the Applicant does not apply for final plan approval by that time, unless an extension is granted per NMC 15.240.020.

Adopted by the Newberg Planning Commission this February 13, 2025.

ATTEST:

Planning Commission Chair

Planning Commission Secretary

EXHIBIT "A" TO PLANNING COMMISSION ORDER NO. 2025-01
FINDINGS
Planned Unit Development
3809 NE Springbrook Road (File No. PUD24-0001)

The Newberg Municipal Code (NMC) criteria and development standards are written in ***italic bold*** font and the findings are written in regular font. The NMC criteria will be presented first, followed by the findings of fact.

Findings of fact with underlined font indicate subsequent inclusion into Conditions of Approval.

A. FINDINGS FOR LAND USE PROCESSES AND PROCEDURES (NMC DIVISION 15.100)

Chapter 15.100 LAND USE PROCESSES AND PROCEDURES

15.100.050 Type III procedure – Quasi-judicial hearing.
[…]

B. Type III actions include, but are not limited to:

[..]

3. Planned unit developments: This action is a final decision unless appealed.

[…]

Finding: Because this application is for a proposed planned unit development, it is processed as a Type III action including a final decision by the Newberg Planning Commission. The decision may be appealed to the City Council.

C. Planning Commission Decisions and Recommendation Actions.

1. Planning Commission Decision. Development actions shall be decided by the planning commission for those land use actions that require a Type III procedure and do not require the adoption of an ordinance. The decision shall be made after public notice and a public hearing is held in accordance with the requirements of NMC 15.100.090 et seq. A Type III decision may be appealed to the city council by a Type III affected party in accordance with NMC 15.100.160 et seq.

2. Planning Commission Recommendation to City Council. Land use actions that would require the adoption of an ordinance shall be referred to the city council by the planning commission together with the record and a recommendation. The recommendation shall be made after public notice and a public hearing is held in accordance with the requirements of NMC 15.100.090 et seq.

Finding: Because the proposed planned unit development decision is final unless appealed, the Planning Commission decision shall be the final decision unless appealed to City Council.

D. City Council Action. If a recommendation to the city council is required, the matter shall be reviewed by the city council as a new hearing. The final decision on these actions is made by the city council.

Finding: The decision on a planned unit development application does not require a recommendation to the City Council. This criterion is not applicable.

E. The applicant shall provide notice pursuant to NMC 15.100.200 et seq.

Finding: The Applicant submitted an affidavit that the required notice was mailed on January 23, 2025, and posted on the site on January 24, 2025. The City posted notice in four public places and in a newspaper of record on January 30, 2025.

Because the Applicant provided notice pursuant to NMC 15.100.200 et seq., this criterion is met.

F. The hearing body may attach certain conditions necessary to ensure compliance with this code.

Finding: Conditions of approval are attached as Exhibit "B" to Planning Commission Order 2025-01.

[…]

B. FINDINGS FOR LAND USE APPLICATIONS (NMC DIVISION 15.200)

Chapter 15.240 PD PLANNED UNIT DEVELOPMENT REGULATIONS

15.240.020 General provisions.
A. Ownership. Except as provided herein, the area included in a proposed planned unit development must be in single ownership or under the development control of a joint application of owners or option holders of the property involved.

Finding: The application materials and submitted title report indicate that the area included in the planned unit development is owned as tenants in common. Because the PUD area is under the development control of a joint application of owners, this criterion is met.

B. Processing Steps – Type III. Prior to issuance of a building permit, planned unit development applications must be approved through a Type III procedure and using the following steps:

> ***1. Step One – Preliminary Plans. Consideration of applications in terms of on-site and off-site factors to assure the flexibility afforded by planned unit development regulations is used to preserve natural amenities; create an attractive, safe, efficient, and stable environment; and assure reasonable compatibility with the surrounding area. Preliminary review necessarily involves consideration of the off-site impact of the proposed design, including building height and location.***
>
> ***2. Step Two – Final Plans. Consideration of detailed plans to assure substantial conformance with preliminary plans as approved or conditionally approved. Final plans***

need not include detailed construction drawings as subsequently required for a building permit.

Finding: This PUD application is being processed as a Type III procedure per NMC 15.100.050(B)(3). The Applicant has acknowledged the two-step PUD approval process and has submitted this application in support of Step One – Preliminary Plan approval. The consideration of on-site and off-site factors for the PUD to preserve natural amenities, create an attractive, safe, efficient, and stable environment, and assure reasonable compatibility with the surrounding area is addressed in this staff report.

Prior to the issuance of building permits, the Applicant shall submit final plans for approval of the Step Two – Final PUD Plan review process using the City's Type I procedure.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

C. Phasing. If approved at the time of preliminary plan consideration, final plan applications may be submitted in phases. If preliminary plans encompassing only a portion of a site under single ownership are submitted, they must be accompanied by a statement and be sufficiently detailed to prove that the entire area can be developed and used in accordance with city standards, policies, plans and ordinances.

Finding: No phasing is proposed for the planned unit development. Because no phasing is proposed, this criterion is not applicable.

D. Lapse of Approval. If the applicant fails to submit material required for consideration at the next step in accordance with the schedule approved at the previous step or, in the absence of a specified schedule, within one year of such approval, the application as approved at the previous step expires. If the applicant fails to obtain a building permit for construction in accordance with the schedule as previously approved, or in the absence of a specified schedule, within three years of a preliminary plan approval, preliminary and final plan approvals expire. Prior to expiration of plan approval at any step, the hearing authority responsible for approval may, if requested, extend or modify the schedule, providing it is not detrimental to the public interest or contrary to the findings and provisions specified herein for planned unit developments. Unless the preliminary plan hearing authority provides to the contrary, expiration of final plan approval of any phase automatically renders all phases void that are not yet finally approved or upon which construction has not begun.

Finding: The Applicant acknowledges the Lapse of Approval procedures and requirements. This criterion is met.

E. Resubmittal Following Expiration. Upon expiration of preliminary or final plan approval, a new application and fee must be submitted prior to reconsideration. Reconsideration shall be subject to the same procedures as an original application.

Finding: The Applicant acknowledges the Resubmittal Following Expiration procedures and requirements. This criterion is met.

F. Density. Except as provided in NMC 15.302.040 relating to subdistricts, dwelling unit density provisions for residential planned unit developments shall be as follows:

1. Maximum Density.

a. Except as provided in adopted refinement plans, the maximum allowable density for any project shall be as follows:

District	*Density Points*
R-1	*175 density points per gross acre, as calculated in subsection (F)(1)(b) of this section*
R-2	*310 density points per gross acre, as calculated in subsection (F)(1)(b) of this section*
R-3	*640 density points per gross acre, as calculated in subsection (F)(1)(b) of this section*
RP	*310 density points per gross acre, as calculated in subsection (F)(1)(b) of this section*
C-1	*As per required findings*
C-2	*As per required findings*
C-3	*As per required findings*

b. Density point calculations in the following table are correlated to dwellings based on the number of bedrooms, which for these purposes is defined as an enclosed room which is commonly used or capable of conversion to use as sleeping quarters. Accordingly, family rooms, dens, libraries, studies, studios, and other similar rooms shall be considered bedrooms if they meet the above definitions, are separated by walls or doors from other areas of the dwelling and are accessible to a bathroom without passing through another bedroom. Density points may be reduced at the applicant's discretion by 25 percent for deed-restricted affordable dwelling units and/or middle housing dwelling units as follows:

Density Point Table

Dwelling Type	*Density Points: Standard Dwelling*	*Density Points: Income-Restricted Affordable Dwelling Unit*
Studio and efficiency	*12*	*9*
One-bedroom	*14*	*11*
Two-bedroom	*21*	*16*
Three-bedroom	*28*	*21*

Dwelling Type	*Density Points: Standard Dwelling*	*Density Points: Income-Restricted Affordable Dwelling Unit*
Four or more bedrooms	*35*	*26*

Duplex, triplex or quadplex dwellings shall be counted as a single dwelling unit, inclusive of all bedrooms in the combined dwelling units, for purposes of calculating density points. Four townhouse dwellings or cottage dwellings shall count as one standard dwelling, inclusive of all bedrooms in the combined dwelling units.

The density points in the right-hand column are applicable to income-restricted affordable dwelling units, provided the dwelling units meet the affordability criteria under NMC 15.242.030 regarding affordable housing requirements for developments using the flexible development standards.

2. Approved Density. The number of dwelling units allowable shall be determined by the hearing authority in accordance with the standards set forth in these regulations. The hearing authority may change density subsequent to preliminary plan approval only if the reduction is necessary to comply with required findings for preliminary plan approval or if conditions of preliminary plan approval cannot otherwise be satisfied.

3. Easement Calculations. Density calculations may include areas in easements if the applicant clearly demonstrates that such areas will benefit residents of the proposed planned unit development.

4. Dedications. Density calculations may include areas dedicated to the public for recreation or open space.

5. Cumulative Density. When approved in phases, cumulative density shall not exceed the overall density per acre established at the time of preliminary plan approval.

Finding: The application materials indicate that the proposed planned unit development includes 16.14 gross acres of Low Density Residential (R-1) zoning and 3.02 acres of High Density Residential (R-3) zoning, and that the PUD will include 17 three-bedroom and 83 four-bedroom units. The following tables indicate the maximum density points allowed and proposed in the PUD.

Zoning District	Gross Size (acres)	Density Points / Gross Acre	Maximum Density Points Allowed
R-1	16.14	175	2,842.5
R-3	3.02	640	1,932.8

Total	*19.16*	*4,775.3*

Dwelling Type	Number of Units	Density Points / Unit	Total Density Points Provided
Three-bedroom	17	28	476
Four-bedroom	83	35	2,905
Total	*100*		*3,381*

The proposed PUD requires 3,381 density points, which is less than the maximum allowable density based on the site, zoning, and 4,775.3 density point calculation for the site. The gross acreage of the subject property used to calculate the maximum density point allowance includes access easements, tracts, and right-of-way. No dedication of land for recreation or open space is proposed in the PUD. Because the proposed PUD does not exceed the maximum density point allowance, this criterion is met.

G. Buildings and Uses Permitted. Buildings and uses in planned unit developments are permitted as follows:

1. R-1, R-2, R-3 and RP Zones.

a. Buildings and uses permitted outright or conditionally in the use district in which the proposed planned unit development is located.

b. Accessory buildings and uses.

c. Dwellings, single, manufactured, and multifamily.

d. Convenience commercial services which the applicant proves will be patronized mainly by the residents of the proposed planned unit development.

Finding: The proposed PUD includes single-family dwellings which are a permitted use in the R-1 and R-3 zoning districts. NMC 15.305.020 notes (2) and (3) indicate that single-family dwellings are a permitted use in the R-1 zoning district limited to one per lot and that single-family dwellings on individual lots in the R-3 zoning district will only be permitted through the PUD process. Because the proposed single-family dwellings are limited to one per lot and the application is being reviewed through the PUD process, this criterion is met.

H. Professional Coordinator and Design Team. Professional coordinators and design teams shall comply with the following:

1. Services. A professional coordinator, licensed in the State of Oregon to practice architecture, landscape architecture or engineering, shall ensure that the required plans

are prepared. Plans and services provided for the city and between the applicant and the coordinator shall include:

a. Preliminary design;

b. Design development;

c. Construction documents, except for single-family detached dwellings and duplexes in subdivisions; and

d. Administration of the construction contract, including, but not limited to, inspection and verification of compliance with approved plans.

2. Address and Attendance. The coordinator or the coordinator's professional representative shall maintain an Oregon address, unless this requirement is waived by the director. The coordinator or other member of the design team shall attend all public meetings at which the proposed planned unit development is discussed.

3. Design Team Designation. Except as provided herein, a design team, which includes an architect, a landscape architect, engineer, and land surveyor, shall be designated by the professional coordinator to prepare appropriate plans. Each team member must be licensed to practice the team member's profession in the State of Oregon.

4. Design Team Participation and Waiver. Unless waived by the director upon proof by the coordinator that the scope of the proposal does not require the services of all members at one or more steps, the full design team shall participate in the preparation of plans at all three steps.

5. Design Team Change. Written notice of any change in design team personnel must be submitted to the director within three working days of the change.

6. Plan Certification. Certification of the services of the professionals responsible for particular drawings shall appear on drawings submitted for consideration and shall be signed and stamped with the registration seal issued by the State of Oregon for each professional so involved. To assure comprehensive review by the design team of all plans for compliance with these regulations, the dated cover sheet shall contain a statement of review endorsed with the signatures of all designated members of the design team.

Finding: The application materials indicate that a professional engineer licensed in the State of Oregon has ensured that all required plans are prepared, certified as necessary, and submitted. The Applicant acknowledges the process for a design team change. Because the PUD is being coordinated by a licensed professional engineer and design team, this criterion is met.

I. Modification of Certain Regulations. Except as otherwise stated in these regulations, fence and wall provisions, general provisions pertaining to height, yards, area, lot width, frontage, depth and coverage, number of off-street parking spaces required, and regulations pertaining to setbacks specified in this code may be modified by the hearing authority, provided the proposed development will be in accordance with the purposes of this code and those regulations. Departures from the hearing authority upon a finding by the engineering director

that the departures will not create hazardous conditions for vehicular or pedestrian traffic. Nothing contained in this subsection shall be interpreted as providing flexibility to regulations other than those specifically encompassed in this code.

Finding: The planned unit development process allows the hearing authority to modify the requirements for certain development standards. The Applicant has requested (1) that the minimum lot width be reduced for three lots in the R-1 zoning district, (2) that the maximum lot coverage for all lots in the R-1 zoning district be increased from 50 percent to 60 percent, and (3) for certain lots in the R-1 and R-3 zoning districts be allowed to intrude into the sun exposure plane described in NMC 15.240.020(K).

- *Modification 1: Minimum lot width modification for three lots in the R-1 zoning district*

NMC 15.405.030(D)(1)(a) requires that each lot or development site shall have either frontage on a public street for a distance of 25 feet or have access to a public street through an easement that is at least 25 feet wide and NMC 15.405.030(D)(1)(c) requires that each lot in the R-1 zoning district shall have a minimum width of 35 feet at the front building line. Lots 82 and 83 on the proposed plat map are flag lots that are proposed to have access to Street B via a 20-foot-wide easement. The Applicant has also proposed Lot 12 to have a driveway access with a width of 20.1 feet. All three lots are in the R-1 zoning district, and the site plan included in the application materials indicates that each lot will be at least 35 feet at the front building line. Prior to the approval of Step 2 Final Plan Consideration the Applicant shall record a shared access easement for Lots 82 and 83. The City of Newberg Staff Engineers have reviewed the development proposal and have not found hazardous conditions created for vehicular or pedestrian traffic if all conditions are adhered to. If approved, the Planning Commission would be granting a 20 percent reduction from the required 25-foot minimum frontage requirement.

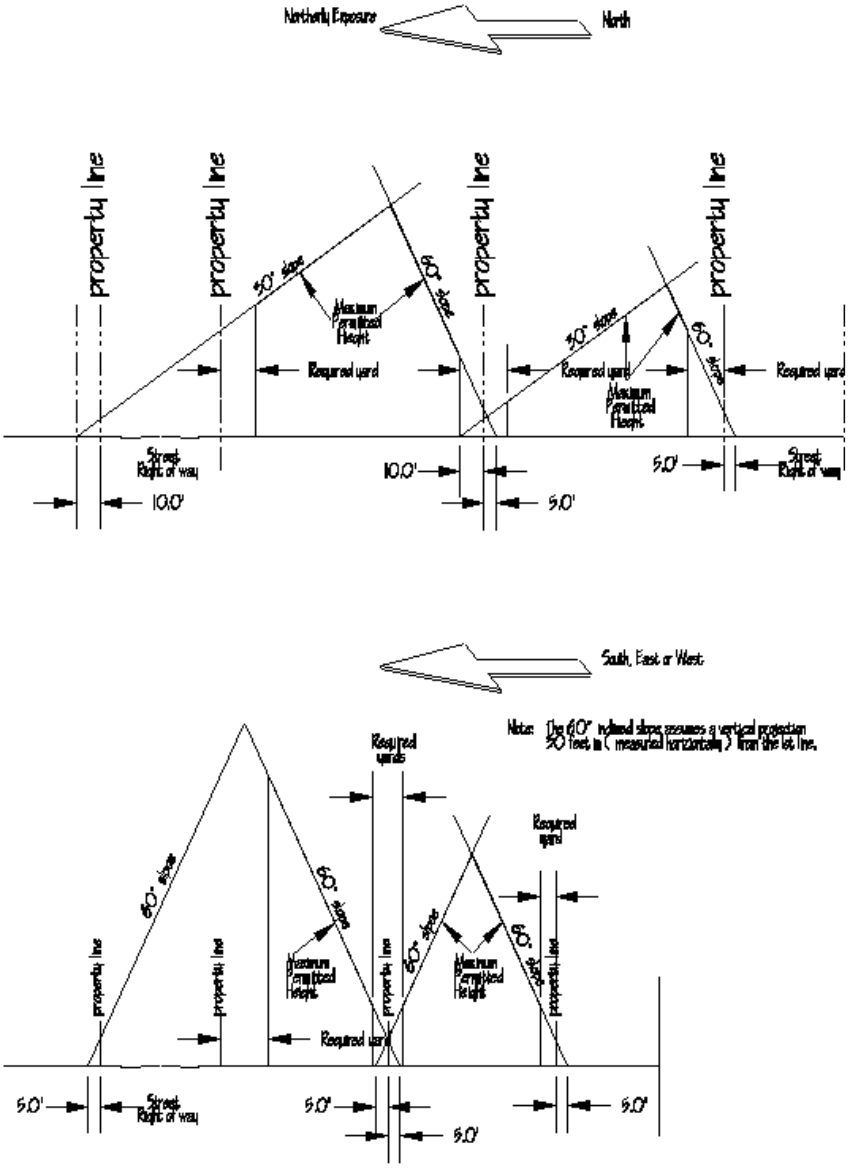
- *Modification 2: Maximum lot coverage for all lots in the R-1 zoning district modification from 50 to 60 percent*

NMC 15.405.040(B)(1)(a) indicates that residential uses in the R-1 zoning district shall have a maximum lot coverage of 40 percent (50 percent if all structures on the lot are one story and 60 percent for townhouse dwellings), a maximum parking coverage of 30 percent, and a combined maximum lot and parking coverage of 60 percent. The Applicant has requested that all lots in the R-1 zoning district have a maximum lot coverage of 50 percent, an increase of 10 percent, and no change to the maximum combined lot and parking coverage of 60 percent. The Applicant has indicated that the requested increase in lot coverage will allow for the development of larger homes on the lot with a greater number of bedrooms. The Applicant's narrative also indicates that some of the proposed dwellings will be single-family, which would meet the exception in NMC 15.405.040(B)(1)(a)(i), and that the distribution of single story and multi-story dwellings will be mixed throughout the development. Staff finds that the proposed mix of housing design types and provision of dwellings with a greater number of bedrooms furthers the City's Comprehensive Plan goal of providing diversity in the type of housing within the City (Goal I). The proposed increase does not change the overall maximum combined lot and parking coverage, and therefore the total improved area of each lot will remain the same. The preliminary plat included with the application materials indicates the location of yard setbacks but does not include the proposed building footprints or parking areas, which will be evaluated for conformance with this code at the time of building permit submittal. If approved, the Planning

Commission would be granting a 10 percent increase in the maximum lot coverage area in the R-1 zoning district for multi-story dwellings.

- *Modification 3: Allow certain lots in the R-1 and R-3 zoning districts to intrude into the sun exposure plane*

NMC 15.240.020(K) requires that unless the hearing authority determines that intrusion of structures into the sun exposure plane will not adversely affect the occupants or potential occupants of adjacent properties, all buildings and structures shall be constructed within the area contained between the lines illustrating the sun exposure plan as depicted in NMC Appendix A, Figure 8, shown below.



NMC Appendix A. Figure 8. Sun Exposure Plane

The application materials include depictions of a potential building elevation's intrusion into the sun exposure plane in the R-1 and R-3 zoning districts. The R-1 lots that would be impacted (Lots 32-40 and 43-51) constitute a minor intrusion that does not adversely affect the occupants of adjacent dwellings as depicted. The application materials do not indicate which dwelling type will be constructed on each lot, and so the impact of the intrusion may vary. The depicted intrusion into the sun exposure plane on the impacted R-3 lots (Lots 1-8 and 89-99) is more significant. The Applicant's narrative indicates that the PUD is proposing larger dwellings on the R-3 lots, consistent with included elevations for the dwellings in the R-1 zoning district, which will be developed at a higher density consistent with the nature of a High-Density Residential zoning district. The Applicant has stated that this design provides an efficient and well-designed community, that residents will have access to open space, and that the design will foster social interactions and an "eyes on the street" principal which promotes a safer and more cohesive community. Adherence to the building height limitations will be evaluated at the time of building permit submittal and the approval is being conditioned elsewhere in this staff report to provide sun exposure plane diagrams with building permit materials. If approved, the Planning Commission would be allowing the selected elevations to impact the sun exposure plane.

The requested modifications are to height, coverage, and frontage requirements, and because the proposed development will be in accordance with the purposes of the NMC and not create hazardous conditions for vehicles or pedestrian traffic, upon adherence to the aforementioned condition of approval, the requested modifications are approved and this criterion will be met.

J. Lot Coverage. Maximum permitted lot and parking area coverage as provided in this code shall not be exceeded unless specifically permitted by the hearing authority in accordance with these regulations.

Finding: As discussed in the finding for NMC 15.240.020(I), the Applicant is requesting a modification to the maximum lot coverage requirements for lots in the R-1 zoning district. The Planning Commission shall determine whether the requested modification shall be permitted. Adherence to the required lot coverage standards for individual lots will be evaluated at the time of building permit submission and the Applicant shall provide lot coverage calculations for buildings, parking, and combined building and parking at the time of building permit submission. Upon adherence to the aforementioned condition of approval, this criterion will be met.

K. Height. Unless determined by the hearing authority that intrusion of structures into the sun exposure plane will not adversely affect the occupants or potential occupants of adjacent properties, all buildings and structures shall be constructed within the area contained between lines illustrating the sun exposure plane (see Appendix A, Figure 8 and the definition of "sun exposure plane" in NMC 15.05.030). The hearing authority may further modify heights to:

1. Protect lines of sight and scenic vistas from greater encroachment than would occur as a result of conventional development.

2. Protect lines of sight and scenic vistas.

3. Enable the project to satisfy required findings for approval.

Finding: The maximum permitted building height in the R-1 zoning district is 30 feet, and as the R-3 lots abut R-1 lots in the proposed PUD, the maximum building height in the R-3 zoning district is 30 feet for 50 feet from the abutting boundary, and 45 feet elsewhere. The Applicant has indicated that all proposed dwellings will meet the building height limitation. As discussed in the finding for NMC 15.240.020(I), the Applicant is requesting a modification to the sun exposure plane height limitations for lots in the R-1 zoning district. The Planning Commission shall determine whether the requested modification shall be permitted. Adherence to the maximum building height limitation and sun exposure plane for individual lots will be evaluated at the time of building permit submission and the Applicant shall provide building height and sun exposure diagrams at the time of building permit submission. Upon adherence to the aforementioned condition of approval, this criterion will be met.

L. Dedication, Improvement and Maintenance of Public Thoroughfares. Public thoroughfares shall be dedicated, improved and maintained as follows:

1. Streets and Walkways. Including, but not limited to, those necessary for proper development of adjacent properties. Construction standards that minimize maintenance and protect the public health and safety, and setbacks as specified in NMC 15.410.050, pertaining to special setback requirements to planned rights-of-way, shall be required.

2. Notwithstanding subsection (L)(1) of this section, a private street may be approved if the following standards are satisfied.

a. An application for approval of a PUD with at least 50 dwelling units may include a private street and the request for a private street shall be supported by the evidence required by this section. The planning commission may approve a private street if it finds the applicant has demonstrated that the purpose statements in NMC 15.240.010(A) through (D) are satisfied by the evidence in subsections (L)(2)(a)(i) through (v) of this section.

i. A plan for managing on-street parking, maintenance and financing of maintenance of the private street, including a draft reserve study showing that the future homeowners association can financially maintain the private street;

ii. A plan demonstrating that on- and off-street parking shall be sufficient for the expected parking needs and applicable codes;

iii. Proposed conditions, covenants and restrictions that include a requirement that the homeowners association shall be established in perpetuity and shall continually employ a community management association whose duties shall include assisting the homeowners association with the private street parking management and maintenance, including the enforcement of parking restrictions;

iv. Evidence that the private street is of sufficient width and construction to satisfy requirements of the fire marshal and city engineer; and

v. The PUD shall be a Class I planned community as defined in ORS Chapter 94.

Finding: The Applicant is not proposing any private streets within the proposed development. This criterion does not apply.

b. If the PUD is established, the homeowners association shall provide an annual written report on the anniversary date of the final approval of the PUD approval to the community development director that includes the following:

i. The most recent reserve study.

ii. The name and contact information for the retained community management association.

iii. A report on the condition of the private street and any plans for maintenance of the private street.

Finding: Applicant is not proposing any private streets within the proposed development. This criterion does not apply.

3. Easements. As are necessary for the orderly extension of public utilities and bicycle and pedestrian access.

Finding: Submitted materials indicate a 10-foot wide public utilities easement (PUE) along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development) as is required for land division projects such as subdivisions and partitions for future, franchise utility installations, including potential future undergrounding of overhead utilities.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the Applicant shall provide final plans for public improvements which meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

M. Underground Utilities. Unless waived by the hearing authority, the developer shall locate all on-site utilities serving the proposed planned unit development underground in accordance with the policies, practices and rules of the serving utilities and the Public Utilities Commission.

Finding: The application materials the Applicant has not submitted formal construction plans for the proposed development and Applicant shall provide

include plans to underground all utilities. However, t

final plans for public improvements which meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is

required to underground newly constructed public utilities along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

N. Usable Outdoor Living Area. All dwelling units shall be served by outdoor living areas as defined in this code. Unless waived by the hearing authority, the outdoor living area must equal at least 10 percent of the gross floor area of each unit. So long as outdoor living area is available to each dwelling unit, other outdoor living space may be offered for dedication to the city, in fee or easement, to be incorporated in a city-approved recreational facility. A portion or all of a dedicated area may be included in calculating density if permitted under these regulations.

Finding: The application materials indicate that all proposed dwelling units will be served by outdoor living areas equal to at least 10 percent of the gross floor area of each unit provided in back and side yards. Adherence to the outdoor living space requirement will be verified at the time of building permit submittal, and the Applicant shall indicate and provide usable outdoor living area calculations at the time of building permit submittal. Upon adherence to the aforementioned condition of approval, this criterion will be met.

O. Site Modification. Unless otherwise provided in preliminary plan approval, vegetation, topography and other natural features of parcels proposed for development shall remain substantially unaltered pending final plan approval.

Finding: Approximately 0.34 acres along the eastern portion of the subject property is within the Stream Corridor Overlay Subdistrict. The Applicant has indicated that grading for the proposed water treatment facility in Tract B is proposed within the Stream Corridor. Prior to any site modification, including but not limited to grading, the Applicant shall submit a Stream Corridor Modification request per NMC 15.342.

The Applicant has indicated that beyond the above-mentioned stream corridor, no other vegetation, topography, or other natural features will be substantially altered prior to final plan approval. The application materials include a tree removal and preservation plan as part of the proposed PUD. The removal of the trees can be approved and there are no additional vegetation, topography, and natural features on the site.

Because this preliminary plan approval considers and may approve the modification of vegetation on the site, upon adherence to the aforementioned condition of approval, this criterion will be met.

P. Completion of Required Landscaping. If required landscaping cannot be completed prior to occupancy, or as otherwise required by a condition of approval, the director may require the applicant to post a performance bond of a sufficient amount and time to assure timely completion.

Finding: The Applicant has acknowledged that if required landscaping cannot be completed prior to occupancy a performance bond may be required to ensure timely completion. This criterion is met.

Q. Design Standards. The proposed development shall meet the design requirements for multifamily residential projects identified in NMC 15.220.060. A minimum of 40 percent of the required points shall be obtained in each of the design categories. [Ord. 2889 § 2 (Exh. B § 8), 12-6-21; Ord. 2880 § 2 (Exh. B §§ 9, 10), 6-7-21; Ord. 2822 § 1 (Exh. A), 2-5-18; Ord. 2763 § 1 (Ord. 2889 § 2 (Exh. B §), 12-6-21; Exh. A §§ 9, 10), 9-16-13; Ord. 2730 § 1 (Exh. A § 9), 10-18-10; Ord. 2720 § 1(4), 11-2-09; Ord. 2505, 2-1-99; Ord. 2451, 12-2-96. Code 2001 § 151.226.]

Finding: NMC 15.220.060 requires that multifamily residential projects with nine or more dwelling units using the discretionary process must attain 20 points. NMC 15.240.020(Q) requires that a PUD obtain 40 percent of the required points in each of the design categories, requiring eight Site Design Elements points and eight Building Design Elements points. The application materials indicate that the proposed development includes the following elements:

Excerpt from Table 15.220.060(B) Multifamily Residential Design Guidelines and Standards			
Site Design Element	**Design Guideline**	**Points Available**	**Points Awarded**
Private and Shared Recreation Areas	Consolidate green space to increase visual impact and functional utility. This applies to larger projects which collectively have a significant amount of open space areas which can be consolidated into children's play areas, gardens, and/or dog-walking areas (three points).	3	3
Landscaping	Provide good-quality landscaping. Provide coordinated site landscaping sufficient to give the site its own distinctive character, including the preservation of existing landscaping and use of native species (two points).	2	2
Street Trees	Use street trees and vegetative screens at the front property line to soften visual impacts from the street and provide shade (one point).	1	1
Outdoor Furnishings	Use site furnishings to enhance open space. Provide communal amenities	1	1

	such as benches, playground equipment, and fountains to enhance the outdoor environment (one point).		
Entrance Building Materials	Use entry accents such as distinctive building or paving materials to mark major entries to multifamily buildings or to individual units (one point).	1	1
Outdoor Lighting	Use appropriate outdoor lighting which enhances the nighttime safety and security of pedestrians without causing glare in nearby buildings (one point).	1	1
Total		**9**	**9**

Building Design Element	Design Guideline	Points Available	Points Awarded
Building Orientation and Entrances	Orient buildings toward the street. For attached single-family and smaller multifamily projects, this means orienting individual entries and porches to the street. In larger projects with internal circulation and grounds, this means that at least 10 percent of the units should have main entries which face the street rather than be oriented toward the interior (three points).	3	3
Building Height	Respect the scale and patterns of nearby buildings by reflecting the architectural styles, building details, materials, and scale of existing buildings (three points).	3	3
Building Façade Design	Provide variation in repeated units of large multifamily projects so that these projects have recognizable identities. Elements such as color; porches, balconies, and windows; railings; and building materials and form, either alone or in combination, can be used to create this variety (three points).	3	3

Building Materials	Use some or all of the following materials in new buildings: wood or wood-like siding applied horizontally or vertically as board and batten; shingles, as roofing, or on upper portions of exterior walls and gable ends; brick at the base of walls and chimneys; wood or wood-like sash windows; and wood or wood-like trim (one point for each material described above).	2	2
Total		**11**	**11**

The application materials indicate that Tract A will provide an amenity for the residents of the neighborhood that includes landscaping, benches, and a shared amenity structure to be determined. The included planting plan indicates the landscaping and street trees in the tracts and along public streets. The planting plan indicates that the shared amenity and outdoor furnishings are to be determined. Because the shared amenity and outdoor furnishings information is still tentative, prior to Step 2 of the PUD process, a revised site plan and landscape plan that demonstrates additional information on the shared recreation area and outdoor furnishings shall be provided. The application materials indicate the location of street lighting along the public streets. The application materials include elevations and floor plans of proposed dwelling units which contain details on the building design elements, including the orientation of buildings and garages to the street, building scale, façade design, and building materials.

Because the proposed development includes more than eight Site Design Elements points and eight Building Design Elements points, this criterion is met.

15.240.030 Preliminary plan consideration – Step one.

A. Preapplication Conference. Prior to filing an application for preliminary plan consideration, the applicant or coordinator may request through the director a preapplication conference to discuss the feasibility of the proposed planned unit development and determine the processing requirements.

Finding: A pre-application conference was held on January 24, 2024. This criterion is met.

B. Application. An application, with the required fee, for preliminary plan approval shall be made by the owner of the affected property, or the owner's authorized agent, on a form prescribed by and submitted to the director. Applications, accompanied by such additional copies as requested by the director for purposes of referral, shall contain or have attached sufficient information as prescribed by the director to allow processing and review in accordance with these regulations. As part of the application, the property owner requesting the planned development shall file a waiver stating that the owner will not file any demand

against the city under Ballot Measure 49, approved November 6, 2007, that amended ORS Chapters 195 and 197 based on the city's decision on the planned development.

Finding: The Applicant submitted an application form with the required fee for preliminary plan approval. The Measure 49 waiver submitted indicated that the waiver was related to annexation and was previously submitted for ANX24-0001/CPMA24-0001/ZMA24-0001. Prior to Step 2 of the PUD process and submittal of Final Plans for compliance revised and before submittal of building permits the Applicant shall submit a Measure 49 waiver related to the City's decision on the planned development. Upon adherence to the aforementioned condition of approval, this criterion will be met.

C. Type III Review and Decision Criteria. Preliminary plan consideration shall be reviewed through the Type III procedure. Decisions shall include review and recognition of the potential impact of the entire development, and preliminary approval shall include written affirmative findings that:

1. The proposed development is consistent with standards, plans, policies and ordinances adopted by the city; and

Finding: The Applicant has provided a Type III PUD application. As discussed in this staff report, the proposed development is consistent with or conditioned in order to be consistent with the standards, plans, policies, and ordinances adopted by the City of Newberg.

Upon adherence to the conditions of approval in this staff report, this criterion will be met.

2. The proposed development's general design and character, including but not limited to anticipated building locations, bulk and height, location and distribution of recreation space, parking, roads, access and other uses, will be reasonably compatible with appropriate development of abutting properties and the surrounding neighborhood; and

Finding: The proposed PUD is located on a property recently annexed into the City limits (Case File Nos. ANX24-0001/CPMA24-0001/ZM24-0001). The abutting properties contain the Allison Inn to the southwest, Yamhill County residential and agricultural uses to the northeast, and undeveloped land to the north and southeast. The application materials include architectural drawings and elevations for the proposed dwelling units. However, because the type of each proposed floor plan was not provided for each respective lot, evaluation of the dwelling unit footprints on individual lots beyond narrative statements on compliance with applicable code requirements is not possible at this stage of review, and will be conducted at the time of building permit review. Single-family dwelling units are proposed, similar to residential development in the area. When the subject property was annexed, Comprehensive Plan designations and appropriate zoning designations were assigned, and the proposed lot configurations meet the development standard for the R-1 and R-3 zoning districts. The Applicant has requested a modification through the PUD process for lot coverage in R-1 zones, which the Planning Commission will consider as described in the finding for NMC15.240.020(I).

Because the abutting residentially designated zoning districts are undeveloped and the proposed PUD configuration will construct one single-family dwelling per lot, which is a

permitted use in the R-1 and R-3 zoning districts pursuant to NMC 15.305, the proposed project meet the site standards in the respective zoning districts and demonstrates compatibility with abutting residentially zoned properties in the surrounding neighborhood.

3. Public services and facilities are available to serve the proposed development. If such public services and facilities are not at present available, an affirmative finding may be made under this criterion if the evidence indicates that the public services and facilities will be available prior to need by reason of:

a. Public facility planning by the appropriate agencies; or

b. A commitment by the applicant to provide private services and facilities adequate to accommodate the projected demands of the project; or

c. Commitment by the applicant to provide for offsetting all added public costs or early commitment of public funds made necessary by the development; and

Finding: The application materials include public improvement plans demonstrating public facilities to be provided, including water, sanitary sewer, storm sewer, electricity, and potentially natural gas. The City's Public Works Engineering staff reviewed the submitted plans and provided findings for NMC 15.505 Public Improvement Standards that public services and facilities can be made available subject Conditions of Approval in this staff report. Because public services and facilities will be made available to serve the proposed development, this criterion is met.

4. The provisions and conditions of this code have been met; and

Finding: As demonstrated in these findings and conditions of approval, the provisions and conditions of this code have been met. The criterion is met as demonstrated through the Applicant's submittal and the evaluation by City Staff of the application materials.

5. Proposed buildings, roads, and other uses are designed and sited to ensure preservation of features, and other unique or worthwhile natural features and to prevent soil erosion or flood hazard; and

Finding: The application materials indicate that some lots and tracts are within the Stream Corridor Overlay Subdistrict. As conditioned elsewhere in this staff report, the appropriate Stream Corridor modification applications will be required prior to grading or development within the Stream Corridor per NMC 15.432. No areas within the Areas of Special Flood Hazard Overlay are present on the site. Because development will be required to receive appropriate Stream Corridor Overlay approvals and no Areas of Special Flood Hazard Overlay are present on the site, this criterion is met.

6. There will be adequate on-site provisions for utility services, emergency vehicular access, and, where appropriate, public transportation facilities; and

Finding: The application materials include public improvement plans demonstrating public facilities to be provided, included water, sanitary sewer, storm sewer, electricity, and potentially natural gas. The City's Public Works Engineering staff reviewed the submitted

plans and provided findings for NMC 15.505 Public Improvement Standards that public services and facilities can be made available subject Conditions of Approval in this staff report. The Applicant has also provided Tualatin Valley Fire & Rescue Permit 2024-0095 approving the proposed development subject to the permit conditions. Because public services and facilities will be made available to serve the proposed development and adequate emergency vehicular access is provided, this criterion is met.

7. Sufficient usable recreation facilities, outdoor living area, open space, and parking areas will be conveniently and safely accessible for use by residents of the proposed development; and

Finding: The application materials indicate that individual lots will contain outdoor living areas associated with dwelling units, and that parking areas associated with dwelling units provide convenient and safely accessible parking areas for use by residents. The proposed off-street parking will be evaluated to meet the City's design standards at the time of building permit review. The included site plan also indicates that a shared outdoor recreation facility is provided on Tract A.

Because sufficient usable recreation facilities, outdoor living area, open space, and parking areas will be provided that are conveniently and safely accessible by residents, this criterion is met.

8. Proposed buildings, structures, and uses will be arranged, designed, and constructed so as to take into consideration the surrounding area in terms of access, building scale, bulk, design, setbacks, heights, coverage, landscaping and screening, and to assure reasonable privacy for residents of the development and surrounding properties.

Finding: The proposed PUD is located on a property recently annexed into the City limits (Case File Nos. ANX24-0001/CPMA24-0001/ZM24-0001). The abutting properties contain the Allison Inn to the southwest, Yamhill County residential and agricultural uses to the northeast, and undeveloped land to the north and southeast. Additional residential development is not anticipated on the Springbrook District/Hospitality zoned parcel to the southwest. The application materials include architectural drawing and elevations for the proposed dwelling units; however no information was provided on the dwelling unit footprints on individual lots beyond narrative statements on compliance with applicable code requirements. When the subject property was annexed, Comprehensive Plan designations and appropriate zoning designations were assigned, and the proposed lot configurations meet the development standard for the R-1 and R-3 zoning districts. The Applicant has requested a modification through the PUD process for lot coverage in R-1 zones, which is evaluated in the finding for NMC 15.240.020(I) and the Planning Commission will consider. Individual lot orientation and access will be from the proposed public roads throughout the PUD, providing reasonable privacy for the residents of the development and surrounding properties.

Because the abutting residentially designated zoning districts are undeveloped and the proposed PUD configuration meets the site standards in the respective zoning districts, the

design of the PUD demonstrates compatibility with abutting residentially zoned properties in the surrounding neighborhood. The criterion is met.

D. Conditions. Applications may be approved subject to conditions necessary to fulfill the purpose and provisions of these regulations. [Ord. 2822 § 1 (Exh. A), 2-5-18; Ord. 2693 § 1 (Exh. A(6)), 3-3-08; Ord. 2612, 12-6-04; Ord. 2451, 12-2-96. Code 2001 § 151.227.]

Finding: Exhibit "B", Conditions of Approval, can be found in the next section of this report. With the implementation of these conditions the proposed PUD will fulfill the purpose and provision of these regulations. Upon adherence to the conditions of approval in Exhibit "B", this criterion will be met.

15.240.040 Final plan consideration – Step two.

[…]

Finding: The Applicant has acknowledged the requirement for Step Two of the PUD review process. This criterion is met.

C. FINDINGS FOR ZONING DISTRICTS (NMC DIVISION 15.300)

Chapter 15.305 ZONING USE TABLE

15.305.020 Zoning use table – Use districts.

#	Use	R-1	R-3	Notes and Special Use Standards
Residential Uses				
Def.	***Dwelling, single-family detached***	***P(2)***	***P(3)***	***Subject to lot or development site area requirements of NMC 15.405.010***
Notes. ***(2) Limited to one per lot as a permitted use. More than one per lot allowed only through a conditional use permit or planned unit development, subject to density limits of NMC 15.405.010(B).*** ***(3) Permitted on individual lots created prior to November 17, 1992. Homes on individual lots created on or after November 17, 1992, will only be permitted through the planned unit development process.***				

Finding: The proposed PUD includes single-family dwellings which are a permitted use in the R-1 and R-3 zoning districts. NMC 15.305.020 notes (2) and (3) indicate that single-family dwellings are a permitted use in the R-1 zoning district limited to one per lot and that single-family dwellings on individual lots in the R-3 zoning district will only be permitted through the PUD process.

Because the proposed single-family dwellings are limited to one per lot and the application is being reviewed through the PUD process, this criterion is met.

Chapter 15.340 AIRPORT OVERLAY (AO) SUBDISTRICT

15.340.050 Limitations.

A. To meet the standards and reporting requirements established in FAA Regulations, Part 77, no structure shall penetrate into the airport imaginary surfaces as defined in this code except as provided in NMC 15.340.030(B).

B. High density public uses as defined in this code shall not be permitted in the airport approach safety zone or the displaced threshold approach surface zone.

C. Following July 1990, if FAA funds are used by the city to improve or enhance the airport, new structures, buildings and dense uses shall be prohibited in the runway protection zone consistent with federal requirements.

D. Whenever there is a conflict in height limitations prescribed by this overlay zone and the primary zoning district, the lowest height limitation fixed shall govern; provided, however, that the height limitations here imposed shall not apply to such structures customarily employed for aeronautical purposes.

E. No glare-producing materials shall be used on the exterior of any structure located within the airport approach safety zone.

F. In noise-sensitive areas (within 1,500 feet of an airport or within established noise contour boundaries of 55 Ldn and above for identified airports) where noise levels are a concern, a declaration of anticipated noise levels shall be attached to any building permit or development approval. In areas where the noise level is anticipated to be 55 Ldn and above, prior to issuance of a building permit for construction of noise-sensitive land use (real property normally used for sleeping or normally used as schools, churches, hospitals, or public libraries) the permit applicant shall be required to demonstrate that the indoor noise level will not exceed 55 Ldn. The director will review building permits for noise-sensitive developments. [Ord. 2451, 12-2-96. Code 2001 § 151.454.]

Findings: The findings below correspond to the subsections:

A. The subject property is within the *Conical Surface*, an airport imaginary surface of the Airport Overlay Subdistrict. The elevation of the subject property ranges from approximately 263 to 330 feet, and the height limitation of the Airport Overlay Subdistrict ranges from approximately 480 to 520 feet at the subject property, resulting in a possible building height of 190 to 217 feet. The building height limit of the R-1 and R-3 zoning districts are 30 and 35 feet respectively. The application materials indicate that no proposed dwellings will exceed the building height limitation of the base zoning district. Because the proposed buildings do not penetrate the airport imaginary surface, this criterion is met.

B. High density public uses are defined as structures or places which the public may enter for such purposes as deliberation, education, worship, entertainment, amusement, awaiting transportation, or similar activity where the occupant load is greater than one person per 15 square feet of gross building lot coverage. The proposed PUD contains single-family dwellings. The subject property is also located in the R-1 and R-3 zoning districts outside the Airport Approach Safety Zone and Displaced Threshold Approach Surface. Because the proposed PUD does not include high density public uses and is not within the Airport Approach Safety Zone or Displaced Threshold Approach Surface, this criterion is not applicable.

C. The subject property is not within the runway protection zone. This criterion is not applicable.

D. The building height limitation is 30 and 35 feet in the R-1 and R-3 zoning districts. Because the R-1 and R-3 building height limitations are less than the airport overlay imaginary surface, the base zone building height limitations shall govern. This criterion is met.

E. The subject property is not within the airport approach safety zone. This criterion is not applicable.

F. The subject property is not within 1,500 feet of Sportsman Airpark. Because the subject property is not in a noise-sensitive area, this criterion is not applicable.

The criteria are met or not applicable.

Chapter 15.342 STREAM CORRIDOR OVERLAY (SC) SUBDISTRICT

15.342.020 Where these regulations apply.
The regulations of this chapter apply to the portion of any lot or development site which is within an SC overlay subdistrict. Unless specifically exempted by NMC 15.342.040, these regulations apply to the following:

A. New structures, additions, accessory structures, decks, addition of concrete or other impervious surfaces;

B. Any action requiring a development permit by this code;

C. Changing of topography by filling or grading;

D. Installation or expansion of utilities including but not limited to phone, cable TV, electrical, wastewater, storm drain, water or other utilities;

E. Installation of pathways, bridges, or other physical improvements which alter the lands within the stream corridor overlay subdistrict. [Ord. 2451, 12-2-96. Code 2001 § 151.466.]

Finding: Approximately 0.34 acres along the eastern portion of the subject property is within the Stream Corridor (SC) Overlay Subdistrict. The Applicant has indicated that no new structures are being proposed within the Stream Corridor, but that grading will occur within the SC Overlay Subdistrict boundary. Corridor. Prior to any site modification, including but not limited to grading, the Applicant shall submit a Stream Corridor Modification request per NMC 15.342.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

D. FINDINGS FOR DEVELOPMENT STANDARDS (NMC DIVISION 400)

Chapter 15.405 LOT REQUIREMENTS

15.405.010 Minimum and maximum lot area.
A. In the following districts, each lot or development site shall have an area as shown below except as otherwise permitted by this code:

1. In the R-1, R-2, R-3, R-P and AR districts, the following minimum lot area standards apply:

Zone	*Minimum lot area for single family*
R-1	*5,000 SF*
R-3	*2,500 SF*

[…]

Finding: The application materials indicate that the smallest proposed lot in the R-1 zoning district is 5,022 square feet and the average lot size is 5,619 square feet. The smallest proposed lot in the R-3 zoning district is 4,033 square feet and the average lot size is 4,216 square feet. Because the proposed lot sizes in the PUD exceed the minimum lot area requirements for single-family dwellings, this criterion is met.

B. Maximum Lot or Development Site Area per Dwelling Unit.

1. In the R-1 district, the average size of lots in a subdivision intended for single-family development shall not exceed 10,000 square feet.

[…]

4. In the R-3 district, lots or development sites in excess of 15,000 square feet used for multiple single-family, duplex, triplex, quadplex, multifamily dwellings or cottage cluster projects shall be developed at a minimum of one dwelling per 2,500 square feet lot area.

Finding: The application materials indicate that the average lot size in the R-1 zoning district is 5,619 square feet and that no lots in the R-3 zoning district are larger than 15,000 square feet or

will contain multiple single-family dwellings. Because the average lot size in the R-1 zoning district is less than 10,000 square feet and no R-3 lots are greater than 15,000 square feet with multiple single-family dwelling, this criterion is met.

C. In calculating lot area for this section, lot area does not include land within public or private streets. In calculating lot area for maximum lot area/minimum density requirements, lot area does not include land within stream corridors, land reserved for public parks or open spaces, commons buildings, land for preservation of natural, scenic, or historic resources, land on slopes exceeding 15 percent or for avoidance of identified natural hazards, land in shared access easements, public walkways, or entirely used for utilities, land held in reserve in accordance with a future development plan, or land for uses not appurtenant to the residence.

Finding: The lot size calculations included area only in the proposed PUD lots. This criterion is met.

D. Lot size averaging is allowed for any subdivision. Some lots may be under the minimum lot size required in the zone where the subdivision is located, as long as the average size of all lots is at least the minimum lot size. [Ord. 2889 § 2 (Exh. B § 26), 12-6-21; Ord. 2880 § 2 (Exh. B §§ 36, 37), 6-7-21; Ord. 2868 § 1 (Exh. A), 11-16-20; Ord. 2763 § 1 (Exh. A § 12), 9-16-13; Ord. 2730 § 1 (Exh. A (2)), 10-18-10; Ord. 2720 § 1(14), 11-2-09; Ord. 2647, 6-5-06; Ord. 2564, 4-15-02; Ord. 2507, 3-1-99; Ord. 2451, 12-2-96. Code 2001 § 151.565.]

Finding: The proposed PUD does not include lot sizes below the minimum lot area, and lot size averaging is not proposed or required. This criterion is not applicable.

15.405.020 Lot area exceptions.
The following shall be exceptions to the required lot areas:

A. Lots of record with less than the area required by this code.

B. Lots or development sites which, as a process of their creation, were approved in accordance with this code.

C. Planned unit developments, provided they conform to requirements for planned unit development approval. [Ord. 2451, 12-2-96. Code 2001 § 151.566.]

Finding: No lots are substandard to the required lot areas in NMC 15.405.010 and the proposed PUD conforms to the required for planned unit development approval subject to conditions of approval elsewhere in this staff report.

Because no lot area exceptions are required, this criterion is not applicable.

15.405.030 Lot dimensions and frontage.
A. Width. Widths of lots shall conform to the standards of this code.

Finding: The Applicant is requesting a modification through the PUD process to the lot frontage requirements for proposed lots 12, 82, and 83. Lot 12 is proposed to have a 20.1- foot wide access to a public street and lots 82 and 83 are proposed to be flag lots that share 20-foot wide access to a public street. The Planning Commission shall determine whether the requested

modification shall be permitted. The application materials indicate that all other proposed lots satisfy the width criteria of this code as demonstrated in the findings for NMC 15.405.030(D). Because the proposed lots conform to the standards of this code or have been modified through the PUD process, this criterion is met.

B. Depth to Width Ratio. Each lot and parcel shall have an average depth between the front and rear lines of not more than two and one-half times the average width between the side lines. Depths of lots shall conform to the standards of this code. Development of lots under 15,000 square feet are exempt from the lot depth to width ratio requirement.

Finding: The application materials indicate that the largest proposed lot is 7,987 square feet. Because all proposed lots are less than 15,000 square feet, this criterion is not applicable.

C. Area. Lot sizes shall conform to standards set forth in this code. Lot area calculations shall not include area contained in public or private streets as defined by this code.

Finding: All proposed lots conform to the lot size standards of this code, as demonstrated in findings for NMC 15.405.010. Because all proposed lots meet the minimum standards, this criterion is met.

D. Frontage.

1. No lot or development site shall have less than the following lot frontage standards:

a. Each lot or development site shall have either frontage on a public street for a distance of at least 25 feet or have access to a public street through an easement that is at least 25 feet wide. No new private streets, as defined in NMC 15.05.030, shall be created to provide frontage or access except as allowed by NMC 15.240.020(L)(2).

[…]

c. Each lot in R-1 zone shall have a minimum width of 35 feet at the front building line and AI or RP shall have a minimum width of 50 feet at the front building line.

[…]

Finding: The Applicant is requesting a modification through the PUD process to the lot frontage requirements for proposed lots 12, 82, and 83. Lot 12 is proposed to have a 20.1-foot wide access to a public street and lots 82 and 83 are proposed to be flag lots that share 20-foot wide access to a public street. The Planning Commission shall determine whether the requested modification shall be permitted. The application materials indicate that all other proposed lots satisfy the 25-foot frontage criteria of this code and that all R-1 proposed lots have a minimum width of 35 feet at the front building line. Because the proposed lots conform to the standards of this code or have been modified through the PUD process, this criterion is met.

2. The above standards apply with the following exceptions:

a. Lots for townhouse dwellings in any zone where they are permitted shall have a minimum frontage on a public street for a distance of at least 20 feet, shall have a minimum width of 20 feet at the front building line and shall have access meeting the provisions of NMC 15.415.050(B).

b. Legally created lots of record in existence prior to the effective date of the ordinance codified in this code.

c. Lots or development sites which, as a process of their creation, were approved with sub-standard widths in accordance with provisions of this code.

d. Existing private streets may not be used for new dwelling units, except private streets that were created prior to March 1, 1999, including paving to fire access roads standards and installation of necessary utilities, and private streets allowed in the airport residential and airport industrial districts. However, existing single-family detached dwellings on existing private streets may be converted to duplex, triplex, or quadplex dwellings. [Ord. 2889 § 2 (Exh. B § 27), 12-6-21; Ord. 2880 § 2 (Exh. B § 38), 6-7-21; Ord. 2830 § 1 (Exh. A), 4-2-18; Ord. 2822 § 1 (Exh. A), 2-5-18; Ord. 2730 § 1 (Exh. A (3)), 10-18-10; Ord. 2720 § 1(15), 11-2-09; Ord. 2647, 6-5-06; Ord. 2507, 3-1-99; Ord. 2451, 12-2-96. Code 2001 § 151.567.]

Finding: The PUD does not propose any townhouse dwellings. The proposed lots will be created by this PUD process and may be approved with substandard widths as part of the PUD approval process. No private streets are proposed with this PUD. Because only single-family dwellings are proposed on lots created through the PUD approval and PUD modification process with frontage on public streets, these criteria are met.

15.405.040 Lot coverage and parking coverage requirements.
[…]

B. Residential uses in residential zones shall meet the following maximum lot coverage and parking coverage standards; however, cottage cluster projects shall be exempt from the standards. See the definitions in NMC 15.05.030 and Appendix A, Figure 4.

1. Maximum Lot Coverage.

a. R-1: 40 percent, except:

i. Fifty percent if all structures on the lot are one story; and

ii. Sixty percent for townhouse dwellings.

b. R-2 and RP: 60 percent.

c. AR and R-3: 60 percent.

2. Maximum Parking Coverage. R-1, R-2, R-3, and RP: 30 percent.

3. Combined Maximum Lot and Parking Coverage.

a. R-1: 60 percent.

b. R-2, R-3, RP and townhouse dwellings in R-1: 70 percent.

Finding: The Applicant is requesting a modification to the maximum lot coverage standard in the R-1 zoning district to be 50 percent. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Lot coverage, parking coverage, and combined lot and parking coverage shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall submit site plans indicating adherence to lot, parking, and combined lot and parking coverage calculations.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

Chapter 15.410 YARD SETBACK REQUIREMENTS

15.410.010 General yard regulations.
A. No yard or open space provided around any building for the purpose of complying with the provisions of this code shall be considered as providing a yard or open space for any other building.

Finding: The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots indicating that no yard or open space provided around any building provides a yard or open space for any other building. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Yards and required setbacks shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall indicate adherence to yard setback requirements on site plans submitted for building permit review.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

B. No yard or open space on adjoining property shall be considered as providing required yard or open space for another lot or development site under the provisions of this code.

Finding: The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots indicating that no yard or open space on adjoining property provides a yard or open space for any other building on proposed lot. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Yards and required setbacks shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall indicate adherence to yard setback requirements on site plans submitted for building permit review.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

C. No front yards provided around any building for the purpose of complying with the regulations of this code shall be used for public or private parking areas or garages, or other accessory buildings, except as specifically provided elsewhere in this code.

Finding: The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Yards and required setbacks shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall indicate adherence to yard setback requirements on site plans submitted for building permit review.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

D. When the common property line separating two or more contiguous lots is covered by a building or a permitted group of buildings with respect to such common property line or lines does not fully conform to the required yard spaces on each side of such common property line or lines, such lots shall constitute a single development site and the yards as required by this code shall then not apply to such common property lines.

Finding: No existing buildings are proposed to remain on the site that will cover a common property line separating two or more contiguous proposed lots. This criterion is not applicable.

E. Dwellings Where Permitted above Nonresidential Buildings. The front and interior yard requirements for residential uses shall not be applicable; provided, that all yard requirements for the district in which such building is located are complied with.

Finding: No nonresidential buildings are proposed in the planned unit development. Because no dwellings are proposed above nonresidential buildings, this criterion is not applicable.

F. In the AI airport industrial district, clear areas, safety areas, object-free areas, taxiways, parking aprons, and runways may be counted as required yards for a building, even if located upon an adjacent parcel.

Finding: The subject property is located in the R-1 and R-3 zoning districts. Because the proposed planned unit development is not located in the Airport Industrial zoning district, this criterion is not applicable.

G. In the AR airport residential district, clear areas, safety areas, object-free areas, taxiways, parking aprons, and runways may be counted as required yards for a building, if located upon an adjacent parcel. [Ord. 2647, 6-5-06; Ord. 2451, 12-2-96. Code 2001 § 151.550.]

Finding: The subject property is located in the R-1 and R-3 zoning districts. Because the proposed planned unit development is not located in the Airport Residential zoning district, this criterion is not applicable.

15.410.020 Front yard setback.
A. Residential (see Appendix A, Figure 10).

1. AR, R-1 and R-2 districts shall have a front yard of not less than 15 feet, except that multifamily dwellings with parking to the side or rear shall have a front yard of not less than 10 feet. Said yard shall be landscaped and maintained.

2. R-3 and RP districts shall have a front yard of not less than 12 feet, except that multifamily dwellings with parking to the side or rear shall have a front yard of not less than eight feet. Said yard shall be landscaped and maintained.

3. The entrance to a garage or carport, whether or not attached to a dwelling, shall be set back at least 20 feet from the nearest property line of the street to which access will be provided. However, the foregoing setback requirement shall not apply where the garage or carport will be provided with access to an alley only.

[…]

Finding: The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Yards and required setbacks shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall indicate adherence to yard setback requirements on site plans submitted for building permit review.

15.410.030 Interior yard setback.
A. Residential.

1. All lots or development sites in the AR, R-1, R-2 and R-3 districts shall have interior yards of not less than five feet, except that where a utility easement is recorded adjacent to a side lot line, there shall be a side yard no less than the width of the easement.

[…]

Finding: The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Yards and required setbacks shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall indicate adherence to yard setback requirements on site plans submitted for building permit review.

15.410.040 Setback and yard restrictions as to schools, churches, public buildings.
A. Building Setback. No buildings shall be erected, used or maintained for a school, church or public or semi-public building or use, institution or similar use under the regulations of this code unless such building is removed at least 25 feet from every boundary line of any property included in any residential district.

B. Required Yard. No required front or interior yard of the lot on which such building or use is located shall be used for play or parking purposes. [Ord. 2451, 12-2-96. Code 2001 § 151.553.]

Finding: No schools, churches, or public buildings are proposed as part of the planned unit development. Because no schools, churches, or public buildings are proposed, these criteria are not applicable.

15.410.050 Special setback requirements to planned rights-of-way.
A. Yard Requirements for Property Abutting Partial or Future Street Rights-of-Way.

1. Except as provided in subsection (A)(2) of this section, no building shall be erected on a lot which abuts a street having only a portion of its required width dedicated, unless the yards provided and maintained in connection with such building have a width and/or depth needed to complete the street width plus the width and/or depths of the yards required on the lot by this code.

2. Where a comprehensive plan street design or a future street plan exists, the placement of buildings and the establishment of yards where required by this code shall relate to the future street boundaries as determined by said plans.

B. Planned Street Right-of-Way Widths. Planned street right-of-way widths are established as indicated in subsection (C) of this section for the various categories of streets shown in the transportation system plan.

C. A lot or parcel of land in any district adjoining a street for which the planned right-of-way width and alignment have been determined shall have a building setback line equal to the yard required in the district, plus a distance of:

1. Fifty feet from and parallel with the centerline of expressways.

2. Thirty-five feet from and parallel with the centerline of major and minor arterials.

3. Thirty feet from and parallel with the centerline of multifamily, commercial and industrial streets and single-family collector streets.

4. Thirty feet from and parallel with the centerline of single-family local streets.

5. Twenty-five feet from and parallel with the centerline of single-family hillside, cul-de-sacs and local streets which will never be extended more than 2,400 feet in length and which will have a relatively even division of traffic to two or more exits.

Exceptions to the above five classifications are shown in the transportation system plan.

D. The centerline of planned streets shall be either the officially surveyed centerline or a centerline as on a precise plan. In the event of conflict between the two, the latter-described line shall prevail. In all other cases, a line midway between properties abutting the right-of-way shall be the centerline for the purposes of this code. [Ord. 2763 § 1 (Exh. A § 13), 9-16-13; Ord. 2602, 9-20-04; Ord. 2451, 12-2-96. Code 2001 § 151.554.]

Finding: The southern boundary of Lots 82 and 83 of the proposed PUD configuration abut a jog in the right-of -way that would be required for a future extension of Street "A" continuing the "to and through" design required in NMC 15.505.030(K). All of the proposed streets in the PUD

are proposed to be classified as local residential streets, which require 54-60 feet of right-of-way pursuant to NMC 15.505.030(G). The City's Transportation System plan does not typically create alignments for local residential streets, and a future extension of the current alignment of Street "A" would create a substandard condition for the required right-of-way along the extended Street "A". The submitted site plan does not indicate dedication of right-of-way for the future extension of Street "A". Because the Transportation System Plan does not identify an alignment for the extension of Street "A", the centerline of Street "A" will determine the special setback requirement for the required future right of way. Because the future development of the adjacent site and extension of Street "A" are not proposed with this development, the rear yards of Lots 82 and 83 will be interior yards.

The finding and condition of approval for NMC 15.505.030(G)(10) requires the Applicant to submit an updated site plan indicating that the layout of lots in this area have been reworked to eliminate the presence of this jog and ensure a consistent ROW length across the entire stretch of Street A to accommodate a future street extension, or an agreement in a form acceptable to the City shall be submitted guaranteeing the dedication of the required right-of-way at the time of extension of Street "A" to serve future development.

If the current site configuration is maintained and an agreement guaranteeing the future dedication of the right-of-way area submitted, Lots 82 and 83 shall have a building setback line equal to the yard required in the district (5-foot interior yard setback in the R-1 zoning district) plus 30-feet from and parallel with the centerline of Street "A", a single-family local street. If the site configuration is revised to eliminate the presence of the jog, the building setback line shall be the standard required in NMC 15.410.030. Prior to the issuance of building permits, the Applicant shall submit a revised site plan indicating the yard setback which includes the building setback line required in 15.410.050(C).

Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.410.060 Vision clearance setback.
The following vision clearance standards shall apply in all zones (see Appendix A, Figure 9).

A. At the intersection of two streets, including private streets, a triangle formed by the intersection of the curb lines, each leg of the vision clearance triangle shall be a minimum of 50 feet in length.

B. At the intersection of a private drive and a street, a triangle formed by the intersection of the curb lines, each leg of the vision clearance triangle shall be a minimum of 25 feet in length.

C. Vision clearance triangles shall be kept free of all visual obstructions from two and one-half feet to nine feet above the curb line. Where curbs are absent, the edge of the asphalt or future curb location shall be used as a guide, whichever provides the greatest amount of vision clearance.

[…]

Finding: The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. The site plans submitted included vision clearance triangles at the intersections of proposed public streets, but not for the service drives proposed for each lot. Adherence to vision clearance standards shall be evaluated at the time of building permit submittal. Prior to the issuance of building permits, the Applicant shall submit revised site plans depicting applicable vision clearance triangles.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.410.070 Yard exceptions and permitted intrusions into required yard setbacks. The following intrusions may project into required yards to the extent and under the conditions and limitations indicated:

A. Depressed Areas. In any district, open work fences, hedges, guard railings or other landscaping or architectural devices for safety protection around depressed ramps, stairs or retaining walls may be located in required yards; provided, that such devices are not more than three and one-half feet in height.

B. Accessory Buildings. In front yards on through lots, where a through lot has a depth of not more than 140 feet, accessory buildings may be located in one of the required front yards; provided, that every portion of such accessory building is not less than 10 feet from the nearest street line.

C. Projecting Building Features. The following building features may project into the required front yard no more than five feet and into the required interior yards no more than two feet; provided, that such projections are no closer than three feet to any interior lot line:

1. Eaves, cornices, belt courses, sills, awnings, buttresses or other similar features.

2. Chimneys and fireplaces, provided they do not exceed eight feet in width.

3. Porches, platforms or landings which do not extend above the level of the first floor of the building.

4. Mechanical structures (heat pumps, air conditioners, emergency generators and pumps).

D. Fences and Walls.

1. In the residential district, a fence or wall shall be permitted to be placed at the property line or within a yard setback as follows:

a. Not to exceed six feet in height. Located or maintained within the required interior yards. For purposes of fencing only, lots that are corner lots or through lots may select one of the street frontages as a front yard and all other yards shall be considered as interior yards, allowing the placement of a six-foot fence on the property line. In no case may a fence extend into the clear vision zone as defined in NMC 15.410.060.

b. Not to exceed four feet in height. Located or maintained within all other front yards.

2. In any commercial, industrial, or mixed employment district, a fence or wall shall be permitted to be placed at the property line or within a yard setback as follows:

a. Not to exceed eight feet in height. Located or maintained in any interior yard except where the requirements of vision clearance apply. For purposes of fencing only, lots that are corner lots or through lots may select one of the street frontages as a front yard and all other yards shall be considered as interior yards, allowing the placement of an eight-foot fence on the property line.

b. Not to exceed four feet in height. Located or maintained within all other front yards.

3. If chain link (wire-woven) fences are used, they are manufactured of corrosion-proof materials of at least 11-1/2 gauge.

4. The requirements of vision clearance shall apply to the placement of fences.

E. Parking and Service Drives (Also Refer to NMC 15.440.010 through 15.440.080).

1. In any district, service drives or accessways providing ingress and egress shall be permitted, together with any appropriate traffic control devices in any required yard.

2. In any residential district, public or private parking areas and parking spaces shall not be permitted in any required yard except as provided herein:

a. Required parking spaces shall be permitted on service drives in the required front yard in conjunction with any single-family detached dwelling, duplex dwelling, triplex dwelling, quadplex dwelling, or townhouse dwelling on a single lot.

b. Recreational vehicles, boat trailers, camperettes and all other vehicles not in daily use are restricted to parking in the front yard setback for not more than 48 hours; and recreational vehicles, boat trailers, camperettes and all other vehicles not in daily use are permitted to be located in the required interior yards.

c. Public or private parking areas, parking spaces or any building or portion of any building intended for parking which have been identified as a use permitted in any residential district shall be permitted in any interior yard that abuts an alley, provided said parking areas, structures or spaces shall comply with NMC 15.440.070, Parking tables and diagrams (Diagrams 1 through 3).

d. Public or private parking areas, service drives or parking spaces which have been identified as a use permitted in any residential district shall be permitted in interior yards; provided, that said parking areas, service drives or parking spaces shall comply with other requirements of this code.

3. In any commercial or industrial district, except C-1, C-4, M-1, and M-E, public or private parking areas or parking spaces shall be permitted in any required yard (see NMC 15.410.030). Parking requirements in the C-4 district and the M-E district within the riverfront overlay subdistrict are described in NMC 15.352.040(H).

4. In the I district, public or private parking areas or parking spaces may be no closer to a front property line than 20 feet, and no closer to an interior property line than five feet.

F. Public Telephone Booths and Public Transit Shelters. Public telephone booths and public transit shelters shall be permitted; provided, that vision clearance is maintained for vehicle requirements for vision clearance.

G. Hangars within the AR airport residential district may be constructed with no yard setbacks to property lines adjacent to other properties within the airport residential or airport industrial districts. [Ord. 2889 § 2 (Exh. B § 31), 12-6-21; Ord. 2880 § 2 (Exh. B § 40), 6-7-21; Ord. 2868 § 1 (Exh. A), 11-16-20; Ord. 2647, 6-5-06; Ord. 2619, 5-16-05; Ord. 2564, 4-15-02; Ord. 2561, 4-1-02; Ord. 2451, 12-2-96. Code 2001 § 151.556.]

Finding: The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Yards and required setbacks, including permitted intrusion into yard setback areas, shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall indicate adherence to yard setback requirements on site plans submitted for building permit review.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

Chapter 15.415 BUILDING AND SITE DESIGN STANDARDS

15.415.010 Main buildings and uses as accessory buildings.
A. Hereinafter, any building which is the only building on a lot is a main building.

B. In any residential district except RP, there shall be only one main use per lot or development site; provided, that home occupations shall be allowed where permitted.

C. In any residential district, there shall be no more than two accessory buildings on any lot or development site. [Ord. 2451, 12-2-96. Code 2001 § 151.535.]

Finding: The application materials include tentative plat maps and do not include any additional information on proposed or planned accessory buildings. The proposed single-family dwellings on each lot will serve as the main building, and any additional accessory buildings will be evaluated in the building permit review process. Multiple uses are not proposed on any lots within the PUD, and any home occupations must comply with the NMC 15.415.060 and will be processed separately. Because no accessory building are proposed at this time and only one main use per lot or development site is proposed, the criteria are met.

15.415.020 Building height limitation.

A. Residential.

1. In the R-1 district, no main building shall exceed 30 feet in height, except that townhouse dwellings shall not exceed 35 feet in height.

[…]

3. In the R-3 district, no main building shall exceed 45 feet in height, except, where an R-3 district abuts upon an R-1 district, the maximum permitted building height shall be limited to 30 feet for a distance of 50 feet from the abutting boundary of the aforementioned district.

4. Accessory buildings in the R-1, R-2, R-3, AR, and RP districts are limited to 16 feet in height, except as follows:

a. Up to 800 square feet of an accessory building may have a height of up to 24 feet.

b. Aircraft hangars in the AR district may be the same height as the main building.

[…]

Finding: The application materials indicate that the single-family dwellings proposed in the PUD will have a maximum height of 30 feet in both the R-1 and R-3 zoning districts. The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. Any additional accessory buildings will be evaluated in the building permit review process or through a separate building permit submittal, as required by the NMC. Compliance with the building height limitation will be evaluated in the building permit review process. Prior to the issuance of building permits, the Applicant shall indicate compliance with the building height limitation on site plans submitted for building permit review.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.415.030 Building height exemptions.
Roof structures and architectural features for the housing of elevators, stairways, tanks, ventilating fans and similar equipment required to operate and maintain the building, fire or parapet walls, skylights, towers, flagpoles, chimneys, smokestacks, wireless masts, TV antennas, steeples and similar structures may be erected above the height limits prescribed in this code; provided, that no roof structure, feature or any other device above the prescribed height limit shall be allowed or used for the purpose of providing additional floor space. Further, no roof structure or architectural feature under this exemption shall be erected more than 18 feet above the height of the main building, whether such structure is attached to it or freestanding, nor shall any such structure or feature exceed the height limits of the airport overlay subdistrict. [Ord. 2730 § 1 (Exh. A (4)), 10-18-10; Ord. 2451, 12-2-96. Code 2001 § 151.537.]

Finding: The application materials indicate that the single-family dwellings proposed in the PUD will not exceed the building height limitations in the R-1 and R-3 zoning districts. The

application materials include tentative plat maps with proposed yard setback requirements for the proposed lots. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. The presence of any building height exemptions will be evaluated in the building permit review process. Prior to the issuance of building permits, the Applicant shall indicate compliance with the building height limitation on site plans submitted for building permit review.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.415.040 Public access required.
No building or structure shall be erected or altered except on a lot fronting or abutting on a public street or having access to a public street over a private street or easement of record approved in accordance with provisions contained in this code. New private streets may not be created to provide access except as allowed under NMC 15.332.020(B)(24), 15.336.020(B)(8), and in the M-4 zone. Existing private streets may not be used for access for new dwelling units, except as allowed under NMC 15.405.030. No building or structure shall be erected or altered without provisions for access roadways as required in the Oregon Fire Code, as adopted by the city. [Ord. 2720 § 1(11), 11-2-09; Ord. 2647, 6-5-06; Ord. 2507, 3-1-99; Ord. 2451, 12-2-96. Code 2001 § 151.538.]

Finding: The application materials indicate that each lot in the proposed PUD has access fronting or abutting a public street or through an access easement, and that the Applicant has obtained a Service Provider Letter from Tualatin Valley Fire and Rescue indicating that the proposed development has been reviewed and approved by the Fire Marshall or Designee. Because each lot in the proposed PUD has public access, this criterion is met.

Chapter 15.420 LANDSCAPING AND OUTDOOR AREAS

15.420.010 Required minimum standards.
A. Private and Shared Outdoor Recreation Areas in Residential Developments.

> ***1. Private Areas. Each ground-level living unit in a residential development subject to a design review plan approval shall have an accessible outdoor private space of not less than 48 square feet in area. The area shall be enclosed, screened or otherwise designed to provide increased privacy for unit residents, their guests and neighbors.***
>
> ***[…]***

Finding: The application materials include tentative plat maps with proposed yard setback requirements for the proposed lots. The application materials included building elevations and floor plans but did not indicate building and parking area footprints on the proposed sites. The Applicant has indicated that each single-family home will provide a minimum of 48 square feet. The provision of private outdoor areas shall be evaluated at the time of building permit submittal and prior to the issuance of building permits, the Applicant shall indicate the required private outdoor area on site plans submitted for building permit review.

B. Required Landscaped Area. The following landscape requirements are established for all developments except single-family detached dwellings, duplex dwellings, triplex dwellings, quadplex dwellings, townhouse dwellings and cottage cluster projects:

1. A minimum of 15 percent of the lot area shall be landscaped; provided, however, that computation of this minimum may include areas landscaped under subsection (B)(3) of this section. Development in the C-3 (central business district) zoning district and M-4 (large lot industrial) zoning district is exempt from the 15 percent landscape area requirement of this section. Additional landscaping requirements in the C-4 district are described in NMC 15.352.040(K). In the AI airport industrial district, only a five percent landscaping standard is required with the goal of "softening" the buildings and making the development "green" with plants, where possible. The existence of the runway, taxiway, and approach open areas already provide generally for the 15 percent requirement. Developments in the AI airport industrial district with a public street frontage shall have said minimum landscaping between the front property line and the front of the building.

2. All areas subject to the final design review plan and not otherwise improved shall be landscaped.

3. The following landscape requirements shall apply to the parking and loading areas:

a. A parking or loading area providing 10 or more spaces shall be improved with defined landscaped areas totaling no less than 25 square feet per parking space.

b. A parking, loading area, or drive aisle which runs adjacent to a property line shall be separate from any lot line adjacent to a street by a landscaped strip at least 10 feet in interior width or the width of the required yard, whichever is greater, and any other lot line by a landscaped strip of at least five feet in interior width. See subsections (B)(3)(c) and (d) of this section for material to plant within landscape strips.

c. A landscaped strip separating a parking area, loading area, or drive aisle from a street shall contain street trees spaced as appropriate to the species, not to exceed 50 feet apart on average, and a combination of shrubs and ground cover, or lawn. This landscaping shall provide partial screening of these areas from the street.

d. A landscaped strip separating a parking area, loading area, or drive aisle from an interior lot line shall contain any combination of trees, shrubs, ground cover or lawn. Plant material shall be selected from at least two different plant material groups (example: trees and shrubs, or lawn and shrubs, or lawn and trees and shrubs).

e. Landscaping in a parking or loading area shall be located in defined landscaped areas which are uniformly distributed throughout the parking or loading area.

f. Landscaping areas in a parking lot, service drive or loading area shall have an interior width of not less than five feet.

g. All multifamily, institutional, commercial, or industrial parking areas, service drives, or loading zones which abut a residential district shall be enclosed with a 75 percent opaque, site-obscuring fence, wall or evergreen hedge along and immediately adjacent to any interior property line which abuts the residential district. Landscape plantings must be large enough to provide the required minimum screening requirement within 12 months after initial installation. Adequate provisions shall be maintained to protect walls, fences or plant materials from being damaged by vehicles using said parking areas.

h. An island of landscaped area shall be located to separate blocks of parking spaces. At a minimum, one deciduous shade tree per seven parking spaces shall be planted to create a partial tree canopy over and around the parking area. No more than seven parking spaces may be grouped together without an island separation unless otherwise approved by the director based on the following alternative standards:

i. Provision of a continuous landscaped strip, with a five-foot minimum width, which runs perpendicular to the row of parking spaces (see Appendix A, Figure 13).

ii. Provision of tree planting landscape islands, each of which is at least 16 square feet in size, and spaced no more than 50 feet apart on average, within areas proposed for back-to-back parking (see Appendix A, Figure 14).

4. Trees, Shrubs and Ground Covers. The species of street trees required under this section shall conform to those authorized by the city council through resolution. The director shall have the responsibility for preparing and updating the street tree species list which shall be adopted in resolution form by the city council.

a. Arterial and minor arterial street trees shall have spacing of approximately 50 feet on center. These trees shall have a minimum two-inch caliper tree trunk or stalk at a measurement of two feet up from the base and shall be balled and burlapped or boxed.

b. Collector and local street trees shall be spaced approximately 35 to 40 feet on center. These trees shall have a minimum of a one and one-half or one and three-fourths inch tree trunk or stalk and shall be balled and burlapped or boxed.

c. Accent Trees. Accent trees are trees such as flowering cherry, flowering plum, crab-apple, Hawthorne and the like. These trees shall have a minimum one and one-half inch caliper tree trunk or stalk and shall be at least eight to 10 feet in height. These trees may be planted bare root or balled and burlapped. The spacing of these trees should be approximately 25 to 30 feet on center.

d. All broad-leafed evergreen shrubs and deciduous shrubs shall have a minimum height of 12 to 15 inches and shall be balled and burlapped or come from a two-gallon can. Gallon-can size shrubs will not be allowed except in ground covers. Larger sizes of shrubs may be required in special areas and locations as specified by the design review board. Spacing of these shrubs shall be typical for the variety, three to eight feet, and shall be identified on the landscape planting plan.

e. Ground Cover Plant Material. Ground cover plant material such as greening juniper, cotoneaster, minor Bowles, English ivy, hypericum and the like shall be one of the following sizes in specified spacing for that size:

Gallon cans	***3 feet on center***
4" containers	***2 feet on center***
2-1/4" containers	***18" on center***
Rooted cuttings	***12" on center***

5. Automatic, underground irrigation systems shall be provided for all areas required to be planted by this section. The director shall retain the flexibility to allow a combination of irrigated and nonirrigated areas. Landscaping material used within nonirrigated areas must consist of drought- resistant varieties. Provision must be made for alternative irrigation during the first year after initial installation to provide sufficient moisture for plant establishment.

6. Required landscaping shall be continuously maintained.

7. Maximum height of tree species shall be considered when planting under overhead utility lines.

8. Landscaping requirements and standards for parking and loading areas (subsection (B)(3) of this section) will apply to development proposals unless the institution has addressed the requirements and standards by an approved site development master plan. With an approved site development master plan, the landscape requirements will be reviewed through an administrative Type I review process.

9. In the M-4 zone, landscaping requirements and standards for parking and loading areas (subsection (B)(3) of this section) do not apply unless within 50 feet of a residential district.

Finding: The following findings correspond to each code subsection:

1. The application materials include proposed plantings and landscaped areas for tracts not intended for development as single-family dwellings across the site. The landscaping of each single-family dwelling lot will be evaluated during the building permit review process. Because the proposed development includes landscaped areas in tracts not intended for single-family dwellings, this criterion is met.

2. The application materials include proposed plantings and landscaped areas for tracts not intended for development as single-family dwellings across the site. The landscaping of each single-family dwelling lot will be evaluated during the building permit review process. Because the proposed development includes landscaped areas in tracts not intended for single-family dwellings and not otherwise improved, this criterion is met.

3. The proposed planned unit development includes single-family dwellings with associated residential parking areas and service drives. No parking areas providing 10 or more

spaces are proposed. No landscape strips or other landscaping areas are required separating residential off-street parking areas from property lines. Because the proposed parking areas area associated with single-family residential uses, the criteria are not applicable.

4. Because the proposed development is a planned unit development, street trees are required. The streets within the PUD are proposed to be classified as local residential streets and N Springbrook Road to the southwest of the PUD is classified as a Major Collector. According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

   > *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

   Although the portion of NE Springbrook Road along the subject property was not annexed in ANX24-0001, because of the condition to provide improvements consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site, street tree requirements for NE Springbrook Road in unincorporated Yamhill County adjacent to the site will be evaluated as a Major Collector.

   NMC 15.420.010(B)(4)(b) requires that street trees along collector and local streets shall have spacing of approximately 35 to 40 feet on center. The PUD has approximately 7,346 feet of street frontage, requiring approximately 197 street trees at a spacing of 35 feet on center. The landscaping plans included in the application materials indicate 123 street trees are provided throughout the PUD. Prior to Step Two PUD approval, the Applicant shall provide updated landscape plans meeting the street tree spacing requirements of NMC 15.420.010(B)(4) or discussing conflicts prohibiting street tree installation (i.e. utilities).

   The installation of street trees located on individual lots intended for residential use shall be verified at the time of final planning inspection prior to issuance of Certificate of Occupancy. Prior to the issuance of building permits, the Applicant shall submit revised site plans indicating street trees located on lots intended for residential use. The installation of street trees located on tracts not intended for residential use will be verified at the time of the final planning inspection prior to issuance of the certificate of occupancy of the first single-family dwelling.

5. The application materials include landscape plans for tracts not intended for single family development. Prior to the issuance of the Type I PUD Step Two approval, the Applicant shall provide irrigation plans for these landscaped areas. Upon adherence to the aforementioned condition of approval, this criterion will be met.

6. The application materials include landscape plans for tracts not intended for single family development. The landscaping proposed for tracts and areas not intended for single family development shall be continuously maintained and prior to the Step Two PUD approval the Applicant shall submit a mechanism for maintenance of privately owned landscaped areas. Upon adherence to the aforementioned condition of approval, this criterion will be met.

7. The proposed utilities in the PUD will be located underground. Because the site utilities will be underground, the required street trees will not conflict with overhead utility lines and this criterion is met.

8. The parking areas required are associated with single-family residential development and meet the landscaping standards as indicated in the finding for NMC 15.420.010(B)(4)(3). No landscaping site development master plan is proposed or required and this criterion is not applicable.

9. The proposed PUD is located in the R-1 and R-3 zoning districts. Because the development is not located in the M-4 zoning district, this criterion is not applicable.

C. Installation of Landscaping. All landscaping required by these provisions shall be installed prior to the issuance of occupancy permits, unless security equal to 110 percent of the cost of the landscaping as determined by the director is filed with the city, insuring such installation within six months of occupancy. A security – cash, certified check, time certificates of deposit, assignment of a savings account, bond or such other assurance of completion as shall meet with the approval of the city attorney – shall satisfy the security requirements. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the director, the security may be used by the city to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the city shall be returned to the applicant. [Ord. 2889 § 2 (Exh. B § 34), 12-6-21; Ord. 2880 § 2 (Exh. B §§ 42, 43), 6-7-21; Ord. 2720 § 1(16, 17), 11-2-09; Ord. 2647, 6-5-06; Ord. 2564, 4-15-02; Ord. 2561, 4-1-02; Ord. 2513, 8-2-99; Ord. 2451, 12-2-96. Code 2001 § 151.580.]

Finding: The application materials include a landscape plan for areas not intended for single-family development. Prior to the issuance of certificates of occupancy, all landscaping required shall be installed or the Applicant shall provide security equal to 110 percent of the cost of the landscaping as specified in NMC 15.420.010(C). Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.420.020 Landscaping and amenities in public rights-of-way.
The following standards are intended to create attractive streetscapes and inviting pedestrian spaces. A review body may require any of the following landscaping and amenities to be placed in abutting public rights-of-way as part of multifamily, commercial, industrial, or institutional design reviews, or for subdivisions and planned unit developments. In addition, any entity improving existing rights-of-way should consider including these elements in the project. A decision to include any amenity shall be based on comprehensive plan guidelines, pedestrian volumes in the area, and the nature of surrounding development.

A. Pedestrian Space Landscaping. Pedestrian spaces shall include all sidewalks and medians used for pedestrian refuge. Spaces near sidewalks shall provide plant material for cooling and dust control, and street furniture for comfort and safety, such as benches, waste receptacles and pedestrian-scale lighting. These spaces should be designed for short-term as well as long-term use. Elements of pedestrian spaces shall not obstruct sightlines and shall adhere to any other required city safety measures. Medians used for pedestrian refuge shall be designed for short-term use only with plant material for cooling and dust control, and pedestrian-scale lighting. The design of these spaces shall facilitate safe pedestrian crossing with lighting and accent paving to delineate a safe crossing zone visually clear to motorists and pedestrians alike.

1. Street trees planted in pedestrian spaces shall be planted according to NMC 15.420.010(B)(4).

2. Pedestrian spaces shall have low (two and one-half feet) shrubs and ground covers for safety purposes, enhancing visibility and discouraging criminal activity.

a. Plantings shall be 90 percent evergreen year-round, provide seasonal interest with fall color or blooms, and at maturity maintain growth within the planting area (refer to plant material matrix below).

b. Plant placement shall also adhere to clear sight line requirements as well as any other relevant city safety measures.

3. Pedestrian-scale lighting shall be installed along sidewalks and in medians used for pedestrian refuge.

a. Pole lights as well as bollard lighting may be specified; however, the amount and type of pedestrian activity during evening hours, e.g., transit stops, nighttime service districts, shall ultimately determine the type of fixture chosen.

b. Luminaire styles shall match the area/district theme of existing luminaires and shall not conflict with existing building or roadway lights causing glare.

c. Lighting heights and styles shall be chosen to prevent glare and to designate a clear and safe path and limit opportunities for vandalism (see Appendix A, Figure 17, Typical Pedestrian Space Layouts).

d. Lighting shall be placed near the curb to provide maximum illumination for spaces furthest from building illumination. Spacing shall correspond to that of the street trees to prevent tree foliage from blocking light.

4. Street furniture such as benches and waste receptacles shall be provided for spaces near sidewalks only.

a. Furniture should be sited in areas with the heaviest pedestrian activity, such as downtown, shopping districts, and shopping centers.

b. Benches should be arranged to facilitate conversation between individuals with L-shaped arrangements and should face the area focal point, such as shops, fountains, plazas, and should divert attention away from nearby traffic.

5. Paving and curb cuts shall facilitate safe pedestrian crossing and meet all ADA requirements for accessibility.

Finding: The Applicant is proposing public right-of-way connections between proposed single-family dwellings, the proposed shared outdoor recreation area, and NE Springbrook Road. The application materials submitted indicate the landscaping in the tracts not intended for residential development and along sidewalks throughout the development site as well as the location of proposed street trees. Because the shared amenity and outdoor furnishings information is still tentative, prior to Step 2 of the PUD process, a revised site plan and landscape plan that demonstrates additional information on the shared recreation area and outdoor furnishings shall be provided. Because street trees, street lighting, and landscaping will be provided at pedestrian areas, upon adherence to the aforementioned condition of approval, this criterion shall be met.

B. Planting Strip Landscaping. All planting strips shall be landscaped. Planting strips provide a physical and psychological buffer for pedestrians from traffic with plant material that reduces heat and dust, creating a more comfortable pedestrian environment. Planting strips shall have different arrangements and combinations of plant materials according to the frequency of on-street parking (see Appendix A, Figures 18 and 19).

1. Planting strips which do not have adjacent parking shall have a combination of ground covers, low (two and one-half feet) shrubs and trees. Planting strips adjacent to frequently used on-street parking, as defined by city staff, shall only have trees protected by tree grates, and planting strips adjacent to infrequently used on-street parking shall be planted with ground cover as well as trees (see Appendix A, Figures 18 and 19, Typical Planting Strip Layouts). District themes or corridor themes linking individual districts should be followed utilizing a unifying plant characteristic, e.g., bloom color, habit, or fall color. When specifying thematic plant material, monocultures should be avoided, particularly those species susceptible to disease.

2. Street trees shall be provided in all planting strips as provided in NMC 15.420.010(B)(4).

a. Planting strips without adjacent parking or with infrequent adjacent parking shall have street trees in conjunction with ground covers and/or shrubs.

b. Planting strips with adjacent parking used frequently shall have only street trees protected by tree grates.

3. Shrubs and ground covers shall be provided in planting strips without adjacent parking with low (two and one-half feet) planting masses to enhance visibility, discourage criminal activity, and provide a physical as well as psychological buffer from passing traffic.

a. Plantings shall be 90 percent evergreen year-round, provide seasonal interest with fall color or blooms and at maturity maintain growth within the planting area.

b. Ground cover able to endure infrequent foot traffic shall be used in combination with street trees for planting strips with adjacent occasional parking (refer to plant material matrix below).

c. All plant placement shall adhere to clear sight line requirements as well as any other relevant city safety measures.

Finding: The Applicant has indicated that all planting strips will be landscaped with a combination of ground covers, shrubs, and trees. The application materials include landscape plans for the tracts not intended for single-family development and the location of proposed street trees, however do not indicate the type or number of plantings in the planting strips through the PUD. Prior to the issuance of public improvement permits, the Applicant shall submit revised landscape plans showing the proposed landscaping in the planting strips.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

C. Maintenance. All landscapes shall be maintained for the duration of the planting to encourage health of plant material as well as public health and safety. All street trees and shrubs shall be pruned to maintain health and structure of the plant material for public safety purposes.

Finding: The application materials indicate that all landscaping will be maintained for the duration of the planting and all street trees and shrubs will be pruned to maintain the health and structure of the plants. This criterion is met.

D. Exception. In the AI airport industrial district and AR airport residential district, no landscape or amenities except for grass are required for any area within 50 feet of aircraft operation areas including aircraft parking areas, taxiways, clear areas, safety areas, object-free areas, and the runway.

Finding: The subject property is located in the R-1 and R-3 zoning districts. Because the subject property is not located in the Airport Industrial (AI) or Airport residential (AR) zoning districts, this criterion is not applicable.

Plant Material Matrix – Newberg Transportation Planning Rule Implementation

	Median		*Pedestrian Space*	*Planting Strip*		
	Central Business District/Urban Application	*Low Density Application*		*Frequent On-Street Parking*	*Infrequent On-Street Parking*	*Without On-Street Parking*
Plant Material	*Trees, shrubs and ground cover*		*Trees, shrubs and ground cover (where applicable)*	*Trees in tree wells with grates*	*Trees and ground cover*	*Trees, shrubs and ground cover*
Tree and Shrub Arrangement	*Single row of trees planted in triangular pattern, equally spaced, shrubs as desired*	*Single row of trees planted in triangular pattern, arranged in clusters, shrubs as desired*	*Refer to median or planting strip specifications as applicable*	*Single row of trees planted in linear pattern, equally spaced*	*Refer to tree specifications for median as applicable, ground cover as desired*	*Refer to tree specifications for median as applicable, ground cover as desired*
Tree Form	*Columnar to round tree canopy*	*Round to broad tree canopy*	*Refer to median or planting strip specifications as applicable*	*Refer to median recommendations as applicable*	*Refer to median recommendations as applicable*	*Refer to median recommendations as applicable*
Examples of Recommended Tree Species	*Bradford Flowering Pear (Pyrus calleryana "Bradford"), Flowering Cherry (Prunus serrulata, several varieties), Red Sunset Maple (Acer rubrum), Londos Plana (Platanus acerifolia)*	*Flowering Cherry (Prunus serrulata, several varieties), Flowering Dogwood (Cornus species, several varieties), Hawthorn (Crataegus species, several species), Red Sunset Maple (Acer rubrum), Red Oak (Quercus rubra)*	*Refer to median or planting strip specifications as applicable*	*Refer to median recommendations as applicable, lowest tree limb height of 10 feet*	*Refer to median recommendations as applicable, lowest limb height of 10 feet*	*Refer to median recommendations as applicable, lowest limb height of 10 feet*

	Median		Pedestrian Space	Planting Strip		
	Central Business District/Urban Application	Low Density Application		Frequent On-Street Parking	Infrequent On-Street Parking	Without On-Street Parking
Shrub and Ground Cover Characteristics (i.e., environmental tolerance, mature size)	Pollutant and reflected heat tolerant	Pollutant and reflected heat tolerant	2.5 feet maximum height, pollutant and reflected heat tolerant	Not applicable	2.5 feet maximum height, pollutant and reflected heat tolerant	2.5 feet maximum height, pollutant and reflected heat tolerant
Examples of Recommended Shrub Species	Lonicera japonica (Privet Honeysuckle), Sargent Juniper (Juniperus sargentii), Cotoneaster (Cotoneaster, various varieties), Winter Creeper (Euonymus fortunei)	Lonicera japonica (Privet Honeysuckle), Sargent Juniper (Juniperus sargentii), Cotoneaster (Cotoneaster, various varieties), Winter Creeper (Euonymus fortunei)	Sargent Juniper (Juniperus sargentii), Cotoneaster (Cotoneaster, low varieties), Winter Creeper (Euonymus fortunei)	Not applicable	Sargent Juniper (Juniperus sargentii), Cotoneaster (Cotoneaster, prostrate varieties)	Sargent Juniper (Juniperus sargentii), Cotoneaster (Cotoneaster, various varieties), Winter Creeper (Euonymus fortunei)

[Ord. 2763 § 1 (Exh. A § 14), 9-16-13; Ord. 2647, 6-5-06; Ord. 2513, 8-2-99. Code 2001 § 151.581.]

Chapter 15.425 EXTERIOR LIGHTING

15.425.010 Purpose.

The purpose of this chapter is to regulate the placement, orientation, distribution patterns, and fixture types of on-site outdoor lighting. The intent of this section is to provide minimum lighting standards that promote safety, utility, and security, prevent glare on public roadways, and protect the privacy of residents. [Ord. 2537, 11-6-00. Code 2001 § 151.585.]

15.425.020 Applicability and exemptions.

A. Applicability. Outdoor lighting shall be required for safety and personal security in areas of assembly, parking, and traverse, as part of multifamily residential, commercial, industrial, public, recreational and institutional uses. The applicant for any Type I or Type II development permit shall submit, as part of the site plan, evidence that the proposed outdoor lighting plan will comply with this section. This information shall contain but not be limited to the following:

1. The location, height, make, model, lamp type, wattage, and proposed cutoff angle of each outdoor lighting fixture.

2. Additional information the director may determine is necessary, including but not limited to illuminance level profiles, hours of business operation, and percentage of site dedicated to parking and access.

3. If any portion of the site is used after dark for outdoor parking, assembly or traverse, an illumination plan for these areas is required. The plan must address safety and personal security.

B. Exemptions. The following uses shall be exempt from the provisions of this section:

1. Public street and airport lighting.

[…]

Finding: The Applicant has included a photometric plan for the proposed street lighting within the planned unit development. Per NMC 15.425.020(B)(1), public street lighting is exempt from the provisions of the Exterior Lighting standards. The application materials included elevations and floorplans of proposed single-family dwellings which do not indicate final proposed exterior lighting for each dwelling. Compliance with the exterior lighting standards can be determined at the time of building permit review. Prior to the issuance of building permits, the Applicant shall submit lighting plan information to verify compliance with the standards in NMC 15.425.

Upon adherence to the aforementioned condition of approval, the criteria will be met.

Chapter 15.430 UNDERGROUND UTILITY INSTALLATION

15.430.010 Underground utility installation.

A. All new utility lines, including but not limited to electric, communication, natural gas, and cable television transmission lines, shall be placed underground. This does not include surface-mounted transformers, connections boxes, meter cabinets, service cabinets, temporary facilities during construction, and high-capacity electric lines operating at 50,000 volts or above.

B. Existing utility lines shall be placed underground when they are relocated, or when an addition or remodel requiring a Type II design review is proposed, or when a developed area is annexed to the city.

C. The director may make exceptions to the requirement to underground utilities based on one or more of the following criteria:

- ***1. The cost of undergrounding is extraordinarily expensive.***
- ***2. There are physical factors that make undergrounding extraordinarily difficult.***
- ***3. Existing utility facilities in the area are overhead and are unlikely to be changed.***

Finding: Submitted materials indicate that there are overhead utility lines along the NE Springbrook Road frontage. The application materials indicate that all new utilities will be

placed underground. Undergrounding of existing overhead utilities along the frontage may be required if operating at less than 50,000 volts or if any poles need to be relocated.

Any new service connection to the property is required to be undergrounded. See NMC 15.430.010 for additional requirements and exception provisions.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to underground all constructed public utilities along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

At the time of writing this staff report, no request has been received from the Applicant for an exception to NMC 15.430(B)'s utility undergrounding requirement. The Applicant may submit a request to the Community Development Director for an exception to the requirement to underground utilities if one or more of the criteria listed in NMC 15.430(B) are applicable to the subject property

This criterion will be met if the aforementioned conditions of approval are adhered to.

Chapter 15.440 OFF-STREET PARKING, BICYCLE PARKING, AND PRIVATE WALKWAYS

Article I. Off-Street Parking Requirements
15.440.010 Required off-street parking.
A. Off-street parking shall be provided on the lot or development site for all R-1, C-1, M-1, M-2 and M-3 zones. In all other zones, the required parking shall be on the lot or development site or within 400 feet of the lot or development site which the parking is required to serve. All required parking must be under the same ownership as the lot or development site served except through special covenant agreements as approved by the city attorney, which bind the parking to the lot or development site.

Finding: The proposed planned unit development includes 100 single-family dwellings and no other uses are proposed. The application materials indicate that parking for each dwelling will be provided on the same lot at the dwelling. The application materials included proposed plat maps with yard setback requirements, but not the proposed location of buildings or parking areas. Compliance with the off-street parking requirements can be determined at the time of building permit review. Prior to the issuance of building permits, the Applicant shall submit updated site plans including the location of required off-street parking and service drives.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.440.020 Parking area and service drive design.
A. All public or private parking areas, parking spaces, or garages shall be designed, laid out and constructed in accordance with the minimum standards as set forth in NMC 15.440.070.

B. Groups of three or more parking spaces, except those in conjunction with a single-family detached dwelling, duplex dwelling, triplex dwelling, quadplex dwelling, townhouse dwelling

or cottage cluster project on a single lot, shall be served by a service drive so that no backward movement or other maneuvering of a vehicle within a street, other than an alley, will be required. Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety in traffic access and egress and maximum safety of pedestrian and vehicular traffic on the site, but in no case shall two-way and one-way service drives be less than 20 feet and 12 feet, respectively. Service drives shall be improved in accordance with the minimum standards as set forth in NMC 15.440.060.

C. Gates. A private drive or private street serving as primary access to more than one dwelling unit shall not be gated to limit access, except as approved by variance.

[…]

Finding: The proposed planned unit development includes 100 single-family dwellings and no other uses are proposed. The application materials indicate that parking for each dwelling will be provided on the same lot at the dwelling. The application materials included proposed plat maps with yard setback requirements and curb cut locations, but not the proposed location of buildings or parking areas. Compliance with the standards for parking areas and service drive design can be determined at the time of building permit review. Prior to the issuance of building permits, the Applicant shall submit updated site plans including the location of required off-street parking and service drives. No gates, private drive, or private streets are proposed with the planned unit development.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.440.030 Parking spaces required.

Use	***Minimum Parking Spaces Required***
Residential Types	
Dwelling, single-family	***2 for each dwelling unit on a single lot***

Finding: The application materials indicate that two off-street parking spaces will be provided on each single-family lot with car garages and driveways. The application materials included proposed plat maps with yard setback requirements, but not the proposed location of buildings or parking areas. Compliance with the off-street parking requirements can be determined at the time of building permit review. Prior to the issuance of building permits, the Applicant shall submit updated site plans including the location of required off-street parking and service drives.

Upon adherence to the aforementioned condition of approval, this criterion will be met.

15.440.060 Parking area and service drive improvements.
All public or private parking areas, outdoor vehicle sales areas, and service drives shall be improved according to the following:

A. All parking areas and service drives shall have surfacing of asphaltic concrete or Portland cement concrete or other hard surfacing such as brick or concrete pavers. Other durable and dust-free surfacing materials may be approved by the director for infrequently used parking

areas. All parking areas and service drives shall be graded so as not to drain stormwater over the public sidewalk or onto any abutting public or private property.

B. All parking areas shall be designed not to encroach on public streets, alleys, and other rights-of-way. Parking areas shall not be placed in the area between the curb and sidewalk or, if there is no sidewalk, in the public right-of-way between the curb and the property line. The director may issue a permit for exceptions for unusual circumstances where the design maintains safety and aesthetics.

[…]

E. Any lights provided to illuminate any public or private parking area or vehicle sales area shall be so arranged as to reflect the light away from any abutting or adjacent residential district.

F. All service drives and parking spaces shall be substantially marked and comply with NMC 15.440.070.

G. Parking areas for residential uses shall not be located in a required front yard, except as follows:

> ***1. Single-family detached, duplex, triplex, quadplex, and townhouse dwellings: parking is authorized in a front yard on a service drive which provides access to an improved parking area outside the front yard.***

Finding: The application materials indicate that the proposed parking areas and service drives will be constructed to City standards, that parking areas do not encroach on public streets, and that lighting will be designed to reduce spill and glare away from any proposed or existing neighboring developments. The application materials included proposed plat maps with yard setback requirements, but not the proposed location of buildings or parking areas. Compliance with the design standards of parking area and service drive improvements can be determined at the time of building permit review. Prior to the issuance of building permits, the Applicant shall submit updated site plans including the location and design of required off-street parking.

Upon adherence to the aforementioned condition of approval, the criteria will be met.

[…]

Article III. Private Walkways
15.440.130 Where required.
Private walkways shall be constructed as part of any development requiring Type II design review, including mobile home parks. In addition, they may be required as part of conditional use permits or planned unit developments. In the airport industrial (AI) district and residential (AR) district, on-site walks are not required in aircraft operations areas, such as parking aprons, taxiways, and runways. [Ord. 2647, 6-5-06; Ord. 2619, 5-16-05; Ord. 2513, 8-2-99. Code 2001 § 151.620.2.]

Finding: The application materials indicate that walkways and sidewalks are being provided within the proposed planned unit development. Because private walkways and sidewalks are provided, this criterion is met.

15.440.140 Private walkway design.
A. All required private walkways shall meet the applicable building code and Americans with Disabilities Act requirements.

B. Required private walkways shall be a minimum of four feet wide.

C. Required private walkways shall be constructed of portland cement concrete or brick.

D. Crosswalks crossing service drives shall, at a minimum, be painted on the asphalt or clearly marked with contrasting paving materials or humps/raised crossings. If painted striping is used, it should consist of thermoplastic striping or similar type of durable application.

E. At a minimum, required private walkways shall connect each main pedestrian building entrance to each abutting public street and to each other.

F. The review body may require on-site walks to connect to development on adjoining sites.

G. The review body may modify these requirements where, in its opinion, the development provides adequate on-site pedestrian circulation, or where lot dimensions, existing building layout, or topography preclude compliance with these standards. [Ord. 2619, 5-16-05; Ord. 2513, 8-2-99. Code 2001 § 151.620.3.]

Finding: The application materials indicate that proposed sidewalks will be five feet in width and constructed of concrete, and that crosswalks will be provided and painted/striped. Compliance with the applicable building code and Americans with Disabilities Act requirements will be determined at the time of public improvement permit and building permit review. Because the proposed planned unit development includes sidewalks and crosswalks meeting the City's design standards and compliance with other regulations will be determined at the permit review stage, this criterion is met.

Chapter 15.505 PUBLIC IMPROVEMENTS STANDARDS

15.505.010 Purpose.
This chapter provides standards for public infrastructure and utilities installed with new development, consistent with the policies of the City of Newberg comprehensive plan and adopted city master plans. The standards are intended to minimize disturbance to natural features, promote energy conservation and efficiency, minimize and maintain development impacts on surrounding properties and neighborhoods, and ensure timely completion of adequate public facilities to serve new development. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

15.505.020 Applicability.
The provision and utilization of public facilities and services within the City of Newberg shall apply to all land developments in accordance with this chapter. No development shall be approved unless the following improvements are provided for prior to occupancy or operation, unless future provision is assured in accordance with NMC 15.505.030(E).

Finding: A

ll improvements reviewed under this application are identified in the NMC 15.505
section specific to them and are conditioned to comply with the Public Works Design and
Construction Standards in effect at the time of construction.
This criterion is met.

4. Public Works Design and Construction Standards. The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall comply with the requirements of the most recently adopted Newberg public works design and construction standards.

Finding: The submitted plans show:

- Street improvements along the existing NE Springbrook Road consistent with the requirements of Major Collector street functional classification.
- New public streets consistent with the requirements of local-residential street functional classification.
- Connection to the existing 12-inch water main on the west side of NE Springbrook Road and construction of water distribution piping to each proposed dwelling.
- Connection to an existing 15-inch wastewater gravity main in NE Springbrook Road and construction of wastewater collection piping to each proposed dwelling.
- Construction of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road which direct collected stormwater to one of two stormwater basins, referred to as "Pond A" and "Pond B" in the preliminary plans, which connect to existing stormwater infrastructure in the area.
- Construction of two stormwater basins. One basin routes pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The other basin appears to route pretreated stormwater to the existing 12-inch stormwater main beneath NE Springbrook Drive near the southeastern property boundary.
- All new utilities depicted on the plans are shown to be underground. The plans also include street lighting improvements along NE Springbrook Road and construction of street lighting along the newly constructed local-residential streets within the proposed development.

Plans submitted with a permit application for proposed public improvements, or for public improvements as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

Proposed improvements should also be completed in tandem with the extension of public utility lines to serve the new development. The Applicant is required to submit construction plans and obtain a public improvement permit for required public improvements.

Plans will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

Additional findings and conditions of approval for these improvements are described under the applicable Newberg Municipal Code sections below.

B. Street Improvements. All projects subject to a Type III design review, partition, or subdivision approval must construct street improvements necessary to serve the development.

This criterion will be met if the aforementioned conditions of approval are adhered to.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. Particular improvements include increasing the travel area width to between 23 and 27.6-feet, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are generally consistent with the requirements of Major Collector street functional classification.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. These public improvements include a two-lane street with on-street parking representing a 32-foot wide paved area, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are consistent with the requirements of local-residential street functional classification.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

C. Water. All developments, lots, and parcels within the City of Newberg shall be served by the municipal water system as specified in Chapter 13.15 NMC.

Finding: Submitted materials appear to show water service laterals and meters to serve each dwelling unit. The Applicant is also proposing to construct a pump station to maintain necessary water pressure in the proposed development. The pump station is proposed to be constructed along NE Springbrook Road at the intersection to the access street to the proposed development. The water main to serve the proposed development must connect to the existing 12-inch water main on the west side of NE Springbrook Road.

This criterion will be met if the aforementioned condition of approval is adhered to.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a water meter at the right-of-way line prior to connecting to the public main or to a double water service where allowed per the Public Works Design and Construction Standards.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed water services. These plans are to be submitted with the application for a public improvement permit.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

The closest existing fire hydrant and any new fire hydrants are to be shown on plans included with Public Improvement permit submittals. Fire hydrant spacing is to be consistent with City of Newberg Public Works Design and Construction standards and Tualatin Valley Fire and Rescue (TVF&R) requirements.

Additional findings and conditions of approval for these water improvements are described under the applicable Newberg Municipal Code sections below.

This criterion will be met if the aforementioned condition of approval is adhered to.

D. Wastewater. All developments, lots, and parcels within the City of Newberg shall be served by the municipal wastewater system as specified in Chapter 13.10 NMC.

Finding: Submitted materials appear to show wastewater service laterals to serve each dwelling unit consistent with NMC 13.10.070(K) below. The wastewater main to serve the proposed development must connect to the existing 15-inch wastewater gravity main beneath NE Springbrook Road.

> *NMC 13.10.070 (K) - Independent Drainage Systems. Every dwelling and/or building under separate ownership shall have an independent wastewater system connection with*

a public or private collection system. Additionally, each parcel shall be served by individual laterals.

The Applicant prepared a wastewater downstream analysis provided with the submitted materials. The downstream analysis evaluated whether the existing public wastewater collection system has the necessary capacity to support the additional wastewater flows from the dwellings constructed as part of the proposed development. The Applicant utilized a modified hydraulic model from the City of Newberg Wastewater Master Plan prepared in March 2018 and amended in 2021 using XPSTORM. The downstream analysis concluded that the additional loads generated from the proposed development will have a negligible effect on the existing downstream wastewater system.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a cleanout at the right-of-way line prior to connecting to the public main or to a double wye service where allowed per the Public Works Design and Construction Standards.

The wastewater analysis of impacts to the wastewater system from the proposed development is required to be submitted with permit applications.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed wastewater services. These plans are to be submitted with the application for a public improvement permit.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

Additional findings and conditions of approval for these wastewater improvements are described under the applicable Newberg Municipal Code sections below.

This criterion will be met if the aforementioned condition of approval is adhered to.

E. Stormwater. All developments, lots, and parcels within the City of Newberg shall manage stormwater runoff as specified in Chapters 13.20 and 13.25 NMC.

Finding: Submitted materials indicate the installation of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road. The stormwater piping routes flows to one of two stormwater detention basins. The northern basin collects stormwater drainage from a portion of the proposed development and appears to route pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The southern basin collects stormwater drainage from the NE Springbrook Road frontage and a portion of the proposed development and appears to route pretreated stormwater to the existing 12-inch main beneath NE Springbrook Drive near the southeastern property boundary.

The Applicant has not yet submitted formal construction plans for the proposed development. With Public Improvement Permit submittals the Applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

The Applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

Plans and stormwater report will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

Additional findings and conditions of approval for these stormwater improvements are described under the applicable Newberg Municipal Code sections below.

This criterion will be met if the aforementioned condition of approval is adhered to.

F. Utility Easements. Utility easements shall be provided as necessary and required by the review body to provide needed facilities for present or future development of the area.

Finding: Submitted materials indicate a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development) as is required for land division projects such as subdivisions and partitions for future, franchise utility installations, including potential future undergrounding of overhead utilities.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

G. City Approval of Public Improvements Required. No building permit may be issued until all required public facility improvements are in place and approved by the director, or are otherwise bonded for in a manner approved by the review authority, in conformance with the provisions of this code and the Newberg Public Works Design and Construction Standards. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

Finding:

This criterion will be met if the aforementioned condition of approval is adhered to.

Any required public improvement permit(s) for this project must be submitted, approved and issued prior to building permits being issued.

15.505.030 Street standards.

A. Purpose. The purpose of this section is to:

1. Provide for safe, efficient, and convenient multi-modal transportation within the City of Newberg.

2. Provide adequate access to all proposed and anticipated developments in the City of Newberg. For purposes of this section, "adequate access" means direct routes of travel between destinations; such destinations may include residential neighborhoods, parks, schools, shopping areas, and employment centers.

3. Provide adequate area in all public rights-of-way for sidewalks, wastewater and water lines, stormwater facilities, natural gas lines, power lines, and other utilities commonly and appropriately placed in such rights-of-way. For purposes of this section, "adequate area" means space sufficient to provide all required public services to standards defined in this code and in the Newberg public works design and construction standards.

B. Applicability. The provisions of this section apply to:

1. The creation, dedication, and/or construction of all public streets, bike facilities, or pedestrian facilities in all subdivisions, partitions, or other developments in the City of Newberg.

2. The extension or widening of existing public street rights-of-way, easements, or street improvements including those which may be proposed by an individual or the city, or which may be required by the city in association with other development approvals.

3. The construction or modification of any utilities, pedestrian facilities, or bike facilities in public rights-of-way or easements.

4. The designation of planter strips. Street trees are required subject to Chapter 15.420 NMC.

5. Developments outside the city that tie into or take access from city streets.

C. Layout of Streets, Alleys, Bikeways, and Walkways. Streets, alleys, bikeways, and walkways shall be laid out and constructed as shown in the Newberg transportation system plan. In areas where the transportation system plan or future street plans do not show specific transportation improvements, roads and streets shall be laid out so as to conform to previously approved subdivisions, partitions, and other developments for adjoining properties, unless it is found in the public interest to modify these patterns. Transportation improvements shall conform to the standards within the Newberg Municipal Code, the Newberg public works design and construction standards, the Newberg transportation system plan, and other adopted city plans.

Finding: The layout for local-residential classified streets is not included in the 2016 TSP nor are there adjoining developments which would determine layouts.

The proposed layout of streets is to conform with the requirements of the current NMC, City of Newberg Public Works Design and Construction Standards, and any other adopted City plans.

The layout for major collector classified streets is included in 2016 TSP. Improvements for NE Springbrook Road are generally consistent with the layout indicated in the 2016 TSP; however, improvements should be made to both sides of NE Springbrook Road in accordance with condition of approval 2.b for annexation of the subject property, ANX24-0001 approved with Ordinance NO. 2024-2931.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

D. Construction of New Streets. Where new streets are necessary to serve a new development, subdivision, or partition, right-of-way dedication and full street improvements shall be required. Three-quarter streets may be approved in lieu of full street improvements when the city finds it to be practical to require the completion of the other one-quarter street improvement when the adjoining property is developed; in such cases, three-quarter street improvements may be allowed by the city only where all of the following criteria are met:

1. The land abutting the opposite side of the new street is undeveloped and not part of the new development; and

Finding: Submitted materials indicate plans to construct local-residential classified streets within the proposed development in full-street configuration. These public improvements include a two-

2. The adjoining land abutting the opposite side of the street is within the city limits and the urban growth boundary.

The proposed streets should conform with the requirements of the current NMC and City of Newberg Public Works Design and Construction Standards.

lane street with on-street parking representing a 32-foot wide paved area, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE.

E. Improvements to Existing Streets.

This criterion is applicable to the proposed partition application.

1. All projects subject to partition, subdivision, or Type II design review approval shall dedicate right-of-way sufficient to improve the street to the width specified in subsection (G) of this section.

2. All projects subject to partition, subdivision, or Type II design review approval must construct a minimum of a three-quarter street improvement to all existing streets adjacent to, within, or necessary to serve the development. The director may waive or modify this requirement where the applicant demonstrates that the condition of existing streets to serve the development meets city standards and is in satisfactory condition to handle the projected traffic loads from the development. Where a development has frontage on both sides of an existing street, full street improvements are required.

3. In lieu of the street improvement requirements outlined in NMC 15.505.040(B), the review authority may elect to accept from the applicant monies to be placed in a fund dedicated to the future reconstruction of the subject street(s). The amount of money deposited with the city shall be 100 percent of the estimated cost of the required street improvements (including any associated utility improvements), and 10 percent of the estimated cost for inflation. Cost estimates used for this purpose shall be based on preliminary design of the constructed street provided by the applicant's engineer and shall be approved by the director.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. Particular improvements include increasing the travel area width to between 23 and 27.6-feet, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are generally consistent with the requirements of Major Collector street functional classification.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be*

consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

F. Improvements Relating to Impacts. Improvements required as a condition of development approval shall be roughly proportional to the impact of the development on public facilities and services. The review body must make findings in the development approval that indicate how the required improvements are roughly proportional to the impact. Development may not occur until required transportation facilities are in place or guaranteed, in conformance with the provisions of this code. If required transportation facilities cannot be put in place or be guaranteed, then the review body shall deny the requested land use application.

Finding: The Applicant has provided a Traffic Impact Analysis (TIA) dated June 2024. The TIA identified that the N Springbrook Road/E Mountainview Drive intersection is currently functioning below the City's level of service standard. The TIA also identified that future 2027 conditions, even in a no-build scenario, would result in continued degradation of the level of service at the N Springbrook Road/E Mountainview Drive intersection and a level of service below the City's standards at N Springbrook Road/Haworth Avenue. Additional trips from the proposed development would further degrade the level of service at both of these intersections.

The Applicant identified two improvement projects included in the City of Newberg's 2016 Transportation Master Plan (TSP) related to these two intersections. Project I08 identified the need for a traffic signal at the intersections of N Springbrook Road/E Mountainview Drive with an estimate of $356,000 (December 2024 dollars[1]). Project I09 identified the need for a traffic light and left turn lanes on Haworth Avenue, at the intersection of N Springbrook Road/Haworth Avenue with an estimate of $528,000 (December 2024 dollars[1]). The TIA identified that trips generated from the proposed development will contribute to the traffic through these two intersections during AM and PM peak hour traffic.

[1] Project costs were presented in the City of Newberg's 2016 Transportation Master Plan in 2016 dollars. These costs were adjusted to December 2024 costs using the Engineering News-Record 20-cites construction cost index to account for increases in construction costs since the original estimate was prepared.

Because the Applicant's development is adversely impacting the N Springbrook Road/E Mountainview Drive and N Springbrook Road/Haworth Avenue intersections, the Applicant will be required to pay a Traffic Impact Fee for the two intersections which is being assessed based on the proportional impact of the development on public facilities and services. The following formula was used to develop a Traffic Impact Fee to capture the proportional impact of the development based on the most significant AM or PM proportional volume contribution at the build out year of 2027.

$$\frac{Number\ of\ PM\ or\ AM\ trips\ proportional\ to\ development}{Number\ of\ PM\ or\ AM\ peak\ hour\ forecasted\ trips\ through\ interestion} \cdot Project\ Cost$$

$$= Traffic\ Impact\ Fee$$

The larger of the two percentages for AM or PM traffic were selected and it was found that the developer proportionate share for Project I08 is 6.9% (93 PM trips directly proportional to the development/1,341 PM peak hour total forecasted trips through the intersection) and Project I09 is 2.9% (31 AM trips directly proportional to the development/1,071 AM peak hour total forecasted trips through the intersection).

For N Springbrook Road/E Mountainview Drive: (93 PM trips directly proportional to the development)/(1,341 PM peak hour total forecasted trips through the intersection)*($356,000 for the TSP cost of an intersection upgrade) = $24,689.04 Traffic Impact Fee.

For N Springbrook Road/Haworth Avenue: (31 AM trips directly proportional to the development)/(1,071 AM peak hour total forecasted trips through the intersection)*($528,000 for the TSP cost of an intersection upgrade) = $15,282.91 Traffic Impact Fee.

The Traffic Impact Fees of $24,689.04 for Project I08 and $15,282.91 for Project I09 shall be paid at the time of, or prior to, building permit issuance.

This criterion will be met if the aforementioned condition of approval is adhered to.

G. Street Width and Design Standards.

> ***1. Design Standards. All streets shall conform with the standards contained in Table 15.505.030(G). Where a range of values is listed, the director shall determine the width based on a consideration of the total street section width needed, existing street widths, and existing development patterns. Preference shall be given to the higher value. Where values may be modified by the director, the overall width shall be determined using the standards under subsections (G)(2) through (10) of this section.***

Table 15.505.030(G) Street Design Standards

Type of Street	*Right-of-Way Width*	*Curb-to-Curb Pavement Width*	*Motor Vehicle Travel Lanes*	*Median Type*	*Striped Bike Lane (Both Sides)*	*On-Street Parking*
Arterial Streets						
*Expressway***	*ODOT*	*ODOT*	*ODOT*	*ODOT*	*ODOT*	*ODOT*
Major arterial	*95 – 100 feet*	*74 feet*	*4 lanes*	*TWLTL or median**	*Yes*	*No**
Minor arterial	*69 – 80 feet*	*48 feet*	*2 lanes*	*TWLTL or median**	*Yes*	*No**
Collectors						
Major	*57 – 80 feet*	*36 feet*	*2 lanes*	*None**	*Yes*	*No**
Minor	*61 – 65 feet*	*40 feet*	*2 lanes*	*None**	*Yes**	*Yes**
Local Streets						
Local residential	*54 – 60 feet*	*32 feet*	*2 lanes*	*None*	*No*	*Yes*
Limited residential, parking both sides	*44 – 50 feet*	*28 feet*	*2 lanes*	*None*	*No*	*Yes*
Limited residential, parking one side	*40 – 46 feet*	*26 feet*	*2 lanes*	*None*	*No*	*One side*
Local commercial/ industrial	*55 – 65 feet*	*34 feet*	*2 lanes*	*None**	*No**	*Yes**

** May be modified with approval of the director. Modification will change overall curb-to-curb and right-of-way width. Where a center turn lane is not required, a landscaped median shall be provided instead, with turning pockets as necessary to preserve roadway functions.*

*** All standards shall be per ODOT expressway standards.*

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. Particular improvements include increasing the travel area width to between 23 and 27.6-feet, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are generally consistent with the requirements of Major Collector street functional classification.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. These public improvements include a two-lane street with on-street parking representing a 32-foot wide paved area, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are consistent with the requirements of local-residential street functional classification.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

2. Motor Vehicle Travel Lanes. Collector and arterial streets shall have a minimum width of 12 feet.

a. Exception.

i. Minimum lane width of 11 feet along S River Street from E First Street to E Fourteenth Street.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include increasing the travel area width to between 23 and 27.6-feet, which includes a 6-foot bike lane. This is above the minimum travel lane size requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be

consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

3. Bike Lanes. Striped bike lanes shall be a minimum of six feet wide. Bike lanes shall be provided where shown in the Newberg transportation system plan.

a. Exception.

i. Minimum striped bike lane width of six feet with a one-foot wide buffer along S River Street from E First Street to the bypass.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include increasing the travel area width to between 23 and 27.6-feet, which includes a 6-foot bike lane. This is above the minimum bike lane size requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

4. Parking Lanes. Where on-street parking is allowed on collector and arterial streets, the parking lane shall be a minimum of eight feet wide.

This criterion will be met if the aforementioned condition of approval is adhered to.

a. Exception.

i. Minimum parking lane width of seven feet along S River Street from the bypass to E Fourteenth Street.

Finding: On-street parking is neither proposed nor required along NE Springbrook Road.

This criterion does not apply.

5. Center Turn Lanes. Where a center turn lane is provided, it shall be a minimum of 12 feet wide.

Finding: A center turn lane is not proposed or required.

This criterion does not apply.

6. Limited Residential Streets. Limited residential streets shall be allowed only at the discretion of the review authority, and only in consideration of the following factors:

a. The requirements of the fire chief shall be followed.

b. The estimated traffic volume on the street is low, and in no case more than 600 average daily trips.

c. Use for through streets or looped streets is preferred over cul-de-sac streets.

d. Use for short blocks (under 400 feet) is preferred over longer blocks.

e. The total number of residences or other uses accessing the street in that block is small, and in no case more than 30 residences.

f. On-street parking usage is limited, such as by providing ample off-street parking, or by staggering driveways so there are few areas where parking is allowable on both sides.

Finding: Limited residential streets are not proposed or required.

This criterion is not applicable.

7. Sidewalks. Sidewalks shall be provided on both sides of all public streets. Minimum width is five feet.

a. Exception.

i. Twelve-foot-wide sidewalks, inclusive of the curb, with tree wells along S River Street from the bypass to E Fourteenth Street.

ii. Twelve-foot-wide shared-use path and four-foot buffer, inclusive of the curb, with tree wells along the east side of S River Street from the bypass to E Fourteenth Street.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include constructing a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line. This is above the minimum sidewalk width requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. The improvements include a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line. This is consistent with the minimum sidewalk width requirement.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards. This includes a sidewalk width of 5-feet with 1-foot of separation between the sidewalk and the new right-of-way line for Type A sidewalks.

8. Planter Strips. Except where infeasible, a planter strip shall be provided between the sidewalk and the curb line, with a minimum width of five feet. This strip shall be landscaped in accordance with the standards in NMC 15.420.020. Curb-side sidewalks may be allowed on limited residential streets. Where curb-side sidewalks are allowed, the following shall be provided:

This criterion will be met if the aforementioned condition of approval is adhered to.

a. Additional reinforcement is done to the sidewalk section at corners.

b. Sidewalk width is six feet.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include constructing a 5.5-foot planter strip. This is above the minimum planter strip width requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. The improvements include constructing a 5.5-foot planter strip. This is above the minimum planter strip width requirement.

The Applicant has not yet submitted formal construction plans for the proposed development, therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards. This would include planter strips of at least 5-feet in width along any constructed or improved public streets.

This criterion will be met if the aforementioned condition of approval is adhered to.

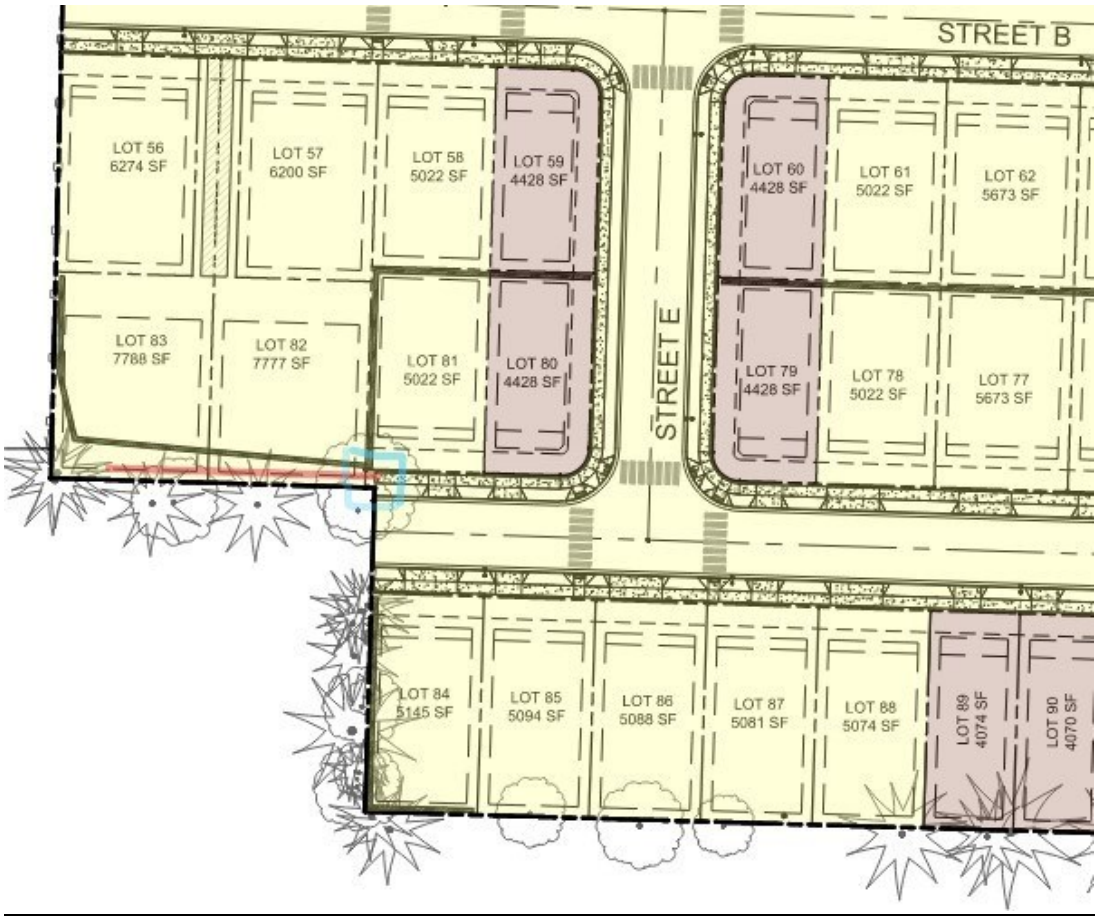
9. Slope Easements. Slope easements shall be provided adjacent to the street where required to maintain the stability of the street.

Finding: Slope easements have not been identified as required along NE Springbrook Road or the newly constructed local-residential streets within the proposed development.

This criterion is not applicable.

10. Intersections and Street Design. The street design standards in the Newberg public works design and construction standards shall apply to all public streets, alleys, bike facilities, and sidewalks in the city.

Finding: Submitted materials include local-residential streets to be constructed within the proposed development boundaries. The plans appear to generally satisfy requirements for the street design standards in the City of Newberg Public Works Design and Construction Standards; however, the western termination of proposed Street A appears to be configured with a jog along the development site boundary (annotated in Figure below). This jog may result in future difficulties in expansion of Street A to the west for future development. Prior to the issuance of public improvement permits, an updated site plan shall be submitted indicating that the layout of lots in this area have been reworked to eliminate the presence of this jog and ensure a consistent ROW length across the entire stretch of Street A to accommodate a future street extension, or an agreement in a form acceptable to the City shall be submitted guaranteeing the dedication of the required right-of-way and any required easements at the time of extension of Street "A" to serve future development.



The Applicant has not yet submitted formal construction plans for the proposed development. The plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval and so long as the construction standard is adhered to.

11. The planning commission may approve modifications to street standards for the purpose of ingress or egress to a minimum of three and a maximum of six lots through a conditional use permit.

Finding: No modifications to street standards for the purpose of ingress or egress were requested by the Applicant.

This criterion is not applicable.

H. Modification of Street Right-of-Way and Improvement Width. The director, pursuant to the Type II review procedures of Chapter 15.220 NMC, may allow modification to the public street standards of subsection (G) of this section, when the criteria in both subsections (H)(1) and (2) of this section are satisfied:

1. The modification is necessary to provide design flexibility in instances where:

a. Unusual topographic conditions require a reduced width or grade separation of improved surfaces; or

b. Lot shape or configuration precludes accessing a proposed development with a street which meets the full standards of this section; or

c. A modification is necessary to preserve trees or other natural features determined by the city to be significant to the aesthetic character of the area; or

d. A planned unit development is proposed and the modification of street standards is necessary to provide greater privacy or aesthetic quality to the development.

2. Modification of the standards of this section shall only be approved if the director finds that the specific design proposed provides adequate vehicular access based on anticipated traffic volumes.

Finding: Modifications to the street right-of-way and/or improvement widths have not been requested and none are required.

This criterion is not applicable.

I. Temporary Turnarounds. Where a street will be extended as part of a future phase of a development, or as part of development of an abutting property, the street may be terminated with a temporary turnaround in lieu of a standard street connection or circular cul-de-sac

bulb. The director and fire chief shall approve the temporary turnaround. It shall have an all-weather surface, and may include a hammerhead-type turnaround meeting fire apparatus access road standards, a paved or graveled circular turnaround, or a paved or graveled temporary access road. For streets extending less than 150 feet and/or with no significant access, the director may approve the street without a temporary turnaround. Easements or right-of-way may be required as necessary to preserve access to the turnaround.

Finding: The Applicant submitted approved Tualatin Valley Fire & Rescue Permit #2024-0095 with the application materials. No future phases of development or development of the abutting property is proposed as part of the proposed PUD. Because no temporary turnaround is required by TVF&R, this criterion is not applicable.

J. Topography. The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of this code.

Finding: Submitted materials show new streets are lain out in a sensible manner in consideration of surrounding topographic conditions.

This criterion is met.

K. Future Extension of Streets. All new streets required for a subdivision, partition, or a project requiring site design review shall be constructed to be "to and through": through the development and to the edges of the project site to serve adjacent properties for future development.

Finding: Submitted materials show new streets which terminate in a matter that allow for road extension to accommodate future land development on the adjoining and vicinity properties west of the proposed development. The proposed street layout does not plan for future extension of streets to the north of the proposed development, as proposed Streets D and F do not terminate at the north property boundary. The northern portion of the property is bounded by the existing urban growth boundary. Future street extensions to the north of the development site are not required because the area lies outside of all City planned rights-of-way and outside of the urban growth boundary. No streets are required in a north-south orientation through the proposed lots along the northern property line.

Because the proposed streets "A", "B", and "C" are proposed to be constructed to be "to and through", this criterion is met.

L. Cul-de-Sacs.

> ***1. Cul-de-sacs shall only be permitted when one or more of the circumstances listed in this section exist. When cul-de-sacs are justified, public walkway connections shall be provided wherever practical to connect with another street, walkway, school, or similar destination.***
>
> > ***a. Physical or topographic conditions make a street connection impracticable. These conditions include but are not limited to controlled access streets, railroads, steep slopes, wetlands, or water bodies where a connection could not be reasonably made.***

b. Buildings or other existing development on adjacent lands physically preclude a connection now or in the future, considering the potential for redevelopment.

c. Where streets or accessways would violate provisions of leases, easements, or similar restrictions.

d. Where the streets or accessways abut the urban growth boundary and rural resource land in farm or forest use, except where the adjoining land is designated as an urban reserve area.

2. Cul-de-sacs shall be no more than 400 feet long (measured from the centerline of the intersection to the radius point of the bulb).

3. Cul-de-sacs shall not serve more than 18 single-family dwellings.

Each cul-de-sac shall have a circular end with a minimum diameter of 96 feet, curb-to-curb, within a 109-foot minimum diameter right-of-way. For residential uses, a 35-foot radius may be allowed if the street has no parking, a mountable curb, curbside sidewalks, and sprinkler systems in every building along the street.

Finding: Submitted materials demonstrate that no cul-de-sacs are being proposed or required.

This criterion is not applicable.

M. Street Names and Street Signs. Streets that are in alignment with existing named streets shall bear the names of such existing streets. Names for new streets not in alignment with existing streets are subject to approval by the director and the fire chief and shall not unnecessarily duplicate or resemble the name of any existing or platted street in the city. It shall be the responsibility of the land divider to provide street signs.

Finding: Submitted materials indicate that new streets will be constructed within the proposed development but do not include any proposed street names at this time. Prior to the issuance of a public improvement permit, the Applicant shall propose street names for review which do not unnecessarily duplicate or resemble any existing streets within the City with their formal construction plan submission.

This criterion will be met if the aforementioned condition of approval is adhered to.

N. Platting Standards for Alleys.

1. An alley may be required to be dedicated and constructed to provide adequate access for a development, as deemed necessary by the director.

2. The right-of-way width and paving design for alleys shall be not less than 20 feet wide. Slope easements shall be dedicated in accordance with specifications adopted by the city council under NMC 15.505.010 et seq.

3. Where two alleys intersect, 10-foot corner cut-offs shall be provided.

4. Unless otherwise approved by the city engineer where topographical conditions will not reasonably permit, grades shall not exceed 12 percent on alleys, and centerline radii on curves shall be not less than 100 feet.

5. All provisions and requirements with respect to streets identified in this code shall apply to alleys the same in all respects as if the word "street" or "streets" therein appeared as the word "alley" or "alleys" respectively.

Finding: Submitted materials show that no alleys are proposed or required.

This criterion is not applicable.

O. Platting Standards for Blocks.

1. Purpose. Streets and walkways can provide convenient travel within a neighborhood and can serve to connect people and land uses. Large, uninterrupted blocks can serve as a barrier to travel, especially walking and biking. Large blocks also can divide rather than unite neighborhoods. To promote connected neighborhoods and to shorten travel distances, the following minimum standards for block lengths are established.

2. Maximum Block Length and Perimeter. The maximum length and perimeters of blocks in the zones listed below shall be according to the following table. The review body for a subdivision, partition, conditional use permit, or a Type II design review may require installation of streets or walkways as necessary to meet the standards below.

Zone(s)	*Maximum Block Length*	*Maximum Block Perimeter*
R-1	*800 feet*	*2,000 feet*
R-2, R-3, RP, I	*1,200 feet*	*3,000 feet*

3. Exceptions.

a. If a public walkway is installed mid-block, the maximum block length and perimeter may be increased by 25 percent.

b. Where a proposed street divides a block, one of the resulting blocks may exceed the maximum block length and perimeter standards provided the average block length and perimeter of the two resulting blocks do not exceed these standards.

c. Blocks in excess of the above standards are allowed where access controlled streets, street access spacing standards, railroads, steep slopes, wetlands, water bodies, preexisting development, ownership patterns or similar circumstances restrict street and walkway location and design. In these cases, block length and perimeter shall be as small as practical. Where a street cannot be provided because of these circumstances but a public walkway is still feasible, a public walkway shall be provided.

d. Institutional campuses located in an R-1 zone may apply the standards for the institutional zone.

e. Where a block is in more than one zone, the standards of the majority of land in the proposed block shall apply.

f. Where a local street plan, concept master site development plan, or specific plan has been approved for an area, the block standards shall follow those approved in the plan. In approving such a plan, the review body shall follow the block standards listed above to the extent appropriate for the plan area.

Finding: The block along the north and east development boundary exceeds these requirements; however, because this block abuts the UGB it is permissible. The blocks shown on the submitted materials are within permissible standards lengths.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted should include block configurations consistent with the requirements of the Newberg Municipal Code and current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

4. Public Pedestrian Walkways and Bicycle Access. The approval authority in approving a land use application with conditions may require a developer to provide an access way where the creation of a street consistent with street spacing standards is infeasible and the creation of a cul-de-sac or dead-end street is unavoidable. A public walkway provides a connection through a block that is longer than established standards or connects the end of the street to another right-of-way or a public access easement. A public walkway shall be contained within a public right-of-way or public access easement, as required by the city. A public walkway shall be a minimum of 10 feet wide and shall provide a minimum six-foot-wide paved surface or other all-weather surface approved by the city (see subsection (S) of this section for public walkway standards).

Design features should be considered that allow access to emergency vehicles but that restrict access to non-emergency motorized vehicles.

Finding: Submitted materials show that no new public pedestrian walkways are proposed or required.

This criterion is not applicable.

P. Private Streets. New private streets, as defined in NMC 15.05.030, shall not be created, except as allowed by NMC 15.240.020(L)(2).

Finding: Submitted materials show that no new private streets are proposed or required.

This criterion is not applicable.

Q. Traffic Calming.

1. The following roadway design features may be required in new street construction where traffic calming needs are anticipated:

a. Serpentine alignment.

b. Curb extensions.

c. Traffic diverters/circles.

d. Raised medians and landscaping.

e. Other methods shown effective through engineering studies.

2. Traffic-calming measures such as speed humps should be applied to mitigate traffic operations and/or safety problems on existing streets. They should not be applied with new street constructions.

Finding: The provided TIA did not recommend any traffic calming measures as analysis found the proposed layout is adequately safe.

This criterion is met.

R. Vehicular Access Standards.

1. Purpose. The purpose of these standards is to manage vehicle access to maintain traffic flow, safety, roadway capacity, and efficiency. They help to maintain an adequate level of service consistent with the functional classification of the street. Major roadways, including arterials and collectors, serve as the primary system for moving people and goods within and through the city. Access is limited and managed on these roads to promote efficient through movement. Local streets and alleys provide access to individual properties. Access is managed on these roads to maintain safe maneuvering of vehicles in and out of properties and to allow safe through movements. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function.

2. Access Spacing Standards. Public street intersection and driveway spacing shall follow the standards in Table 15.505.R below. The Oregon Department of Transportation (ODOT) has jurisdiction of some roadways within the Newberg city limits, and ODOT access standards will apply on those roadways.

Table 15.505.R. Access Spacing Standards

Roadway Functional Classification	*Area[1]*	*Minimum Public Street Intersection Spacing (Feet)[2]*	*Driveway Setback from Intersecting Street[3]*
Expressway	*All*	*Refer to ODOT Access Spacing Standards*	*NA*

Roadway Functional Classification	*Area*[1]	*Minimum Public Street Intersection Spacing (Feet)*[2]	*Driveway Setback from Intersecting Street*[3]
Major arterial	*Urban* *CBD*	*Refer to ODOT Access Spacing Standards*	
Minor arterial	*Urban* *CBD*	*500* *200*	*150* *100*
Major collector	*All*	*400*	*150*
Minor collector	*All*	*300*	*100*

[1] ***"Urban" refers to intersections inside the city urban growth boundary outside the central business district (C-3 zone).***

"CBD" refers to intersections within the central business district (C-3 zone).

"All" refers to all intersections within the Newberg urban growth boundary.

[2] ***Measured centerline to centerline.***

[3] ***The setback is based on the higher classification of the intersecting streets. Measured from the curb of the intersecting street to the beginning of the driveway, excluding flares. If the driveway setback listed above would preclude a lot from having at least one driveway, including shared driveways or driveways on adjoining streets, one driveway is allowed as far from the intersection as possible.***

Finding: Submitted materials propose a local-residential street intersection with NE Springbrook Road that intersects approximately 260-feet from the centerline of Benjamin Road, the nearest street intersection along NE Springbrook Road. This distance is not consistent with the access spacing standards Table 15.505.R. which requires minimum public street intersection spacing of 400 feet along a major collector classified road. The Applicant will either need to reconfigure the intersection to exceed the 400-feet spacing requirement or apply for an exception to access spacing standards for a reduced spacing that is contingent on director approval in accordance with 15.505.030(R)(10) and 15.505.030(R)(11).

This criterion will be met if the aforementioned condition of approval is adhered to.

3. Properties with Multiple Frontages. Where a property has frontage on more than one street, access shall be limited to the street with the lesser classification.

a. For a duplex, triplex or quadplex dwelling or a cottage cluster project with frontage on two local streets, access may be permitted on both streets.

Finding: Submitted materials indicate that there are several lots situated at intersections within the proposed development and would be considered as having multiple frontages. Lots with multiple frontages would be accessed via streets with identical local-residential function classifications (proposed Streets A, B, or C); therefore, this criterion is not applicable.

4. Driveways. More than one driveway is permitted on a lot accessed from either a minor collector or local street as long as there is at least 40 feet of lot frontage separating each driveway approach. More than one driveway is permitted on a lot accessed from a major

collector as long as there is at least 100 feet of lot frontage separating each driveway approach.

a. For a duplex, triplex or quadplex dwelling or a cottage cluster project, more than one driveway is permitted on a lot accessed from either a minor collector or local street as long as there is at least 22 feet of lot frontage separating each driveway approach.

Finding: Submitted materials do not include any lots with multiple driveways.

This criterion is not applicable.

5. Alley Access. Where a property has frontage on an alley and the only other frontages are on collector or arterial streets, access shall be taken from the alley only. The review body may allow creation of an alley for access to lots that do not otherwise have frontage on a public street provided all of the following are met:

a. The review body finds that creating a public street frontage is not feasible.

b. The alley access is for no more than six dwellings and no more than six lots.

c. The alley has through access to streets on both ends.

d. One additional parking space over those otherwise required is provided for each dwelling. Where feasible, this shall be provided as a public use parking space adjacent to the alley.

Finding: Submitted materials do not include any lots with alleys or alley access.

This criterion is not applicable.

6. Closure of Existing Accesses. Existing accesses that are not used as part of development or redevelopment of a property shall be closed and replaced with curbing, sidewalks, and landscaping, as appropriate.

Finding: Submitted materials indicate that the existing gravel access road intersecting with NE Springbrook Road will be demolished as part of the proposed development. Since the proposed development includes proposed streets roughly overlain the existing access road, no additional improvements will be required under this section.

This criterion is met.

7. Shared Driveways.

a. The number of driveways onto arterial streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The city shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes. Where there is an abutting developable property, a shared driveway shall be provided as appropriate. When

shared driveways are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway temporarily ends at the property line, but may be accessed or extended in the future as the adjacent parcel develops. "Developable" means that a parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).

b. Access easements (i.e., for the benefit of affected properties) and maintenance agreements shall be recorded for all shared driveways, including pathways, at the time of final plat approval or as a condition of site development approval.

c. No more than four lots may access one shared driveway, with the exception of cottage dwellings on individual lots that are part of a cottage cluster.

d. Shared driveways shall be posted as no parking fire lanes where required by the fire marshal.

e. Where three or more lots share one driveway, one additional parking space over those otherwise required shall be provided for each dwelling. Where feasible, this shall be provided as a common use parking space adjacent to the driveway. However, duplex, triplex, quadplex, townhouse and cottage dwellings with shared driveways shall be exempt from this standard.

Finding: Submitted materials indicate that the majority of lots will have a private driveway with access onto the local-residential streets. The exception is proposed Lots 82 and 83 which appear to have a shared driveway. Prior to Step 2 of the PUD process, an access easement will need to be prepared for the shared driveway serving Lots 82 and 83, and any additional shared driveways that may be added as development design continues or changes.

This criterion will be met if the aforementioned condition of approval is adhered to.

8. Frontage Streets and Alleys. The review body for a partition, subdivision, or design review may require construction of a frontage street to provide access to properties fronting an arterial or collector street.

Finding: A new frontage street has not been proposed nor is required.

This criterion is not applicable.

9. ODOT or Yamhill County Right-of-Way. Where a property abuts an ODOT or Yamhill County right-of-way, the applicant for any development project shall obtain an access permit from ODOT or Yamhill County.

Finding: NE Springbrook Road along the project site frontage is designated as Yamhill County jurisdiction.

Permit approval from Yamhill County is required for the proposed public improvements in NE Springbrook Road and will be required prior to issuance of a City of Newberg Public Improvement Permit.

10. Exceptions. The director may allow exceptions to the access standards above in any of the following circumstances:

This criterion will be met if the aforementioned condition of approval is adhered to.

a. Where existing and planned future development patterns or physical constraints, such as topography, parcel configuration, and similar conditions, prevent access in accordance with the above standards.

b. Where the proposal is to relocate an existing access for existing development, where the relocated access is closer to conformance with the standards above and does not increase the type or volume of access.

c. Where the proposed access results in safer access, less congestion, a better level of service, and more functional circulation, both on street and on site, than access otherwise allowed under these standards.

Finding: No exceptions to access standards have been requested and none are required.

This criterion is not applicable.

11. Where an exception is approved, the access shall be as safe and functional as practical in the particular circumstance. The director may require that the Applicant submit a traffic study by a registered engineer to show the proposed access meets these criteria.

Finding: No exceptions to access standards have been requested and none are required.

This criterion is not applicable.

S. Public Walkways.

1. Projects subject to Type II design review, partition, or subdivision approval may be required to provide public walkways where necessary for public safety and convenience, or where necessary to meet the standards of this code. Public walkways are meant to connect cul-de-sacs to adjacent areas, to pass through oddly shaped or unusually long blocks, to provide for networks of public paths according to adopted plans, or to provide access to schools, parks or other community destinations or public areas. Where practical, public walkway easements and locations may also be used to accommodate public utilities.

2. Public walkways shall be located within a public access easement that is a minimum of 15 feet in width.

3. A walk strip, not less than 10 feet in width, shall be paved in the center of all public walkway easements. Such paving shall conform to specifications in the Newberg public works design and construction standards.

4. Public walkways shall be designed to meet the Americans with Disabilities Act requirements.

5. Public walkways connecting one right-of-way to another shall be designed to provide as short and straight of a route as practical.

6. The developer of the public walkway may be required to provide a homeowners' association or similar entity to maintain the public walkway and associated improvements.

7. Lighting may be required for public walkways in excess of 250 feet in length.

8. The review body may modify these requirements where it finds that topographic, preexisting development, or similar constraints exist.

Finding: Public walkways are not proposed and none are required.

This criterion is not applicable.

T. Street Trees. Street trees shall be provided for all projects subject to Type II design review, partition, or subdivision. Street trees shall be installed in accordance with the provisions of NMC 15.420.010(B)(4).

Finding: Per NMC 15.420.010(B), landscaping standards are required for all developments except single-family detached dwellings, duplex dwellings, triplex dwellings, quadplex dwellings, townhouse dwellings, and cottage cluster projects. Because the proposed development is a Planned Unit Development, street trees are required. The streets within the PUD are proposed to be classified as local residential streets and N Springbrook Road to the southwest of the PUD is classified as a Major Collector. According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the Applicant's request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Although the portion of NE Springbrook Road along the subject property was not annexed in ANX24-0001, because the condition to provide improvements consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site, street tree requirements for NE Springbrook Road in unincorporated Yamhill County adjacent to the site will be evaluated as a Major Collector.

NMC 15.420.010(B)(4)(b) requires that street trees along collector and local streets shall have spacing of approximately 35 to 40 feet on center. The PUD has approximately 7,346 feet of street frontage, requiring approximately 197 street trees at a spacing of 35 feet on center. The landscaping plans included in the application materials indicate 123 street trees are provided throughout the PUD. Prior to Step Two PUD approval, the Applicant shall provide updated landscape plans meeting the street tree spacing requirements of NMC 15.420.010(B)(4) or discussing conflicts prohibiting street tree installation (i.e. utilities).

The installation of street trees located on individual lots intended for residential use shall be verified at the time of final planning inspection prior to issuance of Certificate of Occupancy. Prior to the issuance of building permits, the Applicant shall submit revised site plans indicating street trees located on lots intended for residential use. The installation of street trees located on tracts not intended for residential use will be verified at the time of the final planning inspection prior to issuance of the certificate of occupancy of the first single-family dwelling.

U. Street Lights. All developments shall include underground electric service, light standards, wiring and lamps for street lights according to the specifications and standards of the Newberg public works design and construction standards. The developer shall install all such facilities and make the necessary arrangements with the serving electric utility as approved by the city. Upon the city's acceptance of the public improvements associated with the development, the street lighting system, exclusive of utility-owned service lines, shall be and become property of the city unless otherwise designated by the city through agreement with a private utility.

Finding: The submitted materials include a Photometrics Plan that includes a plan to install street-lights and power lines as part of the proposed development and NE Springbrook Road frontage improvements.

The necessary public improvement permit will require the Applicant to provide a street lighting analysis along NE Springbrook Road and newly constructed streets for additional PGE Option A street lights meeting city standards. Plans submitted with the public improvement permit application are to include PGE Option A street lights necessary to meet City standards.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

Because the submitted materials do not address the need for possible permits from Yamhill County for installation of streetlights along the NE Springbrook Road frontages, the Applicant will be required to obtain any necessary Yamhill County permits to perform work within Yamhill County right-of-way. Any necessary Yamhill County permits are to be obtained and submitted as part of the public improvement permit process.

This criterion will be met if the aforementioned conditions of approval are adhered to.

V. Transit Improvements. Development proposals for sites that include or are adjacent to existing or planned transit facilities, as shown in the Newberg transportation system plan or adopted local or regional transit plan, shall be required to provide any of the following, as applicable and required by the review authority:

> ***1. Reasonably direct pedestrian connections between the transit facility and building entrances of the site. For the purpose of this section, "reasonably direct" means a route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for users.***
>
> ***2. A transit passenger landing pad accessible to disabled persons.***

3. An easement of dedication for a passenger shelter or bench if such facility is in an adopted plan.

4. Lighting at the transit facility. [Ord. 2889 § 2 (Exh. B §§ 43 – 45), 12-6-21; Ord. 2880 § 2 (Exh. B §§ 51, 52), 6-7-21; Ord. 2871 § 3 (Exh. D), 3-1-21; Ord. 2862 § 1 (Exh. A § 1), 6-15-20; Ord. 2822 § 1 (Exh. A), 2-5-18; Ord. 2810 § 2 (Exhs. B, C), 12-19-16; Ord. 2763 § 1 (Exh. A § 19), 9-16-13; Ord. 2736 § 1 (Exh. A §§ 1, 3, 4), 3-21-11; Ord. 2619, 5-16-05; Ord. 2513, 8-2-99; Ord. 2507, 3-1-99; Ord. 2494, 4-6-98; Ord. 2451, 12-2-96. Code 2001 §§ 151.681, 151.683, 151.684 – 151.686, 151.689 – 151.692, 151.694, 151.695, 151.701 – 151.703, 151.705.]

Finding: The project site is not adjacent to existing or planned transit facilities.

This criterion is not applicable.

15.505.040 Public utility standards.
A. Purpose. The purpose of this section is to provide adequate services and facilities appropriate to the scale and type of development.

B. Applicability. This section applies to all development where installation, extension or improvement of water, wastewater, or private utilities is required to serve the development or use of the subject property.

C. General Standards.

1. The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall conform to the Newberg public works design and construction standards and require a public improvements permit.

2. The location, design, installation and maintenance of all utility lines and facilities shall be carried out with minimum feasible disturbances of soil and site. Installation of all proposed public and private utilities shall be coordinated by the developer and be approved by the city to ensure the orderly extension of such utilities within public right-of-way and easements.

D. Standards for Water Improvements. All development that has a need for water service shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary wastewater and stormwater facilities, as applicable.

1. All developments shall be required to be linked to existing water facilities adequately sized to serve their intended area by the construction of water distribution lines, reservoirs and pumping stations which connect to such water service facilities. All necessary easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.

2. Specific location, size and capacity of such facilities will be subject to the approval of the director with reference to the applicable water master plan. All water facilities shall

conform with city pressure zones and shall be looped where necessary to provide adequate pressure and fire flows during peak demand at every point within the system in the development to which the water facilities will be connected. Installation costs shall remain entirely the developer's responsibility.

3. The design of the water facilities shall take into account provisions for the future extension beyond the development to serve adjacent properties, which, in the judgment of the city, cannot be feasibly served otherwise.

4. Design, construction and material standards shall be as specified by the director for the construction of such public water facilities in the city.

The water main to serve the proposed development must connect to the existing 12-inch water main on the west side of NE Springbrook Road.

Finding: Submitted materials appear to show water service laterals and meters to serve each dwelling unit.

The Applicant is also proposing to construct a water distribution pump station to provide and maintain necessary water pressure in the proposed development. The pump station is proposed to be constructed along NE Springbrook Road at the intersection to the access street to the proposed development. A draft Basis of Design technical memo was provided with the submitted materials which details the preliminary engineering analysis completed so far for the new pump station. Water distribution pump stations are listed in section 1.11.3 of the City of Newberg Public Works Design and Construction Standards as a special design facility not addressed in these standards. For these types of facilities appropriate design, operating and maintenance criteria for the specific project are determined through coordination between the design engineer and the City's Public Works Department.

The Applicant is required to submit the water distribution pump station Basis of Design technical memo with the public improvement permit application. To determine the appropriate design, operating and maintenance criteria, the Basis of Design technical memo for the proposed water booster pump station will be fully reviewed as part of the public improvement permit approval process. This review is to occur in accordance with section 1.11.3 of the City of Newberg Public Works Design and Construction Standards for special facility designs. The Basis of Design technical memo will need to be updated with input provided by City's Public Works Department during the public improvement permit approval process.

The Applicant is required to incorporate City feedback concerning the Basis of Design technical memo into a final Basis of Design and into final plans for the project.

The developer may be required to cover the expense of a consultant with specialty engineering experience selected by the city for a technical review of the Basis of Design and plans for the water booster pump station. The consultant selected by the city for a technical review is to act as an extension of city staff for this unique addition to the public water system.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a water meter at the right-of-way line prior to connecting to the public main or to a double water service where allowed per the Public Works Design and Construction Standards.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed water services. These plans are to be submitted with the application for a public improvement permit.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

The closest existing fire hydrant and any new fire hydrants are to be shown on plans included with permit submittals. Fire hydrant spacing is to be consistent with City of Newberg Public Works Design and Construction standards and TVF&R requirements.

This criterion will be met if the aforementioned conditions of approval are adhered to.

E. Standards for Wastewater Improvements. All development that has a need for wastewater services shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary water services and stormwater facilities, as applicable.

1. All septic tank systems and on-site sewage systems are prohibited. Existing septic systems must be abandoned or removed in accordance with Yamhill County standards.

2. All properties shall be provided with gravity service to the city wastewater system, except for lots that have unique topographic or other natural features that make gravity wastewater extension impractical as determined by the director. Where gravity service is impractical, the developer shall provide all necessary pumps/lift stations and other improvements, as determined by the director.

3. All developments shall be required to be linked to existing wastewater collection facilities adequately sized to serve their intended area by the construction of wastewater lines which connect to existing adequately sized wastewater facilities. All necessary easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.

4. Specific location, size and capacity of wastewater facilities will be subject to the approval of the director with reference to the applicable wastewater master plan. All wastewater facilities shall be sized to provide adequate capacity during peak flows from the entire area potentially served by such facilities. Installation costs shall remain entirely the developer's responsibility.

5. Temporary wastewater service facilities, including pumping stations, will be permitted only if the director approves the temporary facilities, and the developer provides for all facilities that are necessary for transition to permanent facilities.

6. The design of the wastewater facilities shall take into account provisions for the future extension beyond the development to serve upstream properties, which, in the judgment of the city, cannot be feasibly served otherwise.

7. Design, construction and material standards shall be as specified by the director for the construction of such wastewater facilities in the city.

Finding: Submitted materials appear to show wastewater service laterals to serve each dwelling unit consistent with NMC 13.10.070(K) below. The wastewater main to serve the proposed development must connect to the existing 15-inch wastewater gravity main beneath NE Springbrook Road.

> *NMC 13.10.070 (K) - Independent Drainage Systems. Every dwelling and/or building under separate ownership shall have an independent wastewater system connection with a public or private collection system. Additionally, each parcel shall be served by individual laterals.*

The Applicant prepared a wastewater downstream analysis provided with the submitted materials. The downstream analysis evaluated whether the existing public wastewater collection system has the necessary capacity to support the additional wastewater flows from the dwellings constructed as part of the proposed development. The Applicant utilized a modified hydraulic model from the City of Newberg Wastewater Master Plan prepared in March 2018 and amended in 2021 using XPSTORM. The downstream analysis concluded that the additional loads generated from the proposed development will have a negligible effect on the existing downstream wastewater system.

The wastewater analysis of impacts to the wastewater system from the proposed development is required to be submitted with permit applications.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a cleanout at the right-of-way line prior to connecting to the public main or to a double wye service where allowed per the Public Works Design and Construction Standards.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed wastewater services. These plans are to be submitted with the application for a public improvement permit.

This criterion will be met if the aforementioned conditions of approval are adhered to.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

F. Easements. Easements for public and private utilities shall be provided as deemed necessary by the city, special districts, and utility companies. Easements for special purpose uses shall be of a width deemed appropriate by the responsible agency. Such easements shall be recorded on easement forms approved by the city and designated on the final plat of all subdivisions and partitions. Minimum required easement width and locations are as provided in the Newberg public works design and construction standards. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

Finding: Submitted materials indicate a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development) as is required for land division projects such as subdivisions and partitions for future, franchise utility installations, including potential future undergrounding of overhead utilities.

The Applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

15.505.050 Stormwater system standards.
A. Purpose. The purpose of this section is to provide for the drainage of surface water from all development; to minimize erosion; and to reduce degradation of water quality due to sediments and pollutants in stormwater runoff.

B. Applicability. The provisions of this section apply to all developments subject to site development review or land division review and to the reconstruction or expansion of such developments that increases the flow or changes the point of discharge to the city stormwater system. Additionally, the provisions of this section shall apply to all drainage facilities that impact any public storm drain system, public right-of-way or public easement, including but not limited to off-street parking and loading areas.

C. General Requirement. All stormwater runoff shall be conveyed to a public storm wastewater or natural drainage channel having adequate capacity to carry the flow without overflowing or otherwise causing damage to public and/or private property. The developer shall pay all costs associated with designing and constructing the facilities necessary to meet this requirement.

Finding: Submitted materials indicate the installation of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road. The stormwater piping routes flows to one of two stormwater detention basins. The northern basin collects stormwater drainage from a portion of the proposed development and appears to route pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The southern basin collects stormwater drainage from the NE Springbrook Road frontage and a portion of the proposed development and appears to route pretreated stormwater to the existing 12-inch main beneath NE Springbrook Drive near the southeastern property boundary.

The stormwater management plan is to be prepared in accordance with the Public Works Design and Construction Standards. This includes demonstrating compliance with the stormwater facility selection hierarchy described in Section 4.6.8 of the Public Works Design and Construction Standards.

The provided preliminary stormwater management plan lacks figures of the upstream and downstream basin (per requirements outlined in the Public Works Design and Construction Standards Section II, a and b), lacks a stamped certificate of investigation for downstream analysis, and operation and maintenance plan for proposed stormwater management facilities for the proposed development. The Applicant is required to amend this stormwater management plan to include required components identified in the Public Works Design and Construction Standards concerning the preparation of a stormwater management plan.

The Applicant has not yet submitted formal construction plans for the proposed development. With Public Improvement Permit submittals the Applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

The Applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

Plans will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

This criterion will be met if the aforementioned condition of approval is adhered to.

D. Plan for Stormwater and Erosion Control. No construction of any facilities in a development included in subsection (B) of this section shall be permitted until an engineer registered in the State of Oregon prepares a stormwater report and erosion control plan for the project. This plan shall contain at a minimum:

1. The methods to be used to minimize the amount of runoff, sedimentation, and pollution created from the development both during and after construction.

2. Plans for the construction of stormwater facilities and any other facilities that depict line sizes, profiles, construction specifications, and other such information as is necessary for the city to review the adequacy of the stormwater plans.

3. Design calculations shall be submitted for all drainage facilities. These drainage calculations shall be included in the stormwater report and shall be stamped by a licensed professional engineer in the State of Oregon. Peak design discharges shall be computed based upon the design criteria outlined in the public works design and construction standards for the city.

Finding: Submitted materials indicate the installation of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road. The stormwater piping routes flows to one of two

stormwater detention basins. The northern basin collects stormwater drainage from a portion of the proposed development and appears to route pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The southern basin collects stormwater drainage from the NE Springbrook Road frontage and a portion of the proposed development and appears to route pretreated stormwater to the existing 12-inch main beneath NE Springbrook Drive near the southeastern property boundary.

The Applicant is required to submit plans clearly showing the area of disturbance and to obtain a Oregon Department of Environmental Quality 1200-C Erosion Control Permit prior to any ground disturbing activity if 1 acre or more will be disturbed.

With Public Improvement Permit submittals the Applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

The Applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

Plans will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

This criterion will be met if the aforementioned condition of approval is adhered to.

E. Development Standards. Development subject to this section shall be planned, designed, constructed, and maintained in compliance with the Newberg public works design and construction standards. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

Finding: Because the Applicant has not submitted construction plans, construction plans which comply with the Newberg Public Works Design and Construction Standards shall be submitted with the public works improvement permit application.

This criterion will be met if the aforementioned condition of approval is adhered to.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

CONCLUSION:

Based on the above-mentioned findings and adherence to the above-mentioned conditions of approval, the application meets the criteria of the Newberg Development Code for the development of a 100-unit planned unit development as noted in this staff report.

EXHIBIT "B" TO PLANNING COMMISSION ORDER NO. 2025-01
CONDITIONS OF APPROVAL
Planned Unit Development
3809 NE Springbrook Road (File No. PUD24-0001)

A. THE FOLLOWING MUST BE COMPLETED BEFORE PUD STEP 2 FINAL PLANS APPROVAL WILL BE ISSUED:

1. Prior to Step 2 of the PUD process, a revised site plan and landscape plan that demonstrates additional information on the shared recreation area and outdoor furnishings shall be provided.

2. Prior to Step 2 of the PUD process and submittal of Final Plans for compliance and before submittal of building permits the Applicant shall submit a Measure 49 waiver related to the City's decision on the planned development.

3. Prior to Step Two PUD approval, the Applicant shall provide updated landscape plans meeting the street tree spacing requirements of NMC 15.420.010(B)(4) or discussing conflicts prohibiting street tree installation (i.e. utilities).

4. Prior to the issuance of the Type I PUD Step Two approval, the Applicant shall provide irrigation plans for these landscaped areas.

5. The landscaping proposed for tracts and areas not intended for single family development shall be continuously maintained and prior to the Step Two PUD approval the Applicant shall submit a mechanism for maintenance of privately owned landscaped areas.

6. Prior to Step 2 of the PUD process, an access easement will need to be prepared for the shared driveway serving Lots 82 and 83, and any additional shared driveways that may be added as development design continues or changes.

B. THE FOLLOWING MUST BE COMPLETED BEFORE THE CITY WILL ISSUE A PUBLIC IMPROVEMENT PERMIT:

1. The Applicant shall provide final plans for public improvements which meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development).

2. The Applicant shall provide final plans for public improvements which meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to underground newly constructed public

utilities along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development).

3. Prior to the issuance of public improvement permits, the Applicant shall submit revised landscape plans showing the proposed landscaping in the planting strips.

4. Final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to underground all constructed public utilities along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

5. Plans submitted with a permit application for proposed public improvements, or for public improvements as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

6. Proposed improvements should also be completed in tandem with the extension of public utility lines to serve the new development. The Applicant is required to submit construction plans and obtain a public improvement permit for required public improvements.

7. Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the Applicant to complete improvements along both sides of NE Springbrook Road. The Applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

8. The water main to serve the proposed development must connect to the existing 12-inch water main on the west side of NE Springbrook Road.

9. Each lot and each dwelling under separate ownership must have separate private utility laterals to a water meter at the right-of-way line prior to connecting to the public main or to a double water service where allowed per the Public Works Design and Construction Standards.

10. Final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed water services. These plans are to be submitted with the application for a public improvement permit.

11. The closest existing fire hydrant and any new fire hydrants are to be shown on plans included with Public Improvement Permit submittals. Fire hydrant spacing is to be consistent with City of Newberg Public Works Design and Construction standards and Tualatin Valley Fire and Rescue (TVF&R) requirements.

12. The wastewater main to serve the proposed development must connect to the existing 15-inch wastewater gravity main beneath NE Springbrook Road.

13. Each lot and each dwelling under separate ownership must have separate private utility laterals to a cleanout at the right-of-way line prior to connecting to the public main or to a double wye service where allowed per the Public Works Design and Construction Standards.

14. The wastewater analysis of impacts to the wastewater system from the proposed development is required to be submitted with permit applications.

15. Final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed wastewater services. These plans are to be submitted with the application for a public improvement permit.

16. With Public Improvement Permit submittals the Applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

17. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

18. Final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The Applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

19. The proposed layout of streets is to conform with the requirements of the current NMC, City of Newberg Public Works Design and Construction Standards, and any other adopted City plans.

20. Improvements should be made to both sides of NE Springbrook Road in accordance with condition of approval 2.b for annexation of the subject property, ANX24-0001 approved with Ordinance NO. 2024-2931.

21. The plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

22. The proposed streets should conform with the requirements of the current NMC and City of Newberg Public Works Design and Construction Standards.

23. The Applicant will be required to pay a Traffic Impact Fee for the two intersections which is being assessed based on the proportional impact of the development on public facilities and services.

a. For N Springbrook Road/E Mountainview Drive: (93 PM trips directly proportional to the development)/(1,341 PM peak hour total forecasted trips through the intersection)*($356,000 for the TSP cost of an intersection upgrade) = $24,689.04 Traffic Impact Fee.

b. For N Springbrook Road/Haworth Avenue: (31 AM trips directly proportional to the development)/(1,071 AM peak hour total forecasted trips through the intersection)*($528,000 for the TSP cost of an intersection upgrade) = $15,282.91 Traffic Impact Fee.

24. The Traffic Impact Fees of $24,689.04 for Project I08 and $15,282.91 for Project I09 shall be paid at the time of, or prior to, building permit issuance.

25. The plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards. This includes a sidewalk width of 5-feet with 1-foot of separation between the sidewalk and the new right-of-way line for Type A sidewalks.

26. The plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards. This would include planter strips of at least 5-feet in width along any constructed or improved public streets.

27. Prior to the issuance of public improvement permits, an updated site plan shall be submitted indicating that the layout of lots in this area have been reworked to eliminate the presence of this jog and ensure a consistent ROW length across the entire stretch of Street A to accommodate a future street extension, or an agreement in a form acceptable to the City shall be submitted guaranteeing the dedication of the required right-of-way and any required easements at the time of extension of Street "A" to serve future development.

28. Prior to the issuance of a public improvement permit, the Applicant shall propose street names for review which do not unnecessarily duplicate or resemble any existing streets within the City with their formal construction plan submission.

29. The plans submitted should include block configurations consistent with the requirements of the Newberg Municipal Code and current City of Newberg Public Works Design and Construction Standards.

30. The Applicant will either need to reconfigure the intersection to exceed the 400-feet spacing requirement or apply for an exception to access spacing standards for a reduced spacing that is contingent on director approval in accordance with 15.505.030(R)(10) and 15.505.030(R)(11).

31. Permit approval from Yamhill County is required for the proposed public improvements in NE Springbrook Road and will be required prior to issuance of a City of Newberg Public Improvement Permit.

32. The necessary public improvement permit will require the Applicant to provide a street lighting analysis along NE Springbrook Road and newly constructed streets for additional PGE Option A street lights meeting city standards. Plans submitted with the public improvement permit application are to include PGE Option A street lights necessary to meet City standards.

33. The Applicant will be required to obtain any necessary Yamhill County permits to perform work within Yamhill County right-of-way. Any necessary Yamhill County permits are to be obtained and submitted as part of the public improvement permit process.

34. The Applicant is required to submit the water distribution pump station Basis of Design technical memo with the public improvement permit application. To determine the appropriate design, operating and maintenance criteria, the Basis of Design technical memo for the proposed water booster pump station will be fully reviewed as part of the public improvement permit approval process. This review is to occur in accordance with section 1.11.3 of the City of Newberg Public Works Design and Construction Standards for special facility designs. The Basis

of Design technical memo will need to be updated with input provided by City's Public Works Department during the public improvement permit approval process.

a. The Applicant is required to incorporate City feedback concerning the Basis of Design technical memo into a final Basis of Design and into final plans for the project.

b. The developer may be required to cover the expense of a consultant with specialty engineering experience selected by the city for a technical review of the Basis of Design and plans for the water booster pump station. The consultant selected by the city for a technical review is to act as an extension of city staff for this unique addition to the public water system.

35. The closest existing fire hydrant and any new fire hydrants are to be shown on plans included with permit submittals. Fire hydrant spacing is to be consistent with City of Newberg Public Works Design and Construction standards and TVF&R requirements.

36. The stormwater management plan is to be prepared in accordance with the Public Works Design and Construction Standards. This includes demonstrating compliance with the stormwater facility selection hierarchy described in Section 4.6.8 of the Public Works Design and Construction Standards.

37. The Applicant is required to amend this stormwater management plan to include required components identified in the Public Works Design and Construction Standards concerning the preparation of a stormwater management plan.

38. With permit submittals the Applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

39. The Applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

40. construction plans which comply with the Newberg Public Works Design and Construction Standards shall be submitted with the public works improvement permit application.

C. THE FOLLOWING MUST BE COMPLETED BEFORE THE CITY WILL ISSUE A BUILDING PERMIT:

1. Prior to the issuance of building permits, the Applicant shall submit final plans for approval of the Step Two – Final PUD Plan review process using the City's Type I procedure.

2. The Applicant shall provide lot coverage calculations for buildings, parking, and combined building and parking at the time of building permit submission.

3. The Applicant shall provide building height and sun exposure diagrams at the time of building permit submission.

4. The Applicant shall indicate and provide usable outdoor living area calculations at the time of building permit submittal.

5. Prior to the issuance of building permits, the Applicant shall submit site plans indicating adherence to lot, parking, and combined lot and parking coverage calculations.

6. Prior to the issuance of building permits, the Applicant shall indicate adherence to yard setback requirements on site plans submitted for building permit review.

7. Prior to the issuance of building permits, the Applicant shall submit a revised site plan indicating the yard setback which includes the building setback line required in 15.410.050(C).

8. Prior to the issuance of building permits, the Applicant shall submit revised site plans depicting applicable vision clearance triangles.

9. Prior to the issuance of building permits, the Applicant shall indicate compliance with the building height limitation on site plans submitted for building permit review.

10. Prior to the issuance of building permits, the Applicant shall indicate the required private outdoor area on site plans submitted for building permit review

11. Prior to the issuance of building permits, the Applicant shall submit revised site plans indicating street trees located on lots intended for residential use. The installation of street trees located on tracts not intended for residential use will be verified at the time of the final planning inspection prior to issuance of the certificate of occupancy of the first single-family dwelling.

12. Prior to the issuance of building permits, the Applicant shall submit lighting plan information to verify compliance with the standards in NMC 15.425.

13. Prior to the issuance of building permits, the Applicant shall submit updated site plans including the location of required off-street parking.

14. Prior to the issuance of building permits, the Applicant shall submit updated site plans including the location and design of required off-street parking.

15. The Traffic Impact Fees of $24,689.04 for Project I08 and $15,282.91 for Project I09 shall be paid at the time of, or prior to, building permit issuance.

16. Any required public improvement permit(s) for this project must be submitted, approved and issued prior to building permits being issued.

D. THE FOLLOWING MUST BE COMPLETED BEFORE ISSUANCE OF CERTIFICATES OF OCCUPANCY:

1. Prior to the issuance of certificates of occupancy, all landscaping required shall be installed or the Applicant shall provide security equal to 110 percent of the cost of the landscaping as specified in NMC 15.420.010(C).

E. DEVELOPMENT NOTES:

1. Prior to any site modification, including but not limited to grading, the Applicant shall submit a Stream Corridor Modification request per NMC 15.342.

2. The Applicant is required to submit plans clearly showing the area of disturbance and to obtain a Oregon Department of Environmental Quality 1200-C Erosion Control Permit prior to any ground disturbing activity if 1 acre or more will be disturbed.

PUD24-0001

Attachment 1:

Application and Supplemental Materials

3J CONSULTING
9600 SW NIMBUS AVENUE, SUITE 100
BEAVERTON, OREGON 97008
PH: (503) 946.9365
WWW.3JCONSULTING.COM

MEMORANDUM

To: James Dingwall
Assistant Planner
City of Newberg

From: Sam Huck
Planner

Date: November 21, 2024

Project Name: 3809 NE Springbrook Road Annexation
Project No: ANX24-0001
RE: Incomplete Notice Letter Response

This memorandum has been prepared to respond to the comments and request for additional information from the City in the Incomplete Notice letter dated November 5, 2024, for case file PUD24-0001. Submitted with this memorandum is the additional information requested.

Additional Information Requested by the City:

- *Measure 49 Waiver: Please provide a signed Measure 49 waiver. The waiver can be found on page 38 of the application form.*

Applicant's Response: The Applicant has provided the City with a copy of the Measure 49 waiver that was submitted for the annexation of the property, case files ANX24-0001/CPMA24-0001/ZMA24-0001. The Measure 49 Waiver is provided with this memorandum.

- *Site Development Plan: Please provide site plans including the following:*
    - *Existing Conditions – features within 100 feet of the site do not appear on any of the provided plans.*

Applicant's Response: The Applicant has provided the City with a revised existing conditions plan (Sheet C100) that include existing conditions within 100 feet of the site. The existing conditions shown within 100 feet of the site are limited to publicly available data and information. This revised plan has been prepared for informative purposes only. Site background information and features have been generated from a combination of topographic survey data provided by Compass Land Surveyors, May 2024, aerial imagery, public GIS data, and site assessment/observation. No warranty or guarantee of accuracy is expressed or implied. The resubmitted Appendix E-Land Use Plans contains the revised Existing Conditions plan (Sheet C100) is provided with this memorandum.

    - *Site Grading and Drainage –*
        - *The grading plan lacks a clear figure indicating anticipated drainage patterns.*

Applicant's Response: The Applicant has provided the City with a revised Grading Plan that shows a clear figure, represented by arrows, indicating the anticipated drainage patters. The resubmitted Appendix E-Land Use Plans contains a revised Grading Plan (Sheet C210) is provided with this memorandum.

- *The Preliminary Stormwater Management Plan shows drainage basins but does not appear to clearly indicate drainage directions.*

Applicant's Response: The Applicant has provided the City with a revised Appendix D-Stormwater Management Plan, which shows a clear figure, represented by arrows, indicating the anticipated drainage directions. The revised Stormwater Management Plan is provided with this memorandum.

- *Architectural Drawings: Please provide floor plans and elevations for all planned structures.*

Applicant's Response: The Applicant has provided floor plans and elevations for all planned residential homes with this memorandum, attached as separate Home Plans with the following names:

- Nagomi at Springbrook-PUD-Home Plan-3-CAR-NEW 1-BD SG
- Nagomi at Springbrook-PUD-Home Plan-3-CAR-NEW 2-BD CA
- Nagomi at Springbrook-PUD-Home Plan-ASPEN
- Nagomi at Springbrook-PUD-Home Plan-BD-NG
- Nagomi at Springbrook-PUD-Home Plan-ENJI
- Nagomi at Springbrook-PUD-Home Plan-HAGI

In addition to the revisions requested, a revised Narrative has been provided with minor changes.

Thank you for providing this opportunity to provide a response to the Incomplete Notice letter. Please find the additional and revised application materials submitted with this memorandum, and please don't hesitate to reach out with any questions.

Sincerely,

Sam Huck, AICP Candidate
Planner
3J Consulting, Inc.

Attached:

1. Measure 49 Waiver
2. Revised Appendix D-Stormwater Management Plan
3. Revised Appendix E-Land Use Plans
4. Floor Plans and Elevations
5. Revised Narrative

3J CONSULTING
CIVIL ENGINEERING | WATER RESOURCES | LAND USE PLANNING

ICHIJO
Technological Homes

NAGOMI AT SPRINGBROOK

3809 NE SPRINGBROOK ROAD, NEWBERG, OR 97132

APPLICANT

ICHIJO USA CO., LTD.
3800 SW CEDAR HILLS BOULEVARD, SUITE 131
BEAVERTON, OR 97005
CONTACT: MASAKI NARITA

APPLICANT'S REPRESENTATIVE

3J CONSULTING, INC.
9600 NW NIMBUS AVENUE, SUITE 100
BEAVERTON, OR 97008
CONTACT: SAM HUCK
PHONE: (503) 946-9365 x251

APPLICATION TYPE

TYPE III - PLANNED UNIT DEVELOPMENT (PUD)

SUBMITTAL DATE

SEPTEMBER 27, 2024

SUBMITTAL DATE - REVISED/ADDITIONAL MATERIALS

NOVEMBER 21, 2024

Table of Contents

Appendices

Appendix A – Application Forms

- Exhibit 1: Application Form
- Exhibit 2: Current Title Report

Appendix B – Vicinity Map and Land Use Designations

- Exhibit 3: Vicinity Map
- Exhibit 4: Proposed Land Use Designations (ANX24-0001, CPMA24-0001, and ZMA24-0001)
- Exhibit 5: General Land Use Plan (ANX24-0001, CPMA24-0001, and ZMA24-0001)

Appendix C – Public Notice Materials

- Exhibit 6: Mailed Notice
- Exhibit 7: Mailing List
- Exhibit 8: Posted Notice
- Exhibit 9: Affidavit of Notice

Appendix D – Supporting Documents

- Exhibit 10: Stormwater Management Plan
- Exhibit 11: Traffic Impact Analysis
- Exhibit 12: TVF&R Permit
- Exhibit 13: Wastewater Downstream Analysis
- Exhibit 14: Water System Analysis Report

Appendix E – Land Use Plans

- Sheet C000: Cover Sheet
- Sheet C100: Existing Conditions and Demolition Plan
- Sheet C110: Tree Removal and Preservation Plan
- Sheet C150: Overall Tentative Plat
- Sheet C151: Tentative Plat I
- Sheet C152: Tentative Plat II
- Sheet C153: Tentative Plat III
- Sheet C154: Tentative Plat IV
- Sheet C200: Overall Site Plan
- Sheet C201: Proposed Zoning Map
- Sheet C210: Grading Plan
- Sheet C220: Typical Sections
- Sheet C230: Circulation Plan
- Sheet C240: Fire Access Plan
- Sheet C250: Photometrics Plan
- Sheet C300: Composite Utility Plan
- Sheet L101: Planting Plan
- Sheet L102: Planting Plan
- Sheet L103: Planting Plan
- Sheet L104: Planting Plan
- Sheet L105: Planting Plan
- Sheet L106: Plant Schedule
- Sheet L107: Planting Details and Notes

GENERAL INFORMATION

Applicant:	**Ichijo USA Co., LTD.** 3800 SW Cedar Hills Boulevard, Suite 131 Beaverton, OR 97005 Contact: Masaki Narita Phone: (503) 430-7413 Email: m-narita@ichijousa.com
Planning Consultant:	**3J Consulting, Inc.** 9600 SW Nimbus Avenue, Suite 100 Beaverton, OR 97008 Contact: Sam Huck Phone: (503) 946-9365 x251 Email: sam.huck@3j-consulting.com
Civil Engineer:	**3J Consulting, Inc.** 9600 SW Nimbus Avenue, Suite 100 Beaverton, OR 97008 Contact: Chase Welborn, PE Phone: (503) 946-9365 x215 Email: chase.welborn@3j-consulting.com

SITE INFORMATION

Parcel Number:	3209 02300
Address:	3809 NE Springbrook Road
Gross Site Area:	19.16 acres
Zoning Designation:	AF-10 (Proposed City Zoning R-1/R-3)
Existing Use:	Single Family Residential – Farm Use
Surrounding Zoning:	The properties to the north, east, and west are located in unincorporated Yamhill County and are zoned AF-10. The properties to the South are located in the City of Newberg and are zoned Springbrook District Hospitality (SD/H).
Street Classification:	N Springbrook Road is classified as a Major Collector.

INTRODUCTION

APPLICANT'S REQUEST

Ichijo USA ("the Applicant") proposes to construct a 100-unit residential development and seeks approval of Type III Planned Unit Development ("PUD") application. This narrative has been prepared to describe the proposed development and to document compliance with the relevant sections of the City of Newberg's Municipal Code ("NMC"), Title 15 Development Code.

Planned Unit Developments are evaluated under the Type III Quasi-judicial decision process. The Newberg Planning Commission will render the Type III decision after a public hearing on the application is held.

SITE DESCRIPTION/SURROUNDING LAND USE

Located at 3809 Northeast Springbrook Road, the subject site is 19.16 acres in size. Identified as tax lot 3209 02300, the site is currently located within unincorporated Yamhill County, but is being annexed into the City limits through a separate land use application (ANX24-0001, CPMA24-0001, ZMA24-0001). The site is located within the City of Newberg's Urban Growth Boundary, and will have a comprehensive plan designated of Low Density Residential (LDR), and High-density Residential (HDR) on the City's Comprehensive Plan Map upon approval of the previously submitted Comprehensive Plan Map Amendment for the subject property. Upon annexation, the subject property will be predominately zoned R-1, with portions of the property zoned R-3 in accordance with the City of Newberg's comprehensive plan and development code. The development code requires any land proposed for annexation to apply a comprehensive plan designation and corresponding zoning to the site that is being annexed into the City. The LDR and HDR comprehensive plan map designations and corresponding R-1 and R-3 zoning on the property were established in accordance with the requirement to establish R-3 zoning throughout the community for larger units of land proposed for annexation. In accordance with the comprehensive plan policies and the development code, the Applicant proposed R-3 zoned lands on approximately 16 percent of the net size of the site.

Portions of the property along the southern edge abut the Springbrook Master Plan boundary. However, the subject site itself is not included within the Springbrook District. The property has frontage and takes access from Northeast Springbrook Road, which is classified as a Major Collector. A mapped stream and the associated vegetative corridor run along portions of the east property boundary. The site currently has a single-family residence and several other structures that are used for agricultural purposes. The site has a number of trees, a stand of fir trees that is a matured tree farm, and fields that have been used in the past for agriculture. The terrain of the property has a generally sloping topography from the west to the east /southeast of the property.

PROPOSAL

The proposed PUD will provide a diversity of single-family detached homes on 100 single-family lots with associated roadways, walkways, hardscaping, landscaping, and utility improvements. The proposal also includes frontage improvements on Northeast Springbrook Road. The single-family lots are located in both the R-1 and R-3 zones. The proposal includes a shared open space area to be

located within a separate Tract A near the proposed Lot 100, which will provide an amenity for the residents of the neighborhood that includes landscaping, benches, and a shared amenity structure to be determined. The Applicant is considering a gazebo, a play structure, or a similar type of shared amenity structure for future residents to have access to.

Due to existing topography and the location of existing municipal water facilities, the site will be served by a proposed water pump station located at the southeast corner of the site in Tract A near Springbrook Road. This water pump station is to be constructed to serve this proposed residential development within the urban growth boundary which does not currently have municipal water service available. The entirety of the site will be served by gravity sewer mains, which will join the existing municipal system within Northeast Springbrook Road.

Stormwater runoff from the proposed development will drain to proposed storm drain systems, which consists of proposed stormwater best management practices (BMPs) for water quality and detention prior to discharging offsite. Runoff associated with the single-family residences will outfall to Spring Brook to the east of the project site. Runoff associated with the frontage improvements and the southeastern portion of the site will outfall to the existing storm drain system southwest of the project site. Stormwater ponds are proposed to be located at the southeast portion of the property on Tract A and Tract B.

APPLICABLE CRITERIA

The following sections of the Newberg Development Code have been extracted as they have been deemed to be applicable to the proposal. Following each **bold** applicable criteria or design standard, the Applicant has provided a series of draft findings. The intent of providing code and detailed responses and findings is to document, with absolute certainty, that the proposed development has satisfied the approval criteria for the Planned Unit Development application.

TITLE 15 DEVELOPMENT CODE
15.100 LAND USE PROCESSES AND PROCEDURES
15.100.050 Type III procedure – Quasi-judicial hearing.
A. All Type III decisions shall be heard and decided by the planning commission. The planning commission's decision shall be final unless the decision is appealed or the decision is a recommendation to the city council.
B. Type III actions include, but are not limited to:

3. **Planned unit developments: This action is a final decision unless appealed.**

Applicant's Findings: The proposed Planned Unit Development will be processed through a Type III review. This narrative acknowledges the applicable provisions of section 15.100.050.C through 15.100.050.H for the Type III review procedures. This standard is met.

15.100.090 Development permit application.
Applications for development permits shall be submitted upon forms established by the director. An application shall consist of all materials required by this code, including the following information:
A. A completed development permit application form.
B. Proof that the property affected by the application is in the exclusive ownership of the applicant, or that the applicant has the consent of all owners of the affected property.
C. Other information required by this code.
D. The applicable fees.

Applicant's Findings: A completed Land Use Application form and proof that the Applicant has the consent of all owners of the affected property are provided with this application in Appendix A. Application fees have been provided to the City at the time of submittal and all other applicable information required by the code is provided with this narrative and the submitted appendices. This standard is met.

15.100.210 Mailed notice.
Mailed notice shall be provided as follows:
B. Type II and Type III Actions. The applicant shall provide public notice to:

1. **The owner of the site for which the application is made; and**

2. **Owners of property within 500 feet of the entire site for which the application is made. The list shall be compiled from the most recent property tax assessment roll. For purposes of review, this requirement shall be deemed met when the applicant can provide an affidavit or other certification that such notice was deposited in the mail or personally delivered.**

15.100.230 Additional notice procedures for Type III quasi-judicial hearing.

In addition to the requirements of NMC 15.100.210, mailed notice for Type III development actions shall also contain the following:

A. State that an issue which may be the basis for an appeal to the Land Use Board of Appeals shall be raised not later than the close of the record at or following the final new hearing on the proposal before the city. Such issues shall be raised with sufficient specificity so as to afford the hearing body and the parties an adequate opportunity to respond to each issue;

B. State the date, time and location of the hearing;

C. State that the failure of an issue to be raised in a hearing, in person or by letter, or failure to provide sufficient specificity to afford the hearing body an opportunity to respond to the issue may preclude appeal to the Land Use Board of Appeals on that issue;

D. State that a copy of the staff report will be available for inspection at no cost at least seven calendar days prior to the hearing and will be provided at reasonable cost;

E. Include a general explanation of the requirements for submission of testimony and the procedure for conduct of hearings.

Applicant's Findings: Prior to approval of this application, the Applicant will give notice to all applicable parties pursuant to the applicable provisions of Section 15.100.210, and Section 15.100.230. A draft mailed notice and the neighboring property owners' contact information will be reviewed and approved by the City prior to being mailed. A copy of these drafts is provided in Appendix C. After the mailed notice is sent, a signed Affidavit of Noticing will be included in this application. This standard is met.

15.100.260 Procedure for posted notice for Type II and III procedures.

[Details of the posted notice procedures are omitted for brevity.]

15.100.270 Procedure for published notice on Type III and Type IV procedures.

[Details of the posted notice procedures are omitted for brevity.]

Applicant's Findings: Prior to approval of this application, the Applicant will give notice to all applicable parties pursuant to the applicable provisions of Section 15.100.260, and Section 15.100.270. A draft posted notice sign and draft affidavit of posting which will be reviewed and approved by the City prior to being posted is provided in Appendix C. After the posting of the public notice is completed, a signed Affidavit of Noticing will be included in this application. This standard is met.

15.200 LAND USE APPLICATIONS

15.220 SITE DESIGN REVIEW

15.220.060 Additional requirements for multifamily residential projects.

The purpose of this section is to ensure that multifamily residential containing five or more units meet minimum standards for good design, provide a healthy and attractive environment for those who live there, and are compatible with surrounding development.

As part of the discretionary site design review process, an applicant for a new multifamily residential project must demonstrate that some of the following site and building design elements, each of which has a point value, have been incorporated into the design of the project. At least 14 points are required for smaller multifamily projects with five to eight units and at least 20 points are required for multifamily projects with nine or more units. For more information and illustrations of each element, refer to the Newberg Residential Development Design Guidelines (July 1997).

B. Design Guidelines and Standards. Applicable guidelines and standards for multi-unit and congregate housing are located in Table 15.220.060(B). These standards should not be interpreted as requiring a specific architectural style.

[Table 15.220.060(B): Multifamily Residential Design Guidelines and Standards is omitted for brevity.]

Applicant's Findings: In accordance with Section 15.240.020.Q., the standards of this section are applicable for the proposed PUD and the Applicant must provide a minimum of 40% of the points required for multifamily projects. As such, the proposed development must provide a minimum of 9 site design and 10 building design points (40% of each). The Applicant has addressed how the proposal meets this requirement in the PUD findings below. This standard is met.

15.240 PD PLANNED UNIT DEVELOPMENT REGULATIONS

The city's planned unit development regulations are intended to:

A. Encourage comprehensive planning in areas of sufficient size to provide developments at least equal in the quality of their environment to traditional lot-by-lot development and that are reasonably compatible with the surrounding area; and

B. Provide flexibility in architectural design, placement and clustering of buildings, use of open space and outdoor living areas, and provision of circulation facilities, parking, storage and related site and design considerations; and

C. Promote an attractive, safe, efficient and stable environment which incorporates a compatible variety and mix of uses and dwelling types; and

D. Provide for economy of shared services and facilities; and

E. Implement the density requirements of the comprehensive plan and zoning districts through the allocation of the number of permitted dwelling units based on the number of bedrooms provided.

Applicant's Findings: The Applicant proposed PUD meets the stated purposes of the PUD regulations. The site is 19.16 acres. This is a sufficient size to warrant comprehensive planning rather than traditional lot-by-lot development. The proposed PUD development will provide for flexibility in the lot size and placement of buildings and related site and design considerations. The proposed PUD will provide residential neighborhood with an interconnected pedestrian and vehicle circulation system to promote a safe, attractive, efficient, and stable residential environment adjacent to Northeast Springbrook Road, which is classified as a major collector road facility.

This standard is met.

15.240.020 General provisions.

A. Ownership. Except as provided herein, the area included in a proposed planned unit development must be in single ownership or under the development control of a joint application of owners or option holders of the property involved.

Applicant's Findings: The proposed planned unit development is under single ownership.

This standard is met.

B. Processing Steps – Type III. Prior to issuance of a building permit, planned unit development applications must be approved through a Type III procedure and using the following steps:

1. **Step One – Preliminary Plans. Consideration of applications in terms of on-site and off-site factors to assure the flexibility afforded by planned unit development regulations is used to preserve natural amenities; create an attractive, safe, efficient, and stable environment; and assure reasonable compatibility with the surrounding area. Preliminary review necessarily involves consideration of the off-site impact of the proposed design, including building height and location.**
2. **Step Two – Final Plans. Consideration of detailed plans to assure substantial conformance with preliminary plans as approved or conditionally approved. Final plans need not include detailed construction drawings as subsequently required for a building permit.**

Applicant's Findings: The Applicant acknowledges the two-step process to PUD approval and submits these materials in support of Step One – Preliminary Plans.

This standard is met.

C. Phasing. If approved at the time of preliminary plan consideration, final plan applications may be submitted in phases. If preliminary plans encompassing only a portion of a site under single ownership are submitted, they must be accompanied by a statement and be sufficiently

detailed to prove that the entire area can be developed and used in accordance with city standards, policies, plans and ordinances.

Applicant's Findings: No phasing is proposed for the development, therefore this standard is not applicable.

D. Lapse of Approval. If the applicant fails to submit material required for consideration at the next step in accordance with the schedule approved at the previous step or, in the absence of a specified schedule, within one year of such approval, the application as approved at the previous step expires. If the applicant fails to obtain a building permit for construction in accordance with the schedule as previously approved, or in the absence of a specified schedule, within three years of a preliminary plan approval, preliminary and final plan approvals expire. Prior to expiration of plan approval at any step, the hearing authority responsible for approval may, if requested, extend or modify the schedule, providing it is not detrimental to the public interest or contrary to the findings and provisions specified herein for planned unit developments. Unless the preliminary plan hearing authority provides to the contrary, expiration of final plan approval of any phase automatically renders all phases void that are not yet finally approved or upon which construction has not begun.

Applicant's Findings: The Applicant acknowledges the process for lapse of PUD approval and intends to follow through with development of the site based on the original approval timeline.

This standard is met.

E. Resubmittal Following Expiration. Upon expiration of preliminary or final plan approval, a new application and fee must be submitted prior to reconsideration. Reconsideration shall be subject to the same procedures as an original application.

Applicant's Findings: The Applicant acknowledges the process for resubmittal following expiration.

This standard is met.

F. Density. Except as provided in NMC 15.302.040 relating to subdistricts, dwelling unit density provisions for residential planned unit developments shall be as follows:

1. **Maximum Density.**
    a. **Except as provided in adopted refinement plans, the maximum allowable density for any project shall be as follows:**

District	Density Points
R-1	175 density points per gross acre, as calculated in subsection (F)(1)(b) of this section

R-3	**640 density points per gross acre, as calculated in subsection (F)(1)(b) of this section**

b. Density point calculations in the following table are correlated to dwellings based on the number of bedrooms, which for these purposes is defined as an enclosed room which is commonly used or capable of conversion to use as sleeping quarters. Accordingly, family rooms, dens, libraries, studies, studios, and other similar rooms shall be considered bedrooms if they meet the above definitions, are separated by walls or doors from other areas of the dwelling and are accessible to a bathroom without passing through another bedroom. Density points may be reduced at the applicant's discretion by 25 percent for deed-restricted affordable dwelling units and/or middle housing dwelling units as follows:

Density Point Table

Dwelling Type	Density Points: Standard Dwelling	Density Points: Income-Restricted Affordable Dwelling Unit
Studio and efficiency	12	9
One-bedroom	14	11
Two-bedroom	21	16
Three-bedroom	28	21
Four or more bedrooms	35	26

Duplex, triplex or quadplex dwellings shall be counted as a single dwelling unit, inclusive of all bedrooms in the two duplex combined dwelling units, for purposes of calculating density points. Four townhouse dwellings or cottage dwellings shall count as one standard dwelling, inclusive of all bedrooms in the combined dwelling units.

The density points in the right-hand column are applicable to income-restricted affordable dwelling units, provided the dwelling units meet the affordability criteria under NMC 15.242.030 regarding affordable housing requirements for developments using the flexible development standards.

2. **Approved Density. The number of dwelling units allowable shall be determined by the hearing authority in accordance with the standards set forth in these regulations. The hearing authority may change density subsequent to preliminary plan approval only if the reduction is necessary to comply with required findings for preliminary plan approval or if conditions of preliminary plan approval cannot otherwise be satisfied.**
3. **Easement Calculations. Density calculations may include areas in easements if the applicant clearly demonstrates that such areas will benefit residents of the proposed planned unit development.**
4. **Dedications. Density calculations may include areas dedicated to the public for recreation or open space.**

5. **Cumulative Density. When approved in phases, cumulative density shall not exceed the overall density per acre established at the time of preliminary plan approval.**

Applicant's Findings: The total number of density points available to this site, as detailed on the Density Matrix, is 4,757.30.

Zone	Gross Size (Acre)	Density Points/ Gross Acre	Max. Density Points Allowed
R-1	16.14	175	2,824.50
R-3	3.02	640	1,932.80
Total	19.16	815	4,757.30

The proposed PUD development will include 100 single-family detached homes. The single-family homes will have predominately four or more bedrooms each, with 17 of the 100 proposed as three bedroom homes.

	1-Bed	2-Bed	3-Bed	4+ Bed	Total Units
Single-Family Detached	0	0	17	83	100
Total Bedrooms	0	0	17	83	100

Dwelling Type	Number of Units	Density Points/Unit	Total Density Points Provided
Studio	0	12	0
One-bedroom	0	14	0
Two-bedroom	0	21	0
Three-bedroom	17	28	476
Four-bedroom	83	35	2,905
Total	100		3,381

The total number and type of residential dwelling units proposed requires 3,381 density points, which is less than the 4,757.30 points available to this site. If all homes were to have four or more bedrooms, the proposal would still not exceed the total density points allowed.

This standard is met.

G. Buildings and Uses Permitted. Buildings and uses in planned unit developments are permitted as follows:

1. **R-1, R-2, R-3 and RP Zones.**
   a. **Buildings and uses permitted outright or conditionally in the use district in which the proposed planned unit development is located.**

b. **Accessory buildings and uses.**
c. **Dwellings, single, manufactured, and multifamily.**
d. **Convenience commercial services which the applicant proves will be patronized mainly by the residents of the proposed planned unit development.**

Applicant's Findings: The proposal includes single-family detached residential uses within the R-1 and R-3 portions of this site, both of which are permitted by subsection c. above.

This standard is met.

H. Professional Coordinator and Design Team. Professional coordinators and design teams shall comply with the following:

1. **Services. A professional coordinator, licensed in the State of Oregon to practice architecture, landscape architecture or engineering, shall ensure that the required plans are prepared. Plans and services provided for the city and between the applicant and the coordinator shall include:**
   a. **Preliminary design;**
   b. **Design development;**
   c. **Construction documents, except for single-family detached dwellings and duplexes in subdivisions; and**
   d. **Administration of the construction contract, including, but not limited to, inspection and verification of compliance with approved plans.**
2. **Address and Attendance. The coordinator or the coordinator's professional representative shall maintain an Oregon address, unless this requirement is waived by the director. The coordinator or other member of the design team shall attend all public meetings at which the proposed planned unit development is discussed.**
3. **Design Team Designation. Except as provided herein, a design team, which includes an architect, a landscape architect, engineer, and land surveyor, shall be designated by the professional coordinator to prepare appropriate plans. Each team member must be licensed to practice the team member's profession in the State of Oregon.**
4. **Design Team Participation and Waiver. Unless waived by the director upon proof by the coordinator that the scope of the proposal does not require the services of all members at one or more steps, the full design team shall participate in the preparation of plans at all three steps.**
5. **Design Team Change. Written notice of any change in design team personnel must be submitted to the director within three working days of the change.**
6. **Plan Certification. Certification of the services of the professionals responsible for particular drawings shall appear on drawings submitted for consideration and shall be signed and stamped with the registration seal issued by the State of Oregon for each professional so involved. To assure comprehensive review by the design team of all plans for compliance with these regulations, the dated cover sheet shall contain a**

statement of review endorsed with the signatures of all designated members of the design team.

Applicant's Findings: This PUD application includes all of the required plans and documents. A professional engineer licensed in the State of Oregon has ensured that all required plans are prepared, certified as necessary, and submitted. The Applicant acknowledges the process for a design team change. This standard is met.

I. Modification of Certain Regulations. Except as otherwise stated in these regulations, fence and wall provisions, general provisions pertaining to height, yards, area, lot width, frontage, depth and coverage, number of off-street parking spaces required, and regulations pertaining to setbacks specified in this code may be modified by the hearing authority, provided the proposed development will be in accordance with the purposes of this code and those regulations. Departures from the hearing authority upon a finding by the engineering director that the departures will not create hazardous conditions for vehicular or pedestrian traffic. Nothing contained in this subsection shall be interpreted as providing flexibility to regulations other than those specifically encompassed in this code.

Applicant's Findings: This application is proposed as a PUD primarily based on the Zoning Use Table of NMC 15.305, which indicates in Note 3 that "Homes on individual lots created on or after November 17, 1992, will only be permitted through the planned unit development process.". However, several minor requests to modify lot requirements are also requested with this PUD in accordance with this standard. The proposed modifications are for lot frontage, lot area, and lot coverage in the R-1 zone.

<u>R-1 Modification Requests</u>

The R-1 zone requires a minimum width of 35 feet from the front building line, and all lots proposed in the R-1 zone will have at least 35 feet at the front building line. The frontage requirements of that section also require that all lots shall have either a frontage or access to a public street through an easement that is at least 25 feet wide. The Applicant requests a modification to the access width standard of 25 feet for three lots in the R-1 zone. The modification will accommodate two flag lots on lots 82 and 83 to have access to a public street through a driveway with an easement that has a width of 20 feet. This modification will also accommodate lot 12 to have access to a public street on a driveway with a width of 20.1 feet. All access widths for the proposed lots are demonstrated on the Tentative Plats (Sheets C151-C154) provided in Appendix E.

The R-1 zone allows for a maximum lot coverage of 40 percent with some exceptions, and allows a combined maximum lot and parking coverage of 60 percent. The Applicant is requesting a modification to this standard for all lots in the R-1 zone to have a maximum lot coverage of 50 percent and a combined maximum lot and

parking coverage of 60 percent. This will allow for the development of slightly larger homes on the lots, which will provide more bedrooms to become available to community members and future residents of the neighborhood. Some of the homes proposed in the neighborhood will be single story homes, which will meet the maximum lot coverage requirements of the code and do not require a modification. The proposed single story homes mixed with the two-story homes will provide for a desirable diversity in housing type throughout the neighborhood. The diversity in housing types across the neighborhood will provide not only a visually appealing streetscape, but will also provide different types of homes for different people with varying physical abilities, ages, and preferences.

R-3 Modification Requests

The Applicant is requesting a modification to the sun exposure plan requirements of the code, and requesting a modification to the standard. The Applicant proposes lots that will not adversely affect the occupants or potential occupants of adjacent properties even though minor intrusion of structures into the sun exposure plane is proposed. The lots are proposed in a denser manner, and some lots in the north/south orientation in the R-3 zone intrude the sun exposure plane.

The benefits of housing configured in this manner provides numerous benefits to the future residents and provides opportunities for the creation of a highly efficient and well-designed community. Future residents will have access to open space and will use an efficient street and pedestrian network that has been designed with safety in mind. Residents in closer proximity to neighbors fosters social interactions and can promote community engagement and a sense of belonging. Housing configured in this manner incorporates Crime Prevention Through Environmental Design (CPTED) principals, including “eyes on the street”, which is a key principle of CPTED and encourages neighbors to be present and active in their surroundings. By increasing visibility and promoting interactions among residents, a safer and more cohesive community will be built in this neighborhood. By providing varying lot sizes and multiple housing types a greater diversity in the neighborhood makeup may be established, with different incomes, ages, and backgrounds choosing to live in the neighborhood. This modification is requested in order to meet the requirements for lot area, density, site configuration, parking, block length, and access. The Applicant requests a departure from the strict application of the sun exposure plane code from the Planning Commission.

The above requested modifications will allow the Applicant to provide the number of homes proposed and create a well-designed and high-quality single-family home neighborhood within the City.

No other modifications are requested.

This standard is met.

J. Lot Coverage. Maximum permitted lot and parking area coverage as provided in this code shall not be exceeded unless specifically permitted by the hearing authority in accordance with these regulations.

Applicant's Findings: As detailed in the above findings, the Applicant is requesting a modification to the maximum permitted lot and parking area coverage. The Applicant is requesting this modification to be specifically permitted by the hearing authority in accordance with these regulations.

This standard is met.

K. Height. Unless determined by the hearing authority that intrusion of structures into the sun exposure plane will not adversely affect the occupants or potential occupants of adjacent properties, all buildings and structures shall be constructed within the area contained between lines illustrating the sun exposure plane (see Appendix A, Figure 8 and the definition of "sun exposure plane" in NMC 15.05.030). The hearing authority may further modify heights to:

1. **Protect lines of sight and scenic vistas from greater encroachment than would occur as a result of conventional development.**
2. **Protect lines of sight and scenic vistas.**
3. **Enable the project to satisfy required findings for approval.**

Applicant's Findings: The maximum permitted height in the R-1 zone is 30 feet, and the maximum permitted height in the R-3 zone is 30 feet due to the zones directly abutting the R-1 district boundaries. The proposed single-family detached homes will be primarily two-stories in height, with a portion of the homes proposed at one-story. All homes will meet the height requirement of the zone. All of the proposed types of homes will be interspersed throughout the neighborhood. This means that larger homes in the R-1 zones as well as smaller homes in the R-3 zones will have both north/south and east/west orientations across the site. The Applicant has prepared sun exposure diagrams (Figures 1 and 2) showing the north/south orientation and east/west orientation of the lots.

The front and rear yards for all homes in the R-1 zones, no matter the way the buildings are oriented will meet the sun exposure plane requirements of NMC 15.05.030.

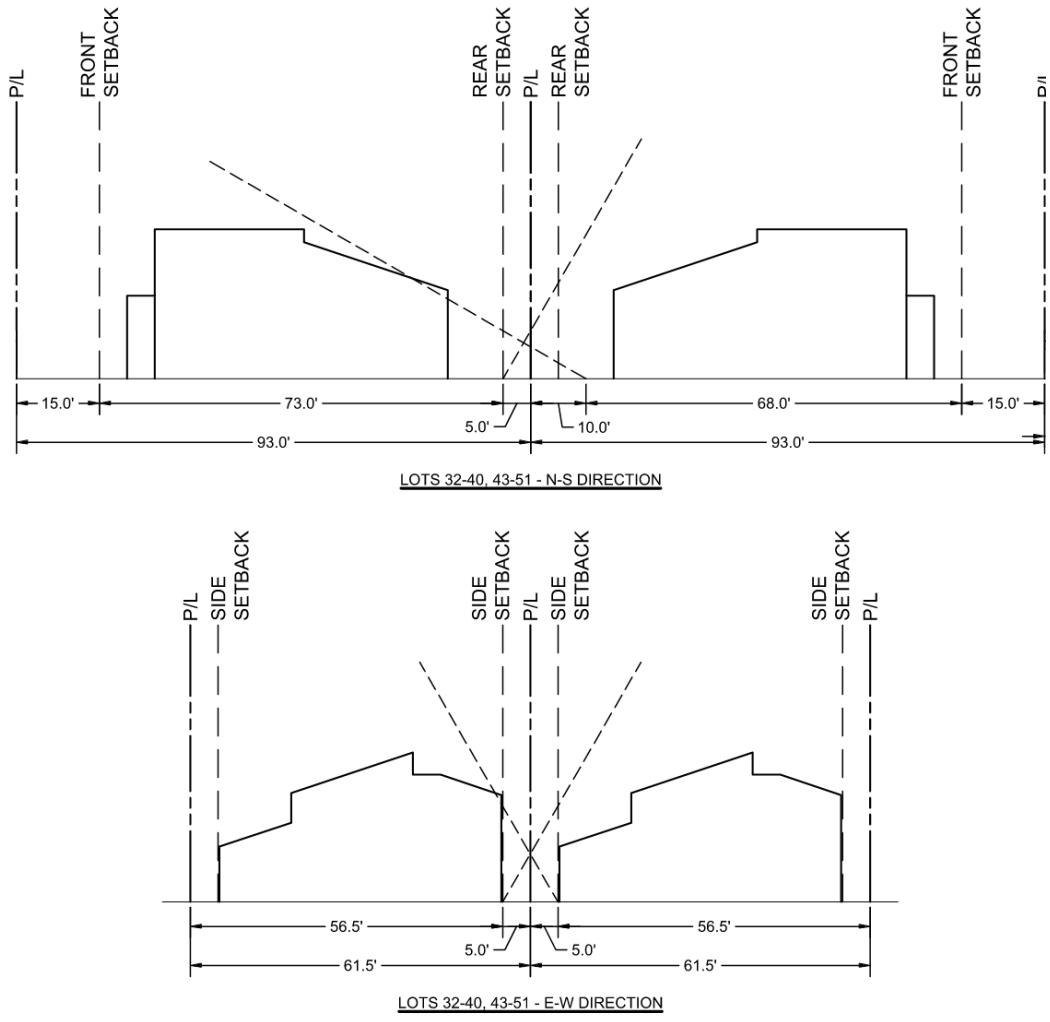


Figure 1: R-1 Homes Sun Exposure Diagram

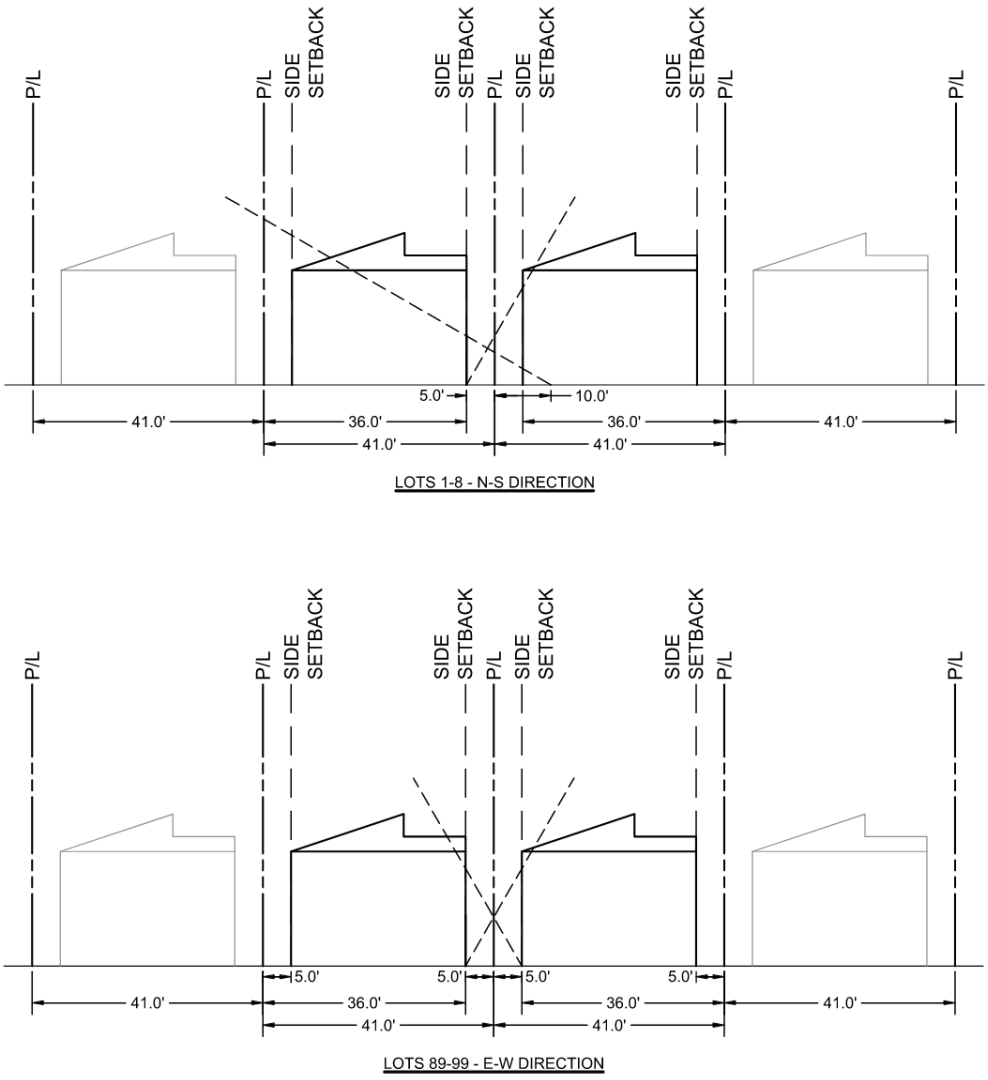


Figure 2: R-3 Homes Sun Exposure Diagram

All homes in the east/west orientation will meet the sun exposure plane requirements of NMC 15.05.030. Some homes in the R-3 zone in the north/south orientation will be without sun exposure at the 30-degree slope for portions of the day. A modification request from this standard has been requested above in the Modification of Certain Regulations section of this narrative.

L. Dedication, Improvement and Maintenance of Public Thoroughfares. Public thoroughfares shall be dedicated, improved and maintained as follows:

1. **Streets and Walkways. Including, but not limited to, those necessary for proper development of adjacent properties. Construction standards that minimize maintenance and protect the public health and safety, and setbacks as specified in NMC 15.410.050, pertaining to special setback requirements to planned rights-of-way, shall be required.**

Applicant's Findings: Public thoroughfares, including all streets and walkways proposed with this PUD application, will be dedicated to the City of Newberg. Construction standards as specified by the City will be followed to protect public health and safety. The yard setback requirements are addressed further in this narrative.

This standard is met.

2. **Notwithstanding subsection (L)(1) of this section, a private street may be approved if the following standards are satisfied.**
    a. **An application for approval of a PUD with at least 50 dwelling units may include a private street and the request for a private street shall be supported by the evidence required by this section. The planning commission may approve a private street if it finds the applicant has demonstrated that the purpose statements in NMC 15.240.010(A) through (D) are satisfied by the evidence in subsections (L)(2)(a)(i) through (v) of this section.**
        i. **A plan for managing on-street parking, maintenance and financing of maintenance of the private street, including a draft reserve study showing that the future homeowners association can financially maintain the private street;**
        ii. **A plan demonstrating that on- and off-street parking shall be sufficient for the expected parking needs and applicable codes;**
        iii. **Proposed conditions, covenants and restrictions that include a requirement that the homeowners association shall be established in perpetuity and shall continually employ a community management association whose duties shall include assisting the homeowners association with the private street parking management and maintenance, including the enforcement of parking restrictions;**
        iv. **Evidence that the private street is of sufficient width and construction to satisfy requirements of the fire marshal and city engineer; and**
        v. **The PUD shall be a Class I planned community as defined in ORS Chapter 94.**
    b. **If the PUD is established, the homeowners association shall provide an annual written report on the anniversary date of the final approval of the PUD approval to the community development director that includes the following:**
        i. **The most recent reserve study.**

ii. **The name and contact information for the retained community management association.**

iii. **A report on the condition of the private street and any plans for maintenance of the private street.**

Applicant's Findings: No private streets are proposed with this application, therefore the standards of this subsection are not applicable.

3. **Easements. As are necessary for the orderly extension of public utilities and bicycle and pedestrian access.**

Applicant's Findings: Any easements deemed necessary will be executed and recorded in accordance with this code.

This standard is met.

M. Underground Utilities. Unless waived by the hearing authority, the developer shall locate all on-site utilities serving the proposed planned unit development underground in accordance with the policies, practices and rules of the serving utilities and the Public Utilities Commission.

Applicant's Findings: The proposal includes all on-site utilities located underground.

This standard is met.

N. Usable Outdoor Living Area. All dwelling units shall be served by outdoor living areas as defined in this code. Unless waived by the hearing authority, the outdoor living area must equal at least 10 percent of the gross floor area of each unit. So long as outdoor living area is available to each dwelling unit, other outdoor living space may be offered for dedication to the city, in fee or easement, to be incorporated in a city-approved recreational facility. A portion or all of a dedicated area may be included in calculating density if permitted under these regulations.

Applicant's Findings: All dwelling units are served by outdoor living areas equal to at least 10 percent of the gross floor area of each unit. The single-family units will have outdoor living on individual lots provided in back and side yards, which are able to provide at least 10 percent of the gross floor area in outdoor living space. Outdoor living spaces for each unit can be verified at the time of building permit issuance.

This standard is met.

O. Site Modification. Unless otherwise provided in preliminary plan approval, vegetation, topography and other natural features of parcels proposed for development shall remain substantially unaltered pending final plan approval.

Applicant's Findings: A stream corridor is located on portions of the subject property near the east property line. Grading for the proposed water treatment facility in Tract B is proposed within the stream corridor. The design and engineering of the proposed water treatment facility will be finalized during the construction document phase and permitting process. Because of this, the extent of the proposed modifications within the stream corridor is not finalized at this time. Therefore, the Applicant requests and would accept a condition of approval for a Type II Stream Corridor Modification application to be submitted prior to any grading activities.

Notwithstanding the above-mentioned stream corridor, no other vegetation, topography or other natural features will be substantially altered prior to final plan approval.

This standard is met.

P. Completion of Required Landscaping. If required landscaping cannot be completed prior to occupancy, or as otherwise required by a condition of approval, the director may require the applicant to post a performance bond of a sufficient amount and time to assure timely completion.

Applicant's Findings: The Applicant acknowledges the possibility of a performance bond being required to assure timely completion of any delayed landscaping.

This standard is met.

Q. Design Standards. The proposed development shall meet the design requirements for multifamily residential projects identified in NMC 15.220.060. A minimum of 40 percent of the required points shall be obtained in each of the design categories.

Applicant's Findings: This development proposal does not propose any multifamily dwelling units, however the single-family detached homes proposed have been evaluated using the design requirements for multifamily residential projects identified in NMC 15.220.060. There are 23 possible site design points, and 25 possible building design points identified; therefore, this project must obtain 9 site design and 10 building design points (40% of each). Below are the site design and building design elements that will be incorporated into the site, meeting this standard.

Site Design:
Shared Recreation Areas: 3 points
Good-quality coordinated site landscaping: 2 points

Street trees: 1 point
Outdoor site furnishing: 1 point
Entrance building accents: 1 point
Appropriate Outdoor Lighting: 1 point
Total Site Design Points: 9 points

Building Design:
Building Orientation and Entrances toward the street: 3 points
Respect the scale and patterns of nearby buildings height: 3 points
Provide variation in repeated units using color, porches, balconies, windows, railings, building materials and form, alone or in combination: 3 points
Building materials: Wood or wood-like siding applied horizontally or vertically as board and batten at entry ways; shingles, as roofing; wood or wood-like sash windows; and wood or wood-like trim: 2 points
Total Building Design Points: 11 points

This standard is met as described above.

15.240.030 Preliminary plan consideration – Step one.
A. Preapplication Conference. Prior to filing an application for preliminary plan consideration, the applicant or coordinator may request through the director a preapplication conference to discuss the feasibility of the proposed planned unit development and determine the processing requirements.

Applicant's Findings: The Applicant attended a pre-application conference with the City on January 24, 2024.

This standard is met.

B. Application. An application, with the required fee, for preliminary plan approval shall be made by the owner of the affected property, or the owner's authorized agent, on a form prescribed by and submitted to the director. Applications, accompanied by such additional copies as requested by the director for purposes of referral, shall contain or have attached sufficient information as prescribed by the director to allow processing and review in accordance with these regulations. As part of the application, the property owner requesting the planned development shall file a waiver stating that the owner will not file any demand against the city under Ballot Measure 49, approved November 6, 2007, that amended ORS Chapters 195 and 197 based on the city's decision on the planned development.

Applicant's Findings: This land use application includes all required fees, forms and documentation for review of the Planned Unit Development and Conditional Use Permit requests.

This standard is met.

C. Type III Review and Decision Criteria. Preliminary plan consideration shall be reviewed through the Type III procedure. Decisions shall include review and recognition of the potential impact of the entire development, and preliminary approval shall include written affirmative findings that:

1. **The proposed development is consistent with standards, plans, policies and ordinances adopted by the city; and**

Applicant's Findings: As described in this narrative, the proposed development is consistent with standards, plans, policies and ordinances adopted by the City.

This standard is met.

2. **The proposed development's general design and character, including but not limited to anticipated building locations, bulk and height, location and distribution of recreation space, parking, roads, access and other uses, will be reasonably compatible with appropriate development of abutting properties and the surrounding neighborhood; and**

Applicant's Findings: The proposed PUD includes medium lot and large lot single-family detached homes at the edge of the Newberg Urban Growth Boundary. The single-family lot neighborhood is reasonably compatible with the abutting properties and surrounding neighborhood, which is more rural in character, due to the larger lots provided in the proposed neighborhood. A higher density of housing than what is proposed would be less compatible with the abutting properties at the subject site. The homes on the site will all be designed and constructed so as to provide a cohesive design and character to the entire development. The distribution of homes, open space, parking, roads, access and other uses is reasonably compatible with the appropriate development of abutting properties and the surrounding neighborhood.

This standard is met.

3. **Public services and facilities are available to serve the proposed development. If such public services and facilities are not at present available, an affirmative finding may be made under this criterion if the evidence indicates that the public services and facilities will be available prior to need by reason of:**
    a. **Public facility planning by the appropriate agencies; or**
    b. **A commitment by the applicant to provide private services and facilities adequate to accommodate the projected demands of the project; or**
    c. **Commitment by the applicant to provide for offsetting all added public costs or early commitment of public funds made necessary by the development; and**

Applicant's Findings: Public services and facilities are either available to serve the proposed development or can be reasonably conditioned to be installed and provided. The public improvement plans included with the land use submittal demonstrate full public facilities will be provided, including water, sanitary sewer, storm sewer, electricity and potentially natural gas. Public services are currently available to serve this site, including police, fire, garbage/recycling, and US Mail.

This standard is met.

4. **The provisions and conditions of this code have been met; and**

Applicant's Findings: As discussed in detail in this narrative, the provisions and conditions of this code have been met.

This standard is met.

5. **Proposed buildings, roads, and other uses are designed and sited to ensure preservation of features, and other unique or worthwhile natural features and to prevent soil erosion or flood hazard; and**

Applicant's Findings: The buildings, roads and other site features are located so as to preserve the stream corridor adjacent to the site and to prevent soil erosion or flood hazard.

This standard is met.

6. **There will be adequate on-site provisions for utility services, emergency vehicular access, and, where appropriate, public transportation facilities; and**

Applicant's Findings: The site is well provisioned for utility services, emergency vehicular access and, if the opportunity arises in the future, public transportation facilities. The public roadways are designed to public street standards. The application includes a letter from Tualatin Valley Fire & Rescue indicating that the streets are adequate for emergency vehicle access.

This standard is met.

7. **Sufficient usable recreation facilities, outdoor living area, open space, and parking areas will be conveniently and safely accessible for use by residents of the proposed development; and**

Applicant's Findings: The proposed single-family housing has outdoor living areas located on individual lots and garages and driveways that provide convenient and safely accessible parking areas for use by residents.

This standard is met.

8. **Proposed buildings, structures, and uses will be arranged, designed, and constructed so as to take into consideration the surrounding area in terms of access, building scale, bulk, design, setbacks, heights, coverage, landscaping and screening, and to assure reasonable privacy for residents of the development and surrounding properties.**

Applicant's Findings: This site has been designed to reflect the surrounding area and to provide a reasonable level of privacy for residents of the development and surrounding properties. Large lot single-family detached dwellings are proposed throughout the proposed PUD, which is a moderate transition from unincorporated county properties to residential urban densities as required by this code. The site as a whole is designed to provide safe and convenient access. The building scale, bulk, design, setbacks, heights, coverage, and landscaping are designed to provide harmony within the site while respecting and reflecting design patterns utilized in other nearby properties.

This standard is met.

D. Conditions. Applications may be approved subject to conditions necessary to fulfill the purpose and provisions of these regulations.

Applicant's Findings: The Applicant acknowledges the possibility of conditions imposed to fulfill the purpose and provisions of the PUD regulations. However, based on the findings identified in this narrative, the Applicant finds the proposal in full compliance with the PUD standards.

This standard is met.

15.240.040 Final plan consideration – Step two.

A. Application. An application, with the required fee, for final plan approval shall be submitted in accordance with the provisions of this code, and must be in compliance with all conditions imposed and schedules previously prescribed.

B. Referral. Referral of final plans and supportive material shall be provided to appropriate agencies and departments.

C. Decision Type I Procedure. The final plan consideration shall be reviewed through the Type I procedure. Upon receipt of the application and fee, final plans and required supportive material, the director shall approve, conditionally approve or deny the application for final plan approval. The decision of the director to approve or deny the application shall be based on written findings of compliance or noncompliance with approved preliminary plans and city

standards, plans, policies and ordinances. Minor variations from approved preliminary plans may be permitted if consistent with the general character of the approved preliminary plans.
D. Conditions. Applications may be approved subject to such conditions as are necessary to fulfill the purpose and provisions of this code.
E. Performance Agreement.

1. **Preparation and Signatures. A duly notarized performance agreement binding the applicant, and the applicant's successors in interest, assuring construction and performance in accordance with the approved final plans shall be prepared by the city and executed by the applicant and city prior to issuance of a building permit.**
2. **Return. Unless an executed copy of the agreement is returned to the director within 60 days of its delivery to the applicant, final plan approval shall expire, necessitating the reapplication for final plan reapproval.**
3. **Filing. The director shall file a memorandum of the performance agreement with the Yamhill County recorder.**
4. **Improvement Petitions and Dedications. Improvement petitions and all documents required with respect to dedications and easements shall be submitted prior to completion of the agreement.**
5. **Project Changes. The director may permit project changes subsequent to execution of the agreement upon finding the changes substantially conform to final approved plans and comply with city standards, plans, policies and ordinances. Other modifications are subject to reapplication at the appropriate step.**
6. **Compliance. Compliance with this section is a prerequisite to the issuance of a building permit.**

Applicant's Findings: The Applicant acknowledges the process for Step Two of a PUD review.

This standard is met.

15.300 ZONING DISTRICTS
15.305 ZONING USE TABLE

Use	R-1	R-3	Notes and Special Use Standards
Residential Uses			
Dwelling, single-family detached	**P(2)**	**P(3)**	**Subject to lot or development site area requirements of NMC 15.405.010**

Notes.
(2) Limited to one per lot as a permitted use. More than one per lot allowed only through a conditional use permit or planned unit development, subject to density limits of NMC 15.405.010(B).

(3) Permitted on individual lots created prior to November 17, 1992. Homes on individual lots created on or after November 17, 1992, will only be permitted through the planned unit development process.

Applicant's Findings: The proposed PUD will include single-family detached residential development in the R-1 and R-3 zones. The individual lots where single-family homes will be located are being created after November 17, 1992, therefore the PUD development process is being followed. The applicable Development Standards of NMC 15.415.010 are addressed in this narrative.

The single-family detached homes will be located on individual lots per Note (2). Not more than one dwelling per lot is proposed, therefore a conditional use permit or planned unit development for this is requested.

This standard is met.

15.340 AIRPORT OVERLAY (AO) SUBDISTRICT

15.340.010 Purpose.

A. In order to carry out the provisions of this airport overlay subdistrict, there are created and established certain zones which include all of the land lying beneath the airport imaginary surfaces as they apply to Sportsman Airpark in Yamhill County. Such zones are shown on the current airport overlay zone map and the displaced threshold approach surface map, prepared by the Newberg engineering department (see Appendix B, Maps 2 and 3).

Applicant's Findings: The subject property is shown in the mapped Airport Conical Surface overlay. No standards of this section are applicable to the proposed development.

15.342 STREAM CORRIDOR OVERLAY (SC) SUBDISTRICT

15.342.020 Where these regulations apply.

The regulations of this chapter apply to the portion of any lot or development site which is within an SC overlay subdistrict. Unless specifically exempted by NMC 15.342.040, these regulations apply to the following:

A. New structures, additions, accessory structures, decks, addition of concrete or other impervious surfaces;

B. Any action requiring a development permit by this code;

C. Changing of topography by filling or grading;

D. Installation or expansion of utilities including but not limited to phone, cable TV, electrical, wastewater, storm drain, water or other utilities;

E. Installation of pathways, bridges, or other physical improvements which alter the lands within the stream corridor overlay subdistrict.

Applicant's Findings: No new structures are being proposed within the Stream Corridor, but a grading permit will be obtained, and a Type II application for Modifications within the Stream Corridor will be submitted to the City for review.

This standard is met.

15.342.030 General information.

The delineated stream corridor overlay subdistrict is described by boundary lines delineated on the City of Newberg zoning map indicated with an SC symbol. The boundaries of the SC areas were established by an ecologist analyzing several environmental values including erosion potential, wildlife habitat, riparian water quality protection, floodplain water quality protection, natural condition, and ecological integrity. This information is contained in more detail in a document titled "City of Newberg, Stream Corridors as a Goal 5 Resource." This document includes a Goal 5 ESEE (economic, social, environment and energy consequences) analysis and was the basis for the preparation of this chapter. The boundaries of the SC overlay subdistrict are typically located at a logical top of bank, or where no obvious top of bank exists, are located at a distance 50 feet from the edge of the wetland.

Applicant's Findings: The location of the steam corridor on the subject property is shown on the City of Newberg zoning map.

15.342.040 Activities exempt from these regulations.

[Details of the exempt activities are omitted for brevity.]

Applicant's Findings: The applicant is not proposing any exempt activities with this application and therefore, the thresholds of this section are not applicable.

15.342.070 Activities requiring a Type II process.

The installation, construction or relocation of the following improvements shall be processed as a Type II decision. The proposal shall be accompanied by a plan as identified in NMC 15.342.080 and conform to the mitigation standards contained in NMC 15.342.090.

A. Public or private street crossings, sidewalks, pathways, and other transportation improvements that generally cross the stream corridor in a perpendicular manner.

B. Bridges and other transportation improvements that bridge the wetland area.

C. Railroad trackage crossings over the SC overlay subdistrict that bridge the wetland area.

D. Water, wastewater, and stormwater systems already listed within approved City of Newberg master infrastructure plans.

E. New single-family or duplex dwellings which meet all of the following requirements:

1. The lot was created prior to December 4, 1996, is currently vacant, has at least 75 percent of the land area located within the SC overlay subdistrict and has less than 5,000 square feet of buildable land located outside the SC overlay subdistrict.

2. No more than one single-family or duplex dwelling and its expansion is permitted on the property, which shall occupy a coverage area not to exceed 1,500 square feet in area.

3. The single-family or duplex dwelling shall be sited in a location which minimizes the impacts to the stream corridor.

4. The improvements and other work are not located within the 100-year flood boundary.

F. Reduced front yard setback. Properties within the SC subdistrict may reduce the front yard setback for single-family or duplex dwellings or additions where the following requirements are met:

1. The reduction in the front yard setback will allow no less than five feet between the property line and the proposed structure.

2. The reduction in the setback will allow the footprint of the proposed dwelling or addition to be located entirely out of the SC overlay subdistrict.

3. Two 20-foot-deep off-street parking spaces can be provided which do not project into the street right-of-way.

4. Maximum coverage within the stream corridor subdistrict shall not exceed 1,500 square feet.

G. Temporary construction access associated with authorized Type II uses. The disturbed area associated with temporary construction access shall be restored pursuant to NMC 15.342.090.

H. Grading and fill for recreational uses and activities, which shall include revegetation, and which do not involve the construction of structures or impervious surfaces.

I. Public parks.

J. Stream corridor enhancement activities which are reasonably expected to enhance stream corridor resource values and generally follow the restoration standards in NMC 15.342.060.

Applicant's Findings: The Applicant proposes stream corridor enhancement activities that are reasonably expected to enhance stream corridor resource values and generally follow the restoration standards in NMC 15.342.060. A Type II application for Modifications within the Stream Corridor will be submitted to the City for review. All other findings will be addressed in that application and related narrative.

This standard is met.

15.400 DEVELOPMENT STANDARDS

15.405 LOT REQUIREMENTS

15.405.010 Minimum and maximum lot area.

A. In the following districts, each lot or development site shall have an area as shown below except as otherwise permitted by this code:

1. **In the R-1, R-2, R-3, R-P and AR districts, the following minimum lot area standards apply:**

Zone	Minimum lot area for single family
R-1	5,000 SF
R-3	2,500 SF

Applicant's Findings: The proposed PUD will meet the minimum lot area for single family dwellings for both the R-1 and R-3 zones on the subject property. The lot sizes proposed in each of the zones on the subject site are demonstrated on the Proposed Zoning Map (Sheet C201) provided in Appendix E.

This standard is met.

B. Maximum Lot or Development Site Area per Dwelling Unit.

1. **In the R-1 district, the average size of lots in a subdivision intended for single-family development shall not exceed 10,000 square feet.**
4. **In the R-3 district, lots or development sites in excess of 15,000 square feet used for multiple single-family, duplex, triplex, quadplex, multifamily dwellings or cottage**

cluster projects shall be developed at a minimum of one dwelling per 2,500 square feet lot area.

C. In calculating lot area for this section, lot area does not include land within public or private streets. In calculating lot area for maximum lot area/minimum density requirements, lot area does not include land within stream corridors, land reserved for public parks or open spaces, commons buildings, land for preservation of natural, scenic, or historic resources, land on slopes exceeding 15 percent or for avoidance of identified natural hazards, land in shared access easements, public walkways, or entirely used for utilities, land held in reserve in accordance with a future development plan, or land for uses not appurtenant to the residence.

Applicant's Findings: The proposed PUD includes lot in the R-1 and R-3 zones. The standards for a PUD are discussed previously within this narrative.

The proposed lots in the R-1 zone contains lots greater than 5,000 square feet with an average lot size that will not exceed 10,000 square feet. All lots in the R-1 zone exceed the minimum lot size requirement.

The proposed lots in the R-3 zone contains lots of greater than 2,500 square feet for single-family dwellings. All lots in the R-3 zone exceed the minimum lot size requirement.

None of the lots proposed on the R-3 zoned lands will exceed 15,000 square feet, and therefore they do not meet the definition of a "development site".

The lots have the following size and density range:

Zoning	Largest Lot	Smallest Lot	Average Lot Size
R-1	7,987 square feet	5,022 square feet	5,619 square feet
R-3	4,493 square feet	4,033 square feet	4,216 square feet

These standards are met.

D. Lot size averaging is allowed for any subdivision. Some lots may be under the minimum lot size required in the zone where the subdivision is located, as long as the average size of all lots is at least the minimum lot size.

Applicant's Findings: No lots are proposed to be under the minimum lot size for the R-1 and R-3 zones, therefore lot size averaging is not required. The average size of all R-1 lots proposed in the PUD is 5,619 square feet, and the average lot size of all R-3 lots proposed is 4,216 square feet.

This standard is met.

15.405.020 Lot area exceptions.
The following shall be exceptions to the required lot areas:
The following shall be exceptions to the required lot areas:
A. Lots of record with less than the area required by this code.

B. Lots or development sites which, as a process of their creation, were approved in accordance with this code.

C. Planned unit developments, provided they conform to requirements for planned unit development approval.

Applicant's Findings: This proposal complies with subsection A, because the one lot that is smaller than the minimum requirement is "less than the area required by this code". This proposal also complies with subsection C of this section because this is a proposed Planned Unit Development. This narrative demonstrates compliance to all PUD approval standards.

This standard is met.

15.405.030 Lot dimensions and frontage.

A. Width. Widths of lots shall conform to the standards of this code.

Applicant's Findings: All proposed lots satisfy the width criterion of this code.

This standard is met.

B. Depth to Width Ratio. Each lot and parcel shall have an average depth between the front and rear lines of not more than two and one-half times the average width between the side lines. Depths of lots shall conform to the standards of this code. Development of lots under 15,000 square feet are exempt from the lot depth to width ratio requirement.

Applicant's Findings: All proposed lots are under 15,000 square feet, and are therefore exempt from the lot depth to width ration requirement.

This standard is met.

C. Area. Lot sizes shall conform to standards set forth in this code. Lot area calculations shall not include area contained in public or private streets as defined by this code.

Applicant's Findings: All proposed lot sizes conform to standards set forth in this code as demonstrated in this narrative.

This standard is met.

D. Frontage.

1. **No lot or development site shall have less than the following lot frontage standards:**
    a. **Each lot or development site shall have either frontage on a public street for a distance of at least 25 feet or have access to a public street through an easement that is at least 25 feet wide. No new private streets, as defined in NMC 15.05.030, shall be created to provide frontage or access except as allowed by NMC 15.240.020(L)(2).**

b. Each lot in R-2 zone shall have a minimum width of 25 feet at the front building line and R-3 zone shall have a minimum width of 30 feet at the front building line, except that duplex, triplex, quadplex and cottage cluster project lots in the R-3 zone shall have a minimum width of 25 feet at the front building line.

c. Each lot in R-1 zone shall have a minimum width of 35 feet at the front building line and AI or RP shall have a minimum width of 50 feet at the front building line.

d. Each lot in an AR zone shall have a minimum width of 45 feet at the front building line.

2. The above standards apply with the following exceptions:

a. Lots for townhouse dwellings in any zone where they are permitted shall have a minimum frontage on a public street for a distance of at least 20 feet, shall have a minimum width of 20 feet at the front building line and shall have access meeting the provisions of NMC 15.415.050.B.

b. Legally created lots of record in existence prior to the effective date of the ordinance codified in this code.

c. Lots or development sites which, as a process of their creation, were approved with sub-standard widths in accordance with provisions of this code.

d. Existing private streets may not be used for new dwelling units, except private streets that were created prior to March 1, 1999, including paving to fire access roads standards and installation of necessary utilities, and private streets allowed in the airport residential and airport industrial districts. However, existing single-family detached dwellings on existing private streets may be converted to duplex, triplex, or quadplex dwellings.

Applicant's Findings: The Applicant is requesting a modification to the lot frontage standard D.1.a. for lots 12, 82 and 83. Lot 12 is proposed with a 20.1 foot wide access to a public street, as shown on the Tentative Plat II (Sheet C152), provided in Appendix E. The Applicant is requesting the modification for the approval of a 20.1 foot wide access to a public street.

Lots 82 and 83 are proposed with a shared access to a public street that is 20 feet wide in total as shown on the Tentative Plat III (Sheet C153), provided in Appendix E. The Applicant is requesting the modification for the approval of a 20 foot wide access to a public street. This modification request is consistent with the PUD modification standards and is proposed in accordance with the provisions of this code.

All other lots meet the requirements of this section for minimum frontage, and all lots meet the requirements for width at the front building line for the R-1 and R-3 zoned lots. Compliance is demonstrated on the Tentative Plats (sheets C151 through C154) on the Land Use Plans provided in Appendix E.

All streets created as part of this PUD proposal are public streets that will conform to the above-mentioned criteria related to frontage requirements. No private streets are proposed with this application.

This standard is met.

15.405.040 Lot coverage and parking coverage requirements.

A. Purpose. The lot coverage and parking coverage requirements below are intended to:

1. **Limit the amount of impervious surface and storm drain runoff on residential lots.**
2. **Provide open space and recreational space on the same lot for occupants of that lot.**
3. **Limit the bulk of residential development to that appropriate in the applicable zone.**

B. Residential uses in residential zones shall meet the following maximum lot coverage and parking coverage standards however, cottage cluster projects shall be exempt from the standards. See the definitions in NMC 15.05.030 and Appendix A, Figure 4.

1. **Maximum Lot Coverage.**
   a. **R-1: 40 percent, except;**
      i. **50 percent if all structures on the lot are one story; and**
      ii. **60 percent for townhouse dwellings**
   b. **R-2 and RP: 60 percent.**
   c. **AR and R-3: 60 percent.**
2. **Maximum Parking Coverage. R-1, R-2, R-3, and RP: 30 percent.**
3. **Combined Maximum Lot and Parking Coverage.**
   a. **R-1: 60 percent.**
   b. **R-2, R-3 and RP and townhouse dwellings in R-1: 70 percent.**

C. All other districts and uses not listed in subsection (B) of this section shall not be limited as to lot coverage and parking coverage except as otherwise required by this code.

Applicant's Findings: The proposed residential lots within the R-1 zones in the PUD range in size from 5,022 square feet to 7,987 square feet with an average lot size of 5,619 square feet. The maximum permitted lot coverage within the R-1 zoning district is 40 percent for two story homes or 50 percent for single story homes.

17 out of the 64 homes in the R-1 zone will be one story homes, which will meet the 50 percent maximum lot coverage, and combined 60 percent maximum lot and parking coverage.

The remaining 47 homes proposed in the R-1 zone will be two stories and the anticipated lot coverage will be more than the stated maximum of 40 percent for a majority of the proposed lots. Therefore, the Applicant is requesting a modification to lot coverage maximums under the PUD criteria. The Applicant is proposing that the maximum lot coverage in the R-1 zones on the site be 50 percent for structures. With the approval of this modification to the standard, the combined maximum lot and parking coverage on the R-1 zoned lots will still not exceed the 60 percent combined maximum, as the driveways on these lots will be approximately 400 square feet. Building footprints and overall lot coverage can be verified at the time of building permit issuance.

The R-3 lots range in size between 4,030 square feet and 4,493 square feet with an average lot size of 4,216 square feet. The maximum permitted lot coverage in the R-3 zone is 60 percent no matter the number of stories of the home. The anticipated

coverage for these lots will be less than the stated maximum. The total lot coverage on the R-3 zoned lots will not exceed 70 percent, as driveways on these lots will be approximately 400 square feet. Building footprints and overall lot coverage can be verified at the time of building permit issuance.

This standard is met.

15.410 YARD SETBACK REQUIREMENTS

15.410.010 General yard regulations.

A. No yard or open space provided around any building for the purpose of complying with the provisions of this code shall be considered as providing a yard or open space for any other building.

B. No yard or open space on adjoining property shall be considered as providing required yard or open space for another lot or development site under the provisions of this code.

C. No front yards provided around any building for the purpose of complying with the regulations of this code shall be used for public or private parking areas or garages, or other accessory buildings, except as specifically provided elsewhere in this code.

D. When the common property line separating two or more contiguous lots is covered by a building or a permitted group of buildings with respect to such common property line or lines does not fully conform to the required yard spaces on each side of such common property line or lines, such lots shall constitute a single development site and the yards as required by this code shall then not apply to such common property lines.

E. Dwellings Where Permitted above Nonresidential Buildings. The front and interior yard requirements for residential uses shall not be applicable; provided, that all yard requirements for the district in which such building is located are complied with.

F. In the AI airport industrial district, clear areas, safety areas, object-free areas, taxiways, parking aprons, and runways may be counted as required yards for a building, even if located upon an adjacent parcel.

G. In the AR airport residential district, clear areas, safety areas, object-free areas, taxiways, parking aprons, and runways may be counted as required yards for a building, if located upon an adjacent parcel.

15.410.020 Front yard setback.

A. Residential (see Appendix A, Figure 10).

1. **AR, R-1 and R-2 districts shall have a front yard of not less than 15 feet. Said yard shall be landscaped and maintained.**
2. **R-3 and RP districts shall have a front yard of not less than 12 feet. Said yard shall be landscaped and maintained.**
3. **The entrance to a garage or carport, whether or not attached to a dwelling, shall be set back at least 20 feet from the nearest property line of the street to which access will be provided. However, the foregoing setback requirement shall not apply where the garage or carport will be provided with access to an alley only.**

4. **Cottage cluster projects in any zone in which they are permitted shall have a front yard of not less than 10 feet. Any garage, carport, or parking areas that are part of a cottage cluster shall be set back at least 20 feet from the nearest property line of the street to which access will be provided. However, the foregoing setback requirement shall not apply where the garage or carport will be provided with access to an alley only.**

15.410.030 Interior yard setback.

A. Residential.

1. **All lots or development sites in the AR, R-1, R-2 and R-3 districts shall have interior yards of not less than five feet, except that where a utility easement is recorded adjacent to a side lot line, there shall be a side yard no less than the width of the easement.**
2. **All lots or development sites in the RP district shall have interior yards of not less than eight feet.**
3. **All lots with townhouse dwellings shall have no minimum interior yard setback where units are attached.**

Applicant's Findings: The proposed homes in the R-1 and R-3 zones will meet all front and interior yard setback requirements. Building footprints yard setbacks can be verified at the time of building permit issuance.

This standard is met.

15.410.060 Vision clearance setback.

The following vision clearance standards shall apply in all zones (see Appendix A, Figure 9).

A. At the intersection of two streets, including private streets, a triangle formed by the intersection of the curb lines, each leg of the vision clearance triangle shall be a minimum of 50 feet in length.

B. At the intersection of a private drive and a street, a triangle formed by the intersection of the curb lines, each leg of the vision clearance triangle shall be a minimum of 25 feet in length.

C. Vision clearance triangles shall be kept free of all visual obstructions from two and one-half feet to nine feet above the curb line. Where curbs are absent, the edge of the asphalt or future curb location shall be used as a guide, whichever provides the greatest amount of vision clearance.

D. There is no vision clearance requirement within the commercial zoning district(s) located within the riverfront (RF) overlay subdistrict.

Applicant's Findings: The proposed development maintains all required vision clearance setbacks, as demonstrated on the submitted Land Use Plans provided in Appendix E.

This standard is met.

15.410.070 Yard exceptions and permitted intrusions into required yard setbacks.

The following intrusions may project into required yards to the extent and under the conditions and limitations indicated:

A. Depressed Areas. In any district, open work fences, hedges, guard railings or other landscaping or architectural devices for safety protection around depressed ramps, stairs or retaining walls may be located in required yards; provided, that such devices are not more than three and one-half feet in height.

B. Accessory Buildings. In front yards on through lots, where a through lot has a depth of not more than 140 feet, accessory buildings may be located in one of the required front yards; provided, that every portion of such accessory building is not less than 10 feet from the nearest street line.

C. Projecting Building Features. The following building features may project into the required front yard no more than five feet and into the required interior yards no more than two feet; provided, that such projections are no closer than three feet to any interior lot line:

1. **Eaves, cornices, belt courses, sills, awnings, buttresses or other similar features.**
2. **Chimneys and fireplaces, provided they do not exceed eight feet in width.**
3. **Porches, platforms or landings which do not extend above the level of the first floor of the building.**
4. **Mechanical structures (heat pumps, air conditioners, emergency generators and pumps).**

D. Fences and Walls.

1. **In the residential district, a fence or wall shall be permitted to be placed at the property line or within a yard setback as follows:**
   a. **Not to exceed six feet in height. Located or maintained within the required interior yards. For purposes of fencing only, lots that are corner lots or through lots may select one of the street frontages as a front yard and all other yards shall be considered as interior yards, allowing the placement of a six-foot fence on the property line. In no case may a fence extend into the clear vision zone as defined in NMC 15.410.060.**
   b. **Not to exceed four feet in height. Located or maintained within all other front yards.**
2. **In any commercial, industrial, or mixed employment district, a fence or wall shall be permitted to be placed at the property line or within a yard setback as follows:**
   a. **Not to exceed eight feet in height. Located or maintained in any interior yard except where the requirements of vision clearance apply. For purposes of fencing only, lots that are corner lots or through lots may select one of the street frontages as a front yard and all other yards shall be considered as interior yards, allowing the placement of an eight-foot fence on the property line.**
   b. **Not to exceed four feet in height. Located or maintained within all other front yards.**
3. **If chain link (wire-woven) fences are used, they are manufactured of corrosion-proof materials of at least 11-1/2 gauge.**
4. **The requirements of vision clearance shall apply to the placement of fences.**

Applicant's Findings: The Applicant acknowledges permitted intrusions into required yard setbacks. The fences surrounding the single-family residential homes in the R-1 and R-3 zoning areas will not exceed six feet in height and will be made of wood. Several retaining

walls will be installed to protect the future homes. The location of the proposed retaining walls is demonstrated on the Grading Plan (Sheet C210) provided in Appendix E. Fencing surrounding the storm pond will be chain link, manufactured of corrosion-proof materials of at least 11-1/2 gauge, and will be 4-feet in height. No fence exceeding four feet in height will be placed in a front yard setback.

This standard is met.

E. Parking and Service Drives (Also Refer to NMC 15.440.010 through 15.440.080).

1. **In any district, service drives or accessways providing ingress and egress shall be permitted, together with any appropriate traffic control devices in any required yard.**
2. **In any residential district, public or private parking areas and parking spaces shall not be permitted in any required yard except as provided herein:**
    a. **Required parking spaces shall be permitted on service drives in the required front yard in conjunction with any single-family, duplex dwelling, triplex dwelling, quadplex dwelling, or townhouse dwelling on a single lot.**
    b. **Recreational vehicles, boat trailers, camperettes and all other vehicles not in daily use are restricted to parking in the front yard setback for not more than 48 hours; and recreational vehicles, boat trailers, camperettes and all other vehicles not in daily use are permitted to be located in the required interior yards.**
    c. **Public or private parking areas, parking spaces or any building or portion of any building intended for parking which have been identified as a use permitted in any residential district shall be permitted in any interior yard that abuts an alley, provided said parking areas, structures or spaces shall comply with NMC 15.440.070, Parking tables and diagrams (Diagrams 1 through 3).**
    d. **Public or private parking areas, service drives or parking spaces which have been identified as a use permitted in any residential district shall be permitted in interior yards; provided, that said parking areas, service drives or parking spaces shall comply with other requirements of this code.**
3. **In any commercial or industrial district, except C-1, C-4, M-1, and M-E, public or private parking areas or parking spaces shall be permitted in any required yard (see NMC 15.410.030). Parking requirements in the C-4 district and the M-E district within the riverfront overlay subdistrict are described in NMC 15.352.040(H).**
4. **In the I district, public or private parking areas or parking spaces may be no closer to a front property line than 20 feet, and no closer to an interior property line than five feet.**

F. Public Telephone Booths and Public Transit Shelters. Public telephone booths and public transit shelters shall be permitted; provided, that vision clearance is maintained for vehicle requirements for vision clearance.

G. Hangars within the AR airport residential district may be constructed with no yard setbacks to property lines adjacent to other properties within the airport residential or airport industrial districts.

Applicant's Findings: Parking is proposed on each individual single-family designated private lot in driveways and garages. Each lot will have between two and four parking spaces per home within the garages and driveways of the single-family homes. The location of the proposed parking areas meets the requirements of this standard.

This standard is met.

15.415 BUILDING AND SITE DESIGN STANDARDS

15.415.010 Main buildings and uses as accessory buildings.

A. Hereinafter, any building which is the only building on a lot is a main building.

B. In any residential district except RP, there shall be only one main use per lot or development site; provided, that home occupations shall be allowed where permitted.

C. In any residential district, there shall be no more than two accessory buildings on any lot or development site.

15.415.020 Building height limitation.

A. Residential.

1. **In the R-1 district, no main building shall exceed 30 feet in height, except that townhouse dwellings shall not exceed 35 feet in height.**
2. **In the R-2, AR, and RP districts, no main building shall exceed 35 feet in height.**
3. **In the R-3 district, no main building shall exceed 45 feet in height, except, where an R-3 district abuts upon an R-1 district, the maximum permitted building height shall be limited to 30 feet for a distance of 50 feet from the abutting boundary of the aforementioned district.**
4. **Accessory buildings in the R-1, R-2, R-3, AR, and RP districts are limited to 16 feet in height, except as follows:**
   a. **Up to 800 square feet of an accessory building may have a height of up to 24 feet.**
   b. **Aircraft hangars in the AR district may be the same height as the main building.**
5. **No cottage cluster dwelling shall exceed 25 feet in height in any zone where the use is permitted.**
6. **Single-family dwellings permitted in commercial or industrial districts shall not exceed 35 feet in height, or the maximum height permitted in the zone, whichever is less.**

Applicant's Findings: The single-family homes in the R-1 zone will have a maximum height of 30 feet, consistent with the requirements of the zone. The proposed single-family homes in the R-3 zones will have a maximum height of 30 feet, consistent with the requirements of the zone.

This standard is met.

C. The maximum height of buildings and uses permitted conditionally shall be stated in the conditional use permits.

Applicant's Findings: The proposed application does not include a conditional use permit. This standard is not applicable.

15.415.040 Public access required.

No building or structure shall be erected or altered except on a lot fronting or abutting on a public street or having access to a public street over a private street or easement of record approved in accordance with provisions contained in this code. New private streets may not be created to provide access except as allowed under NMC 15.332.020(B)(24), 15.336.020(B)(8), and in the M-4 zone. Existing private streets may not be used for access for new dwelling units, except as allowed under NMC 15.405.030. No building or structure shall be erected or altered without provisions for access roadways as required in the Oregon Fire Code, as adopted by the city.

Applicant's Findings: All proposed residential structures will have direct access to a public street. The Applicant has obtained a Service Provider Letter (SPL) from Tualatin Valley Fire and Rescue indicating that the proposed development has been reviewed and approved by the Fire Marshall or Designee. A copy of the SPL has been submitted with this application within Appendix D.

This standard is met.

15.420 LANDSCAPING AND OUTDOOR AREAS

15.420.010 Required minimum standards.

A. Private and Shared Outdoor Recreation Areas in Residential Developments.

1. **Private Areas. Each ground-level living unit in a residential development subject to a design review plan approval shall have an accessible outdoor private space of not less than 48 square feet in area. The area shall be enclosed, screened or otherwise designed to provide increased privacy for unit residents, their guests and neighbors.**
2. **Individual and Shared Areas. Usable outdoor recreation space shall be provided for the individual and/or shared use of residents and their guests in any multifamily residential development, as follows:**
   a. **One- or two-bedroom units: 200 square feet per unit.**
   b. **Three- or more bedroom units: 300 square feet per unit.**
   c. **Storage areas are required in residential developments. Convenient areas shall be provided in residential developments for the storage of articles such as bicycles, barbecues, luggage, outdoor furniture, and the like. These shall be entirely enclosed.**
3. **In the AR airport residential district a five percent landscaping standard is required with the goal of "softening" the buildings and making the development "green" with plants, where possible. The existence of the runway, taxiway, and approach open areas already provide generally for the 15 percent requirement.**

Applicant's Findings: Each single-family home within the neighborhood will have a minimum of 48 square feet of private outdoor open space. Private open space areas can be verified at the time of building permit issuance.

This standard is met.

B. Required Landscaped Area. The following landscape requirements are established for all developments except single-family detached dwellings, duplex dwellings, triplex dwellings, quadplex dwellings, townhouse dwellings and cottage cluster projects:

Applicant's Findings: The proposed single-family detached dwellings are exempt from these requirements.

15.420.020 Landscaping and amenities in public rights-of-way.

The following standards are intended to create attractive streetscapes and inviting pedestrian spaces. A review body may require any of the following landscaping and amenities to be placed in abutting public rights-of-way as part of multifamily, commercial, industrial, or institutional design reviews, or for subdivisions and planned unit developments. In addition, any entity improving existing rights-of-way should consider including these elements in the project. A decision to include any amenity shall be based on comprehensive plan guidelines, pedestrian volumes in the area, and the nature of surrounding development.

A. Pedestrian Space Landscaping. Pedestrian spaces shall include all sidewalks and medians used for pedestrian refuge. Spaces near sidewalks shall provide plant material for cooling and dust control, and street furniture for comfort and safety, such as benches, waste receptacles and pedestrian-scale lighting. These spaces should be designed for short-term as well as long-term use. Elements of pedestrian spaces shall not obstruct sightlines and shall adhere to any other required city safety measures. Medians used for pedestrian refuge shall be designed for short-term use only with plant material for cooling and dust control, and pedestrian-scale lighting. The design of these spaces shall facilitate safe pedestrian crossing with lighting and accent paving to delineate a safe crossing zone visually clear to motorists and pedestrians alike.

1. **Street trees planted in pedestrian spaces shall be planted according to NMC 15.420.010(B)(4).**
2. **Pedestrian spaces shall have low (two and one-half feet) shrubs and ground covers for safety purposes, enhancing visibility and discouraging criminal activity.**
    a. **Plantings shall be 90 percent evergreen year-round, provide seasonal interest with fall color or blooms, and at maturity maintain growth within the planting area (refer to plant material matrix below).**
    b. **Plant placement shall also adhere to clear sight line requirements as well as any other relevant city safety measures.**
3. **Pedestrian-scale lighting shall be installed along sidewalks and in medians used for pedestrian refuge.**

a. **Pole lights as well as bollard lighting may be specified; however, the amount and type of pedestrian activity during evening hours, e.g., transit stops, nighttime service districts, shall ultimately determine the type of fixture chosen.**
b. **Luminaire styles shall match the area/district theme of existing luminaires and shall not conflict with existing building or roadway lights causing glare.**
c. **Lighting heights and styles shall be chosen to prevent glare and to designate a clear and safe path and limit opportunities for vandalism (see Appendix A, Figure 17, Typical Pedestrian Space Layouts).**
d. **Lighting shall be placed near the curb to provide maximum illumination for spaces furthest from building illumination. Spacing shall correspond to that of the street trees to prevent tree foliage from blocking light.**

4. **Street furniture such as benches and waste receptacles shall be provided for spaces near sidewalks only.**
   a. **Furniture should be sited in areas with the heaviest pedestrian activity, such as downtown, shopping districts, and shopping centers.**
   b. **Benches should be arranged to facilitate conversation between individuals with L-shaped arrangements and should face the area focal point, such as shops, fountains, plazas, and should divert attention away from nearby traffic.**
5. **Paving and curb cuts shall facilitate safe pedestrian crossing and meet all ADA requirements for accessibility.**

Applicant's Findings: The submitted Land Use Plans identify and demonstrate the landscaping proposed on the site. Due to the residential nature of the site the public rights-of-way have been provided with plantings. Landscaping and additional public amenities are proposed in Tract A near Lot 100, which will include planted areas, bench seating, a crushed rock pathway, and a shared amenity structure to be determined. The Applicant is considering either a gazebo, a play structure, or a similar type of shared amenity structure to be located in the area described on Planting Plan (Sheet L104) in the Land Use Plans.

This standard is met.

B. Planting Strip Landscaping. All planting strips shall be landscaped. Planting strips provide a physical and psychological buffer for pedestrians from traffic with plant material that reduces heat and dust, creating a more comfortable pedestrian environment. Planting strips shall have different arrangements and combinations of plant materials according to the frequency of on-street parking (see Appendix A, Figures 18 and 19).

1. **Planting strips which do not have adjacent parking shall have a combination of ground covers, low (two and one-half feet) shrubs and trees. Planting strips adjacent to frequently used on-street parking, as defined by city staff, shall only have trees protected by tree grates, and planting strips adjacent to infrequently used on-street parking shall be planted with ground cover as well as trees (see Appendix A, Figures 18 and 19, Typical Planting Strip Layouts). District themes or corridor themes linking individual districts should be followed utilizing a unifying plant characteristic, e.g.,**

bloom color, habit, or fall color. When specifying thematic plant material, monocultures should be avoided, particularly those species susceptible to disease.

2. **Street trees shall be provided in all planting strips as provided in NMC 15.420.010(B)(4).**
    a. **Planting strips without adjacent parking or with infrequent adjacent parking shall have street trees in conjunction with ground covers and/or shrubs.**
    b. **Planting strips with adjacent parking used frequently shall have only street trees protected by tree grates.**
3. **Shrubs and ground covers shall be provided in planting strips without adjacent parking with low (two and one-half feet) planting masses to enhance visibility, discourage criminal activity, and provide a physical as well as psychological buffer from passing traffic.**
    a. **Plantings shall be 90 percent evergreen year-round, provide seasonal interest with fall color or blooms and at maturity maintain growth within the planting area.**
    b. **Ground cover able to endure infrequent foot traffic shall be used in combination with street trees for planting strips with adjacent occasional parking (refer to plant material matrix below).**
    c. **All plant placement shall adhere to clear sight line requirements as well as any other relevant city safety measures.**

C. Maintenance. All landscapes shall be maintained for the duration of the planting to encourage health of plant material as well as public health and safety. All street trees and shrubs shall be pruned to maintain health and structure of the plant material for public safety purposes.

Applicant's Findings: As identified in the included landscaping plan, all planting strips will be landscaped with a combination of ground covers, shrubs and trees. All landscaping will be maintained for the duration of the planting and all street trees and shrubs will be pruned to maintain the health and structure of the plants.

This standard is met.

D. Exception. In the AI airport industrial district and AR airport residential district, no landscape or amenities except for grass are required for any area within 50 feet of aircraft operation areas including aircraft parking areas, taxiways, clear areas, safety areas, object-free areas, and the runway.

Applicant's Findings: This property is not in the AI or AR zone and, as such, this standard is not applicable.

15.425 EXTERIOR LIGHTING

15.425.010 Purpose.

The purpose of this chapter is to regulate the placement, orientation, distribution patterns, and fixture types of on-site outdoor lighting. The intent of this section is to provide minimum

lighting standards that promote safety, utility, and security, prevent glare on public roadways, and protect the privacy of residents.

15.425.020 Applicability and exemptions.

A. Applicability. Outdoor lighting shall be required for safety and personal security in areas of assembly, parking, and traverse, as part of multifamily residential, commercial, industrial, public, recreational and institutional uses. The applicant for any Type I or Type II development permit shall submit, as part of the site plan, evidence that the proposed outdoor lighting plan will comply with this section. This information shall contain but not be limited to the following:

1. **The location, height, make, model, lamp type, wattage, and proposed cutoff angle of each outdoor lighting fixture.**
2. **Additional information the director may determine is necessary, including but not limited to illuminance level profiles, hours of business operation, and percentage of site dedicated to parking and access.**
3. **If any portion of the site is used after dark for outdoor parking, assembly or traverse, an illumination plan for these areas is required. The plan must address safety and personal security.**

B. Exemptions. The following uses shall be exempt from the provisions of this section:

1. **Public street and airport lighting.**
2. **Circus, fair, carnival, or outdoor governmentally sponsored event or festival lighting.**
3. **Construction or emergency lighting, provided such lighting is discontinued immediately upon completion of the construction work or abatement of the emergency necessitating said lighting.**
4. **Temporary Lighting. In addition to the lighting otherwise permitted in this code, a lot may contain temporary lighting during events as listed below:**
    a. **Grand Opening Event. A grand opening is an event of up to 30 days in duration within 30 days of issuance of a certificate of occupancy for a new or remodeled structure, or within 30 days of change of business or ownership. No lot may have more than one grand opening event per calendar year. The applicant shall notify the city in writing of the beginning and ending dates prior to the grand opening event.**
    b. **Other Events. A lot may have two other events per calendar year. The events may not be more than eight consecutive days in duration, nor less than 30 days apart.**
5. **Lighting activated by motion sensor devices.**
6. **Nonconforming lighting in place as of September 5, 2000. Replacement of nonconforming lighting is subject to the requirements of NMC 15.205.010 through 15.205.100.**
7. **Light Trespass onto Industrial Properties. The lighting trespass standards of NMC 15.425.040 do not apply where the light trespass would be onto an industrially zoned property.**

Applicant's Findings: The land use submittal includes a photometrics plan demonstrating the proposed street lighting on the site identifying the location, height, make, model, lamp type, wattage, and proposed cutoff angle of each outdoor lighting fixture. The Photometrics Plan (Sheet C250) is provided in Appendix E.

This standard is met.

15.425.030 Alternative materials and methods of construction, installation, or operation.
The provisions of this section are not intended to prevent the use of any design, material, or methods of installation or operation not specifically prescribed by this section, provided any such alternate has been approved by the director. Alternatives must be an approximate equivalent to the applicable specific requirement of this section and must comply with all other applicable standards in this section.

Applicant's Findings: This land use submittal does not include a request for alternative materials and methods of construction, installation or operation.

This standard is met.

15.425.040 Requirements.
A. General Requirements – All Zoning Districts.

1. **Low-level light fixtures include exterior lights which are installed between ground level and six feet tall. Low-level light fixtures are considered nonintrusive and are unrestricted by this code.**
2. **Medium-level light fixtures include exterior lights which are installed between six feet and 15 feet above ground level. Medium-level light fixtures must either comply with the shielding requirements of subsection (B) of this section, or the applicant shall show that light trespass from a property has been designed not to exceed one-half foot-candle at the property line.**
3. **High-level light fixtures include exterior lights which are installed 15 feet or more above ground level. High-level light fixtures must comply with the shielding requirements of subsection (B) of this section, and light trespass from a property may not exceed one-half foot-candle at the property line.**

B. Table of Shielding Requirements.

Fixture Lamp Type	Shielded
Low/high pressure sodium, mercury vapor, metal halide and fluorescent over 50 watts	Fully
Incandescent over 160 watts	Fully
Incandescent 160 watts or less	None
Fossil fuel	None
Any light source of 50 watts or less	None

Other sources	As approved by NMC 15.425.030

Applicant's Findings: The land use submittal includes a lighting plan identifying the location, height, make, model, lamp type, wattage, and proposed cutoff angle of each outdoor lighting fixture. Lighting is provided for all proposed public streets. All lighting is designed to meet the standards of this section.

This standard is met.

14.430 UNDERGROUND UTILITY INSTALLATION

15.430.010 Underground utility installation.

A. All new utility lines, including but not limited to electric, communication, natural gas, and cable television transmission lines, shall be placed underground. This does not include surface-mounted transformers, connections boxes, meter cabinets, service cabinets, temporary facilities during construction, and high-capacity electric lines operating at 50,000 volts or above.

B. Existing utility lines shall be placed underground when they are relocated, or when an addition or remodel requiring a Type II design review is proposed, or when a developed area is annexed to the city.

C. The director may make exceptions to the requirement to underground utilities based on one or more of the following criteria:

1. **The cost of undergrounding the utility is extraordinarily expensive.**
2. **There are physical factors that make undergrounding extraordinarily difficult.**
3. **Existing utility facilities in the area are primarily overhead and are unlikely to be changed.**

Applicant's Findings: All new utility lines will be located underground.

This standard is met.

15.440 OFF-STREET PARKING, BICYCLE PARKING, AND PRIVATE WALKWAYS

Article I. Off-Street Parking Requirements

15.440.010 Required off-street parking.

A. Off-street parking shall be provided on the development site for all R-1, C-1, M-1, M-2 and M-3 zones. In all other zones, the required parking shall be on the development site or within 400 feet of the development site which the parking is required to serve. All required parking must be under the same ownership as the development site served except through special covenant agreements as approved by the city attorney, which bind the parking to the development site.

1. **In cases where the applicant is proposing off-street parking, refer to subsection (F) of this section for the maximum number of parking spaces.**

B. Off-street parking is required pursuant to NMC 15.440.030 in the C-2 district.

1. **In cases where the applicant is proposing off-street parking, refer to subsection (F) of this section for the maximum number of parking spaces.**

C. Off-street parking is not required in the C-3 district, except for:

1. **Dwelling units meeting the requirements noted in NMC 15.305.020.**
2. **New development which is either immediately adjacent to a residential district or separated by nothing but an alley.**
3. **In cases where the applicant is proposing off-street parking, refer to subsection (F) of this section for the maximum number of parking spaces.**

Applicant's Findings: The proposed parking for the single-family homes will be on the same lot as the use. There are no commercial, office or industrial developments proposed and, as such, no carpool/vanpool parking spaces are required.

This standard is met.

15.440.020 Parking area and service drive design.

A. All public or private parking areas, parking spaces, or garages shall be designed, laid out and constructed in accordance with the minimum standards as set forth in NMC 15.440.070.

B. Groups of three or more parking spaces, except those in conjunction with a single-family detached dwelling, duplex dwelling, triplex dwelling, quadplex dwelling, townhouse dwelling or cottage cluster project on a single lot, shall be served by a service drive so that no backward movement or other maneuvering of a vehicle within a street, other than an alley, will be required. Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety in traffic access and egress and maximum safety of pedestrian and vehicular traffic on the site, but in no case shall two-way and one-way service drives be less than 20 feet and 12 feet, respectively. Service drives shall be improved in accordance with the minimum standards as set forth in NMC 15.440.060.

C. Gates. A private drive or private street serving as primary access to more than one dwelling unit shall not be gated to limit access, except as approved by variance.

D. In the AI airport industrial district and AR airport residential district, taxiways may be used as part of the service drive design where an overall site plan is submitted that shows how the circulation of aircraft and vehicles are safely accommodated, where security fences are located, if required, and is approved by the fire marshal, planning director, and public works director. The following submittal must be made:

1. **A drawing of the area to be developed, including the probable location, height, and description of structures to be constructed; the location and description of a security fence or gate to secure the aircraft operations areas of off-airport property from the other nonsecured pedestrian/auto/truck areas of on-airport property; the proposed location of the proposed taxiway access in accordance with FAA specifications (refer to Federal Aviation Administration Advisory Circular No. 150/5300-13 regarding airport design, and AC/5370-10B regarding construction standards for specifications that should be used as a guideline); and the identification of the vehicular traffic pattern area clearly separated from aircraft traffic. Once specific buildings have been designed, FAA Form 7460-1, Notice of Proposed Construction or Alteration, must be submitted to the City of Newberg, the private airport owner, and the FAA for airspace review.**

15.440.030 Parking spaces required.

Use	Minimum Parking Spaces Required
Residential Types	
Dwelling, single-family	**2 for each dwelling unit on a single lot**

Applicant's Findings: All single-family detached homes will have at least two parking spaces provided on each lot, with car garages and driveways.

This standard is met.

15.440.060 Parking area and service drive improvements.

All public or private parking areas, outdoor vehicle sales areas, and service drives shall be improved according to the following:

A. All parking areas and service drives shall have surfacing of asphaltic concrete or Portland cement concrete or other hard surfacing such as brick or concrete pavers. Other durable and dust-free surfacing materials may be approved by the director for infrequently used parking areas. All parking areas and service drives shall be graded so as not to drain stormwater over the public sidewalk or onto any abutting public or private property.

B. All parking areas shall be designed not to encroach on public streets, alleys, and other rights-of-way. Parking areas shall not be placed in the area between the curb and sidewalk or, if there is no sidewalk, in the public right-of-way between the curb and the property line. The director may issue a permit for exceptions for unusual circumstances where the design maintains safety and aesthetics.

C. All parking areas, except those required in conjunction with single-family or duplex dwellings, shall provide a substantial bumper which will prevent cars from encroachment on abutting private and public property.

D. All parking areas, including service drives, except those required in conjunction with single-family or duplex dwellings, shall be screened in accordance with NMC 15.420.010(B).

E. Any lights provided to illuminate any public or private parking area or vehicle sales area shall be so arranged as to reflect the light away from any abutting or adjacent residential district.

F. All service drives and parking spaces shall be substantially marked and comply with NMC 15.440.070.

G. Parking areas for residential uses shall not be located in a required front yard, except as follows:

1. **Attached or detached single-family or duplex: parking is authorized in a front yard on a service drive which provides access to an improved parking area outside the front yard.**
2. **Three- or four-family: parking is authorized in a front yard on a service drive which is adjacent to a door at least seven feet wide intended and used for entrance of a vehicle (see Appendix A, Figure 12).**

H. A reduction in size of the parking stall may be allowed for up to a maximum of 30 percent of the total number of spaces to allow for compact cars. For high turnover uses, such as

convenience stores or fast-food restaurants, at the discretion of the director, all stalls will be required to be full-sized.

I. Affordable housing projects may use a tandem parking design, subject to approval of the community development director.

J. Portions of off-street parking areas may be developed or redeveloped for transit-related facilities and uses such as transit shelters or park-and-ride lots, subject to meeting all other applicable standards, including retaining the required minimum number of parking spaces.

Applicant's Findings: As identified on the submitted site plan and utility plans, all parking areas and service drives will be constructed to City standards. Parking areas do not encroach on public streets. All lighting will be designed to reduce light spill and glare away from any proposed or existing neighboring developments.

This standard is met.

15.440.075 Residential garage standards.

A. Single-car garages for residential uses shall have a minimum inside width of 10 feet by 20 feet.

B. Two-car garages for residential uses shall have a minimum inside width of 20 feet by 20 feet.

C. Three-car garages for residential uses shall have a minimum inside width of 30 feet by 20 feet.

Applicant's Findings: All single-car garages will have a minimum inside width of 10 feet by 20 feet. All two-car garages will have a minimum inside width of 20 feet by 20 feet. All three-car garages will have a minimum inside width of 30 feet by 20 feet. Compliance with this standard can be verified at the time of building permit issuance.

This standard is met.

Article III. Private Walkways

15.440.120 Purpose.

Sidewalks and private walkways are part of the city's transportation system. Requiring their construction is part of the city's plan to encourage multimodal travel and to reduce reliance on the automobile. Considerable funds have and will be expended to install sidewalks along the streets in the city. Yet there is little point to this expense if it is not possible for people to walk from the sidewalk to the developments along each side. The following requirements are intended to provide safe and convenient paths for employees, customers, and residents to walk from public sidewalks to development entrances, and to walk between buildings on larger sites.

15.440.130 Where required.

Private walkways shall be constructed as part of any development requiring Type II design review, including mobile home parks. In addition, they may be required as part of conditional use permits or planned unit developments. In the airport industrial (AI) district and residential

(AR) district, on-site walks are not required in aircraft operations areas, such as parking aprons, taxiways, and runways.

Applicant's Findings: As this application is for a Planned Unit Development, walkways and sidewalks are required and are provided as shown on the submitted plans.

This standard is met.

15.440.140 Private walkway design.

A. All required private walkways shall meet the applicable building code and Americans with Disabilities Act requirements.

B. Required private walkways shall be a minimum of four feet wide.

C. Required private walkways shall be constructed of portland cement concrete or brick.

D. Crosswalks crossing service drives shall, at a minimum, be painted on the asphalt or clearly marked with contrasting paving materials or humps/raised crossings. If painted striping is used, it should consist of thermoplastic striping or similar type of durable application.

E. At a minimum, required private walkways shall connect each main pedestrian building entrance to each abutting public street and to each other.

F. The review body may require on-site walks to connect to development on adjoining sites.

G. The review body may modify these requirements where, in its opinion, the development provides adequate on-site pedestrian circulation, or where lot dimensions, existing building layout, or topography preclude compliance with these standards.

Applicant's Findings: The proposal includes public sidewalks connecting the single-family homes to NE Springbrook Road. All walkways will be 5 feet in width, and will be constructed of concrete. Crosswalks will be provided on the site and will be painted/clearly striped in conformance with these requirements.

This standard is met.

15.500 PUBLIC IMPROVEMENTS STANDARDS

15.505.010 Purpose.

This chapter provides standards for public infrastructure and utilities installed with new development, consistent with the policies of the City of Newberg comprehensive plan and adopted city master plans. The standards are intended to minimize disturbance to natural features, promote energy conservation and efficiency, minimize and maintain development impacts on surrounding properties and neighborhoods, and ensure timely completion of adequate public facilities to serve new development

15.505.020 Applicability.

The provision and utilization of public facilities and services within the City of Newberg shall apply to all land developments in accordance with this chapter. No development shall be approved unless the following improvements are provided for prior to occupancy or operation, unless future provision is assured in accordance with NMC 15.505.030(E).

A. Public Works Design and Construction Standards. The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall comply with the requirements of the most recently adopted Newberg public works design and construction standards.

B. Street Improvements. All projects subject to a Type II design review, partition, or subdivision approval must construct street improvements necessary to serve the development.

C. Water. All developments, lots, and parcels within the City of Newberg shall be served by the municipal water system as specified in Chapter 13.15 NMC.

D. Wastewater. All developments, lots, and parcels within the City of Newberg shall be served by the municipal wastewater system as specified in Chapter 13.10 NMC.

E. Stormwater. All developments, lots, and parcels within the City of Newberg shall manage stormwater runoff as specified in Chapters 13.20 and 13.25 NMC.

F. Utility Easements. Utility easements shall be provided as necessary and required by the review body to provide needed facilities for present or future development of the area.

G. City Approval of Public Improvements Required. No building permit may be issued until all required public facility improvements are in place and approved by the director, or are otherwise bonded for in a manner approved by the review authority, in conformance with the provisions of this code and the Newberg Public Works Design and Construction Standards.

Applicant's Findings: As identified on the included public improvement plans, the design and construction of all improvements within existing and proposed public rights-of-way and easements and all improvements to be maintained by the city are designed to comply with the requirements of the most recently adopted Newberg public works design and construction standards. All improvements for which city approval is required are proposed to the most recently adopted Newberg public works design and construction standards or as reviewed and approved by the Newberg Engineering Department. The site development plan includes public streets, utility easements, connections to public water and water booster system, connections to sanitary sewer services, and management of stormwater runoff.

This standard is met.

15.505.30 STREET STANDARDS

A. Purpose. The purpose of this section is to:

1. **Provide for safe, efficient, and convenient multi-modal transportation within the City of Newberg.**
2. **Provide adequate access to all proposed and anticipated developments in the City of Newberg. For purposes of this section, "adequate access" means direct routes of travel between destinations; such destinations may include residential neighborhoods, parks, schools, shopping areas, and employment centers.**
3. **Provide adequate area in all public rights-of-way for sidewalks, wastewater and water lines, stormwater facilities, natural gas lines, power lines, and other utilities commonly and appropriately placed in such rights-of-way. For purposes of this**

section, "adequate area" means space sufficient to provide all required public services to standards defined in this code and in the Newberg public works design and construction standards.

B. Applicability. The provisions of this section apply to:

1. **The creation, dedication, and/or construction of all public streets, bike facilities, or pedestrian facilities in all subdivisions, partitions, or other developments in the City of Newberg.**
2. **The extension or widening of existing public street rights-of-way, easements, or street improvements including those which may be proposed by an individual or the city, or which may be required by the city in association with other development approvals.**
3. **The construction or modification of any utilities, pedestrian facilities, or bike facilities in public rights-of-way or easements.**
4. **The designation of planter strips. Street trees are required subject to Chapter 15.420 NMC.**
5. **Developments outside the city that tie into or take access from city streets.**

Applicant's Findings: As demonstrated in the public improvement plans, this development includes public streets designed to provide safe and convenient vehicular and pedestrian access. Proposed improvements include paved streets, curbs, sidewalks, crosswalks, planter strips with street trees and appropriate groundcover, and utility easements where necessary.

This standard is met.

C. Layout of Streets, Alleys, Bikeways, and Walkways. Streets, alleys, bikeways, and walkways shall be laid out and constructed as shown in the Newberg transportation system plan. In areas where the transportation system plan or future street plans do not show specific transportation improvements, roads and streets shall be laid out so as to conform to previously approved subdivisions, partitions, and other developments for adjoining properties, unless it is found in the public interest to modify these patterns. Transportation improvements shall conform to the standards within the Newberg Municipal Code, the Newberg public works design and construction standards, the Newberg transportation system plan, and other adopted city plans.

Applicant's Findings: While no bikeways are proposed, the streets and walkways are designed to comply with the Newberg Transportation System Plan. Streets are planned to meet with adjoining roadways and to provide for future connectivity to the west.

This standard is met.

D. Construction of New Streets. Where new streets are necessary to serve a new development, subdivision, or partition, right-of-way dedication and full street improvements shall be required. Three-quarter streets may be approved in lieu of full

street improvements when the city finds it to be practical to require the completion of the other one-quarter street improvement when the adjoining property is developed; in such cases, three-quarter street improvements may be allowed by the city only where all of the following criteria are met:

1. **The land abutting the opposite side of the new street is undeveloped and not part of the new development; and**
2. **The adjoining land abutting the opposite side of the street is within the city limits and the urban growth boundary.**

Applicant's Findings: Right-of-way dedication and full street improvements are proposed for all new public streets within the development. NE Springbrook Road will serve the new development. All public street improvements will be constructed to public street standards and dedicated to the City of Newberg.

This standard is met.

E. Improvements to Existing Streets.

1. **All projects subject to partition, subdivision, Type II design review, or middle housing land division approval shall dedicate right-of-way sufficient to improve the street to the width specified in subsection (G) of this section.**
2. **All projects subject to partition, subdivision, or Type II design review approval must construct a minimum of a three-quarter street improvement to all existing streets adjacent to, within, or necessary to serve the development. The director may waive or modify this requirement where the applicant demonstrates that the condition of existing streets to serve the development meets city standards and is in satisfactory condition to handle the projected traffic loads from the development. Where a development has frontage on both sides of an existing street, full street improvements are required.**
3. **In lieu of the street improvement requirements outlined in subsection (E)(2) of this section, the review authority may elect to accept from the applicant monies to be placed in a fund dedicated to the future reconstruction of the subject street(s). The amount of money deposited with the city shall be 100 percent of the estimated cost of the required street improvements (including any associated utility improvements), and 10 percent of the estimated cost for inflation. Cost estimates used for this purpose shall be based on preliminary design of the constructed street provided by the applicant's engineer and shall be approved by the director.**

Applicant's Findings: NE Springbrook Road, an existing street, will serve the new development. Street improvements are proposed for the majority of the frontage as demonstrated in the Land Use Plans provided in Appendix E. The Applicant is dedicating more right-of-way than normal due to the circumstance of the railroad being on the other side of the road. Approximately 32 feet of pavement will be constructed, which exceeds the three-quarter improvement requirement. For most of the frontage the Applicant is proposing to replace the entire road width due to the vertical realignment proposed.

In this area the Applicant is proposing to construct about 23 feet of road width and leave approximately 9 feet on the other side, near the railroad, as it currently meets City standards.

All street improvements will adhere to the Conditions of Approval from case file ANX24-0001/CPMA24-0001/ZMA24-0001 for the annexation of the subject property. All public street improvements will be constructed to public street standards and dedicated to the City of Newberg.

This standard is met.

F. Improvements Relating to Impacts. Improvements required as a condition of development approval shall be roughly proportional to the impact of the development on public facilities and services. The review body must make findings in the development approval that indicate how the required improvements are roughly proportional to the impact. Development may not occur until required transportation facilities are in place or guaranteed, in conformance with the provisions of this code. If required transportation facilities cannot be put in place or be guaranteed, then the review body shall deny the requested land use application.

Applicant's Findings: Development of the proposed street network and utilities within the development and connecting to the existing system is roughly proportional to the transportation and development impacts from the development. Transportation facilities will be in place or guaranteed prior to development of the site.

This standard is met.

G. Street Width and Design Standards.

1. Design Standards. All streets shall conform with the standards contained in Table 15.505.030(G). Where a range of values is listed, the director shall determine the width based on a consideration of the total street section width needed, existing street widths, and existing development patterns. Preference shall be given to the higher value. Where values may be modified by the director, the overall width shall be determined using the standards under subsections (G)(2) through (10) of this section.

Table 15.505(G) Street Design Standards

Type of Street	Right-of-way width	Curb-to-curb pavement width	Motor vehicle travel lanes	Median Type	Striped Bike lane (both sides)	On-street parking
Local Residential	54-60 feet	32 feet	2 lanes	None	No	Yes
Major Collector	57 – 80 feet	36 feet	2 lanes	None*	Yes	No*

2. **Motor Vehicle Travel Lanes. Collector and arterial streets shall have a minimum width of 12 feet.**
    a. **Exception.**
        i. **Minimum lane width of 11 feet along S River Street from E First Street to E Fourteenth Street.**
3. **Bike Lanes. Striped bike lanes shall be a minimum of six feet wide. Bike lanes shall be provided where shown in the Newberg transportation system plan.**
    a. **Exception.**
        i. **Minimum striped bike lane width of six feet with a one-foot wide buffer along S River Street from E First Street to the bypass.**
4. **Parking Lanes. Where on-street parking is allowed on collector and arterial streets, the parking lane shall be a minimum of eight feet wide.**
    a. **Exception.**
        i. **Minimum parking lane width of seven feet along S River Street from the bypass to E Fourteenth Street.**
5. **Center Turn Lanes. Where a center turn lane is provided, it shall be a minimum of 12 feet wide.**
6. **Limited Residential Streets. Limited residential streets shall be allowed only at the discretion of the review authority, and only in consideration of the following factors:**
    a. **The requirements of the fire chief shall be followed.**
    b. **The estimated traffic volume on the street is low, and in no case more than 600 average daily trips.**
    c. **Use for through streets or looped streets is preferred over cul-de-sac streets.**
    d. **Use for short blocks (under 400 feet) is preferred over longer blocks.**
    e. **The total number of residences or other uses accessing the street in that block is small, and in no case more than 30 residences.**
    f. **On-street parking usage is limited, such as by providing ample off-street parking, or by staggering driveways so there are few areas where parking is allowable on both sides.**
7. **Sidewalks. Sidewalks shall be provided on both sides of all public streets. Minimum width is five feet.**
    a. **Exception.**
        i. **Twelve-foot-wide sidewalks, inclusive of the curb, with tree wells along S River Street from the bypass to E Fourteenth Street.**
        ii. **Twelve-foot-wide shared-use path and four-foot buffer, inclusive of the curb, with tree wells along the east side of S River Street from the bypass to E Fourteenth Street.**
8. **Planter Strips. Except where infeasible, a planter strip shall be provided between the sidewalk and the curb line, with a minimum width of five feet. This strip shall be landscaped in accordance with the standards in NMC 15.420.020. Curb-side**

sidewalks may be allowed on limited residential streets. Where curb-side sidewalks are allowed, the following shall be provided:

A. Additional reinforcement is done to the sidewalk section at corners.

B. Sidewalk width is six feet.

9. Slope Easements. Slope easements shall be provided adjacent to the street where required to maintain the stability of the street.

10. Intersections and Street Design. The street design standards in the Newberg public works design and construction standards shall apply to all public streets, alleys, bike facilities, and sidewalks in the city.

11. The planning commission may approve modifications to street standards for the purpose of ingress or egress to a minimum of three and a maximum of six lots through a conditional use permit.

Applicant's Findings: Streets, sidewalks and planter strips, as identified on the proposed public improvement plans, are designed to meet the standards of the Newberg Transportation System Plan and this section.

This standard is met.

I. Temporary Turnarounds. Where a street will be extended as part of a future phase of a development, or as part of development of an abutting property, the street may be terminated with a temporary turnaround in lieu of a standard street connection or circular cul-de-sac bulb. The director and fire chief shall approve the temporary turnaround. It shall have an all-weather surface, and may include a hammerhead-type turnaround meeting fire apparatus access road standards, a paved or graveled circular turnaround, or a paved or graveled temporary access road. For streets extending less than 150 feet and/or with no significant access, the director may approve the street without a temporary turnaround. Easements or right-of-way may be required as necessary to preserve access to the turnaround.

Applicant's Findings: The Applicant has obtained a Service Provider Letter approval from Tualatin Valley Fire and Rescue (TVF&R) indicating approval of the proposed lot configuration. The approval has been given TVF&R Permit number 2024-0095. Where future development may occur on adjacent properties to the west of the subject property, road terminations are proposed. No termination of roads are provided to the north of the subject property because this land is outside of the City's urban growth boundary and city limits, and no road terminations are proposed to the east due to existing habitat and associated stream corridor overlay. The road terminations extend 150 feet or less at all locations proposed, and no temporary turnarounds are proposed for streets that terminate to the west.

This standard is met.

J. Topography. The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of this code.

Applicant's Findings: The layout of the streets takes into consideration the surrounding topography.

This standard is met.

K. Future Extension of Streets. All new streets required for a subdivision, partition, or a project requiring site design review shall be constructed to be "to and through": through the development and to the edges of the project site to serve adjacent properties for future development.

Applicant's Findings: The new streets proposed with this development have been designed and will be constructed to be "to and through" for edges of the development site that will serve adjacent properties inside the UGB for future development.

This standard is met.

L. Cul-de-Sacs.

1. Cul-de-sacs shall only be permitted when one or more of the circumstances listed in this section exist. When cul-de-sacs are justified, public walkway connections shall be provided wherever practical to connect with another street, walkway, school, or similar destination.

a. Physical or topographic conditions make a street connection impracticable. These conditions include but are not limited to controlled access streets, railroads, steep slopes, wetlands, or water bodies where a connection could not be reasonably made.

b. Buildings or other existing development on adjacent lands physically preclude a connection now or in the future, considering the potential for redevelopment.

c. Where streets or accessways would violate provisions of leases, easements, or similar restrictions.

d. Where the streets or accessways abut the urban growth boundary and rural resource land in farm or forest use, except where the adjoining land is designated as an urban reserve area.

2. Cul-de-sacs shall be no more than 400 feet long (measured from the centerline of the intersection to the radius point of the bulb).

3. Cul-de-sacs shall not serve more than 18 single-family dwellings.

Each cul-de-sac shall have a circular end with a minimum diameter of 96 feet, curb-to-curb, within a 109-foot minimum diameter right-of-way. For residential uses, a 35-foot radius may be allowed if the street has no parking, a mountable curb, curbside sidewalks, and sprinkler systems in every building along the street.

Applicant's Findings: Where the property abuts the UGB there are no future street connections proposed. Other future street connections are proposed on the west side of the property, but no culs-de-sac are proposed with this development and, as such, this standard is not applicable.

M. Street Names and Street Signs. Streets that are in alignment with existing named streets shall bear the names of such existing streets. Names for new streets not in alignment with existing streets are subject to approval by the director and the fire chief and shall not unnecessarily duplicate or resemble the name of any existing or platted street in the city. It shall be the responsibility of the land divider to provide street signs.

Applicant's Findings: The existing public street used to serve the site has an existing street name. The public streets in the development are new and will be established with this development. The Applicant acknowledges that street names are subject to approval by the director and fire chief and shall not duplicate or resemble the name of any existing platted streets in the city. The Applicant acknowledges it is the responsibility of the developer to provide street signs.

This standard is met.

N. Platting Standards for Alleys.

1. **An alley may be required to be dedicated and constructed to provide adequate access for a development, as deemed necessary by the director.**
2. **The right-of-way width and paving design for alleys shall be not less than 20 feet wide. Slope easements shall be dedicated in accordance with specifications adopted by the city council under NMC 15.505.010 et seq.**
3. **Where two alleys intersect, 10-foot corner cut-offs shall be provided.**
4. **Unless otherwise approved by the city engineer where topographical conditions will not reasonably permit, grades shall not exceed 12 percent on alleys, and centerline radii on curves shall be not less than 100 feet.**
5. **All provisions and requirements with respect to streets identified in this code shall apply to alleys the same in all respects as if the word "street" or "streets" therein appeared as the word "alley" or "alleys" respectively.**

Applicant's Findings: No alleys are proposed with this development and, as such, this standard is not applicable.

O. Platting Standards for Blocks.

1. **Purpose. Streets and walkways can provide convenient travel within a neighborhood and can serve to connect people and land uses. Large, uninterrupted blocks can serve as a barrier to travel, especially walking and biking. Large blocks also can divide rather than unite neighborhoods. To promote connected neighborhoods and to shorten travel distances, the following minimum standards for block lengths are established.**
2. **Maximum Block Length and Perimeter. The maximum length and perimeters of blocks in the zones listed below shall be according to the following table. The review body for a subdivision, partition, conditional use permit, or a Type II design review**

may require installation of streets or walkways as necessary to meet the standards below.

Zone	Maximum Block Length	Maximum Block Perimeter
R-1	800 feet	2,000 feet
R-2, R-3, RP, I	1,200 feet	3,000 feet

3. **Exceptions.**
   a. **If a public walkway is installed mid-block, the maximum block length and perimeter may be increased by 25 percent.**
   b. **Where a proposed street divides a block, one of the resulting blocks may exceed the maximum block length and perimeter standards provided the average block length and perimeter of the two resulting blocks do not exceed these standards.**
   c. **Blocks in excess of the above standards are allowed where access controlled streets, street access spacing standards, railroads, steep slopes, wetlands, water bodies, preexisting development, ownership patterns or similar circumstances restrict street and walkway location and design. In these cases, block length and perimeter shall be as small as practical. Where a street cannot be provided because of these circumstances but a public walkway is still feasible, a public walkway shall be provided.**
   d. **Institutional campuses located in an R-1 zone may apply the standards for the institutional zone.**
   e. **Where a block is in more than one zone, the standards of the majority of land in the proposed block shall apply.**
   f. **Where a local street plan, concept master site development plan, or specific plan has been approved for an area, the block standards shall follow those approved in the plan. In approving such a plan, the review body shall follow the block standards listed above to the extent appropriate for the plan area.**

Applicant's Findings: All blocks in this proposal meet the block length and perimeter standards of this code. The development abuts both R-1 and R-3 zoning. Using the most restrictive approach, the Applicant would apply the maximum block length and maximum block perimeter standards for the R-1 zone.

Using exception a. above, public walkways are proposed to be installed midblock for all of the proposed streets which increases the maximum block length by 200 feet to a total of 1,000 feet. The proposed block length of all streets does not exceed 1,000 feet. All block perimeters proposed do not exceed 2,000 feet.

This standard is met.

4. **Public Pedestrian Walkways and Bicycle Access. The approval authority in approving a land use application with conditions may require a developer to provide an access way where the creation of a street consistent with street spacing standards is**

infeasible and the creation of a cul-de-sac or dead-end street is unavoidable. A public walkway provides a connection through a block that is longer than established standards or connects the end of the street to another right-of-way or a public access easement. A public walkway shall be contained within a public right-of-way or public access easement, as required by the city. A public walkway shall be a minimum of 10 feet wide and shall provide a minimum six-foot-wide paved surface or other all-weather surface approved by the city (see subsection (S) of this section for public walkway standards).

Design features should be considered that allow access to emergency vehicles but that restrict access to non-emergency motorized vehicles.

Applicant's Findings: The block length requirements have been met. Public pedestrian walkways and bicycle access is not necessary to meet access requirements.

This standard is met.

P. Private Streets. New private streets, as defined in NMC 15.05.030, shall not be created, except as allowed by NMC 15.240.020(L)(2).

Applicant's Findings: No private streets are proposed with this application.

This standard is met.

Q. Traffic Calming.

1. The following roadway design features may be required in new street construction where traffic calming needs are anticipated:

a. Serpentine alignment.
b. Curb extensions.
c. Traffic diverters/circles.
d. Raised medians and landscaping.
e. Other methods shown effective through engineering studies.

2. Traffic-calming measures such as speed humps should be applied to mitigate traffic operations and/or safety problems on existing streets. They should not be applied with new street constructions.

Applicant's Findings: Traffic calming measures are not proposed as the submitted Transportation Impact Analysis demonstrates that the proposed street network is safe and effective.

This standard is met.

R. Vehicular Access Standards.

1. Purpose. The purpose of these standards is to manage vehicle access to maintain traffic flow, safety, roadway capacity, and efficiency. They help to maintain an

adequate level of service consistent with the functional classification of the street. Major roadways, including arterials and collectors, serve as the primary system for moving people and goods within and through the city. Access is limited and managed on these roads to promote efficient through movement. Local streets and alleys provide access to individual properties. Access is managed on these roads to maintain safe maneuvering of vehicles in and out of properties and to allow safe through movements. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function.

2. **Access Spacing Standards. Public street intersection and driveway spacing shall follow the standards in Table 15.505.R below. The Oregon Department of Transportation (ODOT) has jurisdiction of some roadways within the Newberg city limits, and ODOT access standards will apply on those roadways.**

Table 15.505.R Access Spacing Standards.

Roadway Functional Classification	Area	Minimum Public Street Intersection Spacing	Driveway Setback from Intersecting Street
Major Collector	Urban CBD	400	150

3. **Properties with Multiple Frontages. Where a property has frontage on more than one street, access shall be limited to the street with the lesser classification.**
   a. **For a duplex, triplex or quadplex dwelling or a cottage cluster project with frontage on two local streets, access may be permitted on both streets.**
4. **Driveways. More than one driveway is permitted on a lot accessed from either a minor collector or local street as long as there is at least 40 feet of lot frontage separating each driveway approach. More than one driveway is permitted on a lot accessed from a major collector as long as there is at least 100 feet of lot frontage separating each driveway approach.**
   a. **For a duplex, triplex or quadplex dwelling or a cottage cluster project, more than one driveway is permitted on a lot accessed from either a minor collector or local street as long as there is at least 22 feet of lot frontage separating each driveway approach.**
5. **Alley Access. Where a property has frontage on an alley and the only other frontages are on collector or arterial streets, access shall be taken from the alley only. The review body may allow creation of an alley for access to lots that do not otherwise have frontage on a public street provided all of the following are met:**
   a. **The review body finds that creating a public street frontage is not feasible.**
   b. **The alley access is for no more than six dwellings and no more than six lots.**
   c. **The alley has through access to streets on both ends.**
   d. **One additional parking space over those otherwise required is provided for each dwelling. Where feasible, this shall be provided as a public use parking space adjacent to the alley.**

6. **Closure of Existing Accesses. Existing accesses that are not used as part of development or redevelopment of a property shall be closed and replaced with curbing, sidewalks, and landscaping, as appropriate.**
7. **Shared Driveways.**
    a. **The number of driveways onto arterial streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The city shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes. Where there is an abutting developable property, a shared driveway shall be provided as appropriate. When shared driveways are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway temporarily ends at the property line, but may be accessed or extended in the future as the adjacent parcel develops. "Developable" means that a parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).**
    b. **Access easements (i.e., for the benefit of affected properties) and maintenance agreements shall be recorded for all shared driveways, including pathways, at the time of final plat approval or as a condition of site development approval.**
    c. **No more than four lots may access one shared driveway, with the exception of cottage dwellings on individual lots that are part of a cottage cluster.**
    d. **Shared driveways shall be posted as no parking fire lanes where required by the fire marshal.**
    e. **Where three or more lots share one driveway, one additional parking space over those otherwise required shall be provided for each dwelling. Where feasible, this shall be provided as a common use parking space adjacent to the driveway. However, duplex, triplex, quadplex, townhouse and cottage dwellings with shared driveways shall be exempt from this standard.**
8. **Frontage Streets and Alleys. The review body for a partition, subdivision, or design review may require construction of a frontage street to provide access to properties fronting an arterial or collector street.**
9. **ODOT or Yamhill County Right-of-Way. Where a property abuts an ODOT or Yamhill County right-of-way, the applicant for any development project shall obtain an access permit from ODOT or Yamhill County.**
10. **Exceptions. The director may allow exceptions to the access standards above in any of the following circumstances:**
    a. **Where existing and planned future development patterns or physical constraints, such as topography, parcel configuration, and similar conditions, prevent access in accordance with the above standards.**
    b. **Where the proposal is to relocate an existing access for existing development, where the relocated access is closer to conformance with the standards above and does not increase the type or volume of access.**

c. **Where the proposed access results in safer access, less congestion, a better level of service, and more functional circulation, both on street and on site, than access otherwise allowed under these standards.**

11. **Where an exception is approved, the access shall be as safe and functional as practical in the particular circumstance. The director may require that the applicant submit a traffic study by a registered engineer to show the proposed access meets these criteria.**

Applicant's Findings: All driveway and intersection spacing standards are met, as demonstrated on the submitted public improvement plans.

This standard is met.

S. Public Walkways.

1. **Projects subject to Type II design review, partition, or subdivision approval may be required to provide public walkways where necessary for public safety and convenience, or where necessary to meet the standards of this code. Public walkways are meant to connect cul-de-sacs to adjacent areas, to pass through oddly shaped or unusually long blocks, to provide for networks of public paths according to adopted plans, or to provide access to schools, parks or other community destinations or public areas. Where practical, public walkway easements and locations may also be used to accommodate public utilities.**
2. **Public walkways shall be located within a public access easement that is a minimum of 15 feet in width.**
3. **A walk strip, not less than 10 feet in width, shall be paved in the center of all public walkway easements. Such paving shall conform to specifications in the Newberg public works design and construction standards.**
4. **Public walkways shall be designed to meet the Americans with Disabilities Act requirements.**
5. **Public walkways connecting one right-of-way to another shall be designed to provide as short and straight of a route as practical.**
6. **The developer of the public walkway may be required to provide a homeowners' association or similar entity to maintain the public walkway and associated improvements.**
7. **Lighting may be required for public walkways in excess of 250 feet in length.**
8. **The review body may modify these requirements where it finds that topographic, preexisting development, or similar constraints exist.**

Applicant's Findings: Public walkways are proposed to connect the residential development to NE Springbrook Road. Public sidewalks have been provided on all public streets in accordance with these standards.

This standard is met.

T. Street Trees. Street trees shall be provided for all projects subject to Type II design review, partition, or subdivision. Street trees shall be installed in accordance with the provisions of NMC 15.420.010(B)(4).

Applicant's Findings: As indicated on the submitted landscaping plans provided in Appendix E, street trees are proposed on all streets.

This standard is met.

U. Street Lights. All developments shall include underground electric service, light standards, wiring and lamps for street lights according to the specifications and standards of the Newberg public works design and construction standards. The developer shall install all such facilities and make the necessary arrangements with the serving electric utility as approved by the city. Upon the city's acceptance of the public improvements associated with the development, the street lighting system, exclusive of utility-owned service lines, shall be and become property of the city unless otherwise designated by the city through agreement with a private utility.

Applicant's Findings: This proposal includes developer-installed underground electric service, light standards, wiring and lamps for streetlights according to the specifications and standards of the Newberg public works design and construction standards.

This standard is met.

V. Transit Improvements. Development proposals for sites that include or are adjacent to existing or planned transit facilities, as shown in the Newberg transportation system plan or adopted local or regional transit plan, shall be required to provide any of the following, as applicable and required by the review authority:

1. **Reasonably direct pedestrian connections between the transit facility and building entrances of the site. For the purpose of this section, "reasonably direct" means a route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for users.**
2. **A transit passenger landing pad accessible to disabled persons.**
3. **An easement of dedication for a passenger shelter or bench if such facility is in an adopted plan.**
4. **Lighting at the transit facility.**

Applicant's Findings: There are no transit facilities within or adjacent to this site and, as such, this standard is not applicable.

15.505.40 PUBLIC UTILITY STANDARDS

A. Purpose. The purpose of this section is to provide adequate services and facilities appropriate to the scale and type of development.

B. Applicability. This section applies to all development where installation, extension or improvement of water, wastewater, or private utilities is required to serve the development or use of the subject property.

C. General Standards.

1. **The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall conform to the Newberg public works design and construction standards and require a public improvements permit.**
2. **The location, design, installation and maintenance of all utility lines and facilities shall be carried out with minimum feasible disturbances of soil and site. Installation of all proposed public and private utilities shall be coordinated by the developer and be approved by the city to ensure the orderly extension of such utilities within public right-of-way and easements.**

D. Standards for Water Improvements. All development that has a need for water service shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary wastewater and stormwater facilities, as applicable.

i. **All developments shall be required to be linked to existing water facilities adequately sized to serve their intended area by the construction of water distribution lines, reservoirs and pumping stations which connect to such water service facilities. All necessary easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.**

ii. **Specific location, size and capacity of such facilities will be subject to the approval of the director with reference to the applicable water master plan. All water facilities shall conform with city pressure zones and shall be looped where necessary to provide adequate pressure and fire flows during peak demand at every point within the system in the development to which the water facilities will be connected. Installation costs shall remain entirely the developer's responsibility.**

iii. **The design of the water facilities shall take into account provisions for the future extension beyond the development to serve adjacent properties, which, in the judgment of the city, cannot be feasibly served otherwise.**

iv. **Design, construction and material standards shall be as specified by the director for the construction of such public water facilities in the city.**

E. Standards for Wastewater Improvements. All development that has a need for wastewater services shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary water services and stormwater facilities, as applicable.

1. **All septic tank systems and on-site sewage systems are prohibited. Existing septic systems must be abandoned or removed in accordance with Yamhill County standards.**
2. **All properties shall be provided with gravity service to the city wastewater system, except for lots that have unique topographic or other natural features that make gravity wastewater extension impractical as determined by the director. Where gravity service is impractical, the developer shall provide all necessary pumps/lift stations and other improvements, as determined by the director.**
3. **All developments shall be required to be linked to existing wastewater collection facilities adequately sized to serve their intended area by the construction of wastewater lines which connect to existing adequately sized wastewater facilities. All necessary easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.**
4. **Specific location, size and capacity of wastewater facilities will be subject to the approval of the director with reference to the applicable wastewater master plan. All wastewater facilities shall be sized to provide adequate capacity during peak flows from the entire area potentially served by such facilities. Installation costs shall remain entirely the developer's responsibility.**
5. **Temporary wastewater service facilities, including pumping stations, will be permitted only if the director approves the temporary facilities, and the developer provides for all facilities that are necessary for transition to permanent facilities.**
6. **The design of the wastewater facilities shall take into account provisions for the future extension beyond the development to serve upstream properties, which, in the judgment of the city, cannot be feasibly served otherwise.**
7. **Design, construction and material standards shall be as specified by the director for the construction of such wastewater facilities in the city.**

F. Easements. Easements for public and private utilities shall be provided as deemed necessary by the city, special districts, and utility companies. Easements for special purpose uses shall be of a width deemed appropriate by the responsible agency. Such easements shall be recorded on easement forms approved by the city and designated on the final plat of all subdivisions and partitions. Minimum required easement width and locations are as provided in the Newberg public works design and construction standards.

Applicant's Findings: The development will connect to public utilities, including water and sanitary sewer. as demonstrated on the submitted public improvement plans, all public utilities are designed to be constructed to City standards.

This standard is met.

15.505.50 STORMWATER SYSTEM STANDARDS.

A. Purpose. The purpose of this section is to provide for the drainage of surface water from all development; to minimize erosion; and to reduce degradation of water quality due to sediments and pollutants in stormwater runoff.

B. Applicability. The provisions of this section apply to all developments subject to site development review or land division review and to the reconstruction or expansion of such developments that increases the flow or changes the point of discharge to the city stormwater system. Additionally, the provisions of this section shall apply to all drainage facilities that impact any public storm drain system, public right-of-way or public easement, including but not limited to off-street parking and loading areas.

C. General Requirement. All stormwater runoff shall be conveyed to a public storm wastewater or natural drainage channel having adequate capacity to carry the flow without overflowing or otherwise causing damage to public and/or private property. The developer shall pay all costs associated with designing and constructing the facilities necessary to meet this requirement.

D. Plan for Stormwater and Erosion Control. No construction of any facilities in a development included in subsection (B) of this section shall be permitted until an engineer registered in the State of Oregon prepares a stormwater report and erosion control plan for the project. This plan shall contain at a minimum:

1. The methods to be used to minimize the amount of runoff, sedimentation, and pollution created from the development both during and after construction.

2. Plans for the construction of stormwater facilities and any other facilities that depict line sizes, profiles, construction specifications, and other such information as is necessary for the city to review the adequacy of the stormwater plans.

3. Design calculations shall be submitted for all drainage facilities. These drainage calculations shall be included in the stormwater report and shall be stamped by a licensed professional engineer in the State of Oregon. Peak design discharges shall be computed based upon the design criteria outlined in the public works design and construction standards for the city.

E. Development Standards. Development subject to this section shall be planned, designed, constructed, and maintained in compliance with the Newberg public works design and construction standards.

Applicant's Findings: The submitted public improvement plans include details of the proposed stormwater detention and treatment plan. The stormwater detention and treatment plan is designed to meet City standards and to preclude stormwater drainage on surrounding properties. Additional information on the stormwater management system proposed for the development are provided in the Stormwater Report, provided in Appendix D.

This standard is met.

SUMMARY AND CONCLUSION

Based upon the materials submitted herein, the application is consistent with the applicable provisions of the Newberg Municipal Code and City of Newberg Comprehensive Plan. The evidence in the record is substantial and supports approval of this application. The Applicant respectfully requests approval from the City of Newberg Planning Commission for this Planned Unit Development application on the subject property.

TYPE III APPLICATION (QUASI-JUDICIAL REVIEW)

File #: _____

TYPES – PLEASE CHECK ONE:

- ☐ **Annexation**
- ☐ **Comprehensive Plan Amendment (site specific)**
- ☐ **Zoning Amendment (site specific)**
- ☐ **Historic Landmark Modification/alteration**
- ☐ **Conditional Use Permit**
- ☐ **Type III Major Modification**
- ☑ **Planned Unit Development**
- ☐ **Other: (Explain)** _____

APPLICANT INFORMATION:

APPLICANT: Ichijo USA Co.LTD C/O Masaki Narita

ADDRESS: 3800 Cedar Hills BLVD Suite 131 CITY: Beaverton STATE: OR ZIP: 97005

EMAIL ADDRESS: m-narita@ichijousa.com PHONE: 503-430-7413 MOBILE:

OWNER *(if different from above)*: Ross D Kerr, Rolland G Kerr Jr PHONE: 503-537-6664

ADDRESS: 3809 NE Springbrook Rd CITY: Newberg STATE: OR ZIP: 97132

ENGINEER/SURVEYOR: 3J Consulting, Inc. CONTACT: Chase Welborn, PE

EMAIL ADDRESS: chase.welborn@3j-consulting.com PHONE: 503-946-9365x215 MOBILE:

GENERAL INFORMATION:

PROJECT LOCATION: 3809 NE Springbrook Road PROJECT VALUATION: $

PROJECT DESCRIPTION/USE: PUD - Residential Development

MAP/TAX LOT NO. (i.e.3200AB-400): R3209 02300 SITE SIZE: 19.16 SQ. FT. ☐ ACRE ☑

COMP PLAN DESIGNATION: Low Density Residential (LDR) / High Density Residential (HDR) CURRENT ZONING: R-1 / R-3

CURRENT USE: Single Family Home TOPOGRAPY: Sloping

SURROUNDING USES:

NORTH: Yamhill County AF-10 SOUTH: SD/H Springbrook District - Hospitality

EAST: Yamhill County AF-10 / VLRD 2.5 WEST: Yamhill County AF-10

ATTACHED PROJECT CRITERIA AND REQUIREMENTS *(check all that is included)*

General Checklist: ☑ Fees ☑ Public Notice Information ☑ Current Title Report(*60 days*) ☑ Written Criteria Response ☑ Owner Signature ☑ 1 -Digital Copy of Full Application Packet

For the type of project detailed checklists and applicable criteria for the written criteria response, turn to:

Submit a complete Application Packet to *Planning@newbergoregon.gov*

Tentative plans must substantially conform to all standards, regulations, and procedures officially adopted by the City of Newberg. All owners must sign the application or submit letters of consent. Incomplete or missing information may delay the approval process.

The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief.

Masaki Narita 9/23/2024
Applicant Signature Date

Ross D Kerr Rolland G Kerr Jr. 09/23/2024
Owner Signature Date

Masaki Narita
Print Name

Ross D Kerr Rolland G Kerr Jr.
Print Name

NEWBERG PERMIT CENTER FEE SCHEDULE

Effective Date: April 1,2024

5% TECHNOLOGY FEE WILL BE ADDED TO TOTAL FEES (*Resolution No. 2016-3268)*

PRE-APPLICATION REVIEW	**$100**
TYPE I (ADMINISTRATIVE REVIEW)	
OTHER:ANY TYPE I ACTION NOT SPECIFICALLY LISTED IN THIS SECTION	**$208**
HOME OCCUPATION BUSINESS LICENSE REVIEW	**$208**
* ADU DESIGN REVIEW	**$208**
* COTTAGE CLUSTER DESIGN REVIEW	**$417**
PROPERTY CONSOLIDATION	**$208**
CODE ADJUSTMENT	**$521**
* DESIGN REVIEW (DUPLEX OR COM. /IND. MINOR ADDITION REVIEW	**0.3% OF PROJECT VALUE, $521 MINIMUM**
MINOR MODIFICATION OR EXTENSION OF TYPE I DECISION	**$208**
MAJOR MODIFICATION OF TYPE I DECISION	**50% OF ORIGINAL FEE**
* PARTITION FINAL PLAT	**$1,048 + $90 PER PARCEL**
PROPERTY LINE ADJUSTMENT	**$1,048**
SIGN REVIEW	**$91 + $1.00 PER SQ. FT. OF SIGN FACE**
* SUBDIVISION, PUD, OR CONDOMINIUM FINAL PLAT	**$2,101 + $90 PER LOT OR UNIT**
HISTORIC LANDMARK MINOR ALTERATION/DEMOLITION	**$0**
TYPE II (LAND USE DECISION)	
OTHER-ANY TYPE II ACTION NOT SPECIFICALLY LISTED IN THIS SECTION	**$1,048**
MINOR MODIFICATION OR EXTENSION OF TYPE II DECISION	**$208**
MAJOR MODIFICATION OF TYPE II DECISION	**50% OF ORIGINAL FEE**
* DESIGN REVIEW (INCLUDING MOBILE/MANUFACTURED HOME PARKS)	**0.6% OF TOTAL PROJECT COST, $1,048 MINIMUM**
* PARTITION PRELIMINARY PLAT	**$1,048 + $90 PER PARCEL**
* SUBDIVISION PRELIMINARY PLAT	**$2,101 + $90 PER LOT**
VARIANCE	**$1,048**
TYPE III (QUASI-JUDICIAL REVIEW)	
OTHER-ANY TYPE III ACTION NOT SPECIFICALLY LISTED IN THIS SECTION	**$2,226**
ANNEXATION	**$2,926 + $278 PER ACRE**
COMPREHENSIVE PLAN AMENDMENT (SITE SPECIFIC)	**$2,742**
CONDITIONAL USE PERMIT	**$2,226**
MINOR MODIFICATION OR EXTENSION OF TYPE III DECISION	**$208**
MAJOR MODIFICATION OF TYPE III DECISION	**50% OF ORIGINAL FEE**
HISTORIC LANDMARK ESTABLISHMENT OR MODIFICATION	**$0**
HISTORIC LANDMARK ELIMINATION	**$2,552**
* SUBDIVISION PRELIMINARY PLAT	**$2,101 + $90 PER LOT**
* PLANNED UNIT DEVELOPMENT	**$4,446 + $90 PER LOT**
ZONING AMENDMENT (SITE SPECIFIC)	**$2,772**
TYPE IV (LEGISLATIVE AMENDMENTS)	
COMPREHENSIVE PLAN TEXT AMENDMENT OR LARGE SCALE MAP REVISION	**$3,153**
DEVELOPMENT CODE TEXT AMENDMENT OR LARGE SCALE MAP REVISION	**$3,153**
APPEALS	
TYPE I OR II APPEAL TO PLANNING COMMISSION	**$601**
TYPE I OR II APPEAL TO CITY COUNCIL	**$1,089**
TYPE III APPEAL TO CITY COUNCIL	**$1,279**
TYPE I ADJUSTMENTS OR TYPE II VARIANCES (*That are not designed to reculate the phyusical characteristics ofa use permitted outright)*	**$336**
EXHIBITOR LICENSE FEE APPPEAL TO THE CITY COUNCIL	**50% OF EXIBITOR LICENSE FEE**
OTHER FEES	
TECHNOLOGY FEE (*This fee will be added to all Planning, Engineering and Building Fees, does not apply to SDC fees*)	**5% OF TOTAL**
TREES IN PUBLIC RIGHT-OF-WAY REMOVAL PERMIT	**$10.50**
EXPEDITED LAND DIVISION	**$7,812 + $90 PER LOT OR UNIT**
URBAN GROWTH BOUNDARY AMENDMENT	**$4,992**
VACATION OF PUBLIC RIGHT-OF-WAY	**$2,071**
FEE-IN-LIEU OF PARKING PROGRAM	**$16,295 PER VEHICLE SPACE**
VERTICAL HOUSING DEVELOPMENT ZONE FEES	**$600 CERTIFICATION & APPLICATION FEE** **$400 ANNUAL MONITORING FEE**
BIKE RACK COST SHARING PROGRAM	**$100 PER RACK**
LICENSE FEES	
GENERAL BUSINESS	**$50**
HOME OCCUPATION	**$25**
PEDDLER/SOLICITOR/STREET VENDOR	**NO FEE (*GENERAL BUSINESS LICENSE FEE ONLY*)**
EXHIBITOR	**$152**
TEMPORARY MERCHANT	**$123/45 DAYS OR $414/PERPETUAL**

***ADDITIONAL LAND USE REVIEW FEES – ENGINEERING DEPARTMENT**	
ALL DESIGN REVIEWS & TYPE II/III PARTITION, SUBDIVISION, PUD'S & MHLD	**$340.79 + $15.14 PER LOT OVER 19 LOT'S**
FINAL PLAT REVIEW: PARTITION, SUBDIVISION & MHLD	**$340.79 + $8.56 PER LOT OR PARCEL**
DEVELOPMENT REVIEW FOR PUBLIC IMPROVEMENTS ON COMMERCIAL, INDUSTRIAL, INSTITUTIONAL ZONES, & MULTIFAMILY DEVELOPMENTS	**$476.60 1ST ACRE + $272.24 PER ADDITIONAL ACRES**

Adoption: Resolution NO: 2024-3920, March 18,2024

GENERAL INFORMATION
Type III Development Permit Process (Quasi-Judicial Hearing)

Overview: Type III Permit applications are reviewed by the Planning Commission and include a mix of objective and subjective standards. Public notice is provided to property owners within 500 ft of the site. Any interested party may appear before the Planning Commission and comment on the project. The applicant or anyone commenting at the hearing may appeal the decision to the City Council. Some Type III decisions automatically proceed to the City Council with a recommendation by the Planning Commission. Type III decisions must be issued within 120 days of an application being determined complete.

Type III Permits Include:

- Annexations*
- Comprehensive Plan and Zoning Map Amendments – site specific*
- Conditional Use Permits
- Historic Landmark Reviews
- Planned Unit Developments
- Subdivisions not meeting the criteria in Newberg Development Code (NDC) §15.100.040(A), or proposed for Type III review by the applicant, or converted from a Type II to a Type III process.

Pre-Application Conference:

Please call to schedule a time for a pre-application meeting **(required on Type III applications)** prior to submitting an application. The Development Review Meetings are held every Wednesday. This meeting provides the opportunity to get advance information from Planning, Engineering and Building divisions all at once. It is likely to save you time and effort later. The non-refundable pre-application conference fee is $105.00, payable prior to the conference.

Submit Application

- Pay fees
- Complete application form(s)
- Submit plans and other required information

Processing

- Staff will perform a completeness check of the application and notify applicant of any information that is missing or incomplete. Processing time 0 to 30 days.
- Staff will route the application to affected agencies and City departments Processing time 14 to 20 days
- Applicant will provide copies of mailed and posted notices to the City for review, mail the approved notice to property owners within 500 ft. of the site, post the site, and provide staff with an affidavit verifying that the notice was mailed and posted. Processing time 14 to 20 days
- Staff will prepare a written report for review by the Planning Commission. A copy will be available for review seven (7) days prior to the hearing. A copy will be mailed to the applicant seven prior to the hearing.

Planning Commission Hearing

- At the Planning Commission Hearing, the applicant and all interested parties are encouraged to testify. Testimony may be given orally or in writing.
- After public testimony, the Planning Commission may approve, deny, table, make a recommendation to the City Council or continue the item. If the decision is final at the Planning Commission, then proceed to Appeals. Planning Commission decisions become effective upon completion of the 14 day appeal period.

City Council Hearing

- If the decision is a recommendation from the Planning Commission that requires adoption of an ordinance, then a new public hearing will be held at the City Council. At the City Council hearing, the applicant and all interested parties are encouraged to testify. Testimony may be given orally or in writing. After public testimony, the City Council may approve, deny, table, or continue the item.

Appeals

- If the applicant, or other parties providing written testimony prior to or at the hearing, or parties providing oral testimony at the hearing; are dissatisfied with the decision of the Planning Commission, they may file an appeal within 14 calendar days of the issuance of the decision. Appeals of Type III decisions proceed to the City Council for a hearing on the record. City Council decisions may only be appealed to the Land Use Board of Appeals.

Permits

- Once a final decision has been made, the applicant may proceed or submit other permits, if necessary (i.e.: design review, building permits, subdivision approval, etc.). For applications involving more than one application type, the permits may be processed individually under each procedure or under the highest procedure number that applies.

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Helpful Hints:

- **Questions?** Information is free! Please do not hesitate to call (503) 537-1240 prior to submitting the application.

- **Partial Applications:** Please do not submit partial applications. If the application, plans, and fee are not submitted together; processing will be delayed and the application may not be accepted for review.

- **Face-to-Face:** It is best to submit an application in person. That way you can receive immediate feedback if there's missing information or suggestions for improvements.

City of Newberg
COMMUNITY DEVELOPMENT
PLANNING DIVISION
(503) 537-1240
planning@newbergoregon.gov

LAND USE REVIEW PROCEDURE
TYPE III

✓ A pre-application conference is optional, ***but encouraged***, for Type III procedures.

APPLICATION SUBMITTED

The city's customer service goal is to determine completeness within 14 days.*

Completeness Check

DAY ZERO — **COMPLETENESS DETERMINATION AND REFERRAL**

Deemed complete:
- Letter is emailed to applicant explaining the next required steps in the process.
- Application is referred to other city departments and public agencies.

Deemed incomplete:
- Letter is emailed to the applicant detailing the needed information.

Applicant has up to 180 days to provide needed information or application will be denied and no fees returned.

Comment Period & Staff Analysis

40 DAYS — **PUBLIC NOTICE**

Notice of proposal mailed 20 days before the public hearing to all properties within 500 ft of the site. A notice sign is also posted on site. **This is done by the Applicant**

53 DAYS — **STAFF REPORT**

Published 7 days before hearing, includes staff recommendation to Planning Commission.

60 DAYS — **PUBLIC HEARING**

The city's customer service goal is to hold a public hearing within approximately 45 days after it is deemed complete.
- Decision may be pronounced at hearing or continued to a future date.

62 DAYS — **NOTICE OF DECISION**

Issued within 2 days of the Planning Commission decision

14-Day Appeal Period

An appeal may be made to the Planning Commission.
The Planning Commission's decision may be appealed City Council.
TheCityCouncil's decision can be appealed to the LandUse Board of Appeals(LUBA)

77 DAYS* — **DECISION IS FINAL**

The Decision is final in 14 days, If not appealed.

**Timeline reflects Newberg Municipal Code requirements and the city's customer service goals. Oregon State law allows 30 days for a completeness determination and requires a final local decision within 120 days of complete application. Applicants always retain the right to postpone the decision or extend past 120 days.*

§ 15.240.010 TYPE III PLANNED UNIT DEVELOPMENT CRITERIA

The city's planned unit development regulations are intended to:

(A) Encourage comprehensive planning in areas of sufficient size to provide developments at least equal in the quality of their environment to traditional lot by lot development and that are reasonably compatible with the surrounding area; and

(B) Provide flexibility in architectural design, placement and clustering of buildings, use of open space and outdoor living areas, and provision of circulation facilities, parking, storage and related site and design considerations; and

(C) Promote an attractive, safe, efficient and stable environment which incorporates a compatible variety and mix of uses and dwelling types; and

(D) Provide for economy of shared services and facilities; and

(E) Implement the density requirements of the comprehensive plan and zoning districts through the allocation of the number of permitted dwelling units based on the number of bedrooms provided.

The applicant must apply for a Pre-Application meeting to discuss the feasibility of the proposed planned unit development and determine the processing requirements.

An application, with the required fee, for preliminary plan approval shall be made by the owner of the affected property, or the owner's authorized agent.

The application shall contain or have attached sufficient information as prescribed by the director to allow processing and review in accordance with these regulations. As part of the application, the property owner requesting the planned development shall file a waiver stating that the owner will not file any demand against the city under Ballot Measure 49, approved November 6, 2007, that amended ORS Chapters 195 and 197 based on the city's decision on the planned development.

Decisions shall include review and recognition of the potential impact of the entire development, and preliminary approval shall include written affirmative findings that::

(1) The proposed development is consistent with standards, plans, policies and ordinances adopted by the city; and

(2) The proposed development's general design and character, including but not limited to anticipated building locations, bulk and height, location and distribution of recreation space, parking, roads, access and other uses, will be reasonably compatible with appropriate development of abutting properties and the surrounding neighborhood; and

(3) Public services and facilities are available to serve the proposed development. If such public services and facilities are not at present available, an affirmative finding may be made under this criterion if the evidence indicates that the public services and facilities will be available prior to need by reason of:

a) Public facility planning by the appropriate agencies; or

b) A commitment by the applicant to provide private services and facilities adequate to accommodate the projected demands of the project; or

c) Commitment by the applicant to provide for offsetting all added public costs or early commitment of public funds made necessary by the development.

(4) The provisions and conditions of this code have been met; and

(5) Proposed buildings, roads, and other uses are designed and sited to ensure preservation of features, and other unique or worthwhile natural features and to prevent soil erosion or flood hazard; and

(6) There will be adequate on-site provisions for utility services, emergency vehicular access, and, where appropriate, public transportation facilities; and

(7) Sufficient usable recreation facilities, outdoor living area, open space, and parking areas will be conveniently and safely accessible for use by residents of the proposed development; and

(8) Proposed buildings, structures, and uses will be arranged, designed, and constructed so as to take into consideration the surrounding area in terms of access, building scale, bulk, design, setbacks, heights, coverage, landscaping and screening, and to assure reasonable privacy for residents of the development and surrounding properties.

PLANNED UNIT DEVELOPMENT CHECKLIST

The following items must be submitted with each application. Incomplete applications will not be processed. Incomplete or missing information may delay the review process. Check with the Planning Division regarding additional requirements for your project.

☑ **FEES**

☑ **CURRENT TITLE REPORT** (within 60 days)

☑ **PUBLIC NOTICE INFORMATION** – Draft of mailer notice and sign; mailing list of all properties within 500'.

☑ **MEASURE 49 WAIVER**

☑ **WRITTEN CRITERIA RESPONSE** – Address the criteria listed on page 30. In addition, the written response should address the planned unit development general provisions found in § 15.240.020 of the Development Code.

☑ **SITE DEVELOPMENT PLAN** - Make sure the plans are prepared so that they are at least 8 ½ x 11 inches in size and the scale is standard, being 10, 20, 30, 40, 50, 100 or multiples of 100 to the inch (such as 1":10', 1":20' or other multiples of 10). Include the following information in the plan set (information may be shown on multiple pages):

- ☑ Existing Site Features: Show existing landscaping, grades, slopes and structures on the site and for areas within 100' of the site. Indicate items to be preserved and removed.
- ☑ Drainage & Grading: Show the direction and location of on and off-site drainage on the plans. This shall include site drainage, parking lot drainage, size and location of storm drain lines, and any retention or detention facilities necessary for the project. Provide an engineered grading plan if necessary.
- ☑ Utilities: Show the location of and access to all public and private utilities, including sewer, water, storm water and any overhead utilities.
- ☑ Public Improvements: Indicate any public improvements that will be constructed as part of the project, including sidewalks, roadways, and utilities.
- ☑ Access, Parking, and Circulation: Show proposed vehicular and pedestrian circulation, parking spaces, parking aisles, and the location and number of access points from adjacent streets. Provide dimensions for parking aisles, back-up areas, and other items as appropriate. Indicate where required bicycle parking will be provided on the site along with the dimensions of the parking spaces.
- ☑ Site Features: Indicate the location and design of all on-site buildings and other facilities such as mail delivery, trash disposal, above ground utilities, loading areas, and outdoor recreation areas. Include appropriate buffering and screening as required by the code.
- ☑ Exterior Lighting Plan: Show all exterior lighting, including the direction of the lighting, size and type of fixtures, and an indication of the amount of lighting using foot candles for analysis.
- ☑ Landscape Plan: Include a comprehensive plan that indicates the size, species and locations of all planned landscaping for the site. The landscape plan should have a legend that indicates the common and botanical names of plants, quantity and spacing, size (caliper, height, or container size), planned landscaping materials, and description of the irrigation system. Include a calculation of the percentage of landscaped area.
- ☑ ADA Plan Compliance: Indicate compliance with any applicable ADA provisions.
- ☑ Architectural Drawings: Provide floor plans and elevations for all planned structures.
- ☑ Sun Exposure Plan Diagram: All buildings and structures on the site must comply with the sun exposure plan (see Figure VIII in the Development Code for more details).
- ☑ Signs and Graphics: Show the location, size, colors, materials, and lighting of all exterior signs, graphics or other informational or directional features if applicable.
- ☑ Other: Show any other site elements which will assist in the evaluation of the site and the project.

☑ **TRAFFIC STUDY** - A traffic study shall be submitted for any project that generates in excess of forty (40) trips per p.m. peak hour. This requirement may be waived by the Director when a determination is made that a previous traffic study adequately addresses the proposal and/or when off-site and frontage improvements have already been completed which adequately mitigate any traffic impacts and/or the proposed use is not in a location which is adjacent to an intersection which is functioning at a poor level of service. A traffic study may be required by the Director for projects below forty (40) trips per p.m. peak hour where the use is located immediately adjacent to an intersection functioning at a poor level of service.

☑ **TUALATIN VALLEY FIRE & RESCUE SERVICE PROVIDER PERMIT** -
The permit form and detailed information can be found on TVFR website at:
https //www.tvfr.com/376/New-Construction-and-Service-Provider-Pe

TICOR TITLE™
Company of Oregon

PRELIMINARY REPORT

In response to the application for a policy of title insurance referenced herein Ticor Title Company of Oregon hereby reports that it is prepared to issue, or cause to be issued, as of the specified date, a policy or policies of title insurance describing the land and the estate or interest hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules or Conditions of said policy forms.

The printed Exceptions and Exclusions from the coverage of said policy or policies are set forth in Exhibit One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Chicago Title Insurance Company, a/an Florida corporation.

Please read the exceptions shown or referred to herein and the Exceptions and Exclusions set forth in Exhibit One of this report carefully. The Exceptions and Exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.

This preliminary report is for the exclusive use of the parties to the contemplated transaction, and the Company does not have any liability to any third parties nor any liability until the full premium is paid and a policy is issued. Until all necessary documents are placed of record, the Company reserves the right to amend or supplement this preliminary report.

Countersigned

Peter Harris

1455 SW Broadway, Suite 1450, Portland, OR 97201
(503)646-4444 FAX (503)469-4198

PRELIMINARY REPORT

TITLE OFFICER: Deborah Clark
deborah.clark@titlegroup.fntg.com
(503)535-3743

ORDER NO.: 471823128578
CUSTOMER NO.: 262303001
Supplement 1: Eff Date

TO: Lawyers Title
Eden Toothman
825 NE Multnomah Suite 1175
Portland, OR 97232

OWNER/SELLER: Ross D. Kerr and Rolland G. Kerr, Jr.
BUYER/BORROWER: Ichijo USA Co., LTD
PROPERTY ADDRESS: 3809 N Springbrook Road, Newberg, OR 97132

EFFECTIVE DATE: August 9, 2024, 08:00 AM

1. THE POLICY AND ENDORSEMENTS TO BE ISSUED AND THE RELATED CHARGES ARE:

	AMOUNT	PREMIUM
ALTA Owner's Policy 2021	$ 9,800,000.00	$ 24,165.00
Owner's Extended		
OTIRO Endorsement No. 110		$ 0.00

2. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

   A Fee

3. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

   Ross D. Kerr, as to an undivided one-half interest and Rolland G. Kerr, Jr., as to an undivided one-half interest, as tenants in common

4. THE LAND REFERRED TO IN THIS REPORT IS SITUATED IN THE COUNTY OF YAMHILL, STATE OF OREGON, AND IS DESCRIBED AS FOLLOWS:

   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

EXHIBIT "A"

Legal Description

PARCEL 1:

Beginning at a point 160 rods North and 46 rods West of the Southeast corner of the Solomon Heater and wife Donation Land Claim in Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, Oregon; thence running West 400 feet; thence South 300 feet to the center of the County Road and 50 feet North of the center of the railroad track of the Southern Pacific Company; and thence in a Northeasterly direction along the center of said County Road to the Point of Beginning.

PARCEL 2:

A tract of land in Section 9, Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, Oregon, more particularly described as follows:

Being a part of the Solomon Heater Donation Land Claim, Notification No. 1471, Claim No. 48 in Section 9, Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, Oregon, and beginning at an iron pipe in the County Road at point 45.23 chains North and 10.00 chains West from the Southeast corner of said Heater Claim; thence North 89°24' West 6.105 chains to a set iron pipe for corner; and the True Point of Beginning of the property herein described; thence North 5.705 chains to a set stake at the Northeast corner of a 3 acre tract; thence North 89°24' West along the North line of said 3 acre tract, 15.356 chains to a stake on division line of said Heater Claim; thence South along the division line of said claim, 11.235 chains to the North line of that certain tract conveyed to Florence Rees Baldwin by Deed recorded in Book 85, Page 383, Deed Records; thence North 89°51' East along the North line of said Baldwin tract and the North line of the Mills tract and the same extended Easterly to the Southerly Southwest corner of that certain tract conveyed by Fred Kincaid et ux. to Elvin Mills et ux., by Deed recorded November 16, 1962 in Film Volume 26, Page 656, Deed and Mortgage Records; thence North 55 feet; thence West 14 feet; thence North 240 feet; thence West 130 feet; thence North 64 feet to the Point of Beginning.

EXCEPTING THEREFROM that certain tract conveyed by Emma O. Kincaid to Springbrook Packing Company, by Deed recorded February 21, 1938 in Book 114, Page 1, Deed Records.

AS OF THE DATE OF THIS REPORT, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN THE POLICY FORM WOULD BE AS FOLLOWS:

GENERAL EXCEPTIONS:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

2. Any facts, rights, interests or claims, which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, which are not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the Land onto adjoining land or of existing improvements located on adjoining land onto the subject Land), encumbrance, violation, variation or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the subject Land.

5. Any lien or right to a lien for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

SPECIFIC ITEMS AND EXCEPTIONS:

6. As disclosed by the assessment and tax roll, the premises herein were once specially assessed for farmland, forestland or other special assessment status and later disqualified. Per ORS 308A.700 to 308A.733, additional taxes were imposed and remain as potential additional tax liability for the property. A check with the Assessor's office will be necessary to determine the effect and continuation of the additional tax liability.

   Additional Tax Liability Amount: $2,904.34

7. The Land has been classified as Forest land, as disclosed by the tax roll. If the Land becomes disqualified, said Land may be subject to additional taxes and/or penalties.

8. Rights of the public to any portion of the Land lying within the area commonly known as streets, roads and highways.

9. Any invalidity or defect in the title of the vestees in the event that the trust referred to herein is invalid or fails to grant sufficient powers to the trustee(s) or in the event there is a lack of compliance with the terms and provisions of the trust instrument.

   If title is to be insured in the trustee(s) of a trust (or if their act is to be insured), this Company will require a copy of said Trust Agreement or a Trust Certification pursuant to ORS Chapter 130.860.

   The Company reserves the right to make additional requirements or add additional items or exceptions after review of the requested documentation.

   Affects: The former ownership interest held under the Kerr Living Trust, dated March 27, 2002.

10. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

11. If requested to issue an extended coverage ALTA loan policy, the following matters must be addressed:

    a) The rights of tenants holding under unrecorded leases or tenancies
    b) Matters disclosed by a statement as to parties in possession and as to any construction, alterations or repairs to the Land within the last 75 days. The Company must be notified in the event that any funds are to be used for construction, alterations or repairs.
    c) Any facts which would be disclosed by an accurate survey of the Land

12. Property taxes in an undetermined amount, which are a lien but not yet payable, including any assessments collected with taxes to be levied for the fiscal year 2024-2025.

ADDITIONAL REQUIREMENTS/NOTES:

A. Note: Property taxes for the fiscal year shown below are paid in full.

Fiscal Year:	2023-2024
Amount:	$5,719.65
Levy Code:	29.2
Account No.:	25902
Map No.:	R3209 02300

Prior to close of escrow, please contact the Tax Collector's Office to confirm all amounts owing, including current fiscal year taxes, supplemental taxes, escaped assessments and any delinquencies.

B. In addition to the standard policy exceptions, the exceptions enumerated above shall appear on the final ALTA Policy unless removed prior to issuance.

C. Note: There are NO conveyances affecting said Land recorded within 24 months of the date of this report.

D. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance by the corporation named below:

Name of Corporation: Ichijo USA Co., LTD

a) A Copy of the corporation By-laws and Articles of Incorporation

b) An original or certified copy of a resolution authorizing the transaction contemplated herein

c) If the Articles and/or By-laws require approval by a ‘parent’ organization, a copy of the Articles and By-laws of the parent

d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

The Oregon Corporation Commission records were unavailable for search as of the effective date herein. Evidence of the existence of the above referenced entity will be required prior to closing.

E. Note: There are no matters against the party(ies) shown below which would appear as exceptions to coverage in a title insurance product:

Parties: Ichijo USA Co., LTD

F. Note: The State of Oregon requires every ALTA Owner's Policy (07-01-2021) to include the OTIRO 110 Endorsement as a supplement to the definition of Insured in said Owner's Policy's Conditions to confirm coverage is the same for an Oregon Registered Domestic Partner as it is for a Spouse.

G. Note: No utility search has been made or will be made for water, sewer or storm drainage charges unless the City/Service District claims them as liens (i.e. foreclosable) and reflects them on its lien docket as of the date of closing. Buyers should check with the appropriate city bureau or water service district and obtain a billing cutoff. Such charges must be adjusted outside of escrow.

H. Note: Effective January 1, 2008, Oregon law (ORS 314.258) mandates withholding of Oregon income taxes from sellers who do not continue to be Oregon residents or qualify for an exemption. Please contact your Escrow Closer for further information.

I. THE FOLLOWING NOTICE IS REQUIRED BY STATE LAW: YOU WILL BE REVIEWING, APPROVING AND SIGNING IMPORTANT DOCUMENTS AT CLOSING. LEGAL CONSEQUENCES FOLLOW FROM THE SELECTION AND USE OF THESE DOCUMENTS. YOU MAY CONSULT AN ATTORNEY ABOUT THESE DOCUMENTS. YOU SHOULD CONSULT AN ATTORNEY IF YOU HAVE QUESTIONS OR CONCERNS ABOUT THE TRANSACTION OR ABOUT THE DOCUMENTS. IF YOU WISH TO REVIEW TRANSACTION DOCUMENTS THAT YOU HAVE NOT SEEN, PLEASE CONTACT THE ESCROW AGENT.

J. Recording Charge (Per Document) is the following:

County	First Page	Each Additional Page
Yamhill	$81.00	$5.00

Note: When possible the company will record electronically. An additional charge of $5.00 applies to each document that is recorded electronically.

Note: Please send any documents for recording to the following address:
Portland Title Group
Attn: Recorder
1455 SW Broadway, Suite 1450
Portland, OR. 97201

Please email your release to the following email address: or-ttc-yamhillrecording@ticortitle.com

K. Note: This map/plat is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances or acreage shown thereon.

L. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, processing, manufacture, sale, dispensing or use of marijuana and psilocybin, the Company is not able to close or insure any transaction involving Land associated with these activities.

M. NOTE: IMPORTANT INFORMATION REGARDING PROPERTY TAX PAYMENTS:
Fiscal Year: July 1st through June 30th
Taxes become a lien on real property, but are not yet payable: July 1st
Taxes become certified and payable (approximately on this date): October 15th
First one third payment of taxes is due: November 15th
Second one third payment of taxes is due: February 15th
Final payment of taxes is due: May 15th

Discounts: If two thirds are paid by November 15th, a 2% discount will apply. If the full amount of the taxes are paid by November 15th, a 3% discount will apply.

Interest: Interest accrues as of the 15th of each month based on any amount that is unpaid by the due date. No interest is charged if the minimum amount is paid according to the above mentioned payment schedule.

EXHIBIT ONE

2021 AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (07-01-2021)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) that restricts, regulates, prohibits, or relates to:
   i. the occupancy, use, or enjoyment of the Land;
   ii. the character, dimensions, or location of any improvement on the Land;
   iii. the subdivision of land; or
   iv. environmental remediation or protection.
   b. any governmental forfeiture, police, regulatory, or national security power.
   c. the effect of a violation or enforcement of any matter excluded under Exclusion 1.a. or 1.b.
2. Any power of eminent domain. Exclusion 2 does not modify or limit the coverage provided under Covered Risk 7.
3. Any defect, lien, encumbrance, adverse claim, or other matter:
   a. created, suffered, assumed, or agreed to by the Insured Claimant;
   b. not Known to the Company, not recorded in the Public Records at the Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   c. resulting in no loss or damage to the Insured Claimant;
   d. attaching or created subsequent to the Date of Policy (Exclusion 3.d. does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   e. resulting in loss or damage that would not have been sustained if consideration sufficient to qualify the Insured named in Schedule A as a bona fide purchaser or encumbrancer had been given for the Insured Mortgage at the Date of Policy.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business law.
5. Invalidity or unenforceability of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or Consumer Protection Law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights law, that the transaction creating the lien of the Insured Mortgage is a:
   a. fraudulent conveyance or fraudulent transfer;
   b. voidable transfer under the Uniform Voidable Transactions Act; or
   c. preferential transfer:
      i. to the extend the Insured Mortgage is not a transfer made as a contemporaneous exchange for new value; or
      ii. for any reason not stated in the Covered Risk 13.b
7. Any claim of a PACA-PSA Trust. Exclusion 7 does not modify or limit the coverage provided under Covered Risk 8.
8. Any lien on the Title for real estate taxes or assessments imposed by a governmental authority and created or attaching between the Date of Policy and the date of recording of the Insured Mortgage in the Public Records. Exclusion 8 does not modify or limit the coverage provided under Covered Risk 2.b. or 11.b.
9. Any discrepancy in the quantity of the area, square footage, or acreage of the Land or of any improvement to the Land.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

2021 AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (07-01-2021)
EXCLUSIONS FROM COVERAGE

The following matters are excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

1. a. any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) that restricts, regulates, prohibits, or relates to:
   i. the occupancy, use, or enjoyment of the Land;
   ii. the character, dimensions or location of any improvement on the Land;
   iii. the subdivision of land; or
   iv. environmental remediation or protection;
   b. any governmental forfeiture, police, regulatory, or national security power
   c. the effect of a violation or enforcement of any matter excluded under Exclusion 1.a. or 1.b.

   Exclusion 1 does not modify or limit the coverage provided under Covered Risk 5 or 6.
2. Any power of eminent domain. Exclusion 2 does not modify or limit the coverage provided under Covered Risk 7.
3. Any defect, lien, encumbrance, adverse claim, or other matter:
   a. created, suffered, assumed or agreed to by the Insured Claimant;
   b. not known to the Company, not recorded in the Public Records at the Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   c. resulting in no loss or damage to the Insured Claimant;
   d. attaching or created subsequent to the Date of Policy (Exclusion 3.d. does not modify or limit the coverage provided under Covered Risk 9 or 10); or
   e. resulting in loss or damage that would not have been sustained if consideration sufficient to qualify the Insured named in Schedule A as a bona fide purchaser had been given for the Title at the Date of Policy.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights law, that the transaction vesting the Title as shown in Schedule A is a:
   a. fraudulent conveyance or fraudulent transfer, or
   b. voidable transfer under the Uniform Voidable Transactions Act; or
   c. preferential transfer:
      i. to the extent the instrument of transfer vesting the Title as shown in Schedule A is not a transfer made as a contemporaneous exchange for new value; or
      ii. for any other reason not stated in Covered Risk 9.b.
5. Any claim of a PACA-PSA Trust. Exclusion 5 does not modify or limit the coverage provided under Covered Risk 8.
6. Any lien on the Title for real estate taxes or assessments imposed or collected by a governmental authority that becomes due and payable after the Date of Policy. Exclusion 6 does not modify or limit the coverage provided under Covered Risk 2.b.
7. Any discrepancy in the quantity of the area, square footage, or acreage of the Land or of any improvement to the Land.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

title to water.

EXHIBIT ONE

2006 AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions or location of any improvement erected on the land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with the applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in the Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

2006 AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions or location of any improvement erected on the land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in the Covered Risk 9 of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

WIRE SAFE™ | Inquire before you wire!

WIRE FRAUD ALERT

This Notice is not intended to provide legal or professional advice.
If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the number of relevant parties to the transaction as soon as an escrow account is opened.** DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
http://www.fbi.gov

Internet Crime Complaint Center:
http://www.ic3.gov

FIDELITY NATIONAL FINANCIAL
PRIVACY NOTICE

Effective July 1, 2024

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

A limited number of FNF subsidiaries have their own privacy notices. If a subsidiary has its own privacy notice, the privacy notice will be available on the subsidiary's website and this Privacy Notice does not apply.

Collection of Personal Information

FNF may collect the following categories of Personal Information:

- contact information (*e.g.*, name, address, phone number, email address);
- demographic information (*e.g.*, date of birth, gender, marital status);
- identity information (*e.g.* Social Security Number, driver's license, passport, or other government ID number);
- financial account information (*e.g.* loan or bank account information);
- biometric data (*e.g.* fingerprints, retina or iris scans, voiceprints, or other unique biological characteristics, and
- other personal information necessary to provide products or services to you.

We may collect Personal Information about you from:

- information we receive from you or your agent;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

Collection of Browsing Information

FNF automatically collects the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to unaffiliated third-party websites. FNF is not responsible for the privacy practices or content of those websites. We recommend that you read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for these main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To prevent and detect fraud;
- To maintain the security of our systems, tools, accounts, and applications;
- To verify and authenticate identities and credentials;
- To communicate with you about our, our affiliates', and others' products and services, jointly or independently.
- To provide reviews and testimonials about our services, with your consent.

When Information Is Disclosed

We may disclose your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to affiliated or nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to affiliated or nonaffiliated third parties with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Security of Your Information

We maintain physical, electronic, and procedural safeguards to protect your Personal Information.

Choices With Your Information

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties, except as permitted by California law. For additional information about your California privacy rights, please visit the "California Privacy" link on our website (https://fnf.com/pages/californiaprivacy.aspx) or call (888) 413-1748.

For Connecticut Residents: For additional information about your Connecticut consumer privacy rights, or to make a consumer privacy request, or to appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710.

For Colorado Residents: For additional information about your Colorado consumer privacy rights, or to make a consumer privacy request, or appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710.

For Nevada Residents: We are providing this notice pursuant to state law. You may be placed on our internal Do Not Call List by calling FNF Privacy at (888) 714-2710 or by contacting us via the information set forth at the end of this Privacy Notice. For further information concerning Nevada's telephone solicitation law, you may contact: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: aginquiries@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes. For additional information about your Oregon consumer privacy rights, or to make a consumer privacy request, or appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710

We may disclose the categories of Personal Information and Browsing information listed above to the following categories of third parties:

- FNF affiliates and subsidiaries;
- Non-affiliated third parties, with your consent;
- Business in connection with the sale or other disposition of all or part of the FNF business and/or assets;
- Service providers;
- Law endorsement or authorities in connection with an investigation, or in response to a subpoena or court order.

For Texas Residents: For additional information about your Texas consumer privacy rights, or to make a consumer privacy request, or appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710.

We may disclose the categories of Personal Information and Browsing information listed above to the following categories of third parties:

- FNF affiliates and subsidiaries;
- Non-affiliated third parties, with your consent;
- Business in connection with the sale or other disposition of all or part of the FNF business and/or assets;
- Service providers;
- Law endorsement or authorities in connection with an investigation, or in response to a subpoena or court order.

For Utah Residents: For additional information about your Utah consumer privacy rights, or to make a consumer privacy request, please call (888) 714-2710.

For Vermont Residents: We will not disclose information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

For Virginia Residents: For additional information about your Virginia consumer privacy rights, or to make a consumer privacy request, or appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710.

Information From Children

The FNF Websites are not intended or designed to attract persons under the age of eighteen (18). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users

FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans

Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except as required or authorized by contract with the mortgage loan servicer or lender, or as required by law or in the good-faith belief that such disclosure is necessary: to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes

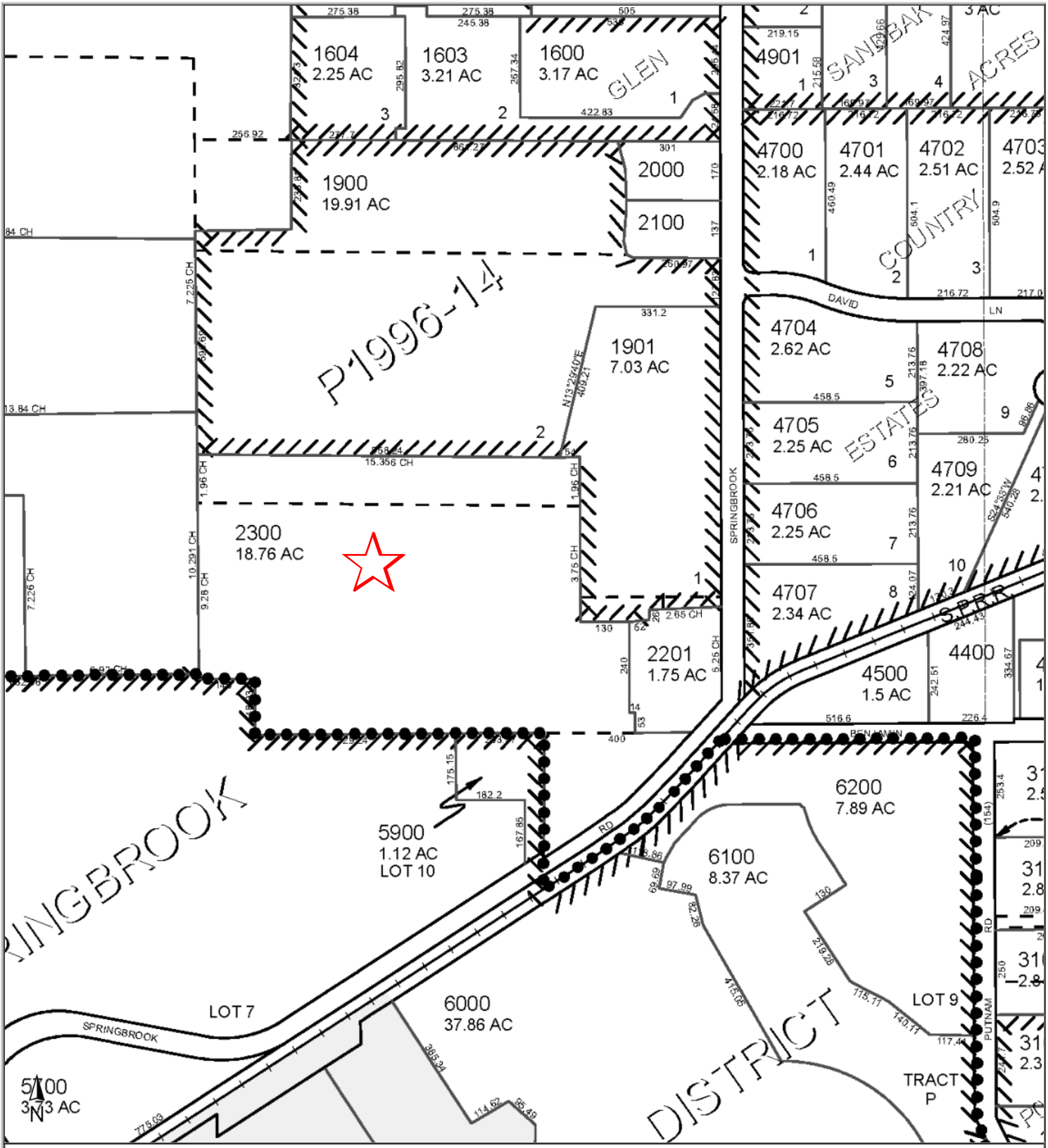
By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The Privacy Notice's effective date will show the last date changes were made. If you provide information to us following any change of the Privacy Notice, that signifies your assent to and acceptance of the changes to the Privacy Notice.

Accessing and Correcting Information; Contact Us

If you have questions or would like to correct your Personal Information, visit FNF's Privacy Inquiry Website or contact us by phone at (888) 714-2710, by email at privacy@fnf.com, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue,
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

;



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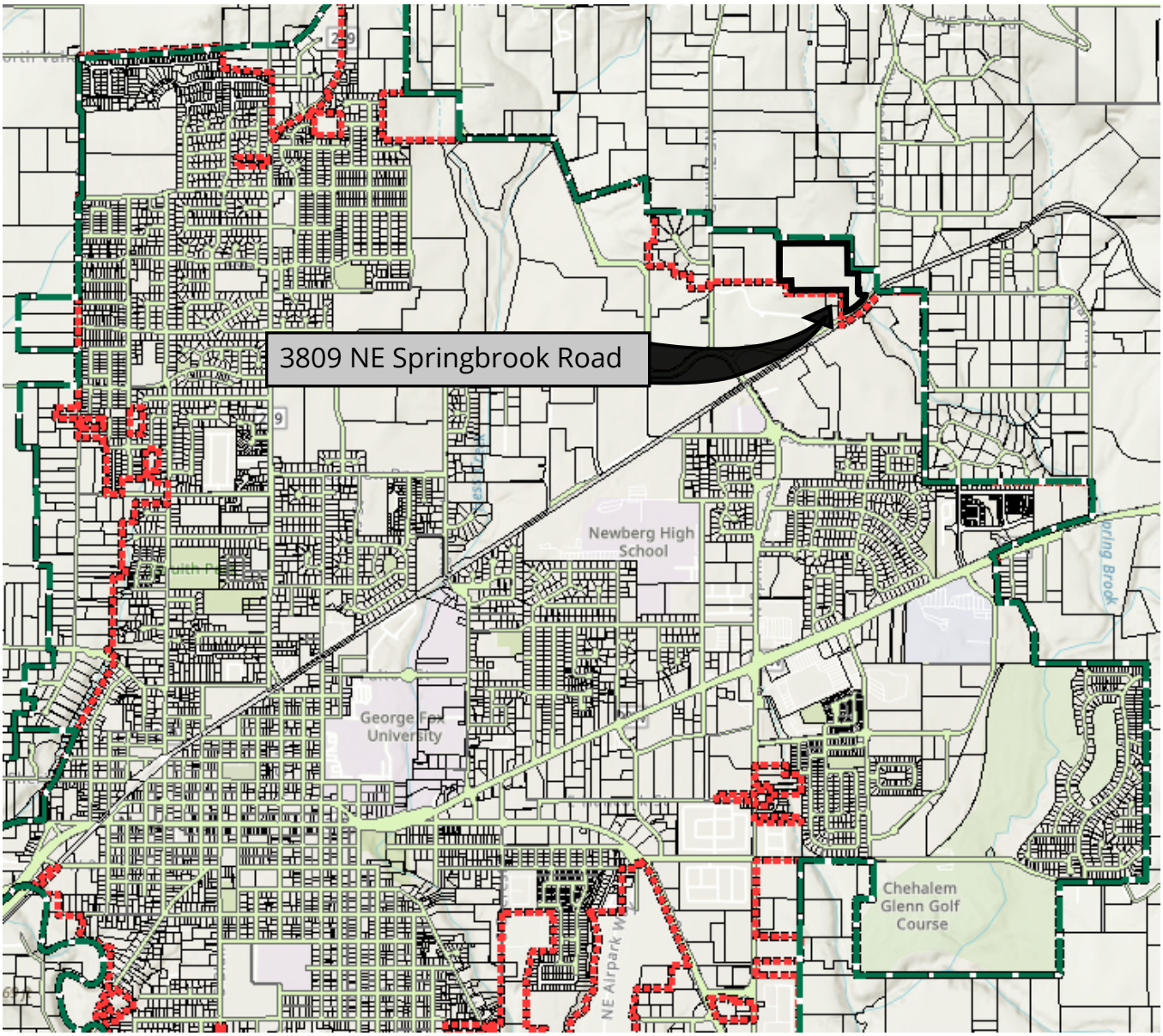
Tax Account #: R320902300

3809 NE Springbrook Rd, Newberg OR 97132

Appendix B - Vicinity Map

3809 NE Springbrook Road Annexation

07/11/2024



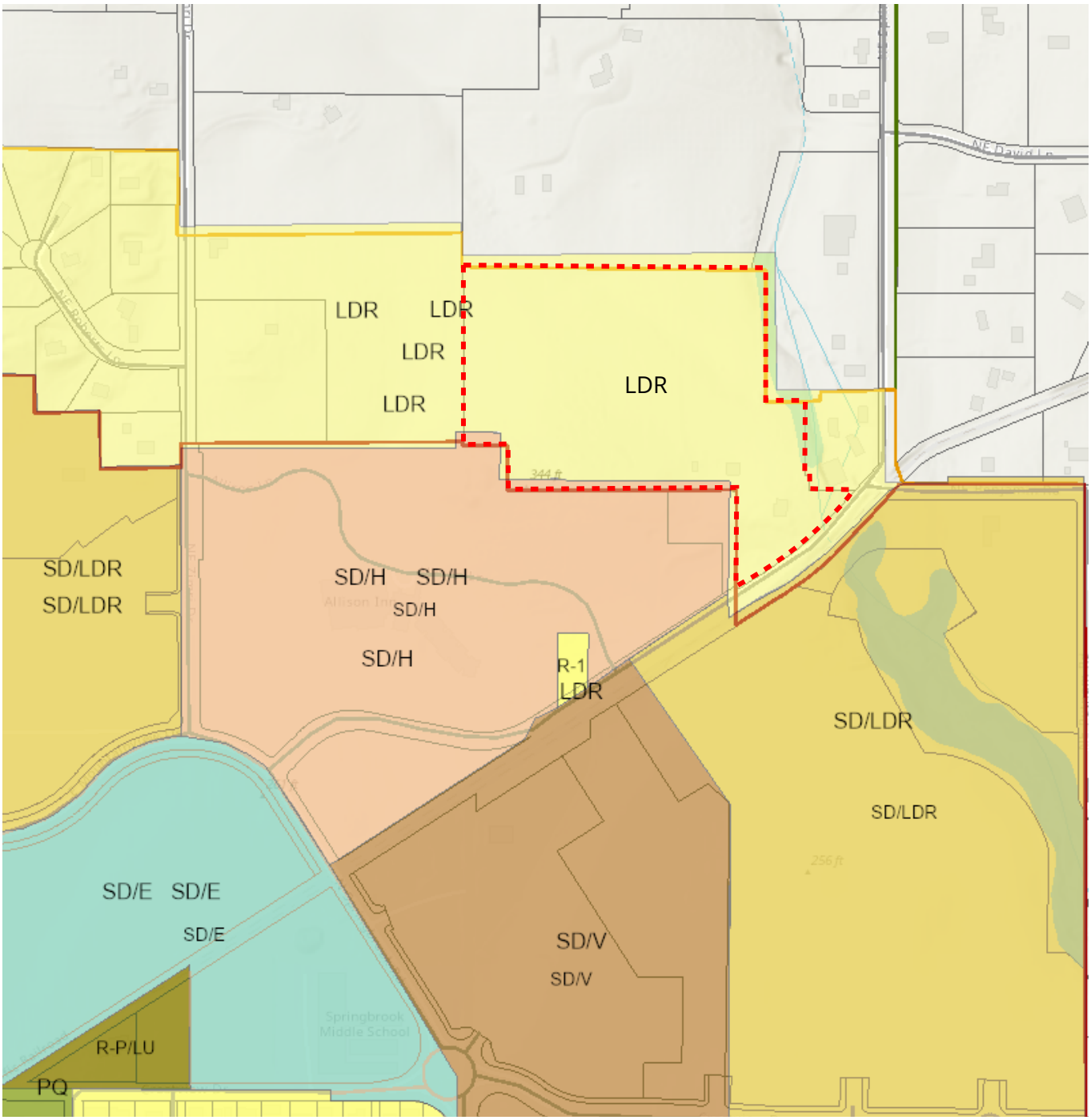
Existing City Limits

Newberg Urban Growth Boundary

Appendix B - Current Comprehensive Plan Designation

3809 NE Springbrook Road Annexation

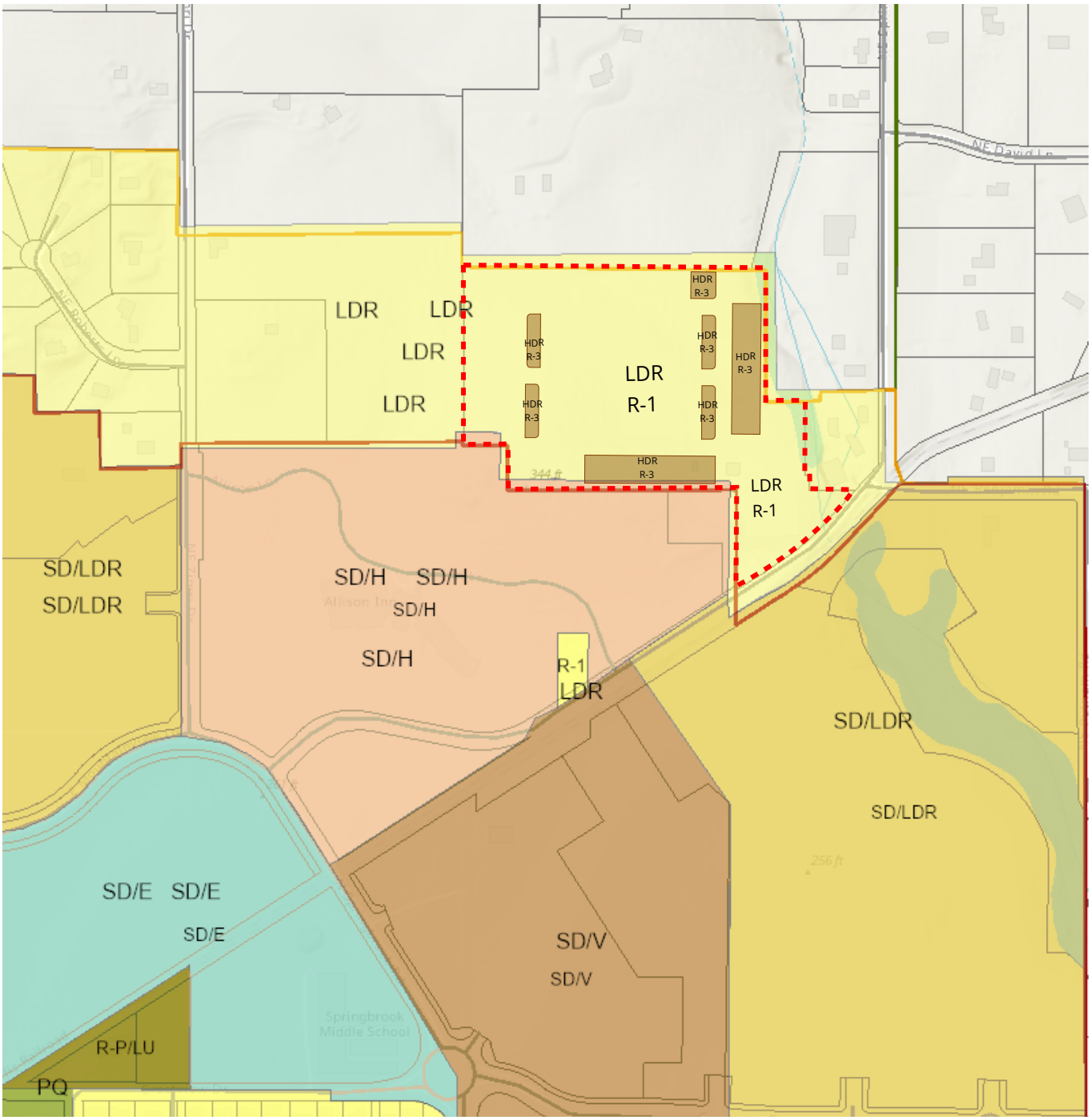
07/10/2024

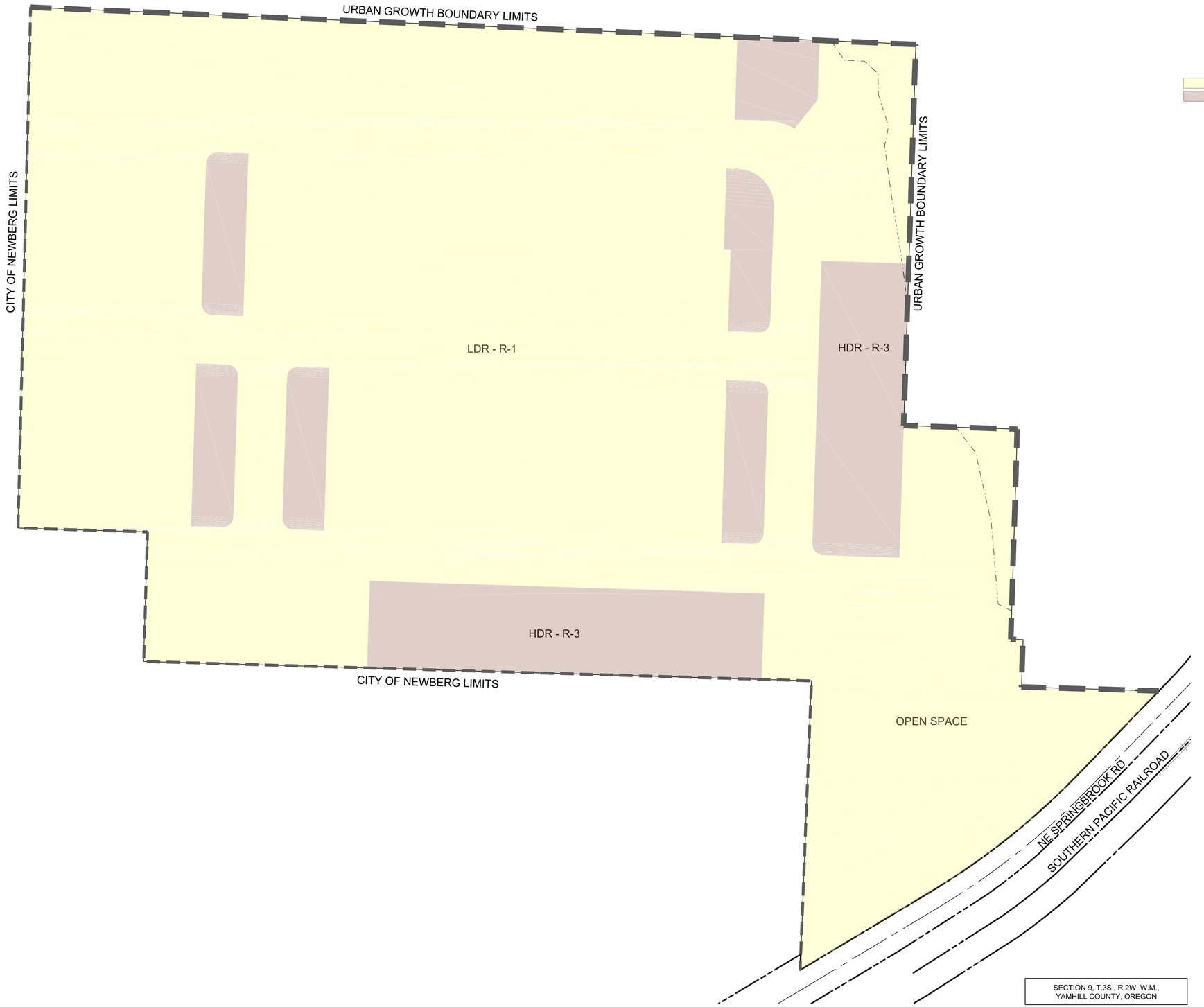


Appendix B - Proposed Comprehensive and Zoning Designations

3809 NE Springbrook Road Annexation

07/10/2024





LEGEND

- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- EXISTING STREAM CORRIDOR
- CITY OF NEWBERG LIMITS
- URBAN GROWTH BOUNDARY LIMITS

ZONE	GROSS SIZE (ACRE)	NET SIZE (ACRE)
R-1	16.14	15.81
R-3	3.02	3.01
TOTAL	19.16	18.82

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92408
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26
PRELIMINARY

PUBLISH DATE
9/9/2024
ISSUED FOR
LAND USE DOCUMENTS
REVISIONS

GENERAL LAND USE PLAN
NE SPRINGBROOK RD ANNEXATION
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
C201

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\EXHIBITS-ANALYSIS\GENERAL USE PLAN\2024-09-09 UPDATED ZONING MAP FOR ANNEXATION\23913 - PROPOSED ZONING MAP.DWG

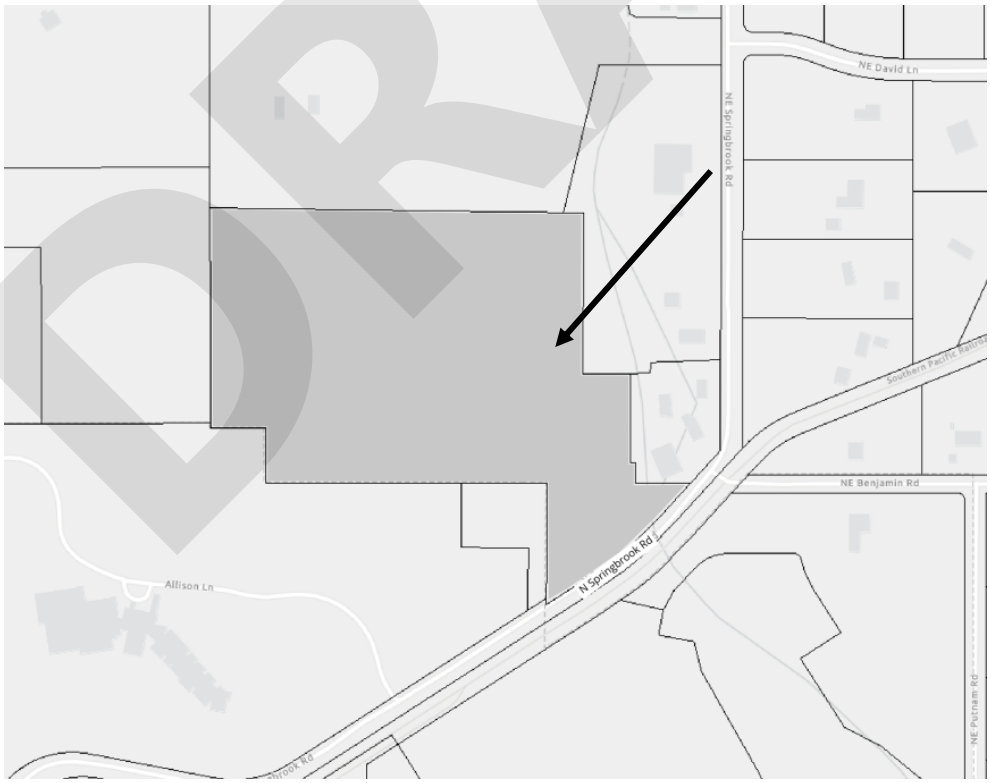
Community Development Department
P.O. Box 970 ▪ 414 E First Street ▪ Newberg, Oregon 97132
503-537-1240. Fax 503-537-1272 www.newbergoregon.gov

NOTICE OF PLANNING COMMISSION HEARING ON A PLANNED UNIT DEVELOPMENT

A property owner in your neighborhood submitted an application to the City of Newberg for a planned unit development at 3809 NE Springbrook Road, Yamhill County tax lot R3209 02300. The Newberg Planning Commission will hold a hearing on ***Date of Hearing*** at 7pm at the Newberg Public Safety Building, 401 E. Third Street, Newberg, OR, to evaluate the proposal. You are invited to take part in the City's review of this project by sending in your written comments or testifying before the Planning Commission. For more details about giving comments, please see the back of this sheet.

The application would create 100 lots at the PUD called Nagomi at Springbrook. Each lot will be between approximately 4,000 square feet and 8,000 square feet and have a single-family home built on each lot. Access to the development will be taken from NE Springbrook Road.

APPLICANT:	***Ichijo USA Co. LTD***
TELEPHONE:	***503-946-9365***
PROPERTY OWNER:	***Ross D Kerr, Rolland G Kerr Jr***
LOCATION:	***3809 NE Springbrook Road***
TAX LOT NUMBER:	***R3209-02300***



We are mailing you information about this project because you own land within 500 feet of the proposed planned unit development. We invite you to participate in the land use hearing scheduled before the Planning Commission. If you wish to participate in the hearing, you may do so in person or be represented by someone else. You also may submit written comments. Oral testimony is typically limited to five minutes per speaker.

If you mail your comments to the City, please put the following information on the outside of the envelope:

Written Comments: File No. **PUD 24-0001**
City of Newberg
Community Development Department
PO Box 970
Newberg, OR 97132

All written comments must be received by 4:30 p.m. on ***December XX, 2024.*** Written information received after this time will be read out loud at the hearing subject to time limits for speakers, and will be included in the record if there are further proceedings.

You can look over all the information about this project or drop comments off at Wastewater Treatment Plant, 2301 NE Wynooski Road. You can also buy copies of the information for a cost of 25 cents a page. A staff report relating to the proposal will be available for inspection at no cost seven days prior to the public hearing. If you have any questions about the project, you can call the Newberg Planning Division at 503-537-1240. Information can also be accessed at: https://www.newbergoregon.gov/planning/page/current-planning-projects

Any issue which might be raised in an appeal of this case to the Land Use Board of Appeals (LUBA) must be raised during the public hearing process. You must include enough detail to enable the decision maker an opportunity to respond. The applicable criteria used to make a decision on this application for a Planned Unit Development are found in Newberg Development Code Section 15.240.030 (C).

Prior to the conclusion of the initial evidentiary hearing, any participant may request an opportunity to present additional evidence, arguments or testimony regarding the application through a continuance or extension of the record. Failure of an issue to be raised in the hearing, in person or by letter, or failure to provide statements or evidence sufficient to afford the decision maker an opportunity to respond to the issue precludes appeal to the State Land Use Board of Appeals based on that issue.

The Planning Commission will make a decision at the end of the public hearing process. If you participate in the public hearing process, either by testifying at the public hearing, or by sending in written comments, we will send you information about any decision made by the City relating to this project.

Date Mailed: ***October XX, 2024***

***ACCOMMODATION OF PHYSICAL IMPAIRMENTS*:**
In order to accommodate persons with physical impairments, please notify the City Recorder's office of any special physical or language accommodations you may need as far in advance of the meeting as possible and no later than 48 hours prior to the meeting. To request these arrangements, please contact the City Recorder at 503-537-1283. For TRS services please dial 711.

Working Together For A Better Community-Serious About Service"

To Our Neighbors at:
2525 ALLISON LN
NEWBERG, OR 97132

To Our Neighbors at:
29105 NE BENJAMIN RD
NEWBERG, OR 97132

To Our Neighbors at:
PO BOX 627
NEWBERG, OR 97132

To Our Neighbors at:
14630 NE SPRINGBROOK RD
NEWBERG, OR 97132

To Our Neighbors at:
14650 NE SPRINGBROOK RD
NEWBERG, OR 97132

To Our Neighbors at:
PO BOX 1060
NEWBERG, OR 97132

To Our Neighbors at:
3809 NE SPRINGBROOK RD
NEWBERG, OR 97132

To Our Neighbors at:
14780 NE SPRINGBROOK RD
NEWBERG, OR 97132

To Our Neighbors at:
PO BOX 1060
NEWBERG, OR 97132

To Our Neighbors at:
14755 NE SPRINGBROOK RD
NEWBERG, OR 97132

To Our Neighbors at:
3220 NE ZIMRI DR
NEWBERG, OR 97132

To Our Neighbors at:
14945 NE SPRINGBROOK RD
NEWBERG, OR 97132

To Our Neighbors at:
3113 CRESTVIEW DR
NEWBERG, OR 97132

To Our Neighbors at:
504 NE AIRPARK WAY
PO BOX 248
NEWBERG, OR 97132

Land Use Notice

FILE # PUD24-0001

PROPOSAL: Planned Unit Development
100 Single-Family Homes

FOR FURTHER INFORMATION, CONTACT:

City of Newberg
Community Development Department
414 E First Street
Phone: 503-537-1240

PLANNING DIVISION FILE #: _____

CITY OF NEWBERG
AFFIDAVIT OF NOTICING

REFERENCE ATTACHED LIST(S)/NOTICE(S)

I, Sam Huck _____, do hereby certify that the attached Notice of Land Use Action was:

a) mailed to the following list of property owners, by United States mail, postage prepaid on_____;
(date)

b) posted on the site according to standards established in Newberg Development Code §15.100.260 on_____.
(date)

I acknowledge that failure to mail the notice in a timely manner constitutes an agreement by the applicant to defer the 120-day process limit and acknowledge that failure to mail will result in the automatic postponement of a decision on the application *15.100.210.(D)(2)* _____.
(date)

_____
Signature Date

_____
Print name

3J CONSULTING

CIVIL ENGINEERING | WATER RESOURCES | COMMUNITY PLANNING

PRELIMINARY STORMWATER MANAGEMENT PLAN

NE Springbrook Road Subdivision
Newberg, OR 97132

November 11, 2024

Prepared For:

Masaki Narita
Ichijo USA Co., Ltd.
3800 SW Cedar Hills Blvd, Suite 131
Beaverton, OR 97005

Prepared By:

3J Consulting, Inc.
9600 SW Nimbus Avenue, Suite 100
Beaverton, Oregon 97008
Project No: 23913
KEF

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

DESIGNER'S CERTIFICATION & STATEMENT

I hereby certify that this Stormwater Management Plan for the NE Springbrook Road Subdivision project has been prepared by me or under my supervision and meets minimum standards of the City of Newberg, and normal standards of engineering practice. I hereby acknowledge and agree that the jurisdiction does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities designed by me.

EXECUTIVE SUMMARY

The NE Springbrook Road Subdivision is proposed at 3809 N Springbrook Rd in the City of Newberg, Yamhill County, Oregon (tax lot 3S2W9 2300). The project proposes a mixture of single-family dwellings, roadways, other hardscaping, landscaping, and utility improvements. The project also proposes frontage improvements along N Springbrook Road. The property has an area of 19.16 ac; however, the total area of analysis (project site) is approximately 19.51 ac to include frontage improvements. The project will involve disturbing 40,770 sf of existing impervious area and is expected to result in 485,273 sf of post-developed impervious area. The project is within the jurisdiction of the City of Newberg.

Stormwater runoff from post-developed impervious areas will drain to proposed storm drain systems, which consist of stormwater best management practices (BMP), prior to discharging offsite. Runoff associated with the single-family residences will outfall to Spring Brook to the east of the project site. Runoff associated with the frontage and the southeastern portion of the site will outfall to the existing storm drain system southwest of the project site. The proposed BMPs include:

- Water Quality Facilities
  - Post-developed impervious areas associated with the single-family dwellings will be treated via a Vegetated Swale (25-ft bottom width, 119-ft length, 0.5% slope).
  - Post-developed impervious areas associated with the N Springbrook Road frontage improvements will be treated via a Vegetated Swale (2-ft bottom width, 100-ft length, 0.5% slope).
  - Pretreatment Manholes are proposed upstream of both water quality BMPs.
- Detention Facilities
  - The post-developed basin associated with the single-family dwellings will be managed via a Detention Pond and Flow Control Manhole. The Detention Pond will over-detain for the frontage.

Results of hydraulic analyses for the proposed onsite storm drain systems will be provided in the Final Stormwater Management Plan.

A Downstream Analysis was not performed due to the implementation of onsite detention facilities; A Certificate of Investigation is attached.

An Operations & Maintenance Plan will be prepared in conjunction with the Final Stormwater Management Plan.

The purpose of this report is to accomplish the following:

- Describe existing and post-developed basins and drainage;
- Describe the design and analysis of the proposed stormwater management facilities; and,
- Demonstrate compliance with City of Newberg *Public Works Design and Construction Standards* (2015).

PROJECT DESCRIPTION

The NE Springbrook Road Subdivision is proposed at 3809 N Springbrook Road in the City of Newberg, Yamhill County, Oregon (tax lot 3S2W9 2300). The project proposes a mixture of single-family dwellings, roadways, other hardscaping, landscaping, and utility improvements. The project also proposes frontage improvements along N Springbrook Road.

The project is within the jurisdictions of the City of Newberg. The design criteria for stormwater management facilities will be per the City's *Public Works Design & Construction Standards* (2015).

The property has an area of 19.16 ac; however, the total area of analysis (project site) is approximately 19.51 ac to include frontage improvements. An existing stream corridor is located along the eastern boundary of the project site.

The project will involve disturbing 40,770 sf of existing impervious area and is expected to result in 485,273 sf of post-developed impervious area. In existing conditions, stormwater runoff discharges offsite at four (4) locations. In post-developed conditions, two basins will be eliminated to mitigate direct runoff from impervious areas to offsite areas.

Stormwater runoff from post-developed impervious areas will drain to proposed storm drain systems, which consists of proposed stormwater best management practices prior to discharging offsite. Runoff associated with the single-family residences will outfall to Spring Brook to the east of the project site. Runoff associated with the frontage and the southeastern portion of the site will outfall to the existing storm drain system southwest of the project site.

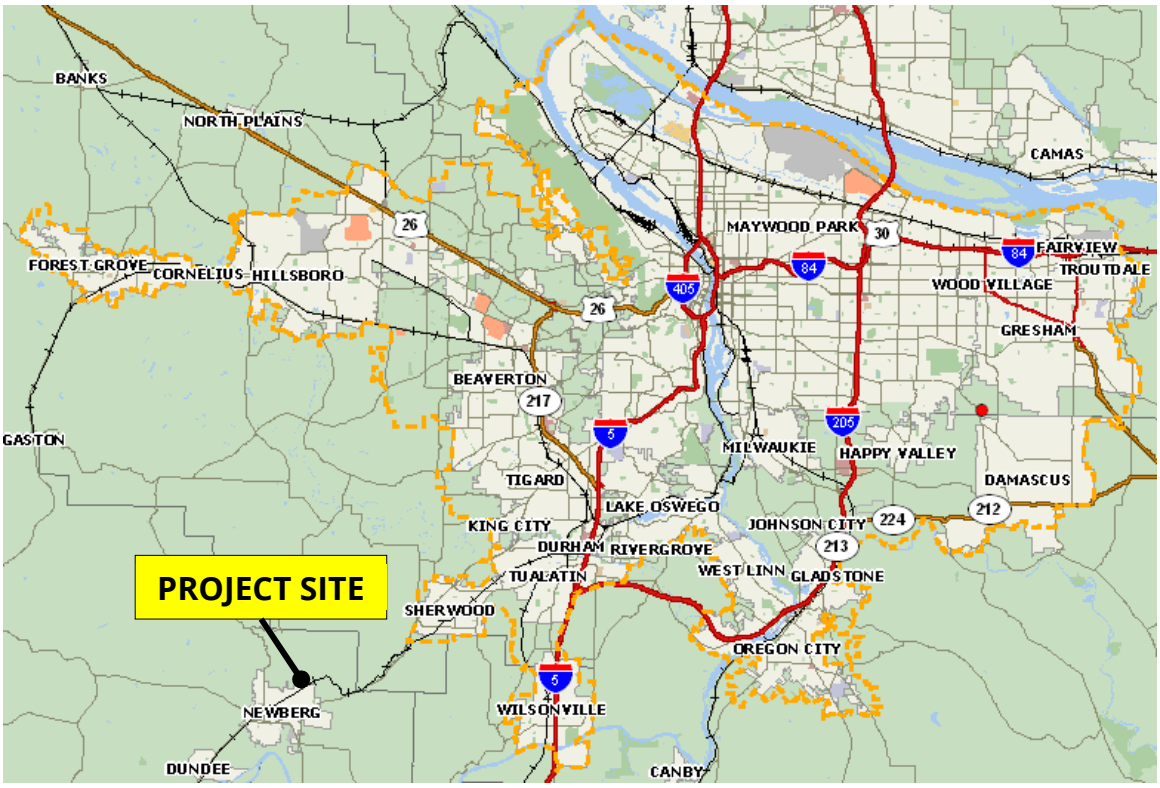


Figure 1 – Vicinity Map

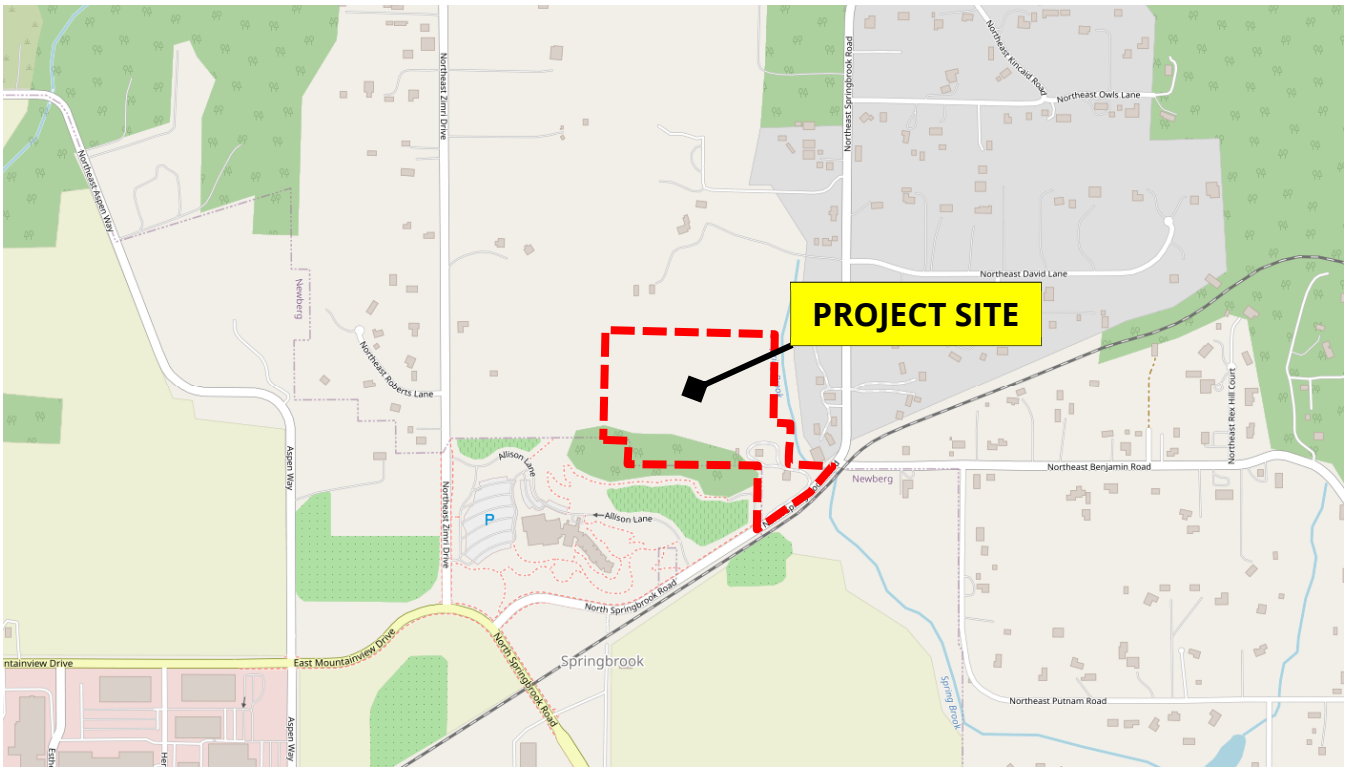


Figure 2 – Site Location

EXISTING CONDITIONS

Site

The existing site consists of one single-family residence along with associated sheds, driveways, and an old tree farm. The property is adjacent to Spring Brook on the east side. All onsite impervious areas will be demolished. The project also proposes frontage improvements along N Springbrook Road to the south.

Soils & Infiltration

The soil types as classified by USDA Web Soil Survey of Yamhill County are identified in Table 1 (See Technical Appendix: Exhibits – Hydrologic Soil Group). Soils corresponding to hydrologic soil group C/D were modeled as soil type D for conservativeness.

Soil Type	Hydrologic Soil Group	Site Coverage (%)
Carlton Silt Loam	C/D	81.1
Woodburn Silt Loam	C	1.5
Saum Silt Loam	C	5.6
Witzel-Ritner Complex	D	11.8

Table 1 – Soil Characteristics

Based on the existing soil types present on-site, infiltration rates for most of the site are expected to be very low and close to zero. In the location of the pond, tested infiltration rates were 5 in/hr. Therefore, potential infiltration will be accounted for as part of the design parameters of the proposed detention system.

Flood Map

The site is located within Zone X (unshaded) per flood insurance rate map (FIRM) community-panel number 41071C0229D (See Technical Appendix: Exhibits – FIRMette). FEMA's definition of Zone X (un-shaded) is an area of minimal flood hazard.

Drainage

In existing conditions, the site drains to four (4) basins (See Technical Appendix: Exhibits – Existing Conditions).

- Basin 1 – Consists of the largest portion of the site, which drains east to Spring Brook.
- Basin 2 – Consists of most of the southeastern portion of the site and frontage. This basin drains southwest to N Spring Brook Road, discharging to the existing storm system southwest of the site.
- Basin 3 – Consists of the smallest portion of the site and drains to the south, eventually discharging to the existing storm system southwest of the site.
- Basin 4 – Consists of the western portion of the site and drains southwest, eventually discharging to the existing storm system southwest of the site.

Upstream Basins

There is an upstream area that discharges directly onto the project site in existing conditions. Along the northern boundary of the site, approximately 987,677 sf (22.67 ac) of pasture area drains onto the project site.

The SBUH method, which is described below in the "Hydrologic Analysis," was used to assess runoff from this upstream area (See Technical Appendix: Hydrographs – Runoff Hydrographs). Web Soil Survey was used to determine that C and D hydrologic soil groups coincide with the upstream basin (See Technical Appendix: Exhibits – Hydrologic Soil Group (Upstream Basin)). A composite Curve Number of 75 was used for the upstream basin, which corresponds to pasture cover in good condition. The Tc of the upstream basin was evaluated using TR-55 methods and knowledge of basin slope, flowpath lengths, and local rainfall data (See Technical Appendix: Hydrologic Analysis – Time of Concentration).

Basin Areas

Table 2 outlines the contributing areas for each basin in existing conditions (See Technical Appendix: Exhibits – Existing Conditions).

Basin	Contributing Basin Areas (ac)		
	Impervious	Pervious	Total
1	0.28	12.92	13.20
2	0.57	1.56	2.13
3	0.09	1.39	1.48
4	0.00	2.71	2.71
Total	0.94	18.57	19.51

Table 2 – Basin Areas – Existing Conditions

It's important to note that existing impervious area has been disregarded in sizing stormwater management facilities at this stage of design, for conservativeness.

POST-DEVELOPED CONDITIONS

Site

In post-developed conditions, the project proposes a mixture of single-family dwellings, roadways, other hardscaping, landscaping, and utility improvements. Due to the amount of net new impervious area generated, stormwater management facilities are also proposed and are detailed in a later section.

Drainage

In post-developed conditions, onsite runoff will be directed to Basins 1 & 2 (See Technical Appendix: Exhibits – Post-Developed Conditions).

- Basin 1 – Consists of the largest portion of the post-developed project site, which includes the single-family dwellings, a detention pond, and part of the frontage. This basin will drain to a proposed storm drain system which will connect to the existing 36" culvert that conveys flow from Spring Brook across N Springbrook Road to the south.
- Basin 2 – Consists of most of the southeastern portion of the site and frontage. This basin will drain to a proposed storm drain system which will connect to the existing storm drain system southwest of the site.
- Basins 3 & 4– These basins are eliminated to mitigate direct runoff from post-developed impervious area offsite. Onsite runoff from these basins will be diverted to Basin 1.

Basin Areas

Table 3 outlines the contributing areas for each basin in post-developed conditions (See Technical Appendix: Exhibits – Post-Developed Conditions). In accordance with the D&C Standards, it is assumed that 2,877 sf of impervious area is proposed for each single-family residential lot.

Basin	Contributing Basin Areas (ac)		
	Impervious	Pervious	Total
[1]1	10.47	[1]7.03	[1]17.50
2	0.67	1.33	2.01
3	0.00	0.00	0.00
4	0.00	0.00	0.00
Total	11.10	8.40	19.51

Table 3 – Basin Areas – Post-Developed Conditions

[1]Area contains detention pond area (23,027 sf)

HYDROLOGIC ANALYSIS

Design Guidelines

The site is located within the jurisdictions of the City of Newberg. As a result, design guidelines for this project reflect current City's *Public Works Design & Construction Standards* (D&C Standards; Aug 2015).

Methodology & Software Used

Naturally occurring rainstorms dissipate over long periods of time. An effective way of estimating storm rainfall is by using the hydrograph method. In accordance with the D&C Standards, the Santa Barbara Urban

Hydrograph (SBUH) method was used to develop runoff rates. The computer software XPSTORM was used in modeling pre- and post-developed hydrologic response for all required design storm events.

Design Storms

The rainfall distribution to be used for this area is the design storm of 24-hour duration based on the standard Type 1A rainfall distribution. Table 4 shows total precipitation depths for the storm events used analysis, which were used as multipliers for the rainfall distribution.

Recurrence Interval (yr)	Precipitation Depth (in)
[1]WQ	1.00
[1]50% of 2	1.25
2	2.50
10	3.50
25	4.00

Table 4 – Design Storms

[1]City standard

Curve Number

The runoff curve number (CN) is a parameter that is used to estimate runoff volumes. Contributing factors for CN include soil type, antecedent moisture condition, and land cover. Composite CNs were calculated based on CNs selected from tables provided in the TR-55 manual (See Technical Appendix: Exhibits – Curve Number).

For predeveloped conditions, basin areas were modeled with a composite CN of 79, which corresponds to woods-grass combination cover in good condition.

Post-developed impervious and pervious areas were modeled with CNs of 98 and 80, respectively. The latter corresponds to landscaped areas in good condition.

Time of Concentration

Time of concentration (Tc) is the estimated time for runoff from the remotest point in a drainage basin to reach its outfall and is used to evaluate peak runoff rates. Predeveloped Tc's were evaluated using TR-55 methods and knowledge of basin slope, flowpath lengths, and local rainfall data (See Technical Appendix: Hydrologic Analysis – Time of Concentration).

Post-developed Tc's are assumed to be a conservative 5 minutes for all contributing areas.

Basin Runoff

The contributing basins are within City jurisdiction and will adhere to the D&C Standards.

Existing Conditions

The predeveloped areas for Basins 2, 3, and 4 were combined for runoff analysis because these basins either discharge or eventually discharge to the existing storm drain system southwest of the project site. Table 5 outlines the peak runoff rates for the predeveloped basins (See Technical Appendix: Hydrographs).

Recurrence Interval (yr)	Peak Runoff Rates (cfs)		
	Basin 1: Predeveloped	Basins 2-4: Predeveloped	Allowable Release Rates
50% of 2	0.15	0.07	0.21
2	1.40	0.77	2.17
10	3.23	1.75	4.98
25	4.27	2.30	6.57

Table 5 – Peak Runoff Rates – Existing Conditions

Post-Developed Conditions

Table 6 outlines the peak runoff rates for Basins 1 and 2 and the unmitigated frontage from both basins (See Technical Appendix: Hydrographs). This table includes the peak runoff rate for the water quality design storm, which will be used to size water quality facilities in the next section.

Recurrence Interval (yr)	Peak Runoff Rates (cfs)		
	Basin 1: Post-Developed	Basin 2: Post-Developed	Unmitigated Frontage (Basins 1 & 2)
WQ	2.12	0.10	0.05
50% of 2	2.77	0.13	0.06
2	7.13	0.51	0.17
10	10.99	0.89	0.28
25	12.99	1.09	0.33

Table 6 – Peak Runoff Rates – Post-Developed Conditions

WATER QUALITY TREATMENT

Design Guidelines

Per the D&C Standards, projects that generate a net impervious area of 2,877 sf (or greater) or disturbs an acre or more require Best Management Practices (BMP) to treat the stormwater runoff for all net new impervious area created.

Per these guidelines, water quality BMPs are required for post-developed impervious in Basins 1 & 2.

LIDA Feasibility

Low Impact Development Approaches (LIDA) aims to conserve existing resources, minimize disturbance, minimize soil compaction, minimize imperviousness, and direct runoff from impervious areas onto pervious areas. LIDA should be implemented to the maximum extent practicable.

Basin 1

Due to poor infiltrating soils, infiltration LIDA cannot be implemented to treat contributing runoff to Basin 1. As a result, runoff from these post-developed areas will be treated with a Vegetated Swale.

Basin 2

Due to poor infiltrating soils, site constraints, and grading constraints, infiltration LIDA cannot be implemented to treat contributing runoff to Basin 2. As a result, runoff from these post-developed areas will be treated with a Vegetated Swale.

Water Quality Storm

Per the D&C Standards, water quality BMPs shall be designed for a dry weather storm event totaling 1.0 inches of precipitation falling in 24 hours with an average storm return period of 96 hours. This standard will be applicable to the contributing basin for Basins 1 and 2.

Peak (design) flows for these storm depths were determined via the SBUH method using an NRCS Type 1A rainfall distribution.

Water Quality Facilities

Basin 1

As indicated in Table 6, the water quality design flow rate for the contributing basin to this basin was evaluated to be 2.12 cfs. To sufficiently treat this flow rate, a vegetated swale was sized per the City's Standard Drawing 460. A swale with a bottom width, length, and longitudinal slope of 25 ft, 119 ft, and 0.5%, respectively, is proposed to treat the required flow rate (See Technical Appendix: Calculations).

A pretreatment manhole is proposed upstream of the Vegetated Swale. For this basin, the 25-yr peak flow is 13.10 cfs, resulting in a required sump volume of 262.1 cf. Assuming a 96" manhole diameter, the required depth is evaluated to be 62.0", which will be proposed at 62.0" to provide sufficient pretreatment.

Basin 2

As indicated in Table 6, the water quality design flow rate for the contributing basin to this basin was evaluated to be 0.10 cfs. To sufficiently treat this flow rate, a vegetated swale was sized per the City's Standard Drawing 460. A swale with a bottom width, length, and longitudinal slope of 2 ft, 100 ft, and 0.5%, respectively, is proposed to treat the required flow rate (See Technical Appendix: Calculations).

A pretreatment manhole is proposed upstream of the Vegetated Swale. For this basin, the 25-yr peak flow is 1.09 cfs, resulting in a required sump volume of 21.8 cf. Assuming a 60" manhole diameter, the required depth is evaluated to be 13.3", which will be proposed at 36" to provide sufficient pretreatment.

WATER QUANTITY MANAGEMENT

Design Guidelines & Criteria

Per the D&C Standards, projects that generate a net impervious area of 2,877 sf (or greater) or disturbs an acre or more require Best Management Practices (BMP) to detain the stormwater runoff for all net new impervious area created. When required, the stormwater quantity onsite detention facilities shall be designed to capture runoff such that the post-development runoff rates do not exceed the predeveloped rates. Specifically, the 50% of the 2-, 2-, 10- and 25-yr post-development runoff rates will not exceed their respective 50% of 2-, 2-, 10- and 25-yr predeveloped rates. These criteria will be adhered to for Basins 1 and 2.

Detention Facilities

Basin 1

A Detention Pond is proposed in the eastern portion of the project site to capture and detain runoff and will outfall to the existing culvert. The proposed vegetated swale will be constructed at the bottom of the detention

pond. The facility has an estimated top area and total volume of 23,027 sf and 124,150 cf, respectively; these values take into consideration the required 1-ft of freeboard that must be provided during the 25-yr storm event. The pond will over-detain for Basin 2 and the frontage portion of Basin 1, which will both discharge unmitigated flow. Details for the Detention Pond and FCMH will be provided in the Final Stormwater Management Plan. Table 1 outlines the allowable release rates from the project site for Basin 1. Outflows from this facility will be released via an FCMH with orifices and weirs to match predeveloped runoff rates per the following table.

Recurrence Interval (yr)	Rates (cfs)			
	Allowable Release Rates (Table 5)	Basin 2 + Unmitigated Runoff (Table 6)	Adjusted Allowable Release Rate	Allowable Release Rates
50% of 2	0.21	0.19	0.02	0.02
2	2.17	0.69	[1]1.48	1.40
10	4.98	1.17	[1]3.81	3.23
25	6.57	1.41	[1]5.15	4.27

[1]Calculated Adjusted Allowable Release Rates exceed predeveloped Basin 1 runoff; therefore Allowable Release Rates shall not exceed predeveloped runoff rates for Basin 1 (Storm events 2-25 year).

Table 7 – Allowable Release Rates

Basin 2

No detention facilities are proposed for Basin 2.

HYDRAULIC ANALYSIS

In accordance with the D&C Standards, a backwater analysis will be performed to demonstrate that the hydraulic grade line shall in all cases be lower than a 2-ft minimum from finished grade at all structure locations. The results of the analysis will be provided in the Final Stormwater Management Plan.

DOWNSTREAM ANALYSIS

A stamped Certificate of Investigation will be provided due to the proposed development constructing, collecting, and discharging more than 2,877 sf of new impervious area (See Technical Appendix: Certification of Investigation). The project is not expected to propose a fee in lieu, because post-developed runoff is currently planned to be managed by onsite detention facilities. As a result, a Downstream Analysis was not performed because the project is expected to match or reduce peak flows, thus mitigating downstream impacts.

OPERATIONS & MAINTENANCE

For privately maintained stormwater management facilities, a maintenance plan that clearly identifies maintenance activities and frequency in a form that can be easily provided to and understood by the people responsible for maintenance shall be prepared. An Operations & Maintenance (O&M) Plan will be prepared in conjunction with the Final Stormwater Management Plan. The O&M Plan will include the City Standard Private Facility Maintenance Agreement form and will be submitted to the City for review. Upon approval of the maintenance agreement by the City, the applicant shall record the agreement with Yamhill County and return one fully executed original to the City Recorders office.

CONCLUSIONS

This report demonstrates that the proposed stormwater management facilities for the NE Springbrook Road Subdivision will meet or exceed the requirements of the City of Newberg. Water Quality Treatment will be addressed with two Vegetated Swales. Water Quantity Management will be addressed with a Detention Pond and Flow Control Manholes.

TECHNICAL APPENDIX

Exhibits

- FIRMette
- Hydrologic Soil Group – Yamhill County
- Exhibits – Hydrologic Soil Group (Upstream Basin)
- Existing Conditions
- Post-Developed Conditions

Hydrologic Analysis

- Curve Numbers
- Time of Concentration

Hydrographs

- Runoff Hydrographs (Existing, Post-Developed, Upstream)

Calculations

- Water Quality Swale

Certification of Investigation

REFERENCES

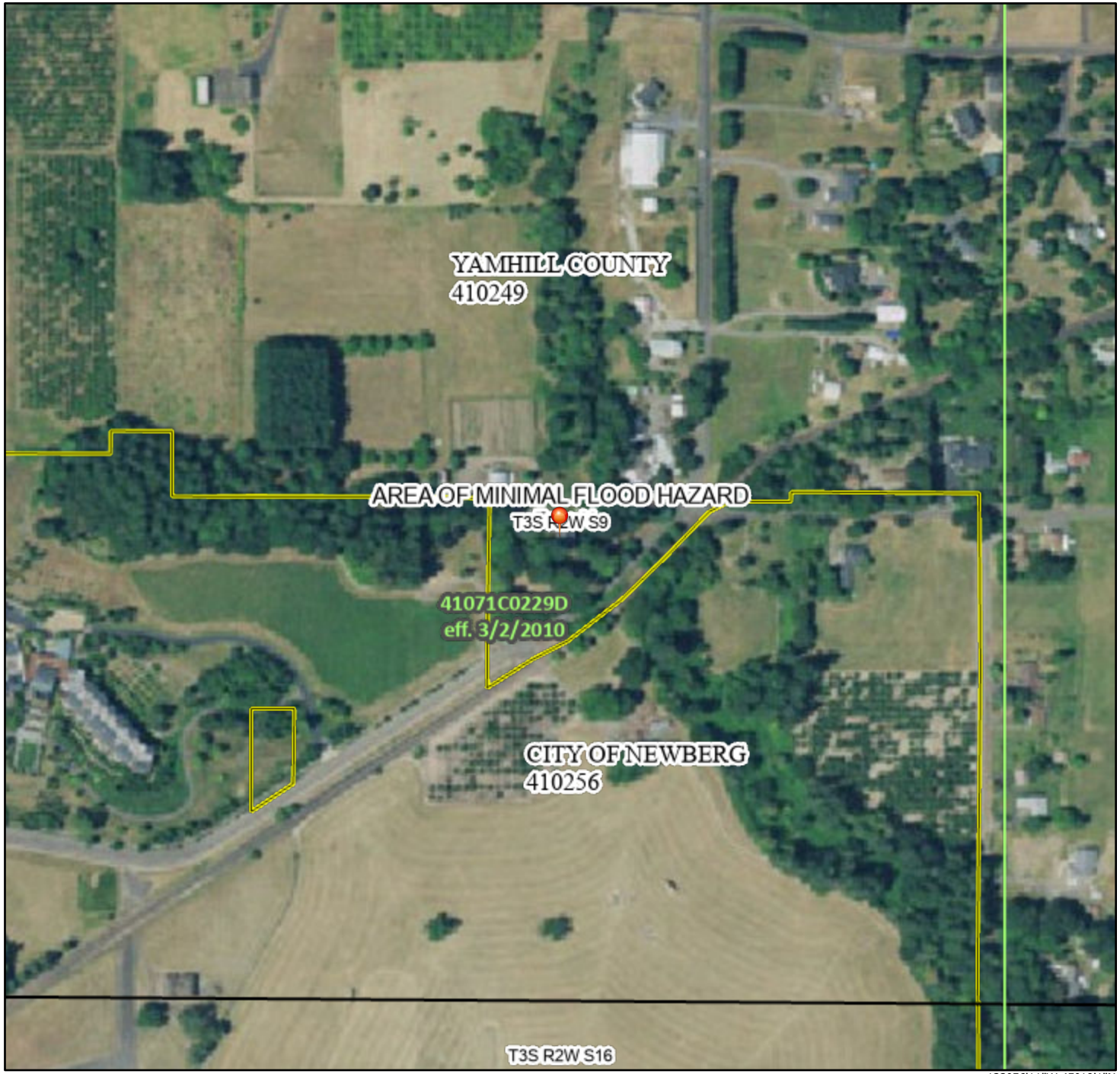
1. *Public Works Design & Construction Standards*. August 2015, City of Newberg
2. *Urban Hydrology for Small Watersheds* (Technical Release 55). June 1986, U.S. Department of Agriculture

EXHIBITS

National Flood Hazard Layer FIRMette

FEMA

122°56'49"W 45°19'26"N



122°56'11"W 45°19'1"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/20/2024 at 7:29 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Map Scale: 1:2,840 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yamhill County, Oregon
Survey Area Data: Version 12, Sep 8, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2304C	Carlton silt loam, 2 to 12 percent slopes	C/D	14.8	73.9%
2304D	Carlton silt loam, 12 to 20 percent slopes	C/D	1.4	7.2%
2310C	Woodburn silt loam, 3 to 12 percent slopes	C	0.3	1.5%
2774D	Saum silt loam, 12 to 20 percent slopes	C	1.1	5.6%
2784C	Witzel-Ritner complex, 2 to 12 percent slopes, stony	D	1.6	8.2%
2784D	Witzel-Ritner complex, 12 to 20 percent slopes, stony	D	0.7	3.6%
Totals for Area of Interest			**20.0**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

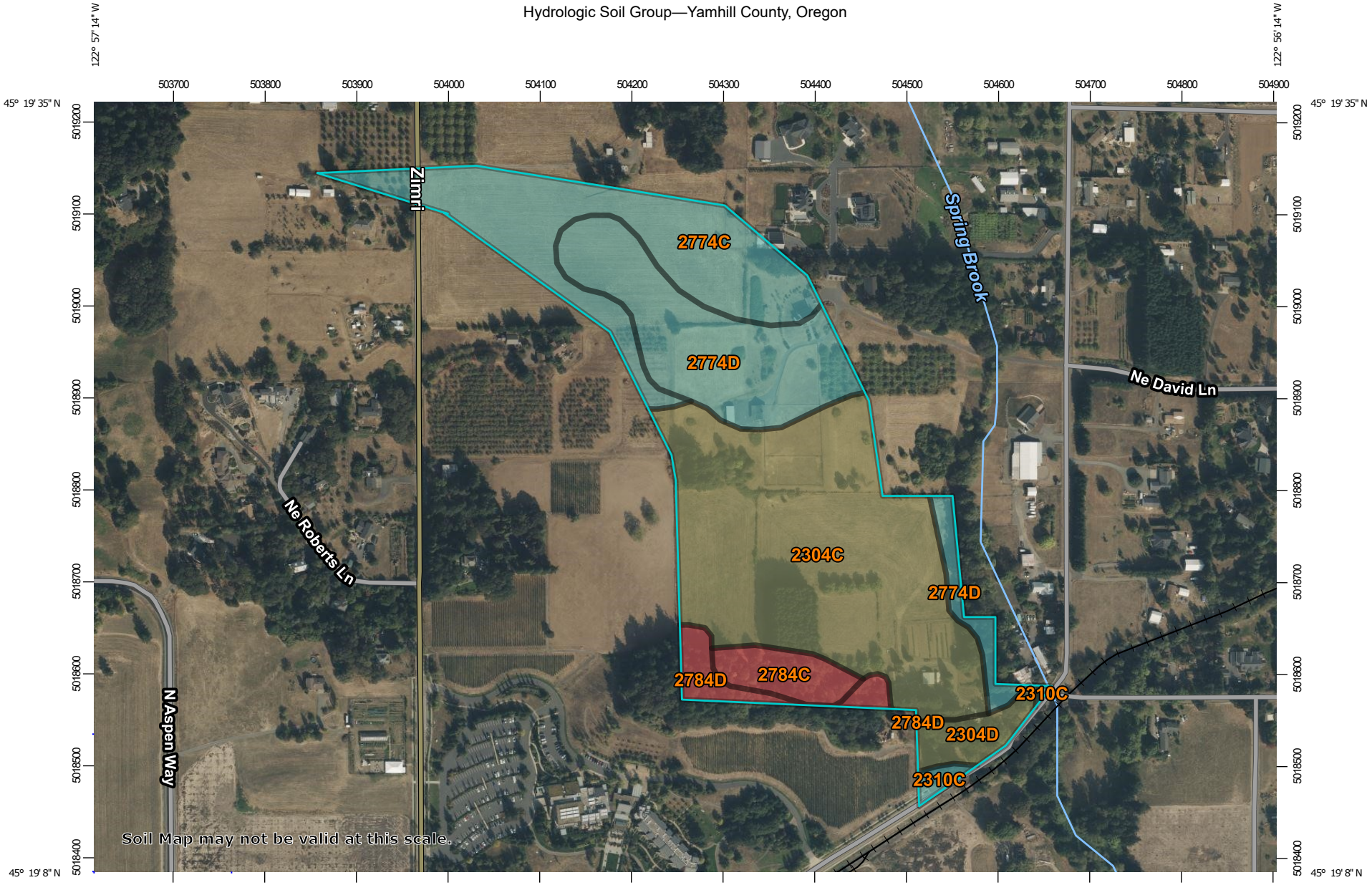
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



Map Scale: 1:5,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

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Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

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Survey Area Data: Version 12, Sep 8, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2304C	Carlton silt loam, 2 to 12 percent slopes	C/D	19.4	44.4%
2304D	Carlton silt loam, 12 to 20 percent slopes	C/D	1.5	3.4%
2310C	Woodburn silt loam, 3 to 12 percent slopes	C	0.4	0.9%
2774C	Saum silt loam, 2 to 12 percent slopes	C	9.9	22.7%
2774D	Saum silt loam, 12 to 20 percent slopes	C	9.3	21.3%
2784C	Witzel-Ritner complex, 2 to 12 percent slopes, stony	D	1.8	4.1%
2784D	Witzel-Ritner complex, 12 to 20 percent slopes, stony	D	1.4	3.1%
Totals for Area of Interest			**43.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

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Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

LEGEND

BASIN BOUNDARY

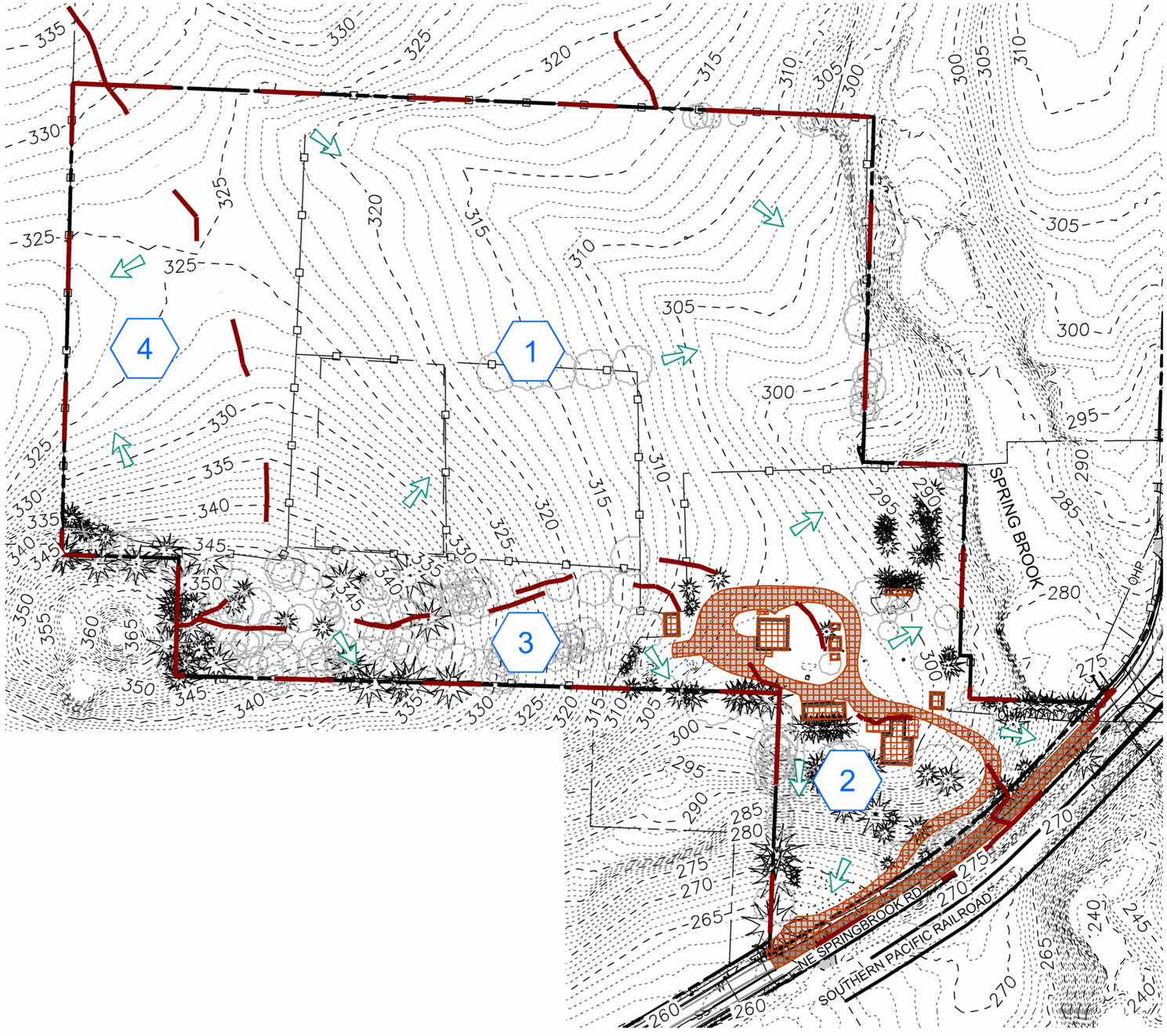
BASIN TAG

IMPERVIOUS AREA

SURFACE FLOW DIRECTION

EXISTING BASIN AREAS

Discharge Location	Imp sf	Per sf	Total sf	Imp ac	Per ac	Total ac
#1	12,164	562,615	574,779	0.28	12.92	13.20
#2	24,896	67,748	92,644	0.57	1.56	2.13
#3	3,710	60,603	64,313	0.09	1.39	1.48
#4	0	118,026	118,026	0.00	2.71	2.71
Total	40,770	808,992	849,762	0.94	18.57	19.51



N
W E
S

SCALE: 1" = 150'

0 150 FT

NE SPRINGBROOK RD SUBDIVISION

JUN 2024

ICHIJO USA CO., LTD.

EXISTING CONDITIONS

3J CONSULTING
CIVIL ENGINEERING . WATER RESOURCES . COMMUNITY PLANNING

LEGEND

BASIN BOUNDARY

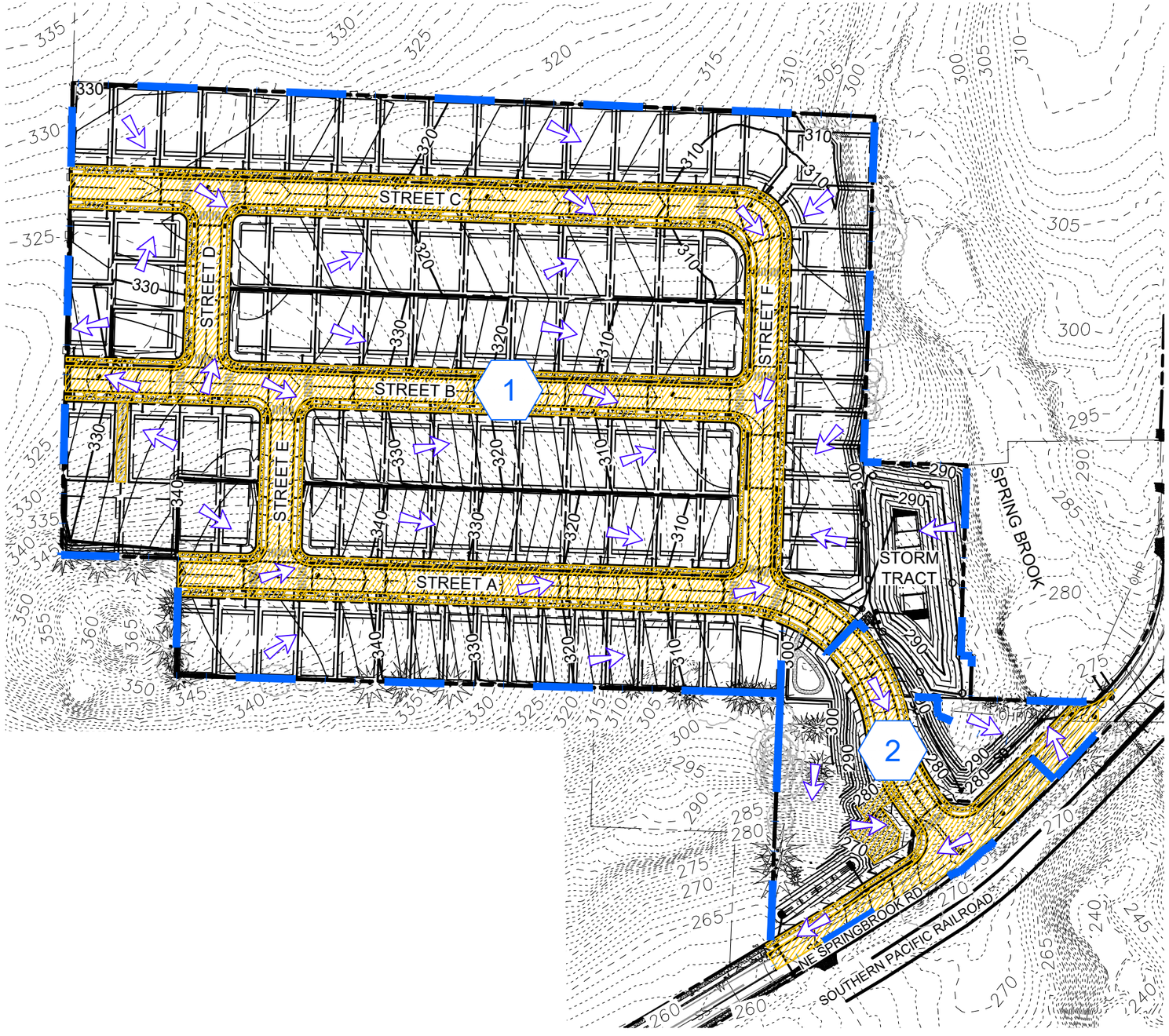
BASIN TAG

IMPERVIOUS AREA

SURFACE FLOW DIRECTION

POST-DEVELOPED BASIN AREAS

Discharge Location	Imp sf	Per sf	Total sf	Imp ac	Per ac	Total ac
#1	455,992	306,356	762,348	10.47	7.03	17.50
#2	29,281	58,133	87,414	0.67	1.33	2.01
#3	0	0	0	0.00	0.00	0.00
#4	0	0	0	0.00	0.00	0.00
Total	485,273	364,489	849,762	11.14	8.37	19.51



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SCALE: 1" = 150'

0 150 FT

NE SPRINGBROOK RD SUBDIVISION

NOV 2024

ICHIJO USA CO., LTD

POST-DEVELOPED CONDITIONS

3J CONSULTING
CIVIL ENGINEERING . WATER RESOURCES . COMMUNITY PLANNING

HYDROLOGIC ANALYSIS

Table 2-2a Runoff curve numbers for urban areas [1/]

Cover description: Cover type and hydrologic condition	Average percent impervious area [2/]	Curve numbers for hydrologic soil group: A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3/]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4/]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5/]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

For Onsite Basins

[1] Average runoff condition, and $I_a = 0.2S$.

[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Table 2-2c Runoff curve numbers for other agricultural lands [1/]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. [2/]	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. [3/]	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 [4/]	48	65	73
Woods—grass combination (orchard or tree farm). [5/]	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. [6/]	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 [4/]	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

For Upstream Basin

For Predeveloped

1 Average runoff condition, and $I_a = 0.2S$.

2 *Poor:* <50%) ground cover or heavily grazed with no mulch.
Fair: 50 to 75% ground cover and not heavily grazed.
Good: > 75% ground cover and lightly or only occasionally grazed.

3 *Poor:* <50% ground cover.
Fair: 50 to 75% ground cover.
Good: >75% ground cover.

4 Actual curve number is less than 30; use CN = 30 for runoff computations.

5 CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

6 *Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

PREDEVELOPED TIMES OF CONCENTRATION

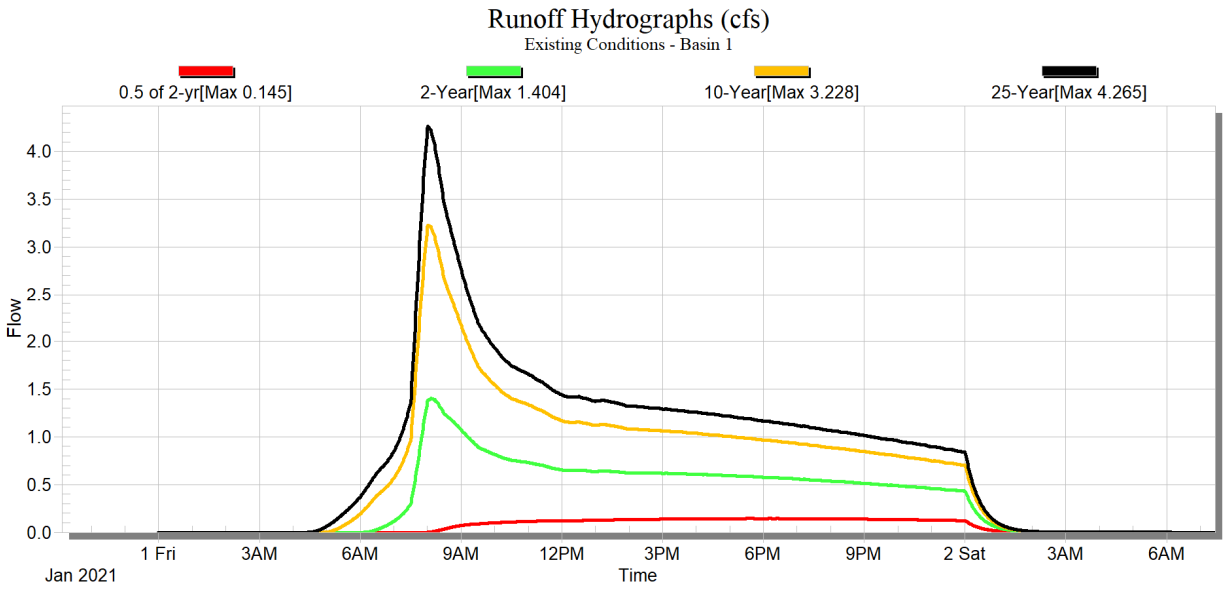
PROJECT NO. 23913	BY KEF	DATE 6/21/2024

SHEET FLOW			
INPUT	**Basin 1**	**Basin 2**	**Upstream Basin**
Surface Description	**Type 9 Woods (light_underbrush)**	**Type 9 Woods (light_underbrush)**	**Type 9 Woods (light_underbrush)**
Manning's "n"	**0.4**	**0.4**	**0.4**
Flow Length, L	**100** ft	**100** ft	**100** ft
2-Yr 24 Hour Rainfall, P_2	**2.5** in	**2.5** in	**2.5** in
Land Slope, s	**0.034** ft/ft	**0.085** ft/ft	**0.045** ft/ft
OUTPUT			
Travel Time	0.33 hr	0.23 hr	0.29 hr
SHALLOW CONCENTRATED FLOW			
INPUT	**VALUE**	**VALUE**	**VALUE**
Surface Description	**Unpaved**	**Unpaved**	**Unpaved**
Flow Length, L	**1172** ft	**1268** ft	**2045** ft
Watercourse Slope*, s	**0.029** ft/ft	**0.059** ft/ft	**0.066** ft/ft
OUTPUT			
Average Velocity, V	2.74 ft/s	3.93 ft/s	4.14 ft/s
Travel Time	0.119 hr	0.090 hr	0.137 hr
CHANNEL FLOW			
INPUT	**VALUE**	**VALUE**	**VALUE**
Cross Sectional Flow Area, a	**0** ft^2	**0** ft^2	**0** ft^2
Wetted Perimeter, P_w	**0** ft	**0** ft	**0** ft
Channel Slope, s	**0** ft/ft	**0** ft/ft	**0** ft/ft
Manning's "n"	**0.24**	**0.24**	**0.24**
Flow Length, L	**0** ft	**0** ft	**0** ft
OUTPUT			
Average Velocity	0.00 ft/s	0.00 ft/s	0.00 ft/s
Hydraulic Radius, r = a / P_w	1.00 ft	1.00 ft	1.00 ft
Travel Time	0.00 hr	0.00 hr	0.00 hr
Watershed or Subarea T_c =	**0.45 hr**	**0.32 hr**	**0.43 hr**
Watershed or Subarea T_c =	**27 minutes**	**19 minutes**	**26 minutes**

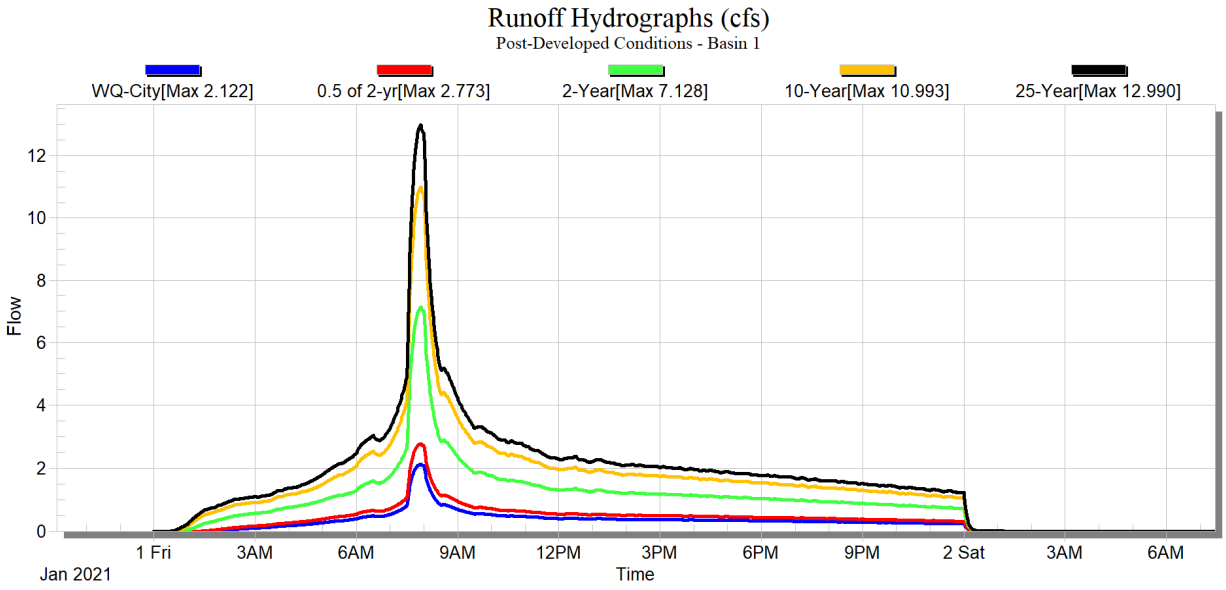
HYDROGRAPHS

Runoff Hydrographs

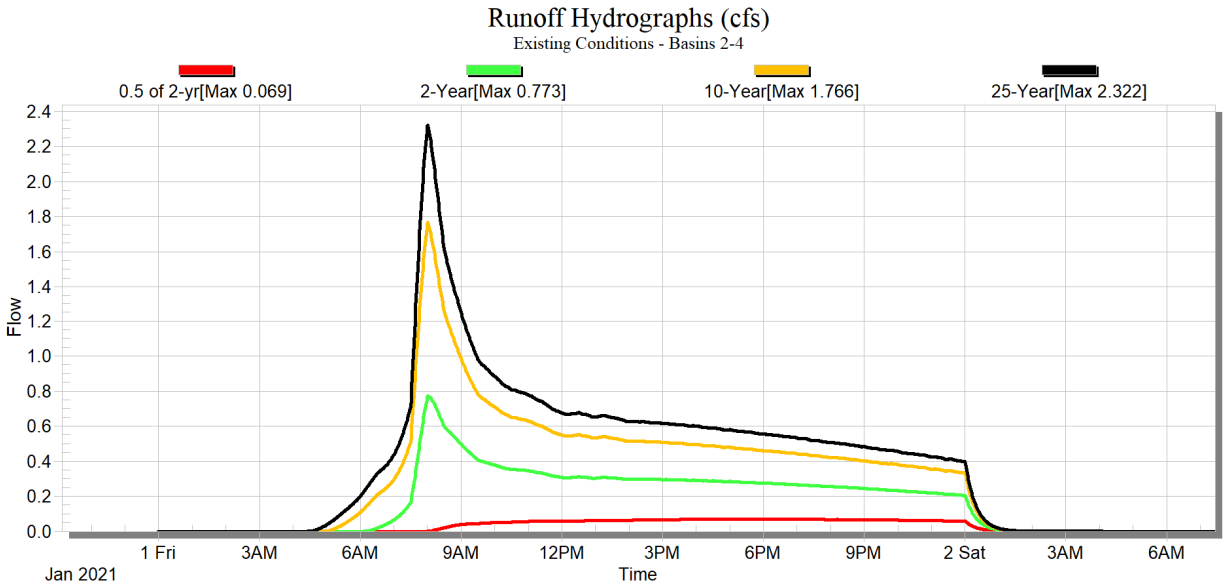
Basin 1 - Existing



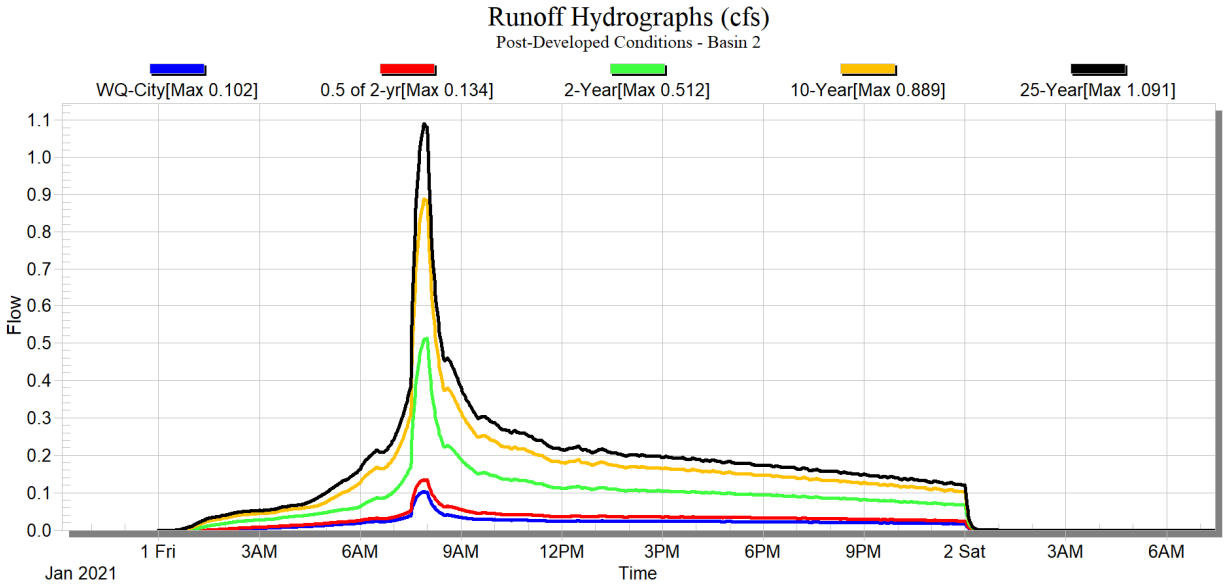
Basin 1 – Post-Developed



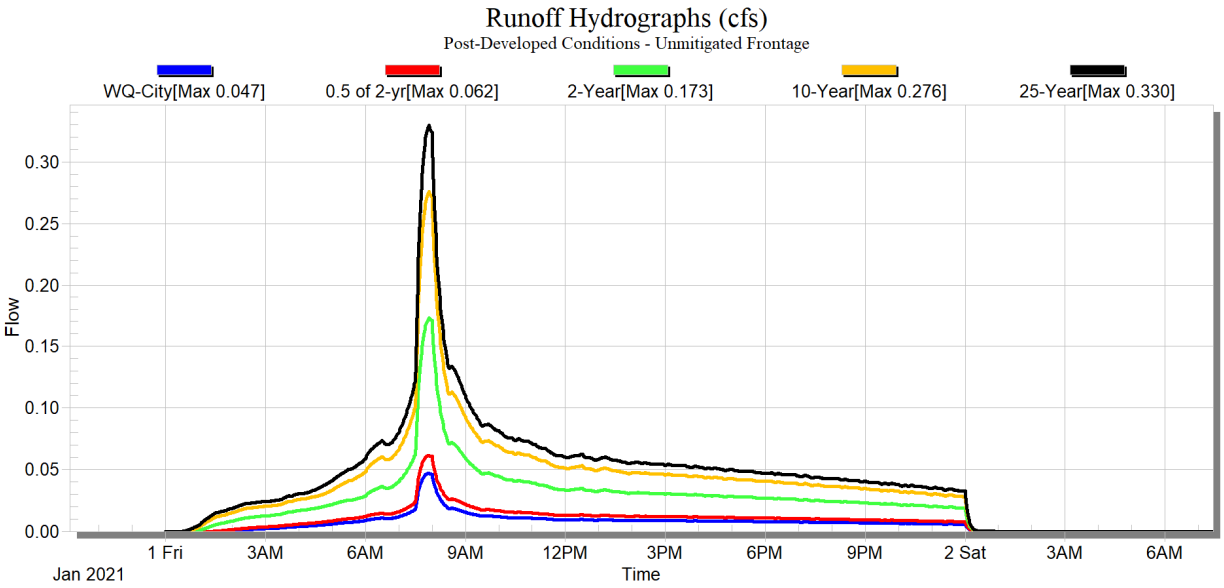
Basins 2-4 - Existing



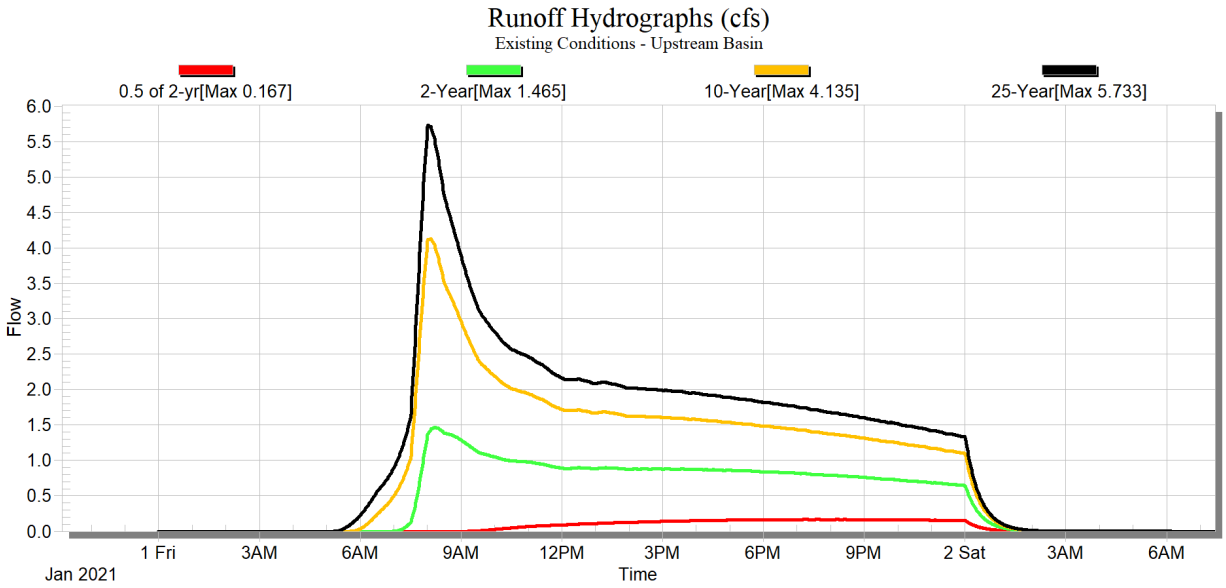
Basin 2 – Post-Developed



Unmitigated Frontage – Post-Developed



Upstream Basin – Existing



CALCULATIONS

SWALE SIZING

PROJECT NO. 23913	BY KEF	DATE Jun 2024

Basin 1 Swale Characteristics		
Input	Description	Value
Q	Peak design storm discharge	2.122 cfs
n	Roughness factor*	0.24
B	Swale width at base	25.0 ft
Z	Side Slopes X:1	4 H:1V
s	Slope of channel (ft/ft, 0.005 minimum)	0.005 ft/ft
t	Minimum hydraulic residence time	9 min
Water Quality Storm Hydraulic Results (Q)		
Input	Description	Value
Y	Normal depth (Max Depth = 0.50 ft)	*0.37* ft
P	Wetted perimeter	28.04 ft
A	Cross section flow area	9.77 ft^2
R	Hydraulic radius	0.35 ft
W	Width of water surface in Swale	27.95 ft
V	Velocity	0.22 ft/s
L	Length	*117.3* ft

**n values: Grass 0.24, Light turf 0.20, Heavy turf 0.35, Dense shrubbery 0.40, Range (natural) 0.13.*

25-yr Check Storm Hydraulics Results		
Input	Description	Value
Y	Normal depth	1.07 ft
P	Wetted perimeter	33.81 ft
A	Cross section flow area	31.26 ft^2
R	Hydraulic radius	0.92 ft
V	Velocity	0.42 ft/s
Q	Flow rate	12.99 cfs

SWALE SIZING

PROJECT NO. 23913	BY KEF	DATE Jun 2024

Basin 2 Swale Characteristics		
Input	Description	Value
Q	Peak design storm discharge	0.102 cfs
n	Roughness factor*	0.24
B	Swale width at base	2.0 ft
Z	Side Slopes X:1	4 H:1V
s	Slope of channel (ft/ft, 0.005 minimum)	0.005 ft/ft
t	Minimum hydraulic residence time	9 min
Water Quality Storm Hydraulic Results (Q)		
Input	Description	Value
Y	Normal depth (Max Depth = 0.50 ft)	*0.24* ft
P	Wetted perimeter	4.01 ft
A	Cross section flow area	0.73 ft^2
R	Hydraulic radius	0.18 ft
W	Width of water surface in Swale	3.95 ft
V	Velocity	0.14 ft/s
L	Length	*75.9* ft

**n values: Grass 0.24, Light turf 0.20, Heavy turf 0.35, Dense shrubbery 0.40, Range (natural) 0.13.*

25-yr Check Storm Hydraulics Results		
Input	Description	Value
Y	Normal depth	0.79 ft
P	Wetted perimeter	8.51 ft
A	Cross section flow area	4.07 ft^2
R	Hydraulic radius	0.48 ft
V	Velocity	0.27 ft/s
Q	Flow rate	1.09 cfs

CERTIFICATION OF INVESTIGATION

CERTIFICATION OF INVESTIGATION

Per Section 4.5.IV(c) of the City's Design Standards, a Certificate of Investigation is required when a downstream analysis has not been conducted for at least one-quarter mile stating the downstream system has been visually investigated and no observable downstream impacts to structures were observed.

The existing culverts that convey flow from Spring Brook to the south across N Springbrook Road and Southern Pacific Railroad, respectively, were visually investigated. Photographs of the culverts were taken that show open space for water to drain through. Although the entire stretch of one-quarter mile was not physically walked (due to private property restrictions), aerial photographs were obtained comparing August 2013 (pre-City of Newberg Stormwater Master Plan) and March 2024 (most current available from Google Earth) that show open space for water to drain through. There were no observable changes or obstructions in the downstream system.

It is proposed that the existing downstream system will continue to have capacity to convey the detained, post-developed flow from the proposed NE Springbrook Road Subdivision.

Kathleen Freeman, PE, CFM
Senior Water Resources Engineer

Photo 1: Photo of existing culvert that conveys flow from Spring Brook across N Springbrook Road to the south. Image taken **6/6/2024**.

Photo 2: Photo of existing culvert that conveys flow from Spring Brook across Southern Pacific Railroad to the south. Image taken **6/6/2024**.

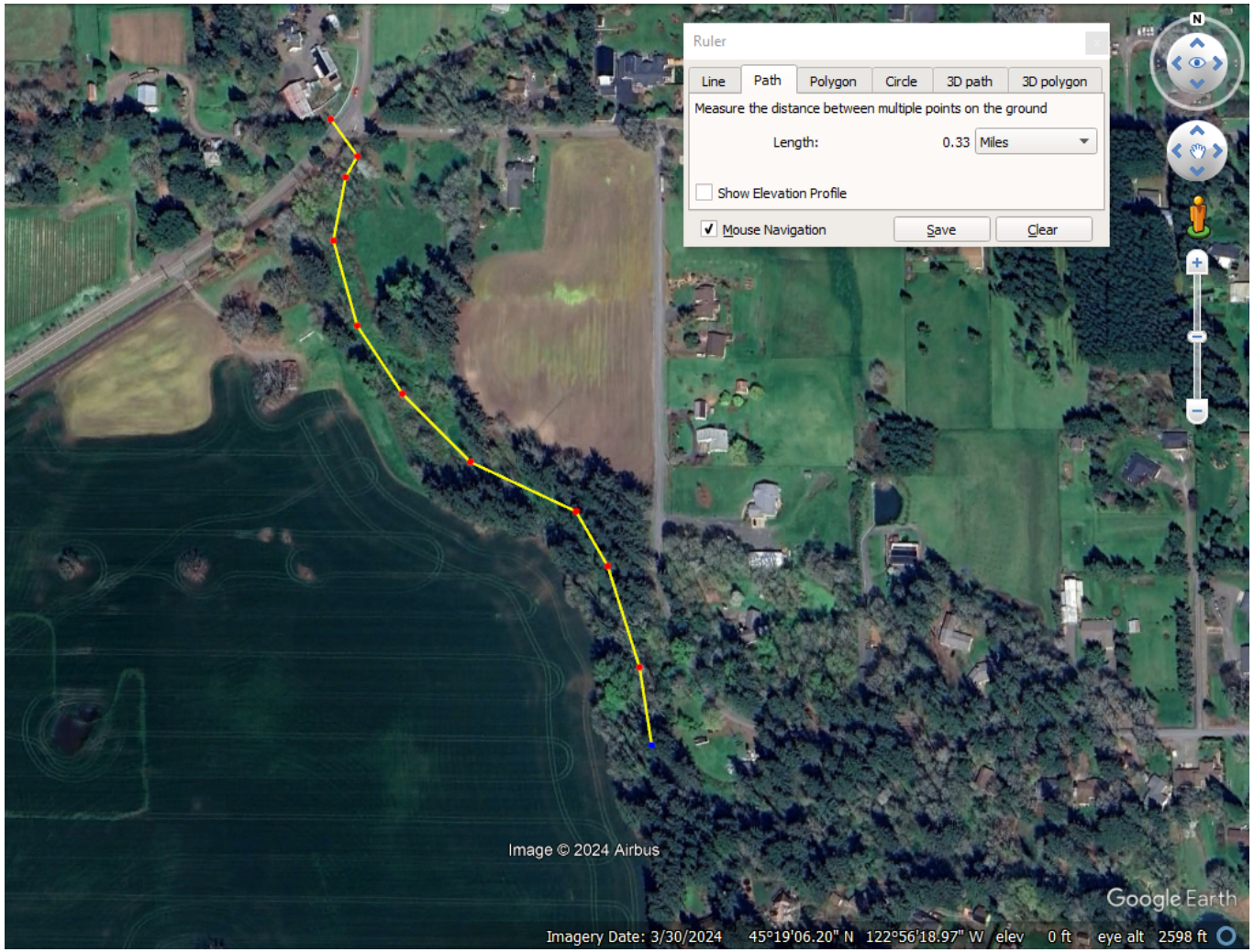


Photo 3: Aerial of downstream system approximately 0.33 miles downstream of Basin 1. Image taken **3/30/2024** at 2,598 ft above ground surface.

Photo 4: Image taken **7/22/2013** at 936 ft above ground surface.

Photo 5: Image taken **3/30/2024** at 936 ft above ground surface.

Photo 6: Image taken **7/22/2013** at 936 ft above ground surface.

Photo 7: Image taken **3/30/2024** at 936 ft above ground surface.

Photo 8: Image taken **7/22/2013** at 936 ft above ground surface.

Photo 9: Image taken **3/30/2024** at 936 ft above ground surface.

NEWBERG SPRINGBROOK SUBDIVISION

TRANSPORTATION IMPACT ANALYSIS (TIA)

JUNE 2024

PREPARED FOR

3J CONSULTING

3J CONSULTING

PREPARED BY

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INTRODUCTION

This study evaluates the transportation impacts associated with the proposed Springbrook Subdivision development located at 3809 NE N Springbrook Road in Newberg, Oregon. The proposed development consists of 104 single family houses on an approximately 19-acre site.

The proposed site plan proposes one access point onto N Springbrook Road with four additional "stub" roads that would lead into potential future developments. The project site is located immediately outside of the city limits but will be annexed into the City of Newberg.

The purpose of this transportation study is to conduct a traffic impact analysis (TIA), which will identify any potential mitigation measures that might be needed to offset transportation impacts that the proposed development may have on the nearby transportation network in the near-term.

TRAFFIC IMPACT ANALYSIS (TIA)

The TIA is focused on four (4) intersections which were selected for evaluation based on discussion with City staff. Important characteristics of the study area and proposed project are listed in Table 1. The intersections are listed and shown in Figure 1.

- N Springbrook Road and NE Benjamin Road
- N Springbrook Road and E Mountainview Drive
- N Springbrook Road and E Crestview Drive
- N Springbrook Road and Haworth Avenue

TABLE 1: STUDY AREA & DEVELOPMENT CHARACTERISTICS

STUDY AREA	
NUMBER OF STUDY INTERSECTIONS	Four intersections
ANALYSIS PERIODS	Weekday AM peak hour (one hour between 6am – 9am) Weekday PM peak hour (one hour between 3pm – 6pm)
PROPOSED DEVELOPMENT	
PROPOSED LAND USE	Single Family Detached Residential
PROJECT TRIPS	77 (19 in, 58 out) AM peak hour trips 103 (65 in, 38 out) PM peak hour trips
VEHICULAR ACCESS POINTS	One proposed access point from N Springbrook Road

FIGURE 1: STUDY AREA

EXISTING CONDITIONS

This chapter provides documentation of existing study area conditions, including the study area roadway network, pedestrian and bicycle facilities, and existing traffic volumes and operations.

STUDY AREA ROADWAY NETWORK

Key roadways and their existing characteristics in the study area are summarized in Table 2. The functional classifications for City of Newberg streets are provided in the City of Newberg Transportation System Plan (TSP).[1]

TABLE 2: STUDY AREA ROADWAY CHARACTERISTICS

ROADWAY	JURISDICTION	CLASSIFICATION	NUMBER OF LANES	POSTED SPEED	SIDEWALKS	BIKE LANES
N SPRINGBROOK ROAD	City of Newberg/ Yamhill County	Minor Arterial [a] (City)/ Major Collector (County)	2	35 mph [c]	Partial	Partial
E CRESTVIEW DRIVE	City of Newberg	Major Collector [b]	2	25 mph	Yes	Yes
E MOUNTAINVIEW DRIVE	City of Newberg	Minor Arterial	2	35 mph	Yes	Yes
NE BENJAMIN ROAD	Yamhill County	Local Road	2	40 mph	No	No
HAWORTH AVENUE	City of Newberg	Major Collector	2	25 mph	Yes	No

[a] N Springbrook Road is classified as a Major Collector north of E Mountainview Drive
[b] E Crestview Drive is classified as a Minor Collector east of N Springbrook Road
[c] Within the study area

Bicycle and Pedestrian Facilities

Bike lanes and sidewalks currently exist along N Springbrook Road with the exception of periodic bike lane gaps. Pedestrian and bicycle facilities drop off approximately 500 feet east of the intersection of N Springbrook Road/Allison Lane. Within the study area, both E Crestview Drive and E Mountainview Drive have sidewalks and bike lanes. NE Benjamin Road does not have any pedestrian or bicycle facilities.

The N Springbrook Road/E Crestview Drive roundabout intersection provides marked pedestrian crosswalks at all approaches. The N Springbrook Road/E Mountainview Drive unsignalized intersection includes a marked crosswalk on the north leg and the west leg. The N Springbrook Road/NE Benjamin Road unsignalized intersection does not provide any pedestrian facilities. The N

[1] Newberg Transportation System Plan, City of Newberg, March 2021

Springbrook Road/Haworth Avenue intersection provides pedestrian facilities on all four corners and has a bike lane on N Springbrook Road in the northbound direction.

Public Transit Service

Yamhill County provides weekday public transit service to Newberg. However, there are no transit stops within one mile of the project site.

EXISTING TRAFFIC VOLUMES

New intersection turning movement count data was collected during the weekday AM (6:00am – 9:00am) and PM peak period (3:00pm – 6:00pm) on Wednesday, April 17th, 2024, at the study intersections. No adjustment factors were applied to the peak hour volumes. See Appendix B for the traffic count data.

Figure 2 shows the existing AM and PM peak hour traffic volumes for the study intersections, along with the lane configurations and traffic control.

INTERSECTION PERFORMANCE MEASURES

Agency mobility standards often require intersections to meet level of service (LOS) intersection operation thresholds.

- The intersection LOS is similar to a "report card" rating based upon average vehicle delay. Level of service A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. Level of service D and E are progressively worse operating conditions. Level of service F represents conditions where average vehicle delay has become excessive, and demand has exceeded capacity. This condition is typically evident in long queues and delays.
- The volume-to-capacity (v/c) ratio represents the level of saturation of the intersection or individual movement. It is determined by dividing the peak hour traffic volume by the maximum hourly capacity of an intersection or turn movement. When the V/C ratio approaches 0.95, operations become unstable and small disruptions can cause the traffic flow to break down, resulting in the formation of excessive queues.

The City of Newberg requires study intersections on public streets to meet its minimum acceptable volume to capacity (v/c) standard of v/c < 0.90 and Level of Service threshold D during the peak hours.[2]

[2] Public Works Design and Construction Standards, City of Newberg, August 2015.

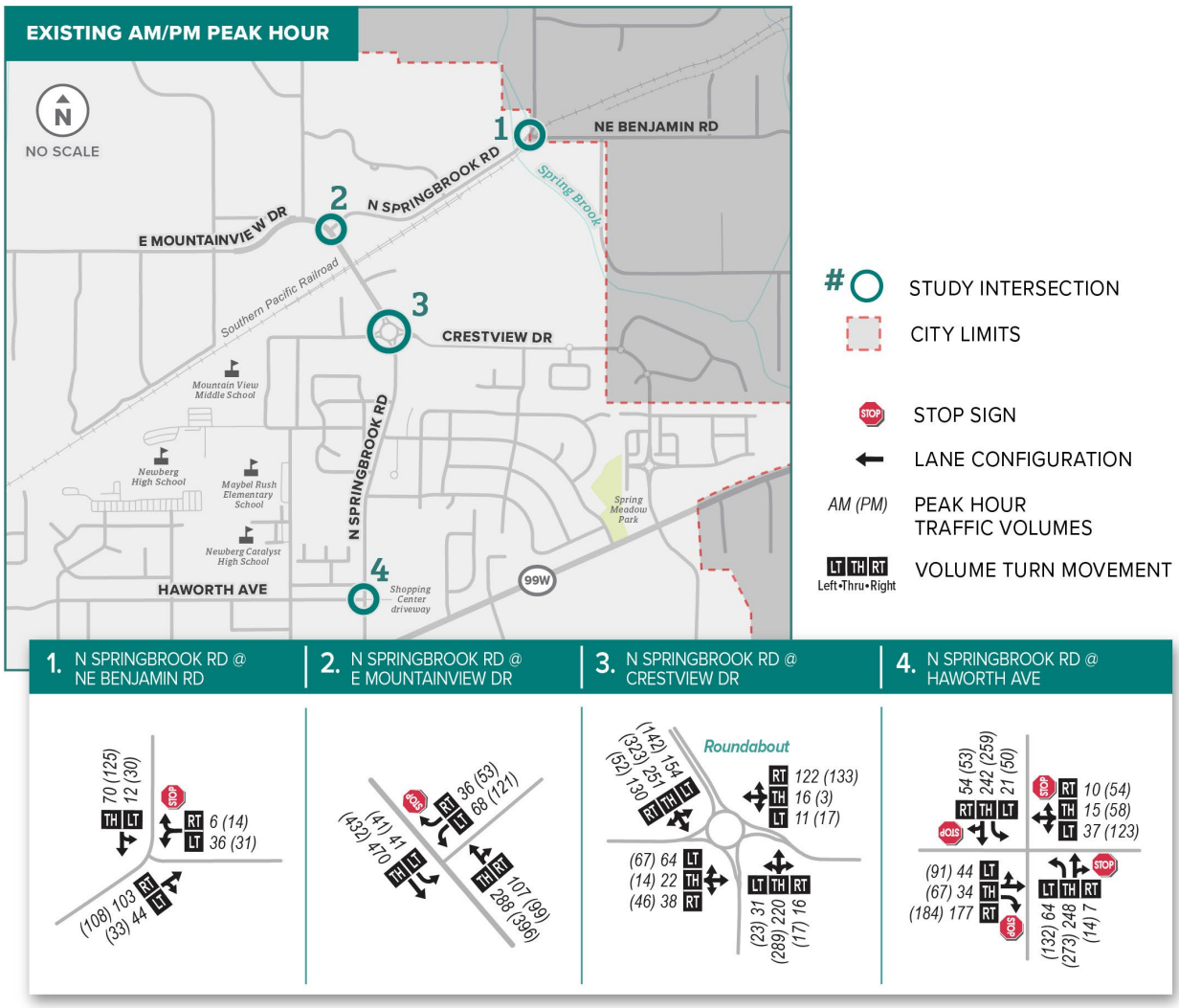


FIGURE 2: EXISTING AM (PM) PEAK HOUR TRAFFIC VOLUMES

EXISTING INTERSECTION OPERATIONS

Intersection operations were analyzed for the AM and PM peak hour at all study intersections for the existing conditions using Highway Capacity Manual (HCM) 6th Edition methodology.[3] The volume to capacity (v/c) ratio, delay, and level of service (LOS) of each study intersection are listed in Table 3: . As shown, the intersection of N Springbrook Road E Mountainview Drive does not meet the operating standard during the PM peak hour under existing conditions. See Appendix C for the Existing HCM Reports.

TABLE 3: EXISTING (2024) INTERSECTION OPERATIONS

[3] Highway Capacity Manual, 6th Edition, Transportation Research Board, 2017.

INTERSECTION	OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
		V/C	DELAY	LOS	V/C	DELAY	LOS
N SPRINGBROOK ROAD AND NE BENJAMIN ROAD	LOS D, v/c < 0.90	0.07	10.2	B	0.07	10.5	B
N SPRINGBROOK ROAD AND E MOUNTAINVIEW DRIVE	LOS D, v/c < 0.90	0.33	27.1	D	0.61	**42.9**	**E**
N SPRINGBROOK ROAD AND E CRESTVIEW DRIVE	LOS D, v/c < 0.90	0.52	7.4	A	0.46	7.0	A
N SPRINGBROOK ROAD AND HAWORTH AVENUE	LOS D, v/c < 0.90	0.56	16.5	C	0.76	31.9	D

STOP-CONTROLLED OR ROUNDABOUT INTERSECTION:
DELAY = CRITICAL MOVEMENT DELAY (SECS)
V/C = CRITICAL MOVEMENT VOLUME-TO-CAPACITY RATIO
LOS = CRITICAL LEVEL OF SERVICE

BOLD/HIGHLIGHTED = DOES NOT MEET OPERATING STANDARD

CRASH ANALYSIS

Crash data was obtained for the five most recent years of available data (2018-2022) at the study intersections. A total of 19 crashes were reported at the study intersections with 17 occurring at N Springbrook Road and Haworth Avenue and the other 2 occurring at N Springbrook Road and NE Benjamin Road.

Of the 17 crashes at N Springbrook Road and Haworth Avenue, 16 of them were angle or turning crashes and were a result of the driver failing to yield right-of-way or ignoring the stop sign. Of the 17 crashes at this intersection, 9 of them resulted in possible or minor injuries while the other 8 resulted in property damage. One crash involved a pedestrian who was struck in the crosswalk. As discussed later in this report, the City of Newberg plans to signalize this intersection which will significantly reduce turning and angle crashes.

The 2 crashes at N Springbrook Road and NE Benjamin Road were due to speeding and resulted in property damage only. Neither of these crashes involved a train. See Appendix G for the crash data.

PROJECT IMPACTS

This chapter reviews the impacts that the proposed development may have on the transportation system within the study area. This analysis includes trip generation, trip distribution, future traffic volume development, and operations analysis for the study intersections.

PROPOSED DEVELOPMENT

The proposed development would construct 104 single family homes and the site would be accessed via N Springbrook Rd.

FUTURE ANALYSIS SCENARIOS

Vehicle operating conditions were analyzed at the study intersections for the following traffic scenarios in the 2027 AM and PM peak hours. All future analysis scenarios assume the same traffic control as existing conditions.

The comparison of the following scenarios enables the assessment of project impacts:

- Existing + Background (No Build)
- Existing + Background + Project (Build)

TRIP GENERATION

Trip generation is the method used to estimate the number of vehicles added to site driveways and the adjacent roadway network by a development during a specified period (e.g., PM peak hour). The Institute of Transportation Engineers (ITE) publishes trip generation rates for the various land uses that can be applied to determine estimated traffic volumes.[4]

Table 4 shows the total number of trips that this development will produce. ITE code 210 (Single Family Housing) was used for all 104 units. The proposed project is estimated to generate a total of 77 AM peak hour trips (19 in, 58 out) and 103 PM peak hour trips (65 in, 38 out).

TABLE 4: PROJECT VEHICLE TRIP GENERATION

LAND USE (ITE CODE)	SIZE	AM PEAK TRIP			PM PEAK TRIP		
		IN	OUT	TOTAL	IN	OUT	TOTAL
SINGLE FAMILY DETACHED HOUSING (210)	104 UNITS	19	58	77	65	38	103

VEHICLE TRIP DISTRIBUTION

Vehicle trip distribution provides an estimation of where vehicles would be coming from and going to. It is given as a percentage at key gateways to the study area and is used to route project trips through the study intersections. **Figure 3** shows the trip distribution for the proposed site. The trip distribution for the passenger car trips was based on the ODOT Transportation Demand Model and confirmed by City staff.

The vehicle trips generated by the site expansion were distributed as follows:

- 40% south of the project site via N Springbrook Road OR99
- 20% west of the project site via E Crestview Drive

[4] Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

- 30% east of the project site via E Mountainview Drive
- 5% east of the project site via NE Benjamin Road
- 5% north of the project site via N Springbrook Road

FUTURE TRAFFIC VOLUMES

Traffic volumes were estimated at the study intersections for the two future analysis scenarios previously listed. A 2027 No Build scenario that does not account for traffic generated by the development, and a 2027 Build scenario that does account for traffic generated by the development.

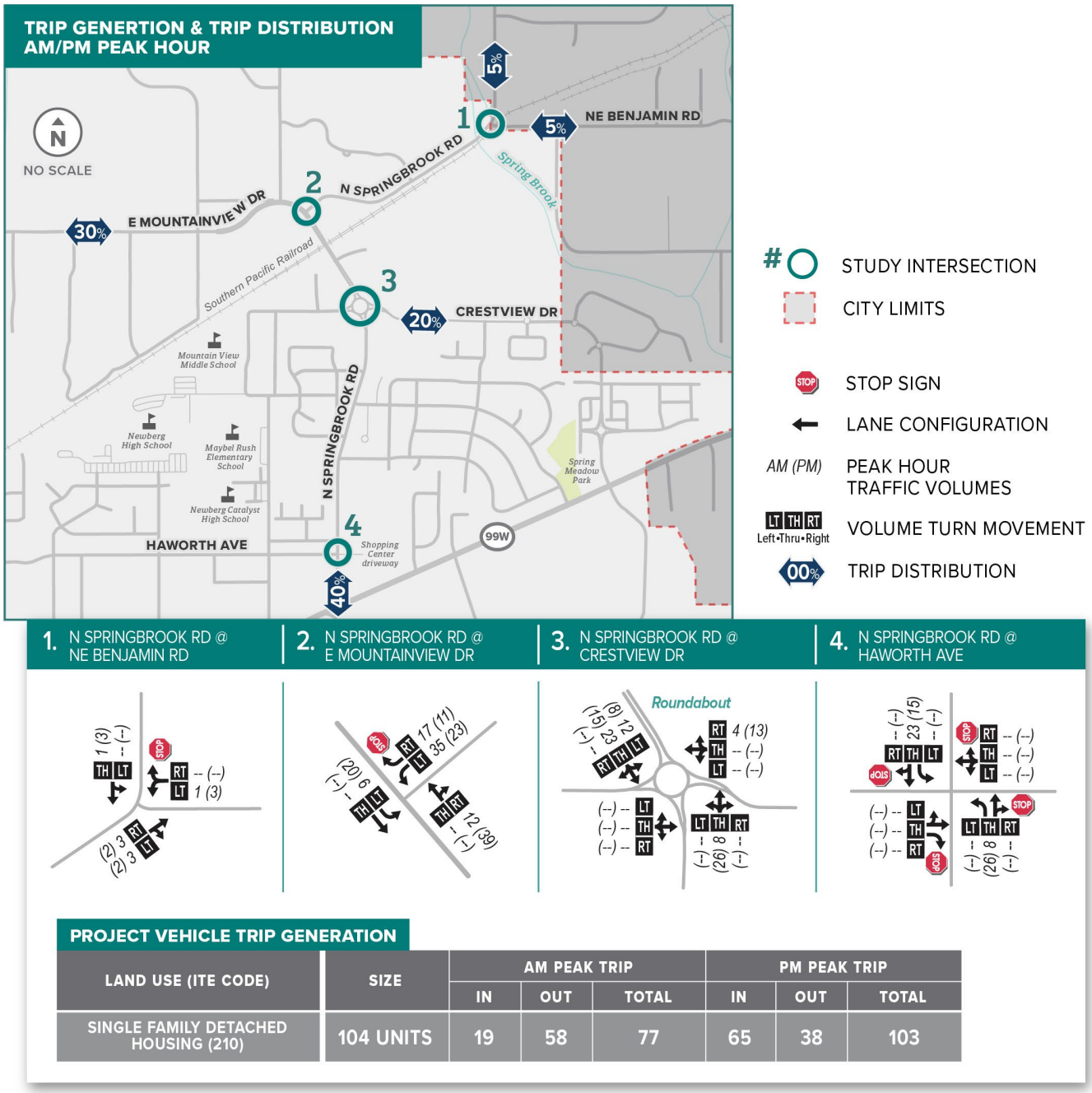
Background Growth Rate

The future 2027 No Build traffic volumes were estimated by applying a growth rate of 3% per year to the existing 2024 traffic volumes. This growth rate was calculated based on growth trends taken from the Newberg Travel Demand model, which is managed by the ODOT Transportation Planning Analysis Unit (TPAU). The background growth rate was also compared to the growth rate assumed in the recently approved Crestview Crossing traffic impact study (see In-Process Developments below) and was found to be higher. The Crestview Crossing traffic analysis assumed a rate of 2% on state highways, but assumed 0% growth on City streets. Because a 3% growth is an above average rate of growth and much higher than the 0% background growth assumed in the Crestview Crossing TIA, the 3% growth rate in this analysis is assumed to include the trips generated by the Collina Subdivision and remainder of the Crestview Crossing development.

Below is a summary of the City's current in-process developments in the vicinity of the Springbrook Subdivision.

- E Crestview Crossing PUD18-0001: This project includes the construction of approximately 248 single family homes, 51 multifamily homes, and commercial space. As of Spring 2024, the majority of the development has been constructed. The remaining construction includes 85 single-family homes. The remaining trips generated by this site were included in the 3% growth rate used to calculate the 2027 No Build traffic volumes.
- Collina at N Springbrook SUB322-002: This project includes the construction of approximately 403 single family homes by 2031 and is to be completed in multiple phases. The trips generated by this site were included in the 3% growth rate used to calculate the 2027 No Build traffic volumes.

Figure 4 shows the 2027 No Build AM and PM peak hour traffic volumes. Figure 5 shows the 2027 Build AM and PM peak hour traffic volumes.



PROJECT VEHICLE TRIP GENERATION

LAND USE (ITE CODE)	SIZE	AM PEAK TRIP			PM PEAK TRIP		
		IN	OUT	TOTAL	IN	OUT	TOTAL
SINGLE FAMILY DETACHED HOUSING (210)	104 UNITS	19	58	77	65	38	103

FIGURE 3: PROJECT TRIPS & TRIP DISTRIBUTION

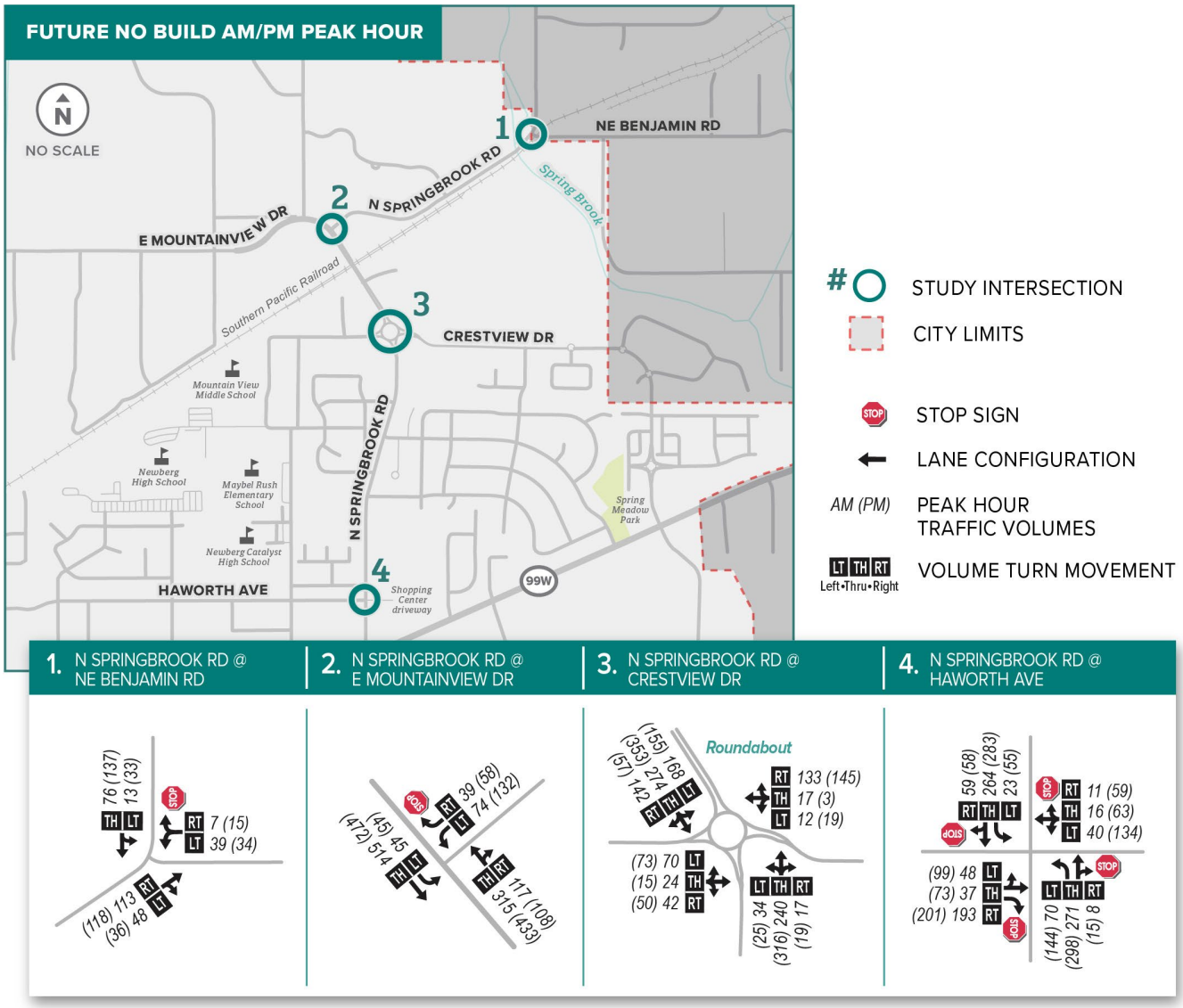


FIGURE 4: FUTURE NO BUILD AM(PM) TRAFFIC VOLUMES

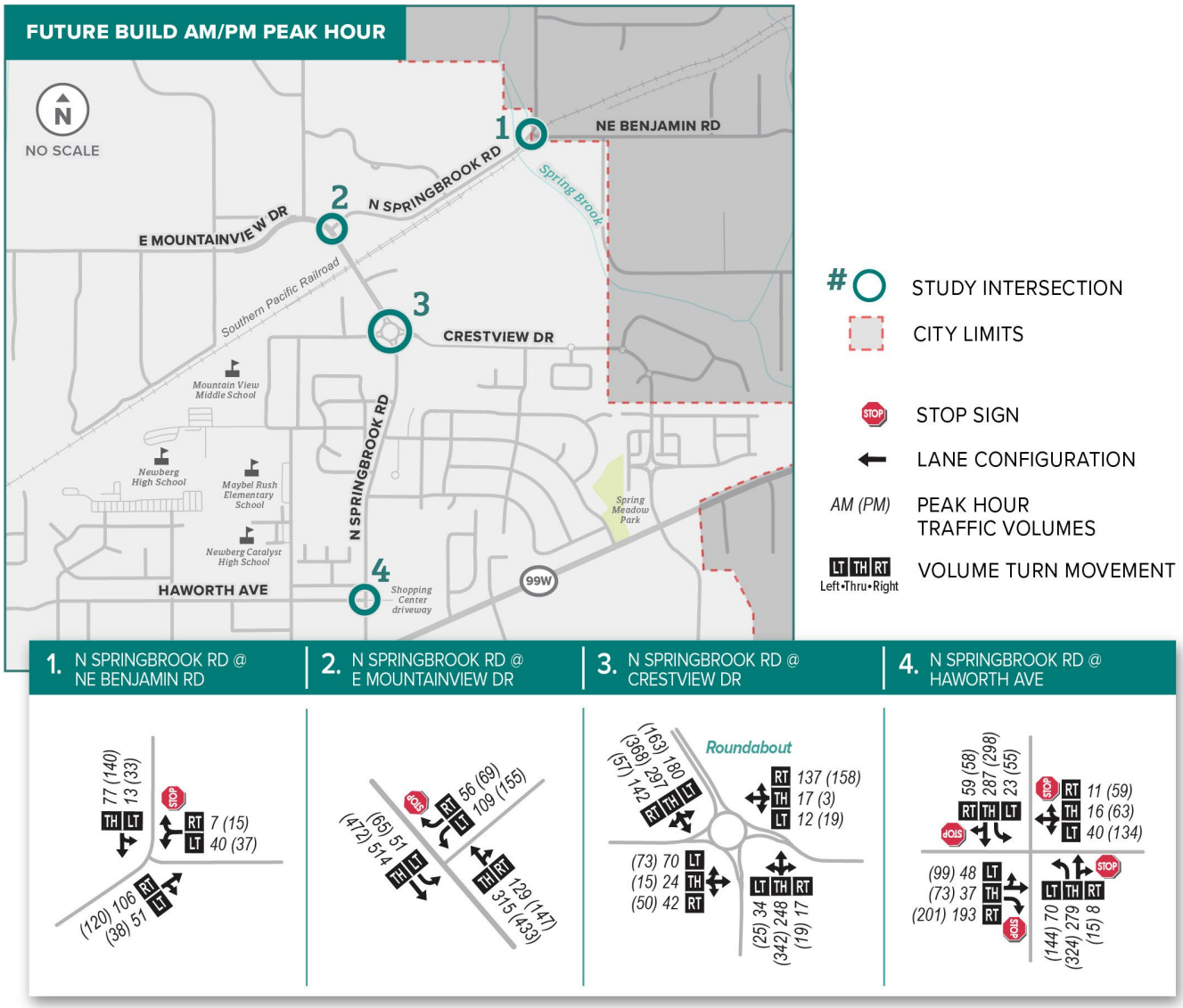


FIGURE 5: FUTURE BUILD AM(PM) TRAFFIC VOLUMES

FUTURE INTERSECTION OPERATIONS

Vehicle operations were analyzed for the AM and PM peak hour at all study intersections for the future scenarios using Highway Capacity Manual (HCM) 6th Edition methodology.[5] The delay, level of service (LOS), and volume to capacity (v/c) ratio of each study intersection are listed in Tables 5 and 6.

As shown, the intersection of N Springbrook Road and E Mountainview Drive continues to fail to meet the City's operating standard. N Springbrook Road and Haworth Road fails to operate at an acceptable LOS for both No Build and Build scenarios, while also exceeding the v/c ratio threshold during the Build scenario during the PM peak hours. See Appendices D and E for the 2027 No Build HCM Reports and the 2027 Build HCM Reports, respectively.

TABLE 5: FUTURE 2027 INTERSECTION OPERATIONS (NO BUILD)

INTERSECTION	OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
		V/C	DELAY	LOS	V/C	DELAY	LOS
N SPRINGBROOK ROAD AND NE BENJAMIN ROAD	LOS D, v/c < 0.90	0.08	10.4	B	0.08	10.8	B
N SPRINGBROOK ROAD AND E MOUNTAINVIEW DRIVE	LOS D, v/c < 0.90	0.42	33.8	D	0.77	**66.0**	**F**
N SPRINGBROOK ROAD AND E CRESTVIEW DRIVE	LOS D, v/c < 0.90	0.60	8.2	A	0.50	7.6	A
N SPRINGBROOK ROAD AND HAWORTH AVENUE	LOS D, v/c < 0.90	0.63	19.5	C	0.88	**49.3**	**E**

STOP-CONTROLLED OR ROUNDABOUT INTERSECTION:
DELAY = CRITICAL MOVEMENT DELAY (SECS)
V/C = CRITICAL MOVEMENT VOLUME-TO-CAPACITY RATIO
LOS = CRITICAL LEVEL OF SERVICE

BOLD/HIGHLIGHTED = DOES NOT MEET OPERATING STANDARD

[5] Highway Capacity Manual, 6th Edition, Transportation Research Board, 2017.

TABLE 6: FUTURE 2027 INTERSECTION OPERATIONS (BUILD)

INTERSECTION	OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
		V/C	DELAY	LOS	V/C	DELAY	LOS
N SPRINGBROOK ROAD AND NE BENJAMIN ROAD	LOS D, v/c < 0.90	0.08	10.4	B	0.09	10.9	B
N SPRINGBROOK ROAD AND E MOUNTAINVIEW DRIVE	LOS D, v/c < 0.90	0.63	49.0	E	**1.02**	**127.6**	**F**
N SPRINGBROOK ROAD AND E CRESTVIEW DRIVE	LOS D, v/c < 0.90	0.60	8.6	A	0.52	8.0	A
N SPRINGBROOK ROAD AND HAWORTH AVENUE	LOS D, v/c < 0.90	0.68	21.8	C	**0.93**	**60.7**	**F**

STOP-CONTROLLED OR ROUNDABOUT INTERSECTION:
DELAY = CRITICAL MOVEMENT DELAY (SECS)
V/C = CRITICAL MOVEMENT VOLUME-TO-CAPACITY RATIO
LOS = CRITICAL LEVEL OF SERVICE

BOLD/HIGHLIGHTED = DOES NOT MEET OPERATING STANDARD

IMPACTS TO RAILROAD CROSSING AT BENJAMIN ROAD

Railroad tracks owned by Pacific & Western Railroad (PNWR) intersect Benajmin Road just east of Springbrook Road. Based on data provided by ODOT, an average of two trains per day cross Benjamin Road at a speed of 15 mph and there have been no reported vehicle crashes involving trains at this crossing within the last five years of published crash data. The average daily traffic on Benjamin Road at the crossing is approximately 450 vehicles per day today.

Based on the analysis in this report, the proposed project will not create any safety and operational deficiencies at this railroad crossing. The proposed subdivision is estimated to increase traffic at the railroad crossing by 1 AM peak hour trip and 3 PM peak hour trips.

Additionally, no street improvements related to the subdivision will be constructed within 50' of the railroad crossing and therefore, improvements to the railroad crossing (e.g., railroad crossing panels) are not required based on information provided by ODOT.[6]

[6] Phone call between Colby DeGeros and Kristyn Peterson (ODOT Rail) on April 23, 2024.

RECOMMENDED TRANSPORTATION MITIGATIONS

Based on the intersection operations presented in this traffic study, the intersections of N Springbrook Road/E Mountainview Drive and N Springbrook Road/Haworth Avenue fail to meet City's required operating standards.

The following improvement projects at these two intersections are identified in the City's Transportation System Plan. The planned improvements are described below.

N Springbrook Road/E Mountainview Drive

In the City's Transportation System Plan[7], the intersection is anticipated to fail to meet the City's mobility standard by 2040 and a traffic signal is identified as the planned improvement (Project I08). Based on the analysis results in this TIS, the N Springbrook Road/E Mountainview Drive intersection is anticipated to fail to meet the City's operating standard during the PM peak hour by 2027 without the construction of the proposed subdivision.

Based on a preliminary signal warrant evaluation, the intersection is not anticipated to meet signal warrants by 2027. See Appendix H for the preliminary traffic signal warrant spreadsheet. In order to mitigate the impacts of the proposed subdivision development, the developer should pay their proportionate share cost of the planned traffic signal improvement. The calculated proportionate share percentage is 6.9% based on the calculations shown in Table 8.

N Springbrook Road/Haworth Avenue

In the City's Transportation System Plan[8], the N Springbrook Road/Haworth Avenue intersection was shown to fail to meet the City's mobility standard in 2015. The TSP identified a traffic signal and left turn lanes on Haworth as the planned improvement (Project I09). Based on the analysis results, the N Springbrook Road/Haworth Avenue intersection does currently (2024) fail to meet the City's operating standard during the PM peak hour without the construction of the proposed subdivision.

Based on a preliminary signal warrant evaluation, the intersection is anticipated to meet signal warrants by 2027. See Appendix H for the preliminary traffic signal warrant spreadsheet. In order to mitigate the impacts of the proposed subdivision development, the developer should pay their proportionate share cost of the planned traffic signal improvement. The calculated proportionate share percentage is 2.7% based on the calculations shown in Table 8.

Mitigated Intersection Operations

Table 7 below shows the intersection operations for the two intersections with the identified transportation improvements constructed under project build conditions. As shown, the two intersections will meet the City's operating standard with the planned improvements in place. See Appendix F for Build Mitigation Reports.

[7] Newberg Transportation System Plan, City of Newberg, March 2021

[8] Newberg Transportation System Plan, City of Newberg, March 2021

TABLE 7: FUTURE INTERSECTION OPERATIONS WITH IMPROVMENTS (BUILD)

INTERSECTION	OPERATING STANDARD	MITIGATION	AM PEAK HOUR			PM PEAK HOUR		
			V/C	DELAY	LOS	V/C	DELAY	LOS
N SPRINGBROOK RD/ E MOUNTAINVIEW RD	LOS D, v/c < 0.90	Traffic Signal	0.53	10.5	B	0.66	14.1	B
N SPRINGBROOK RD/ HAWORTH AVE	LOS D, v/c < 0.90	Traffic Signal	0.52	23.7	C	0.73	34.3	C

SIGNALIZED INTERSECTION:
v/c = Total Intersection Volume-to-Capacity Ratio
Delay = Average Intersection Delay (secs)
LOS = Level of Service

Proportionate Share of Mitigations

The developer's proportionate share of the planned improvements are discussed and calculated in this section. Table 8 shows the number of project vehicle trips as well as the total number of vehicles in 2027 (build year) for both intersections. Proportionate share is calculated based on the total number of project trips entering an intersection and the scenario in which the intersection initially fails to meet operating standards.

TABLE 8: PROPORTIONATE SHARE CALCULATIONS

INTERSECTION	AM PEAK HOUR			PM PEAK HOUR		
	PROJECT TRIPS	2027 VEHICLE VOLUMES	PROPOR-TIONATE SHARE	PROJECT TRIPS	2027 VEHICLE VOLUMES	PROPOR-TIONATE SHARE
SPRINGBROOK RD/ MOUNTAINVIEW RD	70	1,174	6.0%	93	1,341	**6.9%**
SPRINGBROOK RD/ HAWORTH AVE	31	1,071	2.9%	41	1,523	**2.7%**

SITE PLAN REVIEW

This section reviews the project site plan for consistency with the Newberg Transportation System Plan and other applicable transportation standards, including the Newberg Development Code and Newberg Public Works Standards. The purpose of this review is to help identify any major site plan design concerns that could impact the greater project goals and could necessitate overall site plan changes. The site plan is provided in Appendix A.

VEHICULAR SITE ACCESS

There is a new street connection (Street A) that will be the only access road to the proposed subdivision. The new street is shown on the conceptual site plan to connect to N Springbrook Road approximately 250 south of Benjamin Road.

SIGHT DISTANCE

N Springbrook Road at the intersection of the new street experiences significant horizontal and vertical curvature which could hinder sight distance for drivers entering and exiting the project site. Photos were taken near the location of the new street connection on Springbrook Road during a site visit (Figure 6). As shown, there is a hill with horizontal curvature that could potentially block the visibility of southbound traffic. There is no clear posted speed on this road, but a warning sign advising 30 mph is posted at either end of the horizontal curve here.

FIGURE 6: HILL BLOCKING SIGHT DISTANCE LOOKING NORTH ON SPRINGBROOK ROAD

According to Federal Highway Administration, an intersection for a minor road with a major road that has a design speed of 30 mph, a minimum of 335 feet should be visible in both directions.[9]

It is recommended that the new intersection street be located at the top of the hill and as close to the center of the horizontal curve as possible so as to maximize sight distance for both vehicles turning onto Springbrook Road and for vehicles making a northbound left turn off Springbrook Road. A sight distance evaluation should be conducted to verify that no signs, foliage, or other obstructions are hindering the necessary sight distance at the intersection of the new street and N Springbrook Road.

[9] FHWA Intersection Safety and Sight Distance

HALF-STREET IMPROVEMENTS

Because the project site is directly adjacent to N Springbrook Road (550 linear feet approximately), half-street improvements will be required along the site's frontage. The half-street improvements will need to be constructed to City of Newberg's cross section standards. Today, N Springbrook Road fronting the project site has 2 travel lanes and no bicycle or pedestrian facilities. Based on the City's standards, the half-street improvements are to include a bike lane, planting strip, and sidewalk. The sidewalks will provide a continuous pedestrian connection between the new subdivision and the existing pedestrian and bicycle facilities on N Springbrook Road, which end approximately 350 feet south of the new street connection.

ON-SITE CIRCULATION

The City's Developmental Code states that new developments shall be required to provide a circulation system that accommodates expected traffic on the site.[10] There are three east/west roadways within the project site that are connected by two north/south streets. Ingress/egress from the development will be located at the southeast corner of the project site. The proposed roadway network throughout the development is shown in the site plan.

[10] City of Newberg Development Code, Section 3.1.020P

SUMMARY

The key findings of the transportation impact analysis (TIA).

- The proposed project is a single-family residential development consisting of 104 single family detached houses located at 3809 NE N Springbrook Road in Newberg, Oregon.
- The proposed development is expected to generate 77 (19 in, 58 out) AM peak hour vehicle trips and 103 (65 in, 38 out) PM peak hour vehicle trips.
- Under Existing 2024 conditions, the N Springbrook Road and E Mountainview Drive intersection does not operate within the City's LOS standard during the PM peak hour.
- Under the 2027 No Build and Build conditions, the N Springbrook Road and E Mountainview Drive intersection and the N Springbrook Road and Haworth Avenue intersection do not operate within the City's standards during the PM peak hour.
- As a mitigation at the N Springbrook Road and E Mountainview Drive intersection and the N Springbrook Road and Haworth Avenue intersection, the developer should pay the City their proportionate share of cost of the future traffic signals to mitigate impacts from the proposed subdivision.
- There are no operational or safety deficiencies caused by the proposed subdivision to the PNWR railroad crossing on Benjamin Road. Therefore, no improvements to the railroad crossing are required.
- Half-street improvements on N Springbrook Road are required along the project site frontage (approximately 550 feet) consistent with the City's cross section standards for Major Collectors.
- There is significant horizontal and vertical roadway curvature along Springbrook Road near the new street connection, potentially limiting required sight distance (335 feet) for drivers entering and exiting the project site. It is recommended that the new street connection at Springbrook Road be located at the top of the hill and as close to the center of the horizontal curve as possible so as to maximize sight distance.
- A sight distance evaluation should be conducted to verify that no signs, foliage, or other obstructions are hindering sight distance at the intersection of the project site access and N Springbrook Road.

APPENDIX

APPENDIX A: SITE PLAN

APPENDIX B: TRAFFIC COUNT DATA

APPENDIX C: EXISTING HCM REPORTS

APPENDIX D: 2027 NO BUILD HCM REPORTS

APPENDIX E: 2027 BUILD HCM REPORTS

APPENDIX G: CRASH DATA

APPENDIX H: PRELIMINARY SIGNAL WARRANT SPREADSHEETS

APPENDIX A: SITE PLAN

3809 NE SPRINGBROOK ROAD, NEWBERG, OREGON, 97132

COUNTY: YAMHILL
PARCEL: 25902 ACCOUNT: R320902300
PARCEL SIZE: 18.76 ACRES (YAMHILL COUNTY TAX RECORDS)

CURRENT ZONING: AF-10 (YAMHILL COUNTY)

PROPOSED ZONING: R-1 AND R-3 (CITY OF NEWBERG)

REQUIRED SETBACKS:

R-1 ZONE	*R-3 ZONE*
FRONT: 15'	FRONT: 12'
GARAGE: 20'	GARAGE: 20'
SIDE: 5'	SIDE: 5'
REAR: 5'	REAR: 15'
CORNER SIDE: 15'	CORNER SIDE: 12'

DENSITY CALCULATIONS:
GROSS SITE AREA: ±830,311 SF (GIS SOURCE)
GROSS R3 ZONING AREA (10% MINIMUM REQUIRED) = ±83,031 SF
Per Newberg Municipal Code 15.250.030-A.1.

TRACTS A AND C ARE OPEN SPACE TRACTS TO BE OWNED AND MAINTAINED BY THE HOA.

TRACT B IS A STORMWATER FACILITY TRACT TO BE OWNED AND MAINTAINED BY THE CITY OF NEWBERG

PROPOSED R1 ZONE

PROPOSED R3 ZONE
±10,686 SF

THE PURPOSE OF THIS PRELIMINARY LAYOUT IS TO SHOW PLANNED LOT DIMENSIONS AND AREAS FOR PLANNING PURPOSES. THIS IS NOT A FINAL LAYOUT AND NOT TO BE USED FOR SURVEY PURPOSES. ALL DIMENSIONS ARE SUBJECT TO CHANGE.

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

DRAWING BY:	*SRC/JJS*
PREPARED FOR:	*ICHIJO*
PLAN ISSUE DATE:	*DECEMBER 26, 2023*
PLAN ISSUE PURPOSE:	*SCHEMATIC DESIGN*

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

SPRINGBROOK RESIDENTIAL SUBDIVISION
NEWBERG, OREGON

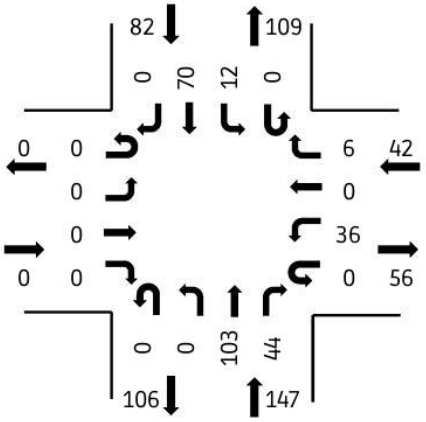
SITE PLAN OVERVIEW
SCHEMATIC LAYOUT 5

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\EXHIBITS-ANALYSIS_COORDINATION\2023-12-19 SITE OPTIONS\23913-SITE OPTION 5.DWG

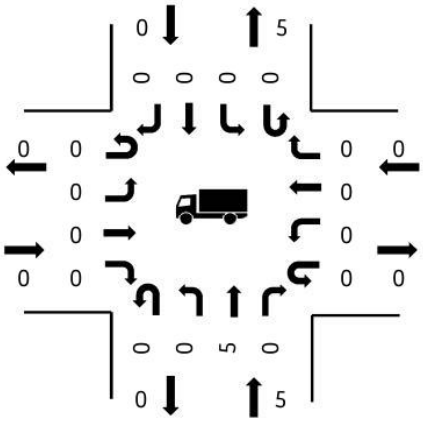
APPENDIX B: TRAFFIC COUNT DATA

Location: N Springbrook Rd & NE Benjamin Rd
Date: 2024-04-18
Peak Hour Start: 07:25 AM
Peak 15 Minute Start: 08:00 AM
Peak Hour Factor: 0.83

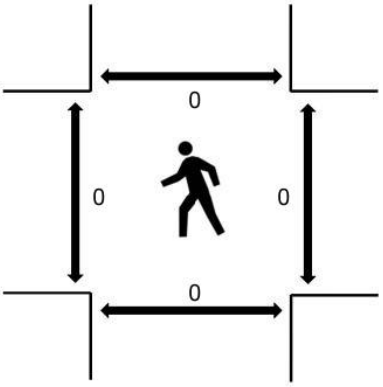
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	6	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0		
06:10:00 AM	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	19	
06:15:00 AM	0	2	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	22	
06:20:00 AM	0	1	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
06:25:00 AM	0	2	3	0	0	0	2	0	0	0	0	0	0	0	0	2	0	1	0	0	22	
06:30:00 AM	0	11	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	31	
06:35:00 AM	0	4	2	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	34	
06:40:00 AM	0	4	3	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	34	
06:45:00 AM	0	8	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	32	
06:50:00 AM	0	1	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	34	
06:55:00 AM	0	4	2	0	0	2	4	0	0	0	0	0	0	0	0	4	0	1	0	0	41	116
07:00:00 AM	0	5	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	2	0	0	39	124
07:05:00 AM	0	5	2	0	0	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	39	122
07:10:00 AM	0	6	1	0	0	1	5	0	0	0	0	0	0	0	0	2	0	0	0	0	37	134
07:15:00 AM	0	6	2	0	0	1	3	0	0	0	0	0	0	0	0	0	0	2	0	0	40	142
07:20:00 AM	0	11	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	46	153
07:25:00 AM	0	8	1	0	0	0	4	0	0	0	0	0	0	0	0	3	0	0	0	0	47	159
07:30:00 AM	0	8	2	0	0	0	10	0	0	0	0	0	0	0	0	5	0	0	0	0	58	169
07:35:00 AM	0	8	6	0	0	1	5	0	0	0	0	0	0	0	0	1	0	0	0	0	62	181
07:40:00 AM	0	9	7	0	0	1	6	0	0	0	0	0	0	0	0	1	0	0	0	0	70	195
07:45:00 AM	0	5	2	0	0	2	6	0	0	0	0	0	0	0	0	4	0	0	0	0	64	201
07:50:00 AM	0	6	4	0	0	1	7	0	0	0	0	0	0	0	0	3	0	1	0	0	65	212
07:55:00 AM	0	3	2	0	0	1	6	0	0	0	0	0	0	0	0	6	0	1	0	0	60	214
08:00:00 AM	0	9	7	0	0	1	8	0	0	0	0	0	0	0	0	4	0	1	0	0	71	233
08:05:00 AM	0	14	5	0	0	1	5	0	0	0	0	0	0	0	0	1	0	1	0	0	76	249
08:10:00 AM	0	12	5	0	0	1	4	0	0	0	0	0	0	0	0	1	0	2	0	0	82	259
08:15:00 AM	0	12	1	0	0	2	6	0	0	0	0	0	0	0	0	4	0	0	0	0	77	270
08:20:00 AM	0	9	2	0	0	1	3	0	0	0	0	0	0	0	0	3	0	0	0	0	68	271
08:25:00 AM	0	7	2	0	0	2	3	0	0	0	0	0	0	0	0	2	0	0	0	0	59	271
08:30:00 AM	0	4	1	0	0	2	6	0	0	0	0	0	0	0	0	1	0	0	0	0	48	260
08:35:00 AM	0	5	2	0	0	1	6	0	0	0	0	0	0	0	0	1	0	0	0	0	45	254
08:40:00 AM	0	5	4	0	0	3	2	0	0	0	0	0	0	0	0	2	0	0	0	0	45	246
08:45:00 AM	0	2	1	0	0	1	7	0	0	0	0	0	0	0	0	1	0	1	0	0	44	240
08:50:00 AM	0	5	2	0	0	0	9	0	0	0	0	0	0	0	0	4	0	2	0	0	51	240
08:55:00 AM	0	4	2	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	44	230

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	6	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:10:00 AM	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	18	
06:15:00 AM	0	2	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	21	
06:20:00 AM	0	1	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
06:25:00 AM	0	2	3	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	21	
06:30:00 AM	0	11	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	30	
06:35:00 AM	0	4	2	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	33	
06:40:00 AM	0	4	3	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	34	
06:45:00 AM	0	8	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	31	
06:50:00 AM	0	1	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	33	
06:55:00 AM	0	4	2	0	0	2	4	0	0	0	0	0	0	0	0	4	0	1	0	0	40	113
07:00:00 AM	0	5	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	37	119
07:05:00 AM	0	5	2	0	0	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	37	118
07:10:00 AM	0	6	1	0	0	1	5	0	0	0	0	0	0	0	0	2	0	0	0	0	35	130
07:15:00 AM	0	6	2	0	0	1	3	0	0	0	0	0	0	0	0	0	0	1	0	0	39	137
07:20:00 AM	0	11	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	45	148
07:25:00 AM	0	8	1	0	0	0	4	0	0	0	0	0	0	0	0	3	0	0	0	0	46	155
07:30:00 AM	0	8	2	0	0	0	10	0	0	0	0	0	0	0	0	5	0	0	0	0	58	165
07:35:00 AM	0	8	6	0	0	1	5	0	0	0	0	0	0	0	0	1	0	0	0	0	62	177
07:40:00 AM	0	9	7	0	0	1	6	0	0	0	0	0	0	0	0	1	0	0	0	0	70	191
07:45:00 AM	0	5	2	0	0	2	6	0	0	0	0	0	0	0	0	4	0	0	0	0	64	198
07:50:00 AM	0	3	4	0	0	1	7	0	0	0	0	0	0	0	0	3	0	1	0	0	62	206
07:55:00 AM	0	2	2	0	0	1	6	0	0	0	0	0	0	0	0	6	0	1	0	0	56	207
08:00:00 AM	0	9	7	0	0	1	8	0	0	0	0	0	0	0	0	4	0	1	0	0	67	228
08:05:00 AM	0	14	5	0	0	1	5	0	0	0	0	0	0	0	0	1	0	1	0	0	75	244
08:10:00 AM	0	12	5	0	0	1	4	0	0	0	0	0	0	0	0	1	0	2	0	0	82	254
08:15:00 AM	0	11	1	0	0	2	6	0	0	0	0	0	0	0	0	4	0	0	0	0	76	265
08:20:00 AM	0	9	2	0	0	1	3	0	0	0	0	0	0	0	0	3	0	0	0	0	67	266
08:25:00 AM	0	7	2	0	0	2	3	0	0	0	0	0	0	0	0	2	0	0	0	0	58	266
08:30:00 AM	0	4	1	0	0	2	6	0	0	0	0	0	0	0	0	1	0	0	0	0	48	255
08:35:00 AM	0	5	2	0	0	1	6	0	0	0	0	0	0	0	0	1	0	0	0	0	45	249
08:40:00 AM	0	5	4	0	0	3	2	0	0	0	0	0	0	0	0	2	0	0	0	0	45	241
08:45:00 AM	0	2	1	0	0	1	7	0	0	0	0	0	0	0	0	1	0	1	0	0	44	235
08:50:00 AM	0	5	2	0	0	0	9	0	0	0	0	0	0	0	0	4	0	2	0	0	51	238
08:55:00 AM	0	4	2	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	44	229

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
07:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	5
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:50:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6
07:55:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	7
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:15:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Bike Volumes

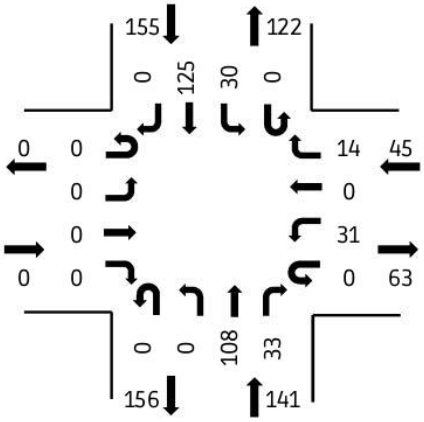
Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
06:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:05:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Pedestrian Volumes

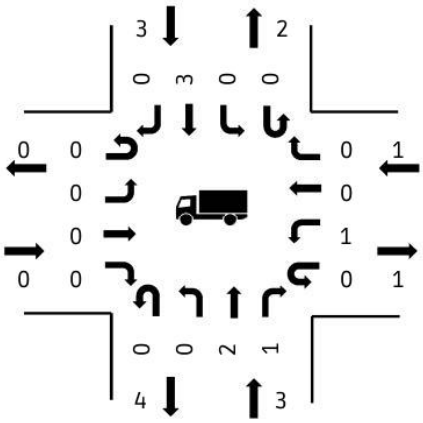
Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
06:00:00 AM	0	0	0	0		
06:05:00 AM	0	0	0	0		
06:10:00 AM	0	0	0	0	0	
06:15:00 AM	0	0	0	0	0	
06:20:00 AM	0	0	0	0	0	
06:25:00 AM	0	0	0	0	0	
06:30:00 AM	0	0	0	0	0	
06:35:00 AM	0	0	0	0	0	
06:40:00 AM	0	0	0	0	0	
06:45:00 AM	0	0	0	0	0	
06:50:00 AM	0	0	0	0	0	
06:55:00 AM	0	0	0	0	0	0
07:00:00 AM	0	0	0	0	0	0
07:05:00 AM	0	0	0	0	0	0
07:10:00 AM	0	0	0	0	0	0
07:15:00 AM	0	0	0	0	0	0
07:20:00 AM	0	0	0	0	0	0
07:25:00 AM	0	0	0	0	0	0
07:30:00 AM	0	0	0	0	0	0
07:35:00 AM	0	0	0	0	0	0
07:40:00 AM	0	0	0	0	0	0
07:45:00 AM	0	0	0	0	0	0
07:50:00 AM	0	0	0	0	0	0
07:55:00 AM	0	0	0	0	0	0
08:00:00 AM	0	0	0	0	0	0
08:05:00 AM	0	0	0	0	0	0
08:10:00 AM	0	0	0	0	0	0
08:15:00 AM	0	0	0	0	0	0
08:20:00 AM	0	0	0	0	0	0
08:25:00 AM	0	0	0	0	0	0
08:30:00 AM	0	0	0	0	0	0
08:35:00 AM	0	0	0	0	0	0
08:40:00 AM	0	0	0	0	0	0
08:45:00 AM	0	0	0	0	0	0
08:50:00 AM	0	0	0	0	0	0
08:55:00 AM	0	0	0	0	0	0

Location: N Springbrook Rd & NE Benjamin Rd
Date: 2024-04-17
Peak Hour Start: 03:20 PM
Peak 15 Minute Start: 03:55 PM
Peak Hour Factor: 0.91

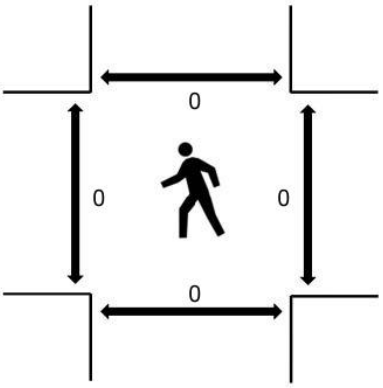
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	3	2	0	0	1	24	0	0	0	0	0	0	0	0	1	0	0	0	0		
03:05:00 PM	0	8	0	0	0	3	10	0	0	0	0	0	0	0	0	0	0	2	0	0		
03:10:00 PM	0	9	2	0	0	1	9	0	0	0	0	0	0	0	0	2	0	0	0	0	77	
03:15:00 PM	0	6	1	0	0	0	12	0	0	0	0	0	0	0	0	2	0	1	0	0	68	
03:20:00 PM	0	8	2	0	0	5	11	0	0	0	0	0	0	0	0	4	0	1	0	0	76	
03:25:00 PM	0	16	1	0	0	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	83	
03:30:00 PM	0	6	2	0	0	2	9	0	0	0	0	0	0	0	0	2	0	0	0	0	82	
03:35:00 PM	0	10	4	0	0	3	10	0	0	0	0	0	0	0	0	2	0	4	0	0	84	
03:40:00 PM	0	7	4	0	0	1	11	0	0	0	0	0	0	0	0	7	0	1	0	0	85	
03:45:00 PM	0	3	3	0	0	3	10	0	0	0	0	0	0	0	0	5	0	0	0	0	88	
03:50:00 PM	0	8	2	0	0	2	7	0	0	0	0	0	0	0	0	2	0	1	0	0	77	
03:55:00 PM	0	9	1	0	0	2	13	0	0	0	0	0	0	0	0	4	0	3	0	0	78	323
04:00:00 PM	0	12	4	0	0	2	7	0	0	0	0	0	0	0	0	2	0	3	0	0	84	322
04:05:00 PM	0	12	2	0	0	5	13	0	0	0	0	0	0	0	0	0	0	0	0	0	94	331
04:10:00 PM	0	9	5	0	0	0	13	0	0	0	0	0	0	0	0	1	0	0	0	0	90	336
04:15:00 PM	0	8	3	0	0	2	11	0	0	0	0	0	0	0	0	2	0	1	0	0	87	341
04:20:00 PM	0	14	1	0	0	0	8	0	0	0	0	0	0	0	0	2	0	2	0	0	82	337
04:25:00 PM	0	9	1	0	0	2	9	0	0	0	0	0	0	0	0	3	0	0	0	0	78	331
04:30:00 PM	0	14	3	0	0	2	5	0	0	0	0	0	0	0	0	4	0	0	0	0	79	338
04:35:00 PM	0	13	1	0	0	1	13	0	0	0	0	0	0	0	0	2	0	1	0	0	83	336
04:40:00 PM	0	6	3	0	0	1	13	0	0	0	0	0	0	0	0	3	0	0	0	0	85	331
04:45:00 PM	0	6	0	0	0	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	81	331
04:50:00 PM	0	9	3	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	80	339
04:55:00 PM	0	12	2	0	0	1	12	0	0	0	0	0	0	0	0	4	0	0	0	0	85	338
05:00:00 PM	0	6	0	0	0	1	7	0	0	0	0	0	0	0	0	2	0	3	0	0	80	327
05:05:00 PM	0	7	5	0	0	2	10	0	0	0	0	0	0	0	0	3	0	2	0	0	79	324
05:10:00 PM	0	8	1	0	0	0	12	0	0	0	0	0	0	0	0	2	0	0	0	0	71	319
05:15:00 PM	0	10	3	0	0	0	12	0	0	0	0	0	0	0	0	2	0	0	0	0	79	319
05:20:00 PM	0	15	2	0	0	0	10	0	0	0	0	0	0	0	0	4	0	2	0	0	83	325
05:25:00 PM	0	11	1	0	0	0	11	0	0	0	0	0	0	0	0	1	0	1	0	0	85	326
05:30:00 PM	0	1	2	0	0	1	10	0	0	0	0	0	0	0	0	1	0	0	0	0	73	313
05:35:00 PM	0	4	2	0	0	1	7	0	0	0	0	0	0	0	0	2	0	0	0	0	56	298
05:40:00 PM	0	7	2	0	0	0	18	0	0	0	0	0	0	0	0	7	0	2	0	0	67	308
05:45:00 PM	0	6	1	0	0	0	10	0	0	0	0	0	0	0	0	2	0	0	0	0	71	303
05:50:00 PM	0	11	0	0	0	1	7	0	0	0	0	0	0	0	0	2	0	1	0	0	77	295
05:55:00 PM	0	11	0	0	0	4	13	0	0	0	0	0	0	0	0	3	0	1	0	0	73	296

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	3	2	0	0	1	22	0	0	0	0	0	0	0	0	1	0	0	0	0		
03:05:00 PM	0	8	0	0	0	3	10	0	0	0	0	0	0	0	0	0	0	2	0	0		
03:10:00 PM	0	9	2	0	0	1	8	0	0	0	0	0	0	0	0	2	0	0	0	0	74	
03:15:00 PM	0	6	1	0	0	0	12	0	0	0	0	0	0	0	0	2	0	1	0	0	67	
03:20:00 PM	0	8	2	0	0	5	11	0	0	0	0	0	0	0	0	4	0	1	0	0	75	
03:25:00 PM	0	16	0	0	0	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	82	
03:30:00 PM	0	6	2	0	0	2	9	0	0	0	0	0	0	0	0	1	0	0	0	0	80	
03:35:00 PM	0	10	4	0	0	3	10	0	0	0	0	0	0	0	0	2	0	4	0	0	82	
03:40:00 PM	0	7	4	0	0	1	11	0	0	0	0	0	0	0	0	7	0	1	0	0	84	
03:45:00 PM	0	3	3	0	0	3	9	0	0	0	0	0	0	0	0	5	0	0	0	0	87	
03:50:00 PM	0	8	2	0	0	2	7	0	0	0	0	0	0	0	0	2	0	1	0	0	76	
03:55:00 PM	0	9	1	0	0	2	12	0	0	0	0	0	0	0	0	4	0	3	0	0	76	316
04:00:00 PM	0	12	4	0	0	2	7	0	0	0	0	0	0	0	0	2	0	3	0	0	83	317
04:05:00 PM	0	12	2	0	0	5	12	0	0	0	0	0	0	0	0	0	0	0	0	0	92	325
04:10:00 PM	0	8	5	0	0	0	13	0	0	0	0	0	0	0	0	1	0	0	0	0	88	330
04:15:00 PM	0	7	3	0	0	2	11	0	0	0	0	0	0	0	0	2	0	1	0	0	84	334
04:20:00 PM	0	14	1	0	0	0	8	0	0	0	0	0	0	0	0	2	0	2	0	0	80	330
04:25:00 PM	0	9	1	0	0	2	9	0	0	0	0	0	0	0	0	3	0	0	0	0	77	325
04:30:00 PM	0	14	3	0	0	2	5	0	0	0	0	0	0	0	0	4	0	0	0	0	79	333
04:35:00 PM	0	12	1	0	0	1	13	0	0	0	0	0	0	0	0	2	0	1	0	0	82	330
04:40:00 PM	0	6	3	0	0	1	13	0	0	0	0	0	0	0	0	3	0	0	0	0	84	325
04:45:00 PM	0	6	0	0	0	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	80	326
04:50:00 PM	0	8	3	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	79	333
04:55:00 PM	0	11	2	0	0	1	12	0	0	0	0	0	0	0	0	4	0	0	0	0	83	332
05:00:00 PM	0	6	0	0	0	1	7	0	0	0	0	0	0	0	0	2	0	3	0	0	78	321
05:05:00 PM	0	7	5	0	0	2	10	0	0	0	0	0	0	0	0	3	0	2	0	0	78	319
05:10:00 PM	0	8	1	0	0	0	12	0	0	0	0	0	0	0	0	2	0	0	0	0	71	315
05:15:00 PM	0	10	3	0	0	0	12	0	0	0	0	0	0	0	0	2	0	0	0	0	79	316
05:20:00 PM	0	15	2	0	0	0	10	0	0	0	0	0	0	0	0	3	0	2	0	0	82	321
05:25:00 PM	0	11	1	0	0	0	11	0	0	0	0	0	0	0	0	1	0	1	0	0	84	322
05:30:00 PM	0	1	2	0	0	1	10	0	0	0	0	0	0	0	0	1	0	0	0	0	72	309
05:35:00 PM	0	4	2	0	0	1	7	0	0	0	0	0	0	0	0	2	0	0	0	0	56	295
05:40:00 PM	0	7	2	0	0	0	17	0	0	0	0	0	0	0	0	7	0	2	0	0	66	304
05:45:00 PM	0	6	1	0	0	0	10	0	0	0	0	0	0	0	0	2	0	0	0	0	70	299
05:50:00 PM	0	11	0	0	0	1	7	0	0	0	0	0	0	0	0	2	0	1	0	0	76	292
05:55:00 PM	0	11	0	0	0	4	13	0	0	0	0	0	0	0	0	3	0	1	0	0	73	294

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:10:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
03:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:25:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
03:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:55:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
04:05:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
04:10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
04:15:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
04:35:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
04:50:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
04:55:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:40:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Bike Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (NE Benjamin Rd)					WB (NE Benjamin Rd)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

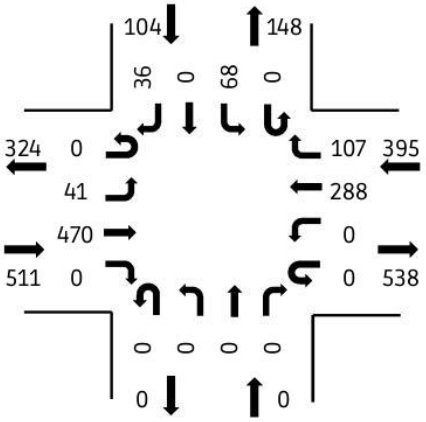
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
03:00:00 PM	0	0	0	1		
03:05:00 PM	0	0	0	0		
03:10:00 PM	0	0	0	0	1	
03:15:00 PM	0	0	0	0	0	
03:20:00 PM	0	0	0	0	0	
03:25:00 PM	0	0	0	0	0	
03:30:00 PM	0	0	0	0	0	
03:35:00 PM	0	0	0	0	0	
03:40:00 PM	0	0	0	0	0	
03:45:00 PM	0	0	0	0	0	
03:50:00 PM	0	0	0	0	0	
03:55:00 PM	0	0	0	0	0	1
04:00:00 PM	0	0	0	0	0	0
04:05:00 PM	0	0	0	0	0	0
04:10:00 PM	0	0	0	0	0	0
04:15:00 PM	0	0	0	0	0	0
04:20:00 PM	0	0	0	0	0	0
04:25:00 PM	0	0	0	0	0	0
04:30:00 PM	0	0	0	0	0	0
04:35:00 PM	0	0	0	0	0	0
04:40:00 PM	0	0	0	0	0	0
04:45:00 PM	0	0	0	0	0	0
04:50:00 PM	0	0	0	0	0	0
04:55:00 PM	0	0	0	0	0	0
05:00:00 PM	0	0	0	0	0	0
05:05:00 PM	0	0	0	0	0	0
05:10:00 PM	0	0	0	0	0	0
05:15:00 PM	0	0	0	0	0	0
05:20:00 PM	0	0	0	0	0	0
05:25:00 PM	0	0	0	0	0	0
05:30:00 PM	0	0	0	0	0	0
05:35:00 PM	0	0	0	0	0	0
05:40:00 PM	0	0	0	0	0	0
05:45:00 PM	0	0	0	0	0	0
05:50:00 PM	0	0	0	0	0	0
05:55:00 PM	0	0	0	0	0	0

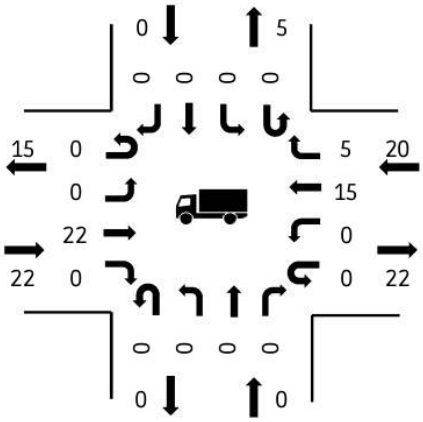
RallyTraffic

Location: N Springbrook Rd & E Mountain View
Date: 2024-04-18
Peak Hour Start: 07:25 AM
Peak 15 Minute Start: 07:55 AM
Peak Hour Factor: 0.85

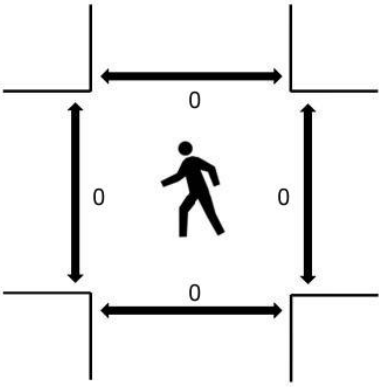
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	2	0	0	0	0	0	10	0	0	0	0	3	1	0	0		
06:05:00 AM	0	0	0	0	0	1	0	1	0	0	5	21	0	0	0	0	5	6	0	0		
06:10:00 AM	0	0	0	0	0	1	0	0	0	0	1	12	0	0	0	0	5	1	0	0	75	
06:15:00 AM	0	0	0	0	0	2	0	0	0	0	1	20	0	0	0	0	8	2	0	0	92	
06:20:00 AM	0	0	0	0	0	0	0	2	0	0	1	11	0	0	0	0	8	2	0	0	77	
06:25:00 AM	0	0	0	0	0	3	0	1	0	0	3	17	0	0	0	0	12	5	0	0	98	
06:30:00 AM	0	0	0	0	0	1	0	0	0	0	3	18	0	0	0	0	10	7	0	0	104	
06:35:00 AM	0	0	0	0	0	1	0	1	0	0	3	13	0	0	0	0	13	5	0	0	116	
06:40:00 AM	0	0	0	0	0	1	0	0	0	0	3	26	0	0	0	0	12	7	0	0	124	
06:45:00 AM	0	0	0	0	0	1	0	1	0	0	1	20	0	0	0	0	10	7	0	0	125	
06:50:00 AM	0	0	0	0	0	6	0	2	0	0	1	24	0	0	0	0	20	1	0	0	143	
06:55:00 AM	0	0	0	0	0	4	0	5	0	0	3	26	0	0	0	0	13	4	0	0	149	446
07:00:00 AM	0	0	0	0	0	1	0	0	0	0	2	19	0	0	0	0	18	3	0	0	152	473
07:05:00 AM	0	0	0	0	0	2	0	1	0	0	2	26	0	0	0	0	17	8	0	0	154	490
07:10:00 AM	0	0	0	0	0	3	0	2	0	0	1	36	0	0	0	0	15	4	0	0	160	531
07:15:00 AM	0	0	0	0	0	5	0	0	0	0	3	25	0	0	0	0	14	8	0	0	172	553
07:20:00 AM	0	0	0	0	0	1	0	2	0	0	2	27	0	0	0	0	20	9	0	0	177	590
07:25:00 AM	0	0	0	0	0	4	0	0	0	0	1	35	0	0	0	0	14	7	0	0	177	610
07:30:00 AM	0	0	0	0	0	11	0	2	0	0	4	41	0	0	0	0	14	9	0	0	203	652
07:35:00 AM	0	0	0	0	0	8	0	1	0	0	5	41	0	0	0	0	17	8	0	0	222	696
07:40:00 AM	0	0	0	0	0	3	0	4	0	0	4	35	0	0	0	0	30	12	0	0	249	735
07:45:00 AM	0	0	0	0	0	6	0	4	0	0	4	29	0	0	0	0	22	5	0	0	238	765
07:50:00 AM	0	0	0	0	0	6	0	4	0	0	2	51	0	0	0	0	27	4	0	0	252	805
07:55:00 AM	0	0	0	0	0	8	0	5	0	0	2	44	0	0	0	0	27	5	0	0	255	841
08:00:00 AM	0	0	0	0	0	6	0	4	0	0	4	46	0	0	0	0	28	14	0	0	287	900
08:05:00 AM	0	0	0	0	0	2	0	3	0	0	8	43	0	0	0	0	35	13	0	0	297	948
08:10:00 AM	0	0	0	0	0	5	0	2	0	0	4	31	0	0	0	0	32	14	0	0	294	975
08:15:00 AM	0	0	0	0	0	6	0	3	0	0	2	37	0	0	0	0	22	7	0	0	269	997
08:20:00 AM	0	0	0	0	0	3	0	4	0	0	1	37	0	0	0	0	20	9	0	0	239	1010
08:25:00 AM	0	0	0	0	0	3	0	2	0	0	2	25	0	0	0	0	19	6	0	0	208	1006
08:30:00 AM	0	0	0	0	0	4	0	2	0	0	2	21	0	0	0	0	12	3	0	0	175	969
08:35:00 AM	0	0	0	0	0	6	0	1	0	0	1	18	0	0	0	0	15	7	0	0	149	937
08:40:00 AM	0	0	0	0	0	2	0	3	0	0	4	19	0	0	0	0	11	6	0	0	137	894
08:45:00 AM	0	0	0	0	0	7	0	2	0	0	2	28	0	0	0	0	15	3	0	0	150	881
08:50:00 AM	0	0	0	0	0	6	0	3	0	0	1	24	0	0	0	0	18	4	0	0	158	843
08:55:00 AM	0	0	0	0	0	3	0	2	0	0	4	22	0	0	0	0	17	3	0	0	164	803

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	2	0	0	0	0	0	9	0	0	0	0	3	1	0	0		
06:05:00 AM	0	0	0	0	0	1	0	1	0	0	5	21	0	0	0	0	5	6	0	0		
06:10:00 AM	0	0	0	0	0	1	0	0	0	0	1	12	0	0	0	0	5	1	0	0	74	
06:15:00 AM	0	0	0	0	0	2	0	0	0	0	1	20	0	0	0	0	7	2	0	0	91	
06:20:00 AM	0	0	0	0	0	0	0	2	0	0	1	11	0	0	0	0	8	2	0	0	76	
06:25:00 AM	0	0	0	0	0	3	0	1	0	0	3	17	0	0	0	0	11	5	0	0	96	
06:30:00 AM	0	0	0	0	0	1	0	0	0	0	3	18	0	0	0	0	9	7	0	0	102	
06:35:00 AM	0	0	0	0	0	1	0	1	0	0	3	13	0	0	0	0	11	5	0	0	112	
06:40:00 AM	0	0	0	0	0	1	0	0	0	0	3	26	0	0	0	0	11	7	0	0	120	
06:45:00 AM	0	0	0	0	0	1	0	1	0	0	1	20	0	0	0	0	10	7	0	0	122	
06:50:00 AM	0	0	0	0	0	5	0	2	0	0	1	24	0	0	0	0	19	1	0	0	140	
06:55:00 AM	0	0	0	0	0	4	0	5	0	0	3	26	0	0	0	0	13	4	0	0	147	437
07:00:00 AM	0	0	0	0	0	1	0	0	0	0	2	19	0	0	0	0	16	3	0	0	148	463
07:05:00 AM	0	0	0	0	0	2	0	1	0	0	2	26	0	0	0	0	16	8	0	0	151	479
07:10:00 AM	0	0	0	0	0	3	0	2	0	0	1	35	0	0	0	0	15	4	0	0	156	519
07:15:00 AM	0	0	0	0	0	5	0	0	0	0	3	25	0	0	0	0	13	8	0	0	169	541
07:20:00 AM	0	0	0	0	0	1	0	2	0	0	2	27	0	0	0	0	19	9	0	0	174	577
07:25:00 AM	0	0	0	0	0	4	0	0	0	0	1	34	0	0	0	0	13	7	0	0	173	596
07:30:00 AM	0	0	0	0	0	11	0	2	0	0	4	40	0	0	0	0	14	9	0	0	199	638
07:35:00 AM	0	0	0	0	0	8	0	1	0	0	5	39	0	0	0	0	17	8	0	0	217	682
07:40:00 AM	0	0	0	0	0	3	0	4	0	0	4	31	0	0	0	0	30	12	0	0	242	718
07:45:00 AM	0	0	0	0	0	6	0	4	0	0	4	26	0	0	0	0	22	3	0	0	227	743
07:50:00 AM	0	0	0	0	0	6	0	4	0	0	2	45	0	0	0	0	24	3	0	0	233	775
07:55:00 AM	0	0	0	0	0	8	0	5	0	0	2	40	0	0	0	0	24	4	0	0	232	803
08:00:00 AM	0	0	0	0	0	6	0	4	0	0	4	46	0	0	0	0	25	14	0	0	266	861
08:05:00 AM	0	0	0	0	0	2	0	3	0	0	8	43	0	0	0	0	34	13	0	0	285	909
08:10:00 AM	0	0	0	0	0	5	0	2	0	0	4	31	0	0	0	0	30	14	0	0	288	935
08:15:00 AM	0	0	0	0	0	6	0	3	0	0	2	37	0	0	0	0	22	6	0	0	265	957
08:20:00 AM	0	0	0	0	0	3	0	4	0	0	1	36	0	0	0	0	18	9	0	0	233	968
08:25:00 AM	0	0	0	0	0	3	0	2	0	0	2	21	0	0	0	0	18	6	0	0	199	961
08:30:00 AM	0	0	0	0	0	4	0	2	0	0	2	21	0	0	0	0	9	3	0	0	164	922
08:35:00 AM	0	0	0	0	0	6	0	1	0	0	1	18	0	0	0	0	14	7	0	0	140	891
08:40:00 AM	0	0	0	0	0	2	0	3	0	0	4	18	0	0	0	0	11	6	0	0	132	851
08:45:00 AM	0	0	0	0	0	7	0	1	0	0	2	25	0	0	0	0	15	3	0	0	144	839
08:50:00 AM	0	0	0	0	0	6	0	3	0	0	1	24	0	0	0	0	17	4	0	0	152	810
08:55:00 AM	0	0	0	0	0	3	0	2	0	0	4	22	0	0	0	0	17	3	0	0	159	778

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	
06:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	
06:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
06:50:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	10
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	11
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	12
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	12
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	13
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4	14
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	14
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	5	14
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	7	17
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	2	0	0	11	22
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	3	1	0	0	19	30
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	3	1	0	0	23	38
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	21	39
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	12	39
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	40
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	40
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	6	42
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	9	45
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	11	47
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	9	46
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	43
08:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	6	42
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6	33
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	25

Bike Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:40:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:05:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:20:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3

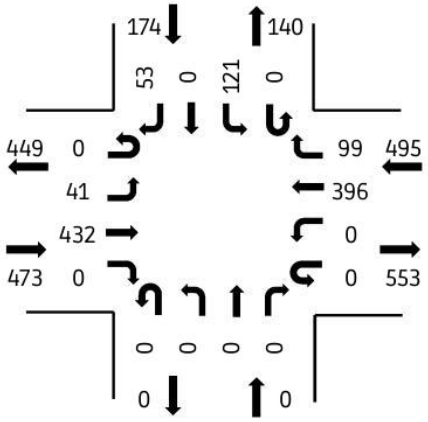
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
06:00:00 AM	0	0	1	0		
06:05:00 AM	0	0	0	0		
06:10:00 AM	0	0	0	0	1	
06:15:00 AM	0	0	0	0	0	
06:20:00 AM	0	0	0	0	0	
06:25:00 AM	0	0	0	0	0	
06:30:00 AM	0	0	0	0	0	
06:35:00 AM	0	0	0	0	0	
06:40:00 AM	0	0	1	0	1	
06:45:00 AM	0	0	0	0	1	
06:50:00 AM	0	0	0	0	1	
06:55:00 AM	0	0	0	0	0	2
07:00:00 AM	0	0	0	0	0	1
07:05:00 AM	0	0	0	0	0	1
07:10:00 AM	0	0	0	0	0	1
07:15:00 AM	0	0	0	0	0	1
07:20:00 AM	0	0	0	0	0	1
07:25:00 AM	0	0	0	0	0	1
07:30:00 AM	0	0	0	0	0	1
07:35:00 AM	0	0	0	0	0	1
07:40:00 AM	0	0	0	0	0	0
07:45:00 AM	0	0	0	0	0	0
07:50:00 AM	0	0	0	0	0	0
07:55:00 AM	0	0	0	0	0	0
08:00:00 AM	0	0	0	0	0	0
08:05:00 AM	0	0	0	0	0	0
08:10:00 AM	0	0	0	0	0	0
08:15:00 AM	0	0	0	0	0	0
08:20:00 AM	0	0	0	0	0	0
08:25:00 AM	0	0	0	0	0	0
08:30:00 AM	0	0	0	0	0	0
08:35:00 AM	0	0	0	0	0	0
08:40:00 AM	0	0	0	0	0	0
08:45:00 AM	0	0	1	0	1	1
08:50:00 AM	0	0	0	0	1	1
08:55:00 AM	0	0	0	0	1	1

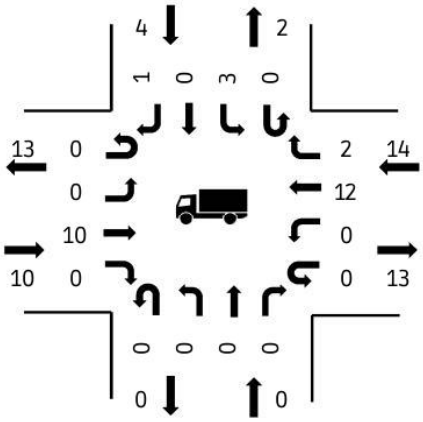
RallyTraffic

Location: N Springbrook Rd & E Mountain View
Date: 2024-04-17
Peak Hour Start: 03:10 PM
Peak 15 Minute Start: 03:25 PM
Peak Hour Factor: 0.88

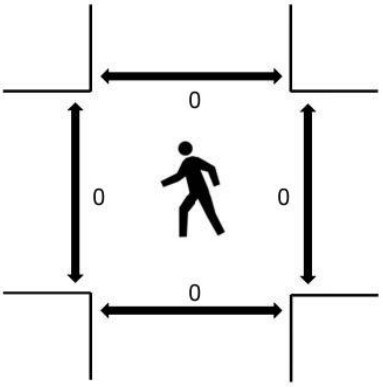
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	24	0	3	0	0	2	25	0	0	0	0	33	3	0	0		
03:05:00 PM	0	0	0	0	0	8	0	3	0	0	4	39	0	0	0	0	27	6	0	0		
03:10:00 PM	0	0	0	0	0	12	0	2	0	0	1	28	0	0	0	0	45	9	0	0	274	
03:15:00 PM	0	0	0	0	0	5	0	2	0	0	3	30	0	0	0	0	38	4	0	0	266	
03:20:00 PM	0	0	0	0	0	12	0	8	0	0	1	34	0	0	0	0	36	14	0	0	284	
03:25:00 PM	0	0	0	0	0	17	0	2	0	0	2	31	0	0	0	0	43	12	0	0	294	
03:30:00 PM	0	0	0	0	0	8	0	3	0	0	4	60	0	0	0	0	28	4	0	0	319	
03:35:00 PM	0	0	0	0	0	20	0	4	0	0	8	45	0	0	0	0	23	9	0	0	323	
03:40:00 PM	0	0	0	0	0	11	0	7	0	0	4	23	0	0	0	0	25	7	0	0	293	
03:45:00 PM	0	0	0	0	0	5	0	7	0	0	4	21	0	0	0	0	27	5	0	0	255	
03:50:00 PM	0	0	0	0	0	9	0	3	0	0	0	34	0	0	0	0	29	8	0	0	229	
03:55:00 PM	0	0	0	0	0	12	0	5	0	0	5	29	0	0	0	0	31	6	0	0	240	1101
04:00:00 PM	0	0	0	0	0	2	0	8	0	0	4	49	0	0	0	0	29	12	0	0	275	1115
04:05:00 PM	0	0	0	0	0	8	0	2	0	0	5	48	0	0	0	0	42	9	0	0	306	1142
04:10:00 PM	0	0	0	0	0	11	0	1	0	0	5	32	0	0	0	0	27	11	0	0	305	1132
04:15:00 PM	0	0	0	0	0	12	0	3	0	0	3	28	0	0	0	0	32	7	0	0	286	1135
04:20:00 PM	0	0	0	0	0	9	0	4	0	0	3	23	0	0	0	0	37	12	0	0	260	1118
04:25:00 PM	0	0	0	0	0	8	0	2	0	0	2	27	0	0	0	0	35	10	0	0	257	1095
04:30:00 PM	0	0	0	0	0	6	0	2	0	0	6	33	0	0	0	0	27	13	0	0	259	1075
04:35:00 PM	0	0	0	0	0	14	0	4	0	0	5	41	0	0	0	0	44	9	0	0	288	1083
04:40:00 PM	0	0	0	0	0	10	0	2	0	0	4	32	0	0	0	0	24	5	0	0	281	1083
04:45:00 PM	0	0	0	0	0	15	0	3	0	0	3	29	0	0	0	0	31	2	0	0	277	1097
04:50:00 PM	0	0	0	0	0	19	0	2	0	0	6	39	0	0	0	0	35	8	0	0	269	1123
04:55:00 PM	0	0	0	0	0	8	0	7	0	0	2	31	0	0	0	0	40	8	0	0	288	1131
05:00:00 PM	0	0	0	0	0	5	0	4	0	0	1	27	0	0	0	0	38	8	0	0	288	1110
05:05:00 PM	0	0	0	0	0	10	0	4	0	0	4	32	0	0	0	0	37	8	0	0	274	1091
05:10:00 PM	0	0	0	0	0	11	0	4	0	0	5	33	0	0	0	0	37	5	0	0	273	1099
05:15:00 PM	0	0	0	0	0	10	0	4	0	0	5	40	0	0	0	0	35	11	0	0	295	1119
05:20:00 PM	0	0	0	0	0	9	0	4	0	0	1	17	0	0	0	0	37	13	0	0	281	1112
05:25:00 PM	0	0	0	0	0	10	0	2	0	0	9	27	0	0	0	0	31	4	0	0	269	1111
05:30:00 PM	0	0	0	0	0	7	0	4	0	0	1	25	0	0	0	0	31	6	0	0	238	1098
05:35:00 PM	0	0	0	0	0	4	0	3	0	0	1	23	0	0	0	0	24	4	0	0	216	1040
05:40:00 PM	0	0	0	0	0	13	0	8	0	0	2	24	0	0	0	0	26	6	0	0	212	1042
05:45:00 PM	0	0	0	0	0	10	0	5	0	0	2	30	0	0	0	0	36	7	0	0	228	1049
05:50:00 PM	0	0	0	0	0	11	0	2	0	0	1	24	0	0	0	0	34	8	0	0	249	1020
05:55:00 PM	0	0	0	0	0	9	0	4	0	0	5	18	0	0	0	0	35	8	0	0	249	1003

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	23	0	3	0	0	2	24	0	0	0	0	31	3	0	0		
03:05:00 PM	0	0	0	0	0	6	0	3	0	0	4	39	0	0	0	0	27	6	0	0		
03:10:00 PM	0	0	0	0	0	11	0	2	0	0	1	27	0	0	0	0	45	9	0	0	266	
03:15:00 PM	0	0	0	0	0	5	0	2	0	0	3	29	0	0	0	0	38	4	0	0	261	
03:20:00 PM	0	0	0	0	0	12	0	8	0	0	1	31	0	0	0	0	33	14	0	0	275	
03:25:00 PM	0	0	0	0	0	17	0	2	0	0	2	30	0	0	0	0	38	11	0	0	280	
03:30:00 PM	0	0	0	0	0	8	0	2	0	0	4	59	0	0	0	0	26	4	0	0	302	
03:35:00 PM	0	0	0	0	0	20	0	4	0	0	8	45	0	0	0	0	23	9	0	0	312	
03:40:00 PM	0	0	0	0	0	11	0	7	0	0	4	23	0	0	0	0	25	6	0	0	288	
03:45:00 PM	0	0	0	0	0	4	0	7	0	0	4	21	0	0	0	0	27	5	0	0	253	
03:50:00 PM	0	0	0	0	0	9	0	3	0	0	0	32	0	0	0	0	27	8	0	0	223	
03:55:00 PM	0	0	0	0	0	11	0	5	0	0	5	29	0	0	0	0	31	6	0	0	234	1068
04:00:00 PM	0	0	0	0	0	2	0	8	0	0	4	48	0	0	0	0	29	12	0	0	269	1085
04:05:00 PM	0	0	0	0	0	8	0	2	0	0	5	48	0	0	0	0	42	9	0	0	304	1114
04:10:00 PM	0	0	0	0	0	10	0	1	0	0	5	32	0	0	0	0	27	10	0	0	302	1104
04:15:00 PM	0	0	0	0	0	12	0	3	0	0	2	26	0	0	0	0	31	7	0	0	280	1104
04:20:00 PM	0	0	0	0	0	9	0	4	0	0	3	23	0	0	0	0	34	11	0	0	250	1089
04:25:00 PM	0	0	0	0	0	8	0	2	0	0	2	27	0	0	0	0	34	10	0	0	248	1072
04:30:00 PM	0	0	0	0	0	6	0	2	0	0	6	33	0	0	0	0	27	13	0	0	254	1056
04:35:00 PM	0	0	0	0	0	14	0	4	0	0	5	40	0	0	0	0	44	8	0	0	285	1062
04:40:00 PM	0	0	0	0	0	10	0	2	0	0	4	31	0	0	0	0	23	5	0	0	277	1061
04:45:00 PM	0	0	0	0	0	15	0	3	0	0	3	29	0	0	0	0	31	2	0	0	273	1076
04:50:00 PM	0	0	0	0	0	19	0	2	0	0	6	39	0	0	0	0	35	6	0	0	265	1104
04:55:00 PM	0	0	0	0	0	8	0	7	0	0	2	30	0	0	0	0	40	8	0	0	285	1112
05:00:00 PM	0	0	0	0	0	5	0	4	0	0	1	25	0	0	0	0	38	8	0	0	283	1090
05:05:00 PM	0	0	0	0	0	10	0	4	0	0	4	31	0	0	0	0	37	8	0	0	270	1070
05:10:00 PM	0	0	0	0	0	11	0	4	0	0	5	33	0	0	0	0	36	5	0	0	269	1079
05:15:00 PM	0	0	0	0	0	10	0	4	0	0	5	39	0	0	0	0	34	11	0	0	291	1101
05:20:00 PM	0	0	0	0	0	9	0	4	0	0	1	17	0	0	0	0	37	13	0	0	278	1098
05:25:00 PM	0	0	0	0	0	10	0	2	0	0	9	27	0	0	0	0	31	4	0	0	267	1098
05:30:00 PM	0	0	0	0	0	7	0	4	0	0	1	25	0	0	0	0	31	6	0	0	238	1085
05:35:00 PM	0	0	0	0	0	4	0	3	0	0	1	23	0	0	0	0	24	4	0	0	216	1029
05:40:00 PM	0	0	0	0	0	12	0	8	0	0	2	24	0	0	0	0	26	6	0	0	211	1032
05:45:00 PM	0	0	0	0	0	10	0	5	0	0	2	29	0	0	0	0	36	7	0	0	226	1038
05:50:00 PM	0	0	0	0	0	11	0	2	0	0	1	24	0	0	0	0	34	8	0	0	247	1011
05:55:00 PM	0	0	0	0	0	9	0	4	0	0	5	18	0	0	0	0	33	8	0	0	246	993

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0		
03:05:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:10:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8	
03:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	
03:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	9	
03:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	1	0	0	14	
03:30:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	17	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
03:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	
03:45:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
03:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	6	
03:55:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	33
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	30
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	28
04:10:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	28
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	6	31
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	10	29
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	9	23
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	19
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	3	21
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4	22
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	21
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	19
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	19
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	5	20
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	21
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	20
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4	18
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
05:40:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	11
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	10

Bike Volumes

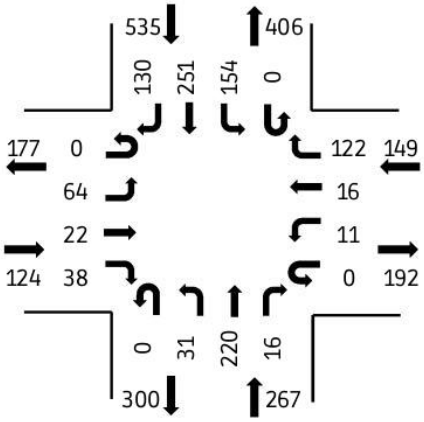
Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Mountain View)					WB (E Mountain View)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	2
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	3
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Pedestrian Volumes

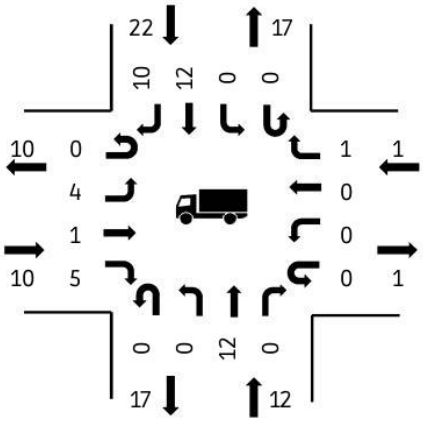
Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
03:00:00 PM	0	0	0	0		
03:05:00 PM	0	0	0	0		
03:10:00 PM	0	0	0	0	0	
03:15:00 PM	0	0	0	0	0	
03:20:00 PM	0	0	0	0	0	
03:25:00 PM	0	0	0	0	0	
03:30:00 PM	0	0	0	0	0	
03:35:00 PM	0	0	0	0	0	
03:40:00 PM	0	0	0	0	0	
03:45:00 PM	0	0	0	0	0	
03:50:00 PM	0	0	0	0	0	
03:55:00 PM	0	0	0	0	0	0
04:00:00 PM	0	0	0	0	0	0
04:05:00 PM	0	0	0	0	0	0
04:10:00 PM	0	0	0	0	0	0
04:15:00 PM	0	0	0	0	0	0
04:20:00 PM	0	0	0	0	0	0
04:25:00 PM	0	0	0	0	0	0
04:30:00 PM	0	0	0	0	0	0
04:35:00 PM	0	0	1	0	1	1
04:40:00 PM	0	0	0	0	1	1
04:45:00 PM	0	0	0	0	1	1
04:50:00 PM	0	0	0	0	0	1
04:55:00 PM	0	0	0	0	0	1
05:00:00 PM	0	0	0	0	0	1
05:05:00 PM	0	0	0	0	0	1
05:10:00 PM	0	0	0	0	0	1
05:15:00 PM	0	0	0	0	0	1
05:20:00 PM	0	0	0	0	0	1
05:25:00 PM	0	0	0	0	0	1
05:30:00 PM	0	0	0	0	0	1
05:35:00 PM	0	0	0	0	0	0
05:40:00 PM	0	0	0	0	0	0
05:45:00 PM	0	0	0	0	0	0
05:50:00 PM	0	0	0	0	0	0
05:55:00 PM	0	0	0	0	0	0

Location: N Springbrook Rd & E Crestview Dr
Date: 2024-04-18
Peak Hour Start: 07:25 AM
Peak 15 Minute Start: 08:00 AM
Peak Hour Factor: 0.83

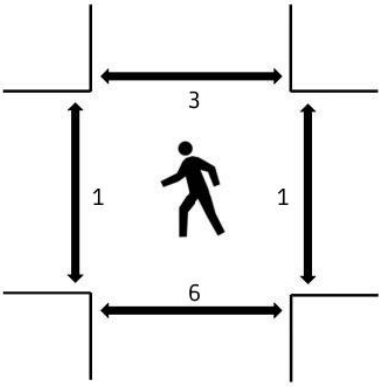
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	5	1	0	0	5	5	0	0	0	0	0	0	0	0	0	0	1	0	0		
06:05:00 AM	0	7	0	0	0	9	11	0	0	0	0	0	0	0	0	0	0	2	0	0		
06:10:00 AM	0	4	1	0	0	5	7	0	0	0	0	0	0	0	0	0	0	2	0	0	65	
06:15:00 AM	0	6	0	0	0	9	11	0	0	0	0	0	0	0	0	0	0	5	0	0	79	
06:20:00 AM	1	6	0	0	0	8	6	0	0	0	0	0	0	0	0	0	0	5	0	0	76	
06:25:00 AM	0	12	0	0	0	9	8	1	0	0	0	0	1	0	0	0	1	3	0	0	92	
06:30:00 AM	0	14	0	0	0	13	8	1	0	0	1	0	0	0	0	0	0	3	0	0	101	
06:35:00 AM	1	15	2	0	0	6	4	2	0	0	1	0	1	0	0	0	0	3	0	0	110	
06:40:00 AM	0	16	0	0	0	14	12	1	0	0	0	0	2	0	0	0	0	2	0	0	122	
06:45:00 AM	1	14	0	0	0	10	12	1	0	0	1	0	0	0	0	0	2	3	0	0	126	
06:50:00 AM	0	13	1	0	0	9	17	2	0	0	0	0	1	0	0	1	1	10	0	0	146	
06:55:00 AM	0	12	3	0	0	9	20	3	0	0	0	0	0	0	0	1	0	7	0	0	154	433
07:00:00 AM	0	10	0	0	0	5	12	4	0	0	1	0	1	0	0	2	1	6	0	0	152	458
07:05:00 AM	0	15	0	0	0	11	16	1	0	0	1	1	0	0	0	1	1	8	0	0	152	484
07:10:00 AM	2	13	0	0	0	12	19	7	0	0	0	0	2	0	0	0	0	6	0	0	158	526
07:15:00 AM	0	14	0	0	0	16	14	1	0	0	2	0	0	0	0	1	0	8	0	0	172	551
07:20:00 AM	1	16	1	0	0	12	12	2	0	0	1	0	1	0	0	1	0	17	0	0	181	589
07:25:00 AM	2	9	3	0	0	11	15	14	0	0	0	2	1	0	0	1	1	10	0	0	189	623
07:30:00 AM	3	18	1	0	0	20	23	7	0	0	2	0	0	0	0	0	0	8	0	0	215	665
07:35:00 AM	1	15	1	0	0	15	26	7	0	0	5	3	3	0	0	0	3	6	0	0	236	715
07:40:00 AM	2	23	2	0	0	15	21	6	0	0	1	0	1	0	0	2	2	15	0	0	257	758
07:45:00 AM	1	17	0	0	0	10	17	7	0	0	3	0	1	0	0	1	2	8	0	0	242	781
07:50:00 AM	3	17	2	0	0	16	25	13	0	0	5	0	3	0	0	1	1	11	0	0	254	823
07:55:00 AM	0	16	1	0	0	10	28	21	0	0	4	2	3	0	0	0	2	14	0	0	265	869
08:00:00 AM	4	24	2	0	0	18	20	11	0	0	7	4	5	0	0	1	1	15	0	0	310	939
08:05:00 AM	6	20	0	0	0	8	10	20	0	0	15	2	9	0	0	2	3	11	0	0	319	990
08:10:00 AM	4	25	2	0	0	10	21	10	0	0	9	5	5	0	0	1	1	13	0	0	324	1035
08:15:00 AM	3	18	2	0	0	10	24	10	0	0	8	3	6	0	0	2	0	7	0	0	305	1072
08:20:00 AM	2	18	0	0	0	11	21	4	0	0	5	1	1	0	0	0	0	4	0	0	266	1075
08:25:00 AM	0	18	1	0	0	10	24	1	0	0	1	0	1	0	0	1	0	6	0	0	223	1069
08:30:00 AM	0	12	2	0	0	7	17	2	0	0	0	0	1	0	0	0	0	3	0	0	174	1031
08:35:00 AM	1	17	0	0	0	8	16	1	0	0	0	0	1	0	0	1	0	5	0	0	157	996
08:40:00 AM	2	12	1	0	0	7	14	0	0	0	0	0	0	0	0	0	0	5	0	0	135	947
08:45:00 AM	2	10	0	0	0	7	24	1	0	0	0	1	1	0	0	1	1	6	0	0	145	934
08:50:00 AM	2	15	1	0	0	9	21	2	0	0	1	0	3	0	0	0	1	5	0	0	155	897
08:55:00 AM	0	18	0	0	0	8	15	2	0	0	1	1	0	0	0	0	0	4	0	0	163	845

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	5	1	0	0	5	4	0	0	0	0	0	0	0	0	0	0	1	0	0		
06:05:00 AM	0	7	0	0	0	9	11	0	0	0	0	0	0	0	0	0	0	2	0	0		
06:10:00 AM	0	4	1	0	0	5	7	0	0	0	0	0	0	0	0	0	0	2	0	0	64	
06:15:00 AM	0	6	0	0	0	9	11	0	0	0	0	0	0	0	0	0	0	4	0	0	78	
06:20:00 AM	1	6	0	0	0	8	6	0	0	0	0	0	0	0	0	0	0	5	0	0	75	
06:25:00 AM	0	11	0	0	0	9	8	1	0	0	0	0	1	0	0	0	1	3	0	0	90	
06:30:00 AM	0	13	0	0	0	13	8	1	0	0	1	0	0	0	0	0	0	3	0	0	99	
06:35:00 AM	1	13	2	0	0	6	4	2	0	0	1	0	1	0	0	0	0	3	0	0	106	
06:40:00 AM	0	15	0	0	0	14	12	1	0	0	0	0	2	0	0	0	0	2	0	0	118	
06:45:00 AM	1	14	0	0	0	10	12	1	0	0	1	0	0	0	0	0	2	3	0	0	123	
06:50:00 AM	0	12	1	0	0	9	16	2	0	0	0	0	1	0	0	1	0	10	0	0	142	
06:55:00 AM	0	11	2	0	0	9	20	3	0	0	0	0	0	0	0	1	0	7	0	0	149	421
07:00:00 AM	0	9	0	0	0	5	12	4	0	0	1	0	1	0	0	2	1	6	0	0	146	446
07:05:00 AM	0	14	0	0	0	11	16	1	0	0	1	1	0	0	0	1	1	8	0	0	148	471
07:10:00 AM	2	13	0	0	0	12	19	6	0	0	0	0	2	0	0	0	0	6	0	0	155	512
07:15:00 AM	0	13	0	0	0	16	14	1	0	0	2	0	0	0	0	1	0	8	0	0	169	537
07:20:00 AM	1	15	1	0	0	12	12	2	0	0	1	0	1	0	0	1	0	17	0	0	178	574
07:25:00 AM	2	8	3	0	0	11	14	14	0	0	0	2	1	0	0	1	1	10	0	0	185	607
07:30:00 AM	3	18	1	0	0	20	22	7	0	0	2	0	0	0	0	0	0	8	0	0	211	649
07:35:00 AM	1	15	1	0	0	15	25	6	0	0	5	3	3	0	0	0	3	6	0	0	231	699
07:40:00 AM	2	23	2	0	0	15	20	4	0	0	1	0	1	0	0	2	2	15	0	0	251	740
07:45:00 AM	1	16	0	0	0	10	15	6	0	0	3	0	1	0	0	1	2	8	0	0	233	759
07:50:00 AM	3	15	2	0	0	16	23	10	0	0	4	0	3	0	0	1	1	11	0	0	239	796
07:55:00 AM	0	14	1	0	0	10	25	18	0	0	3	2	3	0	0	0	2	14	0	0	244	835
08:00:00 AM	4	22	2	0	0	18	20	11	0	0	7	4	3	0	0	1	1	14	0	0	288	901
08:05:00 AM	6	20	0	0	0	8	10	20	0	0	14	2	7	0	0	2	3	11	0	0	302	950
08:10:00 AM	4	24	2	0	0	10	21	10	0	0	8	4	4	0	0	1	1	13	0	0	312	992
08:15:00 AM	3	17	2	0	0	10	24	10	0	0	8	3	6	0	0	2	0	7	0	0	297	1029
08:20:00 AM	2	16	0	0	0	11	20	4	0	0	5	1	1	0	0	0	0	4	0	0	258	1030
08:25:00 AM	0	17	1	0	0	10	21	0	0	0	1	0	1	0	0	1	0	5	0	0	213	1020
08:30:00 AM	0	10	2	0	0	7	17	2	0	0	0	0	1	0	0	0	0	3	0	0	163	981
08:35:00 AM	1	16	0	0	0	8	16	1	0	0	0	0	1	0	0	1	0	5	0	0	148	947
08:40:00 AM	2	12	1	0	0	7	13	0	0	0	0	0	0	0	0	0	0	5	0	0	131	900
08:45:00 AM	2	10	0	0	0	7	22	1	0	0	0	1	1	0	0	1	1	6	0	0	141	889
08:50:00 AM	2	14	1	0	0	9	21	1	0	0	1	0	3	0	0	0	1	5	0	0	150	858
08:55:00 AM	0	18	0	0	0	8	15	2	0	0	1	1	0	0	0	0	0	4	0	0	159	815

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:25:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
06:30:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
06:35:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
06:40:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
06:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
06:50:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	4	
06:55:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12
07:00:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	12
07:05:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	13
07:10:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	14
07:15:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14
07:20:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15
07:25:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	16
07:30:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	16
07:35:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5	16
07:40:00 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	6	18
07:45:00 AM	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	9	22
07:50:00 AM	0	2	0	0	0	0	2	3	0	0	1	0	0	0	0	0	0	0	0	0	15	27
07:55:00 AM	0	2	0	0	0	0	3	3	0	0	1	0	0	0	0	0	0	0	0	0	21	34
08:00:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	22	38
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	17	40
08:10:00 AM	0	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	12	43
08:15:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	43
08:20:00 AM	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8	45
08:25:00 AM	0	1	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	1	0	0	10	49
08:30:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	50
08:35:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	49
08:40:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	47
08:45:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4	45
08:50:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	39
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	30

Bike Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:40:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2

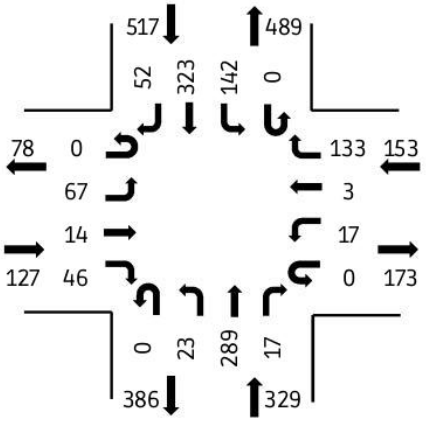
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
06:00:00 AM	0	1	0	0		
06:05:00 AM	0	0	0	0		
06:10:00 AM	1	1	0	1	4	
06:15:00 AM	0	0	0	0	3	
06:20:00 AM	0	0	0	0	3	
06:25:00 AM	0	1	0	0	1	
06:30:00 AM	0	0	0	0	1	
06:35:00 AM	0	0	1	0	2	
06:40:00 AM	0	0	0	0	1	
06:45:00 AM	0	0	0	0	1	
06:50:00 AM	0	0	0	0	0	
06:55:00 AM	0	0	0	0	0	6
07:00:00 AM	0	0	0	0	0	5
07:05:00 AM	0	0	0	0	0	5
07:10:00 AM	0	0	0	0	0	2
07:15:00 AM	0	0	0	0	0	2
07:20:00 AM	0	0	0	0	0	2
07:25:00 AM	3	1	1	0	5	6
07:30:00 AM	0	0	0	0	5	6
07:35:00 AM	0	0	0	0	5	5
07:40:00 AM	0	0	0	0	0	5
07:45:00 AM	0	1	0	0	1	6
07:50:00 AM	0	0	0	0	1	6
07:55:00 AM	1	0	0	1	3	8
08:00:00 AM	1	0	0	0	3	9
08:05:00 AM	0	0	0	0	3	9
08:10:00 AM	1	1	0	0	3	11
08:15:00 AM	0	0	0	0	2	11
08:20:00 AM	0	0	0	0	2	11
08:25:00 AM	0	0	0	0	0	6
08:30:00 AM	0	0	0	0	0	6
08:35:00 AM	0	0	0	0	0	6
08:40:00 AM	0	0	1	0	1	7
08:45:00 AM	0	0	0	0	1	6
08:50:00 AM	0	0	0	0	1	6
08:55:00 AM	0	0	1	0	1	5

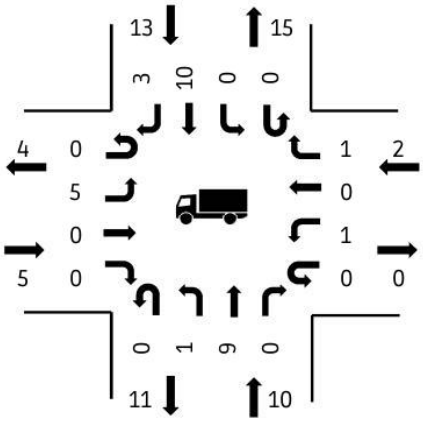
RallyTraffic

Location: N Springbrook Rd & E Crestview Dr
Date: 2024-04-17
Peak Hour Start: 03:10 PM
Peak 15 Minute Start: 03:20 PM
Peak Hour Factor: 0.89

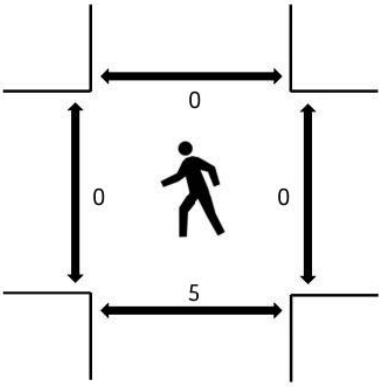
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	1	18	0	0	0	7	35	7	0	0	2	0	0	0	0	1	0	10	0	0		
03:05:00 PM	2	21	1	0	0	14	34	6	0	0	4	0	0	0	0	0	2	3	0	0		
03:10:00 PM	1	37	0	0	0	8	27	8	0	0	12	2	3	0	0	2	0	9	0	0	277	
03:15:00 PM	4	26	2	0	0	8	21	8	0	0	6	0	1	0	0	1	0	9	0	0	282	
03:20:00 PM	5	38	1	0	0	8	31	6	0	0	10	0	3	0	0	1	1	7	0	0	306	
03:25:00 PM	3	22	1	0	0	13	19	3	0	0	17	1	19	0	0	1	0	7	0	0	303	
03:30:00 PM	2	12	0	0	0	22	23	7	0	0	10	2	8	0	0	0	0	13	0	0	316	
03:35:00 PM	1	20	2	0	0	16	37	1	0	0	1	0	4	0	0	1	0	9	0	0	297	
03:40:00 PM	1	23	2	0	0	11	21	2	0	0	2	1	2	0	0	1	1	9	0	0	267	
03:45:00 PM	1	14	1	0	0	9	17	3	0	0	2	2	3	0	0	2	0	15	0	0	237	
03:50:00 PM	2	24	3	0	0	16	19	2	0	0	2	3	0	0	0	5	0	9	0	0	230	
03:55:00 PM	2	24	0	0	0	6	39	0	0	0	1	2	0	0	0	2	1	15	0	0	246	1093
04:00:00 PM	0	26	0	0	0	11	35	4	0	0	0	1	0	0	0	0	0	13	0	0	267	1102
04:05:00 PM	1	23	5	0	0	14	34	8	0	0	4	0	3	0	0	1	0	18	0	0	293	1126
04:10:00 PM	2	26	2	0	0	15	25	2	0	0	1	0	2	0	0	1	1	12	0	0	290	1106
04:15:00 PM	1	25	1	0	0	10	30	1	0	0	2	0	0	0	0	3	0	10	0	0	283	1103
04:20:00 PM	2	27	0	0	0	6	24	1	0	0	1	0	0	0	0	2	1	16	0	0	252	1072
04:25:00 PM	2	27	1	0	0	8	24	3	0	0	4	1	4	0	0	4	1	18	0	0	260	1063
04:30:00 PM	1	24	1	0	0	11	27	3	0	0	1	3	1	0	0	2	0	11	0	0	262	1049
04:35:00 PM	3	29	2	0	0	11	39	2	0	0	2	0	3	0	0	0	0	19	0	0	292	1067
04:40:00 PM	2	18	0	0	0	13	26	5	0	0	0	1	1	0	0	2	0	10	0	0	273	1069
04:45:00 PM	0	24	0	0	0	10	29	6	0	0	2	2	2	0	0	1	1	10	0	0	275	1087
04:50:00 PM	0	33	2	0	0	11	35	2	0	0	2	0	1	0	0	3	0	8	0	0	262	1099
04:55:00 PM	1	24	1	0	0	12	32	6	0	0	4	0	4	0	0	2	0	18	0	0	288	1111
05:00:00 PM	1	29	0	0	0	8	20	2	0	0	4	0	1	0	0	0	0	9	0	0	275	1095
05:05:00 PM	0	25	1	0	0	13	26	2	0	0	1	1	0	0	0	2	0	20	0	0	269	1075
05:10:00 PM	1	25	3	0	0	7	30	3	0	0	5	0	0	0	0	0	1	11	0	0	251	1072
05:15:00 PM	0	24	2	0	0	16	28	5	0	0	3	0	1	0	0	3	0	19	0	0	278	1090
05:20:00 PM	1	32	2	0	0	4	20	5	0	0	2	0	1	0	0	1	1	13	0	0	269	1092
05:25:00 PM	1	18	1	0	0	6	22	5	0	0	0	0	0	0	0	0	1	19	0	0	256	1068
05:30:00 PM	1	18	2	0	0	9	25	7	0	0	4	0	1	0	0	1	1	14	0	0	238	1066
05:35:00 PM	1	15	1	0	0	7	18	0	0	0	2	0	0	0	0	0	2	14	0	0	216	1016
05:40:00 PM	0	16	1	0	0	8	26	2	0	0	2	0	1	0	0	2	0	11	0	0	212	1007
05:45:00 PM	1	27	3	0	0	10	25	5	0	0	0	0	1	0	0	2	0	17	0	0	220	1011
05:50:00 PM	1	19	0	0	0	7	24	8	0	0	3	0	0	0	0	0	0	22	0	0	244	998
05:55:00 PM	2	22	0	0	0	6	18	3	0	0	1	0	0	0	0	2	0	21	0	0	250	969

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	1	17	0	0	0	7	33	6	0	0	2	0	0	0	0	1	0	10	0	0		
03:05:00 PM	2	21	1	0	0	13	33	5	0	0	4	0	0	0	0	0	2	3	0	0		
03:10:00 PM	1	37	0	0	0	8	26	7	0	0	12	2	3	0	0	1	0	9	0	0	267	
03:15:00 PM	4	26	2	0	0	8	20	8	0	0	6	0	1	0	0	1	0	9	0	0	275	
03:20:00 PM	5	37	1	0	0	8	28	6	0	0	8	0	3	0	0	1	1	7	0	0	296	
03:25:00 PM	3	17	1	0	0	13	18	3	0	0	16	1	19	0	0	1	0	6	0	0	288	
03:30:00 PM	2	12	0	0	0	22	23	6	0	0	8	2	8	0	0	0	0	13	0	0	299	
03:35:00 PM	1	20	2	0	0	16	37	1	0	0	1	0	4	0	0	1	0	9	0	0	286	
03:40:00 PM	1	22	2	0	0	11	21	2	0	0	2	1	2	0	0	1	1	9	0	0	263	
03:45:00 PM	1	14	1	0	0	9	16	3	0	0	2	2	3	0	0	2	0	15	0	0	235	
03:50:00 PM	2	22	3	0	0	16	18	2	0	0	2	3	0	0	0	5	0	9	0	0	225	
03:55:00 PM	2	24	0	0	0	6	37	0	0	0	1	2	0	0	0	2	1	15	0	0	240	1058
04:00:00 PM	0	26	0	0	0	11	35	4	0	0	0	1	0	0	0	0	0	13	0	0	262	1071
04:05:00 PM	1	23	5	0	0	14	34	7	0	0	4	0	3	0	0	1	0	18	0	0	290	1097
04:10:00 PM	2	24	2	0	0	15	25	1	0	0	1	0	2	0	0	1	1	12	0	0	286	1077
04:15:00 PM	1	25	1	0	0	10	29	1	0	0	2	0	0	0	0	3	0	10	0	0	278	1074
04:20:00 PM	2	25	0	0	0	6	24	1	0	0	0	0	0	0	0	2	1	15	0	0	244	1045
04:25:00 PM	2	27	1	0	0	8	24	3	0	0	3	1	4	0	0	4	1	18	0	0	254	1043
04:30:00 PM	1	24	1	0	0	11	27	3	0	0	1	3	1	0	0	2	0	11	0	0	257	1032
04:35:00 PM	3	28	2	0	0	10	39	2	0	0	2	0	3	0	0	0	0	19	0	0	289	1048
04:40:00 PM	2	17	0	0	0	13	25	5	0	0	0	1	1	0	0	2	0	10	0	0	269	1049
04:45:00 PM	0	24	0	0	0	10	29	6	0	0	2	2	2	0	0	1	1	10	0	0	271	1068
04:50:00 PM	0	31	2	0	0	11	35	2	0	0	2	0	1	0	0	3	0	8	0	0	258	1081
04:55:00 PM	1	24	1	0	0	12	31	6	0	0	4	0	4	0	0	2	0	18	0	0	285	1094
05:00:00 PM	1	29	0	0	0	7	19	2	0	0	4	0	1	0	0	0	0	9	0	0	270	1076
05:05:00 PM	0	24	1	0	0	13	25	2	0	0	1	1	0	0	0	2	0	20	0	0	264	1055
05:10:00 PM	1	24	3	0	0	7	30	3	0	0	5	0	0	0	0	0	1	11	0	0	246	1054
05:15:00 PM	0	24	2	0	0	16	28	4	0	0	3	0	1	0	0	3	0	19	0	0	274	1072
05:20:00 PM	1	32	2	0	0	4	20	5	0	0	2	0	1	0	0	1	1	13	0	0	267	1078
05:25:00 PM	1	18	1	0	0	6	22	5	0	0	0	0	0	0	0	0	1	19	0	0	255	1055
05:30:00 PM	1	18	2	0	0	9	25	7	0	0	4	0	1	0	0	1	1	14	0	0	238	1053
05:35:00 PM	1	15	1	0	0	7	18	0	0	0	2	0	0	0	0	0	2	14	0	0	216	1005
05:40:00 PM	0	16	1	0	0	8	25	2	0	0	2	0	1	0	0	2	0	11	0	0	211	997
05:45:00 PM	1	27	3	0	0	10	24	5	0	0	0	0	1	0	0	2	0	17	0	0	218	1000
05:50:00 PM	1	18	0	0	0	7	24	8	0	0	3	0	0	0	0	0	0	22	0	0	241	988
05:55:00 PM	2	21	0	0	0	6	18	3	0	0	1	0	0	0	0	2	0	21	0	0	247	959

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0		
03:05:00 PM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0		
03:10:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	10	
03:15:00 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
03:20:00 PM	0	1	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	11	
03:25:00 PM	0	5	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	16	
03:30:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	17	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
03:40:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
03:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
03:50:00 PM	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
03:55:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6	36
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	32
04:05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	30
04:10:00 PM	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	30
04:15:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	29
04:20:00 PM	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	8	27
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	20
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	17
04:35:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	19
04:40:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	20
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	19
04:50:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	18
04:55:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17
05:00:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	19
05:05:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	20
05:10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	18
05:15:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	18
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
05:40:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
05:45:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11
05:50:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	10
05:55:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	10

Bike Volumes

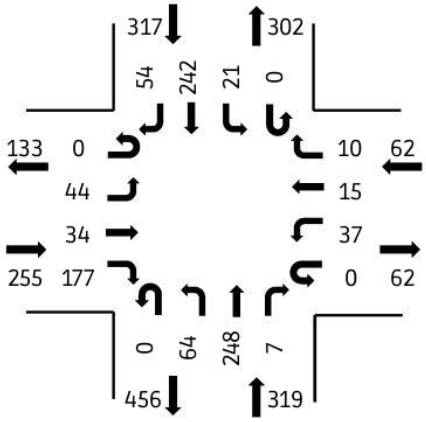
Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (E Crestview Dr)					WB (E Crestview Dr)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Pedestrian Volumes

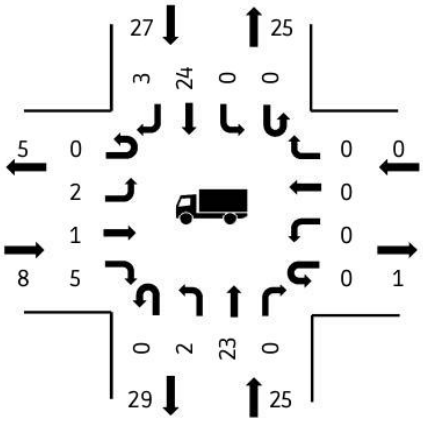
Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
03:00:00 PM	0	0	0	0		
03:05:00 PM	0	0	0	0		
03:10:00 PM	0	0	0	0	0	
03:15:00 PM	0	0	0	0	0	
03:20:00 PM	0	0	0	0	0	
03:25:00 PM	0	0	0	0	0	
03:30:00 PM	3	0	0	0	3	
03:35:00 PM	1	0	0	0	4	
03:40:00 PM	0	0	0	0	4	
03:45:00 PM	1	0	0	0	2	
03:50:00 PM	0	0	0	0	1	
03:55:00 PM	0	0	0	0	1	5
04:00:00 PM	0	0	0	0	0	5
04:05:00 PM	0	0	0	0	0	5
04:10:00 PM	0	0	0	0	0	5
04:15:00 PM	0	0	0	0	0	5
04:20:00 PM	0	0	0	0	0	5
04:25:00 PM	0	0	0	0	0	5
04:30:00 PM	0	0	0	0	0	2
04:35:00 PM	0	0	0	0	0	1
04:40:00 PM	0	0	0	0	0	1
04:45:00 PM	1	0	0	0	1	1
04:50:00 PM	2	0	0	0	3	3
04:55:00 PM	1	0	0	0	4	4
05:00:00 PM	0	0	0	0	3	4
05:05:00 PM	2	0	0	0	3	6
05:10:00 PM	2	0	0	0	4	8
05:15:00 PM	0	0	0	0	4	8
05:20:00 PM	0	0	0	0	2	8
05:25:00 PM	0	0	0	0	0	8
05:30:00 PM	0	0	0	0	0	8
05:35:00 PM	0	0	0	0	0	8
05:40:00 PM	0	0	0	0	0	8
05:45:00 PM	2	0	0	0	2	9
05:50:00 PM	1	0	0	0	3	8
05:55:00 PM	0	0	0	0	3	7

Location: N Springbrook Rd & Haworth Ave
Date: 2024-05-21
Peak Hour Start: 07:25 AM
Peak 15 Minute Start: 07:30 AM
Peak Hour Factor: 0.91

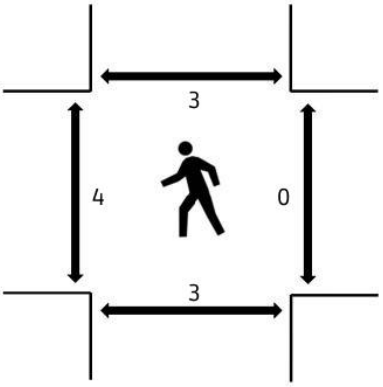
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	2	20	1	0	0	2	17	4	0	0	3	1	12	0	0	1	0	1	0	0		
07:05:00 AM	3	20	1	0	0	1	17	3	0	0	3	0	7	0	0	4	1	1	0	0		
07:10:00 AM	1	17	2	0	0	0	11	7	0	0	1	0	9	0	0	3	1	0	0	0	177	
07:15:00 AM	6	22	2	0	0	2	12	2	0	0	2	1	15	0	0	1	0	0	0	0	178	
07:20:00 AM	8	13	1	0	0	3	17	4	0	0	2	0	16	0	0	3	4	0	0	0	188	
07:25:00 AM	9	20	0	0	0	0	13	4	0	0	3	1	14	0	0	4	2	1	0	0	207	
07:30:00 AM	6	24	1	0	0	3	24	2	0	0	3	4	20	0	0	2	2	1	0	0	234	
07:35:00 AM	7	16	0	0	0	2	20	9	0	0	5	1	25	0	0	3	1	1	0	0	253	
07:40:00 AM	7	21	0	0	0	1	24	3	0	0	5	2	13	0	0	3	0	1	0	0	262	
07:45:00 AM	1	20	1	0	0	2	18	4	0	0	5	2	14	0	0	2	3	0	0	0	242	
07:50:00 AM	3	21	1	0	0	4	21	7	0	0	2	3	14	0	0	4	2	2	0	0	236	
07:55:00 AM	4	19	2	0	0	1	15	6	0	0	10	4	12	0	0	2	0	0	0	0	231	877
08:00:00 AM	2	26	1	0	0	1	28	4	0	0	2	3	5	0	0	6	2	0	0	0	239	893
08:05:00 AM	7	22	1	0	0	0	20	4	0	0	0	4	18	0	0	2	1	0	0	0	234	911
08:10:00 AM	3	22	0	0	0	2	22	3	0	0	5	3	12	0	0	3	1	1	0	0	236	936
08:15:00 AM	11	18	0	0	0	3	18	5	0	0	2	2	14	0	0	4	1	0	0	0	234	949
08:20:00 AM	4	19	0	0	0	2	19	3	0	0	2	5	16	0	0	2	0	3	0	0	230	953
08:25:00 AM	3	14	1	0	0	2	18	3	0	0	2	3	14	0	0	4	3	0	0	0	220	949
08:30:00 AM	2	13	0	0	0	3	15	0	0	0	3	1	7	0	0	7	1	0	0	0	194	909
08:35:00 AM	3	20	0	0	0	1	8	2	0	0	5	1	10	0	0	5	2	0	0	0	176	876
08:40:00 AM	4	12	1	0	0	0	19	0	0	0	0	1	13	0	0	4	4	2	0	0	169	856
08:45:00 AM	2	21	2	0	0	0	20	4	0	0	0	1	10	0	0	1	0	2	0	0	180	847
08:50:00 AM	4	6	1	0	0	1	20	4	0	0	4	7	10	0	0	3	0	0	0	0	183	823
08:55:00 AM	5	15	1	0	0	3	18	4	0	0	3	1	7	0	0	3	2	1	0	0	186	811

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	2	19	1	0	0	2	17	4	0	0	3	1	12	0	0	1	0	1	0	0		
07:05:00 AM	3	19	1	0	0	1	16	3	0	0	3	0	7	0	0	4	1	1	0	0		
07:10:00 AM	1	14	2	0	0	0	11	7	0	0	1	0	9	0	0	3	1	0	0	0	171	
07:15:00 AM	6	20	2	0	0	2	12	2	0	0	2	1	15	0	0	1	0	0	0	0	171	
07:20:00 AM	8	11	1	0	0	3	17	4	0	0	2	0	14	0	0	3	4	0	0	0	179	
07:25:00 AM	9	19	0	0	0	0	11	4	0	0	3	1	14	0	0	4	2	1	0	0	198	
07:30:00 AM	6	22	1	0	0	3	24	2	0	0	3	4	20	0	0	2	2	1	0	0	225	
07:35:00 AM	7	14	0	0	0	2	19	9	0	0	5	1	24	0	0	3	1	1	0	0	244	
07:40:00 AM	7	20	0	0	0	1	22	3	0	0	5	2	13	0	0	3	0	1	0	0	253	
07:45:00 AM	1	20	1	0	0	2	18	4	0	0	5	2	14	0	0	2	3	0	0	0	235	
07:50:00 AM	3	16	1	0	0	4	20	7	0	0	2	3	14	0	0	4	2	2	0	0	227	
07:55:00 AM	4	15	2	0	0	1	15	4	0	0	9	4	11	0	0	2	0	0	0	0	217	839
08:00:00 AM	2	24	1	0	0	1	21	3	0	0	1	3	5	0	0	6	2	0	0	0	214	845
08:05:00 AM	7	20	1	0	0	0	13	4	0	0	0	4	17	0	0	2	1	0	0	0	205	855
08:10:00 AM	3	21	0	0	0	2	19	3	0	0	5	2	12	0	0	3	1	1	0	0	210	878
08:15:00 AM	11	17	0	0	0	3	18	5	0	0	2	2	14	0	0	4	1	0	0	0	218	892
08:20:00 AM	4	17	0	0	0	2	18	3	0	0	2	5	14	0	0	2	0	3	0	0	219	895
08:25:00 AM	3	12	1	0	0	2	16	3	0	0	2	3	12	0	0	3	3	0	0	0	207	887
08:30:00 AM	2	12	0	0	0	3	12	0	0	0	3	1	7	0	0	7	1	0	0	0	178	845
08:35:00 AM	3	17	0	0	0	1	7	2	0	0	5	1	10	0	0	5	2	0	0	0	161	812
08:40:00 AM	4	11	1	0	0	0	18	0	0	0	0	1	13	0	0	4	4	2	0	0	159	793
08:45:00 AM	2	19	2	0	0	0	20	3	0	0	0	1	9	0	0	1	0	2	0	0	170	780
08:50:00 AM	4	6	1	0	0	1	20	4	0	0	4	7	9	0	0	3	0	0	0	0	176	761
08:55:00 AM	5	13	1	0	0	3	15	4	0	0	3	1	6	0	0	3	2	1	0	0	175	751

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:05:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
07:15:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
07:20:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	9	
07:25:00 AM	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
07:30:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
07:35:00 AM	0	2	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	10	
07:40:00 AM	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
07:50:00 AM	0	5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
07:55:00 AM	0	4	0	0	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	14	39
08:00:00 AM	0	2	0	0	0	0	7	1	0	0	1	0	0	0	0	0	0	0	0	0	25	49
08:05:00 AM	0	2	0	0	0	0	7	0	0	0	0	0	1	0	0	0	0	0	0	0	29	57
08:10:00 AM	1	1	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	27	60
08:15:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	59
08:20:00 AM	0	2	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	12	60
08:25:00 AM	0	2	0	0	0	0	2	0	0	0	0	0	2	0	0	1	0	0	0	0	13	63
08:30:00 AM	1	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	17	66
08:35:00 AM	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	16	66
08:40:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11	65
08:45:00 AM	0	2	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	10	69
08:50:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8	65
08:55:00 AM	0	2	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	12	63

Bike Volumes

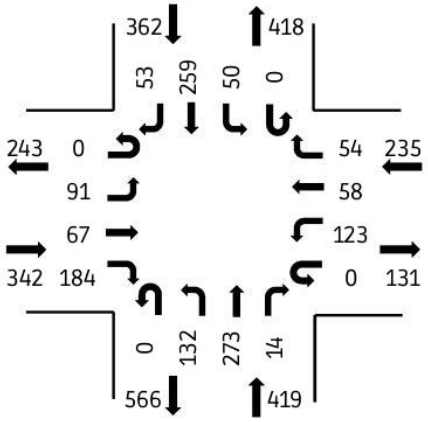
Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:55:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes

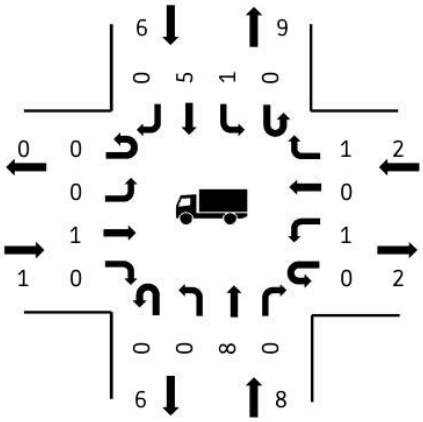
Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
07:00:00 AM	0	0	1	0		
07:05:00 AM	0	0	0	0		
07:10:00 AM	0	1	1	1	4	
07:15:00 AM	0	0	1	0	4	
07:20:00 AM	0	0	0	0	4	
07:25:00 AM	0	0	0	0	1	
07:30:00 AM	0	0	0	0	0	
07:35:00 AM	0	0	0	0	0	
07:40:00 AM	0	1	0	0	1	
07:45:00 AM	1	0	0	0	2	
07:50:00 AM	0	2	0	0	4	
07:55:00 AM	0	0	1	0	4	10
08:00:00 AM	0	0	1	0	4	10
08:05:00 AM	0	0	0	0	2	10
08:10:00 AM	0	0	0	0	1	7
08:15:00 AM	2	0	2	0	4	10
08:20:00 AM	0	0	0	0	4	10
08:25:00 AM	0	0	0	0	4	10
08:30:00 AM	2	0	0	0	2	12
08:35:00 AM	0	0	0	0	2	12
08:40:00 AM	0	0	0	0	2	11
08:45:00 AM	0	0	0	0	0	10
08:50:00 AM	0	0	0	0	0	8
08:55:00 AM	0	0	0	0	0	7

Location: N Springbrook Rd & Haworth Ave
Date: 2024-05-21
Peak Hour Start: 04:05 PM
Peak 15 Minute Start: 04:25 PM
Peak Hour Factor: 0.91

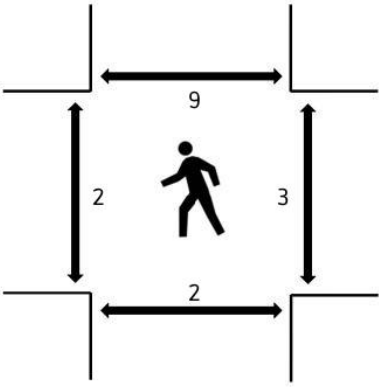
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	11	13	1	0	0	1	23	2	0	0	6	7	10	0	0	10	6	6	0	0		
04:05:00 PM	9	21	0	0	0	3	30	5	0	0	4	6	18	0	0	10	4	4	0	0		
04:10:00 PM	7	27	2	0	0	2	21	4	0	0	5	5	11	0	0	6	4	2	0	0	306	
04:15:00 PM	10	17	2	0	0	5	23	3	0	0	8	5	10	0	0	10	2	5	0	0	310	
04:20:00 PM	12	20	1	0	0	4	15	3	0	0	8	8	15	0	0	13	6	2	0	0	303	
04:25:00 PM	18	20	1	0	0	3	24	3	0	0	8	3	24	0	0	10	9	2	0	0	332	
04:30:00 PM	10	18	0	0	0	6	22	9	0	0	9	5	15	0	0	17	6	5	0	0	354	
04:35:00 PM	13	27	2	0	0	5	25	4	0	0	6	7	16	0	0	9	7	6	0	0	374	
04:40:00 PM	8	20	2	0	0	5	9	1	0	0	13	4	18	0	0	10	6	6	0	0	351	
04:45:00 PM	12	28	1	0	0	1	19	7	0	0	8	11	15	0	0	9	5	4	0	0	349	
04:50:00 PM	13	32	0	0	0	9	20	7	0	0	11	6	17	0	0	10	4	8	0	0	359	
04:55:00 PM	10	25	1	0	0	4	23	3	0	0	6	5	15	0	0	6	1	5	0	0	361	1350
05:00:00 PM	10	18	2	0	0	3	28	4	0	0	5	2	10	0	0	13	4	5	0	0	345	1358
05:05:00 PM	8	19	1	0	0	2	20	7	0	0	5	5	10	0	0	6	5	4	0	0	300	1336
05:10:00 PM	8	25	0	0	0	5	27	3	0	0	5	6	11	0	0	10	4	5	0	0	305	1349
05:15:00 PM	12	28	0	0	0	2	27	1	0	0	6	4	13	0	0	3	3	1	0	0	301	1349
05:20:00 PM	14	22	1	0	0	4	20	5	0	0	3	8	11	0	0	5	2	5	0	0	309	1342
05:25:00 PM	10	21	0	0	0	3	20	2	0	0	9	12	12	0	0	7	5	3	0	0	304	1321
05:30:00 PM	15	18	2	0	0	6	24	4	0	0	12	6	12	0	0	11	3	4	0	0	321	1316
05:35:00 PM	14	22	1	0	0	2	17	2	0	0	6	6	13	0	0	8	6	7	0	0	325	1293
05:40:00 PM	14	27	3	0	0	2	25	3	0	0	4	7	12	0	0	6	4	5	0	0	333	1303
05:45:00 PM	6	24	2	0	0	2	23	2	0	0	9	3	16	0	0	8	7	4	0	0	322	1289
05:50:00 PM	16	28	1	0	0	3	17	4	0	0	6	1	24	0	0	6	8	7	0	0	339	1273
05:55:00 PM	8	20	2	0	0	3	21	0	0	0	6	2	6	0	0	7	11	5	0	0	318	1260

Car Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	11	13	1	0	0	1	21	2	0	0	6	7	10	0	0	10	6	6	0	0		
04:05:00 PM	9	20	0	0	0	3	30	5	0	0	4	6	18	0	0	10	4	4	0	0		
04:10:00 PM	7	24	2	0	0	2	21	4	0	0	5	5	11	0	0	6	4	2	0	0	300	
04:15:00 PM	10	17	2	0	0	5	20	3	0	0	8	5	10	0	0	10	2	5	0	0	303	
04:20:00 PM	12	20	1	0	0	3	15	3	0	0	8	8	15	0	0	13	6	2	0	0	296	
04:25:00 PM	18	20	1	0	0	3	24	3	0	0	8	3	24	0	0	10	9	2	0	0	328	
04:30:00 PM	10	18	0	0	0	6	21	9	0	0	9	5	15	0	0	17	6	5	0	0	352	
04:35:00 PM	13	25	2	0	0	5	25	4	0	0	6	6	16	0	0	9	7	6	0	0	370	
04:40:00 PM	8	19	2	0	0	5	9	1	0	0	13	4	18	0	0	9	6	6	0	0	345	
04:45:00 PM	12	28	1	0	0	1	19	7	0	0	8	11	15	0	0	9	5	4	0	0	344	
04:50:00 PM	13	32	0	0	0	9	20	7	0	0	11	6	17	0	0	10	4	7	0	0	356	
04:55:00 PM	10	24	1	0	0	4	23	3	0	0	6	5	15	0	0	6	1	5	0	0	359	1332
05:00:00 PM	10	18	2	0	0	3	27	4	0	0	5	2	10	0	0	13	4	5	0	0	342	1341
05:05:00 PM	8	19	1	0	0	2	19	7	0	0	5	5	10	0	0	6	5	4	0	0	297	1319
05:10:00 PM	8	25	0	0	0	5	24	3	0	0	5	6	11	0	0	10	4	5	0	0	300	1332
05:15:00 PM	12	28	0	0	0	2	27	1	0	0	6	4	13	0	0	3	3	1	0	0	297	1335
05:20:00 PM	14	22	1	0	0	4	20	5	0	0	3	8	11	0	0	5	2	5	0	0	306	1329
05:25:00 PM	10	21	0	0	0	3	20	2	0	0	9	12	12	0	0	7	5	3	0	0	304	1308
05:30:00 PM	15	17	2	0	0	6	24	4	0	0	12	6	12	0	0	11	3	4	0	0	320	1303
05:35:00 PM	14	22	1	0	0	2	17	2	0	0	6	6	13	0	0	8	6	7	0	0	324	1283
05:40:00 PM	14	27	3	0	0	2	25	3	0	0	4	7	12	0	0	6	4	5	0	0	332	1295
05:45:00 PM	6	24	2	0	0	2	23	2	0	0	9	3	16	0	0	8	7	4	0	0	322	1281
05:50:00 PM	16	28	1	0	0	3	17	4	0	0	6	1	24	0	0	6	8	7	0	0	339	1266
05:55:00 PM	8	20	2	0	0	3	20	0	0	0	6	2	6	0	0	7	11	5	0	0	317	1253

Truck Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
04:15:00 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
04:20:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
04:30:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
04:35:00 PM	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	
04:40:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	6	
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	
04:55:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	18
05:00:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17
05:05:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17
05:10:00 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	17
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	14
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	13
05:25:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14
05:30:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
05:55:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8

Bike Volumes

Time	NB (N Springbrook Rd)					SB (N Springbrook Rd)					EB (Haworth Ave)					WB (Haworth Ave)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:05:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
04:00:00 PM	0	0	0	0		
04:05:00 PM	0	0	0	0		
04:10:00 PM	0	0	0	0	0	
04:15:00 PM	0	0	1	0	1	
04:20:00 PM	0	0	0	1	2	
04:25:00 PM	0	1	0	0	3	
04:30:00 PM	0	2	0	0	4	
04:35:00 PM	0	0	0	0	3	
04:40:00 PM	0	2	0	0	4	
04:45:00 PM	1	3	1	0	7	
04:50:00 PM	0	0	0	0	7	
04:55:00 PM	1	1	0	2	9	16
05:00:00 PM	0	0	0	0	4	16
05:05:00 PM	0	0	1	0	5	17
05:10:00 PM	0	0	0	0	1	17
05:15:00 PM	0	0	0	0	1	16
05:20:00 PM	0	0	0	0	0	15
05:25:00 PM	0	0	0	0	0	14
05:30:00 PM	0	0	0	0	0	12
05:35:00 PM	1	0	1	1	3	15
05:40:00 PM	0	0	0	0	3	13
05:45:00 PM	0	0	0	0	3	8
05:50:00 PM	0	0	0	0	0	8
05:55:00 PM	1	0	0	0	1	5

APPENDIX C: EXISTING HCM REPORTS

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	6	103	44	12	70
Future Vol, veh/h	36	6	103	44	12	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	5	0	0	0
Mvmt Flow	43	7	124	53	14	84

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	263	151	0	0	177	0
Stage 1	151	-	-	-	-	-
Stage 2	112	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	730	901	-	-	1411	-
Stage 1	882	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	723	901	-	-	1411	-
Mov Cap-2 Maneuver	723	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	744	1411	-
HCM Lane V/C Ratio	-	-	0.068	0.01	-
HCM Control Delay (s)	-	-	10.2	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	41	470	288	107	68	36
Future Vol, veh/h	41	470	288	107	68	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	125	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	5	5	5	0	0
Mvmt Flow	48	553	339	126	80	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	465	0	-	0	1051	402
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	649	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1107	-	-	-	253	653
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	524	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1107	-	-	-	242	653
Mov Cap-2 Maneuver	-	-	-	-	242	-
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	524	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	21.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1107	-	-	-	242	653
HCM Lane V/C Ratio	0.044	-	-	-	0.331	0.065
HCM Control Delay (s)	8.4	-	-	-	27.1	10.9
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	0.2

MOVEMENT SUMMARY

Site: 101 [EX AM Springbrook @ Crestview (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Newberg Springbrook Subdivision
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Springbrook															
3	L2	All MCs	37	3.0	37	3.0	0.328	7.0	LOS A	1.7	42.8	0.52	0.35	0.52	30.1
8	T1	All MCs	265	3.0	265	3.0	0.328	7.0	LOS A	1.7	42.8	0.52	0.35	0.52	30.6
18	R2	All MCs	19	3.0	19	3.0	0.328	7.0	LOS A	1.7	42.8	0.52	0.35	0.52	30.4
Approach			322	3.0	322	3.0	0.328	7.0	LOS A	1.7	42.8	0.52	0.35	0.52	30.5
East: Crestview															
1	L2	All MCs	13	3.0	13	3.0	0.202	6.0	LOS A	0.9	22.7	0.52	0.38	0.52	30.2
6	T1	All MCs	19	3.0	19	3.0	0.202	6.0	LOS A	0.9	22.7	0.52	0.38	0.52	30.7
16	R2	All MCs	147	3.0	147	3.0	0.202	6.0	LOS A	0.9	22.7	0.52	0.38	0.52	30.5
Approach			180	3.0	180	3.0	0.202	6.0	LOS A	0.9	22.7	0.52	0.38	0.52	30.5
North: Springbrook															
7	L2	All MCs	186	3.0	186	3.0	0.518	8.1	LOS A	4.0	103.0	0.35	0.14	0.35	29.1
4	T1	All MCs	302	3.0	302	3.0	0.518	8.1	LOS A	4.0	103.0	0.35	0.14	0.35	29.6
14	R2	All MCs	157	3.0	157	3.0	0.518	8.1	LOS A	4.0	103.0	0.35	0.14	0.35	29.4
Approach			645	3.0	645	3.0	0.518	8.1	LOS A	4.0	103.0	0.35	0.14	0.35	29.4
West: Crestview															
5	L2	All MCs	77	3.0	77	3.0	0.192	6.6	LOS A	0.8	20.5	0.57	0.46	0.57	29.1
2	T1	All MCs	27	3.0	27	3.0	0.192	6.6	LOS A	0.8	20.5	0.57	0.46	0.57	29.6
12	R2	All MCs	46	3.0	46	3.0	0.192	6.6	LOS A	0.8	20.5	0.57	0.46	0.57	29.4
Approach			149	3.0	149	3.0	0.192	6.6	LOS A	0.8	20.5	0.57	0.46	0.57	29.3
All Vehicles			1295	3.0	1295	3.0	0.518	7.4	LOS A	4.0	103.0	0.44	0.26	0.44	29.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	34	177	37	15	10	64	248	7	21	242	54
Future Vol, veh/h	44	34	177	37	15	10	64	248	7	21	242	54
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	4	3	3	0	0	0	3	9	0	0	10	6
Mvmt Flow	48	37	195	41	16	11	70	273	8	23	266	59
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	11.5	11.3	14	16
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	56%	0%	60%	100%	0%
Vol Thru, %	0%	97%	44%	0%	24%	0%	82%
Vol Right, %	0%	3%	0%	100%	16%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	255	78	177	62	21	296
LT Vol	64	0	44	0	37	21	0
Through Vol	0	248	34	0	15	0	242
RT Vol	0	7	0	177	10	0	54
Lane Flow Rate	70	280	86	195	68	23	325
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.13	0.487	0.167	0.323	0.135	0.043	0.557
Departure Headway (Hd)	6.678	6.254	6.993	5.978	7.134	6.635	6.17
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	535	574	511	599	499	538	582
Service Time	4.438	4.014	4.76	3.744	5.223	4.393	3.928
HCM Lane V/C Ratio	0.131	0.488	0.168	0.326	0.136	0.043	0.558
HCM Control Delay	10.4	14.9	11.2	11.6	11.3	9.7	16.5
HCM Lane LOS	B	B	B	B	B	A	C
HCM 95th-tile Q	0.4	2.7	0.6	1.4	0.5	0.1	3.4

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	14	108	33	30	125
Future Vol, veh/h	31	14	108	33	30	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	5	0	0	0
Mvmt Flow	34	15	119	36	33	137

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	340	137	0	0	155	0
Stage 1	137	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	654	917	-	-	1438	-
Stage 1	887	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	638	917	-	-	1438	-
Mov Cap-2 Maneuver	638	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	808	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	705	1438	-
HCM Lane V/C Ratio	-	-	0.07	0.023	-
HCM Control Delay (s)	-	-	10.5	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	41	432	396	99	121	53
Future Vol, veh/h	41	432	396	99	121	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	125	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	2	3	2	2	2
Mvmt Flow	47	491	450	113	138	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	563	0	-	0	1092	507
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	585	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1019	-	-	-	237	566
Stage 1	-	-	-	-	605	-
Stage 2	-	-	-	-	557	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1019	-	-	-	226	566
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	557	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	33.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1019	-	-	-	226	566
HCM Lane V/C Ratio	0.046	-	-	-	0.608	0.106
HCM Control Delay (s)	8.7	-	-	-	42.9	12.1
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	-	3.5	0.4

MOVEMENT SUMMARY

Site: 101 [EX PM Springbrook @ Crestview (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Newberg Springbrook Subdivision
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Springbrook															
3	L2	All MCs	26	3.0	26	3.0	0.361	7.2	LOS A	1.9	49.8	0.51	0.32	0.51	30.1
8	T1	All MCs	325	3.0	325	3.0	0.361	7.2	LOS A	1.9	49.8	0.51	0.32	0.51	30.7
18	R2	All MCs	19	3.0	19	3.0	0.361	7.2	LOS A	1.9	49.8	0.51	0.32	0.51	30.5
Approach			370	3.0	370	3.0	0.361	7.2	LOS A	1.9	49.8	0.51	0.32	0.51	30.6
East: Crestview															
1	L2	All MCs	19	3.0	19	3.0	0.203	6.3	LOS A	0.9	22.5	0.54	0.41	0.54	30.0
6	T1	All MCs	3	3.0	3	3.0	0.203	6.3	LOS A	0.9	22.5	0.54	0.41	0.54	30.5
16	R2	All MCs	149	3.0	149	3.0	0.203	6.3	LOS A	0.9	22.5	0.54	0.41	0.54	30.3
Approach			172	3.0	172	3.0	0.203	6.3	LOS A	0.9	22.5	0.54	0.41	0.54	30.3
North: Springbrook															
7	L2	All MCs	160	3.0	160	3.0	0.456	7.0	LOS A	3.3	83.4	0.26	0.09	0.26	29.7
4	T1	All MCs	363	3.0	363	3.0	0.456	7.0	LOS A	3.3	83.4	0.26	0.09	0.26	30.2
14	R2	All MCs	58	3.0	58	3.0	0.456	7.0	LOS A	3.3	83.4	0.26	0.09	0.26	30.0
Approach			581	3.0	581	3.0	0.456	7.0	LOS A	3.3	83.4	0.26	0.09	0.26	30.0
West: Crestview															
5	L2	All MCs	75	3.0	75	3.0	0.191	6.9	LOS A	0.8	20.2	0.59	0.49	0.59	28.9
2	T1	All MCs	16	3.0	16	3.0	0.191	6.9	LOS A	0.8	20.2	0.59	0.49	0.59	29.4
12	R2	All MCs	52	3.0	52	3.0	0.191	6.9	LOS A	0.8	20.2	0.59	0.49	0.59	29.2
Approach			143	3.0	143	3.0	0.191	6.9	LOS A	0.8	20.2	0.59	0.49	0.59	29.1
All Vehicles			1265	3.0	1265	3.0	0.456	7.0	LOS A	3.3	83.4	0.41	0.24	0.41	30.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	23.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	67	184	123	58	54	132	273	14	50	259	53
Future Vol, veh/h	91	67	184	123	58	54	132	273	14	50	259	53
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	2	0	1	0	2	0	3	0	2	2	0
Mvmt Flow	100	74	202	135	64	59	145	300	15	55	285	58
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	16.6	24.4	23.9	29.2
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	58%	0%	52%	100%	0%
Vol Thru, %	0%	95%	42%	0%	25%	0%	83%
Vol Right, %	0%	5%	0%	100%	23%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	287	158	184	235	50	312
LT Vol	132	0	91	0	123	50	0
Through Vol	0	273	67	0	58	0	259
RT Vol	0	14	0	184	54	0	53
Lane Flow Rate	145	315	174	202	258	55	343
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.343	0.701	0.416	0.429	0.614	0.131	0.759
Departure Headway (Hd)	8.508	8.007	8.622	7.635	8.553	8.613	7.972
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	422	451	418	471	421	416	453
Service Time	6.259	5.758	6.371	5.384	6.606	6.363	5.721
HCM Lane V/C Ratio	0.344	0.698	0.416	0.429	0.613	0.132	0.757
HCM Control Delay	15.7	27.6	17.4	16	24.4	12.7	31.9
HCM Lane LOS	C	D	C	C	C	B	D
HCM 95th-tile Q	1.5	5.3	2	2.1	4	0.4	6.4

APPENDIX D: 2027 NO BUILD HCM REPORTS

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	7	113	48	13	76
Future Vol, veh/h	39	7	113	48	13	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	5	0	0	0
Mvmt Flow	47	8	136	58	16	92

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	289	165	0	0	194	0
Stage 1	165	-	-	-	-	-
Stage 2	124	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	706	885	-	-	1391	-
Stage 1	869	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	698	885	-	-	1391	-
Mov Cap-2 Maneuver	698	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	896	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1391	-
HCM Lane V/C Ratio	-	-	0.077	0.011	-
HCM Control Delay (s)	-	-	10.4	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	514	315	117	74	39
Future Vol, veh/h	45	514	315	117	74	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	125	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	5	5	5	0	0
Mvmt Flow	53	605	371	138	87	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	509	0	-	0	1151	440
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	711	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1066	-	-	-	221	621
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	490	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1066	-	-	-	210	621
Mov Cap-2 Maneuver	-	-	-	-	210	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	490	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	26
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1066	-	-	-	210	621
HCM Lane V/C Ratio	0.05	-	-	-	0.415	0.074
HCM Control Delay (s)	8.6	-	-	-	33.8	11.3
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.9	0.2

MOVEMENT SUMMARY

Site: 101 [FY AM Springbrook @ Crestview (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Newberg Springbrook Subdivision
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Springbrook															
3	L2	All MCs	41	3.0	41	3.0	0.367	7.7	LOS A	1.9	49.2	0.56	0.38	0.56	29.8
8	T1	All MCs	289	3.0	289	3.0	0.367	7.7	LOS A	1.9	49.2	0.56	0.38	0.56	30.3
18	R2	All MCs	20	3.0	20	3.0	0.367	7.7	LOS A	1.9	49.2	0.56	0.38	0.56	30.1
Approach			351	3.0	351	3.0	0.367	7.7	LOS A	1.9	49.2	0.56	0.38	0.56	30.3
East: Crestview															
1	L2	All MCs	14	3.0	14	3.0	0.228	6.5	LOS A	1.0	25.8	0.55	0.41	0.55	30.0
6	T1	All MCs	20	3.0	20	3.0	0.228	6.5	LOS A	1.0	25.8	0.55	0.41	0.55	30.5
16	R2	All MCs	160	3.0	160	3.0	0.228	6.5	LOS A	1.0	25.8	0.55	0.41	0.55	30.3
Approach			195	3.0	195	3.0	0.228	6.5	LOS A	1.0	25.8	0.55	0.41	0.55	30.3
North: Springbrook															
7	L2	All MCs	202	3.0	202	3.0	0.569	9.0	LOS A	4.8	123.5	0.40	0.16	0.40	28.8
4	T1	All MCs	330	3.0	330	3.0	0.569	9.0	LOS A	4.8	123.5	0.40	0.16	0.40	29.3
14	R2	All MCs	171	3.0	171	3.0	0.569	9.0	LOS A	4.8	123.5	0.40	0.16	0.40	29.1
Approach			704	3.0	704	3.0	0.569	9.0	LOS A	4.8	123.5	0.40	0.16	0.40	29.1
West: Crestview															
5	L2	All MCs	84	3.0	84	3.0	0.221	7.3	LOS A	0.9	23.7	0.60	0.50	0.60	28.9
2	T1	All MCs	29	3.0	29	3.0	0.221	7.3	LOS A	0.9	23.7	0.60	0.50	0.60	29.3
12	R2	All MCs	51	3.0	51	3.0	0.221	7.3	LOS A	0.9	23.7	0.60	0.50	0.60	29.1
Approach			164	3.0	164	3.0	0.221	7.3	LOS A	0.9	23.7	0.60	0.50	0.60	29.0
All Vehicles			1413	3.0	1413	3.0	0.569	8.2	LOS A	4.8	123.5	0.48	0.29	0.48	29.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	15.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	37	193	40	16	11	70	271	8	23	264	59
Future Vol, veh/h	48	37	193	40	16	11	70	271	8	23	264	59
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	4	3	3	0	0	0	3	9	0	0	10	6
Mvmt Flow	53	41	212	44	18	12	77	298	9	25	290	65
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	12.3	12	15.8	18.9
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	56%	0%	60%	100%	0%
Vol Thru, %	0%	97%	44%	0%	24%	0%	82%
Vol Right, %	0%	3%	0%	100%	16%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	279	85	193	67	23	323
LT Vol	70	0	48	0	40	23	0
Through Vol	0	271	37	0	16	0	264
RT Vol	0	8	0	193	11	0	59
Lane Flow Rate	77	307	93	212	74	25	355
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.147	0.55	0.188	0.366	0.155	0.048	0.629
Departure Headway (Hd)	6.886	6.46	7.228	6.21	7.577	6.841	6.375
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	517	555	493	575	476	520	564
Service Time	4.675	4.249	5.021	4.002	5.577	4.627	4.16
HCM Lane V/C Ratio	0.149	0.553	0.189	0.369	0.155	0.048	0.629
HCM Control Delay	10.9	17	11.7	12.6	12	10	19.5
HCM Lane LOS	B	C	B	B	B	A	C
HCM 95th-tile Q	0.5	3.3	0.7	1.7	0.5	0.2	4.4

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	15	118	36	33	137
Future Vol, veh/h	34	15	118	36	33	137
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	5	0	0	0
Mvmt Flow	37	16	130	40	36	151

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	373	150	0	0	170	0
Stage 1	150	-	-	-	-	-
Stage 2	223	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	626	902	-	-	1420	-
Stage 1	875	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	608	902	-	-	1420	-
Mov Cap-2 Maneuver	608	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	675	1420	-
HCM Lane V/C Ratio	-	-	0.08	0.026	-
HCM Control Delay (s)	-	-	10.8	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	472	433	108	132	58
Future Vol, veh/h	45	472	433	108	132	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	125	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	2	3	2	2	2
Mvmt Flow	51	536	492	123	150	66

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	615	0	-	0	1192	554
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	638	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	974	-	-	-	207	532
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	526	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	974	-	-	-	196	532
Mov Cap-2 Maneuver	-	-	-	-	196	-
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	526	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	49.7
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	974	-	-	-	196	532
HCM Lane V/C Ratio	0.053	-	-	-	0.765	0.124
HCM Control Delay (s)	8.9	-	-	-	66	12.7
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.2	-	-	-	5.2	0.4

MOVEMENT SUMMARY

Site: 101 [FY PM Springbrook @ Crestview (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Newberg Springbrook Subdivision
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Springbrook															
3	L2	All MCs	28	3.0	28	3.0	0.405	8.0	LOS A	2.3	57.7	0.55	0.36	0.55	29.9
8	T1	All MCs	355	3.0	355	3.0	0.405	8.0	LOS A	2.3	57.7	0.55	0.36	0.55	30.4
18	R2	All MCs	21	3.0	21	3.0	0.405	8.0	LOS A	2.3	57.7	0.55	0.36	0.55	30.2
Approach			404	3.0	404	3.0	0.405	8.0	LOS A	2.3	57.7	0.55	0.36	0.55	30.3
East: Crestview															
1	L2	All MCs	21	3.0	21	3.0	0.231	6.9	LOS A	1.0	25.8	0.57	0.45	0.57	29.7
6	T1	All MCs	3	3.0	3	3.0	0.231	6.9	LOS A	1.0	25.8	0.57	0.45	0.57	30.3
16	R2	All MCs	163	3.0	163	3.0	0.231	6.9	LOS A	1.0	25.8	0.57	0.45	0.57	30.1
Approach			188	3.0	188	3.0	0.231	6.9	LOS A	1.0	25.8	0.57	0.45	0.57	30.0
North: Springbrook															
7	L2	All MCs	174	3.0	174	3.0	0.500	7.6	LOS A	3.8	98.5	0.29	0.10	0.29	29.4
4	T1	All MCs	397	3.0	397	3.0	0.500	7.6	LOS A	3.8	98.5	0.29	0.10	0.29	29.9
14	R2	All MCs	64	3.0	64	3.0	0.500	7.6	LOS A	3.8	98.5	0.29	0.10	0.29	29.7
Approach			635	3.0	635	3.0	0.500	7.6	LOS A	3.8	98.5	0.29	0.10	0.29	29.8
West: Crestview															
5	L2	All MCs	82	3.0	82	3.0	0.220	7.6	LOS A	0.9	23.2	0.61	0.53	0.61	28.7
2	T1	All MCs	17	3.0	17	3.0	0.220	7.6	LOS A	0.9	23.2	0.61	0.53	0.61	29.2
12	R2	All MCs	56	3.0	56	3.0	0.220	7.6	LOS A	0.9	23.2	0.61	0.53	0.61	29.0
Approach			155	3.0	155	3.0	0.220	7.6	LOS A	0.9	23.2	0.61	0.53	0.61	28.8
All Vehicles			1382	3.0	1382	3.0	0.500	7.6	LOS A	3.8	98.5	0.44	0.27	0.44	29.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	32.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	73	201	134	63	59	144	298	15	55	283	58
Future Vol, veh/h	99	73	201	134	63	59	144	298	15	55	283	58
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	2	0	1	0	2	0	3	0	2	2	0
Mvmt Flow	109	80	221	147	69	65	158	327	16	60	311	64
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	19.7	32.4	33.1	44.3
HCM LOS	C	D	D	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	58%	0%	52%	100%	0%
Vol Thru, %	0%	95%	42%	0%	25%	0%	83%
Vol Right, %	0%	5%	0%	100%	23%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	144	313	172	201	256	55	341
LT Vol	144	0	99	0	134	55	0
Through Vol	0	298	73	0	63	0	283
RT Vol	0	15	0	201	59	0	58
Lane Flow Rate	158	344	189	221	281	60	375
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.399	0.819	0.483	0.503	0.716	0.154	0.885
Departure Headway (Hd)	9.072	8.57	9.194	8.202	9.161	9.147	8.503
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	396	423	391	437	394	392	427
Service Time	6.846	6.343	6.967	5.974	7.239	6.917	6.272
HCM Lane V/C Ratio	0.399	0.813	0.483	0.506	0.713	0.153	0.878
HCM Control Delay	17.8	40.2	20.3	19.1	32.4	13.6	49.3
HCM Lane LOS	C	E	C	C	D	B	E
HCM 95th-tile Q	1.9	7.5	2.5	2.8	5.4	0.5	9.2

APPENDIX E: 2027 BUILD HCM REPORTS

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	7	106	51	13	77
Future Vol, veh/h	40	7	106	51	13	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	5	0	0	0
Mvmt Flow	48	8	128	61	16	93

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	284	159	0	0	189	0
Stage 1	159	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	710	892	-	-	1397	-
Stage 1	875	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	701	892	-	-	1397	-
Mov Cap-2 Maneuver	701	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	724	1397	-
HCM Lane V/C Ratio	-	-	0.078	0.011	-
HCM Control Delay (s)	-	-	10.4	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	514	315	129	109	56
Future Vol, veh/h	51	514	315	129	109	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	125	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	5	5	5	0	0
Mvmt Flow	60	605	371	152	128	66

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	523	0	-	0	1172	447
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	725	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1054	-	-	-	215	616
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	483	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1054	-	-	-	203	616
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	483	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	36.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1054	-	-	-	203	616
HCM Lane V/C Ratio	0.057	-	-	-	0.632	0.107
HCM Control Delay (s)	8.6	-	-	-	49	11.5
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	3.7	0.4

MOVEMENT SUMMARY

Site: 101 [FY PP AM Springbrook @ Crestview (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Newberg Springbrook Subdivision
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Springbrook															
3	L2	All MCs	41	3.0	41	3.0	0.383	8.0	LOS A	2.0	51.7	0.58	0.40	0.58	29.7
8	T1	All MCs	299	3.0	299	3.0	0.383	8.0	LOS A	2.0	51.7	0.58	0.40	0.58	30.2
18	R2	All MCs	20	3.0	20	3.0	0.383	8.0	LOS A	2.0	51.7	0.58	0.40	0.58	30.0
Approach			360	3.0	360	3.0	0.383	8.0	LOS A	2.0	51.7	0.58	0.40	0.58	30.1
East: Crestview															
1	L2	All MCs	14	3.0	14	3.0	0.236	6.7	LOS A	1.0	26.8	0.56	0.42	0.56	29.9
6	T1	All MCs	20	3.0	20	3.0	0.236	6.7	LOS A	1.0	26.8	0.56	0.42	0.56	30.5
16	R2	All MCs	165	3.0	165	3.0	0.236	6.7	LOS A	1.0	26.8	0.56	0.42	0.56	30.3
Approach			200	3.0	200	3.0	0.236	6.7	LOS A	1.0	26.8	0.56	0.42	0.56	30.3
North: Springbrook															
7	L2	All MCs	217	3.0	217	3.0	0.603	9.6	LOS A	5.5	140.2	0.43	0.17	0.43	28.6
4	T1	All MCs	358	3.0	358	3.0	0.603	9.6	LOS A	5.5	140.2	0.43	0.17	0.43	29.1
14	R2	All MCs	171	3.0	171	3.0	0.603	9.6	LOS A	5.5	140.2	0.43	0.17	0.43	28.9
Approach			746	3.0	746	3.0	0.603	9.6	LOS A	5.5	140.2	0.43	0.17	0.43	28.9
West: Crestview															
5	L2	All MCs	84	3.0	84	3.0	0.231	7.7	LOS A	1.0	24.6	0.62	0.53	0.62	28.7
2	T1	All MCs	29	3.0	29	3.0	0.231	7.7	LOS A	1.0	24.6	0.62	0.53	0.62	29.2
12	R2	All MCs	51	3.0	51	3.0	0.231	7.7	LOS A	1.0	24.6	0.62	0.53	0.62	29.0
Approach			164	3.0	164	3.0	0.231	7.7	LOS A	1.0	24.6	0.62	0.53	0.62	28.9
All Vehicles			1470	3.0	1470	3.0	0.603	8.6	LOS A	5.5	140.2	0.50	0.30	0.50	29.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	16.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	37	193	40	16	11	70	279	8	23	287	59
Future Vol, veh/h	48	37	193	40	16	11	70	279	8	23	287	59
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	4	3	3	0	0	0	3	9	0	0	10	6
Mvmt Flow	53	41	212	44	18	12	77	307	9	25	315	65
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	12.6	12.2	16.5	21.1
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	56%	0%	60%	100%	0%
Vol Thru, %	0%	97%	44%	0%	24%	0%	83%
Vol Right, %	0%	3%	0%	100%	16%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	287	85	193	67	23	346
LT Vol	70	0	48	0	40	23	0
Through Vol	0	279	37	0	16	0	287
RT Vol	0	8	0	193	11	0	59
Lane Flow Rate	77	315	93	212	74	25	380
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.149	0.572	0.19	0.372	0.158	0.048	0.678
Departure Headway (Hd)	6.952	6.526	7.336	6.317	7.724	6.879	6.422
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	512	549	486	564	468	517	559
Service Time	4.745	4.319	5.136	4.116	5.724	4.671	4.213
HCM Lane V/C Ratio	0.15	0.574	0.191	0.376	0.158	0.048	0.68
HCM Control Delay	11	17.8	11.9	12.9	12.2	10	21.8
HCM Lane LOS	B	C	B	B	B	A	C
HCM 95th-tile Q	0.5	3.6	0.7	1.7	0.6	0.2	5.1

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	15	120	38	33	140
Future Vol, veh/h	37	15	120	38	33	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	2	3	0	2
Mvmt Flow	41	16	132	42	36	154

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	379	153	0	0	174	0
Stage 1	153	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	621	898	-	-	1415	-
Stage 1	873	-	-	-	-	-
Stage 2	809	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	604	898	-	-	1415	-
Mov Cap-2 Maneuver	604	-	-	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	667	1415	-
HCM Lane V/C Ratio	-	-	0.086	0.026	-
HCM Control Delay (s)	-	-	10.9	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	15.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	472	433	147	155	69
Future Vol, veh/h	65	472	433	147	155	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	125	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	2	3	2	2	2
Mvmt Flow	74	536	492	167	176	78

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	659	0	-	0	1260	576
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	684	-
Critical Hdwy	4.1	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	939	-	-	-	188	517
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	939	-	-	-	~ 173	517
Mov Cap-2 Maneuver	-	-	-	-	~ 173	-
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	501	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	92.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	939	-	-	-	173	517
HCM Lane V/C Ratio	0.079	-	-	-	1.018	0.152
HCM Control Delay (s)	9.2	-	-	-	127.6	13.2
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	8.3	0.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

MOVEMENT SUMMARY

Site: 101 [FY PP PM Springbrook @ Crestview (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Newberg Springbrook Subdivision
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Springbrook															
3	L2	All MCs	28	3.0	28	3.0	0.438	8.5	LOS A	2.5	64.5	0.58	0.38	0.58	29.7
8	T1	All MCs	384	3.0	384	3.0	0.438	8.5	LOS A	2.5	64.5	0.58	0.38	0.58	30.2
18	R2	All MCs	21	3.0	21	3.0	0.438	8.5	LOS A	2.5	64.5	0.58	0.38	0.58	30.0
Approach			434	3.0	434	3.0	0.438	8.5	LOS A	2.5	64.5	0.58	0.38	0.58	30.1
East: Crestview															
1	L2	All MCs	21	3.0	21	3.0	0.257	7.4	LOS A	1.1	28.9	0.59	0.48	0.59	29.5
6	T1	All MCs	3	3.0	3	3.0	0.257	7.4	LOS A	1.1	28.9	0.59	0.48	0.59	30.1
16	R2	All MCs	178	3.0	178	3.0	0.257	7.4	LOS A	1.1	28.9	0.59	0.48	0.59	29.9
Approach			202	3.0	202	3.0	0.257	7.4	LOS A	1.1	28.9	0.59	0.48	0.59	29.8
North: Springbrook															
7	L2	All MCs	183	3.0	183	3.0	0.521	7.9	LOS A	4.2	106.4	0.30	0.11	0.30	29.3
4	T1	All MCs	413	3.0	413	3.0	0.521	7.9	LOS A	4.2	106.4	0.30	0.11	0.30	29.8
14	R2	All MCs	64	3.0	64	3.0	0.521	7.9	LOS A	4.2	106.4	0.30	0.11	0.30	29.6
Approach			661	3.0	661	3.0	0.521	7.9	LOS A	4.2	106.4	0.30	0.11	0.30	29.6
West: Crestview															
5	L2	All MCs	82	3.0	82	3.0	0.226	7.9	LOS A	0.9	23.7	0.63	0.54	0.63	28.6
2	T1	All MCs	17	3.0	17	3.0	0.226	7.9	LOS A	0.9	23.7	0.63	0.54	0.63	29.1
12	R2	All MCs	56	3.0	56	3.0	0.226	7.9	LOS A	0.9	23.7	0.63	0.54	0.63	28.9
Approach			155	3.0	155	3.0	0.226	7.9	LOS A	0.9	23.7	0.63	0.54	0.63	28.7
All Vehicles			1452	3.0	1452	3.0	0.521	8.0	LOS A	4.2	106.4	0.46	0.29	0.46	29.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

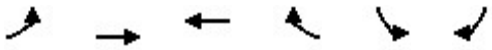
Intersection	
Intersection Delay, s/veh	39.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	73	201	134	63	59	144	324	15	55	298	58
Future Vol, veh/h	99	73	201	134	63	59	144	324	15	55	298	58
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	2	0	1	0	2	0	3	0	2	2	0
Mvmt Flow	109	80	221	147	69	65	158	356	16	60	327	64
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	20.6	34.8	42.8	54.4
HCM LOS	C	D	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	58%	0%	52%	100%	0%
Vol Thru, %	0%	96%	42%	0%	25%	0%	84%
Vol Right, %	0%	4%	0%	100%	23%	0%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	144	339	172	201	256	55	356
LT Vol	144	0	99	0	134	55	0
Through Vol	0	324	73	0	63	0	298
RT Vol	0	15	0	201	59	0	58
Lane Flow Rate	158	373	189	221	281	60	391
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.405	0.902	0.495	0.517	0.736	0.156	0.942
Departure Headway (Hd)	9.219	8.719	9.421	8.426	9.414	9.306	8.665
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	389	414	382	426	383	384	419
Service Time	7.005	6.503	7.206	6.21	7.504	7.085	6.444
HCM Lane V/C Ratio	0.406	0.901	0.495	0.519	0.734	0.156	0.933
HCM Control Delay	18.2	53.2	21.2	20	34.8	13.8	60.7
HCM Lane LOS	C	F	C	C	D	B	F
HCM 95th-tile Q	1.9	9.5	2.6	2.9	5.7	0.5	10.7

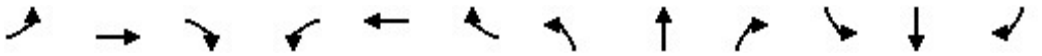
APPENDIX F: 2027 BUILD MITIGATION HCM REPORT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	51	514	315	129	109	56
Future Volume (vph)	51	514	315	129	109	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	1810	1739		1805	1574
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	1810	1739		1805	1574
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	60	605	371	152	128	66
RTOR Reduction (vph)	0	0	17	0	0	57
Lane Group Flow (vph)	60	605	506	0	128	9
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	0%	5%	5%	5%	0%	0%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		8	
Permitted Phases						8
Actuated Green, G (s)	3.1	39.0	31.4		7.8	7.8
Effective Green, g (s)	3.1	39.0	31.4		7.8	7.8
Actuated g/C Ratio	0.06	0.70	0.56		0.14	0.14
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	100	1265	978		252	220
v/s Ratio Prot	0.03	c0.33	c0.29		c0.07	
v/s Ratio Perm						0.01
v/c Ratio	0.60	0.48	0.52		0.51	0.04
Uniform Delay, d1	25.7	3.8	7.5		22.2	20.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.3	1.3	2.0		1.6	0.1
Delay (s)	35.1	5.1	9.5		23.8	20.8
Level of Service	D	A	A		C	C
Approach Delay (s)		7.8	9.5		22.8	
Approach LOS		A	A		C	

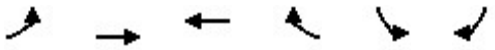
Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



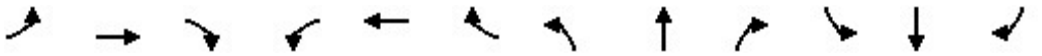
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	37	193	40	16	11	70	279	8	23	287	59
Future Volume (vph)	48	37	193	40	16	11	70	279	8	23	287	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.97		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1784	1514		1798		1752	1738		1798	1693	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1784	1514		1798		1752	1738		1798	1693	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	53	41	212	44	18	12	77	307	9	25	315	65
RTOR Reduction (vph)	0	0	190	0	11	0	0	1	0	0	9	0
Lane Group Flow (vph)	0	94	22	0	63	0	77	315	0	25	371	0
Confl. Peds. (#/hr)	3		3	3		3			4	4		
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	4%	3%	3%	0%	0%	0%	3%	9%	0%	0%	10%	6%
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)		5.7	5.7		4.5		2.7	25.8		0.9	24.0	
Effective Green, g (s)		5.7	5.7		4.5		2.7	25.8		0.9	24.0	
Actuated g/C Ratio		0.10	0.10		0.08		0.05	0.47		0.02	0.44	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		185	157		147		86	816		29	740	
v/s Ratio Prot		c0.05			c0.04		c0.04	0.18		0.01	c0.22	
v/s Ratio Perm			0.01									
v/c Ratio		0.51	0.14		0.43		0.90	0.39		0.86	0.50	
Uniform Delay, d1		23.3	22.4		24.0		26.0	9.4		26.9	11.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.2	0.4		2.0		63.1	1.4		109.1	2.4	
Delay (s)		25.5	22.8		26.0		89.0	10.8		136.1	13.6	
Level of Service		C	C		C		F	B		F	B	
Approach Delay (s)		23.6			26.0			26.1			21.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	54.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	472	433	147	155	69
Future Volume (vph)	65	472	433	147	155	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	1863	1786		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	1863	1786		1770	1583
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	74	536	492	167	176	78
RTOR Reduction (vph)	0	0	15	0	0	65
Lane Group Flow (vph)	74	536	644	0	176	13
Heavy Vehicles (%)	0%	2%	3%	2%	2%	2%
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		8	
Permitted Phases						8
Actuated Green, G (s)	3.0	38.1	30.6		9.1	9.1
Effective Green, g (s)	3.0	38.1	30.6		9.1	9.1
Actuated g/C Ratio	0.05	0.68	0.54		0.16	0.16
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	96	1262	972		286	256
v/s Ratio Prot	c0.04	0.29	c0.36		c0.10	
v/s Ratio Perm						0.01
v/c Ratio	0.77	0.42	0.66		0.62	0.05
Uniform Delay, d1	26.3	4.1	9.1		21.9	19.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	30.9	1.0	3.6		3.9	0.1
Delay (s)	57.2	5.1	12.7		25.8	20.0
Level of Service	E	A	B		C	B
Approach Delay (s)		11.5	12.7		24.0	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	73	201	134	63	59	144	324	15	55	298	58
Future Volume (vph)	99	73	201	134	63	59	144	324	15	55	298	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.95		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	0.99		1.00	0.98	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1831	1527		1766		1805	1833		1770	1815	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1831	1527		1766		1805	1833		1770	1815	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	109	80	221	147	69	65	158	356	16	60	327	64
RTOR Reduction (vph)	0	0	193	0	15	0	0	2	0	0	9	0
Lane Group Flow (vph)	0	189	28	0	266	0	158	370	0	60	382	0
Confl. Peds. (#/hr)	2		9	9		2	3		2	2		3
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	0%	2%	0%	1%	0%	2%	0%	3%	0%	2%	2%	0%
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)		9.4	9.4		14.8		8.4	28.4		3.0	23.0	
Effective Green, g (s)		9.4	9.4		14.8		8.4	28.4		3.0	23.0	
Actuated g/C Ratio		0.13	0.13		0.20		0.11	0.39		0.04	0.31	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		233	195		355		206	707		72	567	
v/s Ratio Prot		c0.10			c0.15		c0.09	0.20		0.03	c0.21	
v/s Ratio Perm			0.02									
v/c Ratio		0.81	0.14		0.75		0.77	0.52		0.83	0.67	
Uniform Delay, d1		31.2	28.5		27.7		31.6	17.4		35.1	22.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		18.9	0.3		8.4		15.6	2.8		53.2	6.3	
Delay (s)		50.1	28.9		36.0		47.3	20.2		88.3	28.3	
Level of Service		D	C		D		D	C		F	C	
Approach Delay (s)		38.7			36.0			28.2			36.3	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX G: CRASH DATA

Springbrook and Benjamin

013 Lat	014 Long	117 Severity	000 Crash Id	002 Year	005 Region	007 County1	008 Jurisdiction	015 Street Name	021 Road Characteristics	022 Off Roadway Flag	036 Crash Cause 1
45.32083611	-122.9404111	PDO	1821127	2018	2	Yamhill		SPRINGBROOK RD	CURVE	TRUE	TOO-FAST
45.32069796	-122.9405309	PDO	1991444	2022	2	Yamhill		SPRINGBROOK RD A	INTER	FALSE	TOO-FAST

Springbrook and Haworth

013 Lat	014 Long	117 Severity	000 Crash Id	002 Year	005 Region	007 County1	008 Jurisdiction	015 Street Name	021 Road Characteristics	022 Off Roadway Flag	036 Crash Cause 1
45.30798031	-122.9469402	Possible Injury (C)	1962105	2022	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30797406	-122.9469379	Possible Injury (C)	2005264	2022	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798031	-122.9469442	PDO	1869465	2019	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798219	-122.9469442	PDO	1867861	2019	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798136	-122.9469453	PDO	1869300	2019	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	PAS-STOP
45.30798031	-122.9469402	Minor Injury (B)	1964936	2022	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30799167	-122.9469444	PDO	1820826	2018	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	PAS-STOP
45.30798889	-122.9469333	PDO	1821040	2018	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798056	-122.9469389	PDO	1821107	2018	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798056	-122.9469389	Minor Injury (B)	1782766	2018	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	RECKLESS
45.308	-122.9469444	PDO	1819916	2018	2	Yamhill	Newberg	SPRINGBROOK RD	INTER	FALSE	NO-YIELD
45.30798031	-122.9469402	Possible Injury (C)	1829551	2019	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798031	-122.9469415	Possible Injury (C)	1886370	2020	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	PAS-STOP
45.30798056	-122.9469389	Possible Injury (C)	1782794	2018	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798056	-122.9469389	Possible Injury (C)	1787844	2018	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30798031	-122.9469415	Possible Injury (C)	1889321	2020	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD
45.30797406	-122.9469379	PDO	1989603	2022	2	Yamhill	Newberg	HAWORTH AVE	INTER	FALSE	NO-YIELD

Springbrook and Benjamin

114 Road Departure Flag	118 Intersection Flag	119 State Highway Flag1	126 Bike / Ped Related	127 Driveway Flag	128 Jurisdiction Complete	011 Hwy No	001 CRASH Date
Yes	No	No	Neither	No	Yamhill County		12/28/2018
No	Yes	No	Neither	No	Yamhill County		10/13/2022

Springbrook and Haworth

114 Road Departure Flag	119 State Highway Flag1	126 Bike / Ped Related	127 Driveway Flag	128 Jurisdiction Complete	011 Hwy No	001 CRASH Date	016 Intersecting Street Name
No	No	Neither	Yes	Newberg		2/11/2022	SPRINGBROOK RD
No	No	Neither	Yes	Newberg		12/18/2022	SPRINGBROOK RD
No	No	Neither	No	Newberg		8/13/2019	SPRINGBROOK RD
No	No	Neither	No	Newberg		4/5/2019	SPRINGBROOK RD
No	No	Neither	No	Newberg		8/7/2019	SPRINGBROOK RD
No	No	Pedestrian	No	Newberg		4/27/2022	SPRINGBROOK RD
No	No	Neither	No	Newberg		11/20/2018	SPRINGBROOK RD
No	No	Neither	No	Newberg		12/6/2018	SPRINGBROOK RD
No	No	Neither	No	Newberg		12/25/2018	SPRINGBROOK RD
No	No	Neither	No	Newberg		1/19/2018	SPRINGBROOK RD
No	No	Neither	Yes	Newberg		8/17/2018	HAWORTH AVE
No	No	Neither	No	Newberg		5/2/2019	SPRINGBROOK RD
No	No	Neither	Yes	Newberg		9/22/2020	SPRINGBROOK RD
No	No	Neither	No	Newberg		2/3/2018	SPRINGBROOK RD
No	No	Neither	Yes	Newberg		5/30/2018	SPRINGBROOK RD
No	No	Neither	Yes	Newberg		12/20/2020	SPRINGBROOK RD
No	No	Neither	No	Newberg		9/8/2022	SPRINGBROOK RD

Springbrook and Benjamin

016 Intersecting Street Name	028 Crash Type	029 Collision Type	031 Weather Conditions	032 Road Surface Conditions	033 Lighting Conditions	034 Traffic Control	019 Mp No	003 Crash Day No
BENJAMIN RD	FIX OBJ	FIX	CLR	DRY	DAY	UNKNOWN		28
	O-STRGHT	SS-M	CLR	DRY	DARK	STOP SIGN	0.310000002	13

Springbrook and Haworth

028 Crash Type	029 Collision Type	031 Weather Conditions	032 Road Surface Conditions	033 Lighting Conditions	034 Traffic Control	118 Intersection Flag	019 Mp No	003 Crash Day No
ANGL-OTH	TURN	CLR	DRY	DAY	STOP SIGN	Yes		11
ANGL-OTH	ANGL	CLR	DRY	DLIT	STOP SIGN	Yes		18
ANGL-OTH	TURN	CLR	DRY	DAY	STOP SIGN	Yes		13
O-1 L-TURN	TURN	RAIN	WET	DAY	STOP SIGN	Yes		5
ANGL-OTH	ANGL	CLR	DRY	DAY	STOP SIGN	Yes		7
PED	PED	CLR	DRY	DAY	STOP SIGN	Yes		27
ANGL-OTH	ANGL	CLR	DRY	DLIT	STOP SIGN	Yes		20
ANGL-OTH	ANGL	CLR	DRY	DLIT	STOP SIGN	Yes		6
ANGL-OTH	ANGL	RAIN	WET	DLIT	STOP SIGN	Yes		25
O-1 L-TURN	TURN	CLD	WET	DLIT	STOP SIGN	Yes		19
ANGL-OTH	ANGL	CLR	DRY	DAY	STOP SIGN	Yes		17
ANGL-OTH	ANGL	CLR	DRY	DAY	STOP SIGN	Yes		2
ANGL-OTH	ANGL	CLR	DRY	DAY	STOP SIGN	Yes		22
ANGL-OTH	ANGL	CLR	DRY	DLIT	STOP SIGN	Yes		3
ANGL-OTH	ANGL	CLR	DRY	DAY	STOP SIGN	Yes		30
ANGL-OTH	ANGL	RAIN	WET	DAY	STOP SIGN	Yes		20
ANGL-OTH	TURN	CLR	DRY	DLIT	STOP SIGN	Yes		8

APPENDIX H: PRELIMINARY SIGNAL WARRANT SPREADSHEETS

Oregon Department of Transportation
Transportation Development Branch
Transportation Planning Analysis Unit

Preliminary Traffic Signal Warrant Analysis[1]

Major Street:	Springbrook Road	**Minor Street:**	Mountainview Drive
Project:	Springbrook Subdivision	**City/County:**	Newberg
Year:	2027	**Alternative:**	0

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	70	Percent of standard warrants 100	70
Case A: Minimum Vehicular Traffic					
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500
Case B: Interruption of Continuous Traffic					
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250
X	100 percent of standard warrants				
	70 percent of standard warrants[2]				

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	8850	11170	N
	Minor	1	2650	1550	
Case B	Major	1	13300	11170	N
	Minor	1	1350	1550	

Analyst and Date:	Reviewer and Date:

[1] Meeting preliminary signal warrants does **not** guarantee that a signal will be installed. When preliminary signal warrants are met, project analysts need to coordinate with Region Traffic to initiate the traffic signal engineering investigation as outlined in the Traffic Manual. Before a signal can be installed, the engineering investigation must be conducted or reviewed by the Region Traffic Manager who will forward signal recommendations to headquarters. Traffic signal warrants must be met and the State Traffic Engineer's approval obtained before a traffic signal can be installed on a state highway.

[2] Used due to 85th percentile speed in excess of 40 mph or isolated community with population of less than 10,000.

Analysis Procedures Manual

Oregon Department of Transportation
Transportation Development Branch
Transportation Planning Analysis Unit

Preliminary Traffic Signal Warrant Analysis[1]

Major Street:	Springbrook Road	**Minor Street:**	Haworth Avenue
Project:	Springbrook Subdivision	**City/County:**	Newberg
Year:	2027	**Alternative:**	0

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	70	Percent of standard warrants 100	70
Case A: Minimum Vehicular Traffic					
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500
Case B: Interruption of Continuous Traffic					
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250
X	100 percent of standard warrants				
	70 percent of standard warrants[2]				

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	8850	8940	Y
	Minor	1	2650	2710	
Case B	Major	1	13300	8940	N
	Minor	1	1350	2710	

Analyst and Date: Reviewer and Date:

[1] Meeting preliminary signal warrants does **not** guarantee that a signal will be installed. When preliminary signal warrants are met, project analysts need to coordinate with Region Traffic to initiate the traffic signal engineering investigation as outlined in the Traffic Manual. Before a signal can be installed, the engineering investigation must be conducted or reviewed by the Region Traffic Manager who will forward signal recommendations to headquarters. Traffic signal warrants must be met and the State Traffic Engineer's approval obtained before a traffic signal can be installed on a state highway.

[2] Used due to 85th percentile speed in excess of 40 mph or isolated community with population of less than 10,000.

FIRE CODE / LAND USE / BUILDING REVIEW APPLICATION

Tualatin Valley Fire & Rescue

North Operating Center
11945 SW 70th Avenue
Tigard, OR 97223
Phone: 503-649-8577

South Operating Center
8445 SW Elligsen Rd
Wilsonville, OR 97070
Phone: 503-649-8577

REV 6-30-20

Project Information

Applicant Name: Maski Narita – Springbrook Subdivision

Address: 3800 SW Cedar Hills Blvd, Suite 131

Phone: 503-430-7413

Email: M-narita@ichijouse.com

Site Address: 3809 N Springbrook Rd

City: Newberg, OR 97132

Map & Tax Lot #: 3S2W9 2300

Business Name: Ichijo USA CO

Land Use/Building Jurisdiction: Newberg

Land Use/ Building Permit # N/A

Choose from: Beaverton, Tigard, **Newberg**, Tualatin, North Plains, West Linn, Wilsonville, Sherwood, Rivergrove, Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County

Project Description

A 100 lot subdivision located in Newberg Oregon near the intersection of Springbrook Road and Benjamin Road

Permit/Review Type (check one):

- ☒ Land Use / Building Review - Service Provider Permit
- ☐ Emergency Radio Responder Coverage Install/Test
- ☐ LPG Tank (Greater than 2,000 gallons)
- ☐ Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)
  - * Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation.
- ☐ Explosives Blasting (Blasting plan is required)
- ☐ Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)
- ☐ Tents or Temporary Membrane Structures (in excess of 10,000 square feet)
- ☐ Temporary Haunted House or similar
- ☐ OLCC Cannabis Extraction License Review
- ☐ Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly)

For Fire Marshal's Office Use Only

TVFR Permit # 2024-0095

Permit Type: SPP-Newberg

Submittal Date: 7-15-24

Assigned To: DPM Arn

Due Date: NA

Fees Due: Ø

Fees Paid: Ø

Approval/Inspection Conditions

(For Fire Marshal's Office Use Only)

This section is for application approval only

[signature] 0450 7-15-24

Fire Marshal or Designee Date

Conditions: 100-lot development to have one point of fire access all homes to be voluntarily sprinklered.

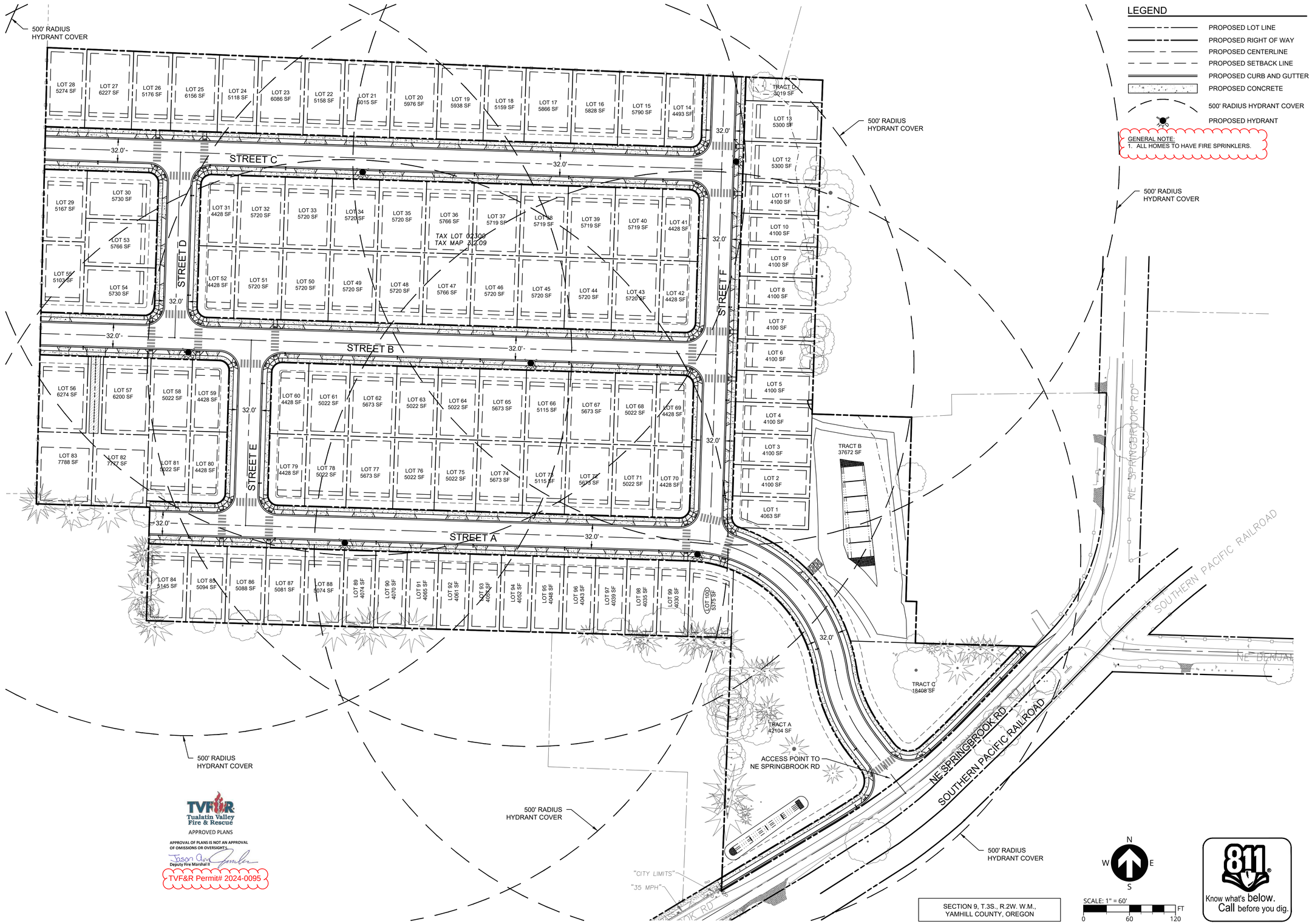
See Attached Conditions: ☒ Yes ☐ No attachedemail

Site Inspection Required: ☒ Yes ☐ No

This section used when site inspection is required

Inspection Comments:

Final TVFR Approval Signature & Emp ID Date



TVF&R
Tualatin Valley Fire & Rescue
APPROVED PLANS
APPROVAL OF PLANS IS NOT AN APPROVAL OF OMISSIONS OR OVERSIGHTS.
Deputy Fire Marshal II
TVF&R Permit# 2024-0095

Know what's below. Call before you dig. 811

REGISTERED PROFESSIONAL ENGINEER
92408PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
PRELIMINARY
EXPIRES: 06/30/24

PUBLISH DATE
6/25/2024
ISSUED FOR
LAND USE DOCUMENTS
REVISIONS

FIRE ACCESS EXHIBIT
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
C200

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\EXHIBITS-ANALYSIS\GENERAL USE PLAN\2024-06-25 GENERAL USE PLAN\23913 - FIRE ACCESS EXHIBIT.DWG

3J CONSULTING
9600 SW NIMBUS AVENUE, SUITE 100
BEAVERTON, OREGON 97008
PH: (503) 946.9365
WWW.3JCONSULTING.COM

TECHNICAL MEMORANDUM

To: Brett Musick, PE
Senior Engineer
City of Newberg

From: Kathleen Freeman, PE, CFM
Water Resources Project Manager

Cc: Chase Welborn, PE and Aaron Murphy, PE

Date: June 20, 2024

Project: **Springbrook Subdivision**
Project No: **23913**
RE: **Wastewater Downstream Analysis**

The proposed Springbrook Subdivision will be located northwest of the N Springbrook Road and NE Benjamin Road intersection. The site encompasses approximately 18.76 acres and is proposed to consist of 77 R-1 and 27 R-3 zoned lots. To develop the parcel, the City of Newberg requires a downstream analysis of the wastewater system to ensure the added flows will be accommodated. The City's Wastewater Master Plan (WWMP), written in March 2018 with a 2021 addendum, has been utilized to develop an existing wastewater hydraulic model for the conveyance from N Springbrook Road to E 9th Street, utilizing the software program XPSTORM. The existing model was used to add calculated flows from the proposed development. The proposed flow rates were calculated using Table 4-2 of the WWMP. The analysis shows the added flows from the proposed development on the downstream wastewater system will have a negligible effect.

Existing Wastewater Conveyance System

Per the WWMP, the following are evaluation thresholds used to identify deficiencies in infrastructure:

- Minimum 2.0-ft depth between rim elevation and Hydraulic Grade Line (HGL),
- Maximum 85% full depth of pipe, and
- Maximum 1.0-ft depth between HGL and top of pipe (top of pipe = Invert Elevation + Pipe Diameter).
    - In all cases where the HGL is below the top of pipe, surcharge conditions do not exist.
    - When the HGL is above the top of pipe, surcharge conditions exist.

The WWMP shows there are several locations in the system that are outside of these thresholds. Additionally, there are locations where modeling shows out of system flooding.

Model Calibration

The data presented in the WWMP was utilized to create an existing conditions model with the software XPSTORM (see Attached: Figure 5 – Updated System Evaluation). All rim elevations, pipe invert

elevations, pipe diameters and lengths and flow rates were input into the model using data from Appendix D1: Existing System Model Data. The flow rates were input into the XPSTORM model as constant flow at each manhole. We calibrated the model to match the WWMP model by adding known flow depths (See Attached: XPSTORM Wastewater Conveyance Data – Existing and Proposed Conditions to E Fernhill Road). The downstream analysis extended approximately 2.62 miles downstream of the proposed subdivision.

To model proposed flows from the Springbrook Subdivision, Table 4-2 of the WWMP was referenced, which are based on proposed zoning. Additionally, per section 2.3.4 of the City's Public Works Design and Construction Standards, an allowance of 1,000 gpad for inflow and infiltration was added to each calculated flow. Table 1 shows the calculated flow rates for each zone within the proposed Springbrook Subdivision.

Zoning	Flow (gpd)	Flow (cfs)	Add to MH
R-1	27,379	0.0424	wwml92161
R-3	13,168	0.0204	wwml92161
Increase in Flow at wwml92161	**40,546**	**0.0627**	N/A

Table 1 - Wastewater Flows

The flow rate of 0.063 cfs was added to the Avg DWF flow at manhole wwml92161 in the WWMP for proposed conditions. No other adjustments were made to the model.

Conveyance Output

Tables 2 and 3 show the existing and proposed conveyance output for the first seven manholes in the downstream system, regarding the evaluation thresholds (See Attached for entire modeled conveyance output).

From	To	Existing US Freeboard (ft)	Existing DS Freeboard (ft)	Existing [1]y/d0	[3]Existing HGL - Top of Pipe US (ft)	[3]Existing HGL - Top of Pipe DS (ft)
wwml92161	wwml92159	6.23	5.27	0.09	-1.14	-1.13
wwml92159	wwml92158	5.27	7.99	0.10	-1.13	-1.14
wwml92158	wwml92157	7.99	15.25	0.09	-1.14	-1.12
wwml92157	wwml92156	15.25	18.81	0.10	-1.12	-1.16
wwml92156	wwml92147	18.81	18.32	0.16	-1.16	-0.91
wwml92147	wwml92148	18.32	9.96	0.22	-1.16	-1.27
[2]wwml92148	wwml92149	9.96	7.96	0.15	-1.27	-1.26

[1]y/d0 = depth of flow/pipe diameter; Multiply by 100 to get %
[2]Approximately 2,014 ft downstream of project site
[3]Calculation = HGL - Pipe Invert + Pipe Diameter. Negative number signifies the HGL is below top of pipe and surcharge conditions do not exist.

Table 2 – Existing Conveyance Downstream Output

From	To	Proposed US Freeboard (ft)	Proposed DS Freeboard (ft)	Proposed [1]y/d0	[3]Proposed HGL - Top of Pipe US (ft)	[3]Proposed HGL - Top of Pipe DS (ft)
wwml92161	wwml92159	6.18	5.22	0.13	-1.09	-1.07
wwml92159	wwml92158	5.22	7.94	0.14	-1.07	-1.09
wwml92158	wwml92157	7.94	15.20	0.13	-1.09	-1.07
wwml92157	wwml92156	15.20	18.77	0.15	-1.07	-1.12
wwml92156	wwml92147	18.77	18.30	0.17	-1.12	-0.90
wwml92147	wwml92148	18.30	9.95	0.23	-1.15	-1.26
[2]wwml92148	wwml92149	9.95	7.95	0.16	-1.26	-1.25

[1]y/d0 = depth of flow/pipe diameter; Multiply by 100 to get %
[2]Approximately 2,014 ft downstream of project site
[3]Calculation = HGL - Pipe Invert + Pipe Diameter. Negative number signifies the HGL is below top of pipe and surcharge conditions do not exist.

Table 3 – Proposed Conveyance Downstream Output

Evaluation Thresholds

Minimum 2.0-ft Depth Between Rim Elevation and Hydraulic Grade Line (HGL)

The added flow to the existing downstream system has very little change in depth between the rim elevations and HGL. In all cases for the first 2,014 ft of the system, there is a least 2.0-ft.

Maximum 85% Full Depth of Pipe

In all cases, the full depth of pipe is less than 85% full.

Maximum 1.0-ft Depth Between HGL and Top of Pipe

There is very little change between existing and proposed conditions for this threshold. Within the first 2,014 ft, the HGL is below the top of pipe.

Figure 5 WWMP Surcharging Analysis

Figure 5 from the WWMP shows evaluation threshold output at each node with differing colors depending on the hydraulic condition at each manhole (e.g., red manhole signifies potential flooding, etc). An analysis was completed using the output data from Appendix D1 to explain why our model showed no surcharging at manholes while Figure 5 shows surcharging. It was determined that while Figure 5 shows surcharging starting at manhole wwml92150, the output data from Appendix D1, as well as our modeling, did not indicate surcharging. The analysis is represented in the attached Figure 5 WWMP Surcharging Analysis. No assumptions are being made as to why the discrepancy between Figure 5 and the output data from D1 exists.

City's Request to Investigate Flooding at Manhole WWML121103

Per the City' observations, flooding occurs at WWML121103, which combines flows north on Springbrook Road and Fernwood Road to the east. The City requested 3J to investigate whether a change in deflection angle from the force main in Fernwood Road to manhole WWML121103 (at the intersection of Springbrook Road and Fernwood Road) would lessen the head loss enough to result in no flooding at the manhole. We analyzed the system using 0 to 30 degree deflection angles (currently it is at 90 degrees). Additionally, we determined that to decrease the deflection angle, a new

manhole would need to be installed between WWML121027 and WWML121026. There was not a deflection angle that would eliminate the flooding.

It should be noted that the Wastewater Master Plan, dated May 2018 and updated May 2021, showed a negative slope between WWML121103 and WWML121027; however as-builts provided from the City shows this does not occur. The system should be surveyed to determine if a negative slope occurs. Additionally, all pipes downstream of WWML121103 are 15" diameter pipes but the force main entering WWML121103 are dual pipes with diameters of 12" and 6". The added flow from the Fernwood force main contributes to the existing pipe system that is over capacity.

The Wastewater Master Plan identified two alternatives to rectify the flooding, depicted in Table 5-2. It is our opinion that these alternatives are the best solutions for flooding.

Summary
The added flows from the proposed Springbrook Subdivision of 0.063 cfs will have a negligible effect on the downstream system, analyzed approximately 1.76 miles from the project location.

Attachments:

- Springbrook Residential Subdivision
- Figure 5 – Updated System Evaluation (Excerpt from WWMP)
- XPSTORM Wastewater Conveyance Data – Existing Conditions to E 9th Street
- Onsite Wastewater Flow Calculations
- XPSTORM Wastewater Conveyance Data – Proposed Conditions to E 9th Street
- Figure 5 WWMP Surcharging Analysis
- Table 5-2 WWMP: Springbrook Road Alternatives Estimated Costs

- - - - END OF DOCUMENT - - -

3809 NE SPRINGBROOK ROAD, NEWBERG, OREGON, 97132

COUNTY: YAMHILL
PARCEL: 25902 ACCOUNT: R320902300
PARCEL SIZE: 18.76 ACRES (YAMHILL COUNTY TAX RECORDS)

CURRENT ZONING: AF-10 (YAMHILL COUNTY)

PROPOSED ZONING: R-1 AND R-3 (CITY OF NEWBERG)

REQUIRED SETBACKS:

R-1 ZONE	*R-3 ZONE*
FRONT: 15'	FRONT: 12'
GARAGE: 20'	GARAGE: 20'
SIDE: 5'	SIDE: 5'
REAR: 5'	REAR: 15'
CORNER SIDE: 15'	CORNER SIDE: 12'

DENSITY CALCULATIONS:
GROSS SITE AREA: ±830,311 SF (GIS SOURCE)
GROSS R3 ZONING AREA (10% MINIMUM REQUIRED) = ±83,031 SF
Per Newberg Municipal Code 15.250.030-A.1.

TRACTS A AND C ARE OPEN SPACE TRACTS TO BE OWNED AND MAINTAINED BY THE HOA.

TRACT B IS A STORMWATER FACILITY TRACT TO BE OWNED AND MAINTAINED BY THE CITY OF NEWBERG

PROPOSED R1 ZONE

PROPOSED R3 ZONE
±10,686 SF

THE PURPOSE OF THIS PRELIMINARY LAYOUT IS TO SHOW PLANNED LOT DIMENSIONS AND AREAS FOR PLANNING PURPOSES. THIS IS NOT A FINAL LAYOUT AND NOT TO BE USED FOR SURVEY PURPOSES. ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SITE PLAN OVERVIEW
SCHEMATIC LAYOUT 5

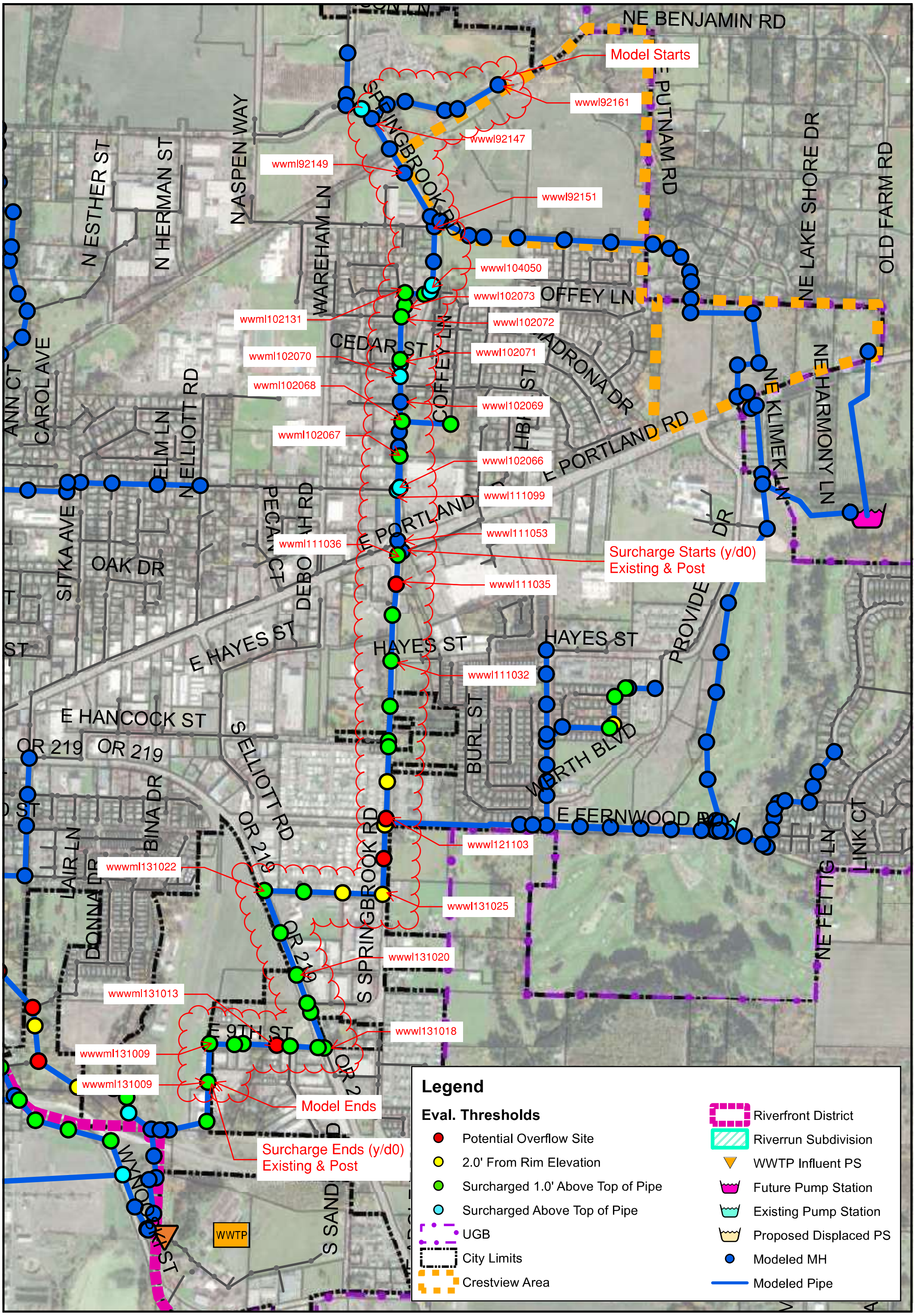
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

DRAWING BY:	*SRC/JJS*
PREPARED FOR:	*ICHIJO*
PLAN ISSUE DATE:	*DECEMBER 26, 2023*
PLAN ISSUE PURPOSE:	*SCHEMATIC DESIGN*

N W E S
SCALE: 1" = 60'
0 60 120 FT

SPRINGBROOK RESIDENTIAL SUBDIVISION
NEWBERG, OREGON

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\EXHIBITS-ANALYSIS_COORDINATION\2023-12-19 SITE OPTIONS\23913-SITE OPTION 5.DWG



KELLER ASSOCIATES

Updated System Evaluation

Wastewater Master Plan Update

City of Newberg OREGON

Figure 5

City of Newberg, OR

XPSTORM WASTEWATER CONVEYANCE DATA - PROPOSED CONDITIONS TO E 9TH STREET

SPRINGBROOK SUBDIVISION DOWNSTREAM ANALYSIS

Location			Conduit Properties			Conduit Results						Conduit Profile									
Link	Station From	Station To	Diameter	Length	Slope	Design Capacity	Qmax/ Qdesign	Max Flow	Max Velocity	Max Flow Depth	y/d0	US Ground Elev.	DS Ground Elev.	US IE	DS IE	US Freeboard	DS Freeboard	US HGL	DS HGL	[1]HGL -Top of Pipe US	[1]HGL - Top of Pipe US
			ft	ft	%	cfs		cfs	ft/s	ft		ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
wwgm1107	wwml92161	wwml92159	1.25	465.0	0.29	3.48	0.01	0.04	0.93	0.11	0.09	255.92	253.49	249.58	248.10	6.23	5.27	249.7	248.2	-1.14	-1.13
wwgm1108	wwml92159	wwml92158	1.25	128.4	0.27	3.32	0.02	0.05	1.00	0.12	0.10	253.49	255.21	248.10	247.11	5.27	7.99	248.2	247.2	-1.13	-1.14
wwgm1109	wwml92158	wwml92157	1.25	403.4	0.34	3.75	0.01	0.05	1.07	0.11	0.09	255.21	260.95	247.11	245.57	7.99	15.25	247.2	245.7	-1.14	-1.12
wwgm1110	wwml92157	wwml92156	1.25	182.5	0.24	3.17	0.02	0.05	0.97	0.13	0.10	260.95	263.55	245.57	244.65	15.25	18.81	245.7	244.7	-1.12	-1.16
wwgm1111	wwml92156	wwml92147	1.25	203.0	0.51	4.62	0.01	0.05	0.65	0.20	0.16	263.55	262.12	244.65	243.47	18.81	18.32	244.7	243.8	-1.16	-0.91
wwgm1104	wwml92147	wwml92148	1.50	349.7	0.40	6.65	0.10	0.67	2.41	0.34	0.22	262.12	251.71	243.47	241.52	18.32	9.96	243.8	241.8	-1.16	-1.27
wwgm1105	wwml92148	wwml92149	1.50	281.5	1.55	13.06	0.05	0.67	3.88	0.23	0.15	251.71	245.17	241.52	236.97	9.96	7.96	241.8	237.2	-1.27	-1.26
wwgm1106	wwml92149	wwml92150	1.50	500.5	1.41	12.49	0.05	0.67	3.76	0.24	0.16	245.17	241.50	236.97	229.75	7.96	11.55	237.2	229.9	-1.26	-1.30
wwgm1091	wwml92150	wwml92151	1.50	107.8	2.99	18.16	0.04	0.67	4.88	0.20	0.13	241.50	239.75	229.75	225.75	11.55	13.63	229.9	226.1	-1.30	-1.13
wwgm1090	wwml92151	wwml92152	1.50	344.6	0.32	5.94	0.12	0.69	2.26	0.37	0.25	239.75	234.71	225.75	223.96	13.63	10.45	226.1	224.3	-1.13	-1.20
wwgm1131	wwml92152	wwml104050	1.50	237.8	0.56	7.83	0.09	0.69	2.73	0.30	0.20	234.71	232.35	223.96	222.32	10.45	9.61	224.3	222.7	-1.20	-1.08
wwgm1132	wwml104050	wwml104051	1.50	65.3	0.12	3.68	0.19	0.69	2.03	0.42	0.28	232.35	229.69	222.32	222.06	9.61	7.39	222.7	222.3	-1.08	-1.26
wwgm1071	wwml102132	wwml102131	0.83	195.8	0.75	1.87	0.37	0.69	2.74	0.45	0.54	227.75	225.87	220.88	219.28	6.52	6.00	221.2	219.9	-0.48	-0.24
wwgm1070	wwml102131	wwml102073	0.83	126.5	0.58	1.65	0.81	1.33	3.46	0.59	0.71	225.87	225.66	219.28	218.21	6.00	7.00	219.9	218.7	-0.24	-0.38
wwgm1069	wwml102073	wwml102072	0.83	115.9	1.18	2.36	0.57	1.34	4.49	0.45	0.54	225.66	223.35	218.21	216.64	7.00	6.20	218.7	217.2	-0.38	-0.32
wwgm1072	wwml104051	wwml102132	1.50	58.5	1.44	12.59	0.06	0.69	3.82	0.24	0.16	229.69	227.75	222.06	220.88	7.39	6.52	222.3	221.2	-1.26	-1.15
wwgm1129	wwml102072	wwml102071	1.00	423.4	0.52	2.58	0.52	1.35	3.06	0.59	0.59	223.35	220.03	216.64	214.40	6.20	5.02	217.2	215.0	-0.49	-0.39
wwgm1062	wwml102071	wwml102070	1.00	42.2	0.21	1.65	0.82	1.35	3.01	0.61	0.61	220.03	219.80	214.40	214.21	5.02	5.02	215.0	214.8	-0.39	-0.43
wwgm1061	wwml102070	wwml102069	1.00	123.0	0.39	2.23	0.62	1.37	2.61	0.74	0.74	219.80	221.49	214.21	213.72	5.02	7.02	214.8	214.5	-0.43	-0.25
wwgm1060	wwml102069	wwml102068	1.00	254.8	0.21	1.64	0.83	1.37	2.62	0.75	0.75	221.49	219.20	213.72	212.88	7.02	5.94	214.5	213.3	-0.25	-0.62
wwgm1056	wwml102068	wwml102067	1.00	295.6	1.56	4.45	0.31	1.40	5.01	0.39	0.39	219.20	214.51	212.88	208.13	5.94	5.99	213.3	208.5	-0.62	-0.61
wwgm1055	wwml102067	wwml102066	1.00	153.3	1.56	4.45	0.32	1.40	5.01	0.39	0.39	214.51	210.77	208.13	203.23	5.99	7.16	208.5	203.6	-0.61	-0.62
wwgm1054	wwml102066	wwml111099	1.00	425.2	1.66	4.59	0.31	1.40	3.21	0.76	0.76	210.77	202.79	203.23	195.95	7.16	5.86	203.6	196.9	-0.62	-0.02
wwgm1709	wwml111099	wwml111053	1.25	500.2	0.41	4.12	0.86	3.52	3.85	0.98	0.78	202.79	203.84	195.95	193.35	5.86	9.92	196.9	193.9	-0.27	-0.68
wwgm1739	wwml111053	wwml111037	1.25	117.3	2.67	9.80	0.43	4.20	7.67	0.57	0.46	203.84	205.03	193.35	189.43	9.92	15.13	193.9	189.9	-0.68	-0.78
wwgm1740	wwml111037	wwml111036	1.25	53.5	11.56	21.96	0.19	4.22	12.92	6.02	4.82	205.03	203.57	189.43	182.78	15.13	14.19	189.9	189.4	-0.78	5.35
wwgm1710	wwml111036	wwml111035	1.25	289.1	0.48	4.48	0.96	4.22	3.67	6.71	5.37	203.57	188.10	182.78	181.39	14.19	0.00	189.4	188.1	5.35	5.46
wwgm1802	wwml111035	wwml111040	1.25	306.3	0.28	3.40	1.21	4.11	3.26	6.71	5.37	188.10	193.00	181.39	180.54	0.00	5.96	188.1	187.0	5.46	5.25
wwgm1800	wwml111040	wwml111032	1.25	452.8	0.28	3.42	1.20	4.08	3.25	6.42	5.14	193.00	193.30	180.54	179.27	5.96	7.83	187.0	185.5	5.25	4.95
wwgm1799	wwml111032	wwml121031	1.25	450.4	0.28	3.42	1.19	4.06	3.24	6.23	4.98	193.30	190.60	179.27	178.01	7.83	6.69	185.5	183.9	4.95	4.65
wwgm1798	wwml121031	wwml121100	1.25	342.8	0.28	3.35	1.21	4.05	3.23	5.93	4.74	190.60	186.60	178.01	177.06	6.69	3.84	183.9	182.8	4.65	4.45
wwgm1796	wwml121100	wwml121030	1.25	59.7	0.29	3.45	1.20	4.11	3.28	5.68	4.54	186.60	185.90	177.06	176.89	3.84	3.41	182.8	182.5	4.45	4.35
wwgm1795	wwml121030	wwml121029	1.25	347.9	0.60	5.02	0.95	4.62	3.69	6.31	5.05	185.90	182.20	176.89	174.79	3.41	1.11	182.5	181.1	4.35	5.05
wwgm1794	wwml121029	wwml121028	1.25	365.6	0.58	4.93	1.00	4.74	3.78	6.94	5.55	182.20	179.60	174.79	172.66	1.11	0.04	181.1	179.6	5.05	5.65
wwgm1793	wwml121028	wwml121103	1.25	38.1	0.79	5.74	2.22	11.32	9.06	7.38	5.90	179.60	179.74	172.66	172.36	0.04	-0.02	179.6	179.8	5.65	6.15
wwgm1792	wwml121103	wwml121027	1.25	23.1	-0.04	1.34	11.41	4.39	3.51	7.37	5.90	179.74	179.87	172.36	172.17	-0.02	0.10	179.8	179.8	6.15	6.35
wwgm1791	wwml121027	wwml121026	1.25	336.7	0.33	3.73	1.25	4.54	3.63	6.92	5.53	179.87	177.80	172.17	171.05	0.10	0.00	179.8	177.8	6.35	5.50
wwgm1790	wwml121026	wwml131025	1.25	351.3	0.27	3.36	1.39	4.60	3.68	6.80	5.44	177.80	177.79	171.05	169.55	0.00	0.64	177.8	177.2	5.50	6.35
wwgm0580	wwml131025	wwml131024	1.25	397.1	0.35	3.55	1.29	4.58	3.68	7.57	6.05	177.79	178.04	169.55	168.13	0.64	1.71	177.2	176.3	6.35	6.95
wwgm0533	wwml131024	wwml131023	1.25	384.7	0.36	3.56	1.30	4.50	3.62	7.82	6.26	178.04	177.45	168.13	166.71	1.71	2.74	176.3	174.7	6.95	6.75
wwgm0558	wwml131023	wwml131022	1.25	389.7	0.15	2.51	2.57	5.94	5.17	7.85	6.28	177.45	176.99	166.71	165.43	2.74	4.03	174.7	173.0	6.75	6.28
wwgm0520	wwml131022	wwml131021	1.25	449.4	0.36	3.89	1.29	5.01	4.19	7.53	6.03	176.99	174.05	165.43	163.74	4.03	2.93	173.0	171.1	6.28	6.13
wwgm0559	wwml131021	wwml131020	1.25	444.1	0.38	3.87	1.18	4.56	3.66	7.38	5.91	174.05	171.74	163.74	161.93	2.93	2.55	171.1	169.2	6.13	6.01
wwgm0583	wwml131020	wwml131111	1.25	300.8	0.30	3.40	1.30	4.37	3.65	7.26	5.81	171.74	172.52	161.93	160.90	2.55	4.66	169.2	167.9	6.01	5.71
wwgm2119	wwml131111	wwml131019	1.25	95.9	0.28	3.18	1.34	4.26	3.60	6.96	5.57	172.52	173.04	160.90	160.63	4.66	5.51	167.9	167.5	5.71	5.65
wwgm0468	wwml131019	wwml131018	1.25	377.8	0.01	3.72	1.15	4.26	3.45	6.77	5.41	173.04	174.47	160.63	158.73	5.51	8.54	167.5	165.9	5.65	5.95
wwgm1206	wwml131018	wwml131017	1.25	61.3	1.11	6.80	1.48	4.99	4.06	7.51	6.01	174.47	173.93	158.73	157.55	8.54	8.37	165.9	165.6	5.95	6.76
wwgm0479	wwml131017	wwml131014	1.25	277.3	0.27	3.38	1.41	4.60	3.73	8.01	6.41	173.93	167.17	157.55	156.45	8.37	2.75	165.6	164.4	6.76	6.72
wwgm0507	wwml131014	wwml131013	1.25	132.0	0.07	1.65	3.48	5.73	4.52	7.97	6.38	167.17	163.40	156.45	156.32	2.75	0.00	164.4	163.4	6.72	5.83
wwgm0540	wwml131013	wwml131012	1.25	332.9	0.41	3.93	1.37	5.38	4.27	7.08	5.66	163.40	164.21	156.32	154.97	0.00	3.14	163.4	161.1	5.83	4.85
wwgm0482	wwml131012	wwml131011	1.25	85.1	0.44	4.07	1.32	5.38	4.28	5.96	4.77	164.21	165.59	154.97	154.68	3.14	5.20	161.1	160.4	4.85	4.46
wwgm0604	wwml131011	wwml131010	1.25	248.7	0.41	4.01	1.34	5.38	4.29	5.71	4.57	165.59	167.11	154.68	153.52	5.20	8.48	160.4	158.6	4.46	3.86
wwgm0555	wwml131010	wwml131009	1.25	382.6	0.31	3.47	1.55	5.38	4.31	5.11	4.09	167.11	165.55	153.52	152.25	8.48	9.65	158.6	155.9	3.86	2.40

[1]Calculation = HGL - Pipe Invert + Pipe Diameter. Negative number signifies the HGL is below top of pipe and surcharge conditions do not exist.

ONSITE WASTEWATER FLOW CALCULATIONS

BASIN	Zoning	[1]Average Lot Size (ac)	DU/Average Lot Size (DU/ac)	[1]People/ DU	[2]ADWF (gpcd)	Flow (gpad)	[3]I/I (gpad)	Flow + I/I (gpad)	[4]Net Area (ac)	Flow (gpd)	Conversion to cfs	[5]Flow (cfs)	Drains to Node
1	R-1	0.227	4.405	2.69	74.25	880	1,000	1,880	14.564	27,379	1.547E-06	0.0424	wwml92161
3	R-3	0.061	16.393	2.69	99	4,366	1,000	5,366	2.454	13,168	1.547E-06	0.0204	wwml92161
											Total anticipated flow from Springbrook Subdivision	**0.0627**	

[1]See Page 4-6, Table 4-2 of WWMP

[2]Residential flows based on design ADWF per capita value of 99 gpcd & reduced by 25% for R1 Zoning Only: See Page 4-6, Table 4-2 of WWMP

[3]Inflow/Infiltration per City of Newberg's 2015 Design Manual

[4]Allocates 25% of area for roads and other public dedication: See Page 4-6, Table 4-2 of WWMP

[5]Total WW Flow used as constant flow in XPSTORM model

XPSTORM WASTEWATER CONVEYANCE DATA - PROPOSED CONDITIONS TO E 9TH STREET

SPRINGBROOK SUBDIVISION DOWNSTREAM ANALYSIS

Location			Conduit Properties			Conduit Results						Conduit Profile									
Link	Station From	Station To	Diameter	Length	Slope	Design Capacity	Qmax/ Qdesign	Max Flow	Max Velocity	Max Flow Depth	y/d0	US Ground Elev.	DS Ground Elev.	US IE	DS IE	US Freeboard	DS Freeboard	US HGL	DS HGL	[1]HGL -Top of Pipe US	[1]HGL - Top of Pipe US
			ft	ft	%	cfs		cfs	ft/s	ft		ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
wwgm1107	wwml92161	wwml92159	1.25	465.0	0.29	3.48	0.03	0.10	1.26	0.17	0.13	255.92	253.49	249.58	248.10	6.18	5.22	249.7	248.3	-1.09	-1.07
wwgm1108	wwml92159	wwml92158	1.25	128.4	0.27	3.32	0.03	0.11	1.29	0.18	0.14	253.49	255.21	248.10	247.11	5.22	7.94	248.3	247.3	-1.07	-1.09
wwgm1109	wwml92158	wwml92157	1.25	403.4	0.34	3.75	0.03	0.11	1.37	0.16	0.13	255.21	260.95	247.11	245.57	7.94	15.20	247.3	245.8	-1.09	-1.07
wwgm1110	wwml92157	wwml92156	1.25	182.5	0.24	3.17	0.04	0.11	1.25	0.18	0.15	260.95	263.55	245.57	244.65	15.20	18.77	245.8	244.8	-1.07	-1.12
wwgm1111	wwml92156	wwml92147	1.25	203.0	0.51	4.62	0.02	0.11	1.12	0.21	0.17	263.55	262.12	244.65	243.47	18.77	18.30	244.8	243.8	-1.12	-0.90
wwgm1104	wwml92147	wwml92148	1.50	349.7	0.40	6.65	0.11	0.73	2.48	0.35	0.23	262.12	251.71	243.47	241.52	18.30	9.95	243.8	241.8	-1.15	-1.26
wwgm1105	wwml92148	wwml92149	1.50	281.5	1.55	13.06	0.06	0.73	3.99	0.24	0.16	251.71	245.17	241.52	236.97	9.95	7.95	241.8	237.2	-1.26	-1.25
wwgm1106	wwml92149	wwml92150	1.50	500.5	1.41	12.49	0.06	0.73	3.86	0.25	0.17	245.17	241.50	236.97	229.75	7.95	11.54	237.2	230.0	-1.25	-1.29
wwgm1091	wwml92150	wwml92151	1.50	107.8	2.99	18.16	0.04	0.73	5.01	0.21	0.14	241.50	239.75	229.75	225.75	11.54	13.61	230.0	226.1	-1.29	-1.11
wwgm1090	wwml92151	wwml92152	1.50	344.6	0.32	5.94	0.13	0.75	2.32	0.39	0.26	239.75	234.71	225.75	223.96	13.61	10.44	226.1	224.3	-1.11	-1.19
wwgm1131	wwml92152	wwml104050	1.50	237.8	0.56	7.83	0.10	0.75	2.80	0.32	0.21	234.71	232.35	223.96	222.32	10.44	9.59	224.3	222.8	-1.19	-1.06
wwgm1132	wwml104050	wwml104051	1.50	65.3	0.12	3.68	0.21	0.76	2.09	0.44	0.29	232.35	229.69	222.32	222.06	9.59	7.38	222.8	222.3	-1.06	-1.25
wwgm1071	wwml102132	wwml102131	0.83	195.8	0.75	1.87	0.40	0.76	2.81	0.47	0.57	227.75	225.87	220.88	219.28	6.50	5.98	221.2	219.9	-0.46	-0.22
wwgm1070	wwml102131	wwml102073	0.83	126.5	0.58	1.65	0.85	1.39	3.50	0.61	0.73	225.87	225.66	219.28	218.21	5.98	6.99	219.9	218.7	-0.22	-0.37
wwgm1069	wwml102073	wwml102072	0.83	115.9	1.18	2.36	0.60	1.40	4.54	0.46	0.56	225.66	223.35	218.21	216.64	6.99	6.18	218.7	217.2	-0.37	-0.30
wwgm1072	wwml104051	wwml102132	1.50	58.5	1.44	12.59	0.06	0.76	3.92	0.25	0.17	229.69	227.75	222.06	220.88	7.38	6.50	222.3	221.2	-1.25	-1.13
wwgm1129	wwml102072	wwml102071	1.00	423.4	0.52	2.58	0.55	1.42	3.10	0.61	0.61	223.35	220.03	216.64	214.40	6.18	5.00	217.2	215.0	-0.47	-0.37
wwgm1062	wwml102071	wwml102070	1.00	42.2	0.21	1.65	0.86	1.42	3.06	0.63	0.63	220.03	219.80	214.40	214.21	5.00	5.01	215.0	214.8	-0.37	-0.42
wwgm1061	wwml102070	wwml102069	1.00	123.0	0.39	2.23	0.64	1.43	2.61	0.77	0.77	219.80	221.49	214.21	213.72	5.01	6.99	214.8	214.5	-0.42	-0.22
wwgm1060	wwml102069	wwml102068	1.00	254.8	0.21	1.64	0.87	1.43	2.65	0.78	0.78	221.49	219.20	213.72	212.88	6.99	5.93	214.5	213.3	-0.22	-0.61
wwgm1056	wwml102068	wwml102067	1.00	295.6	1.56	4.45	0.33	1.46	5.07	0.39	0.39	219.20	214.51	212.88	208.13	5.93	5.99	213.3	208.5	-0.61	-0.60
wwgm1055	wwml102067	wwml102066	1.00	153.3	1.56	4.45	0.33	1.46	5.08	0.40	0.40	214.51	210.77	208.13	203.23	5.99	7.15	208.5	203.6	-0.60	-0.61
wwgm1054	wwml102066	wwml111099	1.00	425.2	1.66	4.59	0.32	1.47	3.27	0.77	0.77	210.77	202.79	203.23	195.95	7.15	5.85	203.6	196.9	-0.61	-0.01
wwgm1709	wwml111099	wwml111053	1.25	500.2	0.41	4.12	0.87	3.59	3.86	0.99	0.80	202.79	203.84	195.95	193.35	5.85	9.91	196.9	193.9	-0.26	-0.67
wwgm1739	wwml111053	wwml111037	1.25	117.3	2.67	9.80	0.44	4.26	7.70	0.58	0.46	203.84	205.03	193.35	189.43	9.91	15.11	193.9	189.9	-0.67	-0.76
wwgm1740	wwml111037	wwml111036	1.25	53.5	11.56	21.96	0.20	4.28	12.92	6.05	4.84	205.03	203.57	189.43	182.78	15.11	14.19	189.9	189.4	-0.76	5.35
wwgm1710	wwml111036	wwml111035	1.25	289.1	0.48	4.48	0.96	4.28	3.67	6.71	5.37	203.57	188.10	182.78	181.39	14.19	0.00	189.4	188.1	5.35	5.46
wwgm1802	wwml111035	wwml111040	1.25	306.3	0.28	3.40	1.22	4.14	3.28	6.71	5.37	188.10	193.00	181.39	180.54	0.00	5.96	188.1	187.0	5.46	5.25
wwgm1800	wwml111040	wwml111032	1.25	452.8	0.28	3.42	1.20	4.10	3.26	6.42	5.14	193.00	193.30	180.54	179.27	5.96	7.83	187.0	185.5	5.25	4.95
wwgm1799	wwml111032	wwml121031	1.25	450.4	0.28	3.42	1.19	4.07	3.25	6.23	4.98	193.30	190.60	179.27	178.01	7.83	6.69	185.5	183.9	4.95	4.65
wwgm1798	wwml121031	wwml121100	1.25	342.8	0.28	3.35	1.21	4.05	3.23	5.93	4.74	190.60	186.60	178.01	177.06	6.69	3.84	183.9	182.8	4.65	4.45
wwgm1796	wwml121100	wwml121030	1.25	59.7	0.29	3.45	1.20	4.11	3.28	5.68	4.54	186.60	185.90	177.06	176.89	3.84	3.41	182.8	182.5	4.45	4.35
wwgm1795	wwml121030	wwml121029	1.25	347.9	0.60	5.02	0.95	4.62	3.69	6.31	5.05	185.90	182.20	176.89	174.79	3.41	1.11	182.5	181.1	4.35	5.05
wwgm1794	wwml121029	wwml121028	1.25	365.6	0.58	4.93	1.00	4.74	3.78	6.94	5.55	182.20	179.60	174.79	172.66	1.11	0.04	181.1	179.6	5.05	5.65
wwgm1793	wwml121028	wwml121103	1.25	38.1	0.79	5.74	2.22	11.32	9.06	7.38	5.90	179.60	179.74	172.66	172.36	0.04	-0.02	179.6	179.8	5.65	6.15
wwgm1792	wwml121103	wwml121027	1.25	23.1	-0.04	1.34	11.41	4.39	3.51	7.37	5.90	179.74	179.87	172.36	172.17	-0.02	0.10	179.8	179.8	6.15	6.35
wwgm1791	wwml121027	wwml121026	1.25	336.7	0.33	3.73	1.25	4.54	3.63	6.92	5.53	179.87	177.80	172.17	171.05	0.10	0.00	179.8	177.8	6.35	5.50
wwgm1790	wwml121026	wwml131025	1.25	351.3	0.27	3.36	1.39	4.60	3.68	6.80	5.44	177.80	177.79	171.05	169.55	0.00	0.64	177.8	177.2	5.50	6.35
wwgm0580	wwml131025	wwml131024	1.25	397.1	0.35	3.55	1.29	4.58	3.68	7.57	6.05	177.79	178.04	169.55	168.13	0.64	1.71	177.2	176.3	6.35	6.95
wwgm0533	wwml131024	wwml131023	1.25	384.7	0.36	3.56	1.30	4.50	3.62	7.82	6.26	178.04	177.45	168.13	166.71	1.71	2.74	176.3	174.7	6.95	6.75
wwgm0558	wwml131023	wwml131022	1.25	389.7	0.15	2.51	2.57	5.94	5.17	7.85	6.28	177.45	176.99	166.71	165.43	2.74	4.03	174.7	173.0	6.75	6.28
wwgm0520	wwml131022	wwml131021	1.25	449.4	0.36	3.89	1.29	5.01	4.19	7.53	6.03	176.99	174.05	165.43	163.74	4.03	2.93	173.0	171.1	6.28	6.13
wwgm0559	wwml131021	wwml131020	1.25	444.1	0.38	3.87	1.18	4.56	3.66	7.38	5.91	174.05	171.74	163.74	161.93	2.93	2.55	171.1	169.2	6.13	6.01
wwgm0583	wwml131020	wwml131111	1.25	300.8	0.30	3.40	1.30	4.37	3.65	7.26	5.81	171.74	172.52	161.93	160.90	2.55	4.66	169.2	167.9	6.01	5.71
wwgm2119	wwml131111	wwml131019	1.25	95.9	0.28	3.18	1.34	4.26	3.60	6.96	5.57	172.52	173.04	160.90	160.63	4.66	5.51	167.9	167.5	5.71	5.65
wwgm0468	wwml131019	wwml131018	1.25	377.8	0.01	3.72	1.15	4.26	3.45	6.77	5.41	173.04	174.47	160.63	158.73	5.51	8.54	167.5	165.9	5.65	5.95
wwgm1206	wwml131018	wwml131017	1.25	61.3	1.11	6.80	1.48	4.99	4.06	7.51	6.01	174.47	173.93	158.73	157.55	8.54	8.37	165.9	165.6	5.95	6.76
wwgm0479	wwml131017	wwml131014	1.25	277.3	0.27	3.38	1.41	4.60	3.73	8.01	6.41	173.93	167.17	157.55	156.45	8.37	2.75	165.6	164.4	6.76	6.72
wwgm0507	wwml131014	wwml131013	1.25	132.0	0.07	1.65	3.48	5.73	4.52	7.97	6.38	167.17	163.40	156.45	156.32	2.75	0.00	164.4	163.4	6.72	5.83
wwgm0540	wwml131013	wwml131012	1.25	332.9	0.41	3.93	1.37	5.38	4.27	7.08	5.66	163.40	164.21	156.32	154.97	0.00	3.14	163.4	161.1	5.83	4.85
wwgm0482	wwml131012	wwml131011	1.25	85.1	0.44	4.07	1.32	5.38	4.28	5.96	4.77	164.21	165.59	154.97	154.68	3.14	5.20	161.1	160.4	4.85	4.46
wwgm0604	wwml131011	wwml131010	1.25	248.7	0.41	4.01	1.34	5.38	4.29	5.71	4.57	165.59	167.11	154.68	153.52	5.20	8.48	160.4	158.6	4.46	3.86
wwgm0555	wwml131010	wwml131009	1.25	382.6	0.31	3.47	1.55	5.38	4.31	5.11	4.09	167.11	165.55	153.52	152.25	8.48	9.65	158.6	155.9	3.86	2.40

[1]Calculation = HGL - Pipe Invert + Pipe Diameter. Negative number signifies the HGL is below top of pipe and surcharge conditions do not exist.

Figure 5 WWMP Surcharging Analysis			
Node	**[1]Surcharging According to Color**	**[2]Surcharging According WWMP Data Output**	**[3]Surcharging According to 3J Modeling**
wwml92161	No	No	No
wwml92159	No	No	No
wwml92158	No	No	No
wwml92157	No	No	No
wwml92156	No	No	No
wwml92147	No	No	No
wwml92148	No	No	No
wwml92149	No	No	No
wwml92150	Yes	No	No
wwml92151	Yes	No	No
wwml92152	Yes	No	No
wwml104050	Yes	No	No
wwml102132	Yes	No	No
wwml102131	Yes	No	No
wwml102073	Yes	No	No
wwml104051	Yes	No	No
wwml102072	Yes	No	No
wwml102071	Yes	No	No
wwml102070	Yes	No	No
wwml102069	No	No	No
wwml102068	Yes	No	No
wwml102067	Yes	No	No
wwml102066	Yes	No	No
wwml111099	No	No	No
wwml111053	No	No	No
wwml111037	No	No	Yes
wwml111036	Yes	Yes	Yes
wwml111035	Yes	Yes	Yes
wwml111040	Yes	Yes	Yes
wwml111032	Yes	Yes	Yes
wwml121031	Yes	Yes	Yes
wwml121100	Yes	Yes	Yes
wwml121030	Yes	Yes	Yes
wwml121029	Yes	Yes	Yes
wwml121028	Yes	Yes	Yes
wwml121103	Yes	Yes	Yes
wwml121027	Yes	Yes	Yes
wwml121026	Yes	Yes	Yes
wwml131025	Yes	Yes	Yes
wwml131024	Yes	Yes	Yes
wwml131023	Yes	Yes	Yes
wwml131022	Yes	Yes	Yes
wwml131021	Yes	Yes	Yes
wwml131020	Yes	Yes	Yes
wwml131111	Yes	Yes	Yes
wwml131019	Yes	Yes	Yes
wwml131018	Yes	Yes	Yes
wwml131017	Yes	Yes	Yes
wwml131014	Yes	Yes	Yes
wwml131013	Yes	Yes	Yes
wwml131012	Yes	Yes	Yes
wwml131011	Yes	Yes	Yes
wwml131010	Yes	Yes	Yes
[1]Figure 5: Updated System Evaluation from WWMP Update			
[2]WWMP Update: Appendix D1 - Existing System Flow			
[3]XPSTORM Wastewater Conveyance Data: Springbrook Subdivision Downstream Analysis (Existing & Proposed Conditions			

Table 5-2: Springbrook Road Alternatives Estimated Costs

Alternative	Item	Unit	Unit Price	Quantity	Cost
A	Upsize existing pipeline				$ 3,176,000
	Mobilization	%	5	-	$ 158,800
				Subtotal (rounded)	$ 3,335,000
	Contingency	%	30	-	$ 1,000,500
				Subtotal (rounded)	$ 4,336,000
	Engineering and CMS	%	25	-	$ 1,084,000
				Project Total Cost (rounded):	**$5,420,000**
B	Parallel gravity main				$ 1,282,500
	Upsize existing pipeline				$ 915,000
				Subtotal (rounded)	$ 2,198,000
	Mobilization	%	5	-	$ 109,900
				Subtotal (rounded)	$ 2,308,000
	Contingency	%	30	-	$ 692,400
				Subtotal (rounded)	$ 3,001,000
	Engineering (25%) and Soft Costs				$ 810,250
				Project Total Cost (rounded):	**$3,812,000**

Excerpt from WWMP, page 5-7

GRAYLING ENGINEERS

Technical Memorandum DRAFT

Project: Springbrook Subdivision Booster Pump Station [2409A]

Date: August 14th, 2024

To: Brett Musick, PE
City of Newberg

From: Haillee Nunn, EIT (Grayling)
Kyle Thompson, PE (Grayling)
Jeff Howard, PE (R&W)

Re: Basis of Design

Att: A. Precision Pumping System Enclosure and Building Options
B. Hydrant Test Data

Background, Purpose, and Authorization

The City of Newberg owns and operates the public drinking water system that serves the proposed Springbrook subdivision. The Springbrook subdivision is located at the upper end of the system's highest pressure zone, known as Pressure Zone 1. The 2017 Water Master Plan states that pressure Zone 1 can provide adequate water pressure up to an elevation of 310 feet. The proposed subdivision will have services ranging from 300 feet to 350 feet at the highest elevation. A booster pump station is needed to provide adequate water pressure under normal conditions and fire flow under emergency conditions.

3J Consulting (3J) has requested assistance from Grayling Engineers (Grayling) with developing a pre-design for the booster pump station to serve the subdivision. Grayling has enlisted the help from R&W Engineering (R&W) to determine the power requirements for the pump station. The results and conclusions presented herein will be used in the subsequent final design phase of the project.

Preliminary Reviews

Water Quality

The proposed pump station is not anticipated to have an effect on water quality. However, because the subdivision is on the fringe of the City's water system, a chlorination station could be added in case chlorine residuals are low in the area.

Geotechnical

A preliminary geotechnical review has not been conducted but will be completed during the second phase of work (final design). This review will assess soil conditions to ensure a stable foundation for the pump station and identify any potential challenges such as high water tables or soil instability.

Permitting

The City is the permitting agency for this project. The proposed pump station will require a final plan review and approval by the Oregon Health Authority (OHA). In addition, the following permits are anticipated:

- Trade permits for electrical and mechanical; these will be led by the contractor.

Pump Station Capacity Evaluation

To develop the system design conditions, a hydraulic analysis was completed using WaterCAD by Bentley. The pump station is assumed to be supplied by a 12-inch distribution main from N. Springbrook Road, which currently dead-ends at a fire hydrant near 3898 N. Springbrook Road. A flow test was performed on two hydrants: one at the current dead-end of the main, and another approximately 370 feet to the south, near the intersection of N. Springbrook Road and Allison Lane. The test data, provided by AFP Systems, was utilized to model the existing distribution system supplying the proposed pump station. A system curve was developed for both 20 psi and 50 psi operating pressures for the subdivision; 20 psi is the minimum operating pressure under fire flow conditions, while 50 psi is an assumed operating pressure under normal conditions. [CITY, CONFIRM DISTRIBUTION PRESSURE.]

The evaluation is based on the following design criteria:

- The station must supply 2,000 gpm of fire flow, considering the R-3 zoning for some of the lots, while simultaneously delivering maximum day demand (MDD) and maintaining a minimum pressure of 20 psi in the distribution system,
- 12-inch diameter supply and discharge line,
- 8-inch diameter distribution piping,
- The station must meet peak hour demand (PHD), calculated using Equation 3-1 from the Washington State Department of Health (DOH) Water System Design Manual (WSDM), resulting in a PHD of 134 gpm.

Table 1 lists the design points developed from the hydraulic model. Further evaluation of system head requirements will be performed during the final design phase when more detailed information is available on the layout and size of piping, control valves, and meters within the pump station. All of these contribute to system head losses and the final sizing and selection of pumps for the pump station. To accommodate these losses, a safety factor of 20 feet has been incorporated into the system curves, as illustrated in **Figure 1**.

Table 1. Initial Design Points

Design Point	Flow (gpm)	Head (ft)
1	160	80
2	2,000	85

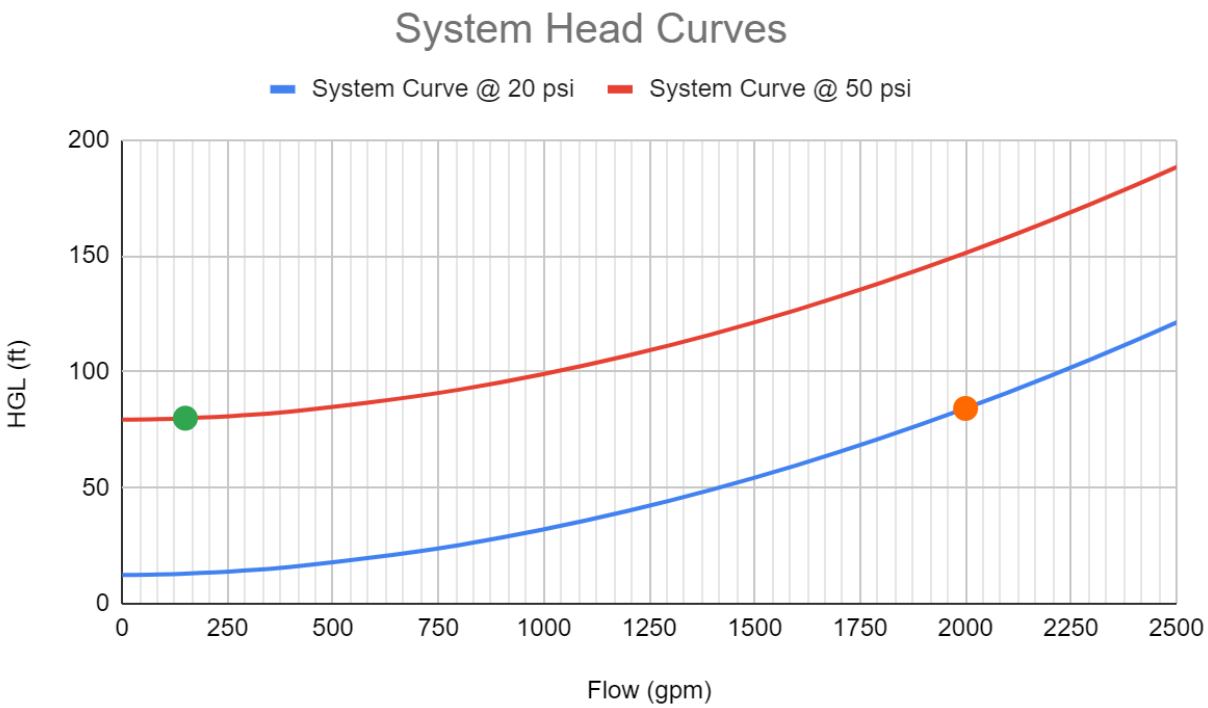


Figure 1. System Head Curves at 20 psi and 50 psi

Configuration Alternatives

Building

There are a variety of alternatives when it comes to housing the pumps and controls, each with its own set of advantages and considerations. Three alternatives, ranging from compact to custom enclosures, are presented below. While these are not the only options for a booster pump station, these are suitable options for this application.

- **Small Enclosure:** This option is cost-effective and quick to install but has limited space for maintenance and future upgrades. The control panel may be mounted inside the enclosure or in a separate enclosure or on a kiosk.

Figure 2. Aluminum Enclosure *(Image from Precision Pumping Systems)*

- **Pre-fabricated Building:** Offers a balance between cost and functionality, providing adequate space and flexibility for internal layouts while being relatively quick to construct. For this system, a building would be approximately 20 feet x 10 feet.

Figure 3. Pre-fabricated building *(Image from Precision Pumping Systems)*

- **Custom Building:** This option allows for the most flexibility in design and space but is the most expensive and time-consuming to construct.

Figure 4. Customized building with generator inside

Attachment A includes additional information regarding the aluminum enclosures and prefabricated buildings as supplied by Precision Pumping Systems.

[CITY, LET'S REVIEW]

Upon review, the City prefers a [TO FOLLOW] building/ enclosure for this application.

Pumps

Selecting the right type of pump is crucial for the efficiency and reliability of the booster pump station. Each type of pump offers different benefits and drawbacks, which must be considered based on the specific requirements of the project. The three pump types most commonly used in drinking water applications are listed below.

- **End Suction Pumps:** End suction pumps are robust and cost-effective but may have lower efficiency compared to other types.

Figure 5. End Suction Pumps ***(Image from Precision Pumping Systems)***

- **Vertical Multistage Pumps:** These offer better efficiency and require less space, making them suitable for compact installations. However, they are more expensive than end suction pumps and more susceptible to damage from debris.

Figure 6. Vertical Multistage Pumps (Image from Precision Pumping Systems)

- **Vertical Turbine Pumps:** These provide high efficiency and reliability. They are the most expensive option and require a more complex installation process.

Figure 7. Vertical Turbine Pumps (Image from Precision Pumping Systems)

[CITY, DO YOU HAVE A PREFERENCE ON PUMP TYPE?]

Upon review, the City prefers [TO FOLLOW] pumps for this application.

Pump Configuration

The minimum pump station configuration will consist of two larger pumps, each capable of supplying the required fire flow and a jockey pump to satisfy daily flows. The jockey pump will run most of the time to

meet the PHD and typical flows. Based on the capacity analysis discussed previously, the pumps would be approximately 60 hp and 5 hp, respectively. The skid for this configuration, which includes the electrical control panel, is approximately 8 feet x 17 feet.

The jockey pump ensures that the system maintains efficiency by not relying solely on the larger pumps for regular flow requirements. This approach conserves energy and reduces wear and tear on the larger pumps, which are reserved for emergency fire flow situations. By having dedicated pumps for both fire flow and regular flow, the system is optimized for reliability and performance.

[CITY, CONFIRM APPROACH]

Controls/ Communications

Effective control systems are crucial for the efficient and reliable operation of the booster pump station. The pump station will utilize Supervisory Control and Data Acquisition (SCADA) for monitoring and control. Additionally, Remote Telemetry Units (RTUs) will be integrated into the system, akin to the configuration used at the Oak Knoll Pump Station. This setup ensures consistent and reliable communication, allowing for real-time monitoring and control of the pump station operations from a central location. [CITY, CONFIRM. WHAT ARE YOUR THOUGHTS ON THE CONTROLS USED IN THE OAK KNOLL PUMP STATION? ARE THERE ANY ASPECTS YOU PARTICULARLY LIKE OR DISLIKE?]

Variable Frequency Drives

Variable Frequency Drives (VFDs) are an important component of the control system. They regulate the speed and torque of the pump motors, offering several benefits:

- **Energy Efficiency:** By adjusting the motor speed to match the system demand, VFDs reduce energy consumption and operational costs.
- **System Protection:** VFDs provide smooth start-ups and shut-downs, reducing mechanical stress on the pumps and minimizing water hammer effects.
- **Enhanced Control:** VFDs allow for precise control of flow and pressure, ensuring the system can respond dynamically to changes in demand.
- **Extended Equipment Life:** By reducing wear and tear on the pumps, VFDs can extend the operational lifespan of the equipment.

Integrating VFDs into the control system of the booster pump station will enhance its performance, improve energy efficiency, and reduce maintenance costs, making them a valuable addition to the overall design.

Instrumentation and Valves

Instrumentation is vital for monitoring and controlling the booster pump station to ensure optimal performance and reliability. Several key instruments are typically used in a constant pressure booster pump station:

- **Flow Meter:** Essential for measuring the volume and rate of water being pumped, helping to monitor performance, detect leaks, and ensure accurate billing.
- **Pressure Gauges:** Installed to monitor the pressure within the system, ensuring that the pump station maintains the required pressure levels for both domestic use and fire protection.
- **Control Valves:** Integral for regulating flow and pressure, maintaining system stability, and protecting against pressure surges.

- **Pressure Relief Valves:** These valves automatically release pressure when it exceeds a predetermined limit. They are essential for protecting the system from overpressure conditions.
- **Check Valves:** Check valves prevent backflow and protect the integrity of the system.

Selecting the appropriate instrumentation ensures the pump station operates efficiently, meets regulatory requirements, and provides reliable service to the community.

The City has chosen to include the following instrumentation: [TO FOLLOW].

Power

The power utility service of the subdivision is Portland General Electric (PGE). Preferred power configuration for motors 1 HP and larger is 3-phase, with 480 Volts generally being preferred for motors larger than 20 HP to 25 HP. We have confirmed with PGE that three phase power is available along N. Springbrook Road, which allows for the proposed pump station location to be provided with 480 Volt, 3-phase power. Actual design of the service from the existing overhead lines to the pump station site will be performed by PGE, but it is assumed a primary power line will be extended, underground, from one of the existing power poles along N. Springbrook Road, to a transformer pad (or pad/vault, depending on PGE's requirements) location near the Booster Pump Station. The actual transformer size (kVA-rating) will be by PGE; the transformer pad should have a dimension of 6-ft x 6-ft.

Based on (2) 60HP pumps, (1) 5 HP pump, and various miscellaneous loads (lights, heat, receptacles, controls, etc.), our preliminary calculations indicate a 400 Amp service (at 480 Volts, 3-phase) will be required.

Backup Generator

Ensuring reliable backup power is essential for the continuous operation of the booster pump station. It is assumed that the generator will be natural gas powered, similar to the city's wastewater lift station standards.

Assuming the entire pump station is to be provided with backup power, preliminary calculations indicate a 150 kW generator will be required.

There are a couple of placement options for the generator, each with its own set of considerations:

- **Outside with a Sound Attenuating Enclosure:** Placing the generator outside in a sound attenuating enclosure can effectively reduce noise levels and exhaust issues. This option simplifies maintenance access and it keeps the interior space free for other equipment if a building is chosen to house the pumps. However, it requires adequate outdoor space and consideration of weather protection and security measures.
- **Inside a Building:** Housing the generator inside a building can protect it from environmental elements and potential vandalism. However, this option requires a larger custom building to accommodate the generator and ensure proper ventilation for exhaust and cooling. This increases construction costs and can complicate the internal layout.

[CITY, WOULD YOU LIKE THE GENERATOR OUTSIDE OR INSIDE A BUILDING? IF THE LATTER THE BUILDING MUST BE CUSTOM TO ACCOMMODATE NFPA AND VENTILATION REQUIREMENTS.]

The City has chosen to place the generator [TO FOLLOW].

Preliminary Cost Estimate

The estimated project cost for the proposed Crestview Green Sanitary Pump Station is $XXX,XXX which includes a 30% contingency. The cost estimate represents an opinion of cost only, acknowledging that final costs of individual projects will vary depending on actual labor and material costs, and other factors. The Association for the Advancement of Cost Engineering International (AACE International) classifies cost estimates depending on project definition, end usage, and other factors. The cost estimates presented herein are considered Class 4 with the end usage being concept evaluation. The expected accuracy range for this level of detail is -20 percent to +30 percent.

Estimated costs shown herein are expressed in 2024 dollars. Costs are based on historical data, past projects, and correspondence with contractors. Costs do not include land acquisition in the form of either purchase or easements.

Next Steps

Based on the results of the predesign task described in this memorandum, the anticipated next steps for the project are outlined below.

- Geotechnical investigation site work and design recommendations
- Finalize pump selection
- Complete final design
- Prepare project report for submittal to OHA

ATTACHMENT A

Precision Pumping System Enclosure and Building Options

PPS
Precision Pumping Systems

PRE-PACKAGED PUMP STATION

MARINE GRADE ALUMINUM ENCLOSURES

Protect your pump station from the elements with our marine grade aluminum custom enclosures. These enclosures provide life-extending protections—while eliminating the need to build an expensive pump house.

Features

- 5052 H-32 marine grade aluminum combat corrosion
- Heat fused, polyester TGIC powder coating
- Thickness: .08"
- Removable bolt-down, single or double roll-off lids
- Lift-off lids and detachable panels
- Locking doors prevent vandalism and intrusion
- Low profile dimensions and design
- Non-slip floor matting

Available Options

- Custom colors available
- Interior and exterior lighting
- Heating, air conditioning and insulation
- Ventilation fans to regulate temperature
- Standard and custom designs
- Stainless Steel

Powder Coat Color Options

PPS Green

PPS Beige

PPS BEIGE IS STANDARD UNLESS OTHERWISE SPECIFIED

Available in 12 different sizes (Custom sizes available)

W **24** x D **36** x H **25**

W **32** x D **48** x H **33**

W **32** x D **48** x H **33**

W **48** x D **33** x H **32**

W **66** x D **48** x H **48**

W **96** x D **48** x H **48**

W **96** x D **48** x H **66**

W **96** x D **72** x H **66**

W **200** x D **72** x H **66**

W **96** x D **96** x H **78**

W **120** x D **96** x H **78**

W **200** x D **96** x H **78**

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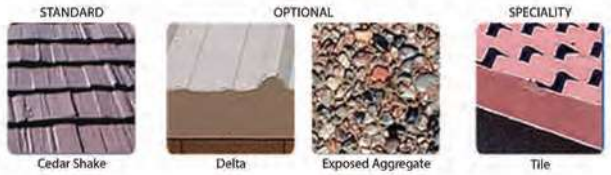
Color Options

Stone Options

Wall Textures

Roof Textures



Powder Coated Marine Grade Aluminum Enclosures

Composite Buildings

Standard Composite Finish

Composite with Siding and Roofing

Additional Options

Pump Station Prefabricated Enclosure Features & Options

Precast Concrete

- 4" thick steel-reinforced concrete walls
- 5" thick steel-reinforced concrete roof
- Standard and custom designs
- Built to withstand earthquakes, hurricane winds and 120 lb/Ft^2 snow load
- Vandal resistant components
- Widest variety of finishes, textures and colors available
- Shipped ready to use

Available Options

- Custom window and doors
- Ventilation/Heating/Air Conditioning
- Interior and exterior lighting
- Intrusion alarm prevents unauthorized entry and theft
- Non-slip floor matting

Powder Coated Marine Grade Aluminum

- 5052 H-32 marine grade aluminum combat corrosion
- Heat fused, polyester TGIC powder coating
- Removable bolt-down, single or double roll-off lids
- Lift-off lids and detachable panels
- Locking doors prevent vandalism and intrusion
- Low profile dimensions and design
- Non-slip floor matting

Available Options

- Custom colors available
- Interior and exterior lighting
- Heating, air conditioning and insulation
- Ventilation fans to regulate temperature
- Standard and custom designs

Composite

- Non-corrosive, sound reducing composite material
- Secure equipment protection
- Designed to resist damage from impact, chemicals, and environmental conditions
- Arrives fully assembled and generally does not require a building permit
- Locking doors prevent vandalism and intrusion
- Walk-in space for easy service and maintenance access
- New construction or retrofit for existing installations

Available Options

- Thermal insulation
- Interior and exterior lighting
- Roof access hatches
- Custom enclosure colors and finishes
- Standard and custom designs

Boise, ID
208.323.5300

Columbia, SC
839.895.5350

PPS
Precision Pumping Systems

GoPPS.com

FAMILY-OWNED SINCE 1972 AND OPERATED

ATTACHMENT B

Hydrant Test Data

AFP SYSTEMS 19435 SW 129th AVE. Tualatin, OR 97063 (503) 692 9284

AFP Systems Fire Hydrant Test Form

Person conducting inspection: Clinton Crisp, Michael Garcia Date: 6-24-24

Building Name: 3809 NE Springbrook Rd, Newberg, OR, USA

Building Address: Northeast Springbrook Road Newberg OR 97132

Number of hydrants being tested: _____

Contact: _____ Number: _____ Email: _____

	#1	#2	#3	#4	#5
Location of hydrant?	South	North			
Access unobstructed?	Yes	Yes			
Faced correctly?	Yes	Yes			
Set Properly?	Yes	Yes			
Location of residual pressure gauge?	N	S			
Static PSI?	60	63			
Residual PSI?	55	57			
Size of outlet flowed?	2.5	2.5			
Number of outlets flowed?	1	1			
Pitot reading?	37	34			
GPM flowed?	1040	1030			
Threads in good repair?	Yes	Yes			
Lubricated?	Yes	Yes			
Leaking in base, dome, or sleeve when under pressure not present?	Yes	Yes			
Hydrant operates properly?	Yes	Yes			
Operating nut lubricated?	Yes	Yes			
Hydrant drains properly?	Yes	Yes			

If NO Please explain:

_____

_____

_____

_____

_____

AFP SYSTEMS 19435 SW 129th AVE. Tualatin, OR 97063 (503) 692 9284

Corrections made:

_____
_____
_____
_____
_____

Corrections required:

_____
_____
_____
_____
_____

Recommendations:

_____
_____
_____
_____
_____

Who was notified of corrections required if needed? _____

Name: _____ Phone number: _____ Email: _____

AFP systems qualified technician preformed this inspection.

Name: Clinton Crisp

Signature: _____

Title: Service

Questions please call (503) 692 9284 or email Justin@afpsys.com

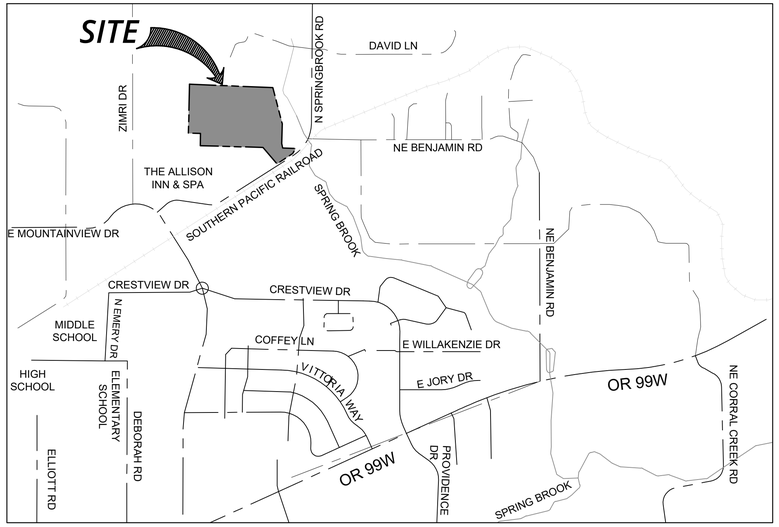
LAND USE DOCUMENTS

FOR

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

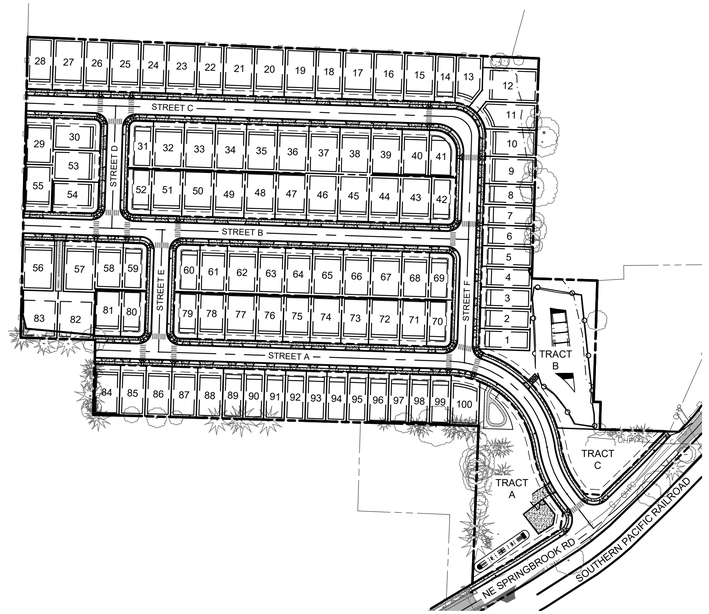
PREPARED FOR

ICHIJO USA CO., LTD.



VICINITY MAP

NOT TO SCALE



SITE MAP

SCALE: 1" = 150'

0 150' 300'

SHEET LIST	
SHEET #	SHEET TITLE
C000	COVER SHEET
C100	EXISTING CONDITIONS & DEMOLITION PLAN
C110	TREE REMOVAL AND PRESERVATION PLAN
C150	OVERALL TENTATIVE PLAT
C151	TENTATIVE PLAT I
C152	TENTATIVE PLAT II
C153	TENTATIVE PLAT III
C154	TENTATIVE PLAT IV
C200	OVERALL SITE PLAN
C201	PROPOSED ZONING MAP
C210	GRADING PLAN
C220	TYPICAL SECTIONS
C230	CIRCULATION PLAN
C240	FIRE ACCESS PLAN
C250	PHOTOMETRICS PLAN
C300	COMPOSITE UTILITY PLAN

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

PROJECT TEAM

OWNER / APPLICANT

ICHIJO USA CO., LTD.
3800 SW CEDAR HILLS BLVD, SUITE 131
BEAVERTON, OR 97005
CONTACT: MASAKI NARITA
PHONE: (503) 430-7413
EMAIL: m-narita@ichijousa.com

CIVIL ENGINEER

3J CONSULTING, INC.
9600 SW NIMBUS AVENUE, SUITE 100
BEAVERTON, OR 97008
CONTACT: JIM SCHMITT, PE
PHONE: (503) 946-9365
EMAIL: jim.schmitt@3j-consulting.com

PLANNER

3J CONSULTING, INC.
9600 SW NIMBUS AVENUE, SUITE 100
BEAVERTON, OR 97008
CONTACT: MERCEDES SERRA
PHONE: (503) 946-9365
EMAIL: mercedes.serra@3j-consulting.com

SURVEYOR

COMPASS LAND SURVEYORS
4107 SE INTERNATIONAL WAY, SUITE 705
MILWAUKIE, OR 97222
CONTACT: JOSEPH MCALLISTER
PHONE: (503) 653-9093
EMAIL: joem@compass-landsurveyors.com

LANDSCAPE ARCHITECT

MEARS DESIGN GROUP
PO BOX 23338
PORTLAND, OR 97281
CONTACT: TROY MEARS
PHONE: (503) 601-4516
EMAIL: troym@mearsdesigngroup.com

WETLAND BIOLOGIST

PACIFIC HABITAT SERVICES, INC.
9450 SW COMMERCE CIRCLE, SUITE 180
WILSONVILLE, OR 97070
CONTACT: JOHN VAN STAVEREN, SPWS
PHONE: (503) 570-0800
EMAIL: jvs@pacifichabitat.com

SITE INFORMATION

LOCATION

3809 N SPRINGBROOK RD
NEWBERG, OR 97132
NEAR THE INTERSECTION WITH NE BENJAMIN RD, NEWBERG, OREGON
(45°19'14.6"N - 122°56'31.2"W)

SECTION, TOWNSHIP, RANGE

TAX LOT 2300 LOCATED IN SECTION 9, T.3S., R.2W., W.M.
CITY OF NEWBERG, YAMHILL COUNTY, OREGON

ZONING

R1 AND R3

FLOOD HAZARD

FIRM PANEL MAP NUMBER:
41071C0229D ZONE X (UN-SHADED)

TAX LOT(S)

3S2W9 2300

GROSS SITE AREA

19.16 ACRES

UTILITIES & SERVICES

WATER, STORM, SEWER, ROADS

CITY OF NEWBERG, PUBLIC WORKS
PHONE: 503-537-1273

POLICE

NEWBERG-DUNDEE POLICE DEPARTMENT
PHONE: 503-538-8321
NON-EMERGENCY
CALL 9-1-1 IN CASE OF EMERGENCY

FIRE

TUALATIN VALLEY FIRE & RESCUE
STATION NUMBER 21
PHONE: 503-649-8577 NON-EMERGENCY
CALL 9-1-1 IN CASE OF EMERGENCY

TELECOMMUNICATIONS

ZIPLY FIBER
PHONE: 503-526-3544

SCHOOLS

NEWBERG OREGON SCHOOL DISTRICT
PHONE: 503-554-5000

PARKS

CHEHALEM PARKS AND REC. DISTRICT
PHONE: 503-554-0283

GAS

NORTHWEST NATURAL
PHONE: 800-422-4012

ELECTRICAL POWER

PORTLAND GENERAL ELECTRIC
PHONE: 503-463-6187

ELECTRICAL LIGHTING

PORTLAND GENERAL ELECTRIC
PHONE: 503-672-5417

CABLE

COMCAST CABLE
PHONE: 971-777-0933

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024
ISSUED FOR
LAND USE DOCUMENTS
REVISIONS

COVER SHEET
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
C000

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - COVER SHEET.DWG

LEGEND

- EXISTING BUILDING
- PROJECT BOUNDARY
- RIGHT-OF-WAY LINE
- RIGHT-OF-WAY CENTERLINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING CONCRETE
- EXISTING GRAVEL
- EXISTING CURB
- EXISTING STRIPING: YELLOW
- EXISTING FENCING
- G — EXISTING GAS LINE
- W — EXISTING WATER MAIN
- SD — EXISTING STORM DRAIN
- 100 — EXISTING MAJOR CONTOUR
- 92 — EXISTING MINOR CONTOUR
- EXISTING STREAM CORRIDOR
- C — EXISTING CABLE LINE
- UGP — EXISTING UNDERGROUND POWER
- OHP — EXISTING OVERHEAD POWER
- EXISTING POWER POLE
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING GUY ANCHOR
- EXISTING WATER METER
- EXISTING IRRIGATION VALVE

VERTICAL DATUM

NAVD88 UTILIZING GPS POSITIONING TIED TO THE ORGM WITH REAL TIME CORRECTORS REFERENCED TO DATUM NAD 83 (2011) EPOCH 2010.00.

HORIZONTAL DATUM (BASIS OF BEARINGS)

OREGON STATE PLANE COORDINATE SYSTEM, NORTH ZONE 83 (91).

DEMOLITION KEY NOTES

1. REMOVE EXISTING STRUCTURE AND FOUNDATION AND DISPOSE OFF-SITE AFTER ALL UTILITY LINES ARE PROPERLY SHUT OFF AND DISCONNECTED.
2. REMOVE EXISTING FENCING AND ASSOCIATED APPURTENANCES AND DISPOSE OFF-SITE.
3. REMOVE EXISTING GRAVEL AND DISPOSE OF OFF-SITE.
4. LOCATE AND REMOVE SEPTIC SYSTEM IN ACCORDANCE WITH YAMHILL COUNTY STANDARDS. PROVIDE CERTIFICATION FROM YAMHILL COUNTY TO THE CITY OF NEWBERG OF SEPTIC SYSTEM REMOVAL.
5. DECOMMISSION WATER WELL PER STATE OF OREGON REQUIREMENTS.
6. REMOVE EXISTING BIRD PERCH POST AND DISPOSE OF OFF-SITE.
7. EXISTING STREAM CORRIDOR FROM NEWBERG / GIS OVERLAY
8. EXISTING STREAM CORRIDOR FROM SURVEYOR / TOP OF BANK TOPOGRAPHY
9. EXISTING SMALL SPRING FROM WETLAND BIOLOGIST / ENVIRONMENTAL STUDY

FLOOD HAZARD INFORMATION

ZONE X (UN-SHADED) THE SITE IS LOCATED WITHIN ZONE X (UN-SHADED) PER FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY-PANEL NUMBER **41071C0229D**
FEMA'S DEFINITION OF ZONE X (UN-SHADED) IS AN AREA OF MINIMAL FLOOD HAZARD, USUALLY DEPICTED ON FIRMS AS ABOVE THE 500-YEAR FLOOD LEVEL. ZONE X IS THE AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD AND PROTECTED BY LEVEE FROM 100-YEAR FLOOD. IN COMMUNITIES THAT PARTICIPATE IN THE NFIP, FLOOD INSURANCE IS AVAILABLE TO ALL PROPERTY OWNERS AND RENTERS IN THESE ZONES.

EXISTING CONDITIONS PLAN

THIS PLAN HAS BEEN PREPARED FOR INFORMATIVE PURPOSES ONLY. SITE BACKGROUND INFORMATION AND FEATURES HAVE BEEN GENERATED FROM A COMBINATION OF TOPOGRAPHIC SURVEY DATA PROVIDED BY COMPASS LAND SURVEYORS, MAY 2024, AERIAL IMAGERY, PUBLIC GIS DATA AND SITE ASSESSMENT/OBSERVATION. NO WARRANTY OR GUARANTEE OF ACCURACY IS EXPRESSED OR IMPLIED.

GENERAL DEMOLITION NOTES

1. SEE TREE REMOVAL AND PRESERVATION PLAN (SHEET C110) FOR ALL TREE REMOVAL INFORMATION.
2. SEE GEOTECHNICAL REPORT FOR SURFACE GRUBBING AND STRIPPING INFORMATION.
3. NO UNAUTHORIZED GROUND DISTURBANCE MAY OCCUR WITHIN VEGETATED CORRIDOR AND SENSITIVE AREA.

SECTION 9, T.3S., R.2W. W.M., YAMHILL COUNTY, OREGON

N W E S

SCALE: 1" = 75'
0 75 150 FT

Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92402PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

EXISTING CONDITIONS & DEMOLITION PLAN

NE SPRINGBROOK RD

PLANNED UNIT DEVELOPMENT

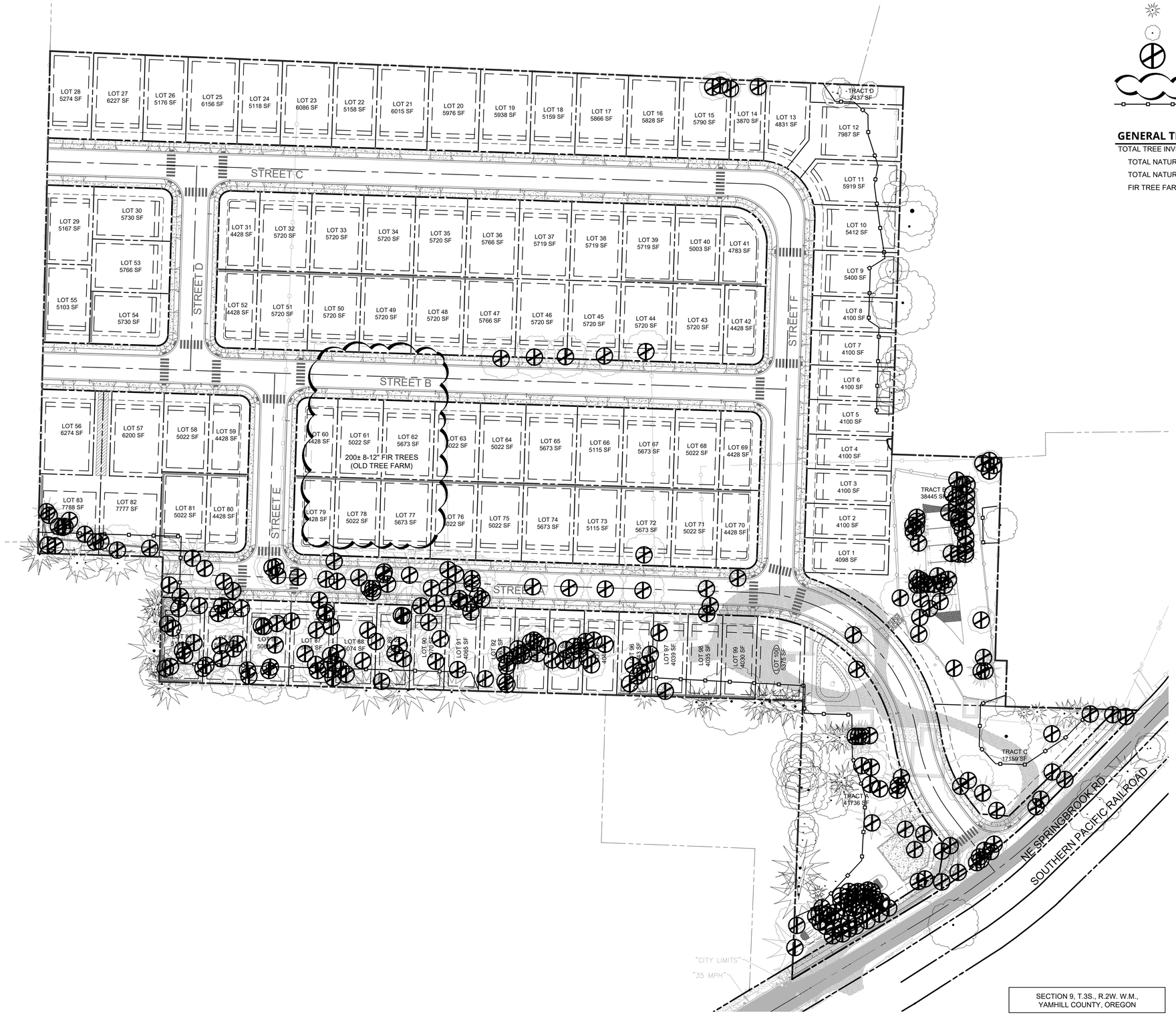
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
C100

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - EXISTING CONDITIONS DEMO.DWG



LEGEND

- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- TREE TO BE REMOVED (291 TOTAL)
- FIR TREE FARM TO BE REMOVED (200 APPROX.)
- PROPOSED TREE PROTECTING FENCING

GENERAL TREE INVENTORY STATISTICS

TOTAL TREE INVENTORY (IN PROJECT LIMITS):	340 EA
TOTAL NATURAL TREES RETAINED:	49 EA
TOTAL NATURAL TREES REMOVED:	291 EA
FIR TREE FARM REMOVED:	200 EA (APPROX.)

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26
PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

TREE REMOVAL AND PRESERVATION PLAN
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

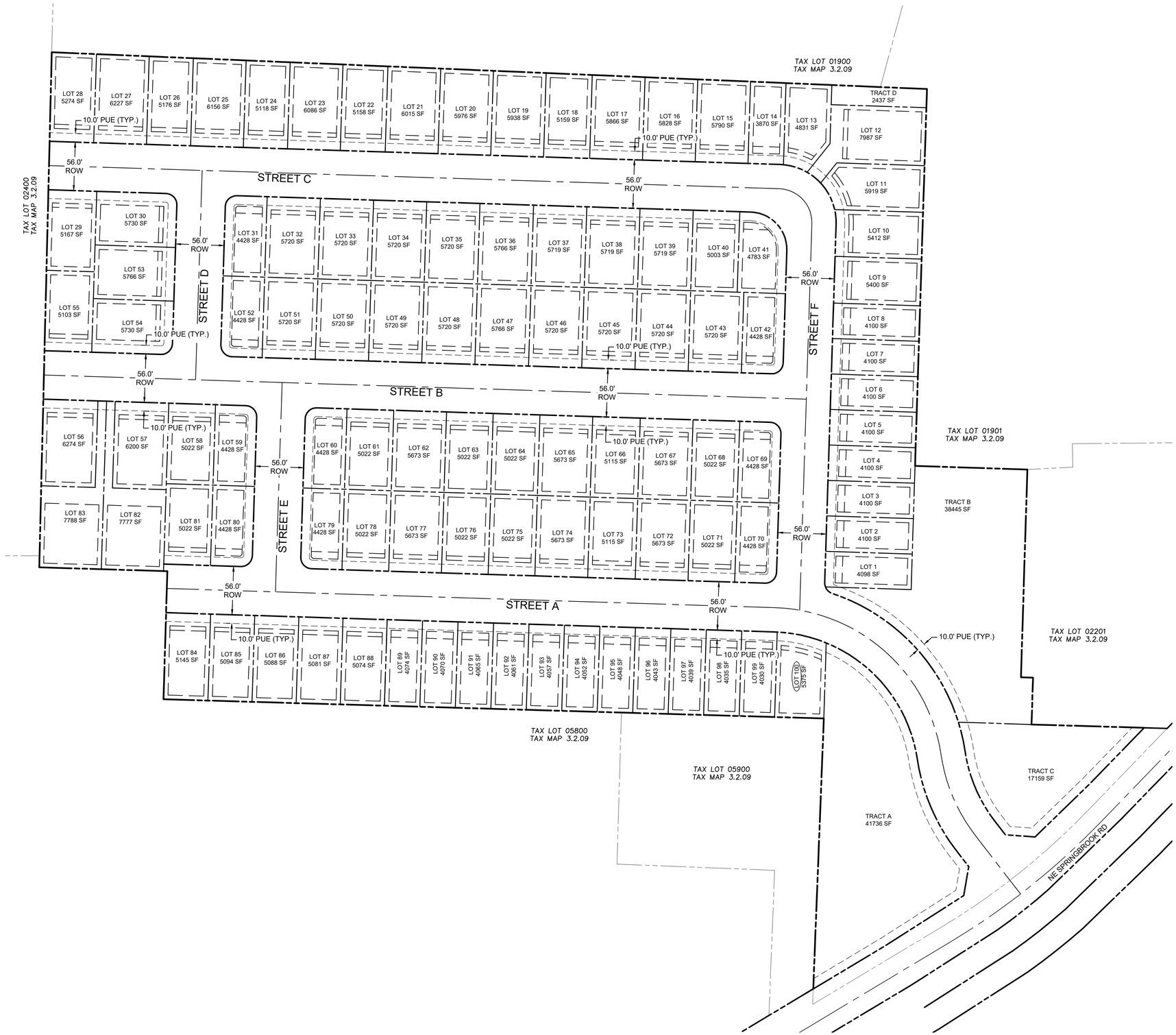
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C110

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - TREE REMOVAL PRESERVATION.DWG



LEGEND

- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE

SITE STATISTICS

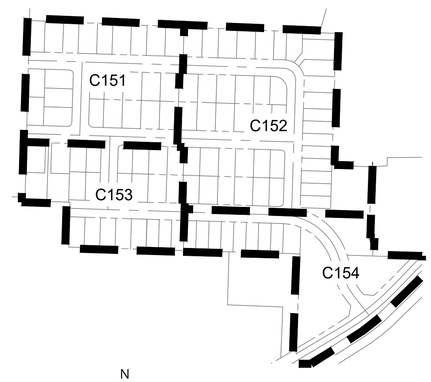
SITE ADDRESS	3809 NE SPRINGBROOK ROAD
TAX LOT	3209 2300
JURISDICTION	CITY OF NEWBERG
GROSS SITE AREA	19.16 ACRES
BUILDABLE SITE AREA	
PROPERTY ZONING	R-1, R-3
FLOOD HAZARD MAP NUMBER	FIRM PANEL NUMBER: 41071C0229D - ZONE X (UN-SHADED)

SUBDIVISION STATISTICS

ZONING CODE CHAPTER 33.120	ZONE R-1	ZONE R-3
ZONE AREA	16.14 ACRES	3.02 ACRES
MAXIMUM DENSITY*	175 DENSITY POINTS/ACRE	640 DENSITY POINTS/ACRE
MAXIMUM LOT SIZE	7,987 SF	4,493 SF
MINIMUM LOT SIZE	5,022 SF	4,030 SF
MINIMUM LOT WIDTH	51 FT	41 FT
MAXIMUM BUILDING HEIGHT	30 FT	30 FT

SETBACKS

FRONT / SIDE STREET	15 FT	12 FT
GARAGE	20 FT	20 FT
INTERIOR / REAR	5 FT	5 FT



N
W E
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SCALE: 1" = 60'

0 60 120 FT

SECTION 9, T.3S., R.2W. W.M., YAMHILL COUNTY, OREGON

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

OVERALL TENTATIVE PLAT
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C150

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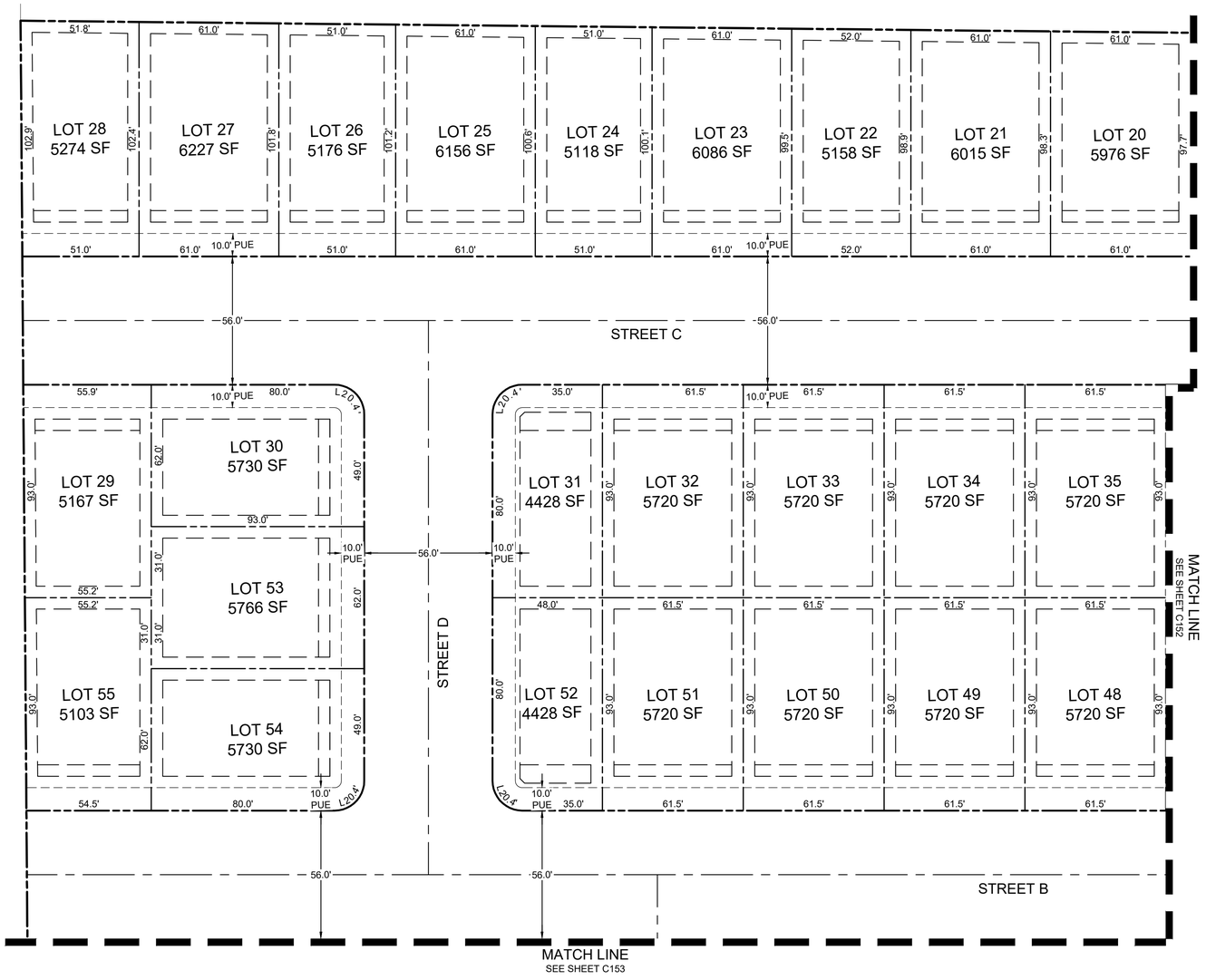
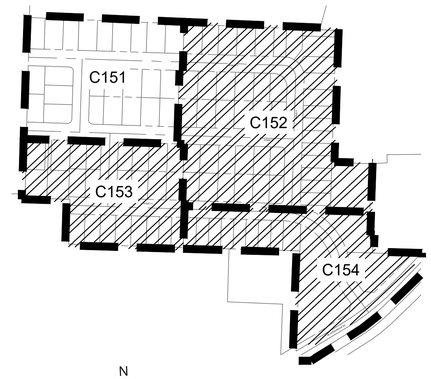


LEGEND

- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE



N
W E
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SCALE: 1" = 30'
0 30 60 FT

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92402PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

TENTATIVE PLAT /
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C151

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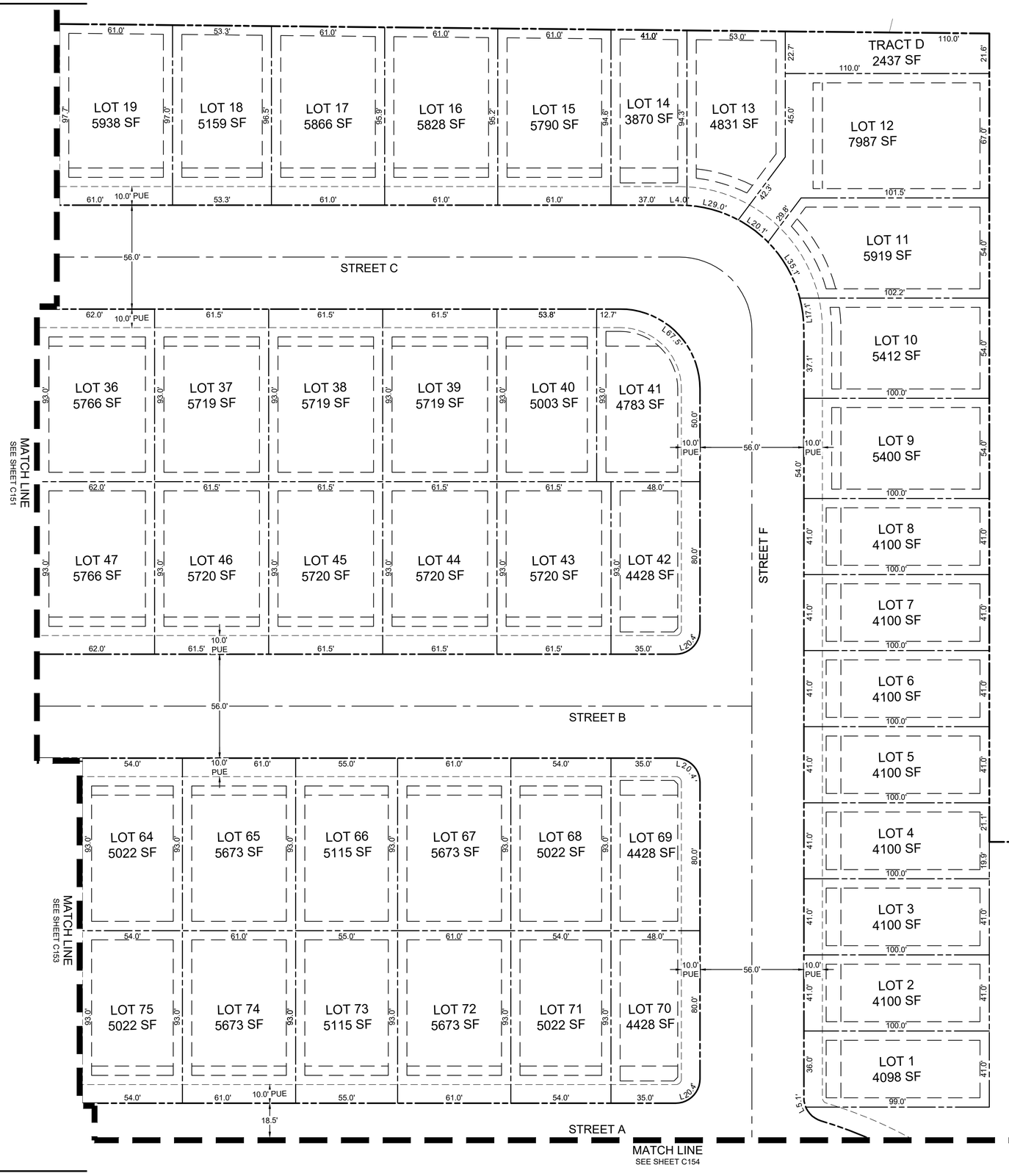
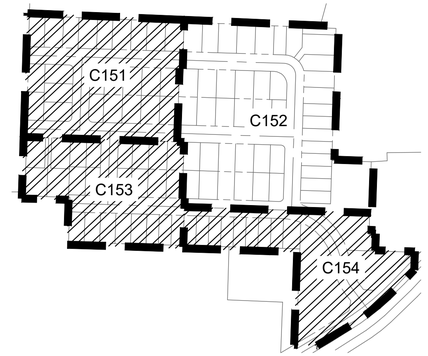


LEGEND

- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE



N
W E
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SCALE: 1" = 30'
0 30 60 FT

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

811
Know what's below.
Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92408PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26
PRELIMINARY

PUBLISH DATE
11/11/2024
ISSUED FOR
LAND USE DOCUMENTS
REVISIONS

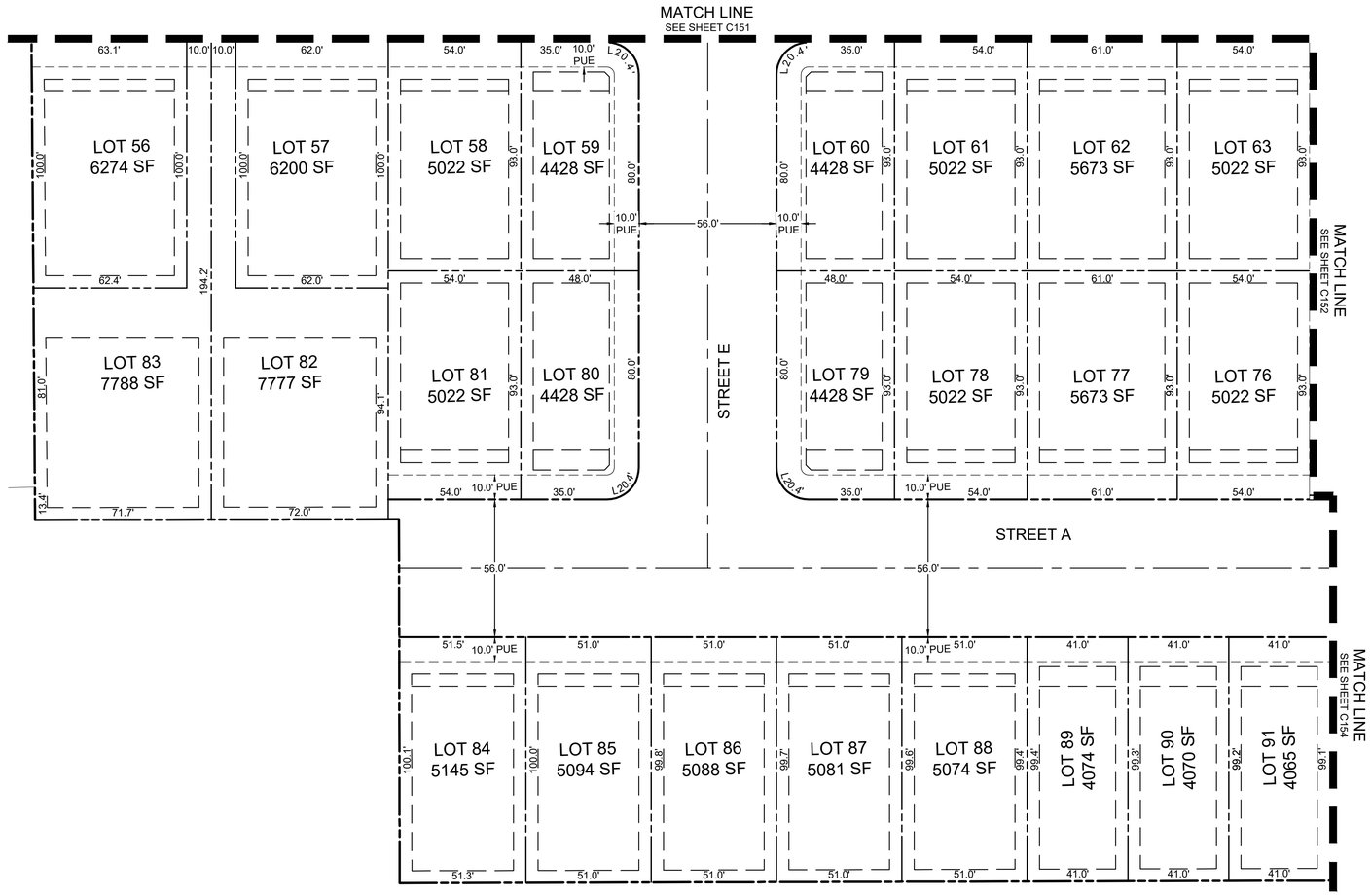
TENTATIVE PLAT II
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

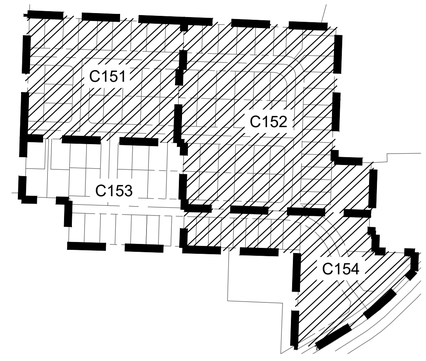
SHEET NUMBER
C152

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - TENTATIVE PLAT.DWG



LEGEND

- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE



N
W E
S

SCALE: 1" = 30'
0 30 60 FT

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

811
Know what's below.
Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92408
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

TENTATIVE PLAT III

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

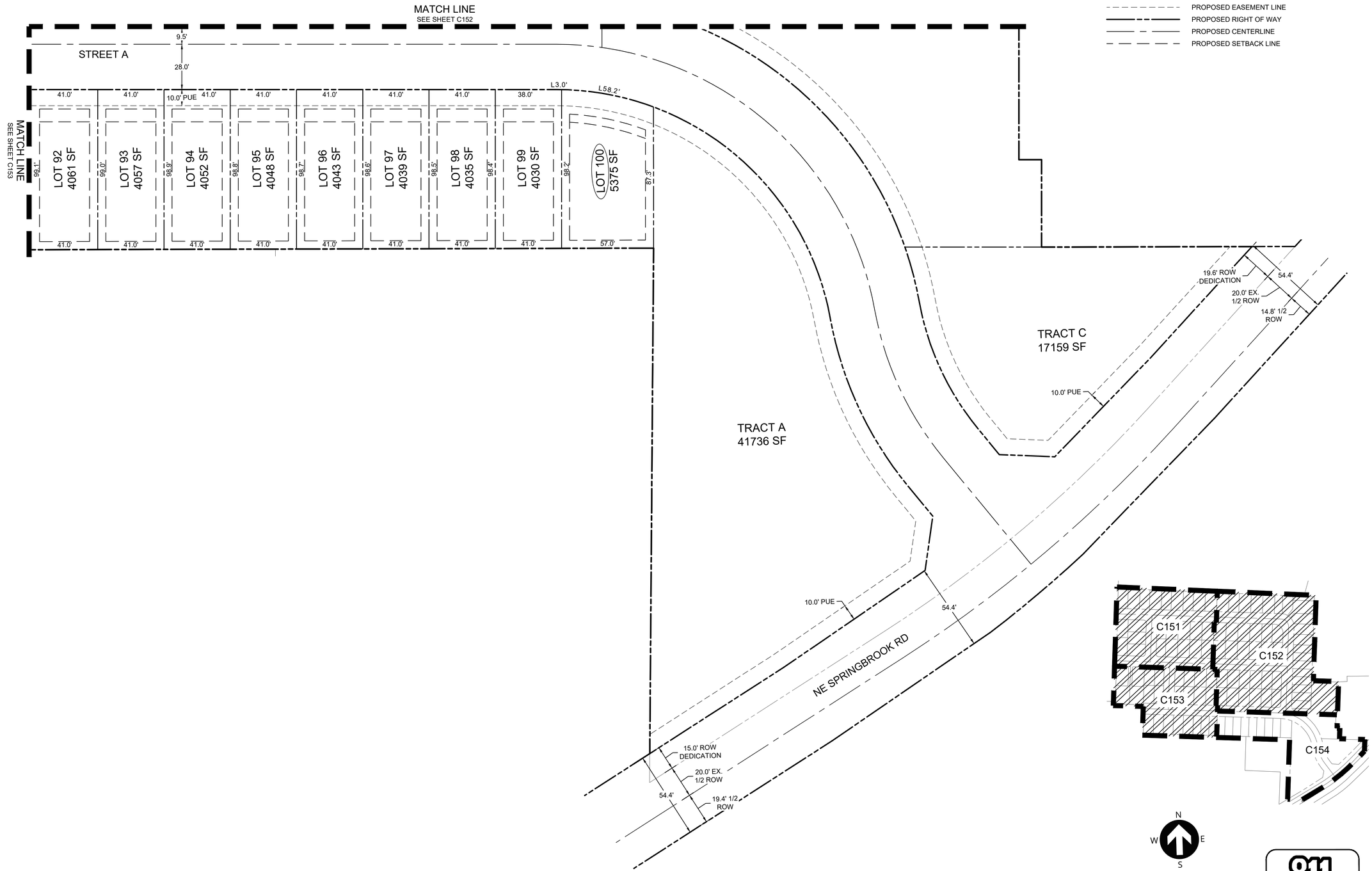
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
C153

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - TENTATIVE PLAT.DWG



PRELIMINARY
REGISTERED PROFESSIONAL ENGINEER
92408
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

TENTATIVE PLAT IV

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

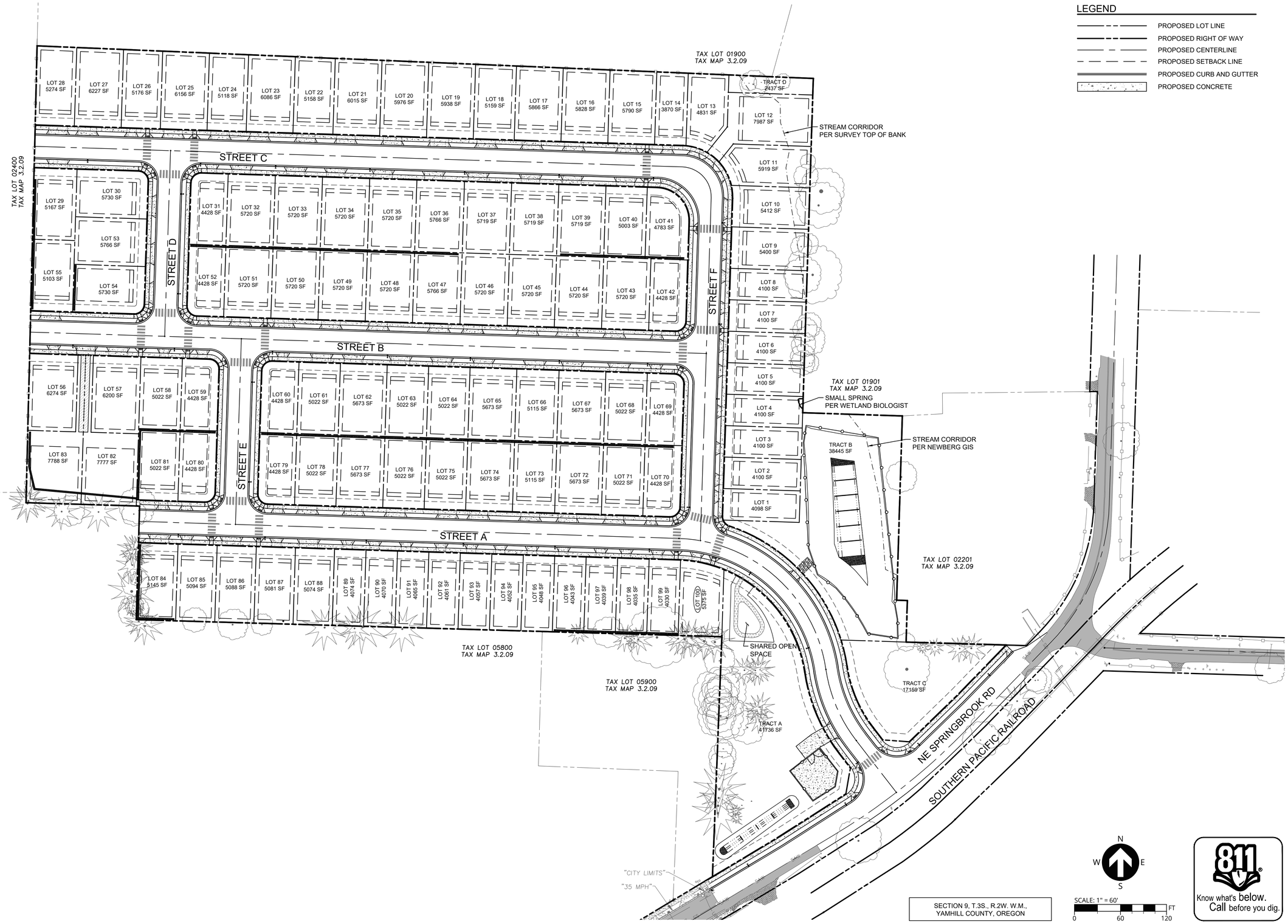
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C154

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - TENTATIVE PLAT.DWG



P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - SITE PLAN.DWG

REGISTERED PROFESSIONAL ENGINEER
92400PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

OVERALL SITE PLAN

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

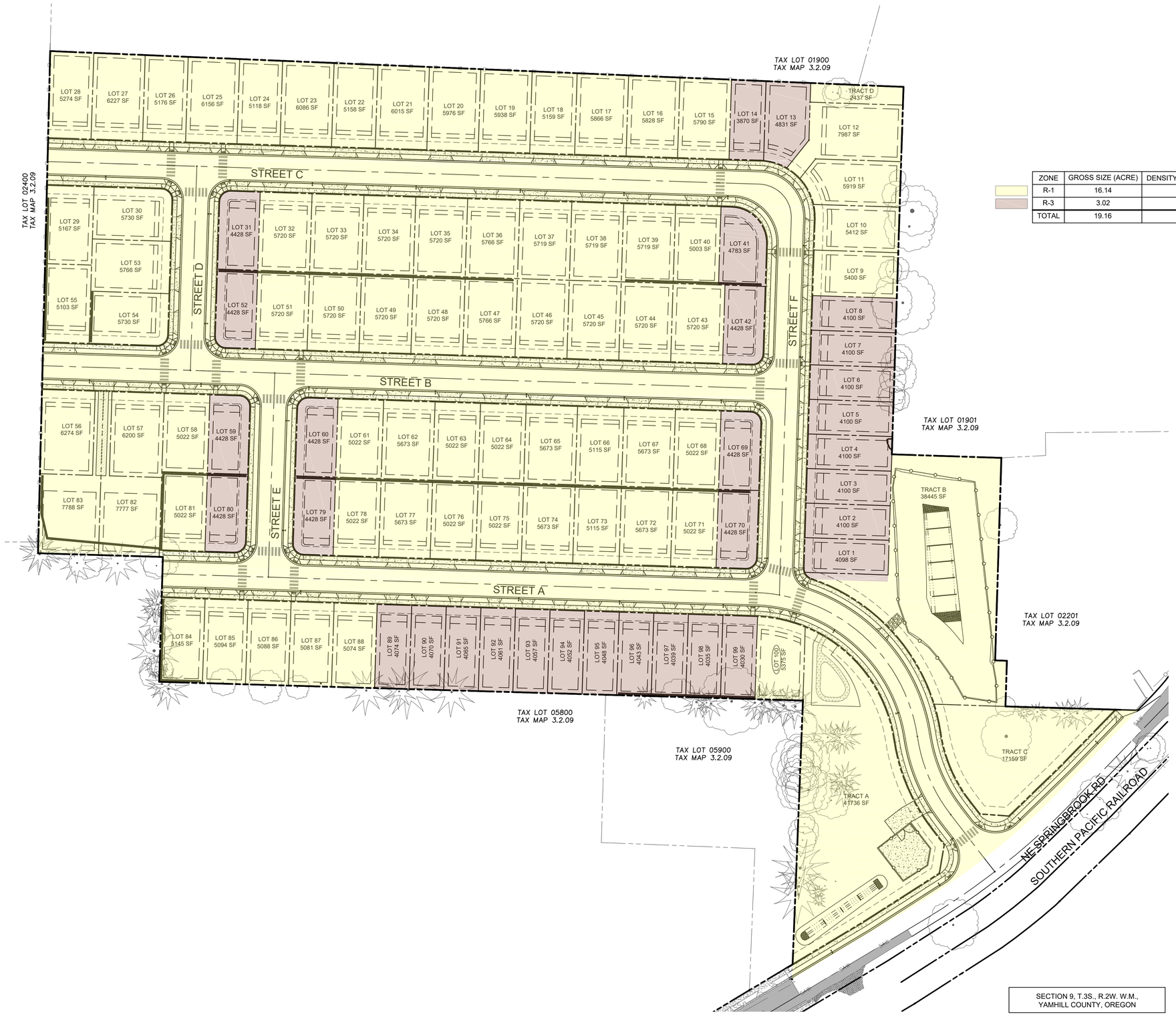
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C200



LEGEND

- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE

ZONE	GROSS SIZE (ACRE)	DENSITY POINTS / GROSS ACRE	MAX. DENSITY POINTS ALLOWED
R-1	16.14	175	2,824.5
R-3	3.02	640	1,932.8
TOTAL	19.16	X	4,757.3

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26
PRELIMINARY

PUBLISH DATE
11/11/2024
ISSUED FOR
LAND USE DOCUMENTS
REVISIONS

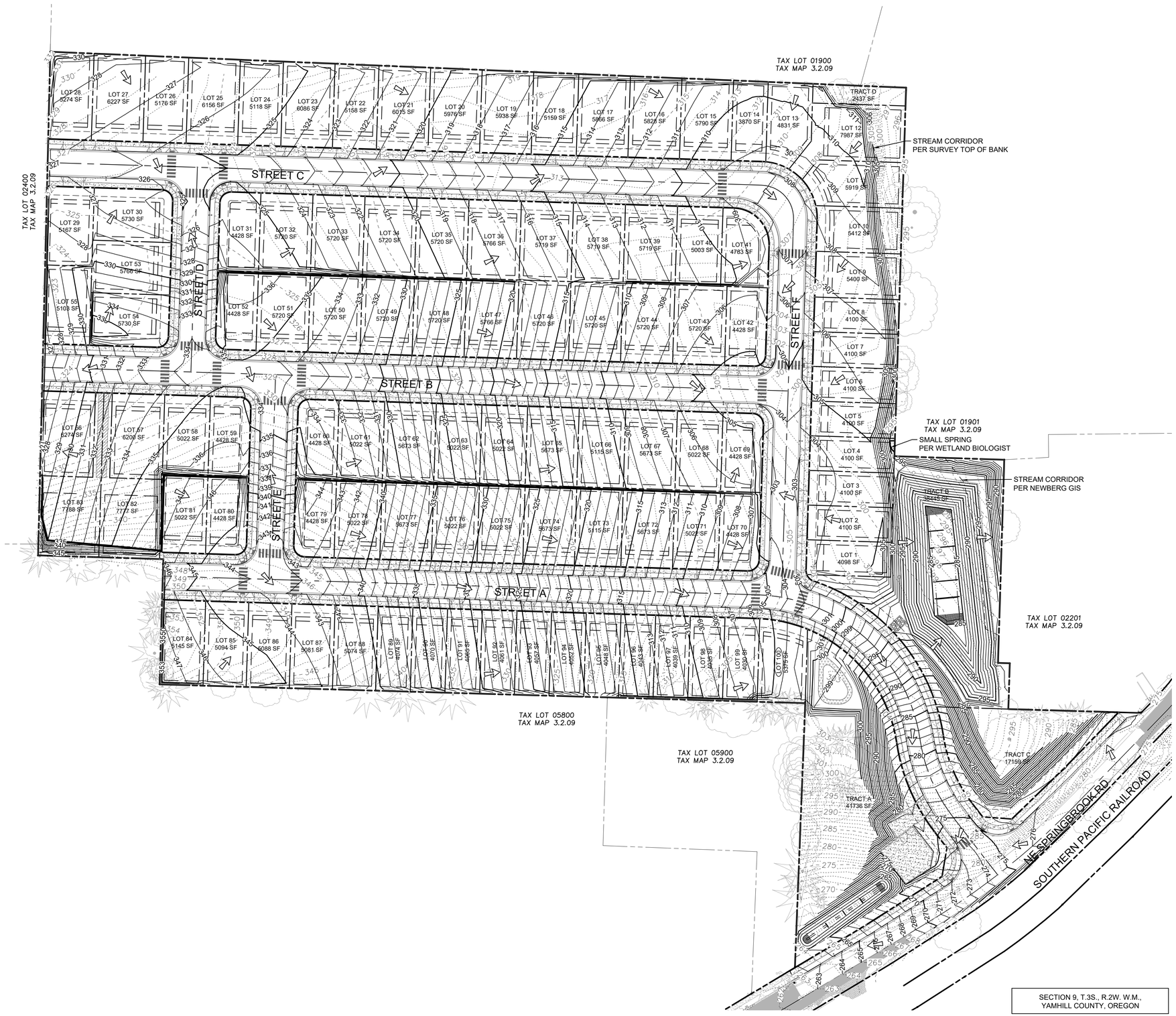
PROPOSED ZONING MAP
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
C201

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - PROPOSED ZONING MAP.DWG



REGISTERED PROFESSIONAL ENGINEER
92400PE
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

GRADING PLAN
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

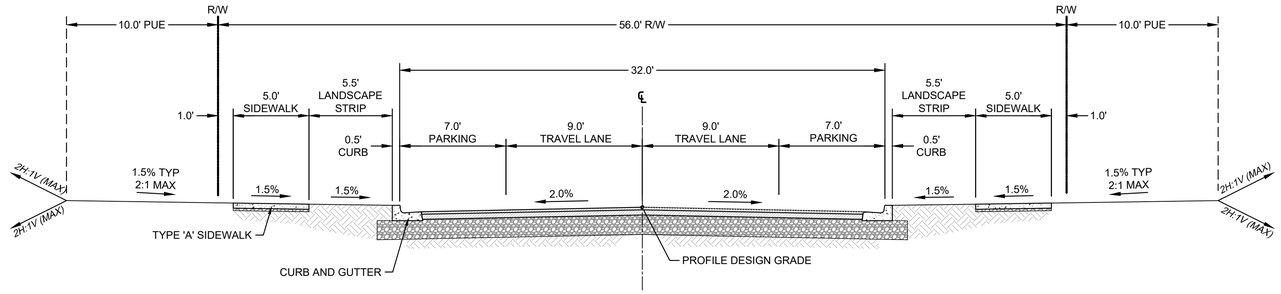
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

SHEET NUMBER
C210

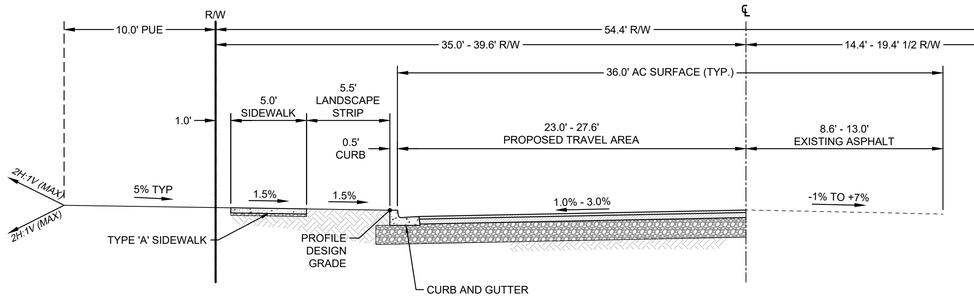
811 Know what's below. Call before you dig.

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - GRADING PLAN.DWG



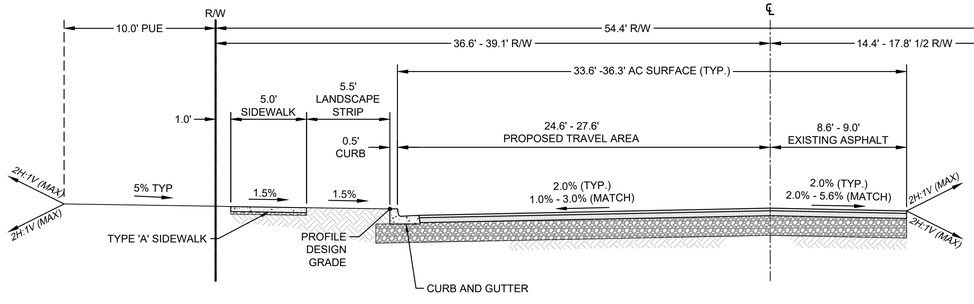
TYPICAL STREET SECTION 1 - LOCAL ROAD

NTS



TYPICAL STREET SECTION 2 - NE SPRINGBROOK ROAD

NTS



TYPICAL STREET SECTION 3 - NE SPRINGBROOK ROAD

STA: 10+50 - 14+00 NTS

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - TYPICAL SECTIONS.DWG

REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

TYPICAL SECTIONS

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

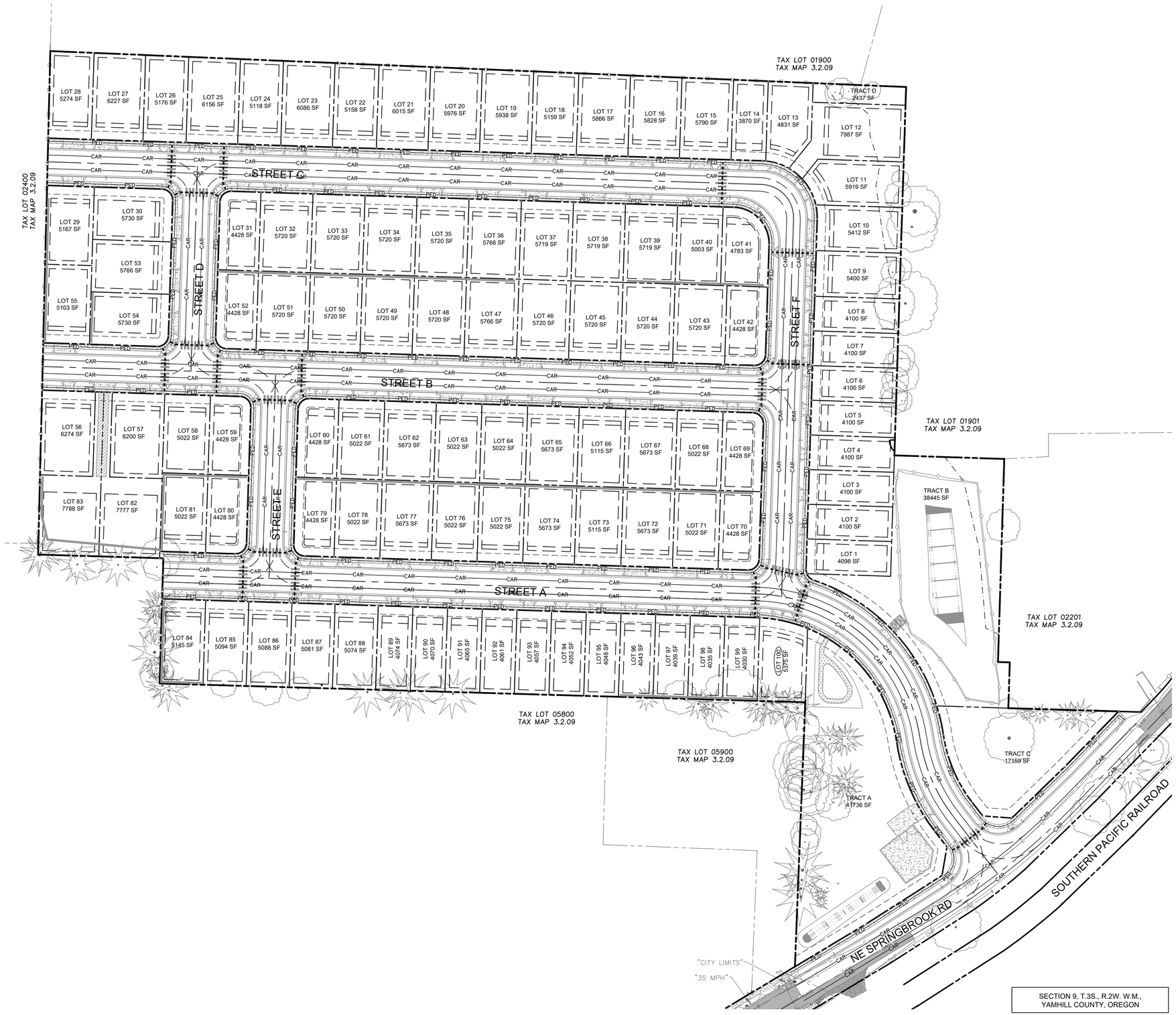
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C220



SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

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11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

CIRCULATION PLAN

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

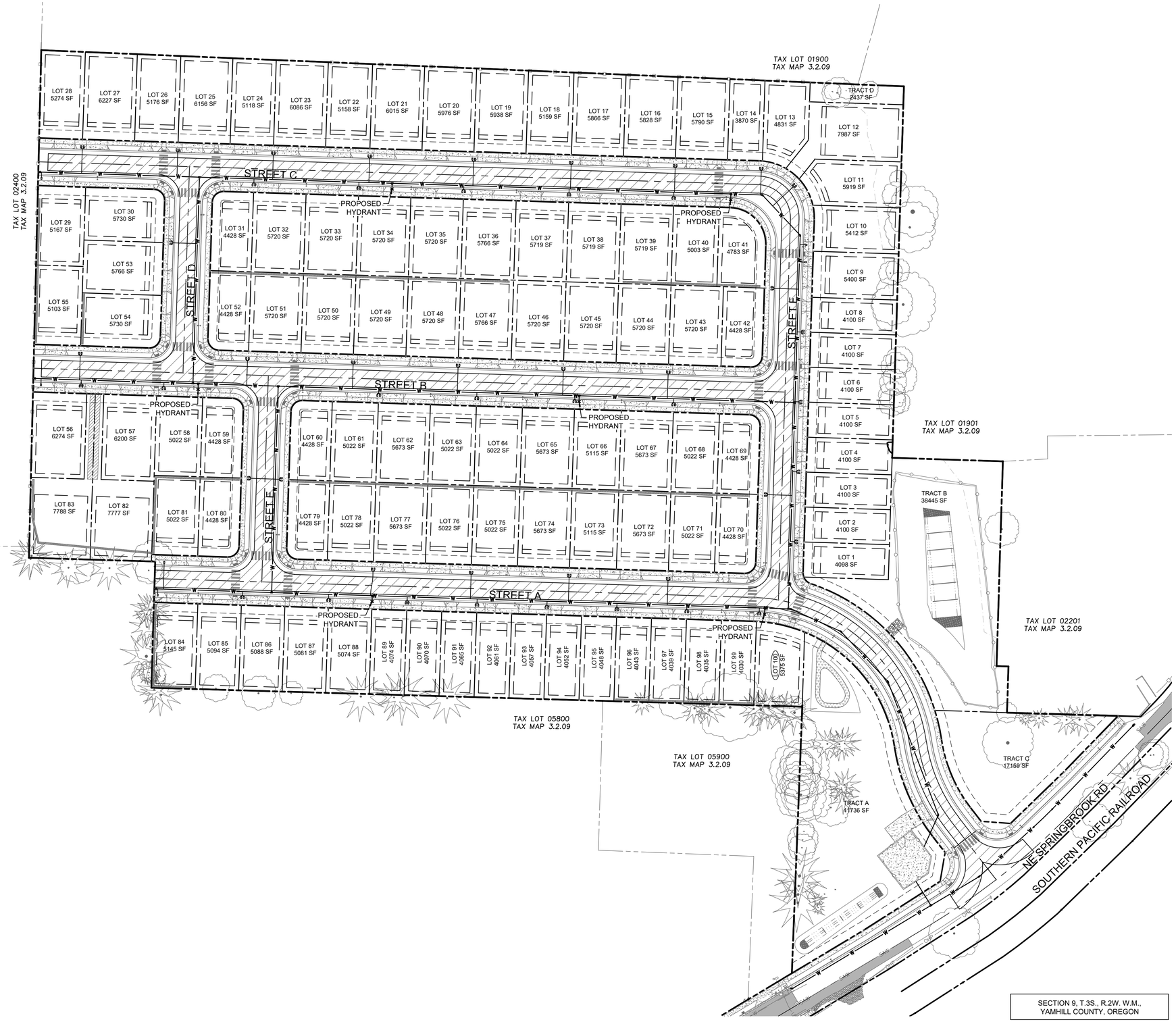
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C230

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - CIRCULATION PLAN.DWG



LEGEND

- FIRE TRUCK TURNING AREA
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE

FIRE ACCESS NOTES:

1. MAX PROPOSED ROAD SLOPE: 12.7%
2. ALL HOUSES ARE PROPOSED WITH SPRINKLERS DUE TO SINGLE ACCESS ROAD

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

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REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26
PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

FIRE ACCESS PLAN
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

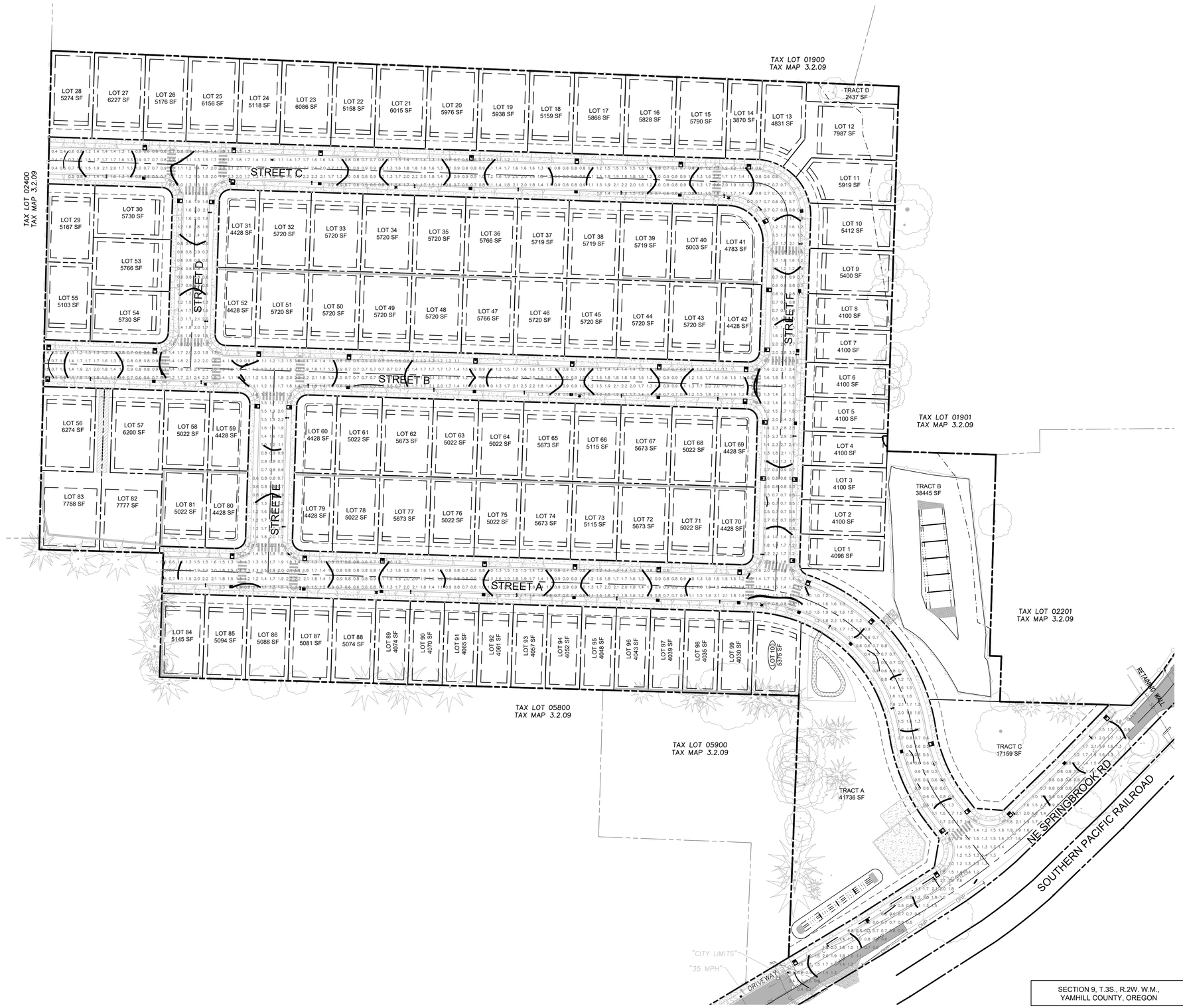
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

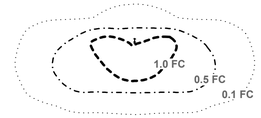
SHEET NUMBER
C240

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - FIRE ACCESS PLAN.DWG



LEGEND

- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE
- PROPOSED CURB
- PROPOSED CONCRETE
- 0.7 FC — ILLUMINATION ANALYSIS POINT (FC)
- FOOT CANDLE UNIT
- PROPOSED LUMINAIRE



SITE LIGHTING LUMINAIRES
COBRAHEAD LIGHTS:
LEOTEK GCM2-40H-MV-WW-2R-GY-700
88W LED (10230 LUMENS) AT 30' MOUNTING HEIGHT

STREET LIGHTING SUMMARY		
STREET A, STREET B, STREET C, STREET D, STREET E, STREET F, NE SPRINGBROOK RD	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.0	1.27
UNIFORMITY (AVG/MIN RATIO)	<6.0	3.73

INTERSECTION LIGHTING SUMMARY		
STREET A @ STREET E	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.0	1.61
UNIFORMITY (AVG/MIN RATIO)	<6.0	1.42
STREET A @ STREET F	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.0	1.41
UNIFORMITY (AVG/MIN RATIO)	<6.0	2.01
STREET A @ NE SPRINGBROOK RD	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.4	1.43
UNIFORMITY (AVG/MIN RATIO)	<4.0	1.53
STREET B @ STREET D	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.0	1.68
UNIFORMITY (AVG/MIN RATIO)	<6.0	1.98
STREET B @ STREET E	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.0	1.44
UNIFORMITY (AVG/MIN RATIO)	<6.0	1.56
STREET B @ STREET F	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.0	1.74
UNIFORMITY (AVG/MIN RATIO)	<6.0	2.47
STREET C @ STREET D	CITY STANDARD	CALCULATED
AVERAGE MAINTAINED ILLUMINANCE (FC)	>1.0	1.41
UNIFORMITY (AVG/MIN RATIO)	<6.0	1.96

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

Know what's below.
Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26
PRELIMINARY

PUBLISH DATE
11/11/2024
ISSUED FOR
LAND USE DOCUMENTS
REVISIONS

PHOTOMETRICS PLAN
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

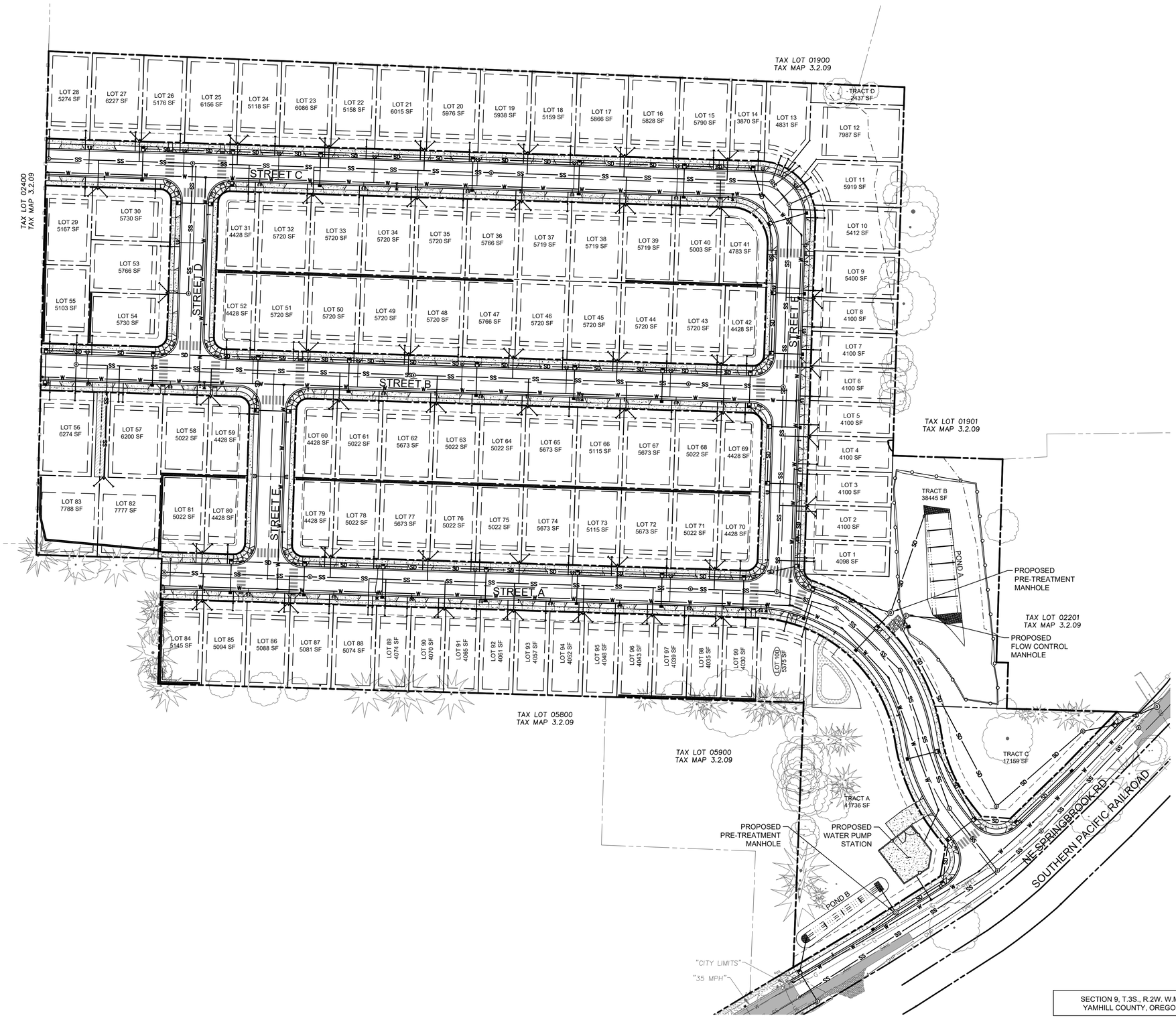
ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 23913
TAX LOT(S) | 3S2W9 2300
LAND USE # | TBD
DESIGNED BY | SRC
CHECKED BY | JJS

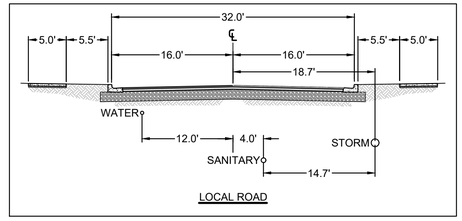
SHEET NUMBER
C250

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - PHOTOMETRICS PLAN.DWG



LEGEND

- PROPOSED STORM PIPE
- PROPOSED SANITARY PIPE
- PROPOSED WATER MAIN
- PROPOSED SUPERSIZED CURB INLET
- PROPOSED STANDARD CURB INLET
- PROPOSED WATER METER
- PROPOSED HYDRANT
- PROPOSED VALVE
- PROPOSED BLOW-OFF / AIR RELEASE ASSY.
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED STORM CLEANOUT
- EXISTING STORM DRAIN
- EXISTING SANITARY PIPE
- EXISTING GAS LINE
- EXISTING WATER MAIN
- EXISTING CABLE LINE
- EXISTING OVERHEAD POWER



STREET UTILITIES TYPICAL SECTIONS
NTS

SECTION 9, T.3S., R.2W. W.M.,
YAMHILL COUNTY, OREGON

N
W E
S

SCALE: 1" = 60'
0 60 120 FT

Know what's below.
Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26
PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

COMPOSITE UTILITY PLAN
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C300

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - COMPOSITE UTILITY PLAN.DWG

LOT 28 LOT 27 LOT 26 LOT 25 LOT 24 LOT 23 LOT 22 LOT 21 LOT 20

STREET B STREET B

LOT 29 LOT 30 LOT 31 LOT 32 LOT 33 LOT 34 LOT 35

STREET D

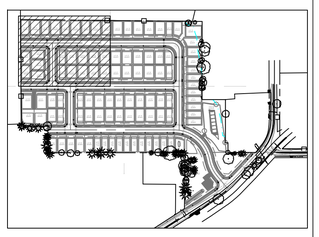
LOT 53

LOT 55 LOT 54 LOT 52 LOT 51 LOT 50 LOT 49 LOT 48

STREET B STREET B

MATCH LINE - SEE SHEET L102

MATCH LINE - SEE SHEET L103



PLAN KEY N.T.S

SCALE: 1" = 20'-0"

20' 10' 0' 20' 40'

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED LANDSCAPE ARCHITECT OREGON TIMOTHY J. MEARS 1003 EXPIRES: 12/31/25

PRELIMINARY NOT FOR CONSTRUCTION

NE SPRINGBROOK RD

PLANNED UNIT DEVELOPMENT

DEVELOPER: ICHIJO USA CO., LTD.
NEWBERG, OREGON

REVISIONS

REV.	DATE	DESCRIPTION

SHEET NAME: PLANTING PLAN

DRAWN BY:	TM
CHECKED BY:	TM
ISSUE DATE:	9/20/2024
JOB NO.:	2418

SHEET: L101

OF 10

LOT 19
LOT 18
LOT 17
LOT 16
LOT 15
LOT 14
LOT 13
TRACT D
LOT 12
LOT 11
LOT 10
LOT 9
LOT 8
LOT 7
LOT 6
LOT 36
LOT 37
LOT 38
LOT 39
LOT 40
LOT 41
LOT 47
LOT 46
LOT 45
LOT 44
LOT 43
LOT 42
STREET B
STREET B
MATCH LINE - SEE SHEET L101
MATCH LINE - SEE SHEET L104

PLAN KEY N.T.S

SCALE: 1" = 20'-0"
20' 10' 0' 20' 40'

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED LANDSCAPE ARCHITECT
OREGON
11/19/2003
PRELIMINARY NOT FOR CONSTRUCTION

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

DEVELOPER: ICHIJO USA CO., LTD.
NEWBERG, OREGON

REVISIONS

REV.	DATE	DESCRIPTION

SHEET NAME: PLANTING PLAN

DRAWN BY:	TM
CHECKED BY:	TM
ISSUE DATE:	9/20/2024
JOB NO.:	2418

SHEET: L102
OF 10

MATCH LINE - SEE SHEET L101

STREET B

STREET B

LOT 56

LOT 57

LOT 58

LOT 59

LOT 60

LOT 61

LOT 62

LOT 63

LOT 64

STREET E

LOT 83

LOT 82

LOT 81

LOT 80

LOT 79

LOT 78

LOT 77

LOT 76

LOT 75

MATCH LINE - SEE SHEET L104

STREET A

STREET A

LOT 84

LOT 85

LOT 86

LOT 87

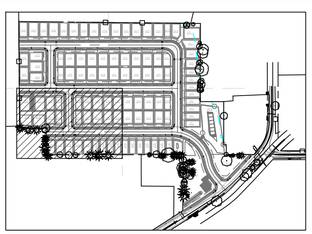
LOT 88

LOT 89

LOT 90

LOT 91

LOT 92



PLAN KEY N.T.S

SCALE: 1" = 20'-0"

20' 10' 0' 20' 40'

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED LANDSCAPE ARCHITECT
OREGON
11/19/2003
PRELIMINARY NOT FOR CONSTRUCTION

NE SPRINGBROOK RD

PLANNED UNIT DEVELOPMENT

DEVELOPER: ICHIJO USA CO., LTD.
NEWBERG, OREGON

REVISIONS

REV.	DATE	DESCRIPTION

SHEET NAME:
PLANTING PLAN

DRAWN BY:	TM
CHECKED BY:	TM
ISSUE DATE:	9/20/2024
JOB NO.:	2418

SHEET:
L103
OF 10

MATCH LINE - SEE SHEET L102

STREET B

LOT 65 | LOT 66 | LOT 67 | LOT 68 | LOT 69

LOT 74 | LOT 73 | LOT 72 | LOT 71 | LOT 70

MATCH LINE - SEE SHEET L103

STREET F

LOT 5

LOT 4

LOT 3

FREEBOARD AREA

LOT 2

LOT 1

TRACT B

DETENTION POND

SWALE BOTTOM AREA

STREET A

LOT 93 | LOT 94 | LOT 95 | LOT 96 | LOT 97 | LOT 98 | LOT 99 | LOT 100

SHARED AMENITY TO BE DETERMINED

BENCH TO BE DETERMINED (TYPICAL)

STREET A

MATCH LINE - SEE SHEET L105

N

SCALE: 1" = 20'-0"

20' 10' 0' 20' 40'

DETENTION POND FACILITY

PLANTING RATES REFER TO SHEET L106 FOR PLANT LISTING REQUIREMENTS

PLANT TYPE	PLANTING AREA (SQ FT)	PLANTING DENSITY (PER SQ FT)	NUMBER OF PLANTS	NUMBER OF SPECIES

ZONE A — POND BOTTOM AREA 4,315 SQ FT

HERBS	4,315	/	100	X	115	=	4,962	4

ZONE A/B — SIDE SLOPE AREA 18,509 SQ FT

TREES	18,509	/	200	X	1	=	93	3
LG.SHRUBS	18,509	/	100	X	3	=	555	3
SM.SHRUBS	18,509	/	100	X	4	=	740	4
GROUND/ COVER	18,509	/	100	X	70	=	12,956	2

PLAN KEY N.T.S

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED LANDSCAPE ARCHITECT OREGON 2003

PRELIMINARY NOT FOR CONSTRUCTION

NE SPRINGBROOK RD

PLANNED UNIT DEVELOPMENT

DEVELOPER: ICHIJO USA CO., LTD.
NEWBERG, OREGON

REVISIONS

REV.	DATE	DESCRIPTION

SHEET NAME: PLANTING PLAN

DRAWN BY:	TM
CHECKED BY:	TM
ISSUE DATE:	9/20/2024
JOB NO.:	2418

SHEET: L104

OF 10

MATCH LINE - SEE SHEET L104

TRACT A

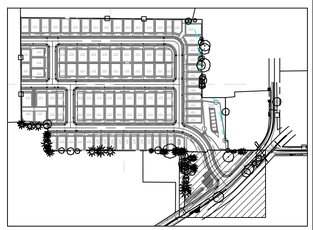
TRACT C

FREEBOARD AREA

SWALE BOTTOM AREA

NE SPRINGBROOK RD

SWALE FACILITY									
PLANTING RATES								REFER TO SHEET L106 FOR PLANT LISTING REQUIREMENTS	
PLANT TYPE	PLANTING AREA (SQ FT)		PLANTING DENSITY (PER SQ FT)			NUMBER OF PLANTS		NUMBER OF SPECIES	
ZONE A	POND BOTTOM AREA 4,315 SQ FT								
HERBS	800	/	100	X	115	=	920		4
ZONE A/B	SIDE SLOPE AREA 1,548 SQ FT								
TREES	1,548	/	200	X	1	=	8		3
LG.SHRUBS	1,548	/	100	X	3	=	46		2
SM.SHRUBS	1,548	/	100	X	4	=	62		2
GROUND/ COVER	1,548	/	100	X	70	=	1,084		1



PLAN KEY N.T.S

SCALE: 1" = 20'-0"

20' 10' 0' 20' 40'

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED LANDSCAPE ARCHITECT
OREGON
TIMOTHY J. MEARS
9003
PRELIMINARY NOT FOR CONSTRUCTION

NE SPRINGBROOK RD

PLANNED UNIT DEVELOPMENT

DEVELOPER: ICHIJO USA CO., LTD.
NEWBERG, OREGON

REVISIONS

REV.	DATE	DESCRIPTION

SHEET NAME: PLANTING PLAN

DRAWN BY:	TM
CHECKED BY:	TM
ISSUE DATE:	9/20/2024
JOB NO.:	2418

SHEET: L105

OF 10

PLANT MATERIALS LISTING:

Botanical name
Common Name

SYM	TREES	(D)eciduous/ (E)vergreen	QTY.	SIZE	CONDITION	REMARKS
	Acer circinatum Vine Maple	(D)	4	5-6'	B&B	Multi-stem
	Acer palmatum 'Sango Kaku' Coral Bark Maple	(D)	11	6-7'	B&B	
	Acer rubrum 'Bowhall' Bowhall Maple	(D)	4	1.5" Cal.	B&B	
	Cercidiphyllum japonicum Katsura	(D)	25	1.5" Cal.	B&B	
	Chamaecyparis obtusa 'Gracilis' Gracilis Hinoki Cypress	(E)	38	6-7'	B&B	
	x Cupressocyparis leylandii Leyland Cypress	(E)	5	7-8'	B&B	
	Fagus sylvatica 'Tricolor' Tricolor European Beech	(D)	13	1.5" Cal.	B&B	
	Juniperus scopulorum 'Moonglow' Moonglow Juniper	(E)	9	6-7'	B&B	20' tall 5-8' wide
	Calocedrus decurrens Incense Cedar	(D)	5	7-8'	B&B	
	Pinus flexilis 'Vanderwolf's Pyramid' Vanderwolf's Pyramid Pine	(E)	18	6-7'	B&B	
	Thuja x plicata 'Excelsa' Excelsa Red Cedar	(E)	18	7-8'	B&B	35-40' tall 12-15' wide
	Styrax japonica Japanese Snowbell	(D)	8	1.5" Cal.	B&B	
	Zelkova serrata 'Village Green' Village Green Zelkova	(D)	16	1.5" Cal.	B&B	
Total Trees			174			

PLANT MATERIALS LISTING:

Botanical name
Common Name

SYM	SHRUBS	(D)eciduous/ (E)vergreen	QTY.	SIZE	CONDITION	REMARKS
	Cornus sericea 'Kelseyi' Kelseyi Dwarf Redtwig Dogwood	(D)	37	1 Gal	Can	
	Cornus alba 'Elegantissima' Variegated Redtwig Dogwood	(D)	19	5 Gal	Can	8' tall 5' wide
	Euonymus alata 'Compactus' Compact Winged Euonymus	(D)	37	5 Gal	Can	
	Euonymus fortunei 'Emerald 'n Gold' Emerald 'n Gold Euonymus	(E)	49	1 Gal	Can	1-2' tall 2-3' wide
	Euonymus japonicus 'Aureovariegatus' Gold Spot Euonymus	(E)	37	5 Gal	Can	5-10' tall 3-6' wide
	Hakonechloa macra 'All Gold' All Gold Japanese Fountain Grass	(E)	102	1 Gal	Can	18" tall 18" wide
	Ilex glabra 'Shamrock' Shamrock Inkberry	(E)	7	5 Gal	Can	5' tall 5' wide
	Pennisetum alopecuroides 'Hameln' Hameln Dwarf Fountain Grass	(D)	16	1 Gal	Can	
	Mahonia aquifolium Oregon grape	(E)	41	2 Gal	Can	4-5' tall 3-4' wide
	Symphoricarpos albus Snowberry	(D)	14	2 Gal	Can	3-6' tall 3-6' wide
	Sambucus racemosa Red elderberry	(D)	16	2 Gal	B&B	8-10' tall 8-10' wide
	Rhododendron 'PJM Elite' PJM Elite Rhododendron	(E)	28	18-24"	Can	
	Rosa 'Pink Supreme Carpet' Pink Supreme Carpet Rose	(D)	303	2 Gal	Can	
	Rudbeckia fulgida 'Goldsturm' Black Eye Susan	(D)	-	1 Gal	Can	
	Sarcococca ruscifolia Fragrant Sweet Box	(E)	17	2 Gal	Can	4' tall 4' wide
	Viburnum davidii David Viburnum	(E)	14	1 Gal	Can	2-3' tall 3-4' wide
	Weigela florida 'Bokraspiwi' Spilled Wine Weigela	(D)	36	2 Gal	Can	
Total Shrubs			773			

PLANT MATERIALS LISTING:

Botanical name
Common Name

SYM	GROUND COVER	(D)eciduous/ (E)vergreen	QTY.	SIZE	CONDITION	SPACING
	Arctostaphylos uva-ursi 'Massachusetts' Massachusetts Kinnikinnick	(E)	105	4"	Pots	30" O.C.
	Rubus calycinoides 'Emerald Carpet' Creeping Raspberry	(E)	15,010	4"	Pots	36" O.C.
	Lawn (Hydro-seed) Sunmark Seeds: Celebration Seed Mix		38,015 SF (Approximate)			
	Native Seedmix Sunmark Seeds: Native EcoTurf Seed Mix		18,970 SF (Approximate)			
	12" Thick ADA Accessible Engineered Wood Fiber Surfacing		4,415 SF (Approximate)			
	1/4" minus crushed rock pathway - 3" depth minimum					

DETENTION POND

(REFER TO PLANTING DETAILS SHEET L107)

BOTTOM — POND BOTTOM 4,315 SQ FT

	Common Name (Botanical name)	Minimum Species Composition	Plant Catagory	ZONE	Minimum Rooting Size	Spacing Format
HERBACEOUS	Slough Sedge (Carex obnupta)	1241	Herb	A	1/2 Gal.	1' o/c.
	Creeping Spike Rush (Eleocharis palustris)	1241	Herb	A	1/2 Gal.	1' o/c.
	Spreading Rush (Juncus patens)	1240	Herb	A	1/2 Gal.	1' o/c.
	Small Fruited Bulrush (Scirpus microcarpus)	1240	Herb	A	1/2 Gal.	1' o/c.
	Total Herbaceous Plants	4962				

SIDE SLOPES — UPLAND ZONE INTERIOR SIDE SLOPES 18,509 SQ FT

	Common Name (Botanical name)	Minimum Species Composition	Plant Catagory	ZONE	Minimum Rooting Size	Spacing Format
TREES	Red Alder (Alnus rubra)	31	Tree	A/B	1.5" Cal.	Single
	Cascara (Rhamnus purshiana)	31	Tree	A/B	1.5" Cal.	Single
	Hogan Cedar (Thuja plicata 'Hogan')	31	Tree	A/B	6-7'	Single
	Total Tree	93				
LG. SHRUBS	Indian Plum (Oemleria cerasiformis)	185	Shrub	A/B	3 gal.	4' o/c.
	Salmonberry (Rubus spectabilis)	185	Shrub	A/B	3 gal.	4' o/c.
	Douglas Spiraea (Spiraea douglasii)	185	Shrub	A/B	3 gal.	4' o/c.
	Total Shrubs	555				
SM. SHRUBS	Kelsey Dogwood (Cornus sericea 'Kelseyii')	185	Shrub	B	1 gal.	2' o/c.
	Oregon grape (Mahonia aquifolium)	185	Shrub	A/B	1 gal.	2' o/c.
	Nootka Rose (Rosa nutkana)	185	Shrub	A/B	1 gal.	2' o/c.
	Common Snowberry (Symphoricarpos alba)	185	Shrub	B	1 gal.	2' o/c.
	Total Shrubs	740				
G.C.	Kinnickinnick (Arctostaphylos uva-ursi)	6478	G.C.	B	1 gal.	12" o/c.
	Coastal Strawberry (Fragaria chiloensis)	6478	G.C.	B	1 gal.	12" o/c.
	Total Ground Cover	12,956				

SWALE

(REFER TO PLANTING DETAILS SHEET L107)

BOTTOM — POND BOTTOM 800 SQ FT

	Common Name (Botanical name)	Minimum Species Composition	Plant Catagory	ZONE	Minimum Rooting Size	Spacing Format
HERBACEOUS	Slough Sedge (Carex obnupta)	230	Herb	A	1/2 Gal.	1' o/c.
	Creeping Spike Rush (Eleocharis palustris)	230	Herb	A	1/2 Gal.	1' o/c.
	Spreading Rush (Juncus patens)	230	Herb	A	1/2 Gal.	1' o/c.
	Small Fruited Bulrush (Scirpus microcarpus)	230	Herb	A	1/2 Gal.	1' o/c.
	Total Herbaceous Plants	920				

SIDE SLOPES — UPLAND ZONE INTERIOR SIDE SLOPES 1,548 SQ FT

	Common Name (Botanical name)	Minimum Species Composition	Plant Catagory	ZONE	Minimum Rooting Size	Spacing Format
TREES	Red Alder (Alnus rubra)	2	Tree	A/B	1.5" Cal.	Single
	Cascara (Rhamnus purshiana)	3	Tree	A/B	1.5" Cal.	Single
	Hogan Cedar (Thuja plicata 'Hogan')	3	Tree	A/B	6-7'	Single
	Total Tree	8				
LG SHRUBS	Salmonberry (Rubus spectabilis)	23	Shrub	A/B	3 gal.	4' o/c.
	Douglas Spiraea (Spiraea douglasii)	23	Shrub	A/B	3 gal.	4' o/c.
	Total Shrubs	46				
SM SHRUBS	Kelsey Dogwood (Cornus sericea 'Kelseyii')	31	Shrub	A/B	1 gal.	2' o/c.
	Oregon grape (Mahonia aquifolium)	31	Shrub	A/B	1 gal.	2' o/c.
	Total Shrubs	62				
G.C.	Coastal Strawberry (Fragaria chiloensis)	1084	G.C.	B	1 gal.	12" o/c.
	Total Ground Cover	1084				

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED LANDSCAPE ARCHITECT — OREGON — 13003 — PRELIMINARY NOT FOR CONSTRUCTION

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

DEVELOPER: ICHIJO USA CO., LTD.
NEWBERG, OREGON

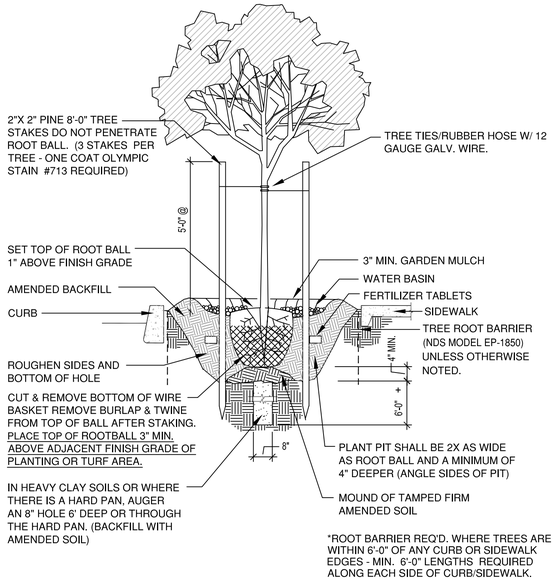
REVISIONS

REV.	DATE	DESCRIPTION

SHEET NAME: PLANT SCHEDULE

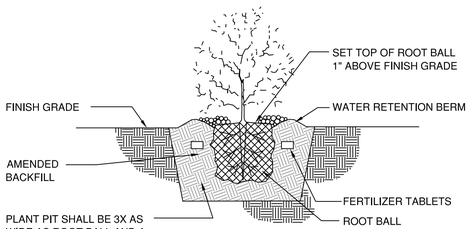
DRAWN BY: TM
CHECKED BY: TM
ISSUE DATE: 9/20/2024
JOB NO.: 2418

SHEET: L106
OF 10



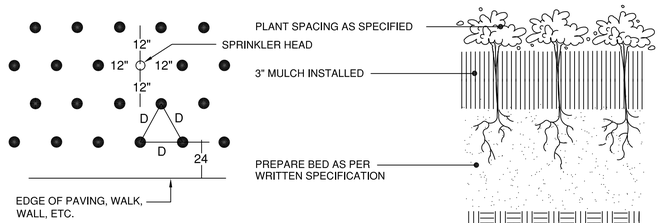
TREE PLANTING DETAIL

N.T.S.



SHRUB PLANTING DETAIL

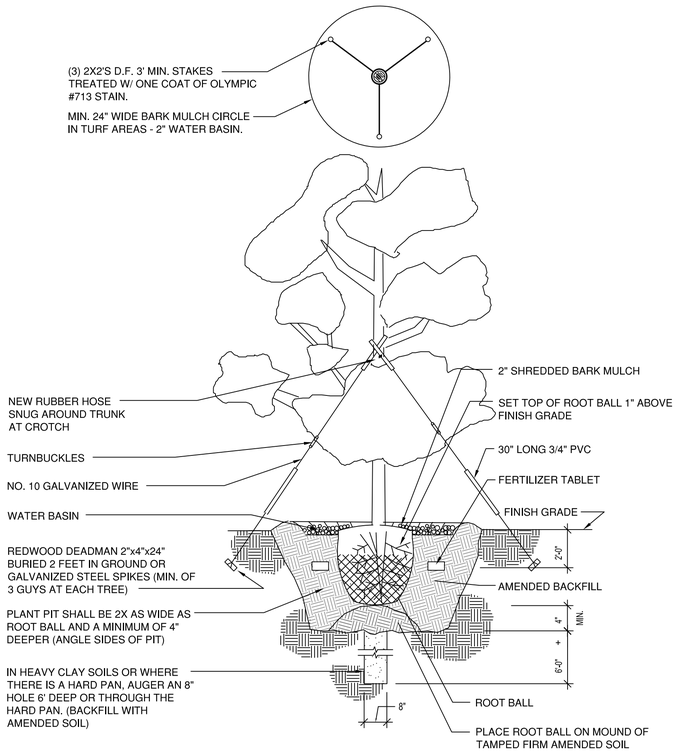
N.T.S.



NOTE:
LOCATE PLANTS SPACED EQUAL DISTANCE (D) FROM EACH OTHER AS SPECIFIED AND MINIMUM OF 12" FROM SPRINKLER HEAD

GROUNDCOVER PLANTING DETAIL

N.T.S.

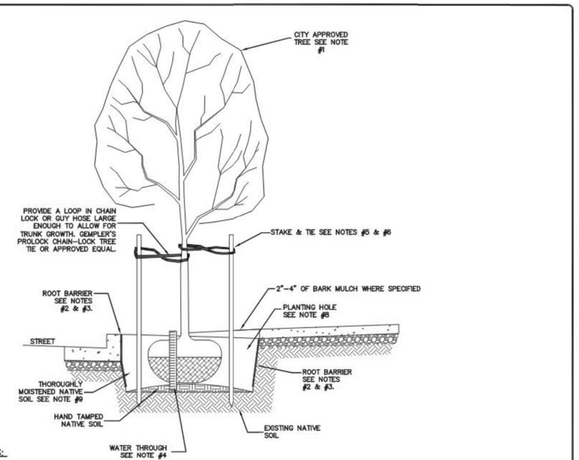


EVERGREEN TREE PLANTING DETAIL

N.T.S.

TYPICAL PLANTING NOTES:

1. B&B stock may be substituted with container stock of equal grade.
2. Container stock may be substituted with B&B stock of equal grade.
3. Plant material shall conform with American Standard for Nursery Stock, ANSI Z60.1, 2014 edition.
4. All trees shall be branched.
5. Refer to project technical specification for topsoil requirement. All planting beds shall have a minimum of 18 inches topsoil. Re-use of existing topsoil is recommended, but must meet specifications.
6. Garden mulch all planting beds with 3" min. Layer of specified garden mulch.
7. In the event of a discrepancy between this material listing and the drawings, the drawings shall govern the plant species and quantities required.
8. In the event of question or lack of clarity on drawings, Landscape Contractor is to call Landscape Architect before proceeding.
9. Landscape contractor is to notify Landscape Architect prior to installation of plant material to approve final placement.
10. Landscape Contractor to verify plant material quantities.
11. Contractor will provide a one year warranty on all provided & installed plant material from date of final approval by owner's representative.



NOTES:

1. REFER TO THE CITY PLANNING DEPARTMENT APPROVED STREET TREE PLANTING LIST.
2. ROOT BARRIER REQUIRED WHEN HARDSCAPE OR STRUCTURE IS LOCATED WITHIN A 6' RADIUS FROM CENTER OF TREE. ROOT BARRIER TO BE 18" DEEP AND SHALL BE INSTALLED ALONG ALL BOUNDARIES WITH HARDSCAPE e.g. SIDEWALK & CURB.
3. LINEAR OR CIRCULAR APPLICATION OF ROOT BARRIER PERMITTED. ROOT BARRIER TO EXTENT AT MINIMUM 24" PAST CENTER OF TREE IN ALL DIRECTIONS OR HAVE A MINIMUM RADIUS OF 24" FOR CIRCULAR APPLICATION. USE CENTURY CP-SERIES ROOTBARRIER PANELS WITH INTERLOCKING JOINTS OR NDS RP SERIES ROOT BARRIER PANELS WITH INTERLOCKING JOINTS. ALL ROOT BARRIER INSTALLATIONS SHALL BE IN CONFORMANCE WITH MANUFACTURERS RECOMENDATIONS.
4. OPPOSITE TREE STAKES, PROVIDE TWO, 3" DIAMETER HDPE PERFORATED PIPE WATERING THROUGHS, FILLED WITH CLEAN PEA GRAVEL.
5. REMOVE NURSERY STAKES & INSTALL 2" DIAMETER TREATED STAKES, SET OUTSIDE ROOTBALL AND DRIVE A MINIMUM OF 12" INTO UNDISTURBED SOIL BELOW PLANTING HOLE. TRIM STAKE 6" ABOVE HIGHEST TREE TIE TO AVOID INTERFENCE WITH CANOPY.
6. FLEXIBLE NON-ABRASIVE TREE TIE SECURED TO STAKE WITH A NAIL. PLACE TIES 6" ABOVE THE LOWEST POINT ON THE TRUNK WHERE IT CAN BE HELD SUCH THAT THE TOP OF THE TREE SPRINGS BACK TO THE UPRIGHT POSITION WHEN BENT OR DEFLECTED.
7. SET CROWN OF ROOTBALL 1-½" ABOVE FINISHED GRADE.
8. PLANTING HOLE TO BE TWICE THE DIAMETER OF ROOTBALL, WITH ROOTBALL RESTING ON FIRM SOIL. SCARIFY SIDES OF PLANTING HOLE.
9. BACKFILL WITH A MIXTURE OF ⅔ NATIVE SOIL AN ⅓ ORGANIC COMPOST. AREAS WITH POOR OR HEAVILY COMPACTED SOIL MAY REQUIRE ADDITIONAL AMENDMENT.

City of Newberg
PUBLIC WORKS ENGINEERING DIVISION
414 E. FIRST STREET NEWBERG, OR 97132
PHONE: 503-537-1240
FAX: 503-537-1277

REVISIONS:
MAY 2014

STREET TREE & ROOT BARRIER

SCALE: N.T.S.
DATE: MARCH 2014
APPROVED BY: JAY H.
STANDARD DRAWING 108

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED LANDSCAPE ARCHITECT
OREGON
JULY 9, 2003
PRELIMINARY NOT FOR CONSTRUCTION

NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

DEVELOPER: ICHIJO USA CO., LTD.
NEWBERG, OREGON

REVISIONS

REV.	DATE	DESCRIPTION

SHEET NAME:
PLANTING DETAILS & NOTES

DRAWN BY: TM
CHECKED BY: TM
ISSUE DATE: 9/20/2024
JOB NO.: 2418

SHEET:
L107
OF 10

PLAN SG-1L

PROJECT INFORMATION

PROJECT OWNER

ICHIJO USA CO., LTD.

ADDRESS

ASSESSOR'S PARCEL NUMBER

ZONE

LOT AREA

PROJECT DESCRIPTION

NEW SINGLE FAMILY RESIDENCE

PROJECT TEAM

OWNER / CONTRACTOR

ICHIJO USA CO., LTD.
1406 140th PL. NE Suite 104
Bellevue, WA 98007
TEL: 425-497-0616
CONTACT: SAMMY UCHIMURA (sammy@ichijousa.com)

GENERAL NOTES

1. THE CONTRACTOR SHALL PERFORM WORK IN STRICT ACCORDANCE WITH THE FOLLOWING CODES AND ALL APPLICABLE STATE AND LOCAL AMENDMENTS:
   2018 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE
   2018 EDITION OF THE WASHINGTON STATE ENERGY CODE
   2018 EDITION OF THE INTERNATIONAL FIRE CODE
   2018 EDITION OF THE INTERNATIONAL MECHANICAL CODE
   2018 EDITION OF THE UNIFORM PLUMBING CODE
   2018 EDITION OF THE WASHINGTON CITIES ELECTRICAL CODE
2. ALL THE WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE ATTACHED DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSION AND CONDITIONS IN THE FIELD AND SHALL IMMEDIATELY NOTIFY THE BUILDER OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND THE DRAWINGS.
4. DRAWINGS SHALL NOT BE SCALED. DIMENSIONS SHALL GOVERN, DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. WRITTEN SPECIFICATIONS AND NOTES SHALL GOVERN OVER ALL. IN CASE OF CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN. CONTACT BUILDER PRIOR TO CONSTRUCTION FOR CLARIFICATION.
5. PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS NOTED OTHERWISE.
6. CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING BUT NOT LIMITED TO SAFETY AND PROTECTION OF PROPERTY DURING THE PERFORMANCE OF THE WORK
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS AND PAYMENT OF UTILITY CHARGES.
8. DO NOT COMMENCE WORK UNTIL CONDITIONS ARE ACCEPTABLE TO ALL CONCERNED PARTIES, INCLUDING GOVERNING AUTHORITIES.
9. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND PROTECT ALL EXISTING MECHANICAL, ELECTRICAL AND ALL OTHER UTILITIES AND CAP OR RELOCATE AS REQUIRED.
10. CONTRACTOR SHALL PROVIDE METHODS, MEANS, AND FACILITIES REQUIRED TO PREVENT CONTAMINATION OF SOIL, WATER, OR ATMOSPHERE, AND IN COMPLIANCE WITH ENVIRONMENTAL REGULATION OF LOCAL GOVERNING AUTHORITIES.

ENERGY NOTES

1. ALL WORK SHALL CONFORM TO THE 2018 WASHINGTON STATE ENERGY CODE (WSEC).
2. ALL DOORS AND WINDOWS SHALL BE NFRC CERTIFIED FOR U VALUES AS INDICATED. ENERGY COMPLIANCE IS PER WASHINGTON STATE ENERGY CODE PRESCRIPTIVE PATH, TABLE R402.1.1 REFER TO WINDOW SCHEDULE ON THIS SHEET.
3. ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS PER 2018 WSEC R406.3 SHALL BE MET BY THE FOLLOWING OPTIONS FROM TABLE R406.2 AND R406.3 TO ACHIEVE THE MINIMUM CREDIT OF 6.0 REQUIRED AS MEDIUM DWELLING UNIT;

   FUEL TYPE 2 (1.0 POINTS) - FOR AN INITIAL HEATING SYSTEM USING A HEAT PUMP THAT MEETS FEDERAL STANDARDS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(1)C OR C403.3.2(2).
   OPTION 1.3 (0.5 POINTS) - EFFICIENT BUILDING ENVELOPE OPTIONS
   COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL CONDUCTIVE UA BY 5%.
   OPTION 2.1 (0.5 POINTS) - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS
   COMPLIANCE BASED ON SECTION R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS.
   OPTION 3.5 (1.5 POINTS) - HIGH-EFFICIENCY HVAC EQUIPMENT OPTIONS
   AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPF OF 11.0.
   OPTION 4.1 (0.5 POINTS) - HIGH-EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS
   ALL SUPPLY AND RETURN DUCTS LOCATED IN AN UNCONDITIONED ATTIC SHALL BE DEEPLY BURIED IN CEILING. INSULATION IN ACCORDANCE WITH SECTION R403.3.7. FOR MECHANICAL EQUIPMENT LOCATED OUTSIDE THE CONDITIONED SPACE, A MAXIMUM OF 10 LINEAR FEET OF RETURN DUCT AND 5 LINEAR FEET OF SUPPLY DUCT CONNECTIONS TO THE EQUIPMENT MAY BE OUTSIDE THE DEEPLY BURIED INSULATION.
   OPTION 5.5 (2.0 POINTS)- EFFICIENT WATER HEATING OPTIONS
   ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEEA'S ADVANCED WATER HEATING SPECIFICATION.
4. A PERMANENT CERTIFICATE SHALL BE COMPLETED AND POSTED BY THE BUILDER ON OR WITHIN THREE FEET OF THE ELECTRICAL DISTRIBUTION PANEL. THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE FOLLOWING:
   a.) R VALUES
   b.) U VALUES
   c.) RESULTS FROM DUCT SYSTEM AIR LEAKAGE TESTINGS.
   d.) RESULTS FROM BUILDING ENVELOPE AIR LEAKAGE TESTING (BLOWER DOOR TEST).
   e.) TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIPMENT.
5. ALL EXTERIOR DUCTWORK OUTSIDE THE THERMAL ENVELOPE SHALL BE INSULATED TO R-8 MINIMUM.
6. ALL HOT WATER PIPING SHALL BE INSULATED TO R-3 MINIMUM.
7. DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED (WSEC R403.2.2) WHERE DUCTS OR AIR HANDLERS ARE LOCATED OUTSIDE THE THERMAL ENVELOPE (INCLUDING CRAWL SPACES) DUCTS SHALL BE LEAK TESTED IN ACCORDANCE WITH WSU RS-33
8. BUILDING AIR LEAKAGE TESTING IS REQUIRED PRIOR TO FINAL INSPECTION. DEMONSTRATE THAT AIR LEAKAGE RATE IS LESS THAN 5 AIR CHANGES PER HOUR AT A PRESSURE OF 0.2 INCHES W.G. THE TEST RESULT SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE (WSEC R402.4.1.2).
9. WINDOWS SKYLIGHTS AND SLIDING DOORS SHALL HAVE AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM PER SQUARE FOOT. SWINGING DOORS NO MORE THAN 0.5 CFM PER SQUARE FOOT WHEN TESTED ACCORDING TO NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440. ALL UNITS SHALL BE LISTED AND LABELED BY THE MFR
10. RECESSED LUMINAIRES INSTALLED IN THE BUILDING ENVELOPED SHALL BE IC-RATED AND CERTIFIED UNDER ASTM E283 AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM WHEN TESTED AT 1.57 PSF PRESSURE DIFFERENTIAL AND SHALL HAVE A LABEL ATTACHED SHOWING COMPLIANCE WITH THIS TEST METHOD. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.
11. MINIMUM 75% OF ALL INTERIOR LUMINARES SHALL BE HIGH EFFICACY LUMINARES. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY LUMINARES.
12. EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH ATLEAST ONE PROGRAMMABLE THERMOSTAT IN COMPLIANCE WITH R403.1.1 FOR THE REGULATION OF TEMPERATURE.
13. TO THE MAXIMUM EXTENT POSSIBLE, INSULATION SHALL EXTEND OVER THE FULL COMPONENT AREA TO THE INTENDED R-VALUE EXTERIOR WALL CAVITIES ISOLATED DURING FRAMING SHALL BE FULLY INSULATED TO THE LEVELS OF THE SURROUNDING WALLS.

INSULATION NOTES

1. ALL WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE TOTAL UA ALTERNATIVE WORKSHEET SUBMITTED SEPARATELY.
2. ALL INSULATION SHALL BE INSTALLED IN COMPLIANCE WITH THE 2018 WASHINGTON STATE ENERGY CODE (2018 WSEC).

SHEET INDEX

N

VICINITY PLAN

PROJECT SITE

N

PROJECT MAP

PROJECT LOT

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COVER SHEET

PAGE NO.

A0.0

WINDOW SCHEDULE (FIRST FLOOR)

NO	ROOM	NAME	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
	ENTRY	H=7'		ENTRY DOOR	38.375"	83.5"		
	GARAGE	16' X7'		GARAGE DOOR	195"	85.5"		
	GARAGE	H=7'		ENTRY DOOR	38.375"	83.5"		
1	DEN	UF6512		FIXED WINDOWS	65.5"	12.5"	82"	0.24
2	DEN	UF6512.		FIXED WINDOWS	65.5"	12.5"	58"	0.24
3	DEN	UF6512..		FIXED WINDOWS	65.5"	12.5"	34"	0.24
4	MASTERS BATHROOM	UF5324	TEMPERED	FIXED WINDOWS	53.5"	24.5"	70"	0.24
5	MASTERS BEDROOM	UF1736		FIXED WINDOWS	17.5"	36.5"	58 1/16"	0.24
6	MASTERS BEDROOM	UF1736		FIXED WINDOWS	17.5"	36.5"	58 1/16"	0.24
7	MASTERS BEDROOM	U6560		2-LITE SLIDING WINDOWS	65.5"	60.5"	34"	0.27
8	KITCHEN	UF6560		FIXED WINDOWS	65.5"	60.5"	34"	0.24
9	HALLWAY	U7282S	TEMPERED	2-LITE PATIO DOOR	72"	82"	0"	0.26
10	LIVING	UF6560		FIXED WINDOWS	65.5"	60.5"	34"	0.24
11	LIVING	UF1772		FIXED WINDOWS	17.5"	72.5"	22"	0.24
12	LIVING	UF1772		FIXED WINDOWS	17.5"	72.5"	22"	0.24
13	BEDROOM 2	U6560		2-LITE SLIDING WINDOWS	65.5"	60.5"	34"	0.27
14	MAIN BATH	UF4118	TEMPERED	FIXED WINDOWS	41.5"	18.5"	76"	0.24
15	BEDROOM 3	U6560		2-LITE SLIDING WINDOWS	65.5"	60.5"	34"	0.27

AVERAGE U-FACTOR OF ALL FLOORS: 0.26

AREA SCHEDULE

1ST FLOOR A	2ND FLOOR B	GARAGE C	BASEMENT D	TOTAL AREA (A+B+C+D)	NET HEATING AREA (A+B+D)
1832 SF	SF	420 SF	SF	2252 SF	1832 SF

*(INSIDE FACE OF EXTERIOR WALL STUDS)

SOURCE SPECIFIC VENTILATION

1. REFER TO PLAN FOR LOCATIONS.
2. SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM. EXHAUST FANS PROVIDING SOURCE SPECIFIC VENTILATION SHALL HAVE A MINIMUM FAN FLOW RATING NOT LESS THAN 50 CFM AT 0.25 INCHES WATER GAUGE FOR BATHROOMS, LAUNDRIES, OR SIMILAR ROOMS AND 400 CFM AT 0.25 INCHES WATER GAUGE FOR KITCHENS. THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED OUTDOORS.

CRAWL SPACE VENTILATION (7"X16" BOX VENT)

1. USE AN 7"X16" BOX VENT WITH NFVA OF 72.5 SI FOR EACH VENTILATION.
2. CALCULATION:
   (CRAWL SPACE) 1832 SF / 300 = 6.10 SF = 878.4 SI
   OF VENTING AREA NEEDED
   (13) BOX VENT =13 X 72.5 = 942.5 SI > 878.4 SI REQUIRED

NOTE

① PROVIDE 1/2" GWB ON WALLS AND CEILING
② SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE REQUIRED TO RECEIVE ITS PRIMARY POWER FROM THE BUILDING WIRING AND BE PROVIDED WITH BATTERY BACKUP
③ ALL PLUMBING PENETRATIONS SHALL BE CONSTRUCTED TO MEET THE 2018 UNIFORM PLUMBING CODE

WINDOW REQUIREMENTS

1. REFER TO BLDG FLOOR PLANS FOR TEMPERED GLASS LOCATIONS LABELED "TEMPERED."
2. ALL SLEEPING ROOMS SHALL BE PROVIDED WITH A MINIMUM OF ONE EMERGENCY EGRESS WINDOW. PER 2018 IRC SECTION R310.1. REFER TO PLAN FOR LOCATIONS. EGRESS WINDOWS SHALL HAVE:
   MIN NET OPEN AREA = 5.7 SF
   MIN. NET OPEN HEIGHT = 24"
   MIN. NET OPEN WIDTH = 20"
   MAXIMUM SILL HEIGHT = 44"
   PER 2018 IRC SECTION R310.2.
3. ALL WINDOWS WITHIN 10' OF GRADE SHALL BE LOCKABLE

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM

1. REFER TO 2018 IRC M1505.4 FOR DETAILED REQUIREMENTS FOR THE EXHAUST SYSTEM AND CONTROLS.
2. PROVIDE AN EXHAUST FAN CAPABLE OF PROVIDING VENTILATION AIRFLOW RATE DETERMINED BY TABLE M1505.4.3(1) WITH COEFFICIENT FACTOR OF 1.5 (NOT BALANCED/NOT DISTRIBUTED ON TABLE M1505.4.3(2))

SYMBOLS

- DRAWING NUMBER / SHEET NUMBER
- WINDOW TAG
- CENTER LINE
- EXTERIOR FINISH PRODUCT: TD-X, WS-XXXX, LS-XXXX, CS-XXXX
- FLOORING
- CONCRETE
- TILE
- VINYL
- CARPET
- DECKING
- GRID LINES — 1219.2MM OR 1 GRID IS EQUIVALENT TO 4'-0"
- CD CARBON MONOXIDE DETECTOR
- SD SMOKE DETECTOR
- HD HEAT DETECTOR
- SOURCE SPECIFIC VENT (50 CFM VTOS)
- GM GAS METER
- HB HOSE BIB
- EM ELECTRIC METER
- RA RETURN AIR
- SA SUPPLY AIR (CEILING MOUNTED)
- SA SUPPLY AIR (FLOOR MOUNTED)
- SA SUPPLY AIR (WALL MOUNTED)

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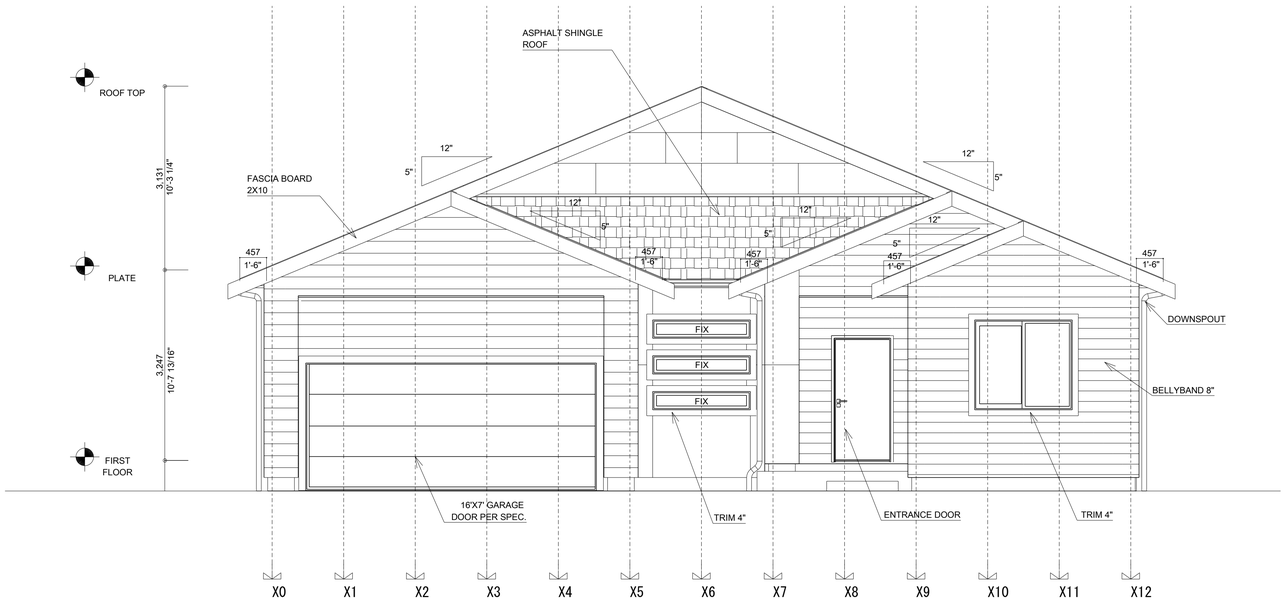
FIRST FLOOR PLAN

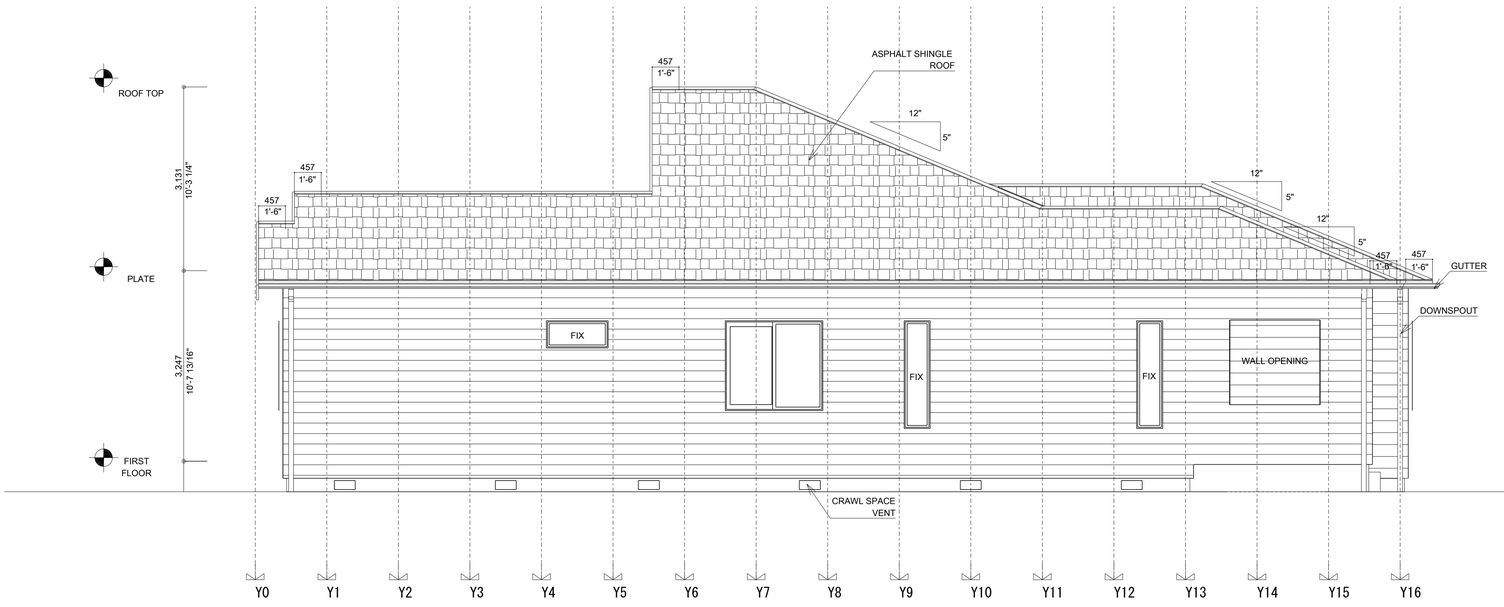
PAGE NO.

A2.0



1 FRONT

Scale 1/4" = 1' -0"



2 RIGHT

Scale 1/4" = 1' -0"

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ELEVATIONS

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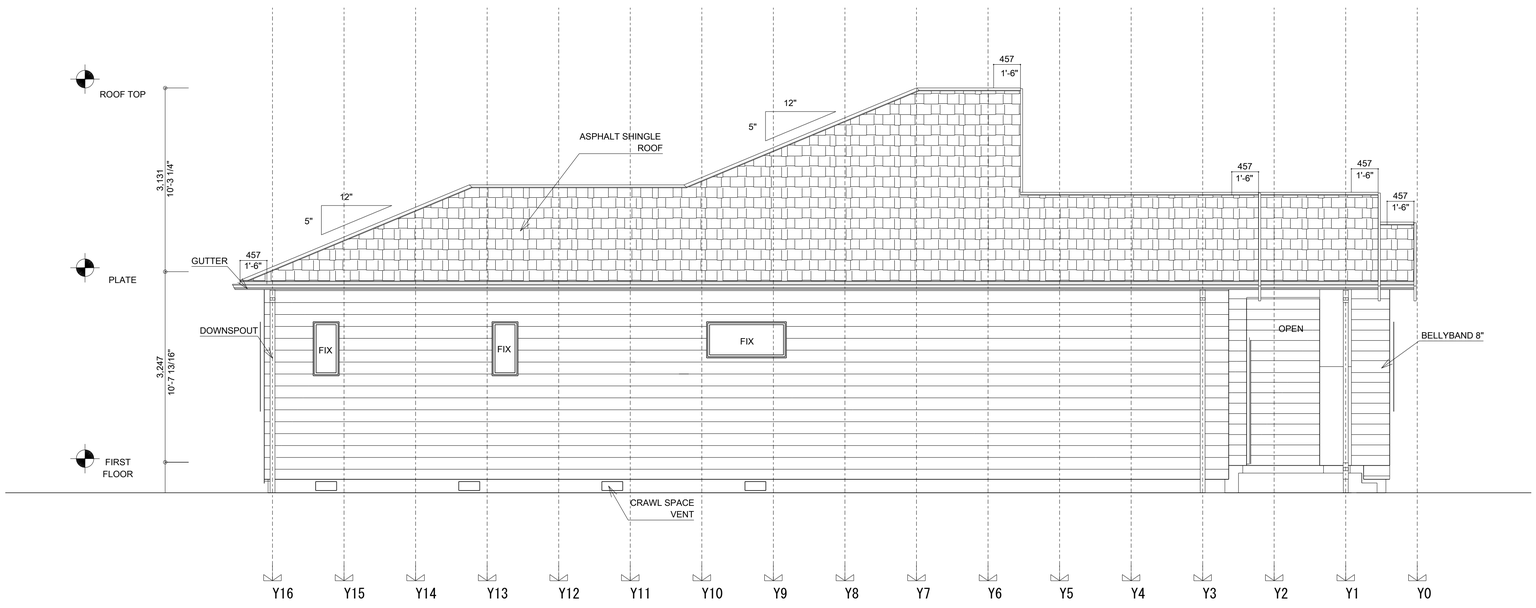
A3.0

1 REAR

Scale 1/4″ = 1' -0″



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ELEVATIONS

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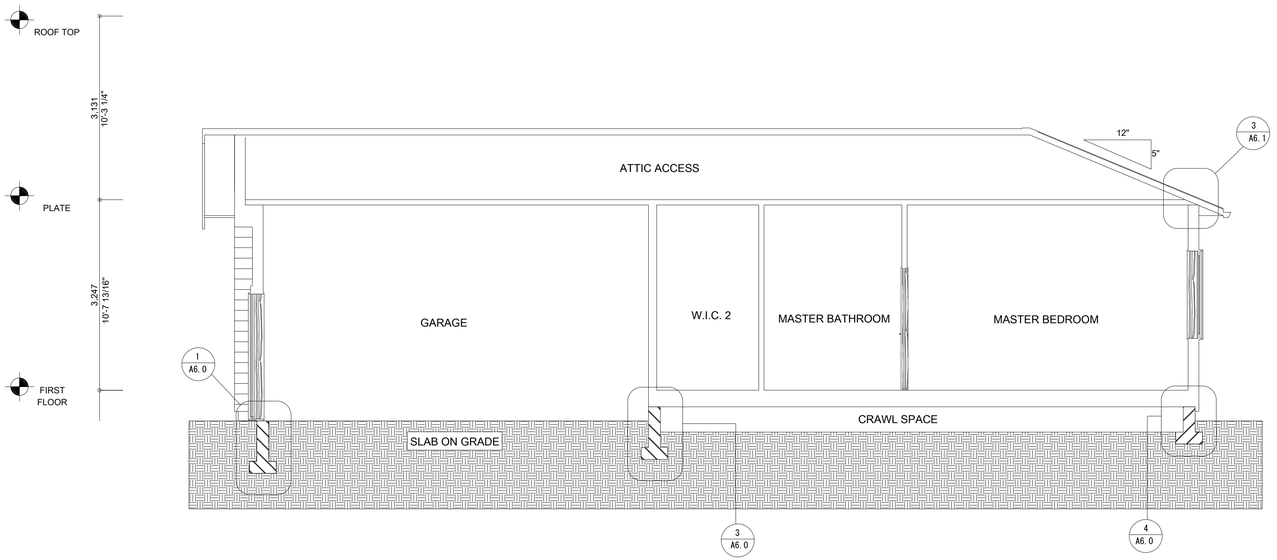
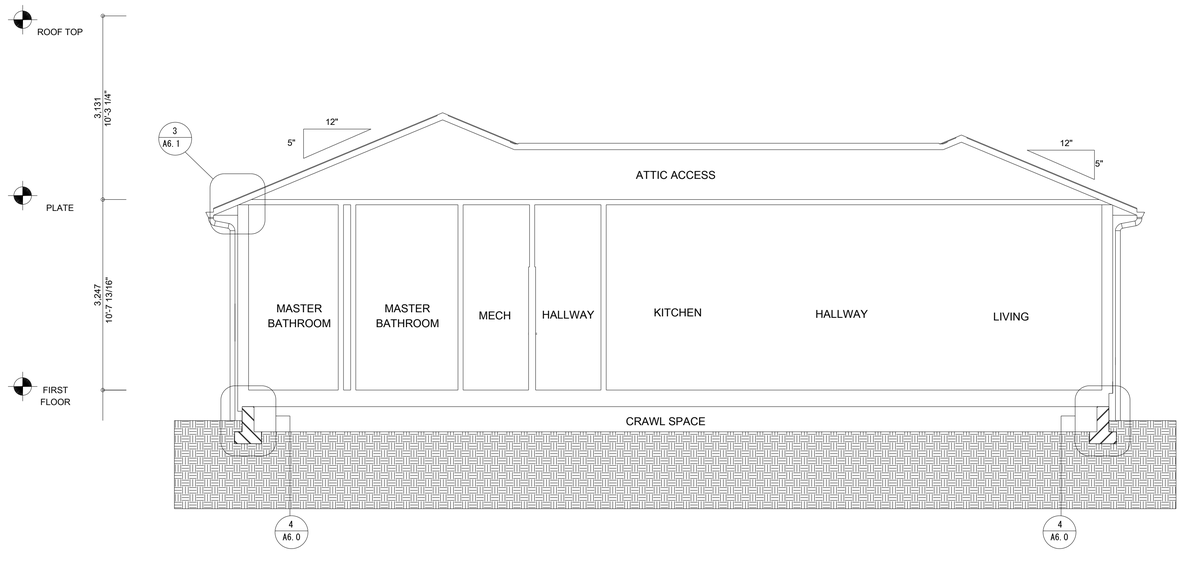
A3.1



1 BUILDING SECTION

SCALE 1/4" = 1'-0"



2 BUILDING SECTION

SCALE 1/4" = 1'-0"

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SECTIONS

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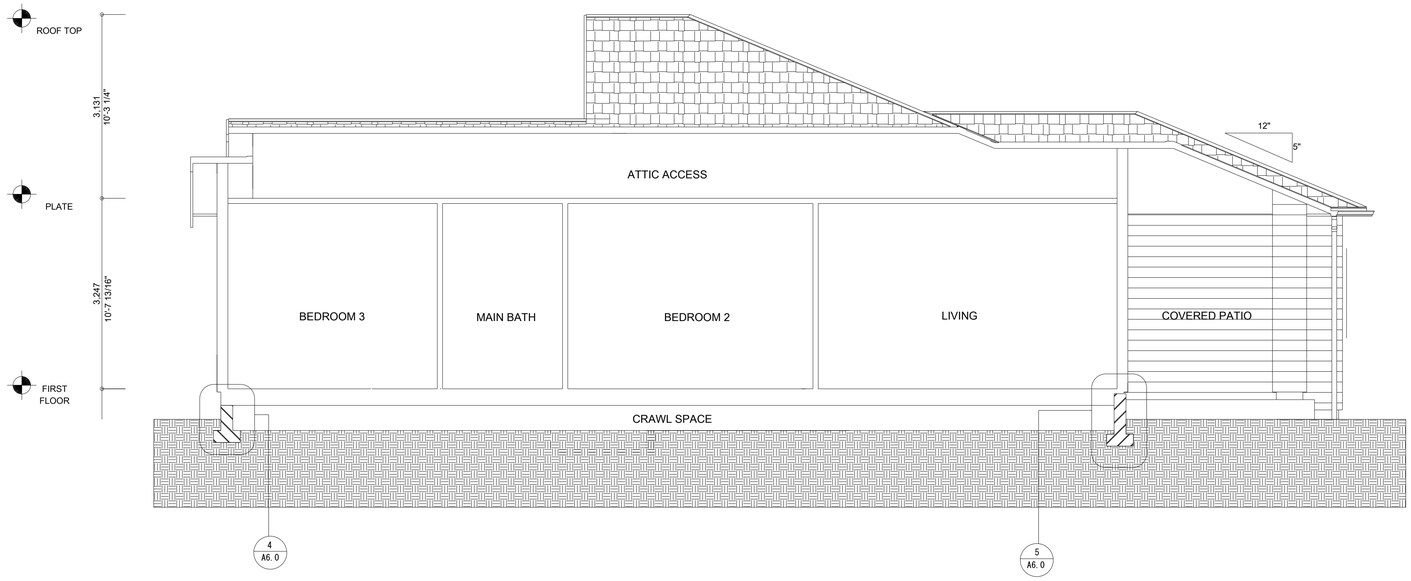

1 BUILDING SECTION

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SECTIONS

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A4.1

ROOF VENTILATION

UPPER ROOF	1

AREA	1832	SF	
VENTING RATIO	1/150		
REQ'D VENT	1758	SI	IS NEEDED

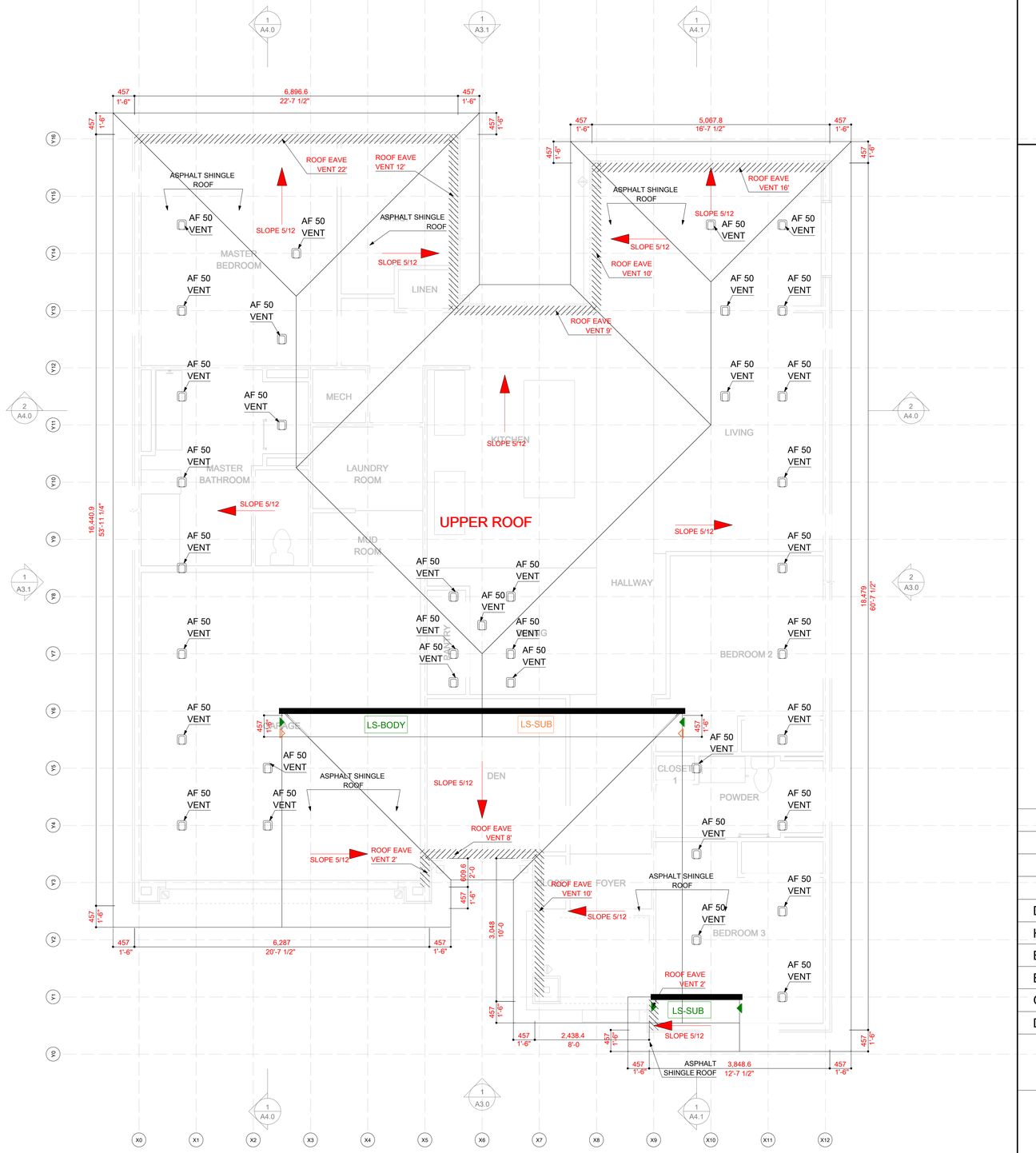
	LOW		HIGH	
EAVE VENT (6.28SI/LF)	91	LF	0	LF
	571	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	18	QTY	18	QTY
	900	SI	900	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	1471	SI	900	SI
SUB TOTAL RATIO	62	%	38	%
TOTAL (SI)	2371	SI		
TOTAL RATIO	135	%	OF REQ'D	

NOTE

ROOF OVERHANG WITHIN 2' TO 5' OF PROPERTY LINES ARE REQUIRED TO MEET 2018 IRC, TABLE R302.1(1). FOOT NOTE A, THE UNDERSIDE OF THE EAVE DO NOT REQUIRE A 1 HOUR RATE ASSEMBLY IF THERE IS NO OPENING SUCH AS BIRD BLOCK VENTILATION OPENINGS. ALSO, FOOTNOTE B: 1 HOUR RATED ASSEMBLY IS NOT REQUIRED ON GABLE OVERHANGS IF THERE ARE NO OPENINGS.

NOTE

UNDERLAYMENT FOR ASPHALT SHINGLES, SLOPED FROM 2:12 UP TO 4:12, SHALL BE (2) LAYERS INSTALLED IN ACCORDANCE WITH 2018 IRC, R905.1.1.



1 MAIN ROOF PLAN

SCALE 1/4" = 1'-0"

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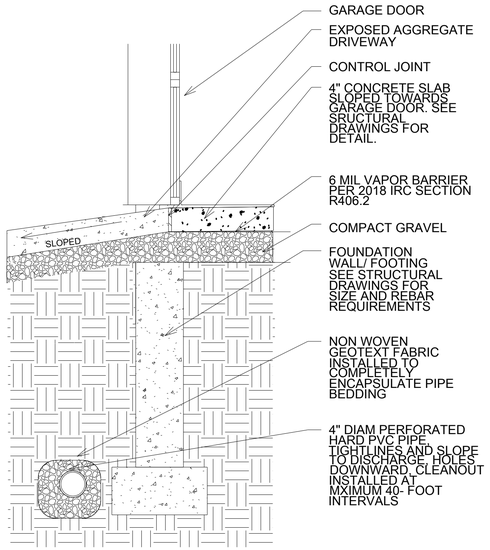
MAIN ROOF PLAN

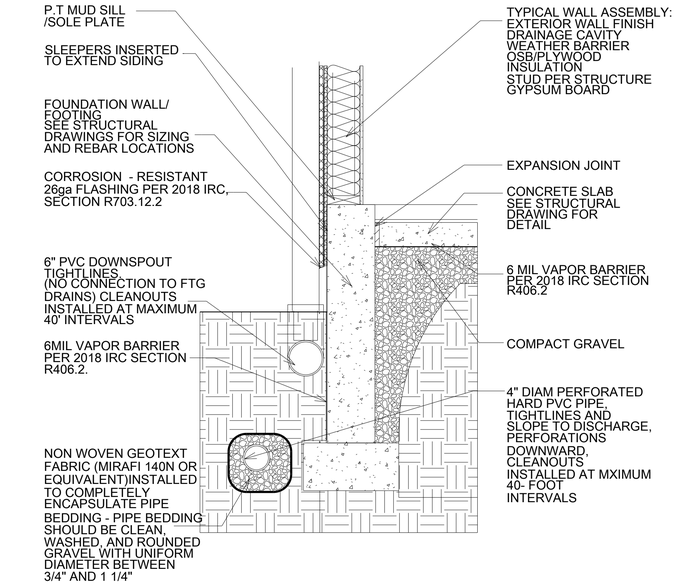
PAGE NO.

A5.0



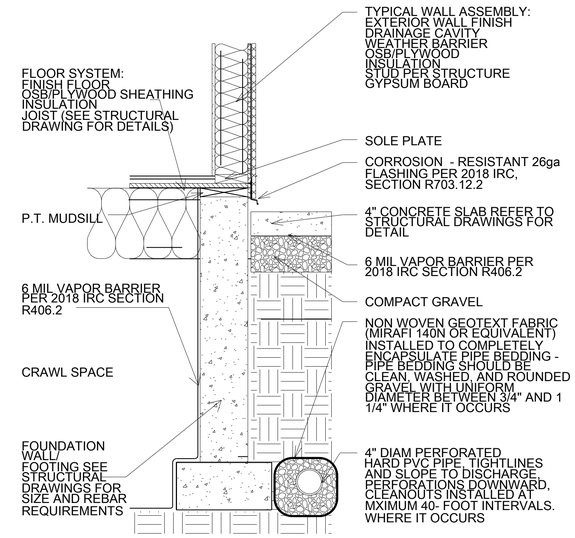
1 TYP. DRIVEWAY

SCALE 1" = 1'-0"



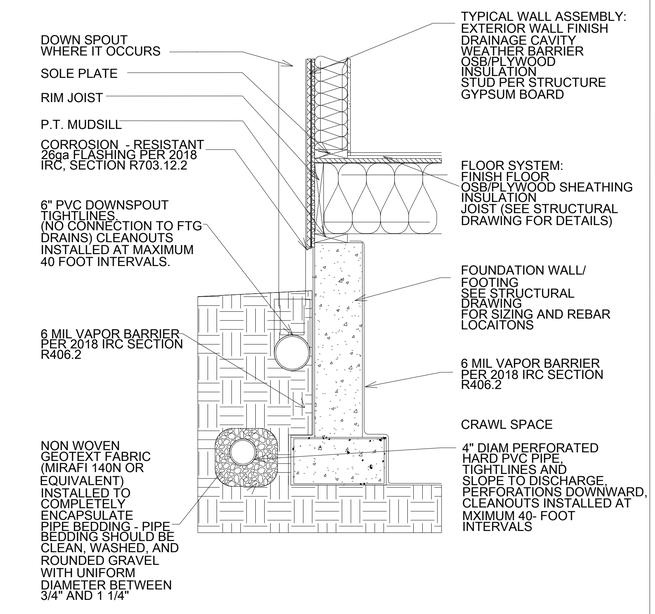
2 TYP. GARAGE FDTN EXT.

SCALE 1" = 1'-0"



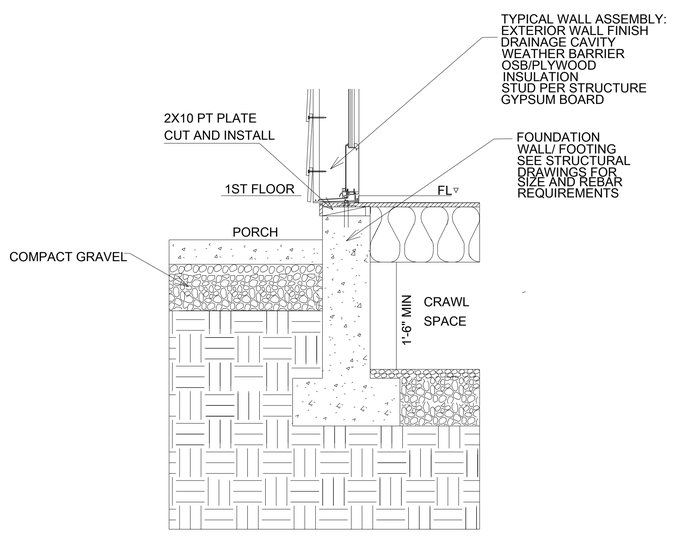
3 TYP. GARAGE FDTN INT.

SCALE 1" = 1'-0"



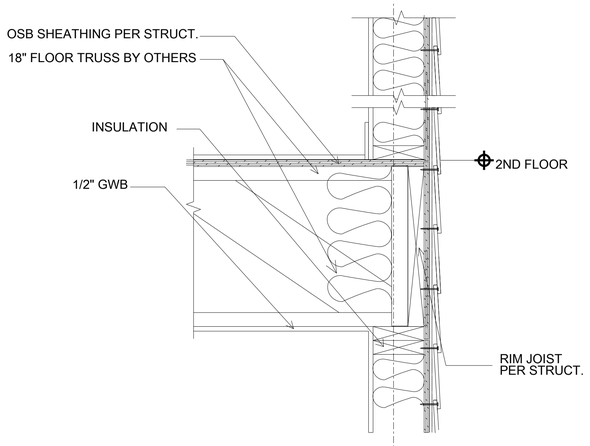
4 TYP. CRAWL SPACE FDTN

SCALE 1" = 1'-0"



5 TYPE PATIO SLAB EXTERIOR WALL FOUNDATION

SCALE 1" = 1'-0"



6 FLOOR @ EXTERNAL WALL

SCALE 1" = 1'-0"

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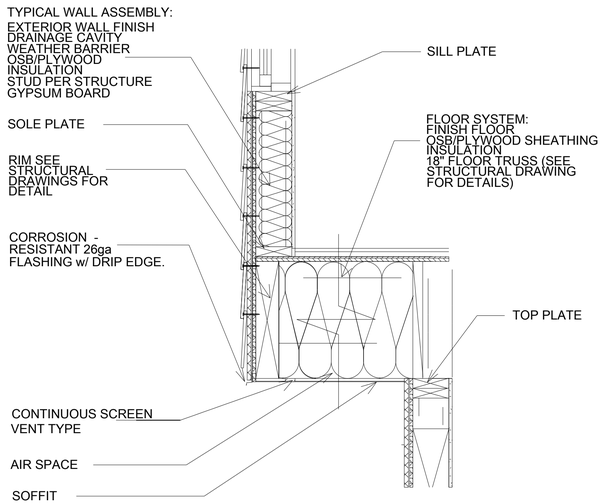
ARCHITECTURAL DETAILS

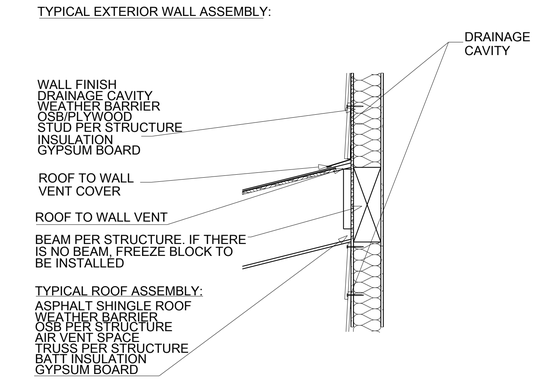
PAGE NO.

A6.0



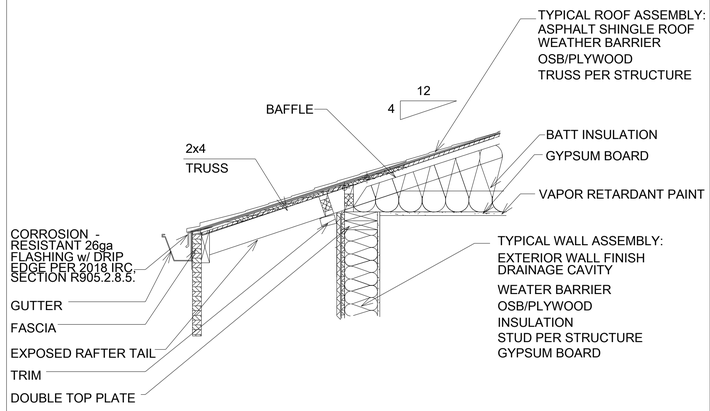
1 2ND FLOOR OVERHANG

SCALE 1" = 1'-0"



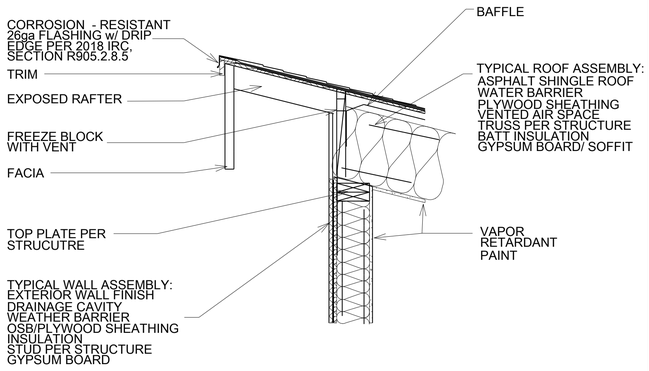
2 ROOF TO WALL VENT

SCALE 1" = 1'-0"



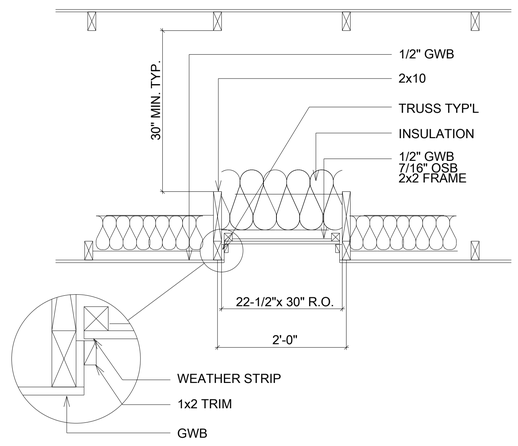
3 EXPOSED EAVE TO ATTIC

SCALE 1" = 1'-0"



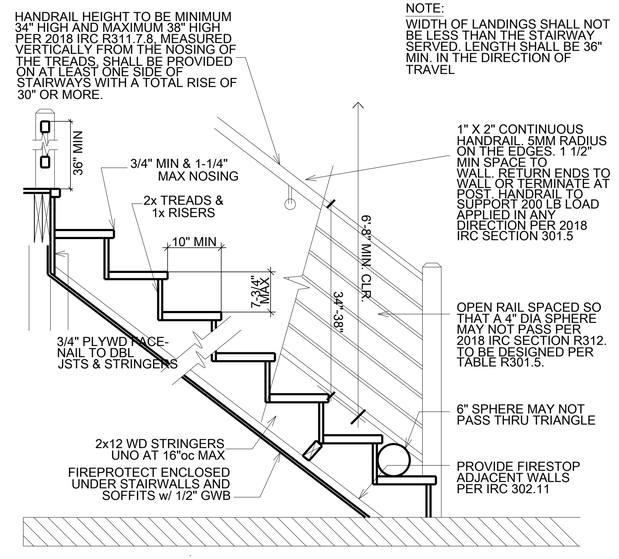
4 TOP OF SHED ROOF

SCALE 1" = 1'-0"



5 ATTIC ACCESS

SCALE 1" = 1'-0"



6 TYP. STAIRS

SCALE 1" = 1'-0"

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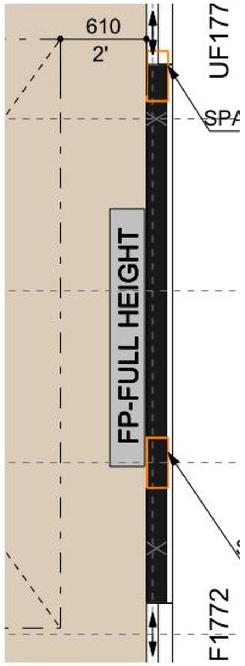
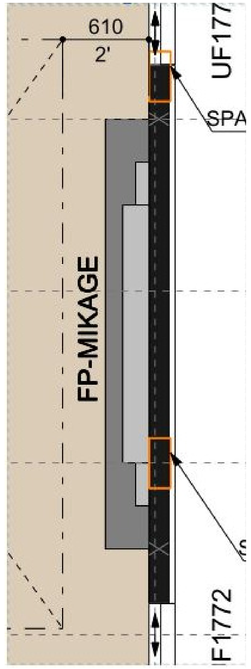
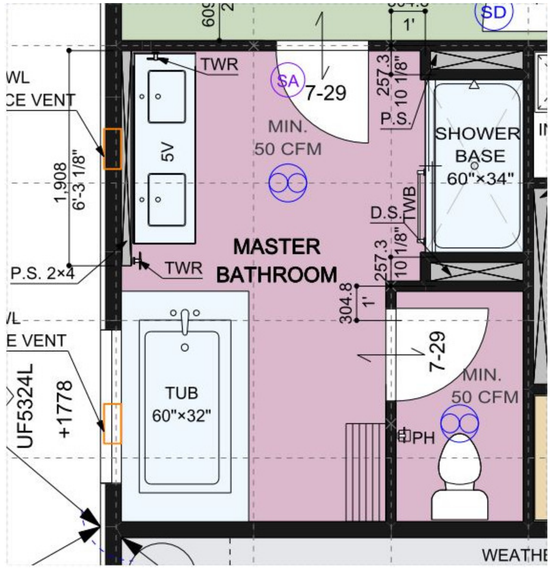


1 FP-FULL HEIGHT OPTION



2 FP-MIKAGE OPTION



3 MASTER BATH OPTION

IF EXHIBIT C SHOWS THE APPLICABLE UPGRADE OPTIONS, THIS SHOULD FOLLOW THEM.

4 OPTION

IF EXHIBIT C SHOWS THE APPLICABLE UPGRADE OPTIONS, THIS SHOULD FOLLOW THEM.

5 OPTION

6 OPTION

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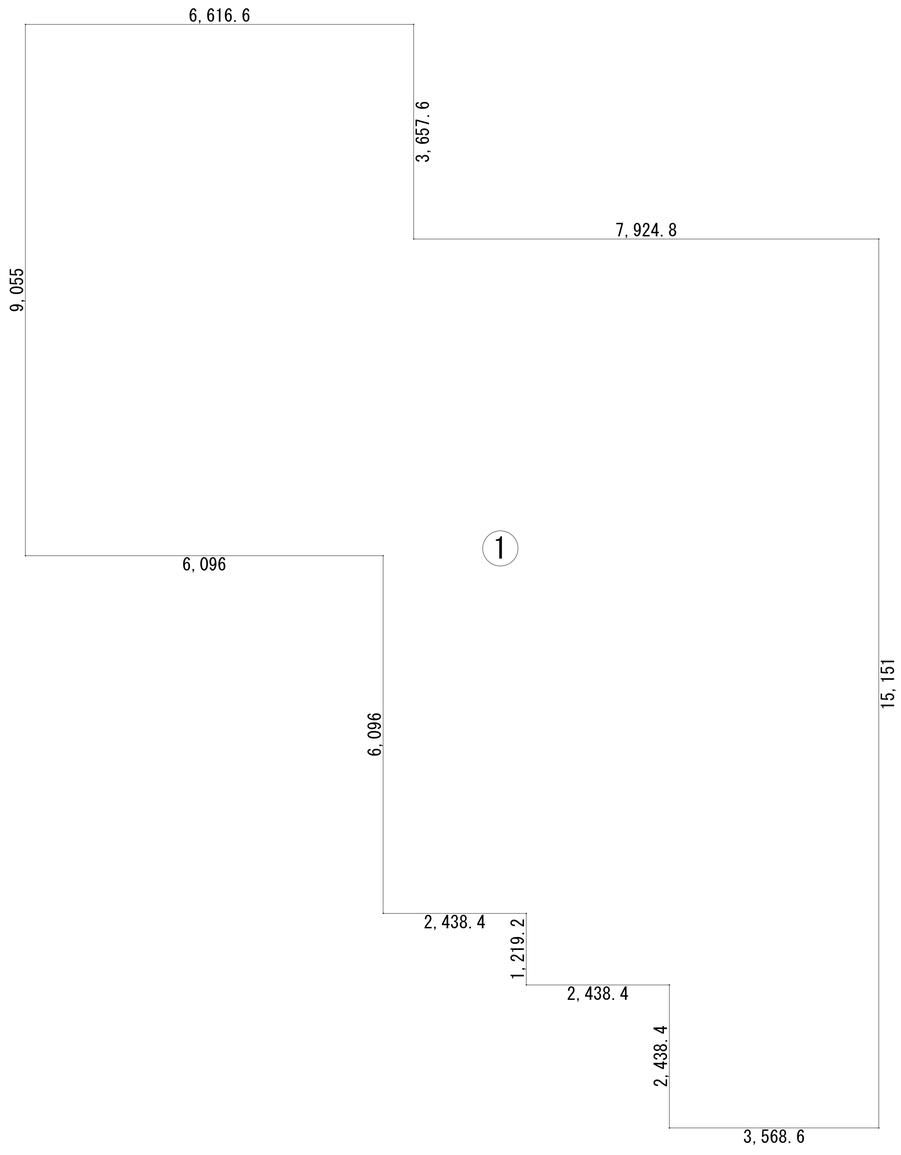
OPTIONAL DETAILS

PAGE NO.

A7.0

Area Schedule (inside face of exterior wall stud)	
Name	Area
1st Floor	1,832 SF
Garage	420 SF
	2,252 SF
NET HEATING AREA	1,832 SF



NUMBER	FORMULA	(m)	AREA(㎡)	AREA(SF)
①			170.195195	1,832 SF
	TOTAL	≒	170.195195 170.19	1,832 SF

1 1st FLOOR AREA

Scale 1/4" = 1' -0"

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PLAN SG-1L
U120160-DC1L

REVISION

DATE:	2022/8/2
HOUSE TYPE:	USA-S1
BP CODE:	
BP DRAWING #:	
CUST CODE:	U120160-DC1L
DRAWING # :	2-8

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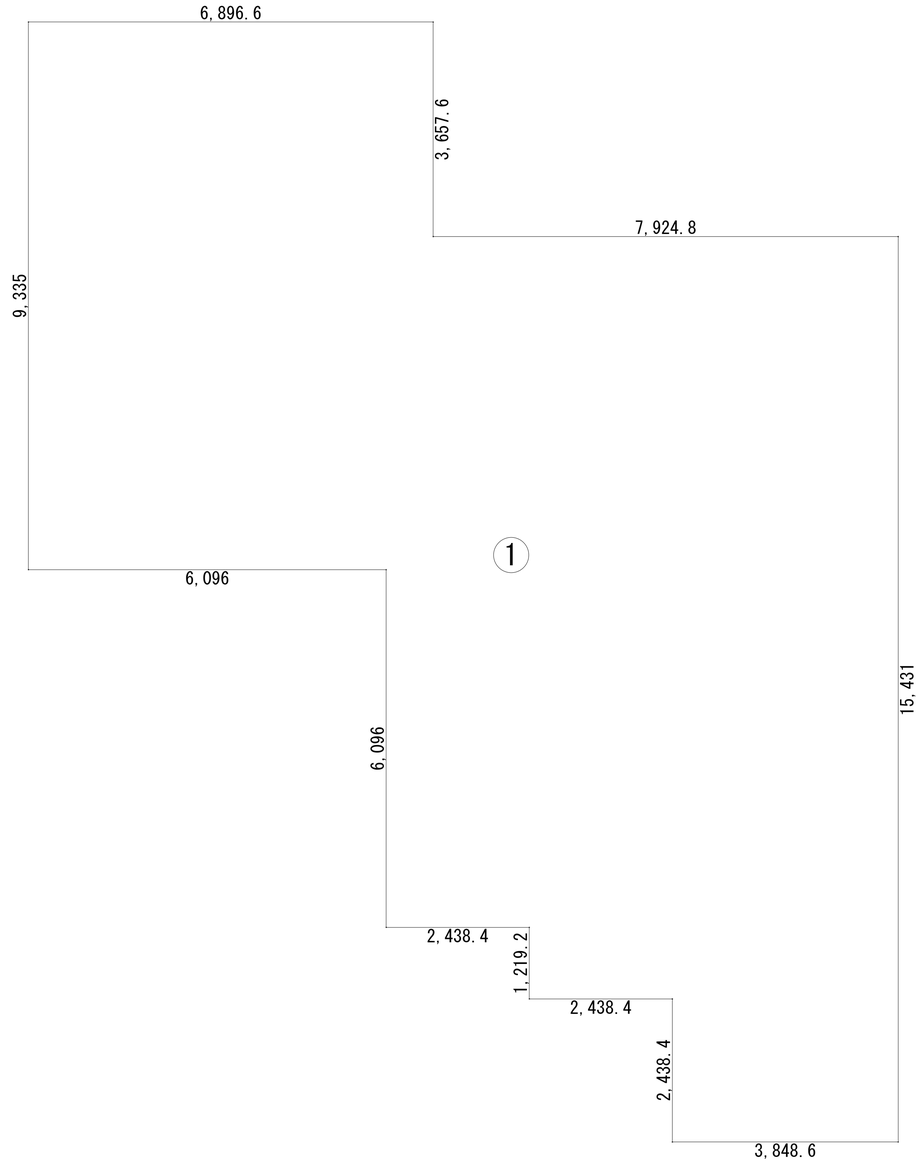
PERMIT SQUARE FOOTAGE

PAGE NO.

A10.0

Area Schedule (outside face of exterior wall stud)	
Name	Area
1st Floor	1,933 SF
NET HEATING AREA	1,933 SF



NUMBER	FORMULA	(m)	AREA(㎡)	AREA(SF)
①			179.611595	1,933 SF
	TOTAL	≒	179.611595 179.61	1,933 SF

1 1st FLOOR AREA

Scale 1/4" = 1' -0"

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SALES SQUARE FOOTAGE

PAGE NO.

A10.1

PLAN CA-1L

PROJECT INFORMATION

PROJECT OWNER

ICHIJO USA CO., LTD.

ADDRESS

ASSESSOR'S PARCEL NUMBER

ZONE

LOT AREA

PROJECT DESCRIPTION

NEW SINGLE FAMILY RESIDENCE

PROJECT TEAM

OWNER / CONTRACTOR

ICHIJO USA CO., LTD.
1406 140th PL. NE Suite 104
Bellevue, WA 98007
TEL: 425-497-0616
CONTACT: SAMMY UCHIMURA (sammy@ichijousa.com)

GENERAL NOTES

1. THE CONTRACTOR SHALL PERFORM WORK IN STRICT ACCORDANCE WITH THE FOLLOWING CODES AND ALL APPLICABLE STATE AND LOCAL AMENDMENTS:
   2018 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE
   2018 EDITION OF THE WASHINGTON STATE ENERGY CODE
   2018 EDITION OF THE INTERNATIONAL FIRE CODE
   2018 EDITION OF THE INTERNATIONAL MECHANICAL CODE
   2018 EDITION OF THE UNIFORM PLUMBING CODE
   2018 EDITION OF THE WASHINGTON CITIES ELECTRICAL CODE
2. ALL THE WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE ATTACHED DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSION AND CONDITIONS IN THE FIELD AND SHALL IMMEDIATELY NOTIFY THE BUILDER OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND THE DRAWINGS.
4. DRAWINGS SHALL NOT BE SCALED. DIMENSIONS SHALL GOVERN, DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. WRITTEN SPECIFICATIONS AND NOTES SHALL GOVERN OVER ALL. IN CASE OF CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN. CONTACT BUILDER PRIOR TO CONSTRUCTION FOR CLARIFICATION.
5. PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS NOTED OTHERWISE.
6. CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING BUT NOT LIMITED TO SAFETY AND PROTECTION OF PROPERTY DURING THE PERFORMANCE OF THE WORK
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS AND PAYMENT OF UTILITY CHARGES.
8. DO NOT COMMENCE WORK UNTIL CONDITIONS ARE ACCEPTABLE TO ALL CONCERNED PARTIES, INCLUDING GOVERNING AUTHORITIES.
9. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND PROTECT ALL EXISTING MECHANICAL, ELECTRICAL AND ALL OTHER UTILITIES AND CAP OR RELOCATE AS REQUIRED.
10. CONTRACTOR SHALL PROVIDE METHODS, MEANS, AND FACILITIES REQUIRED TO PREVENT CONTAMINATION OF SOIL, WATER, OR ATMOSPHERE, AND IN COMPLIANCE WITH ENVIRONMENTAL REGULATION OF LOCAL GOVERNING AUTHORITIES.

ENERGY NOTES

1. ALL WORK SHALL CONFORM TO THE 2018 WASHINGTON STATE ENERGY CODE (WSEC).
2. ALL DOORS AND WINDOWS SHALL BE NFRC CERTIFIED FOR U VALUES AS INDICATED. ENERGY COMPLIANCE IS PER WASHINGTON STATE ENERGY CODE PRESCRIPTIVE PATH, TABLE R402.1.1 REFER TO WINDOW SCHEDULE ON THIS SHEET.
3. ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS PER 2018 WSEC R406.3 SHALL BE MET BY THE FOLLOWING OPTIONS FROM TABLE R406.2 AND R406.3 TO ACHIEVE THE MINIMUM CREDIT OF 6.0 REQUIRED AS MEDIUM DWELLING UNIT;

   FUEL TYPE 2 (1.0 POINTS) - FOR AN INITIAL HEATING SYSTEM USING A HEAT PUMP THAT MEETS FEDERAL STANDARDS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(1)C OR C403.3.2(2).
   OPTION 1.3 (0.5 POINTS) - EFFICIENT BUILDING ENVELOPE OPTIONS
   COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL CONDUCTIVE UA BY 5%.
   OPTION 2.1 (0.5 POINTS) - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS
   COMPLIANCE BASED ON SECTION R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS.
   OPTION 3.5 (1.5 POINTS) - HIGH-EFFICIENCY HVAC EQUIPMENT OPTIONS
   AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPF OF 11.0.
   OPTION 4.1 (0.5 POINTS) - HIGH-EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS
   ALL SUPPLY AND RETURN DUCTS LOCATED IN AN UNCONDITIONED ATTIC SHALL BE DEEPLY BURIED IN CEILING. INSULATION IN ACCORDANCE WITH SECTION R403.3.7. FOR MECHANICAL EQUIPMENT LOCATED OUTSIDE THE CONDITIONED SPACE, A MAXIMUM OF 10 LINEAR FEET OF RETURN DUCT AND 5 LINEAR FEET OF SUPPLY DUCT CONNECTIONS TO THE EQUIPMENT MAY BE OUTSIDE THE DEEPLY BURIED INSULATION.
   OPTION 5.5 (2.0 POINTS)- EFFICIENT WATER HEATING OPTIONS
   ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEEA'S ADVANCED WATER HEATING SPECIFICATION.
4. A PERMANENT CERTIFICATE SHALL BE COMPLETED AND POSTED BY THE BUILDER ON OR WITHIN THREE FEET OF THE ELECTRICAL DISTRIBUTION PANEL. THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE FOLLOWING:
   a.) R VALUES
   b.) U VALUES
   c.) RESULTS FROM DUCT SYSTEM AIR LEAKAGE TESTINGS.
   d.) RESULTS FROM BUILDING ENVELOPE AIR LEAKAGE TESTING (BLOWER DOOR TEST).
   e.) TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIPMENT.
5. ALL EXTERIOR DUCTWORK OUTSIDE THE THERMAL ENVELOPE SHALL BE INSULATED TO R-8 MINIMUM.
6. ALL HOT WATER PIPING SHALL BE INSULATED TO R-3 MINIMUM.
7. DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED (WSEC R403.2.2) WHERE DUCTS OR AIR HANDLERS ARE LOCATED OUTSIDE THE THERMAL ENVELOPE (INCLUDING CRAWL SPACES) DUCTS SHALL BE LEAK TESTED IN ACCORDANCE WITH WSU RS-33
8. BUILDING AIR LEAKAGE TESTING IS REQUIRED PRIOR TO FINAL INSPECTION. DEMONSTRATE THAT AIR LEAKAGE RATE IS LESS THAN 5 AIR CHANGES PER HOUR AT A PRESSURE OF 0.2 INCHES W.G. THE TEST RESULT SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE (WSEC R402.4.1.2).
9. WINDOWS SKYLIGHTS AND SLIDING DOORS SHALL HAVE AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM PER SQUARE FOOT. SWINGING DOORS NO MORE THAN 0.5 CFM PER SQUARE FOOT WHEN TESTED ACCORDING TO NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440. ALL UNITS SHALL BE LISTED AND LABELED BY THE MFR
10. RECESSED LUMINAIRES INSTALLED IN THE BUILDING ENVELOPED SHALL BE IC-RATED AND CERTIFIED UNDER ASTM E283 AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM WHEN TESTED AT 1.57 PSF PRESSURE DIFFERENTIAL AND SHALL HAVE A LABEL ATTACHED SHOWING COMPLIANCE WITH THIS TEST METHOD. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.
11. MINIMUM 75% OF ALL INTERIOR LUMINARES SHALL BE HIGH EFFICACY LUMINARES. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY LUMINARES.
12. EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH ATLEAST ONE PROGRAMMABLE THERMOSTAT IN COMPLIANCE WITH R403.1.1 FOR THE REGULATION OF TEMPERATURE.
13. TO THE MAXIMUM EXTENT POSSIBLE, INSULATION SHALL EXTEND OVER THE FULL COMPONENT AREA TO THE INTENDED R-VALUE EXTERIOR WALL CAVITIES ISOLATED DURING FRAMING SHALL BE FULLY INSULATED TO THE LEVELS OF THE SURROUNDING WALLS.

INSULATION NOTES

1. ALL WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE TOTAL UA ALTERNATIVE WORKSHEET SUBMITTED SEPARATELY.
2. ALL INSULATION SHALL BE INSTALLED IN COMPLIANCE WITH THE 2018 WASHINGTON STATE ENERGY CODE (2018 WSEC).

SHEET INDEX

N

VICINITY PLAN

PROJECT SITE

N

PROJECT MAP

PROJECT LOT

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PLAN CA-1L
U120160-BT1L

REVISION		

DATE:	2023/11/17
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BP DRAWING #:	
CUST CODE:	U120160-BT1L
DRAWING # :	1-1A

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FC	M. U.

COVER SHEET

PAGE NO.

A0.0

WINDOW SCHEDULE (FIRST FLOOR)

NO	ROOM	NAME	OPERATION	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
E1	GARAGE	16'X7'			GARAGE DOOR	195″	85 1/2″		
E2	GARAGE	8'X7'			GARAGE DOOR	99″	85 1/2″		
E3	GARAGE	H=7'			ENTRY DOOR	38 3/8″	83 5/8″		
E4	ENTRY	H=7'			ENTRY DOOR	38 3/8″	83 5/8″		
D1	PANTRY	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D2	STORAGE	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D3	DEN/BEDROOM 2	7-36			INTERIOR DOOR	38 1/2″	82 1/2″		
D4	POWDER	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
C1	CLOSET	MCFD-30			FOLDING DOOR	29 1/2″	82 1/2″		
1	KITCHEN	UF4112.			FIXED WINDOWS	41.5″	12.5″	43 1/2″	0.24
2	KITCHEN	UF4148		TEMPERED	FIXED WINDOWS	41.5″	48.5″	46″	0.24
3	DINING	U7282S	XO	TEMPERED	2-LITE PATIO DOOR	72.0″	82.0″	0″	0.26
4	LIVING	U8960T	XOX	TEMPERED	3-LITE SLIDING WINDOWS	89.5″	60.5″	34″	0.27
5	LIVING	UF1760		TEMPERED	FIXED WINDOWS	17.5″	60.5″	34″	0.24
6	LIVING	UF1760		TEMPERED	FIXED WINDOWS	17.5″	60.5″	34″	0.24
7	DEN/BEDROOM 2	U6560	XO		2-LITE SLIDING WINDOWS	65.5″	60.5″	34″	0.27
8	POWDER	UF1718		TEMPERED	FIXED WINDOWS	17.5″	18.5″	76″	0.24
9	FOYER	UF1772.		TEMPERED	FIXED WINDOWS	17.5″	72.5″	11″	0.24

AREA SCHEDULE

1ST FLOOR A	2ND FLOOR B	GARAGE C	BASEMENT D	TOTAL AREA (A+B+C+D)	NET HEATING AREA (A+B+D)
1161 SF	1427 SF	722 SF	SF	3310 SF	2588 SF

*(INSIDE FACE OF EXTERIOR WALL STUDS)

SOURCE SPECIFIC VENTILATION

1. REFER TO PLAN FOR LOCATIONS.
2. SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM. EXHAUST FANS PROVIDING SOURCE SPECIFIC VENTILATION SHALL HAVE A MINIMUM FAN FLOW RATING NOT LESS THAN 50 CFM AT 0.25 INCHES WATER GAUGE FOR BATHROOMS, LAUNDRIES, OR SIMILAR ROOMS AND 400 CFM AT 0.25 INCHES WATER GAUGE FOR KITCHENS. THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED OUTDOORS.

CRAWL SPACE VENTILATION (7"X16" BOX VENT)

1. USE AN 7"X16" BOX VENT WITH NFVA OF 72.5 SI FOR EACH VENTILATION.
2. CALCULATION:
   (CRAWL SPACE) 1161 SF / 300 = 3.87 SF = 557.28 SI
   OF VENTING AREA NEEDED
   (11) BOX VENT = 11 X 72.5 = 797.5 SI > 557.28 SI REQUIRED

NOTE

① PROVIDE 1/2" GWB ON WALLS AND CEILING

② SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE REQUIRED TO RECEIVE ITS PRIMARY POWER FROM THE BUILDING WIRING AND BE PROVIDED WITH BATTERY BACKUP

③ ALL PLUMBING PENETRATIONS SHALL BE CONSTRUCTED TO MEET THE 2018 UNIFORM PLUMBING CODE

④ THIS PLAN MAY NOT BE CONSTRUCTION ON SITES THAT WILL PLACE THE WALLS OR COLUMNS WITHIN 5FT OF THE PROPERTY LINE

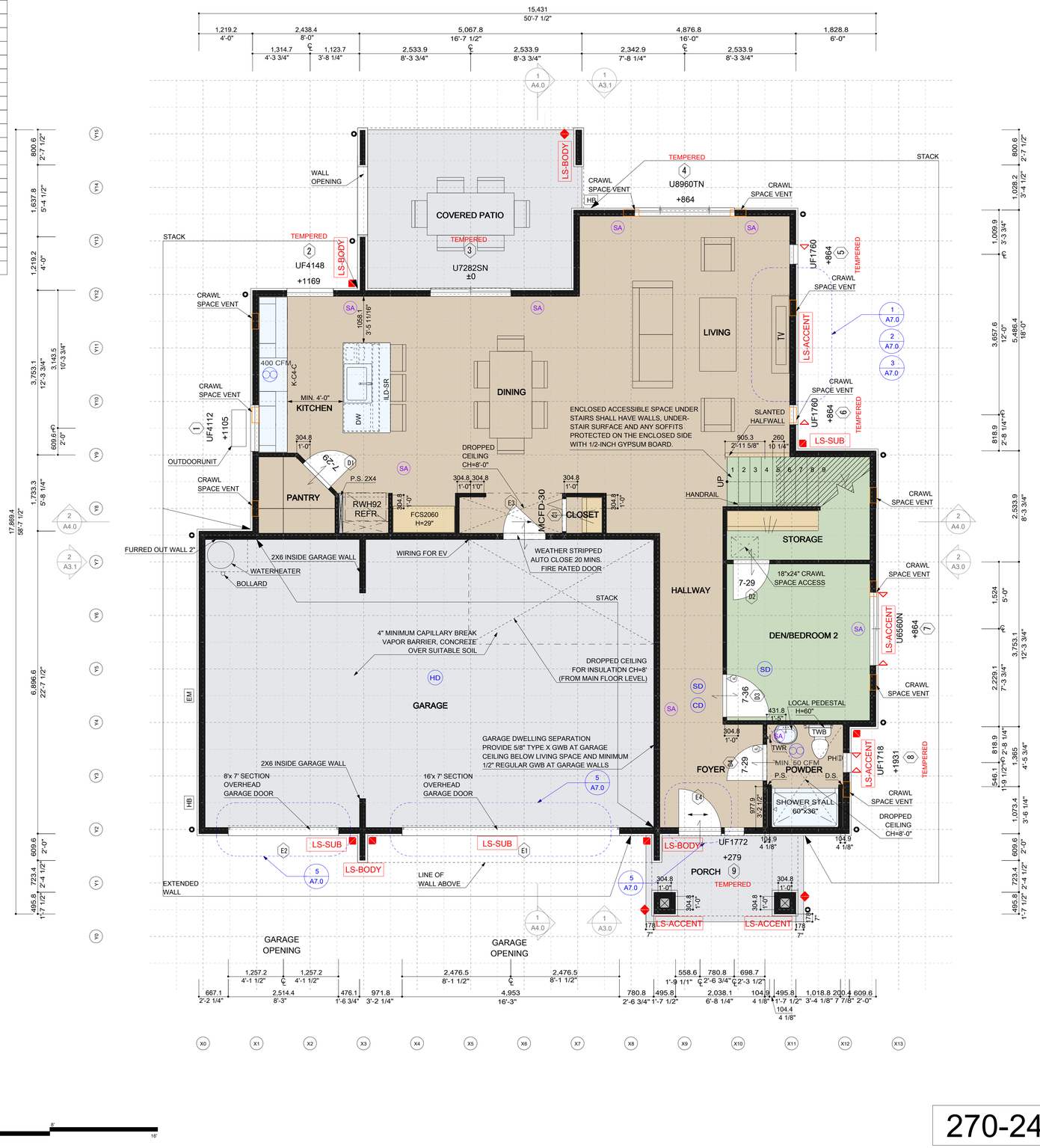
SYMBOLS

DRAWING NUMBER / SHEET NUMBER
WINDOW TAG
CENTER LINE
TD-X
WS-XXXX
LS-XXXX
CS-XXXX — EXTERIOR FINISH PRODUCT

GRID LINES — 1219.2MM OR 1 GRID IS EQUIVALENT TO 4'-0"

CD CARBON MONOXIDE DETECTOR
SD SMOKE DETECTOR
HD HEAT DETECTOR
SOURCE SPECIFIC VENT (50 CFM VTOS)
GM GAS METER
HB HOSE BIB
EM ELECTRIC METER
RA RETURN AIR
SA SUPPLY AIR (CEILING MOUNTED)
SA SUPPLY AIR (FLOOR MOUNTED)
SA SUPPLY AIR (WALL MOUNTED)

FLOORING
CONCRETE
TILE
VINYL
CARPET
DECKING



1 SCALE FIRST FLOOR PLAN 1/4" = 1'-0"

270-240

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FIRST FLOOR PLAN

PAGE NO.
A2.0

WINDOW SCHEDULE (SECOND FLOOR)

NO	ROOM	NAME	OPERATION	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
D5	BEDROOM 4	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D6	BEDROOM 3	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D7	MAIN BATH	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D8	MECH	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D9	MAIN BATH	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D10	W.I.C.	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D11	PRIMARY BATHROOM	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D12	PRIMARY BATHROOM	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D13	PRIMARY BEDROOM	7-29x2			INTERIOR DOOR	62 1/2″	82 1/2″		
D14	LAUNDRY ROOM	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D15	LAUNDRY ROOM	7-36			INTERIOR DOOR	38 1/2″	82 1/2″		
C2	BEDROOM 3	MCFD-60			FOLDING DOOR	63″	82 1/2″		
C3	BEDROOM 4	MCFD-60			FOLDING DOOR	63″	82 1/2″		
10	BEDROOM 4	U6548,	XO		2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
11	BEDROOM 3	U6548,	XO		2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
12	MAIN BATH	UF1724,		TEMPERED	FIXED WINDOWS	17.5″	24.5″	58″	0.24
13	MAIN BATH	UF1724,		TEMPERED	FIXED WINDOWS	17.5″	24.5″	58″	0.24
14	PRIMARY BATHROOM	UF5318,		TEMPERED	FIXED WINDOWS	53.5″	18.5″	64″	0.24
15	PRIMARY BATHROOM	UF1724,		TEMPERED	FIXED WINDOWS	17.5″	24.5″	58″	0.24
16	PRIMARY BEDROOM	U8948T,	XOX		3-LITE SLIDING WINDOWS	89.5″	48.5″	34″	0.27
17	PRIMARY BEDROOM	UF1718,			FIXED WINDOWS	17.5″	18.5″	64″	0.24
18	PRIMARY BEDROOM	UF1718,			FIXED WINDOWS	17.5″	18.5″	64″	0.24
19	STAIRS	UF4148,		TEMPERED	FIXED WINDOWS	41.5″	48.5″	34″	0.24
20	FAMILY ROOM	UF6548,			FIXED WINDOWS	65.5″	48.5″	34″	0.24
21	FAMILY ROOM	UF6518,			FIXED WINDOWS	65.5″	18.5″	64″	0.24

AVERAGE U-FACTOR OF ALL FLOORS: 0.27

WINDOW REQUIREMENTS

1 REFER TO BLDG FLOOR PLANS FOR TEMPERED GLASS LOCATIONS LABELED "TEMPERED."

2. ALL SLEEPING ROOMS SHALL BE PROVIDED WITH A MINIMUM OF ONE EMERGENCY EGRESS WINDOW. PER 2018 IRC SECTION R310.1. REFER TO PLAN FOR LOCATIONS. EGRESS WINDOWS SHALL HAVE:
   MIN NET OPEN AREA = 5.7 SF
   MIN. NET OPEN HEIGHT = 24"
   MIN. NET OPEN WIDTH = 20"
   MAXIMUM SILL HEIGHT = 44"
   PER 2018 IRC SECTION R310.2.
3. ALL WINDOWS WITHIN 10' OF GRADE SHALL BE LOCKABLE

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM

1. REFER TO 2018 IRC M1505.4 FOR DETAILED REQUIREMENTS FOR THE EXHAUST SYSTEM AND CONTROLS.
2. PROVIDE AN EXHAUST FAN CAPABLE OF PROVIDING VENTILATION AIRFLOW RATE DETERMINED BY TABLE M1505.4.3(1) WITH COEFFICIENT FACTOR OF 1.5 (NOT BALANCED/NOT DISTRIBUTED ON TABLE M1505.4.3(2))

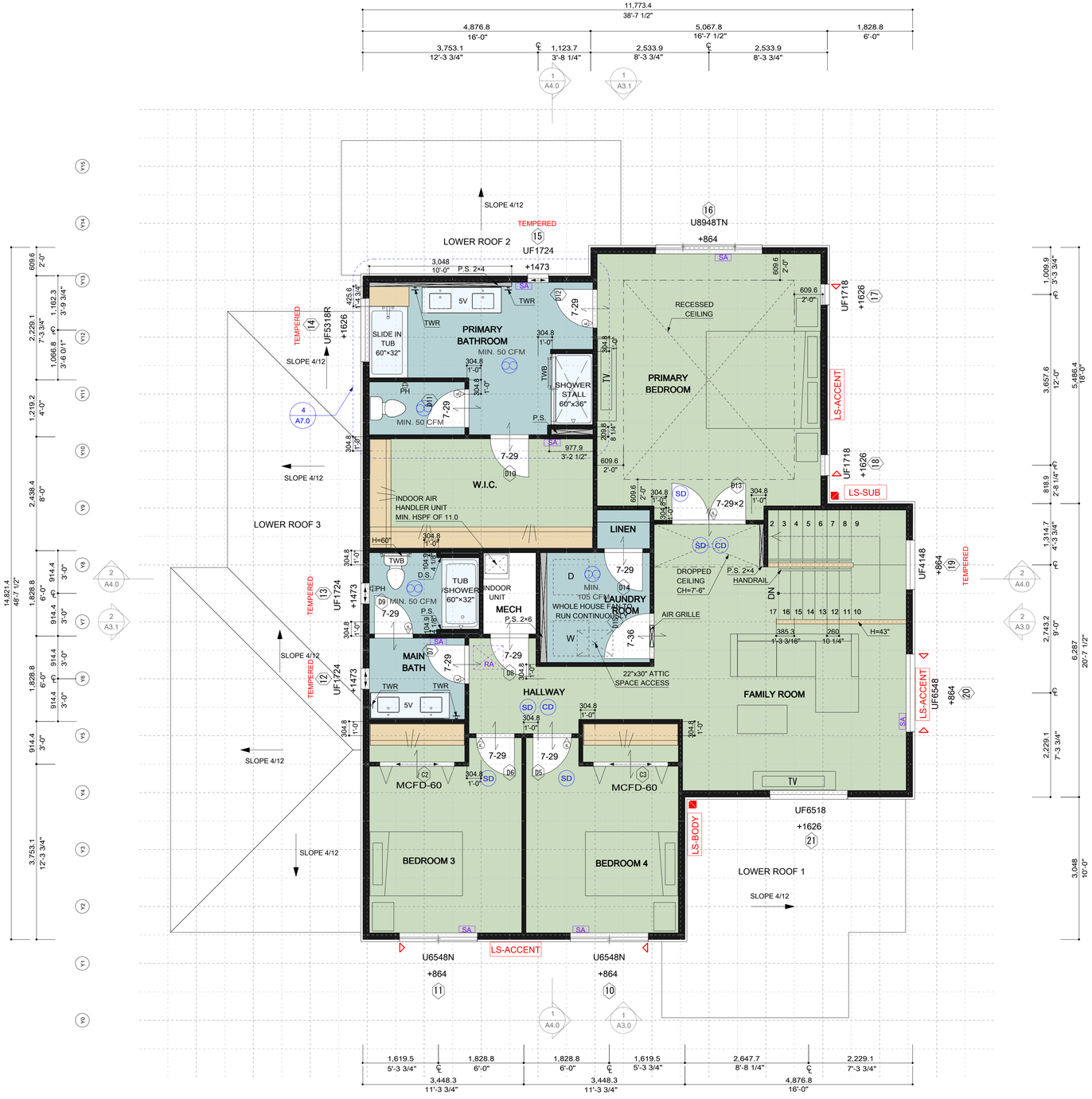
NOTE

① PROVIDE 1/2" GWB ON WALLS AND CEILING

SYMBOLS

- DRAWING NUMBER / SHEET NUMBER
- WINDOW TAG
- CENTER LINE
- TD-X, WS-XXXX, LS-XXXX, CS-XXXX — EXTERIOR FINISH PRODUCT
- GRID LINES — 1219.2MM OR 1 GRID IS EQUIVALENT TO 4'-0"
- CD CARBON MONOXIDE DETECTOR
- SD SMOKE DETECTOR
- HD HEAT DETECTOR
- SOURCE SPECIFIC VENT — 50 CFM VTOS
- GM GAS METER
- HB HOSE BIB
- EM ELECTRIC METER
- RA RETURN AIR
- SA SUPPLY AIR (CEILING MOUNTED)
- SA SUPPLY AIR (FLOOR MOUNTED)
- SA SUPPLY AIR (WALL MOUNTED)

FLOORING, CONCRETE, TILE, VINYL, CARPET, DECKING



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SECOND FLOOR PLAN

PAGE NO.

A2.1

1 FRONT

Scale 1/4″ = 1′ -0″

2 RIGHT

Scale 1/4″ = 1′ -0″

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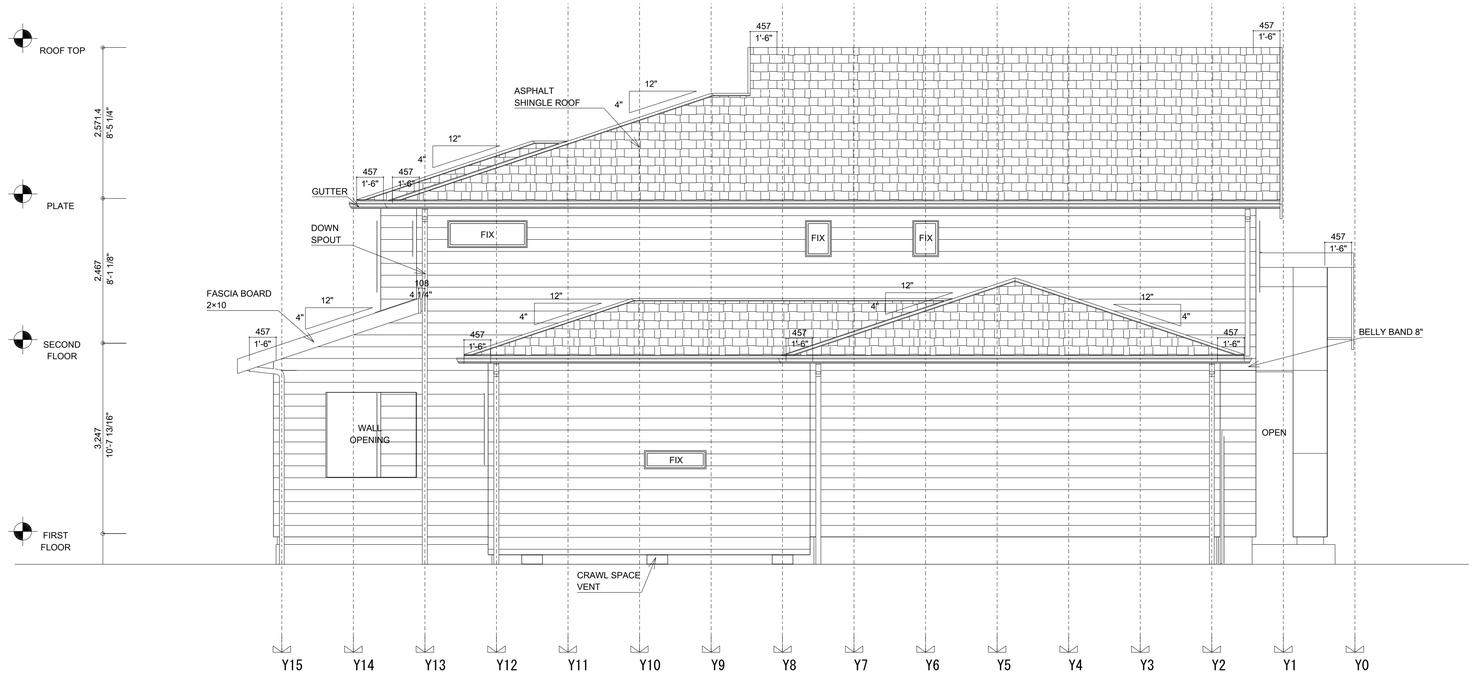
ELEVATIONS

PAGE NO.

A3.0

1 REAR

Scale 1/4″ = 1′ -0″



2 LEFT

Scale 1/4″ = 1′ -0″

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ELEVATIONS

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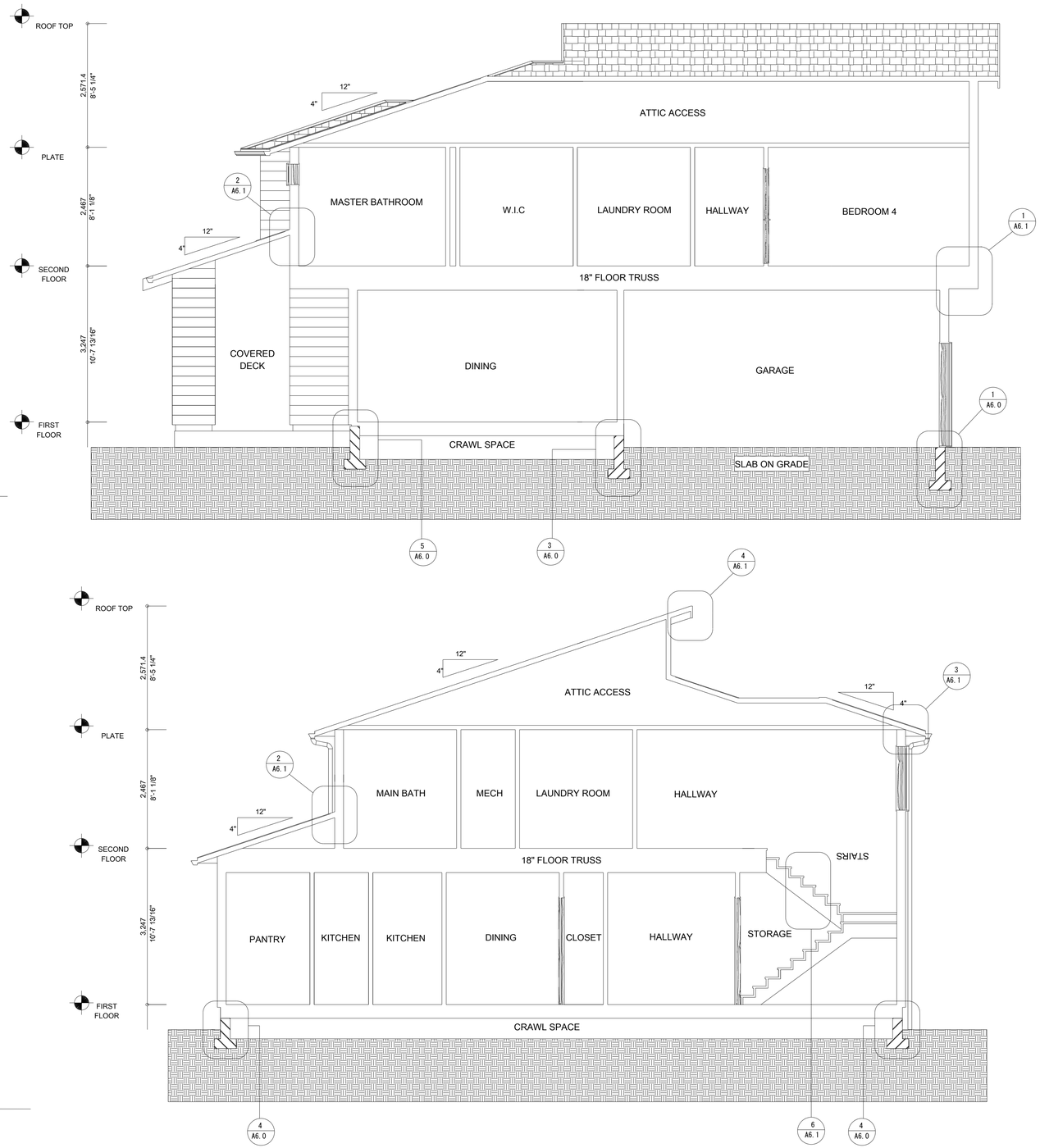
A3.1



1 BUILDING SECTION

SCALE 1/4" = 1'-0"

2 BUILDING SECTION

SCALE 1/4" = 1'-0"

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PLAN CA-1L
U120160-BT1L

REVISION

DATE:	2023/11/17
HOUSE TYPE:	USA-S1
BP CODE:	
BP DRAWING #:	
CUST CODE:	U120160-BT1L
DRAWING # :	1-1A

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SECTIONS

PAGE NO.

A4.0

ROOF VENTILATION

LOWER ROOF	1

AREA	168	SF	
VENTING RATIO	1/150		
REQ'D VENT	161	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	17	LF	0	LF
	106	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	2	QTY
	0	SI	100	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	106	SI	100	SI
SUB TOTAL RATIO	51	%	49	%
TOTAL (SI)	206	SI		
TOTAL RATIO	128	%	OF REQ'D	

LOWER ROOF	2

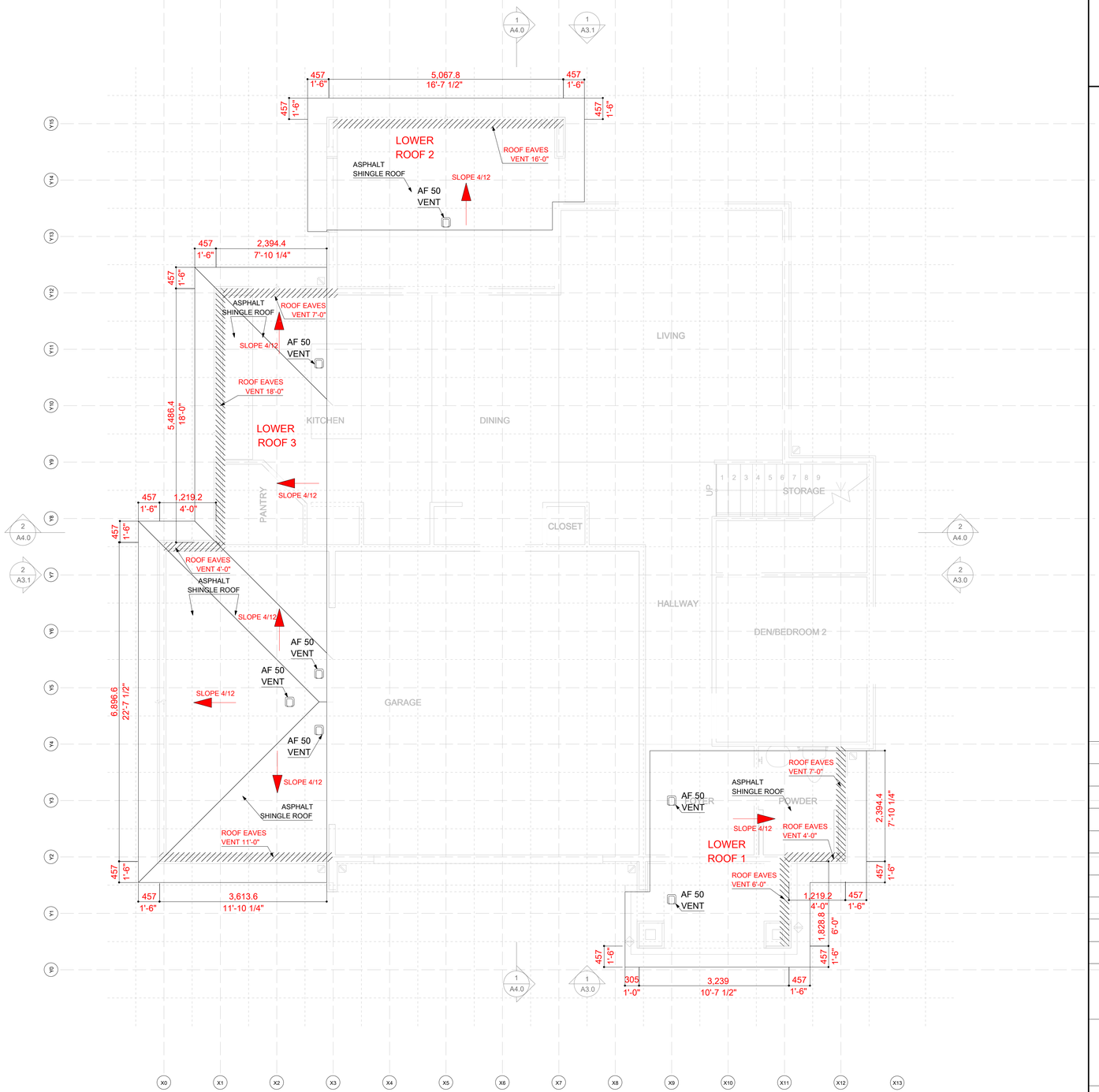
AREA	126	SF	
VENTING RATIO	1/150		
REQ'D VENT	120	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	16	LF	0	LF
	100	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	100	SI	50	SI
SUB TOTAL RATIO	67	%	33	%
TOTAL (SI)	150	SI		
TOTAL RATIO	125	%	OF REQ'D	

LOWER ROOF	3

AREA	404	SF	
VENTING RATIO	1/150		
REQ'D VENT	387	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	40	LF	0	LF
	251	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	4	QTY
	0	SI	200	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	251	SI	200	SI
SUB TOTAL RATIO	56	%	44	%
TOTAL (SI)	451	SI		
TOTAL RATIO	117	%	OF REQ'D	



1 LOWER ROOF PLAN

SCALE 1/4" = 1'-0"

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LOWER ROOF PLAN

PAGE NO.

A5.0

ROOF VENTILATION

UPPER ROOF	1

AREA	1579	SF	
VENTING RATIO	1/150		
REQ'D VENT	1515	SI	IS NEEDED

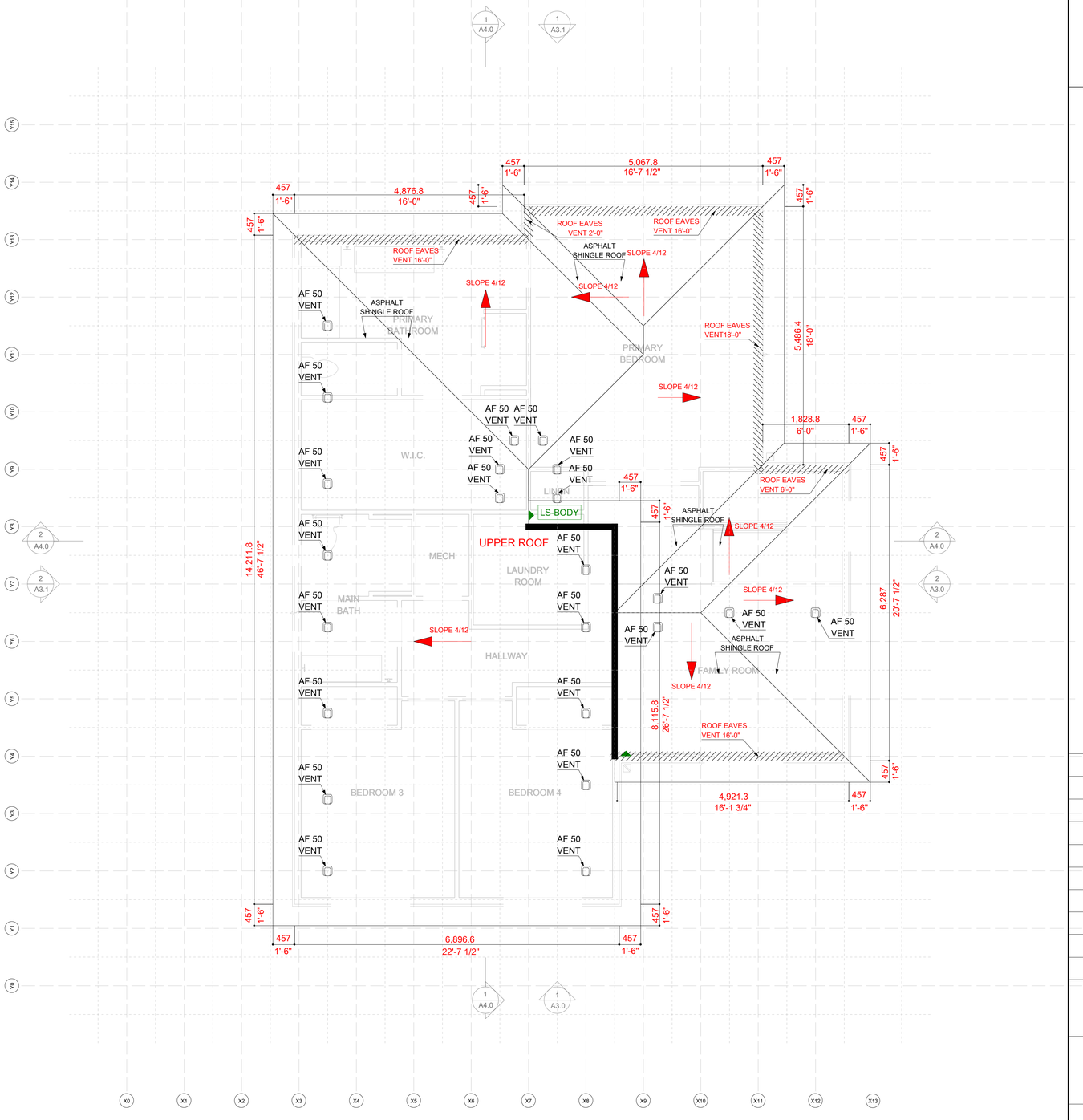
	LOW		HIGH	
EAVE VENT (6.28SI/LF)	74	LF	0	LF
	464	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	9	QTY	14	QTY
	450	SI	700	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	914	SI	700	SI
SUB TOTAL RATIO	57	%	43	%
TOTAL (SI)	1614	SI		
TOTAL RATIO	107	%	OF REQ'D	

NOTE

ROOF OVERHANG WITHIN 2' TO 5' OF PROPERTY LINES ARE REQUIRED TO MEET 2018 IRC, TABLE R302.1(1). FOOT NOTE A, THE UNDERSIDE OF THE EAVE DO NOT REQUIRE A 1 HOUR RATE ASSEMBLY IF THERE IS NO OPENING SUCH AS BIRD BLOCK VENTILATION OPENINGS. ALSO, FOOTNOTE B: 1 HOUR RATED ASSEMBLY IS NOT REQUIRED ON GABLE OVERHANGS IF THERE ARE NO OPENINGS.

NOTE

UNDERLAYMENT FOR ASPHALT SHINGLES, SLOPED FROM 2:12 UP TO 4:12, SHALL BE (2) LAYERS INSTALLED IN ACCORDANCE WITH 2018 IRC, R905.1.1.



1 MAIN ROOF PLAN

SCALE 1/4" = 1'-0"

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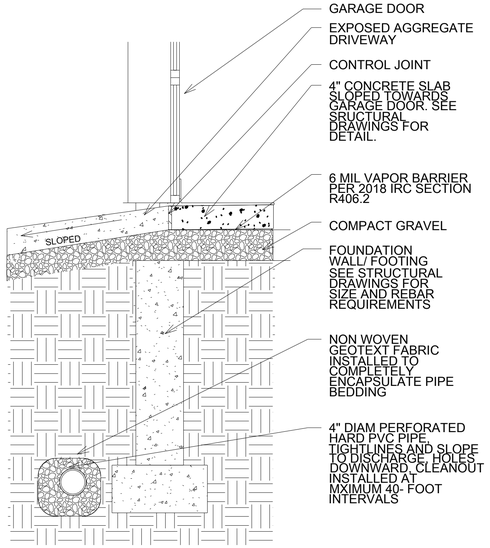
MAIN ROOF PLAN

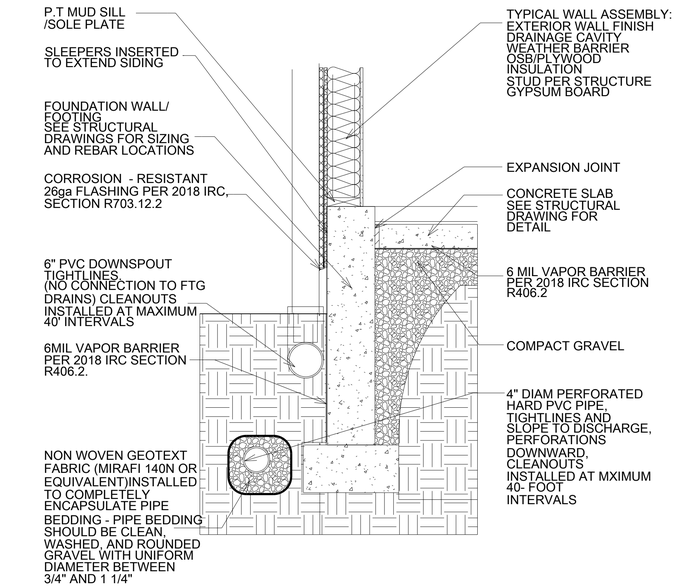
PAGE NO.

A5.1



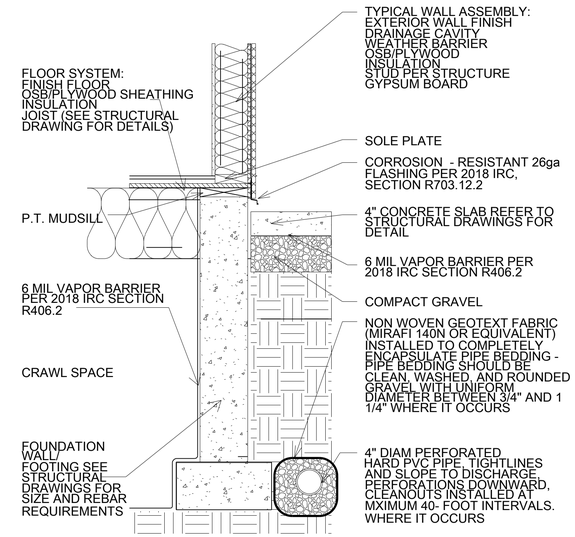
1 TYP. DRIVEWAY

SCALE 1" = 1'-0"



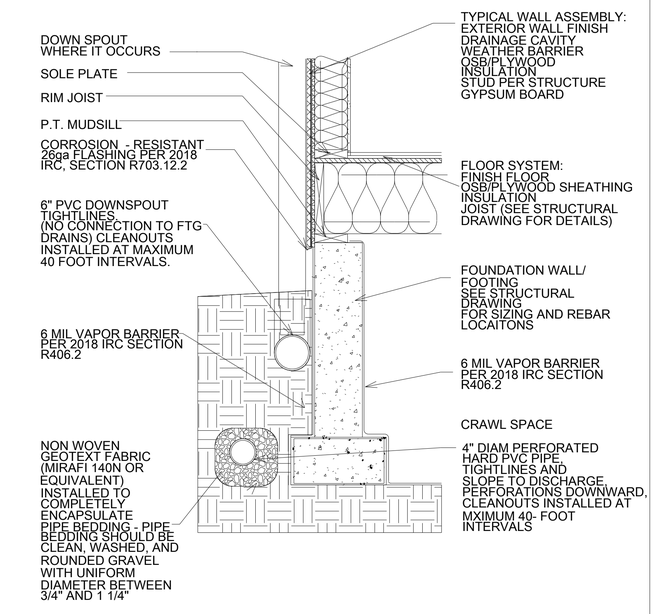
2 TYP. GARAGE FDTN EXT.

SCALE 1" = 1'-0"



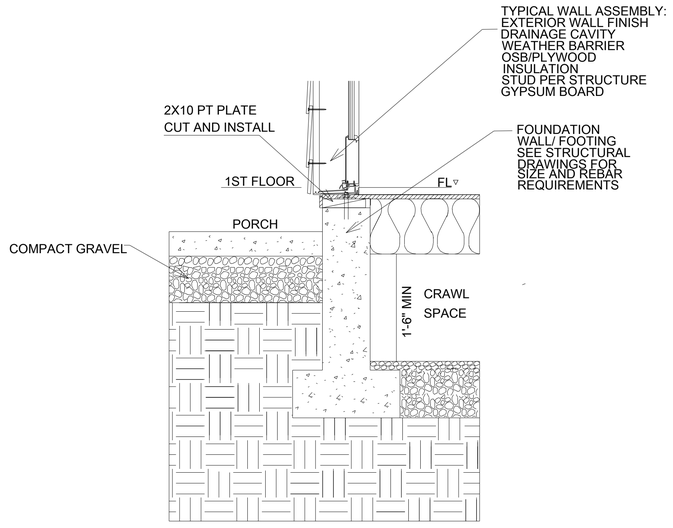
3 TYP. GARAGE FDTN INT.

SCALE 1" = 1'-0"



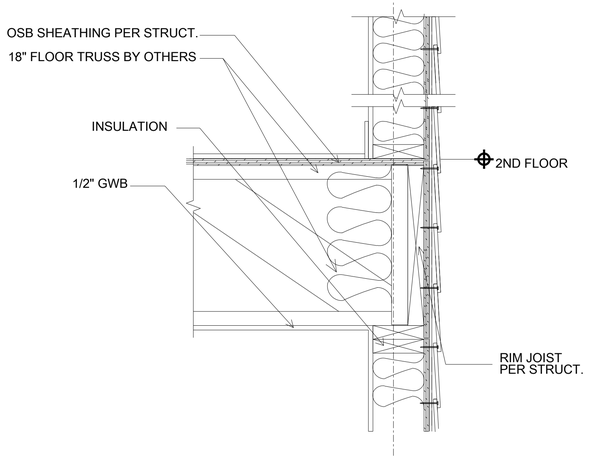
4 TYP. CRAWL SPACE FDTN

SCALE 1" = 1'-0"



5 TYPE PATIO SLAB EXTERIOR WALL FOUNDATION

SCALE 1" = 1'-0"



6 FLOOR @ EXTERNAL WALL

SCALE 1" = 1'-0"

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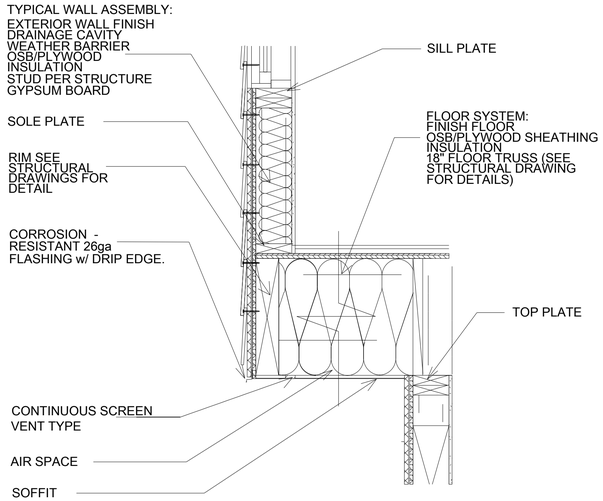
ARCHITECTURAL DETAILS

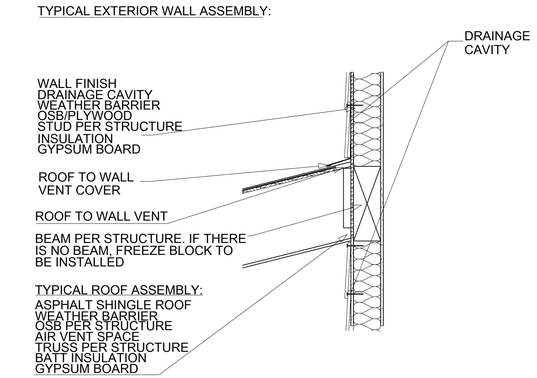
PAGE NO.

A6.0



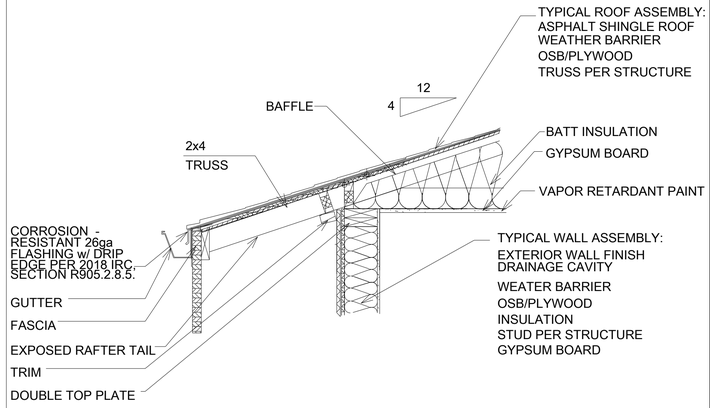
1 2ND FLOOR OVERHANG

SCALE 1" = 1'-0"



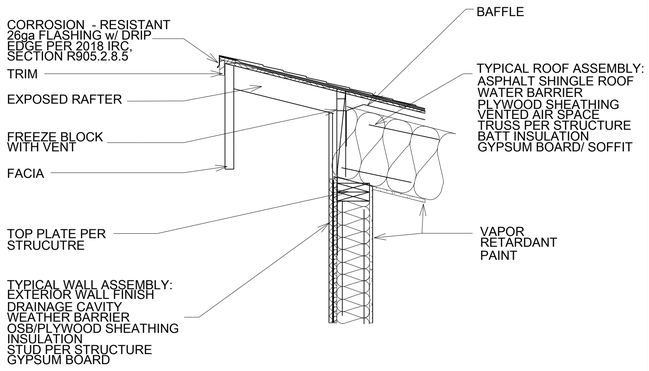
2 ROOF TO WALL VENT

SCALE 1" = 1'-0"



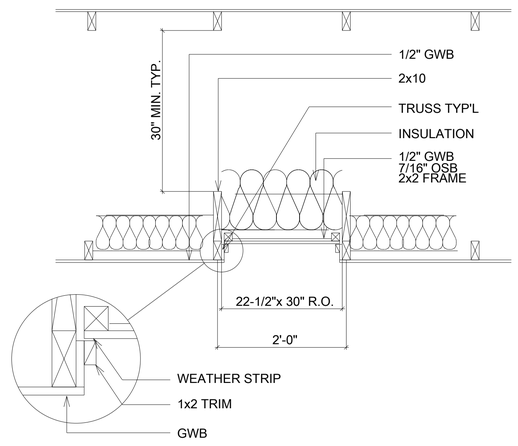
3 EXPOSED EAVE TO ATTIC

SCALE 1" = 1'-0"



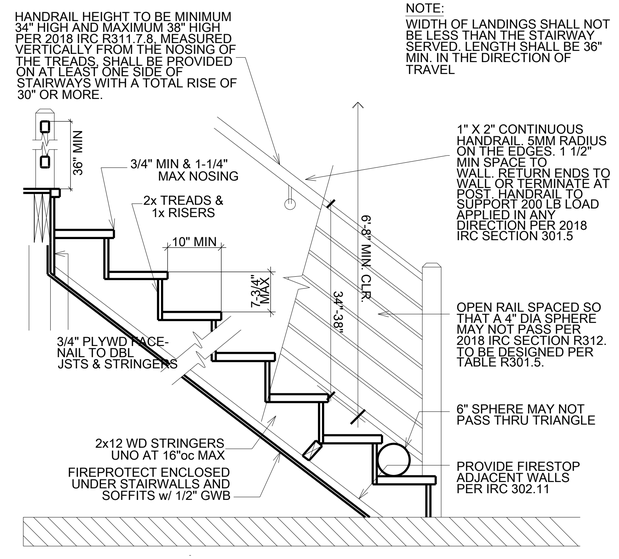
4 TOP OF SHED ROOF

SCALE 1" = 1'-0"



5 ATTIC ACCESS

SCALE 1" = 1'-0"



6 TYP. STAIRS

SCALE 1" = 1'-0"

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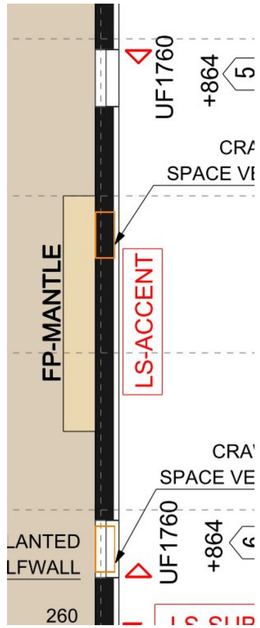
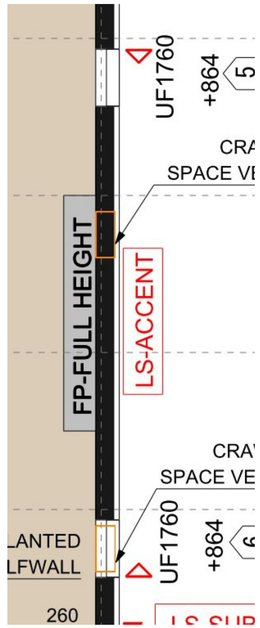
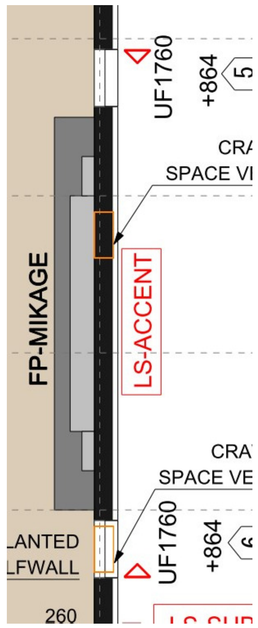


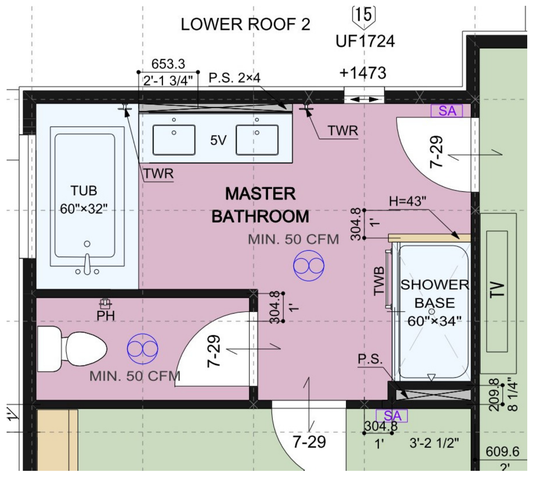
1 FP-MANTLE OPTION



2 FP-FULL HEIGHT OPTION



3 FP-MIKAGE OPTION



4 MASTER BATH OPTION

IF EXHIBIT C SHOWS THE APPLICABLE UPGRADE OPTIONS, THIS SHOULD FOLLOW THEM.

5 OPTION

6 OPTION

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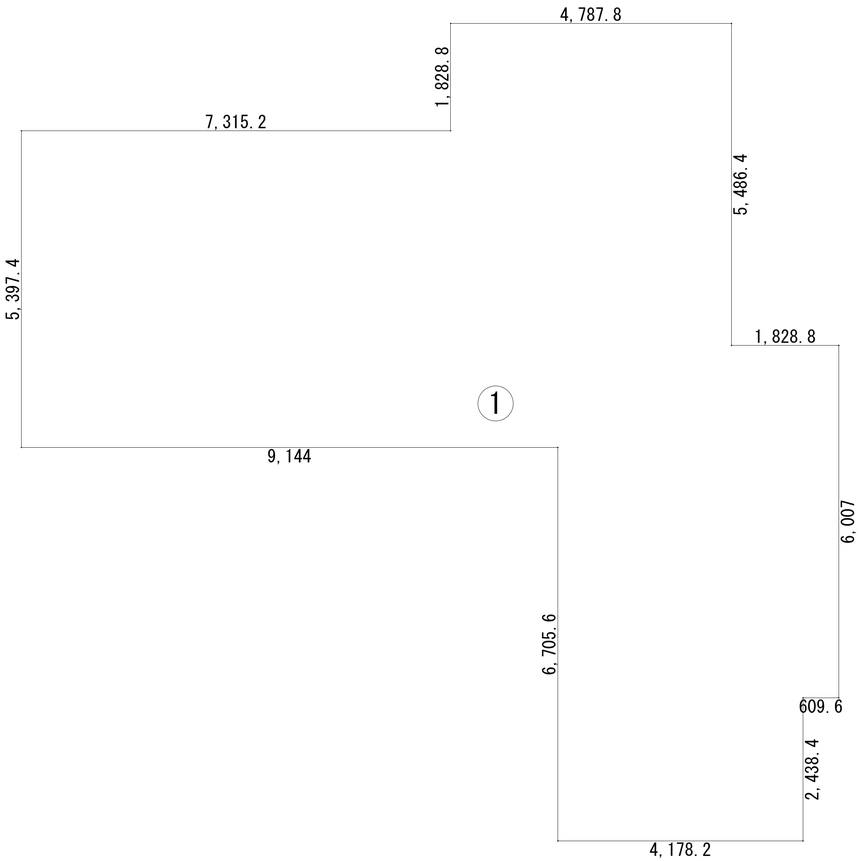
OPTIONAL DETAILS

PAGE NO.

A7.0

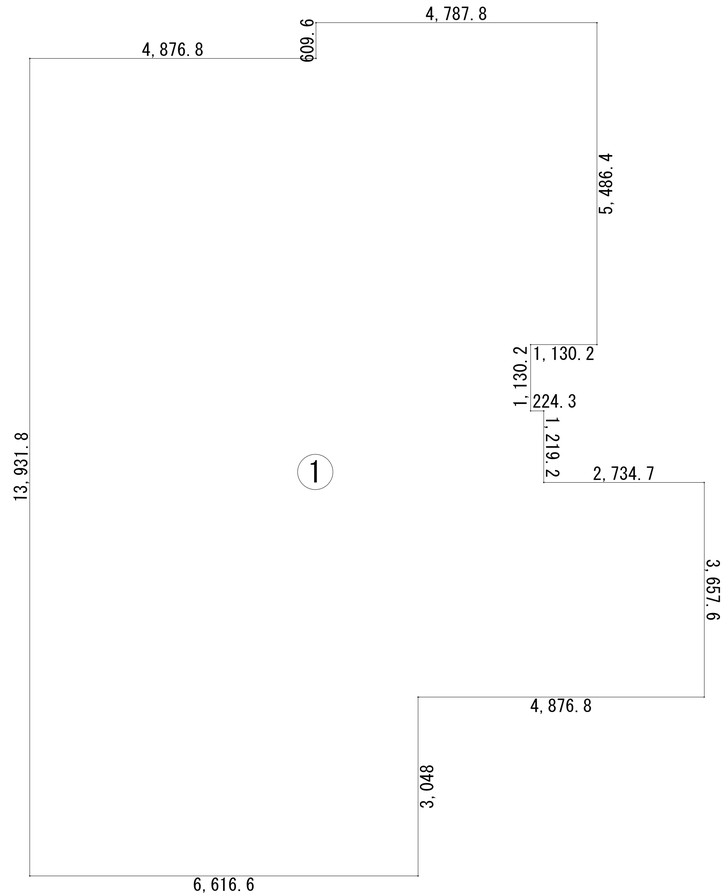
Area Schedule (inside face of exterior wall stud)	
Name	Area
1st Floor	1,161 SF
2nd Floor	1,427 SF
Garage	722 SF
	3,310 SF
NET HEATING AREA	2,588 SF



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		107.881030	1,161 SF
TOTAL	≒	107.881030 107.88	1,161 SF

1 1st FLOOR AREA

Scale 1/4" = 1' -0"



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		132.580806	1,427 SF
TOTAL	≒	132.580806 132.58	1,427 SF

2 2nd FLOOR AREA

Scale 1/4" = 1' -0"

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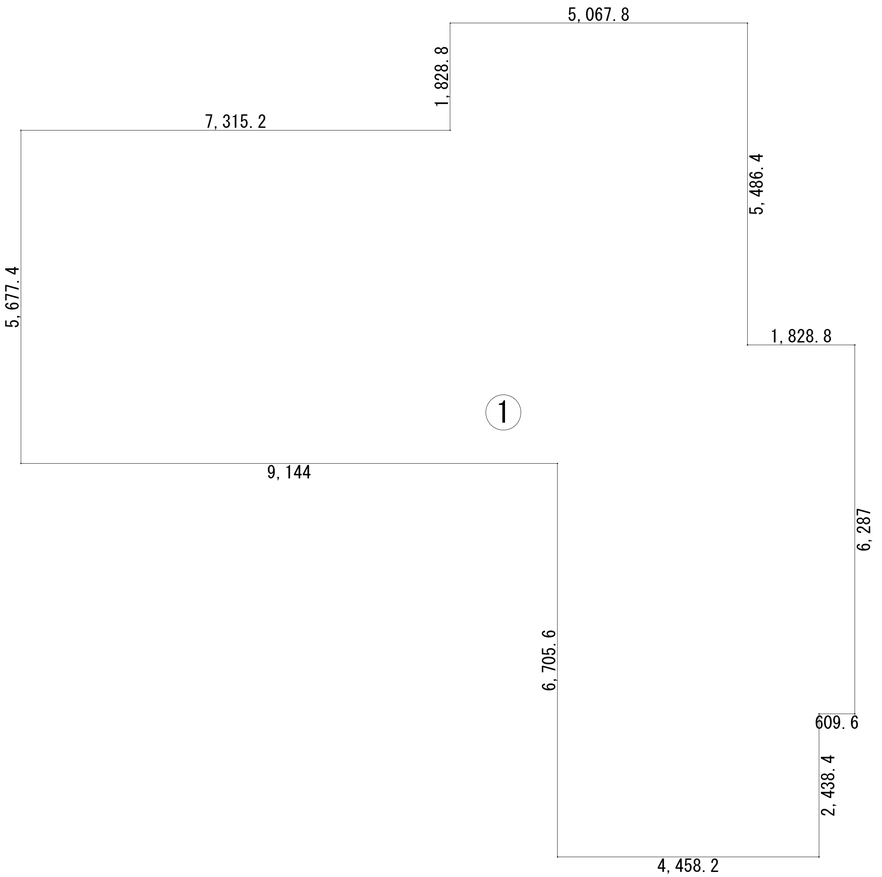
PERMIT SQUARE FOOTAGE

PAGE NO.

A10.0

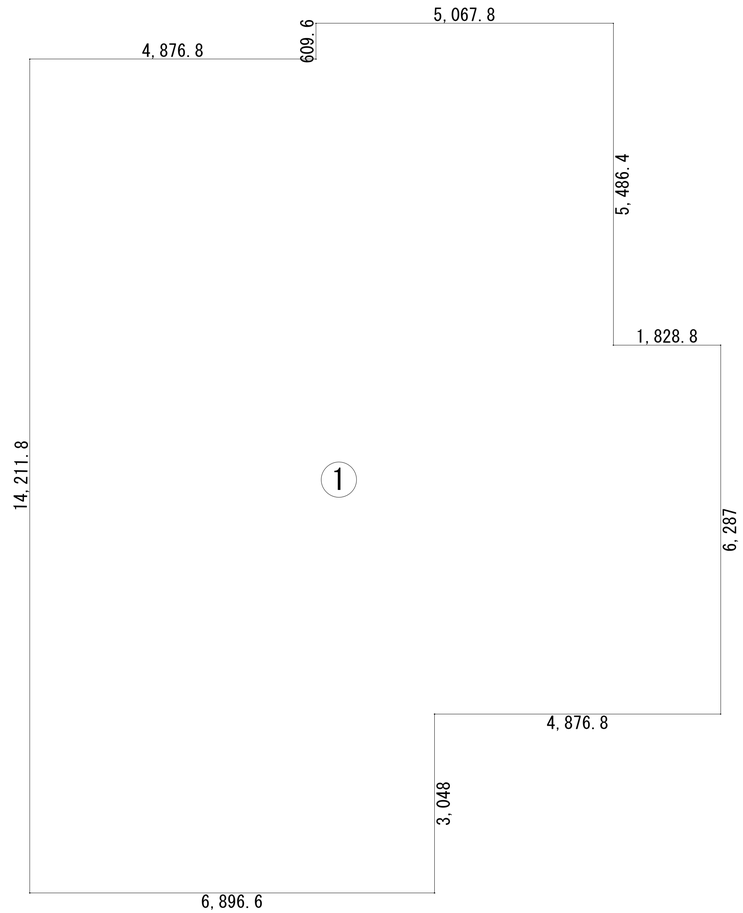
Area Schedule (outside face of exterior wall stud)	
Name	Area
1st Floor	1,246 SF
2nd Floor	1,578 SF
NET HEATING AREA	2,824 SF



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		115. 761238	1, 246 SF
	TOTAL ≒	115. 761238 115. 76	1, 246 SF

1 1st FLOOR AREA

Scale 1/4" = 1' -0"



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		146. 627358	1, 578 SF
	TOTAL ≒	146. 627358 146. 62	1, 578 SF

2 2nd FLOOR AREA

Scale 1/4" = 1' -0"

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SALES SQUARE FOOTAGE

PAGE NO.

A10.1

PLAN C-1L

PROJECT TEAM

OWNER / CONTRACTOR
ICHIJO USA CO., LTD.
1406 140TH PL. NE SUITE 104
BELLEVUE, WA 98007
TEL: 425-497-0616
CONTACT: NAOKI YAMAOKA
nao@ichijousa.com

PROJECT INFORMATION

PROJECT OWNER
ICHIJO USA CO., LTD.

ADDRESS

ASSESSOR'S PARCEL NUMBER

LOT AREA

PROJECT DESCRIPTION
NEW SINGLE FAMILY RESIDENCE

SHEET INDEX

GENERAL NOTES

1. THE CONTRACTOR SHALL PERFORM WORK IN STRICT ACCORDANCE WITH THE FOLLOWING CODES AND ALL APPLICABLE STATE AND LOCAL AMENDMENTS:
   2021 EDITION OF THE OREGON RESIDENTIAL SPECIALTY CODE
   2019 EDITION OF THE OREGON STRUCTURAL SPECIALTY CODE
   2021 EDITION OF THE OREGON PLUMBING SPECIALTY CODE
   2019 EDITION OF THE OREGON MECHANICAL SPECIALTY CODE
   2021 EDITION OF THE OREGON ELECTRICAL SPECIALTY CODE
2. ALL THE WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE ATTACHED DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN THE FIELD AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND THE DRAWINGS.
4. DRAWINGS SHALL NOT BE SCALED. DIMENSIONS SHALL GOVERN, DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. WRITTEN SPECIFICATIONS NOTES SHALL GOVERN OVER ALL. IN CASE OF CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN. CONTACT ARCHITECT PRIOR TO CONSTRUCTION FOR CLARIFICATION.
5. PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS NOTED OTHERWISE.
6. CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING BUT NOT LIMITED TO SAFETY AND PROTECTION OF PROPERTY DURING THE PERFORMANCE OF THE WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS AND PAYMENT OF UTILITY CHARGES.
8. DO NOT COMMENCE WORK UNTIL CONDITIONS ARE ACCEPTABLE TO ALL CONCERNED PARTIES, INCLUDING GOVERNING AUTHORITIES.
9. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND PROTECT ALL EXISTING MECHANICAL, ELECTRICAL AND ALL OTHER UTILITIES AND CAP OR RELOCATE AS REQUIRED.
10. CONTRACTOR SHALL PROVIDE METHODS, MEANS, AND FACILITIES REQUIRED TO PREVENT CONTAMINATION OF SOIL, WATER, OR ATMOSPHERE, AND IN COMPLIANCE WITH ENVIRONMENTAL REGULATION OF LOCAL GOVERNING AUTHORITIES.

MECHANICAL/PLUMBING/ELECTRICAL

1. MECHANICAL/PLUMBING SYSTEMS PERMITS WILL BE OBTAINED BY THE CONTRACTOR DURING CONSTRUCTION.

ENERGY EFFICIENCY

TABLE N1101.1(2)

ADDITIONAL MEASURES

1. HIGH EFFICIENCY HVAC SYSTEM

A. GAS-FIRED FURNACE OR BOILER AFUE 94%, OR
B. AIR SOURCE HEAT PUMP HSPF 10.0/14.0 SEER COOLING, OR
C. GROUND SOURCE HEAT PUMP COP 3.5 OR ENERGY STAR RATED

RADON CONTROL

AF103.5.1 PASSIVE SUBMEMBRANE DEPRESSURIZATION

AF103.5.1.1 VENTILATION. CRAWL SPACES SHALL BE PROVIDED WITH VENTS TO THE EXTERIOR OF THE BUILDING. THE MINIMUN NET AREA OF VENTILATION OPENINGS SHALL COMPLY WITH SECTION R408.1.

AF103.5.1.2 SOIL-GAS-RETARDER. THE SOIL IN CRAWL SPACES SHALL BE COVERED WITH A CONTINUOUS LAYER OF MINIMUN 6-MIL (0.15MM) POLYETHYLENE SOIL-GAS-RETRDER. THE GROUND COVER SHALL BE LAPPED A MINIMUM 12 INCHES (305MM) AT JOINTS AND SHALL BE EXTENDED TO ALL FOUNDATION WALLS ENCLOSING THE CRAWL SPACE AREA.

AF103.5.1.3 VENT PIPE. A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSERTED HORIZONTALLY BENEATH THE SHEETING AND CONNECTED TO A 3- OR 4-INCH-DIAMETER (76 MM OR 102 MM) FITTING WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE BUILDING FLOORS, TERMINATE AT LEAST 12 INCHES (305 MM) ABOVE THE ROOF IN A LOCATION AT LEAST 10 FEET (3048 MM) AWAY FROM ANY WINDOWS OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET (610 MM) BELOW THE EXHAUST POINT, AND 10 FEET (3048 MM) FROM ANY WINDOW OR OTHER OPENING ADJOINING OR ADJACENT BUILDINGS.

SOLAR READY REQUIREMENTS FOR ALL NEW HOMES

N1107.4 SOLAR INTERCONNECTION PATHWAY. A SQUARE METAL JUNCTION BOX NOT LESS THAN 4 INCHES BY 4 INCHES WITH A METAL BOX COVER SHALL BE PROVIDED WITHIN 24 INCHES HORIZONTALLY OR VERTICALLY OF THE MAIN ELECTRICAL PANEL. A MINIMUM 3/4-INCH RIGID METAL RACEWAY SHALL EXTEND FROM THE JUNCTION BOX TO A CAPPED ROOF TERMINATION OR TO AN ACCESSIBLE LOCATION IN THE ATTIC WITH A VERTICAL CLEARANCE OF NOT LESS THAN 36 INCHES. WHERE THE RACEWAY TERMINATES IN THE ATTIC, THE TERMINATION SHALL BE LOCATED NOT LESS THAN 6 INCHES ABOVE THE INSULATION. THE END OF THE RACEWAY SHALL BE MARKED AS “RESERVED FOR SOLAR.”
EXCEPTION: IN LIEU OF 3/4 INCH RIGID METAL RACEWAY, A MINIMUM # 10 COPPER 3-WIRE MC CABLE INSTALLED FROM THE JUNCTION BOX TO THE TERMINATION POINT INCLUDING 6 INCHES ADDITIONAL WIRE IS PERMITTED.

VICINITY PLAN

PROJECT SITE

SITE MAP

PROJECT LOT

SYMBOLS

DRAWING NUMBER
SHEET NUMBER
WINDOW TAG
CENTER LINE
TF-X EXTERIOR
LS-XXXX FINISH
FS PRODUCT
GRID LINES
1 GRID
IS EQUIVALENT
TO 4'-0"
INTERIOR DOOR KEY
WITH INDICATOR
(PROVIDE BY ICHIJO)
INTERIOR DOOR KEY
WITHOUT INDICATOR
(PROVIDE BY ICHIJO)

CD CARBON MONOXIDE DETECTOR
SD SMOKE DETECTOR
HD HEAT DETECTOR
SOURCE SPECIFIC VENT
50 CFM VTOS
RETURN AIR
SUPPLY AIR
(CEILING MOUNTED)
SUPPLY AIR
(FLOOR MOUNTED)
SUPPLY AIR
(WALL MOUNTED)
GM GAS METER
HB HOSE BIB
EM ELECTRIC METER

PH TOILET PAPER HOLDER
(PROVIDE 2X BACKING)
TWR TOWEL RING
(PROVIDE 2X BACKING)
TWB TOWEL BAR
(PROVIDE 2X BACKING
EXCEPT SHOWER ENCLOSURE)
OPR-XX OPEN RAILING
(PROVIDE BY ICHIJO)
LDB LAUNDRY BASE CABINET
(PROVIDE BY ICHIJO)
XX V VANITY CABINET
(PROVIDE BY ICHIJO)

LVP
CONCRETE
TILE
LVT
CARPET
DECKING
BALCONY

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PLAN 2709 TYPE C-1L

REVISION

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DRAWN BY	VH
CHECKED BY	N. Y.

COVER SHEET

PAGE NO. A0.0

WINDOW AND DOOR SCHEDULE (MAIN FLOOR)

NO	ROOM	NAME	OPERATION	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
E1	GARAGE	G16080			GARAGE DOOR	195″	97 1/2″		
E2	GARAGE	D3068			ENTRY DOOR	38 3/8″	83 5/8″		
E3	ENTRY	D3080			ENTRY DOOR	38 3/8″	98 7/8″		
D1	PANTRY	8-29			INTERIOR DOOR	32 1/2″	94 1/2″		
D2	BATHROOM	8-29			INTERIOR DOOR	32 1/2″	94 1/2″		
D3	STORAGE	8-29			INTERIOR DOOR	32 1/2″	94 1/2″		
D4	CLOSET	8-29			INTERIOR DOOR	32 1/2″	94 1/2″		
D5	DEN/BEDROOM 2	8-29			INTERIOR DOOR	32 1/2″	94 1/2″		
C1	CLOSET 2	HFD-30			FOLDING DOOR	29 1/2″	94 1/2″		
1	FOYER	F2570.		TEMPERED	FIXED WINDOWS	29.5″	84.5″	14″	0.23
2	KITCHEN	F3510.			FIXED WINDOWS	41.5″	12.5″	43 1/2″	0.24
3	KITCHEN	F3510.			FIXED WINDOWS	41.5″	12.5″	43 1/2″	0.24
4	KITCHEN	S5550	XO	EGRESS	2-LITE SLIDING WINDOWS	65.5″	60.5″	35 1/2″	0.27
5	DINING	F5560			FIXED WINDOWS	65.5″	72.5″	23 1/2″	0.24
6	LIVING	P8080	OX	TEMPERED/EGRESS	2-LITE PATIO DOOR	96.0″	96.0″	0″	0.25
7	LIVING	F2560			FIXED WINDOWS	29.5″	72.5″	23 1/2″	0.24
8	LIVING	F2560			FIXED WINDOWS	29.5″	72.5″	23 1/2″	0.24
9	BATHROOM	F3510			FIXED WINDOWS	41.5″	12.5″	83 1/2″	0.24
10	DEN/BEDROOM 2	F5510			FIXED WINDOWS	65.5″	12.5″	83 1/2″	0.24
11	DEN/BEDROOM 2	S4550	XO	EGRESS	2-LITE SLIDING WINDOWS	53.5″	60.5″	35 1/2″	0.27

AREA SCHEDULE

1ST FLOOR A	2ND FLOOR B	GARAGE C	BASEMENT D	TOTAL AREA (A+B+C+D)	NET HEATING AREA (A+B+D)	
1266 SF	1443 SF	418 SF	-	3127 SF	2709 SF	(INSIDE FACE OF EXTERIOR WALL STUD)
1346 SF	1517 SF	438 SF	-	3301 SF	2863 SF	(OUTSIDE FACE OF EXTERIOR WALL STUD)
1346 SF	1586 SF	-	-	2932 SF	2932 SF	(SALES)

CRAWL SPACE VENTING

OPENINGS FOR UNDER-FLOOR VENTILATION. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL BE NOT LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER-FLOOR SPACE AREA.
-SEE FLOOR PLAN FOR CRAWL SPACE VENTS CALCULATION.

WHOLE HOUSE VENTILATION

1. REFER TO 2021 ORSC M1505.4 FOR DETAILED REQUIREMENTS FOR THE EXHAUST SYSTEM AND CONTROLS.
2. THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE BALANCED VENTILATION. 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.

SOURCE SPECIFIC VENTILATION

1. REFER TO PLAN FOR LOCATIONS.
2. SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM WATER CLOSET, LAUNDRY ROOM. VENTILATION SYSTEMS SHALL BE DESIGNED TO HAVE THE CAPACITY TO EXHAUST THE MINIMUM AIR FLOW RATE DETERMINED IN ACCORDANCE WITH 2021 ORSC TABLE M1505.5.

NOTE

SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE REQUIRED TO RECEIVE ITS PRIMARY POWER FROM THE BUILDING WIRING AND BE PROVIDED WITH BATTERY BACKUP

1 MAIN FLOOR PLAN
SCALE 1/4" = 1'-0"

270-240

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MAIN FLOOR PLAN

PAGE NO. A2.1

WINDOW AND DOOR SCHEDULE (SECOND FLOOR)

NO	ROOM	NAME	OPERATION	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
D6	LAUNDRY ROOM	7-36			INTERIOR DOOR	38 1/2″	82 1/2″		
D7	BEDROOM 4	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D8	BEDROOM 3	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D9	W.I.C. 2	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D10	W.I.C.	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D11	PRIMARY BATHROOM	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D12	PRIMARY BATHROOM	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D13	PRIMARY BEDROOM	7-36			INTERIOR DOOR	38 1/2″	82 1/2″		
D14	MAIN BATH	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D15	MAIN BATH	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
D16	MECH	7-29			INTERIOR DOOR	32 1/2″	82 1/2″		
C2	BEDROOM 4	MCFD-60			FOLDING DOOR	63″	82 1/2″		
C3	LINEN	MCFD-60			FOLDING DOOR	63″	82 1/2″		
12	LAUNDRY ROOM	S4540,			2-LITE SLIDING WINDOWS	53.5″	48.5″	35 1/2″	0.27
13	BEDROOM 4	S5540,	XO	EGRESS	2-LITE SLIDING WINDOWS	65.5″	48.5″	35 1/2″	0.27
14	BEDROOM 4	F2540,			FIXED WINDOWS	29.5″	48.5″	35 1/2″	0.24
15	BEDROOM 4	F2540,			FIXED WINDOWS	29.5″	48.5″	35 1/2″	0.24
16	BEDROOM 3	S5540,	XO	EGRESS	2-LITE SLIDING WINDOWS	65.5″	48.5″	35 1/2″	0.27
17	BEDROOM 3	F2530,			FIXED WINDOWS	29.5″	36.5″	47 1/2″	0.24
18	W.I.C.	F2540,			FIXED WINDOWS	29.5″	48.5″	35 1/2″	0.24
19	PRIMARY BATHROOM	F2540,		TEMPERED	FIXED WINDOWS	29.5″	48.5″	35 1/2″	0.24
20	PRIMARY BATHROOM	S4540,	XO	TEMPERED	2-LITE SLIDING WINDOWS	53.5″	48.5″	35 1/2″	0.27
21	PRIMARY BEDROOM	S3530,	XO		2-LITE SLIDING WINDOWS	41.5″	36.5″	47 1/2″	0.27
22	PRIMARY BEDROOM	S5540,	XO	EGRESS	2-LITE SLIDING WINDOWS	65.5″	48.5″	35 1/2″	0.27
23	PRIMARY BEDROOM	F3530,			FIXED WINDOWS	41.5″	36.5″	47 1/2″	0.24
24	PRIMARY BEDROOM	F3530,			FIXED WINDOWS	41.5″	36.5″	47 1/2″	0.24
25	STAIRS	F2540,			FIXED WINDOWS	29.5″	48.5″	35 1/2″	0.24
26	STAIRS	F2540,			FIXED WINDOWS	29.5″	48.5″	35 1/2″	0.24
27	FAMILY ROOM	F5540,			FIXED WINDOWS	65.5″	48.5″	35 1/2″	0.24
28	FAMILY ROOM	S9540,	XOX	EGRESS	3-LITE SLIDING WINDOWS	113.5″	48.5″	35 1/2″	0.27

AVERAGE U-FACTOR OF ALL FLOORS: 0.25

WINDOW REQUIREMENTS

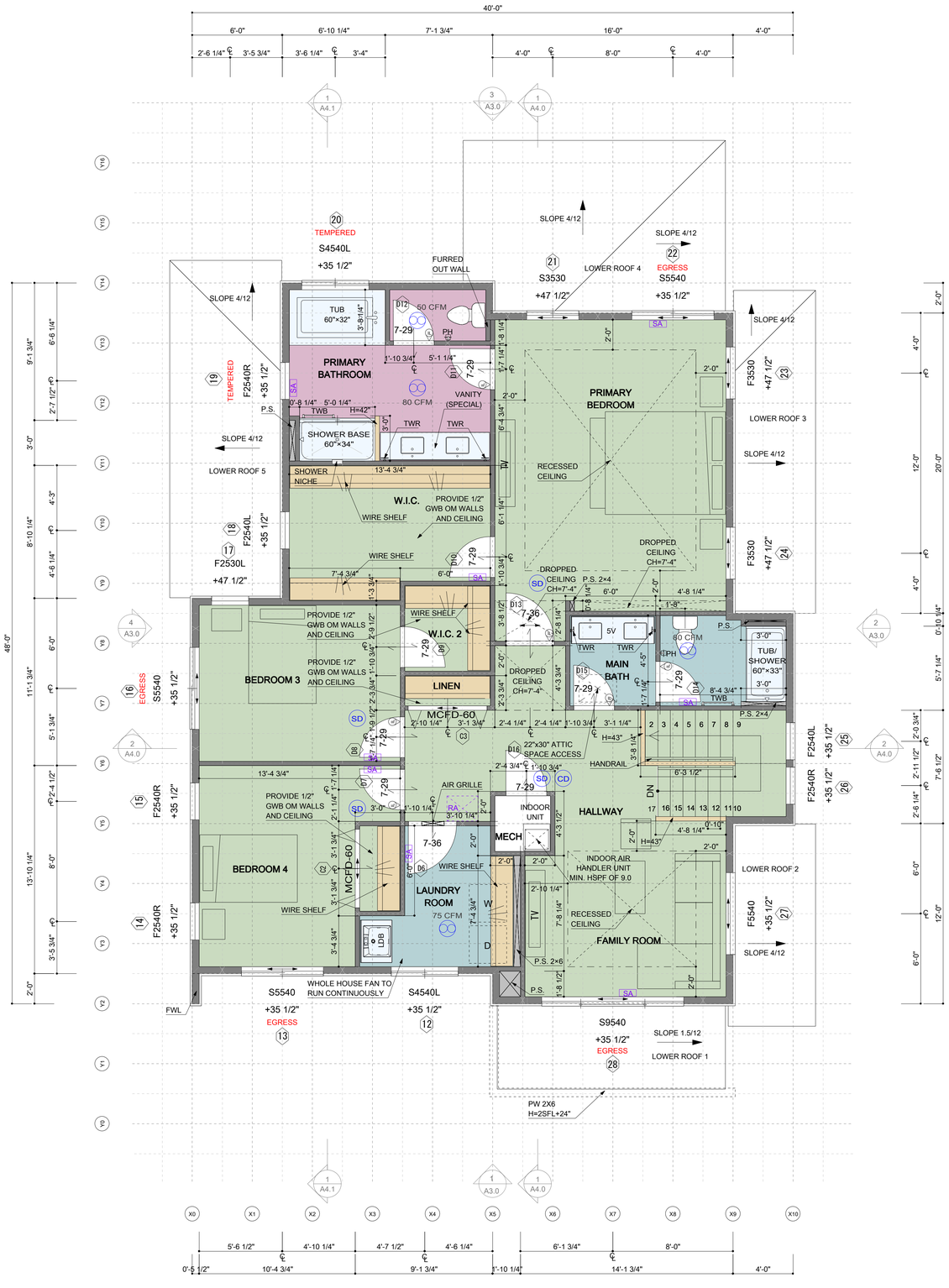
1 REFER TO BLDG FLOOR PLANS FOR TEMPERED GLASS LOCATIONS LABELED "TEMPERED."

2. ALL SLEEPING ROOMS SHALL BE PROVIDED WITH A MINIMUM OF ONE EMERGENCY EGRESS WINDOW. PER 2021 ORSC R310.1. REFER TO PLAN FOR LOCATIONS. EGRESS WINDOWS SHALL HAVE:
   MIN NET OPEN AREA = 5.7 SF
   MIN. NET OPEN HEIGHT = 24"
   MIN. NET OPEN WIDTH = 20"
   MAXIMUM SILL HEIGHT = 44"
   PER 2021 ORSC R310.2.

3. ALL WINDOWS WITHIN 10' OF GRADE SHALL BE LOCKABLE

NOTE

SHOWER HEAD TO BE RATED AT 1.75 GPM
LAVATORY FAUCETS TO BE RATED AT 1.0 GPM
KITCHEN SINK FAUCETS TO BE RATED AT 1.75 GPM



1 SECOND FLOOR PLAN
SCALE 1/4" = 1'-0"

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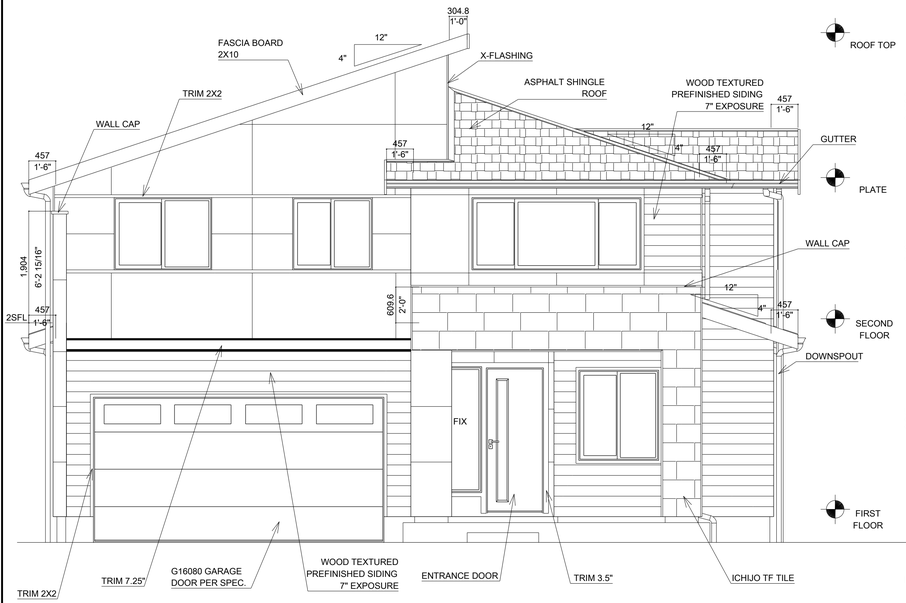
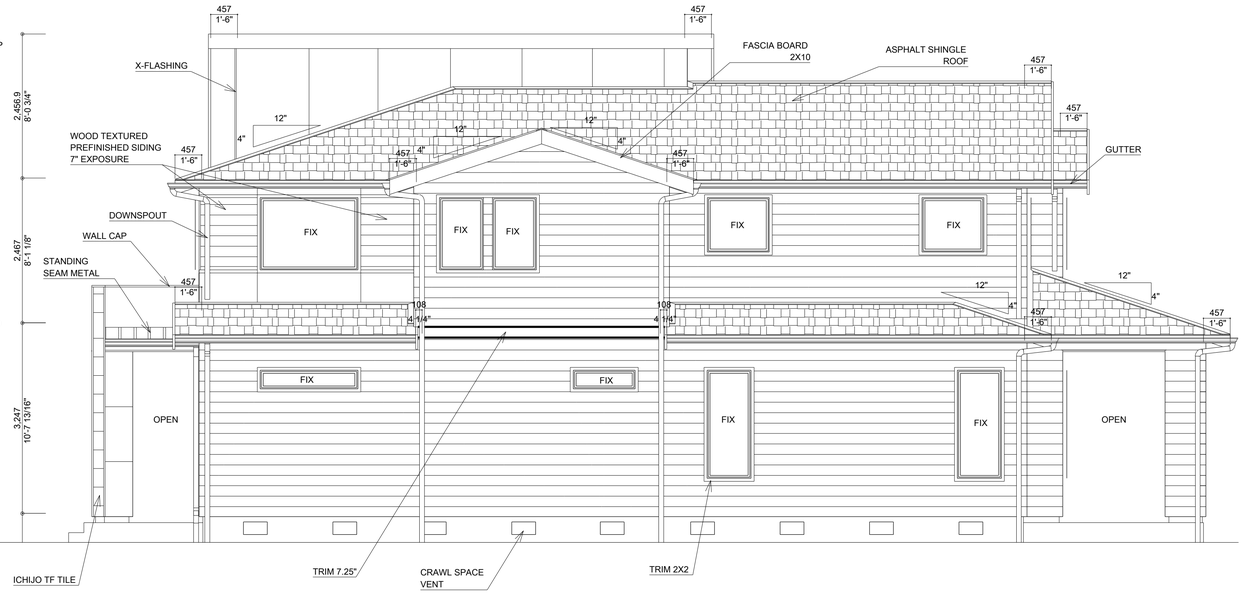
SECOND FLOOR PLAN

PAGE NO. A2.2



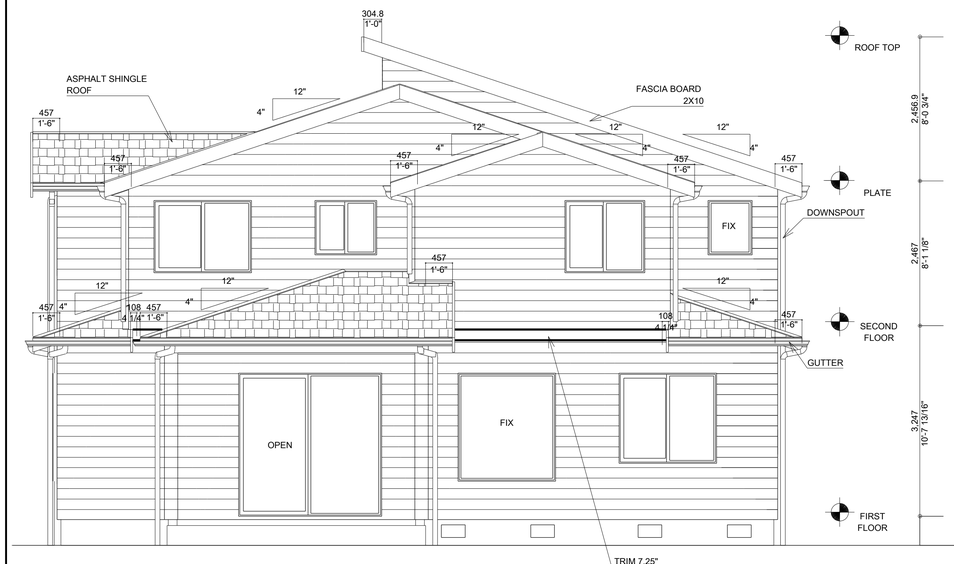


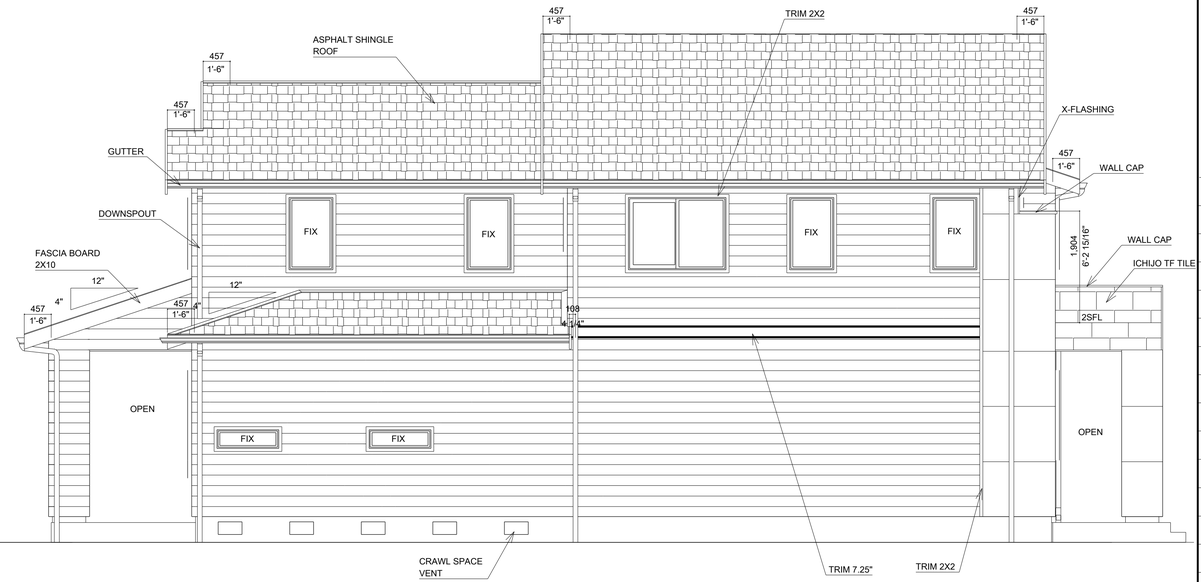
1 FRONT ELEVATION

Scale 1/4" = 1' -0"

2 RIGHT ELEVATION

Scale 1/4" = 1' -0"





3 REAR ELEVATION

Scale 1/4" = 1' -0"

4 LEFT ELEVATION

Scale 1/4" = 1' -0"

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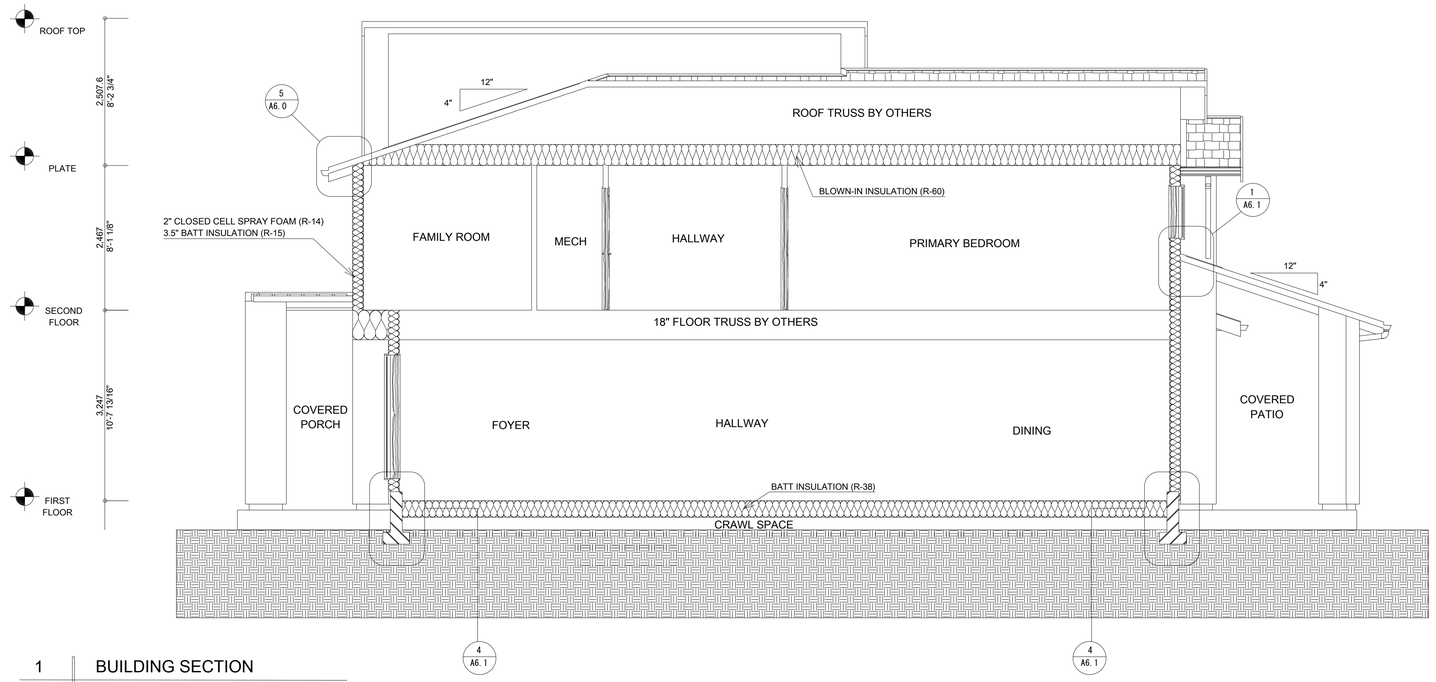
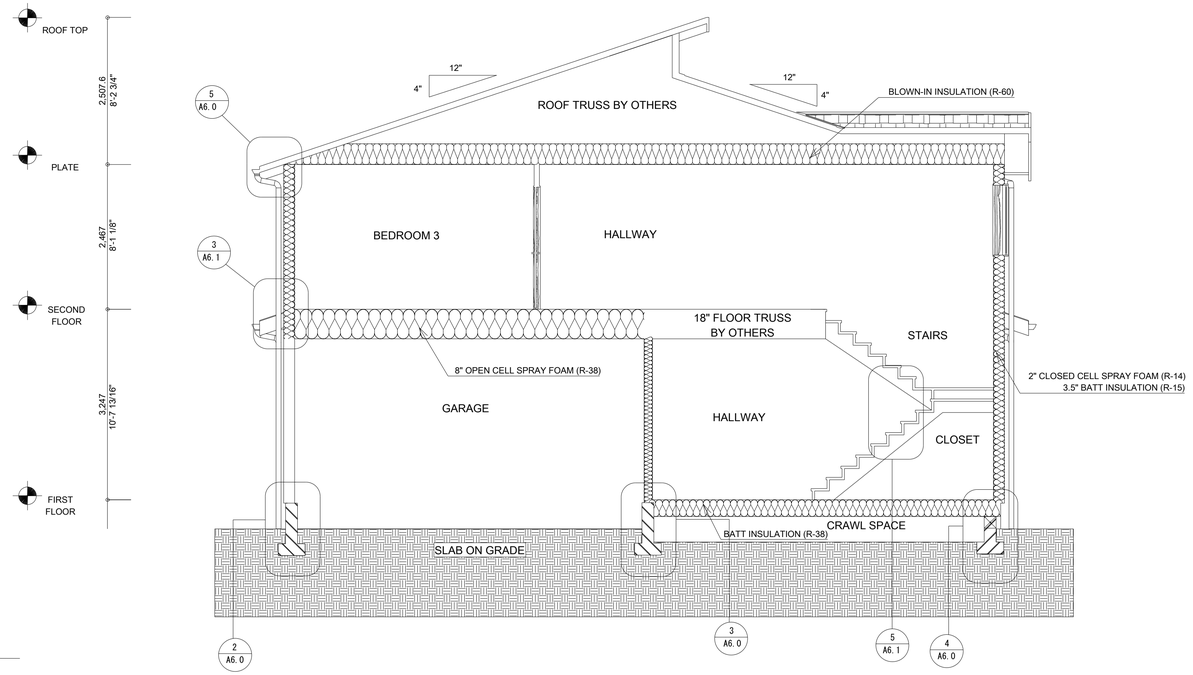
ELEVATIONS

PAGE NO. A3.0



1 BUILDING SECTION

SCALE 1/4" = 1'-0"



2 BUILDING SECTION

SCALE 1/4" = 1'-0"

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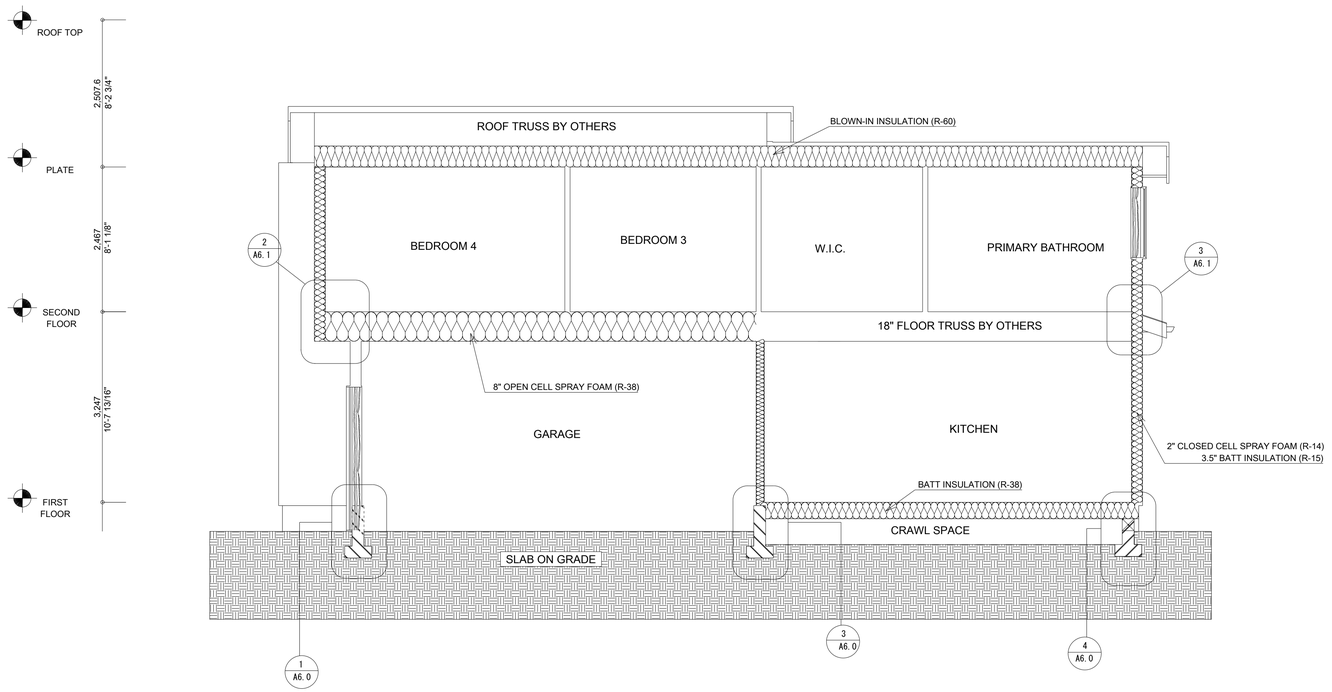
SECTIONS

PAGE NO. A4.0



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SECTIONS

PAGE NO. A4.1

ROOF VENTILATION

LOWER ROOF	1

AREA	90	SF	
VENTING RATIO	1/150		
REQ'D VENT	86	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	6	LF	0	LF
	38	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	38	SI	50	SI
SUB TOTAL RATIO	43	%	57	%
TOTAL (SI)	88	SI		
TOTAL RATIO	102	%	OF REQ'D	

LOWER ROOF	2

AREA	48	SF	
VENTING RATIO	1/150		
REQ'D VENT	46	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	8	LF	0	LF
	50	SI	0	SI
AF 50 (50SI/EA)	0	QTY	0	QTY
	0	SI	0	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	50	SI	0	SI
SUB TOTAL RATIO	100	%	0	%
TOTAL (SI)	50	SI		
TOTAL RATIO	109	%	OF REQ'D	

LOWER ROOF	3

AREA	80	SF	
VENTING RATIO	1/150		
REQ'D VENT	77	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	14	LF	0	LF
	88	SI	0	SI
AF 50 (50SI/EA)	0	QTY	0	QTY
	0	SI	0	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	88	SI	0	SI
SUB TOTAL RATIO	100	%	0	%
TOTAL (SI)	88	SI		
TOTAL RATIO	114	%	OF REQ'D	

LOWER ROOF	4

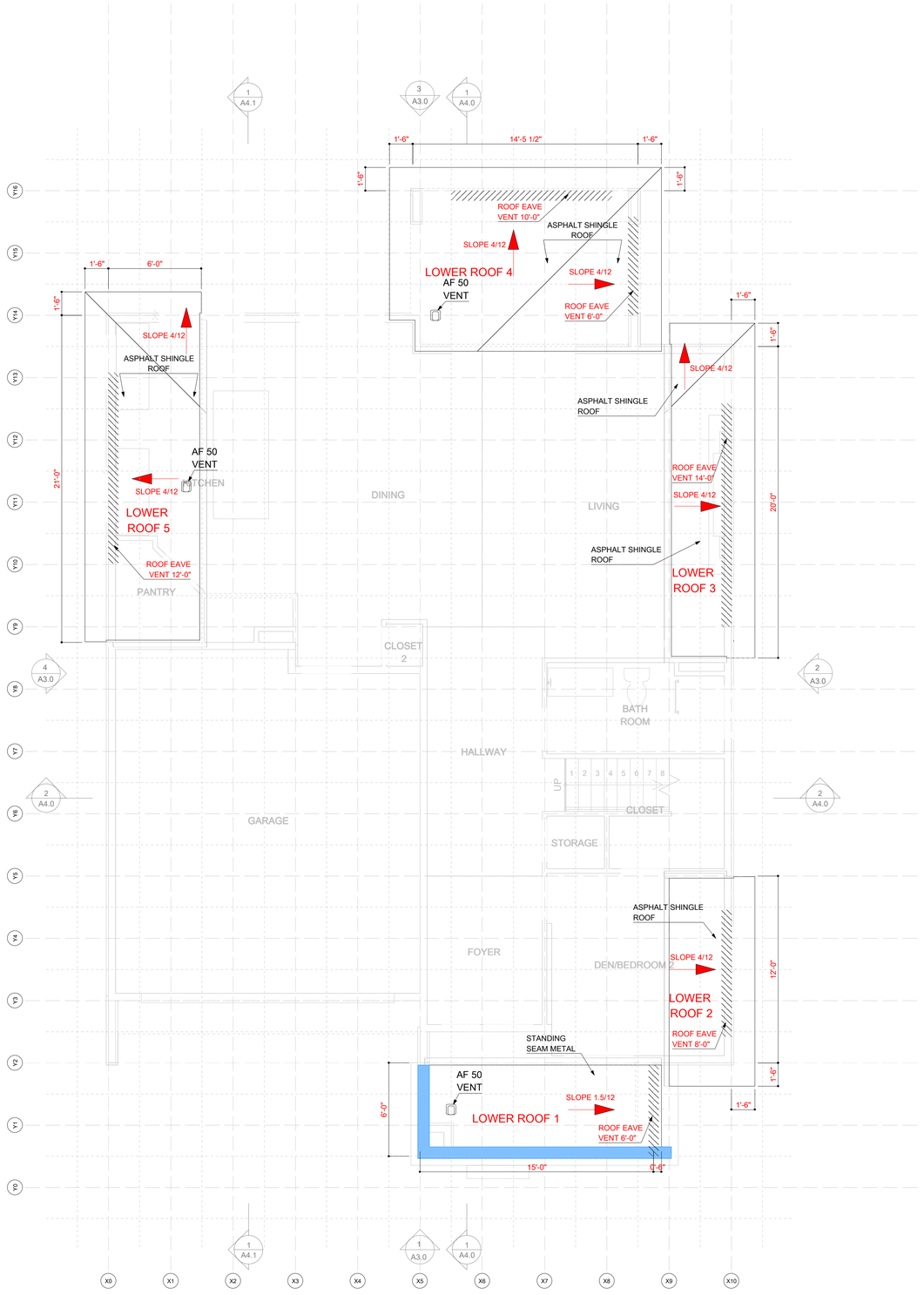
AREA	144	SF	
VENTING RATIO	1/150		
REQ'D VENT	138	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	16	LF	0	LF
	100	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	100	SI	50	SI
SUB TOTAL RATIO	67	%	33	%
TOTAL (SI)	150	SI		
TOTAL RATIO	109	%	OF REQ'D	

LOWER ROOF	5

AREA	126	SF	
VENTING RATIO	1/150		
REQ'D VENT	121	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	12	LF	0	LF
	75	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	75	SI	50	SI
SUB TOTAL RATIO	60	%	40	%
TOTAL (SI)	125	SI		
TOTAL RATIO	103	%	OF REQ'D	



1 LOWER ROOF PLAN

SCALE 1/4" = 1'-0"

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LOWER ROOF PLAN

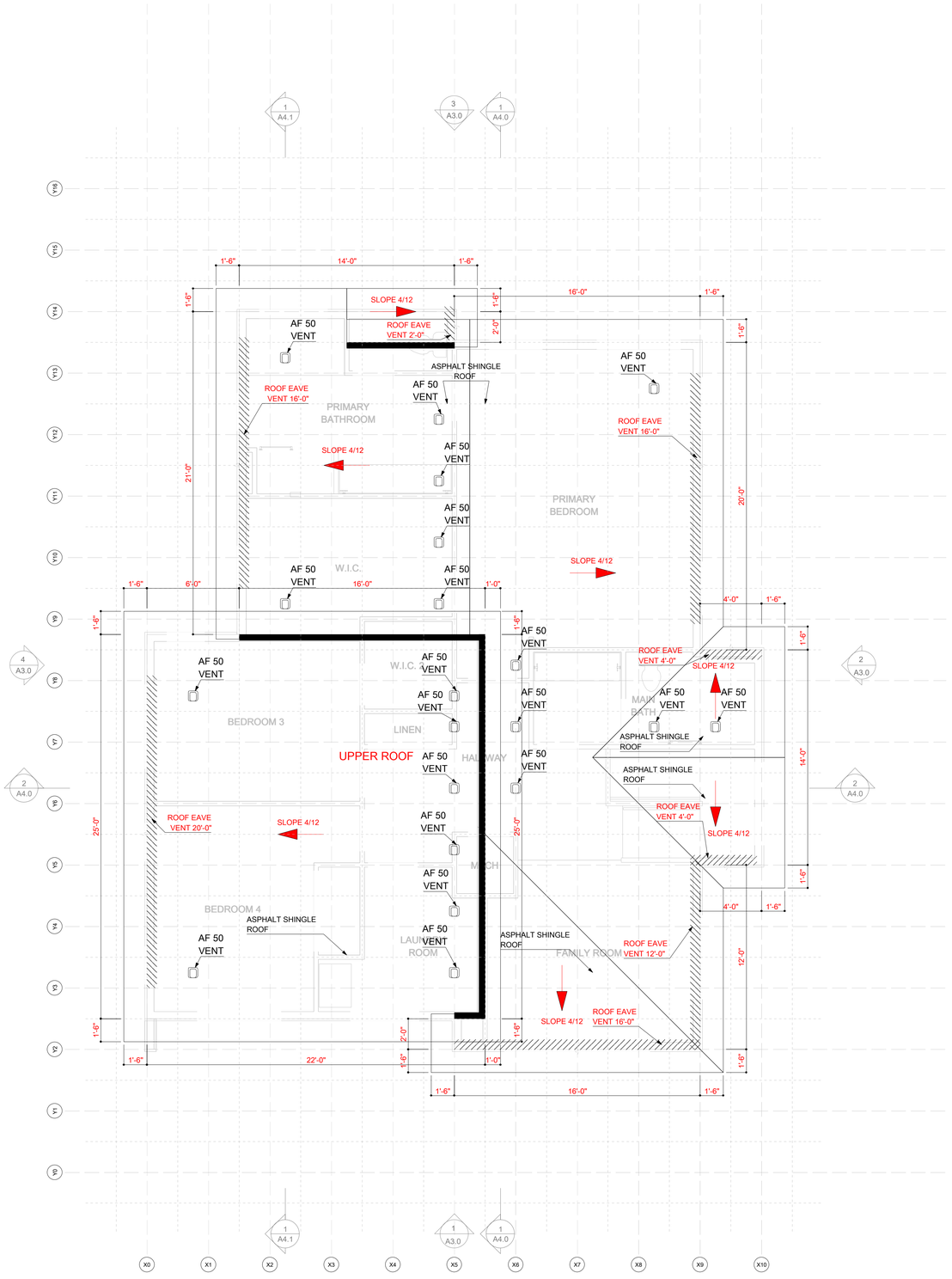
PAGE NO. A5.0

ROOF VENTILATION

UPPER ROOF	1

AREA	1586	SF	
VENTING RATIO	1/150		
REQ'D VENT	1523	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	90	LF	0	LF
	565	SI	0	SI
AF 50 (50SI/EA)	5	QTY	15	QTY
	250	SI	750	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	815	SI	750	SI
SUB TOTAL RATIO	52	%	48	%
TOTAL (SI)	1565	SI		
TOTAL RATIO	103	%	OF REQ'D	



1 MAIN ROOF PLAN

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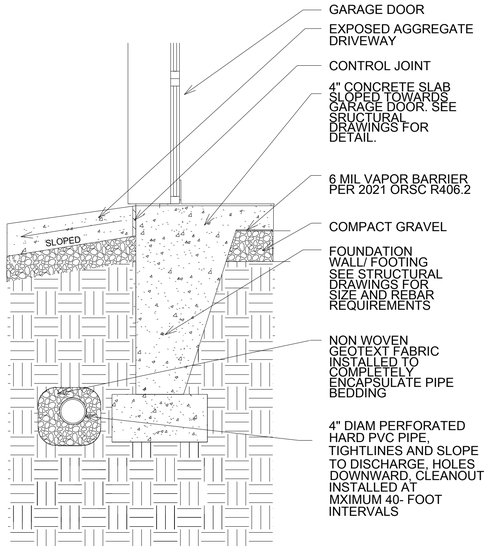
DRAWING # :	
DRAWN BY	VH
CHECKED BY	N. Y.

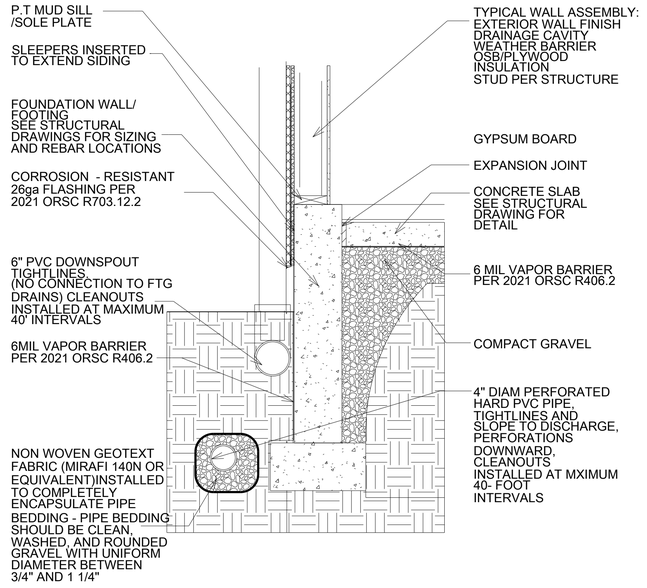
MAIN ROOF PLAN

PAGE NO. A5.1



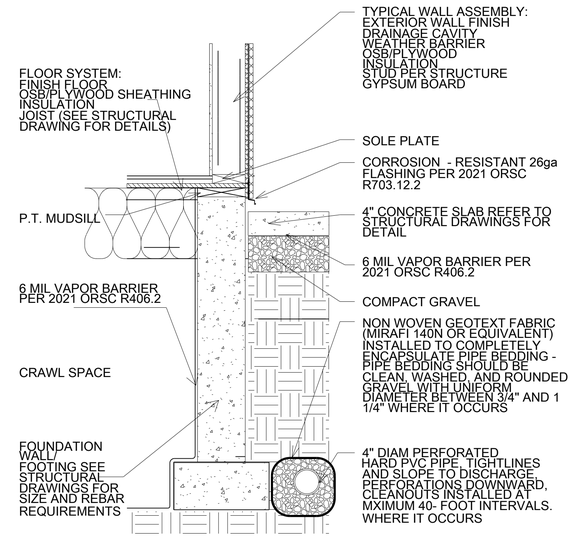
1 TYP. DRIVEWAY

SCALE 1" = 1'-0"



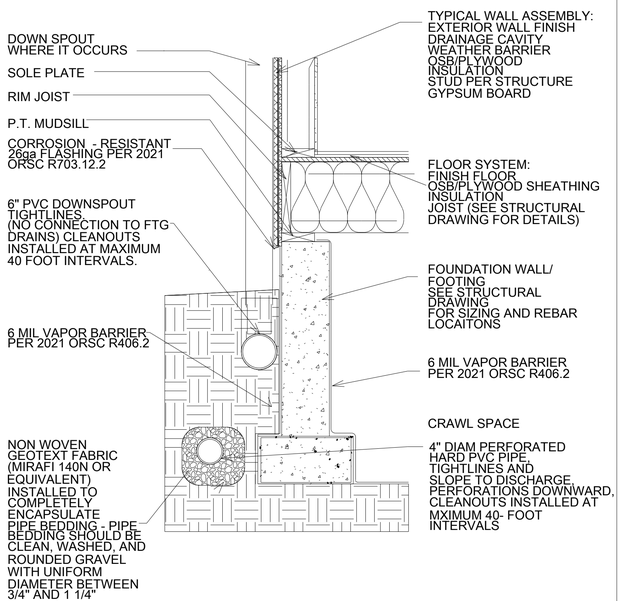
2 TYP. GARAGE FDTN EXT.

SCALE 1" = 1'-0"



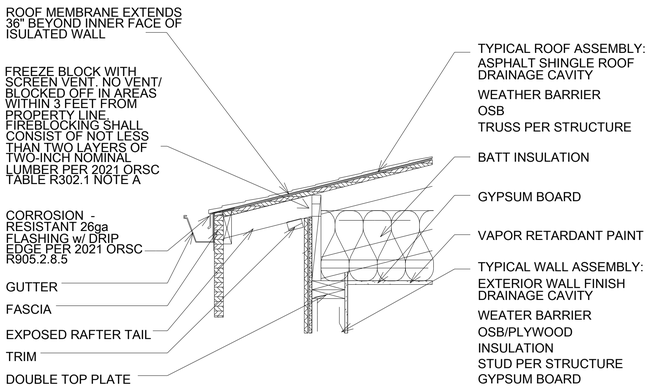
3 TYP. GARAGE FDTN INT.

SCALE 1" = 1'-0"



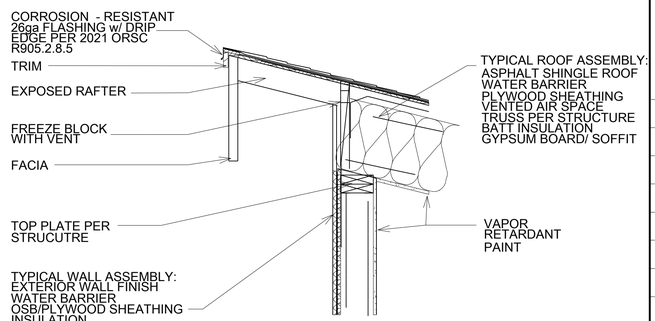
4 TYP. CRAWL SPACE FDTN

SCALE 1" = 1'-0"



5 EXPOSED EAVE TO ATTIC

SCALE 1" = 1'-0"



6 TOP OF SHED ROOF

SCALE 1" = 1'-0"

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WEB: www.ichijousa.com

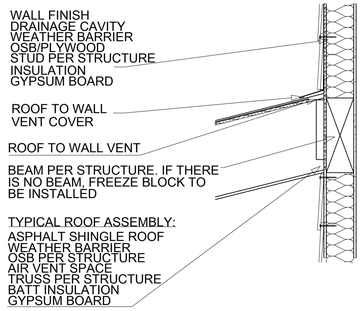
PLAN 2709 TYPE C-1L

REVISION

DATE:	2024/2/1
HOUSE TYPE:	USA-S3
BP CODE:	U223022-XL1L
BP DRAWING #:	1-4
CUST CODE:	
DRAWING # :	
DRAWN BY	CN
CHECKED BY	N. Y.

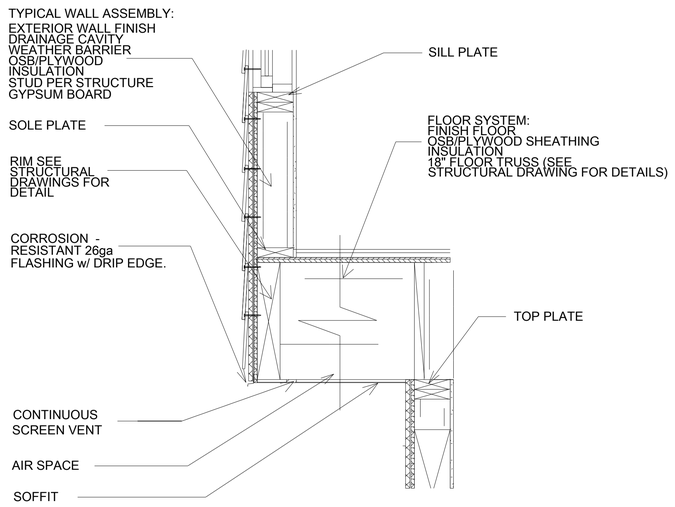
ARCHITECTURAL DETAILS

PAGE NO. A6.0



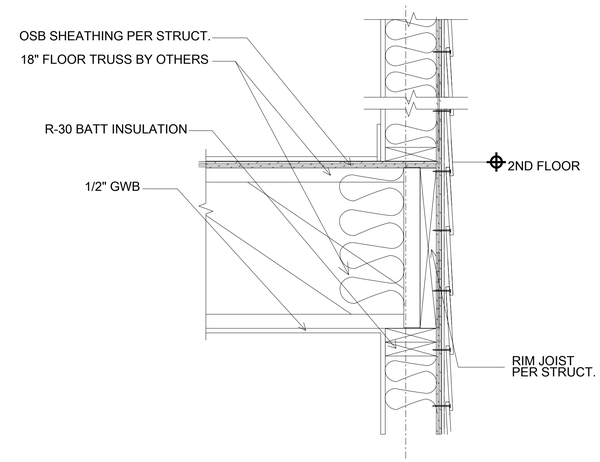
1 ROOF TO WALL VENT

SCALE 1" = 1'-0"



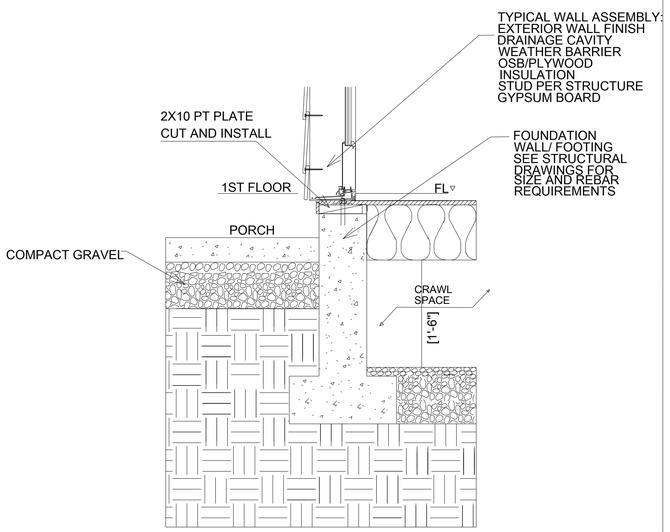
2 2ND FLOOR OVERHANG

SCALE 1" = 1'-0"



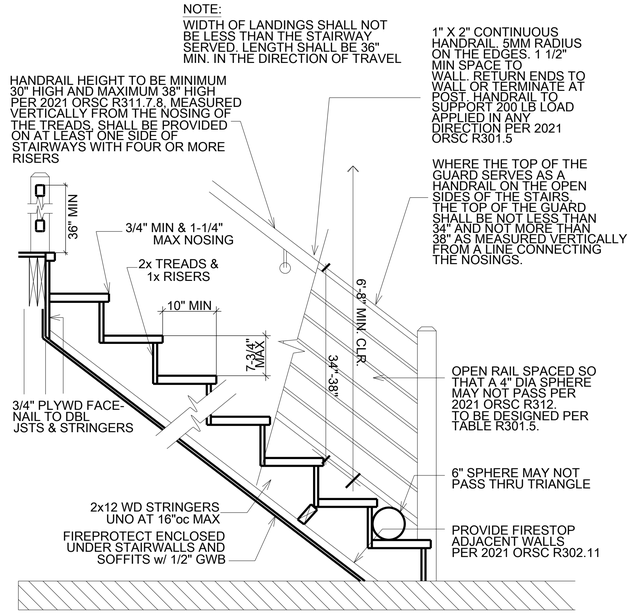
3 FLOOR @ EXTERNAL WALL

SCALE 1" = 1'-0"



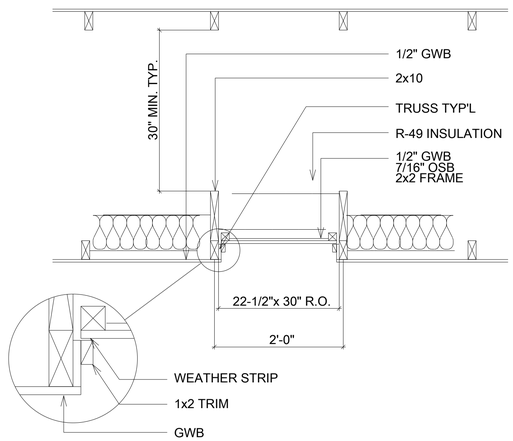
4 TYPE PATIO SLAB EXTERIOR WALL FOUNDATION

SCALE 1" = 1'-0"



5 TYP. STAIRS

SCALE 1" = 1'-0"



6 ATTIC ACCESS

SCALE 1" = 1'-0"

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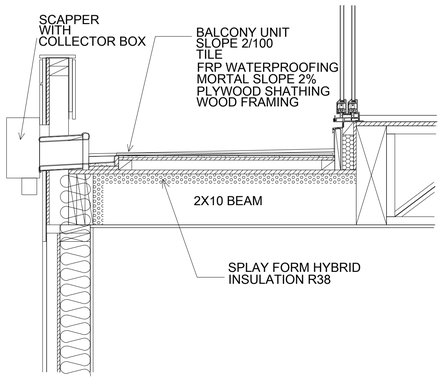
PLAN 2709 TYPE C-1L

REVISION

DATE:	2024/2/1
HOUSE TYPE:	USA-S3
BP CODE:	U223022-XL1L
BP DRAWING #:	1-4
CUST CODE:	
DRAWING # :	
DRAWN BY	CN
CHECKED BY	N. Y.

ARCHITECTURAL DETAILS

PAGE NO. A6.1



1 BALCONY
SCALE 1" = 1'-0"

BLANK

BLANK

BLANK

BLANK

BLANK

BLANK

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PLAN 2709 TYPE C-1L

REVISION

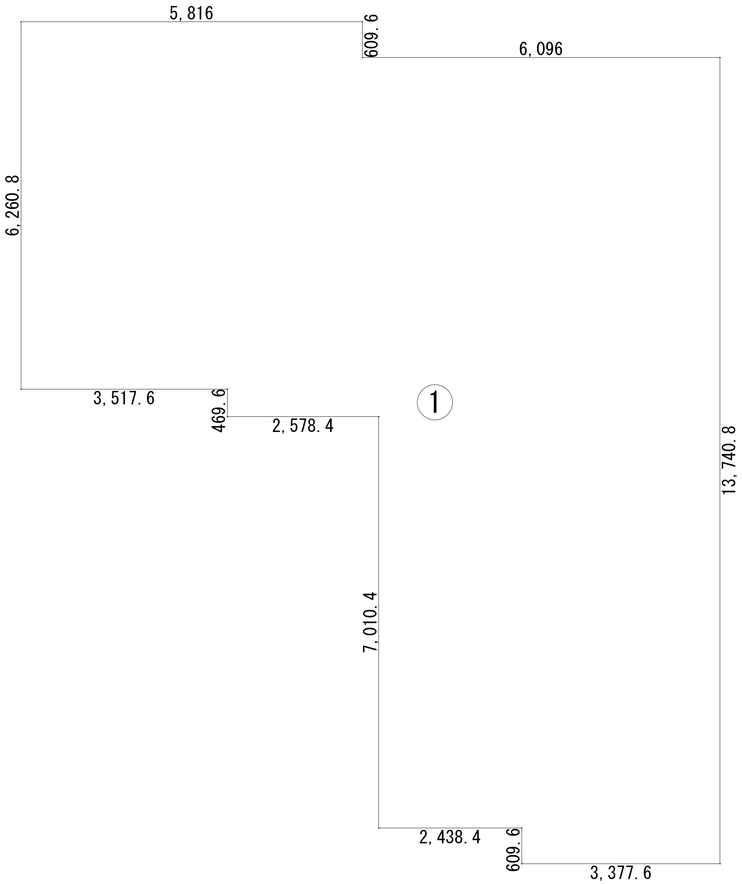
DATE:	2024/2/1
HOUSE TYPE:	USA-S3
BP CODE:	U223022-XL1L
BP DRAWING #:	1-4
CUST CODE:	
DRAWING # :	

DRAWN BY	CN	CHECKED BY	N. Y.

ARCHITECTURAL DETAILS

PAGE NO. A6.2

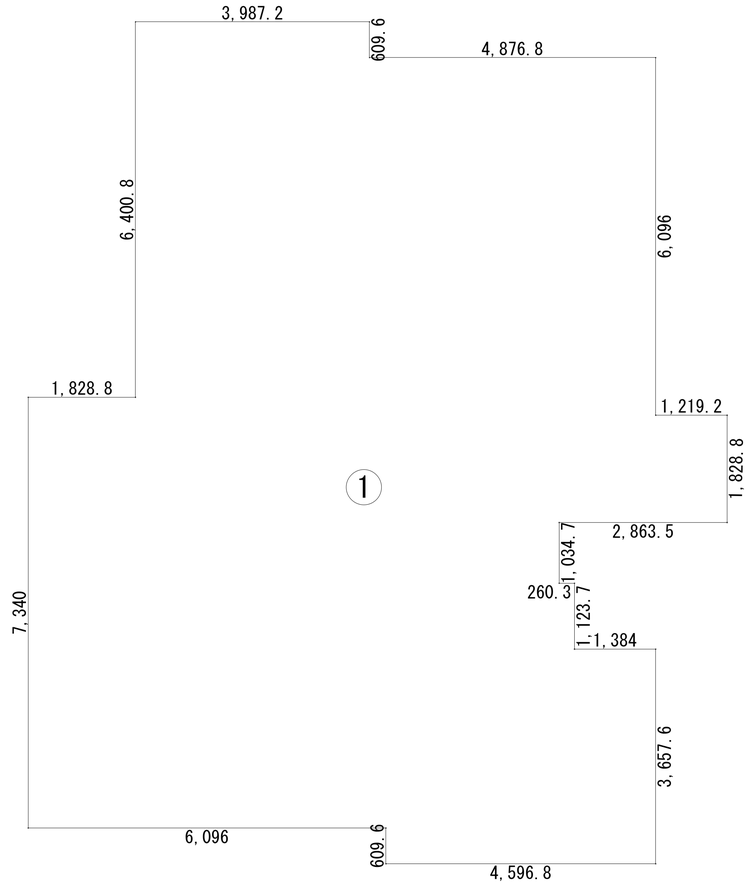
Area Schedule (inside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,266 SF
2ND FLOOR	1,443 SF
GARAGE	418 SF
	3,127 SF
NET HEATING AREA	2,709 SF



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		117.636009	1,266 SF
	TOTAL ≒	117.636009 117.63	1,266 SF

1 1ST FLOOR AREA

Scale 1/4" = 1' -0"



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		134.024270	1,443 SF
	TOTAL ≒	134.024270 134.02	1,443 SF

2 2ND FLOOR AREA

Scale 1/4" = 1' -0"

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PLAN 2709 TYPE C-1L

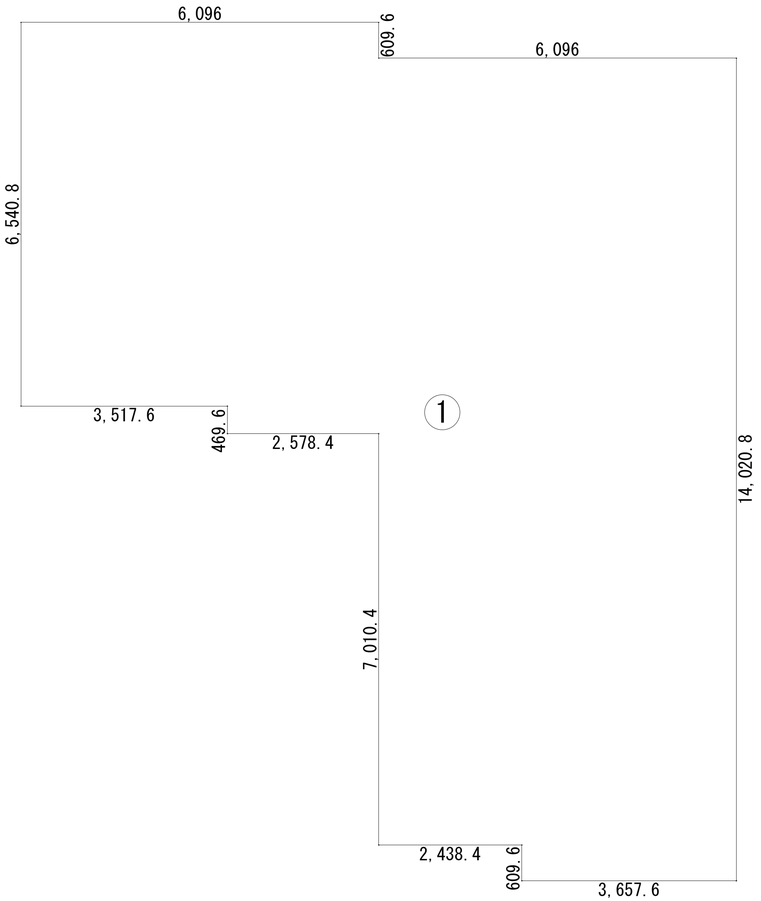
REVISION

DATE:	2024/2/1
HOUSE TYPE:	USA-S3
BP CODE:	U223022-XL1L
BP DRAWING #:	1-4
CUST CODE:	
DRAWING # :	
DRAWN BY RQ	CHECKED BY N.Y.

PERMIT SQUARE FOOTAGE

PAGE NO. A11.0

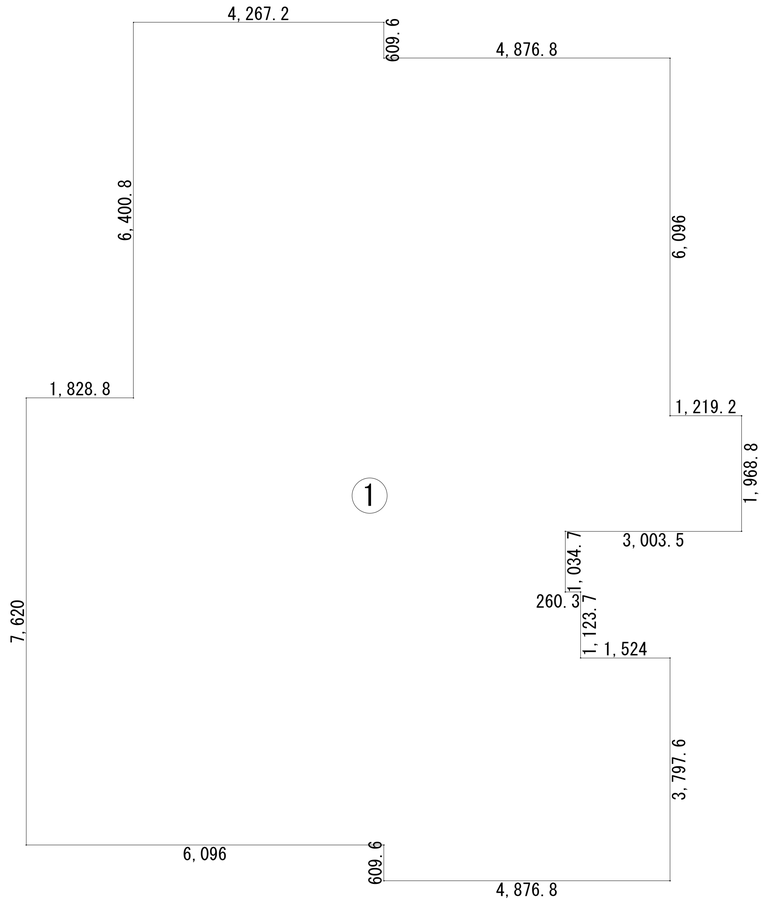
Area Schedule (outside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,346 SF
2ND FLOOR	1,517 SF
GARAGE	438 SF
	3,301 SF
NET HEATING AREA	2,863 SF



NUMBER	FORMULA	(m)	AREA (㎡)	AREA (SF)
①			125.067881	1, 346 SF
	TOTAL	≒	125.067881 125.06	1, 346 SF

1 1ST FLOOR AREA

Scale 1/4" = 1' -0"



NUMBER	FORMULA	(m)	AREA (㎡)	AREA (SF)
①			140.983278	1, 517 SF
	TOTAL	≒	140.983278 140.98	1, 517 SF

2 2ND FLOOR AREA

Scale 1/4" = 1' -0"

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PLAN 2709 TYPE C-1L

REVISION

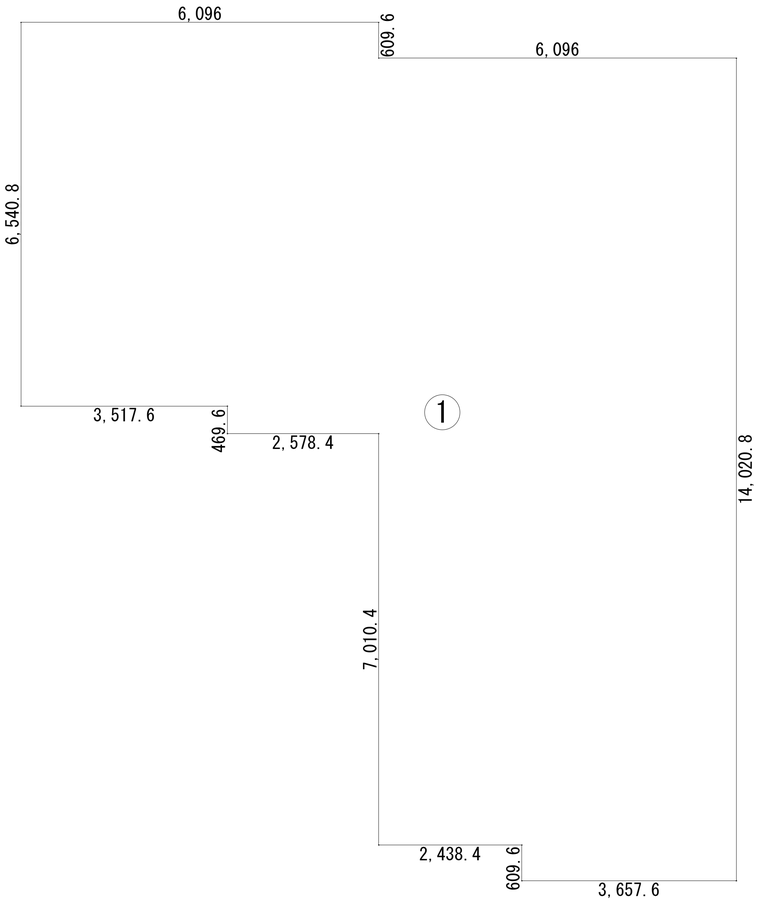
DATE:	2024/2/1
HOUSE TYPE:	USA-S3
BP CODE:	U223022-XL1L
BP DRAWING #:	1-4
CUST CODE:	
DRAWING # :	
DRAWN BY: RQ	CHECKED BY: N. Y.

PERMIT SQUARE FOOTAGE

PAGE NO. A11.1

Area Schedule (outside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,346 SF
2ND FLOOR	1,586 SF

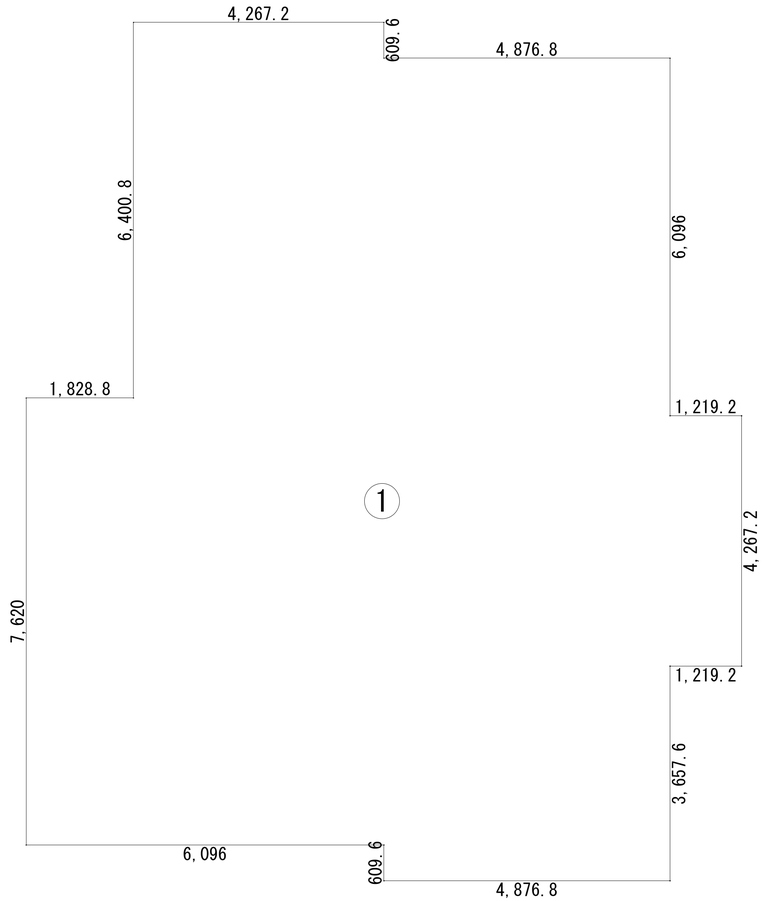
NET HEATING AREA 2,932 SF



NUMBER	FORMULA	(m)	AREA (㎡)	AREA (SF)
①			125.067881	1,346 SF
	TOTAL	≒	125.067881 125.06	1,346 SF

1 1ST FLOOR AREA

Scale 1/4" = 1' -0"



NUMBER	FORMULA	(m)	AREA (㎡)	AREA (SF)
①			147.344221	1,586 SF
	TOTAL	≒	147.344221 147.34	1,586 SF

2 2ND FLOOR AREA

Scale 1/4" = 1' -0"

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PLAN 2709 TYPE C-1L

REVISION

DATE:	2024/2/1
HOUSE TYPE:	USA-S3
BP CODE:	U223022-XL1L
BP DRAWING #:	1-4
CUST CODE:	
DRAWING # :	
DRAWN BY RQ	CHECKED BY N. Y.

SALES SQUARE FOOTAGE

PAGE NO. A11.2

PLAN NG-1L

PROJECT INFORMATION

PROJECT OWNER

ICHIJO USA CO., LTD.

ADDRESS

ASSESSOR'S PARCEL NUMBER

ZONE

LOT AREA

PROJECT DESCRIPTION

NEW SINGLE FAMILY RESIDENCE

PROJECT TEAM

OWNER / CONTRACTOR

ICHIJO USA CO., LTD.
1406 140th PL. NE Suite 104
Bellevue, WA 98007
TEL: 425-497-0616
CONTACT: SAMMY UCHIMURA (sammy@ichijousa.com)

GENERAL NOTES

1. THE CONTRACTOR SHALL PERFORM WORK IN STRICT ACCORDANCE WITH THE FOLLOWING CODES AND ALL APPLICABLE STATE AND LOCAL AMENDMENTS:
   2018 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE
   2018 EDITION OF THE WASHINGTON STATE ENERGY CODE
   2018 EDITION OF THE INTERNATIONAL FIRE CODE
   2018 EDITION OF THE INTERNATIONAL MECHANICAL CODE
   2018 EDITION OF THE UNIFORM PLUMBING CODE
   2018 EDITION OF THE WASHINGTON CITIES ELECTRICAL CODE
2. ALL THE WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE ATTACHED DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSION AND CONDITIONS IN THE FIELD AND SHALL IMMEDIATELY NOTIFY THE BUILDER OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND THE DRAWINGS.
4. DRAWINGS SHALL NOT BE SCALED. DIMENSIONS SHALL GOVERN, DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. WRITTEN SPECIFICATIONS AND NOTES SHALL GOVERN OVER ALL. IN CASE OF CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN. CONTACT BUILDER PRIOR TO CONSTRUCTION FOR CLARIFICATION.
5. PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS NOTED OTHERWISE.
6. CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING BUT NOT LIMITED TO SAFETY AND PROTECTION OF PROPERTY DURING THE PERFORMANCE OF THE WORK
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS AND PAYMENT OF UTILITY CHARGES.
8. DO NOT COMMENCE WORK UNTIL CONDITIONS ARE ACCEPTABLE TO ALL CONCERNED PARTIES, INCLUDING GOVERNING AUTHORITIES.
9. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND PROTECT ALL EXISTING MECHANICAL, ELECTRICAL AND ALL OTHER UTILITIES AND CAP OR RELOCATE AS REQUIRED.
10. CONTRACTOR SHALL PROVIDE METHODS, MEANS, AND FACILITIES REQUIRED TO PREVENT CONTAMINATION OF SOIL, WATER, OR ATMOSPHERE, AND IN COMPLIANCE WITH ENVIRONMENTAL REGULATION OF LOCAL GOVERNING AUTHORITIES.
11. EXTERIOR/INTERIOR WALLS ARE PREFABRICATED AT HOUSE AND TECHNOLOGY INDUSTRIES, PTE. LTD (HTI). THAT INCLUDES WALL FRAMING, WINDOW, WALL SHEATHING, WEATHER BARRIER, FURRING STRIP.
    HTI SHALL STRICTLY COMPLY WITH THE REQUIREMENTS
    FOR AC196 AND FA-464, WHICH VERIFY THEIR IN-PLANT INSPECTION PROCESSES. AC196 AND FA-464 CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH PERMIT SET.

ENERGY NOTES

1. ALL WORK SHALL CONFORM TO THE 2018 WASHINGTON STATE ENERGY CODE (WSEC).
2. ALL DOORS AND WINDOWS SHALL BE NFRC CERTIFIED FOR U VALUES AS INDICATED. ENERGY COMPLIANCE IS PER WASHINGTON STATE ENERGY CODE PRESCRIPTIVE PATH, TABLE R402.1.1 REFER TO WINDOW SCHEDULE ON THIS SHEET.
3. ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS PER 2018 WSEC R406.3 SHALL BE MET BY THE FOLLOWING OPTIONS FROM TABLE R406.2 AND R406.3 TO ACHIEVE THE MINIMUM CREDIT OF 6.0 REQUIRED AS MEDIUM DWELLING UNIT;

   FUEL TYPE 2 (1.0 POINTS) - FOR AN INITIAL HEATING SYSTEM USING A HEAT PUMP THAT MEETS FEDERAL STANDARDS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(1)C OR C403.3.2(2).
   OPTION 1.3 (0.5 POINTS) - EFFICIENT BUILDING ENVELOPE OPTIONS
   COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL CONDUCTIVE UA BY 5%.
   OPTION 2.1 (0.5 POINTS) - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS
   COMPLIANCE BASED ON SECTION R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS.
   OPTION 3.5 (1.5 POINTS) - HIGH-EFFICIENCY HVAC EQUIPMENT OPTIONS
   AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPF OF 11.0.
   OPTION 4.1 (0.5 POINTS) - HIGH-EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS
   ALL SUPPLY AND RETURN DUCTS LOCATED IN AN UNCONDITIONED ATTIC SHALL BE DEEPLY BURIED IN CEILING. INSULATION IN ACCORDANCE WITH SECTION R403.3.7. FOR MECHANICAL EQUIPMENT LOCATED OUTSIDE THE CONDITIONED SPACE, A MAXIMUM OF 10 LINEAR FEET OF RETURN DUCT AND 5 LINEAR FEET OF SUPPLY DUCT CONNECTIONS TO THE EQUIPMENT MAY BE OUTSIDE THE DEEPLY BURIED INSULATION.
   OPTION 5.5 (2.0 POINTS)- EFFICIENT WATER HEATING OPTIONS
   ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEEA'S ADVANCED WATER HEATING SPECIFICATION.
4. A PERMANENT CERTIFICATE SHALL BE COMPLETED AND POSTED BY THE BUILDER ON OR WITHIN THREE FEET OF THE ELECTRICAL DISTRIBUTION PANEL. THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE FOLLOWING:
   a.) R VALUES
   b.) U VALUES
   c.) RESULTS FROM DUCT SYSTEM AIR LEAKAGE TESTINGS.
   d.) RESULTS FROM BUILDING ENVELOPE AIR LEAKAGE TESTING (BLOWER DOOR TEST).
   e.) TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIPMENT.
5. ALL EXTERIOR DUCTWORK OUTSIDE THE THERMAL ENVELOPE SHALL BE INSULATED TO R-8 MINIMUM.
6. ALL HOT WATER PIPING SHALL BE INSULATED TO R-3 MINIMUM.
7. DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED (WSEC R403.2.2) WHERE DUCTS OR AIR HANDLERS ARE LOCATED OUTSIDE THE THERMAL ENVELOPE (INCLUDING CRAWL SPACES) DUCTS SHALL BE LEAK TESTED IN ACCORDANCE WITH WSU RS-33
8. BUILDING AIR LEAKAGE TESTING IS REQUIRED PRIOR TO FINAL INSPECTION. DEMONSTRATE THAT AIR LEAKAGE RATE IS LESS THAN 5 AIR CHANGES PER HOUR AT A PRESSURE OF 0.2 INCHES W.G. THE TEST RESULT SHALL BE POSTED ON THE RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE (WSEC R402.4.1.2).
9. WINDOWS SKYLIGHTS AND SLIDING DOORS SHALL HAVE AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM PER SQUARE FOOT. SWINGING DOORS NO MORE THAN 0.5 CFM PER SQUARE FOOT WHEN TESTED ACCORDING TO NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440. ALL UNITS SHALL BE LISTED AND LABELED BY THE MFR
10. RECESSED LUMINAIRES INSTALLED IN THE BUILDING ENVELOPED SHALL BE IC-RATED AND CERTIFIED UNDER ASTM E283 AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM WHEN TESTED AT 1.57 PSF PRESSURE DIFFERENTIAL AND SHALL HAVE A LABEL ATTACHED SHOWING COMPLIANCE WITH THIS TEST METHOD. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.
11. MINIMUM 75% OF ALL INTERIOR LUMINARES SHALL BE HIGH EFFICACY LUMINARES. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY LUMINARES.
12. EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH ATLEAST ONE PROGRAMMABLE THERMOSTAT IN COMPLIANCE WITH R403.1.1 FOR THE REGULATION OF TEMPERATURE.
13. TO THE MAXIMUM EXTENT POSSIBLE, INSULATION SHALL EXTEND OVER THE FULL COMPONENT AREA TO THE INTENDED R-VALUE EXTERIOR WALL CAVITIES ISOLATED DURING FRAMING SHALL BE FULLY INSULATED TO THE LEVELS OF THE SURROUNDING WALLS.

INSULATION NOTES

1. ALL WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE TOTAL UA ALTERNATIVE WORKSHEET SUBMITTED SEPARATELY.
2. ALL INSULATION SHALL BE INSTALLED IN COMPLIANCE WITH THE 2018 WASHINGTON STATE ENERGY CODE (2018 WSEC).

SHEET INDEX

N

VICINITY PLAN

PROJECT SITE

N

PROJECT MAP

PROJECT LOT

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PLAN NG-1L
U120160-DB1L

REVISION

DATE:	2022/6/3
HOUSE TYPE	USA-S1
DRAWING #	1-1
HRD CODE:	U120160-DB1L

DRAWN BY	CHECKED BY
MC	M. M.

COVER SHEET

PAGE NO.

A0.0

WINDOW SCHEDULE (FIRST FLOOR)

NO	ROOM	NAME	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
	ENTRY	H=7'		ENTRY DOOR	38.375"	83.5"		
	GARAGE	16'X7'		GARAGE DOOR	195"	85.5"		
	GARAGE	H=7'		ENTRY DOOR	38.375"	83.5"		
1	DEN/BEDROOM 2	U6560		2-LITE SLIDING WINDOWS	65.5"	60.5"	34"	0.27
2	GUEST BATH	UF4124	TEMPERED	FIXED WINDOWS	41.5"	24.5"	70"	0.24
3	HALLWAY	UF6572		FIXED WINDOWS	65.5"	72.5"	22"	0.23
4	LIVING	U6082S		2-LITE PATIO DOOR	60.0"	82.0"	0"	0.26
5	LIVING	UF6572		FIXED WINDOWS	65.5"	72.5"	22"	0.23
6	LIVING	UF1772		FIXED WINDOWS	17.5"	72.5"	22"	0.24
7	LIVING	UF1772		FIXED WINDOWS	17.5"	72.5"	22"	0.24
8	DINING	UF6536		FIXED WINDOWS	65.5"	36.5"	58 1/16"	0.24
9	KITCHEN	U8936T		3-LITE SLIDING WINDOWS	89.5"	36.5"	58 1/16"	0.27
10	KITCHEN	UF1772		FIXED WINDOWS	17.5"	72.5"	22"	0.24
11	NOOK	UF1772		FIXED WINDOWS	17.5"	72.5"	22"	0.24
12	NOOK	UF1772		FIXED WINDOWS	17.5"	72.5"	22"	0.24
13	NOOK	UF6548		FIXED WINDOWS	65.5"	48.5"	46"	0.24
14	FOYER	UF2984,	TEMPERED	FIXED WINDOWS	29.5"	84.5"	0"	0.23

AREA SCHEDULE

1ST FLOOR A	2ND FLOOR B	GARAGE C	BASEMENT D	TOTAL AREA (A+B+C+D)	NET HEATING AREA (A+B+D)
1420 SF	1616 SF	467 SF	SF	3503 SF	3036 SF

*(INSIDE FACE OF EXTERIOR WALL STUDS)

SOURCE SPECIFIC VENTILATION

1. REFER TO PLAN FOR LOCATIONS.
2. SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM. EXHAUST FANS PROVIDING SOURCE SPECIFIC VENTILATION SHALL HAVE A MINIMUM FAN FLOW RATING NOT LESS THAN 50 CFM AT 0.25 INCHES WATER GAUGE FOR BATHROOMS, LAUNDRIES, OR SIMILAR ROOMS AND 400 CFM AT 0.25 INCHES WATER GAUGE FOR KITCHENS. THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED OUTDOORS.

CRAWL SPACE VENTILATION (7"X16" BOX VENT)

1. USE AN 7"X16" BOX VENT WITH NFVA OF 72.5 SI FOR EACH VENTILATION.
2. CALCULATION:
   (CRAWL SPACE) 1420 SF / 300 = 4.73 SF = 681.12 SI OF VENTING AREA NEEDED
   (10) BOX VENT = 10 X 72.5 = 725 SI > 681.12 SI REQUIRED

NOTE

① PROVIDE 1/2" GWB ON WALLS AND CEILING

② SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE REQUIRED TO RECEIVE ITS PRIMARY POWER FROM THE BUILDING WIRING AND BE PROVIDED WITH BATTERY BACKUP

③ ALL PLUMBING PENETRATIONS SHALL BE CONSTRUCTED TO MEET THE 2018 UNIFORM PLUMBING CODE

SYMBOLS

- DRAWING NUMBER / SHEET NUMBER
- WINDOW TAG
- CENTER LINE
- TD-X, WS-XXXX, LS-XXXX, CS-XXXX — EXTERIOR FINISH PRODUCT
- GRID LINES — 1219.2MM OR 1 GRID IS EQUIVALENT TO 4'-0"
- CD — CARBON MONOXIDE DETECTOR
- SD — SMOKE DETECTOR
- HD — HEAT DETECTOR
- SOURCE SPECIFIC VENT — 50 CFM VTOS
- GM — GAS METER
- HB — HOSE BIB
- EM — ELECTRIC METER
- RA — RETURN AIR
- SA — SUPPLY AIR (CEILING MOUNTED)
- SA — SUPPLY AIR (FLOOR MOUNTED)
- SA — SUPPLY AIR (WALL MOUNTED)

FLOORING, CONCRETE, TILE, VINYL, CARPET, DECKING

1 SCALE FIRST FLOOR PLAN 1/4" = 1'-0"

270-240

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PLAN NG-1L
U120160-DB1L

REVISION

DATE:	2022/6/3
HOUSE TYPE	USA-S1
DRAWING #	1-1
HRD CODE:	U120160-DB1L

DRAWN BY	CHECKED BY
MC	M. M.

FIRST FLOOR PLAN

PAGE NO.

A2.0

WINDOW SCHEDULE (SECOND FLOOR)

NO	ROOM	NAME	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
15	MASTERS BATHROOM	UF1724,		FIXED WINDOWS	17.5″	24.5″	58″	0.24
16	MASTERS BATHROOM	UF6524,		FIXED WINDOWS	65.5″	24.5″	58″	0.24
17	MASTERS BEDROOM	UF2936,		FIXED WINDOWS	29.5″	36.5″	46″	0.24
18	MASTERS BEDROOM	UF2936,		FIXED WINDOWS	29.5″	36.5″	46″	0.24
19	MASTERS BEDROOM	U6548,		2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
20	FAMILY ROOM	U8936T,		3-LITE SLIDING WINDOWS	89.5″	36.5″	46″	0.27
21	BEDROOM 3	U6548,		2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
22	MAIN BATH	UF1736,	TEMPERED	FIXED WINDOWS	17.5″	36.5″	46″	0.24
23	MAIN BATH	UF1736,	TEMPERED	FIXED WINDOWS	17.5″	36.5″	46″	0.24
24	LAUNDRY ROOM	UF2936,		FIXED WINDOWS	29.5″	36.5″	46″	0.24
25	BEDROOM 5	U6548,		2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
26	BEDROOM 4	U6548,		2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
27	OPEN TO BELOW	UF6536,		FIXED WINDOWS	65.5″	36.5″	46″	0.24

AVERAGE U-FACTOR OF ALL FLOORS: 0.25

WINDOW REQUIREMENTS

1. REFER TO BLDG FLOOR PLANS FOR TEMPERED GLASS LOCATIONS LABELED "TEMPERED."
2. ALL SLEEPING ROOMS SHALL BE PROVIDED WITH A MINIMUM OF ONE EMERGENCY EGRESS WINDOW. PER 2018 IRC SECTION R310.1. REFER TO PLAN FOR LOCATIONS. EGRESS WINDOWS SHALL HAVE:
   MIN NET OPEN AREA = 5.7 SF
   MIN. NET OPEN HEIGHT = 24"
   MIN. NET OPEN WIDTH = 20"
   MAXIMUM SILL HEIGHT = 44"
   PER 2018 IRC SECTION R310.2.
3. ALL WINDOWS WITHIN 10' OF GRADE SHALL BE LOCKABLE

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM

1. REFER TO 2018 IRC M1505.4 FOR DETAILED REQUIREMENTS FOR THE EXHAUST SYSTEM AND CONTROLS.
2. PROVIDE AN EXHAUST FAN CAPABLE OF PROVIDING VENTILATION AIRFLOW RATE DETERMINED BY TABLE M1505.4.3(1) WITH COEFFICIENT FACTOR OF 1.5 (NOT BALANCED/NOT DISTRIBUTED ON TABLE M1505.4.3(2))

NOTE

① PROVIDE 1/2" GWB ON WALLS AND CEILING

SYMBOLS

- X / XX.0 — DRAWING NUMBER / SHEET NUMBER
- ① — WINDOW TAG
- ℄ — CENTER LINE
- TD-X, WS-XXXX, LS-XXXX, CS-XXXX — EXTERIOR FINISH PRODUCT
- GRID LINES — 1219.2MM OR 1 GRID IS EQUIVALENT TO 4'-0"
- CD — CARBON MONOXIDE DETECTOR
- SD — SMOKE DETECTOR
- HD — HEAT DETECTOR
- RA — RETURN AIR
- SOURCE SPECIFIC VENT (50 CFM VTOS)
- SA — SUPPLY AIR (CEILING MOUNTED)
- SA — SUPPLY AIR (FLOOR MOUNTED)
- GM — GAS METER
- HB — HOSE BIB
- SA — SUPPLY AIR (WALL MOUNTED)
- EM — ELECTRIC METER

FLOORING, CONCRETE, TILE, VINYL, CARPET, DECKING

SECOND FLOOR PLAN
SCALE 1/4" = 1'-0"

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PLAN NG-1L
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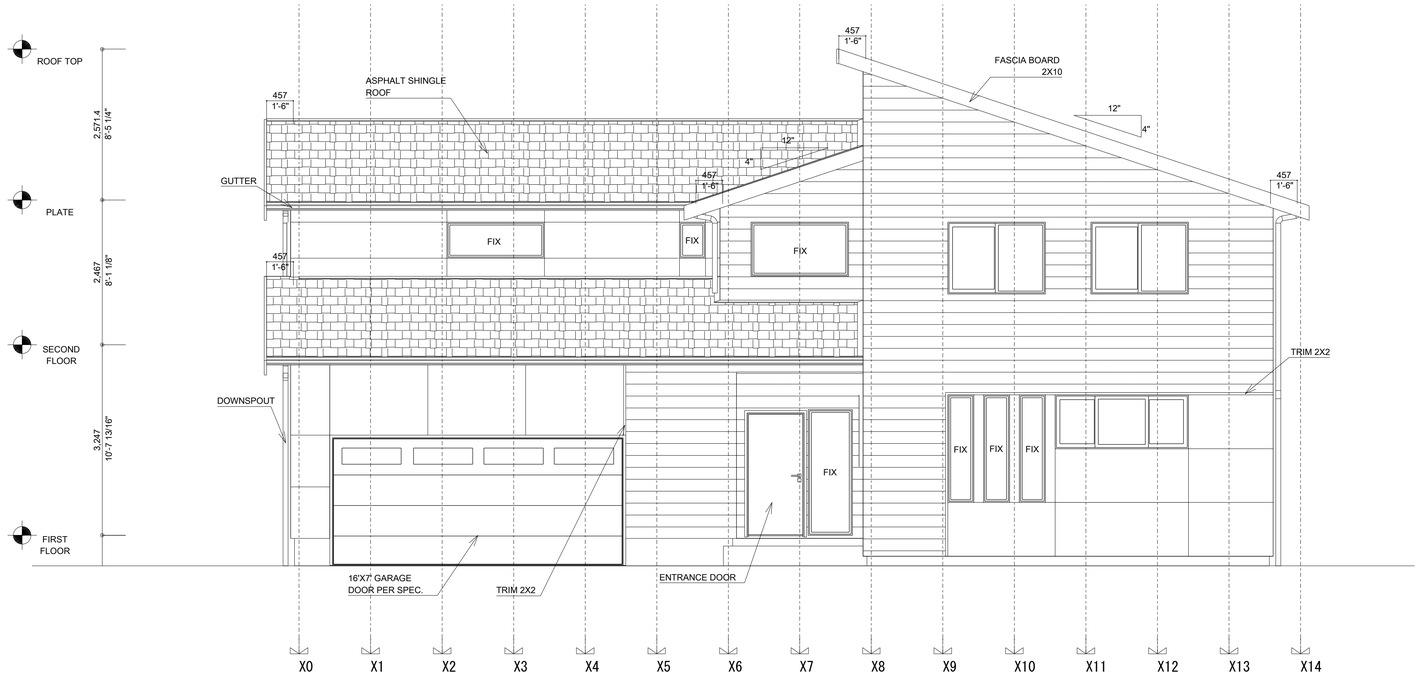
SECOND FLOOR PLAN

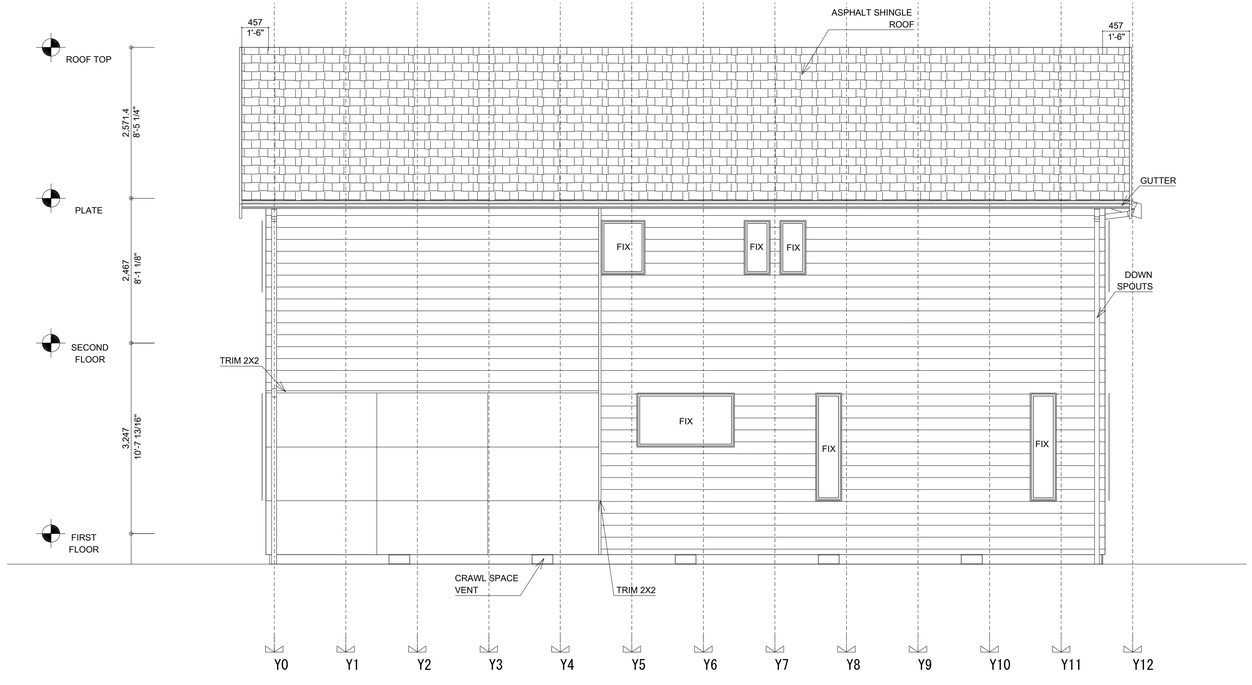
PAGE NO.

A2.1



1 FRONT

Scale 1/4" = 1' -0"



2 RIGHT

Scale 1/4" = 1' -0"

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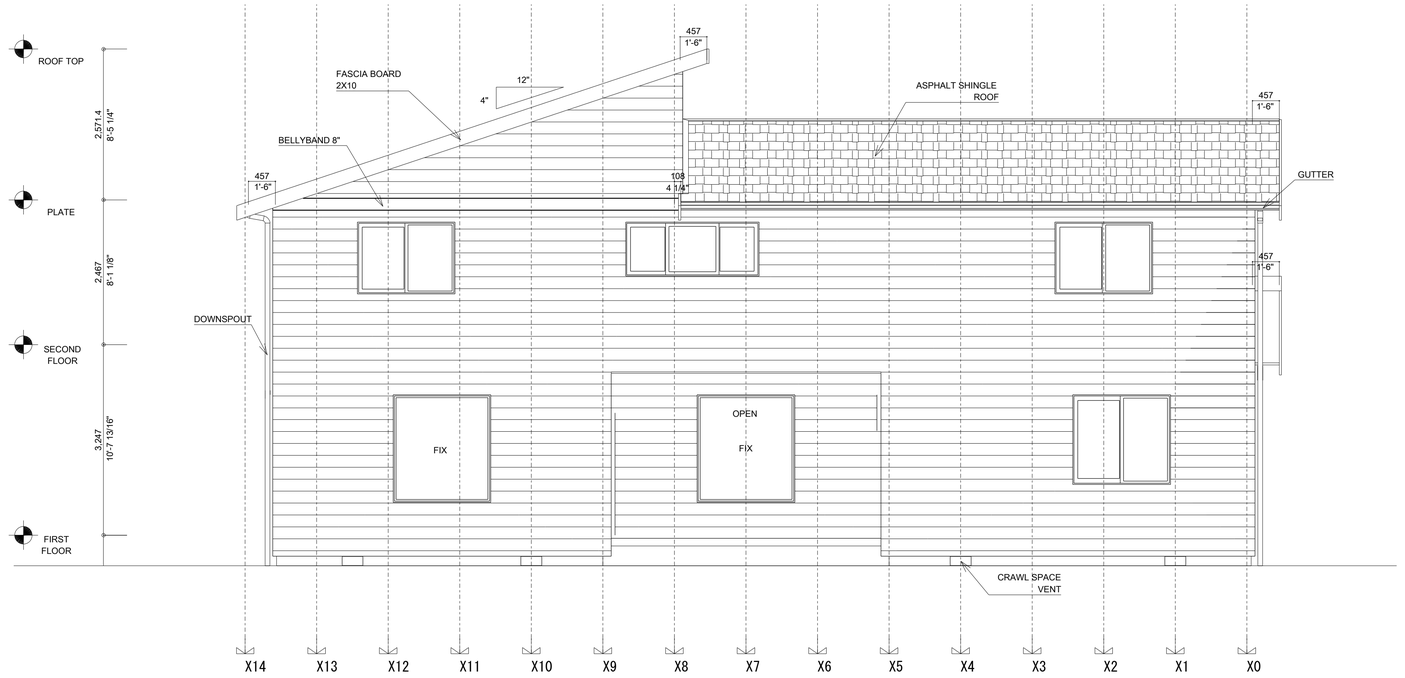
ELEVATIONS

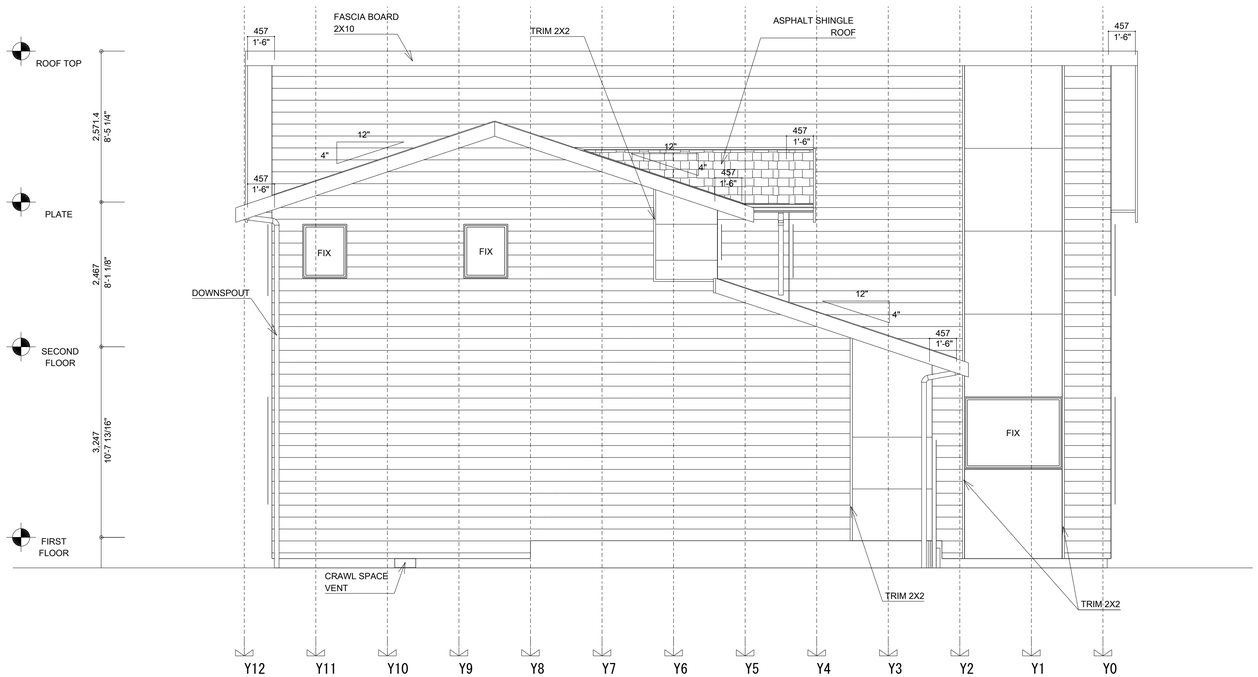
PAGE NO.

A3.0



1 REAR

Scale 1/4″ = 1′ -0″



2 LEFT

Scale 1/4″ = 1′ -0″

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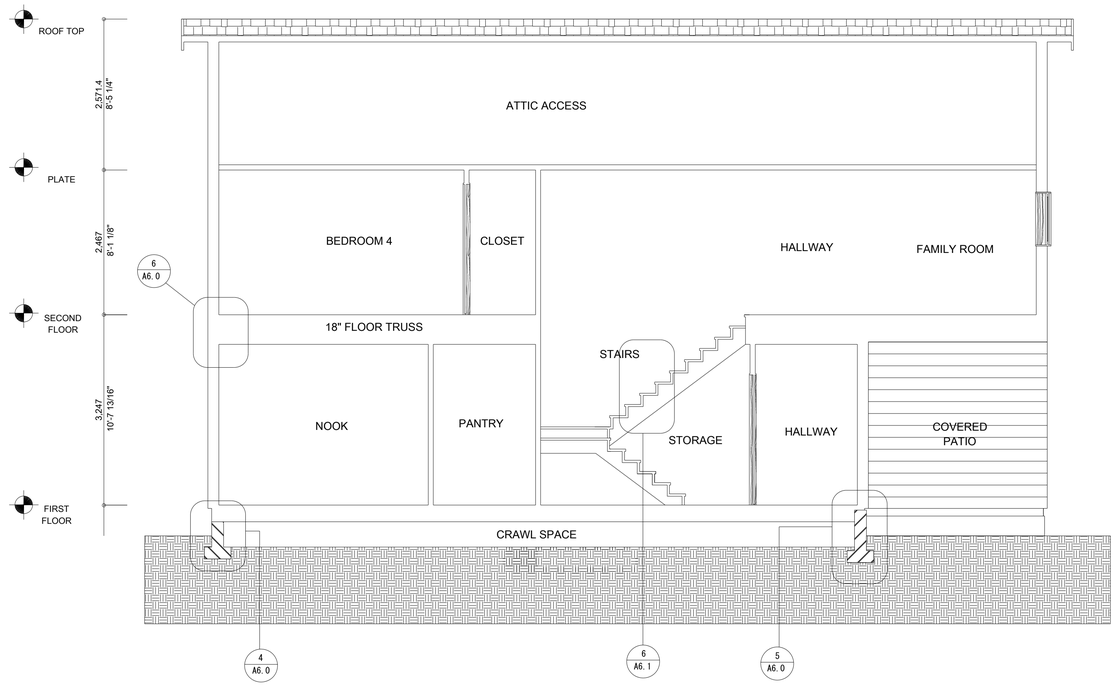
ELEVATIONS

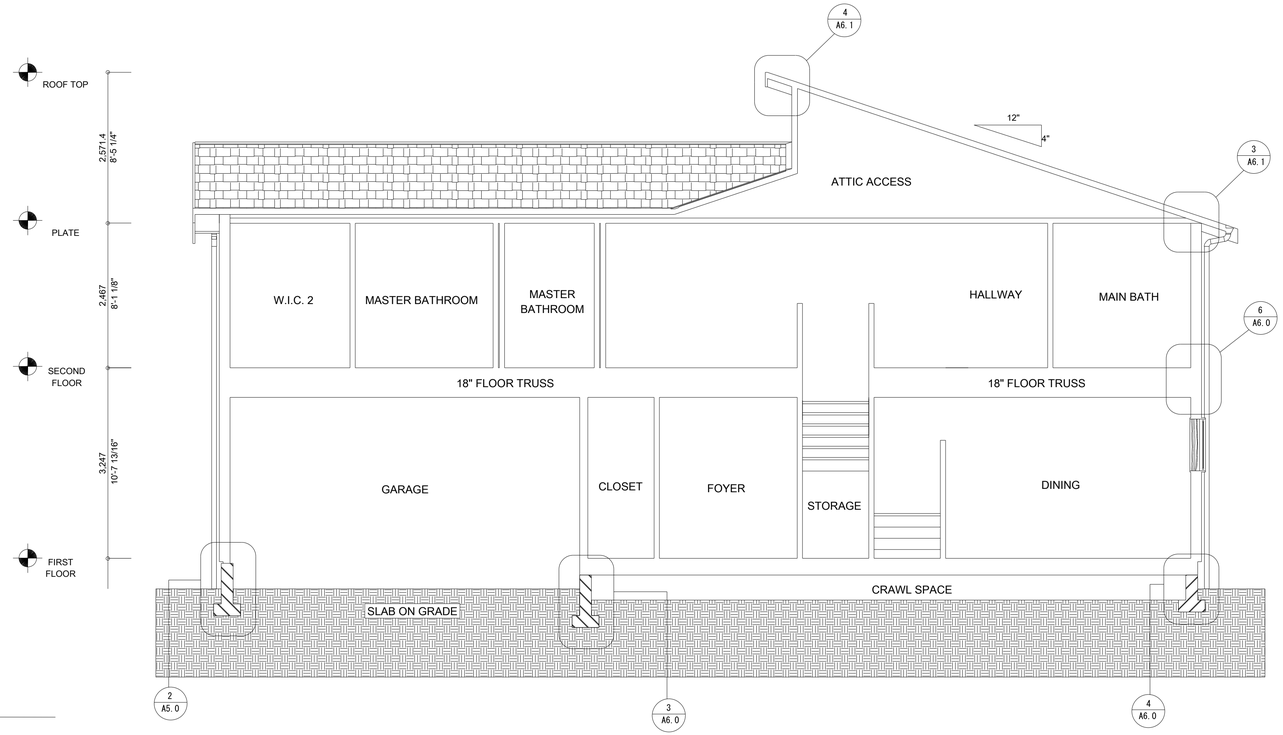
PAGE NO.

A3.1



1 BUILDING SECTION

SCALE 1/4" = 1'-0"



2 BUILDING SECTION

SCALE 1/4" = 1'-0"

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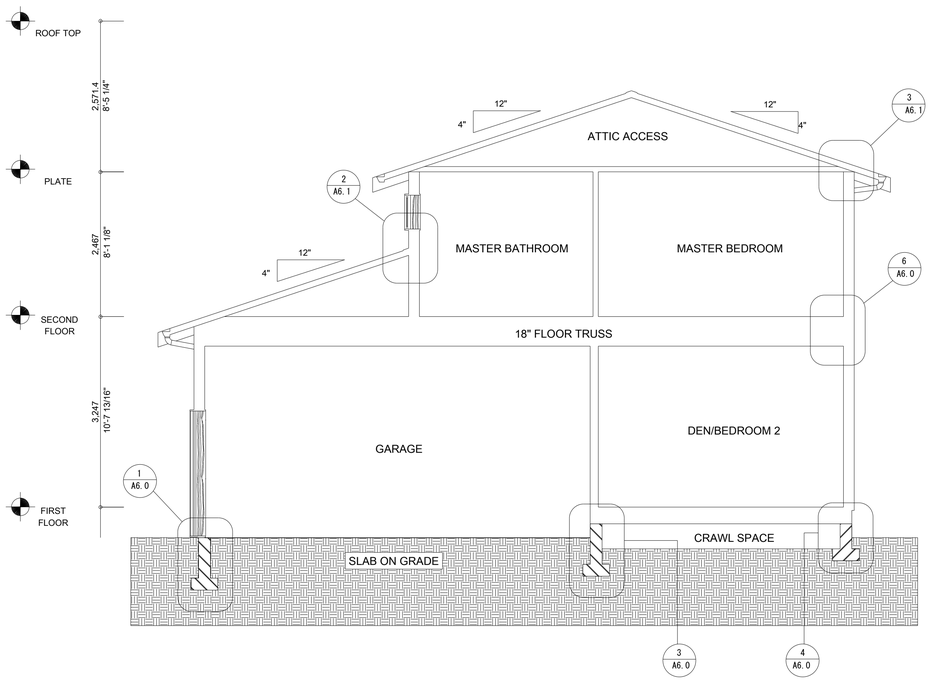
SECTIONS

PAGE NO.

A4.0



1 BUILDING SECTION

SCALE 1/4" = 1'-0"

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SECTIONS

PAGE NO.

A4.1

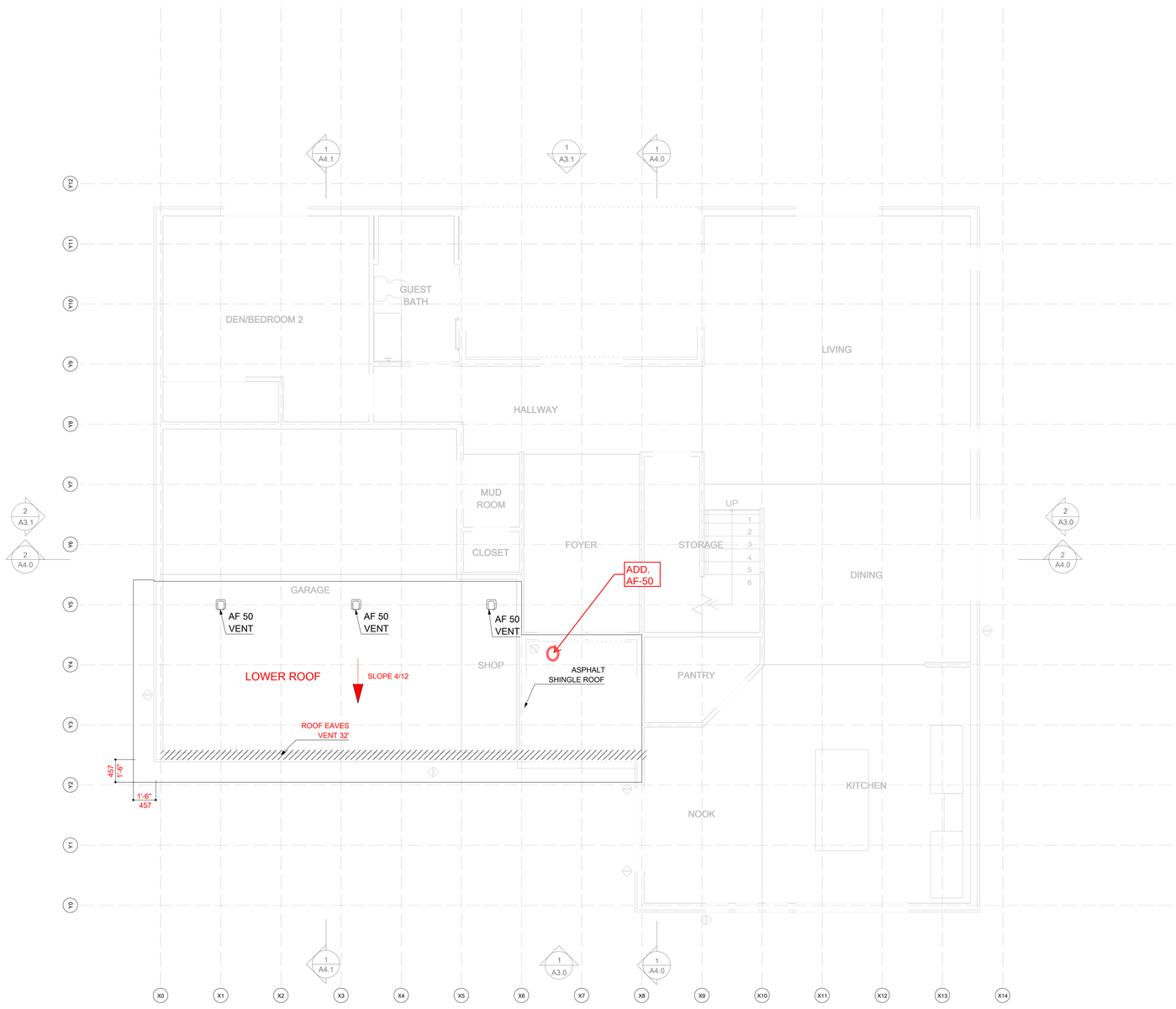
ROOF VENTILATION

LOWER ROOF	1

AREA	376	SF	
VENTING RATIO	1/150		
REQ'D VENT	360	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	32	LF	0	LF
	200	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	3	QTY
	0	SI	150	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	200	SI	150	SI
SUB TOTAL RATIO	57	%	43	%
TOTAL (SI)	350	SI		
TOTAL RATIO	97	%	OF REQ'D	

COR.



1 LOWER ROOF PLAN

SCALE 1/4" = 1'-0"

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LOWER ROOF PLAN

PAGE NO.

A5.0

ROOF VENTILATION

UPPER ROOF	1

AREA	924	SF
VENTING RATIO	1/150	
REQ'D VENT	887	SI IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	0	LF	0	LF
	0	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	7	QTY	16	QTY
	350	SI	800	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	350	SI	800	SI
SUB TOTAL RATIO	30	%	70	%
TOTAL (SI)	1150	SI		
TOTAL RATIO	130	%	OF REQ'D	

COR.

UPPER ROOF	2

AREA	695	SF
VENTING RATIO	1/150	
REQ'D VENT	667	SI IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	68	LF	0	LF
	427	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
IN-Vent(6.75 SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	13	QTY
	0	SI	650	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	427	SI	650	SI
SUB TOTAL RATIO	40	%	60	%
TOTAL (SI)	1077	SI		
TOTAL RATIO	161	%	OF REQ'D	

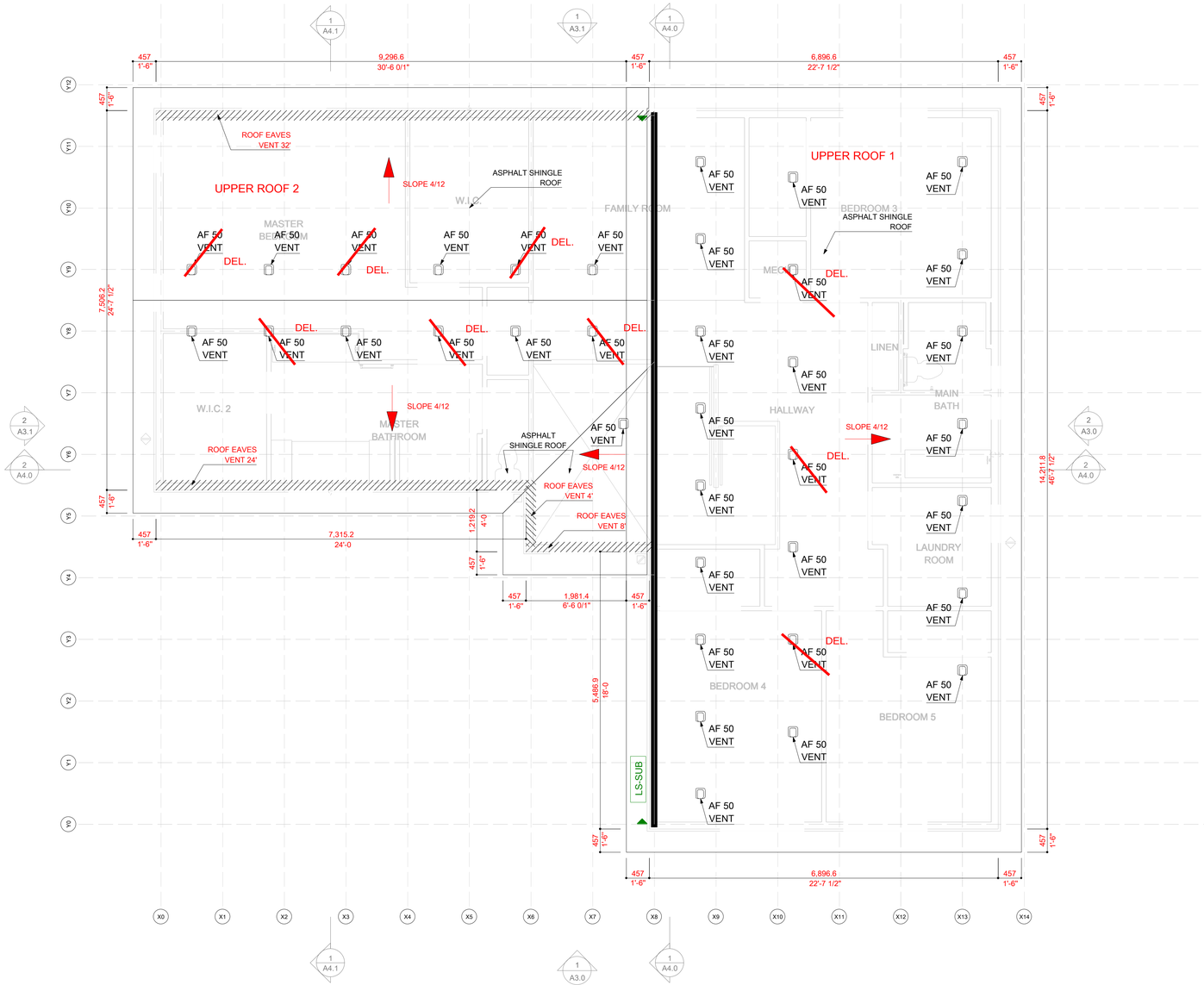
COR.

NOTE

ROOF OVERHANG WITHIN 2' TO 5' OF PROPERTY LINES ARE REQUIRED TO MEET 2018 IRC, TABLE R302.1(1). FOOT NOTE A, THE UNDERSIDE OF THE EAVE DO NOT REQUIRE A 1 HOUR RATE ASSEMBLY IF THERE IS NO OPENING SUCH AS BIRD BLOCK VENTILATION OPENINGS. ALSO, FOOTNOTE B: 1 HOUR RATED ASSEMBLY IS NOT REQUIRED ON GABLE OVERHANGS IF THERE ARE NO OPENINGS.

NOTE

UNDERLAYMENT FOR ASPHALT SHINGLES, SLOPED FROM 2:12 UP TO 4:12, SHALL BE (2) LAYERS INSTALLED IN ACCORDANCE WITH 2018 IRC, R905.1.1.



1 MAIN ROOF PLAN
SCALE 1/4" = 1'-0"

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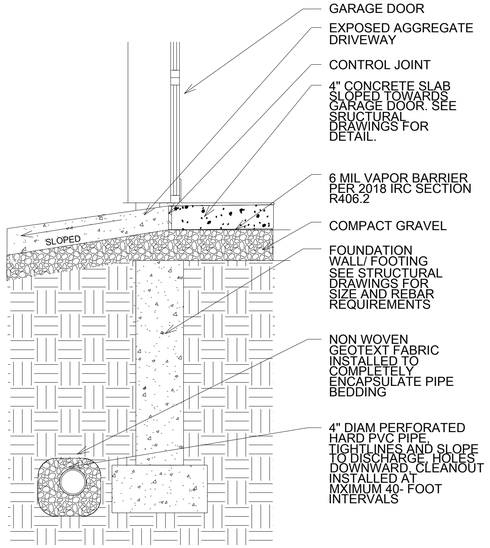
MAIN ROOF PLAN

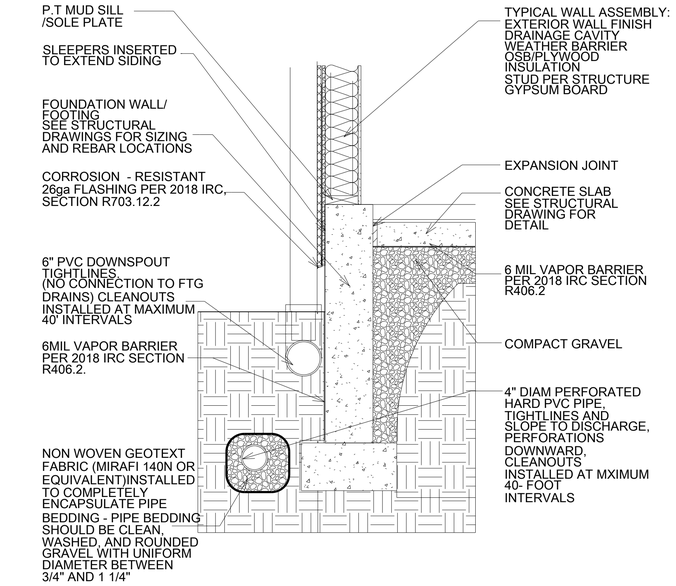
PAGE NO.

A5.1



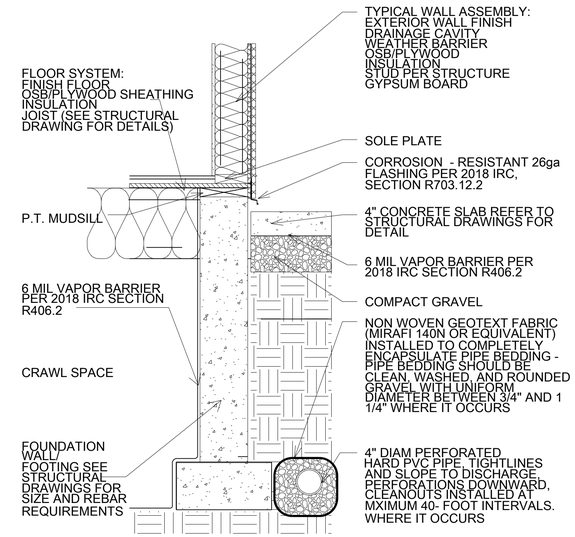
1 TYP. DRIVEWAY

SCALE 1" = 1'-0"



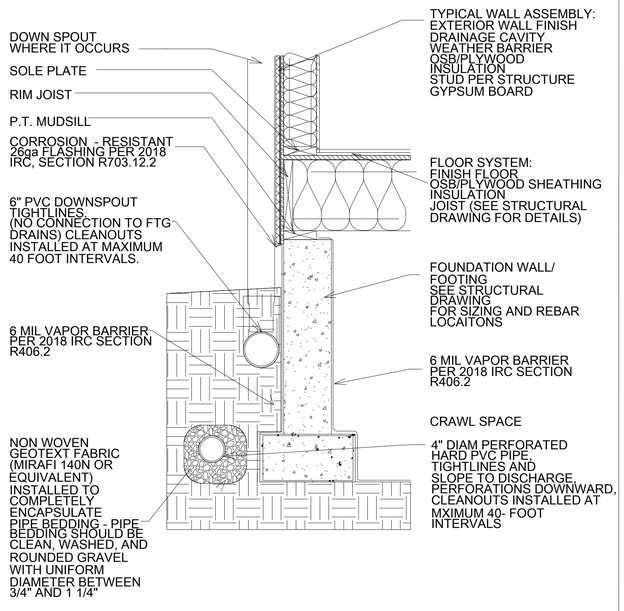
2 TYP. GARAGE FDTN EXT.

SCALE 1" = 1'-0"



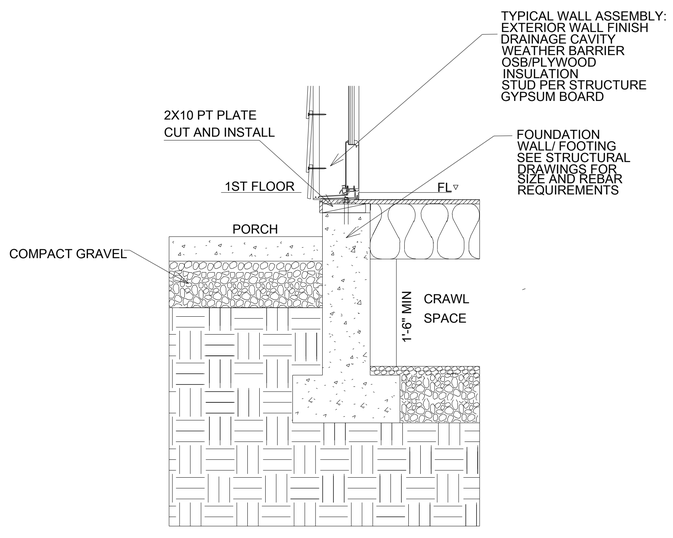
3 TYP. GARAGE FDTN INT.

SCALE 1" = 1'-0"



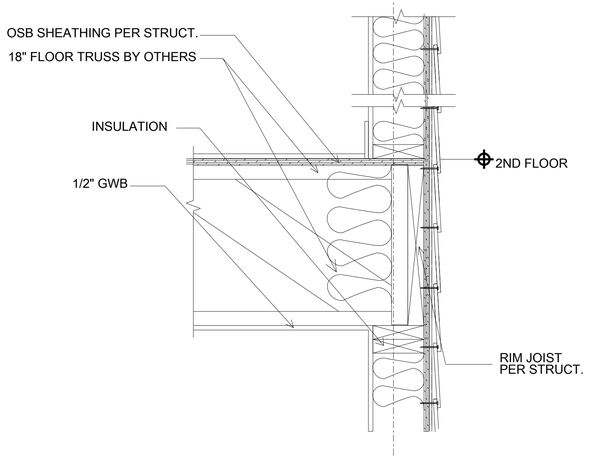
4 TYP. CRAWL SPACE FDTN

SCALE 1" = 1'-0"



5 TYPE PATIO SLAB EXTERIOR WALL FOUNDATION

SCALE 1" = 1'-0"



6 FLOOR @ EXTERNAL WALL

SCALE 1" = 1'-0"

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PLAN NG-1L
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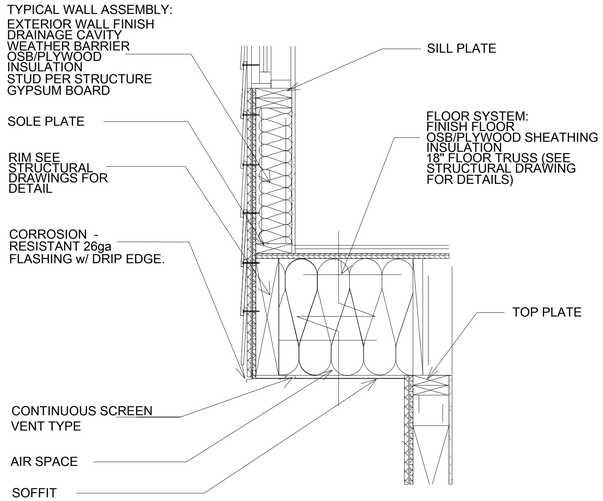
ARCHITECTURAL DETAILS

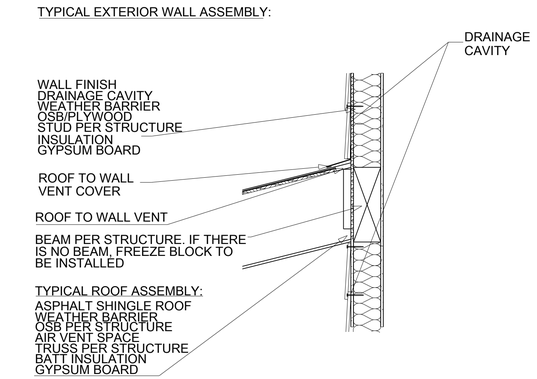
PAGE NO.

A6.0



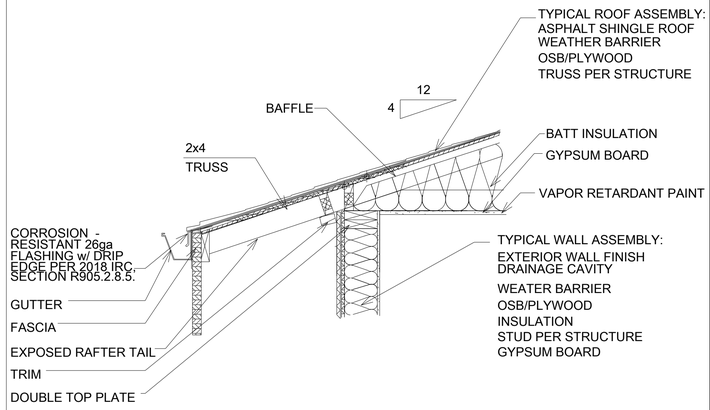
1 2ND FLOOR OVERHANG

SCALE 1" = 1'-0"



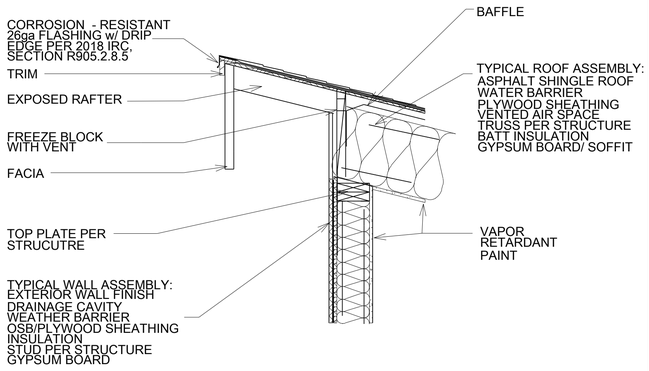
2 ROOF TO WALL VENT

SCALE 1" = 1'-0"



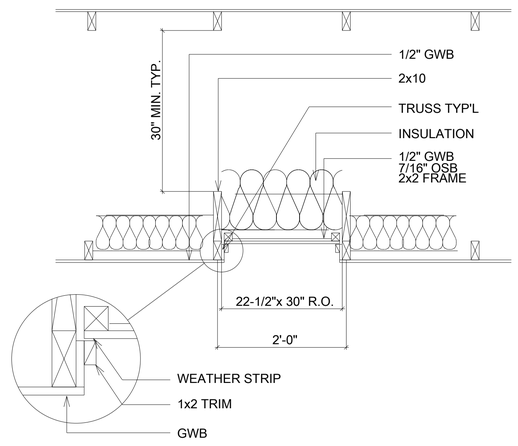
3 EXPOSED EAVE TO ATTIC

SCALE 1" = 1'-0"



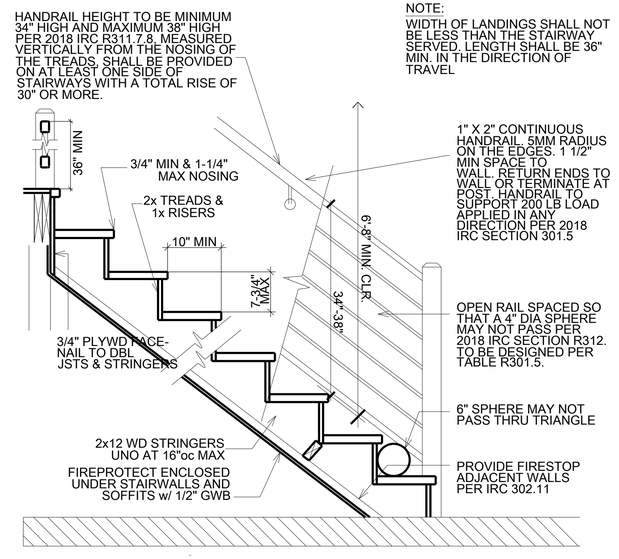
4 TOP OF SHED ROOF

SCALE 1" = 1'-0"



5 ATTIC ACCESS

SCALE 1" = 1'-0"



6 TYP. STAIRS

SCALE 1" = 1'-0"

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HOUSE TYPE	USA-S1
DRAWING #	1-1
HRD CODE:	U120160-DB1L
DRAWN BY: RM	CHECKED BY: M. M.

ARCHITECTURAL DETAILS

PAGE NO.

A6.1

1 OPTION

2 OPTION

3 OPTION

4 OPTION

5 OPTION

6 OPTION

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PLAN NG-1L
U120160-DB1L

REVISION

DATE:	2022/6/3
HOUSE TYPE	USA-S1
DRAWING #	1-1
HRD CODE:	U120160-DB1L

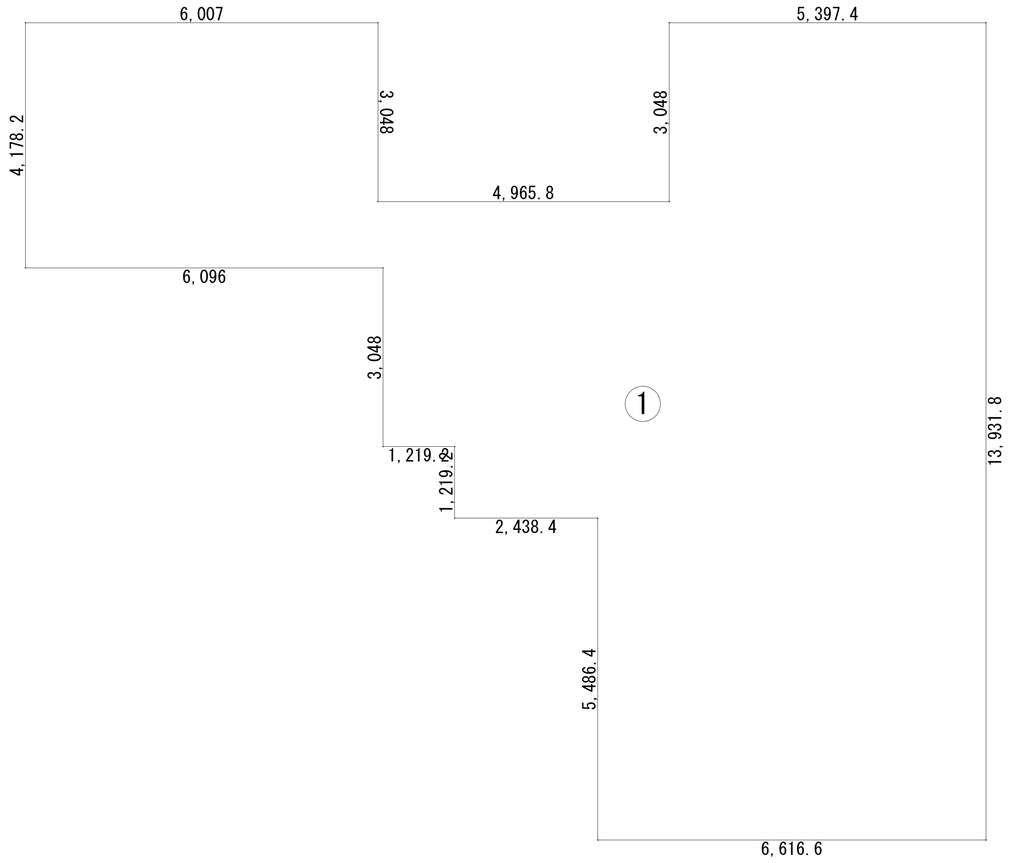
DRAWN BY	CHECKED BY
MC	M. M.

OPTIONAL DETAILS

PAGE NO.

A7.0

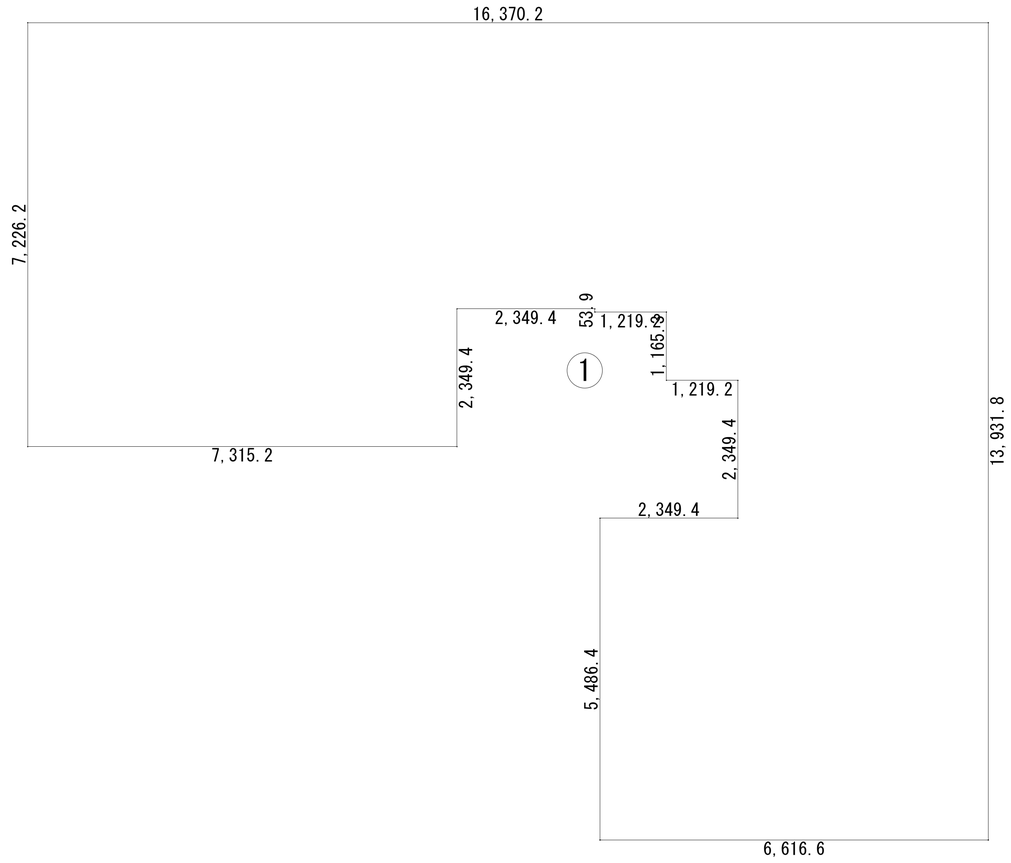
Area Schedule (inside face of exterior wall stud)	
Name	Area
1st Floor	1,420 SF
2nd Floor	1,616 SF
Garage	467 SF
	3,503 SF
NET HEATING AREA	3,036 SF



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		131.919143	1,420 SF
	TOTAL ≒	131.919143 131.91	1,420 SF

1 1st FLOOR AREA

Scale 1/4" = 1' -0"



NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		150.101929	1,616 SF
	TOTAL ≒	150.101929 150.10	1,616 SF

2 2nd FLOOR AREA

Scale 1/4" = 1' -0"

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REVISION

DATE:	2022/6/3
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DRAWING #	1-1
HRD CODE:	U120160-DB1L

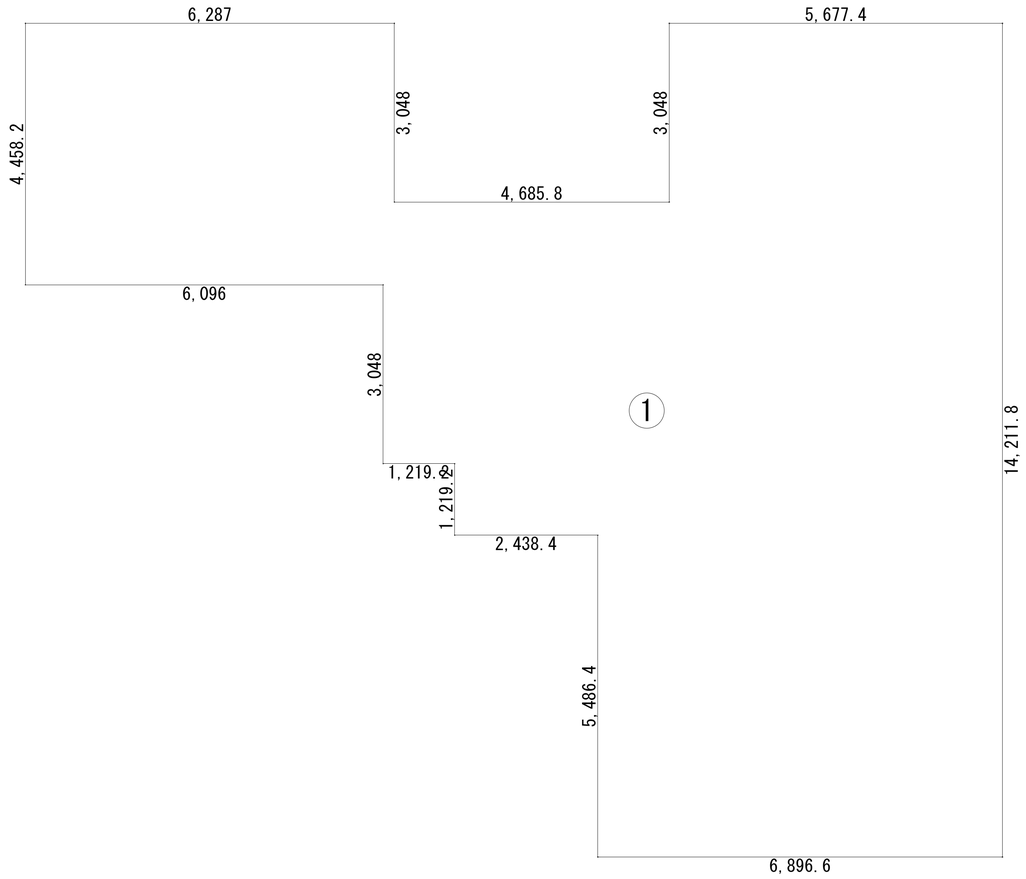
DRAWN BY	CHECKED BY
AT	M.M.

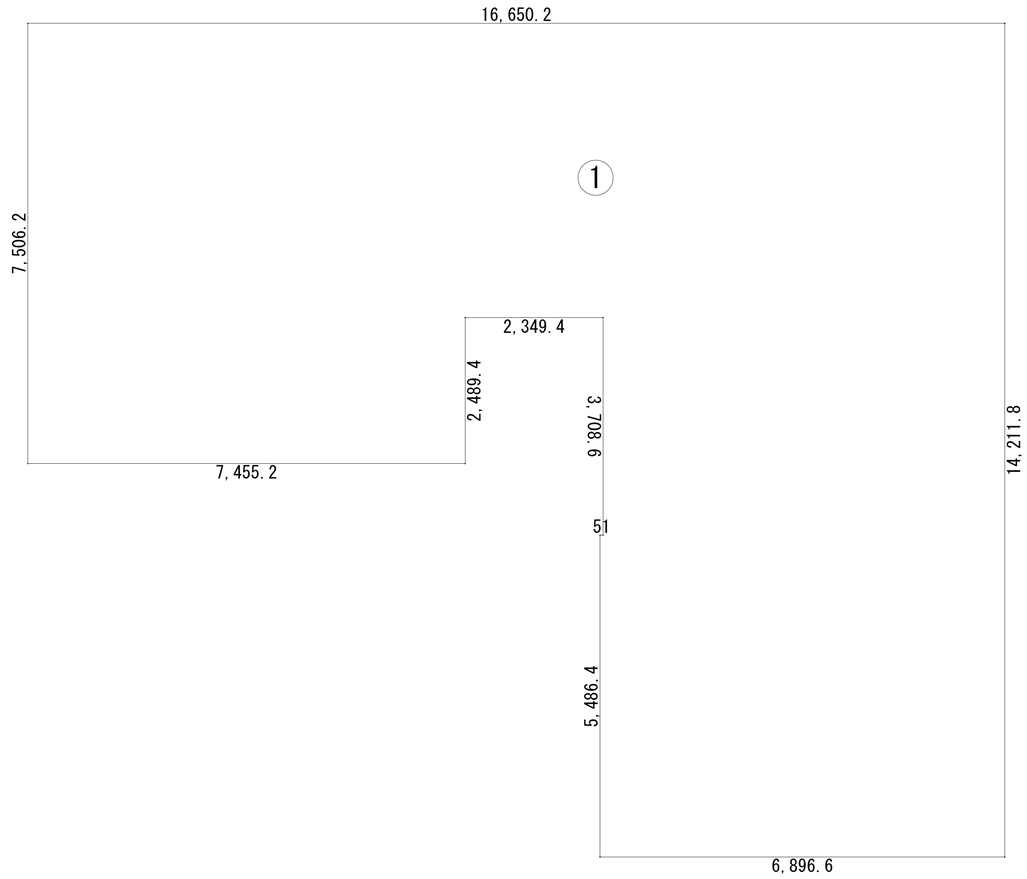
PERMIT SQUARE FOOTAGE

PAGE NO.

A10.0

Area Schedule (outside face of exterior wall stud)	
Name	Area
1st Floor	1,521 SF
2nd Floor	1,779 SF
NET HEATING AREA	3,300 SF





NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		141.335543	1,521 SF
	TOTAL ≒	141.335543 141.33	1,521 SF

1 1st FLOOR AREA

Scale 1/4" = 1' -0"

NUMBER	FORMULA (m)	AREA (㎡)	AREA (SF)
①		165.314797	1,779 SF
	TOTAL ≒	165.314797 165.31	1,779 SF

2 2nd FLOOR AREA

Scale 1/4" = 1' -0"

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REVISION

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AT	M. M.

SALES SQUARE FOOTAGE

PAGE NO.

A10.1

TYPE E-1L

PROJECT INFORMATION

PROJECT OWNER
ICHIJO USA CO., LTD.

ADDRESS

ASSESSOR'S PARCEL NUMBER

ZONE

LOT AREA

PROJECT DESCRIPTION
NEW SINGLE FAMILY RESIDENCE

SHEET INDEX

GENERAL NOTES

1. THE CONTRACTOR SHALL PERFORM WORK IN STRICT ACCORDANCE WITH THE FOLLOWING CODES AND ALL APPLICABLE STATE AND LOCAL AMENDMENTS:
   2021 EDITION OF THE OREGON RESIDENTIAL SPECIALTY CODE
   2019 EDITION OF THE OREGON STRUCTURAL SPECIALTY CODE
   2021 EDITION OF THE OREGON PLUMBING SPECIALTY CODE
   2019 EDITION OF THE OREGON MECHANICAL SPECIALTY CODE
   2021 EDITION OF THE OREGON ELECTRICAL SPECIALTY CODE
2. ALL THE WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE ATTACHED DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN THE FIELD AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND THE DRAWINGS.
4. DRAWINGS SHALL NOT BE SCALED. DIMENSIONS SHALL GOVERN, DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. WRITTEN SPECIFICATIONS NOTES SHALL GOVERN OVER ALL. IN CASE OF CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN. CONTACT ARCHITECT PRIOR TO CONSTRUCTION FOR CLARIFICATION.
5. PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS NOTED OTHERWISE.
6. CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING BUT NOT LIMITED TO SAFETY AND PROTECTION OF PROPERTY DURING THE PERFORMANCE OF THE WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS AND PAYMENT OF UTILITY CHARGES.
8. DO NOT COMMENCE WORK UNTIL CONDITIONS ARE ACCEPTABLE TO ALL CONCERNED PARTIES, INCLUDING GOVERNING AUTHORITIES.
9. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND PROTECT ALL EXISTING MECHANICAL, ELECTRICAL AND ALL OTHER UTILITIES AND CAP OR RELOCATE AS REQUIRED.
10. CONTRACTOR SHALL PROVIDE METHODS, MEANS, AND FACILITIES REQUIRED TO PREVENT CONTAMINATION OF SOIL, WATER, OR ATMOSPHERE, AND IN COMPLIANCE WITH ENVIRONMENTAL REGULATION OF LOCAL GOVERNING AUTHORITIES.

MECHANICAL/PLUMBING/ELECTRICAL

1. MECHANICAL/PLUMBING SYSTEMS PERMITS WILL BE OBTAINED BY THE CONTRACTOR DURING CONSTRUCTION.

ENERGY EFFICIENCY

TABLE N1101.1(2)

ADDITIONAL MEASURES

1. HIGH EFFICIENCY HVAC SYSTEM

A. GAS-FIRED FURNACE OR BOILER AFUE 94%, OR
B. AIR SOURCE HEAT PUMP HSPF 10.0/14.0 SEER COOLING, OR
C. GROUND SOURCE HEAT PUMP COP 3.5 OR ENERGY STAR RATED

RADON CONTROL

AF103.5.1 PASSIVE SUBMEMBRANE DEPRESSURIZATION

AF103.5.1.1 VENTILATION. CRAWL SPACES SHALL BE PROVIDED WITH VENTS TO THE EXTERIOR OF THE BUILDING. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL COMPLY WITH SECTION R408.1.

AF103.5.1.2 SOIL-GAS-RETARDER. THE SOIL IN CRAWL SPACES SHALL BE COVERED WITH A CONTINUOUS LAYER OF MINIMUN 6-MIL (0.15MM) POLYETHYLENE SOIL-GAS-RETRDER. THE GROUND COVER SHALL BE LAPPED A MINIMUM 12 INCHES (305MM) AT JOINTS AND SHALL BE EXTENDED TO ALL FOUNDATION WALLS ENCLOSING THE CRAWL SPACE AREA.

AF103.5.1.3 VENT PIPE. A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSERTED HORIZONTALLY BENEATH THE SHEETING AND CONNECTED TO A 3- OR 4-INCH-DIAMETER (76 MM OR 102 MM) FITTING WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE BUILDING FLOORS, TERMINATE AT LEAST 12 INCHES (305 MM) ABOVE THE ROOF IN A LOCATION AT LEAST 10 FEET (3048 MM) AWAY FROM ANY WINDOWS OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET (610 MM) BELOW THE EXHAUST POINT, AND 10 FEET (3048 MM) FROM ANY WINDOW OR OTHER OPENING ADJOINING OR ADJACENT BUILDINGS.

SOLAR READY REQUIREMENTS FOR ALL NEW HOMES

N1107.4 SOLAR INTERCONNECTION PATHWAY. A SQUARE METAL JUNCTION BOX NOT LESS THAN 4 INCHES BY 4 INCHES WITH A METAL BOX COVER SHALL BE PROVIDED WITHIN 24 INCHES HORIZONTALLY OR VERTICALLY OF THE MAIN ELECTRICAL PANEL. A MINIMUM 3/4-INCH RIGID METAL RACEWAY SHALL EXTEND FROM THE JUNCTION BOX TO A CAPPED ROOF TERMINATION OR TO AN ACCESSIBLE LOCATION IN THE ATTIC WITH A VERTICAL CLEARANCE OF NOT LESS THAN 36 INCHES. WHERE THE RACEWAY TERMINATES IN THE ATTIC, THE TERMINATION SHALL BE LOCATED NOT LESS THAN 6 INCHES ABOVE THE INSULATION. THE END OF THE RACEWAY SHALL BE MARKED AS “RESERVED FOR SOLAR.”
EXCEPTION: IN LIEU OF 3/4 INCH RIGID METAL RACEWAY, A MINIMUM # 10 COPPER 3-WIRE MC CABLE INSTALLED FROM THE JUNCTION BOX TO THE TERMINATION POINT INCLUDING 6 INCHES ADDITIONAL WIRE IS PERMITTED.

VICINITY PLAN

PROJECT SITE

SITE MAP

PROJECT LOT

SYMBOLS

DRAWING NUMBER
SHEET NUMBER
WINDOW TAG
CENTER LINE
TF-X EXTERIOR
LS-XXXX FINISH
FS PRODUCT
GRID LINES
1 GRID
IS EQUIVALENT
TO 4'-0"
INTERIOR DOOR KEY
WITH INDICATOR
(PROVIDE BY ICHIJO)
INTERIOR DOOR KEY
WITHOUT INDICATOR
(PROVIDE BY ICHIJO)

CARBON MONOXIDE DETECTOR
SMOKE DETECTOR
HEAT DETECTOR
SOURCE SPECIFIC VENT
50 CFM VTOS
RETURN AIR
SUPPLY AIR
(CEILING MOUNTED)
SUPPLY AIR
(FLOOR MOUNTED)
SUPPLY AIR
(WALL MOUNTED)
GAS METER
HOSE BIB
ELECTRIC METER

TOILET PAPER HOLDER
(PROVIDE 2X BACKING)
TOWEL RING
(PROVIDE 2X BACKING)
TOWEL BAR
(PROVIDE 2X BACKING
EXCEPT SHOWER ENCLOSURE)
OPEN RAILING
(PROVIDE BY ICHIJO)
LDB LAUNDRY BASE CABINET
(PROVIDE BY ICHIJO)
XX V VANITY CABINET
(PROVIDE BY ICHIJO)

LVP
CONCRETE
TILE
LVT
CARPET
DECKING
BALCONY

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PLAN 2571 TYPE E-1L

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DRAWN BY	ML
CHECKED BY	N. Y.

COVER SHEET

PAGE NO. A0.0

WINDOW AND DOOR SCHEDULE (MAIN FLOOR)

NO	ROOM	NAME	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
E1	GARAGE	G16080		GARAGE DOOR	195″	97 1/2″		
E2	GARAGE	D3068		ENTRY DOOR	38 3/8″	83 5/8″		
E3	ENTRY	D3080		ENTRY DOOR	38 3/8″	98 7/8″		
D1	BATHROOM	8-29		INTERIOR DOOR	32 1/2″	94 1/2″		
D2	STORAGE	8-29		INTERIOR DOOR	32 1/2″	94 1/2″		
D3	DEN/BEDROOM 2	8-29		INTERIOR DOOR	32 1/2″	94 1/2″		
C1	PANTRY	HFD-60		FOLDING DOOR	63″	94 1/2″		
C2	DEN/BEDROOM 2	HFD-60		FOLDING DOOR	63″	94 1/2″		
1	FOYER	F1570.	TEMPERED	FIXED WINDOWS	17.5″	84.5″	14″	0.23
2	KITCHEN	F3510.		FIXED WINDOWS	41.5″	12.5″	43 1/2″	0.24
3	KITCHEN	F3510.		FIXED WINDOWS	41.5″	12.5″	43 1/2″	0.24
4	KITCHEN	F5550		FIXED WINDOWS	65.5″	60.5″	35″	0.24
5	DINING	S7550	EGRESS	3-LITE SLIDING WINDOWS	89.5″	60.5″	35″	0.27
6	DINING	F5540		FIXED WINDOWS	65.5″	48.5″	47 1/2″	0.24
7	LIVING	P8080	TEMPERED/EGRESS	2-LITE PATIO DOOR	96.0″	96.0″	0″	0.25
8	LIVING	F1550		FIXED WINDOWS	17.5″	60.5″	35 1/2″	0.24
9	LIVING	F1550		FIXED WINDOWS	17.5″	60.5″	35 1/2″	0.24
10	BATHROOM	F3510		FIXED WINDOWS	41.5″	12.5″	83 1/2″	0.24
11	DEN/BEDROOM 2	S5550	EGRESS	2-LITE SLIDING WINDOWS	65.5″	60.5″	35 1/2″	0.27

AREA SCHEDULE

1ST FLOOR A	2ND FLOOR B	GARAGE C	BASEMENT D	TOTAL AREA (A+B+C+D)	NET HEATING AREA (A+B+D)	
1078 SF	1493 SF	382 SF	-	2953 SF	2571 SF	(INSIDE FACE OF EXTERIOR WALL STUD)
1156 SF	1567 SF	400 SF	-	3123 SF	2723 SF	(OUTSIDE FACE OF EXTERIOR WALL STUD)
1156 SF	1616 SF	-	-	2772 SF	2772 SF	(SALES)

CRAWL SPACE VENTING

OPENINGS FOR UNDER-FLOOR VENTILATION. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL BE NOT LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER-FLOOR SPACE AREA.
-SEE FLOOR PLAN FOR CRAWL SPACE VENTS CALCULATION.

WHOLE HOUSE VENTILATION

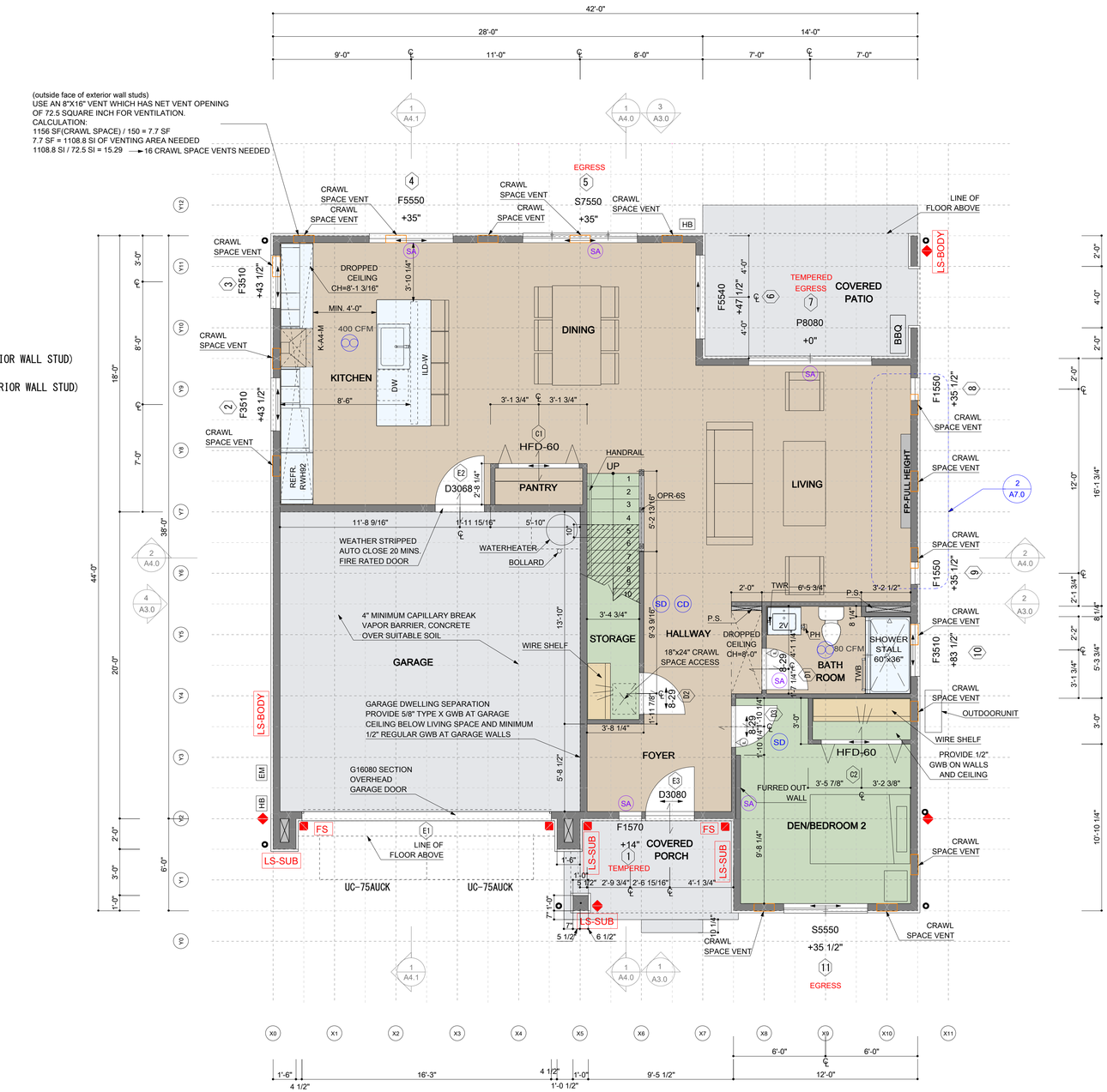
1. REFER TO 2021 ORSC M1505.4 FOR DETAILED REQUIREMENTS FOR THE EXHAUST SYSTEM AND CONTROLS.
2. THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE BALANCED VENTILATION. LOCAL EXHAUST OR SUPPLY FANS ARE PERMITTED TO SERVE AS PART OF SUCH A SYSTEM. OUTDOOR AIR VENTILATION PROVIDED BY A SUPPLY FAN DUCTED TO THE RETURN SIDE OF AN AIR HANDLER SHALL BE CONSIDERED AS PROVIDING SUPPLY VENTILATION FOR THE BALANCED SYSTEM.

SOURCE SPECIFIC VENTILATION

1. REFER TO PLAN FOR LOCATIONS.
2. SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM WATER CLOSET, LAUNDRY ROOM. VENTILATION SYSTEMS SHALL BE DESIGNED TO HAVE THE CAPACITY TO EXHAUST THE MINIMUM AIR FLOW RATE DETERMINED IN ACCORDANCE WITH 2021 ORSC TABLE M1505.5.

NOTE

SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE REQUIRED TO RECEIVE ITS PRIMARY POWER FROM THE BUILDING WIRING AND BE PROVIDED WITH BATTERY BACKUP



1 MAIN FLOOR PLAN
SCALE 1/4" = 1'-0"

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MAIN FLOOR PLAN

PAGE NO. A2.1

270-240

WINDOW AND DOOR SCHEDULE (SECOND FLOOR)

NO	ROOM	NAME	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
D4	MAIN BATH	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D5	MAIN BATH	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D6	LAUNDRY ROOM	7-36		INTERIOR DOOR	38 1/2"	82 1/2"		
D7	BEDROOM 3	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D8	PRIMARY BATHROOM	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D9	PRIMARY BATHROOM	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D10	PRIMARY BEDROOM	7-36		INTERIOR DOOR	38 1/2"	82 1/2"		
D11	W.I.C.	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D12	W.I.C. 2	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D13	BEDROOM 4	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
D14	MECH	7-29		INTERIOR DOOR	32 1/2"	82 1/2"		
C3	LINEN	MCFD-30		FOLDING DOOR	29 1/2"	82 1/2"		
C4	CLOSET	MCFD-60		FOLDING DOOR	63"	82 1/2"		
C5	CLOSET 2	MCFD-60		FOLDING DOOR	63"	82 1/2"		
12	HALLWAY	F1540,		FIXED WINDOWS	17.5"	48.5"	35 1/2"	0.24
13	HALLWAY	F1540,		FIXED WINDOWS	17.5"	48.5"	35 1/2"	0.24
14	FAMILY ROOM	S7540,	EGRESS	3-LITE SLIDING WINDOWS	89.5"	48.5"	35 1/2"	0.27
15	FAMILY ROOM	F5540,		FIXED WINDOWS	65.5"	48.5"	35 1/2"	0.24
16	LAUNDRY ROOM	F3510,		FIXED WINDOWS	41.5"	12.5"	43 1/2"	0.24
17	BEDROOM 3	S5540,	EGRESS	2-LITE SLIDING WINDOWS	65.5"	48.5"	35 1/2"	0.27
18	PRIMARY BATHROOM	F4530,	TEMPERED	FIXED WINDOWS	53.5"	36.5"	47 1/2"	0.24
19	PRIMARY BEDROOM	S9540,	EGRESS	3-LITE SLIDING WINDOWS	113.5"	48.5"	35 1/2"	0.27
20	PRIMARY BEDROOM	F1540,		FIXED WINDOWS	17.5"	48.5"	35 1/2"	0.24
21	PRIMARY BEDROOM	F1540,		FIXED WINDOWS	17.5"	48.5"	35 1/2"	0.24
22	BEDROOM 4	S5540,	EGRESS	2-LITE SLIDING WINDOWS	65.5"	48.5"	35 1/2"	0.27
23	HALLWAY	F1540,		FIXED WINDOWS	17.5"	48.5"	35 1/2"	0.24
24	HALLWAY	F1540,		FIXED WINDOWS	17.5"	48.5"	35 1/2"	0.24

AVERAGE U-FACTOR OF ALL FLOORS: 0.27

WINDOW REQUIREMENTS

1. REFER TO BLDG FLOOR PLANS FOR TEMPERED GLASS LOCATIONS LABELED "TEMPERED."
2. ALL SLEEPING ROOMS SHALL BE PROVIDED WITH A MINIMUM OF ONE EMERGENCY EGRESS WINDOW. PER 2021 ORSC R310.1. REFER TO PLAN FOR LOCATIONS. EGRESS WINDOWS SHALL HAVE:
   MIN NET OPEN AREA = 5.7 SF
   MIN. NET OPEN HEIGHT = 24"
   MIN. NET OPEN WIDTH = 20"
   MAXIMUM SILL HEIGHT = 44"
   PER 2021 ORSC R310.2.
3. ALL WINDOWS WITHIN 10' OF GRADE SHALL BE LOCKABLE

NOTE

SHOWER HEAD TO BE RATED AT 1.75 GPM
LAVATORY FAUCETS TO BE RATED AT 1.0 GPM
KITCHEN SINK FAUCETS TO BE RATED AT 1.75 GPM

1 SECOND FLOOR PLAN
SCALE 1/4" = 1'-0"

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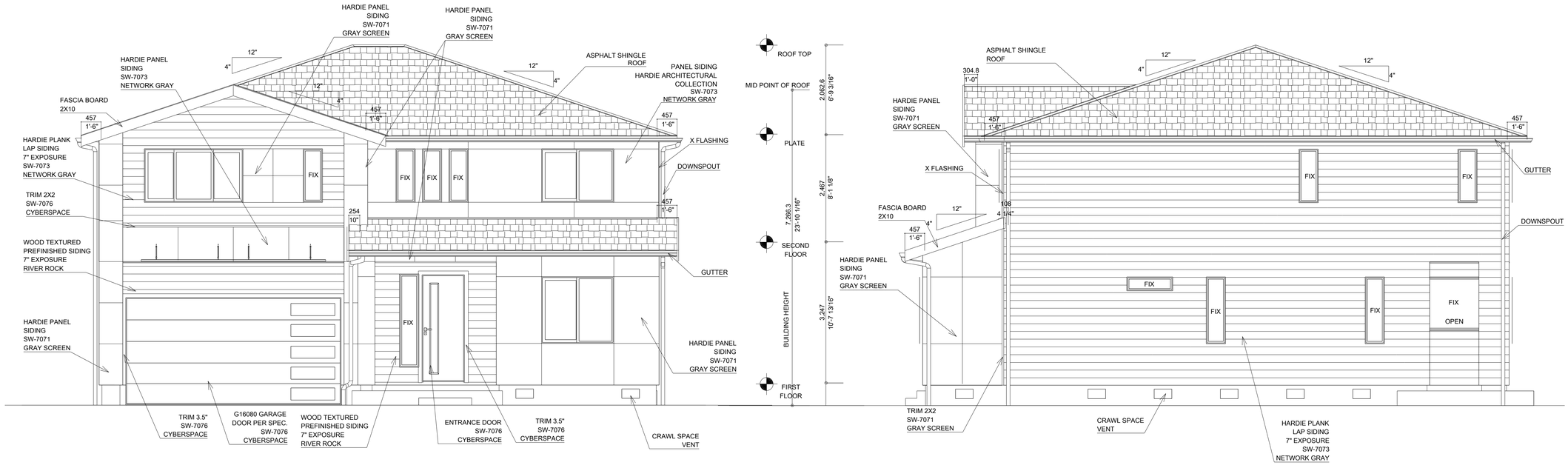
SECOND FLOOR PLAN

PAGE NO. A2.2

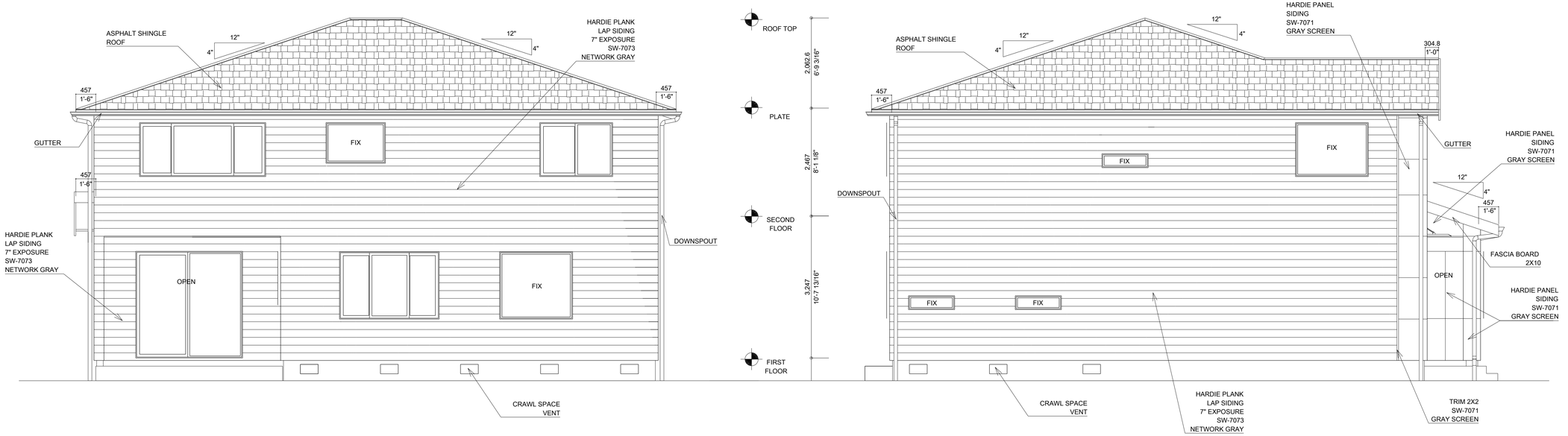


1 FRONT ELEVATION

Scale 1/4" = 1' -0"

2 RIGHT ELEVATION

Scale 1/4" = 1' -0"



3 REAR ELEVATION

Scale 1/4" = 1' -0"

4 LEFT ELEVATION

Scale 1/4" = 1' -0"

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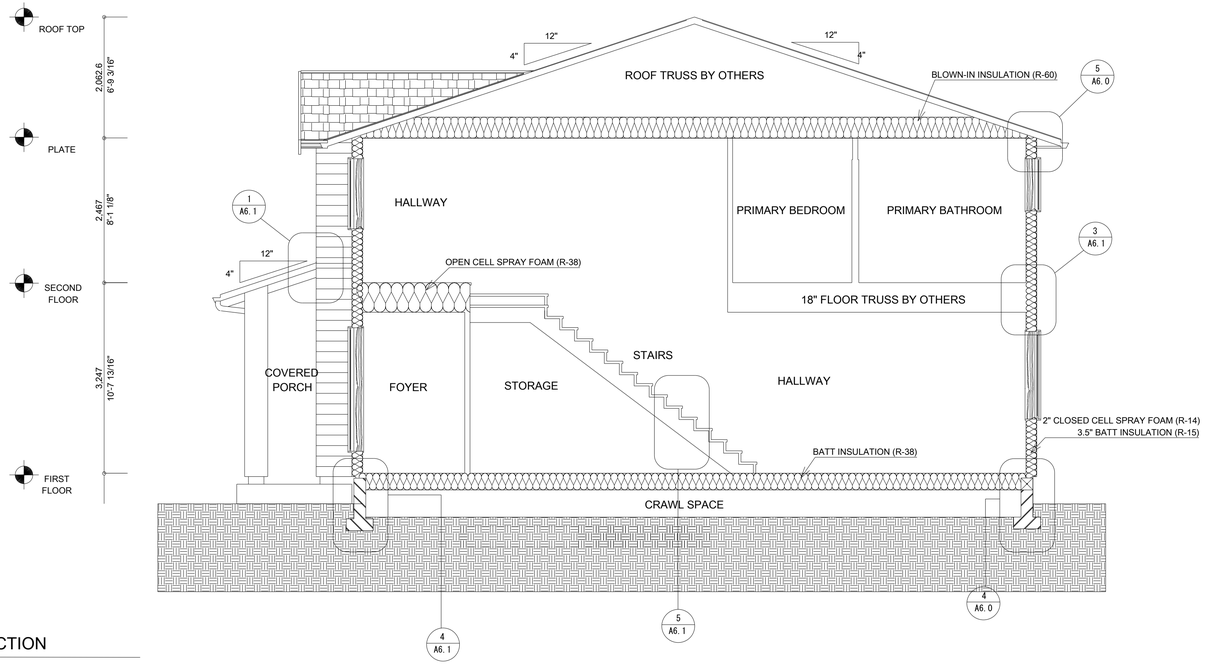
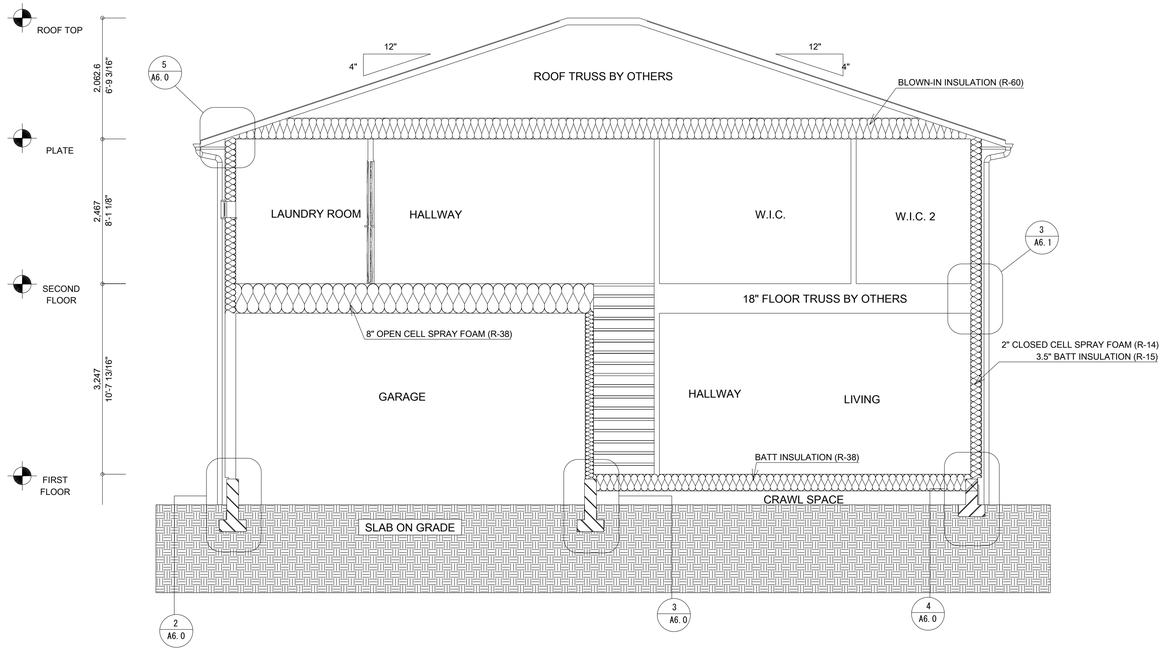
ELEVATIONS

PAGE NO. A3.0



1 BUILDING SECTION

SCALE 1/4" = 1'-0"



2 BUILDING SECTION

SCALE 1/4" = 1'-0"

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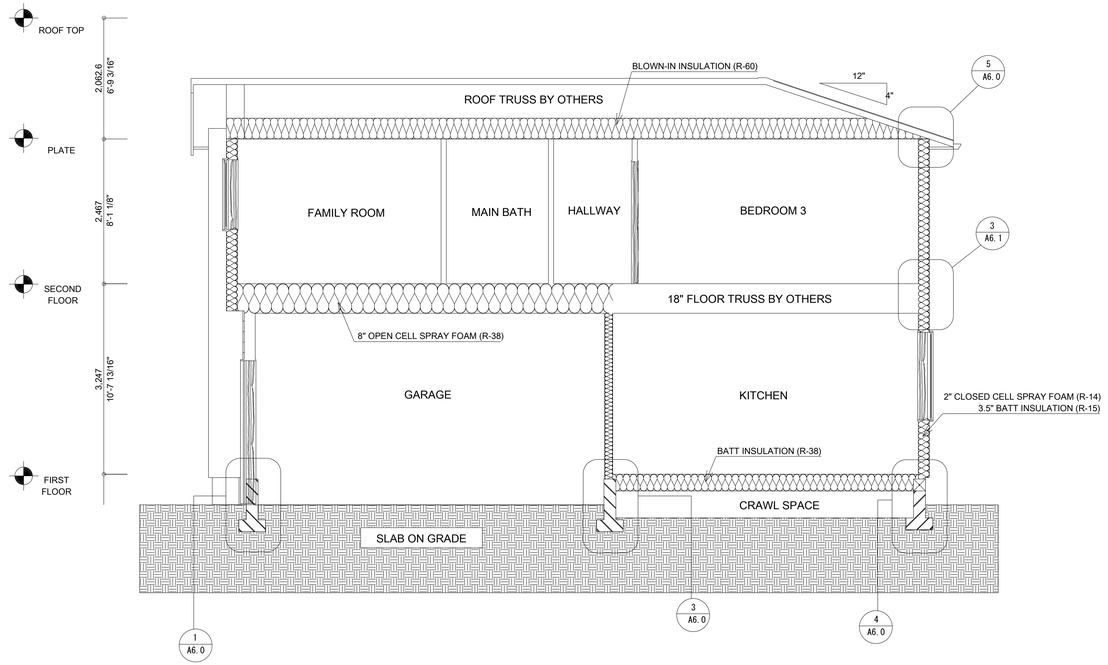
CHECKED BY	N. Y.

SECTIONS

PAGE NO. A4.0



1 BUILDING SECTION

SCALE 1/4" = 1'-0"

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PLAN 2571 TYPE E-1L

REVISION

DATE:	2023/10/27
HOUSE TYPE:	USA-S3
BP CODE:	U223029-XE1L
BP DRAWING #:	3-13
CUST CODE:	U223029-XE1L
DRAWING # :	3-14
DRAWN BY	JA
CHECKED BY	N. Y.

SECTIONS

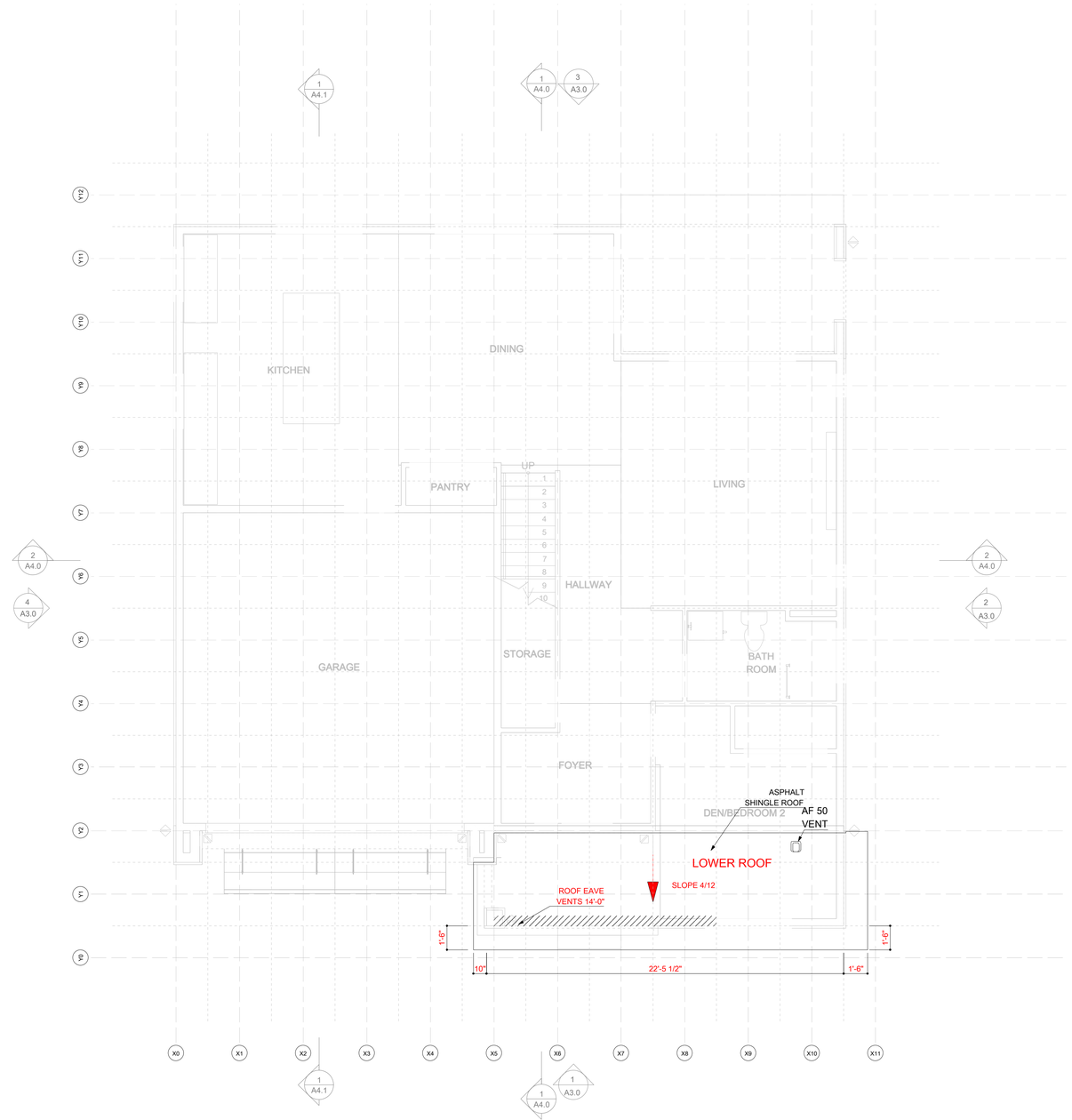
PAGE NO. A4.1

ROOF VENTILATION

LOWER ROOF	1

AREA	134	SF	
VENTING RATIO	1/150		
REQ'D VENT	129	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	14	LF	0	LF
	88	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	88	SI	50	SI
SUB TOTAL RATIO	64	%	36	%
TOTAL (SI)	138	SI		
TOTAL RATIO	107	%	OF REQ'D	



1 LOWER ROOF PLAN

SCALE 1/4" = 1'-0"

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DRAWN BY	ML
CHECKED BY	N. Y.

LOWER ROOF PLAN

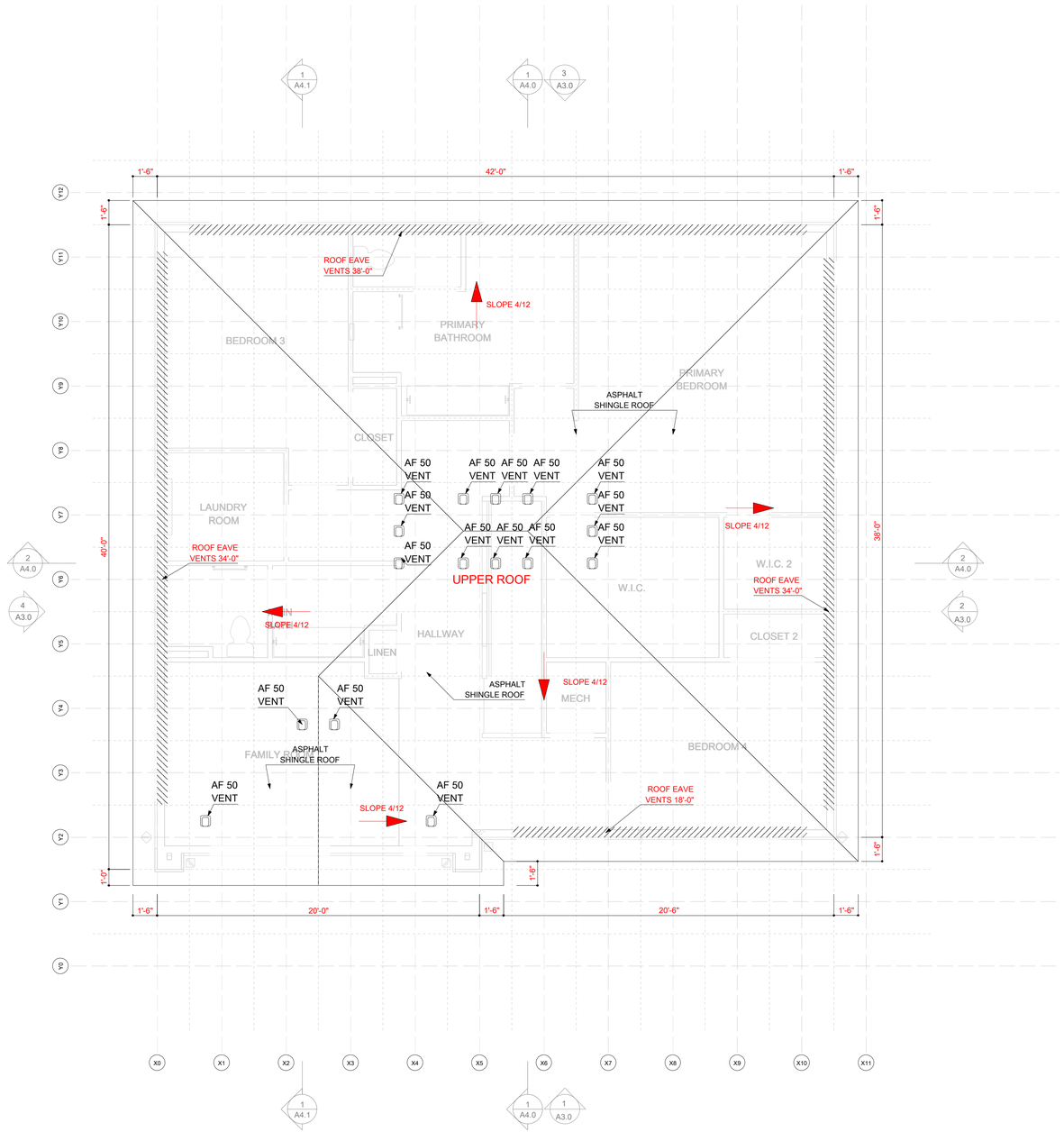
PAGE NO. A5.0

ROOF VENTILATION

UPPER ROOF	1

AREA	1619	SF	
VENTING RATIO	1/150		
REQ'D VENT	1554	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	124	LF	0	LF
	779	SI	0	SI
AF 50 (50SI/EA)	2	QTY	14	QTY
	100	SI	700	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	879	SI	700	SI
SUB TOTAL RATIO	56	%	44	%
TOTAL (SI)	1579	SI		
TOTAL RATIO	102	%	OF REQ'D	



1 MAIN ROOF PLAN

SCALE 1/4" = 1'-0"

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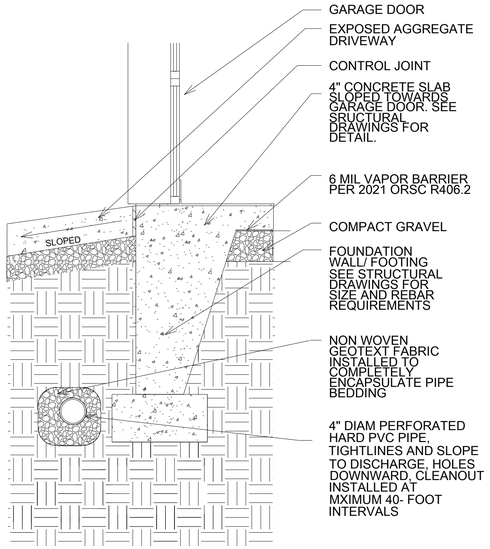
DRAWING # :	3-14
DRAWN BY	ML
CHECKED BY	N. Y.

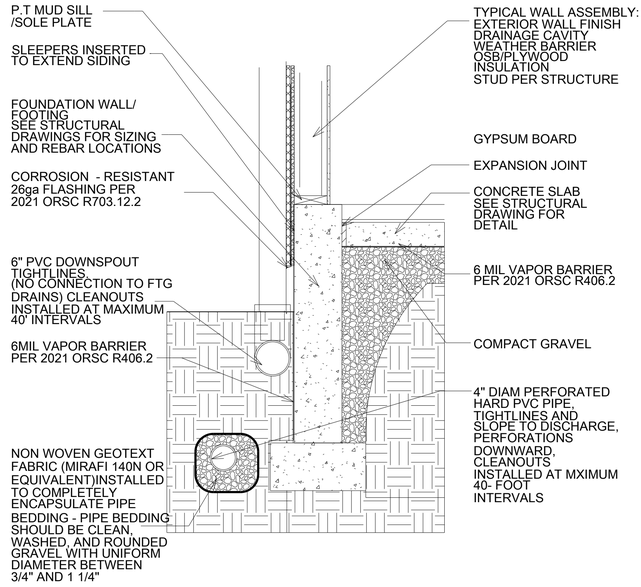
MAIN ROOF PLAN

PAGE NO. A5.1



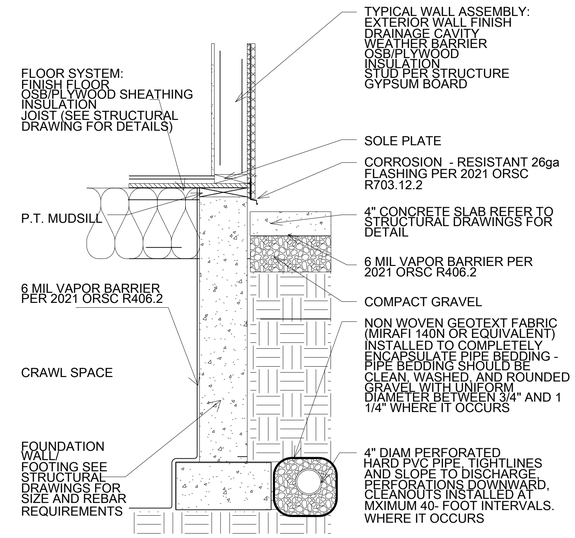
1 TYP. DRIVEWAY

SCALE 1" = 1'-0"



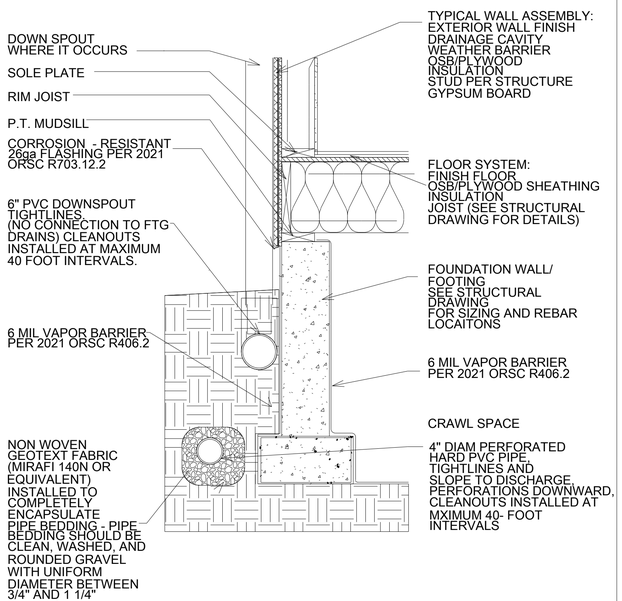
2 TYP. GARAGE FDTN EXT.

SCALE 1" = 1'-0"



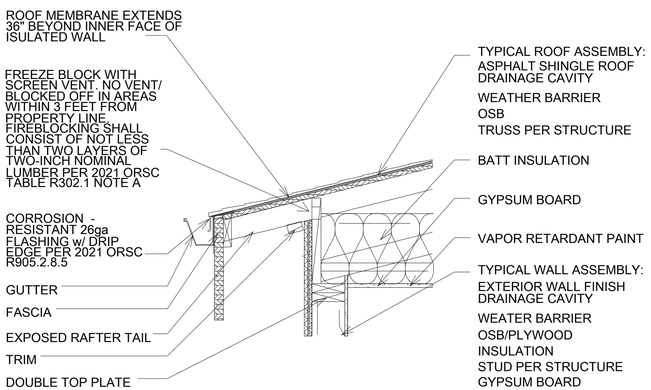
3 TYP. GARAGE FDTN INT.

SCALE 1" = 1'-0"



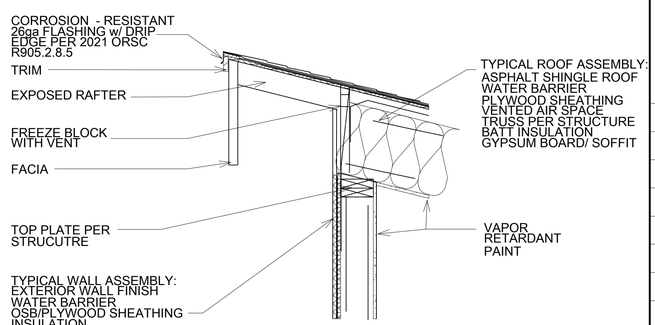
4 TYP. CRAWL SPACE FDTN

SCALE 1" = 1'-0"



5 EXPOSED EAVE TO ATTIC

SCALE 1" = 1'-0"



6 TOP OF SHED ROOF

SCALE 1" = 1'-0"

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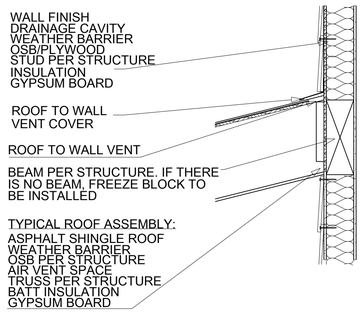
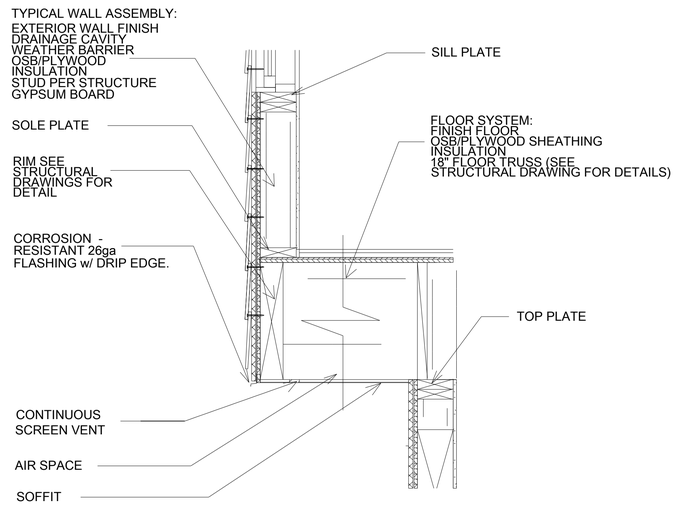
ARCHITECTURAL DETAILS

PAGE NO. A6.0



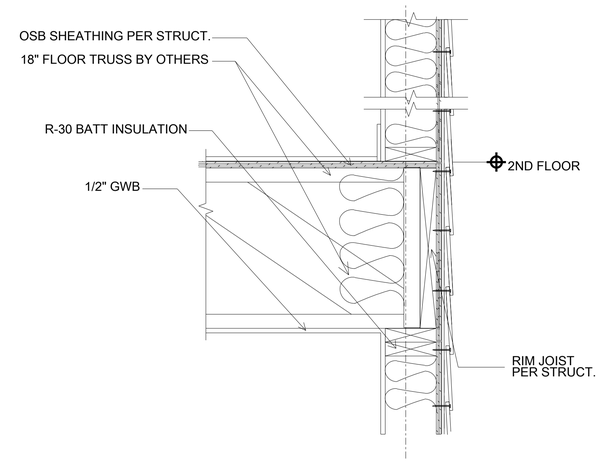
1 ROOF TO WALL VENT

SCALE 1" = 1'-0"



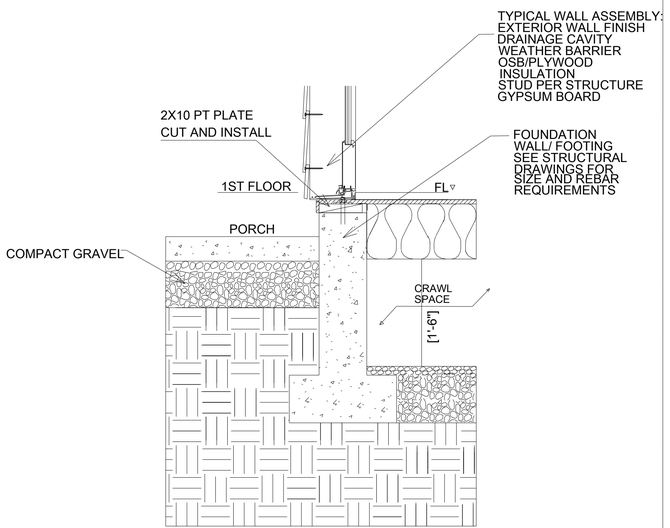
2 2ND FLOOR OVERHANG

SCALE 1" = 1'-0"



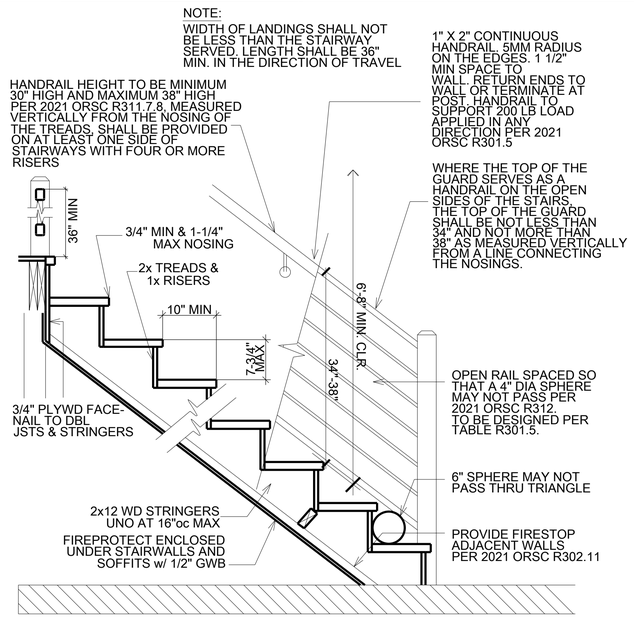
3 FLOOR @ EXTERNAL WALL

SCALE 1" = 1'-0"



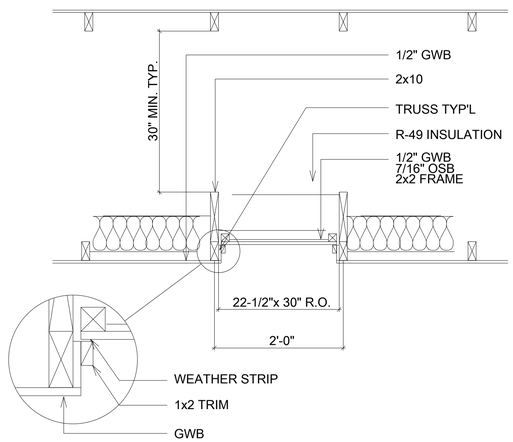
4 TYPE PATIO SLAB EXTERIOR WALL FOUNDATION

SCALE 1" = 1'-0"



5 TYP. STAIRS

SCALE 1" = 1'-0"



6 ATTIC ACCESS

SCALE 1" = 1'-0"

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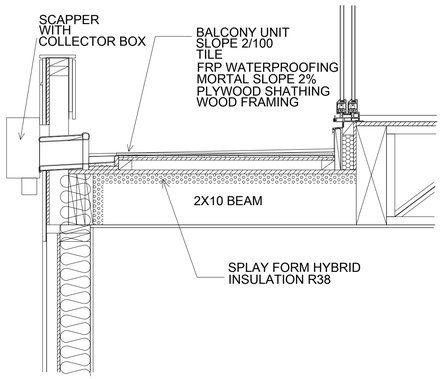
CHECKED BY	N. Y.

ARCHITECTURAL DETAILS

PAGE NO. A6.1



1 BALCONY
SCALE 1" = 1'-0"

BLANK

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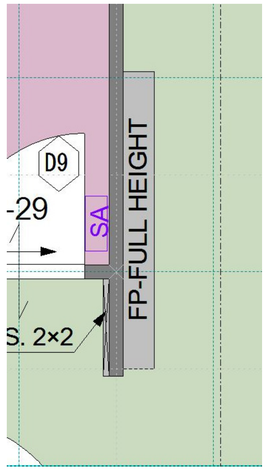
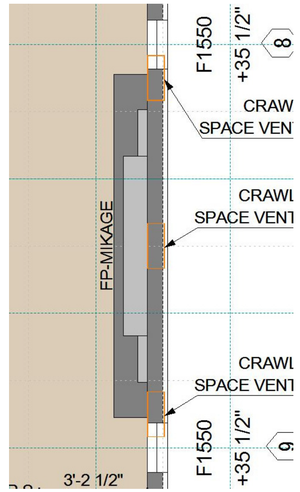
CHECKED BY	N. Y.

ARCHITECTURAL DETAILS

PAGE NO. A6.2



1 FP-FULL HEIGHT OPTION



2 FP-MIKAGE OPTION

3 OPTION

4 OPTION

5 OPTION

6 OPTION

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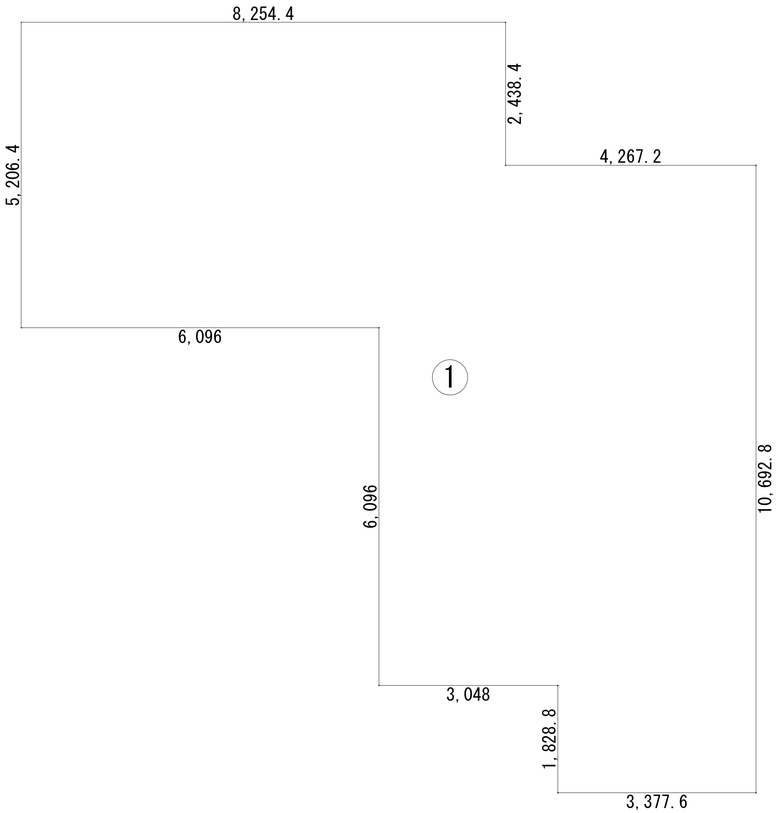
CUST CODE:	U223029-XE1L
DRAWING # :	3-14
DRAWN BY	ML
CHECKED BY	N. Y.

OPTIONAL DETAILS

PAGE NO. A7.0

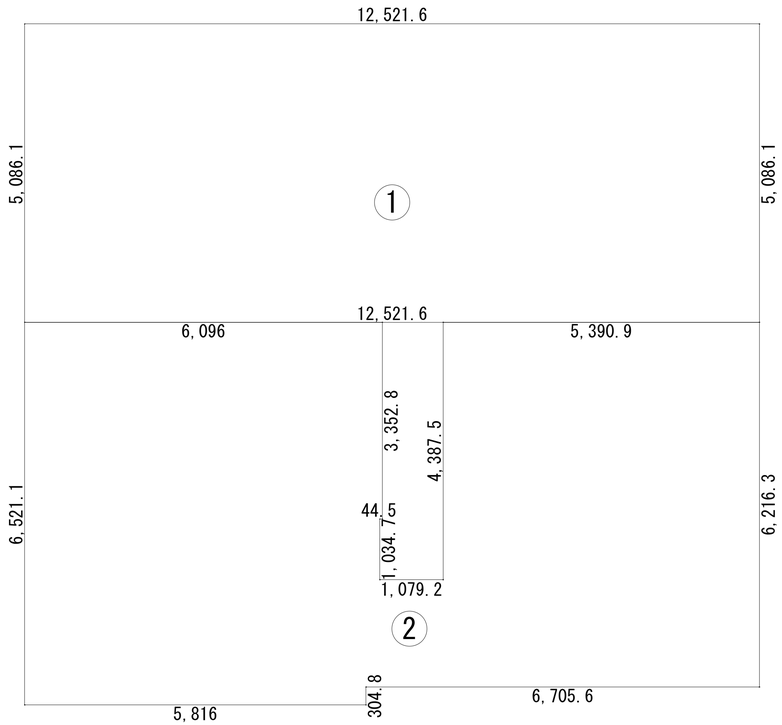
Area Schedule (inside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,078 SF
2ND FLOOR	1,493 SF
GARAGE	382 SF
	2,953 SF
NET HEATING AREA	2,571 SF



NUMBER	FORMULA (m)	AREA(㎡)	AREA(SF)
①		100.134730	1,078 SF
	TOTAL ≒	100.134730 100.13	1,078 SF

1 1ST FLOOR AREA

Scale 1/4″ = 1′ -0″



NUMBER	FORMULA (m)	AREA(㎡)	AREA(SF)
①	5.0861×12.521599	63.686104	685 SF
②		75.024969	808 SF
	TOTAL ≒	138.711073 138.71	1,493 SF

2 2ND FLOOR AREA

Scale 1/4″ = 1′ -0″

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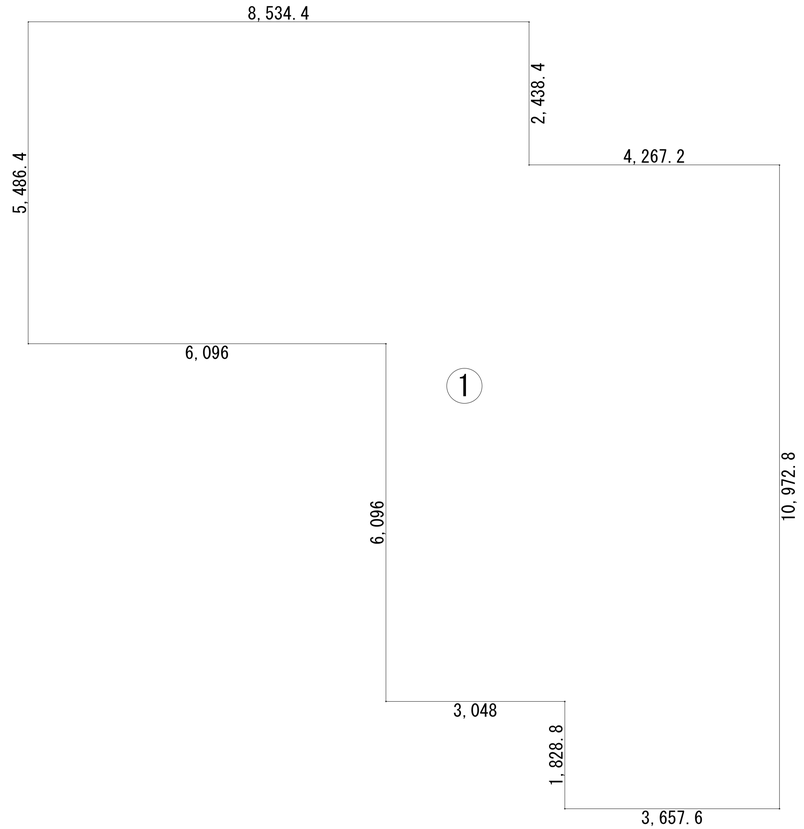
PERMIT SQUARE FOOTAGE

PAGE NO. A11.0

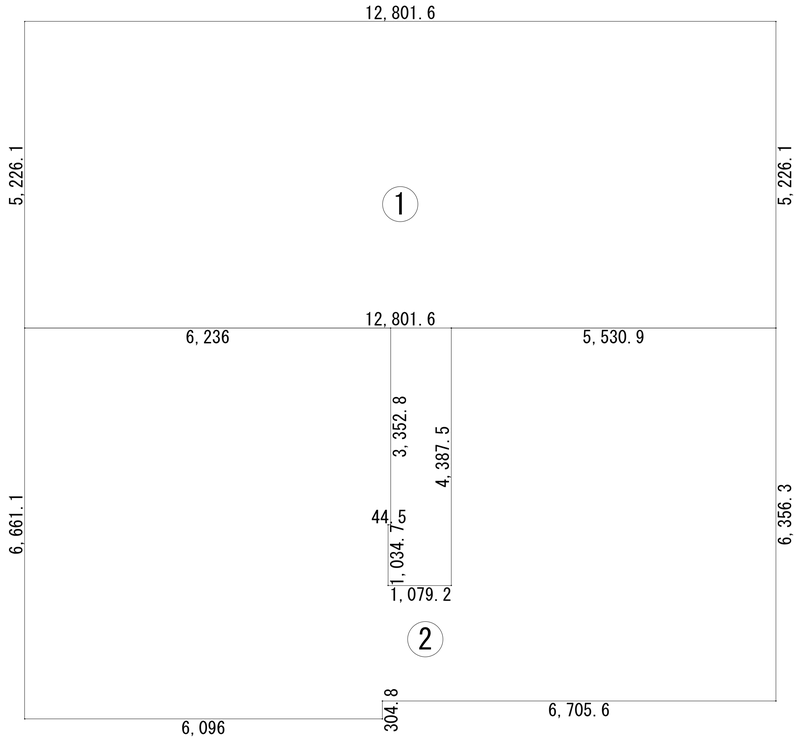
Area Schedule (outside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,156 SF
2ND FLOOR	1,567 SF
GARAGE	400 SF
	3,123 SF
NET HEATING AREA	2,723 SF



NUMBER	FORMULA (m)	AREA(㎡)	AREA(SF)
①		107.395914	1,156 SF
	TOTAL ≒	107.395914 107.39	1,156 SF

1 1ST FLOOR AREA

Scale 1/4″ = 1′ -0″



NUMBER	FORMULA (m)	AREA(㎡)	AREA(SF)
①	5.2261×12.801599	66.902436	720 SF
②		78.643101	847 SF
	TOTAL ≒	145.545537 145.54	1,567 SF

2 2ND FLOOR AREA

Scale 1/4″ = 1′ -0″

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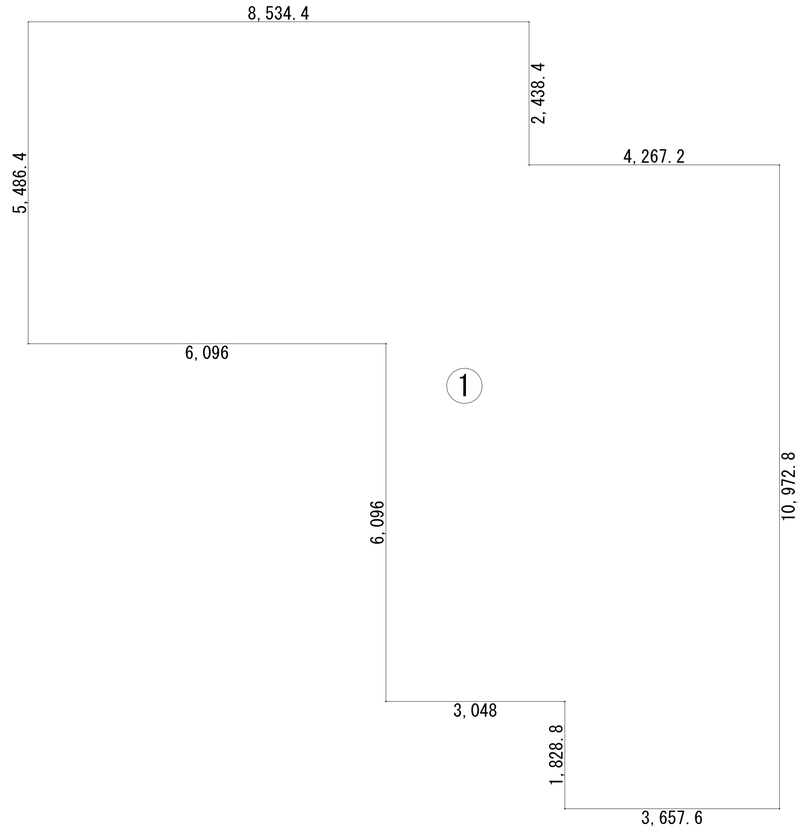
PERMIT SQUARE FOOTAGE

PAGE NO. A11.1

Area Schedule (outside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,156 SF
2ND FLOOR	1,616 SF

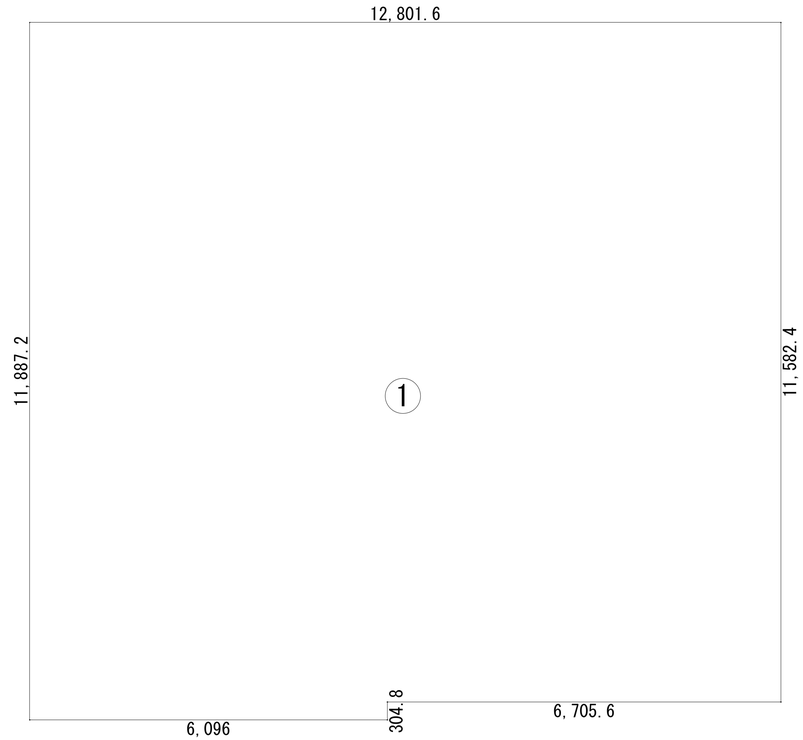
NET HEATING AREA 2,772 SF



NUMBER	FORMULA (m)	AREA(㎡)	AREA(SF)
①		107.395914	1,156 SF
TOTAL	≒	107.395914 107.39	1,156 SF

1 1ST FLOOR AREA

Scale 1/4″ = 1′ -0″



NUMBER	FORMULA (m)	AREA(㎡)	AREA(SF)
①		150.131312	1,616 SF
TOTAL	≒	150.131312 150.13	1,616 SF

2 2ND FLOOR AREA

Scale 1/4″ = 1′ -0″

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DRAWING # :	3-14
DRAWN BY	IB
CHECKED BY	N.Y.

SALES SQUARE FOOTAGE

PAGE NO. A11.2

TYPE R-1L

PROJECT INFORMATION

PROJECT OWNER
ICHIJO USA CO., LTD.

ADDRESS

LOT AREA

PROJECT DESCRIPTION
NEW SINGLE FAMILY RESIDENCE

PROJECT TEAM

OWNER / CONTRACTOR
ICHIJO USA
3800 SW CEDAR HILLS BLVD. STE 131 BEAVERTON OR 97005
Tel : +1 503-430-7413
CONTACT: MASAKI NARITA (m-narita@ichijousa.com)

SHEET INDEX

GENERAL NOTES

1. THE CONTRACTOR SHALL PERFORM WORK IN STRICT ACCORDANCE WITH THE FOLLOWING CODES AND ALL APPLICABLE STATE AND LOCAL AMENDMENTS:
   2021 EDITION OF THE OREGON RESIDENTIAL SPECIALTY CODE
   2019 EDITION OF THE OREGON STRUCTURAL SPECIALTY CODE
   2021 EDITION OF THE OREGON PLUMBING SPECIALTY CODE
   2019 EDITION OF THE OREGON MECHANICAL SPECIALTY CODE
   2021 EDITION OF THE OREGON ELECTRICAL SPECIALTY CODE
2. ALL THE WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE ATTACHED DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN THE FIELD AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND THE DRAWINGS.
4. DRAWINGS SHALL NOT BE SCALED. DIMENSIONS SHALL GOVERN, DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. WRITTEN SPECIFICATIONS NOTES SHALL GOVERN OVER ALL. IN CASE OF CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN. CONTACT ARCHITECT PRIOR TO CONSTRUCTION FOR CLARIFICATION.
5. PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS NOTED OTHERWISE.
6. CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING BUT NOT LIMITED TO SAFETY AND PROTECTION OF PROPERTY DURING THE PERFORMANCE OF THE WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS AND PAYMENT OF UTILITY CHARGES.
8. DO NOT COMMENCE WORK UNTIL CONDITIONS ARE ACCEPTABLE TO ALL CONCERNED PARTIES, INCLUDING GOVERNING AUTHORITIES.
9. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND PROTECT ALL EXISTING MECHANICAL, ELECTRICAL AND ALL OTHER UTILITIES AND CAP OR RELOCATE AS REQUIRED.
10. CONTRACTOR SHALL PROVIDE METHODS, MEANS, AND FACILITIES REQUIRED TO PREVENT CONTAMINATION OF SOIL, WATER, OR ATMOSPHERE, AND IN COMPLIANCE WITH ENVIRONMENTAL REGULATION OF LOCAL GOVERNING AUTHORITIES.

MECHANICAL/PLUMBING/ELECTRICAL
1. MECHANICAL/PLUMBING SYSTEMS PERMITS WILL BE OBTAINED BY THE CONTRACTOR DURING CONSTRUCTION.

SOLAR READY REQUIREMENTS FOR ALL NEW HOMES

N1107.4 SOLAR INTERCONNECTION PATHWAY. A SQUARE METAL JUNCTION BOX NOT LESS THAN 4 INCHES BY 4 INCHES WITH A METAL BOX COVER SHALL BE PROVIDED WITHIN 24 INCHES HORIZONTALLY OR VERTICALLY OF THE MAIN ELECTRICAL PANEL. A MINIMUM 3/4-INCH RIGID METAL RACEWAY SHALL EXTEND FROM THE JUNCTION BOX TO A CAPPED ROOF TERMINATION OR TO AN ACCESSIBLE LOCATION IN THE ATTIC WITH A VERTICAL CLEARANCE OF NOT LESS THAN 36 INCHES. WHERE THE RACEWAY TERMINATES IN THE ATTIC, THE TERMINATION SHALL BE LOCATED NOT LESS THAN 6 INCHES ABOVE THE INSULATION. THE END OF THE RACEWAY SHALL BE MARKED AS "RESERVED FOR SOLAR."
EXCEPTION: IN LIEU OF 3/4 INCH RIGID METAL RACEWAY, A MINIMUM # 10 COPPER 3-WIRE MC CABLE INSTALLED FROM THE JUNCTION BOX TO THE TERMINATION POINT INCLUDING 6 INCHES ADDITIONAL WIRE IS PERMITTED.

ENERGY EFFICIENCY

TABLE N1101.1(2)

ADDITIONAL MEASURES

1. HIGH EFFICIENCY HVAC SYSTEM

A. GAS-FIRED FURNACE OR BOILER AFUE 94%, OR
B. AIR SOURCE HEAT PUMP HSPF 10.0/14.0 SEER COOLING, OR
C. GROUND SOURCE HEAT PUMP COP 3.5 OR ENERGY STAR RATED

PREFABRICATED PANELIZING SYSTEM

THIS PROJECT IS USING A METHOD OF PREFABRICATED PANELIZING SYSTEM. THE PANEL WILL BE SHIPPED FROM OUR FACTORY IN THE PHILIPPINES (HTI). THE WHOLE PURPOSE OF HTI'S ACCREDITATION, FA-464 IS THAT THIS SUBSTITUTES THE NEED FOR BUILDING INSPECTOR TO VERIFY ALL CONSTRUCTION THAT NOT VISIBLE AT THE JOBSITE (WALLS, FLOOR, CEILINGS). ITEMS NOT VISIBLE INCLUDING ELEMENTS OF THE SHEAR WALL LOADING CAPACITY AS SHOWN IN THE ARCHITECTURAL ENGINEERED DRAWINGS HAVE BEEN INSPECTED AT THE HTI FACTORY TO MEET THE APPLICABLE IBC CODES AS NOTED IN THE CERTIFICATE OF ACCREDITATION AS SPECIFIED BY ICHIJO USA CO., LTD. REPRESENTATIVE ENGINEERS.

THE INSPECTION PROCESS AT HTI MEETS THE INTERNATIONAL ACCREDITATION SERVICE ACCEPTANCE CRITERIA AC196 IN WHAT IS ESSENTIALLY 100% VISUAL INSPECTION DURING THE MANUFACTURING PROCESS. THIS IS VERIFIED BY BENCHMARK HOLDINGS, LLC ONGOING AUDITS AND JOINT AUDIT/ASSESSMENTS WITH THE INTERNATIONAL ACCREDITATION SERVICE. AS A SIDE NOTE, THE QUALITY OF THE HTI PRODUCT IS EXTREMELY HIGH, EXCEEDING THAT OF THE TYPICAL STICK BUILT US STRUCTURE. THE BUILDING PRODUCTS ARE FROM NORTH AMERICAN MANUFACTURES USED IN US CONSTRUCTION MEETING RESPECTIVE PRODUCT AND EVALUATION STANDARDS TO MEET APPLICABLE CODE REQUIREMENTS.

RADON CONTROL

AF103.5.1 PASSIVE SUBMEMBRANE DEPRESSURIZATION

AF103.5.1.1 VENTILATION. CRAWL SPACES SHALL BE PROVIDED WITH VENTS TO THE EXTERIOR OF THE BUILDING. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL COMPLY WITH SECTION R408.1.

AF103.5.1.2 SOIL-GAS-RETARDER. THE SOIL IN CRAWL SPACES SHALL BE COVERED WITH A CONTINUOUS LAYER OF MINIMUN 6-MIL (0.15MM) POLYETHYLENE SOIL-GAS-RETRDER. THE GROUND COVER SHALL BE LAPPED A MINIMUM 12 INCHES (305MM) AT JOINTS AND SHALL BE EXTENDED TO ALL FOUNDATION WALLS ENCLOSING THE CRAWL SPACE AREA.

AF103.5.1.3 VENT PIPE. A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSERTED HORIZONTALLY BENEATH THE SHEETING AND CONNECTED TO A 3- OR 4-INCH-DIAMETER (76 MM OR 102 MM) FITTING WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE BUILDING FLOORS, TERMINATE AT LEAST 12 INCHES (305 MM) ABOVE THE ROOF IN A LOCATION AT LEAST 10 FEET (3048 MM) AWAY FROM ANY WINDOWS OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET (610 MM) BELOW THE EXHAUST POINT, AND 10 FEET (3048 MM) FROM ANY WINDOW OR OTHER OPENING ADJOINING OR ADJACENT BUILDINGS.

VICINITY PLAN

PROJECT SITE

SITE MAP

PROJECT LOT

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TYPE R-1L

REVISION

DATE:	2023/2/21
HOUSE TYPE:	USA-S1
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COVER SHEET

PAGE NO.

A0.0

WINDOW AND DOOR SCHEDULE (FIRST FLOOR)

NO	ROOM	NAME	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
	ENTRY	H=8'		ENTRY DOOR	38.375″	98.75″		
	GARAGE	16'X8'		GARAGE DOOR	195″	97.5″		
	GARAGE	H=7'		ENTRY DOOR	38.375″	83.5″		
		7-29		INTERIOR DOOR	32.5″	82.5″		
		7-36		INTERIOR DOOR	38.5″	82.5″		
		MCFD-30		FOLDING DOOR	29.5″	82.5″		
		MCFD-60		FOLDING DOOR	63″	82.5″		
1	DEN/BEDROOM 2	U6560		2-LITE SLIDING WINDOWS	65.5″	60.5″	34″	0.27
2	KITCHEN	UF4112.		FIXED WINDOWS	41.5″	12.5″	43 1/2″	0.24
3	DINING	U6560		2-LITE SLIDING WINDOWS	65.5″	60.5″	34″	0.27
4	DINING	UF4160		FIXED WINDOWS	41.5″	60.5″	34″	0.24
5	LIVING	U7282S	TEMPERED	2-LITE PATIO DOOR	72.0″	82.0″	0″	0.26
6	LIVING	UF1760		FIXED WINDOWS	17.5″	60.5″	34″	0.24
7	LIVING	UF1760		FIXED WINDOWS	17.5″	60.5″	34″	0.24
8	POWDER BATH	UF2918	TEMPERED	FIXED WINDOWS	29.5″	18.5″	76″	0.24

AREA SCHEDULE

1ST FLOOR A	2ND FLOOR B	GARAGE C	BASEMENT D	TOTAL AREA (A+B+C+D)	NET HEATING AREA (A+B+D)
1140 SF	1331 SF	400 SF	SF	2871 SF	2471 SF

＊(OUTSIDE FACE OF EXTERIOR WALL STUDS)

CRAWL SPACE VENTING

OPENINGS FOR UNDER-FLOOR VENTILATION. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER-FLOOR AREA. REQUIRED OPENINGS SHALL BE EVENLY PLACED TO PROVIDE CROSS VENTILATION OF THE SPACE EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS.
-SEE FIRST FLOOR PLAN FOR CRAWL SPACE VENTS CALCULATION.

WHOLE HOUSE VENTILATION

1. REFER TO IRC M1507.3.2 AND M1507.3.5 FOR DETAILED REQUIREMENTS FOR THE EXHAUST SYSTEM AND CONTROLS.
2. WHOLE HOUSE VENTILATION TO BE PROVIDED BY MEANS OF AN INTEGRATED WHOLE HOUSE FORCED AIR SYSTEM. (REFER ALSO TO ENERGY NOTE 3.2a ABOVE); FAN CAPABLE OF PROVIDING VENTILATION RATE OF 75 CFM PER TABLE 1507.3.3(1) , 1501-3000 S.F., 4-5 BEDROOMS.
3. OUTSIDE AIR SHALL BE PROVIDED BY MEANS OF FRESH AIR INLET TO THE RETURN AIR PLENUM AT A POINT WITHIN 4' UPSTREAM OF THE AIR HANDLER. THE SYSTEM WILL BE EQUIPPED WITH A MOTORIZED DAMPER PER IRC M1507.3.5.

SOURCE SPECIFIC VENTILATION

1. REFER TO PLAN FOR LOCATIONS.
2. SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM. EXHAUST FANS PROVIDING SOURCE SPECIFIC VENTILATION SHALL HAVE A MINIMUM FAN FLOW RATING NOT LESS THAN 50 CFM AT 0.25 INCHES WATER GAUGE FOR BATHROOMS, LAUNDRIES, OR SIMILAR ROOMS AND 100 CFM AT 0.25 INCHES WATER GAUGE FOR KITCHENS. THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED OUTDOORS.

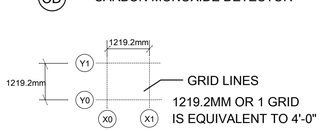
NOTE

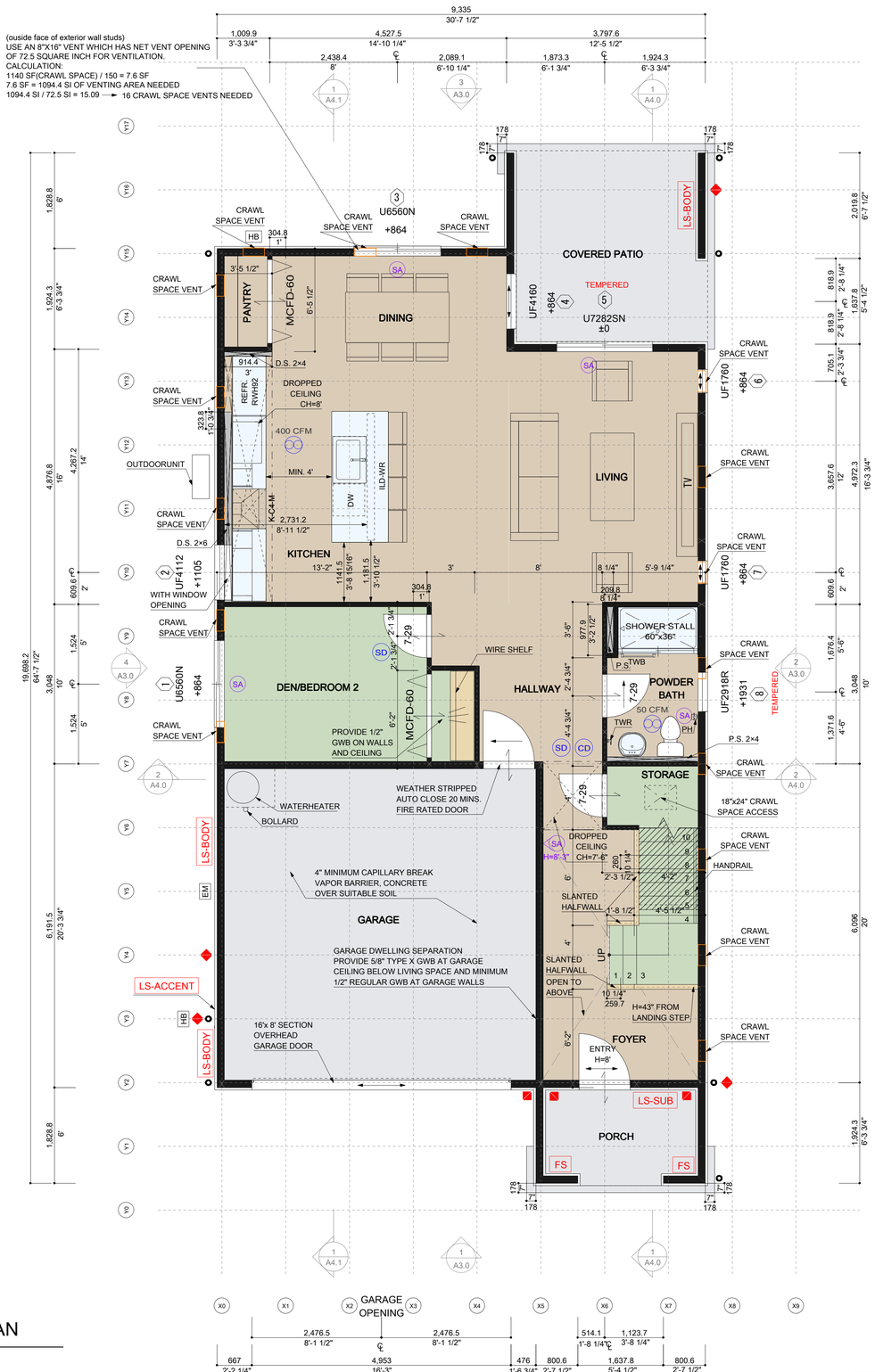
SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE REQUIRED TO RECEIVE ITS PRIMARY POWER FROM THE BUILDING WIRING AND BE PROVIDED WITH BATTERY BACKUP

SYMBOLS

- DRAWING NUMBER / SHEET NUMBER
- WINDOW TAG
- CENTER LINE
- TD-X
- WS-XXXX
- LS-XXXX
- CS-XXXX — EXTERIOR FINISH PRODUCT
- GM — GAS METER
- HB — HOSE BIB
- EM — ELECTRIC METER
- SD — SMOKE DETECTOR
- 50 CFM VTOS — SOURCE SPECIFIC VENT
- CD — CARBON MONOXIDE DETECTOR

LVP	
CONCRETE	
TILE	
LVT	
CARPET	





1 MAIN FLOOR PLAN
SCALE 1/4" = 1'-0"

270-240

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MAIN FLOOR PLAN

PAGE NO.

A2.0

WINDOW AND DOOR SCHEDULE (SECOND FLOOR)

NO	ROOM	NAME	REMARKS	TYPE	RO WIDTH	RO HEIGHT	SILL HEIGHT	U-FACTOR
9	LAUNDRY ROOM	UF2918,		FIXED WINDOWS	29.5″	18.5″	64″	0.24
10	BEDROOM 4	U6548,	EGRESS	2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
11	MAIN BATH	UF2924,	TEMPERED	FIXED WINDOWS	29.5″	24.5″	58″	0.24
12	BEDROOM 3	U6548,	EGRESS	2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
13	MASTERS BEDROOM	UF1736,		FIXED WINDOWS	17.5″	36.5″	46″	0.24
14	MASTERS BEDROOM	UF1736,		FIXED WINDOWS	17.5″	36.5″	46″	0.24
15	MASTERS BEDROOM	U6548,	EGRESS	2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
16	MASTERS BATHROOM	UF1736,		FIXED WINDOWS	17.5″	36.5″	46″	0.24
17	MASTERS BATHROOM	U5336,	TEMPERED	2-LITE SLIDING WINDOWS	53.5″	36.5″	46″	0.27
18	MASTERS BATHROOM	UF2936,	TEMPERED	FIXED WINDOWS	29.5″	36.5″	46″	0.24
19	FAMILY ROOM	U6548,		2-LITE SLIDING WINDOWS	65.5″	48.5″	34″	0.27
20	STAIRS	UF2948,		FIXED WINDOWS	29.5″	48.5″	34″	0.24
21	STAIRS	UF2948,		FIXED WINDOWS	29.5″	48.5″	34″	0.24
22	OPEN TO BELOW	UF2948,		FIXED WINDOWS	29.5″	48.5″	34″	0.24
23	OPEN TO BELOW	UF2948,		FIXED WINDOWS	29.5″	48.5″	34″	0.24

AVERAGE U-FACTOR OF ALL FLOORS: 0.27

WINDOW REQUIREMENTS

1. REFER TO BLDG FLOOR PLANS FOR TEMPERED GLASS LOCATIONS LABELED "TEMPERED."
2. ALL SLEEPING ROOMS SHALL BE PROVIDED WITH A MINIMUM OF ONE EMERGENCY EGRESS WINDOW. PER 2015 IRC SECTION R310.1. REFER TO PLAN FOR LOCATIONS. EGRESS WINDOWS SHALL HAVE:
   MIN NET OPEN AREA = 5.7 SF
   MIN. NET OPEN HEIGHT = 24"
   MIN. NET OPEN WIDTH = 20"
   MAXIMUM SILL HEIGHT = 44"
   PER 2015 IRC SECTION R310.2.
3. ALL WINDOWS WITHIN 10' OF GRADE SHALL BE LOCKABLE

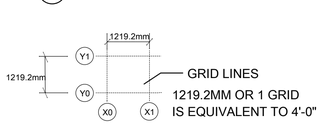
NOTE

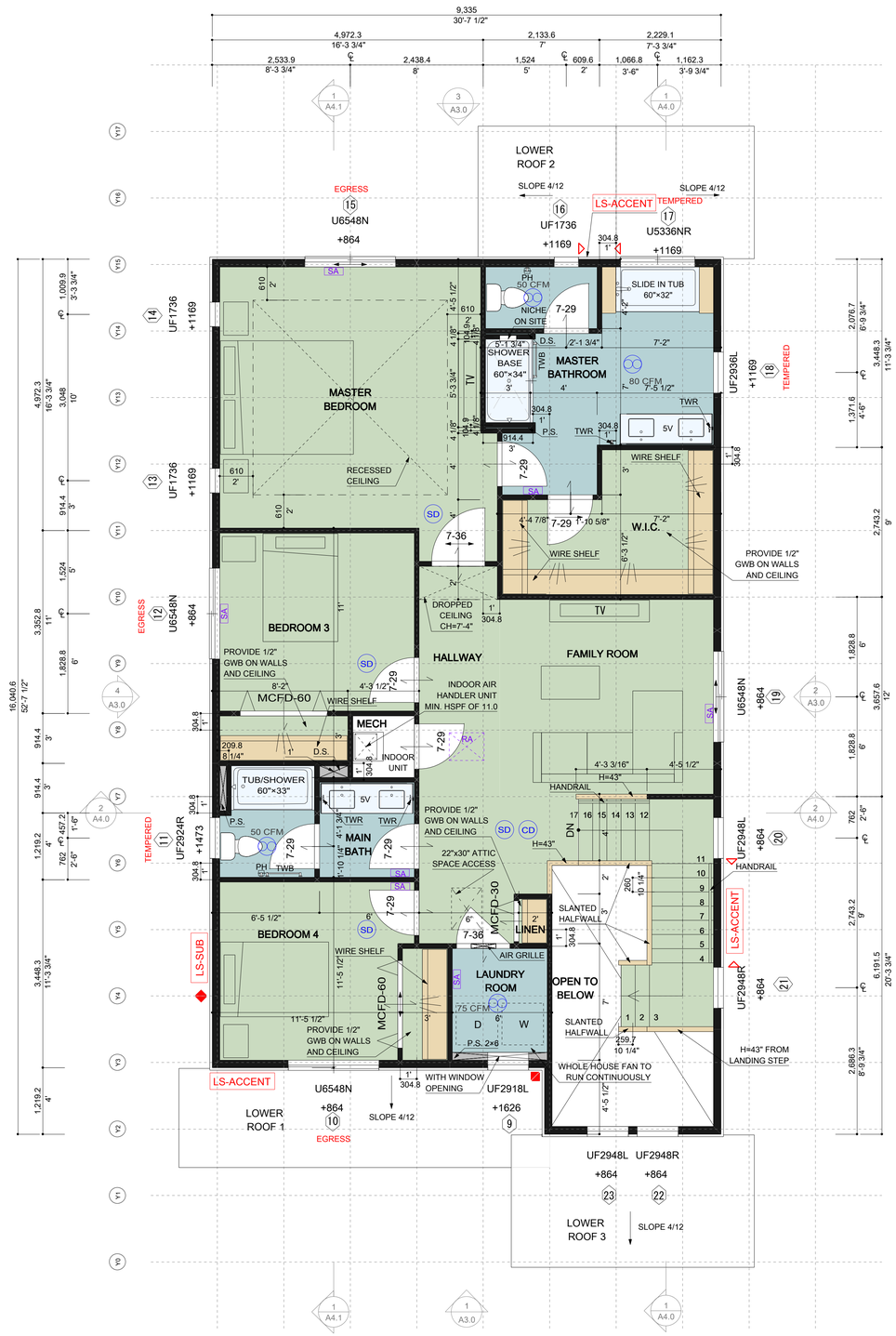
SHOWER HEAD TO BE RATED AT 1.75 GPM
LAVATORY FAUCETS TO BE RATED AT 1.0 GPM
KITCHEN SINK FAUCETS TO BE RATED AT 1.75 GPM

SYMBOLS

- DRAWING NUMBER / SHEET NUMBER
- WINDOW TAG
- CENTER LINE
- TD-X
- WS-XXXX
- LS-XXXX
- CS-XXXX — EXTERIOR FINISH PRODUCT
- GM — GAS METER
- HB — HOSE BIB
- EM — ELECTRIC METER
- SD — SMOKE DETECTOR
- 50 CFM VTOS — SOURCE SPECIFIC VENT
- CD — CARBON MONOXIDE DETECTOR

LVP
CONCRETE
TILE
LVT
CARPET





1 SECOND FLOOR PLAN
SCALE 1/4" = 1'-0"

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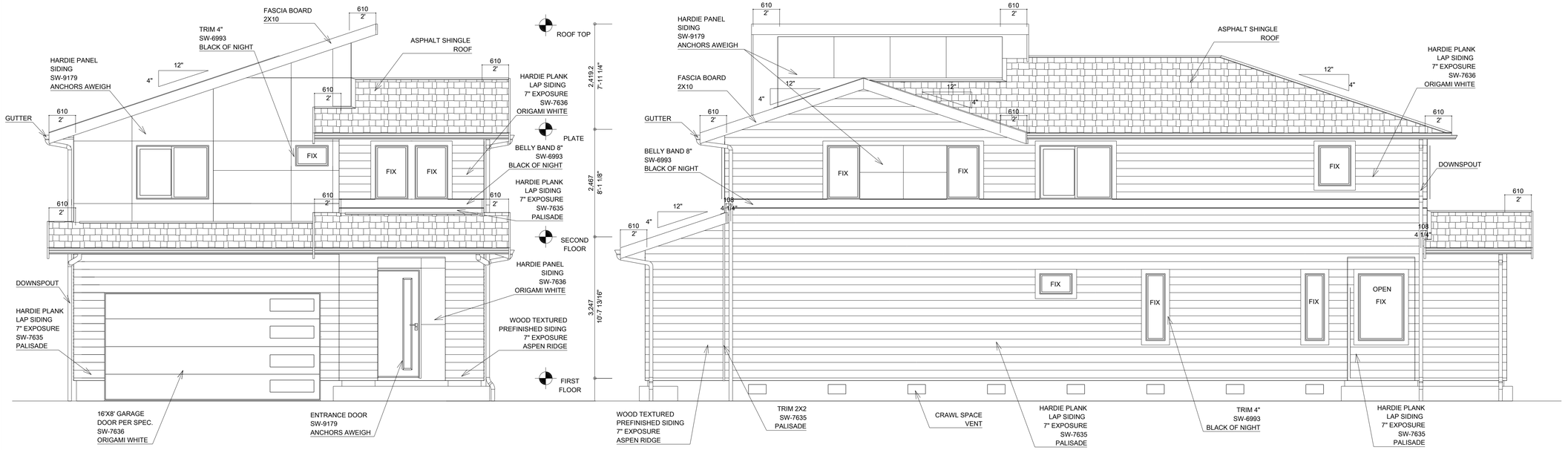
SECOND FLOOR PLAN

PAGE NO.

A2.1

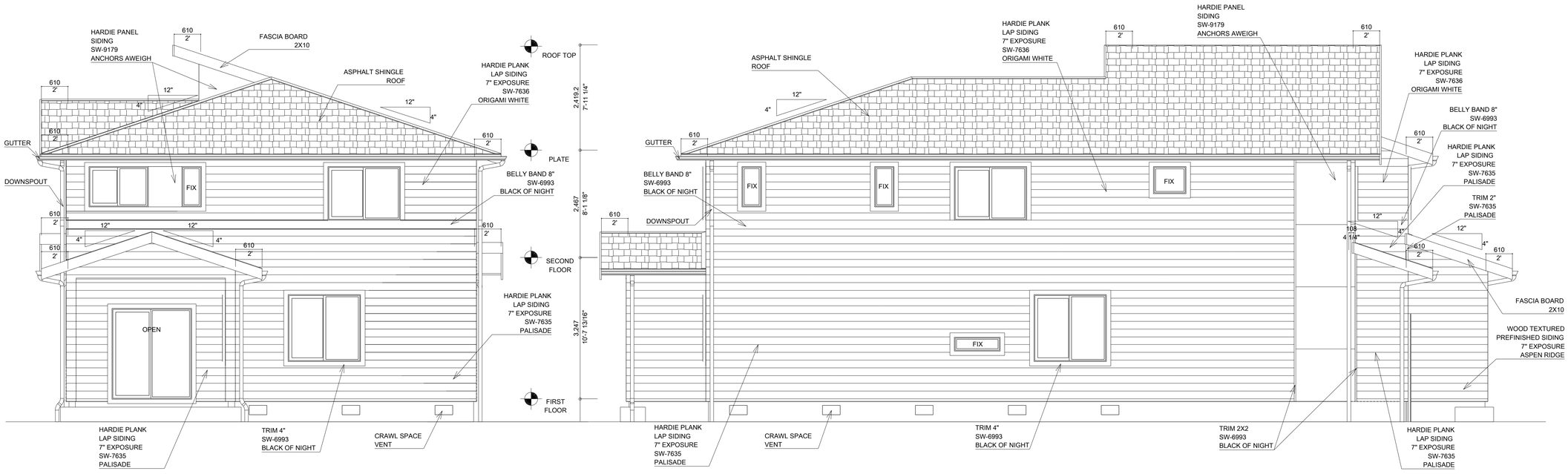


1 FRONT ELEVATION

Scale 1/4″ = 1′ -0″

2 RIGHT ELEVATION

Scale 1/4″ = 1′ -0″



3 REAR ELEVATION

Scale 1/4″ = 1′ -0″

4 LEFT ELEVATION

Scale 1/4″ = 1′ -0″

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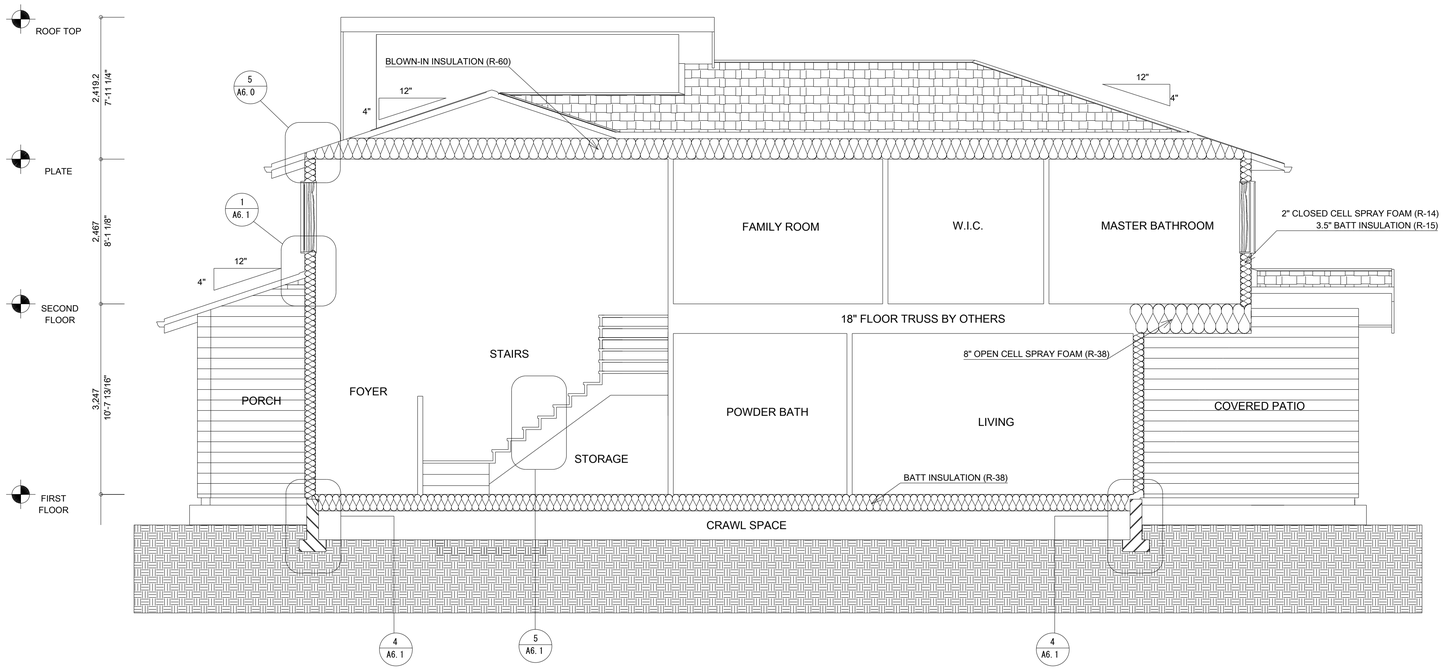
ELEVATIONS

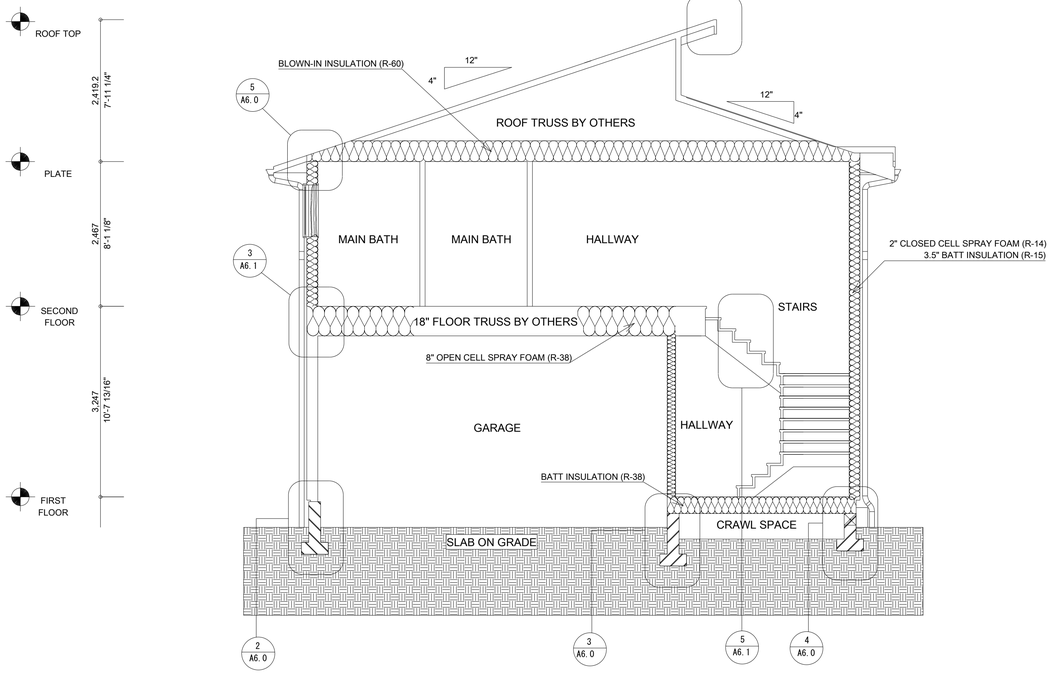
PAGE NO.

A3.0



1 BUILDING SECTION

SCALE 1/4" = 1'-0"



2 BUILDING SECTION

SCALE 1/4" = 1'-0"

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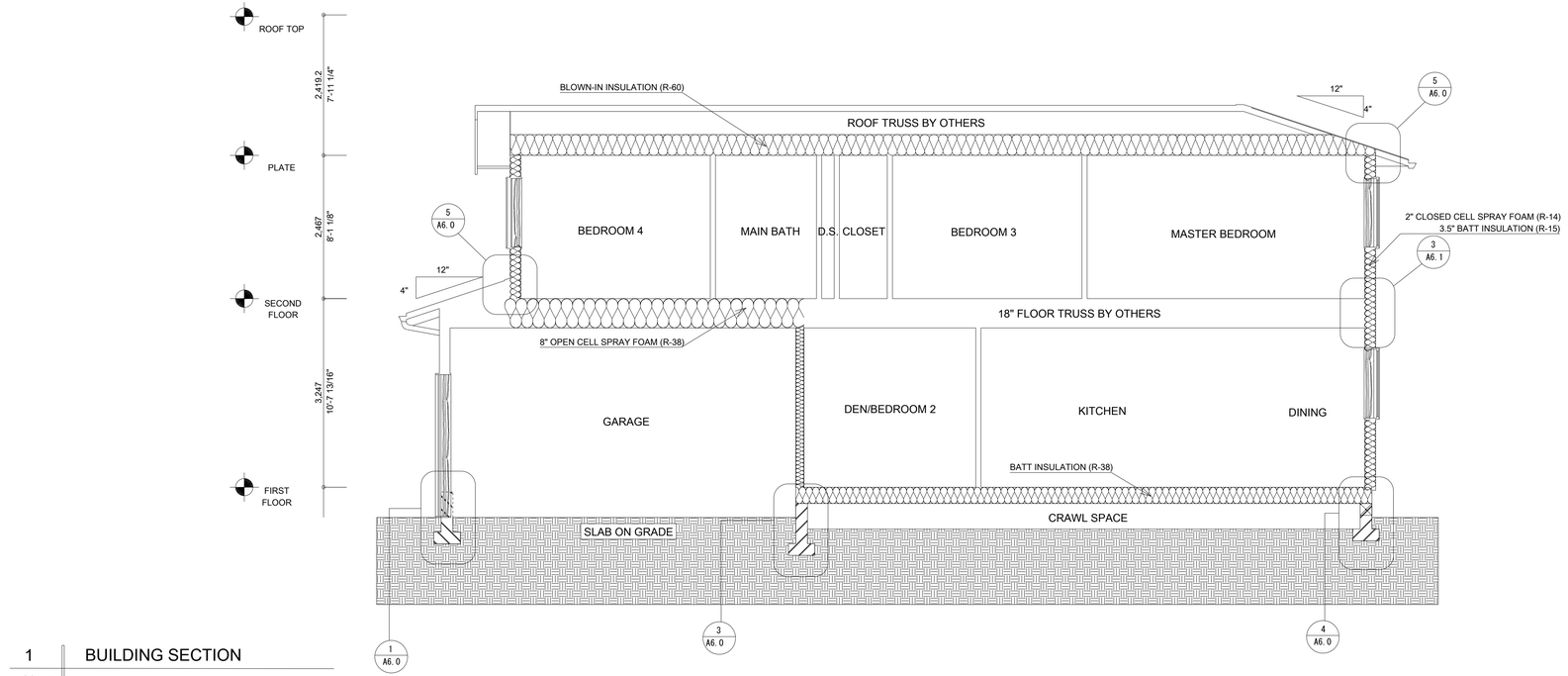
SECTIONS

PAGE NO.

A4.0



1 BUILDING SECTION

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SECTIONS

PAGE NO.

A4.1

ROOF VENTILATION

LOWER ROOF	1

AREA	88	SF	
VENTING RATIO	1/300		
REQ'D VENT	42	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	20	LF	0	LF
	125	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	125	SI	50	SI
SUB TOTAL RATIO	71	%	29	%
TOTAL (SI)	175	SI		
TOTAL RATIO	417	%	OF REQ'D	

LOWER ROOF	2

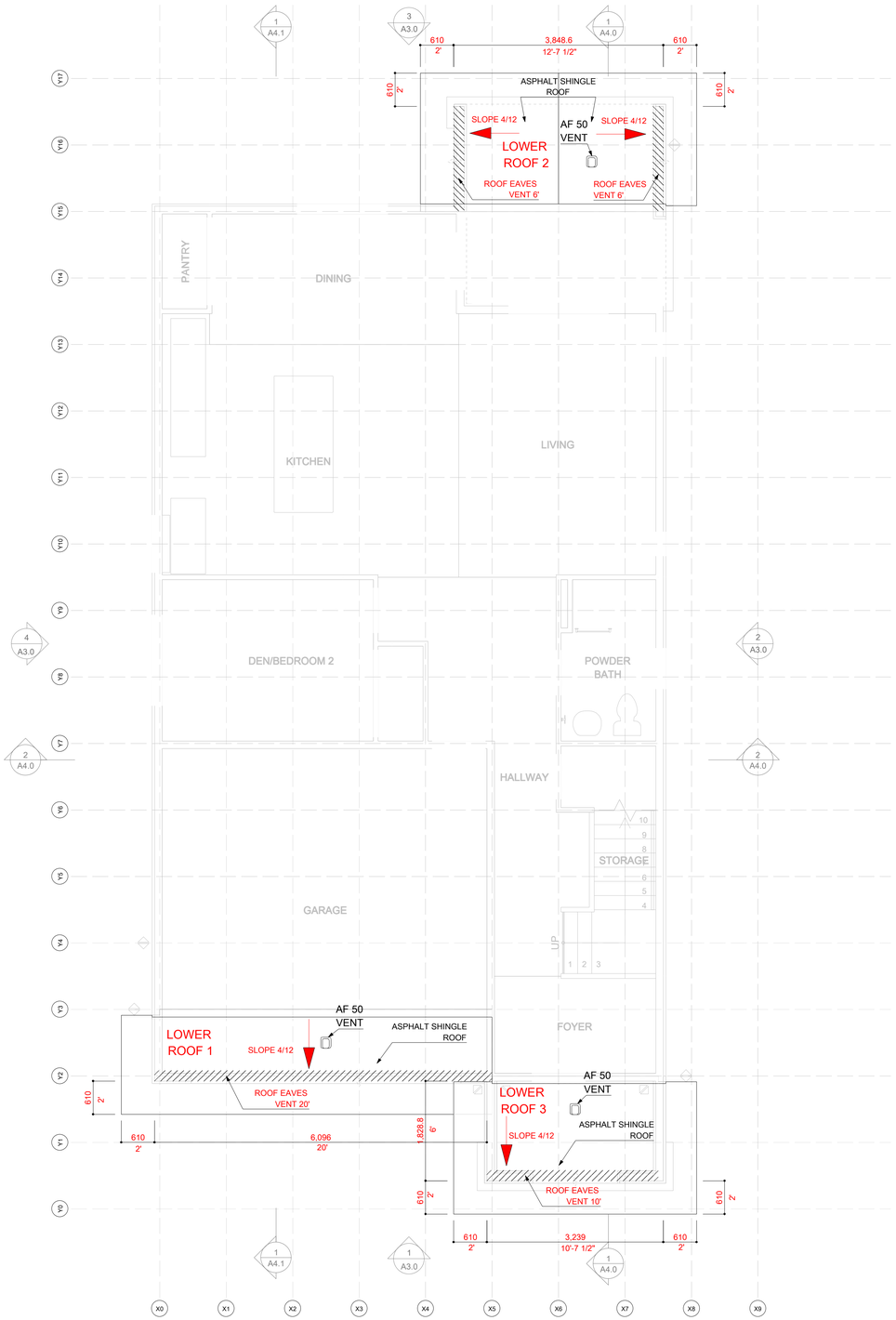
AREA	80	SF	
VENTING RATIO	1/300		
REQ'D VENT	38	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	12	LF	0	LF
	75	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	75	SI	50	SI
SUB TOTAL RATIO	60	%	40	%
TOTAL (SI)	125	SI		
TOTAL RATIO	329	%	OF REQ'D	

LOWER ROOF	3

AREA	70	SF	
VENTING RATIO	1/300		
REQ'D VENT	33	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	10	LF	0	LF
	62	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	1	QTY
	0	SI	50	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	62	SI	50	SI
SUB TOTAL RATIO	55	%	45	%
TOTAL (SI)	112	SI		
TOTAL RATIO	339	%	OF REQ'D	



1 LOWER ROOF PLAN
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LOWER ROOF PLAN

PAGE NO.

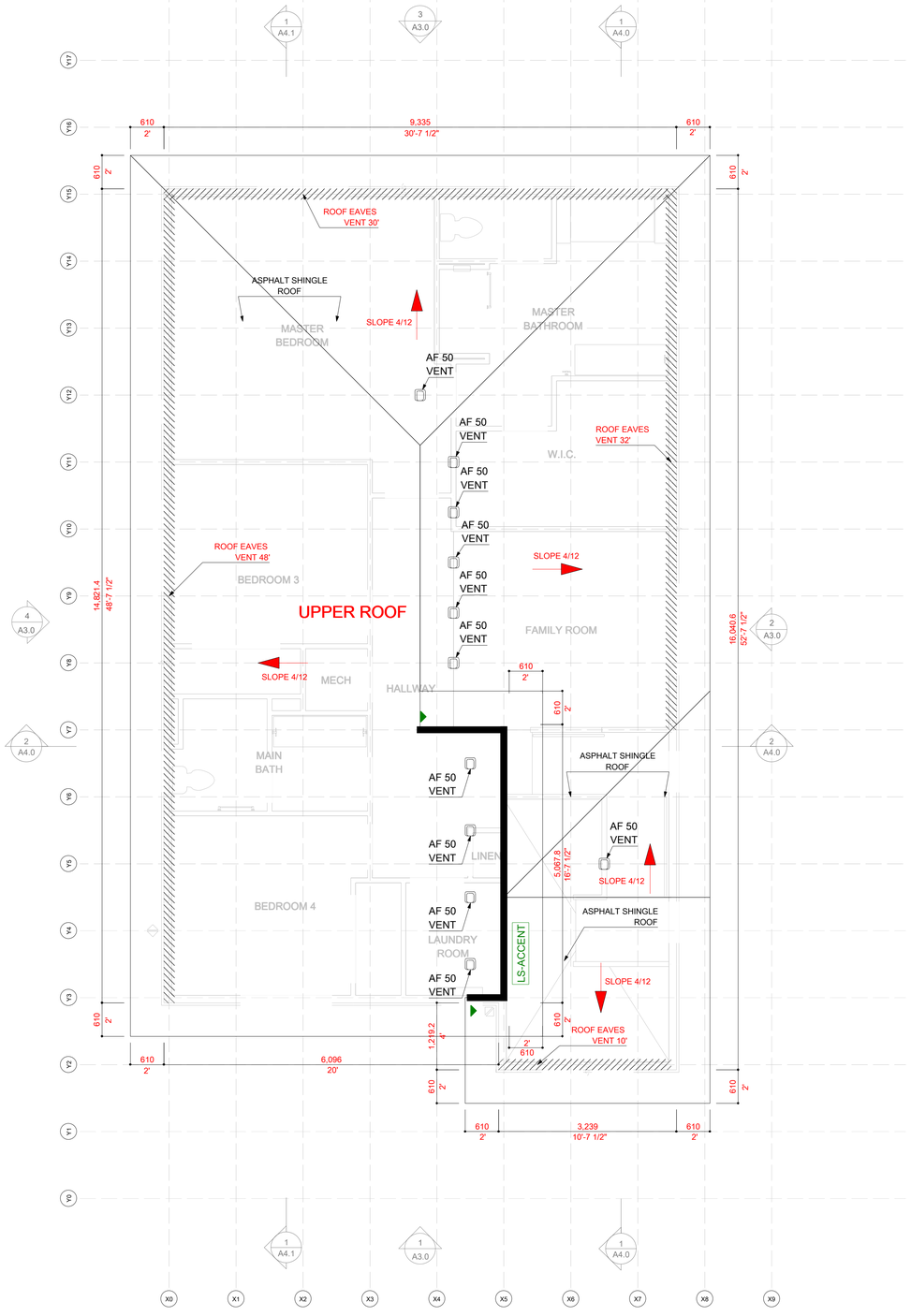
A5.0

ROOF VENTILATION

UPPER ROOF	1

AREA	1510	SF	
VENTING RATIO	1/300		
REQ'D VENT	724	SI	IS NEEDED

	LOW		HIGH	
EAVE VENT (6.28SI/LF)	120	LF	0	LF
	753	SI	0	SI
RIDGE VENT (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
ROOF TO WALL (16SI/LF)	0	LF	0	LF
	0	SI	0	SI
AF 50 (50SI/EA)	0	QTY	11	QTY
	0	SI	550	SI
SOFFIT VENT (9SI/LF)	0	LF	0	LF
	0	SI	0	SI
SUB TOTAL (SI)	753	SI	550	SI
SUB TOTAL RATIO	58	%	42	%
TOTAL (SI)	1303	SI		
TOTAL RATIO	180	%	OF REQ'D	



1 MAIN ROOF PLAN
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MAIN ROOF PLAN

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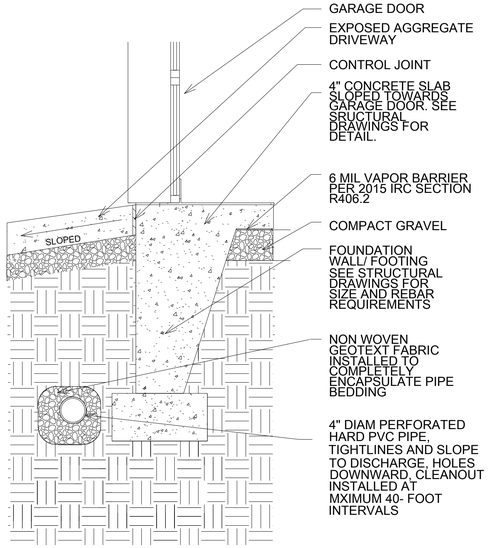
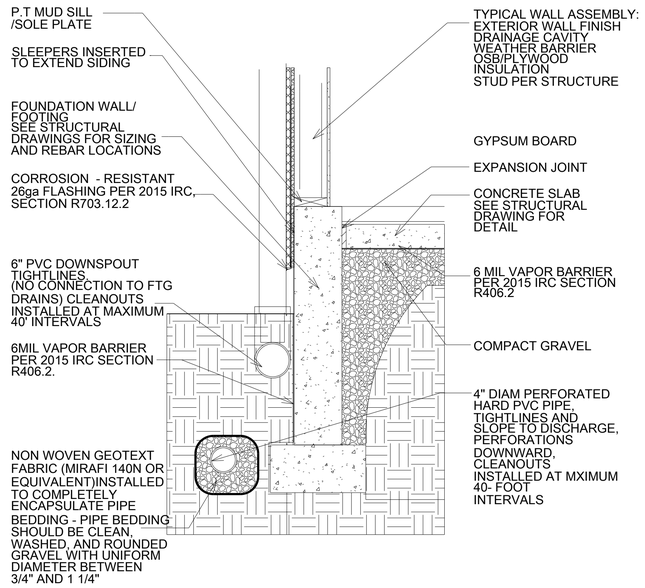
A5.1



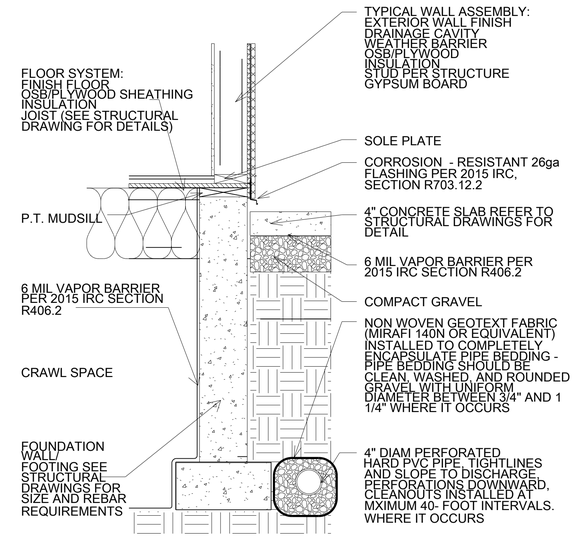
1 TYP. DRIVEWAY

SCALE 1" = 1'-0"



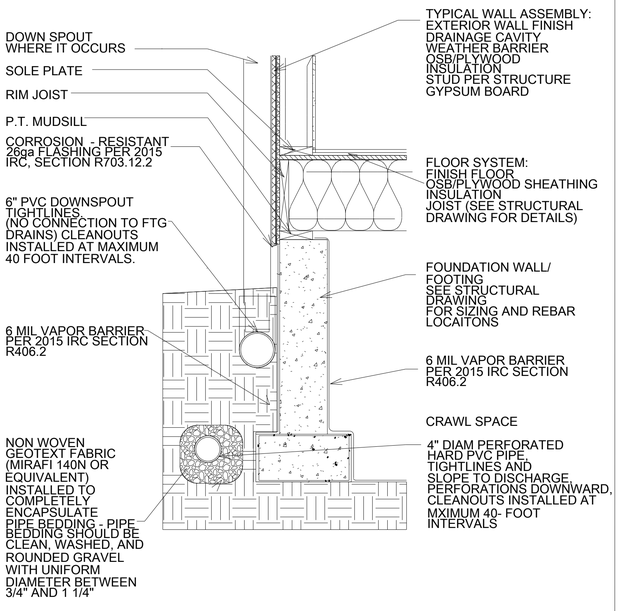
2 TYP. GARAGE FDTN EXT.

SCALE 1" = 1'-0"



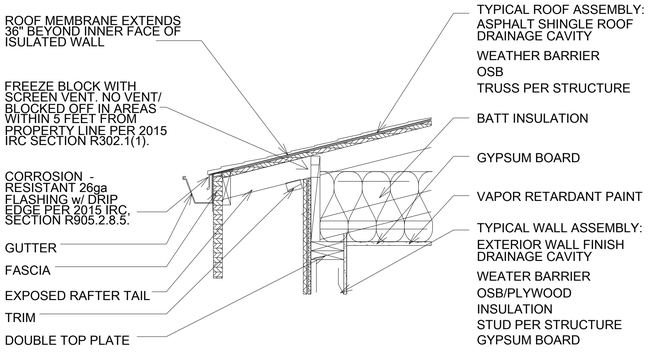
3 TYP. GARAGE FDTN INT.

SCALE 1" = 1'-0"



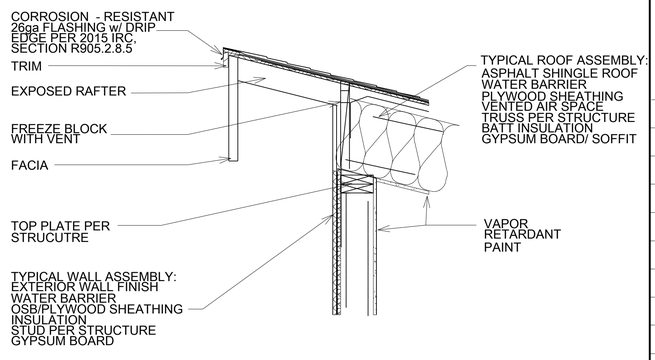
4 TYP. CRAWL SPACE FDTN

SCALE 1" = 1'-0"



5 EXPOSED EAVE TO ATTIC

SCALE 1" = 1'-0"



6 TOP OF SHED ROOF

SCALE 1" = 1'-0"

ICHIJO
Technological Homes
ICHIJO USA CO., LTD.
3800 SW CEDAR HILLS BLVD. STE 131
BEAVERTON OR 97005
Tel : +1 503-430-7413
Fax : +1 503-430-7621
WEB: www.ichijousa.com

TYPE R-1L

REVISION

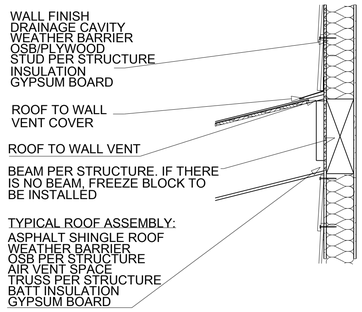
DATE:	2023/2/21
HOUSE TYPE:	USA-S1
BP CODE:	
BP DRAWING #:	
CUST CODE:	U220171-YN1L
DRAWING # :	2-14

DRAWN BY	CHECKED BY
RM	T. K.

ARCHITECTURAL DETAILS

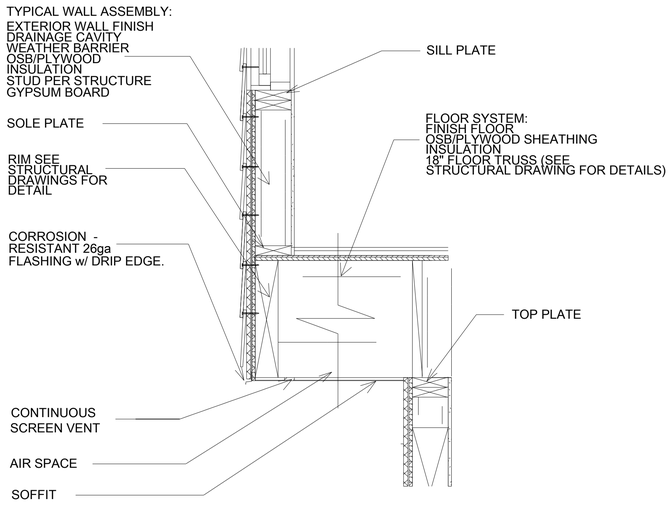
PAGE NO.

A6.0



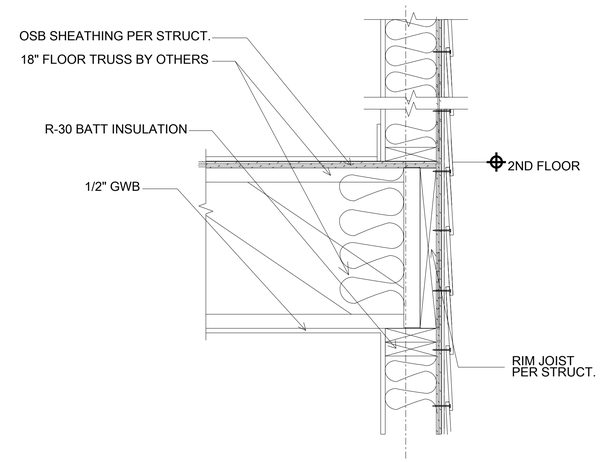
1 ROOF TO WALL VENT

SCALE 1" = 1'-0"



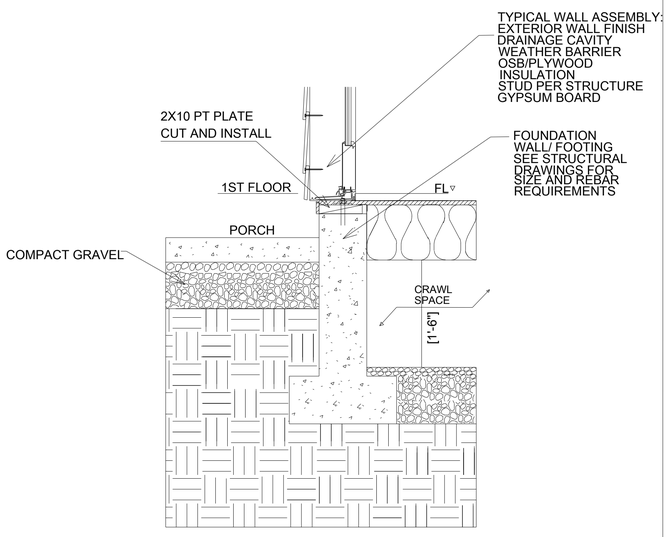
2 2ND FLOOR OVERHANG

SCALE 1" = 1'-0"



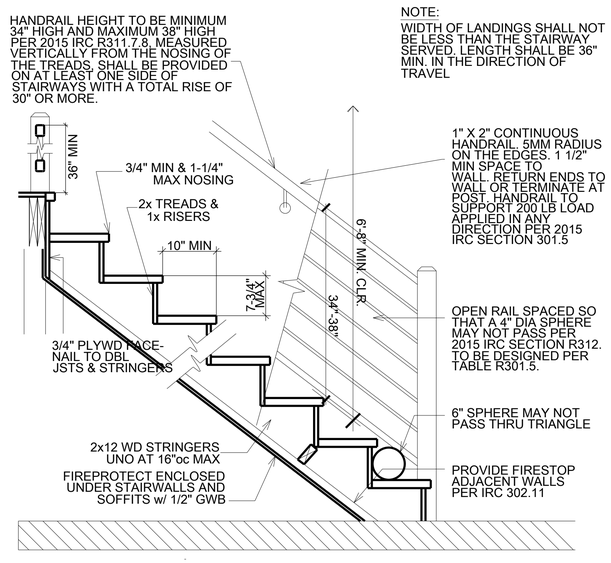
3 FLOOR @ EXTERNAL WALL

SCALE 1" = 1'-0"



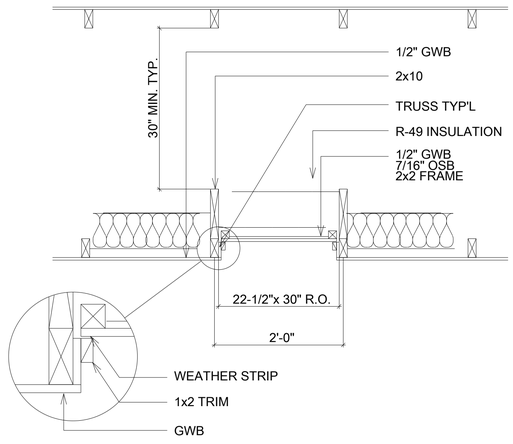
4 TYPE PATIO SLAB EXTERIOR WALL FOUNDATION

SCALE 1" = 1'-0"



5 TYP. STAIRS

SCALE 1" = 1'-0"



6 ATTIC ACCESS

SCALE 1" = 1'-0"

ICHIJO
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BEAVERTON OR 97005
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Fax : +1 503-430-7621
WEB: www.ichijousa.com

TYPE R-1L

REVISION		

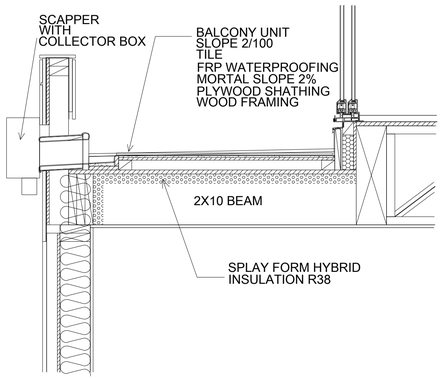
DATE:	2023/2/21
HOUSE TYPE:	USA-S1
BP CODE:	
BP DRAWING #:	
CUST CODE:	U220171-YN1L
DRAWING # :	2-14

DRAWN BY	CHECKED BY
RM	T. K.

ARCHITECTURAL DETAILS

PAGE NO.

A6.1



1 BALCONY
SCALE 1" = 1'-0"

BLANK

BLANK

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BLANK

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CUST CODE:	U220171-YN1L
DRAWING # :	2-14

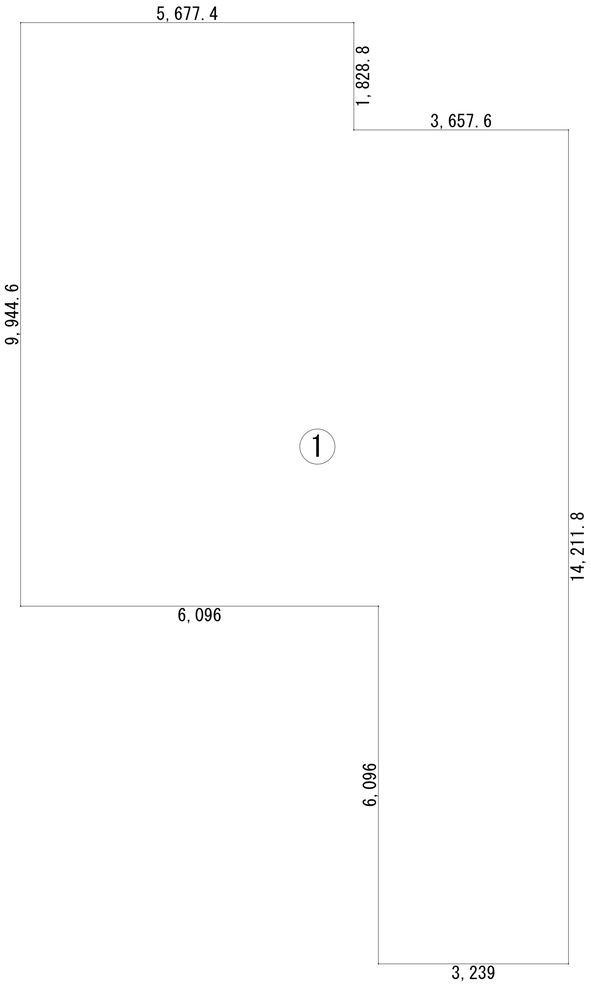
DRAWN BY	CHECKED BY
RM	T. K.

ARCHITECTURAL DETAILS

PAGE NO.

A6.2

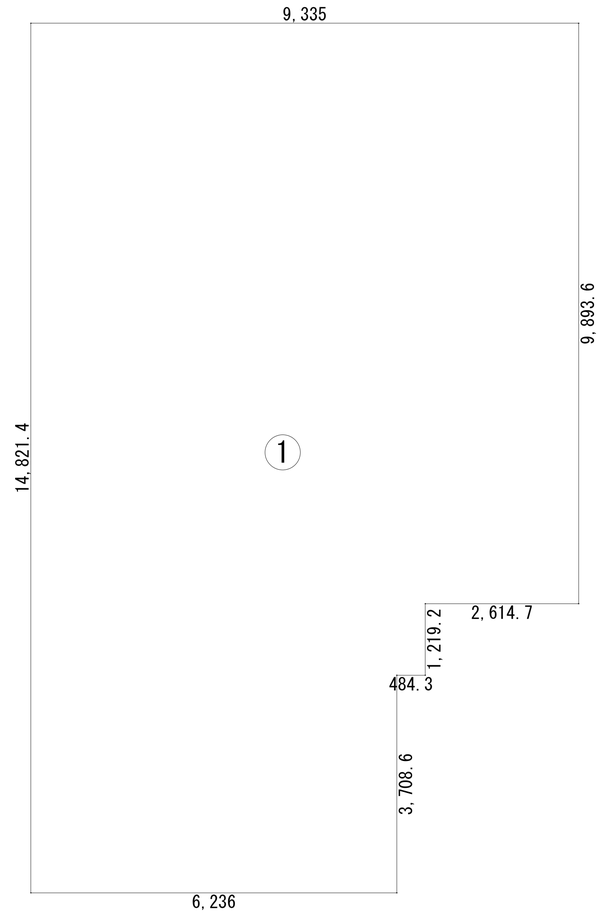
Area Schedule (outside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,140 SF
2ND FLOOR	1,331 SF
GARAGE	400 SF
	2,871 SF
NET HEATING AREA	2,471 SF



NUMBER	FORMULA	(m)	AREA(㎡)	AREA(SF)
①			105.888766	1,140 SF
	TOTAL		105.888766 105.88	1,140 SF

1 1ST FLOOR AREA

Scale 1/4″ = 1′ -0″



NUMBER	FORMULA	(m)	AREA(㎡)	AREA(SF)
①			123.676975	1,331 SF
	TOTAL		123.676975 123.67	1,331 SF

2 2ND FLOOR AREA

Scale 1/4″ = 1′ -0″

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BEAVERTON OR 97005
Tel : +1 503-430-7413
Fax : +1 503-430-7621
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TYPE R-1L

REVISION

DATE:	2023/2/21
HOUSE TYPE:	USA-S1
BP CODE:	
BP DRAWING #:	
CUST CODE:	U220171-YN1L
DRAWING # :	2-14

DRAWN BY	CHECKED BY
AT	T. K.

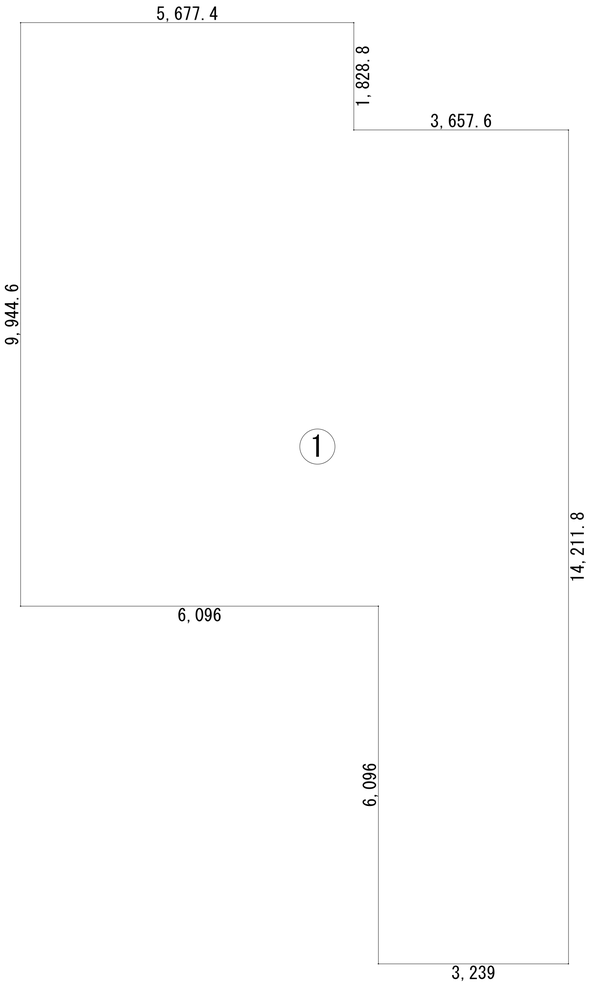
PERMIT SQUARE FOOTAGE

PAGE NO.

A11.0

Area Schedule (outside face of exterior wall stud)	
Name	Area
1ST FLOOR	1,140 SF
2ND FLOOR	1,417 SF

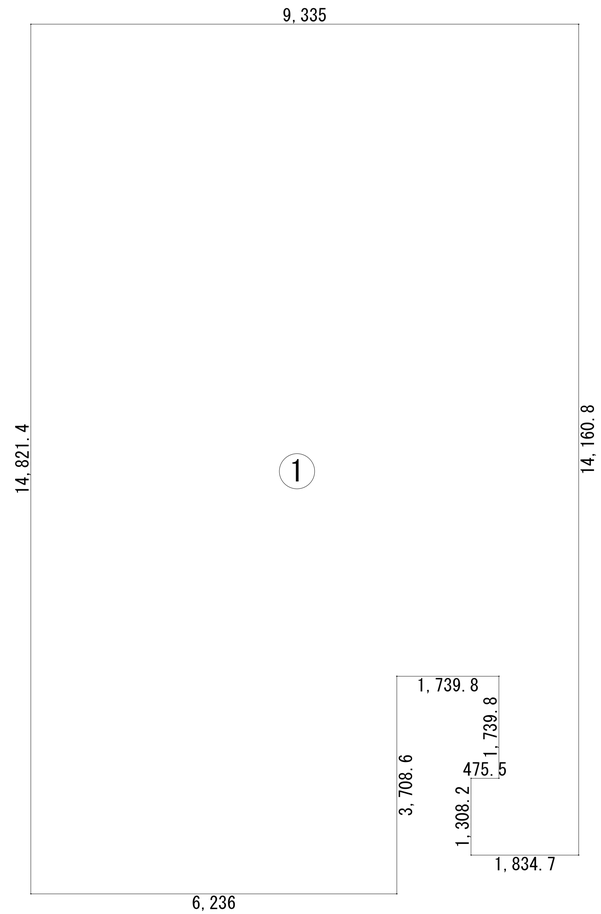
NET HEATING AREA 2,557 SF



NUMBER	FORMULA	(m)	AREA(㎡)	AREA(SF)
①			105.888766	1,140 SF
	TOTAL	≒	105.888766 105.88	1,140 SF

1 1ST FLOOR AREA

Scale 1/4" = 1' -0"



NUMBER	FORMULA	(m)	AREA(㎡)	AREA(SF)
①			131.629708	1,417 SF
	TOTAL	≒	131.629708 131.62	1,417 SF

2 2ND FLOOR AREA

Scale 1/4" = 1' -0"

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Technological Homes

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BEAVERTON OR 97005
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Fax : +1 503-430-7621
WEB: www.ichijousa.com

TYPE R-1L

REVISION		

DATE:	2023/2/21
HOUSE TYPE:	USA-S1
BP CODE:	
BP DRAWING #:	
CUST CODE:	U220171-YN1L
DRAWING # :	2-14

DRAWN BY	CHECKED BY
AT	T. K.

SALES SQUARE FOOTAGE

PAGE NO.

A11.1

AFTER RECORDING RETURN TO:
City of Newberg
Community Development Department
PO Box 970 – (414 E. First Street)
Newberg, OR 97132

COVENANT OF WAIVER OF RIGHTS AND REMEDIES

Recitals

1) The undersigned, Ross D Kerr and Rolland G Kerr Jr (hereinafter referred to as "Owner" or "Owners") has/have petitioned the City of Newberg (hereinafter referred to as "City") to commence certain proceedings, relating to annexation, for the real property described in **Exhibit A** which is attached hereto and incorporated herein.

2) Pursuant to the enactment of **Ballot Measure 49** (adopted November 6, 2007), if a public entity enacts one or more land use regulations that restrict the residential use of private real property or a farming or forest practice and that reduce the fair market value of the property, then the owner of the property shall be entitled to just compensation from the public entity that enacted the land use regulation or regulations as provided in Measure 49.

3) There is the potential that the Oregon electors or the Oregon Legislature may, in the future, enact further statutory or constitutional amendments relating to compensation for the impact of local regulations upon real property, under certain circumstances.

4) City does not wish to approve the Owner's/Owners' requested proceedings if the result would or could arguably give rise to a later claim by the Owner or Owners, or the Owner's/Owners' successors or assigns for compensation for the land use regulations in effect upon the effective date of the proceedings, or would or could arguably require the City to waive the City's land use regulations in effect upon the effective date of the proceedings, which are being newly imposed upon the property by reason and result of the proceedings.

5) Owner(s) seek(s) to induce the City to proceed with the proceedings and therefore Owner(s) agree(s) to eliminate the potential of claim for compensation or the right to seek waiver from the City's land use regulations existing as of the effective date of the proceedings.

NOW THEREFORE, the undersigned Owner(s) warrant(s) that the Owner(s) executing this covenant hold(s) the full and complete present ownership or any interest therein in the property, and hereby agree(s) and covenant(s) as follows:

1) As inducement to the City to proceed with the following proceeding(s) affecting the subject real property: 3809 NE Springbrook Rd, Newberg, which may include designation of the property as subject to additional applicable overlay zones and districts, e.g., Limited Use Overlay District, (all inclusively referred to herein as "proceedings"), the undersigned Owner(s), on behalf of Owner(s), Owner's/Owners' heirs, devisees, executors, administrators, successors and assigns, agree(s) and covenant(s) to the City of Newberg, its officers, agents, employees and assigns that the undersigned hereby remises, waives, releases and forever discharges, and agrees that Owner(s) shall be estopped from asserting any rights and remedies, actions, causes of action, suits, claims, liabilities, demands, and rights to waivers arising under or granted by any statutory or constitutional regulatory compensation or waiver provisions, including but not limited to Ballot Measure 49 (2007) or otherwise enacted after the date of this proceeding which would create a right of claim for compensation or waiver from City land use regulations that exist upon the effective date of the proceeding and which, by the approval of the proceeding, are then applicable to the property.

2) This waiver and release shall bind the undersigned's heirs, devisees, executors and administrators, successors in interests, and assigns. This covenant, waiver, release and discharge shall run with the land, and this instrument, or a memorandum hereof, may be recorded in the official records of the County in which the subject real property is located. This instrument may be terminated upon the filing of a Notice of Termination of Covenant filed by the City of Newberg.

3) If this instrument is given contemporaneous with a consent to future proceedings to be initiated by the City, Owner(s) acknowledge(s) that the proceedings may be initiated by the City of Newberg at any time in the discretion of the City of Newberg, and that this waiver and release is applicable to any ordinances adopted prior to the effective date of the proceeding.

4) This document is executed of my/our own free will and without duress. I, or if more than one, each of us respectively acknowledge that I/we have been advised to obtain legal advice prior to the execution of this document, and that either I, or each of us respectively, have either obtained legal advice or have independently elected not to seek legal advice prior to the execution of this document, recognizing that this document may affect my/our legal rights and remedies.

OWNER

Ross D. Kerr

OWNER

STATE OF OREGON)
) ss.
County of Yamhill)

This instrument was acknowledged before me on this 9th day of July, 2024, by Ross D. Kerr and Rolland G Kerr Jr..

Molly Anne McDonnell
Notary Public for Oregon
My Commission expires: Feb 21, 2027

OFFICIAL STAMP
MOLLY ANNE MCDONNELL
NOTARY PUBLIC - OREGON
COMMISSION NO. 1033343
MY COMMISSION EXPIRES FEBRUARY 21, 2027

CITY OF NEWBERG

City Recorder

Dated: _____

APPROVED AS TO FORM:

City Attorney

Dated: _____

PLANNING DIVISION FILE #: .

CITY OF NEWBERG
AFFIDAVIT OF NOTICING

REFERENCE ATTACHED LIST(S)/NOTICE(S)

I, Sam Huck, do hereby certify that the attached Notice of Land Use Action was:

a) mailed to the following list of property owners, by United States mail, postage prepaid on 1/23/2025 (date);

b) posted on the site according to standards established in Newberg Development Code §15.100.260 on 1/24/2025 (date).

I acknowledge that failure to mail the notice in a timely manner constitutes an agreement by the applicant to defer the 120-day process limit and acknowledge that failure to mail will result in the automatic postponement of a decision on the application *15.100.210.(D)(2)* 1/24/2025 (date).

Signature 1/24/2025 Date

Sam Huck
Print name

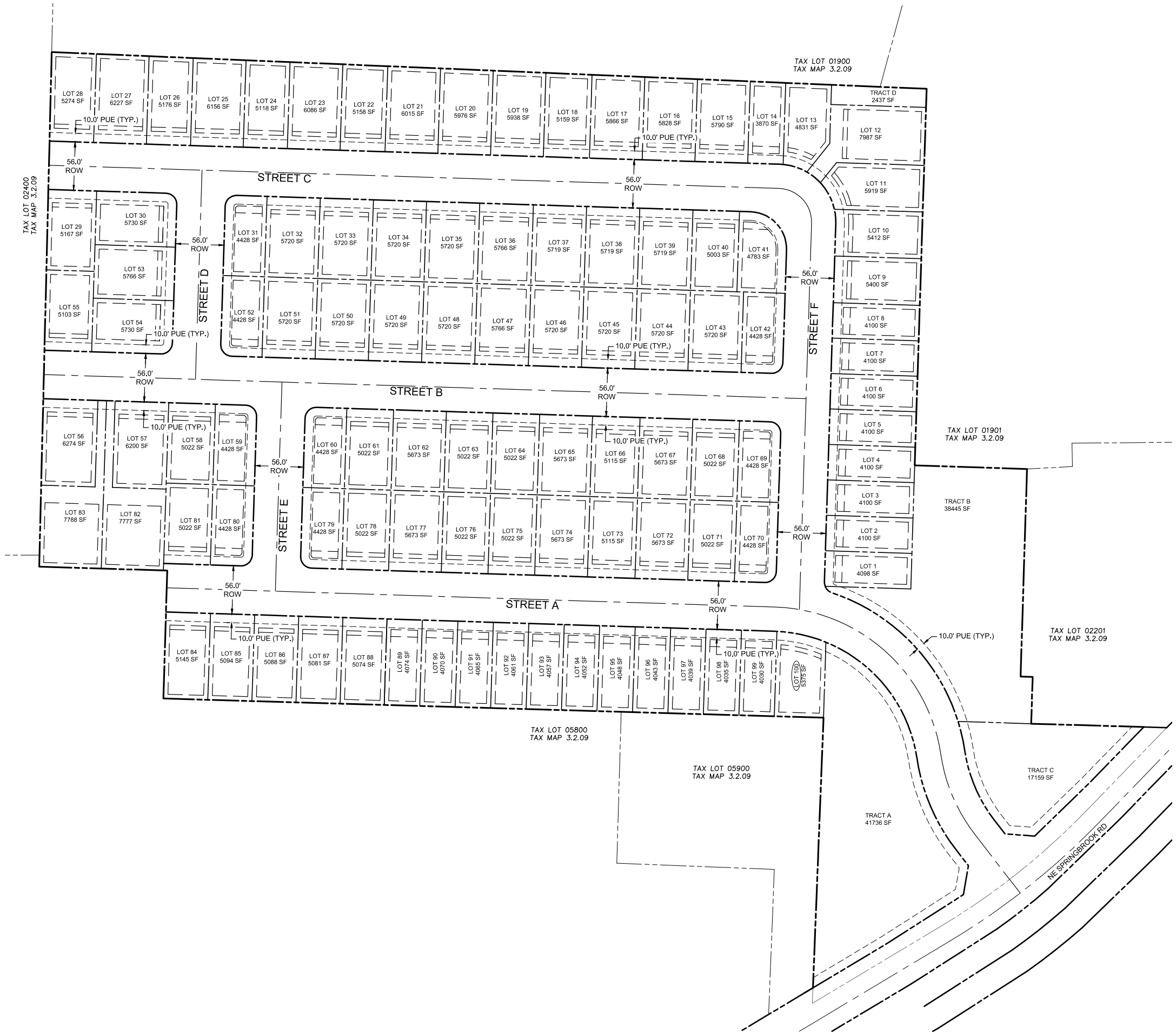
OFFICIAL STAMP
Barbara Lynne Duda
NOTARY PUBLIC - OREGON
COMMISSION NO. 1048705
MY COMMISSION EXPIRES MAY 30, 2028

Barbara L Duda
Washington County
May 30, 2028 expiration

PUD24-0001

Attachment 2:

Preliminary Plat



LEGEND

- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE

SITE STATISTICS

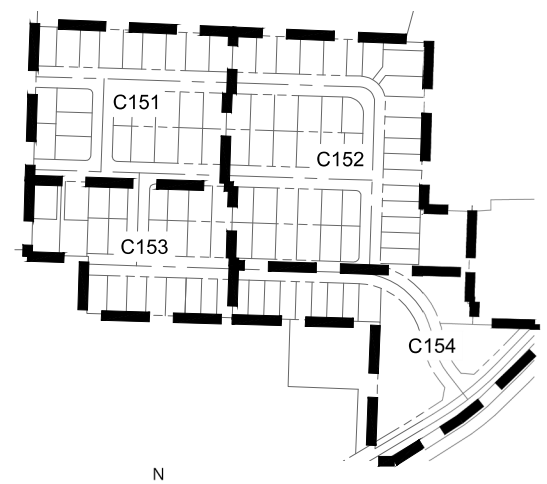
SITE ADDRESS	3809 NE SPRINGBROOK ROAD
TAX LOT	3209 2300
JURISDICTION	CITY OF NEWBERG
GROSS SITE AREA	19.16 ACRES
BUILDABLE SITE AREA	
PROPERTY ZONING	R-1, R-3
FLOOD HAZARD MAP NUMBER	FIRM PANEL NUMBER: 41071C0229D - ZONE X (UN-SHADED)

SUBDIVISION STATISTICS

ZONING CODE CHAPTER 33.120	ZONE R-1	ZONE R-3
ZONE AREA	16.14 ACRES	3.02 ACRES
MAXIMUM DENSITY*	175 DENSITY POINTS/ACRE	640 DENSITY POINTS/ACRE
MAXIMUM LOT SIZE	7,987 SF	4,493 SF
MINIMUM LOT SIZE	5,022 SF	4,030 SF
MINIMUM LOT WIDTH	51 FT	41 FT
MAXIMUM BUILDING HEIGHT	30 FT	30 FT

SETBACKS

FRONT / SIDE STREET	15 FT	12 FT
GARAGE	20 FT	20 FT
INTERIOR / REAR	5 FT	5 FT



N
W E
S

SCALE: 1" = 60'

0 60 120 FT

SECTION 9, T.3S., R.2W. W.M., YAMHILL COUNTY, OREGON

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
92400
OREGON
JULY 11, 2017
JAMES J. SCHMITT
EXPIRES: 06/30/26

PRELIMINARY

PUBLISH DATE
11/11/2024

ISSUED FOR
LAND USE DOCUMENTS

REVISIONS

OVERALL TENTATIVE PLAT
NE SPRINGBROOK RD
PLANNED UNIT DEVELOPMENT

ICHIJO USA CO., LTD.
NEWBERG, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	23913
TAX LOT(S)	3S2W9 2300
LAND USE #	TBD
DESIGNED BY	SRC
CHECKED BY	JJS

SHEET NUMBER
C150

P:\23913-3809 NE SPRINGBROOK RD SUBDIVISION\CAD\SHEETS\23913 - TENTATIVE PLAT.DWG

PUD24-0001

Attachment 3:

Agency Comments

The enclosed material has been referred to you for your information and comment. Any comments you wish to make should be returned to the Community Development Department prior to: December 23, 2024
Please refer questions and comments to: James Dingawll

NOTE: Additional information can be viewed on our website at:

APPLICANT:	IchiJo USA Co. LTD
REQUEST:	100-Unit Residential Development
SITE ADDRESS:	3809 NE SPRINGBROOK RD
LOCATION:	
TAX LOT:	R3209 02300
FILE NO:	PUD24-0001
ZONE:	AF-10(Proposed City Zoning R-1/R-3)
HEARING DATE:	1/9/2025

For full Project Information click on the Link Here: PUD24-0001 Full Application

- [✔] Reviewed, no conflict.
- [ ] Reviewed; recommend denial for the following reasons:
- [ ] Require additional information to review. (Please list information required)
- [ ] Meeting requested.
- [ ] Comments. (Attach additional pages as needed)

W E Worthey

Digitally signed by W E Worthey
DN: O=City of Newberg, CN=W E Worthey, E=will.worthey@newbergoregon.gov
Reason: I have reviewed this document
Location: your signing location here
Date: 2024.12.10 13:27:02-08'00'
Foxit PhantomPDF Version: 10.1.12

Reviewed By:

12/10/24

Date:

Will Worthey CM

Organization:

COMMUNITY DEVELOPMENT
LAND USE APPLICATION REFERRAL

The enclosed material has been referred to you for your information and comment. Any comments you wish to make should be returned to the Community Development Department prior to: December 23, 2024
Please refer questions and comments to: James Dingawll

NOTE: Additional information can be viewed on our website at:

APPLICANT:	IchiJo USA Co. LTD
REQUEST:	100-Unit Residential Development
SITE ADDRESS:	3809 NE SPRINGBROOK RD
LOCATION:	
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- [✔] Reviewed, no conflict.
- [ ] Reviewed; recommend denial for the following reasons:
- [ ] Require additional information to review. (Please list information required)
- [ ] Meeting requested.
- [ ] Comments. (Attach additional pages as needed)

Reviewed By: _____ Date: 12/11/24

Organization: _____

ENGINEERING COMMENTS
1/29/2025

FILE NO:	PUD24-0001
REQUEST:	Construct a 100-unit residential development
LOCATION:	3809 NE Springbrook Road

SITE INFORMATION:

Access and Transportation: Access to the proposed development is provided from NE Springbrook Road. It is classified as a Major Collector under the jurisdiction of Yamhill County.

UTILITIES:

Water: The City's online GIS indicates that there is an active public 12-inch water main in Springbrook Road which deadends approximately at the southwest corner of the property boundary.

Wastewater: The City's online GIS mapping shows there is an existing 15-inch wastewater gravity main in NE Springbrook Road, which deadends approximately at the southwest corner of the property boundary.

Stormwater: The City's online GIS mapping shows there is an existing 12-inch stormwater main in NE Springbrook Road, which deadends approximately at the southwest corner of the property boundary.

Overhead Lines: There are overhead utility lines along the NE Springbrook Road property frontage.

Chapter 15.220 Site Design Review
15.220.030 Site Design Review Requirements
B. Type II or III. The following information is required to be submitted with all Type II or III applications for site design review:

> ***13. Roadways and Utilities. The proposed plans shall indicate any public improvements that will be constructed as part of the project, including, but not limited to, roadway and utility improvements.***

Finding: The stretch of NE Springbrook Road which provides frontage to the proposed development shall be improved consistent with City of Newberg standards which include additions of bike lanes, curbs, and sidewalks on either side of NE Springbrook Road consistent with the Major Collector functional classification. NE Springbrook Road will also likely require additional right-of-way dedication and pavement widening.

Utility main improvements for storm, wastewater, and water shall be consistent with requirements outlined in *NMC Title 13 Public Utilities and Services* and procedures outlined in this design review feedback.

All improvements reviewed under this application are identified in the NMC 15.505 section specific to them and are conditioned to comply with the Public Works Design and Construction Standards in those sections.

This criterion is met.

> ***14. Traffic Study. A traffic study shall be submitted for any project that generates in excess of 40 trips per p.m. peak hour. This requirement may be waived by the director when a determination is made that a previous traffic study adequately addresses the proposal and/or when off-site and frontage improvements have already been completed which adequately mitigate any traffic impacts and/or the proposed use is not in a location which is adjacent to an intersection which is functioning at a poor level of service. A traffic study shall be required by the director for projects below 40 trips per p.m. peak hour where the use is located immediately adjacent to an intersection functioning at a poor level of service. The traffic study shall be conducted according to the City of Newberg design standards. [Ord. 2913 § 2 (Exh. B § 5), Ord. 2889 § 2 (Exh. B § 6), 12-6-21; Ord. 2763 § 1 (Exh. A § 7), 9-16-13; Ord. 2747 § 1 (Exh. A § 5), 9-6-11, 4-17-23; Ord. 2619, 5-16-05; Ord. 2451, 12-2-96. Code 2001 § 151.192.]***

Finding: The applicant has provided a Traffic Impact Analysis (TIA) dated June 2024. The TIA identified that the N Springbrook Road/E Mountainview Drive intersection is currently functioning below the City's level of service standard. The TIA also identified that future 2027 conditions, even in a no-build scenario, would result in continued degradation of the level of service at the N Springbrook Road/E Mountainview Drive intersection and a level of service below the City's standards at N Springbrook Road/Haworth Avenue. Additional trips from the proposed development would further degrade the level of service at both of these intersections.

The applicant identified two improvement projects included in the City of Newberg's 2016 Transportation Master Plan (TSP) related to these two intersections. Project I08 identified the need for a traffic signal at the intersections of N Springbrook Road/E Mountainview Drive with

an estimate of $356,000 (December 2024 dollars[1]). Project I09 identified the need for a traffic light and left turn lanes on Haworth Avenue, at the intersection of N Springbrook Road/Haworth Avenue with an estimate of $528,000 (December 2024 dollars[1]). The TIA identified that trips generated from the proposed development will contribute to the traffic through these two intersections during AM and PM peak hour traffic.

Because the applicant's development is adversely impacting the N Springbrook Road/E Mountainview Drive and N Springbrook Road/Haworth Avenue intersections, the applicant will be required to pay a Traffic Impact Fee for the two intersection which is being assessed based on the proportional impact of the development on public facilities and services. The following formula was used to develop a Traffic Impact Fee to capture the proportional impact of the development based on the most significant AM or PM proportional volume contribution at the build out year of 2027.

$$\frac{Number\ of\ PM\ or\ AM\ trips\ proportional\ to\ development}{Number\ of\ PM\ or\ AM\ peak\ hour\ forecasted\ trips\ through\ interestion} \cdot Project\ Cost$$

$$= Traffic\ Impact\ Fee$$

The larger of the two percentages for AM or PM traffic were selected and it was found that the developer proportionate share for Project I08 is 6.9% (93 PM trips directly proportional to the development/1,341 PM peak hour total forecasted trips through the intersection) and Project I09 is 2.9% (31 AM trips directly proportional to the development/1,071 AM peak hour total forecasted trips through the intersection).

For N Springbrook Road/E Mountainview Drive: (93 PM trips directly proportional to the development)/(1,341 PM peak hour total forecasted trips through the intersection)*($356,000 for the TSP cost of an intersection upgrade) = $24,689.04 Traffic Impact Fee.

For N Springbrook Road/Haworth Avenue: (31 AM trips directly proportional to the development)/(1,071 AM peak hour total forecasted trips through the intersection)*($528,000 for the TSP cost of an intersection upgrade) = $15,282.91 Traffic Impact Fee.

The Traffic Impact Fees of $24,689.04 for Project I08 and $15,282.91 for Project I09 shall be paid at the time of, or prior to, building permit issuance.

This criterion will be met if the aforementioned condition of approval is adhered to.

[1] Project costs were presented in the City of Newberg's 2016 Transportation Master Plan in 2016 dollars. These costs were adjusted to December 2024 costs using the Engineering News-Record 20-cites construction cost index to account for increases in construction costs since the original estimate was prepared.

Chapter 15.240 PD Planned Unit Development Regulations

15.240.020 General provisions.

L. Dedication, Improvement and Maintenance of Public Thoroughfares. Public thoroughfares shall be dedicated, improved and maintained as follows:

> ***1. Streets and Walkways. Including, but not limited to, those necessary for proper development of adjacent properties. Construction standards that minimize maintenance and protect the public health and safety, and setbacks as specified in NMC 15.410.050, pertaining to special setback requirements to planned rights-of-way, shall be required.***
>
> ***2. Notwithstanding subsection (L)(1) of this section, a private street may be approved if the following standards are satisfied.***
>
> > ***a. An application for approval of a PUD with at least 50 dwelling units may include a private street and the request for a private street shall be supported by the evidence required by this section. The planning commission may approve a private street if it finds the applicant has demonstrated that the purpose statements in NMC 15.240.010(A) through (D) are satisfied by the evidence in subsections (L)(2)(a)(i) through (v) of this section.***
> >
> > ***i. A plan for managing on-street parking, maintenance and financing of maintenance of the private street, including a draft reserve study showing that the future homeowners association can financially maintain the private street;***
> >
> > ***ii. A plan demonstrating that on- and off-street parking shall be sufficient for the expected parking needs and applicable codes;***
> >
> > ***iii. Proposed conditions, covenants and restrictions that include a requirement that the homeowners association shall be established in perpetuity and shall continually employ a community management association whose duties shall include assisting the homeowners association with the private street parking management and maintenance, including the enforcement of parking restrictions;***
> >
> > ***iv. Evidence that the private street is of sufficient width and construction to satisfy requirements of the fire marshal and city engineer; and***
> >
> > ***v. The PUD shall be a Class I planned community as defined in ORS Chapter 94.***

Finding: Applicant is not proposing any private streets within the proposed development. This criterion does not apply.

> > ***b. If the PUD is established, the homeowners association shall provide an annual written report on the anniversary date of the final approval of the PUD approval to the community development director that includes the following:***
> >
> > ***i. The most recent reserve study.***

ii. The name and contact information for the retained community management association.

iii. A report on the condition of the private street and any plans for maintenance of the private street.

Finding: Applicant is not proposing any private streets within the proposed development. This criterion does not apply.

3. Easements. As are necessary for the orderly extension of public utilities and bicycle and pedestrian access.

Finding: Submitted materials indicate a 10-foot wide public utilities easement (PUE) along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development) as is required for land division projects such as subdivisions and partitions for future, franchise utility installations, including potential future undergrounding of overhead utilities.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

M. Underground Utilities. Unless waived by the hearing authority, the developer shall locate all on-site utilities serving the proposed planned unit development underground in accordance with the policies, practices and rules of the serving utilities and the Public Utilities Commission.

Finding: Applicant includes plans to underground all utilities; however, the applicant has not yet submitted formal construction plans for the proposed development. Final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to underground newly constructed public utilities along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

Chapter 15.430 Underground Utility Installation

15.430.010 Underground utility installation.

A. All new utility lines, including but not limited to electric, communication, natural gas, and cable television transmission lines, shall be placed underground. This does not include

surface-mounted transformers, connections boxes, meter cabinets, service cabinets, temporary facilities during construction, and high-capacity electric lines operating at 50,000 volts or above.

B. Existing utility lines shall be placed underground when they are relocated, or when an addition or remodel requiring a Type II design review is proposed, or when a developed area is annexed to the city.

C. The director may make exceptions to the requirement to underground utilities based on one or more of the following criteria:

1. The cost of undergrounding the utility is extraordinarily expensive.

2. There are physical factors that make undergrounding extraordinarily difficult.

3. Existing utility facilities in the area are primarily overhead and are unlikely to be changed. [Ord. 2537, 11-6-00. Code 2001 § 151.589.]

Finding: Submitted materials indicate that there are overhead utility lines along the NE Springbrook Road frontage. Undergrounding of existing overhead utilities along the frontage may be required if operating at less than 50,000 volts or if any poles need to be relocated.

Any new service connection to the property is required to be undergrounded. See NMC 15.430.010 for additional requirements and exception provisions.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to underground all constructed public utilities along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

Chapter 15.505 Public Improvement Standards

15.505.010 Purpose.
This chapter provides standards for public infrastructure and utilities installed with new development, consistent with the policies of the City of Newberg comprehensive plan and adopted city master plans. The standards are intended to minimize disturbance to natural features, promote energy conservation and efficiency, minimize and maintain development impacts on surrounding properties and neighborhoods, and ensure timely completion of adequate public facilities to serve new development. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

15.505.020 Applicability.
The provision and utilization of public facilities and services within the City of Newberg shall apply to all land developments in accordance with this chapter. No development shall be

approved unless the following improvements are provided for prior to occupancy or operation, unless future provision is assured in accordance with NMC 15.505.030(E).

Finding: All improvements reviewed under this application are identified in the NMC 15.505 section specific to them and are conditioned to comply with the Public Works Design and Construction Standards in those sections.

This criterion is met.

A. Public Works Design and Construction Standards. The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall comply with the requirements of the most recently adopted Newberg public works design and construction standards.

Finding: The submitted plans show:

- Street improvements along the existing NE Springbrook Road consistent with the requirements of Major Collector street functional classification.
- New public streets consistent with the requirements of local-residential street functional classification.
- Connection to the existing 12-inch water main on the west side of NE Springbrook Road and construction of water distribution piping to each proposed dwelling.
- Connection to an existing 15-inch wastewater gravity main in NE Springbrook Road and construction of wastewater collection piping to each proposed dwelling.
- Construction of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road which direct collected stormwater to one of two stormwater basins, referred to as "Pond A" and "Pond B" in the preliminary plans, which connect to existing stormwater infrastructure in the area.
- Construction of two stormwater basins. One basin routes pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The other basin appears to route pretreated stormwater to the existing 12-inch stormwater main beneath NE Springbrook Drive near the southeastern property boundary.
- All new utilities depicted on the plans are shown to be underground. The plans also include street lighting improvements along NE Springbrook Road and construction of street lighting along the newly constructed local-residential streets within the proposed development.

Plans submitted with a permit application for proposed public improvements, or for public improvements as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

Proposed improvements should also be completed in tandem with the extension of public utility lines to serve the new development. The applicant is required to submit construction plans and obtain a public improvement permit for required public improvements.

Plans will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

Additional findings and conditions of approval for these improvements are described under the applicable Newberg Municipal Code sections below.

This criterion will be met if the aforementioned condition of approval is adhered to.

B. Street Improvements. All projects subject to a Type III design review, partition, or subdivision approval must construct street improvements necessary to serve the development.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. Particular improvements include increasing the travel area width to between 23 and 27.6-feet, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are generally consistent with the requirements of Major Collector street functional classification.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. These public improvements include a two-lane street with on-street parking representing a 32-foot wide paved area, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the

new right-of-way line, and a 10-foot PUE. These improvements are consistent with the requirements of local-residential street functional classification.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

C. Water. All developments, lots, and parcels within the City of Newberg shall be served by the municipal water system as specified in Chapter 13.15 NMC.

Finding: Submitted materials appear to show water service laterals and meters to serve each dwelling unit. The applicant is also proposing to construct a pump station to maintain necessary water pressure in the proposed development. The pump station is proposed to be constructed along NE Springbrook Road at the intersection to the access street to the proposed development. The water main to serve the proposed development must connect to the existing 12-inch water main on the west side of NE Springbrook Road.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a water meter at the right-of-way line prior to connecting to the public main or to a double water service where allowed per the Public Works Design and Construction Standards.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to submit construction plans and obtain a public improvement permit for proposed water services. These plans are to be submitted with the application for a public improvement permit.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

The closest existing fire hydrant and any new fire hydrants are to be shown on plans included with permit submittals. Fire hydrant spacing is to be consistent with City of Newberg Public Works Design and Construction standards and Tualatin Valley Fire and Rescue (TVF&R) requirements.

Additional findings and conditions of approval for these water improvements are described under the applicable Newberg Municipal Code sections below.

This criterion will be met if the aforementioned condition of approval is adhered to.

D. Wastewater. All developments, lots, and parcels within the City of Newberg shall be served by the municipal wastewater system as specified in Chapter 13.10 NMC.

Finding: Submitted materials appear to show wastewater service laterals to serve each dwelling unit consistent with NMC 13.10.070(K) below. The wastewater main to serve the proposed development must connect to the existing 15-inch wastewater gravity main beneath NE Springbrook Road.

> *NMC 13.10.070 (K) - Independent Drainage Systems. Every dwelling and/or building under separate ownership shall have an independent wastewater system connection with a public or private collection system. Additionally, each parcel shall be served by individual laterals.*

The applicant prepared a wastewater downstream analysis provided with the submitted materials. The downstream analysis evaluated whether the existing public wastewater collection system has the necessary capacity to support the additional wastewater flows from the dwellings constructed as part of the proposed development. The applicant utilized a modified hydraulic model from the City of Newberg Wastewater Master Plan prepared in March 2018 and amended in 2021 using XPSTORM. The downstream analysis concluded that the additional loads generated from the proposed development will have a negligible effect on the existing downstream wastewater system.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a cleanout at the right-of-way line prior to connecting to the public main or to a double wye service where allowed per the Public Works Design and Construction Standards.

The wastewater analysis of impacts to the wastewater system from the proposed development is required to be submitted with permit applications.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to submit construction plans and obtain a public improvement permit for proposed wastewater services. These plans are to be submitted with the application for a public improvement permit.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

Additional findings and conditions of approval for these wastewater improvements are described under the applicable Newberg Municipal Code sections below.

This criterion will be met if the aforementioned condition of approval is adhered to.

E. Stormwater. All developments, lots, and parcels within the City of Newberg shall manage stormwater runoff as specified in Chapters 13.20 and 13.25 NMC.

Finding: Submitted materials indicate the installation of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road. The stormwater piping routes flows to one of two stormwater detention basins. The northern basin collects stormwater drainage from a portion of the proposed development and appears to route pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The southern basin collects stormwater drainage from the NE Springbrook Road frontage and a portion of the proposed development and appears to route pretreated stormwater to the existing 12-inch main beneath NE Springbrook Drive near the southeastern property boundary.

The applicant has not yet submitted formal construction plans for the proposed development. With permit submittals the applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

The applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

Plans and stormwater report will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

Additional findings and conditions of approval for these stormwater improvements are described under the applicable Newberg Municipal Code sections below.

This criterion will be met if the aforementioned condition of approval is adhered to.

F. Utility Easements. Utility easements shall be provided as necessary and required by the review body to provide needed facilities for present or future development of the area.

Finding: Submitted materials indicate a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development) as is required for land division projects such as subdivisions and partitions for future, franchise utility installations, including potential future undergrounding of overhead utilities.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

G. City Approval of Public Improvements Required. No building permit may be issued until all required public facility improvements are in place and approved by the director, or are otherwise bonded for in a manner approved by the review authority, in conformance with the provisions of this code and the Newberg Public Works Design and Construction Standards. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

Finding: Any required public improvement permit(s) for this project must be submitted, approved and issued prior to building permits being issued.

This criterion will be met if the aforementioned condition of approval is adhered to.

15.505.030 Street standards.
A. Purpose. The purpose of this section is to:

1. Provide for safe, efficient, and convenient multi-modal transportation within the City of Newberg.

2. Provide adequate access to all proposed and anticipated developments in the City of Newberg. For purposes of this section, "adequate access" means direct routes of travel between destinations; such destinations may include residential neighborhoods, parks, schools, shopping areas, and employment centers.

3. Provide adequate area in all public rights-of-way for sidewalks, wastewater and water lines, stormwater facilities, natural gas lines, power lines, and other utilities commonly and appropriately placed in such rights-of-way. For purposes of this section, "adequate area" means space sufficient to provide all required public services to standards defined in this code and in the Newberg public works design and construction standards.

B. Applicability. The provisions of this section apply to:

1. The creation, dedication, and/or construction of all public streets, bike facilities, or pedestrian facilities in all subdivisions, partitions, or other developments in the City of Newberg.

2. The extension or widening of existing public street rights-of-way, easements, or street improvements including those which may be proposed by an individual or the city, or which may be required by the city in association with other development approvals.

3. The construction or modification of any utilities, pedestrian facilities, or bike facilities in public rights-of-way or easements.

4. The designation of planter strips. Street trees are required subject to Chapter 15.420 NMC.

5. Developments outside the city that tie into or take access from city streets.

C. Layout of Streets, Alleys, Bikeways, and Walkways. Streets, alleys, bikeways, and walkways shall be laid out and constructed as shown in the Newberg transportation system plan. In areas where the transportation system plan or future street plans do not show specific transportation improvements, roads and streets shall be laid out so as to conform to previously approved subdivisions, partitions, and other developments for adjoining properties, unless it is found in the public interest to modify these patterns. Transportation improvements shall conform to the standards within the Newberg Municipal Code, the Newberg public works design and construction standards, the Newberg transportation system plan, and other adopted city plans.

Finding: The layout for local-residential classified streets is not included in the 2016 TSP nor are there adjoining developments which would determine layout. The proposed layout is to conform with the requirements of the current NMC, City of Newberg Public Works Design and Construction Standards, and any other adopted City plans.

The layout for major collector classified streets is included in 2016 TSP. Improvements for NE Springbrook Road are generally consistent with the layout indicated in the 2016 TSP; however, improvements should be made to both sides of NE Springbrook Road in accordance with condition of approval 2.b for annexation of the subject property, ANX24-0001 approved with Ordinance NO. 2024-2931.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

D. Construction of New Streets. Where new streets are necessary to serve a new development, subdivision, or partition, right-of-way dedication and full street improvements shall be required. Three-quarter streets may be approved in lieu of full street improvements when the city finds it to be practical to require the completion of the other one-quarter street improvement when the adjoining property is developed; in such cases, three-quarter street improvements may be allowed by the city only where all of the following criteria are met:

1. The land abutting the opposite side of the new street is undeveloped and not part of the new development; and

2. The adjoining land abutting the opposite side of the street is within the city limits and the urban growth boundary.

Finding: Submitted materials indicate plans to construct local-residential classified streets within the proposed development in full-street configuration. These public improvements include a two-lane street with on-street parking representing a 32-foot wide paved area, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. The proposed streets should conform with the requirements of the current NMC and City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

E. Improvements to Existing Streets.

1. All projects subject to partition, subdivision, or Type II design review approval shall dedicate right-of-way sufficient to improve the street to the width specified in subsection (G) of this section.

2. All projects subject to partition, subdivision, or Type II design review approval must construct a minimum of a three-quarter street improvement to all existing streets adjacent to, within, or necessary to serve the development. The director may waive or modify this requirement where the applicant demonstrates that the condition of existing streets to serve the development meets city standards and is in satisfactory condition to handle the projected traffic loads from the development. Where a development has frontage on both sides of an existing street, full street improvements are required.

3. In lieu of the street improvement requirements outlined in NMC 15.505.040(B), the review authority may elect to accept from the applicant monies to be placed in a fund dedicated to the future reconstruction of the subject street(s). The amount of money deposited with the city shall be 100 percent of the estimated cost of the required street

improvements (including any associated utility improvements), and 10 percent of the estimated cost for inflation. Cost estimates used for this purpose shall be based on preliminary design of the constructed street provided by the applicant's engineer and shall be approved by the director.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. Particular improvements include increasing the travel area width to between 23 and 27.6-feet, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are generally consistent with the requirements of Major Collector street functional classification.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

F. Improvements Relating to Impacts. Improvements required as a condition of development approval shall be roughly proportional to the impact of the development on public facilities and services. The review body must make findings in the development approval that indicate how the required improvements are roughly proportional to the impact. Development may not occur until required transportation facilities are in place or guaranteed, in conformance with the provisions of this code. If required transportation facilities cannot be put in place or be guaranteed, then the review body shall deny the requested land use application.

Finding: The applicant has provided a Traffic Impact Analysis (TIA) dated June 2024. The TIA identified that the N Springbrook Road/E Mountainview Drive intersection is currently functioning below the City's level of service standard. The TIA also identified that future 2027 conditions, even in a no-build scenario, would result in continued degradation of the level of service at the N Springbrook Road/E Mountainview Drive intersection and a level of service below the City's standards at N Springbrook Road/Haworth Avenue. Additional trips from the proposed development would further degrade the level of service at both of these intersections.

The applicant identified two improvement projects included in the City of Newberg's 2016 Transportation Master Plan (TSP) related to these two intersections. Project I08 identified the need for a traffic signal at the intersections of N Springbrook Road/E Mountainview Drive with an estimate of $356,000 (December 2024 dollars[2]). Project I09 identified the need for a traffic light and left turn lanes on Haworth Avenue, at the intersection of N Springbrook Road/Haworth Avenue with an estimate of $528,000 (December 2024 dollars[1]). The TIA identified that trips generated from the proposed development will contribute to the traffic through these two intersections during AM and PM peak hour traffic.

Because the applicant's development is adversely impacting the N Springbrook Road/E Mountainview Drive and N Springbrook Road/Haworth Avenue intersections, the applicant will be required to pay a Traffic Impact Fee for the two intersection which is being assessed based on the proportional impact of the development on public facilities and services. The following formula was used to develop a Traffic Impact Fee to capture the proportional impact of the development based on the most significant AM or PM proportional volume contribution at the build out year of 2027.

$$\frac{Number\ of\ PM\ or\ AM\ trips\ proportional\ to\ development}{Number\ of\ PM\ or\ AM\ peak\ hour\ forecasted\ trips\ through\ interestion} \cdot Project\ Cost$$

$$= Traffic\ Impact\ Fee$$

The larger of the two percentages for AM or PM traffic were selected and it was found that the developer proportionate share for Project I08 is 6.9% (93 PM trips directly proportional to the development/1,341 PM peak hour total forecasted trips through the intersection) and Project I09 is 2.9% (31 AM trips directly proportional to the development/1,071 AM peak hour total forecasted trips through the intersection).

For N Springbrook Road/E Mountainview Drive: (93 PM trips directly proportional to the development)/(1,341 PM peak hour total forecasted trips through the intersection)*($356,000 for the TSP cost of an intersection upgrade) = $24,689.04 Traffic Impact Fee.

[2] Project costs were presented in the City of Newberg's 2016 Transportation Master Plan in 2016 dollars. These costs were adjusted to December 2024 costs using the Engineering News-Record 20-cites construction cost index to account for increases in construction costs since the original estimate was prepared.

For N Springbrook Road/Haworth Avenue: (31 AM trips directly proportional to the development)/(1,071 AM peak hour total forecasted trips through the intersection)*($528,000 for the TSP cost of an intersection upgrade) = $15,282.91 Traffic Impact Fee.

The Traffic Impact Fees of $24,689.04 for Project I08 and $15,282.91 for Project I09 shall be paid at the time of, or prior to, building permit issuance.

This criterion will be met if the aforementioned condition of approval is adhered to.

G. Street Width and Design Standards.

1. Design Standards. All streets shall conform with the standards contained in Table 15.505.030(G). Where a range of values is listed, the director shall determine the width based on a consideration of the total street section width needed, existing street widths, and existing development patterns. Preference shall be given to the higher value. Where values may be modified by the director, the overall width shall be determined using the standards under subsections (G)(2) through (10) of this section.

Table 15.505.030(G) Street Design Standards

Type of Street	*Right-of-Way Width*	*Curb-to-Curb Pavement Width*	*Motor Vehicle Travel Lanes*	*Median Type*	*Striped Bike Lane (Both Sides)*	*On-Street Parking*
Arterial Streets						
Expressway*	***ODOT***	***ODOT***	***ODOT***	***ODOT***	***ODOT***	***ODOT***
Major arterial	***95 – 100 feet***	***74 feet***	***4 lanes***	***TWLTL or median****	***Yes***	***No****
Minor arterial	***69 – 80 feet***	***48 feet***	***2 lanes***	***TWLTL or median****	***Yes***	***No****
Collectors						
Major	***57 – 80 feet***	***36 feet***	***2 lanes***	***None****	***Yes***	***No****
Minor	***61 – 65 feet***	***40 feet***	***2 lanes***	***None****	***Yes****	***Yes****
Local Streets						
Local residential	***54 – 60 feet***	***32 feet***	***2 lanes***	***None***	***No***	***Yes***
Limited residential, parking both sides	***44 – 50 feet***	***28 feet***	***2 lanes***	***None***	***No***	***Yes***
Limited residential, parking one side	***40 – 46 feet***	***26 feet***	***2 lanes***	***None***	***No***	***One side***

Type of Street	*Right-of-Way Width*	*Curb-to-Curb Pavement Width*	*Motor Vehicle Travel Lanes*	*Median Type*	*Striped Bike Lane (Both Sides)*	*On-Street Parking*
Local commercial/ industrial	*55 – 65 feet*	*34 feet*	*2 lanes*	*None**	*No**	*Yes**

** May be modified with approval of the director. Modification will change overall curb-to-curb and right-of-way width. Where a center turn lane is not required, a landscaped median shall be provided instead, with turning pockets as necessary to preserve roadway functions.*

*** All standards shall be per ODOT expressway standards.*

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. Particular improvements include increasing the travel area width to between 23 and 27.6-feet, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are generally consistent with the requirements of Major Collector street functional classification.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. These public improvements include a two-lane street with on-street parking representing a 32-foot wide paved area, a 0.5-foot curb and gutter, a 5.5-foot planter strip, a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line, and a 10-foot PUE. These improvements are consistent with the requirements of local-residential street functional classification.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as

found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

2. Motor Vehicle Travel Lanes. Collector and arterial streets shall have a minimum width of 12 feet.

a. Exception.

i. Minimum lane width of 11 feet along S River Street from E First Street to E Fourteenth Street.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include increasing the travel area width to between 23 and 27.6-feet, which includes a 6-foot bike lane. This is above the minimum travel lane size requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

3. Bike Lanes. Striped bike lanes shall be a minimum of six feet wide. Bike lanes shall be provided where shown in the Newberg transportation system plan.

a. Exception.

i. Minimum striped bike lane width of six feet with a one-foot wide buffer along S River Street from E First Street to the bypass.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include increasing the travel area width to between 23 and 27.6-feet, which includes a 6-foot bike lane. This is above the minimum bike lane size requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

> *With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.*

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

4. Parking Lanes. Where on-street parking is allowed on collector and arterial streets, the parking lane shall be a minimum of eight feet wide.

a. Exception.

i. Minimum parking lane width of seven feet along S River Street from the bypass to E Fourteenth Street.

Finding: On-street parking is neither proposed nor required along NE Springbrook Road.

This criterion does not apply.

5. Center Turn Lanes. Where a center turn lane is provided, it shall be a minimum of 12 feet wide.

Finding: A center turn lane is not proposed or required.

This criterion does not apply.

6. Limited Residential Streets. Limited residential streets shall be allowed only at the discretion of the review authority, and only in consideration of the following factors:

a. The requirements of the fire chief shall be followed.

b. The estimated traffic volume on the street is low, and in no case more than 600 average daily trips.

c. Use for through streets or looped streets is preferred over cul-de-sac streets.

d. Use for short blocks (under 400 feet) is preferred over longer blocks.

e. The total number of residences or other uses accessing the street in that block is small, and in no case more than 30 residences.

f. On-street parking usage is limited, such as by providing ample off-street parking, or by staggering driveways so there are few areas where parking is allowable on both sides.

Finding: Limited residential streets are not proposed or required.

This criterion is not applicable.

7. Sidewalks. Sidewalks shall be provided on both sides of all public streets. Minimum width is five feet.

a. Exception.

i. Twelve-foot-wide sidewalks, inclusive of the curb, with tree wells along S River Street from the bypass to E Fourteenth Street.

ii. Twelve-foot-wide shared-use path and four-foot buffer, inclusive of the curb, with tree wells along the east side of S River Street from the bypass to E Fourteenth Street.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include constructing a 5-foot-wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line. This is above the minimum sidewalk width requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the proposed project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. The improvements include a 5-foot wide sidewalk with 1-foot of separation between the sidewalk and the new right-of-way line. This is consistent with the minimum sidewalk width requirement.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards. This includes a sidewalk width of 5-feet with 1-foot of separation between the sidewalk and the new right-of-way line for Type A sidewalks.

This criterion will be met if the aforementioned condition of approval is adhered to.

8. Planter Strips. Except where infeasible, a planter strip shall be provided between the sidewalk and the curb line, with a minimum width of five feet. This strip shall be landscaped in accordance with the standards in NMC 15.420.020. Curb-side sidewalks may be allowed on limited residential streets. Where curb-side sidewalks are allowed, the following shall be provided:

a. Additional reinforcement is done to the sidewalk section at corners.

b. Sidewalk width is six feet.

Finding: Submitted materials show proposed public improvements along the NE Springbrook Road frontage. These public improvements are only shown for the western half of the existing frontage. The improvements include constructing a 5.5-foot planter strip. This is above the minimum planter strip width requirement.

According To Exhibit "A-3" bullet 2.b of the Ordinance NO. 2024-2931 which effectively accepts the applicants request to annex the property (ANX24-0001) and the stretch of frontage along NE Springbrook Road:

With future development of the site, since the existing railroad right-of-way is adjacent to the public road right-of-way, the developer will be required to build full street improvements for NE Springbrook Road. This would include street lighting and is to be consistent with existing street improvements on both sides of NE Springbrook Road southwest of the site.

Condition of Approval 2.b of the Ordinance NO. 2024-2931 for annexation of the project site requires the applicant to complete improvements along both sides of NE Springbrook Road. The applicant will need to align the improvements with the existing configuration of the NE Springbrook Road immediately south of the project boundary. Street improvements shall include bike lanes, curbs, and sidewalks on either side of NE Springbrook Road.

Submitted materials also include construction of local-residential classified streets within the boundaries of the proposed development. The improvements include constructing a 5.5-foot planter strip. This is above the minimum planter strip width requirement.

The applicant has not yet submitted formal construction plans for the proposed development, therefore, the plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards. This would include planter strips of at least 5-feet in width along any constructed or improved public streets.

This criterion will be met if the aforementioned condition of approval is adhered to.

9. Slope Easements. Slope easements shall be provided adjacent to the street where required to maintain the stability of the street.

Finding: Slope easements have not been identified as required along NE Springbrook Road or the newly constructed local-residential streets within the proposed development.

This criterion is not applicable.

10. Intersections and Street Design. The street design standards in the Newberg public works design and construction standards shall apply to all public streets, alleys, bike facilities, and sidewalks in the city.

Finding: Submitted materials include local-residential streets to be constructed within the proposed development boundaries. The plans appear to generally satisfy requirements for the street design standards in the City of Newberg Public Works Design and Construction Standards; however, the western termination of proposed Street A appears to be configured with a jog along the development site boundary. This jog may result in future difficulties in expansion of Street A to the west for future development. Layout of lots in this area are to be reworked to eliminate the presence of this jog and ensure a consistent ROW length across the entire stretch of Street A to accommodate a future street extension.

The applicant has not yet submitted formal construction plans for the proposed development. The plans submitted with a permit application for proposed public improvements, or as found to be required during the permit plan review process, are to meet the requirements of the current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval and so long as the construction standard is adhered to.

11. The planning commission may approve modifications to street standards for the purpose of ingress or egress to a minimum of three and a maximum of six lots through a conditional use permit.

Finding: No modifications to street standards for the purpose of ingress or egress were requested by the Applicant.

This criterion is not applicable.

H. Modification of Street Right-of-Way and Improvement Width. The director, pursuant to the Type II review procedures of Chapter 15.220 NMC, may allow modification to the public street standards of subsection (G) of this section, when the criteria in both subsections (H)(1) and (2) of this section are satisfied:

1. The modification is necessary to provide design flexibility in instances where:

a. Unusual topographic conditions require a reduced width or grade separation of improved surfaces; or

b. Lot shape or configuration precludes accessing a proposed development with a street which meets the full standards of this section; or

c. A modification is necessary to preserve trees or other natural features determined by the city to be significant to the aesthetic character of the area; or

d. A planned unit development is proposed and the modification of street standards is necessary to provide greater privacy or aesthetic quality to the development.

2. Modification of the standards of this section shall only be approved if the director finds that the specific design proposed provides adequate vehicular access based on anticipated traffic volumes.

Finding: Modifications to the street right-of-way and/or improvement widths have not been requested and none are required.

This criterion is not applicable.

I. Temporary Turnarounds. Where a street will be extended as part of a future phase of a development, or as part of development of an abutting property, the street may be terminated with a temporary turnaround in lieu of a standard street connection or circular cul-de-sac bulb. The director and fire chief shall approve the temporary turnaround. It shall have an all-weather surface, and may include a hammerhead-type turnaround meeting fire apparatus access road standards, a paved or graveled circular turnaround, or a paved or graveled temporary access road. For streets extending less than 150 feet and/or with no significant access, the director may approve the street without a temporary turnaround. Easements or right-of-way may be required as necessary to preserve access to the turnaround.

Finding: A temporary turnaround is not proposed; however, public service providers such as Waste Management (municipal waste and recycling disposal) and TVF&R may require temporary turnarounds at the western termination of proposed Streets A, B, and C to complete their services. The applicant will need to solicit comments from these entities concerning the need for temporary turnarounds and incorporate corresponding feedback as appropriate.

Commented [BM1]: This may need to be revised once we know if comments from other agencies note a need for temporary turnarounds.

This criterion will be met if the aforementioned condition of approval is adhered to.

J. Topography. The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of this code.

Finding: Submitted materials show new streets are lain out in a sensible manner in consideration of surrounding topographic conditions.

This criterion is met.

K. Future Extension of Streets. All new streets required for a subdivision, partition, or a project requiring site design review shall be constructed to be "to and through": through the development and to the edges of the project site to serve adjacent properties for future development.

Finding: Submitted materials show new streets which terminate in a matter that allow for road extension to accommodate future land development on the adjoining and vicinity properties west of the proposed development. The proposed street layout does not accommodate for the future development north of the proposed development, as proposed Streets D and F do not terminate at the north property boundary. A natural explanation for this would be that the existing urban growth boundary (UGB) shares its boundary along the north development site boundary and would prevent development in this area; however, future expansions of the UGB are not unusual and are periodically granted. While forthcoming development north of the proposed development is not imminent, the exclusion of street stubs oriented north may restrict any possibility of future development north of the proposed development if the UGB were ever to be expanded in this direction. The applicant should include additional plan drawings which demonstrate future potential street layouts to the west, and an additional configuration with future potential street layouts north of the proposed development.

Commented [BM2]: OK to the west. What about to the north along proposed streets D and F?

Commented [LH3R2]: updated

Commented [LH4]: Updated per our discussion, but I am concerned this may be an overreach. If there is no clear pathway in the code to require, at least for the future north street layout, the applicant to provide this. I wouldn't feel great about making this request. It seems if anything, a future code amendment which adds teeth to this request would be great and useful for big picture planning in the future.

Commented [LH5R4]: This does tie-into the discussion of blocks and how the northern layout of dwellings exceed the permissible block lengths which is presented later in this section. If anything, this could be the teeth to request/require that the applicant includes the north-south oriented street stub

Commented [BM6R4]: Agreed. We will need Planning to provide input on this.

This criterion is met.

L. Cul-de-Sacs.

1. Cul-de-sacs shall only be permitted when one or more of the circumstances listed in this section exist. When cul-de-sacs are justified, public walkway connections shall be provided wherever practical to connect with another street, walkway, school, or similar destination.

a. Physical or topographic conditions make a street connection impracticable. These conditions include but are not limited to controlled access streets, railroads, steep slopes, wetlands, or water bodies where a connection could not be reasonably made.

b. Buildings or other existing development on adjacent lands physically preclude a connection now or in the future, considering the potential for redevelopment.

c. Where streets or accessways would violate provisions of leases, easements, or similar restrictions.

d. Where the streets or accessways abut the urban growth boundary and rural resource land in farm or forest use, except where the adjoining land is designated as an urban reserve area.

2. Cul-de-sacs shall be no more than 400 feet long (measured from the centerline of the intersection to the radius point of the bulb).

3. Cul-de-sacs shall not serve more than 18 single-family dwellings.

Each cul-de-sac shall have a circular end with a minimum diameter of 96 feet, curb-to-curb, within a 109-foot minimum diameter right-of-way. For residential uses, a 35-foot radius may be allowed if the street has no parking, a mountable curb, curbside sidewalks, and sprinkler systems in every building along the street.

Finding: Submitted materials demonstrate that no cul-de-sacs are being proposed or required.

This criterion is not applicable.

M. Street Names and Street Signs. Streets that are in alignment with existing named streets shall bear the names of such existing streets. Names for new streets not in alignment with existing streets are subject to approval by the director and the fire chief and shall not unnecessarily duplicate or resemble the name of any existing or platted street in the city. It shall be the responsibility of the land divider to provide street signs.

Finding: Submitted materials indicate that new streets will be constructed within the proposed development but do not include any proposed street names at this time. The applicant will need to propose street names for review which do not unnecessarily duplicate or resemble any existing streets within the City with their formal construction plan submission.

This criterion will be met if the aforementioned condition of approval is adhered to.

N. Platting Standards for Alleys.

1. An alley may be required to be dedicated and constructed to provide adequate access for a development, as deemed necessary by the director.

2. The right-of-way width and paving design for alleys shall be not less than 20 feet wide. Slope easements shall be dedicated in accordance with specifications adopted by the city council under NMC 15.505.010 et seq.

3. Where two alleys intersect, 10-foot corner cut-offs shall be provided.

4. Unless otherwise approved by the city engineer where topographical conditions will not reasonably permit, grades shall not exceed 12 percent on alleys, and centerline radii on curves shall be not less than 100 feet.

5. All provisions and requirements with respect to streets identified in this code shall apply to alleys the same in all respects as if the word "street" or "streets" therein appeared as the word "alley" or "alleys" respectively.

Finding: Submitted materials show that no alleys are proposed or required.

This criterion is not applicable.

O. Platting Standards for Blocks.

1. Purpose. Streets and walkways can provide convenient travel within a neighborhood and can serve to connect people and land uses. Large, uninterrupted blocks can serve as a barrier to travel, especially walking and biking. Large blocks also can divide rather than unite neighborhoods. To promote connected neighborhoods and to shorten travel distances, the following minimum standards for block lengths are established.

2. Maximum Block Length and Perimeter. The maximum length and perimeters of blocks in the zones listed below shall be according to the following table. The review body for a subdivision, partition, conditional use permit, or a Type II design review may require installation of streets or walkways as necessary to meet the standards below.

Zone(s)	*Maximum Block Length*	*Maximum Block Perimeter*
R-1	*800 feet*	*2,000 feet*
R-2, R-3, RP, I	*1,200 feet*	*3,000 feet*

3. Exceptions.

a. If a public walkway is installed mid-block, the maximum block length and perimeter may be increased by 25 percent.

b. Where a proposed street divides a block, one of the resulting blocks may exceed the maximum block length and perimeter standards provided the average block length and perimeter of the two resulting blocks do not exceed these standards.

c. Blocks in excess of the above standards are allowed where access controlled streets, street access spacing standards, railroads, steep slopes, wetlands, water bodies, preexisting development, ownership patterns or similar circumstances restrict street and walkway location and design. In these cases, block length and perimeter shall be as small as practical. Where a street cannot be provided because of these circumstances but a public walkway is still feasible, a public walkway shall be provided.

d. Institutional campuses located in an R-1 zone may apply the standards for the institutional zone.

e. Where a block is in more than one zone, the standards of the majority of land in the proposed block shall apply.

f. Where a local street plan, concept master site development plan, or specific plan has been approved for an area, the block standards shall follow those approved in the plan. In approving such a plan, the review body shall follow the block standards listed above to the extent appropriate for the plan area.

Finding: The block along the north and east development boundary exceeds these requirements; however, because this block abuts the UGB it is permissible. The blocks shown on the submitted materials are within permissible standards lengths.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, the plans submitted should include block configurations consistent with the requirements of the Newberg Municipal Code and current City of Newberg Public Works Design and Construction Standards.

This criterion will be met if the aforementioned condition of approval is adhered to.

4. Public Pedestrian Walkways and Bicycle Access. The approval authority in approving a land use application with conditions may require a developer to provide an access way where the creation of a street consistent with street spacing standards is infeasible and the creation of a cul-de-sac or dead-end street is unavoidable. A public walkway provides a connection through a block that is longer than established standards or connects the end of the street to another right-of-way or a public access easement. A public walkway shall be contained within a public right-of-way or public access easement, as required by the city. A public walkway shall be a minimum of 10 feet wide and shall provide a minimum

Commented [LH7]: So the block along n and e site boundary appears to exceed these limits but it is against the boundary of the UGB. I do know that UGB extensions are not impossible so I wonder if we would request that a walkway or some other form of access be inserted in this block to break it up, even though future development north and east of the development is uncertain and unlikely without an UGB extension. Not sure how to address exactly. Adjust response as necessary.

Commented [LH8R7]: Need input from planning - drafted a response but not sure if acceptable/correct

Commented [BM9R7]: Agreed. This might be resolved by future street extensions to the north.

Commented [BM10]: Input from Planning requested.

six-foot-wide paved surface or other all-weather surface approved by the city (see subsection (S) of this section for public walkway standards).

Design features should be considered that allow access to emergency vehicles but that restrict access to non-emergency motorized vehicles.

Finding: Submitted materials show that no new public pedestrian walkways are proposed or required.

This criterion is not applicable.

P. Private Streets. New private streets, as defined in NMC 15.05.030, shall not be created, except as allowed by NMC 15.240.020(L)(2).

Finding: Submitted materials show that no new private streets are proposed or required.

This criterion is not applicable.

Q. Traffic Calming.

1. The following roadway design features may be required in new street construction where traffic calming needs are anticipated:

a. Serpentine alignment.

b. Curb extensions.

c. Traffic diverters/circles.

d. Raised medians and landscaping.

e. Other methods shown effective through engineering studies.

2. Traffic-calming measures such as speed humps should be applied to mitigate traffic operations and/or safety problems on existing streets. They should not be applied with new street constructions.

Finding: The provided TIA did not recommend any traffic calming measures as analysis found the proposed layout is adequately safe.

This criterion is met.

R. Vehicular Access Standards.

1. Purpose. The purpose of these standards is to manage vehicle access to maintain traffic flow, safety, roadway capacity, and efficiency. They help to maintain an adequate level of service consistent with the functional classification of the street. Major roadways,

including arterials and collectors, serve as the primary system for moving people and goods within and through the city. Access is limited and managed on these roads to promote efficient through movement. Local streets and alleys provide access to individual properties. Access is managed on these roads to maintain safe maneuvering of vehicles in and out of properties and to allow safe through movements. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function.

2. Access Spacing Standards. Public street intersection and driveway spacing shall follow the standards in Table 15.505.R below. The Oregon Department of Transportation (ODOT) has jurisdiction of some roadways within the Newberg city limits, and ODOT access standards will apply on those roadways.

Table 15.505.R. Access Spacing Standards

Roadway Functional Classification	*Area*[1]	*Minimum Public Street Intersection Spacing (Feet)*[2]	*Driveway Setback from Intersecting Street*[3]
Expressway	*All*	*Refer to ODOT Access Spacing Standards*	*NA*
Major arterial	*Urban* *CBD*	*Refer to ODOT Access Spacing Standards*	
Minor arterial	*Urban* *CBD*	*500* *200*	*150* *100*
Major collector	*All*	*400*	*150*
Minor collector	*All*	*300*	*100*

[1] ***"Urban" refers to intersections inside the city urban growth boundary outside the central business district (C-3 zone).***

"CBD" refers to intersections within the central business district (C-3 zone).

"All" refers to all intersections within the Newberg urban growth boundary.

[2] ***Measured centerline to centerline.***

[3] ***The setback is based on the higher classification of the intersecting streets. Measured from the curb of the intersecting street to the beginning of the driveway, excluding flares. If the driveway setback listed above would preclude a lot from having at least one driveway, including shared driveways or driveways on adjoining streets, one driveway is allowed as far from the intersection as possible.***

Finding: Submitted materials propose a local-residential street intersection with NE Springbrook Road that intersects approximately 260-feet from the centerline of Benjamin Road, the nearest street intersection along NE Springbrook Road. This distance is not consistent with the access spacing standards Table 15.505.R. which requires minimum public street intersection spacing of 400 feet along a major collector classified road. The applicant will either need to reconfigure the intersection to exceed the 400-feet spacing requirement or apply for an exception to access

spacing standards for a reduced spacing that is contingent on director approval in accordance with 15.505.030(R)(10) and 15.505.030(R)(11).

This criterion will be met if the aforementioned condition of approval is adhered to.

3. Properties with Multiple Frontages. Where a property has frontage on more than one street, access shall be limited to the street with the lesser classification.

a. For a duplex, triplex or quadplex dwelling or a cottage cluster project with frontage on two local streets, access may be permitted on both streets.

Finding: Submitted materials indicate that there are several lots situated at intersections within the proposed development and would be considered as having multiple frontages. Lots with multiple frontages would be accessed via streets with identical local-residential function classifications (proposed Streets A, B, or C); therefore, this criterion is not applicable.

4. Driveways. More than one driveway is permitted on a lot accessed from either a minor collector or local street as long as there is at least 40 feet of lot frontage separating each driveway approach. More than one driveway is permitted on a lot accessed from a major collector as long as there is at least 100 feet of lot frontage separating each driveway approach.

a. For a duplex, triplex or quadplex dwelling or a cottage cluster project, more than one driveway is permitted on a lot accessed from either a minor collector or local street as long as there is at least 22 feet of lot frontage separating each driveway approach.

Finding: Submitted materials do not include any lots with multiple driveways.

This criterion is not applicable.

5. Alley Access. Where a property has frontage on an alley and the only other frontages are on collector or arterial streets, access shall be taken from the alley only. The review body may allow creation of an alley for access to lots that do not otherwise have frontage on a public street provided all of the following are met:

a. The review body finds that creating a public street frontage is not feasible.

b. The alley access is for no more than six dwellings and no more than six lots.

c. The alley has through access to streets on both ends.

d. One additional parking space over those otherwise required is provided for each dwelling. Where feasible, this shall be provided as a public use parking space adjacent to the alley.

Finding: Submitted materials do not include any lots with alleys or alley access.

This criterion is not applicable.

6. Closure of Existing Accesses. Existing accesses that are not used as part of development or redevelopment of a property shall be closed and replaced with curbing, sidewalks, and landscaping, as appropriate.

Finding: Submitted materials indicate that the existing gravel access road intersecting with NE Springbrook Road will be demolished as part of the proposed development. Since the proposed development includes proposed streets roughly overlain the existing access road, no additional improvements will be required under this section.

This criterion is met.

7. Shared Driveways.

a. The number of driveways onto arterial streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The city shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes. Where there is an abutting developable property, a shared driveway shall be provided as appropriate. When shared driveways are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway temporarily ends at the property line, but may be accessed or extended in the future as the adjacent parcel develops. "Developable" means that a parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).

b. Access easements (i.e., for the benefit of affected properties) and maintenance agreements shall be recorded for all shared driveways, including pathways, at the time of final plat approval or as a condition of site development approval.

c. No more than four lots may access one shared driveway, with the exception of cottage dwellings on individual lots that are part of a cottage cluster.

d. Shared driveways shall be posted as no parking fire lanes where required by the fire marshal.

e. Where three or more lots share one driveway, one additional parking space over those otherwise required shall be provided for each dwelling. Where feasible, this shall be provided as a common use parking space adjacent to the driveway. However, duplex, triplex, quadplex, townhouse and cottage dwellings with shared driveways shall be exempt from this standard.

Finding: Submitted materials indicate that the majority of lots will have a private driveway with access onto the local-residential streets. The exception is proposed Lots 82 and 83 which appear to have a shared driveway. An access easement will need to be prepared for the shared driveway

serving Lots 82 and 83, and any additional shared driveways that may be added as development design continues or changes.

This criterion will be met if the aforementioned condition of approval is adhered to.

8. Frontage Streets and Alleys. The review body for a partition, subdivision, or design review may require construction of a frontage street to provide access to properties fronting an arterial or collector street.

Finding: A new frontage street has not been proposed nor is required.

This criterion is not applicable.

9. ODOT or Yamhill County Right-of-Way. Where a property abuts an ODOT or Yamhill County right-of-way, the applicant for any development project shall obtain an access permit from ODOT or Yamhill County.

Finding: NE Springbrook Road along the project site frontage is designated as Yamhill County jurisdiction.

Permit approval from Yamhill County is required for the proposed public improvements in NE Springbrook Road and will be required prior to issuance of a City of Newberg Public Improvement Permit.

This criterion will be met if the aforementioned condition of approval is adhered to.

10. Exceptions. The director may allow exceptions to the access standards above in any of the following circumstances:

a. Where existing and planned future development patterns or physical constraints, such as topography, parcel configuration, and similar conditions, prevent access in accordance with the above standards.

b. Where the proposal is to relocate an existing access for existing development, where the relocated access is closer to conformance with the standards above and does not increase the type or volume of access.

c. Where the proposed access results in safer access, less congestion, a better level of service, and more functional circulation, both on street and on site, than access otherwise allowed under these standards.

Finding: No exceptions to access standards have been requested and none are required.

This criterion is not applicable.

11. Where an exception is approved, the access shall be as safe and functional as practical in the particular circumstance. The director may require that the applicant submit a traffic study by a registered engineer to show the proposed access meets these criteria.

Finding: No exceptions to access standards have been requested and none are required.

This criterion is not applicable.

S. Public Walkways.

1. Projects subject to Type II design review, partition, or subdivision approval may be required to provide public walkways where necessary for public safety and convenience, or where necessary to meet the standards of this code. Public walkways are meant to connect cul-de-sacs to adjacent areas, to pass through oddly shaped or unusually long blocks, to provide for networks of public paths according to adopted plans, or to provide access to schools, parks or other community destinations or public areas. Where practical, public walkway easements and locations may also be used to accommodate public utilities.

2. Public walkways shall be located within a public access easement that is a minimum of 15 feet in width.

3. A walk strip, not less than 10 feet in width, shall be paved in the center of all public walkway easements. Such paving shall conform to specifications in the Newberg public works design and construction standards.

4. Public walkways shall be designed to meet the Americans with Disabilities Act requirements.

5. Public walkways connecting one right-of-way to another shall be designed to provide as short and straight of a route as practical.

6. The developer of the public walkway may be required to provide a homeowners' association or similar entity to maintain the public walkway and associated improvements.

7. Lighting may be required for public walkways in excess of 250 feet in length.

8. The review body may modify these requirements where it finds that topographic, preexisting development, or similar constraints exist.

Finding: Public walkways are not proposed and none are required.

This criterion is not applicable.

T. Street Trees. Street trees shall be provided for all projects subject to Type II design review, partition, or subdivision. Street trees shall be installed in accordance with the provisions of NMC 15.420.010(B)(4).

Finding: This criterion will be met if the aforementioned condition of approval is adhered to.
or
This criterion is not applicable.
or
This criterion is met.

Commented [LH11]: Planning to address

U. Street Lights. All developments shall include underground electric service, light standards, wiring and lamps for street lights according to the specifications and standards of the Newberg public works design and construction standards. The developer shall install all such facilities and make the necessary arrangements with the serving electric utility as approved by the city. Upon the city's acceptance of the public improvements associated with the development, the street lighting system, exclusive of utility-owned service lines, shall be and become property of the city unless otherwise designated by the city through agreement with a private utility.

Finding: The submitted materials include a Photometrics Plan that includes a plan to install street-lights and power lines as part of the proposed development and NE Springbrook Road frontage improvements.

The necessary public improvement permit will require the applicant to provide a street lighting analysis along NE Springbrook Road and newly constructed streets for additional PGE Option A street lights meeting city standards. Plans submitted with the public improvement permit application are to include PGE Option A street lights necessary to meet City standards.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

Because the submitted materials do not address the need for possible permits from Yamhill County for installation of streetlights along the NE Springbrook Road frontages, the applicant will be required to obtain any necessary Yamhill County permits to perform work within Yamhill County right-of-way. Any necessary Yamhill County permits are to be obtained and submitted as part of the public improvement permit process.

This criterion will be met if the aforementioned conditions of approval are adhered to.

V. Transit Improvements. Development proposals for sites that include or are adjacent to existing or planned transit facilities, as shown in the Newberg transportation system plan or adopted local or regional transit plan, shall be required to provide any of the following, as applicable and required by the review authority:

> ***1. Reasonably direct pedestrian connections between the transit facility and building entrances of the site. For the purpose of this section, "reasonably direct" means a route***

that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for users.

2. A transit passenger landing pad accessible to disabled persons.

3. An easement of dedication for a passenger shelter or bench if such facility is in an adopted plan.

4. Lighting at the transit facility. [Ord. 2889 § 2 (Exh. B §§ 43 – 45), 12-6-21; Ord. 2880 § 2 (Exh. B §§ 51, 52), 6-7-21; Ord. 2871 § 3 (Exh. D), 3-1-21; Ord. 2862 § 1 (Exh. A § 1), 6-15-20; Ord. 2822 § 1 (Exh. A), 2-5-18; Ord. 2810 § 2 (Exhs. B, C), 12-19-16; Ord. 2763 § 1 (Exh. A § 19), 9-16-13; Ord. 2736 § 1 (Exh. A §§ 1, 3, 4), 3-21-11; Ord. 2619, 5-16-05; Ord. 2513, 8-2-99; Ord. 2507, 3-1-99; Ord. 2494, 4-6-98; Ord. 2451, 12-2-96. Code 2001 §§ 151.681, 151.683, 151.684 – 151.686, 151.689 – 151.692, 151.694, 151.695, 151.701 – 151.703, 151.705.]

Finding: The project site is not adjacent to existing or planned transit facilities.

This criterion is not applicable.

15.505.040 Public utility standards.
A. Purpose. The purpose of this section is to provide adequate services and facilities appropriate to the scale and type of development.

B. Applicability. This section applies to all development where installation, extension or improvement of water, wastewater, or private utilities is required to serve the development or use of the subject property.

C. General Standards.

1. The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall conform to the Newberg public works design and construction standards and require a public improvements permit.

2. The location, design, installation and maintenance of all utility lines and facilities shall be carried out with minimum feasible disturbances of soil and site. Installation of all proposed public and private utilities shall be coordinated by the developer and be approved by the city to ensure the orderly extension of such utilities within public right-of-way and easements.

D. Standards for Water Improvements. All development that has a need for water service shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary wastewater and stormwater facilities, as applicable.

1. All developments shall be required to be linked to existing water facilities adequately sized to serve their intended area by the construction of water distribution lines, reservoirs and pumping stations which connect to such water service facilities. All necessary easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.

2. Specific location, size and capacity of such facilities will be subject to the approval of the director with reference to the applicable water master plan. All water facilities shall conform with city pressure zones and shall be looped where necessary to provide adequate pressure and fire flows during peak demand at every point within the system in the development to which the water facilities will be connected. Installation costs shall remain entirely the developer's responsibility.

3. The design of the water facilities shall take into account provisions for the future extension beyond the development to serve adjacent properties, which, in the judgment of the city, cannot be feasibly served otherwise.

4. Design, construction and material standards shall be as specified by the director for the construction of such public water facilities in the city.

Finding: Submitted materials appear to show water service laterals and meters to serve each dwelling unit. The water main to serve the proposed development must connect to the existing 12-inch water main on the west side of NE Springbrook Road.

The applicant is also proposing to construct a water distribution pump station to provide and maintain necessary water pressure in the proposed development. The pump station is proposed to be constructed along NE Springbrook Road at the intersection to the access street to the proposed development. A draft Basis of Design technical memo was provided with the submitted materials which details the preliminary engineering analysis completed so far for the new pump station. Water distribution pump stations are listed in section 1.11.3 of the City of Newberg Public Works Design and Construction Standards as a special design facility not addressed in these standards. For these types of facilities appropriate design, operating and maintenance criteria for the specific project are determined through coordination between the design engineer and the City's Public Works Department.

The applicant is required to submit the water distribution pump station Basis of Design technical memo with the public improvement permit application. To determine the appropriate design, operating and maintenance criteria, the Basis of Design technical memo for the proposed water booster pump station will be fully reviewed as part of the public improvement permit approval process. This review is to occur in accordance with section 1.11.3 of the City of Newberg Public Works Design and Construction Standards for special facility designs. The Basis of Design technical memo will need to be updated with input provided by City's Public Works Department during the public improvement permit approval process.

The applicant is required to incorporate City feedback concerning the Basis of Design technical memo into a final Basis of Design and into final plans for the project.

The developer may be required to cover the expense of a consultant with specialty engineering experience selected by the city for a technical review of the Basis of Design and plans for the water booster pump station. The consultant selected by the city for a technical review is to act as an extension of city staff for this unique addition to the public water system.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a water meter at the right-of-way line prior to connecting to the public main or to a double water service where allowed per the Public Works Design and Construction Standards.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to submit construction plans and obtain a public improvement permit for proposed water services. These plans are to be submitted with the application for a public improvement permit.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

The closest existing fire hydrant and any new fire hydrants are to be shown on plans included with permit submittals. Fire hydrant spacing is to be consistent with City of Newberg Public Works Design and Construction standards and TVF&R requirements.

This criterion will be met if the aforementioned conditions of approval are adhered to.

E. Standards for Wastewater Improvements. All development that has a need for wastewater services shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary water services and stormwater facilities, as applicable.

> ***1. All septic tank systems and on-site sewage systems are prohibited. Existing septic systems must be abandoned or removed in accordance with Yamhill County standards.***
>
> ***2. All properties shall be provided with gravity service to the city wastewater system, except for lots that have unique topographic or other natural features that make gravity wastewater extension impractical as determined by the director. Where gravity service is impractical, the developer shall provide all necessary pumps/lift stations and other improvements, as determined by the director.***
>
> ***3. All developments shall be required to be linked to existing wastewater collection facilities adequately sized to serve their intended area by the construction of wastewater lines which connect to existing adequately sized wastewater facilities. All necessary***

easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.

4. Specific location, size and capacity of wastewater facilities will be subject to the approval of the director with reference to the applicable wastewater master plan. All wastewater facilities shall be sized to provide adequate capacity during peak flows from the entire area potentially served by such facilities. Installation costs shall remain entirely the developer's responsibility.

5. Temporary wastewater service facilities, including pumping stations, will be permitted only if the director approves the temporary facilities, and the developer provides for all facilities that are necessary for transition to permanent facilities.

6. The design of the wastewater facilities shall take into account provisions for the future extension beyond the development to serve upstream properties, which, in the judgment of the city, cannot be feasibly served otherwise.

7. Design, construction and material standards shall be as specified by the director for the construction of such wastewater facilities in the city.

Finding: Submitted materials appear to show wastewater service laterals to serve each dwelling unit consistent with NMC 13.10.070(K) below. The wastewater main to serve the proposed development must connect to the existing 15-inch wastewater gravity main beneath NE Springbrook Road.

> *NMC 13.10.070 (K) - Independent Drainage Systems. Every dwelling and/or building under separate ownership shall have an independent wastewater system connection with a public or private collection system. Additionally, each parcel shall be served by individual laterals.*

The applicant prepared a wastewater downstream analysis provided with the submitted materials. The downstream analysis evaluated whether the existing public wastewater collection system has the necessary capacity to support the additional wastewater flows from the dwellings constructed as part of the proposed development. The applicant utilized a modified hydraulic model from the City of Newberg Wastewater Master Plan prepared in March 2018 and amended in 2021 using XPSTORM. The downstream analysis concluded that the additional loads generated from the proposed development will have a negligible effect on the existing downstream wastewater system.

The wastewater analysis of impacts to the wastewater system from the proposed development is required to be submitted with permit applications.

Each lot and each dwelling under separate ownership must have separate private utility laterals to a cleanout at the right-of-way line prior to connecting to the public main or to a double wye service where allowed per the Public Works Design and Construction Standards.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to submit construction plans and obtain a public improvement permit for proposed wastewater services. These plans are to be submitted with the application for a public improvement permit.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

This criterion will be met if the aforementioned conditions of approval are adhered to.

F. Easements. Easements for public and private utilities shall be provided as deemed necessary by the city, special districts, and utility companies. Easements for special purpose uses shall be of a width deemed appropriate by the responsible agency. Such easements shall be recorded on easement forms approved by the city and designated on the final plat of all subdivisions and partitions. Minimum required easement width and locations are as provided in the Newberg public works design and construction standards. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

Finding: Submitted materials indicate a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within the proposed development) as is required for land division projects such as subdivisions and partitions for future, franchise utility installations, including potential future undergrounding of overhead utilities.

The applicant has not yet submitted formal construction plans for the proposed development; therefore, final plans for public improvements are to meet City of Newberg Public Works Design and Construction Standards and applicable City standards. The applicant is required to include a 10-foot wide PUE along public street frontages (NE Springbrook Road and newly constructed local streets within proposed development).

This criterion will be met if the aforementioned condition of approval is adhered to.

15.505.050 Stormwater system standards.
A. Purpose. The purpose of this section is to provide for the drainage of surface water from all development; to minimize erosion; and to reduce degradation of water quality due to sediments and pollutants in stormwater runoff.

B. Applicability. The provisions of this section apply to all developments subject to site development review or land division review and to the reconstruction or expansion of such developments that increases the flow or changes the point of discharge to the city stormwater system. Additionally, the provisions of this section shall apply to all drainage facilities that impact any public storm drain system, public right-of-way or public easement, including but not limited to off-street parking and loading areas.

C. General Requirement. All stormwater runoff shall be conveyed to a public storm wastewater or natural drainage channel having adequate capacity to carry the flow without

overflowing or otherwise causing damage to public and/or private property. The developer shall pay all costs associated with designing and constructing the facilities necessary to meet this requirement.

Finding: Submitted materials indicate the installation of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road. The stormwater piping routes flows to one of two stormwater detention basins. The northern basin collects stormwater drainage from a portion of the proposed development and appears to route pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The southern basin collects stormwater drainage from the NE Springbrook Road frontage and a portion of the proposed development and appears to route pretreated stormwater to the existing 12-inch main beneath NE Springbrook Drive near the southeastern property boundary.

The stormwater management plan is to be prepared in accordance with the Public Works Design and Construction Standards. This includes demonstrating compliance with the stormwater facility selection hierarchy described in Section 4.6.8 of the Public Works Design and Construction Standards.

The provided preliminary stormwater management plan lacks figures of the upstream and downstream basin (per requirements outlined in the Public Works Design and Construction Standards Section II, a and b), lacks a stamped certificate of investigation for downstream analysis, and operation and maintenance plan for proposed stormwater management facilities for the proposed development. The applicant is required to amend this stormwater management plan to include required components identified in the Public Works Design and Construction Standards concerning the preparation of a stormwater management plan.

The applicant has not yet submitted formal construction plans for the proposed development. With permit submittals the applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

The applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

Plans will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

This criterion will be met if the aforementioned condition of approval is adhered to.

D. Plan for Stormwater and Erosion Control. No construction of any facilities in a development included in subsection (B) of this section shall be permitted until an engineer

registered in the State of Oregon prepares a stormwater report and erosion control plan for the project. This plan shall contain at a minimum:

> ***1. The methods to be used to minimize the amount of runoff, sedimentation, and pollution created from the development both during and after construction.***
>
> ***2. Plans for the construction of stormwater facilities and any other facilities that depict line sizes, profiles, construction specifications, and other such information as is necessary for the city to review the adequacy of the stormwater plans.***
>
> ***3. Design calculations shall be submitted for all drainage facilities. These drainage calculations shall be included in the stormwater report and shall be stamped by a licensed professional engineer in the State of Oregon. Peak design discharges shall be computed based upon the design criteria outlined in the public works design and construction standards for the city.***

Finding: Submitted materials indicate the installation of stormwater conveyance piping and periodic storm drain inlets along the constructed local-residential streets within the proposed development and along NE Springbrook Road. The stormwater piping routes flows to one of two stormwater detention basins. The northern basin collects stormwater drainage from a portion of the proposed development and appears to route pretreated stormwater flow to a drainage ditch and culvert beneath NE Springbrook Road near the intersection of Benjamin Road. The southern basin collects stormwater drainage from the NE Springbrook Road frontage and a portion of the proposed development and appears to route pretreated stormwater to the existing 12-inch main beneath NE Springbrook Drive near the southeastern property boundary.

The applicant is required to submit plans clearly showing the area of disturbance and to obtain a Oregon Department of Environmental Quality 1200-C Erosion Control Permit prior to any ground disturbing activity if 1 acre or more will be disturbed.

With permit submittals the applicant is required to submit plans that clearly show public and private stormwater management and conveyance facilities for the proposed project that are in accordance with Newberg Municipal Code sections 13.20 and 13.25.

The applicant is required to submit construction plans and obtain a public improvement permit for proposed public stormwater facilities. Final plans and stormwater report for the management of stormwater which comply with the Newberg Public Works Design and Construction Standards and with NMC Sections 13.20 and 13.25 shall be submitted with building and public improvement permit applications.

Plans will be fully reviewed for compliance with city standards, including the Public Works Design and Construction Standards, as part of the permit plan review process.

This criterion will be met if the aforementioned condition of approval is adhered to.

E. Development Standards. Development subject to this section shall be planned, designed, constructed, and maintained in compliance with the Newberg public works design and construction standards. [Ord. 2810 § 2 (Exhs. B, C), 12-19-16.]

Finding: Because the applicant has not submitted construction plans, construction plans which comply with the Newberg Public Works Design and Construction Standards shall be submitted with the public works improvement permit application.

Plans will be fully reviewed for compliance with city standards including the Public Works Design and Construction Standards as part of the permit plan review process.

This criterion will be met if the aforementioned condition of approval is adhered to.

MEMORANDUM

TO: Newberg Planning Commission
FROM:
SUBJECT: Anticipated Schedule of Planning Commission Activities
DATE: February 5, 2024

To assist the Planning Commission in gauging activities for FY 25/26, below is a preliminary schedule of activities.

February 13, 2025
- PUD24-0009 Nagomi at Springbrook 100-Unit Planned Unit Development at 3809 NE Springbrook Road

March 11, 2025
- SUB224-0001 for 10-Lot Subdivision at 1929 E Orchard Drive *(Tentative)*

April 10, 2025
- DCA24-0003 Vacation Rental Home Regulations Update (Work Session #1)
- GEN24-0014 Code Amendments Needed to Address Floodplain and FEMA National Insurance Program Issues (Work Session)

April 24, 2025 (Special Meeting)
- DCA24-0003 Vacation Rental Home Regulations Update (Work Session #2)

May 8, 2025
- DCA24-0003 Vacation Rental Home Regulations Update (Hearing-Tentative)
- GEN24-0014 Code Amendments Needed to Address Floodplain and FEMA National Insurance Program Issues (Hearing)

June 12, 2025
- No items scheduled at this time.

There are additional activities the Community Development Department may bring forward to the Planning Commission for consideration for land use cases. Staff is also looking at various updates and cleanup actions to the Development Code and other projects such as:

1. Development Code Amendment – Small Cell Site Facilities – Legislative Hearing
2. Development Code Amendment – Institutional Zone & Overlay Regulations – Legislative Hearing (Tentative)

3. Other Items from the Planning Division's Work Program, which is available at newbergoregon.gov/planning, include:
    a. Items related to the Newberg Urban Growth Boundary Project
    b. Update requirements related to HOA's and stormwater facilities management
    c. Code updates for compliance with statewide regulations including HB3395 (2023) and Commercial Conversions to Residential (HB2984)
    d. Street Tree and Planter Strips Update
4. Other Items from Prior Discussion with the Planning Commission
    a. Appendix A revisions roadway cross-sections
    b. Tentative – Military Banner Sign Regulations – Legislative
    c. Annexation criteria
    d. Stream Corridor Adjustment process
    e. Urban Forestry program
    f. Fences in Industrial zones
    g. C-3 zone – reduce front yard landscaping from 10 feet to 5 feet
    h. Industrial outdoor storage
    i. Downtown sign point system
    j. Roof top mechanical unit screening
    k. Historic review process
    l. Zoning Use Table
    m. Undergrounding utilities
    n. Driveway width
    o. Home occupations
    p. 15.405.030(B) – "The creation" ~~development~~ of lots under 15,000 sf……
    q. 15.302.010 – add R-4 to the list
    r. Replace parking diagrams in 15.440.070 for readability
    s. Replace airport overlay diagrams in back of Dev. Code for readability
    t. Temporary Merchant standards
    u. Food Carts
    v. ADUs in industrial zones