Land Use Application for a Site Design Review and Lot Consolidation for Friendsview Springbrook Meadows II

Date: March 2020

Submitted to:
City of Newberg
Planning Department
414 E 1st Street
Newberg, OR 97132

Applicant:
Friendsview Manor, Inc.
1301 Fulton Street
Newberg, OR 97132

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for a Site Design Review
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Submitted to:	City of Newberg Planning Department 414 E 1st Street Newberg, OR 97132
Owner/Applicant:	Friendsview Manor, Inc. 1301 Fulton Street Newberg, OR 97132
Applicant's Consultant:	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062 Contact(s): Mimi Doukas, AICP, RLA Email: mimid@aks-eng.com Phone: (503) 563-6151
Site Location:	Fronts on Providence Drive between Hayes Street & 99W
Assessor's Map:	Yamhill County Assessor's Map 3216; Tax Lot 2026 and a portion of Tax Lot 2019
Site Size:	Tax Lot 2026: ±6.67 acres Tax Lot 2019: ±5,775 square feet (redeveloped)
Land Use Districts:	(R-P) Residential Professional District (SP) Springbrook Oaks Specific Plan, Area F-1

I. Executive Summary

Friendsview (Applicant) is submitting this consolidated application which includes a Lot Consolidation and Site Design Review of a concept master site development plan and a master site development plan for an independent living community in Newberg, Tax Lot 2026 of Tax Map 3216. The property is planned to be consolidated with the neighboring Tax Lot 2019 (of Tax Map 3216) to the south prior to the occupation of Phase 3 development. Proposed development on Tax Lot 2026 is planned to be a continuation of the existing independent living community on Tax Lot 2019. Planned development includes four total phases:

- Phase 1 will include duplex-style independent living units and all infrastructure.
- Phase 2 will include additional duplex-style independent living units.
- Phase 3 will involve the extension of the existing community building over the consolidated property line.
- Phase 4 will include a multistory structure and associated parking to accommodate more than 30 additional independent living units.

A new access point is planned from Providence Drive, with the option to access the development through the existing point on Hayes Street. Open space, landscaping, and outdoor living and recreation areas will meet the requirements of the City of Newberg Municipal Code (NMC) for all proposed development.

This application includes the City application forms, written materials, and preliminary plans necessary for City staff to review and determine compliance with the applicable approval criteria. The evidence is substantial and supports the City's approval of the application.

II. Site Description/Setting

The development site (Tax Lot 2026) is an irregularly-shaped ±6.67-acre parcel with an additional ±5,775 square feet being redeveloped on the abutting property to the south (Tax Lot 2019). The property is zoned R-P (Residential-Professional District) with an SP (Specific Plan Subdistrict) Overlay for the Springbrook Oaks Specific Plan, Area F-1. The property also has a comprehensive plan designation of MIX/SP (Mixed Use Specific Plan). The Springbrook neighborhood is comprised of a mix of single-family and multifamily dwellings and a variety of commercial uses. The adjacent Tax Lot 2001 to the east is occupied by Oregon Clinic. West of the subject property is Argyle Winery Distribution. The property to the north is occupied by the Providence Newberg Medical Center. South of the site is an existing Friendsview independent living community of which the proposed development will be a continuation. Improvement of the subject property with an independent living community will be consistent with the overall character of the neighborhood.

III. Applicable Review Criteria

CITY OF NEWBERG DEVELOPMENT CODE

Chapter 15.100 LAND USE PROCESSES AND PROCEDURES

15.100.020 Type I procedure – Administrative Decision

A. Type I development actions shall be decided by the director without public notice or public hearing. Notice of a decision shall be provided to the applicant.

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

1. Design review permits for single-family dwellings, duplexes, additions, accessory dwelling units, accessory structures, or other additions specifically listed in NMC 15.220.020(A)(1).
2. Home occupation permits.
3. Signs, not in conjunction with a new development or major remodel.
4. Adjustments.
5. Processing final land division maps and plats.
6. Determining compliance with the conditions of approval for a land use action processed under a Type II or Type III procedure.

C. A Type I decision may be appealed by an affected party, Type I, in accordance with NMC 15.100.160 et seq.

D. The director shall make a decision based on the information presented, and shall issue a development permit if the applicant has complied with all of the relevant requirements of the Newberg comprehensive plan and this code. The director may add conditions to the permit to ensure compliance with all requirements of this code, the comprehensive plan and other relevant policies and regulations.

15.100.030 Type II procedure.

A. Type II development actions shall be decided by the director.

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

1. Site design review.
2. Variances.
3. Manufactured dwelling parks and mobile home parks.
4. Partitions.
5. Subdivisions, except for subdivisions with certain conditions requiring them to be processed using the Type III process, pursuant to NMC 15.235.030(A).

C. The applicant shall provide notice pursuant to the requirements of NMC 15.100.200 et seq.

D. The director shall make a decision based on the information presented and shall issue a development permit if the applicant has complied with all of the relevant requirements of this code. The

director may add conditions to the permit to ensure compliance with all requirements of this code.

E. Appeals may be made by an affected party, Type II, in accordance with NMC 15.100.160 et seq. All Type II development action appeals shall be heard and decided by the planning commission.

F. If the director's decision is appealed as provided in subsection (E) of this section, the hearing shall be conducted pursuant to the Type III quasi-judicial hearing procedures as identified in NMC 15.100.050.

G. The decision of the planning commission on any appeal may be further appealed to the city council by an affected party, Type III, in accordance with NMC 15.100.160 et seq. and shall be a review of the record supplemented by written or oral arguments relevant to the record presented by the parties.

H. An applicant shall have the option to request at the time the development permit application is submitted that the proposal be reviewed under the Type III procedure.

Response: This consolidated application includes a lot consolidation and site design review, and is, therefore, a Type II action. It is understood the requirements and procedures listed in this section apply to this application.

15.100.130 Permit decision – Type I.

A. The director shall approve or deny the development permit for Type I action within 60 days of accepting a complete permit application.

B. The decision of the director shall be based upon the application, the evidence, comments from referral agencies, and approvals required by others.

C. The director shall approve a permit application if applicable approvals by others have been granted and the proposed development or land use request otherwise conforms to the requirements of the Newberg comprehensive plan and this code.

D. The director shall deny the permit application if required approvals are not granted or the application otherwise fails to comply with code requirements.

E. The director shall notify the applicant of the disposition of the application. The notice shall indicate that the decision is final unless appealed by the applicant. The notice shall describe the right of appeal pursuant to NMC 15.100.160 et seq.

15.100.140 Permit decision – Type II.

A. The director shall approve or deny the development permit for a Type II action within 60 days of accepting a complete permit application, unless it is a subdivision which has been converted to a Type III process pursuant to NMC 15.235.030(A).

B. The applicant shall provide notice pursuant to NMC 15.100.200 et seq. together with a 14-day comment period for the submission of written comments prior to the decision.

C. The decision of the director shall be based upon the application, the evidence, comments from referral agencies, and approvals required by others.

D. The director shall notify the applicant and others entitled to notice of the disposition of the application. The notice shall indicate the date that the decision will take effect and describe the right of appeal pursuant to NMC 15.100.160 et seq. A decision on a Type II development shall take effect on the fifteenth day following the notice of a decision unless an appeal is filed pursuant to NMC 15.100.160 et seq.

E. Approval or denial of a Type II development permit application shall be accompanied by written findings that explain the criteria, facts and justification for the decision.

F. The director shall approve a permit application if applicable approvals by others have been granted and the proposed development or land use request otherwise conforms to the requirements of this code. The director may add conditions to the permit to ensure compliance with all requirements of this code.

G. The director shall deny the permit application if required approvals are not obtained or the application otherwise fails to comply with code requirements.

H. Notice of approval or denial of a Type II decision shall be provided to the applicant, parties providing written testimony, or anyone requesting such notice. Notice shall include a description of the item, the decision, conditions that may have been added, and the rights of appeal.

I. Type II applications are required to be reviewed under the Type III procedures at the request of the applicant, or the application is a subdivision which has been converted to a Type III process pursuant to NMC 15.235.030(A), or through an appeal of the director's decision. Type II development permit applications that require a Type III procedure must conclude the hearing procedure before a land use or construction permit application can be considered to be complete by the director. Upon receiving a final decision by the hearing body on a Type III application, the subsequent review of a permit application may be reviewed by the director as a Type I process.

5.100.160 Appeal procedures.

A. Type I. An appeal of a Type I decision by the director may be appealed within 14 calendar days of the date of the decision by the director. Appeals may be made only by an affected party, Type I (the person or party submitting the application). Appeals of a Type I application are processed as a Type III procedure and proceed to the planning commission.

B. Type II. An appeal of a Type II decision by the director may be appealed within 14 calendar days of the date of the decision. Appeals may be made only by an affected party, Type II (the applicant, any party entitled to receive notice of the decision, or anyone providing written comments within 14 calendar days prior to the date of the decision). Appeals of a Type II application are processed as a Type III procedure and proceed to the planning commission.

5.100.170 Notice of appeal – Type I, II and III.

A. An appeal for Type I, II, and III decisions shall include an identification of the decision sought to be reviewed, the date of the

decision and shall be accompanied by a notice of appeal form provided by the planning and building department. The notice of appeal shall be completed by the applicant and shall contain:

1. An identification of the decision sought to be reviewed, including the date of the decision.

2. A statement of the interest of the person seeking review and that they were a party to the initial proceedings.

3. A detailed statement of the specific grounds on which the appeal is filed.

B. Notice shall be filed with the community development department together with the filing fee and deposit for transcript costs.

Response: This consolidated application is for a lot consolidation and site design review, and is, therefore, a Type II action. It is understood the permit decision and appeal procedures of the above-listed sections apply to this application.

15.100.200 Compliance required.

Notice on all Type I through Type IV actions, including appeals, shall be conducted in accordance with this article.

15.100.210 Mailed notice.

Mailed notice shall be provided as follows:

A. Type I Actions. No public notice is required.

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.

3. To the owner of a public use airport, subject to the provisions of ORS 215.416 or 227.175.

C. The director may request that the applicant provide notice to people other than those required in this section if the director believes they are affected or otherwise represent an interest that may be affected by the proposed development. This includes, but is not limited to, neighborhood associations, other governmental agencies, or other parties the director believes may be affected by the decision.

D. The director shall provide the applicant with the following information regarding the mailing of notice:

1. The latest date by which the notice must be mailed;

2. An affidavit of mailing (to be signed and returned) certifying that the notice was mailed, acknowledging that a failure to mail the notice in a timely manner constitutes an agreement by the applicant to defer the 120-day process limit and

acknowledging that failure to mail will result in the automatic postponement of a decision on the application; and

3. A sample notice.

Response: The Applicant will provide public notice as required by NMC 15.100.210. A mailing list, sample notice, and a site notice sign are included in Exhibit E. The criteria are met, or will be met when, applicable.

E. The notice of a Type II and Type III development application shall be reasonably calculated to give actual notice and shall:

1. Set forth the street address or other easily understood geographical reference to the subject property;

2. List, by commonly used citation, the applicable criteria for the decision;

3. Include the name and phone number of a local government contact person, the telephone number where additional information may be obtained and where information may be examined;

4. Explain the nature of the application and the proposed use or uses which could be authorized;

5. State that a copy of the application, all documents and evidence relied upon by the applicant and applicable criteria are available for inspection at no cost and will be provided at a reasonable cost.

F. Prior to mailing or posting any notice required by this code, the applicant shall submit a copy of the notice to the director.

G. The applicant shall mail the notice for Type II actions at least 14 days before a decision is rendered. The applicant shall file with the director an affidavit of mailing as identified in subsection (D) of this section within two business days after notice is mailed.

H. The applicant shall mail the notice for Type III actions at least 20 days before the first new hearing, or if two or more new hearings are allowed, 10 days before the first new hearing. The applicant shall file with the director an affidavit of mailing as identified in subsection (D) of this section within two business days after notice is mailed.

I. All public notices shall be deemed to have been provided or received upon the date the notice is deposited in the mail or personally delivered, whichever occurs first. The failure of a property owner to receive notice shall not invalidate an action if a good faith attempt was made to notify all persons entitled to notice. An affidavit of mailing issued by the person conducting the mailing shall be conclusive evidence of a good faith attempt to contact all persons listed in the affidavit.

J. Failure to mail the notice and affirm that the mailing was completed in conformance with the code shall result in:

1. Postponement of a decision until the mailing requirements have been met; or

2. Postponement of the hearing to the next regularly scheduled meeting or to such other meeting as may be available for the hearing; or

3. The entire process being invalidated; or

4. Denial of the application.

15.100.220 Additional notice procedures of Type II development applications.

In addition to the requirements of NMC 15.100.210, mailed notice for development actions shall also contain the following:

A. Provide a 14-day period from the date of mailing for the submission of written comments prior to the decision;

B. State that issues that may provide a basis for appeal must be raised in writing during the comment period;

C. State that issues must be raised with sufficient specificity to enable the local government to respond to the issue;

D. State the place, date and time that comments are due;

E. State that notice of the decision, including an explanation of appeal rights, will be provided to any person who submits comments under subsection (A) of this section;

F. Briefly summarize the local decision-making process.

G. Type II notice for subdivisions shall also include a description of how an interested party may request a public hearing before the planning commission.

Response: Exhibit E includes draft notice materials meeting the requirements of this section. As stated above, the Applicant will provide notice as required, including the required affidavit. The criteria are met.

15.100.260 Procedure for posted notice for Type II and III procedures.

A. Posted Notice Required. Posted notice is required for all Type II and III procedures. The notice shall be posted on the subject property by the applicant.

B. Notice Information Provided by City. The director shall provide the applicant with the following information regarding the posting of notice:

1. The number of notices required;

2. The latest date by which the notice must be posted;

3. An affidavit of posting (to be signed and returned) certifying that the notice was posted on site, acknowledging that a failure to post the notice in a timely manner constitutes an agreement by the applicant to defer the 120-day process limit and acknowledging that failure to post will result in the automatic postponement of a decision on the application; and

4. A sample notice.

C. Submission of Notice. Prior to posting any notice required by this section, the applicant shall submit a copy of the notice to the director for review.

D. Size, Number and Location Requirements. A waterproof notice which measures a minimum of two feet by three feet shall be placed on each frontage of the site. If a frontage is over 600 feet long, a notice is required for each 600 feet, or fraction of 600 feet. If possible, notices shall be posted within 10 feet of a street lot line and shall be visible to pedestrians and motorists in clear view from a public right-of-way. Notices shall not be posted in a public right-of-way or on trees.

E. Contents of Notice. The posted notice shall only contain the following information: planning action number, brief description of the proposal, phone number and address for contact at the Newberg planning and building department.

F. Standards and Timing, Type II Actions. The applicant shall post the notice at least 14 days before a decision is rendered. The applicant shall file with the director an affidavit of posting as identified in subsection (B) of this section within two business days after notice is posted.

G. Standards and Timing, Type III Actions. The applicant shall post the notice at least 10 days before the first scheduled hearing. The applicant shall file with the director an affidavit of posting as identified in subsection (B) of this section within two business days after notice is posted.

H. Removal of Notice. The applicant shall not remove the notice before the final decision. All posted notice shall be removed by the applicant within 10 days following the date of the final decision on the request.

I. Failure to Post Notice. The failure of the posted notice to remain on the property shall not invalidate the proceedings. Failure by the applicant to post a notice and affirm that the posting was completed in conformance with the code shall result in:

1. Postponement of a decision until the mailing requirements have been met; or

2. Postponement of the hearing to the next regularly scheduled meeting or to such other meeting as may be available for the hearing; or

3. The entire process being invalidated; or

4. Denial of the application.

Response: This consolidated application includes site design review, a Type II action. Consequently, the posted notice requirements for Type II procedures listed in this section apply to this application. Notice will be posted and documented as required.

Division 15.200 Land Use Applications

Chapter 15.220 SITE DESIGN REVIEW

15.220.020 Site design review applicability.

A. Applicability of Requirements. Site design review shall be required prior to issuance of building permits or commencement of work for

all improvements noted below. Site design review permits shall be processed as either Type I or Type II, as noted below.

1. Type I.

   a. Single-family dwellings;

   b. Duplexes;

   c. Institutional, commercial or industrial additions which do not exceed 1,000 square feet in gross floor area;

   d. Multifamily additions which do not exceed 1,000 square feet in gross floor area and do not add any new units, or new construction incidental to the main use on an existing developed site which do not exceed 1,000 square feet in gross floor area and do not add any new units;

   e. Institutional, commercial or industrial interior remodels which do not exceed 25 percent of the assessed valuation of the existing structure;

   f. Multifamily remodels which do not exceed 25 percent of the assessed valuation of the existing structure and do not add any new units;

   g. Signs which are not installed in conjunction with a new development or remodel;

   h. Modifications, paving, landscaping, restriping, or regrading of an existing duplex, multifamily, institutional, commercial or industrial parking lot;

   i. Fences and trash enclosures.

2. Type II.

   a. Any new development or remodel which is not specifically identified within subsection (A)(1) of this section.

   b. Telecommunications facilities.

   c. Accessory dwelling units.

Response: The planned improvement is not listed as a Type I review use. Therefore, Type II site design review is applicable to this application.

C. Site Design Review Time Limit. An approved site design review plan intended to be constructed in a single phase shall be valid for one year from the date of the notice of final decision. A building permit must be acquired within this time period or the design review approval shall terminate. The director under a Type I procedure may grant an extension for up to six months if the applicant files a request in writing prior to the expiration of the approval and demonstrates compliance with the following:

1. The land use designation of the property has not been changed since the initial design review approval; and

2. The applicable standards in this code which applied to the project have not changed.

Response: The time limits of this section apply to this application.

D. Phased Design Review Approval. If a site plan is approved to be constructed in phases, completion of each phase shall extend the expiration of the original design review approval by 12 months from the date of its expiration. Prior to the expiration of each phase, the applicant may apply for an extension to the phase which is about to expire through subsection (C) of this section. The extension of a phase under subsection (C) of this section shall also extend any subsequent phases. The total number of extensions shall not extend the original design review approval more than five years from its original approval date. An applicant with a project containing two or more phases may elect to submit a master site development plan, with the following options:

1. The applicant may provide all of the detailed information for a Type II site design review approval, per the requirements of NMC 15.220.030(B), for all phases of the project. Once the master site development plan is approved:

a. Each subsequent phase of development is permitted outright upon a showing that the proposed phase is being constructed in substantial compliance with the approved plan. This review of substantial compliance will be undertaken by means of a Type I procedure. A phase of development will be considered to be within substantial compliance if the actual characteristics of the project, e.g., total gross square feet of development, employees, vehicle trips, parking spaces, are within five percent of those projected in the approved master site development plan; providing, that the project still is in compliance with all applicable development standards in effect at the time of the approval, or existing applicable development standards, if these are less stringent than the standards in effect at the time of approval. In lieu of minor modifications by the five percent rule established above, the applicant may request minor adjustments through the administrative adjustment provisions in NMC 15.210.010 et seq.

b. If at the time of construction a subsequent phase of development is not in substantial compliance with the approved plan as defined above, the proposed changes will be subject to review by means of a Type II procedure, including any necessary variances to the applicable development standards in effect at the time of the new application. Those aspects of the phase which do not vary from the approved plan will be reviewed under the provisions of subsection (D)(1)(a) of this section, and not subject to the review required in this subsection.

Response: This consolidated application seeks phased design review approval for a four-phase independent living community for Friendsview. Per Section D(2) below, the Applicant will be utilizing the concept master site development plan. A master site development plan is also included in this application to allow for approval of Phases 1 through 3, subject to the provisions of the NMC as detailed above.

2. Institutions and other large developments that anticipate significant development over time, but cannot provide detailed information about future projects or phases of development in advance, can develop a concept master site development plan which addresses generic site development and design elements including but not limited to general architectural standards and materials, landscaping standards and materials, on-site vehicular and pedestrian circulation, institutional sign program, and baseline traffic and parking studies and improvement programs. The applicant will be required to undergo Type II site design review, per the requirements of NMC 15.220.030(B), for each project or phase of development at the time of construction, including demonstration of substantial compliance with the generic development and design elements contained within the approved concept master site development plan. The more detailed and comprehensive the generic elements in the concept master site development plan are, the more reduced is the scope of discretionary review at the time of actual construction of a project or phase of development. For purposes of this subsection, "substantial compliance" will be defined as noted in subsection (D)(1)(a) of this section.

3. An applicant that submits a concept master site development plan which meets the requirements of subsection (D)(2) of this section may at the same time submit a master site development plan for one or more of the initial phases contained in the concept master site development plan, which are described in sufficient detail to receive complete design review approval in advance, under the provisions of subsection (D)(1) of this section. The concept master site development plan and master site development plan will be filed as separate applications but reviewed concurrently.

Response: The application involves a four-phase independent living community for Friendsview. The Preliminary Development Plans (Exhibit A) detail compliance with landscaping, open space, coverage, parking, traffic, and other applicable sections of this Code for all phases. The application provides sufficient detail for the approval of Phases 1 through 3 as required by NMC 15.220.020(D)(1) above. Conceptual information is included for Phase 4 development, which will be subject to a reduced scope design review at a later date. The provisions of this section are understood.

4. The approval(s) granted in this section shall be in effect as follows:

   a. Once a master site development plan has been approved, completion of each phase shall extend the expiration of the original site design review approval by 12 months from the date of its

expiration. Prior to the expiration of each phase, the applicant may apply for an extension to the phase which is about to expire through subsection (C) of this section. The extension of a phase under subsection (C) of this section shall also extend to any subsequent phases. The total number of extensions shall not extend the original site design review approval by more than five years from its original approval date.

b. Institutions submitting a concept master site development plan shall be held to the same requirement provided in subsection (D)(2)(a) of this section, unless the plan specifically includes an expiration date. In no case shall a concept master site development plan cover a period exceeding 10 years.

Response: The application seeks phased design review approval for the proposed four-phase development. It is understood the time limits of section D(4)(a) above apply to Phases 1 through 3, meeting the requirements of a master site development plan. Per D(4)(b) above, the conceptual Phase 4 seeks 10 years from the time of approval to meet the requirements of this Code.

15.220.030 Site design review requirements.

B. Type II. The following information is required to be submitted with all Type II applications for site design review:

1. Site Development Plan. A site development plan shall be to scale and shall indicate the following as appropriate to the nature of the use:

a. Access to site from adjacent right-of-way, streets and arterials;

b. Parking and circulation areas;

c. Location and design of buildings and signs;

d. Orientation of windows and doors;

e. Entrances and exits;

f. Private and shared outdoor recreation spaces;

g. Pedestrian circulation;

h. Outdoor play areas;

i. Service areas for uses such as mail delivery, trash disposal, above-ground utilities, loading and delivery;

j. Areas to be landscaped;

k. Exterior lighting;

l. Special provisions for handicapped persons;

m. Other site elements and spaces which will assist in the evaluation of site development;

n. Proposed grading, slopes, and proposed drainage;

o. Location and access to utilities including hydrant locations; and

p. Streets, driveways, and sidewalks.

Response: The Preliminary Development Plans (Exhibit A) show the information required for a site development plan per the requirements of this section. The criteria are met.

2. Site Analysis Diagram. A site analysis diagram shall be to scale and shall indicate the following characteristics on the site and within 100 feet of the site:

a. Relationship of adjacent lands;

b. Location of species of trees greater than four inches in diameter at four feet above ground level;

c. Existing and proposed topography;

d. Natural drainage and proposed drainage and grading;

e. Natural features and structures having a visual or other significant relationship with the site.

Response: The Existing Conditions and Preliminary Grading Plans (Exhibit A) show the information required for a site analysis diagram per the requirements of this section. The criteria are met.

3. Architectural Drawings. Architectural drawings shall be prepared which identify floor plans and elevations.

Response: Architectural drawings are included with the Preliminary Development Plans (Exhibit A) for Phases 1 through 3. The criterion is met.

4. Landscape Plan. The landscape plan shall indicate:

a. The size, species and approximate locations of plant materials to be retained or placed on the site together with a statement which indicates the mature size and canopy shape of all plant materials;

b. Proposed site contouring; and

c. A calculation of the percentage of the site to be landscaped.

Response: The Preliminary Development Plans (Exhibit A) include a landscape plan meeting the requirements of this section for all proposed development. The criteria are met.

5. Special Needs for Handicapped. Where appropriate, the design review plan shall indicate compliance with handicapped accessibility requirements including, but not limited to, the location of handicapped parking spaces, the location of accessible routes from the entrance to the public way, and ramps for wheelchairs.

6. Existing Features and Natural Landscape. The plans shall indicate existing landscaping and existing grades. Existing

trees or other features intended to be preserved or removed shall be indicated on the plans.

7. Drives, Parking and Circulation. Proposed vehicular and pedestrian circulation, parking spaces, parking aisles, and the location and number of access points shall be indicated on the plans. Dimensions shall be provided on the plans for parking aisles, back-up areas, and other items as appropriate.

8. Drainage. The direction and location of on- and off-site drainage shall be indicated on the plans. This shall include, but not be limited to, site drainage, parking lot drainage, size and location of storm drain lines, and any retention or detention facilities necessary for the project.

9. Buffering and Screening. Buffering and screening of areas, structures and facilities for storage, machinery and equipment, services (mail, refuse, utility wires, and the like), loading and parking and similar accessory areas and structures shall be shown on the plans.

10. Signs and Graphics. The location, colors, materials, and lighting of all exterior signs, graphics or other informational or directional features shall be shown on the plans.

11. Exterior Lighting. Exterior lighting within the design review plan shall be indicated on the plans. The direction of the lighting, size and type of fixtures, and an indication of the amount of lighting shall be shown on the plans.

12. Trash and Refuse Storage. All trash or refuse storage areas, along with appropriate screening, shall be indicated on the plans. Refuse storage areas must be constructed of brick, concrete block or other similar products as approved by the director.

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.

Response: The Preliminary Development Plans (Exhibit A) include the information required by NMC 15.220.030, B (5) – (13), including handicapped accessibility features, existing conditions, parking and circulation, drainage and erosion control, buffers and screening, exterior lighting, trash and recycling areas, and planned roadway and utilities improvements. The criteria are 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 may 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.

Response: The Institute of Transportation Engineers (ITE) Trip Generation Handbook, Trip Generation Rates – 9th Edition, indicates that the proposed 28 units for "Senior Adult Attached Housing 252" of Phases 1 and 2 are estimated to generate eight p.m. peak hour trips. The Community Building is an auxiliary use to the independent living units and is not expected to generate any additional trips. Proposed Phase 4 development is estimated to generate an additional 10 p.m. peak hour trips. At a total of 18 p.m. peak hour trips, this rate is below the "40 trips per p.m. peak hour" threshold to require a traffic study. Thus, a traffic study is not provided with this application. The criterion is met.

15.220.050 Criteria for design review (Type II process).

B. Type II. The following criteria are required to be met in order to approve a Type II design review request:

1. Design Compatibility. The proposed design review request incorporates an architectural design which is compatible with and/or superior to existing or proposed uses and structures in the surrounding area. This shall include, but not be limited to, building architecture, materials, colors, roof design, landscape design, and signage.

Response: Architectural drawings are included with the Preliminary Development Plans (Exhibit A). The drawings show that Phases 1 through 3 will include 14 duplex structures designed to match the existing development directly south. The community building expansion will utilize the same architectural features of the existing community building. The surrounding uses were built over many years and incorporate a variety of architectural styles. The planned structures are harmonious with the street-level location and are intended to be compatible with current and future surrounding uses. The criterion is met.

2. Parking and On-Site Circulation. Parking areas shall meet the requirements of NMC 15.440.010. Parking studies may be required to determine if adequate parking and circulation are provided for uses not specifically identified in NMC 15.440.010. Provisions shall be made to provide efficient and adequate on-site circulation without using the public streets as part of the parking lot circulation pattern. Parking areas shall be designed so that vehicles can efficiently enter and exit the public streets with a minimum impact on the functioning of the public street.

Response: As discussed elsewhere in this narrative, the Preliminary Development Plans (Exhibit A) show the planned improvements meet the requirements of NMC 15.440.010. The criterion is met.

3. Setbacks and General Requirements. The proposal shall comply with NMC 15.415.010 through 15.415.060 dealing with height restrictions and public access; and NMC 15.405.010 through 15.405.040 and 15.410.010 through 15.410.070 dealing with setbacks, coverage, vision clearance, and yard requirements.

Response: As discussed elsewhere in this narrative, the Preliminary Development Plans (Exhibit A) show the planned improvements comply with the applicable standards for setbacks, height, access, and other requirements listed in this section. The criterion is met.

4. **Landscaping Requirements. The proposal shall comply with NMC 15.420.010 dealing with landscape requirements and landscape screening.**

Response: The Preliminary Development Plans (Exhibit A) show that landscaping associated with this project meets the requirements of NMC 15.420.010. The criterion is met.

5. **Signs. Signs shall comply with NMC 15.435.010 et seq. dealing with signs.**

Response: Signs are not part of this application. Any potential signs associated with this project will comply with NMC 15.435.010 et seq. The criterion is be met.

6. **Manufactured Dwelling, Mobile Home and RV Parks. Manufactured dwelling and mobile home parks shall also comply with the standards listed in NMC 15.445.075 through 15.445.100 in addition to the other clear and objective criteria listed in this section. RV parks also shall comply with NMC 15.445.170 in addition to the other criteria listed in this section.**

Response: This application does not include manufactured dwellings, mobile homes, or RV parks. The criterion is inapplicable.

7. **Zoning District Compliance. The proposed use shall be listed as a permitted or conditionally permitted use in the zoning district in which it is located as found in NMC 15.305.010 through 15.336.020. Through this site review process, the director may make a determination that a use is determined to be similar to those listed in the applicable zoning district, if it is not already specifically listed. In this case, the director shall make a finding that the use shall not have any different or more detrimental effects upon the adjoining neighborhood area than those specifically listed.**

Response: This application is for an independent living community. Per the NMC 15.305.020 Zoning Use Table – Use Districts, "Dwelling, multifamily" is a permitted use in the R-P District. The criterion is met.

8. **Subdistrict Compliance. Properties located within subdistricts shall comply with the provisions of those subdistricts located in NMC 15.340.010 through 15.348.060.**

Response: The subject property is within the Specific Plan Subdistrict. As discussed elsewhere in this narrative, the Preliminary Development Plans (Exhibit A) show the planned improvements comply with the applicable standards of NMC 15.346. The criterion is met.

9. **Alternative Circulation, Roadway Frontage Improvements and Utility Improvements. Where applicable, new developments shall provide for access for vehicles and pedestrians to adjacent properties which are currently developed or will be developed in the future. This may be**

accomplished through the provision of local public streets or private access and utility easements. At the time of development of a parcel, provisions shall be made to develop the adjacent street frontage in accordance with city street standards and the standards contained in the transportation plan. At the discretion of the city, these improvements may be deferred through use of a deferred improvement agreement or other form of security.

Response: The Preliminary Development Plans (Exhibit A) show planned frontage improvements for the project. Sidewalks, planter strips, and other required circulation and utility improvements are shown to meet City standards. The criterion, as applicable, is met.

10. Traffic Study Improvements. If a traffic study is required, improvements identified in the traffic study shall be implemented as required by the director.

Response: A traffic study is not required for this application, as discussed above in response to NMC 15.220.030.B(14).

15.220.060 Additional requirements for multifamily residential projects.

The purpose of this section is to ensure that residential projects containing three 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 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 attached single-family projects of any size and smaller multifamily projects with six or fewer units and at least 20 points are required for multifamily projects with seven or more units. For more information and illustrations of each element, refer to the Newberg Residential Development Design Guidelines (July 1997).

A. Site Design Elements.

1. 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).

2. Preserve existing natural features, including topography, water features, and/or native vegetation (three points).

3. Use the front setback to build a street edge by orienting building(s) toward the street with a relatively shallow front yard (12 to 15 feet for two-story buildings) to create a more "pedestrian-friendly" environment (three points).

4. Place parking lots to the sides and/or back of projects so that front yard areas can be used for landscaping and other "pedestrian-friendly" amenities (three points).

5. Create "outdoor" rooms in larger projects by grouping buildings to create well-defined outdoor spaces (two points).

6. 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).

7. Landscape at the edges of parking lots to minimize visual impacts upon the street and surrounding properties (two points).

8. Use street trees and vegetative screens at the front property line to soften visual impacts from the street and provide shade (one point).

9. Use site furnishings to enhance open space. Provide communal amenities such as benches, playground equipment, and fountains to enhance the outdoor environment (one point).

10. Keep fences neighborly by keeping them low, placing them back from the sidewalk, and using compatible building materials (one point).

11. Use entry accents such as distinctive building or paving materials to mark major entries to multifamily buildings or to individual units (one point).

12. Use appropriate outdoor lighting which enhances the nighttime safety and security of pedestrians without causing glare in nearby buildings (one point).

B. Building Design Elements.

1. 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).

2. Respect the scale and patterns of nearby buildings by reflecting the architectural styles, building details, materials, and scale of existing buildings (three points).

3. Break up large buildings into bays by varying planes at least every 50 feet (three points).

4. Provide variation in repeated units in both single-family attached and 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).

5. 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).

6. Incorporate architectural elements of one of the city's historical styles (Queen Anne, Dutch colonial revival, colonial revival, or bungalow style) into the design to reinforce the city's cultural identity. Typical design elements which should be considered include, but are not limited to, "crippled hip" roofs, Palladian-style windows, roof eave brackets, dormer windows, and decorative trim boards (two points).

7. Keep car shelters secondary to the building by placing them to the side or back of units and/or using architectural designs, materials, and landscaping to buffer visual impacts from the street (two points).

8. Provide a front porch at every main entry as this is both compatible with the city's historic building pattern and helps to create an attractive, "pedestrian-friendly" streetscape (two points).

9. Use sloped roofs at a pitch of 3:12 or steeper. Gable and hip roof forms are preferable (two points).

Newberg Municipal Code – Additional requirements for multifamily residential projects		
#	How is Criterion Met	Points
(A) Site Design Elements		
(A)(3)	All proposed duplexes are oriented facing the private internal loop driveway with shallow front yards to help create a pedestrian friendly environment.	3
(A)(6)	Landscaping has been designed to be a continuation of existing development to the south. Care has been taken to select tree and plant species consistent with the area	2
(A)(8)	Street trees are provided along Providence Drive, as well as along the internal circulation routes helping to reduce the visual impacts of proposed structures.	1
(A)(11)	All attached dwelling units have covered front porches for each residence that help denote the entries.	1
(A)(12)	As shown on the lighting plans, a tiered system of lighting is in place to help illuminate the internal private loop drive, pedestrian pathways and individual unit entries to provide a safe environment. Care was taken to ensure proposed fixtures would not produce glare in nearby buildings.	1
(B) Building Design Elements		
(B)(1)	All attached dwelling structures are oriented to face and take access from the internal circulation for the development. Coupled with trees and sidewalks, the internal circulation looks and feels more like a small residential street than a service drive.	3
(B)(2)	Proposed development is an extension of existing development south of the site. Single story attached dwelling unit structures are typical to the development style of the area, creating pedestrian friendly communities.	3
(B)(3)	Each duplex façade has been articulated with varied roof structures, step backs, and material palettes to create a visually appealing environment.	3
(B)(4)	There are 5 total designs making up the 14 attached dwelling structures. These designs vary in massing, frontage lengths, organization of siding materials, window layout, etc.	3
(B)(5)	Duplex structures have been designed with a variety of materials including: horizontal and vertical wood siding, roof shingles, stone as a building base, wood-like sash windows and wood trim.	5
(B)(8)	Each attached dwelling unit has a front porch that denotes the main entry and creates a pedestrian friendly development	2

(B)(9)	Roof lines are varied with hip and gable forms and have pitches steeper than 3:12.	2
Total Points		29

Response: As shown on the Architectural Plans (Exhibit A), site and building design have utilized the above criteria to create a multifamily design in line with the aesthetic of the surrounding area. The criteria are met.

Chapter 15.230 PROPERTY CONSOLIDATIONS & PROPERTY LINE ADJUSTMENTS

15.230.010 Property consolidations.

A. Consolidating Properties. An owner of abutting properties may consolidate them into a single lot through any of the following:

1. A deed restriction recorded with the Yamhill County recorder. The applicant shall file a copy of the recorded deed restriction with the director. The deed restriction shall state that the properties are to be considered one lot for planning and zoning purposes, and that the properties shall not be conveyed separately prior to their being divided in accordance with regulations of the city.

2. The plat vacation process as described in ORS 271.080 through 271.230.

3. The replat process as described in ORS 92.180 through 92.190.

4. A property line adjustment, subdivision plat or partition plat that effects the consolidation of the property.

Response: As shown in the attached Lot Consolidation documents (Exhibit J), a deed restriction will be recorded with Yamhill County to allow for the occupancy of a community building being expanded over the property line of Tax Lot 2019 and Tax Lot 2026.

Division 15.300 Zoning Districts

Chapter 15.302 DISTRICTS AND THEIR AMENDMENT

15.302.010 Establishment and designation of use districts and subdistricts.

In order to classify, regulate, restrict and segregate the uses of lands and buildings, to regulate and restrict the height and size of buildings, to regulate the area of yards and other open spaces about buildings, and to regulate the density of population, the following classes of use districts and subdistricts are established:

A. Use Districts.

4. RP residential professional district.

B. Subdistricts of Use Districts.

8. SP specific plan subdistrict.

15.302.032 Purposes of each zoning district.

E. RP Residential-Professional District. The RP residential-professional district provides for a desirable mixing of residential land uses with medical and local business office uses in possible

close proximity to adjacent residential areas. The office building and parking coverage, traffic generation, open space and other external factors are intended to be compatible with the residential uses permitted. This district may be appropriate in transition areas between major land uses as indicated in the adopted plan. The RP district is intended to be consistent with commercial or residential designations on the Newberg comprehensive plan. RP districts shall be located as to conform to goals and policies identified within the Newberg comprehensive plan and in areas which have a minimal impact on the livability or appropriate development of abutting property.

15.302.040 Subdistricts.

Subdistricts of each of the use districts may be established. The parent residential district requirements shall apply to those respective subdistricts except those regulations pertaining to lot area per dwelling unit or density.

H. SP Specific Plan Subdistrict. The SP subdistrict identifies the area in which a specific plan has been approved. The subdistrict overlay may be applied within any zoning district. The subdistrict shall be designated by the suffix SP added to the symbol of the parent district. Uses allowed in the parent district may be limited or expanded under the approved specific plan.

Response: The subject property is located in the R-P District, SP Subdistrict, and designated Mixed Use (MIX) in the comprehensive plan. This application is for a new four-phase independent living community for Friendsview. A multifamily use is consistent with the purpose of all classifications. Therefore, the planned use is allowed by the R-P District and SP Subdistrict. The criteria are met.

Chapter 15.305 ZONING USE TABLE

15.305.020 Zoning use table – Use districts.

Newberg Development Code – Zoning Use Table			
#	Use	RP	Notes and Special Use Standards
200	Residential Uses		
Def.	Dwelling, multifamily	P	Subject to density limits of NMC 15.405.010(B)
Key: P: Permitted use S: Special use – Use requires a special use permit C: Conditional use – Requires a conditional use permit X: Prohibited use (#): See notes for limitations			

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).

Response: The site is located within the Inner Horizontal Surface, which has a 150-foot height restriction per Federal Aviation Regulation (FAR) Part 77. Phases 1 through 3 of proposed development include single-story structures below the 150-foot height maximum. Phase 4 development will show compliance with height restrictions at the time of a reduced scope site design review. The criterion is met, or can be met, through future action.

> **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.**

Response: The site is not located within the airport approach safety zone or the displaced threshold approach surface zone. The criterion is not applicable.

> **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.**

Response: The application does not involve development at or in conjunction with the airport. The criterion is not applicable.

> **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.**

Response: The site is located within Area F-1 of the Springbrook Oaks Specific Plan, as shown in Exhibit "A" of Ordinance 2006-2657: Specific Plan Map Amendment. Phases 1 through 3 of proposed development include single-story structures all under the 50-foot height maximum per NMC 15.346.070(B)(6)(c) below. Phase 4 development will show compliance with height restrictions at the time of a reduced scope site design review. The criterion is met or can be met through future action.

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

Response: As detailed in Appendix C, Subsection C of the Springbrook Oaks Specific Plan, the selected building materials will not produce any glare. The criterion is met.

> **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.**

Response: The subject site is more than 1,500 feet from the airport and not within established noise contour boundaries. The criterion is not applicable.

Chapter 15.346 SPECIFIC PLAN (SP) SUBDISTRICT

15.346.040 Specific plan development standards.

A. Overlay Subdistrict. The specific plan shall be implemented as a zoning overlay subdistrict. If the plan applies to land outside the city limits, the SP specific plan zoning subdistrict classification shall indicate where the SP overlay zone will be applied upon annexation. The specific plan shall be adopted as an exhibit to the SP overlay zone subdistrict and the SP overlay plan district.

B. New Construction. New construction subject to site design review or building permit review shall meet the special development and design standards of the specific plan.

Response: This application includes Site Design Review for a site within the city, in the Springbrook Oaks Specific Plan Subdistrict. Construction permits will be applied for at a later date. Per NMC 15.220.020.C above, any future development will be carried out in substantial accord with the plans, drawings, sketches, and other documents approved as part of the final decision for this application.

C. Priority of Standards and Procedures. Unless otherwise noted, the standards and procedures of the specific plan overlay subdistrict shall supplement and supersede standards and procedures of this code. The specific plan shall be adopted as an exhibit to the SP overlay zone subdistrict and the SP overlay plan district.

Response: It is understood the standards and procedures of the Specific Plan Subdistrict shall supplement and supersede other standards and procedures of this Code.

15.346.070 Specific plan development standards.

Development standards for specific plans are listed below. The standards shall be utilized in conjunction with the specific plan adopted as an exhibit to the SP overlay subdistrict. This section is intended to be amended as new specific plans are adopted.

A. The Northwest Newberg Specific Plan.

Response: This project is located in the Springbrook Oaks Specific Plan. These standards are not applicable.

B. Springbrook Oaks Specific Plan.

1. Report Adopted. The Springbrook Oaks specific plan dated August 2, 1999, is adopted by reference. The development standards listed in this section are intended to implement the policies of the Springbrook Oaks specific plan. Development of Springbrook Oaks shall follow the standards of this code section as well as the policies of the plan. If a conflict exists between the Springbrook Oaks specific plan policies and the development code, the Springbrook Oaks specific plan shall govern.

Response: This project is located in the Springbrook Oaks Specific Plan. Development will meet the standards of this section and of the Springbrook Oaks Specific Plan.

2. Permitted Uses and Conditional Uses. Eight development areas have been established with corresponding zones

within the Springbrook Oaks specific plan. The permitted and conditional uses allowed under the SP subdistrict shall be the same as those uses permitted in the base zoning districts. Exceptions to this standard include the following:

a. A golf course shall be permitted within the M-1 area, adjacent to the stream corridor; and

b. Densities and lot sizes shall be in accordance to the standards established in subsection (B)(8)(a) of this section.

c. In addition to the permitted uses in the RP zone, area F-1 permits:

i. Medically related industrial uses, such as medical laboratories, manufacture and wholesale distribution of medical equipment, medical research facilities, and laundries and similar services for medical facilities.

ii. Medically related retail uses, such as a pharmacy, gift shop or cafe (limited to 3,000 square feet), or medical appliance sale and rental store.

iii. Barber and beauty shops.

Area F-1 permits residential uses.

d. Area F-2 does not permit single-family dwellings.

e. Areas shown in the bypass corridor overlay (LUBCO) district are subject to the standards of that overlay.

Response: This project involves a new independent living community for Friendsview in Area F-1 of the Springbrook Oaks Specific Plan Subdistrict. Multifamily is a permitted use per the base zone and the subdistrict.

3. Street and Pedestrian Pathway Standards. Street and pedestrian pathway development standards are established in NMC 15.505.010 et seq. and NMC 15.505.210 et seq.

Response: The Preliminary Development Plans (Exhibit A) show planned frontage improvements for the project meet the requirements of NMC 15.505.010 and NMC 15.505.210. This standard is met.

4. Residential Design. Multiple, nonrepetitive home designs (detached dwelling units) shall be used in the development. No two identical designs shall be located closer than every three residences on any street frontage.

Response: Phases 1 and 2 propose 14 duplex structures comprising 28 dwelling units. Five alternative duplex designs are utilized to create an aesthetically pleasing community consistent with the development to the south.

5. Setbacks. Figures 1 and 2 of the Springbrook Oaks specific plan identify special setback standards that apply to the property.

Response: All development proposed is planned to be accessed by a private loop driveway and is not located adjacent to a street property line. This standard is met.

6. Residential, Professional and Industrial Setbacks.

a. Residential.

i. Development Areas A through F Setbacks – Figure 1 of the Springbrook Oaks Specific Plan. Minimum and maximum front setbacks for structures shall be met in development areas A through F of the Springbrook Oaks specific plan. Residential structures shall be no closer nor further from the front property line than as follows:

	Minimum	Maximum
Porch	10'	25'
Dwelling	15'	25' (without porch)
Garage or Carport	20'	None

The front of a garage may not be closer to the property line than the front of the house unless each front on different streets.

Response: The duplex units are accessed by private loop driveway and are not located adjacent to a street property line. This standard is met.

ii. Development Area H Setback – Figure 2 of the Springbrook Oaks Specific Plan. Special minimum front setbacks for residential structures shall be met in development area H of the Springbrook Oaks specific plan. No maximum setback is required. Front setbacks are as follows:

	Minimum	Maximum
Porch	10'	None
Dwelling	15'	None
Garage or Carport	20'	None

Response: This application does not involve development within Area H of the Springbrook Oaks Specific Plan. This standard does not apply.

iii. Interior Setbacks. Interior yard setbacks shall be the same as the base zone. An exception to this standard is made for single-family attached housing, where no interior setback is required for the zero lot

line. Another exception is development within the R-P zones of area F which may have a five-foot interior setback.

Response: The site is located within Area F-1 of the Springbrook Oaks Specific Plan in the R-P Zoning District. Interior yard setbacks are 5 feet. This standard is met.

iv. Staggered front setbacks of at least two feet shall be established for attached homes. No two attached dwelling units with the same setback shall be located closer than every two residences on any street frontage.

Response: All development proposed is planned to be accessed by a private loop driveway and is not located adjacent to a street property line. As detailed in NMC 15.346.070(B)(4) above, and shown in the Preliminary Development Plans (Exhibit A), five duplex designs with various façade articulations are utilized to create an aesthetically pleasing community consistent with the development to the south. The standard is met.

b. Professional and Industrial Setbacks. Except as set forth in subsection (B)(5) of this section, setbacks for professional and industrial developments within development areas A, F, and G of the Springbrook Oaks specific plan shall be set by the base zone or as otherwise required in this code.

Response: This application involves independent living units as part of the Friendsview Retirement Community. This standard is not applicable.

c. Building Heights. Building height limits shall be the same as those in the base zone. An exception is for areas F-1 and F-2, which shall have a maximum building height of 50 feet.

Response: The site is located within Area F-1 of the Springbrook Oaks Specific Plan, as shown in Exhibit "A" of Ordinance 2006-2657: Specific Plan Map Amendment. Phases 1 through 3 of proposed development include single-story structures all under the 50-foot height maximum, as required above. Phase 4 development will show compliance with height restrictions at the time of a reduced scope site design review. The standard is met or can be met through future action.

7. Street Trees. Street trees shall be provided adjacent to all public rights-of-way abutting or within a subdivision or partition. Street trees shall be installed in accordance with the provisions of NMC 15.420.010(B)(4). Trees shall be selected from the street tree species list authorized by the city council. Preference should be given towards the selection of oak species to maintain the character of the development's namesake: Springbrook Oaks.

Response: The Preliminary Development Plans (Exhibit A) show the location and types of trees for installation with this project meet the standards of NMC 15.420.010(B)(4). This standard is met.

8. Residential Density. Residential density is governed by the SP overlay subdistrict.

a. The following development standards shall be applied to Springbrook Oaks (please refer to Graphic VI for map of development areas A through H of the Springbrook Oaks specific plan). See Appendix A, Figure 20. These standards shall supersede any density or density transfer standards established in the development code.

Area	Zone	Minimum Lot Size (Square Feet)	Minimum Lot Area per Dwelling Unit (Square Feet)	Maximum Density (Dwelling Units per Acre)
B	RP	1,500*	1,500*	21.8*[1]
F-1	RP	1,500*	1,500*	21.8*
F-2	RP	1,500*	None*[2]	None*[2]
F-3	RP	1,500*	1,500*	21.8*

* Different than the standards established elsewhere in the development code. Residential land use only permitted on F-1 area for Yamhill County tax lot 3216-02026.
1 Up to 100 percent of the land zoned RP within area B may be developed for residential use.
2 There is no limit on the number of dwelling units allowed in area F-2.

Response: This application proposes 28 independent living units to be completed in the initial two phases on the 6.67-acre Yamhill County Tax Lot 2026 (Tax Map 3216). Future Phase 4 development will include an additional 30+ units. With the potential of 58+ total units on-site, density is below the allowed maximum of 145 units. This standard is met.

9. Commercial and Industrial Standards. In addition to site review standards, all commercial and industrial development will conform to the covenants, conditions, and restrictions (CC&Rs) approved for the Springbrook Oaks development. A certificate of compliance with these CC&Rs shall be submitted with a design review application for any commercial or industrial development.

Response: This application includes a residential use and does not involve commercial or industrial development. However, covenants, conditions, and restrictions (CC&Rs) are included in Exhibit H. This standard is not applicable.

10. Sign Standards. Signs must comply with NMC 15.435.010 through 15.435.120.

Response: Signs are not part of this application. Any potential signs associated with this project will comply with NMC 15.435.010 through 15.435.020 below. The standard can be met.

11. Tree Management Plan. Any proposed development within development area H must follow the approved tree management plan for development area H. The plan shall be developed by a third-party licensed arborist.

Response: This application does not involve development within area H of the Springbrook Oaks Specific Plan. This standard does not apply.

12. Permitting Process. Any proposed development shall follow the permit approval process described in NMC 15.100.010

through 15.100.150. Exceptions to this standard are as follows:

a. Proposed subdivisions will be reviewed under the Type II process; and

Response: This application does not involve a proposed subdivision. This exception does not apply.

b. Any proposed development within development areas A through F that meet the building design and development standards in Appendix C (see Springbrook Oaks specific plan) will be reviewed under the Type I process. The applicant shall provide written documentation showing that each development standard has been met.

Response: Proposed development is within development area F; however, it cannot meet all the standards in Appendix C of the Springbrook Oaks Specific Plan. Therefore, Type II site design review per NMC 15.100.030 is applicable to this application. This exception does not apply.

13. Plan Amendments. Proposed amendments and adjustments to the specific plan will follow the procedure described in NMC 15.346.050. Exceptions to this amendment and adjustment procedure are as follows:

a. Proposed boundary modifications for development areas B through E (see Appendix A, Figure 20) that increase any individual area no more than five percent of its original total acreage will be reviewed under a Type I process. Proposed boundary modifications that change the total acreage of any of the aforementioned development areas more than five percent will be reviewed under a Type III process.

b. Proposed boundary modifications for development areas F and G that move a boundary less than 50 feet and do not change the total acreage in a development area by more than 0.1 acre will be reviewed under a Type I process. Other proposed boundary modifications will be reviewed under a Type III process.

c. Proposed boundary changes for areas A and H will be reviewed under a Type III process.

Response: The Proposed development is located within development area F but does not include plan amendments. These exceptions do not apply.

14. Residential Development Near the Bypass. In order to minimize conflicts between the proposed bypass and proposed residential development in area F, the director shall approve a management plan prior to residential subdivision or development approval in area F. The management plan shall be developed in coordination with the director, ODOT, and the developer. The management

plan may require any of the following or other conditions necessary to minimize conflicts:

a. Separation between the bypass and residential development, either within or outside the eventual right-of-way.

b. Specific orientation of buildings.

c. Specific layout of streets, walkways, pedestrian paths, alleys, driveways, open spaces, and sound walls.

Response: The Applicant is not aware if the City has developed a management plan in response to the criteria.

Division 15.400 Development Standards

Chapter 15.405 LOT REQUIREMENTS

15.405.010 Lot area – Lot areas per dwelling unit.

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

2. In the R-2, R-3, and RP districts, each lot or development site shall have a minimum area of 3,000 square feet or as may be established by a subdistrict. In the R-2 and R-P districts, the average size of lots in a subdivision intended for single-family development shall not exceed 5,000 square feet.

B. Lot or Development Site Area per Dwelling Unit

2. In the R-2, AR, and R-P districts, there shall be a minimum of 3,000 square feet of lot or development site area per dwelling unit. In the R-2 and R-P districts, lots or development sites in excess of 15,000 square feet used for multiple single-family, duplex or multifamily dwellings shall be developed at a minimum of one dwelling per 5,000 square feet lot area.

Response: Minimum required site area per dwelling unit is 1,500 square feet, as set forth in NMC 15.346.070(B)(8)(a). The criteria are not applicable.

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.

Response: Lot area was calculated per the requirements of this section. The criterion is met.

15.405.030 Lot dimensions and frontage.

A. Width. Widths of lots shall conform to the standards of this code.

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.

Response: As shown on the Preliminary Development Plans (Exhibit A), the subject site meets the required depth-to-width ratio. The criteria are 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.

Response: Lot area was calculated per the requirements of this section. The 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.

b. Each lot in an R-2 and R-3 zone shall have a minimum width of 30 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.

Response: As shown on the Preliminary Development Plans (Exhibit A), the subject site has more than 50-foot width fronting on Providence Drive. The 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. See the definitions in NMC 15.05.030 and Appendix A, Figure 4.

1. Maximum Lot Coverage.

a. R-1: 30 percent, or 40 percent if all structures on the lot are one-story.

b. R-2 and RP: 50 percent.

c. AR and R-3: 50 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, R-2 and RP: 60 percent.

b. R-3: 70 percent.

Response: The Preliminary Development Plans (Exhibit A) show that lot coverage for structures, parking, and combined coverage for all phases fall below the maximum coverage thresholds for the R-P District. The criteria are met.

Chapter 15.410 YARD SETBACK REQUIREMENTS

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.

Response: The Preliminary Development Plans (Exhibit A) show the proposed building locations and compliance with the minimum front yard setback standards for the R-P District. The criteria are met.

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.

Response: The Preliminary Development Plans (Exhibit A) show the proposed building locations and compliance with the minimum interior setback standards for R-P District. The criteria are 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.

Response: The subject property is located at the intersection of a private drive and Providence Drive. The Preliminary Development Plans (Exhibit A) show vision clearance triangles meeting the requirements of this section. The criteria are 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 or industrial 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 or two-family 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 and M-1, 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 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.

Response: At this time, the above-listed exceptions and intrusions into yard setbacks are not planned as necessary. The criteria are not applicable.

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.

15.415.020 Building height limitation.

A. Residential.

1. In the R-1, R-2, AR, and RP districts, no main building shall exceed 30 feet in height. 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.

Response: This section is superseded by NMC 346.070(B)(6)(c). The criteria do not apply.

E. Alternative Building Height Standard. As an alternative to the building height standards above, any project may elect to use the

following standard (see Figure 24 in Appendix A). To meet this standard:

1. Each point on the building must be no more than 20 feet higher than the ground level at all points on the property lines, plus one vertical foot for each horizontal foot of distance from that property line; and

2. Each point on the building must be no more than 20 feet higher than the ground level at a point directly north on a property line, plus one vertical foot for each two horizontal feet of distance between those points. This second limit does not apply if the property directly to the north is a right-of-way, parking lot, protected natural resource, or similar unbuildable property.

Response: The Preliminary Development Plans (Exhibit A) show that structures in Phases 1 through 3 comply with NMC 346.070(B)(6)(c). Phase 4 development will show compliance with height restrictions at the time of a reduced scope site design review. The criteria are not applicable.

F. Buildings within the airport overlay subdistrict are subject to the height limits of that subdistrict.

Response: As discussed in response to NMC 15.340050 above, the proposed development is under the height limit allowed by the Airport Overlay Subdistrict. The 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.

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 duplex or 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.

Response: The Preliminary Development Plans (Exhibit A) for Phases 1 and 2 show that each unit has more than 200 square feet of outdoor area provided in the form of private patios or shared usable outdoor recreation space. Phase 4 development will show compliance with these requirements at the time of a reduced scope site design review. The applicable criteria are met, or can be met, through future action.

> **B. Required Landscaped Area. The following landscape requirements are established for all developments except single-family dwellings:**
>
> **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.**

Response: The Preliminary Development Plans (Exhibit A) show that ±38% of the subject lot area is planned to be landscaped, exceeding the requirements of this subsection. The criterion is met.

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

Response: All areas that are not proposed for improvement will be landscaped. The criterion is met.

> **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).

Response: The Preliminary Development Plans (Exhibit A) show that planned landscaping for parking and loading areas included with this project is in conformance with the requirements of this subsection, including islands, blocking, and screening. The criteria are met.

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:**

Ground Cover Plant Material	
Gallon cans	3 feet on center
4" containers	2 feet on center
2-1/4" containers	18" on center
Rooted cuttings	12" on center

Response: The Preliminary Development Plans (Exhibit A) show that the location and types of trees and groundcover planned for installation with this project meet the standards of this section. The criteria are met.

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.

Response: The installation, irrigation, and maintenance requirements of NMC 15.42.010 apply to this project. The Preliminary Development Plans (Exhibit A) show planned landscape features in conformance with the subsections above. The criteria are met, or can be met, through future action.

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.

Response: Landscaping required by this chapter will be installed prior to final occupancy permits, or the appropriate security must be provided per this subsection. The criterion is met, or can be met through, future action.

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.

Response: The Preliminary Development Plans (Exhibit A) show planting strips, street trees, and sidewalks included along the public improvements for Providence Drive. The improvements meet the minimum requirements of the City Code and Public Works engineering standards. It is understood the review body may impose reasonable conditions upon landscaping and amenities in the public right-of-way, as indicated in this section. The criteria are met.

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

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.

Response: The Preliminary Development Plans (Exhibit A) show planting strip landscaping, including street trees, in conformance with the requirements of this section. The criteria are 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.

Response: Required landscaping installed as part of this project will be maintained and pruned, including street trees, for public safety. The criterion is met.

Chapter 15.425 EXTERIOR LIGHTING

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.

Response: The Preliminary Development Plans (Exhibit A) contain the information required per NMC 15.425.020 to satisfy the requirements of an outdoor "lighting plan." The criteria are 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.

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.

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
Note: "Incandescent" includes tungsten-halogen (quartz) lamps.	

Response: The Preliminary Development Plans (Exhibit A) contain the information required per NMC 15.425.020 to satisfy the requirements of an outdoor "lighting plan" for Phases 1 through 3 of development. Required lighting will meet NMC 15.425.030–040 for the installation of outdoor lighting. Phase 4 development will show compliance with above requirements at the time of a reduced scope site design review. The criteria are met or can be met through future action.

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. here are physical factors that make undergrounding extraordinarily difficult.
3. Existing utility facilities in the area are primarily overhead and are unlikely to be changed.

Response: New utilities included with this project will be installed underground, where required by this chapter. The Preliminary Development Plans (Exhibit A) show planned utilities meeting these standards. The criteria are met.

Chapter 15.435 SIGNS

Response: Signs are not part of this application. Any potential signs associated with this project will comply with the requirements of this section.

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 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.

Response: All proposed parking is located on-site. The criterion 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 single-family or two-family dwellings 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.

Response: The Preliminary Development Plans (Exhibit A) show parking spaces in a shared parking area near the community building and additional parking in the Phase 4 development area. The space and drive aisle layout meet the minimum standards of this section. The criteria are met.

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.

Response: The site is not planned to be gated at this time. This criterion is not applicable.

15.440.030 Parking spaces required.

Parking Spaces Required	
Use	Minimum Parking Spaces Required
Dwelling, multifamily and multiple single-family dwellings on a single lot	
Studio or one-bedroom unit	1 per dwelling unit
Two-bedroom unit	1.5 per dwelling unit
Three- and four-bedroom unit	2 per dwelling unit
Five- or more bedroom unit	0.75 spaces per bedroom
*Unassigned spaces	If a development is required to have more than 10 spaces on a lot, then it must provide some unassigned spaces. At least 15 percent of the total required parking spaces must be unassigned and be located for convenient use by all occupants of the development. The location shall be approved by the director.
*Visitor spaces	If a development is required to have more than 10 spaces on a lot, then it must provide at least 0.2 visitor spaces per dwelling unit.
*On-street parking credit	On-street parking spaces may be counted toward the minimum number of required spaces for developments required to have more than 10 spaces on a lot. The on-street spaces must be directly adjoining and on the same side of the street as the subject property, must be legal spaces that meet all city standards, and cannot be counted if they could be removed by planned future street widening or a bike lane on the street.
*Available transit service	At the review body's discretion, affordable housing projects may reduce the required off-street parking by 10 percent if there is an adequate continuous pedestrian route no more than 1,500 feet in length from the development to transit service with an average of less than one hour regular service intervals during commuting periods or where the development provides its own transit. A developer may qualify for this parking reduction if improvements on a proposed pedestrian route are made by the developer, thereby rendering it an adequate continuous route.

Response: This application is for a multifamily independent living community. Phases 1 through 3 include 28 two-bedroom units requiring a minimum of 42 dedicated parking spaces, as listed above. Additionally, a minimum of seven unassigned spaces and six visitor spaces must be provided. The Preliminary Development Plans (Exhibit A) show that each dwelling unit has an attached, one- or two-car garage and a driveway providing dedicated parking spaces in excess of the minimum required. Additional spaces are provided next to the community building along Providence Drive, which can meet the requirement for unassigned and visitor parking. The width of the private loop driveway is such that parking can be accommodated along one side of the drive. Thus, the plans show adequate dedicated, unassigned, and visitor spaces. Phase 4 development will show compliance with above requirements at the time of a reduced scope site design review by providing additional parking and utilizing the excess from Phases 1 through 3. The criteria are met or can be met through future action.

15.440.070 Parking tables and diagrams.

The following tables provide the minimum dimensions of public or private parking areas

Table of Dimensions (in feet)					
Basic Stall			Back to Back	Aisles	
Angle- °	A	B	C	D (one-way)	E (two-way)
30°	18	16.8	25.8	12	20
38°	14.6	18.2	29.3	12	20
45°	12.7	19.1	31.8	12	20
52°	11.4	19.7	33.9	13	20
55°	11	19.9	34.6	14	20
60°	10.4	20.1	35.7	15	20
70°	9.6	20	36.9	18	20
80°	9.1	19.3.3	37	20	20

Notes:
1. Bumpers must be installed where paved areas abut street right-of-way (except at driveways).
2. No stalls shall be such that cars must back over the property line to enter or leave stall.
3. Stalls must be clearly marked and the markings must be maintained in good condition.
4. The sketches show typical situations to illustrate the required standards. For further information or advice, contact the community development department at 537-1210

Stall Width with Corresponding Table of dimensions (in feet)						
Stall Width = X	9	9.5	10	10.5	11	12
Aisle Width = Y	24	24	22	22	20	20

Notes:
1. Bumpers must be installed where paved areas abut street right-of-way (except at driveways).
2. No stalls shall be such that cars must back over the property line to enter or leave stall.
3. Stalls must be clearly marked and the markings must be maintained in good condition.
4. The sketches show typical situations to illustrate the required standards. For further information or advice, contact the planning department.

Response: The Preliminary Development Plans (Exhibit A) show parking spaces in a shared parking area near the community building and additional parking in the Phase 4 development area. The space and drive aisle layout meet the minimum standards of this section. The criteria are met.

Article II. Bicycle Parking

15.440.100 Facility requirements.

Bicycle parking facilities shall be provided for the uses shown in the following table. Fractional space requirements shall be rounded up to the next whole number.

Bicycle Parking Requirements	
Use	**Minimum Number of Bicycle Parking Spaces Required**
New multiple dwellings, including additions creating additional dwelling units	**One bicycle parking space for every four dwelling units**

15.440.110 Design.

A. Bicycle parking facilities shall consist of one or more of the following:

1. A firmly secured loop, bar, rack, or similar facility that accommodates locking the bicycle frame and both wheels using a cable or U-shaped lock.

2. An enclosed locker.

3. A designated area within the ground floor of a building, garage, or storage area. Such area shall be clearly designated for bicycle parking.

4. Other facility designs approved by the director.

B. All bicycle parking spaces shall be at least six feet long and two and one-half feet wide. Spaces shall not obstruct pedestrian travel.

C. All spaces shall be located within 50 feet of a building entrance of the development.

D. Required bicycle parking facilities may be located in the public right-of-way adjacent to a development subject to approval of the authority responsible for maintenance of that right-of-way.

Response: Per the bicycle space requirements above, a minimum of seven bicycle spaces are required to meet the development of Phases 1 through 3. The Preliminary Development Plans (Exhibit A) show bicycle spaces meeting the size and location requirements of this section, with eight total spaces provided near the community center. Phase 4 development will show compliance with above requirements at the time of a reduced scope site design review by providing additional bike parking as needed. The criteria are met or can be met through future action.

Article III. Private Walkways

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.

Response: The Preliminary Development Plans (Exhibit A) show several sections of private walkways within the project area. They are designed with a minimum width of 4 feet and meet ADA requirements. The exact location and layout of the private walkways is contingent on final design approval by the City. The criteria are met.

Division 15.500 Public Improvement Standards

Chapter 15.505 PUBLIC IMPROVEMENTS STANDARDS

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.

Response: Public improvements included with this project meet the standards of this chapter, as discussed with City staff. The Preliminary Development Plans (Exhibit A) show that the improvements—including water, wastewater, stormwater, and associated utility easements—are planned to be constructed to City Public Works design and engineering standards. The criteria are met.

15.505.030 Street 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.

Response: No new streets are planned for this project; however, improvements along the Providence Drive frontage are required. The Preliminary Development Plans (Exhibit A) walkways are laid out and will be constructed per the Newberg transportation system plan. The criteria are 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.

Response: No new streets are anticipated for this project. The criteria are not applicable.

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.

Response: Improvements to existing streets will be constructed to the standards of this section. The criteria are 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.

Response: Improvements required as conditions for this project will meet the proportionality and guarantee provisions of this section, as applicable. The criterion 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.

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

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.

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.

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.

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.

Response: No new public or private streets are planned for this project; however, improvements along the Providence Drive frontage are required. The Preliminary Development Plans (Exhibit A) show street improvements, sidewalks, planting strips, etc. as described in detail above. The criteria are met.

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.

I. Temporary Turnarounds.

J. Topography.

K. Future Extension of Streets.

L. Cul-de-Sacs.

M. Street Names and Street Signs.

N. Platting Standards for Alleys.

O. Platting Standards for Blocks.

P. Private Streets. New private streets, as defined in NMC 15.05.030, shall not be created.

Response: No new public streets or extensions, cul-de-sacs, alleys, blocks, or private streets are planned to be included with this project. The criteria are 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.

Response: No new streets or extensions are planned to be included with this project.

R. Vehicular Access Standards.

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.

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.

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.

Response: One access points from Providence Drive is planned. Connection to existing development also allows access from Hayes Street. The Preliminary Development Plans (Exhibit A) show the access points are over 100 feet apart. The criteria are met.

5. Alley Access.

Response: No alleys are planned to be included with this project.

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.

Response: No access points currently exist. The criterion is not applicable.

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.

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

e. Where three lots or three dwellings 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.

Response: This is a multifamily development with dedicated attached garages, shared parking areas for visitors, and a primary access point off Providence Drive. Shared driveways and access easements are not necessary. The criteria are not applicable.

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.

Response: A frontage street is not necessary.

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.

Response: The property abuts a City street. The criterion is not applicable.

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.

Response: No exceptions are requested.

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.

Response: The Preliminary Development Plans (Exhibit A) show public walkways (sidewalks) along the Providence Drive frontage, as described in detail above and meeting the criteria in this section. The walkways take into account the landscaping requirements for this development. The criteria are 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).

Response: As discussed in the landscaping requirements section of this narrative and shown in the preliminary plans (Exhibit A), street trees are planned to be provided per the requirements of NMC 15.420.010(B)(4). The criterion 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.

Response: No new street lights are planned as a part of development. The criterion is not applicable.

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.

Response: Proposed development does not include transit-related facilities, and none currently exist or are planned to exist per the Newberg transportation system plan. The criteria are 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.

Response: The Preliminary Development Plans (Exhibit A) show the location of utilities included with this project. The design, installation, and maintenance of private and public utilities for this project will meet City of Newberg standards. The criteria are met.

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.**

Response: The Preliminary Development Plans (Exhibit A) show that the location and size of water facilities meet the City of Newberg standards. The water improvements are planned to be installed and inspected in coordination with City Public Works. The criteria are met.

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.

Response: The Preliminary Development Plans (Exhibit A) show the location and size of sanitary sewer facilities meeting City of Newberg standards. The criteria are met.

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.

Response: The Preliminary Development Plans (Exhibit A) show necessary utility easements anticipated as necessary for this project. The width and location of the easements meet the Newberg Public Works design and construction standards. The criterion is met.

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.

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.

Response: The Preliminary Development Plans (Exhibit A) include a preliminary storm drainage plan meeting the design and construction standards of Newberg Public Works. The Preliminary Stormwater Report (Exhibit F) is included separately. The criterion is met.

SPRINGBROOK OAKS SPECIFIC PLAN

Appendix C BUILDING DESIGN AND DEVELOPMENT STANDARDS

Attached Residential Dwelling Units in Development Areas B through F

Design Standards

A. Primary individual unit entries shall be oriented towards a road. Entries shall be covered and architecturally differentiated from other building elements, in order to clearly express their location and function (see Figure 3).

Response: As shown on the Preliminary Development Plans (Exhibit A), all individual unit entries face inward, toward the private loop driveway. Front porches are provided with various roof and siding designs to differentiate the pedestrian entrance from other building elements.

B. Buildings shall be articulated in such a manner that no more than 25' of horizontal, flat building facade will be permitted. In the case of rowhouse or townhouse units, no more than two units may be paired together in the same facade or without a minimum of 2'-0" difference between adjacent facades (see Figures 4 and 5).

Response: The duplexes are designed with porches, columns, as well as various roof pitches, designs, and wall setbacks to provide articulation and aesthetically pleasing façades.

C. When possible, garages and carports should not be adjacent to primary streets or roads. They should be located internally within each development or complex where their designated dwelling units are located. Attached garages shall not extend beyond any primary entry facade.

Response: As shown on the Preliminary Plans (Exhibit A), garages all face the internal private loop driveway and are not adjacent to any primary streets or roads. Consistent with the development to the south, garage entries have been designed to more closely resemble main entries. Garage doors will have a craftsman feel, with wood panels, upper windows, and the look of a traditional hinged door. Because this project must meet additional design review requirements per the Type II design process, the garages may extend beyond the primary façade in this case.

D. All buildings shall utilize materials that meet or exceed current industry standards (American Institute of Architects or American Society of Testing Materials) for a medium to high level range of quality. The proposed building materials will be recommended by a licensed architect and will be compatible with the Springbrook Oaks development.

The following are some examples of unacceptable building products:

1. Tl-11 siding panels.
2. Three tab composition roofing.
3. Single-ply vinyl siding

In addition, all exterior walls shall utilize a "double-wall" system. This incorporates the use of an air infiltration barrier and secondary water resistive membrane, exterior sheathing beneath, and a covering with an acceptable siding product. Buildings will meet all applicable building codes and current construction requirements.

Response: Consistent with the development to the south, duplexes will be clad in stucco or horizontal clapboard siding made of fiber cement. Shingles, trim, and masonry bases will be incorporated for visual interest. Exterior walls will utilize a “double-wall” system and be built per the current applicable building code and construction requirements.

E. Each dwelling unit shall incorporate individual areas of exterior space no less than 50 square feet per unit. Each space shall have a minimum dimension of 5', in any direction. This can be achieved through the use of porches, decks, patios, balconies etc. or designated yards other than those adjacent to primary streets or roads.

Response: As shown on the Preliminary Development Plans (Exhibit A), each dwelling unit has a private front porch and private back patio meeting the minimum size requirements.

F. On buildings with sloped roofs, no slope shall be less than a 4:12 pitch. These roofs shall utilize eaves, rakes, and overhangs of no less than 12".

Response: As shown on the Preliminary Development Plans (Exhibit A), all sloped roofs have a pitch of 4:12 or greater, with overhangs.

> **G.** The minimum landscape percentage or "pervious" surface area shall not be less than 30% of the overall site area.

Response: As shown on the Preliminary Development Plans (Exhibit A), landscaping exceeds the required minimums listed in this Code.

> **H.** No building shall be greater than 35', or three stories, in overall height. This shall include garages in rowhouse or townhouse type buildings.

Response: As discussed above, proposed duplexes are single-story and do not exceed the maximum height limit as allowed by NMC 15.346.070(B)(6)(c).

> **I.** Where trash enclosures are required; they are to be located internally within the complex or development. They shall not be adjacent to any primary road or street. They shall be enclosed on all sides by walls, gates or fences and provided with a secondary buffer of landscape screening on at least three sides. Access to the enclosure shall be limited to one side only (see Figure 6).

Response: A trash enclosure will be built to accommodate the community building. It will be located behind the community center, away from the street, constructed of approved materials and will provide a secondary landscape buffer around the perimeter.

> **J.** Each complex or development shall provide an internal pedestrian circulation system. Each system shall be interconnected with adjacent circulation systems to form a master pedestrian circulation system. All internal systems shall be appropriately illuminated to meet current City standards.

Response: Site development includes a pedestrian circulation system that originates at Providence Drive and connects all independent living units to the community building and connects to the existing pedestrian circulation on development to the south.

> **K.** All parking ratios shall meet current City standards.

Response: Per NMC 15.440.030, two-bedroom dwelling units require 1.5 parking spaces each. Parking is provided for each dwelling unit with a one- or two-car private garage and driveway. Additional spaces are provided near the community building along Providence Drive, and street width is such that parking can happen along one side, exceeding the required minimums.

> **L.** All buildings shall be colored in earth tones of medium range value. No building or buildings shall be brightly colored or colored in such a manner as to emphasize its overall mass. Subtle contrasts between adjacent buildings and individual building elements (i.e. trims, facades etc.) shall be provided.

Response: Consistent with the existing development to the south, all structures will utilize materials and paints with earth tones of medium range value, providing subtle contrasts between individual building elements and adjacent structures.

M. **Exterior trim will be provided around all windows and at building comers. Window trim pieces shall be painted a contrasting color to the building body.**

Response: As shown on the Preliminary Development Plans (Exhibit A), trim is provided around all doors and windows and at building corners. Window and door trim contrast the color of the building body.

N. **All primary collector streets and neighborhood secondary streets, shall comply with Figures 7, 8, and 9.**

Response: The project site does not include any primary collector or neighborhood secondary streets. Access to all units is from a private loop driveway which connects to Providence Drive. The private driveway is wide enough to allow for visitor parking on one side.

O. **All setbacks shall comply with Figures 10 and 11.**

Response: Proposed development meets all applicable setbacks.

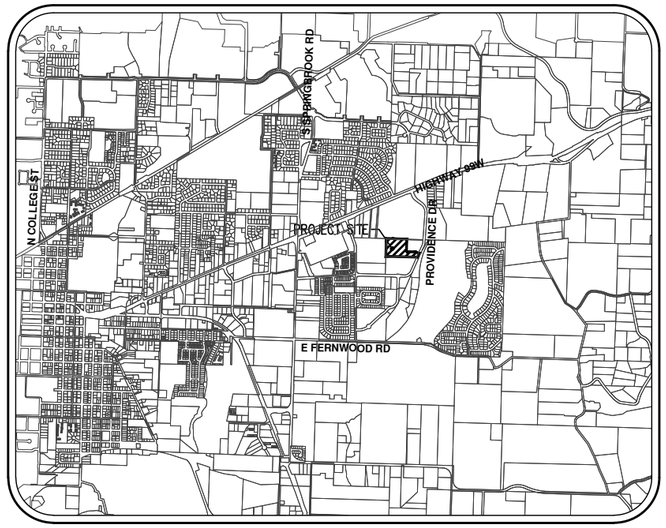
IV. Conclusion

The required findings have been made, and this written narrative and accompanying documentation demonstrate the application is consistent with the applicable provisions of the City of Newberg Municipal Code and Public Works engineering standards. The evidence in the record is substantial and supports approval of the application. Therefore, the Applicant respectfully requests the City approve these Type II Site Design Review and Type I Lot Consolidation applications.

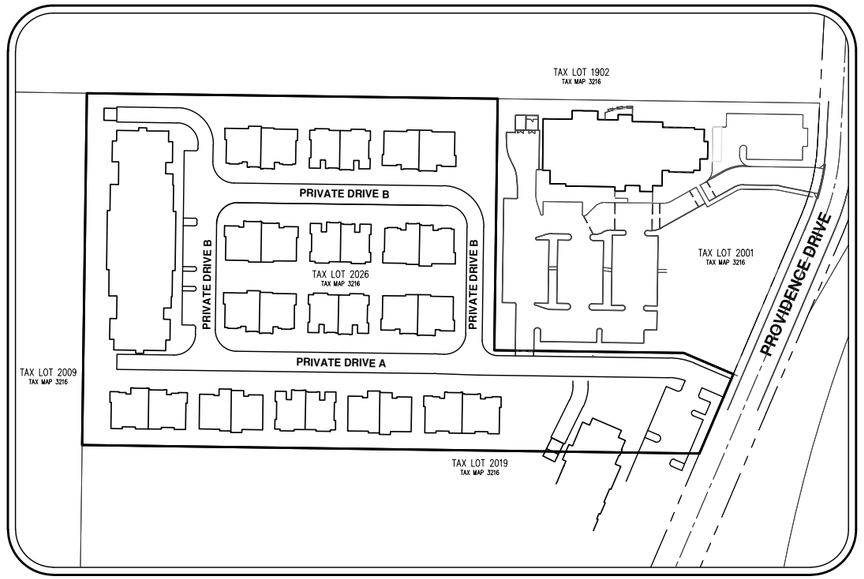
Exhibit A: Development Plans

FRIENDSVIEW SPRINGBROOK MEADOWS II

PRELIMINARY PLANS



VICINITY MAP
NTS



SITE MAP
1" = 100'

LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
DECIDUOUS TREE			STORM DRAIN CLEAN OUT		
CONIFEROUS TREE			STORM DRAIN CATCH BASIN		
			STORM DRAIN AREA DRAIN		
FIRE HYDRANT			STORM DRAIN MANHOLE		
WATER BLOWOFF			GAS METER		
WATER METER			GAS VALVE		
WATER VALVE			GUY WIRE ANCHOR		
DOUBLE CHECK VALVE			UTILITY POLE		
AIR RELEASE VALVE			POWER VAULT	P	P
SANITARY SEWER CLEAN OUT			POWER JUNCTION BOX		
SANITARY SEWER MANHOLE			POWER PEDESTAL		
SIGN			COMMUNICATIONS VAULT	C	C
STREET LIGHT			COMMUNICATIONS JUNCTION BOX		
MAILBOX	MB	MB	COMMUNICATIONS RISER		

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE	PWR	PWR
OVERHEAD WIRE	OHW	OHW
COMMUNICATIONS LINE	COM	COM
FIBER OPTIC LINE	CFO	CFO
GAS LINE	GAS	GAS
STORM DRAIN LINE	STM	STM
SANITARY SEWER LINE	SAN	SAN
WATER LINE	WAT	WAT

SHEET INDEX

OWNER:
MJG DEVELOPMENT, INC.
901 BRUTSCHER STREET, SUITE 206
NEWBERG, OR 97132

ARCHITECT:
LRS ARCHITECTS
720 NW DAVIS ST, SUITE 300
PORTLAND, OR 97209
CONTACT: DEAN MASUKAWA, ASSOCIATE
PH: 503.265.1545

PLANNING/ENGINEERING/ SURVEYING FIRM:
AKS ENGINEERING & FORESTRY, LLC.
CONTACT: MIMI DOUKAS, AICP, RLA
12965 SW HERMAN RD, SUITE 100
TUALATIN, OR 97062
PH: 503.563.6151

GEOTECHNICAL FIRM:
GEODESIGN, INC.
CONTACT: GEORGE SAUNDERS, P.E., G.E.
9450 SW COMMERCIE CIRCLE, SUITE 300
WILSONVILLE, OR 97070
PH: 503.968.8787

PROJECT LOCATION:
LOCATED ON THE WEST SIDE OF PROVIDENCE DRIVE, SOUTH OF HIGHWAY 99, IN NEWBERG, OREGON
LAT: 45.30583
LONG: 122.9362

PROPERTY DESCRIPTION:
YAMHILL COUNTY TAX MAP 3S 2W 16, TAX LOT 2026 AND 5,775 SQUARE FEET OF TAX LOT 2019

EXISTING LAND USE:
OPEN FIELD

PROJECT PURPOSE:
INDEPENDENT LIVING COMMUNITY

DATUM:
VERTICAL DATUM NAVD 88: ELEVATIONS ARE BASED ON YAMHILL COUNTY GEODETIC CONTROL STATION NO. 22.
ELEVATION: 223.436'

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LRS ARCHITECTS
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503.221.1121 503.221.2077 www.marchtects.com

Friendsview RETIREMENT COMMUNITY

COVER SHEET WITH VICINITY AND SITE MAPS
FRC SPRINGBROOK MEADOWS II
MJG DEVELOPMENT, INC.
NEWBERG, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 13, 2007
RICHARD GREGORY
PRELIMINARY NOT FOR CONSTRUCTION
RENEWS: JUNE 30, 2021

JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SCR

P01

AKS DRAWING FILE: 5680 P01 – COVER.DWG | LAYOUT: P01

TAX LOT 1902
TAX MAP 3216

TAX LOT 2001
TAX MAP 3216

TAX LOT 2026
TAX MAP 3216

TAX LOT 2009
TAX MAP 3216

TAX LOT 2019
TAX MAP 3216

PROVIDENCE DRIVE

EX STM CI
RIM: 194.69
IE OUT: 190.12 (10"E)
SUMP: 189.09

EX STM DI
TOP GRATE: 196.51
BOT. GRATE: 195.14
IE OUT: 192.91 (12"NE)
SUMP: 188.81

EX STM MH
RIM: 194.63
IE IN: 190.11 (10"E)
IE IN: 190.00 (10"W)
IE IN: 189.98 (12"SW)
IE OUT: 189.82 (12"N)

EX STM CI
RIM: 194.78
IE OUT: 191.18 (10"W)
SUMP: 190.12

TOP OF 12" PIPE: 192.02'

TOP OF 24" PIPE: 193.39'

S89°13'27"E 425.00'

24" DI

12" WROUGHT IRON
6" POLY

S03°00'00"W 56.89'

WATER LOCATE RISER

TOP OF 24" PIPE: 190.81'

CURVE
L=94.88'

AIR RELEASE VALVE IN VAULT

10.00' PUBLIC UTILITY EASEMENT PER PLAT OF OAK MEADOWS II

20.00' PUBLIC WATER LINE EASEMENT PER INSTR. NO. 2002-13432, FOR THE BENEFIT OF CITY OF NEWBERG & AMENDED BY DOCUMENT NO. 2017-09858

5.8' TALL PVC STAND PIPE

EX SAN MH
RIM: 199.82
IE OUT: 190.46 (8"SE)

TOP OF 24" PIPE: 195.76'

24" CI
12" WROUGHT IRON
6" POLY

8" PVC

TOP OF 24" PIPE: 193.72'

12.00' GAS PIPELINE EASEMENT PER INSTR. NO. 2002-21022 FOR THE BENEFIT OF NORTHWEST NATURAL GAS COMPANY

N21°08'01"E 228.19'

EX SAN MH
RIM: 196.40
IE IN: 191.59 (8"NE)
IE IN: 189.56 (8"NW)
IE OUT: 189.34 (8"SW)

TOP OF 6" PIPE: 193.67'

6" PVC

S89°13'27"E 250.00'

S66°52'12"E 71.29'

EX STM MH
RIM: 194.88
IE IN: 184.77 (15"SW)
IE OUT: 183.57 (15"SE)
SUMP: 183.26

CPP STM LINE
END OF LINE NOT FOUND

GRAVEL

15" PVC

TOP OF 24" PIPE: 188.12

EX STM DI
TOP GRATE: 188.22
BOT. GRATE: 188.22
IE OUT: 184.97 (15"NE)
SUMP: 188.22

GARDEN

S23°09'13"W 71.67'

EX STM MH
RIM: 192.28
IE IN: 181.63 (15"NW)
IE OUT: 181.43 (18"SW)

18" PVC

TOP OF 24" PIPE: 185.78

EX STM CI
RIM: 190.87
IE OUT: 187.69 (12"SE)
SUMP: 186.87

COMM MH

8" PVC

EX SAN MH
RIM: 197.36
IE IN: 184.80 (8"NE)
IE OUT: 191.36 (8"SW)

EX STM CI
RIM: 192.92
IE OUT: 186.74 (12"NW)
SUMP: 186.10

EX STM DI
TOP GRATE: 207.87
BOT. GRATE: 206.63
IE IN: 203.81 (8"W)
IE OUT: 203.42 (24"E)
SUMP: 202.86

EX STM MH
RIM: 203.12
IE IN: 201.68 (6"W)
IE OUT: 199.62 (15"E)
SUMP: 198.40

EX STM DI
TOP GRATE: 205.86
BOT. GRATE: 204.57
SUMP: 201.15

EX 24" CULVERT
IE: 203.71

EX STM AD
RIM: 203.64

EX STM MH
RIM: 205.74
IE IN: 198.88 (15"W)
IE OUT: 198.32 (24"S)

N00°46'46"E 464.37'

20.00' STORM DRAIN EASEMENT PER PLAT OF OAK MEADOWS II, FOR THE BENEFIT OF CITY OF NEWBERG

CPP STM LINE POTHOLE
TOP OF PIPE EL= 196.29

CPP STM LINE POTHOLE
TOP OF PIPE EL= 193.85

CPP STM LINE POTHOLE
TOP OF PIPE EL= 192.64

CPP STM LINE POTHOLE
TOP OF PIPE EL= 190.56

CPP STM LINE POTHOLE
TOP OF PIPE EL= 190.06

CPP STM LINE POTHOLE
TOP OF PIPE EL= 187.70

S89°13'27"E 542.03'

N89°13'14"W 814.66'

METAL FENCE

EX STM MH
RIM: 206.22

STORM VALLEY GUTTER

WROUGHT IRON FENCE

EX STM AD
RIM: 188.61
NO DIP INFO

N

SCALE: 1"=40 FEET

40 0 8 20 40

ORIGINAL PAGE SIZE: 22" x 34"

NOTES:

1. PUBLIC UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PER UTILITY LOCATE TICKET NUMBER 16138430. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
2. FIELD WORK WAS CONDUCTED NOVEMBER 21-22, 2016.
3. VERTICAL DATUM NAVD 88: ELEVATIONS ARE BASED ON YAMHILL COUNTY GEODETIC CONTROL STATION NO. 22. WITH A CORPSCON CONVERTED ELEVATION = 223.436 FEET (NAVD 88) FROM PUBLISHED NGVD 29 ELEVATION OF 219.994 FEET. CONVERTED NAVD 88 VALUE WERE CHECKED AGAINST PHYSICAL GPS OBSERVATION USING THE TRIMBLE VRS NOW NETWORK.
4. THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
5. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
6. CONTOUR INTERVAL IS 1 FOOT.
7. CONTOUR LINES OUTSIDE OF SURVEY LIMITS ARE BASED ON LIDAR INFORMATION AND ARE CONSIDERED APPROXIMATE.

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Friendsview RETIREMENT COMMUNITY

EXISTING CONDITIONS PLAN
FRC SPRINGBROOK MEADOWS II
MJG DEVELOPMENT, INC.
NEWBERG, OREGON

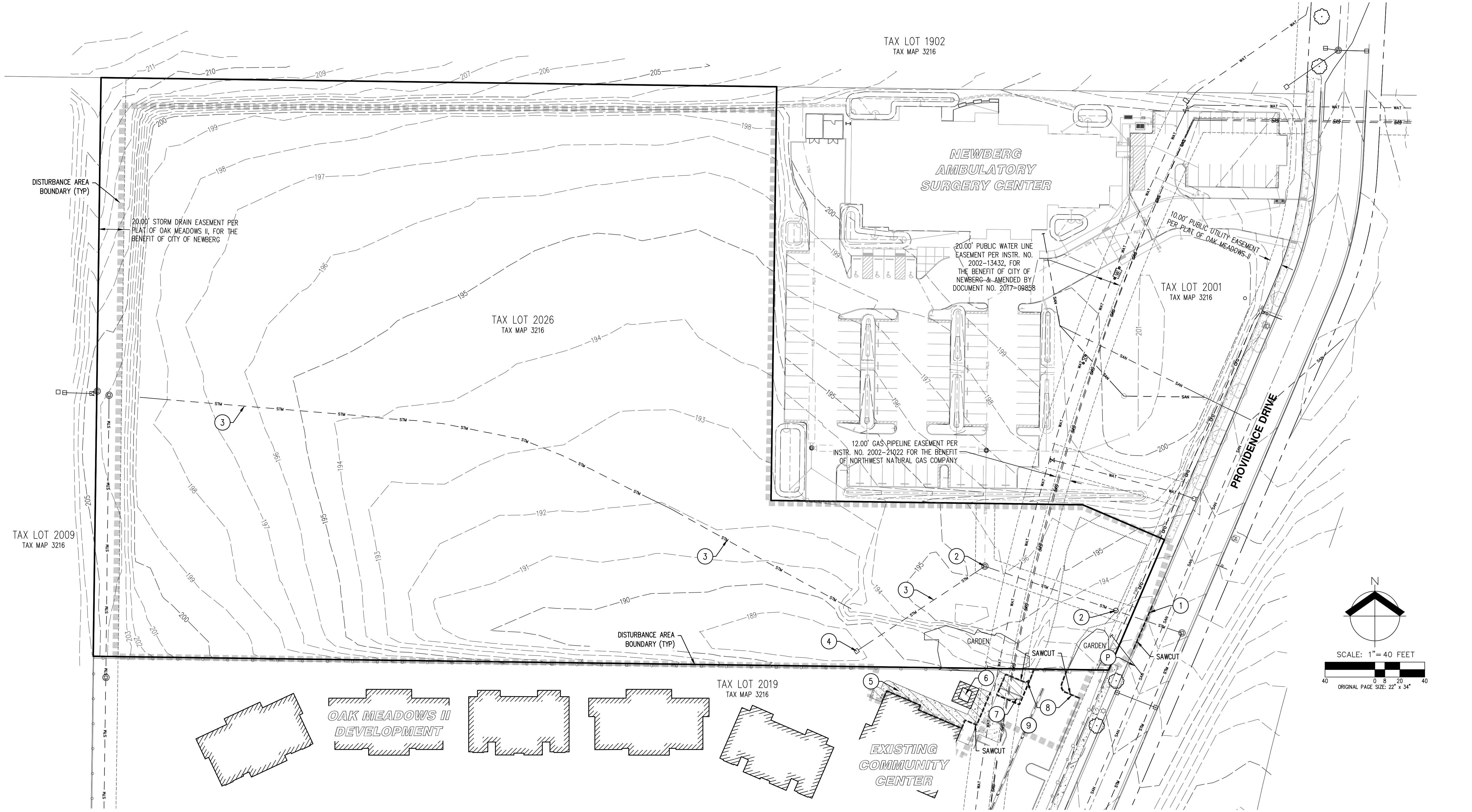
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 9, 2007
KENT WHITE
70652LS
RENEWS: 6/30/20

PRELIMINARY NOT FOR CONSTRUCTION

JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SCR

P02

AKS DRAWING FILE: 5680 P02 - EXISTING CONDITIONS PLAN.DWG | LAYOUT: P02



LEGEND

EXISTING GROUND CONTOUR (1 FT)	
EXISTING GROUND CONTOUR (5 FT)	160
EXISTING TREE TO REMAIN	
DISTURBANCE AREA BOUNDARY	
AC SAWCUT	
EXISTING CONCRETE TO BE REMOVED	

(X) KEYED DEMOLITION NOTES:

1. SAWCUT CURB & EXISTING AC PAVEMENT AND HAUL OFF-SITE FOR DISPOSAL
2. PROTECT AND PRESERVE EXISTING STORM MANHOLE
3. REMOVE STORM DRAIN PIPE AND HAUL OFF-SITE FOR DISPOSAL
4. REMOVE STORM DITCH INLET AND HAUL OFF-SITE FOR DISPOSAL
5. SAWCUT & REMOVE EXISTING CONCRETE AND HAUL OFF-SITE FOR DISPOSAL
6. REMOVE EXISTING TRASH ENCLOSURE AND REUSE IF OWNER DEEMS APPROPRIATE, OTHERWISE DISPOSE OF OFF-SITE
7. SAWCUT & REMOVE EXISTING LANDSCAPE ISLAND AND CURB AND HAUL OFF-SITE FOR DISPOSAL
8. SAWCUT & REMOVE EXISTING CURB AND HAUL OFF-SITE FOR DISPOSAL
9. PRESERVE AC PAVEMENT IN PARKING LOT AREA

NOTES:

1. SITE PREPARATION MUST INCLUDE THE REMOVAL OF VEGETATION, NON-COMPLYING FILL, TOPSOIL, OR OTHER UNSUITABLE MATERIAL PRIOR TO PLACEMENT OF FILL.
2. DRAIN TILES ARE LIKELY LOCATED ON THIS SITE. CONTRACTOR SHALL MAKE EFFORTS TO LOCATE ALL DRAIN TILES PRIOR TO CONSTRUCTION AND WORK WITH PROJECT ENGINEER TO DEVELOP A PLAN TO ADDRESS PRIOR TO CONSTRUCTION.

(P) CONTRACTOR TO POTHOLE AND VERIFY ALL UTILITY TIE-IN ELEVATIONS PRIOR TO ORDERING STRUCTURES, PIPES AND ALL MATERIALS.

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LRS ARCHITECTS

PRELIMINARY DEMOLITION PLAN
FRC SPRINGBROOK MEADOWS II
MJG DEVELOPMENT, INC.
NEWBERG, OREGON

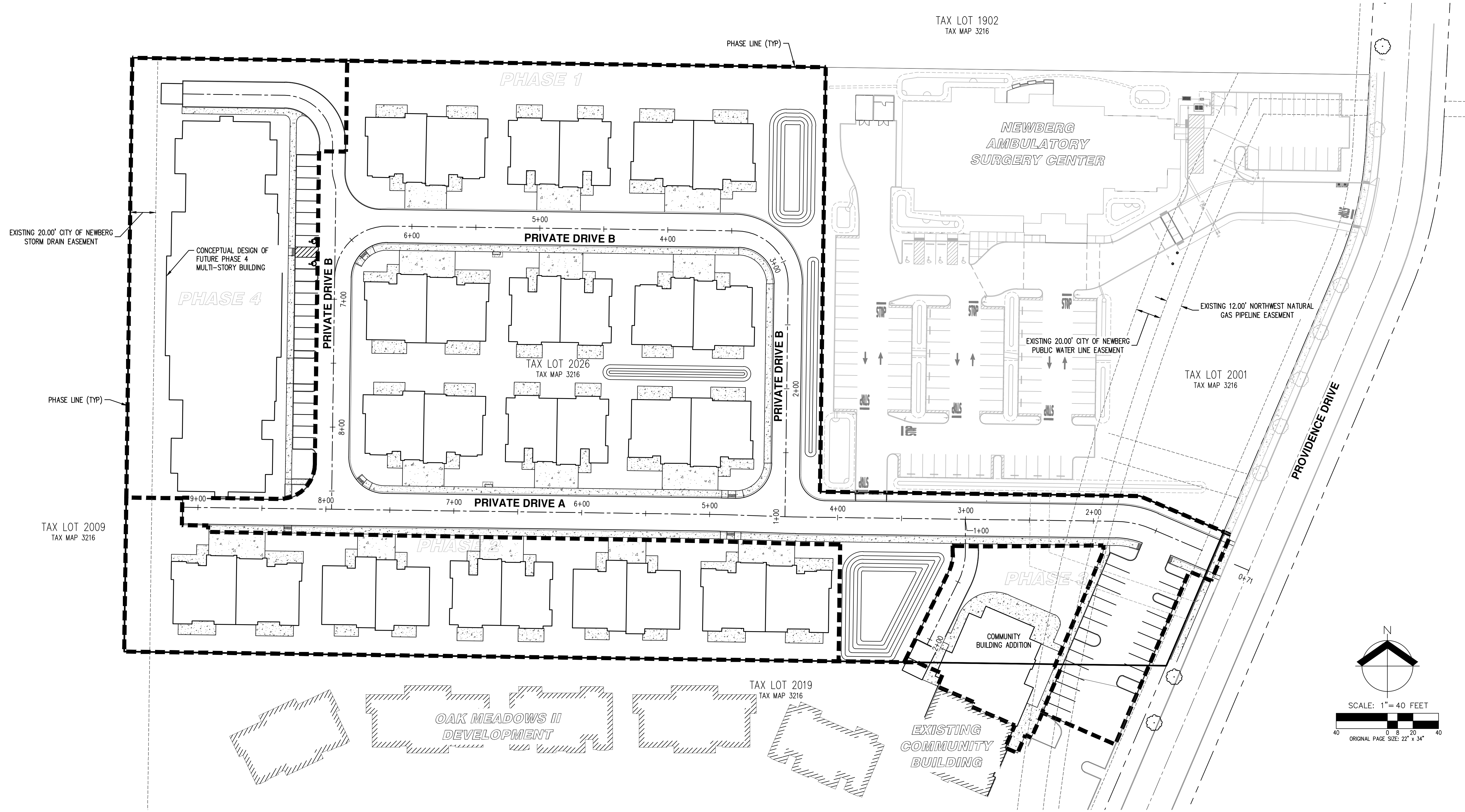
PRELIMINARY NOT FOR CONSTRUCTION

RENEWS: JUNE 30, 2021

JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SCR

P03

AKS DRAWING FILE: 5680 P03 - DEMOLITION PLAN.DWG | LAYOUT: P03



PROJECT PHASING

PHASE 1: TOTAL SITE DEMOLITION AND CLEARING SHALL OCCUR IN ORDER TO MASS GRADE ENTIRE SITE. ALL INFRASTRUCTURE (INCLUDING UTILITIES) WILL BE CONSTRUCTED IN ORDER TO SERVE THE FUTURE BUILDINGS SHOWN IN PHASES 2 AND 3. DUPLEXES WITHIN CENTER ISLAND AND NEAR THE NORTHERN PROPERTY LINE (9 TOTAL) SHALL BE CONSTRUCTED.

PHASE 2: CONSTRUCTION OF 5 SOUTHERN DUPLEX BUILDINGS ONLY.

PHASE 3: EXPANSION OF EXISTING COMMUNITY BUILDING ALONG WITH SIDEWALK AND PARKING, TYING INTO THE PHASE 1 SITE DRIVE. ADDITIONALLY, CONSTRUCTION OF COMMUNITY BUILDING SERVICE ACCESS DRIVE AND TRASH ENCLOSURE.

PHASE 4: CONCEPTUAL BUILDING OUTLINE ALONG WITH DRIVE TO TRASH ENCLOSURE, SIDEWALK, AND PARKING AREA SHOWN.

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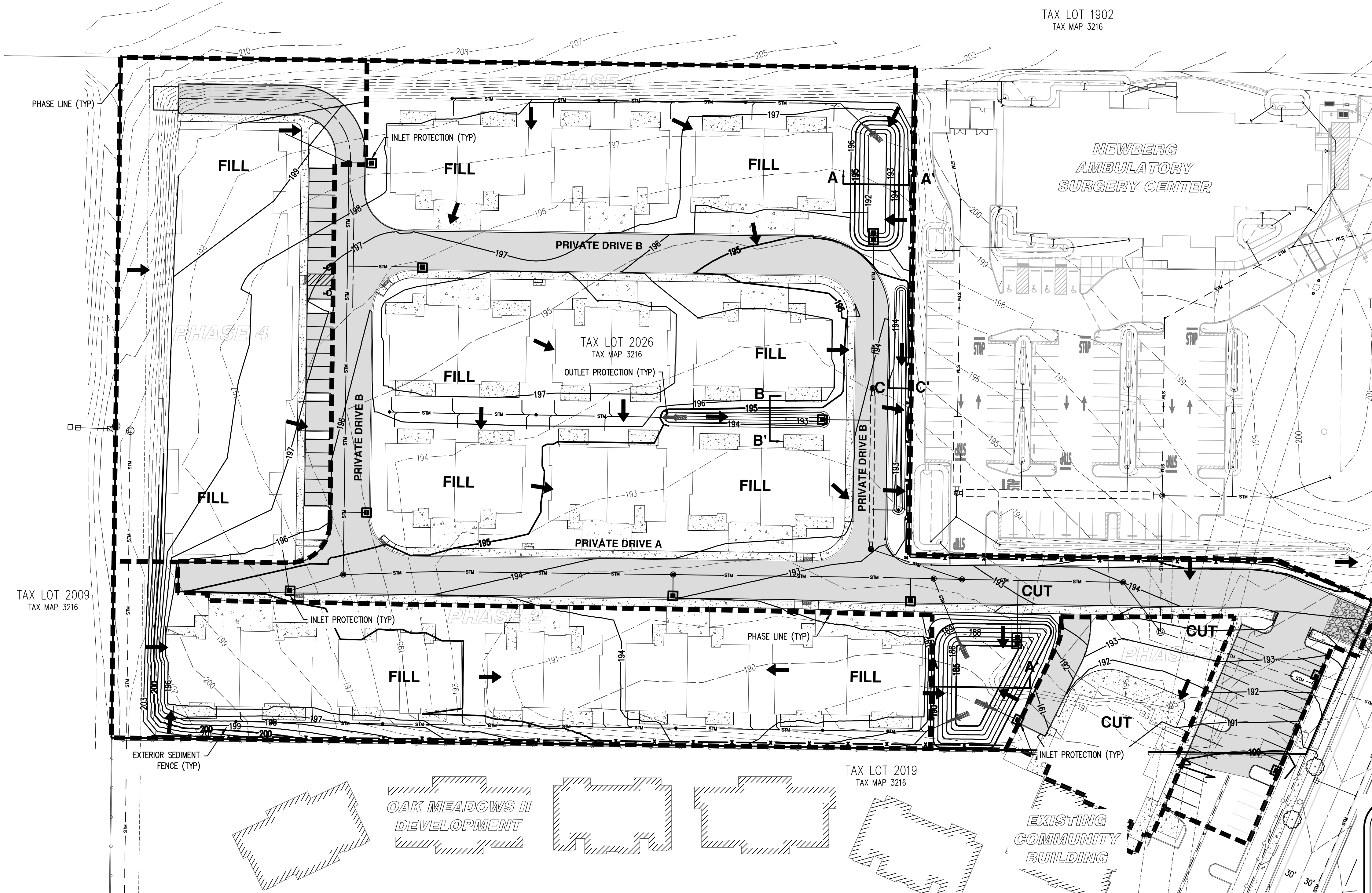
SITE PHASING PLAN
FRC SPRINGBROOK MEADOWS II
MJG DEVELOPMENT, INC.
NEWBERG, OREGON

PRELIMINARY NOT FOR CONSTRUCTION
RENEWS: JUNE 30, 2021

JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SCR

P04

AKS DRAWING FILE: 5680 P04 - SITE PHASING PLAN.DWG | LAYOUT: P04



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SCALE: 1" = 40 FEET

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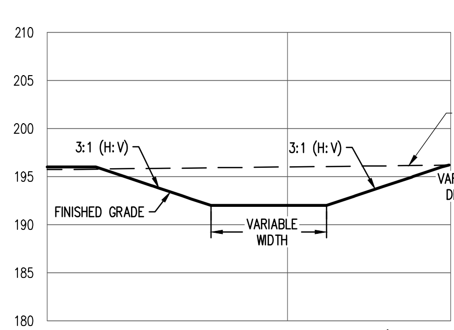
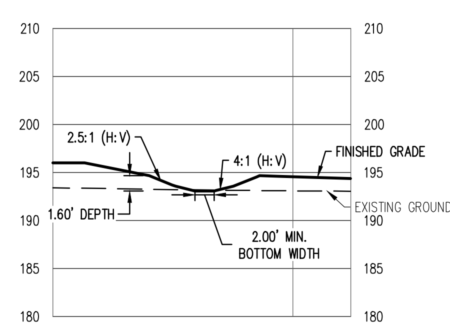
ORIGINAL PAGE SIZE: 22" x 34"



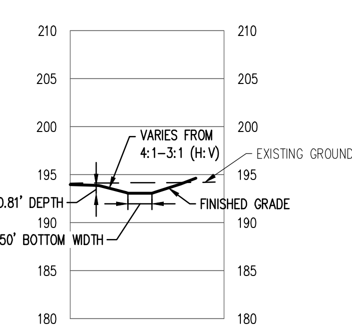
LIDA BASIN - SECTION A-A'

HORZ: 1" = 10'
VERT: 1" = 10'
ALL PROFILE ELEVATIONS ARE BASED ON CENTERLINE UNLESS OTHERWISE NOTED



VEGETATED SWALE - SECTION B-B'

HORZ: 1" = 10'
VERT: 1" = 10'
ALL PROFILE ELEVATIONS ARE BASED ON CENTERLINE UNLESS OTHERWISE NOTED



LIDA SWALE - SECTION C-C'

HORZ: 1" = 10'
VERT: 1" = 10'
ALL PROFILE ELEVATIONS ARE BASED ON CENTERLINE UNLESS OTHERWISE NOTED

LEGEND

EXISTING GROUND CONTOUR (1 FT)	
EXISTING GROUND CONTOUR (5 FT)	350
FINISHED GRADE CONTOUR (1 FT)	
FINISHED GRADE CONTOUR (5 FT)	345
SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)	
EXISTING TREE TO REMAIN	
INLET PROTECTION (TYP)	
OUTLET PROTECTION (TYP)	
DRAINAGE FLOW DIRECTION	
GRAVEL CONSTRUCTION ENTRANCE	
PHASE LINE	
IMPERVIOUS SURFACE	

AKS DRAWING FILE: 5680 P04 - GRADING.DWG | LAYOUT: P05

GRADING, EROSION & SEDIMENT CONTROL PLAN

FRC SPRINGBROOK MEADOWS II

MJG DEVELOPMENT, INC.

NEWBERG, OREGON

AKS

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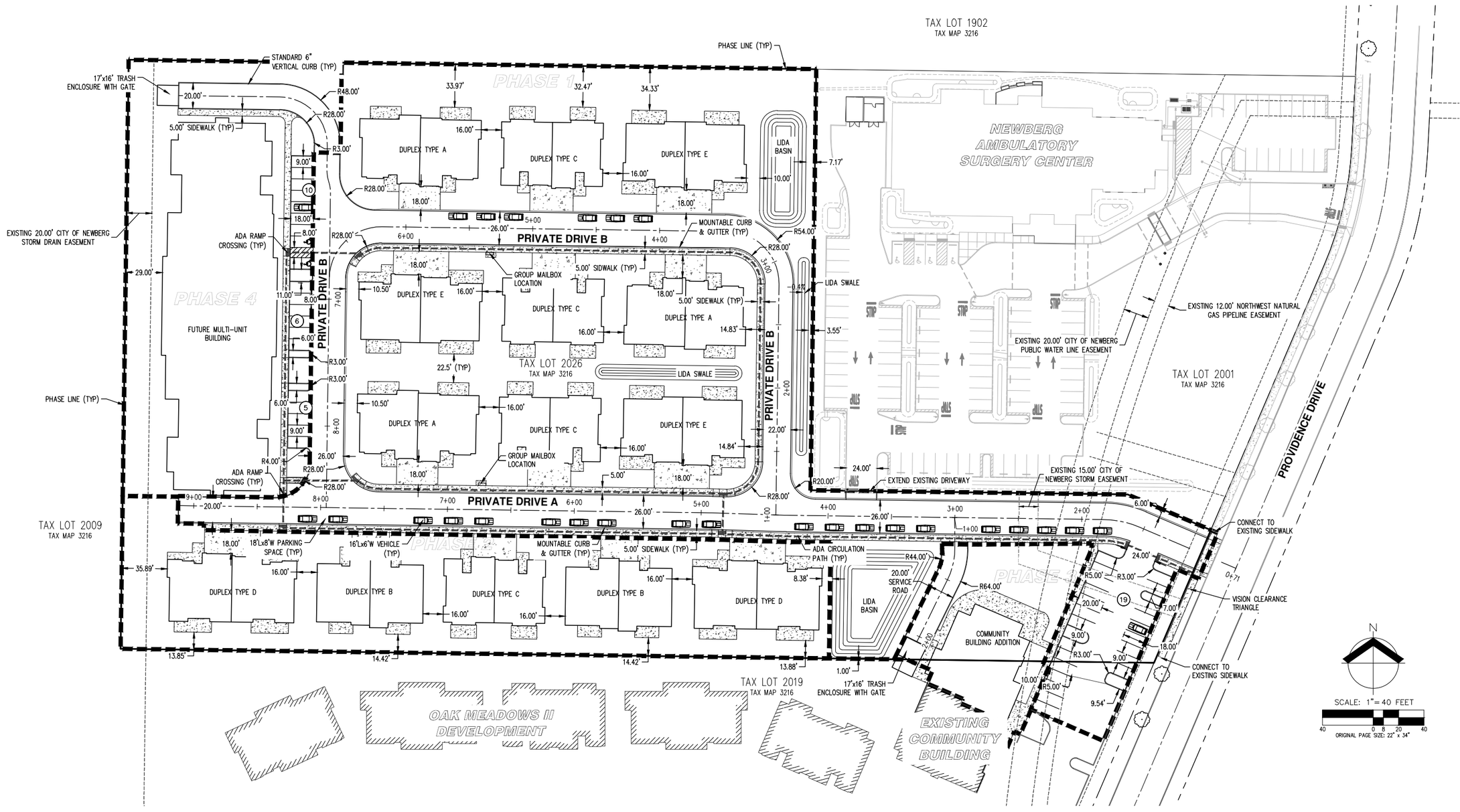
Friendsview RETIREMENT COMMUNITY

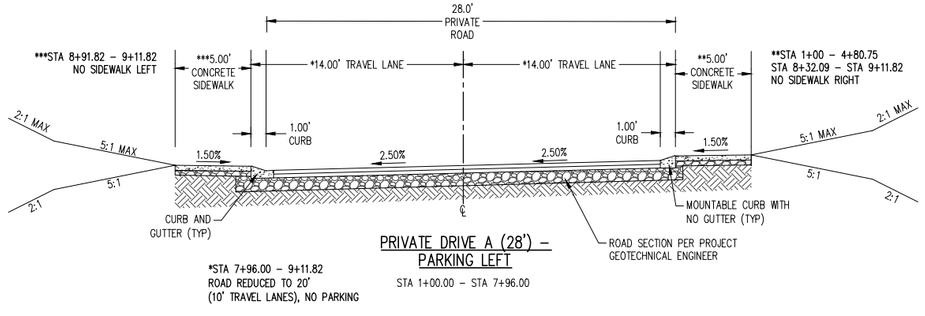
PRELIMINARY NOT FOR CONSTRUCTION

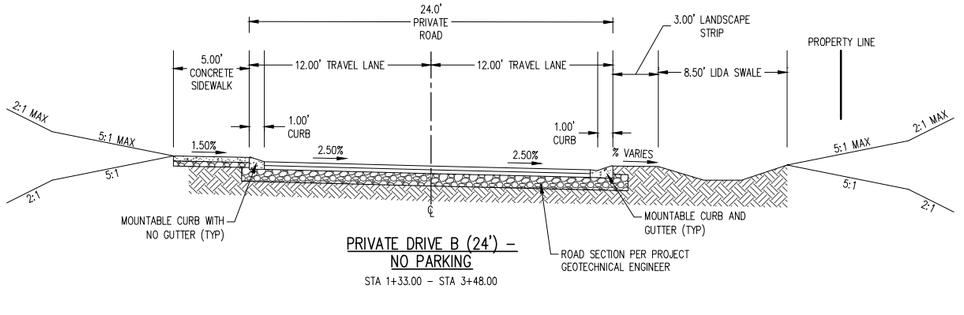
RENEWS: JUNE 30, 2021

JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SCR

P05







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PRELIMINARY SITE PLAN WITH DIMENSIONS

FRC SPRINGBROOK MEADOWS II

MJG DEVELOPMENT, INC.

NEWBERG, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2015
CHARLES C. RICHARD GREGORY

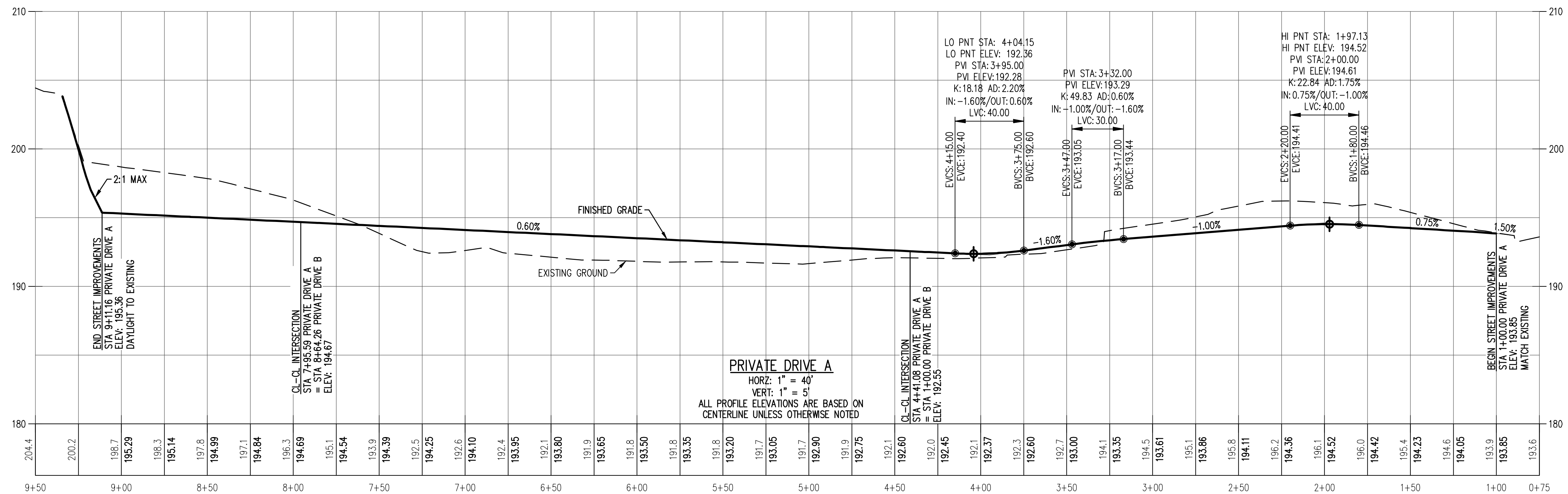
PRELIMINARY NOT FOR CONSTRUCTION

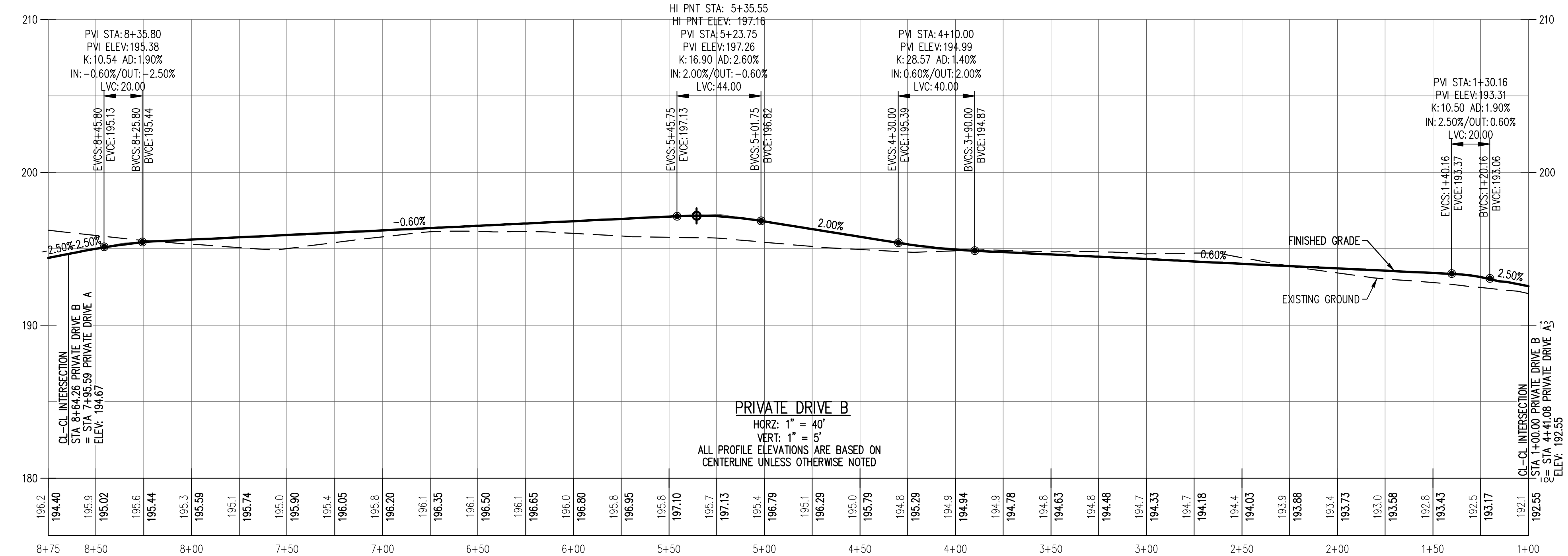
REVISIONS: JUNE 30, 2021

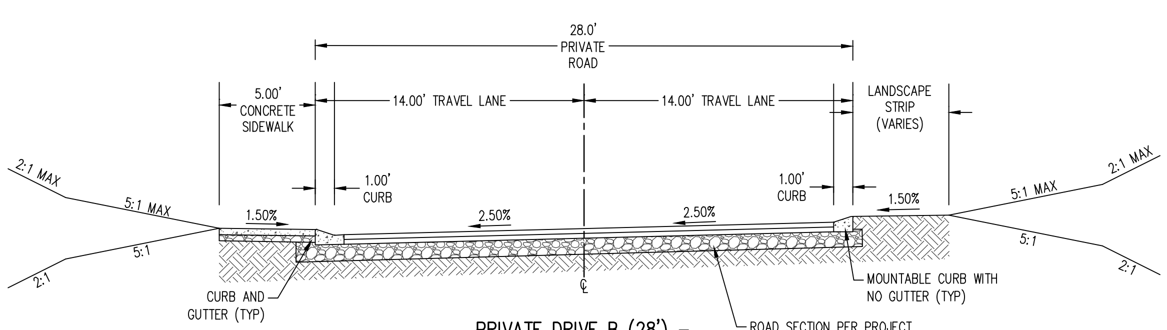
JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SCR

P06

AKS DRAWING FILE: 5680 P05 – SITE PLAN WITH DIMENSIONS.DWG | LAYOUT: P06

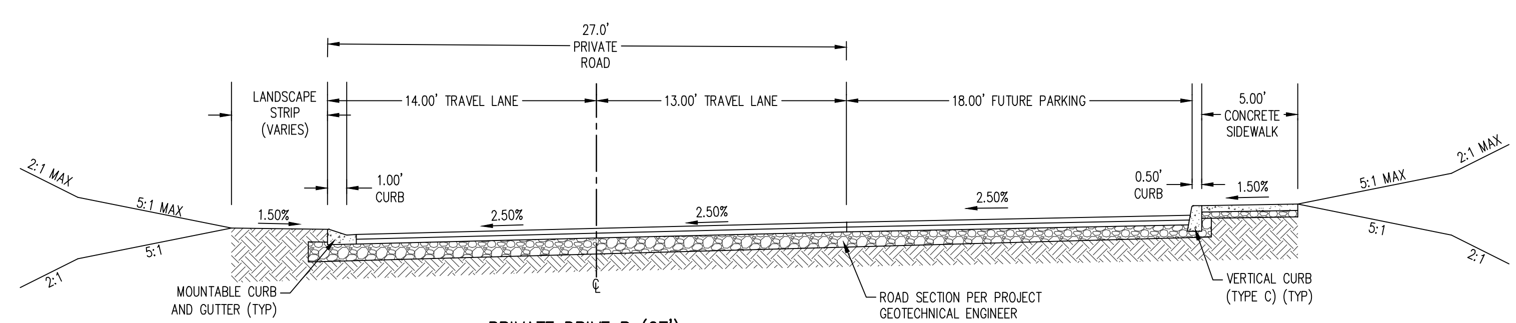






PRIVATE DRIVE B (28') – PARKING RIGHT

STA 3+48.00 – STA 6+81.00



PRIVATE DRIVE B (27') – NO PARKING

STA 6+81.00 – STA 8+21.00

AKS DRAWING FILE: 5680 P05 – SITE PLAN WITH DIMENSIONS.DWG | LAYOUT: P07

PRELIMINARY STREET PLAN AND PROFILES
FRC SPRINGBROOK MEADOWS II
MJG DEVELOPMENT, INC.
NEWBERG, OREGON

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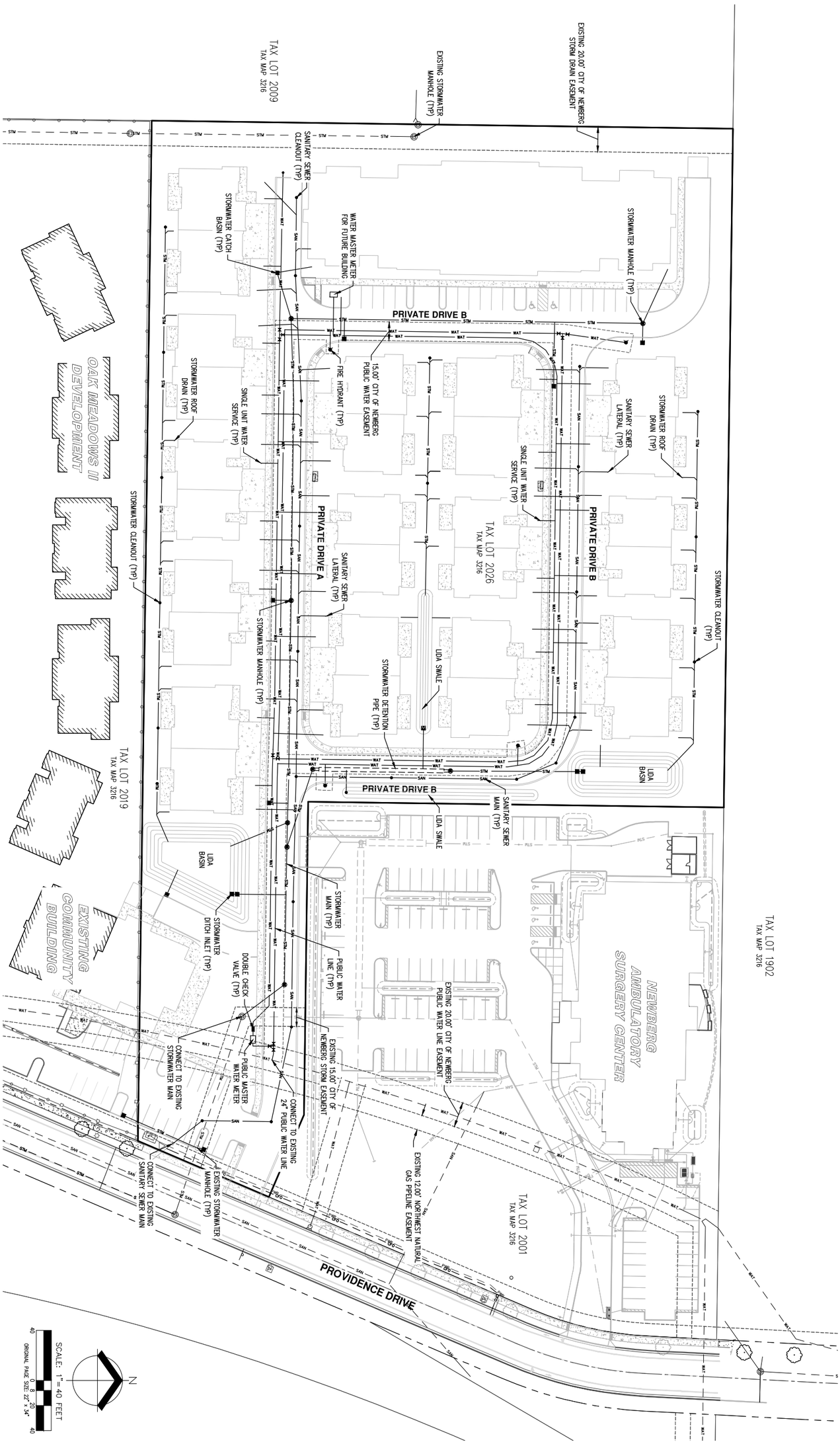
RENEWS: JUNE 30, 2021

JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SCR

P07



PRELIMINARY COMPOSITE UTILITY PLAN
FRC SPRINGBROOK MEADOWS II
MJG DEVELOPMENT, INC.
NEWBERG, OREGON

P08

REGISTERED PROFESSIONAL ENGINEER — OREGON — RICHARD GREGORY — RENEWAL: JUNE 30, 2021

PRELIMINARY NOT FOR CONSTRUCTION

JOB NUMBER:	5680
DATE:	03/20/2020
DESIGNED BY:	DRR
DRAWN BY:	DRR
CHECKED BY:	SSR

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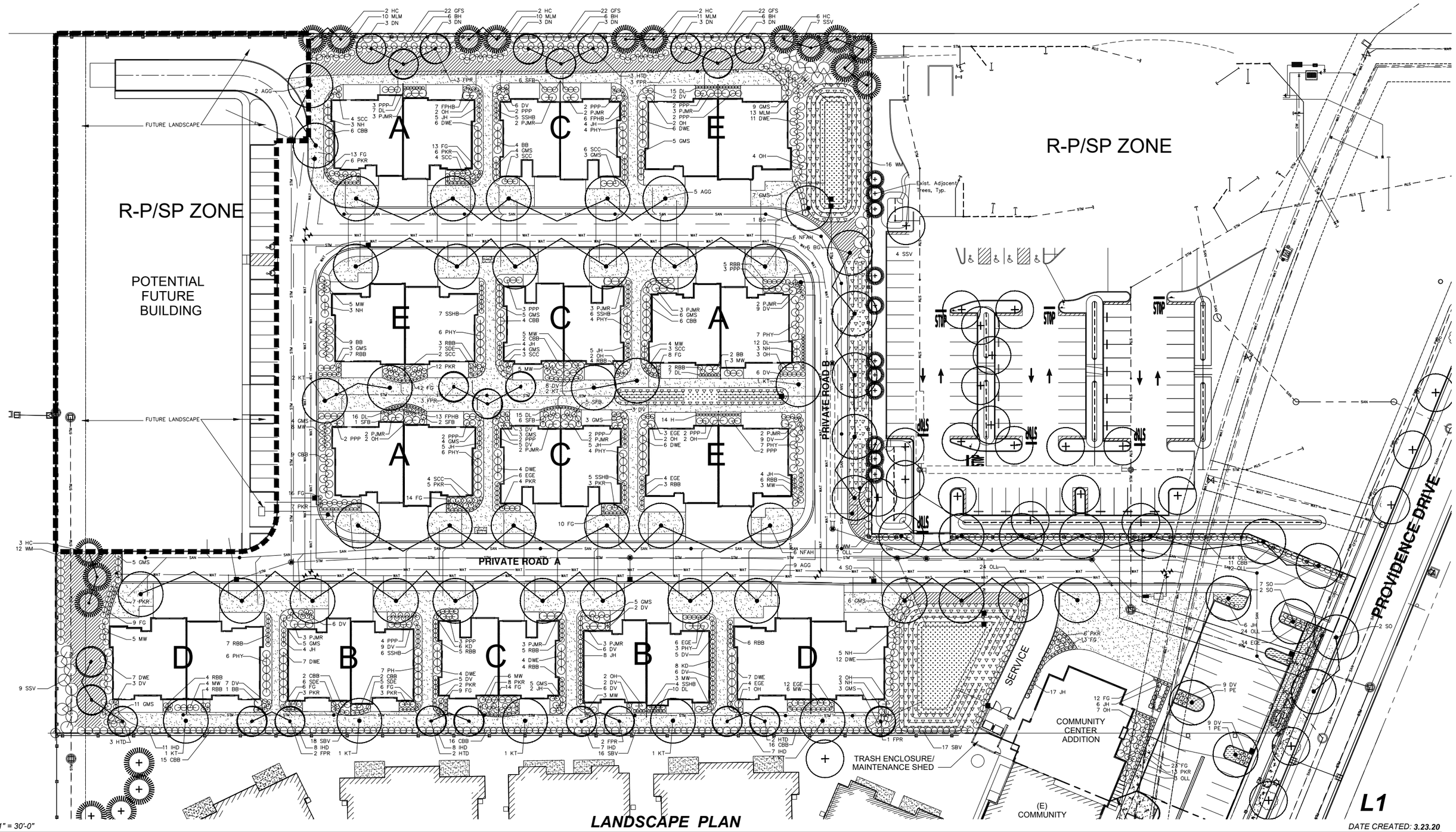

SCALE: 1" = 30'-0"

LANDSCAPE PLAN

L1

DATE CREATED: 3.23.20

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Newberg, Oregon 97132
www.friendsview.org

FRC: Springbook Meadows II
4061 Hayes Street
Newberg, OR 97132

REGISTERED 74 PRELIMINARY CHRISTOPHER J. FRESHLEY OREGON LANDSCAPE ARCHITECT

CHRISTOPHER FRESHLEY
LANDSCAPE ARCHITECT
3944 S.W. 36TH PLACE * PORTLAND, OREGON 97221 * 503/222-9681
(E-MAIL): CHRIS@FRESHLEYLANDSCAPEARCHITECT.COM

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720 NW Davis Suite 300 Portland OR 97209
PH: 503.211.1121 FX: 503.211.2077 www.lrsarchitects.com

LANDSCAPE LEGEND

SYMBOL	COMMON NAME BOTANICAL NAME	SIZE/COND.	SPACING
TREES			
AGG	Autumn Gold Gingko Gingko bilob 'Autmn Gold'	2" Cal.	40' o.c.
BG	Black Gum Nyssa sylvatica	2" Cal.	40' o.c.
FPR	Forest Pansy Redbud Cercis canadensis 'Forest Pansy'	2" Cal.	25' o.c.
HC	Hogan Cedar Thuja plicata 'Hogan'	7'-8'	20' o.c.
HTD	Heart Throb Dogwood Cornus kousa 'Schmred'	2" Cal.	25' o.c.
KT	Katsura Tree Cercidiphyllum japonicum	2" Cal.	as shown
NFAH	Native Flame American Hornbeam Carpinus caroliniana 'JFS-KW6'	2" Cal.	40' o.c.
PE	Pioneer Elm Ulmus 'Pioneer'	2" Cal.	as shown
SO	Shummard Oak Quercus shummardii	2" Cal.	40' o.c.
SHRUBS			
BB	Beautyberry Calicarpa dichotoma 'Early4 Amethyst'	5 Gal.	5' o.c.
BH	Blue Girl/Boy Holly Ilex x meserveae 'Blue Girl (90%) & Blue Boy (10%)	5 Gal.	4' o.c.
BLH	Blue Lacecap Hydrangea Hydrangea macrophylla 'Blue Lacecap'	3 Gal.	5' o.c.
CBB	Cherry Bomb Barberry Berberis thunbergii 'Monomb'	5 Gal.	5' o.c.
DN	Diablo Ninebark Physocarpus opulifolius 'Monlo'	5 Gal.	6' o.c.
DWE	Dwarf Winged Euonymus Euonymus alatus 'Compacta'	5 Gal.	5' o.c.
DV	David Viburnum Viburnum davidii	3 Gal.	3' o.c.
EGE	Emeral Gaiety Euonymus Euonymus fortunei 'Emerald Gaiety'	5 Gal.	3' o.c.
GFS	Goldflame Spirea Spirea bumalda 'Goldflame'	3 Gal.	4' o.c.
GMS	Goldmound Spirea Spirea bumalda 'Goldmound'	3 Gal.	4' o.c.
FPHB	Firepower Heavenly Bamboo Nandina domestica 'Firepower'	3 Gal.	2' o.c.
IHD	Ivory Halo Dogwood Cornus alba 'Balhalo'	3 Gal.	5' o.c.
JH	Japanese Holly Ilex crenata 'Convexa'	18"-24"	3' o.c.
KD	Kelsey Dogwood Cornus sericea 'Kelseyii'	3 Gal.	3' o.c.
MW	Minuet Weigelia Weigelia florida 'Minuet'	3 Gal.	4' o.c.
NH	Nordic Holly Ilex glabra 'Chamzin'	5 Gal.	5' o.c.
OH	Oakleaf Hydrangea Hydrangea quercifolia 'Snow Queen'	3 Gal.	5' o.c.
OLL	Otto Luyken Laurel Prunus laurocerasus 'Otto Luyken'	24"-30"	4' o.c.
PHY	Pistachio Hydrangea Hydrangea macrophylla 'Horwack'	3 Gal.	5' o.c.
PJM	PJM Rhododendron Rhododendron 'PJM'	24"-30"	5' o.c.
PKR	Pink Knockout Rose Rosa 'Radcon' Pink	2 Gal.	3.5' o.c.
PPP	Passion Party Pieris Pieris japonica 'Passion Party'	5 Gal.	4' o.c.
RBB	Royal Burgundy Barberry Berberis thunbergii 'Royal Burgundy'	3 Gal.	3' o.c.
SBV	Spring Bouquet Viburnum Viburnum tinus 'Compactum'	24"-30"	4' o.c.
SDE	Sunny Delight Euonymus Euonymus japonicus var. microphyllus 'Moncliff'	24"-30"	4' o.c.
SCC	Sixteen Candles Clethra Clethra alnifolia 'Sixteen Candles'	3 Gal.	3.5' o.c.
SFB	Scarletta Fetterbush Leucothoe fontanesiana 'Scarletta'	3 Gal.	3.5' o.c.
SSHB	Heavenly Bamboo Nandina domestica 'Sienna Sunrise'	3 Gal.	3' o.c.
SSV	Summer Snowflake Virunum Viburnum plicatum tomentosum 'Summer Snowflake'	2 Gal.	3' o.c.
WM	Wax Myrtle Myrica californica	24"-30"	4' o.c.
GRASSES/PERENNIALS			
DL	Day Lily Hemerocallis 'Stella de Oro'	1 Gal.	2' o.c.
FG	Fountain Grass Pennisetum alopecuroides 'Hameln'	1 Gal.	2.5' o.c.
H	Hosta Hosta Variegata"	1 Gal.	2' o.c.
MLM	Morning Light Miscanthus Miscanthus sinensis 'Morning Light'	1 Gal.	4' o.c.
GROUNDCOVER			
	Kinnikinnick Arctostapylos uva-ursi 'Emerald Carpet'	1 Gal.	24" o.c.
	Bearberry Cotoneaster Cotoneaster dammeri	1 Gal.	30" o.c.
	Lawn		

WATER QUALITY FACILITY LEGEND

POND AND/OR SWALE TREATMENT AREA

Soft Rush Juncus effusus	4" Pot	18" o.c.
Slough Sedge Carex obnupta	4" Pot	18" o.c.
Pacific Rush Juncus effusus var. gracillis	4" Pot	18" o.c.
Spreading Rush Juncus patens	4" Pot	18" o.c.

NOTE: Plant in equal quantities in randam layout.

SIDE SLOPE/DETENTION AREA ABOVE TREATMENT AREA

NOTE: Trees to be planted in equal quantities at .01 x the area. Shrubs to be planted in equal quantities at .05 x the area. Planting densities comply with City of Newberg standards.

TREES	
Bitter Cherry Prunus emarginata	3 Gal.
Quaking Aspen Popilus tremuloides	3 Gal.
Douglas Hawthorne Crataegus douglasii	3 Gal.
Cascara Rhamnus	3 Gal.
Oregon Ash Fraxinus latifolia	3 Gal.
Red Alder Alnus rubra	3 Gal.
SHRUBS	
Oregon Grape Mahonia aquifoliu,	2 Gal.
Mock Orange Philadephus lewsii	2 Gal.
Kelsey Dogwood Cornus sericea 'Kelseyii'	2 Gal.
Pacific Ninebark Philadelphus opulifolius	2 Gal.
Indian Plum Fraxinus latifolia	2 Gal.
Douglas Spirea Spirea douglasii	2 Gal.
Red Flowering Current Ribes sangineum	2 Gal.
Snowberry Symphoriocarpus albus	2 Gal.

GENERAL NOTES:

1. Irrigation to be provided by a fully automatic underground system, pop up sprinkler heads in lawn areas, drip irrigation in planting beds. Plans to be submitted at building permit.

GENERAL NOTES:

1. Landscape Plan to comply with all City of Newberg Landsape Code requirements and any project Conditions of Approval.
2. Plant spacing as per legend above except where noted otherwise on plans.
3. Provide specified root barriers whenever edge of root ball is within 5' of of sidewalk, curb and retaining walls. Install as specified and detailed. Do not undermine sidewalk, curb or utilities.
4. Submit representative sample of all proposed plant material for use on project for review/approval by architect prior to installation. Provide samples at project site.
5. Layout and stake all landscape tree and shrub plantings for review/approval by architect prior to planting.
6. Receive approval of sub grade by architect prior to topsoil placement.
7. Deposit imported Topsoil as follows: 18" in all landscape planting beds or more as required to meet finish civil grades, 6" in all lawn areas or as required to meet finish civil grades.
8. Receive approval of final finish landscape grade prior to any planting.
9. Receive approval of installed irrigation system by architect prior to any planting.
10. Provide jute erosion control netting on all slopes 3:1 and greater. See civil grading plans.
11. When trees are planted as a group, trees in group must be consistent in size and form.
12. Sheared conifer trees not acceptable.

SCALE: NTS

LANDSCAPE PLAN LEGEND

L2

DATE CREATED: 3.23.20

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www.friendsview.org

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Suite 300 FX: 503.211.2077
Portland OR 97209 www.lrsarchitects.com

I ZONE

SITE SUMMARY:

BASE ZONING DISTRICT:
- R-P (RESIDENTIAL PROFESSIONAL)

ZONING SUBDISTRICT:
- SP (SPRINGBROOK OAKS, SPECIFIC PLAN, AREA F-1)

LAND USE 15.305:
- DWELLING 2 FAMILY (DUPLEX),
- DWELLING MULTIFAMILY

SITE AREA:
- +/-6.7 ACRES (TAX LOT 2026)

REDEVELOPED SITE AREA (TAX LOT 2019):
- 5,775 SF

DENSITY 15.346:
- MAX. DENSITY PER ACRE: 21.8
- 21.8 DU/AC X 6.67 AC = 145 MAXIMUM UNITS
- PROPOSED: 28 UNITS
- POTENTIAL FUTURE DEVELOPMENT: 38+/- ADDITIONAL UNITS
- +/- 66 TOTAL UNITS

NEW BUILDING AREA (TAX LOT 2026):

- BUILDING 1:	4,562 SF	
- BUILDING 2:	3,884 SF	
- BUILDING 3:	4,491 SF	
- BUILDING 4:	4,491 SF	
- BUILDING 5:	3,884 SF	
- BUILDING 6:	4,562 SF	
- BUILDING 7:	4,562 SF	
- BUILDING 8:	3,884 SF	
- BUILDING 9:	4,491 SF	
- BUILDING 10:	4,916 SF	
- BUILDING 11:	4,229 SF	
- BUILDING 12:	3,884 SF	
- BUILDING 13:	4,229 SF	
- BUILDING 14:	4,916 SF	
- COMMUNITY BUILDING	2,294 SF	(PORTION IN TAX LOT 2026)
- TRASH ENCLOSURE:	462 SF	
TOTAL SF:	63,742 SF	

NEW BUILDING AREA (TAX LOT 2019):

- COMMUNITY BUILDING	2,465 SF
	63,742 SF
	+ 2,465 SF
TOTAL NEW BUILDING AREA:	**66,207SF**

NEW LOT COVERAGE (TAX LOT 2026) 15.405:
- MAXIMUM BUILDING COVERAGE: 50%
- ACTUAL BUILDING COVERAGE: 66,207 SF (22.9%)

- MAXIMUM PARKING COVERAGE: 30%
- ACTUAL PARKING COVERAGE: 7,150 SF (2.4%) INCLUDING FUTURE PARKING AREA

- MAXIMUM COMBINED BUILDING AND PARKING COVERAGE: 60%
- ACTUAL COMBINED COVERAGE: 25.3%

LANDSCAPING 15.420:
- MINIMUM LANDSCAPING: 30% (Can include pervious areas that do not include landscaping)
- ACTUAL LANDSCAPING: 38%

OPEN SPACE 15.420:
- REQUIRED OUTDOOR AREA - INDIVIDUAL OR SHARED: 200 SF/UNIT
  200 SF X 28 UNITS = 5,600 SF REQUIRED

- PATIOS PROVIDED:	12,000 SF	
- OUTDOOR AREA 1:	6,350 SF	
- OUTDOOR AREA 2:	4,600 SF	
- OUTDOOR AREA SITTING:	1,420 SF	
- TOTAL:	24,370 SF	PROVIDED

PARKING REQUIRED 15.440:
- DEDICATED: 1.5 SPACES/ 2 BED UNIT = 42
- VISITOR: 0.2 SPACES/ UNIT = 6
- UNASSIGNED - 15% OF REQUIRED MINIMUM = .15 x 42 = 7
- TOTAL REQUIRED = 55

PARKING PROVIDED:
- DEDICATED (INCLUDING GARAGES): 56
- DEDICATED (ON PRIVATE DRIVE): 46
- VISITOR: 7
- UNASSIGNED - 7
- TOTAL PROVIDED = 118

BIKE PARKING 15.440:
- REQUIRED: 1 SPACE/ 4 UNITS = 7
- PROVIDED = 8

N
Plan North

SCALE: 1" = 50'-0"

ARCHITECTURAL SITE PLAN

DATE CREATED: 07/16/18

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ELECTRICAL LEGEND

- STANDARD DUPLEX OUTLET
- GFCI WP — GFCI & WATER PROOF DUPLEX OUTLET
- SPECIAL PURPOSE OUTLET
- FLOOR OUTLET
- SWITCH
- TWO-WAY SWITCH
- THREE-WAY SWITCH
- SWITCH W/ BUILT-IN DIMMER
- EXHAUST FAN TIMER
- BELL
- THERMOSTAT
- TELEVISION
- EP — ELECTRICAL PANEL
- MP — MEDIA PANEL
- SA — COMBINATION SMOKE AND CARBON MONOXIDE ALARM
- EXHAUST FAN

LIGHTING LEGEND

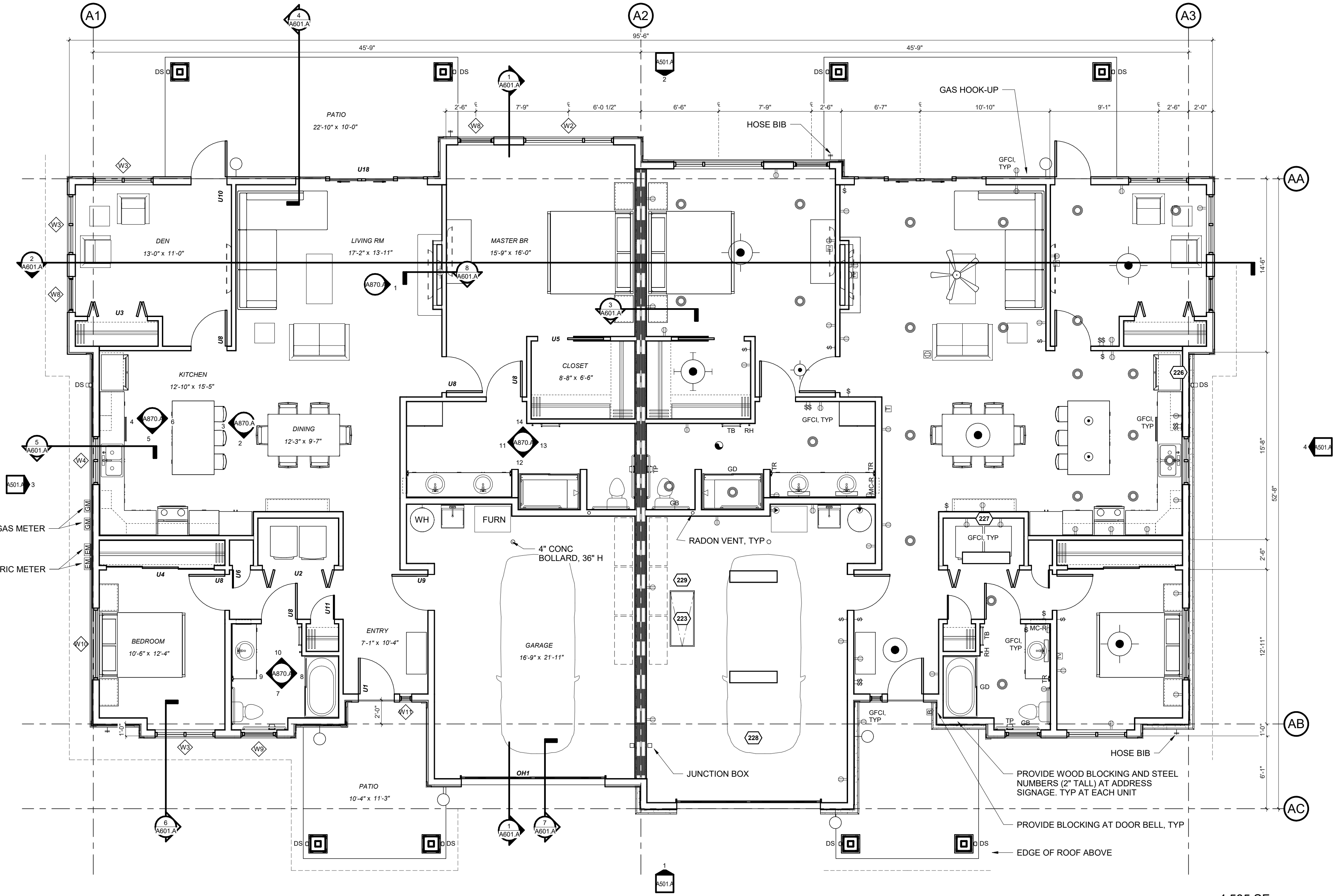
- MINI PENDANT LIGHT
- RECESSED CAN LIGHT
- WALL MOUNTED VANITY LIGHT
- WALL MOUNTED LIGHT
- PENDANT LIGHT
- SEMI FLUSH LIGHT
- LINEAR SURFACE MOUNTED LIGHT
- CEILING FAN

M/E/P SYSTEMS

A. M/E/P SYSTEMS ARE DESIGN BUILD AND DEFERRED SUBMITTAL
B. SYSTEM DESIGNS, PERMITTING, AND CONSTRUCTION ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS
C. ALL SYSTEMS TO COMPLY WITH 2017 IRC AND RESPECTIVE DISCIPLINES RESIDENTIAL CODES
D. SEE M/E/P SPECIFICATION SHEETS FOR COORDINATION AND SYSTEM REQUIREMENTS
E. SMOKE ALARMS SHALL BE DESIGNED, PERMITTED, AND INSTALLED IN ACCORDANCE WITH UL 217
F. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL MEET UL 217, UL 2034, UL 2075, AND UL 268
G. ALARMS TO COMPLY WITH NFPA 72 AND IRC SECTION R314 AND R315

WINDOWS

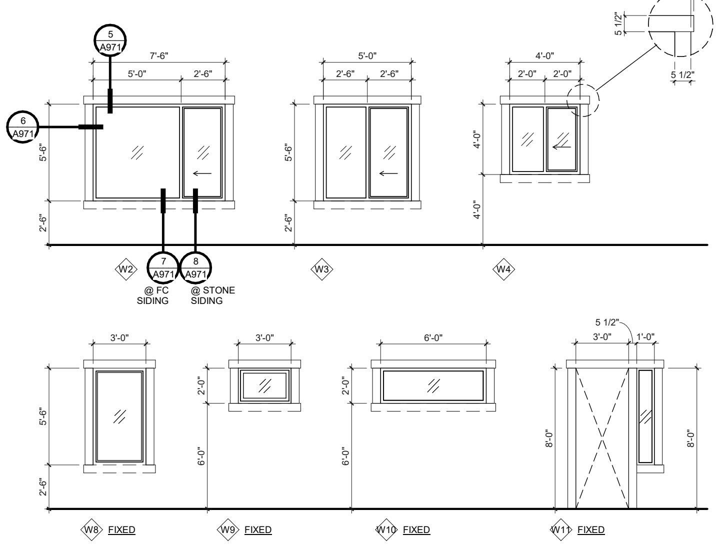
A. THE WINDOW MANUFACTURER SHALL MEET SEISMIC AND WIND CRITERIA. THE ATTACHMENT OF THESE ELEMENTS, IN ADDITION TO THE ATTACHMENT OF NON-STRUCTURAL ITEMS, SHALL MEET THE CALCULATED EARTHQUAKE AND WIND LOADS. CALCULATIONS AND SUBMITTAL MAY BE REQUIRED BY THE BUILDING DEPARTMENT OR BUILDING INSPECTOR.
B. PROVIDE INSECT SCREENS AT ALL OPERABLE WINDOWS.
C. GLAZING IN LOCATIONS SUBJECT TO HUMAN IMPACT SUCH AS PANES IN DOORS, GLAZING WITHIN 24" OF A DOOR OPENING, GLAZING WITHIN 18" OF THE FLOOR (AND IS OVER 9 SQUARE FEET PER PANEL) SHALL BE TEMPERED OR LAMINATED SAFETY GLASS.



1. UNIT A FLOOR PLAN

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

4,585 SF



NOTE: APPLY BOTTOM TRIM WHERE NOTED ON EXTERIOR ELEVATIONS, TYP

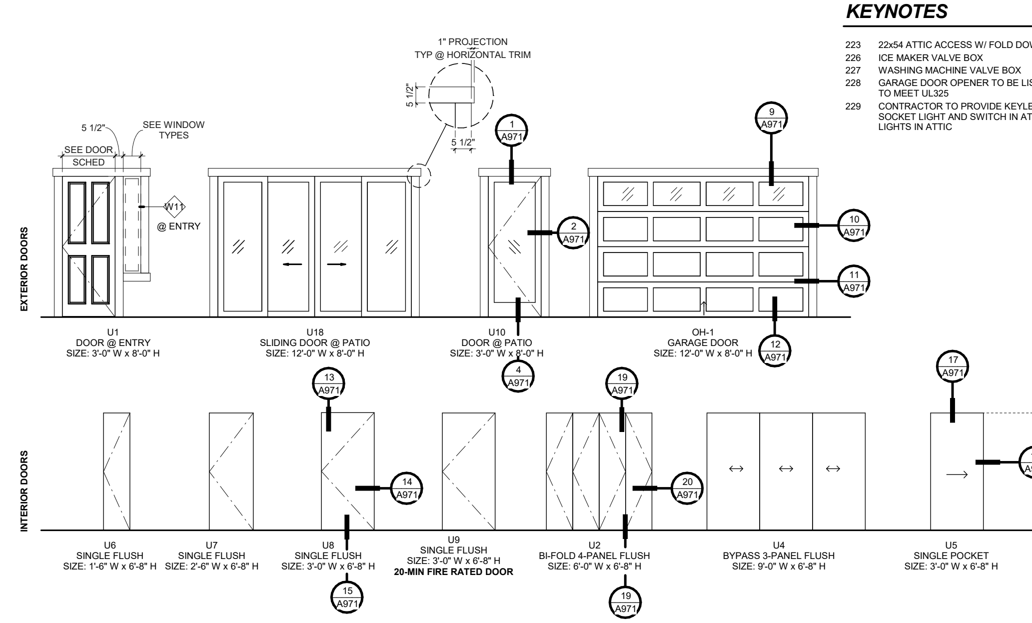
WINDOW TYPES - UNIT A

GENERAL NOTES (DOOR)

A. ALL DOORS SHALL MEET ALL APPLICABLE FEDERAL AND STATE ACCESSIBILITY REQUIREMENTS. ALL DOORS SHALL HAVE A MINIMUM 32" CLEAR OPENING. ALL DOORS SHALL HAVE A MAXIMUM 1/2" THRESHOLD HEIGHT UNLESS SHOWN OTHERWISE IN APPLICABLE DETAILS WITH COMPLIANT RAMP THRESHOLDS.
B. FOR DOORS WITH 60 OR 90 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 100 SQUARE INCHES AND SHALL NOT EXCEED THIS SIZE. WIRE GLASS IS NOT ALLOWED IN DOORS SUBJECT TO HUMAN IMPACT PER IBC CHAPTER 24.
C. FIRE-RESISTIVE RATED DOORS LIMITED TO MAXIMUM OF 100 SQ. IN. DIMENSION FOR GLASS, IT SHALL BE NO MORE THAN 4" WIDE.
D. FOR DOORS WITH 45 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 1,296 SQUARE INCHES PER LITE IN WOOD AND PLASTIC-FACED COMPOSITE OR HOLLOW METAL DOORS.
E. IN ELECTRICAL ROOMS WITH EQUIPMENT 1200 AMPS OR GREATER WITH OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES; DOORS MUST SWING IN THE DIRECTION OF EGRESS AND BE EQUIPPED WITH PANIC HARDWARE, PER ***XXX CODE IBC 2012 SECTION 1008.1.10***
F. MAXIMUM THRESHOLD TO BE 1/2" AT BARRIER FREE UNITS AND ALL PUBLIC SPACES.
G. ALL REQUIRED FIRE DOORS SHALL BEAR LABEL FROM A RECOGNIZED AGENCY. TRANSMITTED TEMPERATURE END POINT TO BE 450°F FOR DOORS TO STAIRS FROM INTERIOR OF BUILDING. FIRE DOORS SHALL BE SELF-CLOSING AND SELF-LATCHING.
H. INSTALL DOORS AND WINDOWS PER MINIMUM AAMA 2400-02.
I. PROVIDE SAFETY GLAZING AT THE FOLLOWING LOCATIONS PER THE ***XXX***

CODE IBC 2012 SECTION 2406.3:

a. GLAZING IN SWINGING DOORS EXCEPT JALOUSIES.
b. GLAZING IN FIXED & SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANEL IN SLIDING & BIFOLD CLOSET DOOR ASSEMBLIES.
c. GLAZING IN STORM DOORS
d. GLAZING IN UNFRAMED SWINGING DOORS.
e. GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE A STANDING SURFACE.
f. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE.
g. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL WHICH MEETS ALL OF THE FOLLOWING CONDITIONS:
   1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SF;
   2. EXPOSED BOTTOM EDGE LESS THAN 18" ABOVE THE FLOOR;
   3. EXPOSED TOP EDGE GREATER THAN 36" ABOVE THE FLOOR;
   4. ONE OR MORE WALKING SURFACE(S) WITHIN 36" HORIZONTALLY OF THE PLANE OF THE GLAZING.
h. GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36" HORIZONTALLY OF A WALKING SURFACE; WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.
i. GLAZING ADJACENT TO STAIRWAYS WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE NOSE OF THE TREAD.
j. ALL DOOR SURFACES, FRAMES AND TRIM TO BE PAINTED (COLOR TBD) UNLESS NOTED AS TRANSPARENT FINISH (TS) OR PRE FINISHED (PF).
k. REFER TO PROJECT MANUAL FOR GLAZING TYPE
l. ALL FIRE/SMOKE DOORS TO BE SELF CLOSING & LATCHING



DOOR TYPES - UNIT A

GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO START OF WORK.
B. ALL DIMENSIONS ARE TO FACE OF FRAMING UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/ FACE OF FRAMING.DIMENSIONS INDICATED AS "CLEAR MINIMUM" ARE TO FACE OF FINISH.
C. SEE Ai SHEET FOR STANDARD FIXTURE MOUNTING REQUIREMENTS UNO.
D. SITE INFORMATION SHOWN FOR REFERENCE ONLY. SEE SITE, CIVIL AND LANDSCAPE PLANS.
E. SEE **COVER SHEET** FOR CODE COMPLIANCE INFORMATION
F. SEE LANDSCAPE DRAWINGS FOR SURROUNDING DESIGN & DETAILS.
G. ALL DIMENSIONS ARE TO FACE OF STUD UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/FACE OF FRAMING. DIMENSIONS INDICATED AS "CLR MIN" ARE TO FACE OF FINISH.
H. ALL DOOR OPENINGS PERPENDICULAR TO A WALL ARE 5" TO THE WALL UNO.
I. WHERE EXTRA SHEATHING LAYERS DO NOT CONTINUE ACROSS THE ENTIRE FACE OF A WALL, ADD ADDITIONAL SHEATHING TO FLUSH OUT THE WALL SURFACE.
J. SEE **A150** FOR ASSEMBLY TYPES & FOUNDATION DETAILS.
K. SEE **A800** SERIES FOR KITCHEN & BATHROOM ELEVATIONS
L. **RAIN DRAINS:** CONTRACTOR TO PROVIDE COMPLETE GUTTER & DOWNSPOUTS. CONNECT DOWNSPOUTS TO RAIN DRAIN SYSTEM. COORDINATE W/ CIVIL DRAWINGS FOR CONNECTION POINTS AND PIPE SIZES

WALL TYPES

SEE **A100** CODE SERIES CODE ANALYSIS PLANS AND WALL TYPE SHEETS FOR ADDITIONAL INFORMATION.

EXTERIOR WALLS:
EXTERIOR WALL TYPES VARY. SEE EXTERIOR ELEVATIONS AND WALL SECTIONS FOR LOCATIONS, UNO.

- TYPICAL WALL W/FIBER CEMENT FLAT PANEL SIDING SYSTEM IS TYPE 16 T / - E
- TYPICAL WALL W/FIBER CEMENT LAP SIDING SYSTEM IS TYPE 26 T / - E
- TYPICAL WALL W/SIMULATED STONE SYSTEM IS TYPE 36 T / - E

INTERIOR WALLS:
- TYPICAL INTERIOR WALL IS TYPE A4 A / N C
- TYPICAL SHARED UNIT WALL IS TYPE B4 A / 1 -

WALLS WITH WOOD SHEATHING:
- ALL EXTERIOR WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO - 6 T / - E
- ALL INTERIOR LIVING UNIT WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO A4 A / 1 S

WALL TYPES LEGEND

SEE **A100** CODE SERIES SHEETS FOR ADDITIONAL INFORMATION

1-HOUR FIRE BARRIER OR FIRE PARTITION: OR IN COMBINATION WITH OTHER IBC WALL TYPE(S) (WHERE OCCURS). AND CONFORMING TO THE MOST STRINGENT REQUIREMENTS OF EACH.

BATHROOM LEGEND

- RH — ROBE HOOK
- TR — TOWEL RING
- TP — TOILET PAPER HOLDER
- MC-R — RECESSED MEDICINE CABINET
- TB — TOWEL BAR
- GB-x — GRAB BAR, AS SPECIFIED. PROVIDE SOLID BLOCKING. NUMBER SPECIFIES LENGTH IN INCHES
- GD — SLIDING GLASS SHOWER DOOR

KEYNOTES

223	22x54 ATTIC ACCESS W/ FOLD DOWN STAIRS
226	ICE MAKER VALVE BOX
227	WASHING MACHINE VALVE BOX
228	GARAGE DOOR OPENER TO BE LISTED AND LABELED TO MEET UL325
229	CONTRACTOR TO PROVIDE KEYLESS PORCELAIN SOCKET LIGHT AND SWITCH IN ATTIC. PROVIDE 2 LIGHTS IN ATTIC

LRS ARCHITECTS
720 NW Davis Suite 300 Portland OR 97209
503.221.1121 503.221.2077 www.lrsarchitects.com

CONSULTANT:

PROJECT NUMBER: 218184

FRC: Springbrook Meadows II

4061 Hayes Street
Newberg, OR 97132

Friendsview RETIREMENT COMMUNITY

SHEET TITLE:

FLOOR PLAN - UNIT A

SHEET:

A201.A

100% DD SET
JANUARY 31, 2020

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ELECTRICAL LEGEND

- STANDARD DUPLEX OUTLET
- GFCI WP — GFCI & WATER PROOF DUPLEX OUTLET
- SPECIAL PURPOSE OUTLET
- FLOOR OUTLET
- SWITCH
- ^{2} — TWO-WAY SWITCH
- ^{3} — THREE-WAY SWITCH
- ^{D} — SWITCH W/ BUILT-IN DIMMER
- EXHAUST FAN TIMER
- BELL
- THERMOSTAT
- TV — TELEVISION
- EP — ELECTRICAL PANEL
- MP — MEDIA PANEL
- SA — COMBINATION SMOKE AND CARBON MONOXIDE ALARM
- EXHAUST FAN

LIGHTING LEGEND

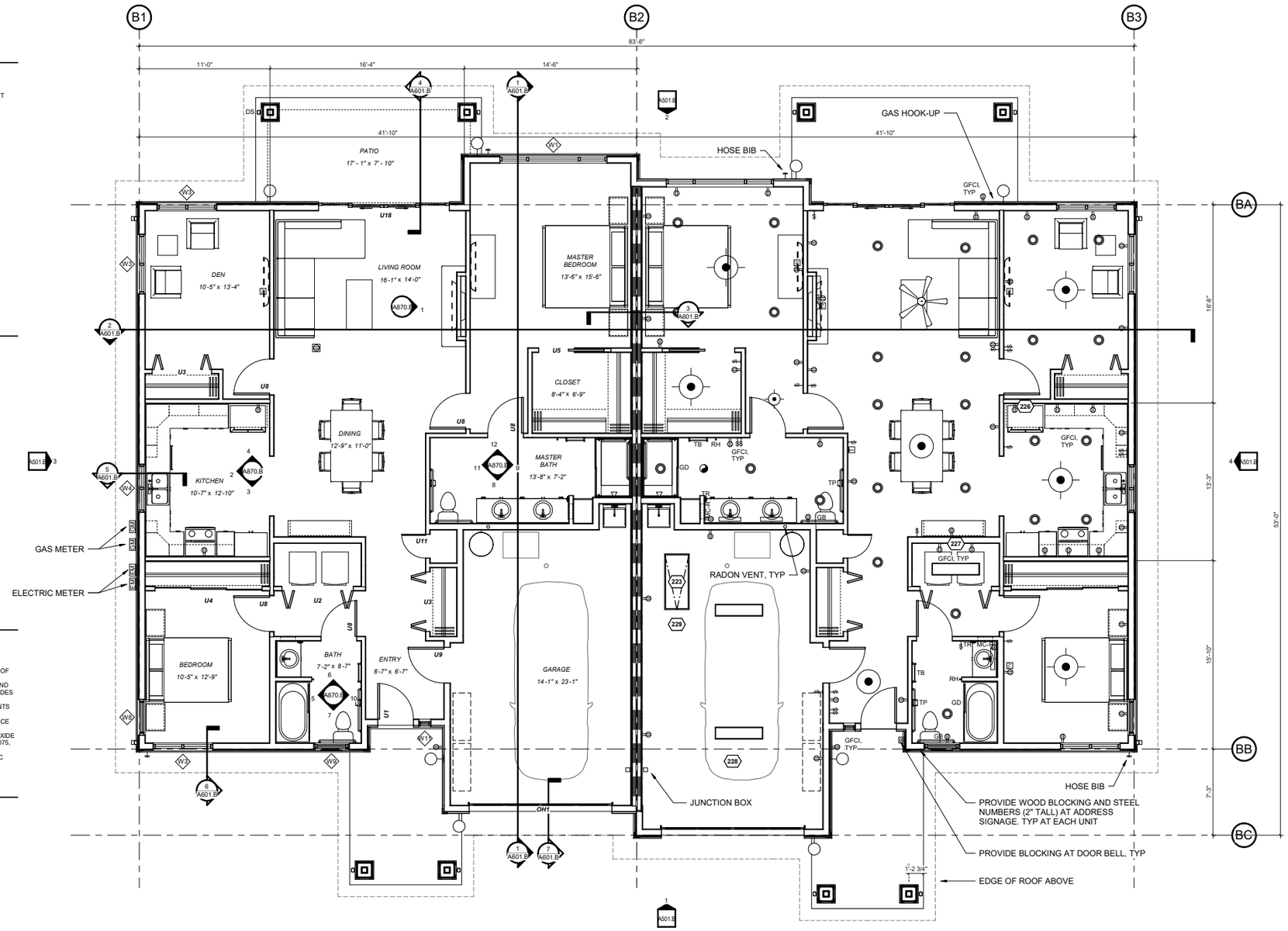
- MINI PENDANT LIGHT
- RECESSED CAN LIGHT
- WALL MOUNTED VANITY LIGHT
- WALL MOUNTED LIGHT
- PENDANT LIGHT
- SEMI FLUSH LIGHT
- LINEAR SURFACE MOUNTED LIGHT
- CEILING FAN

M/E/P SYSTEMS

A. M/E/P SYSTEMS ARE DESIGN BUILD AND DEFERRED SUBMITTAL
B. SYSTEM DESIGNS, PERMITTING, AND CONSTRUCTION ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS.
C. ALL SYSTEMS TO COMPLY WITH 2017 IRC AND RESPECTIVE DISCIPLINES RESIDENTIAL CODES
D. SEE M/E/P SPECIFICATION SHEETS FOR COORDINATION AND SYSTEM REQUIREMENTS
E. SMOKE ALARMS SHALL BE DESIGNED, PERMITTED, AND INSTALLED IN ACCORDANCE WITH UL 217
F. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL MEET UL 217, UL 2034, UL 2075, AND UL 268
G. ALARMS TO COMPLY WITH NFPA 72 AND IRC SECTION R314 AND R315

WINDOWS

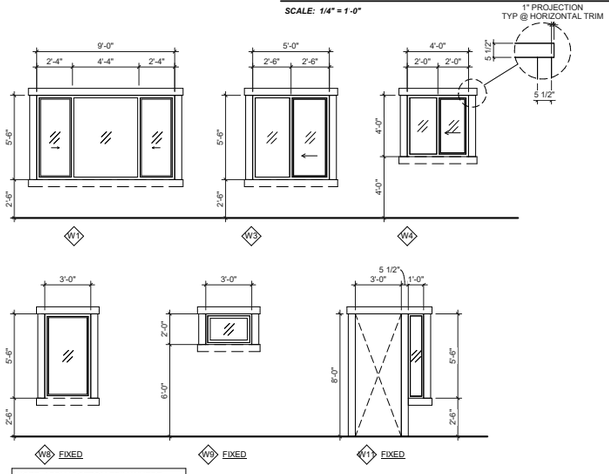
A. THE WINDOW MANUFACTURER SHALL MEET SEISMIC AND WIND CRITERIA. THE ATTACHMENT OF THESE ELEMENTS, IN ADDITION TO THE ATTACHMENT OF NON-STRUCTURAL ITEMS, SHALL MEET THE CALCULATED EARTHQUAKE AND WIND LOADS. CALCULATIONS AND SUBMITTAL MAY BE REQUIRED BY THE BUILDING DEPARTMENT OR BUILDING INSPECTOR.
B. PROVIDE INSECT SCREENS AT ALL OPERABLE WINDOWS.
C. GLAZING IN LOCATIONS SUBJECT TO HUMAN IMPACT SUCH AS PANES IN DOORS, GLAZING WITHIN 24" OF A DOOR OPENING, GLAZING WITHIN 18" OF THE FLOOR (AND IS OVER 9 SQUARE FEET PER PANEL) SHALL BE TEMPERED OR LAMINATED SAFETY GLASS.



1. UNIT B FLOOR PLAN

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

4,141 SF

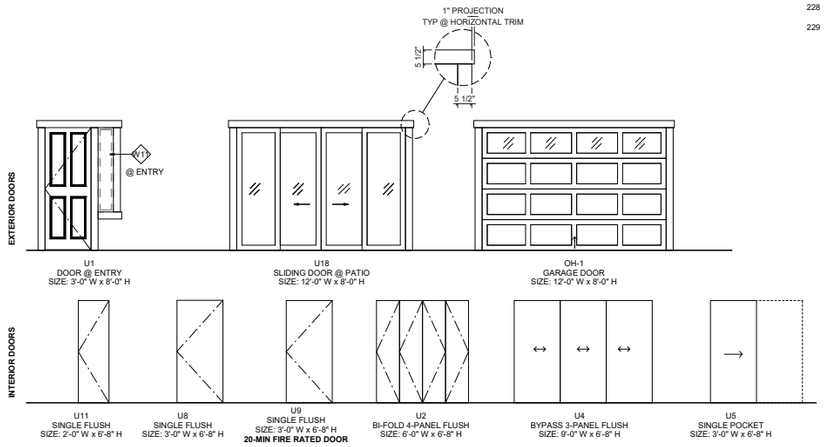


WINDOW TYPES - UNIT B

GENERAL NOTES (DOOR)

A. ALL DOORS SHALL MEET ALL APPLICABLE FEDERAL AND STATE ACCESSIBILITY REQUIREMENTS. ALL DOORS SHALL HAVE A MINIMUM 32" CLEAR OPENING. ALL DOORS SHALL HAVE A MAXIMUM 1/2" THRESHOLD HEIGHT UNLESS SHOWN OTHERWISE IN APPLICABLE DETAILS WITH COMPLIANT RAMP THRESHOLDS.
B. FOR DOORS WITH 60 OR 90 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 100 SQUARE INCHES AND SHALL NOT EXCEED THIS SIZE. WIRE GLASS IS NOT ALLOWED IN DOORS SUBJECT TO HUMAN IMPACT PER IBC CHAPTER 24.
C. FIRE-RESISTIVE RATED DOORS LIMITED TO MAXIMUM OF 100 SQ. IN. DIMENSION FOR GLASS, IT SHALL BE NO MORE THAN 4" WIDE.
D. FOR DOORS WITH 45 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 1,296 SQUARE INCHES PER LITE IN WOOD AND PLASTIC-FACED COMPOSITE OR HOLLOW METAL DOORS.
E. IN ELECTRICAL ROOMS WITH EQUIPMENT 1200 AMPS OR GREATER WITH OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES; DOORS MUST SWING IN THE DIRECTION OF EGRESS AND BE EQUIPPED WITH PANIC HARDWARE, PER ***XXX CODE IBC 2012 SECTION 1008.1.10***
F. MAXIMUM THRESHOLD TO BE 1/2" AT BARRIER FREE UNITS AND ALL PUBLIC SPACES.
G. ALL REQUIRED FIRE DOORS SHALL BEAR LABEL FROM A RECOGNIZED AGENCY. TRANSMITTED TEMPERATURE END POINT TO BE 450°F FOR DOORS TO STAIRS FROM INTERIOR OF BUILDING. FIRE DOORS SHALL BE SELF-CLOSING AND SELF-LATCHING.
H. INSTALL DOORS AND WINDOWS PER MINIMUM AAMA 2400-02.
I. PROVIDE SAFETY GLAZING AT THE FOLLOWING LOCATIONS PER THE ***XXX***

CODE IBC 2012 SECTION 2406.3:
a. GLAZING IN SWINGING DOORS EXCEPT JALOUSIES.
b. GLAZING IN FIXED & SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANEL IN SLIDING & BIFOLD CLOSET DOOR ASSEMBLIES.
c. GLAZING IN STORM DOORS
d. GLAZING IN UNFRAMED SWINGING DOORS.
e. GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE A STANDING SURFACE.
f. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE.
g. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL WHICH MEETS ALL OF THE FOLLOWING CONDITIONS:
1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SF;
2. EXPOSED BOTTOM EDGE LESS THAN 18" ABOVE THE FLOOR;
3. EXPOSED TOP EDGE GREATER THAN 36" ABOVE THE FLOOR;
4. ONE OR MORE WALKING SURFACE(S) WITHIN 36" HORIZONTALLY OF THE PLANE OF THE GLAZING.
h. GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36" HORIZONTALLY OF A WALKING SURFACE; WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.
i. GLAZING ADJACENT TO STAIRWAYS WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE NOSE OF THE TREAD.
j. ALL DOOR SURFACES, FRAMES AND TRIM TO BE PAINTED (COLOR TBD) UNLESS NOTED AS TRANSPARENT FINISH (TS) OR PRE FINISHED (PF).
k. REFER TO PROJECT MANUAL FOR GLAZING TYPE
l. ALL FIRE/SMOKE DOORS TO BE SELF CLOSING & LATCHING



DOOR TYPES - UNIT B

GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO START OF WORK.
B. ALL DIMENSIONS ARE TO FACE OF FRAMING UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/ FACE OF FRAMING.DIMENSIONS INDICATED AS "CLEAR MINIMUM" ARE TO FACE OF FINISH.
C. SEE AI SHEET FOR STANDARD FIXTURE MOUNTING REQUIREMENTS UNO.
D. SITE INFORMATION SHOWN FOR REFERENCE ONLY. SEE SITE, CIVIL AND LANDSCAPE PLANS.
E. SEE **COVER SHEET** FOR CODE COMPLIANCE INFORMATION
F. SEE LANDSCAPE DRAWINGS FOR SURROUNDING DESIGN & DETAILS.
G. ALL DIMENSIONS ARE TO FACE OF STUD UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/FACE OF FRAMING. DIMENSIONS INDICATED AS "CLR MIN" ARE TO FACE OF FINISH.
H. ALL DOOR OPENINGS PERPENDICULAR TO A WALL ARE 5" TO THE WALL UNO.
I. WHERE EXTRA SHEATHING LAYERS DO NOT CONTINUE ACROSS THE ENTIRE FACE OF A WALL, ADD ADDITIONAL SHEATHING TO FLUSH OUT THE WALL SURFACE.
J. SEE **A100** FOR ASSEMBLY TYPES & FOUNDATION DETAILS.
K. SEE **A800** SERIES FOR KITCHEN & BATHROOM ELEVATIONS
L. **RAIN DRAINS:** CONTRACTOR TO PROVIDE COMPLETE GUTTER & DOWNSPOUTS. CONNECT DOWNSPOUTS TO RAIN DRAIN SYSTEM. COORDINATE W/ CIVIL DRAWINGS FOR CONNECTION POINTS AND PIPE SIZES

WALL TYPES

SEE **A100** CODE SERIES CODE ANALYSIS PLANS AND WALL TYPE SHEETS FOR ADDITIONAL INFORMATION.

EXTERIOR WALLS:
EXTERIOR WALL TYPES VARY. SEE EXTERIOR ELEVATIONS AND WALL SECTIONS FOR LOCATIONS, UNO.

- TYPICAL WALL W/FIBER CEMENT FLAT PANEL SIDING SYSTEM IS TYPE — 16 / - E
- TYPICAL WALL W/FIBER CEMENT LAP SIDING SYSTEM IS TYPE — 26 / - E
- TYPICAL WALL W/SIMULATED STONE SYSTEM IS TYPE — 36 / - E

INTERIOR WALLS:
- TYPICAL INTERIOR WALL IS TYPE — A4 / NC
- TYPICAL SHARED UNIT WALL IS TYPE — B4 / 1 -

WALLS WITH WOOD SHEATHING:
- ALL EXTERIOR WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO — - 6 / - E
- ALL INTERIOR LIVING UNIT WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO — A4 / 1 S

WALL TYPES LEGEND

SEE **A100** CODE SERIES SHEETS FOR ADDITIONAL INFORMATION

1-HOUR FIRE BARRIER OR FIRE PARTITION: OR IN COMBINATION WITH OTHER IBC WALL TYPE(S) (WHERE OCCURS), AND CONFORMING TO THE MOST STRINGENT REQUIREMENTS OF EACH.

BATHROOM LEGEND

- RH — ROBE HOOK
- TR — TOWEL RING
- TP — TOILET PAPER HOLDER
- MC-R — RECESSED MEDICINE CABINET
- TB — TOWEL BAR
- GB-x — GRAB BAR, AS SPECIFIED. PROVIDE SOLID BLOCKING. NUMBER SPECIFIES LENGTH IN INCHES
- GD — SLIDING GLASS SHOWER DOOR

KEYNOTES

223	22x54 ATTIC ACCESS W/ FOLD DOWN STAIRS
226	ICE MAKER VALVE BOX
227	WASHING MACHINE VALVE BOX
228	GARAGE DOOR OPENER TO BE LISTED AND LABELED TO MEET UL325
229	CONTRACTOR TO PROVIDE KEYLESS PORCELAIN SOCKET LIGHT AND SWITCH IN ATTIC. PROVIDE 2 LIGHTS IN ATTIC

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Suite 300 503.221.2077
Portland OR 97209 www.lrsarchitects.com

CONSULTANT:

PROJECT NUMBER: 218184

FRC: Springbrook Meadows II

4061 Hayes Street
Newberg, OR 97132

Friendsview RETIREMENT COMMUNITY

SHEET TITLE:
FLOOR PLAN - UNIT B

SHEET:
A201.B
100% DD SET
JANUARY 31, 2020

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ELECTRICAL LEGEND

- STANDARD DUPLEX OUTLET
- GFCI WP — GFCI & WATER PROOF DUPLEX OUTLET
- SPECIAL PURPOSE OUTLET
- FLOOR OUTLET
- SWITCH
- $2 — TWO-WAY SWITCH
- $3 — THREE-WAY SWITCH
- $d — SWITCH W/ BUILT-IN DIMMER
- EXHAUST FAN TIMER
- BELL
- T — THERMOSTAT
- TV — TELEVISION
- EP — ELECTRICAL PANEL
- MP — MEDIA PANEL
- SA — COMBINATION SMOKE AND CARBON MONOXIDE ALARM
- EXHAUST FAN

LIGHTING LEGEND

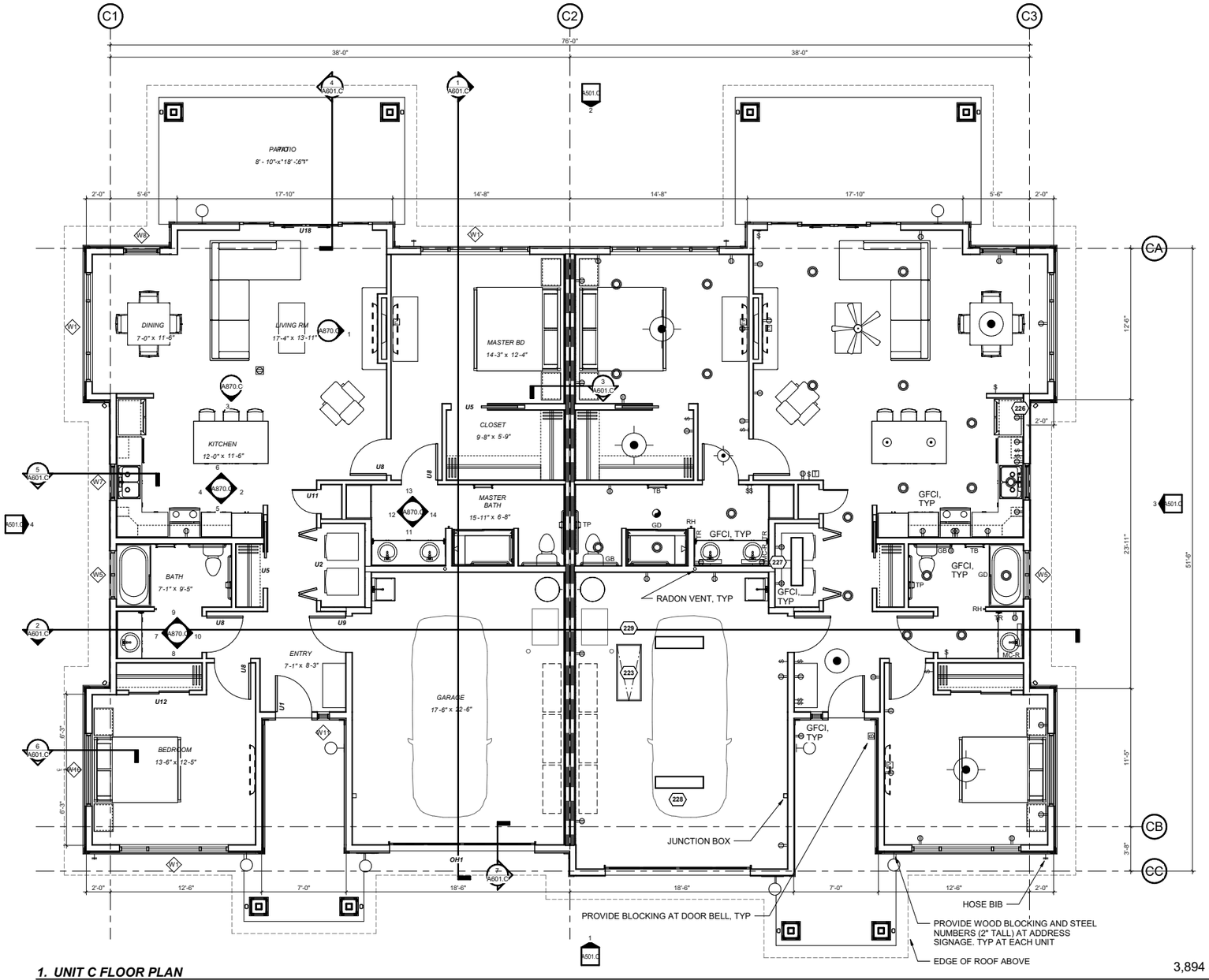
- MINI PENDANT LIGHT
- RECESSED CAN LIGHT
- WALL MOUNTED VANITY LIGHT
- WALL MOUNTED LIGHT
- PENDANT LIGHT
- SEMI FLUSH LIGHT
- LINEAR SURFACE MOUNTED LIGHT
- CEILING FAN

M/E/P SYSTEMS

A. M/E/P SYSTEMS ARE DESIGN BUILD AND DEFERRED SUBMITTAL
B. SYSTEM DESIGNS, PERMITTING, AND CONSTRUCTION ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS
C. ALL SYSTEMS TO COMPLY WITH 2017 IRC AND RESPECTIVE DISCIPLINES RESIDENTIAL CODES
D. SEE M/E/P SPECIFICATION SHEETS FOR COORDINATION AND SYSTEM REQUIREMENTS
E. SMOKE ALARMS SHALL BE DESIGNED, PERMITTED, AND INSTALLED IN ACCORDANCE WITH UL 217
F. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL MEET UL 217, UL 2034, UL 2075, AND UL 268
G. ALARMS TO COMPLY WITH NFPA 72 AND IRC SECTION R314 AND R315

WINDOWS

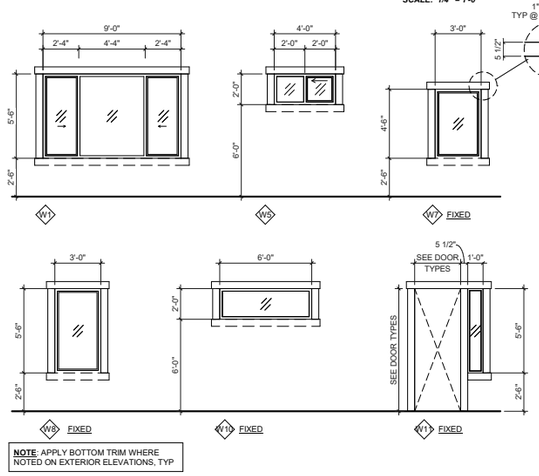
A. THE WINDOW MANUFACTURER SHALL MEET SEISMIC AND WIND CRITERIA. THE ATTACHMENT OF THESE ELEMENTS, IN ADDITION TO THE ATTACHMENT OF NON-STRUCTURAL ITEMS, SHALL MEET THE CALCULATED EARTHQUAKE AND WIND LOADS. CALCULATIONS AND SUBMITTAL MAY BE REQUIRED BY THE BUILDING DEPARTMENT OR BUILDING INSPECTOR.
B. PROVIDE INSECT SCREENS AT ALL OPERABLE WINDOWS.
C. GLAZING IN LOCATIONS SUBJECT TO HUMAN IMPACT SUCH AS PANES IN DOORS, GLAZING WITHIN 24" OF A DOOR OPENING, GLAZING WITHIN 18" OF THE FLOOR (AND IS OVER 9 SQUARE FEET PER PANEL) SHALL BE TEMPERED OR LAMINATED SAFETY GLASS.



1. UNIT C FLOOR PLAN

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

3,894 SF



NOTE: APPLY BOTTOM TRIM WHERE NOTED ON EXTERIOR ELEVATIONS, TYP

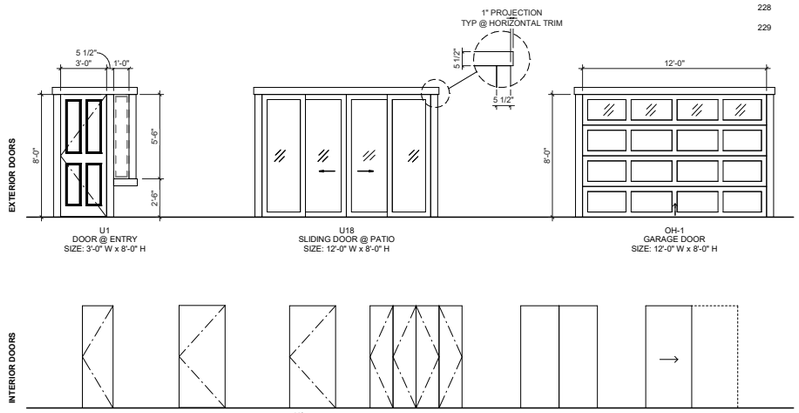
WINDOW TYPES - UNIT C

GENERAL NOTES (DOOR)

A. ALL DOORS SHALL MEET ALL APPLICABLE FEDERAL AND STATE ACCESSIBILITY REQUIREMENTS. ALL DOORS SHALL HAVE A MINIMUM 32" CLEAR OPENING. ALL DOORS SHALL HAVE A MAXIMUM 1/2" THRESHOLD HEIGHT UNLESS SHOWN OTHERWISE IN APPLICABLE DETAILS WITH COMPLIANT RAMP THRESHOLDS.
B. FOR DOORS WITH 60 OR 90 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 100 SQUARE INCHES AND SHALL NOT EXCEED THIS SIZE. WIRE GLASS IS NOT ALLOWED IN DOORS SUBJECT TO HUMAN IMPACT PER IBC CHAPTER 24.
C. FIRE-RESISTIVE RATED DOORS LIMITED TO MAXIMUM OF 100 SQ. IN. DIMENSION FOR GLASS, IT SHALL BE NO MORE THAN 4" WIDE.
D. FOR DOORS WITH 45 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 1,296 SQUARE INCHES PER LITE IN WOOD AND PLASTIC-FACED COMPOSITE OR HOLLOW METAL DOORS.
E. IN ELECTRICAL ROOMS WITH EQUIPMENT 1200 AMPS OR GREATER WITH OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES; DOORS MUST SWING IN THE DIRECTION OF EGRESS AND BE EQUIPPED WITH PANIC HARDWARE, PER ***XXX CODE IBC 2012 SECTION 1008.1.10***
F. MAXIMUM THRESHOLD TO BE 1/2" AT BARRIER FREE UNITS AND ALL PUBLIC SPACES.
G. ALL REQUIRED FIRE DOORS SHALL BEAR LABEL FROM A RECOGNIZED AGENCY. TRANSMITTED TEMPERATURE END POINT TO BE 450°F FOR DOORS TO STAIRS FROM INTERIOR OF BUILDING. FIRE DOORS SHALL BE SELF-CLOSING AND SELF-LATCHING.
H. INSTALL DOORS AND WINDOWS PER MINIMUM AAMA 2400-02.
I. PROVIDE SAFETY GLAZING AT THE FOLLOWING LOCATIONS PER THE ***XXX***

CODE IBC 2012 SECTION 2406.3:

a. GLAZING IN SWINGING DOORS EXCEPT JALOUSIES.
b. GLAZING IN FIXED & SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANEL IN SLIDING & BIFOLD CLOSET DOOR ASSEMBLIES.
c. GLAZING IN STORM DOORS
d. GLAZING IN UNFRAMED SWINGING DOORS.
e. GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE A STANDING SURFACE.
f. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE.
g. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL WHICH MEETS ALL OF THE FOLLOWING CONDITIONS:
   1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SF;
   2. EXPOSED BOTTOM EDGE LESS THAN 18" ABOVE THE FLOOR;
   3. EXPOSED TOP EDGE GREATER THAN 36" ABOVE THE FLOOR;
   4. ONE OR MORE WALKING SURFACE(S) WITHIN 36" HORIZONTALLY OF THE PLANE OF THE GLAZING.
h. GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36" HORIZONTALLY OF A WALKING SURFACE; WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.
i. GLAZING ADJACENT TO STAIRWAYS WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE NOSE OF THE TREAD.
j. ALL DOOR SURFACES, FRAMES AND TRIM TO BE PAINTED (COLOR TBD) UNLESS NOTED AS TRANSPARENT FINISH (TS) OR PRE FINISHED (PF).
k. REFER TO PROJECT MANUAL FOR GLAZING TYPE
l. ALL FIRE/SMOKE DOORS TO BE SELF CLOSING & LATCHING



DOOR TYPES - UNIT C:

GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO START OF WORK.
B. ALL DIMENSIONS ARE TO FACE OF FRAMING UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/ FACE OF FRAMING.DIMENSIONS INDICATED AS "CLEAR MINIMUM" ARE TO FACE OF FINISH.
C. SEE AI SHEET FOR STANDARD FIXTURE MOUNTING REQUIREMENTS UNO.
D. SITE INFORMATION SHOWN FOR REFERENCE ONLY. SEE SITE, CIVIL AND LANDSCAPE PLANS.
E. SEE **COVER SHEET** FOR CODE COMPLIANCE INFORMATION
F. SEE LANDSCAPE DRAWINGS FOR SURROUNDING DESIGN & DETAILS.
G. ALL DIMENSIONS ARE TO FACE OF STUD UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/FACE OF FRAMING. DIMENSIONS INDICATED AS "CLR MIN" ARE TO FACE OF FINISH.
H. ALL DOOR OPENINGS PERPENDICULAR TO A WALL ARE 5" TO THE WALL UNO.
I. WHERE EXTRA SHEATHING LAYERS DO NOT CONTINUE ACROSS THE ENTIRE FACE OF A WALL, ADD ADDITIONAL SHEATHING TO FLUSH OUT THE WALL SURFACE.
J. SEE **A100** FOR ASSEMBLY TYPES & FOUNDATION DETAILS.
K. SEE **A800** SERIES FOR KITCHEN & BATHROOM ELEVATIONS
L. **RAIN DRAINS:** CONTRACTOR TO PROVIDE COMPLETE GUTTER & DOWNSPOUTS. CONNECT DOWNSPOUTS TO RAIN DRAIN SYSTEM. COORDINATE W/ CIVIL DRAWINGS FOR CONNECTION POINTS AND PIPE SIZES

WALL TYPES

SEE **A100** CODE SERIES CODE ANALYSIS PLANS AND WALL TYPE SHEETS FOR ADDITIONAL INFORMATION.

EXTERIOR WALLS:
EXTERIOR WALL TYPES VARY. SEE EXTERIOR ELEVATIONS AND WALL SECTIONS FOR LOCATIONS, UNO.

- TYPICAL WALL W/FIBER CEMENT FLAT PANEL SIDING SYSTEM IS TYPE — 16 / - E
- TYPICAL WALL W/FIBER CEMENT LAP SIDING SYSTEM IS TYPE — 26 / - E
- TYPICAL WALL W/SIMULATED STONE SYSTEM IS TYPE — 36 / - E

INTERIOR WALLS:
- TYPICAL INTERIOR WALL IS TYPE — A4 A / NC
- TYPICAL SHARED UNIT WALL IS TYPE — B4 A / 1 -

WALLS WITH WOOD SHEATHING:
- ALL EXTERIOR WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO — - 6 / - E
- ALL INTERIOR LIVING UNIT WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO — A4 / 1 S

WALL TYPES LEGEND

SEE **A100** CODE SERIES SHEETS FOR ADDITIONAL INFORMATION

1-HOUR FIRE BARRIER OR FIRE PARTITION: OR IN COMBINATION WITH OTHER IBC WALL TYPE(S) (WHERE OCCURS), AND CONFORMING TO THE MOST STRINGENT REQUIREMENTS OF EACH.

BATHROOM LEGEND

- RH — ROBE HOOK
- TR — TOWEL RING
- TP — TOILET PAPER HOLDER
- MC-R — RECESSED MEDICINE CABINET
- TB — TOWEL BAR
- GB-x — GRAB BAR, AS SPECIFIED. PROVIDE SOLID BLOCKING. NUMBER SPECIFIES LENGTH IN INCHES
- GD — SLIDING GLASS SHOWER DOOR

KEYNOTES

223 — 22x54 ATTIC ACCESS W/ FOLD DOWN STAIRS
226 — ICE MAKER VALVE BOX
227 — WASHING MACHINE VALVE BOX
228 — GARAGE DOOR OPENER TO BE LISTED AND LABELED TO MEET UL325
229 — CONTRACTOR TO PROVIDE KEYLESS PORCELAIN SOCKET LIGHT AND SWITCH IN ATTIC. PROVIDE 2 LIGHTS IN ATTIC

LRS ARCHITECTS
720 NW Davis 503.221.1121
Suite 300 503.221.2077
Portland OR 97209 www.lrsarchitects.com

CONSULTANT:

PROJECT NUMBER: 218184

FRC: Springbrook Meadows II

4061 Hayes Street
Newberg, OR 97132

Friendsview RETIREMENT COMMUNITY

SHEET TITLE:
FLOOR PLAN - UNIT C

SHEET:
A201.C
100% DD SET
JANUARY 31, 2020

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ELECTRICAL LEGEND

- STANDARD DUPLEX OUTLET
- GFCI/WP GFCI & WATER PROOF DUPLEX OUTLET
- SPECIAL PURPOSE OUTLET
- FLOOR OUTLET
- SWITCH
- $_2$ TWO-WAY SWITCH
- $_3$ THREE-WAY SWITCH
- $_d$ SWITCH W/ BUILT-IN DIMMER
- EXHAUST FAN TIMER
- BELL
- T THERMOSTAT
- TV TELEVISION
- EP ELECTRICAL PANEL
- MP MEDIA PANEL
- SA COMBINATION SMOKE AND CARBON MONOXIDE ALARM
- EXHAUST FAN

LIGHTING LEGEND

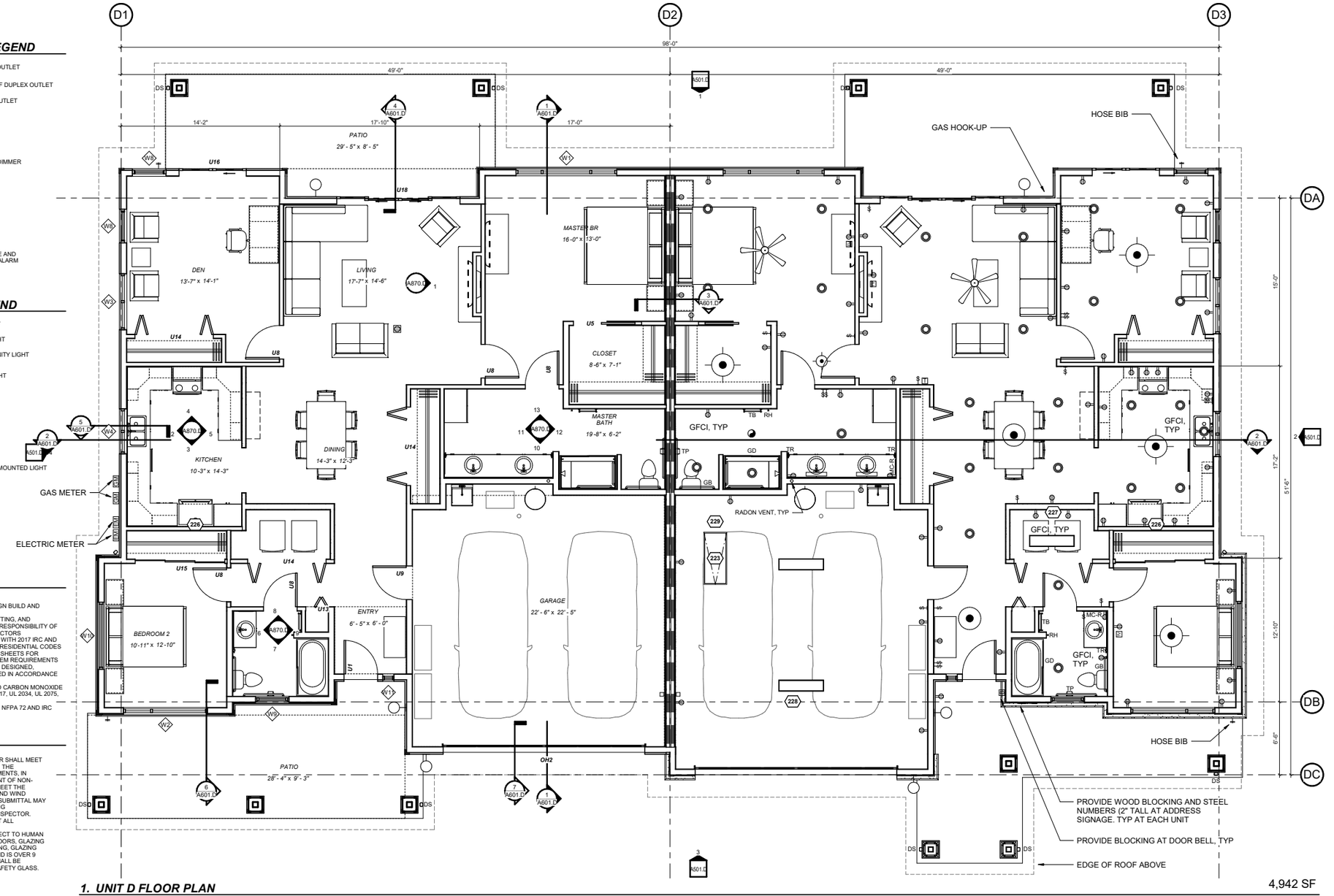
- MINI PENDANT LIGHT
- RECESSED CAN LIGHT
- WALL MOUNTED VANITY LIGHT
- WALL MOUNTED LIGHT
- PENDANT LIGHT
- SEMI FLUSH LIGHT
- LINEAR SURFACE MOUNTED LIGHT
- CEILING FAN

M/E/P SYSTEMS

A. M/E/P SYSTEMS ARE DESIGN BUILD AND DEFERRED SUBMITTAL
B. SYSTEM DESIGNS, PERMITTING, AND CONSTRUCTION ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS
C. ALL SYSTEMS TO COMPLY WITH 2017 IRC AND RESPECTIVE DISCIPLINES RESIDENTIAL CODES
D. SEE M/E/P SPECIFICATION SHEETS FOR COORDINATION AND SYSTEM REQUIREMENTS
E. SMOKE ALARMS SHALL BE DESIGNED, PERMITTED, AND INSTALLED IN ACCORDANCE WITH UL 217
F. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL MEET UL 217, UL 2034, UL 2075, AND UL 268
G. ALARMS TO COMPLY WITH NFPA 72 AND IRC SECTION R314 AND R315

WINDOWS

A. THE WINDOW MANUFACTURER SHALL MEET SEISMIC AND WIND CRITERIA. THE ATTACHMENT OF THESE ELEMENTS, IN ADDITION TO THE ATTACHMENT OF NON-STRUCTURAL ITEMS, SHALL MEET THE CALCULATED EARTHQUAKE AND WIND LOADS. CALCULATIONS AND SUBMITTAL MAY BE REQUIRED BY THE BUILDING DEPARTMENT OR BUILDING INSPECTOR.
B. PROVIDE INSECT SCREENS AT ALL OPERABLE WINDOWS.
C. GLAZING IN LOCATIONS SUBJECT TO HUMAN IMPACT SUCH AS PANES IN DOORS, GLAZING WITHIN 24" OF A DOOR OPENING, GLAZING WITHIN 18" OF THE FLOOR (AND IS OVER 9 SQUARE FEET PER PANEL) SHALL BE TEMPERED OR LAMINATED SAFETY GLASS.



4,942 SF

1. UNIT D FLOOR PLAN

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

GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO START OF WORK.
B. ALL DIMENSIONS ARE TO FACE OF FRAMING UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/ FACE OF FRAMING.DIMENSIONS INDICATED AS "CLEAR MINIMUM" ARE TO FACE OF FINISH.
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J. SEE **A110** FOR ASSEMBLY TYPES & FOUNDATION DETAILS.
K. SEE **A800** SERIES FOR KITCHEN & BATHROOM ELEVATIONS
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WALL TYPES

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WALL TYPES LEGEND

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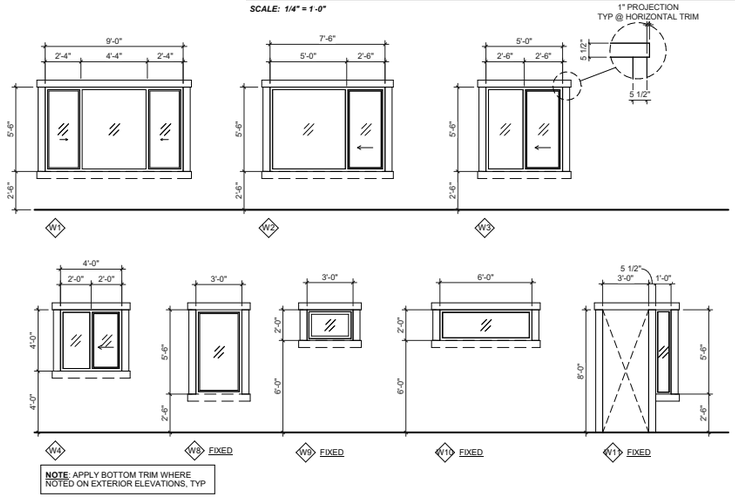


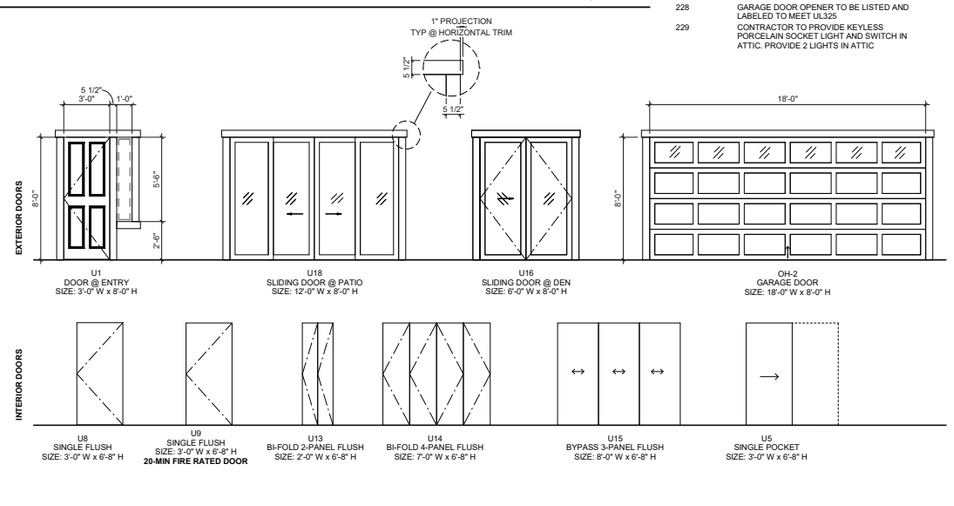
NOTE: APPLY BOTTOM TRIM WHERE NOTED ON EXTERIOR ELEVATIONS, TYP

WINDOW TYPES - UNIT D

GENERAL NOTES (DOOR)

A. ALL DOORS SHALL MEET ALL APPLICABLE FEDERAL AND STATE ACCESSIBILITY REQUIREMENTS. ALL DOORS SHALL HAVE A MINIMUM 32" CLEAR OPENING. ALL DOORS SHALL HAVE A MAXIMUM 1/2" THRESHOLD HEIGHT UNLESS SHOWN OTHERWISE IN APPLICABLE DETAILS WITH COMPLIANT RAMP THRESHOLDS.
B. FOR DOORS WITH 60 OR 90 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 100 SQUARE INCHES AND SHALL NOT EXCEED THIS SIZE. WIRE GLASS IS NOT ALLOWED IN DOORS SUBJECT TO HUMAN IMPACT PER IBC CHAPTER 24.
C. FIRE-RESISTIVE RATED DOORS LIMITED TO MAXIMUM OF 100 SQ. IN. DIMENSION FOR GLASS, IT SHALL BE NO MORE THAN 4" WIDE.
D. FOR DOORS WITH 45 MINUTE FIRE-RESISTIVE RATINGS, GLASS MAY BE A MAXIMUM OF 1,296 SQUARE INCHES PER LITE IN WOOD AND PLASTIC-FACED COMPOSITE OR HOLLOW METAL DOORS.
E. IN ELECTRICAL ROOMS WITH EQUIPMENT 1200 AMPS OR GREATER WITH OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES, DOORS MUST SWING IN THE DIRECTION OF EGRESS AND BE EQUIPPED WITH PANIC HARDWARE, PER ***XXX CODE IBC 2012 SECTION 1008.1.10***
F. MAXIMUM THRESHOLD TO BE 1/2" AT BARRIER FREE UNITS AND ALL PUBLIC SPACES.
G. ALL REQUIRED FIRE DOORS SHALL BEAR LABEL FROM A RECOGNIZED AGENCY. TRANSMITTED TEMPERATURE END POINT TO BE 450°F FOR DOORS TO STAIRS FROM INTERIOR OF BUILDING. FIRE DOORS SHALL BE SELF-CLOSING AND SELF-LATCHING.
H. INSTALL DOORS AND WINDOWS PER MINIMUM AAMA 2400-02.
I. PROVIDE SAFETY GLAZING AT THE FOLLOWING LOCATIONS PER THE ***XXX***

CODE IBC 2012 SECTION 2406.3:
a. GLAZING IN SWINGING DOORS EXCEPT JALOUSIES.
b. GLAZING IN FIXED & SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANEL IN SLIDING & BIFOLD CLOSET DOOR ASSEMBLIES.
c. GLAZING IN STORM DOORS
d. GLAZING IN UNFRAMED SWINGING DOORS
e. GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE A STANDING SURFACE.
f. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE.
g. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL WHICH MEETS ALL OF THE FOLLOWING CONDITIONS:
   1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SF;
   2. EXPOSED BOTTOM EDGE LESS THAN 18" ABOVE THE FLOOR;
   3. EXPOSED TOP EDGE GREATER THAN 36" ABOVE THE FLOOR;
   4. ONE OR MORE WALKING SURFACE(S) WITHIN 36" HORIZONTALLY OF THE PLANE OF THE GLAZING.
h. GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36" HORIZONTALLY OF A WALKING SURFACE; WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.
i. GLAZING ADJACENT TO STAIRWAYS WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE NOSE OF THE TREAD.
j. ALL DOOR SURFACES, FRAMES AND TRIM TO BE PAINTED (COLOR TBD) UNLESS NOTED AS TRANSPARENT FINISH (TS) OR PRE FINISHED (PF).
k. REFER TO PROJECT MANUAL FOR GLAZING TYPE
l. ALL FIRE/SMOKE DOORS TO BE SELF CLOSING & LATCHING



DOOR TYPES - UNIT D:

LRS ARCHITECTS
720 NW Davis 503.221.1121
Suite 300 503.221.2077
Portland OR 97209 www.lrsarchitects.com

CONSULTANT:

PROJECT NUMBER: 218184

FRC: Springbrook Meadows II

4061 Hayes Street
Newberg, OR 97132

Friendsview RETIREMENT COMMUNITY

SHEET TITLE:
FLOOR PLAN - UNIT D

SHEET:
A201.D
100% DD SET
JANUARY 31, 2020

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ELECTRICAL LEGEND

- STANDARD DUPLEX OUTLET
- GFCI/WP — GFCI & WATER PROOF DUPLEX OUTLET
- SPECIAL PURPOSE OUTLET
- FLOOR OUTLET
- SWITCH
- $2 — TWO-WAY SWITCH
- $3 — THREE-WAY SWITCH
- $d — SWITCH W/ BUILT-IN DIMMER
- EXHAUST FAN TIMER
- BELL
- THERMOSTAT
- TV — TELEVISION
- EP — ELECTRICAL PANEL
- MP — MEDIA PANEL
- SA — COMBINATION SMOKE AND CARBON MONOXIDE ALARM
- EXHAUST FAN

LIGHTING LEGEND

- MINI PENDANT LIGHT
- RECESSED CAN LIGHT
- WALL MOUNTED VANITY LIGHT
- WALL MOUNTED LIGHT
- PENDANT LIGHT
- SEMI FLUSH LIGHT
- LINEAR SURFACE MOUNTED LIGHT
- CEILING FAN

M/E/P SYSTEMS

A. M/E/P SYSTEMS ARE DESIGN BUILD AND DEFERRED SUBMITTAL
B. SYSTEM DESIGNS, PERMITTING, AND CONSTRUCTION ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS.
C. ALL SYSTEMS TO COMPLY WITH 2017 IRC AND RESPECTIVE DISCIPLINES RESIDENTIAL CODES
D. SEE M/E/P SPECIFICATION SHEETS FOR COORDINATION AND SYSTEM REQUIREMENTS
E. SMOKE ALARMS SHALL BE DESIGNED, PERMITTED, AND INSTALLED IN ACCORDANCE WITH UL 217
F. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL MEET UL 217, UL 2034, UL 2075, AND UL 268
G. ALARMS TO COMPLY WITH NFPA 72 AND IRC SECTION R314 AND R315

WINDOWS

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B. PROVIDE INSECT SCREENS AT ALL OPERABLE WINDOWS.
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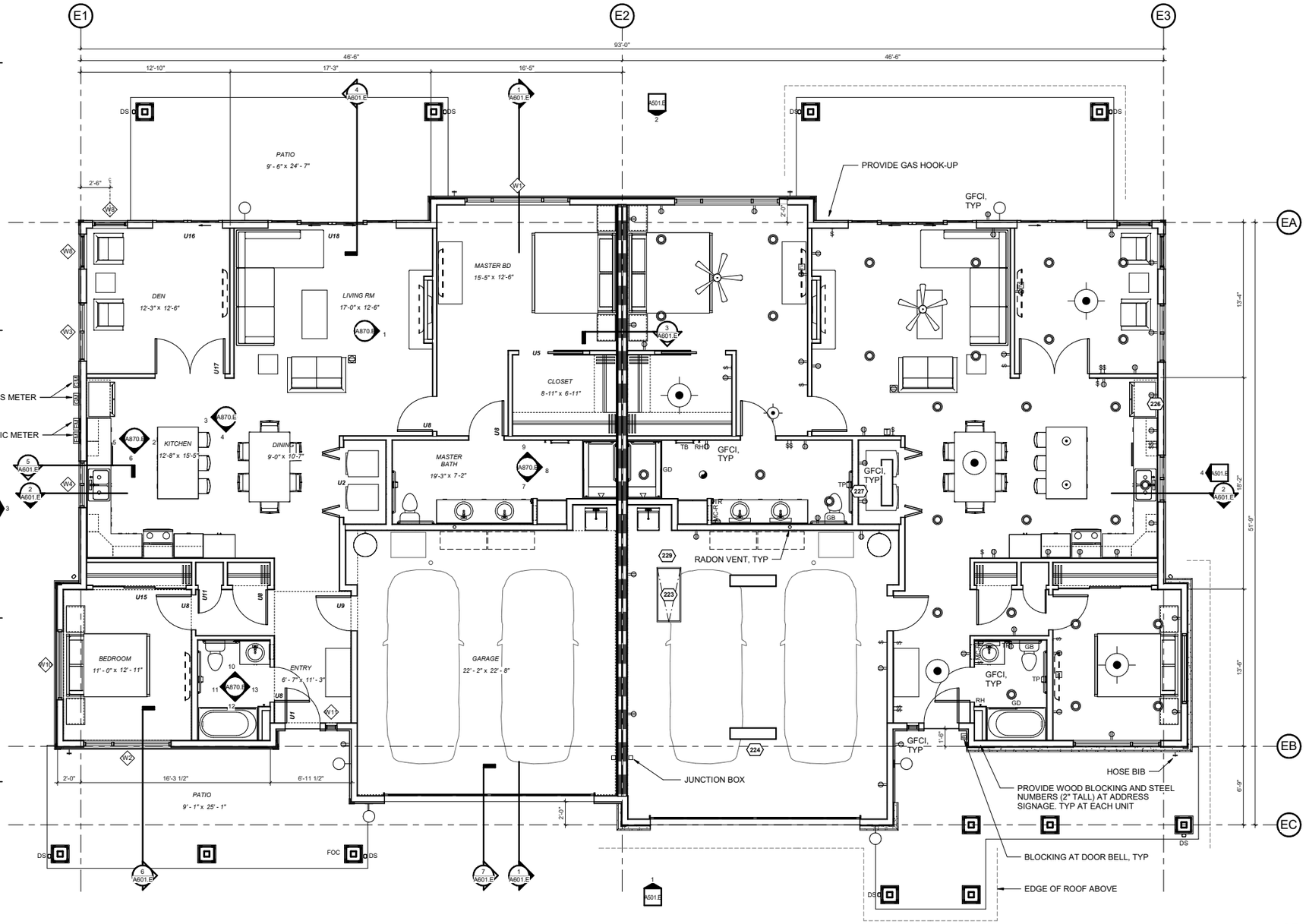
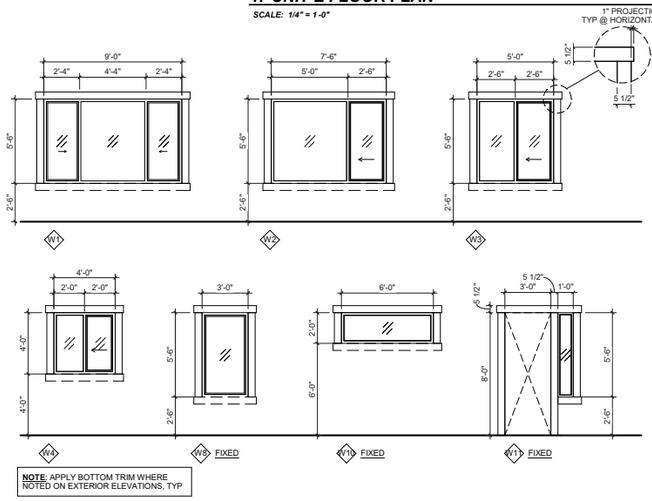


1. UNIT E FLOOR PLAN

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

4,616 SF



NOTE: APPLY BOTTOM TRIM WHERE NOTED ON EXTERIOR ELEVATIONS, TYP

WINDOW TYPES - UNIT E

GENERAL NOTES (DOOR)

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E. IN ELECTRICAL ROOMS WITH EQUIPMENT 1200 AMPS OR GREATER WITH OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES; DOORS MUST SWING IN THE DIRECTION OF EGRESS AND BE EQUIPPED WITH PANIC HARDWARE. PER ***XXX CODE IBC 2012 SECTION 1008.1.10***
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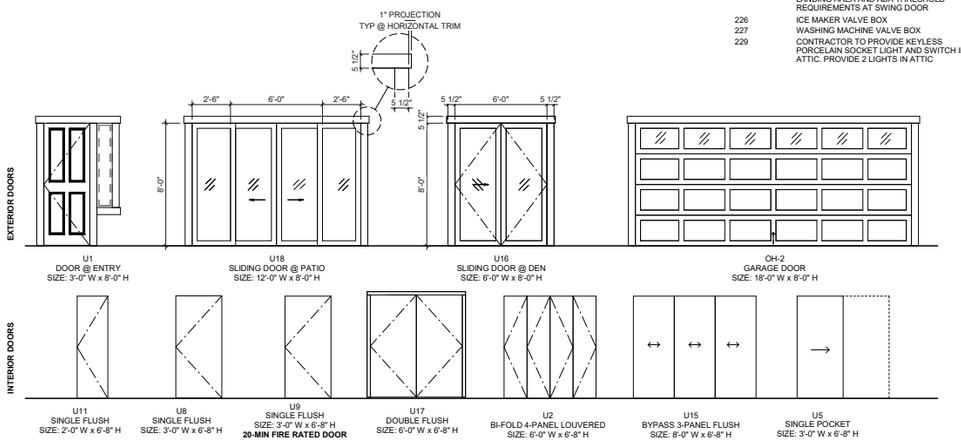

DOOR TYPES - UNIT E

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I. WHERE EXTRA SHEATHING LAYERS DO NOT CONTINUE ACROSS THE ENTIRE FACE OF A WALL, ADD ADDITIONAL SHEATHING TO FLUSH OUT THE WALL SURFACE.
J. SEE **A100** FOR ASSEMBLY TYPES & FOUNDATION DETAILS.
K. SEE **A800** SERIES FOR KITCHEN & BATHROOM ELEVATIONS
L. **RAIN DRAINS:** CONTRACTOR TO PROVIDE COMPLETE GUTTER & DOWNSPOUTS. CONNECT DOWNSPOUTS TO RAIN DRAIN SYSTEM. COORDINATE W/ CIVIL DRAWINGS FOR CONNECTION POINTS AND PIPE SIZES

WALL TYPES

SEE **A100** CODE SERIES CODE ANALYSIS PLANS AND WALL TYPE SHEETS FOR ADDITIONAL INFORMATION.

EXTERIOR WALLS:
EXTERIOR WALL TYPES VARY. SEE EXTERIOR ELEVATIONS AND WALL SECTIONS FOR LOCATIONS, UNO.

- TYPICAL WALL W/FIBER CEMENT FLAT PANEL SIDING SYSTEM IS TYPE — 16 T / - E
- TYPICAL WALL W/FIBER CEMENT LAP SIDING SYSTEM IS TYPE — 26 T / - E
- TYPICAL WALL W/SIMULATED STONE SYSTEM IS TYPE — 36 T / - E

INTERIOR WALLS:
- TYPICAL INTERIOR WALL IS TYPE — A4 A / NIC
- TYPICAL SHARED UNIT WALL IS TYPE — B4 A / 1 -

WALLS WITH WOOD SHEATHING:
- ALL EXTERIOR WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO — - 6 T / - E
- ALL INTERIOR LIVING UNIT WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR ARE TYPE, UNO — A4 A / 1 S

WALL TYPES LEGEND

SEE **A100** CODE SERIES SHEETS FOR ADDITIONAL INFORMATION

1-HOUR FIRE BARRIER OR FIRE PARTITION: OR IN COMBINATION WITH OTHER IBC WALL TYPE(S) (WHERE OCCURS). AND CONFORMING TO THE MOST STRINGENT REQUIREMENTS OF EACH.

BATHROOM LEGEND

- RH — ROBE HOOK
- TR — TOWEL RING
- TP — TOILET PAPER HOLDER
- MC-R — RECESSED MEDICINE CABINET
- TB — TOWEL BAR
- GB-x — GRAB BAR, AS SPECIFIED. PROVIDE SOLID BLOCKING. NUMBER SPECIFIES LENGTH IN INCHES
- GD — SLIDING GLASS SHOWER DOOR

KEYNOTES

223	22x54 ATTIC ACCESS W/ FOLD DOWN STAIRS
224	GARAGE FLOOR TO SLOPE TO DRAIN TOWARDS VEHICLE DOORWAY (EXTERIOR). MAINTIN DOOR LANDING AREA AND ADA THRESHOLD REQUIREMENTS AT SWING DOOR
226	ICE MAKER VALVE BOX
227	WASHING MACHINE VALVE BOX
229	CONTRACTOR TO PROVIDE KEYLESS PORCELAIN SOCKET LIGHT AND SWITCH IN ATTIC. PROVIDE 2 LIGHTS IN ATTIC

LRS ARCHITECTS
720 NW Davis 503.221.1121
Suite 300 503.221.2077
Portland OR 97209 www.lrsarchitects.com

CONSULTANT:

PROJECT NUMBER: 218184

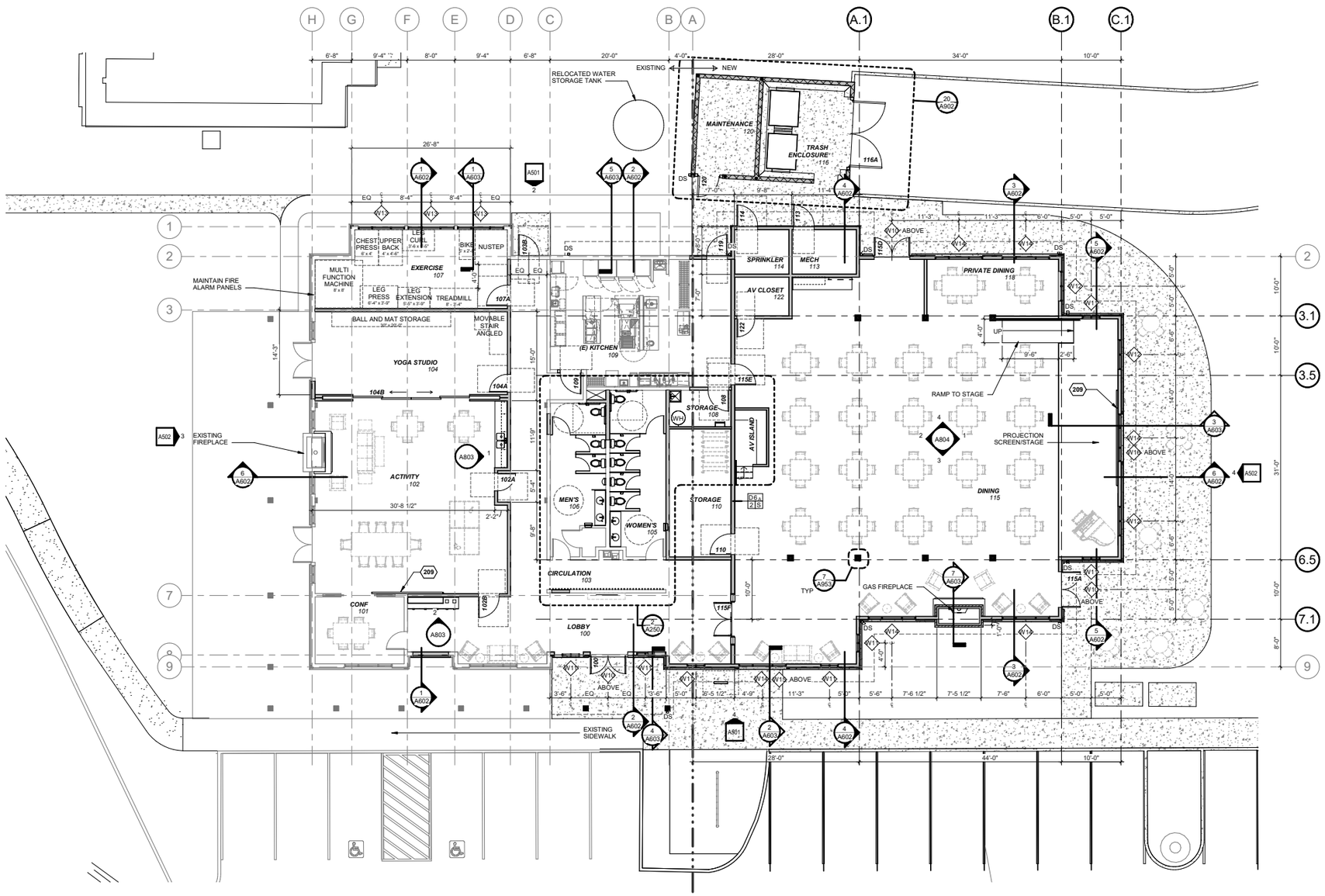
FRC: Springbrook Meadows II

4061 Hayes Street
Newberg, OR 97132

Friendsview RETIREMENT COMMUNITY

SHEET TITLE:
FLOOR PLAN - UNIT E

SHEET:
A201.E
100% DD SET
JANUARY 31, 2020



1. CLUBHOUSE FLOOR PLAN

SCALE: 1/8" = 1'-0"

EXISTING:	4,381 SF
NEW:	4,755 SF
TOTAL:	9,136 SF

GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO START OF WORK.
B. EXISTING CONDITIONS TO REMAIN, UNO. PATCH AND REPAIR WITH LIKE MATERIAL AND FINISHES AS REQUIRED BY NEW WORK.
C. ALIGN NEW WALLS WITH EXISTING WALLS
D. ALL DIMENSIONS ARE TO FACE OF FRAMING UNO OR CENTER OF WINDOW OPENING, COLUMN, OR GRID. EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION/ FACE OF FRAMING.DIMENSIONS INDICATED AS "CLEAR MINIMUM" ARE TO FACE OF FINISH.
E. SEE A/ SHEET FOR STANDARD FIXTURE MOUNTING REQUIREMENTS UNO.
F. ALL DOOR OPENINGS PERPENDICULAR TO A WALL ARE 5" TO THE WALL UNO, MAINTAIN ACCESSIBLE CLEARANCES AT ALL NEW DOOR LOCATIONS.

WALL TYPES

SEE **A100** CODE SERIES CODE ANALYSIS PLANS AND WALL TYPE SHEETS FOR ADDITIONAL INFORMATION.

EXTERIOR WALLS:
EXTERIOR WALL TYPES VARY. SEE EXTERIOR ELEVATIONS AND WALL SECTIONS FOR LOCATIONS, UNO.

- TYPICAL WALL W/SIMULATED STONE SYSTEM — 46 / - E
- TYPICAL WALL W/ BOARD AND BATTEN SIDING SYSTEM — 36 / - E

INTERIOR WALLS:
- TYPICAL INTERIOR WALL, UNO — A6 A / NC

WALLS WITH WOOD SHEATHING:
- ALL EXTERIOR WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR, UNO — - 6 / - E
- ALL INTERIOR WALLS WITH WOOD SHEATHING FOR STRUCTURAL SHEAR, UNO — A4 A / 1 S

KEYNOTES

209 WALL MOUNTED PROJECTOR SCREEN

LRS ARCHITECTS
720 NW Davis 503.221.1121
Suite 300 503.221.2077
Portland OR 97209 www.lrsarchitects.com

PRELIMINARY NOT FOR CONSTRUCTION

CONSULTANT:

PROJECT NUMBER: *218184*

FRC: Springbrook Meadows II

4061 Hayes Street
Newberg, OR 97132

Friendsview RETIREMENT COMMUNITY

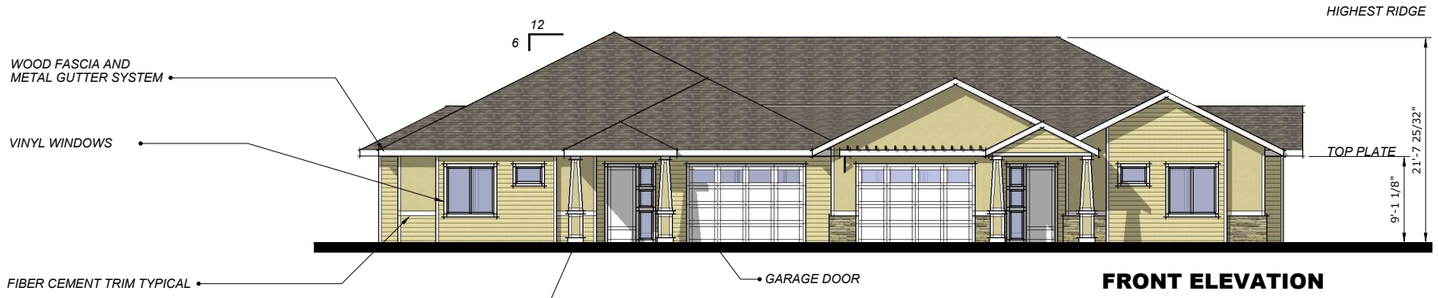
SHEET TITLE:
FLOOR PLAN - CLUBHOUSE

N North

DRAWN BY: *Author*

SHEET:
A201
50% CD SET
MARCH 13, 2020

3/23/2020 8:55:20 AM C:\360 Revit Local Files\218184_FVSB-II_ARCH_R20_032320_jmcdermott.rvt

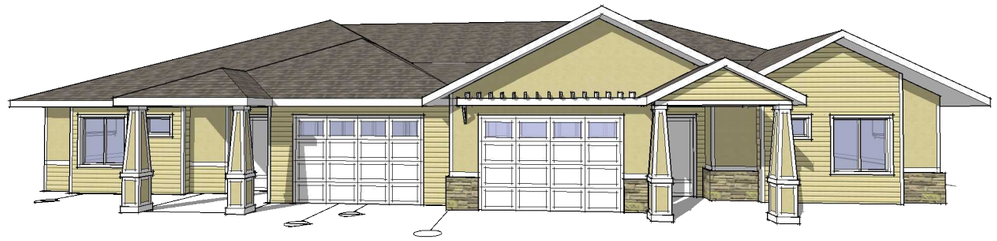


FRONT ELEVATION

SIDE ELEVATION

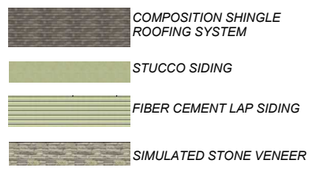
BACK ELEVATION

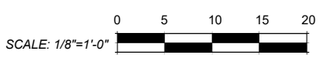
SIDE ELEVATION



FRONT PERSPECTIVE

BACK PERSPECTIVE





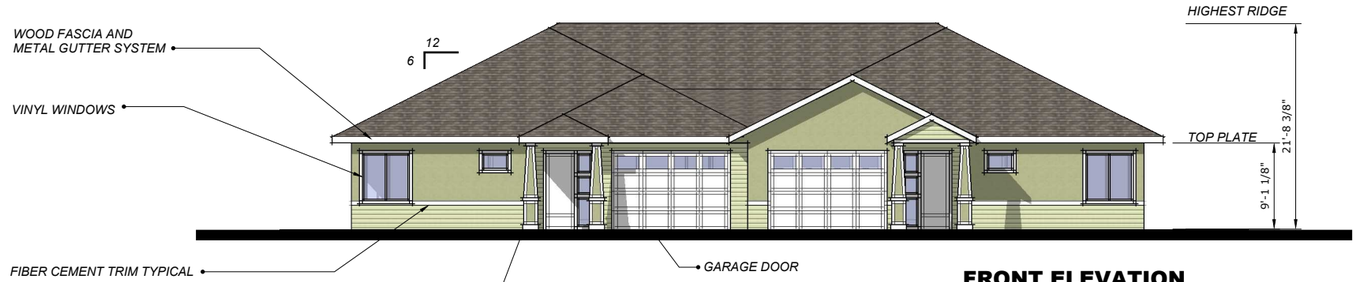
A8

DATE CREATED: **8/6/19**

Friendsview
RETIREMENT COMMUNITY
1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

FRC: Springbook Meadows II - UNIT A
4061 Hayes Street
Newberg, OR 97132

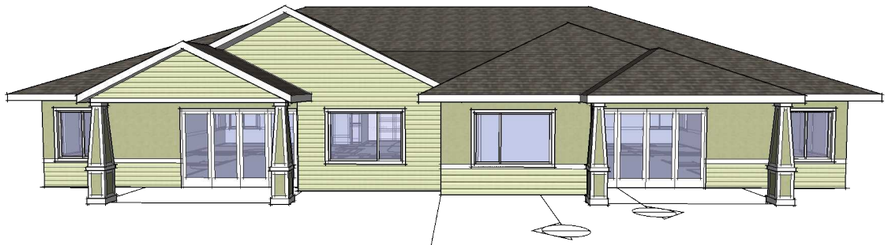
LRS ARCHITECTS
720 NW Davis Suite 300 Portland OR 97209
PH: 503.211.1121
FX: 503.211.2077
www.lrsarchitects.com



FRONT ELEVATION

FRONT PERSPECTIVE

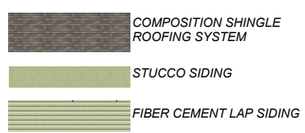
SIDE ELEVATION

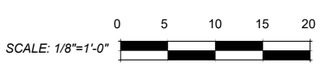


BACK PERSPECTIVE

BACK ELEVATION

SIDE ELEVATION





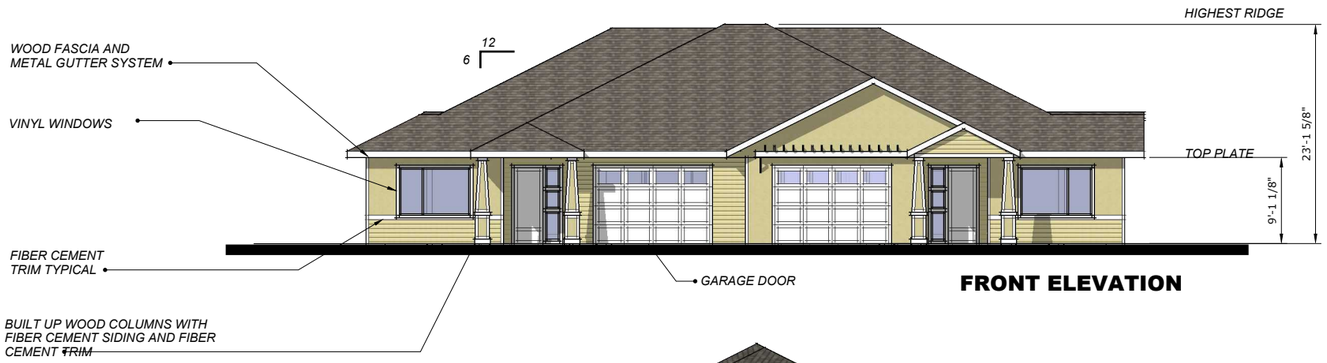
A9

DATE CREATED: **8/6/19**

Friendsview RETIREMENT COMMUNITY
1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

***FRC: Springbook Meadows II -* UNIT B**
4061 Hayes Street
Newberg, OR 97132

LRS ARCHITECTS
720 NW Davis Suite 300 Portland OR 97209
PH: 503.211.1121 FX: 503.211.2077 www.lrsarchitects.com



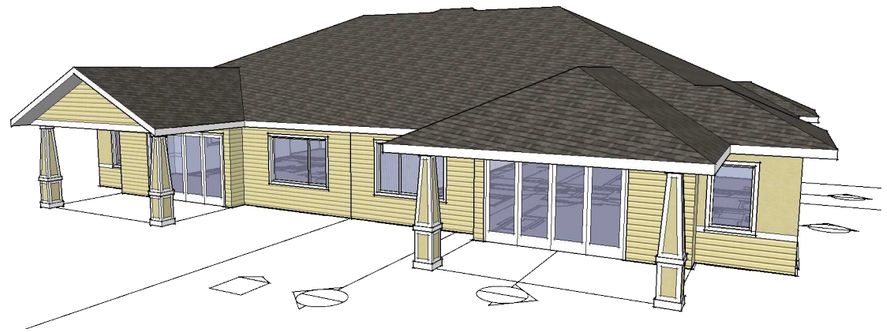
FRONT ELEVATION

SIDE ELEVATION

BACK ELEVATION

SIDE ELEVATION

FRONT PERSPECTIVE



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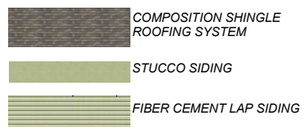


0 5 10 15 20

SCALE: 1/8"=1'-0"

A10

DATE CREATED: **8/6/19**

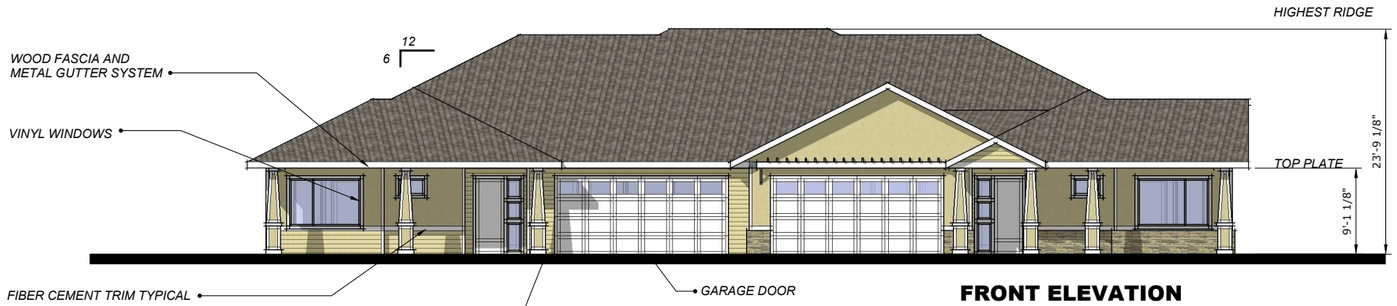
Friendsview
RETIREMENT COMMUNITY

1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

***FRC: Springbook Meadows II -* UNIT C**

4061 Hayes Street
Newberg, OR 97132

LRS ARCHITECTS
720 NW Davis PH: 503.211.1121
Suite 300 FX: 503.211.2077
Portland OR 97209 www.lrsarchitects.com

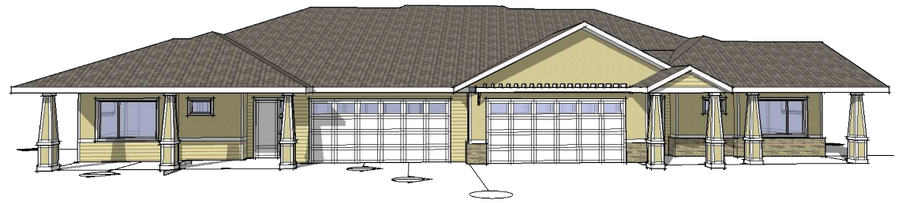


FRONT ELEVATION

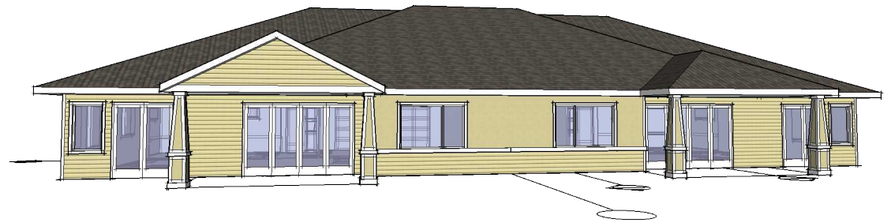
SIDE ELEVATION

BACK ELEVATION

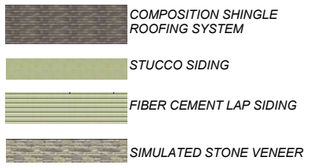
SIDE ELEVATION



FRONT PERSPECTIVE



BACK PERSPECTIVE



A11

DATE CREATED: ***8/6/19***

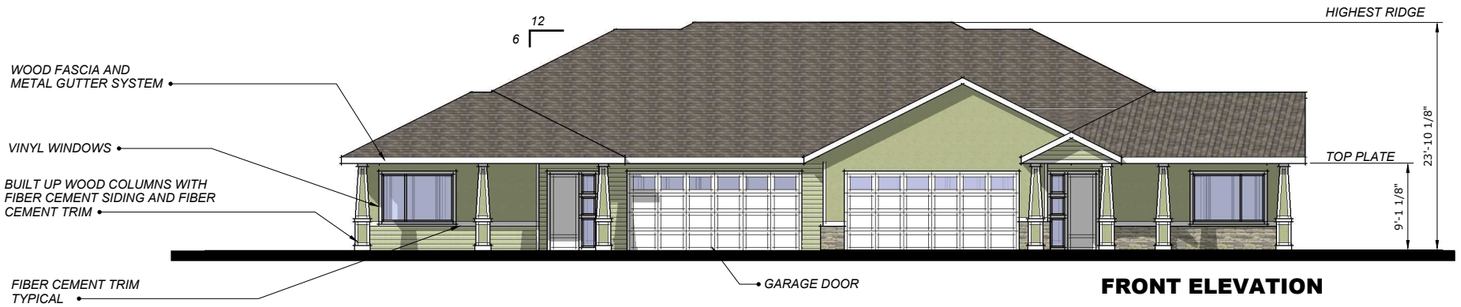
Friendsview RETIREMENT COMMUNITY

1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

FRC: Springbook Meadows II - UNIT D

4061 Hayes Street
Newberg, OR 97132

LRS ARCHITECTS
720 NW Davis PH: 503.211.1121
Suite 300 FX: 503.211.2077
Portland OR 97209 www.lrsarchitects.com



FRONT ELEVATION

FRONT PERSPECTIVE

SIDE ELEVATION

BACK PERSPECTIVE

BACK ELEVATION

SIDE ELEVATION

SCALE: 1/8"=1'-0"

0 5 10 15 20

COMPOSITION SHINGLE ROOFING SYSTEM

STUCCO SIDING

FIBER CEMENT LAP SIDING

SIMULATED STONE VENEER

A12

DATE CREATED: ***8/6/19***

Friendsview RETIREMENT COMMUNITY

1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

FRC: Springbook Meadows II - UNIT E

4061 Hayes Street
Newberg, OR 97132

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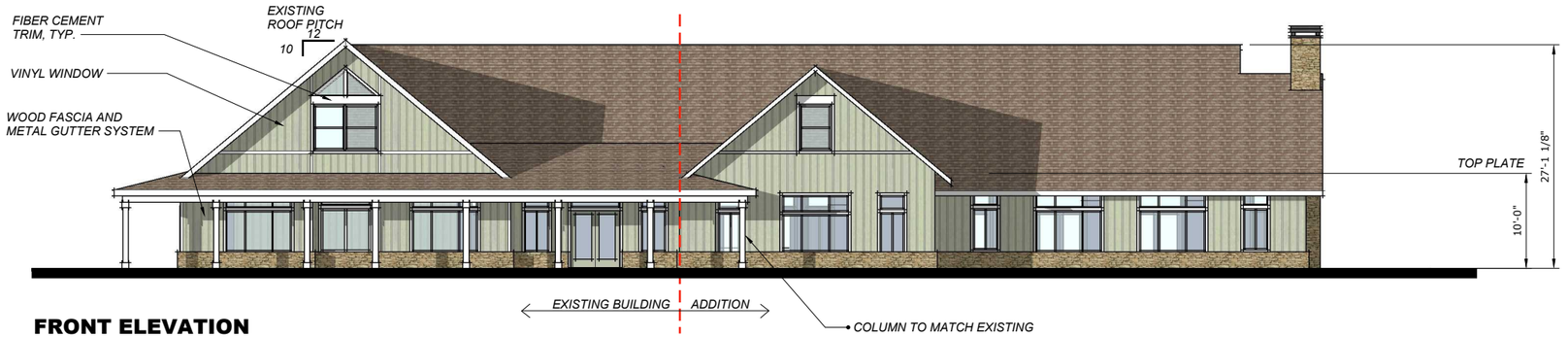
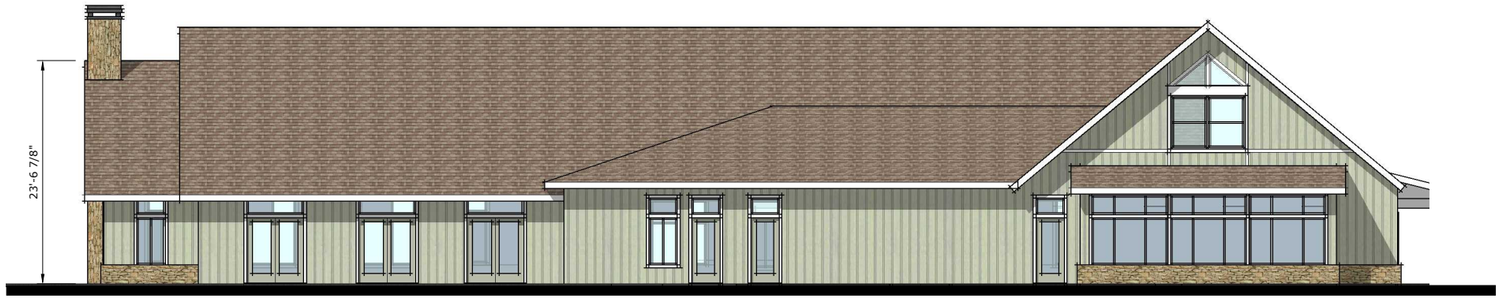
720 NW Davis Suite 300 Portland OR 97209
PH: 503.211.1121 FX: 503.211.2077 www.lrsarchitects.com



FRONT ELEVATION

SIDE ELEVATION

FRONT PERSPECTIVE



BACK ELEVATION

SIDE ELEVATION

BACK PERSPECTIVE

0 5 10 15 20

SCALE: 1/8"=1'-0"

A13

DATE CREATED: ***8/6/19***

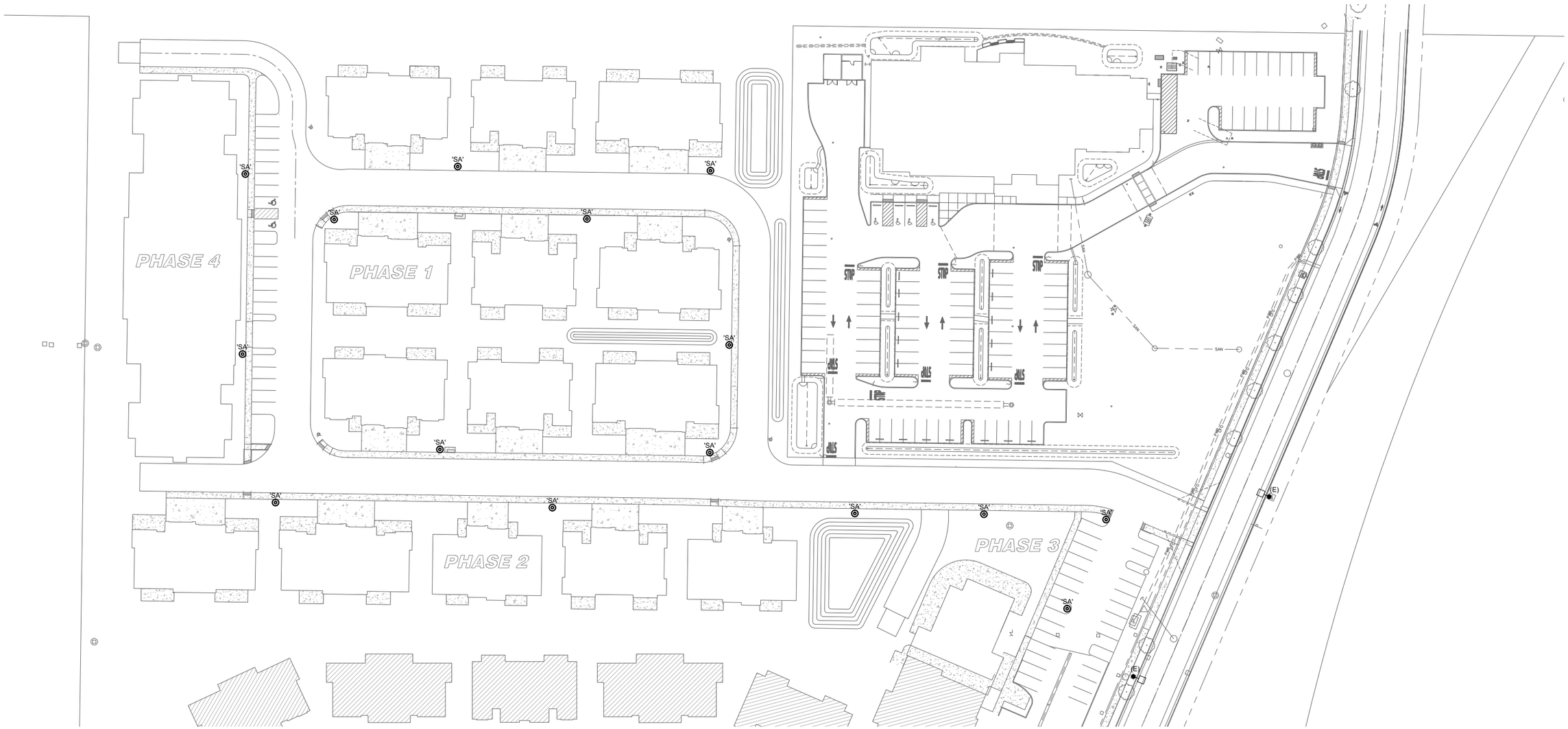
Friendsview RETIREMENT COMMUNITY

1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

FRC: Springbook Meadows II - COMMUNITY BUILDING

4061 Hayes Street
Newberg, OR 97132

LRS ARCHITECTS
720 NW Davis PH: 503.211.1121
Suite 300 FX: 503.211.2077
Portland OR 97209 www.lrsarchitects.com



LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	HOUSING	SHIELDING	MOUNTING	FINISH	UL/IP RATING	DRIVER/ POWER SUPPLY	LIGHT SOURCE	INPUT WATTS	MFG/CATALOG #	NOTES
SA	EXTERIOR POST TOP SITE LUMINAIRE WITH TYPE IV DISTRIBUTION	NOMINAL 14-INCH DIAMETER BY 31-INCH HIGH CAST ALUMINUM ALLOY ACORN	CLEAR STIPPLED ACRYLIC GLOBE	13-FOOT HIGH, STRAIGHT STEEL ROUND POLE. POLE TO WITHSTAND 100 MILE PER HOUR WINDS WITH A GUST FACTOR OF 1.3.	AS SELECTED BY ARCHITECT	WET	INTEGRAL ELECTRONIC DRIVER	LED, NOMIMAL 3000 LUMENS, 3500K, +80 CRI	30 WATTS	SPRING CITY DURPHY SERIES, ANTIQUE STREET LAMPS OR APPROVED	

NOTES:
1. THIS LUMINAIRE SCHEDULE IS NOT COMPLETE WITHOUT A COPY OF THE PROJECT MANUAL CONTAINING THE ELECTRICAL SPECIFICATIONS.
2. SPECIFIED MANUFACTURERS ARE APPROVED TO SUBMIT BID. INCLUSION DOES NOT RELIEVE MANUFACTURER FROM SUPPLYING PRODUCT AS DESCRIBED.
3. PROVIDE SUBMITTALS THAT INCLUDE THE LUMINAIRE, LAMP AND DRIVER INFORMATION OF EACH LUMINAIRE, WITH APPLICABLE OPTIONS CLEARLY CHECKED OR HIGHLIGHTED. SUBMITTALS NOT INCLUDING THIS INFORMATION WILL BE RETURNED AS REJECTED BY THE ENGINEER OF RECORD.
4. REMOTE DRIVERS: UL LISTED FOR THEIR APPLICATION. DRIVERS MARKED AS UL RECOGNIZED COMPONENT BUT NOT UL LISTED ARE SUBJECT TO REMOVAL AND REPLACEMENT AT NO COST TO OWNER.

SCALE: 1" = 40'-0"

SITE PLAN - LIGHTING

E1.0

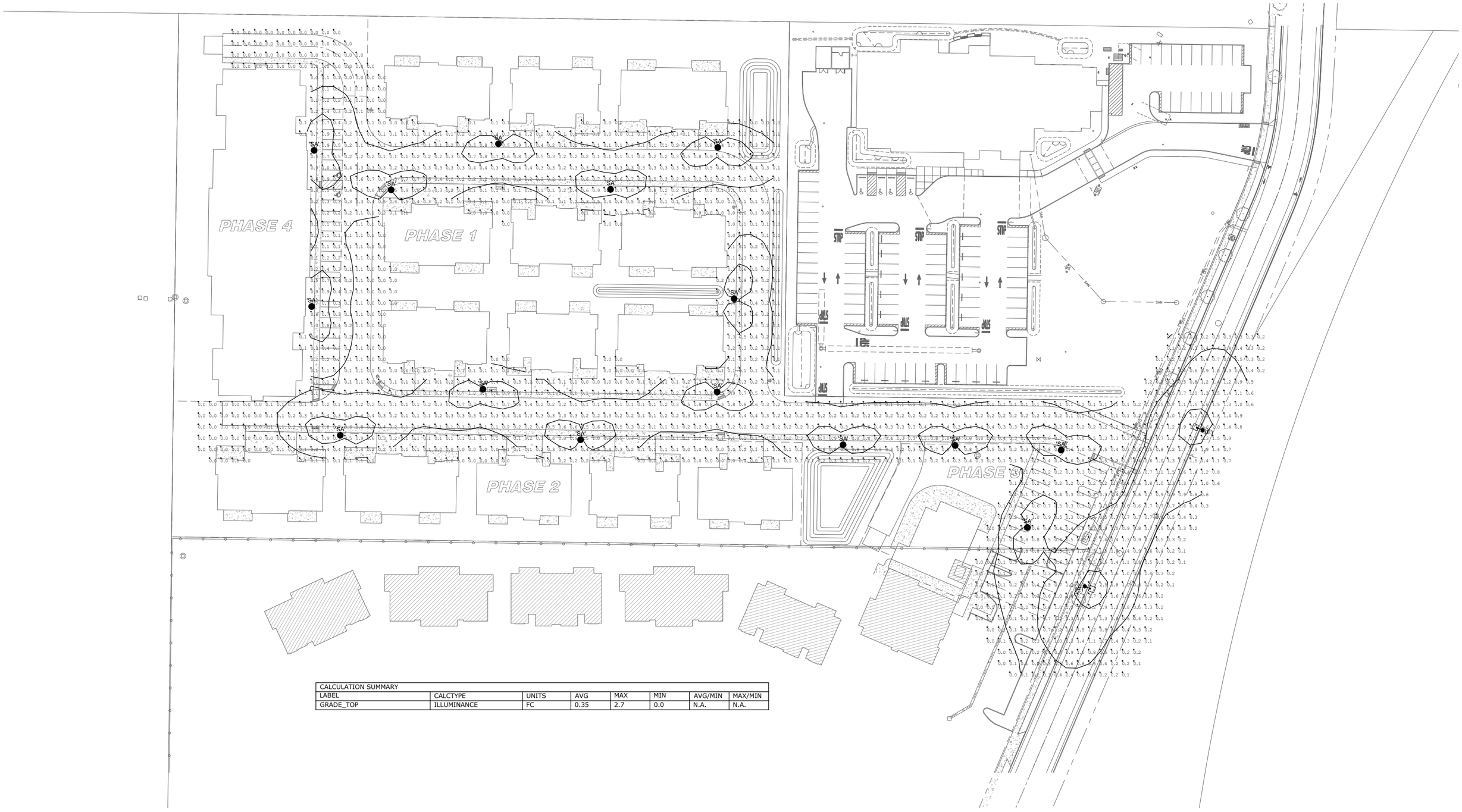
DATE CREATED: 08/02/19

Friendsview RETIREMENT COMMUNITY
1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

FRC: Springbook Meadows II
4061 Hayes Street
Newberg, OR 97132

INTERFACE ENGINEERING
PROJECT 2019-2059
CONTACT Tess Ellsworth
100 SW Main Street, Suite 1600
Portland, OR 97204
TEL 503.382.2266
www.interfaceengineering.com

LRS ARCHITECTS
720 NW Davis Suite 300 Portland OR 97209
PH: 503.211.1121
FX: 503.211.2077
www.lrsarchitects.com



CALCULATION SUMMARY							
LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
GRADE_TOP	ILLUMINANCE	FC	0.35	2.7	0.0	N.A.	N.A.

SCALE: 1" = 40'-0"

SITE PLAN - PHOTOMETRICS

EPH1.0

DATE CREATED: 08/02/19

Friendsview RETIREMENT COMMUNITY

1301 Fulton Street
Newberg, Oregon 97132
www.friendsview.org

FRC: Springbook Meadows II
4061 Hayes Street
Newberg, OR 97132

INTERFACE ENGINEERING
PROJECT 2019-2059
CONTACT Tess Ellsworth
100 SW Main Street, Suite 1600
Portland, OR 97204
TEL 503.382.2266
www.interfaceengineering.com

LRS ARCHITECTS
720 NW Davis PH: 503.211.1121
Suite 300 FX: 503.211.2077
Portland OR 97209 www.lrsarchitects.com

Exhibit B: Land Use Application Forms

TYPE II APPLICATION (LAND USE) -- 2020

File #: _____

TYPES – PLEASE CHECK ONE:

- [x] **Design review**
- [ ] **Tentative Plan for Partition**
- [ ] **Tentative Plan for Subdivision**
- [ ] **Type II Major Modification**
- [ ] **Variance** _____
- [ ] **Other: (Explain)** _____

APPLICANT INFORMATION:

APPLICANT: Friendview Manor, Inc

ADDRESS: 1301 Fulton Street, Newberg, OR 97132

EMAIL ADDRESS: Please Contact Applicants Consultant - AKS Engineering & Forestry, LLC - Mimi Doukas - MimiD@aks-eng.com

PHONE: 503-563-6151 MOBILE: _____ FAX: 503-563-6152

OWNER (if different from above): Werth Family LLC PHONE: 503-538-5157

ADDRESS: 33180 NE Haugen Rd, Newberg OR 97132

ENGINEER/SURVEYOR: AKS Engineering & Forestry, LLC - Steve Roper PHONE: 503-563-6151

ADDRESS: 12965 SW Herman Rd., Suite 100, Tualatin, OR 97062

GENERAL INFORMATION:

PROJECT NAME: Friendview Springbrook Meadows III PROJECT LOCATION: Providence Dr between Hayes St & Pacific Hwy W

PROJECT VALUATION: _____

PROJECT DESCRIPTION/USE: New four phase independent living community for Friendsview Retirement Community

MAP/TAX LOT NO. (i.e.3200AB-400): 3216 tax Lots 2019 and 2026 ZONE: R-P in SP SITE SIZE: 6.67 SQ. FT. ☐ ACRE ☒

COMP PLAN DESIGNATION: Mix/SP TOPOGRAPHY: Flat

CURRENT USE: Vacant

SURROUNDING USES:

NORTH: Institutional SOUTH: Residential

EAST: Vacant/Future Bypas WEST: Commercial

SPECIFIC PROJECT CRITERIA AND REQUIREMENTS ARE ATTACHED

General Checklist: ☑ Fees ☑ Public Notice Information ☑ Current Title Report ☑ Written Criteria Response ☑ Owner Signature

For detailed checklists, applicable criteria for the written criteria response, and number of copies per application type, turn to:

The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief. 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.

Applicant Signature Date

DEAN WERTH 3/19/2020

Print Name

Todd Engle Digitally signed by Todd Engle DN: cn=Todd Engle, o=Friendsview Retirement Community, ou, email=tengle@friendsview.org, c=US Date: 2020.03.19 11:47:32 -07'00'

Owner Signature Date

Todd Engle

Print Name

Attachments: General Information, Fee Schedule, Criteria, Checklists

TYPE II APPLICATION (LAND USE) -- 2019

File #: _____

TYPES – PLEASE CHECK ONE:

- [x] **Design review**
- [ ] **Tentative Plan for Partition**
- [ ] **Tentative Plan for Subdivision**
- [ ] **Type II Major Modification**
- [ ] **Variance** _____
- [ ] **Other: (Explain)** _____

APPLICANT INFORMATION:

APPLICANT: Friendsview Manor, Inc.

ADDRESS: 1301 Fulton Street, Newberg, OR 97132

EMAIL ADDRESS: Please Contact Applicant's Consultant - AKS Engineering & Forestry, LLC: Mimi Doukas - MimiD@aks-eng.com

PHONE: (503) 563-6151 MOBILE: _____ FAX: (503) 563-6152

OWNER (if different from above): _____ PHONE: _____

ADDRESS: _____

ENGINEER/SURVEYOR: AKS Engineering & Forestry, LLC - Steve Roper PHONE: (503) 563-6151

ADDRESS: 12965 SW Herman Road, Suite 100, Tualatin, OR 97062

GENERAL INFORMATION:

PROJECT NAME: Friendsview Springbrook Meadows II PROJECT LOCATION: Providence Dr between Hayes St and Pacific Hwy W

PROJECT VALUATION: _____

PROJECT DESCRIPTION/USE: New four phase independent living community for Friendsview Retirement Community

MAP/TAX LOT NO. (i.e.3200AB-400): 3216 Tax Lots 2019 and 2026 ZONE: R-P in SP SITE SIZE: 6.67 SQ. FT. ☐ ACRE ☐

COMP PLAN DESIGNATION: MIX/SP TOPOGRAPHY: Flat

CURRENT USE: Vacant

SURROUNDING USES:

NORTH: Institutional SOUTH: Residential

EAST: Vacant/ Future Bypass WEST: Commercial

SPECIFIC PROJECT CRITERIA AND REQUIREMENTS ARE ATTACHED

General Checklist: ☑ Fees ☑ Public Notice Information ☑ Current Title Report ☑ Written Criteria Response ☑ Owner Signature

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The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief. 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.

_____ _____

Applicant Signature Date Owner Signature Date

_____ _____

Print Name Print Name

Attachments: General Information, Fee Schedule, Criteria, Checklists

GENERAL INFORMATION
Type II Development Permit Process

Overview: Type II Permit applications are reviewed administratively using a process in which City staff apply clear and objective standards that do not allow limited discretion. Notice is provided to property owners within 500 ft of the site so that they may provide input into the process. The noticing comment period is limited to 14 days in which written comments may be filed. The applicant or any person that comments in writing is able to appeal the staff decision to the Planning Commission. During the 14 day notice period, anyone may request that a Type II Subdivision decision be converted to a Type III process and that a hearing be held before the Planning Commission. Type II Decisions may take from 30 to 120 days.

Type II Permits Include:

- Design review for commercial, industrial and multi-family projects
- Manufactured home parks and mobile home parks.
- Partitions
- Subdivisions except those meeting the criteria in NDC § 15.235.030(A)
- Variances

Pre-Application Conference:
Please call to schedule a time for a pre-application meeting (optional) prior to submitting an application. The (Development Review Meetings) or pre-application 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, payable prior to the conference.

Submit Type II 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.
- Subdivision Conversion to Type III Review. During the 14 day comment period, anyone may request that a subdivision application be converted to a Type III review process. If this occurs, the subdivision will be reviewed by the Planning Commission at their next available meeting. Processing Time: 30 to 60 days.
- If all comments are addressed and no changes are required, then an approval letter is sent to the applicant and those providing comment. Processing Time: 14 to 20 days.

GENERAL INFORMATION
Type II Development Permit Process

Appeals
If the applicant, or another party providing written comments within the noticing period, is dissatisfied with the decision; then an appeal must be filed within 14 calendar days of the issuance of the decision. Appeals of Type II decisions proceed to the Planning Commission and are processed as a Type III decision.

Partition and Subdivision Plats
The applicant must submit final improvement plans and a final partition or subdivision plat within two years of the date of preliminary plat approval. Final plats are processed under a Type I decision.

Building Permits
The applicant may submit building permit applications concurrently with submission of other development applications; however, no building permits will be issued until the appeal period has expired on pending development applications

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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 is missing information or suggestions for improvements.

NEWBERG PERMIT CENTER FEE SCHEDULE

Effective Date: April 1, 2019

5% Technology fee will be added to total fees (resolution No. 2016-3268)

PRE-APPLICATION REVIEW **$100**

TYPE I (ADMINISTRATIVE REVIEW)

- ANY TYPE I ACTION NOT SPECIFICALLY LISTED IN THIS SECTION **$175**
- PROPERTY CONSOLIDATION **$175**
- CODE ADJUSTMENT **$437**
- DESIGN REVIEW – TYPE I (DUPLEX OR COM. /IND. MINOR ADDITION REVIEW) ..... **0.3% OF PROJECT VALUE, $437 MINIMUM**
- MINOR MODIFICATION OR EXTENSION OF TYPE I DECISION **$175**
- MAJOR MODIFICATION OF TYPE I DECISION ..... **50% OF ORIGINAL FEE**
- PARTITION FINAL PLAT ..... **$875 + $77 PER PARCEL**
- PROPERTY LINE ADJUSTMENT **$875**
- SIGN REVIEW ..... **$78 PLUS $1.00 PER SQ. FT. OF SIGN FACE**
- SUBDIVISION, PUD, OR CONDOMINIUM FINAL PLAT ..... **$1753 + $77 PER LOT OR UNIT**

TYPE II (LAND USE DECISION)

- ANY TYPE II ACTION NOT SPECIFICALLY LISTED IN THIS SECTION **$875**
- MINOR MODIFICATION OR EXTENSION OF TYPE II DECISION **$175**
- MAJOR MODIFICATION OF TYPE II DECISION ..... **50% OF ORIGINAL FEE**
- DESIGN REVIEW (INCLUDING MOBILE/MANUFACTURED HOME PARKS) ..... **0.6% OF TOTAL PROJECT COST, $875 MINIMUM***
- PARTITION PRELIMINARY PLAT ..... **$875 PLUS $77 PER PARCEL**
- SUBDIVISION PRELIMINARY PLAT ..... **$1753 PLUS $77 PER LOT**
- VARIANCE **$875**

TYPE III (QUASI-JUDICIAL REVIEW)

- ANY TYPE III ACTION NOT SPECIFICALLY LISTED IN THIS SECTION **$1857**
- ANNEXATION ..... **$2442 PLUS $234 PER ACRE**
- COMPREHENSIVE PLAN AMENDMENT (SITE SPECIFIC) **$2442**
- CONDITIONAL USE PERMIT **$1857**
- MINOR MODIFICATION OR EXTENSION OF TYPE III DECISION **$175**
- MAJOR MODIFICATION OF TYPE III DECISION ..... **50% OF ORIGINAL FEE**
- HISTORIC LANDMARK ESTABLISHMENT OR MODIFICATION **$0**
- HISTORIC LANDMARK ELIMINATION **$2129**
- SUBDIVISION PRELIMINARY PLAT ..... **$1753 PLUS $77 PER LOT**
- PLANNED UNIT DEVELOPMENT ..... **$3708+$77 PER LOT OR UNIT**
- ZONING AMENDMENT (SITE SPECIFIC) **$2313**

TYPE IV (LEGISLATIVE AMENDMENTS)

- COMPREHENSIVE PLAN TEXT AMENDMENT OR LARGE SCALE MAP REVISION **$2631**
- DEVELOPMENT CODE TEXT AMENDMENT OR LARGE SCALE MAP REVISION **$2631**

APPEALS

- TYPE I OR II APPEAL TO PLANNING COMMISSION **$503**
- TYPE I OR II APPEAL TO CITY COUNCIL **$911**
- TYPE III APPEAL TO CITY COUNCIL **$1069**
- TYPE I ADJUSTMENTS OR TYPE II VARIANCES THAT ARE NOT DESIGNED TO REGULATE THE PHYSICAL CHARACTERISTICS OF A USE PERMITTED OUTRIGHT **$283**

OTHER FEES

- COMMUNITY DEVELOPMENT FEE ..... **0.75% OF PROJECT COST (THE ABOVE CHARGE IS ADDED TO ANY BUILDING PERMIT APPLICATION)**
- EXPEDITED LAND DIVISION ..... **$6515 + $77 PER LOT OR UNIT**
- URBAN GROWTH BOUNDARY AMENDMENT **$4164**
- VACATION OF PUBLIC RIGHT-OF-WAY **$1728**

LICENSE FEES

- GENERAL BUSINESS **$50**
- HOME OCCUPATION **$25**
- PEDDLER/SOLICITOR/STREET VENDOR ..... **No fee (Business License fee only)**
- EXHIBITOR **$129**
- TEMPORARY MERCHANT ..... **$106/45 days or $346/perpetual**

TECHNOLOGY FEE ..... **5% OF TOTAL FEES**

ADDITIONAL LAND USE REVIEW FEES – ENGINEERING DEPARTMENT

Planning Review, Partition, Subdivision & PUD's (Type 11/111 Application) - **$284.08 - 19 lots, Plus $12.63 per lot over 20 lots**

Final Plat Review, Partition and subdivision .....**$284.08 Plus .....$7.14 per lot or parcel**

Development review for public improvements on Commercial, Industrial, Multifamily Developments & Institutional zones **$397.28 1st Acre $226.93 Additional acre**

ADOPTION AND REVISION HISTORY:

Adopted by: Resolution 98-2122, July 6, 1998
Amended by: Resolution 99-2214, December 8, 1999
Resolution 2000-2265, October 2, 2000
Resolution 2001-2318, November 19, 2001
Executive Order January 2, 2007 (Reso. 99-2210)
Executive Order October 24, 2008
Executive Order, December 16, 2002 pursuant to Resolution 99-2210
Executive Order, January 22, 2002 pursuant to Resolution 99-2210
Resolution 2004-2466, November 3, 2003
Resolution 2007-2752, December 3, 2007
Executive Order November 29, 2011(2011-32)
Executive Order October 24, 2012(2012-34)
Resolution 2014-3140, May 19, 2014
Executive Order April 1, 2015 (2015-42)
Resolution 2016-3268, April 18, 2016
Resolution 2017-3361 March 2017
Resolution 2018-3443 March 2018
Resolution 2019-3539 March 2019

CITY OF NEWBERG
REQUIREMENTS FOR MAILED NOTICES

For all Type II and Type III land use applications, mailed notice must be sent to all property owners within five hundred (500) feet of the site. Newberg Development Code §15.100.210 sets forth the requirements for mailed notices. The applicant is responsible for preparing and mailing the notices, for paying the postage, and for submitting an affidavit of mailing within two days of mailing the notices.

Mailing List:

- The applicant must create a mailing list including the tax lot numbers and addresses of property owners within five hundred (500) feet of the outer boundaries of the tax lot or tax lots of the proposed project. This information can be obtained at a local title company.
- The Planning & Building Department may request that notice be provided to people other than those who own property within five hundred (500) feet of the site, if the Department believes that they are affected or otherwise represent an interest that may be affected by the proposed development.
- The mailing list and a copy of the mailed notice should be submitted with the affidavit of mailing.
- Envelopes returned to the post office should go to the Planning & Building Office so that they can be kept with the application file. The return address on the notices should read:

  City of Newberg
  Community Development
  P.O. Box 970
  Newberg, OR 97132

A return address stamp is available at the Planning & Building Office for your convenience.

Mailed Notice Deadlines:

- Before mailing the notice, the applicant must submit a copy for approval to the Community Development Office at 414 E. First Street, Newberg, Oregon.
- For Type II actions, the notice must be mailed at least fourteen (14) days before a decision is rendered. For Type III actions, the notice must be mailed at least twenty (20) days before the first new hearing, or if two or more hearings are required, ten (10) days before the first new hearing.
- The affidavit of mailing must be submitted to the Planning & Building Office within two (2) days of mailing the notice.

Sample Notices:

A sample notice is included on the following page. Information to be filled in by the applicant is indicated by italicized text. Sample notices for each application type are located on the web at:

http://www.newbergoregon.gov/planning/sample-notice-forms-type-ii-applications

(Or to navigate there on your own from the homepage (www.newbergoregon.gov): Government, Community Development, Planning, Planning Forms)

Community Development Department
P.O. Box 970 ▪ 414 E First Street ▪ Newberg, Oregon 97132
503-537-1240. Fax 503-537-1272 www.newbergoregon.gov

WE WANT YOUR COMMENTS ON A PROPOSED NEW DEVELOPMENT IN YOUR NEIGHBORHOOD

A property owner in your neighborhood submitted an application to the City of Newberg to subdivide a parcel of land from ***(insert number of original lots i.e. one, two, etc)*** lot(s) into ***(insert number of lots created***) separate lots. You are invited to take part in the City's review of this project by sending in your written comments. You also may request that the Planning Commission hold a hearing on the application. The applicable criteria used to make a decision on this application for preliminary subdivision plan approval are found in Newberg Development Code 15.235.050(A).
For more details about giving comments, please see the back of this sheet.

The development would include ***(briefly describe what the project number of lots, size of lots, new streets created, etc.)***

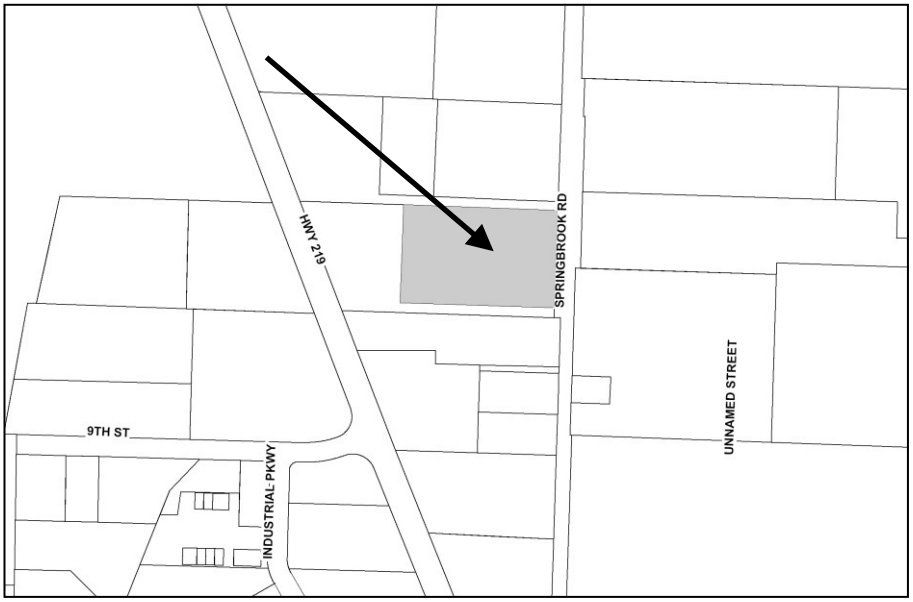
APPLICANT: ***Applicant's name***
TELEPHONE: ***Applicant's phone number***

PROPERTY OWNER: ***Property owner name***

LOCATION: ***Project Address***

TAX LOT NUMBER: ***Yamhill County Tax Map and Lot Number (i.e. 3219AB-1400)***

Insert site map with the project location highlighted as shown on the adjacent sample map.



We are mailing you information about this project because you own land within 500 feet of the proposed new project. We invite you to send any written comments for or against the proposal within 14 days from the date this notice is mailed. You also may request that the Newberg Planning Commission hold a hearing on the application by sending a written request during this 14-day period and identifying the issues you would like the Planning Commission to address.

If you mail your comments to the City, please put the following information on the outside of the envelope:

Written Comments: File No.XX
City of Newberg
Community Development
PO Box 970
Newberg, OR 97132

(City staff will give you the file number for your project at the time of application)

All written comments must be turned in by 4:30 p.m. on ***enter date two weeks from date you mailed notice*****.** Any issue which might be raised in an appeal of this case to the Land Use Board of Appeals (LUBA) must be submitted to the City in writing before this date. 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 preliminary subdivision plan approval are found in Newberg Development Code 15.235.050(A).

You can look over all the information about this project or drop comments off at Newberg City Hall, 414 E. First Street. You can also buy copies of the information for a cost of 25 cents a page. If you have any questions about the project, you can call the Newberg Planning Division at 503-537-1240.

The Community Development Director will make a decision at the end of a 14-day comment period. If you send in written comments about this project, you will be sent information about any decision made by the City relating to this project.

Date Mailed: ***Date notice is mailed***

CITY OF NEWBERG
REQUIREMENTS FOR POSTED NOTICES

For all Type II and Type III land use applications, the site must be posted with an approved notice. Newberg Development Code §15.100.260 establishes the standards for posted notices. Before notice is posted on the site, a copy of the notice must be submitted to the Planning & Building Office for review. Within two (2) days of posting the site, an affidavit of posting must be submitted to the Community Development office.

Posted notices must contain the following information:

- Planning Division file number
- A brief description of the proposal
- Phone number and address for the Newberg Planning & Building Department, 414 E. First Street, phone 503-537-1240

Guidelines for Posting Notice:

- The posted notice must to be waterproof and a minimum of two (2) feet by three (3) feet in size.
- Each frontage of the site must be posted. If a frontage is more than six hundred (600) feet in length, additional notices are required for each six hundred (600) feet or fraction thereof. For example, a lot with a 1400' frontage on Wynooski Street must be posted with three notices along that frontage.
- The notices must not be posted within the public right-of-way, though they must be within ten (10) feet of it.
- The notices must be clearly visible to pedestrians and motorists in the public right-of-way, and must not be posted on trees.
- For Type II applications, the site must be posted at least fourteen (14) days before a decision is rendered.
- For Type III applications, the site must be posted at least ten days (10) before the first scheduled hearing.

Signs for posted notices:

The posted notices must be able to withstand adverse weather. All posted notice signs must conform to the attached example. Signs must be landscape orientation and white with black lettering ("sans-serif" font i.e. Arial or block printing).

Signs may be ordered custom-made from sign companies such as Chehalem Sign Co., or applicants may construct their own signs.

Acceptable materials for notice signs: (dimensions: minimum 2' x 3')

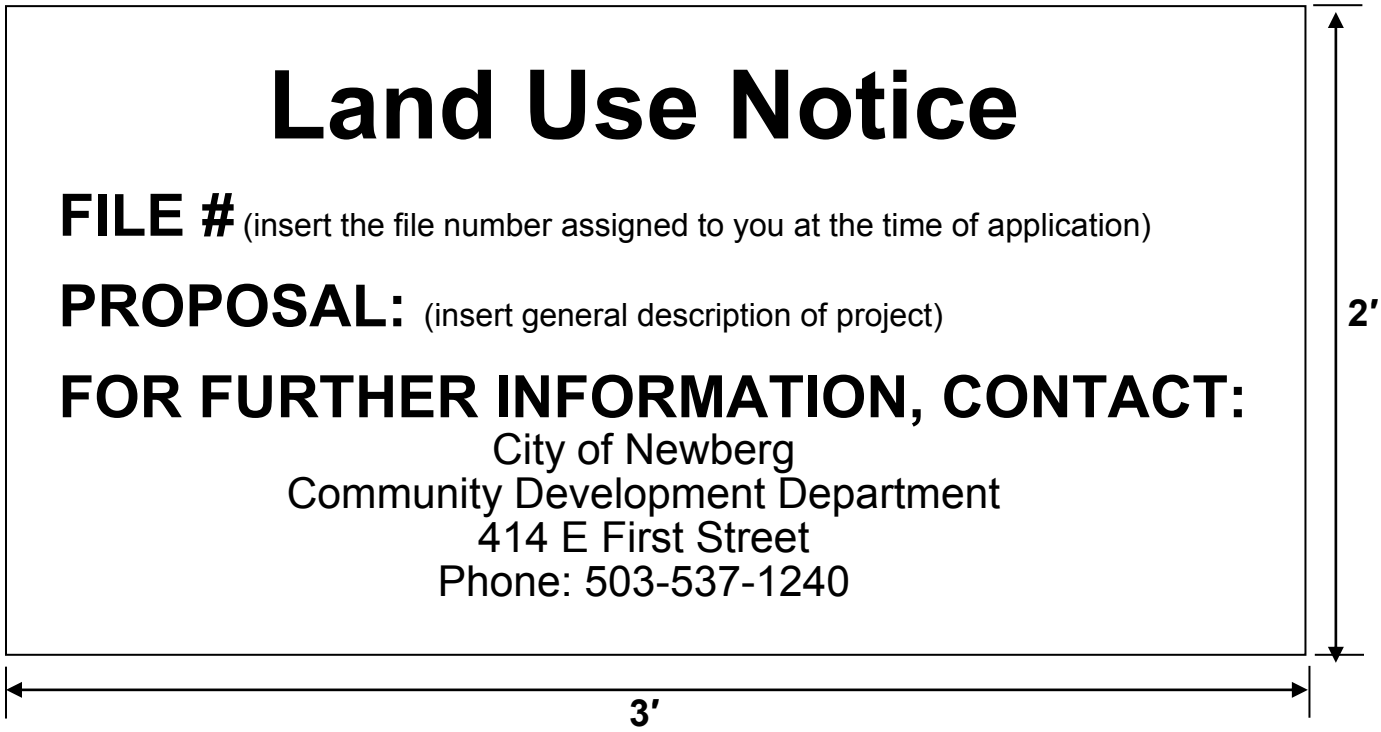
- Plywood (but sign face must be white)
- Plastic or corrugated plastic
- Foam core board (available at many art and hobby supply shops)
- Water resistant poster board
- Other weatherproof materials

Posted notice signs may not be attached to trees, and must be located outside the public right-of-way but within ten (10) feet of it. Therefore, the signs should have legs or stakes or otherwise be freestanding.

Removal of Posted Notice:

The notice must remain posted until a final decision is made. Within ten (10) days of the final decision, the notice(s) must be removed from the site by the applicant.

CITY OF NEWBERG
SAMPLE POSTED NOTICE



Notice must be white with black letters, and must be landscape orientation, as shown above. The notice must be lettered using block printing or a “sans-serif” font, such as Arial.

CITY OF NEWBERG
AFFIDAVIT OF NOTICING REQUIREMENTS

The affidavit on the following page must be submitted to the Planning & Building Department **within two (2) days of mailing notice** and **within two (2) days of posting notice.** The consequences of failure to mail and post notice, and to submit the affidavits within the two (2) day deadline are described in Newberg Development Code §15.100.210(J) and §15.100.260(I).

§15.100.210(J) - Failure to Mail the Notice:
Failure to mail the notice and affirm that the mailing was completed in conformance with the code shall result in:

(1) Postponement of a decision until the mailing requirements have been met; or

(2) Postponement of the hearing to the next regularly scheduled meeting or to such other meeting as may be available for the hearing; or

(3) The entire process being invalidated; or

(4) Denial of the application.

§15.100.260(I) - Failure to Post the Notice:
The failure of the posted notice to remain on the property shall not invalidate the proceedings. Failure by the applicant to post a notice and affirm that the posting was completed in conformance with the code shall result in:

(1) Postponement of a decision until the mailing requirements have been met; or

(2) Postponement of the hearing to the next regularly scheduled meeting or to such other meeting as may be available for the hearing; or

(3) The entire process being invalidated; or

(4) Denial of the application.

PLANNING DIVISION FILE #: _____

CITY OF NEWBERG
AFFIDAVIT OF NOTICING

REFERENCE ATTACHED LIST(S)/NOTICE(S)

I, _____, 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)

_____
Signature Date

_____
Print name

§15.220.050 - TYPE II DESIGN REVIEW CRITERIA

Type II Site Design Review applies to the following activities:

- ·Any new development or remodel which is not specifically identified within Newberg Development Code § 15.220.020(A)(1).
- ·Telecommunication facilities.

The following development activities are exempt from Type II standards:

- ·Replacement of an existing item such as a roof, floor, door, window or siding.
- ·Plumbing and/or mechanical alterations which are completely internal to an existing structure.

Provide a written response that specifies how your project meets the following criteria:

(1) *Design Compatibility. The proposed design review request incorporates an architectural design which is compatible with and/or superior to existing or proposed uses and structures in the surrounding area. This shall include, but not be limited to, building architecture, materials, colors, roof design, landscape design, and signage*.

(2) *Parking and On-Site Circulation. Parking areas shall meet the requirements of NMC 15.440.010. Parking studies may be required to determine if adequate parking and circulation are provided for uses not specifically identified in NMC 15.440.010. Provisions shall be made to provide efficient and adequate on-site circulation without using the public streets as part of the parking lot circulation pattern. Parking areas shall be designed so that vehicles can efficiently enter and exit the public streets with a minimum impact on the functioning of the public street*.

(3) *Setbacks and General Requirements. The proposal shall comply with NMC 15.415.010 through 15.415.060 dealing with height restrictions and public access; and NMC 15.405.010 through 15.405.040 and 15.410.010 through 15.410.070 dealing with setbacks, coverage, vision clearance, and yard requirements*

(4) *Landscaping Requirements. The proposal shall comply with NMC 15.420.010 dealing with landscape requirements and landscape screening.*

(5) *Signs. Signs shall comply with NMC 15.435.010 et seq. dealing with signs.*

(6) *Manufactured Dwelling, Mobile Home and RV Parks. Manufactured dwelling and mobile home parks shall also comply with the standards listed in NMC 15.445.075 through 15.445.100 in addition to the other clear and objective criteria listed in this section. RV parks also shall comply with NMC 15.445.170 in addition to the other criteria listed in this section.*

(7) *Zoning District Compliance. The proposed use shall be listed as a permitted or conditionally permitted use in the zoning district in which it is located as found in NMC 15.305.010 through 15.336.020. Through this site review process, the director may make a determination that a use is determined to be similar to those listed in the applicable zoning district, if it is not already specifically listed. In this case, the director shall make a finding that the use shall not have any different or more detrimental effects upon the adjoining neighborhood area than those specifically listed.*

(8) *Sub district Compliance. Properties located within subdistricts shall comply with the provisions of those subdistricts located in NMC 15.340.010 through 15.348.060.*

(9) *Alternative Circulation, Roadway Frontage Improvements and Utility Improvements. Where applicable, new developments shall provide for access for vehicles and pedestrians to adjacent properties which are currently developed or will be developed in the future. This may be accomplished through the provision of local public streets or private access and utility easements. At the time of development of a parcel, provisions shall be made to develop the adjacent street frontage in accordance with city street standards and the standards contained in the transportation plan. At the discretion of the city, these improvements may be deferred through use of a deferred improvement agreement or other form of security.*

(10) *Traffic Study Improvements. If a traffic study is required, improvements identified in the traffic study shall be implemented as required by the director. [Ord. 2763 § 1 (Exh. A § 7), 9-16-13; Ord. 2747 § 1 (Exh. A § 5), 9-6-11; Ord. 2451, 12-2-96. Code 2001 § 151.194.]*

DESIGN REVIEW 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**

☑ **PUBLIC NOTICE INFORMATION** – Draft of mailer notice and sign; mailing list of all properties within 500'.

☑ **CURRENT TITLE REPORT** (within 60 days old)

☑ **SUBMIT one original and three copies 8-1/2″ x 11″ or 11″ x 17″ reproducible document together with 20 copies of the following information. In addition, submit two (2) full size copies of all plans.**

☑ **WRITTEN CRITERIA RESPONSE** – Address the criteria listed on page 12.

☑ **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, wetlands 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. A preliminary storm water report is required (see Public works Design and Construction standards).
- □ 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, including the location of accessible parking spaces, accessible routes from the entrance to the public way, and ramps for wheelchairs.
- □ Architectural Drawings: Provide floor plans and elevations for all planned structures.
- □ 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.

N/A ☐ **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.

TYPE I APPLICATION -- 2019
(ADMINISTRATIVE REVIEW)

File #: _____

TYPES – PLEASE CHECK ONE:

___ **Code Adjustment**
___ **Final Plat**
___ **Minor Design Review**
___ **Property Line Adjustment**
_X_ **Property Line Consolidation**
___ **Type I Extension or Type I Minor/Major Modification**
___ **Type II or Type III Extension or Minor Modification**
___ **Other: (Explain)** _____

APPLICANT INFORMATION:

APPLICANT: Friendsview Manor, Inc.
ADDRESS: 1301 Fulton Street, Newberg, OR 97132
EMAIL ADDRESS: Please Contact Applicant's Consultant - AKS Engineering & Forestry, LLC: Mimi Doukas - MimiD@aks-eng.com
PHONE: (503) 563-6151 MOBILE: (503) 563-6151 FAX: (503) 563-6152
OWNER (if different from above): Werth Family LLC PHONE: 503-538-5157
ADDRESS: 33180 NE Haugen Rd., Newberg, OR 97132
ENGINEER/SURVEYOR: AKS Engineering & Forestry, LLC - Mimi Doukas PHONE: 503-538-5157
ADDRESS: 12965 SW Herman Road, Suite 100, Tualatin, OR 97062

GENERAL INFORMATION:

PROJECT NAME: Friendsview Springbrook Meadows II PROJECT LOCATION: Providence Dr between Hayes St and Pacific Hwy W
PROJECT DESCRIPTION/USE: New four phase independent living community for Friendsview Retirement Community PROJECT VALUATION: _____
MAP/TAX LOT NO. (i.e.3200AB-400): 3216 Tax Lots 2019 and 2026 ZONE: R-P in SP SITE SIZE: 6.67 SQ. FT. ☐ ACRE ☐
COMP PLAN DESIGNATION: MIX/SP TOPOGRAPHY: Flat
CURRENT USE: Vacant
SURROUNDING USES:
NORTH: Institutional SOUTH: Residential
EAST: Vacant/ Future Bypass WEST: Commercial

SPECIFIC PROJECT CRITERIA AND REQUIREMENTS ARE ATTACHED

General Checklist: ■ Fees ■ Current Title Report ■ Written Criteria Response ■ Owner Signature

For detailed checklists, applicable criteria for the written criteria response, and number of copies per application type, turn to:

The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief. 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.

Dean C Werth
Applicant Signature Date

DEAN E WERTH 3-20-2020
Print Name

Todd Engle
Owner Signature Date

Todd Engle
Print Name

Attachments: General Information, Fee Schedule, Criteria, Checklists

GENERAL INFORMATION
Type I Development Permit Process (Administrative Decision)

Overview: Type I Permit applications are reviewed administratively using a process in which City staff applies clear and objective standards that do not allow much discretion. This process does not require public notice of the application or decision. Only the applicant may appeal the decision. Depending on the type of application, a Type I process can take as little time as a few days (i.e.: signs) or up to 60 days (i.e.: plat maps).

TYPE I PERMITS INCLUDE:

- Adjustments to Development Code Standards
- Duplexes
- Fences and trash enclosures
- Final plat maps for subdivisions and partitions
- Minor remodels or additions for commercial, industrial and multi-family residential
- Modifications, paving, landscaping, re-striping or re-grading of parking lots
- Property line adjustments or consolidations
- Signs (freestanding and building mounted)

- **Pre-Application Conference:** Please call to schedule a time for a pre-application meeting (optional) 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): duplexes, signs, and minor additions require concurrent submittal of a building permit application.
  - Submit required plans

- **Processing**
  - Staff will perform a completeness check of the application and notify applicant of any information that is missing or incomplete.
  - If the application is complete, staff will notify applicant by phone or in writing that the application has been approved or requires modifications so that it may be approved.
  - Building permit fees may need to be paid at this time.

Helpful Hints:

- **Questions?** Information is free! Please do not hesitate to call (503) 537-1240 prior to submitting the application.
- **Time:** Make sure the application is complete. Incomplete applications will delay the processing. Please go through the detailed checklist to make sure you have everything. The more work you can do prior to submittal, the faster the application can be processed.
- **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.

NEWBERG PERMIT CENTER FEE SCHEDULE

Effective Date: April 1, 2019

5% Technology fee will be added to total fees (resolution No. 2016-3268)

PRE-APPLICATION REVIEW **$100**

TYPE I (ADMINISTRATIVE REVIEW)

- ANY TYPE I ACTION NOT SPECIFICALLY LISTED IN THIS SECTION **$175**
- PROPERTY CONSOLIDATION **$175**
- CODE ADJUSTMENT **$437**
- DESIGN REVIEW – TYPE I (DUPLEX OR COM. /IND. MINOR ADDITION REVIEW) ..... **0.3% OF PROJECT VALUE, $437 MINIMUM**
- MINOR MODIFICATION OR EXTENSION OF TYPE I DECISION **$175**
- MAJOR MODIFICATION OF TYPE I DECISION ..... **50% OF ORIGINAL FEE**
- PARTITION FINAL PLAT ..... **$875 + $77 PER PARCEL**
- PROPERTY LINE ADJUSTMENT **$875**
- SIGN REVIEW ..... **$78 PLUS $1.00 PER SQ. FT. OF SIGN FACE**
- SUBDIVISION, PUD, OR CONDOMINIUM FINAL PLAT ..... **$1753 + $77 PER LOT OR UNIT**

TYPE II (LAND USE DECISION)

- ANY TYPE II ACTION NOT SPECIFICALLY LISTED IN THIS SECTION **$875**
- MINOR MODIFICATION OR EXTENSION OF TYPE II DECISION **$175**
- MAJOR MODIFICATION OF TYPE II DECISION ..... **50% OF ORIGINAL FEE**
- DESIGN REVIEW (INCLUDING MOBILE/MANUFACTURED HOME PARKS) ..... **0.6% OF TOTAL PROJECT COST, $875 MINIMUM***
- PARTITION PRELIMINARY PLAT ..... **$875 PLUS $77 PER PARCEL**
- SUBDIVISION PRELIMINARY PLAT ..... **$1753 PLUS $77 PER LOT**
- VARIANCE **$875**

TYPE III (QUASI-JUDICIAL REVIEW)

- ANY TYPE III ACTION NOT SPECIFICALLY LISTED IN THIS SECTION **$1857**
- ANNEXATION ..... **$2442 PLUS $234 PER ACRE**
- COMPREHENSIVE PLAN AMENDMENT (SITE SPECIFIC) **$2442**
- CONDITIONAL USE PERMIT **$1857**
- MINOR MODIFICATION OR EXTENSION OF TYPE III DECISION **$175**
- MAJOR MODIFICATION OF TYPE III DECISION ..... **50% OF ORIGINAL FEE**
- HISTORIC LANDMARK ESTABLISHMENT OR MODIFICATION **$0**
- HISTORIC LANDMARK ELIMINATION **$2129**
- SUBDIVISION PRELIMINARY PLAT ..... **$1753 PLUS $77 PER LOT**
- PLANNED UNIT DEVELOPMENT ..... **$3708+$77 PER LOT OR UNIT**
- ZONING AMENDMENT (SITE SPECIFIC) **$2313**

TYPE IV (LEGISLATIVE AMENDMENTS)

- COMPREHENSIVE PLAN TEXT AMENDMENT OR LARGE SCALE MAP REVISION **$2631**
- DEVELOPMENT CODE TEXT AMENDMENT OR LARGE SCALE MAP REVISION **$2631**

APPEALS

- TYPE I OR II APPEAL TO PLANNING COMMISSION **$503**
- TYPE I OR II APPEAL TO CITY COUNCIL **$911**
- TYPE III APPEAL TO CITY COUNCIL **$1069**
- TYPE I ADJUSTMENTS OR TYPE II VARIANCES THAT ARE NOT DESIGNED TO REGULATE THE PHYSICAL CHARACTERISTICS OF A USE PERMITTED OUTRIGHT **$283**

OTHER FEES

- COMMUNITY DEVELOPMENT FEE ..... **0.75% OF PROJECT COST (THE ABOVE CHARGE IS ADDED TO ANY BUILDING PERMIT APPLICATION)**
- EXPEDITED LAND DIVISION ..... **$6515 + $77 PER LOT OR UNIT**
- URBAN GROWTH BOUNDARY AMENDMENT **$4164**
- VACATION OF PUBLIC RIGHT-OF-WAY **$1728**

LICENSE FEES

- GENERAL BUSINESS **$50**
- HOME OCCUPATION **$25**
- PEDDLER/SOLICITOR/STREET VENDOR ..... **No fee (Business License fee only)**
- EXHIBITOR **$129**
- TEMPORARY MERCHANT ..... **$106/45 days or $346/perpetual**

TECHNOLOGY FEE ..... **5% OF TOTAL FEES**

ADDITIONAL LAND USE REVIEW FEES – ENGINEERING DEPARTMENT

Planning Review, Partition, Subdivision & PUD's (Type 11/111 Application) - **$284.08 - 19 lots, Plus $12.63 per lot over 20 lots**

Final Plat Review, Partition and subdivision .....**$284.08 Plus .....$7.14 per lot or parcel**

Development review for public improvements on Commercial, Industrial, Multifamily Developments & Institutional zones **$397.28 1st Acre $226.93 Additional acre**

ADOPTION AND REVISION HISTORY:

Adopted by: Resolution 98-2122, July 6, 1998
Amended by: Resolution 99-2214, December 8, 1999
Resolution 2000-2265, October 2, 2000
Resolution 2001-2318, November 19, 2001
Executive Order January 2, 2007 (Reso. 99-2210)
Executive Order October 24, 2008
Executive Order, December 16, 2002 pursuant to Resolution 99-2210
Executive Order, January 22, 2002 pursuant to Resolution 99-2210
Resolution 2004-2466, November 3, 2003
Resolution 2007-2752, December 3, 2007
Executive Order November 29, 2011(2011-32)
Executive Order October 24, 2012(2012-34)
Resolution 2014-3140, May 19, 2014
Executive Order April 1, 2015 (2015-42)
Resolution 2016-3268, April 18, 2016
Resolution 2017-3361 March 2017
Resolution 2018-3443 March 2018
Resolution 2019-3539 March 2019

§ 15.230.010 PROPERTY CONSOLIDATION

Definition: The elimination of common property lines between two or more abutting properties.

The owner of abutting properties may consolidate them into a single property through any of the following ways:

(1) A deed restriction recorded with the Yamhill County Recorder. The applicant shall file a copy of the recorded deed restriction with the Director. The deed restriction shall state that the properties are to be considered one lot for planning and zoning purposes, and that the properties shall not be conveyed separately prior to them being divided in accordance with regulations of the city.
(2) The plat vacation process as described in O.R.S. 271.080 to 271.230.
(3) The replat process as described in O.R.S. 92.180 to 92.190.
(4) A property line adjustment, subdivision plat or partition plat that effects the consolidation of the property.

PROPERTY CONSOLIDATION PROCESS

Coordinate with a title company to get a deed restriction written up to consolidate the properties. The deed restriction should state that the properties are to be considered one lot for planning and zoning purposes, and that the properties shall not be conveyed separately prior to them being divided in accordance with regulations of the city. A new legal description that encompasses the entire new property (after consolidation) will also be necessary for review and recording with the deed restriction.

The Planning Division and City Surveyor will review the deed restriction and new legal description for approval. After approval, the deed restriction and accompanying new legal description will need to be recorded with the Yamhill County Recorder, with a copy of the documents returned to the City.

PROPERTY CONSOLIDATION APPLICATION CHECKLIST

The following items must be submitted with each application. All diagrams, maps and plans must be drawn to scale. Incomplete applications will not be processed and incomplete or missing information may delay the review process. Check with the Planning Division regarding additional requirements for your project.

☑ **FEES**

☑ A**PPLICATION FORM**

☑ **CURRENT TITLE REPORT**

☑ **DEED RESTRICTION** – Provide a deed restriction that effectively consolidates the properties.

☑ **LEGAL DESCRIPTION** – Provide both the current legal descriptions of the parcels to be consolidated and a new legal description that encompasses the entire new parcel after consolidation.

Exhibit C: Property Title Information

First American

First American Title Insurance Company

825 NE Evans Street
McMinnville, OR 97128
Phn - (503)376-7363
Fax - (866)800-7294

YAMHILL COUNTY TITLE UNIT
FAX (866)800-7294

Title Officer: Larry Ball
(503)376-7363
lball@firstam.com

REVISED LOT BOOK SERVICE

Friendsview Manor
1301 E. Fulton Street
Newberg, OR 97132

Order No.: 1032-3106516
March 25, 2020

Attn: Todd Engle
Phone No.: (503)538-3144 - Fax No.:
Email:

Re:

Fee: $0.00

We have searched our Tract Indices as to the following described property:

TRACT 1:

Parcel 2 of Partition Plat 2017-06, recorded June 6, 2017 as Instrument No. 201709029, Deed and Mortgage Records, Yamhill County, State of Oregon, corrected by Affidavit of Correction recorded June 22, 2017 as Instrument No. 201709900, Deed and Mortgage Records.

TRACT 2:

Lot 2, OAK MEADOWS II, in the City of Newberg, Yamhill County, Oregon

and as of March 23, 2020 at 8:00 a.m.

We find that the last deed of record runs to

Werth Family, LLC, an Oregon limited liability company, as to Tract 1, and
Friendsview Manor, Inc., as to Tract 2

We find the following apparent encumbrances within ten (10) years prior to the effective date hereof:

NONE

1. City liens, if any, of the City of Newberg.

2. The rights of the public in and to that portion of the premises herein described lying within the limits of streets, roads and highways.

3. Waiver of Rights to Remonstrance, pertaining to Streets, Future Streets, or Public Utilities including storm sewer, sanitary sewer, sanitary sewer and water lines including the terms and provisions thereof:
   Recorded: August 22, 1991 in Film Volume 258, Page 1175, Deed and Mortgage Records

4. Easement, including terms and conditions contained therein:
   Granted to: City of Newberg, a municipal corporation
   For: Public Water Line and Pedestrian and Bicycle Path Easement
   Recorded: July 11, 2002
   Recording Information: 200213432

   Partial Release of Easement recorded June 21, 2017 as Instrument No. 201709858, Deed and Mortgage Records.

5. Easement, including terms and conditions contained therein:
   Granted to: Northwest Natural Gas Company, an Oregon corporation
   For: Gas Pipeline Easement
   Recorded: October 25, 2002
   Recording Information: 200221022

6. Covenant of Waiver of Rights and Remedies, including the terms and provisions thereof:
   Recorded: July 25, 2006 as Instrument No. 200616704, Deed and Mortgage Records

7. Advanced Financing Agreement and the terms and conditions thereof:
   Between: Providence Health Systems-Oregon
   And: City of Newberg, a municipal corporation of the State of Oregon
   Recording Information: July 28, 2006 as Instrument No. 200617344, Deed and Mortgage Records

8. Notice of Reimbursement District Formation, including terms and provisions thereof.
   Recorded: March 05, 2007 as Instrument No. 200704923, Deed and Mortgage Records

9. Covenants, conditions, restrictions and/or easements; but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, family status, or national origin to the extent such covenants, conditions or restrictions violate Title 42, Section 3604(c), of the United States Codes:
   Recording Information: May 16, 2008 as Instrument No. 200808480, Deed and Mortgage Records

10. The By-Laws, including the terms and provisions thereof of Oak Meadows II Owner's Association, Inc..

Recorded: May 16, 2008 as Instrument No. 200808481, Deed and Mortgage Records

11. Regulations and Assessments of Homeowner's Association, as set forth in Declaration recorded May 16, 2008 as Instrument No. 200808480, Deed and Mortgage Records.

THE FOLLOWING AFFECTS TRACT 1 ONLY:

12. Advanced Financing Agreement and the terms and conditions thereof:
Between: The Greens at Springbrook LLC (aka Oakridge Estates Development Corporation)
And: City of Newberg, a municipal corporation of the State of Oregon
Recording Information: March 05, 2007 as Instrument No. 200704924, Deed and Mortgage Records

13. Easement, including terms and conditions contained therein:
Granted to: City of Newberg, a Municipal Corporation of the State of Oregon
For: 15 foot pedestrian easement
Recorded: May 12, 2008
Recording Information: 200808192

Partial Release of Easement recorded June 21, 2017 as Instrument No. 201709857, Deed and Mortgage Records

14. Easement as shown on the recorded plat/partition
For: 20 foot storm drain easement

15. Easement as shown on the recorded plat/partition
For: 10 foot public utility easement

16. Easement, including terms and provisions contained therein:
Recording Information: June 21, 2017 as Instrument No. 201709859, Deed and Mortgage Records
In Favor of: City of Newberg, a municipal corporation
For: Pedestrian access

17. Easement as shown on the recorded plat/partition
For: 15 foot storm drainage easement partition 2017-06

THE FOLLOWING AFFECTS TRACT 2 ONLY:

18. Twenty foot storm drain easement as shown on the plat of Oak Meadows II.

19. Ten foot public utility easement as shown on the plat of Oak Meadows II.

20. Fifteen foot water line easement as shown on the plat of Oak Meadows II.

21. Covenants, conditions, restrictions and/or easements; but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, family status, or national origin to the extent such covenants, conditions or restrictions violate Title 42, Section 3604(c), of the United States Codes:
Recording Information: May 16, 2008 as Instrument No. 200808480, Deed and Mortgage Records

22. Regulations and Assessments of Oak Meadows II Owner's Association, as set forth in Declaration recorded May 16, 2008 as Instrument No. 200808480, Deed and Mortgage Records.

23. The By-Laws, including the terms and provisions thereof of Oak Meadows II Owner's Association, Inc..
Recorded: May 16, 2008 as Instrument No. 200808481, Deed and Mortgage Records

24. Deed of Trust and Assignments of Rents.
Grantor/Trustor: Friendsview Manor, dba Friendsview Retirement Community, an Oregon nonprofit corporation
Grantee/Beneficiary: U.S. Bank National Association, a national banking association
Trustee: First American Title Insurance Company of Oregon
Amount: $42,140,000.00
Recorded: August 04, 2016
Recording Information: Instrument No. 201612003, Deed and Mortgage Records
(Affects said land and other properties)

25. Covenants, conditions, restrictions and/or easements; but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, family status, or national origin to the extent such covenants, conditions or restrictions violate Title 42, Section 3604(c), of the United States Codes:
Recording Information: April 19, 2019 as Instrument No. 201904747, Deed and Mortgage Records

We have also searched our General Index for Judgments and State and Federal Liens against the Grantee(s) named above and find:

NONE

We find the following unpaid taxes and city liens: NONE

THIS IS NOT a title report since no examination has been made of the title to the above described property. Our search for apparent encumbrances was limited to our Tract Indices, and therefore above listings do not include additional matters which might have been disclosed by an examination of the record title. We assume no liability in connection with this Lot Book Service and will not be responsible for errors or omissions therein. The charge for this service will not include supplemental reports, rechecks or other services.

Exhibit D: Tax Maps

ASSESSMENT & TAX CARTOGRAPHY

SECTION 16 T.3S. R.2W. W.M.
YAMHILL COUNTY OREGON
1" = 400'

CANCELLED TAXLOTS:

2009 A01	2200
3800	2100
3701	2015
3700	2010
3602	1906
3601	1901
3600	1700
3500	1600
3400	1502
3300	1501
3200	1500
3100	1300
3001	800
3000	600
2900	500
2807	400
2806	300
2805	200
2804	105
2803	104
2802	103
2801	102
2800	101
2701	100
2700	
2600	
2501	
2500	
2400	
2300	

DATE PRINTED: 2/15/2018

3 2 16

Exhibit E: Public Notice Information

Community Development Department
P.O. Box 970 ▪ 414 E First Street ▪ Newberg, Oregon 97132
503-537-1240. Fax 503-537-1272 www.newbergoregon.gov

WE WANT YOUR COMMENTS ON A PROPOSED NEW DEVELOPMENT IN YOUR NEIGHBORHOOD

A property owner in your neighborhood has submitted an application to the City of Newberg for a new independent living community for Friendsview Retirement Community. The subject property is located along Providence Drive north of Hayes Street in Newberg. You are invited to take part in the City's review of this project by sending in your written comments. The applicable criteria used to make a decision on this application for design review approval are found in Newberg Development Code 15.220.050(B). For more details about giving comments, please see the back of this sheet.

The project will include the construction of a new duplex style homes, a future multistory apartment building, and the expansion of the existing community building. Offsite work will include the construction of new sidewalks and landscape strips along Providence Drive.

APPLICANT:	Friendsview Manor, Inc.
APPLICANT'S CONSULTANT:	AKS Engineering & Forestry, LLC—Mimi Doukas, AICP, RLA
TELEPHONE:	(503) 563-6151
EMAIL:	MimiD@aks-eng.com
PROPERTY OWNER:	Werth Family LLC
LOCATION:	33180 NE Haugen Road, Newberg, OR 97132
TAX LOT NUMBER:	Yamhill County Assessor's Map 3216, Tax Lot 2026

Community Development Department
P.O. Box 970 ▪ 414 E First Street ▪ Newberg, Oregon 97132
503-537-1240. Fax 503-537-1272 www.newbergoregon.gov

We are mailing you information about this project because you own land within 500 feet of the development site. We invite you to send any written comments for or against the project within 14 days from the date this notice is mailed.

If you mail your comments to the City, please put the following information on the outside of the envelope:

Written Comments: _____
City of Newberg
Community Development
PO Box 970
Newberg, OR 97132

All written comments must be turned in by 4:30 p.m. on _____, 2019. Any issue which might be raised in an appeal of this case to the Land Use Board of Appeals (LUBA) must be submitted to the City in writing before this date. 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 design review approval are found in Newberg Development Code 15.220.050(B).

You can look over all the information about this project or drop comments off at Newberg City Hall, 414 E. First Street. You can also buy copies of the information for a cost of 25 cents a page. If you have any questions about the project, you can call the Newberg Planning Division at 503-537-1240. A copy of the application is posted at www.newbergoregon.gov/planning.

The Community Development Director will make a decision at the end of a 14-day comment period. If you send in written comments about this project, you will be sent information about any decision made by the City relating to this project.

Date Mailed: _____

Land Use Notice

FILE # _____

PROPOSAL: New independent living community for Friendsview Retirement Community.

FOR FURTHER INFORMATION, CONTACT:

City of Newberg
Community Development Department
414 E First Street
Phone: 503-537-1240

PROVIDENCE HEALTH SYSTEM
4400 NE HALSEY BLDG 2 NO 190
PORTLAND OR 97213

WARDIN & WESTLUND INVEST II LTD PTRSHP
1630 SE BUSH ST
HILLSBORO OR 97123

WARDIN & WESTLUND INVEST II LTD PTRSHP
1630 SE BUSH ST
HILLSBORO OR 97123

WARDIN & WESTLUND INVEST II LTD PTRSHP
1630 SE BUSH ST
HILLSBORO OR 97123

WARDIN & WESTLUND INVEST II LTD PTRSHP
1630 SE BUSH ST
HILLSBORO OR 97123

W-P 99 LLC
879 PROVIDENCE DR
NEWBERG OR 97132

LION NATHAN USA INC
8717 W 110TH ST STE 430
BLDG 14
OVERLAND PARK KS 66210

NHI-REIT OF NEXT HOUSE LLC
222 ROBERT ROSE DR
MURFREESBORO TN 37129

CHEHALEM PARK AND RECREATION DISTRICT
125 S ELLIOTT RD
NEWBERG OR 97132

OAK MEADOWS II OWNERS ASSOCIATION
33180 NE HAUGEN RD
NEWBERG OR 97132

FRIENDSVIEW MANOR INC
1301 E FULTON ST
NEWBERG OR 97132

DEPARTMENT OF TRANSPORTATION
3879 OAK MEADOW LOOP
NEWBERG OR 97132

DEPARTMENT OF TRANSPORTATION
3330 SW 70TH AVE
PORTLAND OR 97225

WHITNEY FAMILY PROPERTIES
LTD PRTSHP
PO BOX 248
NEWBERG OR 97132

AIRPARK PROPERTIES LLC
18485 SW SCHOLLS FERRY RD
BEAVERTON OR 97007

Exhibit F: Preliminary Stormwater Report

Friendsview Springbrook Meadows II
Newberg, Oregon

Preliminary Stormwater Report

Date:	March 2020
Client:	MJG Development, Inc. 901 Brutscher Street, Suite 206 Newberg, OR, 97132
Engineering Contact:	Chuck Gregory, PE 503-563-6151 | chuckg@aks-eng.com
Engineering Firm:	AKS Engineering & Forestry, LLC 12965 SW Herman Rd
AKS Job Number:	5680

AKS ENGINEERING & FORESTRY
www.aks-eng.com

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Preliminary Stormwater Report

FRIENDSVIEW SPRINGBROOK MEADOWS II
NEWBERG, OREGON

1.0 Purpose of Report

The purpose of this report is to analyze the effects of the proposed development regarding existing and proposed stormwater runoff and the effect on the existing stormwater conveyance systems. Analysis includes documentation of the criteria, methodology, and informational sources used to design the proposed stormwater system. The results of the proposed hydraulic system are also presented in the appendices.

2.0 Project Location/Description

The proposed development will be located south of Highway 99, and west of Providence Drive in Newberg, Oregon, encompassing 6.66 acres (Tax Lot 2026, Yamhill County Tax Map 3SW216 – Parcel 2 PP 2017-06).

The proposed project is a multi-phased development. The first phase will include 18 single unit attached dwellings, drive aisles, curbs, sidewalks, landscaping, associated underground utilities, and stormwater facilities. The second phase will include 10 single unit attached dwellings, landscaping, and a stormwater facility. The third phase includes the community center addition and accompanying utilities, parking lot areas, and associated landscaping. The fourth and final phase will consist a of a multi-unit building, parking spaces, sidewalks, and accompanying utilities.

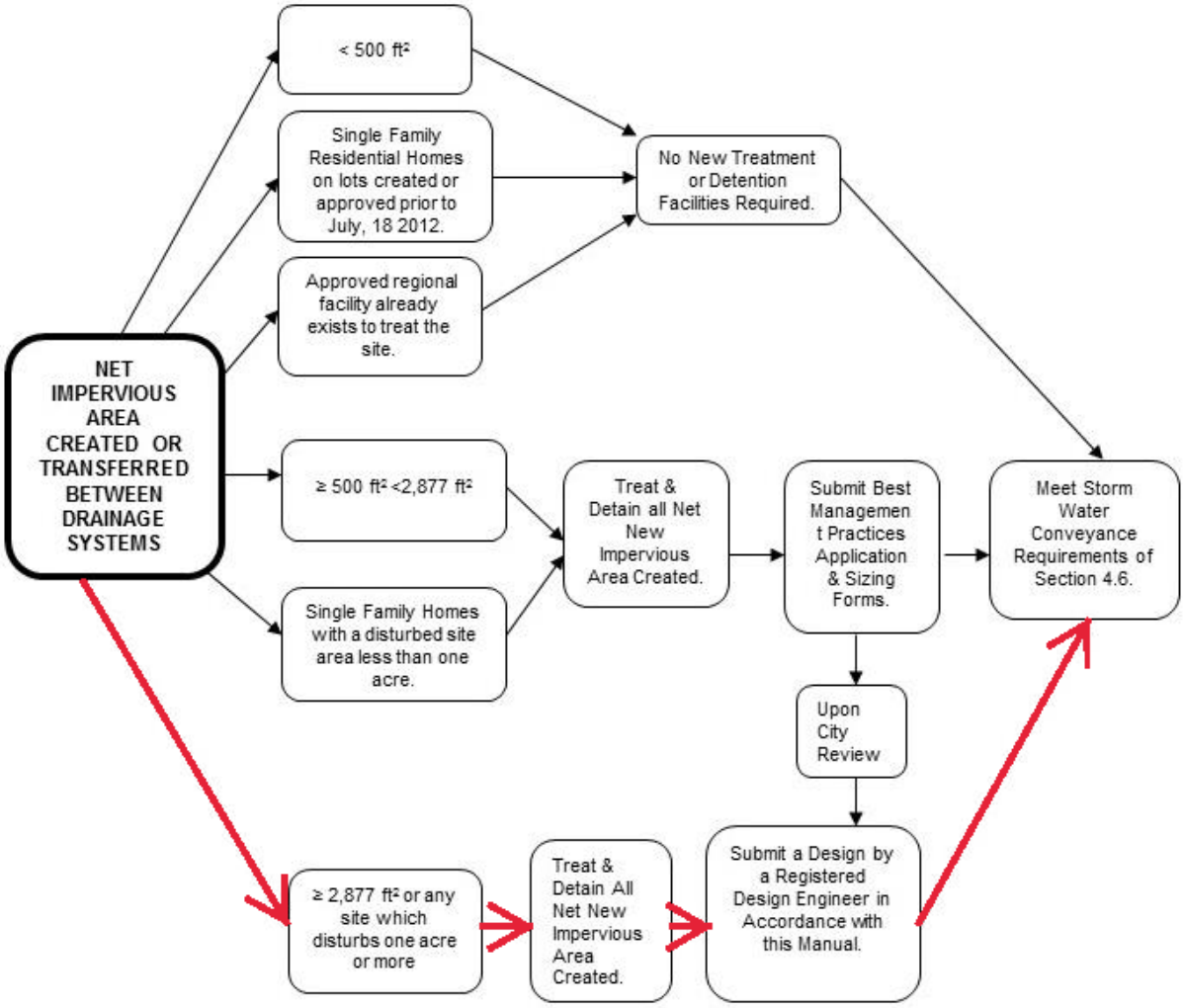
Stormwater management is provided through a combination of low impact development approach (LIDA) facilities, including two vegetated basins, a vegetated swale, a vegetated planter, and an underground detention pipe. All stormwater treatment facilities will be designed with outlet structures to release the post-developed site peak flow at or below pre-developed rates. A small portion of the site at the southeast side will be treated using stormfilter cartridge catch basins, due to limitations of the site created by the existing utilities and the existing grade of Providence Drive.

3.0 Regulatory Design Criteria

Stormwater design criteria is dictated by the City of Newberg *Public Works Design and Construction Standards (August 2015)*. Per Figure 4.4, the proposed development will create more than 2,877 square feet of impervious area and will therefore be required to provide treatment and detention for all net new impervious area.

4.6 Water Quantity and Quality Facilities

Figure 4.4 Storm water Quality & Quantity Design Flow Chart



3.1 STORMWATER QUANTITY

Per City of Newberg's *Public Works Design and Construction Standards (August 2015),* it is required that the post-development runoff rates from the site do not exceed the pre-development runoff rates.

4.7.1.III Water Quantity Facility Design & Control Standards

Stormwater quantity on-site detention facilities shall be designed to capture runoff so the post-development runoff rates from the site do not exceed the pre-development runoff rates from the site, based on 24-hour storm events ranging from ½ of the 2-year return storm to the 25-year return storm. Specifically, the ½ of the 2, 2, 10, and 25-year post-development runoff rates will not exceed their respective ½ of the 2, 2, 10, and 25-year pre-development runoff rates…

Per City of Newberg standards, the proposed development will provide stormwater quantity management with LIDA facilities and an underground detention pipe. The proposed conveyance system and stormwater management facilities will be designed to detain the post-developed runoff rates from the site so they do not exceed the pre-developed rates.

3.2 STORMWATER QUALITY

Per City of Newberg's *Public Works Design and Construction Standards (August 2015),* it is required that stormwater quality facilities be designed based on the following:

> *4.8.5 Water Quality Storm*
>
> *The storm defines both volume and rate of runoff. The stormwater quality only facilities 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 using Figure 4-3, rainfall distribution.*

Stormwater quality management for this project will be met using vegetated basins, vegetated swales, and vegetated planters. The vegetated basins and vegetated swale have been designed per City of Newberg Standards and checked against the *Clean Water Services Design and Construction Standards for Sanitary Sewer and Surface Water Management (R&O 17-05)*. The vegetated planter has been checked using the City of Portland's stormwater standards.

4.0 Design Methodology

The Santa Barbara Urban Hydrograph (SBUH) Method was used to analyze stormwater runoff from the site. This method utilizes the SCS Type 1A 24-hour design storm. HydroCAD 10.0 computer software was used to model the hydrology and stormwater facility hydraulics. Runoff Curve Numbers (CN), which are representative of existing and developed cover conditions and time of concentration (Tc) values were developed in accordance with the U.S. Department of Agriculture (USDA) – Natural Resource Conservation Service's (NRCS) Technical Release 55 and are included in Appendix E.

5.0 Design Parameters

5.1 DESIGN STORMS

Per City of Newberg requirements, the following rainfall intensities and durations were utilized in the analysis of the existing and proposed stormwater facilities:

Table 5-1: Rainfall Intensities

Recurrence Interval (Years)	Rainfall Event (Hours)	Total Precipitation Depth (Inches)
CWS Water Quality	4.00	0.36
City Water Quality	24.0	1.00
½ of 2	24.0	1.25
2	24.0	2.50
10	24.0	3.50
25	24.0	4.00

5.2 PRE-DEVELOPED SITE CONDITIONS

5.2.1 Site Topography

Existing on-site grades generally vary from ±1% to ±48%, with a high point of ±211 feet in the northwest corner of the site. The low point of the property is ±189 feet near southeast property line. The site generally slopes from northwest to southeast.

5.2.2 Land Use

The existing site consists of undeveloped vacant farm land.

5.3 SOIL TYPE

The soil beneath project the site and associated drainage basins is classified as Woodburn Silt Loam according to the USDA Soil Survey for Yamhill County. The table below outlines the Hydrologic Soil Group rating for each soil type:

Table 5-2: Hydrologic Soil Group Ratings

NRCS Map Unit Identification	NCRS Soil Classification	Hydrologic Soil Group Rating
2310A	Woodburn Silt Loam	C

Further information regarding this soil type is included in the NRCS Soil Resource Report located in Appendix D of this report.

5.4 POST-DEVELOPED SITE CONDITIONS

5.4.1 Site Topography

The on-site slopes will be modified with cuts and fills to accommodate the construction of private streets, attached dwellings, a large multi-unit building, and various stormwater facilities. A majority of the site will be routed towards the south vegetated basin, with a small amount of undetained stormwater flowing to the southeast.

5.4.2 Land Use

The post-developed site will consist of a large multi-unit building and 28 single unit attached dwellings with associated streets, sidewalks, and underground utilities.

5.4.3 Post-Developed Input Parameters

Appendices A, B, and C provide the HydroCAD reports that were generated for the analyzed storm events. These reports include all the parameters (e.g. impervious/pervious areas, time of concentration, etc.) used to model the site hydrology.

5.4.4 Description of Off-Site Contributing Basins

There are no major off-site contributory basins draining onto the subject site.

6.0 Stormwater Analyses

6.1 PROPOSED STORMWATER QUALITY CONTROL FACILITIES

6.1.1 North Vegetated Basin

At the northeast corner of the proposed development, a vegetated basin has been designed per City standards, and check against the *Clean Water Services Design and Construction Standards for Sanitary Sewer and Surface Water Management (R&O 17-05),* to provide water quality treatment for the proposed impervious areas. Water quality flow will be routed through the bottom of a 12-foot wide, 68-

foot long vegetated dry basin. Calculations for the water quality treatment through the basin can be referenced in Appendix C.

6.1.2 Vegetated Planter

At the east side of the proposed development, adjacent to Tax Lot 2001, a LIDA planter has been designed per City standards and checked against the City of Portland standards (see Table 5-1) to provide water quality treatment for the contributing impervious areas.

Table 6-1: PAC Calculator Summary Table			
Planter	**Impervious Area Treated (ft^2)**	**Facility Size – Bottom Area (ft^2)**	**Planter Area exceeding WQ Requirement (ft^2)**
1	15,315	375	99

The City of Portland PAC report as well as the 1-inch water quality storm can be referenced in Appendix C.

6.1.3 Vegetated Swale

In the center of the proposed site, a vegetated swale has been designed per City of Newberg standards and checked against the *Clean Water Services Design and Construction Standards for Sanitary Sewer and Surface Water Management (R&O 17-05)*. To treat the runoff from impervious surfaces, the water quality flow will be routed through a 2-foot wide (bottom width), 116-foot long, vegetated swale located between Private Road A and Private Road B. The proposed water quality swale was designed to provide a minimum residence time of 9 minutes. Calculations for the water quality storm event through the vegetated swale can be referenced in Appendix C.

6.1.4 South Vegetated Basin

At the south end of the proposed development, a vegetated basin has been designed per City standards and checked against the *Clean Water Services Design and Construction Standards for Sanitary Sewer and Surface Water Management (R&O 17-05)* to provide water quality treatment for the proposed impervious areas. Water quality flow will be routed through the bottom of a minimum 18-foot wide, 55-foot long vegetated dry basin. Calculations for the water quality treatment through the basin can be referenced in Appendix C.

6.1.5 Stormfilter Cartridge Catch Basin

A small portion of the site at the southeast side will be undetained and will therefore be treated using stormfilter cartridge catch basins. The undetained area consists mostly of impervious area created by the expansion of the parking lot to the south. The additional parking lot area is ±8,876 square feet, which will create ±0.04 cubic feet per second (cfs) of runoff volume. Therefore, two 18-inch stormfilter cartridge catch basins will be necessary to treat the runoff produced by the water quality storm event. Table 6-3 highlights the sizing requirements for stormfilter cartridge catch basins.

Table 6-2: Stormfilter Cartridge Catch Basin Sizing			
Required Treatment Area (sf)	**Water Quality Flow (cfs)**	**Cartridge Flow Rate (18-inch Cartridge) (cfs)**	**Number of Cartridges Required**
8,876	0.04	0.03	2

Appendix C contains information for the undetained parking lot area during the water quality storm.

6.2 PROPOSED STORMWATER QUANTITY CONTROL FACILITIES

Stormwater quantity for this project will be met using two vegetated basins and an underground detention pipe. The combination of these LIDA facilities have been designed to release the post-developed peak flow at or below the pre-development rate by providing detention.

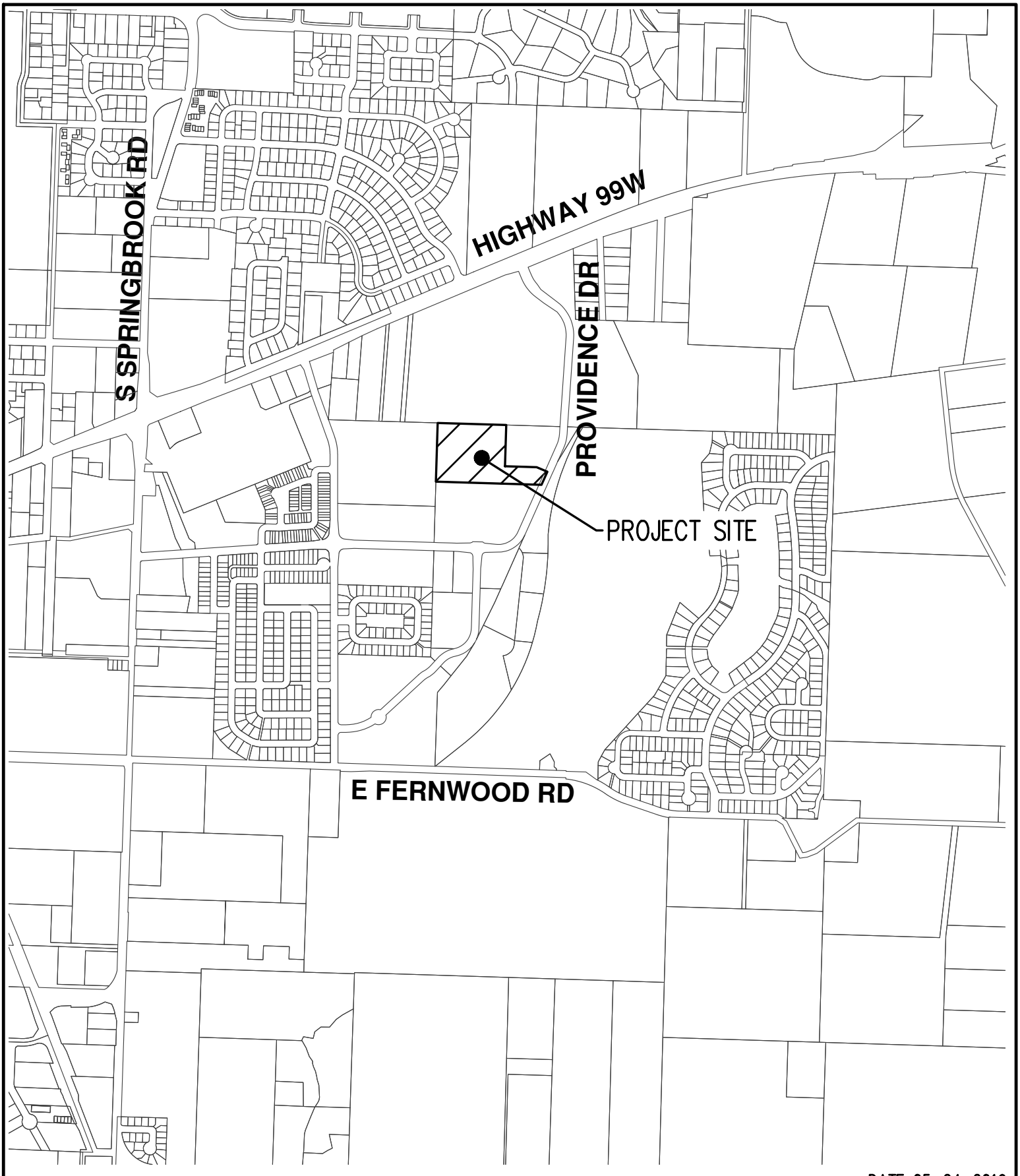
The vegetated basins at the north and south side of the site have been designed with outlet structures per CWS Standards to maintain a minimum of 1-foot of freeboard during the 25-year storm event. Both basins will provide detention in order to meet City of Newberg requirements. Due to the limitations of existing grades and overall space on-site, a 36-inch diameter, 100-foot long underground detention pipe was also designed to help detain the required storage volume. Calculations and contributing basins for all stormwater quantity control facilities can be referenced in Appendices B & C. The table below outlines the pre- and post-development flow rate comparisons:

Table 6-3: Peak Pre- and Post-Development Flow Comparisons

Recurrence Interval (Years)	Peak Pre-Development Flow (cfs)	Peak Post-Development Flow (cfs)	Peak Flow Increase or (Decrease) – (cfs)
½ of 2	0.24	0.21	(0.03)
2	1.47	1.20	(0.27)
10	2.68	2.18	(0.50)
25	3.32	2.79	(0.53)

6.3 DOWNSTREAM ANALYSIS

A downstream analysis incorporating the subject site has previously been performed as part of the stormwater analysis and design for Parcel 1, located adjacent to the site. This report, titled Providence Drive Ambulatory Surgery Center Stormwater Report, was completed August 18, 2017 by AKS staff. It was determined that the proposed development will have no detrimental impacts to the downstream system.



DATE: 05-24-2019

N

SCALE: 1"=1000 FEET

1000 0 200 500 1000

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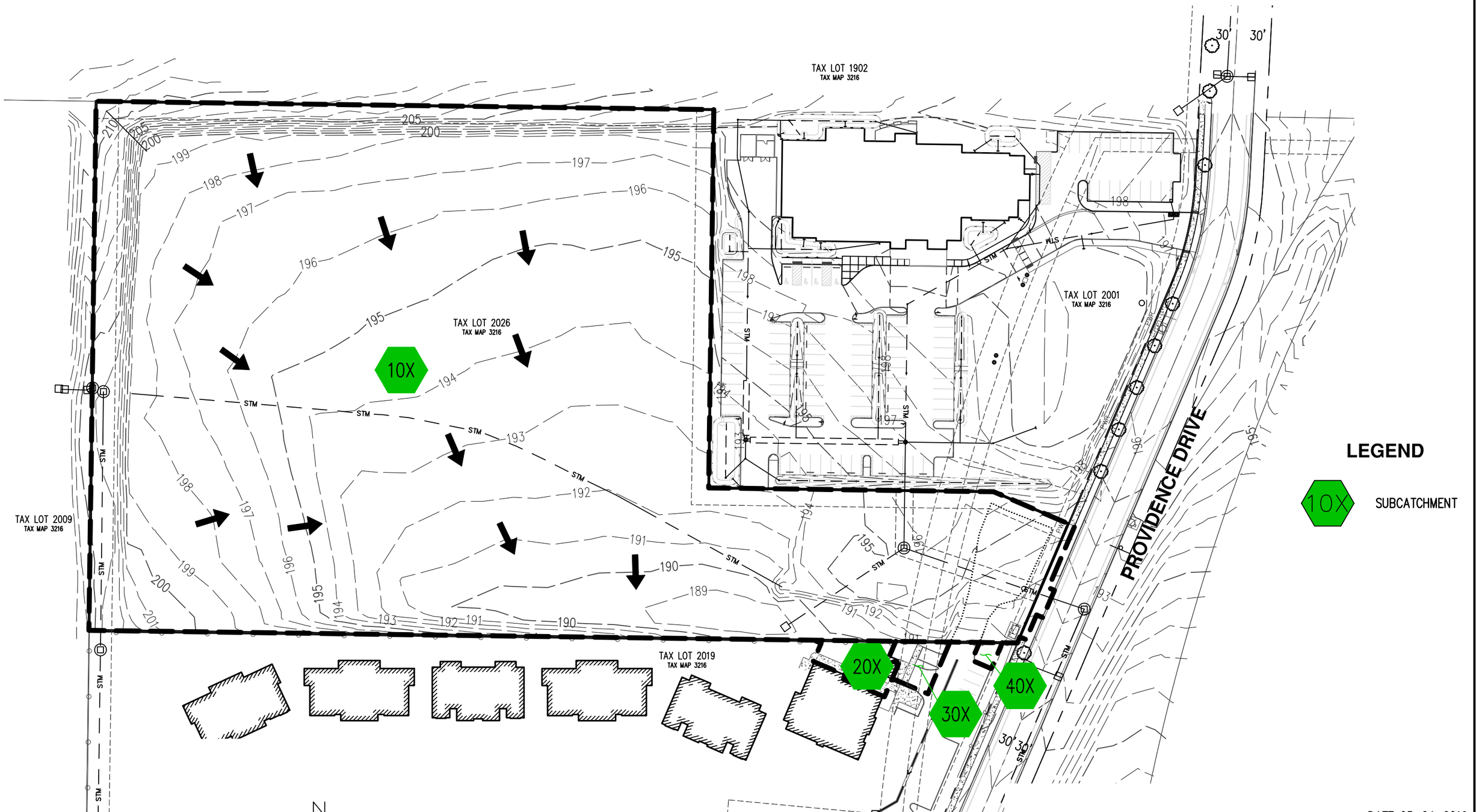
FIGURE 1: VICINITY MAP

FIGURE 1

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151 WWW.AKS-ENG.COM

DRWN: DS
CHKD: SR
AKS JOB: 5680

DWG: 5680 VICINITY MAP | FIG. 1



DATE: 05-24-2019

PRE-DEVELOPED BASIN DELINEATION	FIGURE 2
FRIENDSVIEW SPRINGBROOK MEADOWS II	
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 P:503.563.6151 F:503.563.6152 aks-eng.com	DRWN: DRR CHKD: SCR AKS JOB: 5680

DWG: 5680 PRE-DEVELOPED BASIN DELINEATION | FIG. 2

TAX LOT 1902
TAX MAP 3216

PRIVATE ROAD B

PRIVATE ROAD A

TAX LOT 2026
TAX MAP 3216

TAX LOT 2001
TAX MAP 3216

TAX LOT 2009
TAX MAP 3216

TAX LOT 2019
TAX MAP 3216

PROVIDENCE DRIVE

2S 4S 3S 5S 6S 1S 8S 7S 9S 10S 12S 13S 11S 14S

1P 2P 3P 4P

2R 1R 3R

STM WLS

LEGEND

1S SUBCATCHMENT

1P STORMWATER FACILITY

1R / 1R STORM MAIN

N

SCALE: 1"= 80 FEET

80 0 16 40 80

ORIGINAL PAGE SIZE: 11"x17"

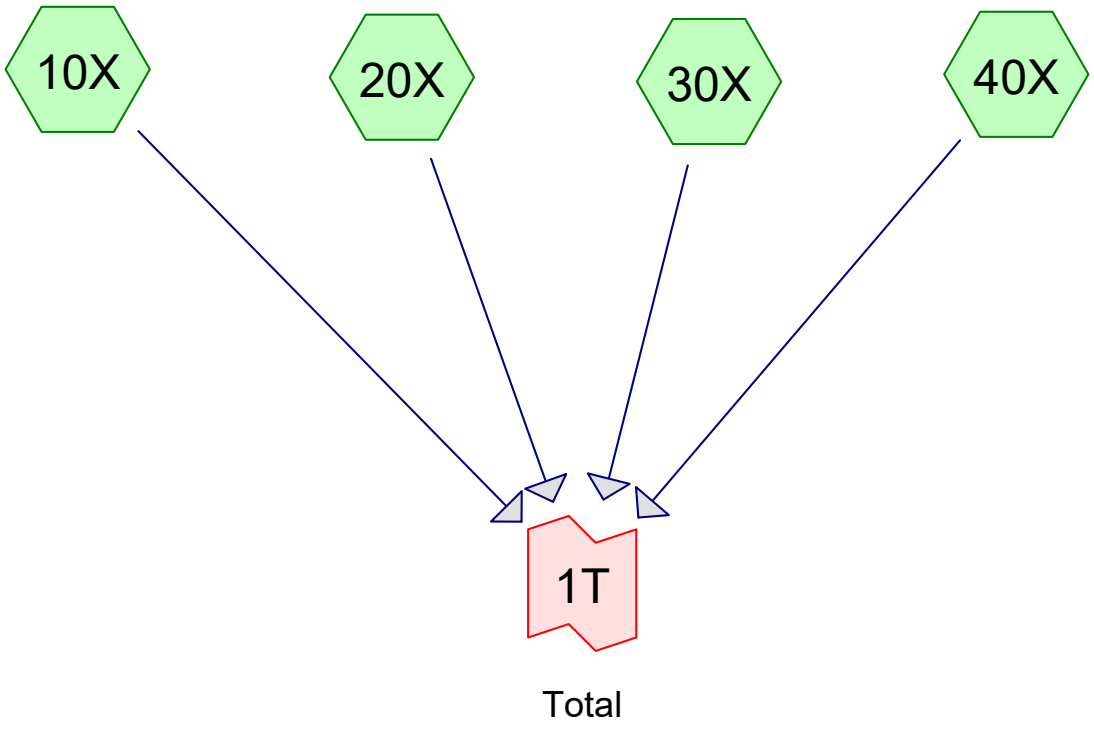
DATE: 05-24-2019

POST-DEVELOPED BASIN DELINEATION	FIGURE 3
FRIENDSVIEW SPRINGBROOK MEADOWS II	

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
P: 503.563.6151 F: 503.563.6152 aks-eng.com

DRWN: DRR
CHKD: SCR
AKS JOB: 5680

Appendix A: HydroCAD Reports for Pre-Developed Condition Storm Events (25-Year Storm Event Analysis 10-Year Storm Event Analysis Summary Only 2-Year Storm Event Analysis Summary Only 1/2-Year Storm Event Analysis Summary Only)



Subcat Reach Pond Link

Routing Diagram for 5680 Pre-Dev
Prepared by AKS Engineering & Forestry LLC, Printed 5/23/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.054	74	>75% Grass cover, Good, HSG C (20X, 30X, 40X)
0.117	96	Gravel surface, HSG C (10X)
6.568	86	Pasture/grassland/range, Poor, HSG C (10X)
0.047	98	Paved parking, HSG C (20X, 30X)
6.785	**86**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10X: Runoff Area=291,185 sf 0.00% Impervious Runoff Depth>2.52"
Flow Length=800' Tc=24.1 min CN=86/0 Runoff=3.26 cfs 1.403 af

Subcatchment 20X: Runoff Area=2,375 sf 42.06% Impervious Runoff Depth>2.50"
Tc=5.0 min CN=74/98 Runoff=0.03 cfs 0.011 af

Subcatchment 30X: Runoff Area=1,635 sf 63.24% Impervious Runoff Depth>2.96"
Tc=5.0 min CN=74/98 Runoff=0.03 cfs 0.009 af

Subcatchment 40X: Runoff Area=367 sf 0.00% Impervious Runoff Depth>1.59"
Tc=5.0 min CN=74/0 Runoff=0.00 cfs 0.001 af

Link 1T: Total Inflow=3.32 cfs 1.424 af
Primary=3.32 cfs 1.424 af

Total Runoff Area = 6.785 ac Runoff Volume = 1.424 af Average Runoff Depth = 2.52"
99.31% Pervious = 6.738 ac 0.69% Impervious = 0.047 ac

Summary for Subcatchment 10X:

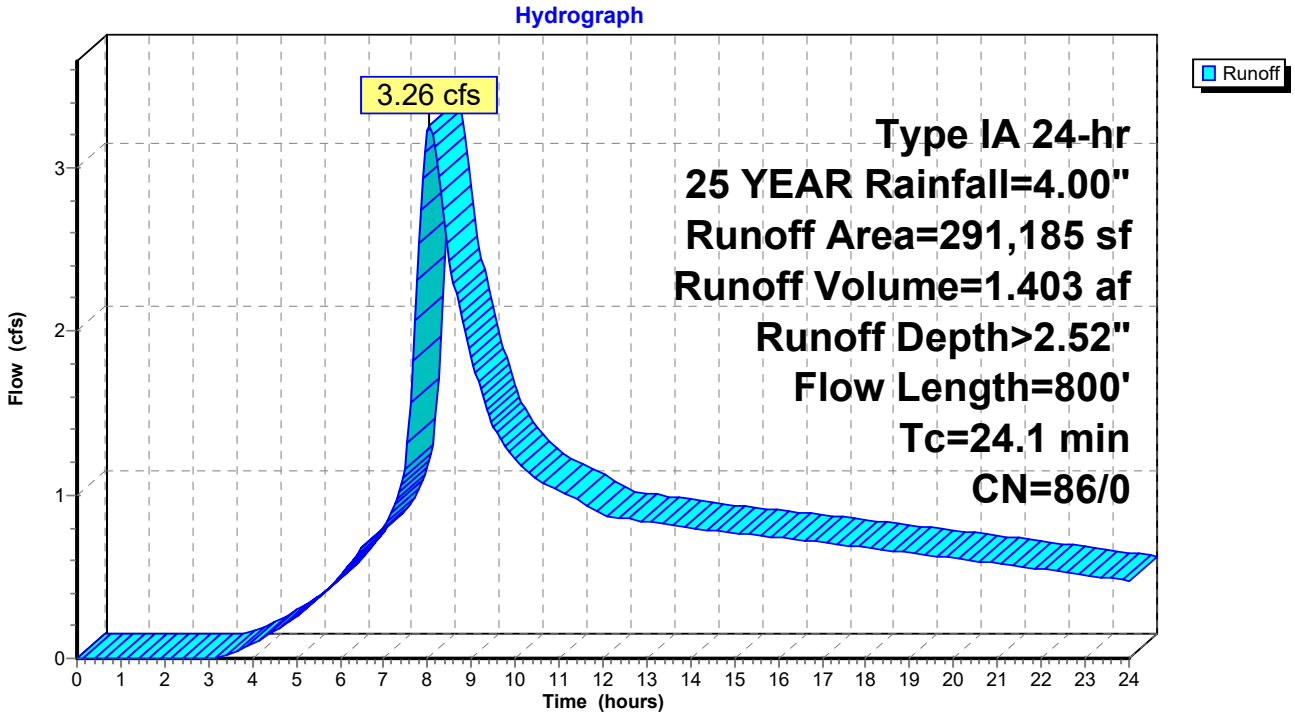
Runoff = 3.26 cfs @ 8.04 hrs, Volume= 1.403 af, Depth> 2.52"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25 YEAR Rainfall=4.00"

Area (sf)	CN	Description
286,095	86	Pasture/grassland/range, Poor, HSG C
5,090	96	Gravel surface, HSG C
291,185	86	Weighted Average
291,185	86	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	100	0.0021	0.15		**Sheet Flow,** Fallow n= 0.050 P2= 2.50"
12.8	700	0.0170	0.91		**Shallow Concentrated Flow, Shallow** Short Grass Pasture Kv= 7.0 fps
24.1	800	Total			

Subcatchment 10X:



Summary for Subcatchment 20X:

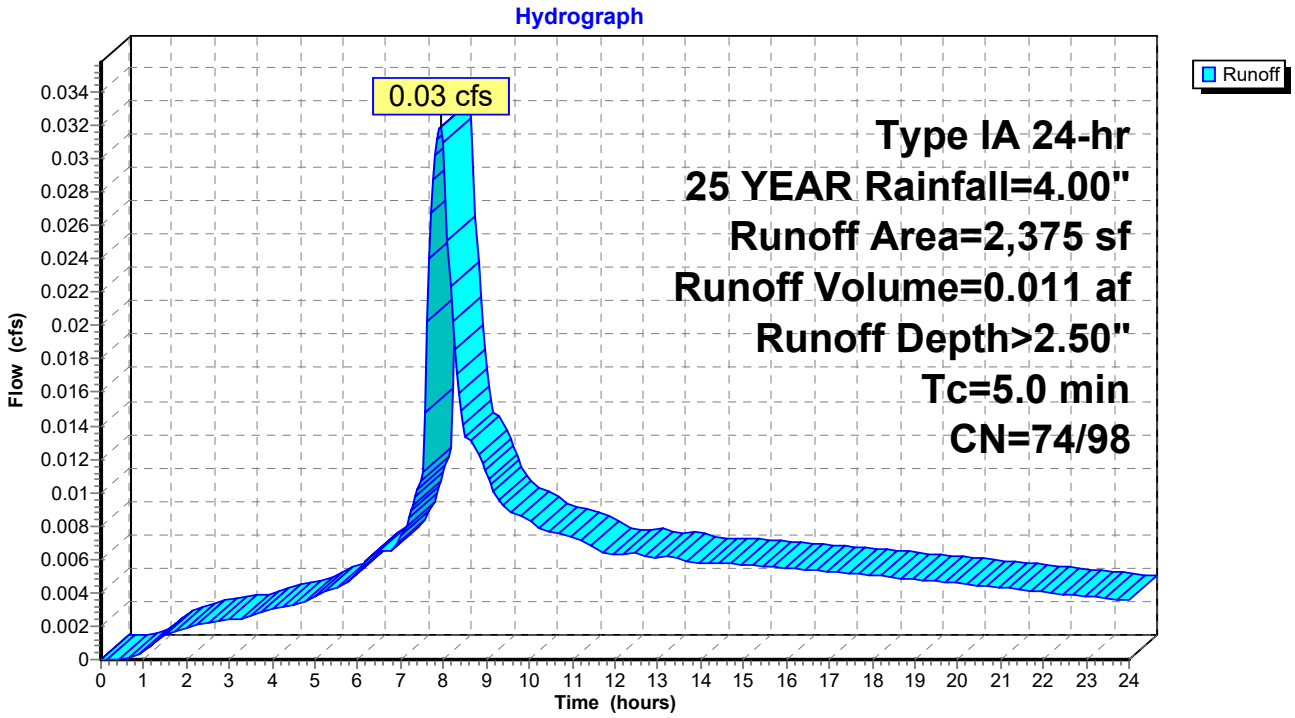
Runoff = 0.03 cfs @ 7.95 hrs, Volume= 0.011 af, Depth> 2.50"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25 YEAR Rainfall=4.00"

Area (sf)	CN	Description
1,376	74	>75% Grass cover, Good, HSG C
999	98	Paved parking, HSG C
2,375	84	Weighted Average
1,376	74	57.94% Pervious Area
999	98	42.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 20X:



Summary for Subcatchment 30X:

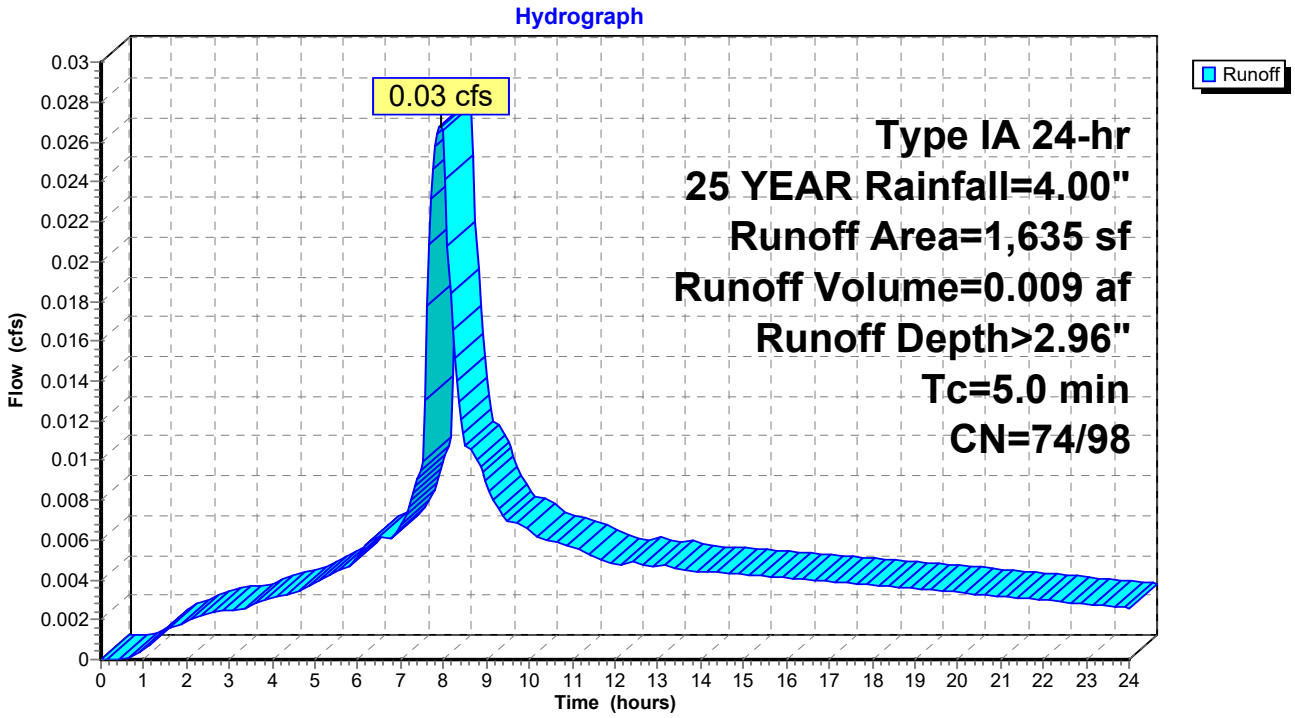
Runoff = 0.03 cfs @ 7.92 hrs, Volume= 0.009 af, Depth> 2.96"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25 YEAR Rainfall=4.00"

Area (sf)	CN	Description
601	74	>75% Grass cover, Good, HSG C
1,034	98	Paved parking, HSG C
1,635	89	Weighted Average
601	74	36.76% Pervious Area
1,034	98	63.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 30X:



Summary for Subcatchment 40X:

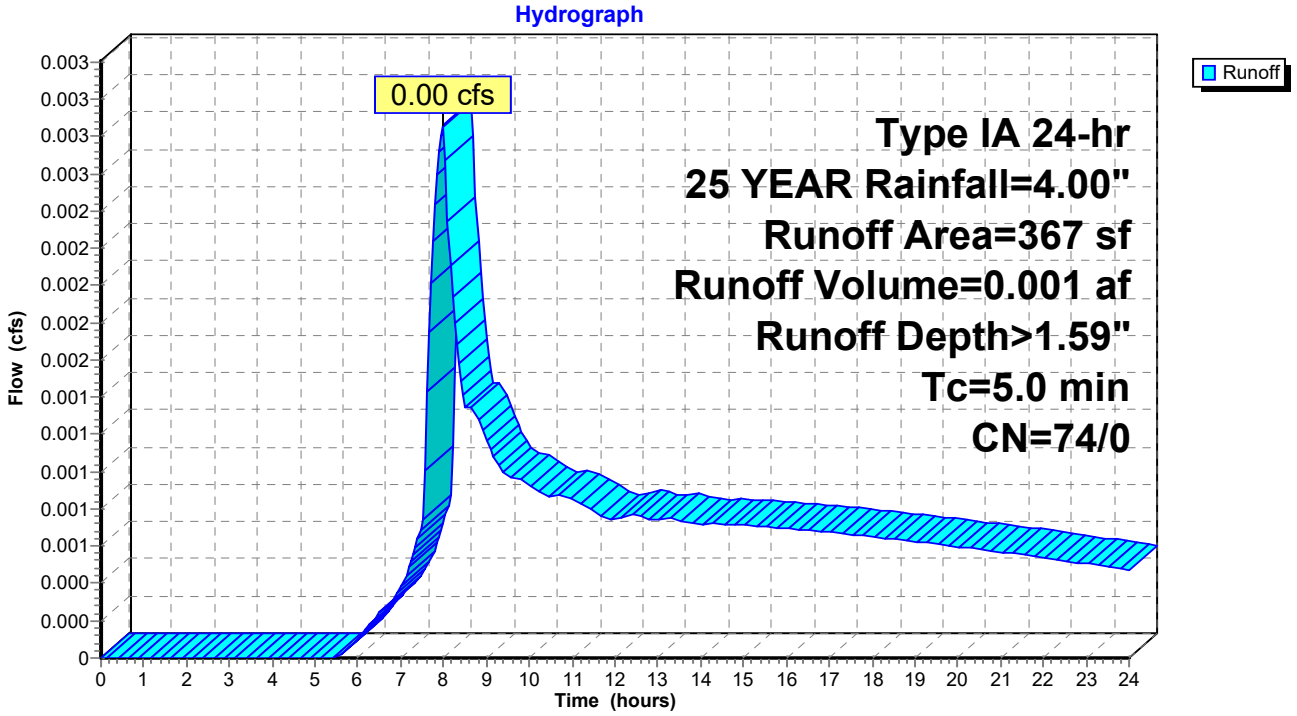
Runoff = 0.00 cfs @ 7.98 hrs, Volume= 0.001 af, Depth> 1.59"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25 YEAR Rainfall=4.00"

Area (sf)	CN	Description
367	74	>75% Grass cover, Good, HSG C
367	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 40X:

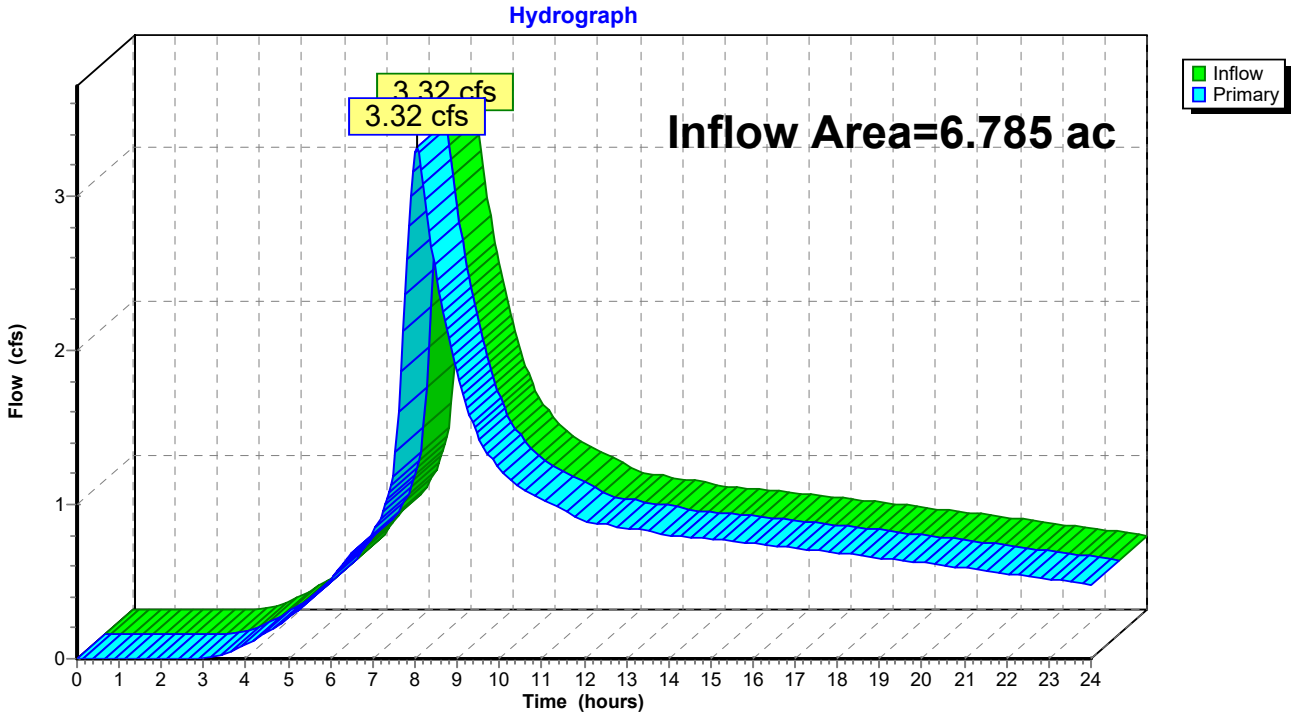


Summary for Link 1T: Total

Inflow Area = 6.785 ac, 0.69% Impervious, Inflow Depth > 2.52" for 25 YEAR event
Inflow = 3.32 cfs @ 8.04 hrs, Volume= 1.424 af
Primary = 3.32 cfs @ 8.04 hrs, Volume= 1.424 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1T: Total



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10X: Runoff Area=291,185 sf 0.00% Impervious Runoff Depth>2.07"
Flow Length=800' Tc=24.1 min CN=86/0 Runoff=2.63 cfs 1.155 af

Subcatchment 20X: Runoff Area=2,375 sf 42.06% Impervious Runoff Depth>2.09"
Tc=5.0 min CN=74/98 Runoff=0.03 cfs 0.009 af

Subcatchment 30X: Runoff Area=1,635 sf 63.24% Impervious Runoff Depth>2.52"
Tc=5.0 min CN=74/98 Runoff=0.02 cfs 0.008 af

Subcatchment 40X: Runoff Area=367 sf 0.00% Impervious Runoff Depth>1.24"
Tc=5.0 min CN=74/0 Runoff=0.00 cfs 0.001 af

Link 1T: Total Inflow=2.68 cfs 1.174 af
Primary=2.68 cfs 1.174 af

Total Runoff Area = 6.785 ac Runoff Volume = 1.174 af Average Runoff Depth = 2.08"
99.31% Pervious = 6.738 ac 0.69% Impervious = 0.047 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10X: Runoff Area=291,185 sf 0.00% Impervious Runoff Depth>1.23"
Flow Length=800' Tc=24.1 min CN=86/0 Runoff=1.44 cfs 0.684 af

Subcatchment 20X: Runoff Area=2,375 sf 42.06% Impervious Runoff Depth>1.30"
Tc=5.0 min CN=74/98 Runoff=0.02 cfs 0.006 af

Subcatchment 30X: Runoff Area=1,635 sf 63.24% Impervious Runoff Depth>1.66"
Tc=5.0 min CN=74/98 Runoff=0.01 cfs 0.005 af

Subcatchment 40X: Runoff Area=367 sf 0.00% Impervious Runoff Depth>0.61"
Tc=5.0 min CN=74/0 Runoff=0.00 cfs 0.000 af

Link 1T: Total Inflow=1.47 cfs 0.695 af
Primary=1.47 cfs 0.695 af

Total Runoff Area = 6.785 ac Runoff Volume = 0.695 af Average Runoff Depth = 1.23"
99.31% Pervious = 6.738 ac 0.69% Impervious = 0.047 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10X: Runoff Area=291,185 sf 0.00% Impervious Runoff Depth>0.33"
Flow Length=800' Tc=24.1 min CN=86/0 Runoff=0.24 cfs 0.183 af

Subcatchment 20X: Runoff Area=2,375 sf 42.06% Impervious Runoff Depth>0.48"
Tc=5.0 min CN=74/98 Runoff=0.01 cfs 0.002 af

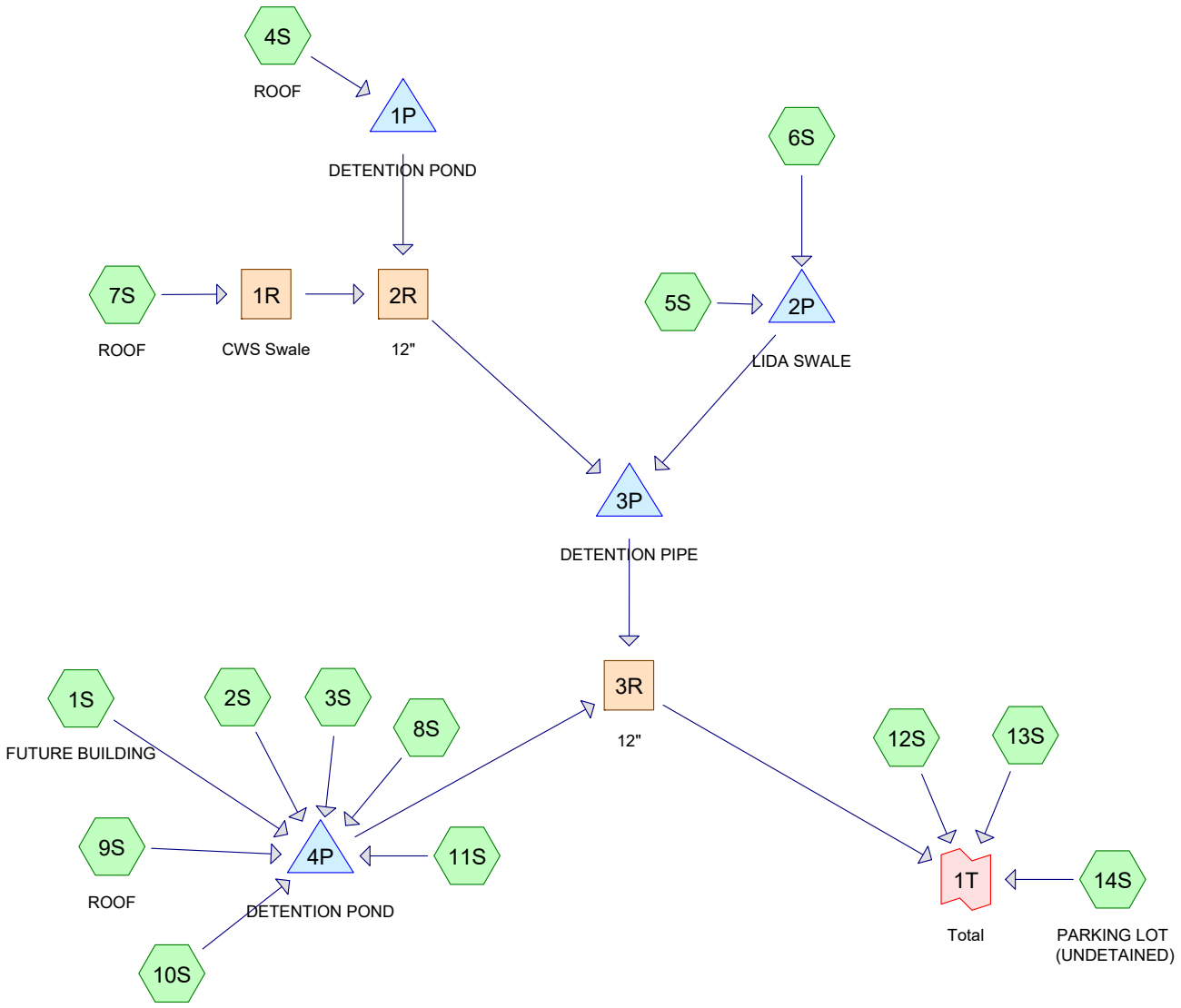
Subcatchment 30X: Runoff Area=1,635 sf 63.24% Impervious Runoff Depth>0.68"
Tc=5.0 min CN=74/98 Runoff=0.01 cfs 0.002 af

Subcatchment 40X: Runoff Area=367 sf 0.00% Impervious Runoff Depth>0.07"
Tc=5.0 min CN=74/0 Runoff=0.00 cfs 0.000 af

Link 1T: Total Inflow=0.24 cfs 0.188 af
Primary=0.24 cfs 0.188 af

Total Runoff Area = 6.785 ac Runoff Volume = 0.188 af Average Runoff Depth = 0.33"
99.31% Pervious = 6.738 ac 0.69% Impervious = 0.047 ac

Appendix B: HydroCAD Reports for Post-Developed Condition Storm Events (25-Year Storm Event Analysis 10-Year Storm Event Analysis Summary Only 2-Year Storm Event Analysis Summary Only 1/2-Year Storm Event Analysis Summary Only)



Subcat Reach Pond Link

Routing Diagram for 5680 Post-Dev

Prepared by AKS Engineering & Forestry LLC, Printed 5/23/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.384	74	>75% Grass cover, Good, HSG C (1S, 4S, 6S, 7S, 9S, 11S, 13S)
0.143	98	Community Center Addition (12S)
0.352	98	Impervious ROW (5S)
0.139	98	Impervious Roofs (Community Center Addition) (11S)
0.889	98	Impervious pavement, sidewalks (8S)
0.571	98	Impervious pavements, sidewalks (2S, 3S, 10S, 14S)
2.162	98	Roofs, HSG C (1S, 4S, 7S, 9S)
6.639	**89**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FUTURE BUILDING Runoff Area=38,657 sf 60.02% Impervious Runoff Depth>2.45"
Tc=5.0 min CN=74/98 Runoff=0.52 cfs 0.181 af

Subcatchment 2S: Runoff Area=6,069 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.11 cfs 0.038 af

Subcatchment 3S: Runoff Area=4,125 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.08 cfs 0.026 af

Subcatchment 4S: ROOF Runoff Area=41,458 sf 37.65% Impervious Runoff Depth>2.00"
Tc=5.0 min CN=74/98 Runoff=0.43 cfs 0.158 af

Subcatchment 5S: Runoff Area=15,315 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.29 cfs 0.096 af

Subcatchment 6S: Runoff Area=3,807 sf 0.00% Impervious Runoff Depth>1.24"
Tc=5.0 min CN=74/0 Runoff=0.02 cfs 0.009 af

Subcatchment 7S: ROOF Runoff Area=54,229 sf 56.22% Impervious Runoff Depth>2.37"
Tc=5.0 min CN=74/98 Runoff=0.70 cfs 0.246 af

Subcatchment 8S: Runoff Area=38,733 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.73 cfs 0.242 af

Subcatchment 9S: ROOF Runoff Area=50,579 sf 49.20% Impervious Runoff Depth>2.23"
Tc=5.0 min CN=74/98 Runoff=0.61 cfs 0.216 af

Subcatchment 10S: Runoff Area=5,797 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.11 cfs 0.036 af

Subcatchment 11S: Runoff Area=13,186 sf 45.87% Impervious Runoff Depth>2.17"
Tc=5.0 min CN=74/98 Runoff=0.15 cfs 0.055 af

Subcatchment 12S: Runoff Area=6,208 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.12 cfs 0.039 af

Subcatchment 13S: Runoff Area=2,155 sf 0.00% Impervious Runoff Depth>1.24"
Tc=5.0 min CN=74/0 Runoff=0.01 cfs 0.005 af

Subcatchment 14S: PARKING LOT Runoff Area=8,876 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.17 cfs 0.055 af

Reach 1R: CWS Swale Avg. Flow Depth=0.54' Max Vel=0.31 fps Inflow=0.70 cfs 0.246 af
n=0.240 L=115.0' S=0.0100 '/' Capacity=18.78 cfs Outflow=0.69 cfs 0.245 af

Reach 2R: 12" Avg. Flow Depth=0.30' Max Vel=3.54 fps Inflow=0.72 cfs 0.314 af
12.0" Round Pipe n=0.013 L=251.0' S=0.0100 '/' Capacity=3.56 cfs Outflow=0.71 cfs 0.314 af

Reach 3R: 12" Avg. Flow Depth=0.52' Max Vel=4.61 fps Inflow=1.92 cfs 1.041 af
12.0" Round Pipe n=0.013 L=76.5' S=0.0099 '/' Capacity=3.55 cfs Outflow=1.92 cfs 1.040 af

Pond 1P: DETENTION POND Peak Elev=194.64' Storage=3,967 cf Inflow=0.43 cfs 0.158 af
Outflow=0.07 cfs 0.069 af

Pond 2P: LIDA SWALE Peak Elev=193.17' Storage=73 cf Inflow=0.31 cfs 0.105 af
Outflow=0.30 cfs 0.105 af

Pond 3P: DETENTION PIPE Peak Elev=189.76' Storage=707 cf Inflow=1.01 cfs 0.418 af
Outflow=1.01 cfs 0.402 af

Pond 4P: DETENTION POND Peak Elev=188.68' Storage=10,139 cf Inflow=2.31 cfs 0.793 af
Outflow=1.00 cfs 0.639 af

Link 1T: Total Inflow=2.19 cfs 1.140 af
Primary=2.19 cfs 1.140 af

Total Runoff Area = 6.639 ac Runoff Volume = 1.402 af Average Runoff Depth = 2.53"
35.91% Pervious = 2.384 ac 64.09% Impervious = 4.255 ac

Summary for Subcatchment 1S: FUTURE BUILDING

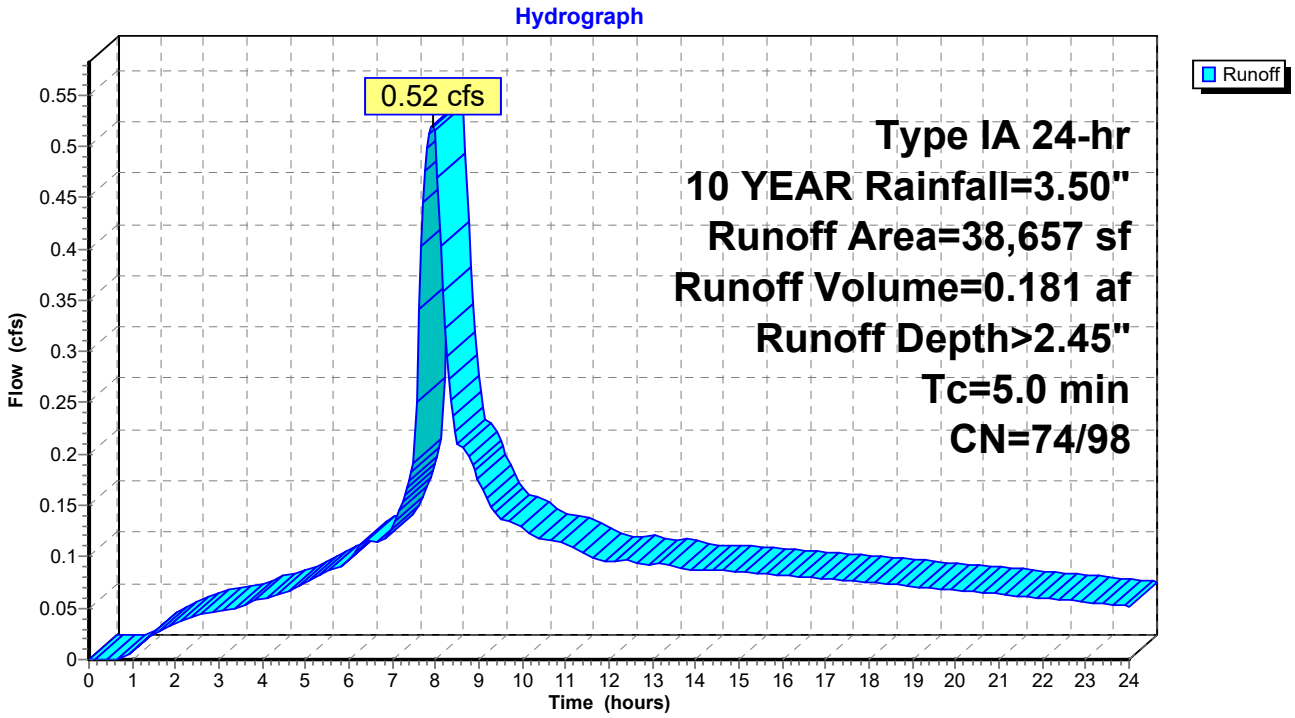
Runoff = 0.52 cfs @ 7.93 hrs, Volume= 0.181 af, Depth> 2.45"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

Area (sf)	CN	Description
23,200	98	Roofs, HSG C
15,457	74	>75% Grass cover, Good, HSG C
38,657	88	Weighted Average
15,457	74	39.98% Pervious Area
23,200	98	60.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: FUTURE BUILDING



Summary for Subcatchment 2S:

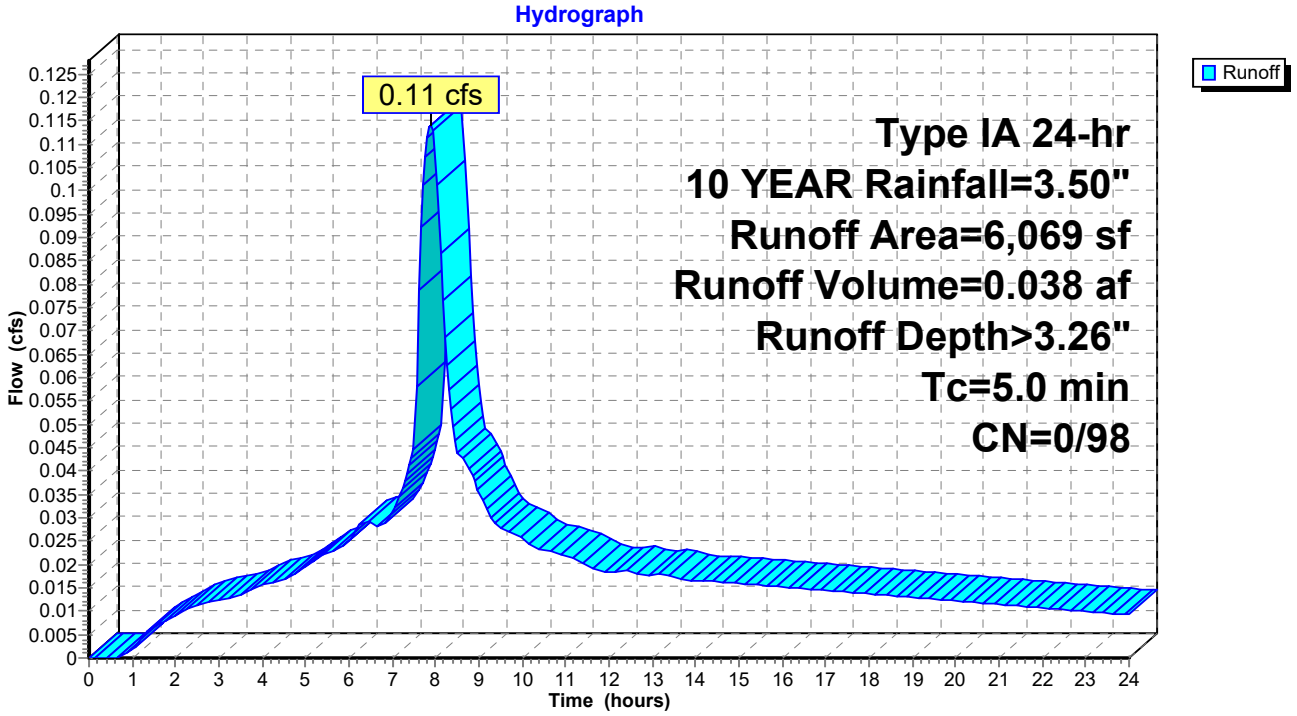
Runoff = 0.11 cfs @ 7.90 hrs, Volume= 0.038 af, Depth> 3.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	6,069	98	Impervious pavements, sidewalks
	6,069	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S:



Summary for Subcatchment 3S:

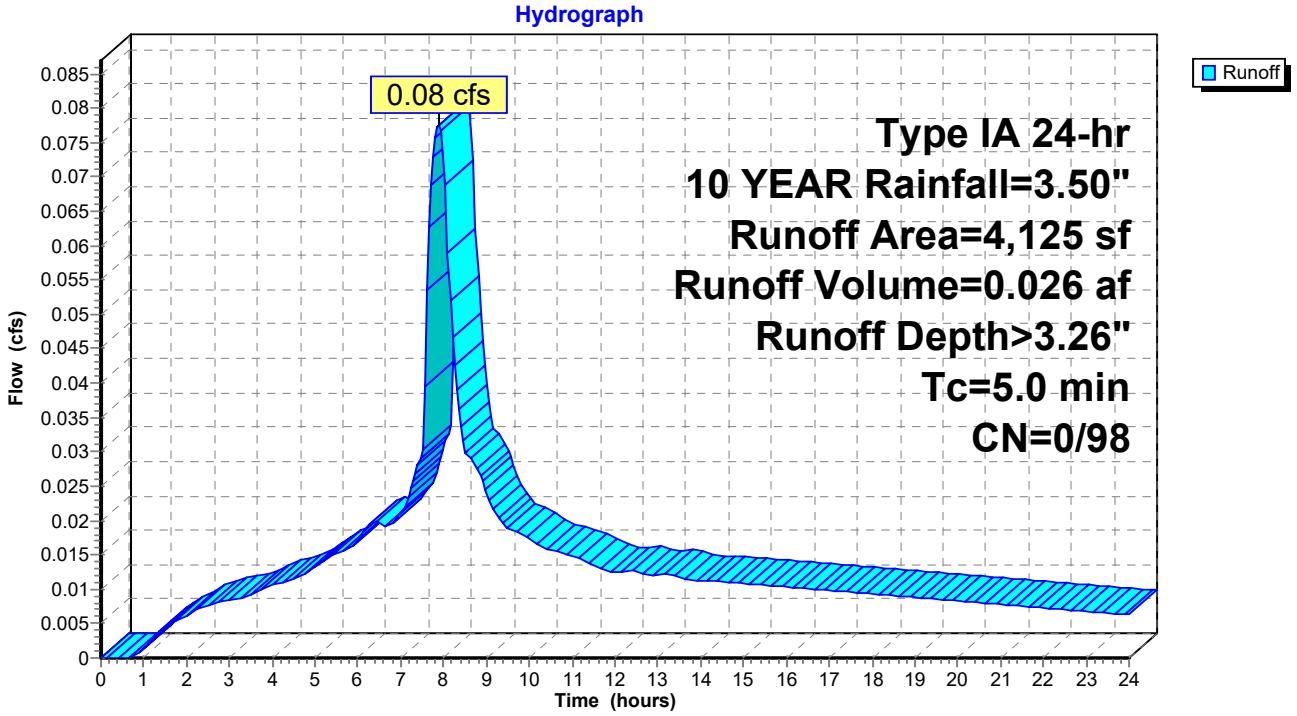
Runoff = 0.08 cfs @ 7.90 hrs, Volume= 0.026 af, Depth> 3.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	4,125	98	Impervious pavements, sidewalks
	4,125	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 3S:



Summary for Subcatchment 4S: ROOF

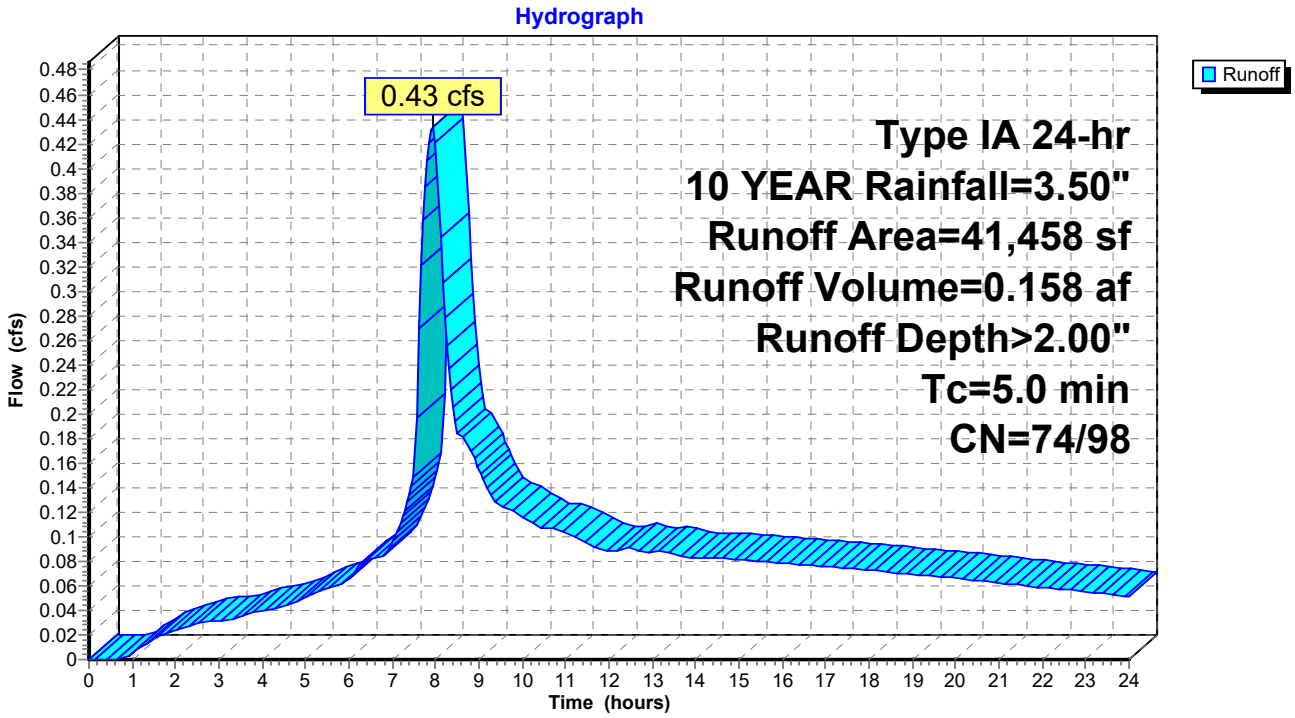
Runoff = 0.43 cfs @ 7.96 hrs, Volume= 0.158 af, Depth> 2.00"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

Area (sf)	CN	Description
25,850	74	>75% Grass cover, Good, HSG C
15,608	98	Roofs, HSG C
41,458	83	Weighted Average
25,850	74	62.35% Pervious Area
15,608	98	37.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 4S: ROOF



Summary for Subcatchment 5S:

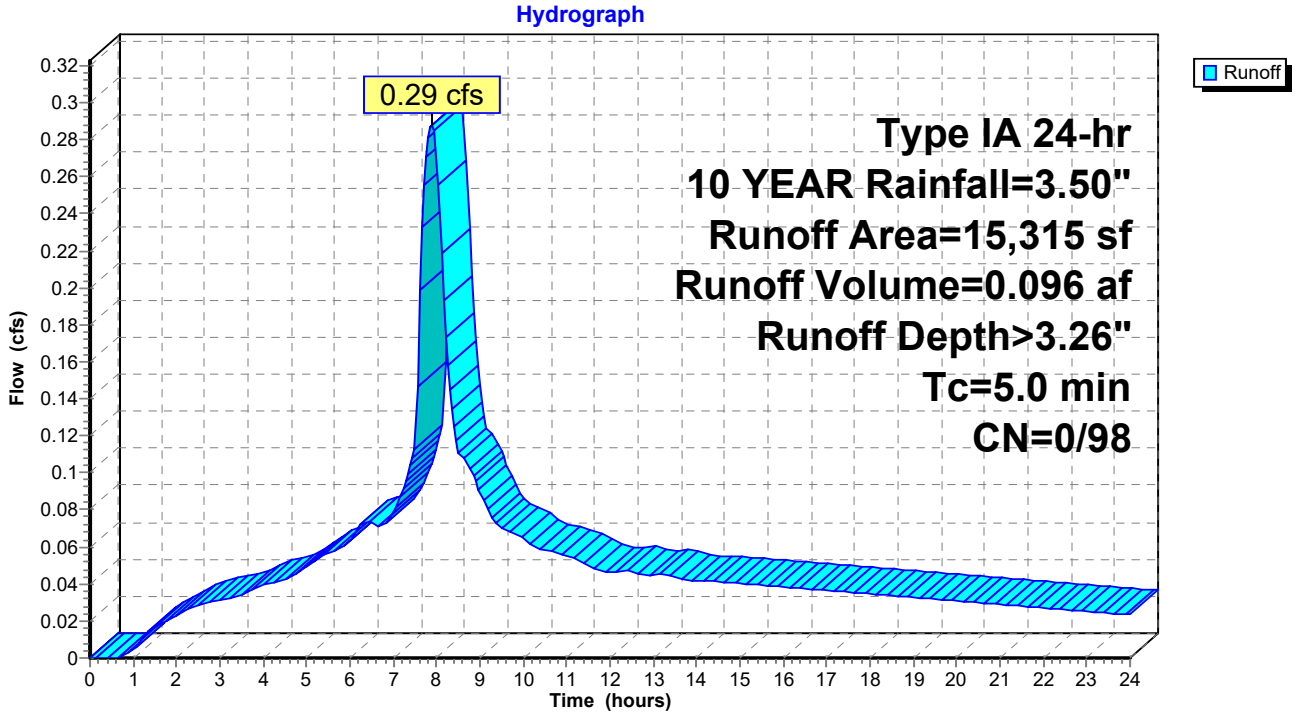
Runoff = 0.29 cfs @ 7.90 hrs, Volume= 0.096 af, Depth> 3.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	15,315	98	Impervious ROW
	15,315	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 5S:



Summary for Subcatchment 6S:

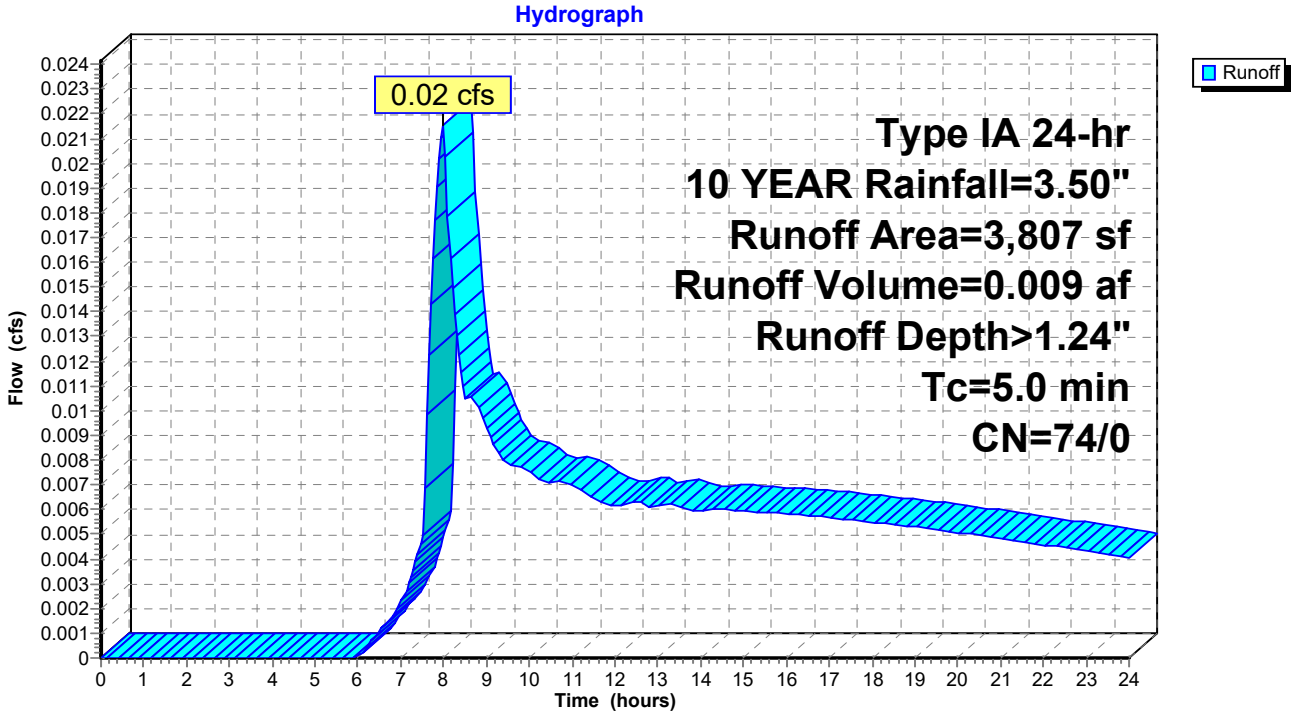
Runoff = 0.02 cfs @ 7.99 hrs, Volume= 0.009 af, Depth> 1.24"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

Area (sf)	CN	Description
3,807	74	>75% Grass cover, Good, HSG C
3,807	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 6S:



Summary for Subcatchment 7S: ROOF

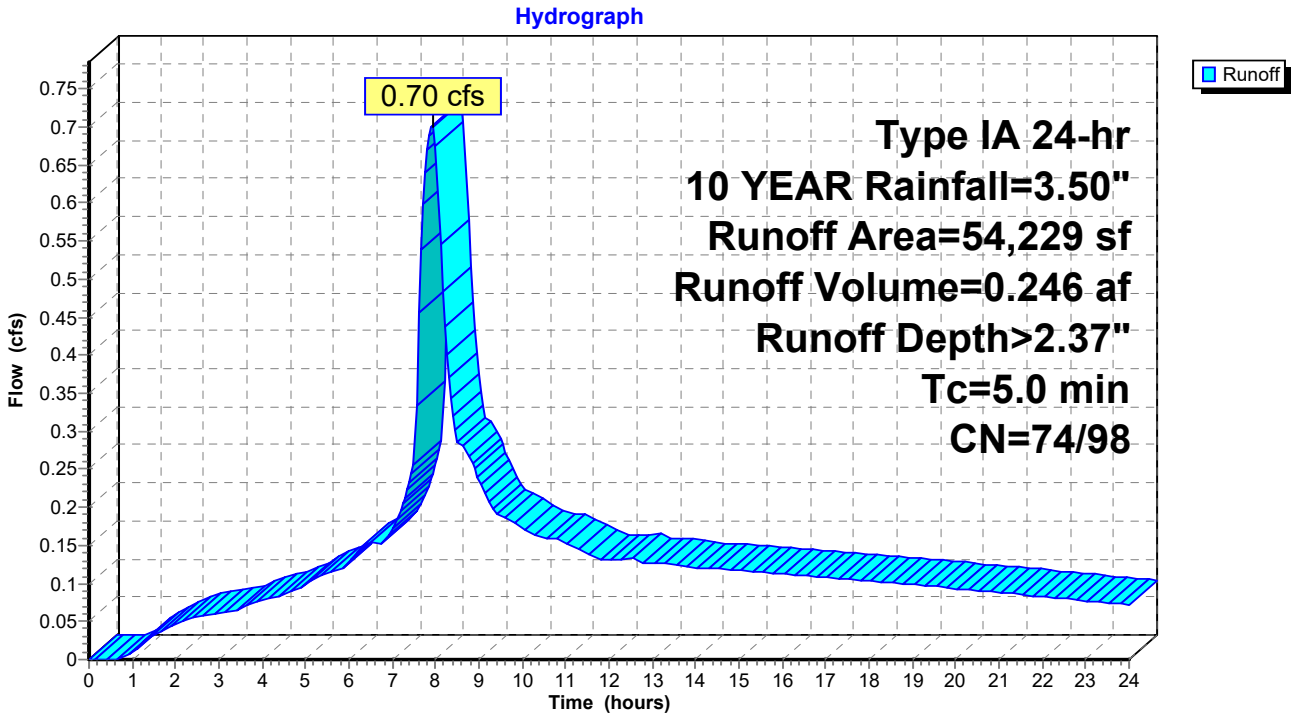
Runoff = 0.70 cfs @ 7.93 hrs, Volume= 0.246 af, Depth> 2.37"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

Area (sf)	CN	Description
30,485	98	Roofs, HSG C
23,744	74	>75% Grass cover, Good, HSG C
54,229	87	Weighted Average
23,744	74	43.78% Pervious Area
30,485	98	56.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 7S: ROOF



Summary for Subcatchment 8S:

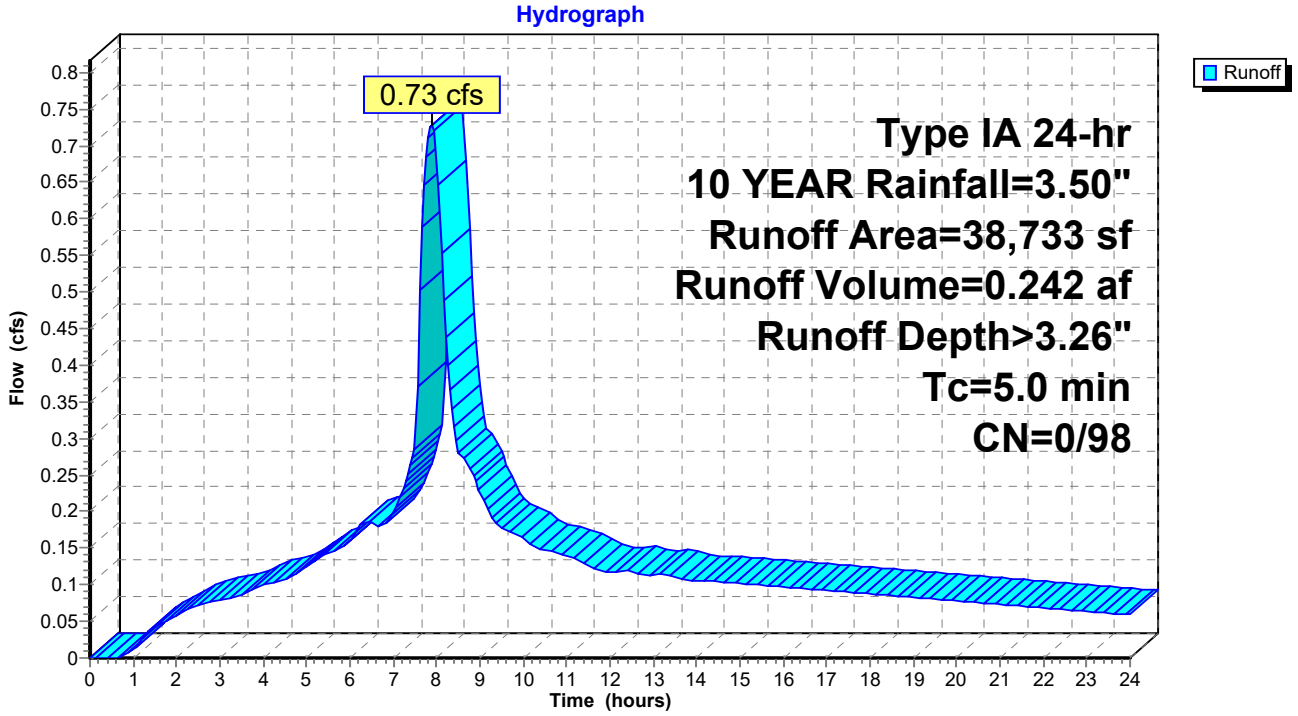
Runoff = 0.73 cfs @ 7.90 hrs, Volume= 0.242 af, Depth> 3.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	38,733	98	Impervious pavement, sidewalks
	38,733	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S:



Summary for Subcatchment 9S: ROOF

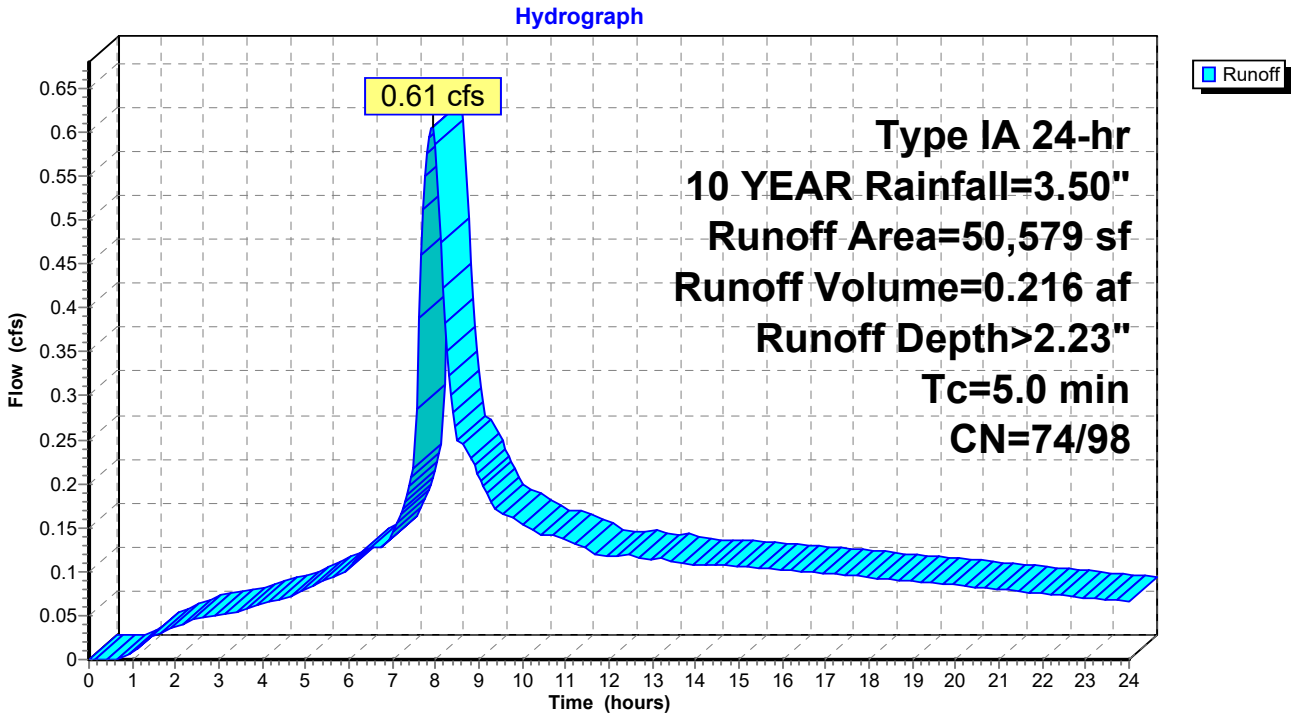
Runoff = 0.61 cfs @ 7.94 hrs, Volume= 0.216 af, Depth> 2.23"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

Area (sf)	CN	Description
25,693	74	>75% Grass cover, Good, HSG C
24,886	98	Roofs, HSG C
50,579	86	Weighted Average
25,693	74	50.80% Pervious Area
24,886	98	49.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 9S: ROOF



Summary for Subcatchment 10S:

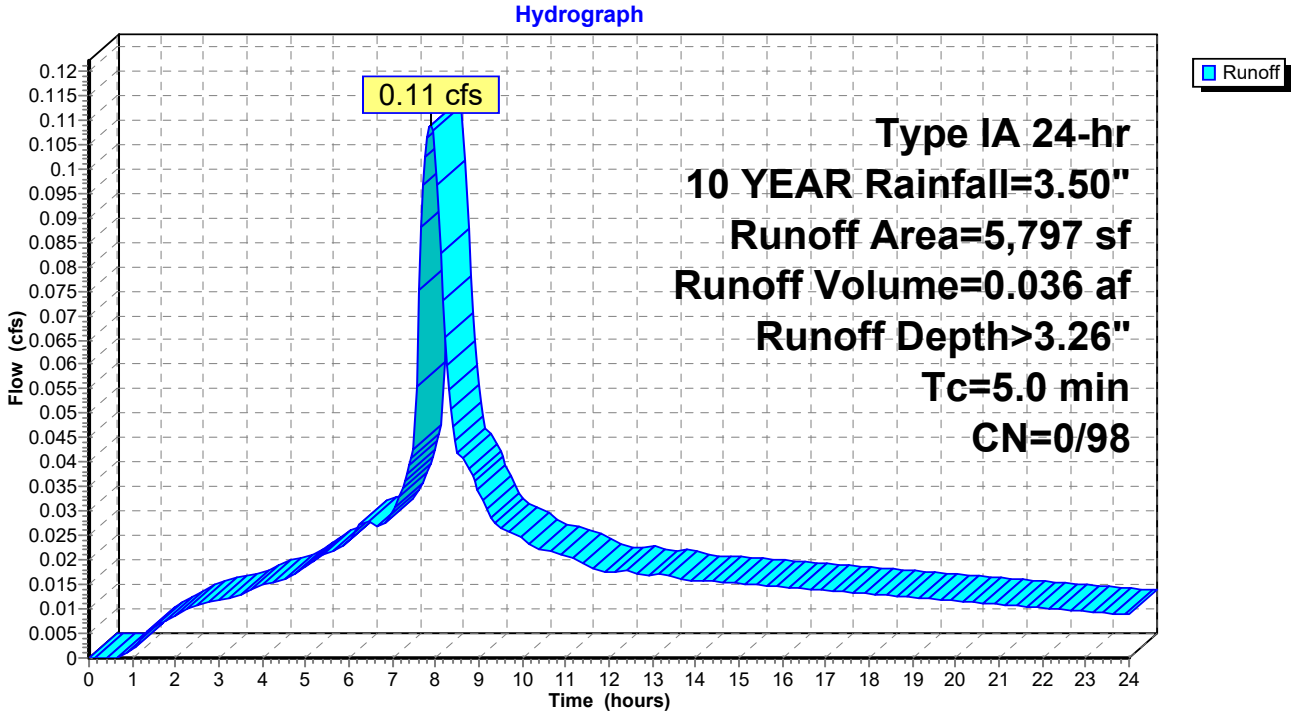
Runoff = 0.11 cfs @ 7.90 hrs, Volume= 0.036 af, Depth> 3.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	5,797	98	Impervious pavements, sidewalks
	5,797	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 10S:



Summary for Subcatchment 11S:

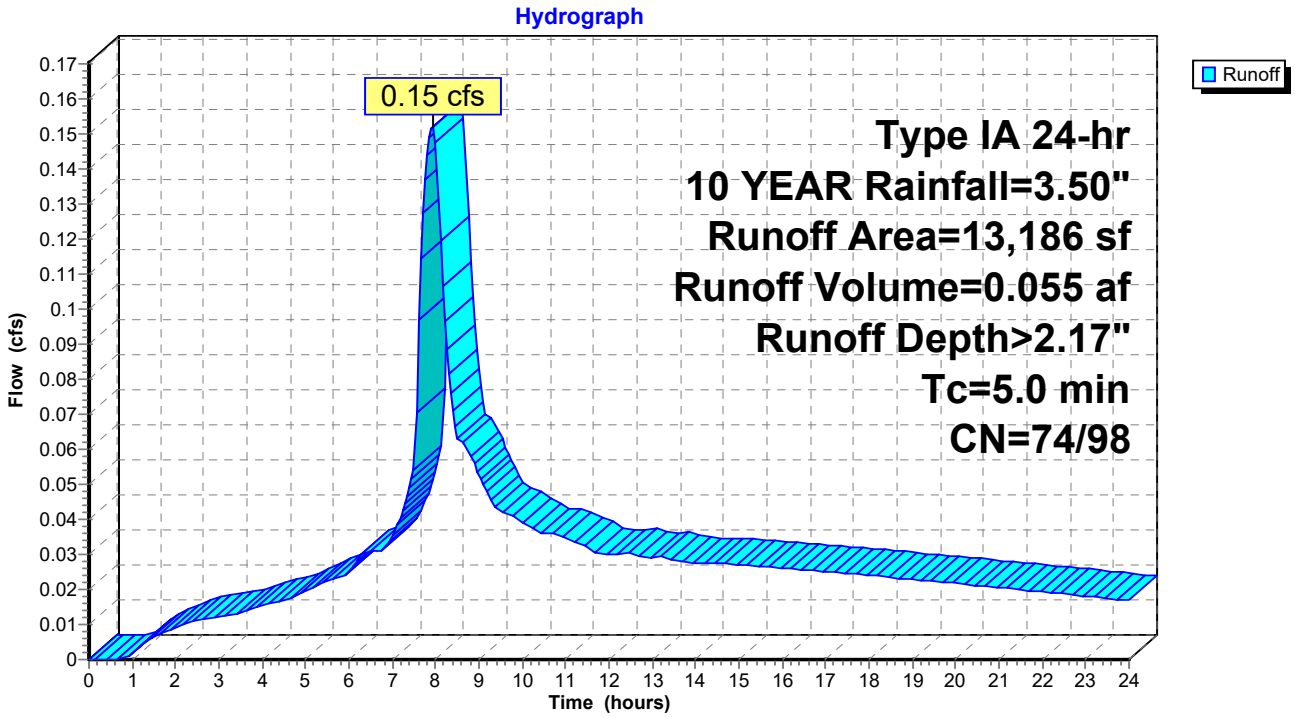
Runoff = 0.15 cfs @ 7.94 hrs, Volume= 0.055 af, Depth> 2.17"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
	7,137	74	>75% Grass cover, Good, HSG C
*	6,049	98	Impervious Roofs (Community Center Addition)
	13,186	85	Weighted Average
	7,137	74	54.13% Pervious Area
	6,049	98	45.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 11S:



Summary for Subcatchment 12S:

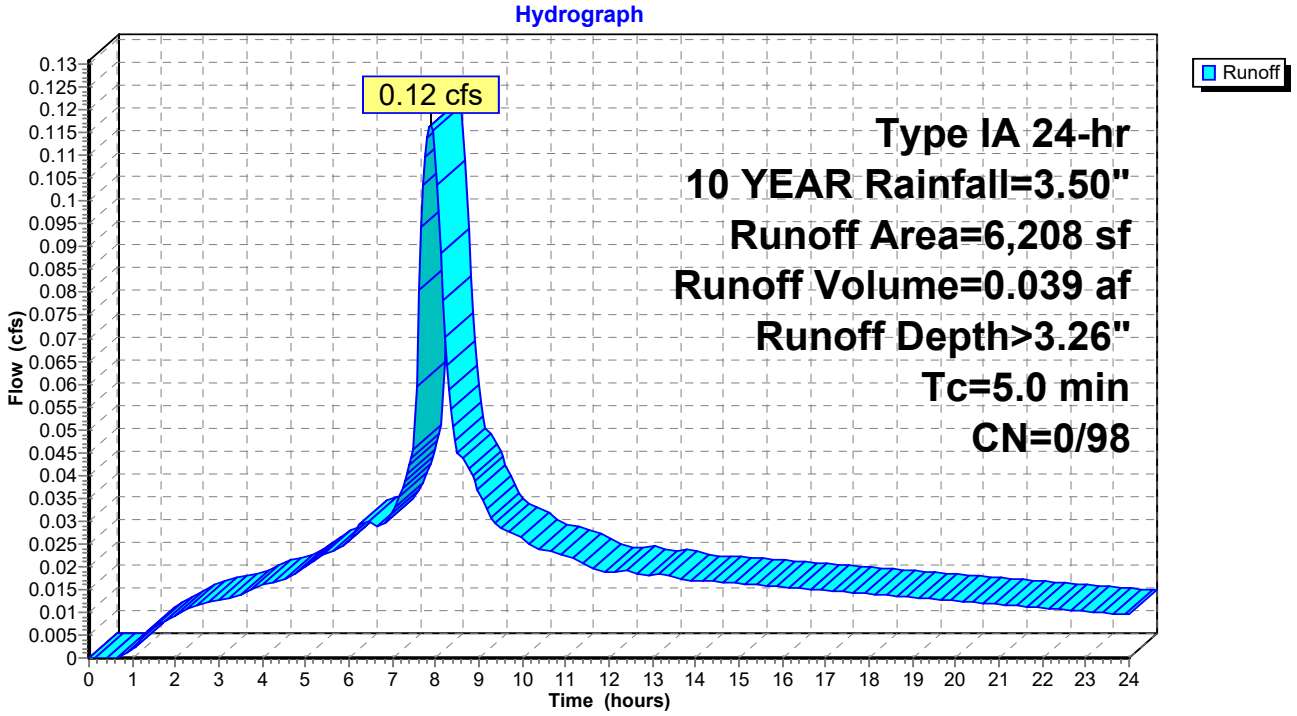
Runoff = 0.12 cfs @ 7.90 hrs, Volume= 0.039 af, Depth> 3.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	6,208	98	Community Center Addition
	6,208	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 12S:



Summary for Subcatchment 13S:

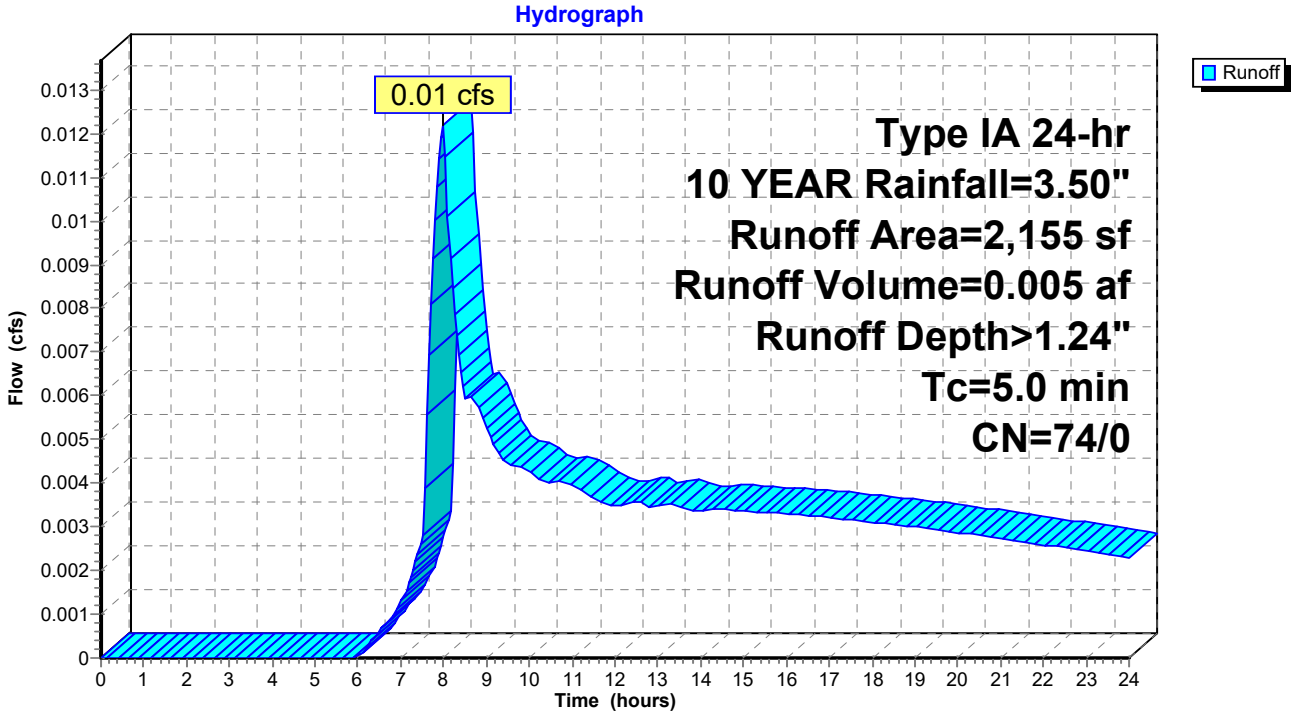
Runoff = 0.01 cfs @ 7.99 hrs, Volume= 0.005 af, Depth> 1.24"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

Area (sf)	CN	Description
2,155	74	>75% Grass cover, Good, HSG C
2,155	74	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 13S:



Summary for Subcatchment 14S: PARKING LOT (UNDETAINED)

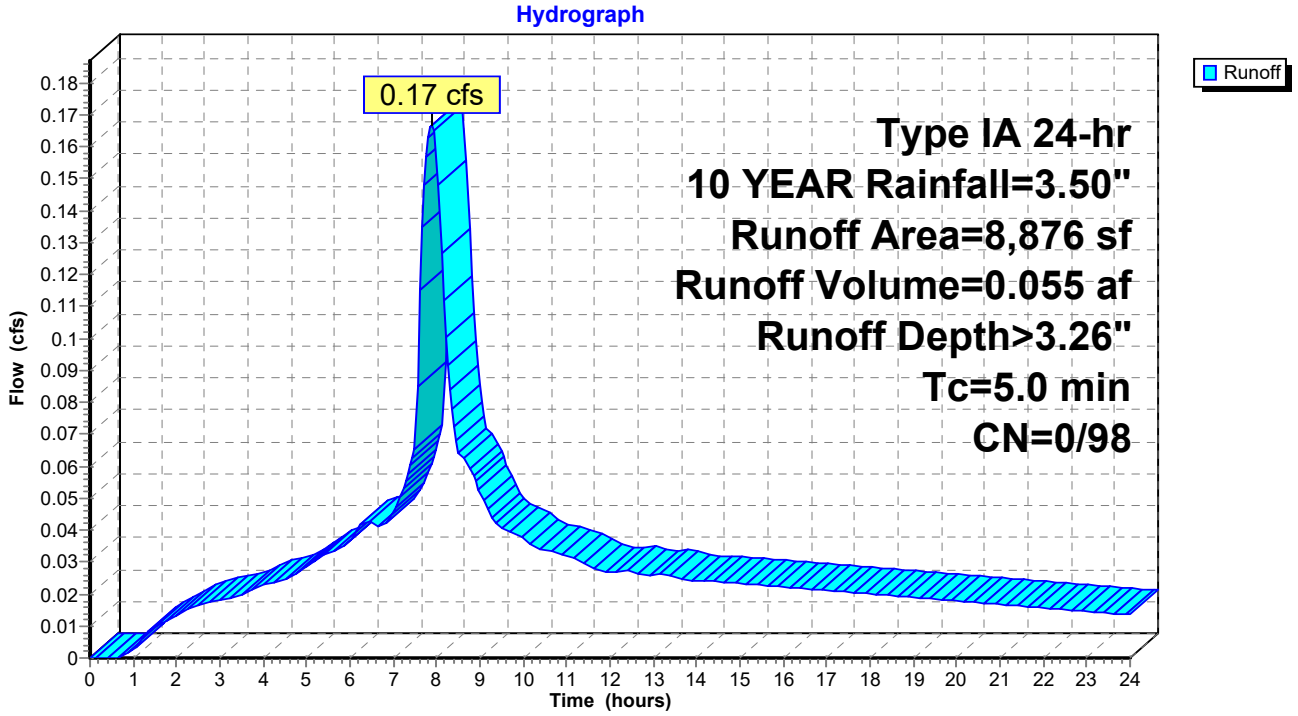
Runoff = 0.17 cfs @ 7.90 hrs, Volume= 0.055 af, Depth> 3.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10 YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	8,876	98	Impervious pavements, sidewalks
	8,876	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 14S: PARKING LOT (UNDETAINED)



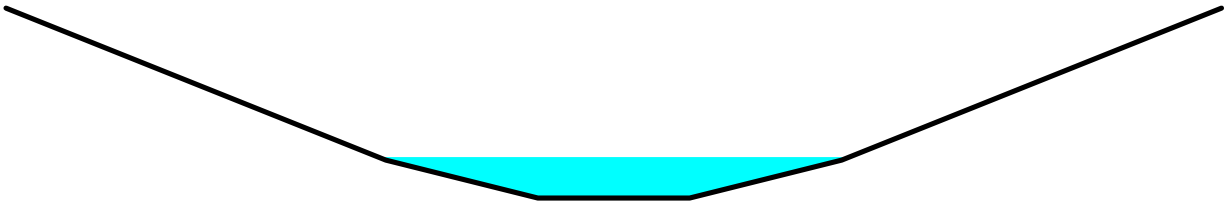
Summary for Reach 1R: CWS Swale

Inflow Area = 1.245 ac, 56.22% Impervious, Inflow Depth > 2.37" for 10 YEAR event
Inflow = 0.70 cfs @ 7.93 hrs, Volume= 0.246 af
Outflow = 0.69 cfs @ 7.99 hrs, Volume= 0.245 af, Atten= 1%, Lag= 3.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.31 fps, Min. Travel Time= 6.2 min
Avg. Velocity = 0.18 fps, Avg. Travel Time= 10.5 min

Peak Storage= 257 cf @ 7.99 hrs
Average Depth at Peak Storage= 0.54'
Bank-Full Depth= 2.50' Flow Area= 24.0 sf, Capacity= 18.78 cfs

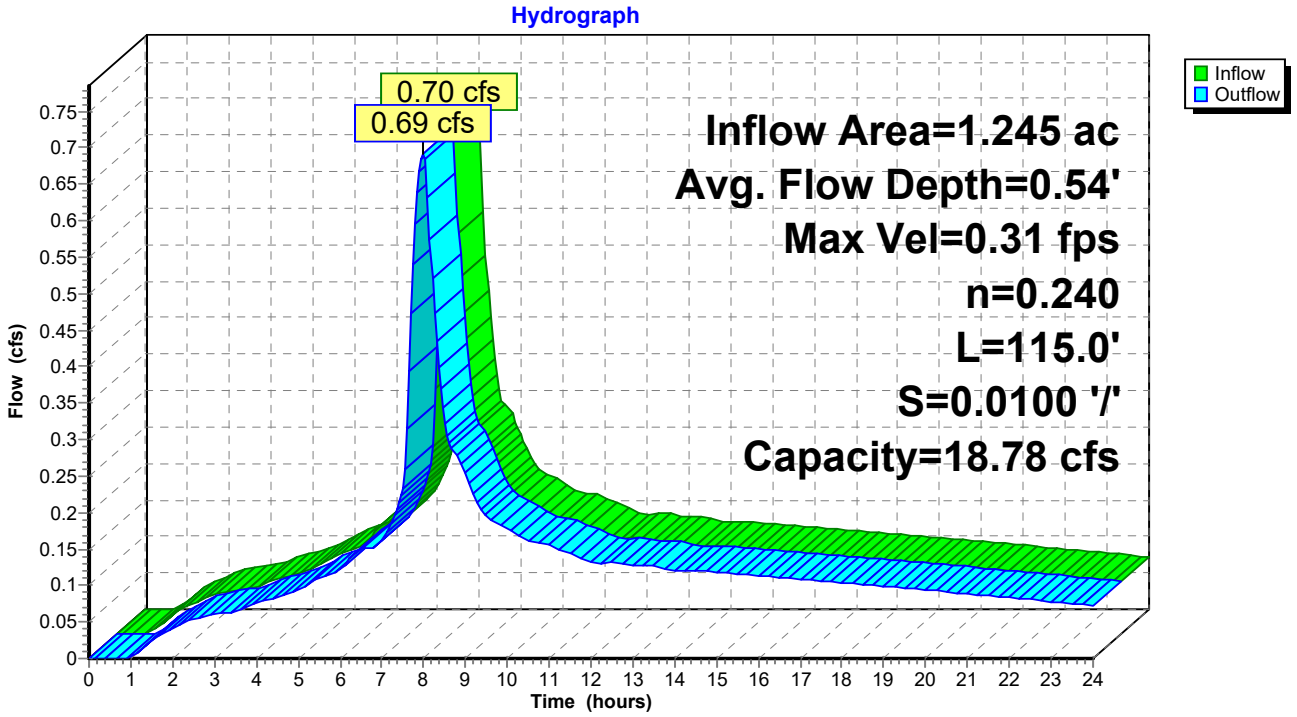
Custom cross-section, Length= 115.0' Slope= 0.0100 '/'
Constant n= 0.240
Inlet Invert= 196.00', Outlet Invert= 194.85'



Offset (feet)	Elevation (feet)	Chan.Depth (feet)
-8.00	2.50	0.00
-3.00	0.50	2.00
-1.00	0.00	2.50
1.00	0.00	2.50
3.00	0.50	2.00
8.00	2.50	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	2.0	0	0.00
0.50	2.0	6.1	230	0.59
2.50	24.0	16.9	2,760	18.78

Reach 1R: CWS Swale



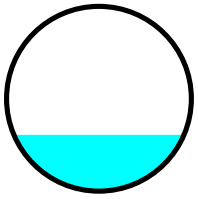
Summary for Reach 2R: 12"

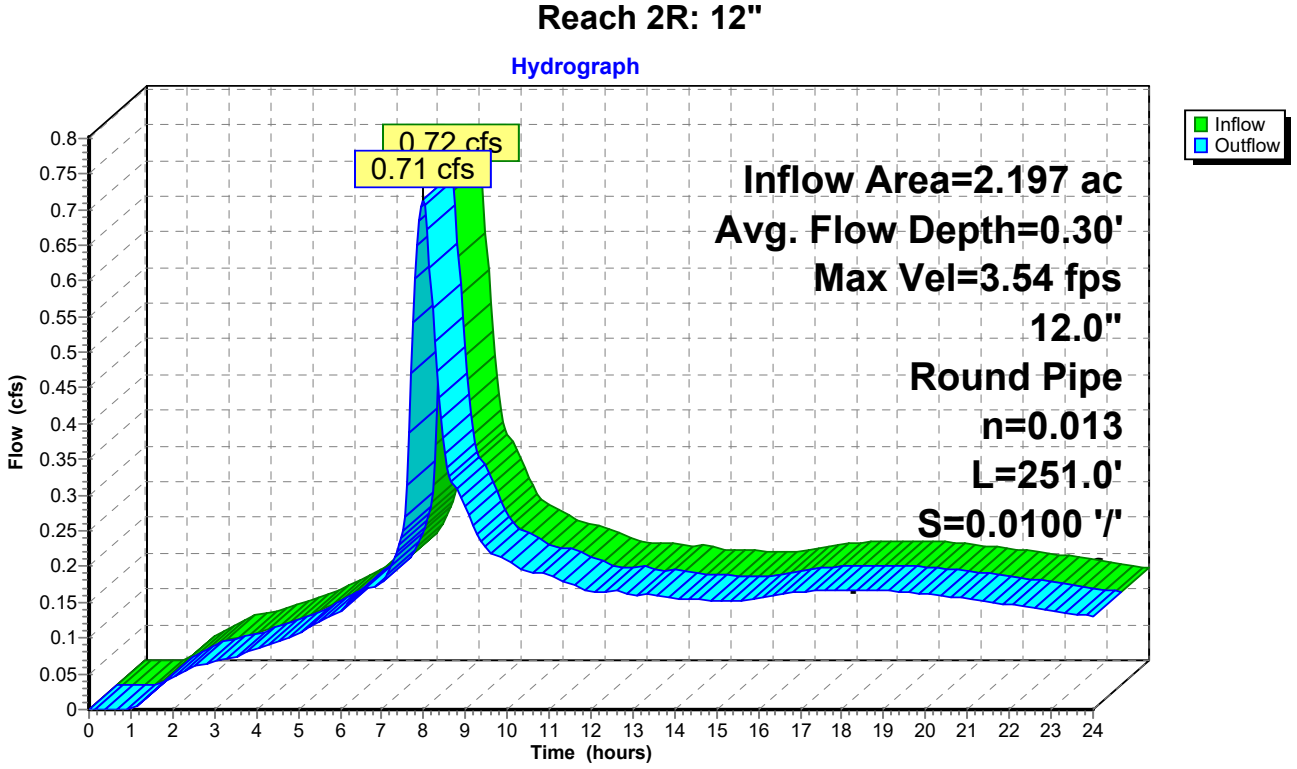
Inflow Area = 2.197 ac, 48.17% Impervious, Inflow Depth > 1.72" for 10 YEAR event
Inflow = 0.72 cfs @ 7.99 hrs, Volume= 0.314 af
Outflow = 0.71 cfs @ 8.00 hrs, Volume= 0.314 af, Atten= 0%, Lag= 0.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.54 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 2.22 fps, Avg. Travel Time= 1.9 min

Peak Storage= 51 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.56 cfs

12.0" Round Pipe
n= 0.013
Length= 251.0' Slope= 0.0100 '/'
Inlet Invert= 190.00', Outlet Invert= 187.49'





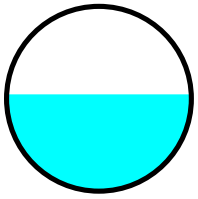
Summary for Reach 3R: 12"

Inflow Area = 6.243 ac, 62.61% Impervious, Inflow Depth > 2.00" for 10 YEAR event
Inflow = 1.92 cfs @ 8.05 hrs, Volume= 1.041 af
Outflow = 1.92 cfs @ 8.05 hrs, Volume= 1.040 af, Atten= 0%, Lag= 0.2 min

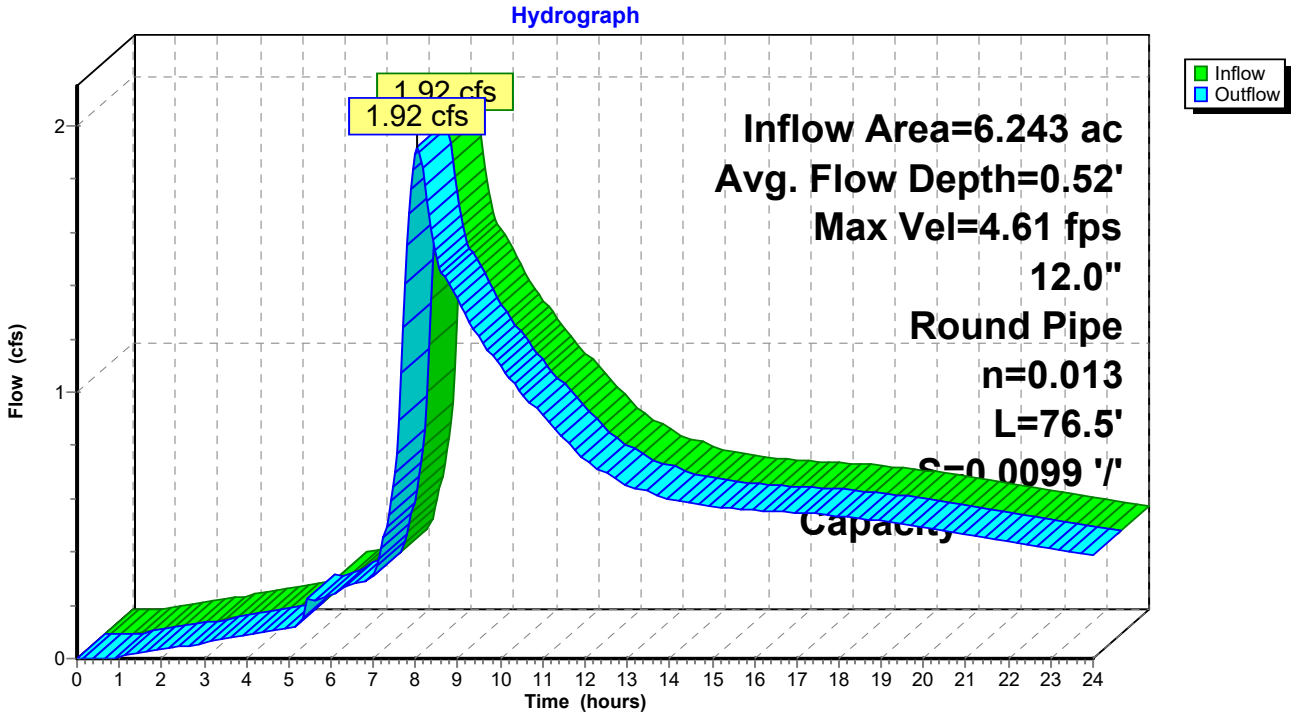
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.61 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.01 fps, Avg. Travel Time= 0.4 min

Peak Storage= 32 cf @ 8.05 hrs
Average Depth at Peak Storage= 0.52'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.55 cfs

12.0" Round Pipe
n= 0.013
Length= 76.5' Slope= 0.0099 '/'
Inlet Invert= 185.50', Outlet Invert= 184.74'



Reach 3R: 12"



Summary for Pond 1P: DETENTION POND

Inflow Area = 0.952 ac, 37.65% Impervious, Inflow Depth > 2.00" for 10 YEAR event
Inflow = 0.43 cfs @ 7.96 hrs, Volume= 0.158 af
Outflow = 0.07 cfs @ 19.61 hrs, Volume= 0.069 af, Atten= 84%, Lag= 699.1 min
Primary = 0.07 cfs @ 19.61 hrs, Volume= 0.069 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 194.64' @ 19.61 hrs Surf.Area= 2,260 sf Storage= 3,967 cf
Flood Elev= 196.00' Surf.Area= 3,164 sf Storage= 7,644 cf

Plug-Flow detention time= 542.6 min calculated for 0.069 af (43% of inflow)
Center-of-Mass det. time= 240.3 min (975.4 - 735.1)

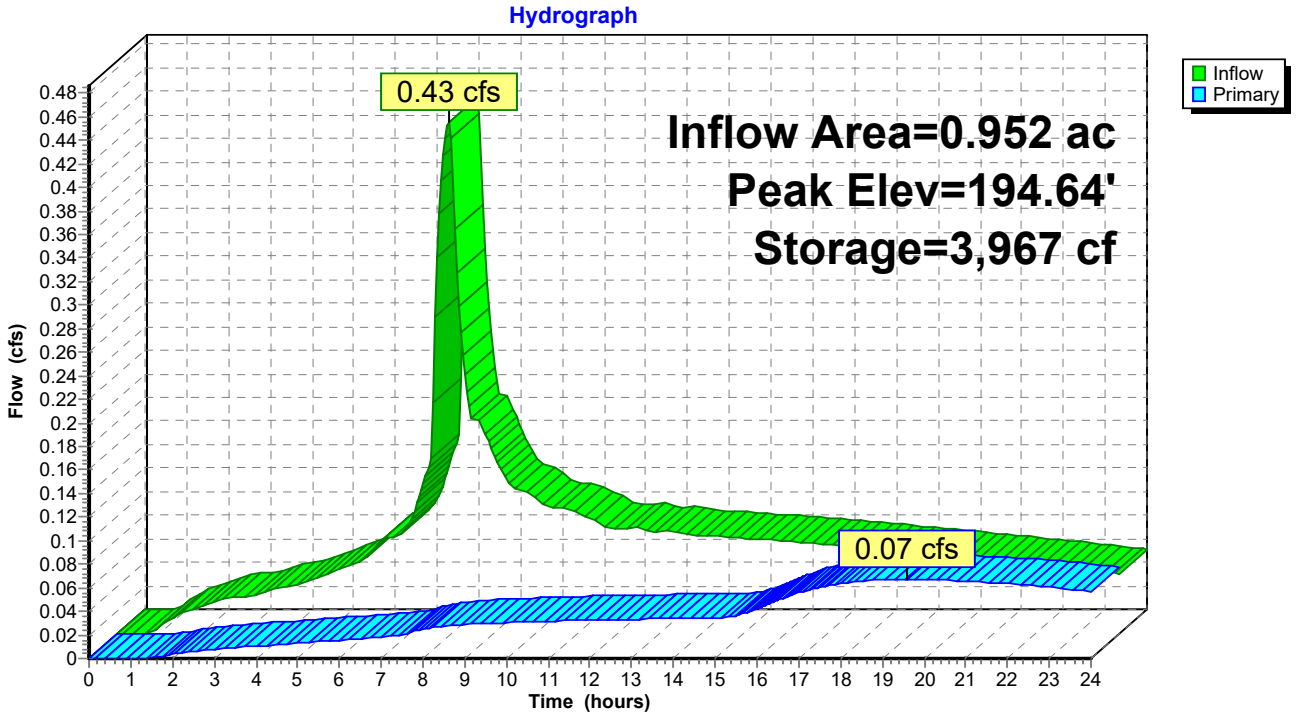
Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	7,644 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
192.00	815	158.0	0	0	815
193.00	1,318	177.0	1,056	1,056	1,348
194.00	1,877	196.0	1,589	2,646	1,942
195.00	2,492	215.0	2,177	4,823	2,597
196.00	3,164	233.0	2,821	7,644	3,277

Device	Routing	Invert	Outlet Devices
#1	Primary	192.00'	**6.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 192.00' / 191.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 0.20 sf
#2	Device 1	192.00'	**0.9" Vert. WQ Orifice** C= 0.620
#3	Device 1	194.50'	**2.5" Vert. Detention Orifice** C= 0.620
#4	Device 1	194.80'	**2.0' long (Profile 17) Upper Ditch Inlet** Head (feet) 0.49 0.98 1.48 1.97 2.46 2.95 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31

Primary OutFlow Max=0.07 cfs @ 19.61 hrs HW=194.64' TW=190.15' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.07 cfs of 1.46 cfs potential flow)
  - **2=WQ Orifice** (Orifice Controls 0.04 cfs @ 8.03 fps)
  - **3=Detention Orifice** (Orifice Controls 0.03 cfs @ 1.31 fps)
  - **4=Upper Ditch Inlet** (Controls 0.00 cfs)

Pond 1P: DETENTION POND



Summary for Pond 2P: LIDA SWALE

Inflow Area = 0.439 ac, 80.09% Impervious, Inflow Depth > 2.86" for 10 YEAR event
Inflow = 0.31 cfs @ 7.91 hrs, Volume= 0.105 af
Outflow = 0.30 cfs @ 8.01 hrs, Volume= 0.105 af, Atten= 4%, Lag= 5.8 min
Primary = 0.30 cfs @ 8.01 hrs, Volume= 0.105 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 193.17' @ 8.01 hrs Surf.Area= 492 sf Storage= 73 cf
Flood Elev= 195.00' Surf.Area= 1,312 sf Storage= 795 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.6 min (679.5 - 678.9)

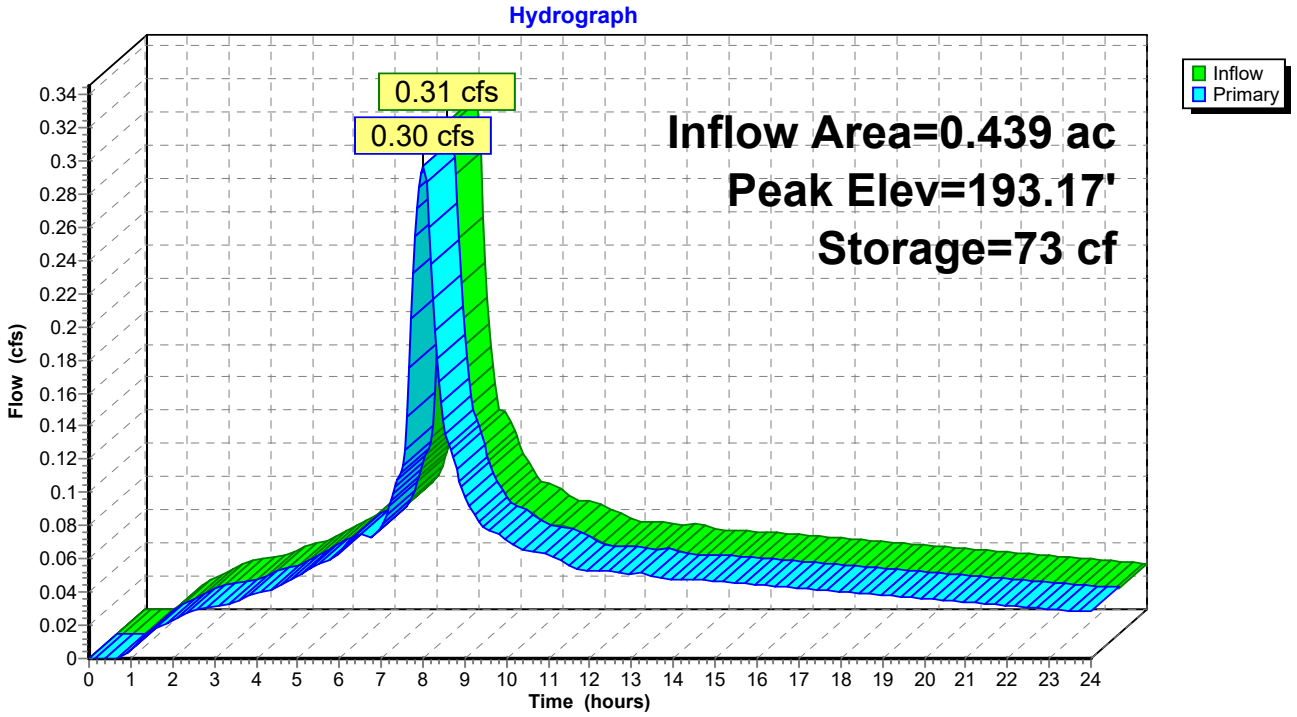
Volume	Invert	Avail.Storage	Storage Description
#1	193.00'	795 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
193.00	374	303.0	0	0	374
194.00	1,312	322.0	795	795	1,369

Device	Routing	Invert	Outlet Devices
#1	Primary	192.77'	**6.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 192.77' / 192.67' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	193.00'	**2.00 cfs Exfiltration at all elevations**
#3	Device 1	193.50'	**6.0" Horiz. Orifice/Grate** C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=0.30 cfs @ 8.01 hrs HW=193.17' TW=189.76' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 0.30 cfs @ 2.42 fps)
└**2=Exfiltration** (Passes 0.30 cfs of 2.00 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 2P: LIDA SWALE



Summary for Pond 3P: DETENTION PIPE

Inflow Area = 2.636 ac, 53.49% Impervious, Inflow Depth > 1.90" for 10 YEAR event
Inflow = 1.01 cfs @ 8.00 hrs, Volume= 0.418 af
Outflow = 1.01 cfs @ 8.01 hrs, Volume= 0.402 af, Atten= 0%, Lag= 0.0 min
Primary = 1.01 cfs @ 8.01 hrs, Volume= 0.402 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 189.76' @ 8.01 hrs Surf.Area= 0 sf Storage= 707 cf
Flood Elev= 188.90' Surf.Area= 130 sf Storage= 693 cf

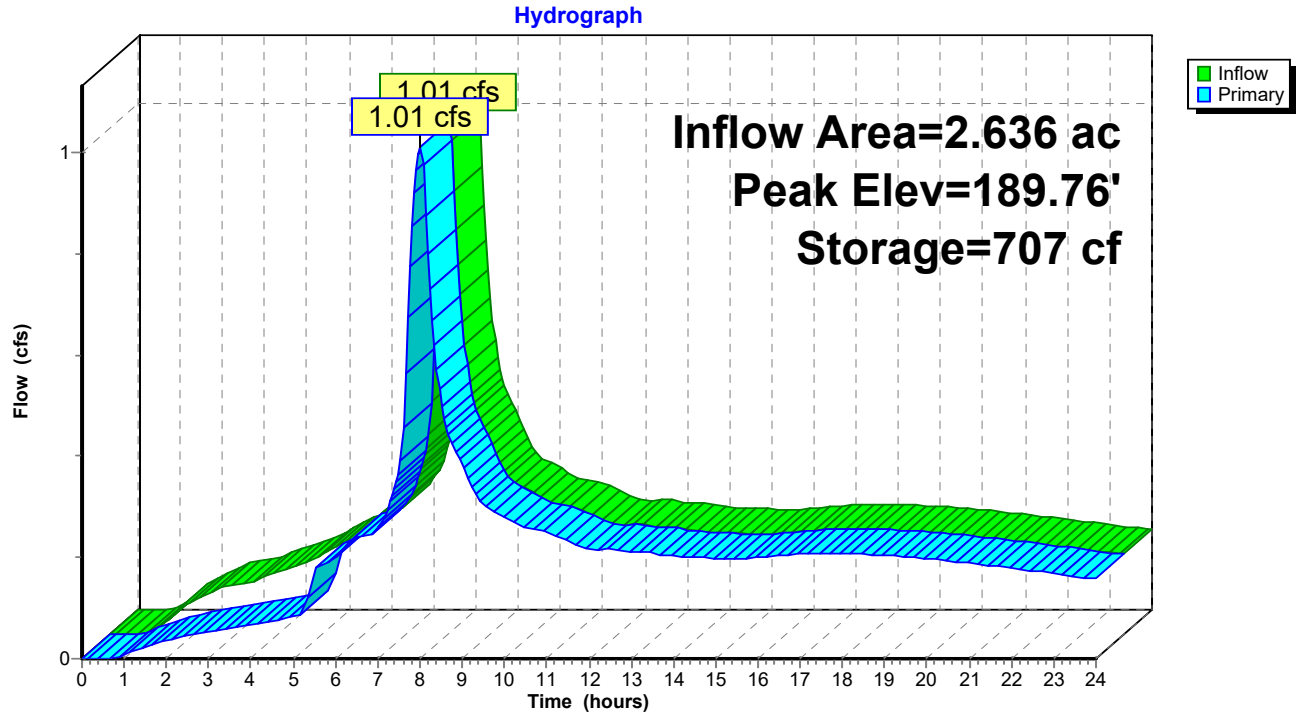
Plug-Flow detention time= 47.3 min calculated for 0.401 af (96% of inflow)
Center-of-Mass det. time= 21.0 min (768.8 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	186.00'	707 cf	**36.0" Round Pipe Storage** L= 100.0' S= 0.0010 '/'

Device	Routing	Invert	Outlet Devices
#1	Primary	185.90'	**1.4" Vert. 1/2 of 2-YR Orifice** C= 0.620
#2	Primary	188.90'	**6.0" Horiz. 25-YR Orifice** C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=1.01 cfs @ 8.01 hrs HW=189.76' TW=186.02' (Dynamic Tailwater)
└─**1=1/2 of 2-YR Orifice** (Orifice Controls 0.10 cfs @ 9.62 fps)
└─**2=25-YR Orifice** (Orifice Controls 0.91 cfs @ 4.62 fps)

Pond 3P: DETENTION PIPE



Summary for Pond 4P: DETENTION POND

Inflow Area = 3.608 ac, 69.27% Impervious, Inflow Depth > 2.64" for 10 YEAR event
Inflow = 2.31 cfs @ 7.92 hrs, Volume= 0.793 af
Outflow = 1.00 cfs @ 8.43 hrs, Volume= 0.639 af, Atten= 57%, Lag= 31.0 min
Primary = 1.00 cfs @ 8.43 hrs, Volume= 0.639 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 188.68' @ 8.43 hrs Surf.Area= 4,047 sf Storage= 10,139 cf
Flood Elev= 190.00' Surf.Area= 5,137 sf Storage= 16,196 cf

Plug-Flow detention time= 250.6 min calculated for 0.639 af (80% of inflow)
Center-of-Mass det. time= 121.7 min (811.4 - 689.7)

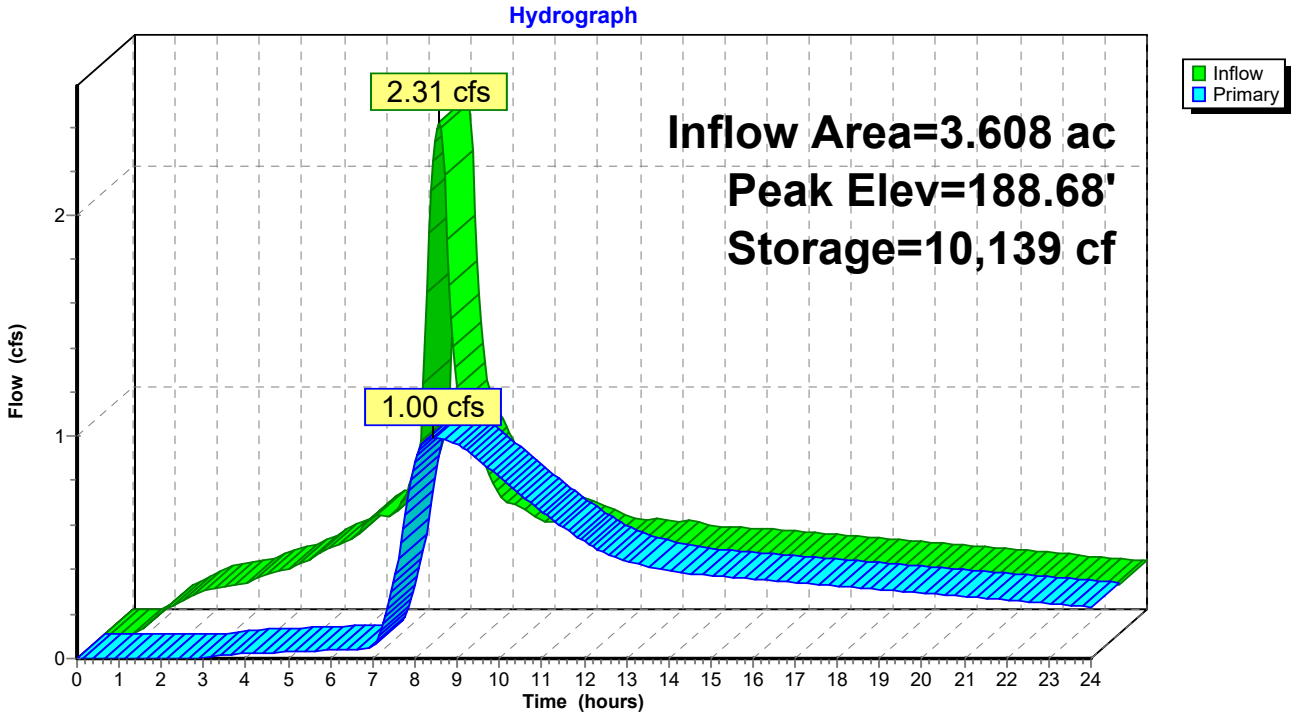
Volume	Invert	Avail.Storage	Storage Description
#1	185.00'	16,196 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
185.00	1,628	173.0	0	0	1,628
186.00	2,190	197.0	1,902	1,902	2,358
187.00	2,823	221.0	2,500	4,402	3,184
188.00	3,528	245.0	3,169	7,571	4,104
189.00	4,305	268.0	3,910	11,481	5,077
190.00	5,137	287.0	4,715	16,196	5,961

Device	Routing	Invert	Outlet Devices
#1	Device 4	185.00'	**1.1" Vert. WQ Orifice** C= 0.620
#2	Primary	187.50'	**6.0" Vert. ORIFICE** C= 0.620
#3	Primary	188.70'	**2.0' long (Profile 17) Upper Ditch Inlet** Head (feet) 0.49 0.98 1.48 1.97 2.46 2.95 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31
#4	Primary	184.90'	**12.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 184.90' / 184.80' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=1.00 cfs @ 8.43 hrs HW=188.68' TW=185.96' (Dynamic Tailwater)
- **2=ORIFICE** (Orifice Controls 0.94 cfs @ 4.79 fps)
- **3=Upper Ditch Inlet** (Controls 0.00 cfs)
- **4=Culvert** (Passes 0.05 cfs of 6.23 cfs potential flow)
  - **1=WQ Orifice** (Orifice Controls 0.05 cfs @ 8.20 fps)

Pond 4P: DETENTION POND

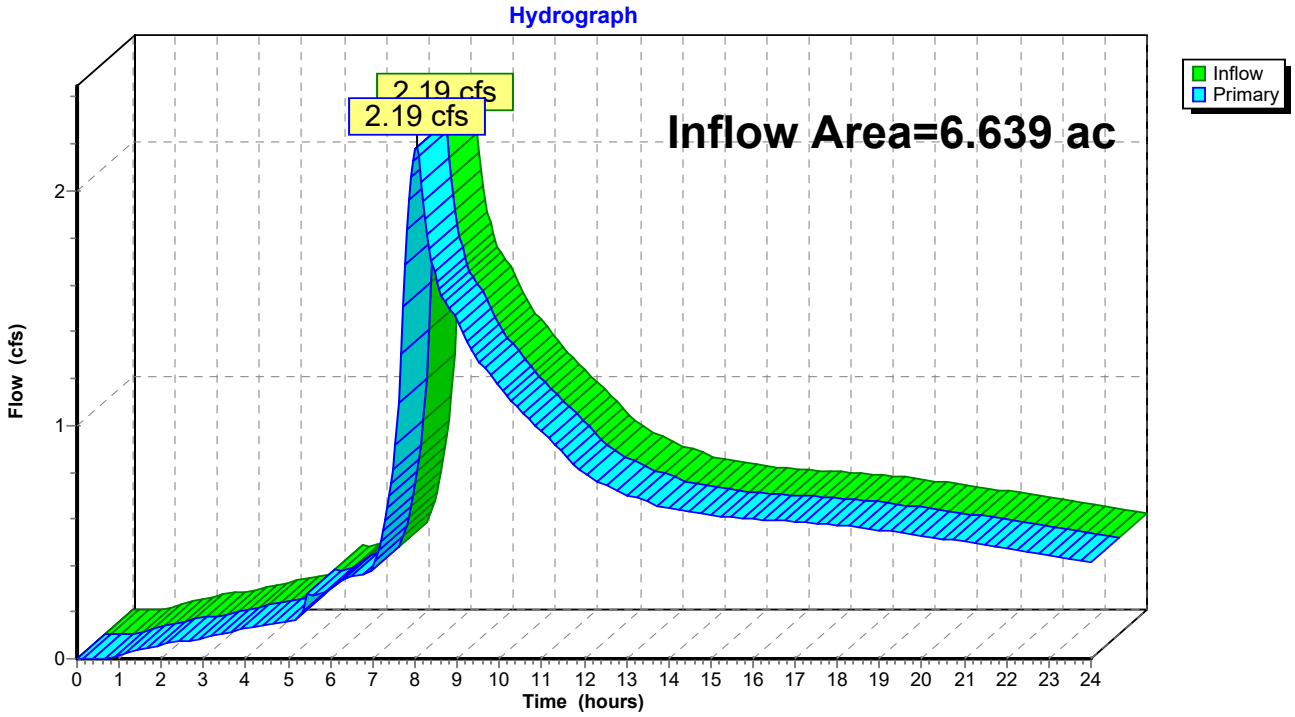


Summary for Link 1T: Total

Inflow Area = 6.639 ac, 64.09% Impervious, Inflow Depth > 2.06" for 10 YEAR event
Inflow = 2.19 cfs @ 8.03 hrs, Volume= 1.140 af
Primary = 2.19 cfs @ 8.03 hrs, Volume= 1.140 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1T: Total



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FUTURE BUILDING Runoff Area=38,657 sf 60.02% Impervious Runoff Depth>2.45"
Tc=5.0 min CN=74/98 Runoff=0.52 cfs 0.181 af

Subcatchment 2S: Runoff Area=6,069 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.11 cfs 0.038 af

Subcatchment 3S: Runoff Area=4,125 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.08 cfs 0.026 af

Subcatchment 4S: ROOF Runoff Area=41,458 sf 37.65% Impervious Runoff Depth>2.00"
Tc=5.0 min CN=74/98 Runoff=0.43 cfs 0.158 af

Subcatchment 5S: Runoff Area=15,315 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.29 cfs 0.096 af

Subcatchment 6S: Runoff Area=3,807 sf 0.00% Impervious Runoff Depth>1.24"
Tc=5.0 min CN=74/0 Runoff=0.02 cfs 0.009 af

Subcatchment 7S: ROOF Runoff Area=54,229 sf 56.22% Impervious Runoff Depth>2.37"
Tc=5.0 min CN=74/98 Runoff=0.70 cfs 0.246 af

Subcatchment 8S: Runoff Area=38,733 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.73 cfs 0.242 af

Subcatchment 9S: ROOF Runoff Area=50,579 sf 49.20% Impervious Runoff Depth>2.23"
Tc=5.0 min CN=74/98 Runoff=0.61 cfs 0.216 af

Subcatchment 10S: Runoff Area=5,797 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.11 cfs 0.036 af

Subcatchment 11S: Runoff Area=13,186 sf 45.87% Impervious Runoff Depth>2.17"
Tc=5.0 min CN=74/98 Runoff=0.15 cfs 0.055 af

Subcatchment 12S: Runoff Area=6,208 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.12 cfs 0.039 af

Subcatchment 13S: Runoff Area=2,155 sf 0.00% Impervious Runoff Depth>1.24"
Tc=5.0 min CN=74/0 Runoff=0.01 cfs 0.005 af

Subcatchment 14S: PARKING LOT Runoff Area=8,876 sf 100.00% Impervious Runoff Depth>3.26"
Tc=5.0 min CN=0/98 Runoff=0.17 cfs 0.055 af

Reach 1R: CWS Swale Avg. Flow Depth=0.54' Max Vel=0.31 fps Inflow=0.70 cfs 0.246 af
n=0.240 L=115.0' S=0.0100 '/' Capacity=18.78 cfs Outflow=0.69 cfs 0.245 af

Reach 2R: 12" Avg. Flow Depth=0.30' Max Vel=3.54 fps Inflow=0.72 cfs 0.314 af
12.0" Round Pipe n=0.013 L=251.0' S=0.0100 '/' Capacity=3.56 cfs Outflow=0.71 cfs 0.314 af

Reach 3R: 12" Avg. Flow Depth=0.52' Max Vel=4.61 fps Inflow=1.92 cfs 1.041 af
12.0" Round Pipe n=0.013 L=76.5' S=0.0099 '/' Capacity=3.55 cfs Outflow=1.92 cfs 1.040 af

Pond 1P: DETENTION POND Peak Elev=194.64' Storage=3,967 cf Inflow=0.43 cfs 0.158 af
Outflow=0.07 cfs 0.069 af

Pond 2P: LIDA SWALE Peak Elev=193.17' Storage=73 cf Inflow=0.31 cfs 0.105 af
Outflow=0.30 cfs 0.105 af

Pond 3P: DETENTION PIPE Peak Elev=189.76' Storage=707 cf Inflow=1.01 cfs 0.418 af
Outflow=1.01 cfs 0.402 af

Pond 4P: DETENTION POND Peak Elev=188.68' Storage=10,139 cf Inflow=2.31 cfs 0.793 af
Outflow=1.00 cfs 0.639 af

Link 1T: Total Inflow=2.19 cfs 1.140 af
Primary=2.19 cfs 1.140 af

Total Runoff Area = 6.639 ac Runoff Volume = 1.402 af Average Runoff Depth = 2.53"
35.91% Pervious = 2.384 ac 64.09% Impervious = 4.255 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FUTURE BUILDING Runoff Area=38,657 sf 60.02% Impervious Runoff Depth>1.60"
Tc=5.0 min CN=74/98 Runoff=0.33 cfs 0.119 af

Subcatchment 2S: Runoff Area=6,069 sf 100.00% Impervious Runoff Depth>2.27"
Tc=5.0 min CN=0/98 Runoff=0.08 cfs 0.026 af

Subcatchment 3S: Runoff Area=4,125 sf 100.00% Impervious Runoff Depth>2.27"
Tc=5.0 min CN=0/98 Runoff=0.05 cfs 0.018 af

Subcatchment 4S: ROOF Runoff Area=41,458 sf 37.65% Impervious Runoff Depth>1.23"
Tc=5.0 min CN=74/98 Runoff=0.25 cfs 0.098 af

Subcatchment 5S: Runoff Area=15,315 sf 100.00% Impervious Runoff Depth>2.27"
Tc=5.0 min CN=0/98 Runoff=0.20 cfs 0.066 af

Subcatchment 6S: Runoff Area=3,807 sf 0.00% Impervious Runoff Depth>0.61"
Tc=5.0 min CN=74/0 Runoff=0.01 cfs 0.004 af

Subcatchment 7S: ROOF Runoff Area=54,229 sf 56.22% Impervious Runoff Depth>1.54"
Tc=5.0 min CN=74/98 Runoff=0.45 cfs 0.160 af

Subcatchment 8S: Runoff Area=38,733 sf 100.00% Impervious Runoff Depth>2.27"
Tc=5.0 min CN=0/98 Runoff=0.51 cfs 0.168 af

Subcatchment 9S: ROOF Runoff Area=50,579 sf 49.20% Impervious Runoff Depth>1.42"
Tc=5.0 min CN=74/98 Runoff=0.37 cfs 0.138 af

Subcatchment 10S: Runoff Area=5,797 sf 100.00% Impervious Runoff Depth>2.27"
Tc=5.0 min CN=0/98 Runoff=0.08 cfs 0.025 af

Subcatchment 11S: Runoff Area=13,186 sf 45.87% Impervious Runoff Depth>1.37"
Tc=5.0 min CN=74/98 Runoff=0.09 cfs 0.035 af

Subcatchment 12S: Runoff Area=6,208 sf 100.00% Impervious Runoff Depth>2.27"
Tc=5.0 min CN=0/98 Runoff=0.08 cfs 0.027 af

Subcatchment 13S: Runoff Area=2,155 sf 0.00% Impervious Runoff Depth>0.61"
Tc=5.0 min CN=74/0 Runoff=0.00 cfs 0.002 af

Subcatchment 14S: PARKING LOT Runoff Area=8,876 sf 100.00% Impervious Runoff Depth>2.27"
Tc=5.0 min CN=0/98 Runoff=0.12 cfs 0.038 af

Reach 1R: CWS Swale Avg. Flow Depth=0.43' Max Vel=0.27 fps Inflow=0.45 cfs 0.160 af
n=0.240 L=115.0' S=0.0100 '/' Capacity=18.78 cfs Outflow=0.43 cfs 0.159 af

Reach 2R: 12" Avg. Flow Depth=0.24' Max Vel=3.11 fps Inflow=0.45 cfs 0.200 af
12.0" Round Pipe n=0.013 L=251.0' S=0.0100 '/' Capacity=3.56 cfs Outflow=0.45 cfs 0.200 af

Reach 3R: 12" Avg. Flow Depth=0.37' Max Vel=3.92 fps Inflow=1.04 cfs 0.633 af
12.0" Round Pipe n=0.013 L=76.5' S=0.0099 '/' Capacity=3.55 cfs Outflow=1.04 cfs 0.633 af

Pond 1P: DETENTION POND Peak Elev=193.89' Storage=2,450 cf Inflow=0.25 cfs 0.098 af
Outflow=0.03 cfs 0.041 af

Pond 2P: LIDA SWALE Peak Elev=193.08' Storage=34 cf Inflow=0.21 cfs 0.071 af
Outflow=0.20 cfs 0.071 af

Pond 3P: DETENTION PIPE Peak Elev=189.23' Storage=707 cf Inflow=0.66 cfs 0.271 af
Outflow=0.66 cfs 0.255 af

Pond 4P: DETENTION POND Peak Elev=188.03' Storage=7,675 cf Inflow=1.52 cfs 0.528 af
Outflow=0.57 cfs 0.378 af

Link 1T: Total Inflow=1.19 cfs 0.701 af
Primary=1.19 cfs 0.701 af

Total Runoff Area = 6.639 ac Runoff Volume = 0.924 af Average Runoff Depth = 1.67"
35.91% Pervious = 2.384 ac 64.09% Impervious = 4.255 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FUTURE BUILDING Runoff Area=38,657 sf 60.02% Impervious Runoff Depth>0.65"
Tc=5.0 min CN=74/98 Runoff=0.14 cfs 0.048 af

Subcatchment 2S: Runoff Area=6,069 sf 100.00% Impervious Runoff Depth>1.03"
Tc=5.0 min CN=0/98 Runoff=0.04 cfs 0.012 af

Subcatchment 3S: Runoff Area=4,125 sf 100.00% Impervious Runoff Depth>1.03"
Tc=5.0 min CN=0/98 Runoff=0.03 cfs 0.008 af

Subcatchment 4S: ROOF Runoff Area=41,458 sf 37.65% Impervious Runoff Depth>0.43"
Tc=5.0 min CN=74/98 Runoff=0.10 cfs 0.034 af

Subcatchment 5S: Runoff Area=15,315 sf 100.00% Impervious Runoff Depth>1.03"
Tc=5.0 min CN=0/98 Runoff=0.09 cfs 0.030 af

Subcatchment 6S: Runoff Area=3,807 sf 0.00% Impervious Runoff Depth>0.07"
Tc=5.0 min CN=74/0 Runoff=0.00 cfs 0.001 af

Subcatchment 7S: ROOF Runoff Area=54,229 sf 56.22% Impervious Runoff Depth>0.61"
Tc=5.0 min CN=74/98 Runoff=0.19 cfs 0.064 af

Subcatchment 8S: Runoff Area=38,733 sf 100.00% Impervious Runoff Depth>1.03"
Tc=5.0 min CN=0/98 Runoff=0.24 cfs 0.077 af

Subcatchment 9S: ROOF Runoff Area=50,579 sf 49.20% Impervious Runoff Depth>0.55"
Tc=5.0 min CN=74/98 Runoff=0.15 cfs 0.053 af

Subcatchment 10S: Runoff Area=5,797 sf 100.00% Impervious Runoff Depth>1.03"
Tc=5.0 min CN=0/98 Runoff=0.04 cfs 0.011 af

Subcatchment 11S: Runoff Area=13,186 sf 45.87% Impervious Runoff Depth>0.51"
Tc=5.0 min CN=74/98 Runoff=0.04 cfs 0.013 af

Subcatchment 12S: Runoff Area=6,208 sf 100.00% Impervious Runoff Depth>1.03"
Tc=5.0 min CN=0/98 Runoff=0.04 cfs 0.012 af

Subcatchment 13S: Runoff Area=2,155 sf 0.00% Impervious Runoff Depth>0.07"
Tc=5.0 min CN=74/0 Runoff=0.00 cfs 0.000 af

Subcatchment 14S: PARKING LOT Runoff Area=8,876 sf 100.00% Impervious Runoff Depth>1.03"
Tc=5.0 min CN=0/98 Runoff=0.05 cfs 0.018 af

Reach 1R: CWS Swale Avg. Flow Depth=0.27' Max Vel=0.21 fps Inflow=0.19 cfs 0.064 af
n=0.240 L=115.0' S=0.0100 '/' Capacity=18.78 cfs Outflow=0.18 cfs 0.063 af

Reach 2R: 12" Avg. Flow Depth=0.16' Max Vel=2.42 fps Inflow=0.19 cfs 0.086 af
12.0" Round Pipe n=0.013 L=251.0' S=0.0100 '/' Capacity=3.56 cfs Outflow=0.19 cfs 0.086 af

Reach 3R: 12" Avg. Flow Depth=0.15' Max Vel=2.37 fps Inflow=0.18 cfs 0.193 af
12.0" Round Pipe n=0.013 L=76.5' S=0.0099 '/' Capacity=3.55 cfs Outflow=0.18 cfs 0.193 af

Pond 1P: DETENTION POND Peak Elev=192.57' Storage=540 cf Inflow=0.10 cfs 0.034 af
Outflow=0.02 cfs 0.023 af

Pond 2P: LIDA SWALE Peak Elev=193.00' Storage=0 cf Inflow=0.09 cfs 0.031 af
Outflow=0.09 cfs 0.031 af

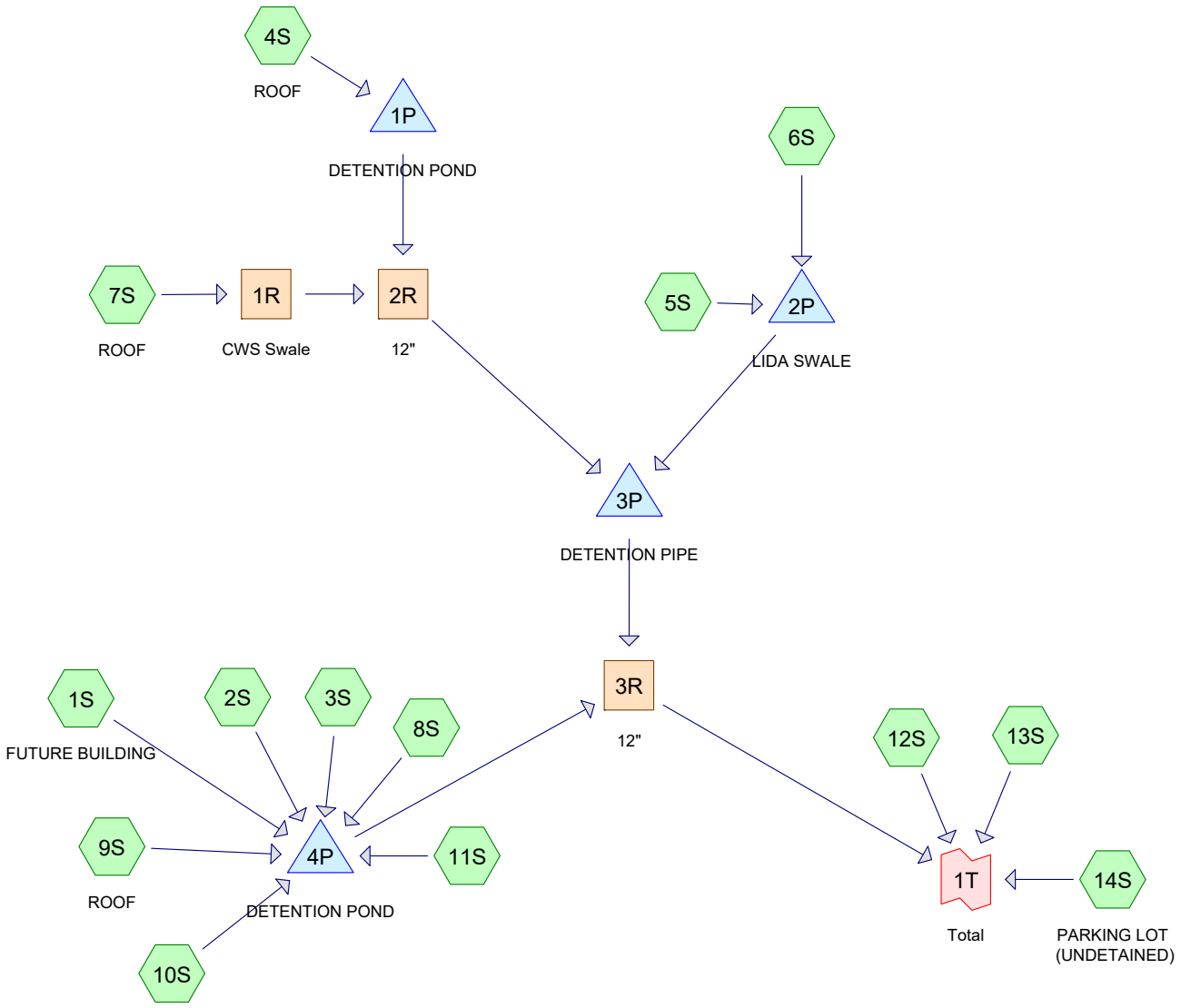
Pond 3P: DETENTION PIPE Peak Elev=188.95' Storage=700 cf Inflow=0.28 cfs 0.117 af
Outflow=0.15 cfs 0.113 af

Pond 4P: DETENTION POND Peak Elev=187.61' Storage=6,260 cf Inflow=0.67 cfs 0.222 af
Outflow=0.09 cfs 0.080 af

Link 1T: Total Inflow=0.22 cfs 0.223 af
Primary=0.22 cfs 0.223 af

Total Runoff Area = 6.639 ac Runoff Volume = 0.381 af Average Runoff Depth = 0.69"
35.91% Pervious = 2.384 ac 64.09% Impervious = 4.255 ac

Appendix C: Water Quality Analysis



Subcat Reach Pond Link

Routing Diagram for 5680 Post-Dev

Prepared by AKS Engineering & Forestry LLC, Printed 5/23/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.384	74	>75% Grass cover, Good, HSG C (1S, 4S, 6S, 7S, 9S, 11S, 13S)
0.143	98	Community Center Addition (12S)
0.352	98	Impervious ROW (5S)
0.139	98	Impervious Roofs (Community Center Addition) (11S)
0.889	98	Impervious pavement, sidewalks (8S)
0.571	98	Impervious pavements, sidewalks (2S, 3S, 10S, 14S)
2.162	98	Roofs, HSG C (1S, 4S, 7S, 9S)
6.639	**89**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Pond 1P: DETENTION POND Peak Elev=192.39' Storage=355 cf Inflow=0.07 cfs 0.025 af
Outflow=0.01 cfs 0.018 af

Pond 2P: LIDA SWALE Peak Elev=193.00' Storage=0 cf Inflow=0.07 cfs 0.023 af
Outflow=0.07 cfs 0.023 af

Pond 3P: DETENTION PIPE Peak Elev=188.12' Storage=520 cf Inflow=0.22 cfs 0.088 af
Outflow=0.08 cfs 0.087 af

Pond 4P: DETENTION POND Peak Elev=187.23' Storage=5,055 cf Inflow=0.51 cfs 0.167 af
Outflow=0.04 cfs 0.050 af

Summary for Pond 1P: DETENTION POND

Inflow Area = 0.952 ac, 37.65% Impervious, Inflow Depth > 0.31" for WQ event
Inflow = 0.07 cfs @ 7.92 hrs, Volume= 0.025 af
Outflow = 0.01 cfs @ 11.72 hrs, Volume= 0.018 af, Atten= 82%, Lag= 228.0 min
Primary = 0.01 cfs @ 11.72 hrs, Volume= 0.018 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 192.39' @ 11.72 hrs Surf.Area= 998 sf Storage= 355 cf
Flood Elev= 196.00' Surf.Area= 3,164 sf Storage= 7,644 cf

Plug-Flow detention time= 336.1 min calculated for 0.018 af (74% of inflow)
Center-of-Mass det. time= 172.4 min (906.5 - 734.1)

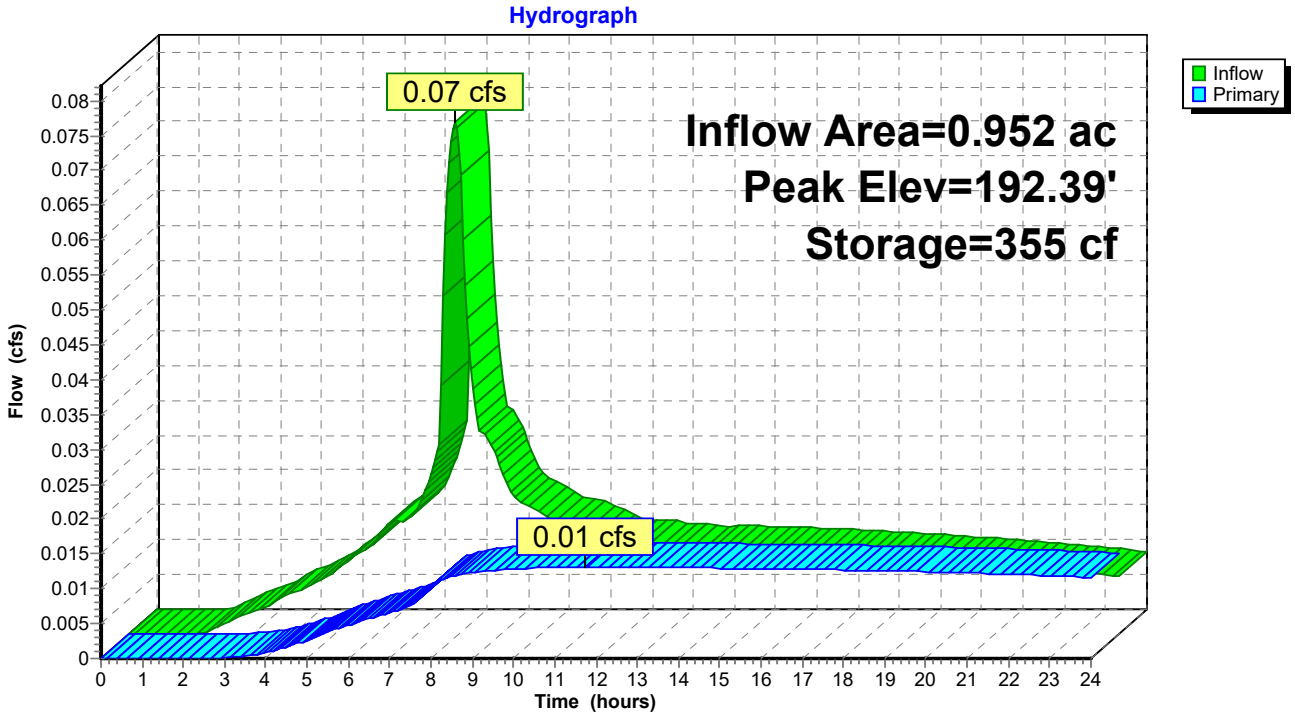
Volume	Invert	Avail.Storage	Storage Description
#1	192.00'	7,644 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
192.00	815	158.0	0	0	815
193.00	1,318	177.0	1,056	1,056	1,348
194.00	1,877	196.0	1,589	2,646	1,942
195.00	2,492	215.0	2,177	4,823	2,597
196.00	3,164	233.0	2,821	7,644	3,277

Device	Routing	Invert	Outlet Devices
#1	Primary	192.00'	**6.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 192.00' / 191.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 0.20 sf
#2	Device 1	192.00'	**0.9" Vert. WQ Orifice** C= 0.620
#3	Device 1	194.50'	**2.5" Vert. Detention Orifice** C= 0.620
#4	Device 1	194.80'	**2.0' long (Profile 17) Upper Ditch Inlet** Head (feet) 0.49 0.98 1.48 1.97 2.46 2.95 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31

Primary OutFlow Max=0.01 cfs @ 11.72 hrs HW=192.39' TW=190.07' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.01 cfs of 0.29 cfs potential flow)
  ├─**2=WQ Orifice** (Orifice Controls 0.01 cfs @ 2.96 fps)
  ├─**3=Detention Orifice** (Controls 0.00 cfs)
  └─**4=Upper Ditch Inlet** (Controls 0.00 cfs)

Pond 1P: DETENTION POND



Summary for Pond 2P: LIDA SWALE

Inflow Area = 0.439 ac, 80.09% Impervious, Inflow Depth > 0.64" for WQ event
Inflow = 0.07 cfs @ 7.92 hrs, Volume= 0.023 af
Outflow = 0.07 cfs @ 7.92 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min
Primary = 0.07 cfs @ 7.92 hrs, Volume= 0.023 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 193.00' @ 7.92 hrs Surf.Area= 374 sf Storage= 0 cf
Flood Elev= 195.00' Surf.Area= 1,312 sf Storage= 795 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (715.8 - 715.8)

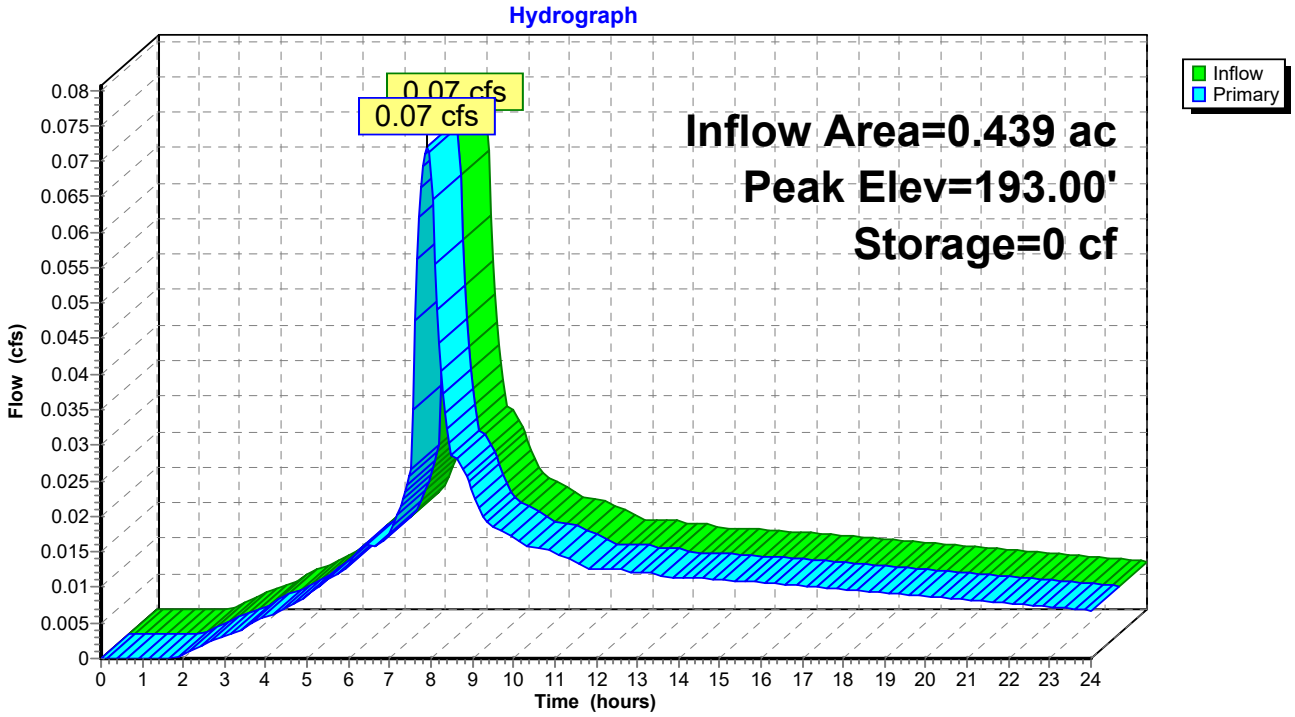
Volume	Invert	Avail.Storage	Storage Description
#1	193.00'	795 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
193.00	374	303.0	0	0	374
194.00	1,312	322.0	795	795	1,369

Device	Routing	Invert	Outlet Devices
#1	Primary	192.77'	**6.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 192.77' / 192.67' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	193.00'	**2.00 cfs Exfiltration at all elevations**
#3	Device 1	193.50'	**6.0" Horiz. Orifice/Grate** C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=0.12 cfs @ 7.92 hrs HW=193.00' TW=187.27' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.12 cfs @ 1.96 fps)
↑**2=Exfiltration** (Passes 0.12 cfs of 2.00 cfs potential flow)
3=Orifice/Grate (Controls 0.00 cfs)

Pond 2P: LIDA SWALE



Summary for Pond 3P: DETENTION PIPE

Inflow Area = 2.636 ac, 53.49% Impervious, Inflow Depth > 0.40" for WQ event
Inflow = 0.22 cfs @ 7.99 hrs, Volume= 0.088 af
Outflow = 0.08 cfs @ 9.24 hrs, Volume= 0.087 af, Atten= 64%, Lag= 74.8 min
Primary = 0.08 cfs @ 9.24 hrs, Volume= 0.087 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 188.12' @ 9.24 hrs Surf.Area= 278 sf Storage= 520 cf
Flood Elev= 188.90' Surf.Area= 130 sf Storage= 693 cf

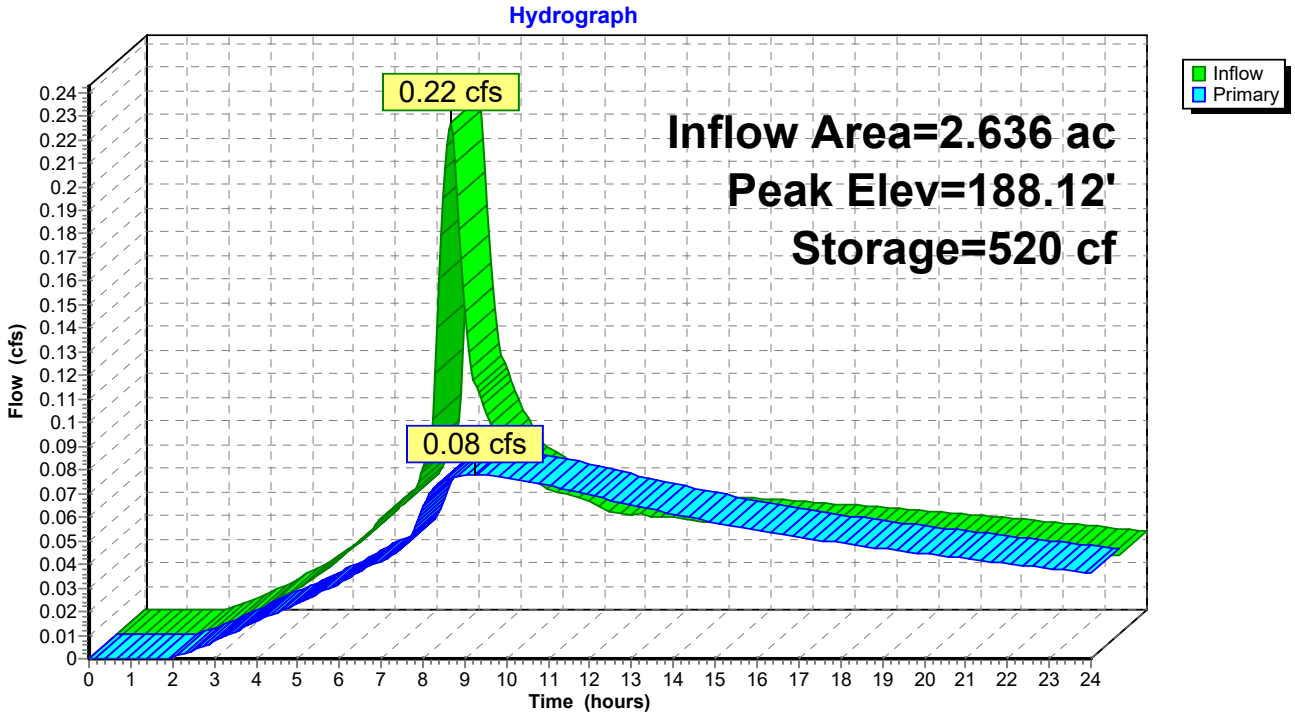
Plug-Flow detention time= 64.4 min calculated for 0.087 af (99% of inflow)
Center-of-Mass det. time= 55.7 min (821.0 - 765.3)

Volume	Invert	Avail.Storage	Storage Description
#1	186.00'	707 cf	**36.0" Round Pipe Storage** L= 100.0' S= 0.0010 '/'

Device	Routing	Invert	Outlet Devices
#1	Primary	185.90'	**1.4" Vert. 1/2 of 2-YR Orifice** C= 0.620
#2	Primary	188.90'	**6.0" Horiz. 25-YR Orifice** C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=0.08 cfs @ 9.24 hrs HW=188.12' TW=185.62' (Dynamic Tailwater)
└─**1=1/2 of 2-YR Orifice** (Orifice Controls 0.08 cfs @ 7.31 fps)
└─**2=25-YR Orifice** (Controls 0.00 cfs)

Pond 3P: DETENTION PIPE



Summary for Pond 4P: DETENTION POND

Inflow Area = 3.608 ac, 69.27% Impervious, Inflow Depth > 0.55" for WQ event
Inflow = 0.51 cfs @ 7.92 hrs, Volume= 0.167 af
Outflow = 0.04 cfs @ 24.00 hrs, Volume= 0.050 af, Atten= 92%, Lag= 964.8 min
Primary = 0.04 cfs @ 24.00 hrs, Volume= 0.050 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 187.23' @ 24.00 hrs Surf.Area= 2,975 sf Storage= 5,055 cf
Flood Elev= 190.00' Surf.Area= 5,137 sf Storage= 16,196 cf

Plug-Flow detention time= 582.9 min calculated for 0.050 af (30% of inflow)
Center-of-Mass det. time= 261.0 min (979.5 - 718.4)

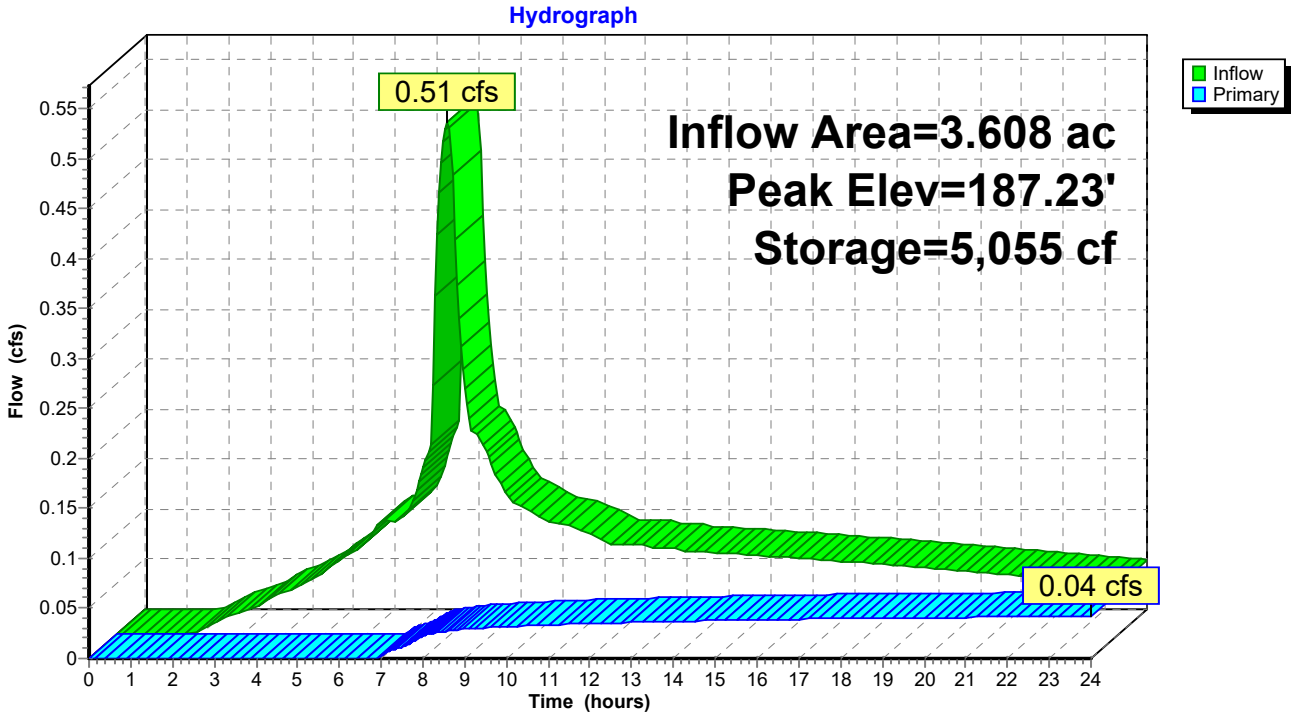
Volume	Invert	Avail.Storage	Storage Description
#1	185.00'	16,196 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
185.00	1,628	173.0	0	0	1,628
186.00	2,190	197.0	1,902	1,902	2,358
187.00	2,823	221.0	2,500	4,402	3,184
188.00	3,528	245.0	3,169	7,571	4,104
189.00	4,305	268.0	3,910	11,481	5,077
190.00	5,137	287.0	4,715	16,196	5,961

Device	Routing	Invert	Outlet Devices
#1	Device 4	185.00'	**1.1" Vert. WQ Orifice** C= 0.620
#2	Primary	187.50'	**6.0" Vert. ORIFICE** C= 0.620
#3	Primary	188.70'	**2.0' long (Profile 17) Upper Ditch Inlet** Head (feet) 0.49 0.98 1.48 1.97 2.46 2.95 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31
#4	Primary	184.90'	**12.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 184.90' / 184.80' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.05 cfs @ 24.00 hrs HW=187.23' TW=0.00' (Dynamic Tailwater)
- **2=ORIFICE** (Controls 0.00 cfs)
- **3=Upper Ditch Inlet** (Controls 0.00 cfs)
- **4=Culvert** (Passes 0.05 cfs of 5.11 cfs potential flow)
  - **1=WQ Orifice** (Orifice Controls 0.05 cfs @ 7.35 fps)

Pond 4P: DETENTION POND



Vegetated Swale

STORMWATER QUALITY CALCULATIONS

Client: MJG Development Inc.
Project: Friendsview Springbrook Meadows II
AKS Job No.: 5680
Date: May 23, 2019
Done By: DRR
Checked By: DS

IMPERVIOUS AREA

Total Site Area:	1.23	acres
Total Site Area:	53,721	square feet (sf)
Number of Lots:	1	

Roof Area	30,485	sf
Total Impervious Area:	30,485	sf

WATER QUALITY VOLUME (WQV)

(Per CWS 4.05.6a.2 - R&O 17-05)

$$WQV = \frac{0.36" \text{ X Area (ft)}}{12" \text{ per ft}} = \textbf{915 cubic feet}$$

WATER QUALITY FLOW (WQF)

(Per CWS 4.05.6a.3 - R&O 17-05)

$$WQF = \frac{WQV \text{ (sf)}}{14{,}400 \text{ seconds}} = \textbf{0.06 cfs}$$

VEGETATED SWALE, WATER QUALITY FLOW DESIGN & CALCULATIONS

Hydraulic Design Criteria (Per CWS 4.06.2 - R&O 17-05)

Design Flow: Water Quality Flow
Minimum Hydraulic Residence Time: 9 minutes
Maximum Water Design Depth: 0.5-ft
Minimum Freeboard: 1.0 foot (for facilities not protected from high flows)
Manning's "n" Value: 0.24
Maximum Velocity: 2.0 fps based on the 25-YR flow

Swale Sizing Assumptions:

Slope	Bottom Width	Manning's #	Side Slope	Depth of Swale	Length
(ft/ft)	(ft)	"n"	H:V	(ft)	(ft)
0.01	2	0.24	4:1	2.5	100

Water Quality Flow Hydraulic Calculations (See Hydraflow Printouts):

Q	Flow Depth	Flow Area	Wp	R	Velocity
(cfs)	(ft)	(sf)	(ft)	(ft)	(fps)
0.06	0.16	0.42	3.32	0.13	0.15

25-Year Flow Hydraulic Calculations (See HydroCAD Printouts):

Q	Flow Depth	Velocity
(cfs)	(ft)	(fps)
0.84	0.6	0.33

Check Against Design Criteria: **Meet CWS Criteria?**

	Calculated		CWS Criteria			
Minimum Hydraulic Residence Time:	**11.1**	**minutes**	>	9	minutes	Yes
Maximum Water Quality Design Depth:	**0.16**	**feet**	<	0.5	feet	Yes
Minimum Freeboard:	**1.92**	**feet**	>	0.5	feet	Yes
Minimum Length:	**100**	**feet**	≥	100	feet	Yes
Maximum Velocity (25 yr):	**0.33**	**fps**	<	2.0	fps	Yes

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Monday, May 6 2019

Vegetated Swale WQ Flow

Trapezoidal

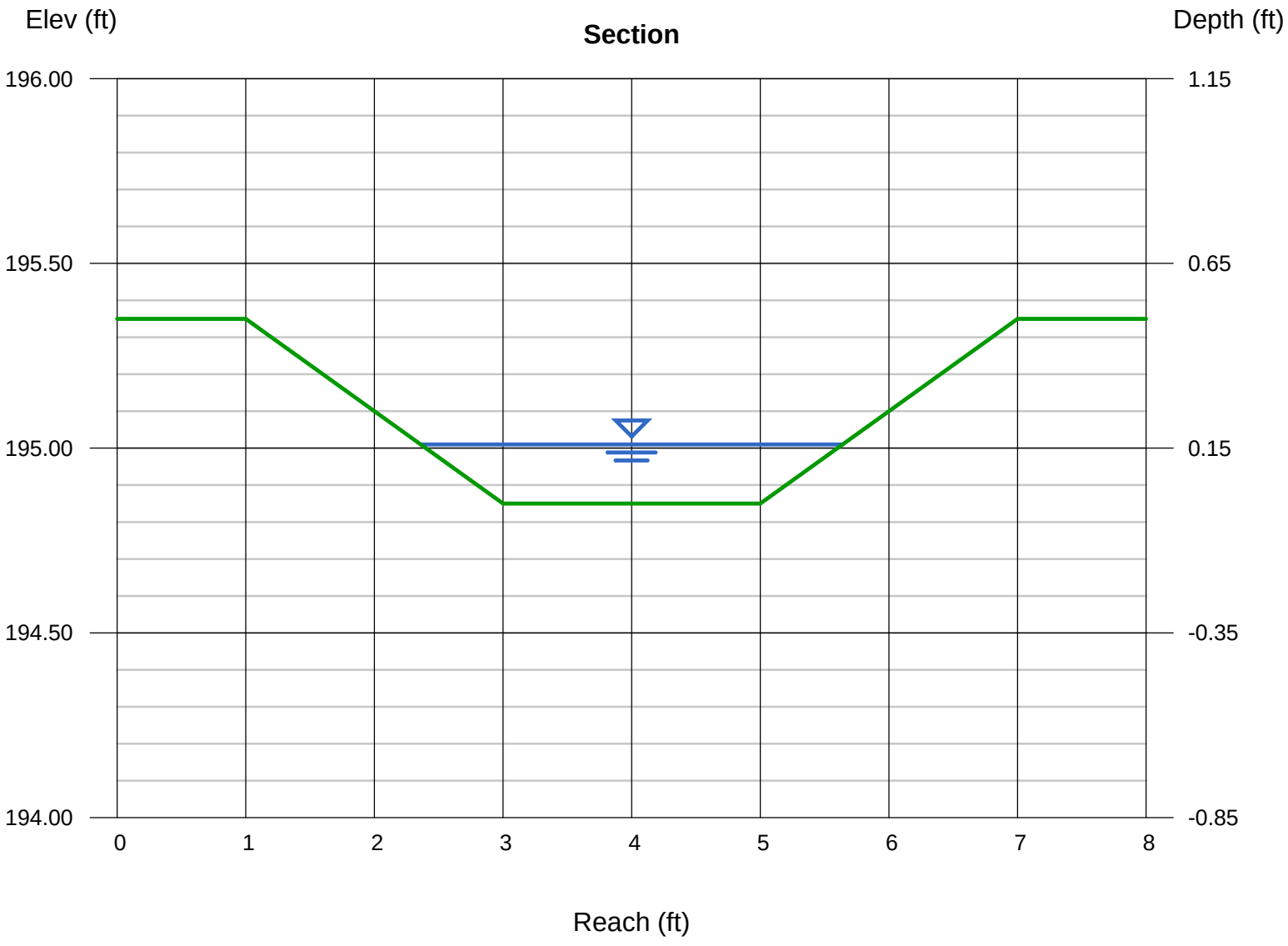
Bottom Width (ft)	= 2.00
Side Slopes (z:1)	= 4.00, 4.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 194.85
Slope (%)	= 1.00
N-Value	= 0.240

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.06

Highlighted

Depth (ft)	= 0.16
Q (cfs)	= 0.060
Area (sqft)	= 0.42
Velocity (ft/s)	= 0.14
Wetted Perim (ft)	= 3.32
Crit Depth, Yc (ft)	= 0.03
Top Width (ft)	= 3.28
EGL (ft)	= 0.16



LIDA Planter

PAC Report

Project Name Friendsview Springbrook Meadows II	Permit No.	Created 5/3/19 3:35 PM
Project Address Newberg OR Newberg, OR 97132	Designer Darko Simic	Last Modified 5/3/19 3:40 PM
	Company AKS Engineering and Forestry	Report Generated 5/3/19 3:40 PM

Project Summary

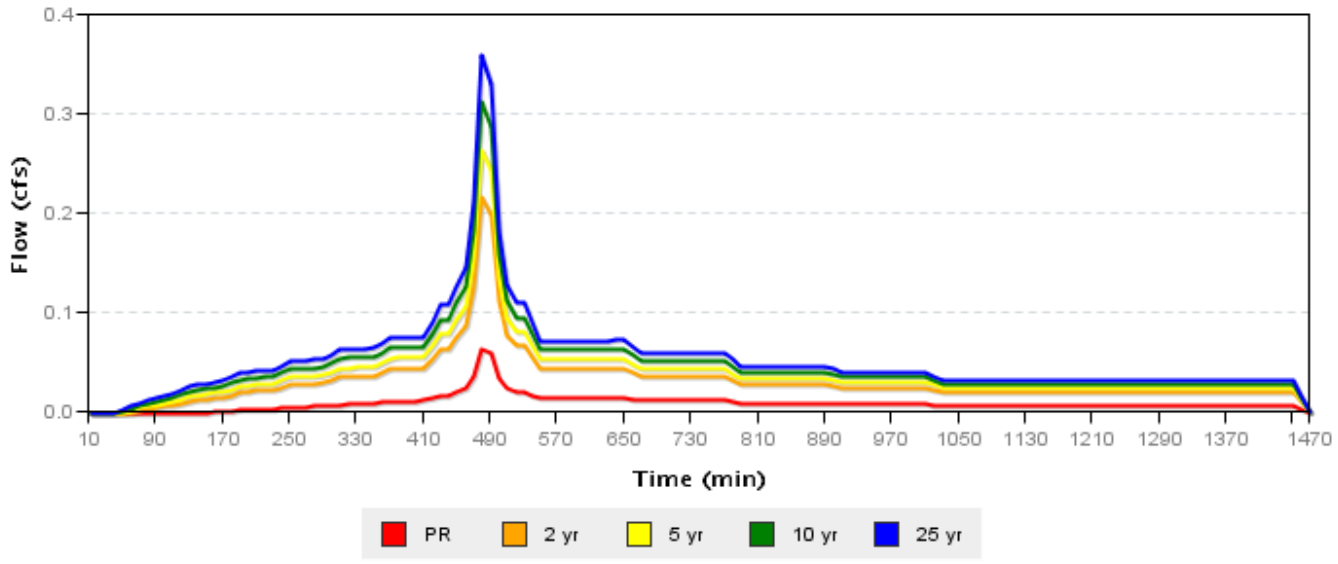
Private Site Development

Catchment Name	Impervious Area (sq ft)	Native Soil Design Infiltration Rate	Hierarchy Category	Facility Type	Facility Config	Facility Size (sq ft)	Facility Sizing Ratio	PR Results	Flow Control Results
Roadway	15315	1.00	1	Planter (Flat)	B	375	2.4%	Pass	Not Used

Catchment Roadway

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Open Pit Falling Head**
	Native Soil Infiltration Rate (I_{test})	**1.00**
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{dsgn})	**0.50 in/hr**
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**1**
	Hierarchy Description	**On-site infiltration with a surface infiltration facility**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**Pass**
	Flow Control Requirement	**Pass**
	Impervious Area	**15315 sq ft** **0.352 acre**
	Time of Concentration (Tc)	**5**
	Post-Development Curve Number (CN_{post})	**98**

SBUH Results



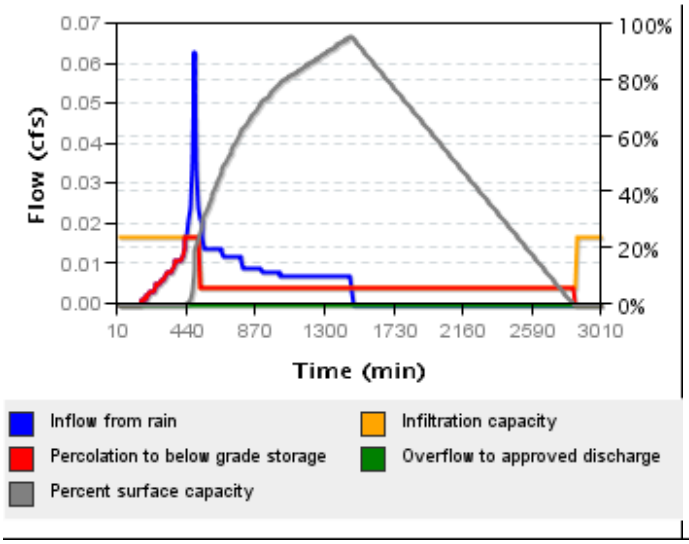
	Peak Rate (cfs)	Volume (cf)
PR	0.063	800.252
2 yr	0.216	2771.186
5 yr	0.264	3405.926

10 yr	0.312	4041.616
25 yr	0.359	4677.906

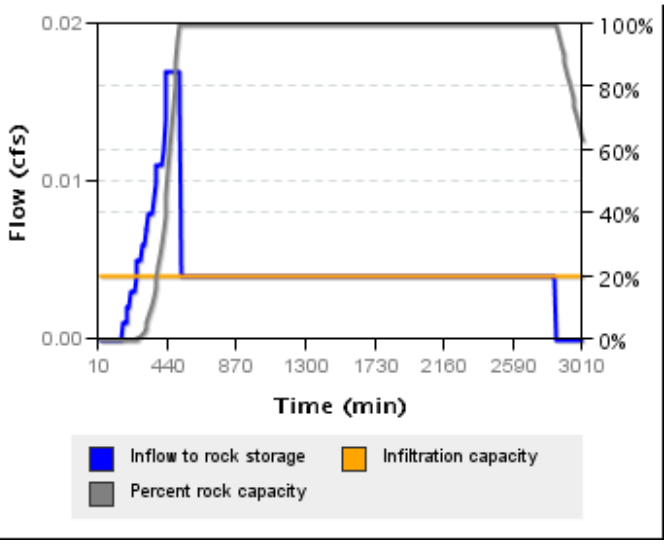
Facility Roadway

Facility Details	Facility Type	**Planter (Flat)**
	Facility Configuration	**B: Infl. with rock storage (RS)**
	Facility Shape	**Planter**
	Above Grade Storage Data	
	Bottom Area	**375 sq ft**
	Bottom Width	**2.50 ft**
	Storage Depth 1	**12.0 in**
	Growing Medium Depth	**18 in**
	Surface Capacity at Depth 1	**375.0 cu ft**
	Design Infiltration Rate for Native Soil	**0.004 in/hr**
	Infiltration Capacity	**0.017 cfs**
	Below Grade Storage Data	
	Rock Storage Depth	**12 in**
	Rock Porosity	**0.30 in**
Facility Facts	Total Facility Area Including Freeboard	**375.00 sq ft**
	Sizing Ratio	**2.4%**
Pollution Reduction Results	Pollution Reduction Score	**Pass**
	Overflow Volume	**0.000 cf**
	Surface Capacity Used	**95%**
	Rock Capacity Used	**100%**
10 Year Results	10 Year Score	**Fail**
	Overflow Volume	**3193.032 cf**
	Surface Capacity Used	**100%**
	Rock Capacity Used	**100%**

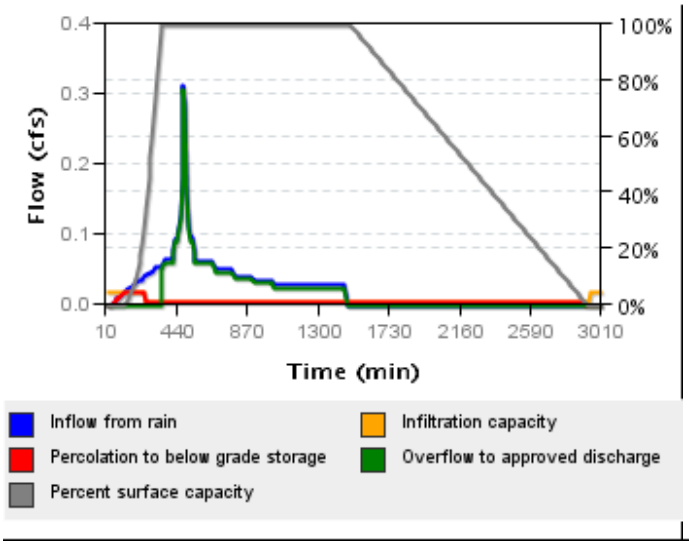
Pollution Reduction Event Surface Facility Modeling



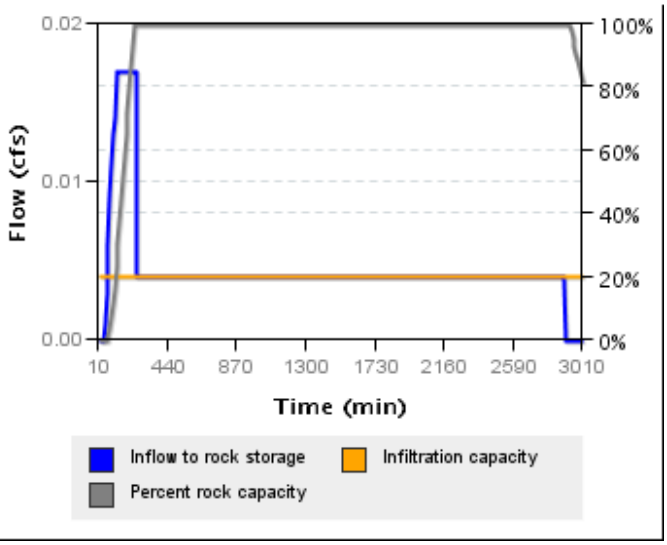
Pollution Reduction Event Below Grade Modeling



10 Year Event Surface Facility Modeling



10 Year Event Below Grade Modeling



North Vegetated Basin

STORMWATER QUALITY CALCULATIONS

Client: MJG Development Inc.
Project: Friendsview Springbrook Meadows II
AKS Job No.: 5680
Date: 5/23/2019
Done By: DRR
Checked By: DS

IMPERVIOUS AREA

Total Site Area:	0.95	acres
Total Site Area:	41,457	square feet (sf)
Number of Lots:	1	
Impervious Area Per Lot:	0	sf

Total Impervious Roof Area:	15,608	sf
Total Impervious Area:	15,608	sf

WATER DESIGN QUALITY VOLUME (WQV)

(Per CWS 4.05.6a - R&O 17-05)

$$WQV = \frac{0.36" \text{ X Area (ft)}}{12" \text{ per ft}} = \mathbf{468} \ \mathbf{cubic\ feet}$$

WATER QUALITY FLOW (WQF)

(Per CWS 4.05.6b - R&O 17-05)

$$WQF = \frac{WQV\ (sf)}{4*60*60} = \mathbf{0.03} \ \mathbf{cfs}$$

EXTENDED DRY BASIN DESIGN & CALCULATIONS

Hydraulic Design Criteria (Per CWS 4.06.3 - R&O 17-05)

Permanent Pool Depth: 0.4 ft
Permanent Pool covers bottom of basin
Design Detention Volume: 1.0 x Water Quality Volume (WQV)
Water Quality Drawdown Time: 48 hours
Maximum Depth of WQ Pool: 4 ft
Avoid direct flow across WQ pond to avoid short circuiting

Extended Dry Basin Sizing Design:

Bottom Slope (ft/ft)	Minimum Bottom Width (ft)	Side Slopes H:V	Top of Pond Elev. (ft)	Perm. Pool Depth (ft)	Pool Bottom Area (sf)	Bottom of Pool Elev. (ft)
0.01	4	3.0	196	0.4	815	192.0

Water Quality Flow Hydraulic Calculations:

Q (cfs)	Pool Elev. at WQV (ft)	Orifice CL Height (ft)	Calculated Orifice Diameter (in)	Max. Pool Elev., 25-yr Event (ft)	Calculated Pond WQV (cubic feet)	Calculated WQV Pool Depth (ft)
0.030	192.60	192.06	1.38	194.35	573	0.6

Check Against Design Criteria:

	Calculated		Meet CWS Criteria?			
Minimum Freeboard:	1.7	feet	**Yes**	more than	1	foot
Minimum Bottom Width:	4	feet	**Yes**	greater than	4	feet
Maximum Pool Depth at WQV:	0.6	feet	**Yes**	less than	4	feet
Detained Water Quality Volume:	573	cubic feet	**Yes**	greater than	468	cf

South Vegetated Basin

STORMWATER QUALITY CALCULATIONS

Client: MJG Development Inc.
Project: Friendsview Springbrook Meadows II
AKS Job No.: 5680
Date: 5/23/2019
Done By: DRR
Checked By: DS

IMPERVIOUS AREA

Total Site Area:	3.72	acres
Total Site Area:	161,870	square feet (sf)
Number of Lots:	1	

Total Impervious Roof Area:	54,135	sf
Road & Sidewalk Impervious Area	56,430	sf
Total Impervious Area:	110,565	sf

WATER DESIGN QUALITY VOLUME (WQV)

(Per CWS 4.05.6a - R&O 17-05)

$$WQV = \frac{0.36" \text{ X Area (ft)}}{12" \text{ per ft}} = \mathbf{3317} \ \mathbf{cubic\ feet}$$

WATER QUALITY FLOW (WQF)

(Per CWS 4.05.6b - R&O 17-05)

$$WQF = \frac{WQV\ (sf)}{4*60*60} = \mathbf{0.23} \ \mathbf{cfs}$$

EXTENDED DRY BASIN DESIGN & CALCULATIONS

Hydraulic Design Criteria (Per CWS 4.06.3 - R&O 17-05)

Permanent Pool Depth: 0.4 ft
Permanent Pool covers bottom of basin
Design Detention Volume: 1.0 x Water Quality Volume (WQV)
Water Quality Drawdown Time: 48 hours
Maximum Depth of WQ Pool: 4 ft
Avoid direct flow across WQ pond to avoid short circuiting

Extended Dry Basin Sizing Design:

Bottom Slope (ft/ft)	Minimum Bottom Width (ft)	Side Slopes H:V	Top of Pond Elev. (ft)	Perm. Pool Depth (ft)	Pool Bottom Area (sf)	Bottom of Pool Elev. (ft)
0.01	4	3.0	190	0.4	1628	185.0

Water Quality Flow Hydraulic Calculations:

Q (cfs)	Pool Elev. at WQV (ft)	Orifice CL Height (ft)	Calculated Orifice Diameter (in)	Max. Pool Elev., 25-yr Event (ft)	Calculated Pond WQV (cubic feet)	Calculated WQV Pool Depth (ft)
0.230	186.60	185.12	2.98	188.89	3326	1.6

Check Against Design Criteria:

	Calculated		Meet CWS Criteria?			
Minimum Freeboard:	1.1	feet	**Yes**	more than	1	foot
Minimum Bottom Width:	4	feet	**Yes**	greater than	4	feet
Maximum Pool Depth at WQV:	1.6	feet	**Yes**	less than	4	feet
Detained Water Quality Volume:	3326	cubic feet	**Yes**	greater than	3317	cf

Appendix D: USDA-NRCS Soil Resource Report

Map Scale: 1:1,820 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

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 6, Sep 18, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 19, 2015—Sep 13, 2016

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
2310A	Woodburn silt loam, 0 to 3 percent slopes	C	11.6	100.0%
Totals for Area of Interest			**11.6**	**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:

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

Appendix E: TR55 RUNOFF CURVE NUMBERS

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 (vegetat ion 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
Developin g 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).					

[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 2-2b Runoff curve numbers for cultivated agricultural lands [1/]

Cover description			Curve numbers for hydrologic soil group			
Cover type	Treatment [2/]	Hydrologic condition [3/]	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
	C&T+ CR	Poor	65	73	79	81
		Good	61	70	77	80
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T+ CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

[1] Average runoff condition, and I_a=0.2S

[2] Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

[3] Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good ≥ 20%), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

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

[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.

Table 2-2d Runoff curve numbers for arid and semiarid rangelands [1/]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition [2/]	A [3/]	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

[1] Average runoff condition, and $I_a = 0.2S$. For range in humid regions, use table 2-2c.
[2] Poor: <30% ground cover (litter, grass, and brush overstory).
Fair: 30 to 70% ground cover.
Good: > 70% ground cover.
[3] Curve numbers for group A have been developed only for desert shrub.

Exhibit G: Geotechnical Report

GeoDesign Inc

REPORT OF GEOTECHNICAL ENGINEERING SERVICES

Springbrook Phase II
Providence Drive
Newberg, Oregon

For
Friendsview Retirement Community
October 26, 2018

GeoDesign Project: Friends-3-01

GeoDesign Inc

October 26, 2018

Friendsview Retirement Community
1301 Fulton Street
Newberg, OR 97132

c/o LRS Architects
720 NW Davis Street, Suite 300
Portland, OR 97209

Attention: Dean Masukawa

Report of Geotechnical Engineering Services
Springbrook Phase II
Providence Drive
Newberg, Oregon
GeoDesign Project: Friends-3-01

GeoDesign, Inc. is pleased to submit this report of geotechnical engineering services for the planned Springbrook Phase II development in Newberg, Oregon. Our services for this project were conducted in accordance with our signed proposal with Friendsview Retirement Community dated August 24, 2018.

We appreciate the opportunity to be of service to you. Please contact us if you have questions regarding this report.

Sincerely,

GeoDesign, Inc.

George Saunders, P.E., G.E.
Principal Engineer

cc: Tim Towers, Friendsview Retirement Community (via email only)

SPM:GPS:kt
Attachments
One copy submitted (via email only)
Document ID: Friends-3-01-102618-geor.docx

EXECUTIVE SUMMARY

Based on the results of our subsurface explorations and analyses, it is our opinion that the project can be developed as proposed provided the recommendations in this report are incorporated into design and construction. The following summarizes general considerations for the planned project:

- Based on the results of our explorations and our experience in the site area, there is a low risk of liquefaction or other seismic hazards during the design earthquake.
- The proposed structures can be satisfactorily supported by conventional shallow foundations bearing on undisturbed native soil or on structural fill overlying undisturbed native soil.
- Due to the potential for shallow perched water, we recommend that foundation drains be installed around the perimeter of the buildings.
- Undocumented fill was encountered in test pit TP-1 to a depth of approximately 6 feet BGS. Where encountered, we recommend that undocumented fill be removed to at least 2 feet below the bottom of footings and supported on granular pads in accordance with the "Foundations Support" section.
- It is possible that the ground surface was tilled in the past if the site was used for agricultural purposes. We recommend that the project budget include a contingency to improve subgrade soil over a portion of the site where tilled zones or undocumented fill is encountered. Improvement can consist of scarifying and re-compacting on-site soil during dry weather. During periods of wet weather, subgrade improvement should include replacing on-site soil with imported granular material or cement amending on-site soil.
- The native soil is generally suitable for use as structural fill during periods of dry weather, provided it is properly moisture conditioned. However, moisture conditioning (drying) is expected to require significant time and effort. It will not be possible to adequately compact native soil during the rainy season or any period of prolonged wet weather.
- The native soil is easily disturbed during the wet season or when wet of optimum moisture content. Subgrade protection will be necessary if construction occurs during the wet season.

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ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
AC	asphalt concrete
ACP	Asphalt Concrete Pavement
AOS	apparent opening size
ASTM	American Society for Testing and Materials
BGS	below ground surface
CRBG	Columbia River Basalt Group
CTB	cement-treated base
ESAL	equivalent single-axle load
FRC	Friendsview Retirement Community
g	gravitational acceleration (32.2 feet/second^2)
H:V	horizontal to vertical
IBC	International Building Code
MCE	maximum considered earthquake
OSHA	Occupational Safety and Health Administration
OSSC	Oregon Standard Specifications for Construction (2018)
pcf	pounds per cubic foot
PG	performance grade
psf	pounds per square foot
psi	pounds per square inch
SOSSC	State of Oregon Structural Specialty Code

1.0 INTRODUCTION

This report presents the results of GeoDesign's geotechnical engineering evaluation for the planned Springbrook Phase II development located north of the intersection between Providence Drive and Hayes Street in Newberg, Oregon. The proposed development will be constructed on the lot north of (and an extension of) Phase I of the development. Figure 1 shows the site vicinity relative to surrounding features. Figure 2 shows the proposed development area and our approximate exploration locations. Acronyms and abbreviations used herein are defined above, immediately following the Table of Contents.

1.1 PROJECT UNDERSTANDING

LRS Architects provided preliminary project plans. The project will consist of constructing 14 one-story duplexes and new roadways and extending the existing community center building onto the Phase II site. The community center will be more than double its current size. The existing community center building parking lot will also be expanded. Structural loads were not available at the time of this report. Based on our experience with similar structures, we assume that maximum column and wall loads will be on the order of 100 kips and 4 kips per foot, respectively.

A grading plan was not available by the time of this report. Based on existing site topography, we anticipate maximum site cuts and fills will be on the order of 5 feet. Basements are not planned.

2.0 PURPOSE AND SCOPE

The purpose of our geotechnical engineering services was to characterize site subsurface conditions and provide geotechnical engineering recommendations for use in design and construction of the proposed development. Our scope of services included the following:

- Coordinated and managed the field explorations, including utility locates, access preparation, and scheduling contractors and GeoDesign staff.
- Reviewed readily available geotechnical and geologic information regarding the site area, including previous GeoDesign reports.
- Completed 12 test pits (TP-1 through TP-12) to depths between approximately 5 and 12 feet BGS.
- Collected disturbed and undisturbed soil samples for laboratory testing at select depths from the explorations.
- Classified the material encountered in the explorations. Maintained a detailed log of each exploration. Observed groundwater conditions in the explorations.
- Completed the following laboratory tests on select soil samples collected from the explorations:
  - Eighteen natural moisture content determinations
  - Two Atterberg limits tests

- Provided this geotechnical report for the project, including the following:
  - Summary of liquefaction potential at the site
  - Recommendations for site preparation, grading and drainage, stripping depths, fill type for imported material, compaction criteria, trench excavation and backfill, use of on-site soil, and wet/dry weather earthwork
  - Recommendations for foundation support of the buildings
  - Recommendations for preparing floor slab subgrade
  - Design criteria for retaining walls (if needed), including lateral earth pressures, backfill, compaction, and drainage, as well as temporary shoring recommendations
  - Recommendations for the management of identified groundwater conditions that may affect the performance of structures or pavement
  - Recommendations for construction of asphalt concrete (AC) pavements if needed for on-site access roads and parking areas, including subbase, base course, and AC paving thickness
  - Seismic design parameters

3.0 SITE CONDITIONS

3.1 GEOLOGIC SETTING

The site is located in the northwest portion of the Central Willamette Valley physiographic province. The coast range bounds the basin to the west with the Chehalem Mountains and Parrett Mountain to the north and towards the east, respectively. The geologic profile in the site vicinity consists of 10 to 40 feet of catastrophic flood deposits. The Columbia River Basalt is considered as the basement material, with decomposed residual basalt directly underlying the flood basalt at this site (Gannett and Caldwell, 1998; Burns et al., 1997).

The near-surface geologic unit is mapped as Pleistocene Age (15,500 to 13,000 years before present) catastrophic flood deposits (Qws). The unit consists of silt with varying amounts of clay and fine sand, generally referred to as the Willamette Silt (Schlicker and Deacon, 1967). The catastrophic flood deposits are associated with Lake Missoula, a late Wisconsin glacial lake that formed when a lobe of the Cordilleran ice sheet impounded the Clark Fork River in western Montana. Periodic failure of the ice dam produced multiple flooding episodes with ponding into the Willamette Valley (Gannett and Caldwell, 1998). Middle Miocene Age (16.5 million to 15.6 million years before present) CRBG (Tcr) underlies the catastrophic flood deposits and forms the basement material at this site (Gannett and Caldwell, 1998).

3.2 SURFACE CONDITIONS

The site is currently a vacant field. Based on Google Earth historical photographs, the site has been vacant and possibly used for agricultural purposes since at least 1994. It is located immediately north of Phase I of the Springbrook development. A new development exists immediately northwest of the site. A soil berm is present along the north site boundary, but appears to be on the neighboring property. The ground surface is gently sloped to flat and covered by grass and some scattered mature trees.

3.3 SUBSURFACE CONDITIONS

We explored subsurface conditions by excavating 12 test pits (TP-1 through TP-12) to depths between approximately 5 and 12 feet BGS. Descriptions of the subsurface exploration and laboratory testing programs, the exploration logs, and results of laboratory testing are presented in the Appendix.

The subsurface conditions encountered in our test pits consist of fine-grained silt and clay soil to the maximum depth explored. While classified as two different soils types, the clay and silt layers are part of the same geologic unit. The difference in soil classification is a result of the variance in soil plasticity; clay soil has higher plasticity than silt soil. The silt and clay soil contains small amounts of fine sand. We used a ½-inch-diameter, steel hand probe to evaluate soil stiffness in the upper 4 feet of the test pits. Based on probing and our observations, the silt and clay layers are generally medium stiff to stiff, with some soft and very stiff zones. Laboratory testing indicates that the moisture content of the silt and clay ranged from 10 to 41 percent at the time of our explorations, with the majority of results between 23 and 38 percent. Atterberg limits testing indicates that the soil has low to moderate plasticity.

Test pit TP-1 encountered approximately 6 feet of undocumented fill at the ground surface. The fill appears to consist of reworked native soil with some angular gravel. Our observations indicate that the fill is generally medium stiff.

3.3.1 Groundwater

Groundwater was only observed in test pit TP-10 at an approximately depth of 11.5 feet BGS. This depth is consistent with our observations during other subsurface explorations in the site area. The test pits were performed in September, when groundwater levels are typically near the seasonal low. The depth to groundwater is expected to fluctuate in response to seasonal changes, changes in surface topography, and other factors not observed in the site vicinity.

4.0 DESIGN RECOMMENDATIONS

4.1 FOUNDATION SUPPORT

4.1.1 General

Based on the results of our explorations and analysis, the proposed buildings can be supported by conventional spread footings bearing on granular pads underlain by native undisturbed soil or structural fill underlain by native undisturbed soil. Foundations should not be established on soft soil, undocumented fill, or soil containing deleterious material. The granular pads should be least 3 inches thick during the dry summer months (June through August) and should be increased to 6 inches during the wet spring, fall, and winter months. The granular pads should extend 6 inches beyond the margins of the footings for every foot excavated below the base grade of the footing. The granular pads should consist of imported granular material, as defined in the "Structural Fill" section. The imported granular material should be compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D1557, or, as determined by one of our geotechnical staff, until well-keyed. We recommend that a member of our geotechnical staff observe the prepared footing subgrade.

Undocumented fill was encountered in test pit TP-1 to a depth of approximately 6 feet BGS. The test pit was located near the northern edge of the proposed community center addition. It is possible that the material was placed during construction of the community center. Where encountered, we recommend that undocumented fill be removed to a minimum depth of 2 feet below the bottom of footings and replaced with granular material as recommended for granular pads. During construction, GeoDesign should be contacted to evaluate all footing subgrade and in areas with undocumented fill, whether deeper excavation and thicker granular pads are needed. It is likely that undocumented fill exists only in isolated areas of the site.

4.1.2 Dimensions and Design Parameters

Continuous wall and isolated spread footings should be at least 16 and 20 inches wide, respectively. The bottom of exterior footings should be at least 18 inches below the lowest adjacent exterior grade. The bottom of interior footings should be established at least 12 inches below the base of the slab. Footings established on on-site soil or structural fill soil and prepared as recommended above should be sized based on an allowable bearing pressure of 2,500 psf. This is a net bearing pressure; the weight of the footing and overlying backfill can be ignored in calculating footing sizes. The recommended allowable bearing pressure applies to the total of dead plus long-term live loads and can be increased by one-half for short-term loads such as those resulting from wind or seismic forces.

Based on our analysis and experience with similar soil, total post-construction consolidation-induced settlement under static conditions should be less than 1 inch, with differential settlement of less than ½ inch between footings.

4.1.3 Resistance to Sliding

Lateral loads on footings can be resisted by passive earth pressure on the sides of the structures and by friction on the base of the footings. Our analysis indicates that the available passive earth pressure for footings confined by on-site soil and structural fill is 300 pcf, modeled as an equivalent fluid pressure. Typically, the movement required to develop the available passive resistance may be relatively large; therefore, we recommend using a reduced passive pressure of 250 pcf equivalent fluid pressure. Adjacent floor slabs, pavements, or the upper 12-inch depth of adjacent, unpaved areas should not be considered when calculating passive resistance. In addition, in order to rely on passive resistance, a minimum of 10 feet of horizontal clearance must exist between the face of the footings and any adjacent downslopes.

For footings in contact with native soil, a coefficient of friction equal to 0.30 may be used when calculating resistance to sliding. This value can be increased to 0.40 for footings in contact with imported granular material.

4.1.4 Footing Subgrade Evaluation

We recommend that all footing and floor subgrades be evaluated by the project geotechnical engineer or their representative to confirm suitable bearing conditions. Observations should also confirm that all loose or soft material, organics, undocumented fill, prior topsoil zones, and softened subgrades (if present) have been removed as discussed above. Localized deepening of footing excavations may be required to penetrate debris, fill, or deleterious material.

Foundation-bearing surfaces should not be exposed to standing water. Should water infiltrate and pool in the excavation, the water and any damaged subgrade should be removed before placing reinforcing steel or concrete.

4.2 FLOOR SLABS

Satisfactory subgrade support for floor slabs supporting up to 150 psf areal loading can be obtained provided the building areas are prepared as described in this report. Slabs should be reinforced according to their proposed use and per the structural engineer's recommendations. Load-bearing concrete slabs may be designed assuming a modulus of subgrade reaction (k) of 150 psi per inch. We recommend a minimum 6-inch-thick layer of aggregate base be placed and compacted over the prepared soil subgrade. Aggregate base material placed beneath building floor slabs should meet the requirements in the "Structural Fill" and "Fill Placement and Compaction" sections.

The near-surface native soil is fine grained and will tend to maintain high moisture content. In areas where moisture-sensitive floor slab and flooring will be installed, the installation of a vapor barrier is warranted in order to reduce the potential for moisture transmission through and efflorescence growth on the slab and flooring. In addition, flooring manufacturers often require vapor barriers to protect flooring and flooring adhesives and will warrant their product only if a vapor barrier is installed according to their recommendations. If the project includes moisture-sensitive flooring, we recommend that 10- or 15-mil Stego Wrap be considered for this project. The recommended procedures for installing Stego Wrap are to pour the floor slab concrete directly over the vapor barrier. We recommend that the structural engineer be contacted to determine if the mix design for the concrete should be modified assuming the above-referenced construction sequence. Actual selection and design of an appropriate vapor barrier, if needed, should be based on discussions among members of the design team.

4.3 SEISMIC DESIGN CRITERIA

Based on our explorations, the following design parameters are applicable if the buildings are designed using the applicable provisions of the 2012 IBC and 2014 SOSSC. The parameters presented in Table 1 are appropriate for code-level seismic design. The selected seismic Site Class D is based on the results of our explorations and previous experience in the site area.

Table 1. Seismic Design Parameters

Parameter	Short Period (T_s = 0.2 second)	1 Second Period (T_1 = 1.0 second)
MCE Spectral Acceleration, S	S_s = 0.948 g	S_1 = 0.431 g
Site Class	D	
Site Coefficient, F	F_a = 1.121	F_v = 1.569
Adjusted Spectral Acceleration, S_M	S_{MS} = 1.062 g	S_{M1} = 0.676 g
Design Spectral Response Acceleration Parameters, S_D	S_{DS} = 0.708 g	S_{D1} = 0.451 g

Based on the soil types encountered and our experience in the site area, there is a low risk of liquefaction during the design earthquake.

4.4 RETAINING STRUCTURES

4.4.1 Assumptions

Our retaining wall design recommendations are based on the following assumptions: (1) the walls consist of conventional, cantilevered retaining walls, (2) the walls are less than 10 feet in height, (3) the backfill is drained and consists of imported granular materials, and (4) the backfill has a slope flatter than 4H:1V. Re-evaluation of our recommendations will be required if the retaining wall design criteria for the project varies from these assumptions.

4.4.2 Wall Design Parameters

For unrestrained retaining walls, an active pressure of 35 pcf equivalent fluid pressure should be used for design. Where retaining walls are restrained from rotation (such as basement walls), a pressure of 55 pcf equivalent fluid pressure should be used for design. A superimposed seismic lateral force should be calculated based on a dynamic force of $7H^2$ pounds per lineal foot of wall (where H is the height of the wall in feet) and applied as a distributed load with the centroid located at a distance of 0.6H from the base of the wall.

If surcharges (e.g., retained slopes, structure foundations, vehicles, steep slopes, terraced walls, etc.) are located within a horizontal distance from the back of a wall equal to the height of the wall, additional pressures will need to be accounted for in the wall design. Our office should be contacted for appropriate wall surcharges based on the actual magnitude and configuration of the applied loads. The base of the wall footing excavations should extend a minimum of 12 inches below the lowest adjacent grade. The wall footings should be designed in accordance with the "Foundation Support" section.

4.4.3 Wall Drainage and Backfill

The above design parameters have been provided assuming back-of-wall drains will be installed to prevent buildup of hydrostatic pressures behind all walls. If a drainage system is not installed, our office should be contacted for revised design forces.

Backfill material placed behind retaining walls and extending a horizontal distance of ½H (where H is the height of the retaining wall) should consist of select granular wall backfill meeting the requirements in the "Structural Fill" section. Alternatively, the native soil can be used as backfill material, provided a minimum 2-foot-wide column of angular drain rock wrapped in a geotextile is placed against the wall and the native soil can be adequately moisture conditioned for compaction. The rock column should extend from the perforated drainpipe or foundation drains to within approximately 1 foot of the ground surface. The angular drain rock should meet the requirements provided in the "Structural Fill" section. All wall backfill should be placed and compacted as recommended for select granular wall backfill in the "Structural Fill" section.

Perforated collector pipes should be placed at the base of the granular backfill behind the walls. The pipe should be embedded in a minimum 2-foot-wide zone of angular drain rock. The drain rock should meet specifications provided in the "Structural Fill" section. The drain rock should be wrapped in a drainage geotextile fabric meeting the requirements in the "Geotextile Fabric"

section. The collector pipes should discharge at an appropriate location away from the base of the wall. Unless measures are taken to prevent backflow into the wall's drainage system, the discharge pipe should not be tied directly into stormwater drain systems.

Settlement of up to 1 percent of the wall height commonly occurs immediately adjacent to the wall as the wall rotates and develops active lateral earth pressures. Consequently, we recommend that construction of flatwork adjacent to retaining walls be postponed at least four weeks after backfilling of the wall, unless survey data indicates that settlement is complete prior to that time.

4.5 DRAINAGE

4.5.1 General

Where possible, the finished ground surface around the buildings should be sloped away from the buildings at a minimum 2 percent gradient for a distance of at least 5 feet. Downspouts or roof scuppers should discharge into a storm drain system that carries the collected water to an appropriate stormwater system. Trapped planter areas should not be created adjacent to the buildings without providing means for positive drainage (e.g., swales or catch basins).

4.5.2 Foundation Drains

The native soil has low permeability. While groundwater was encountered well below the anticipated finished floor elevations, it is possible that water can become perched at shallow depths during periods of persistent wet weather. Therefore, we recommend that foundation drains be installed around the building perimeters. The foundation drains should be constructed at a minimum slope of approximately ½ percent and pumped or drained by gravity to a suitable discharge. The perforated drainpipes should not be tied to a stormwater drainage system unless backflow provisions are implemented. The foundation drains should consist of 6-inch-diameter, perforated drainpipes embedded in a minimum 2-foot-wide zone of crushed drain rock that extends to the ground surface. The invert elevation of the drainpipes should be installed at least 2 feet below the elevation of the basement floor slab.

The drain rock should meet the requirements specified in the "Structural Fill" section. The drain rock should be wrapped in a geotextile fabric that meets the specifications for drainage geotextiles provided in the "Geotextile Fabric" section.

4.5.3 Floor Slab Drainage

General recommendations for drainage and vapor barriers under floor slabs are provided in the "Floor Slab" section. Assuming the finished floor grades are less than 5 feet below existing grades, and provided the other drainage recommendations recommended herein are implemented, it is our opinion that floor slab drains will not be needed for this project.

4.6 PAVEMENT DESIGN

Pavement should be installed on prepared subgrade or new engineered fill prepared in conformance with the "Construction" section. Our pavement recommendations are based on the following assumptions:

- The top 12 inches of soil subgrade below the pavement section is prepared in accordance with the "Site Preparation" section. This may include subgrade improvement in some areas.
- Resilient moduli of 4,000 psi and 20,000 psi were estimated for the native subgrade and base rock, respectively.
- Initial and terminal serviceability indices of 4.2 and 2.5, respectively.
- Reliability of 75 percent and standard deviation of 0.45.
- Structural coefficients of 0.42, 0.10, and 0.08 for the AC, base rock, and cement-amended subgrade, respectively.
- A 20-year design life.
- Heavy traffic generally consists of two-axle trucks, such as delivery and garbage trucks.

We do not have specific information on the frequency of vehicles expected at the site. We performed pavement design for several assumed traffic scenarios based on discussions with the design team. The assumed traffic breakdown and recommended pavement sections are provided in Table 2. The design team can select the appropriate pavement section for different areas of the site based on the anticipated traffic levels. All the recommended pavement sections with subgrades prepared as recommended are suitable to support an occasional 80,000-pound fire truck.

Table 2. Minimum Pavement Thicknesses

Traffic Levels			Pavement Thicknesses without CTB[1] (inches)		Pavement Thicknesses with CTB[1,2] (inches)	
Cars Per Day	Trucks per Day	ESALs	AC	Base Rock	AC	Base Rock
300	0	3,000	2.5	7.0	2.5	4.0
300	5	19,000	3.0	8.0	3.0	4.0
300	10	37,000	3.0	9.0	3.0	4.0

1. All thicknesses are intended to be the minimum acceptable values.
2. Assumes a minimum seven-day unconfined compressive strength of 100 psi.

Table 2 includes standard pavement sections and the option for cement amending the subgrade (assuming a minimum seven-day compressive strength of 100 psi). These pavement sections are meant for dry weather construction and increased sections will be needed if constructed outside the dry weather period (typically early July to late September) as discussed in the "Subgrade Protection" section. If the cement amendment option is chosen, we recommend assuming a minimum cement ratio of 7 percent by dry weight. In addition, to prevent strength loss during curing, cement-amended soil should be allowed to cure for at least four days prior to construction traffic or placing the base rock. Lastly, the amended subgrade should be protected with a minimum of 4 inches of base rock prior to construction traffic access.

The AC, aggregate base, and cement amendment should meet the requirements outlined in the "Materials" section. Construction traffic should be limited to non-building, unpaved portions of the site or haul roads. The base rock thicknesses are not meant to support construction

equipment; recommendations for staging and haul road sections are provided in the "Subgrade Protection" section. Construction traffic should not be allowed on new pavements. If construction traffic is to be allowed on newly constructed road sections, an allowance for this additional traffic will need to be made in the design pavement section.

4.7 PERMANENT SLOPES

Permanent cut and fill slopes should not exceed 2H:1V. Slopes within stormwater facilities should not exceed 3H:1V. Access roads and pavement should be located at least 5 feet from the top of cut and fill slopes. The setback should be increased to 10 feet for buildings. The slopes should be planted with appropriate vegetation to provide protection against erosion as soon as possible after grading. Surface water runoff should be collected and directed away from slopes to prevent water from running down the face of the slope.

5.0 CONSTRUCTION

5.1 SITE PREPARATION

5.1.1 Stripping and Grubbing

Trees and shrubs should be removed from planned improvement areas. In addition, root balls should be grubbed out to the depth of the roots, which could exceed 3 feet BGS. Depending on the methods used to remove the root balls, considerable disturbance and loosening of the subgrade could occur during site grubbing. We recommend that soil disturbed during grubbing operations be removed to expose firm, undisturbed subgrade. The resulting excavations should be backfilled with structural fill.

The topsoil and roots from grass should be stripped and removed from all development areas. Based on the results of our exploration, the root zone is approximately 4 inches thick. The actual stripping depth should be based on field observations at the time of construction. Stripped material should be transported off site for disposal or used in landscaped areas.

5.1.2 Subgrade Evaluation and Improvement

Our explorations encountered some undocumented fill in one area of the site. Although, we did not observe an apparent agricultural tilled zone at the ground surface, it should be assumed that tilling was performed at some point in the past. We recommend that the project budget include a contingency to improve pavement and floor slab subgrade soil over a portion of the site. The subgrade should be proof rolled with a fully loaded dump truck or similarly heavy, rubber tire construction equipment to identify soft, loose, or unsuitable areas. A member of our geotechnical staff should observe proof rolling to evaluate yielding of the ground surface. During wet weather, subgrade evaluation can be performed by probing with a foundation probe rather than proof rolling.

Areas containing undocumented fill, or that appear soft, should be improved by scarifying and re-compacting (dry weather only) or replacing with imported granular material in accordance with the "Structural Fill" and "Fill Placement and Compaction" sections. Scarifying and re-compacting native soil will require that the soil be dried and will only be possible during the dry summer months. During periods of wet weather, subgrade improvement should consist of replacing

unsuitable soil with imported granular material or the subgrade should be cement treated. The "Materials" section provides recommendations for structural fill and cement amendment.

5.2 SUBGRADE PROTECTION

The near-surface soil at the site is fine grained and will be easily disturbed during the wet season and when it is moist. If not carefully executed, earthwork and construction traffic can create extensive soft areas and significant subgrade repair costs can result. If construction is planned when the surficial soil is wet or may become wet, the construction methods and schedule should be carefully considered with respect to protecting the subgrade to reduce the need to over-excavate disturbed or softened soil. The project budget should reflect the recommendations below if construction is planned during wet weather or when the surficial soil is wet.

Granular haul roads or staging areas will be necessary for support of construction traffic during wet conditions. The base rock thickness described in the "Pavement" section is intended to support post-construction design traffic loads. This design base rock thickness may not support construction traffic or pavement construction.

The thickness of the granular material for haul roads and staging areas will depend on the amount and type of construction traffic. Generally, a 12- to 18-inch-thick mat of granular material is sufficient for light staging areas and the basic building pad but is generally not expected to be adequate to support heavy equipment or truck traffic. The granular mat for haul roads and areas with repeated heavy construction traffic typically needs to be increased to between 18 and 24 inches. The actual thickness of haul roads and staging areas should be based on the contractor's approach to site development and the amount and type of construction traffic. The granular material should be placed in one lift over the prepared, undisturbed subgrade and compacted using a smooth-drum, non-vibratory roller. The granular material should meet the specifications for imported granular material or stabilization material in the "Structural Fill" section. In addition, a geotextile fabric can be placed as a barrier between the subgrade and imported granular material in areas of repeated construction traffic. The geotextile should have a minimum Mullen burst strength of 250 psi for puncture resistance and an AOS between U.S. Standard No. 70 and No. 100 sieves.

As an alternative to placing thick rock sections to support construction traffic, the subgrade can be stabilized using a cement amendment. If this approach is used, the cement-amended soil should meet the guidelines provided in the "Soil Amendment with Cement" section. The thickness of the cement treatment and granular material as well as the cement ratio will depend on the soil moisture and construction traffic.

5.3 EXCAVATION

5.3.1 Trench Cuts

Trench cuts in the native soil should stand near vertical to depths of at least 4 feet. Open excavation techniques may be used to excavate trenches greater than 4 feet deep provided the walls of the excavation are cut at a slope of 1H:1V, groundwater seepage is not present, and with the understanding that some sloughing may occur. If excessive caving occurs, the trenches should be flattened to 1½H:1V or 2H:1V if workers are required to enter.

Use of approved temporary shoring is recommended where sloping is not possible. If a conventional shield is used, the contractor should limit the length of open trench. If shoring is used, we recommend that the type and design of the shoring system be the responsibility of the contractor, who is in the best position to choose a system that fits the overall plan of operation. All excavations should be made in accordance with applicable OSHA and state regulations.

5.3.2 Temporary Dewatering

Groundwater was encountered in one test pits at a depth of approximately 11.5 feet BGS. However, perched groundwater may develop near the ground surface during periods of persistent wet weather. It should be possible to remove perched water by pumping from sumps.

5.3.3 Shoring

Shoring is not required for temporary excavations up to a depth of approximately 4 feet. Open excavation techniques may be used to excavate trenches with depths between 4 and 8 feet, provided the walls of the excavation are cut at a slope of 1H:1V and groundwater seepage is not present. In lieu of large and open cuts, approved temporary shoring may be used for excavation support. A wide variety of shoring and dewatering systems are available. Consequently, we recommend that the contractor be responsible for selecting the appropriate shoring and dewatering systems.

If box shoring is used, it should be understood that box shoring is a safety feature used to protect workers and does not prevent caving. If the excavations are left open for extended periods of time, caving of the sidewalls may occur. The presence of caved material will limit the ability to properly backfill and compact the trenches. The contractor should be prepared to fill voids between the box shoring and the sidewalls of the trenches with sand or gravel before caving occurs.

5.3.4 Safety

All excavations should be made in accordance with applicable OSHA requirements and regulations of the state, county, and local jurisdiction. While this report describes certain approaches to excavation and dewatering, the contract documents should specify that the contractor is responsible for selecting excavation and dewatering methods, monitoring the excavations for safety, and providing shoring (as required) to protect personnel and adjacent structural elements.

5.4 EROSION CONTROL AND DISTURBED SOIL

Erosion of the soil at this site will occur as exposed surfaces are disturbed due to construction activities and exposure to climatic conditions. Jurisdictional requirements should be incorporated into the project development plan. Measures that can be employed to reduce erosion include the use of silt fences, hay bales, buffer zones of natural growth, sedimentation ponds, and granular haul roads.

Surface slopes and stockpiled soil should be protected by some form of weather-resistant cover or erosion control product if left exposed. Temporary erosion control measures in accordance with local and state ordinances should be in place prior to and during construction. Permanent slopes should be re-vegetated or otherwise protected as soon as practical after construction.

Subgrade or fill soil that becomes loose or disturbed should be excavated to expose undisturbed soil and replaced with properly compacted fill. The contractor may reduce soil disturbance by the following:

- Working off of existing paved surfaces
- Preventing construction traffic over unprotected soil in stripped, cut, or fill areas
- Providing appropriate gravel working mats (see "Subgrade Protection" section) over stripped, cut, and fill areas
- Sloping excavated surfaces to collect and properly dispose of runoff
- Trenching and providing brow ditches above cut slopes
- Sealing the exposed surface by rolling with a smooth-drum compactor or rubber tire roller at the end of each working day and removing wet surface soil prior to commencing filling each day

5.5 MATERIALS

5.5.1 Structural Fill

5.5.1.1 General

Fill should only be placed over a subgrade that has been prepared in conformance with the "Site Preparation" section. All material used as structural fill should be free of organic matter or other unsuitable material. The material should meet the specifications provided in OSSC 00330 (Earthwork), depending on the application. All structural fill should have a maximum particle size of 4 inches. A brief characterization of some of the acceptable material and our recommendations for its use as structural fill is provided below.

5.5.1.2 On-Site Soil

The on-site soil is generally suitable for use as structural fill during dry weather if it meets the requirements set forth in OSSC 00330.12 (Borrow Material). Based on laboratory test results, the moisture content of the on-site soil is expected to exceed the optimum moisture content for compaction by at least 5 percent. Significant moisture conditioning (drying) will likely be required to use on-site soil for structural fill. Accordingly, extended warm and dry weather will be required to adequately condition and place the soil as structural fill. Repeated tilling/scarification will be necessary to dry the material. It will be difficult, if not impossible, to adequately compact on-site clay soil during the rainy season or during prolonged periods of rainfall.

5.5.1.3 Imported Granular Material

Imported granular material used for structural fill should be pit- or quarry-run rock, crushed rock, or crushed gravel and sand and should meet the requirements set forth in OSSC 00330.14 (Selected Granular Backfill) and OSSC 00330.15 (Selected Stone Backfill). Imported granular material should be fairly well graded between coarse and fine material, have less than 5 percent by dry weight passing the U.S. Standard No. 200 sieve, and have at least two mechanically fractured faces and can generally be adequately compacted during wet conditions.

5.5.1.4 Aggregate Base Rock

Imported granular material used as base rock for building floor slabs and pavements should consist of ¾- or 1½-inch-minus material meeting the requirements in OSSC 00641 (Aggregate

Subbase, Base, and Shoulders), with the exception that the aggregate should have less than 5 percent by dry weight passing the U.S. Standard No. 200 Sieve (washed analysis) and have at least two mechanically fractured faces.

5.5.1.5 Trench Backfill

Trench backfill for the utility pipe base and pipe zone should consist of well-graded, granular material with a maximum particle size of 1 inch, have less than 5 percent by dry weight passing the U.S. Standard No. 200 sieve, and meet OSSC 00405.14 (Trench Backfill, Class B). The material should be free of roots, organic matter, and other unsuitable material.

Within building and pavement areas, trench backfill placed above the pipe zone should consist of imported granular material meeting the requirements of OSSC 00405.14 (Trench Backfill, Class B).

5.5.1.6 Stabilization Material

Stabilization material for trenching, staging pads, or haul roads should consist of pit- or quarry-run rock, crushed rock, or crushed gravel and sand and should meet the requirements set forth in OSSC 00330.14 (Selected Granular Backfill) and OSSC 00330.15 (Selected Stone Backfill), with a minimum particle size of 4 inches, less than 5 percent by dry weight passing the U.S. Standard No. 4 sieve, and at least two mechanically fractured faces. The material should be free of organic matter and other deleterious material. In general, stabilization material should be placed in one lift and compacted to a firm condition; however, we should be contacted if lift thicknesses greater than 2 feet are required.

5.5.1.7 Drain Rock

Drain rock should consist of angular, granular material with a maximum particle size of 2 inches and should meet OSSC 00430.11 (Granular Drain Backfill Material). The material should be free of roots, organic matter, and other unsuitable material; have less than 2 percent by dry weight passing the U.S. Standard No. 200 sieve (washed analysis); and have at least two mechanically fractured faces. Drain rock should be compacted to a firm condition.

5.5.1.8 Select Granular Wall Backfill

Backfill material placed behind retaining walls and extending a horizontal distance of at least ½H (where H is the height of the retaining wall) should consist of select granular material that meets the specifications provided in OSSC 00510.12 (Granular Wall Backfill) or OSSC 00510.13 (Granular Structure Backfill). We recommend the select granular wall backfill be separated from general fill, native soil, and/or topsoil using a geotextile fabric that meets the specifications provided below for drainage geotextiles.

5.5.2 Geotextile Fabric

5.5.2.1 Subgrade Geotextile

Subgrade geotextile should conform to OSSC Table 02320-1 and OSSC 00350 (Geosynthetic Installation). A minimum initial aggregate base lift of 6 inches is required over geotextiles.

5.5.2.2 Drainage Geotextile

Drainage geotextile should conform to Type 2 material of OSSC Table 02320-1 and OSSC 00350 (Geosynthetic Installation). A minimum initial aggregate base lift of 6 inches is required over geotextiles.

5.5.3 Soil Amendment with Cement

5.5.3.1 General

As an alternative to the use of imported granular material for wet weather structural fill and/or to provide subgrade stabilization for wet weather earthwork, an experienced contractor should be able to amend the on-site soil with portland cement to obtain suitable support properties. Successful use of soil amendment depends on the use of correct mixing techniques, soil moisture content, and amendment quantities. Soil amending should be conducted in accordance with the specifications provided in OSSC 00344 (Treated Subgrade). The amount of cement used during treatment should be based on an assumed soil dry unit weight of 100 pcf.

5.5.3.2 Subbase Stabilization

For preliminary design purposes, we recommend a target strength for cement-amended subgrade for building and subbase (below aggregate base) soil of 100 psi. The amount of cement used to achieve this target generally varies with moisture content and soil type. It is difficult to predict field performance of soil to cement amendment due to variability in soil response, and we recommend laboratory testing to confirm expectations. Generally, 6 percent cement by weight of dry soil can be used when the soil moisture content does not exceed approximately 23 percent. If the soil moisture content is in the range of 23 to 35 percent, 7 to 9 percent by weight of dry soil is recommended.

We recommend assuming a minimum cement ratio of at least 7 percent (by dry weight) based on the soil moisture content at the time of our explorations. The amount of cement added to the soil may need to be adjusted based on field observations and performance at the time of construction. Moreover, depending on the time of year and moisture content levels during amendment, water may need to be applied during tilling to appropriately condition the soil moisture content. Due to the high plasticity of the on-site soil, it will likely be necessary to till the soil more than once in order to adequately break down soil clumps. It may be advantageous to apply the cement in two passes (3 to 4 percent cement in each pass) for more effective hydration due to the high soil moisture content.

A minimum curing of four days is required between treatment and construction traffic access. Construction traffic should not be allowed on unprotected, cement-amended subgrade. To protect the cement-amended surfaces from abrasion or damage, the finished surface should be covered with 4 to 6 inches of imported granular material. The crushed rock typically becomes contaminated with soil during construction. Contaminated base rock should be removed and replaced with clean rock in pavement areas. The actual thickness of the amended material and imported granular material for haul roads and staging areas will depend on the anticipated traffic, as well as the contractor's means and methods and, accordingly, should be the contractor's responsibility.

5.5.3.3 Cement-Amended Structural Fill

On-site soil that would not otherwise be suitable for structural fill due to high moisture contents may be amended and placed as fill over a subgrade prepared in conformance with the "Site Preparation" section. The cement ratio for general cement-amended fill can generally be reduced by 1 percent (by dry weight). Typically, a minimum curing of four days is required between treatment and construction traffic access. However, consecutive lifts of fill may be treated immediately after the previous lift has been amended and compacted (e.g., the four-day wait period does not apply). When the final lift of fill is a building or roadway subgrade, the four-day wait period is in effect.

5.5.3.4 Other Considerations

Portland cement-amended soil is hard and has low permeability. This soil does not drain well, nor is it suitable for planting. Future planted areas should not be cement amended, if practical, or accommodations should be made for drainage and planting. Moreover, cement amending soil within building areas must be done carefully to avoid trapping water under floor slabs. We should be contacted if this approach is considered. Cement amendment should not be used if runoff during construction cannot be directed away from adjacent wetlands.

Cement amending should generally not be attempted when air temperature is below 40 degrees Fahrenheit or during moderate to heavy precipitation. Cement should not be placed when the ground surface is saturated or standing water exists.

We recommend cement-spreading equipment be equipped with balloon tires to reduce rutting and disturbance of the fine-grained soil. A static sheepsfoot or segmented pad roller with a minimum static weight of 40,000 pounds should be used for initial compaction of the fine-grained soil. A smooth-drum roller with a minimum applied linear force of 700 pounds per inch should be used for final compaction. The amended soil should be compacted to at least 92 percent of the achievable dry density at the moisture content of the material, as defined in ASTM D1557.

5.5.3.5 Specification Recommendations

We recommend that the following comments be included in the specifications for the project:

- In general, cement amending is not recommended during the cold weather (temperatures less than 40 degrees Fahrenheit) or during rainfall. Treatment may be possible when temperatures are between 32 and 40 degrees Fahrenheit, provided the treated lift is immediately covered by at least 12 inches of soil for insulation purposes. GeoDesign should be consulted prior to treating at this temperature range.
- Mixing Equipment
  - Use a pulverizer/mixer capable of uniformly mixing the cement into the soil to the design depth. Blade mixing will not be allowed.
  - Pulverize the soil-cement mixture such that 100 percent by dry weight passes a 1-inch sieve and a minimum of 70 percent passes a No. 4 sieve, exclusive of gravel or stone retained on these sieves. If water is required, the pulverizer should be equipped to inject water to a tolerance of ¼ gallon per square foot of surface area.

- Use machinery that will not disturb the subgrade, such as using low-pressure "balloon" tires on the pulverizer/mixer vehicle. If subgrade is disturbed, the tilling/treatment depth shall extend the full depth of the disturbance.
- Multiple "passes" of the tiller may be required to adequately blend the cement and soil mixture.

- Spreading Equipment
  - Use a spreader capable of distributing the cement uniformly on the ground to within 5 percent variance of the specified application rate.
  - Use machinery that will not disturb the subgrade, such as using low-pressure "balloon" tires on the spreader vehicle. If subgrade is disturbed, the tilling/treatment depth shall extend the full depth of the disturbance.
- Compaction Equipment
  - Use a static, sheepsfoot or segmented pad roller with a minimum static weight of 40,000 pounds for initial compaction of fine-grained soil (silt and clay), or an alternate approved by the geotechnical engineer.

5.5.4 AC

5.5.4.1 ACP

The AC should be Level 2, ½-inch, dense ACP according to OSSC 00745 (Asphalt Concrete Pavement – Statistical Acceptance) and compacted to 91 percent of the maximum specific gravity of the mix, as determined by AASHTO T 209. The minimum and maximum lift thickness is 2.0 and 3.5 inches, respectively, for ½-inch ACP. Asphalt binder should be performance graded and conform to PG 64-22 or better. If a thin asphalt overlay is selected, the nominal aggregate size should be reduced to 3/8 inch.

5.5.4.2 Cold Weather Paving Considerations

In general, AC paving is not recommended during cold weather (temperatures less than 40 degrees Fahrenheit). Compacting under these conditions can result in low compaction and premature pavement distress.

Each AC mix design has a recommended compaction temperature range that is specific for the particular AC binder used. In colder temperatures, it is more difficult to maintain the temperature of the AC mix as it can lose heat while stored in the delivery truck, as it is placed, and in the time between placement and compaction. In Oregon, the AC surface temperature during paving should be at least 40 degrees Fahrenheit for lift thickness greater than 2.5 inches and at least 50 degrees Fahrenheit for lift thickness between 2.0 and 2.5 inches.

If paving activities must take place during cold-weather construction as defined above, the project team should be consulted and a site meeting should be held to discuss ways to lessen low compaction risks.

5.6 FILL PLACEMENT AND COMPACTION

Fill soil should be compacted at a moisture content that is within 3 percent of optimum. The maximum allowable moisture content varies with the soil gradation and should be evaluated during construction. Fill and backfill material should be placed in uniform, horizontal lifts and compacted with appropriate equipment. The maximum lift thickness will vary depending on the

material and compaction equipment used but should generally not exceed the loose thicknesses provided in Table 3. Fill material should be compacted in accordance with the compaction criteria provided in Table 4.

Table 3. Recommended Uncompacted Lift Thickness

Compaction Equipment	Recommended Uncompacted Lift Thickness (inches)		
	Silty/Clayey Soil	Granular and Crushed Rock Maximum Particle Size ≤ 1½ Inches	Crushed Rock Maximum Particle Size > 1½ Inches
Hand Tools: Plate Compactor and Jumping Jack	4 to 8	4 to 8	Not Recommended
Rubber Tire Equipment	6 to 8	10 to 12	6 to 8
Light Roller	8 to 10	10 to 12	8 to 10
Heavy Roller	10 to 12	12 to 18	12 to 16
Hoe Pack Equipment	12 to 16	18 to 24	18 to 24

The table above is based on our experience and is intended to serve only as a guideline. The information provided in this table should not be included in the project specifications.

Table 4. Compaction Criteria

Fill Type	Compaction Requirements in Structural Zones		
	Percent Maximum Dry Density Determined by ASTM D1557		
	0 to 2 Feet Below Subgrade (percent)	Greater Than 2 Feet Below Subgrade (percent)	Pipe Zone (percent)
Area Fill (Granular)	95	95	-----
Area Fill (Fine Grained)	92	92	-----
Aggregate Bases	95	95	-----
Trench Backfill[1,2]	95	92	90[1,2]
Retaining Wall Backfill	95[3]	92[3]	-----

1. Trench backfill above the pipe zone in non-structural areas should be compacted to 85 percent.
2. Or as recommended by the pipe manufacturer.
3. Should be reduced to 90 percent within a horizontal distance of 3 feet from the retaining wall.

6.0 OBSERVATION OF CONSTRUCTION

Satisfactory earthwork and foundation performance depends to a large degree on the quality of construction. Subsurface conditions observed during construction should be compared with those encountered during the subsurface explorations. Recognition of changed conditions often

requires experience; therefore, qualified personnel should visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those anticipated. In addition, sufficient observation of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications.

7.0 LIMITATIONS

We have prepared this report for use by Friendsview Retirement Community and members of the design and construction teams for the proposed development. The data and report can be used for estimating purposes, but our report, conclusions, and interpretations should not be construed as a warranty of the subsurface conditions and are not applicable to other sites.

Soil explorations indicate soil conditions only at specific locations and only to the depths penetrated. They do not necessarily reflect soil strata or water level variations that may exist between exploration locations. If subsurface conditions differing from those described are noted during the course of excavation and construction, re-evaluation will be necessary.

The site development plans and design details were not finalized at the time this report was prepared. When the design has been finalized and if there are changes in the site grades or location, configuration, design loads, or type of construction, the conclusions and recommendations presented may not be applicable. If design changes are made, we should be retained to review our conclusions and recommendations and to provide a written evaluation or modification.

The scope of our services does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in our report for consideration in design.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

♦ ♦ ♦

We appreciate the opportunity to be of continued service to you. Please call if you have questions concerning this report or if we can provide additional services.

Sincerely,

GeoDesign, Inc.

Scott P. McDevitt, P.E., G.E.
Senior Project Engineer

George Saunders, P.E., G.E.
Principal Engineer

REFERENCES

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Schlicker, Herbert G., and Deacon, Robert J., 1967, Engineering Geology of the Tualatin Valley Region, Oregon: Oregon Department of Geology and Mineral Industries Bulletin 60, 103 p.

FIGURES

VICINITY MAP BASED ON AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH PRO®

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FRIENDS-3-01	**VICINITY MAP**	
OCTOBER 2018	SPRINGBROOK PHASE II NEWBERG, OR	**FIGURE 1**

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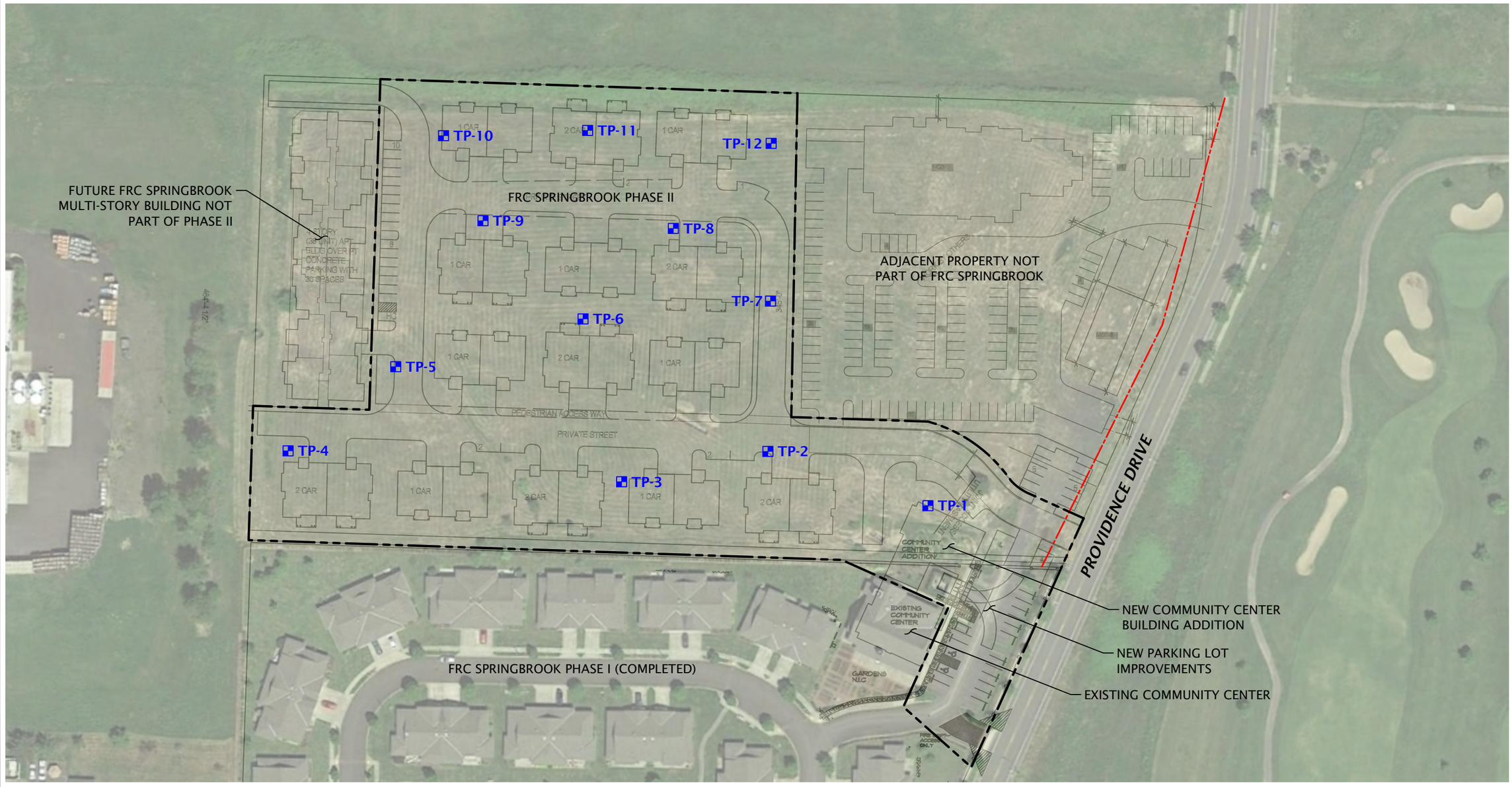
File Name: J:\E-L\Friends\Friends-3\Friends-3-01\Figures\CAD\Friends-3-01-VM01.dwg | Layout: FIGURE 1



LEGEND:

- FRC SPRINGBROOK PHASE II SCOPE OF WORK BOUNDARY
- TP-1 TEST PIT
- GAS LINE

N

0 100 200

(SCALE IN FEET)

SITE PLAN BASED ON AERIAL PHOTOGRAPHY OBTAINED FROM GOOGLE EARTH PRO®, SEPTEMBER 28, 2018

SITE PLAN

SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE 2

FRIENDS-3-01

OCTOBER 2018

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APPENDIX

APPENDIX

FIELD EXPLORATIONS

GENERAL

We explored subsurface conditions at site by excavating 12 test pits (TP-1 through TP-12) to depths between approximately 5 and 12 feet BGS. Excavation services were provided by Dan J. Fischer Excavating, Inc. on September 11, 2018 using a mini excavator. The exploration logs are presented in this appendix. Figure 2 shows the exploration locations relative to proposed site features. A member of our geotechnical staff observed the explorations.

SOIL SAMPLING

Representative samples were collected from the test pit sidewalls and the mini excavator bucket and retained in plastic bags. Sampling intervals are shown on the exploration logs.

SOIL CLASSIFICATION

The soil samples were classified in accordance with the "Exploration Key" (Table A-1) and "Soil Classification System" (Table A-2), which are presented in this appendix. The exploration logs indicate the depths at which the soils or their characteristics change, although the change actually could be gradual. If the change occurred between sample locations, the depth was interpreted. Classifications are shown on the exploration logs.

LABORATORY TESTING

CLASSIFICATION

The soil samples were classified in the laboratory to confirm field classifications. The laboratory classifications are shown on the exploration logs if those classifications differed from the field classifications.

MOISTURE CONTENT

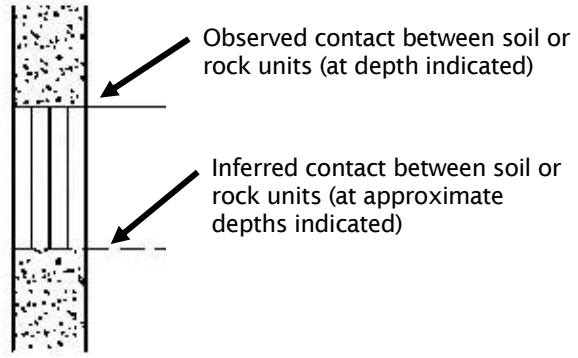
The natural moisture content of select soil samples was determined in general accordance with ASTM D2216. The natural moisture content is a ratio of the weight of the water to soil in a test sample and is expressed as a percentage. The test results are presented in this appendix.

ATTERBERG LIMIT TESTING

The plastic limit and liquid limit (Atterberg limits) of select soil samples were determined in accordance with ASTM D4318. The Atterberg limits and the plasticity index were completed to aid in the classification of the soil. The plastic limit is defined as the moisture content, in percent, where the soil becomes brittle. The liquid limit is defined as the moisture content where the soil begins to act similar to a liquid. The plasticity index is the difference between the liquid and plastic limits. The test results are presented in this appendix.

SYMBOL	SAMPLING DESCRIPTION
	Location of sample obtained in general accordance with ASTM D 1586 Standard Penetration Test with recovery
	Location of sample obtained using thin-wall Shelby tube or Geoprobe® sampler in general accordance with ASTM D 1587 with recovery
	Location of sample obtained using Dames & Moore sampler and 300-pound hammer or pushed with recovery
	Location of sample obtained using Dames & Moore and 140-pound hammer or pushed with recovery
	Location of sample obtained using 3-inch-O.D. California split-spoon sampler and 140-pound hammer
	Location of grab sample
	Rock coring interval
	Water level during drilling
	Water level taken on date shown

Graphic Log of Soil and Rock Types



GEOTECHNICAL TESTING EXPLANATIONS

ATT	Atterberg Limits	P	Pushed Sample
CBR	California Bearing Ratio	PP	Pocket Penetrometer
CON	Consolidation	P200	Percent Passing U.S. Standard No. 200 Sieve
DD	Dry Density		
DS	Direct Shear	RES	Resilient Modulus
HYD	Hydrometer Gradation	SIEV	Sieve Gradation
MC	Moisture Content	TOR	Torvane
MD	Moisture-Density Relationship	UC	Unconfined Compressive Strength
NP	Nonplastic	VS	Vane Shear
OC	Organic Content	kPa	Kilopascal

ENVIRONMENTAL TESTING EXPLANATIONS

CA	Sample Submitted for Chemical Analysis	ND	Not Detected
P	Pushed Sample	NS	No Visible Sheen
PID	Photoionization Detector Headspace Analysis	SS	Slight Sheen
		MS	Moderate Sheen
ppm	Parts per Million	HS	Heavy Sheen

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EXPLORATION KEY

TABLE A-1

RELATIVE DENSITY - COARSE-GRAINED SOIL

Relative Density	Standard Penetration Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)
Very Loose	0 – 4	0 - 11	0 - 4
Loose	4 – 10	11 - 26	4 - 10
Medium Dense	10 – 30	26 - 74	10 - 30
Dense	30 – 50	74 - 120	30 - 47
Very Dense	More than 50	More than 120	More than 47

CONSISTENCY - FINE-GRAINED SOIL

Consistency	Standard Penetration Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)	Unconfined Compressive Strength (tsf)
Very Soft	Less than 2	Less than 3	Less than 2	Less than 0.25
Soft	2 - 4	3 – 6	2 - 5	0.25 - 0.50
Medium Stiff	4 - 8	6 – 12	5 - 9	0.50 - 1.0
Stiff	8 - 15	12 – 25	9 - 19	1.0 - 2.0
Very Stiff	15 - 30	25 – 65	19 – 31	2.0 - 4.0
Hard	More than 30	More than 65	More than 31	More than 4.0

PRIMARY SOIL DIVISIONS			GROUP SYMBOL	GROUP NAME
COARSE-GRAINED SOIL (more than 50% retained on No. 200 sieve)	GRAVEL (more than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (< 5% fines)	GW or GP	GRAVEL
		GRAVEL WITH FINES (≥ 5% and ≤ 12% fines)	GW-GM or GP-GM	GRAVEL with silt
			GW-GC or GP-GC	GRAVEL with clay
		GRAVEL WITH FINES (> 12% fines)	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND (50% or more of coarse fraction passing No. 4 sieve)	CLEAN SAND (<5% fines)	SW or SP	SAND
		SAND WITH FINES (≥ 5% and ≤ 12% fines)	SW-SM or SP-SM	SAND with silt
			SW-SC or SP-SC	SAND with clay
		SAND WITH FINES (> 12% fines)	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
FINE-GRAINED SOIL (50% or more passing No. 200 sieve)	SILT AND CLAY	Liquid limit less than 50	ML	SILT
			CL	CLAY
			CL-ML	silty CLAY
			OL	ORGANIC SILT or ORGANIC CLAY
		Liquid limit 50 or greater	MH	SILT
			CH	CLAY
			OH	ORGANIC SILT or ORGANIC CLAY
HIGHLY ORGANIC SOIL			PT	PEAT

MOISTURE CLASSIFICATION

Term	Field Test
dry	very low moisture, dry to touch
moist	damp, without visible moisture
wet	visible free water, usually saturated

ADDITIONAL CONSTITUENTS

Secondary granular components or other materials such as organics, man-made debris, etc.

Percent	Silt and Clay In: Fine-Grained Soil	Silt and Clay In: Coarse-Grained Soil	Percent	Sand and Gravel In: Fine-Grained Soil	Sand and Gravel In: Coarse-Grained Soil
< 5	trace	trace	< 5	trace	trace
5 – 12	minor	with	5 – 15	minor	minor
> 12	some	silty/clayey	15 – 30	with	with
			> 30	sandy/gravelly	Indicate %

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SOIL CLASSIFICATION SYSTEM

TABLE A-2

DEPTH FEET	MATERIAL DESCRIPTION	ELEVATION DEPTH	SAMPLE	MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0	Medium stiff, brown SILT (ML), minor gravel, trace sand and organics; dry, silt has medium plasticity, gravel is angular, sand is fine to coarse (4-inch-thick root zone) - **FILL**.				
2.5	very stiff, without gravel; moist at 3.0 feet				
5.0					
	Medium stiff, dark brown SILT with sand (ML), trace organics; moist, sand is fine to coarse.	6.0			Possible old topsoil layer.
7.5	brown, trace sand, without organics; sand is fine at 8.0 feet				
10.0					
	Exploration completed at a depth of 12.0 feet.	12.0			No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
12.5					
15.0					

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-1

OCTOBER 2018

SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-1

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Very stiff, brown SILT with sand (ML), trace organics; dry, sand is fine to medium (4-inch-thick root zone).					
2.5		gray-brown with orange mottles, minor sand; moist at 2.5 feet		ATT		●	LL = 46% PL = 28%
5.0		medium stiff to stiff at 4.0 feet					
		Exploration completed at a depth of 5.5 feet.	5.5				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
7.5							
10.0							
12.5							
15.0							

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EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-2

OCTOBER 2018

SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-2

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Very stiff, light brown with gray mottled SILT (ML), minor sand, trace organics; dry (5-inch-thick root zone).					
		medium stiff; moist at 2.0 feet					
2.5							
		soft at 4.0 feet					
5.0							
7.5							
		medium stiff to very stiff at 9.5 feet					Light brown with orange and red laminated layers between 9.0 and 11.0 feet.
10.0							
		Medium stiff, gray CLAY (CL), trace sand; moist, sand is fine.	11.0				
		Exploration completed at a depth of 12.0 feet.	12.0				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
12.5							
15.0						0 50 100	

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EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-3

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SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-3

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff, light brown SILT (ML), minor sand, trace organics; dry, sand is fine (4-inch-thick root zone).					
		moist at 1.0 foot					
2.5							
		soft at 4.0 feet					
5.0							
		Medium stiff, brown with gray mottled CLAY (CL), trace sand; moist, sand is fine.	5.5				
7.5							Brown with orange and red laminated layers between 8.0 and 9.5 feet.
		medium stiff to very stiff at 8.0 feet					
10.0							
		medium stiff, gray at 10.0 feet					
12.5		Exploration completed at a depth of 12.0 feet.	12.0				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
15.0							

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-4

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SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-4

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION / DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff, gray with brown mottled CLAY (CL), trace sand and organics; dry, sand is fine (4-inch-thick root zone).					
		moist at 1.0 foot					
2.5					☒	●	
5.0		Exploration completed at a depth of 5.0 feet.	5.0		☒	●	No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
7.5							
10.0							
12.5							
15.0							

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-5

OCTOBER 2018

SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-5

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff, brown with gray mottled SILT (ML), minor sand, trace organics; dry, sand is fine (4-thick-inch root zone).					
		moist at 1.5 feet					
2.5							
		medium stiff at 4.0 feet					
5.0		medium stiff to very stiff at 5.0 feet					Brown with orange and red laminated layers from 5.0 to 9.5 feet.
7.5							
		Medium stiff, gray CLAY (CL), trace sand; moist, sand is fine.	9.5				
10.0							
		Exploration completed at a depth of 12.0 feet.	12.0				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
12.5							
15.0							

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EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-6

OCTOBER 2018

SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-6

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff, light brown SILT (ML), minor sand, trace organics; dry, sand is fine (3-inch-thick root zone).					
		moist at 1.5 feet			☒	●	
2.5							
5.0					☒		
		Exploration completed at a depth of 6.0 feet.	6.0				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
7.5							
10.0							
12.5							
15.0							

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EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-7

OCTOBER 2018

SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-7

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff to very stiff, light brown SILT (ML), minor sand, trace organics; dry, sand is fine (5-inch-thick root zone).					
		moist at 1.5 feet					
2.5					☒	●	
5.0					☒		
		Exploration completed at a depth of 6.0 feet.	6.0				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
7.5							
10.0							
12.5							
15.0							

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-8

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SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-8

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff to very stiff, brown SILT (ML), minor sand, trace organics; dry, sand is fine (5-inch-thick root zone).					
		moist at 1.5 feet					
2.5		stiff, orange with brown mottles at 3.0 feet					
		gray with orange mottles at 4.0 feet					
5.0							
		Exploration completed at a depth of 6.0 feet.	6.0				No groundwater seepage was observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
7.5							
10.0							
12.5							
15.0							

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-9

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NEWBERG, OR

FIGURE A-9

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff to very stiff, orange SILT (ML), minor sand, trace organics; dry, sand is fine (5-inch-thick root zone).					
		moist at 1.0 foot					
2.5		Stiff, gray-brown with orange mottled CLAY (CL), trace sand; moist, sand is fine.	2.5				
				ATT			LL = 39% PL = 24%
		soft at 4.0 feet					
5.0		medium stiff, gray at 5.0 feet					
7.5							
10.0							
		wet at 11.5 feet					Slow groundwater seepage observed at 11.5 feet.
		Exploration completed at a depth of 12.0 feet.	12.0				No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
12.5							
15.0							

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-10

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SPRINGBROOK PHASE II
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FIGURE A-10

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff to very stiff, brown SILT (ML), minor sand, trace organics; dry, sand is fine (5-inch-thick root zone).					
		moist at 1.5 feet					
2.5							
5.0							
7.5							
		Medium stiff, brown with gray mottled CLAY (CL), trace sand; moist, sand is fine.	9.0				
10.0		gray at 11.0 feet					
		Exploration completed at a depth of 12.0 feet.	12.0				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
12.5							
15.0						0 50 100	

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-11

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FIGURE A-11

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION DEPTH	TESTING	SAMPLE	● MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff to very stiff, brown SILT (ML), minor sand, trace organics; dry, sand is fine (5-inch-thick root zone).					
		moist at 2.0 feet					
2.5					⊠	●	
		soft at 4.0 feet					
5.0							
7.5							
10.0							
		Medium stiff, brown CLAY (CL), trace sand; moist, sand is fine.	10.5		⊠		
		Exploration completed at a depth of 12.0 feet.	12.0				No groundwater seepage observed to the depth explored. No caving observed to the depth explored. Surface elevation was not measured at the time of exploration.
12.5							
15.0							

EXCAVATED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: J. Guenther COMPLETED: 09/11/18

EXCAVATION METHOD: mini excavator (see document text)

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FRIENDS-3-01

TEST PIT TP-12

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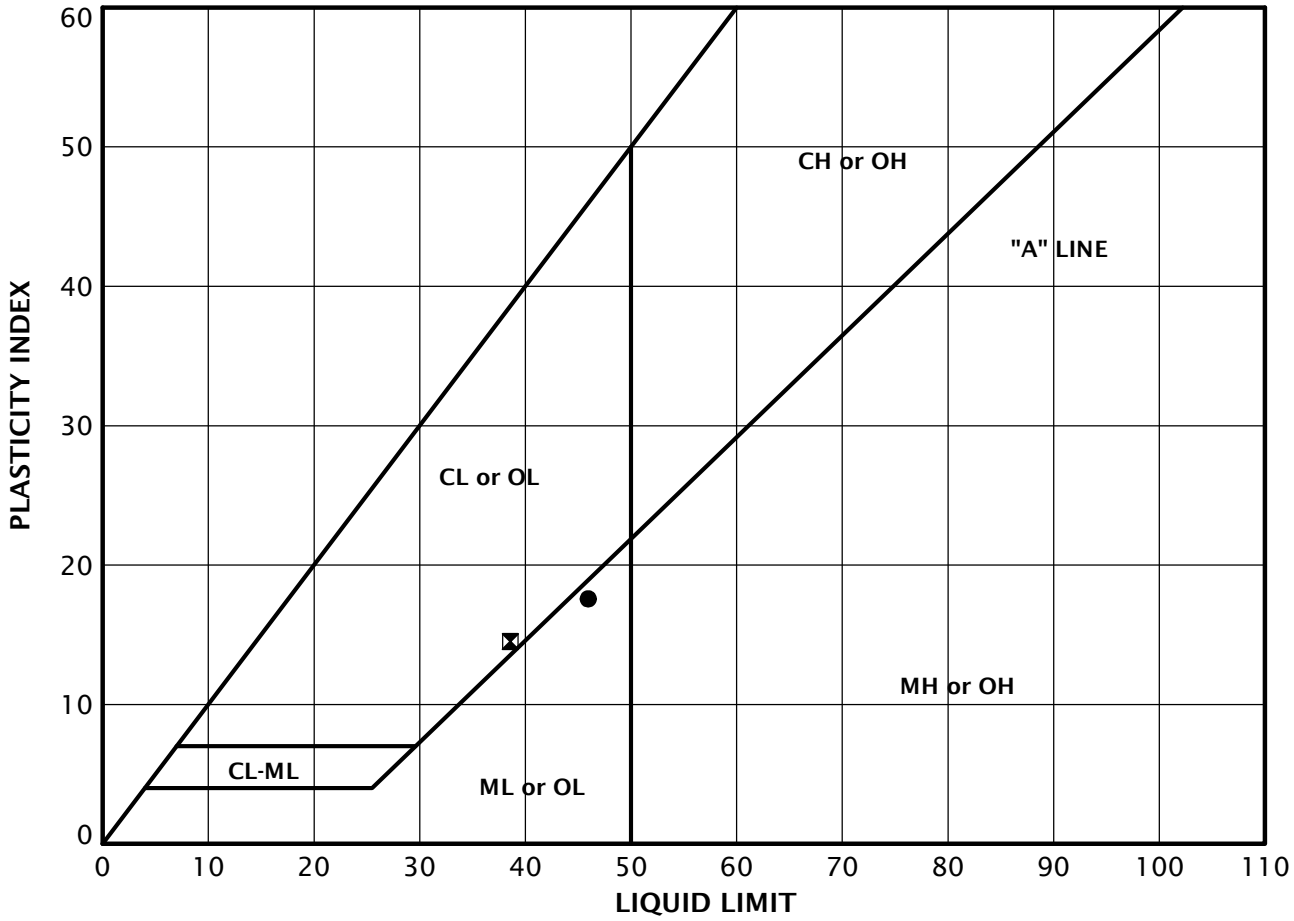
NEWBERG, OR

FIGURE A-12

TEST PIT LOG - 1 PER PAGE FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KM:KT



KEY	EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	MOISTURE CONTENT (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
●	TP-2	3.5	32	46	28	18
⊠	TP-10	3.5	37	39	24	15

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FRIENDS-3-01

ATTERBERG LIMITS TEST RESULTS

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SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-13

SAMPLE INFORMATION			MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	SIEVE			ATTERBERG LIMITS		
EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	ELEVATION (FEET)			GRAVEL (PERCENT)	SAND (PERCENT)	P200 (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
TP-1	1.0		10							
TP-1	3.5		19							
TP-2	3.5		32					46	28	18
TP-3	1.0		26							
TP-4	1.5		23							
TP-4	11.0		37							
TP-5	2.0		32							
TP-5	4.5		41							
TP-6	1.5		26							
TP-6	5.0		27							
TP-7	1.5		28							
TP-8	2.0		31							
TP-9	1.5		15							
TP-10	1.0		27							
TP-10	3.5		37					39	24	15
TP-11	2.5		32							
TP-11	9.5		38							
TP-12	2.5		28							

LAB SUMMARY FRIENDS-3-01-TP1_12.GPJ GEODESIGN.GDT PRINT DATE: 10/19/18:KT

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FRIENDS-3-01

OCTOBER 2018

SUMMARY OF LABORATORY DATA

SPRINGBROOK PHASE II
NEWBERG, OR

FIGURE A-14

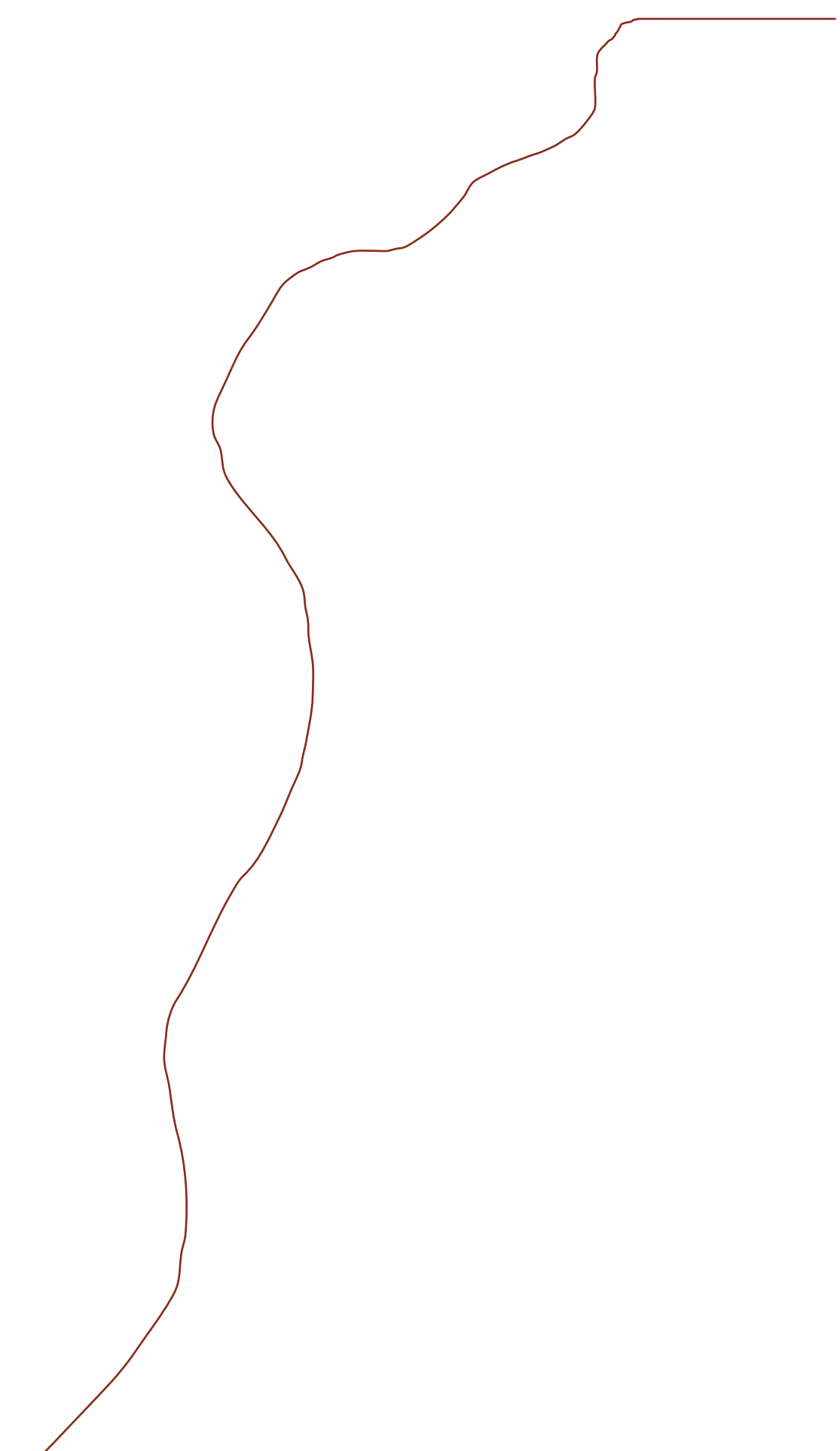

Exhibit H: Covenants, Conditions & Restrictions

Yamhill County Official Records 201904747
PR-CRPR
Stn=2 MILLSA 04/19/2019 01:08:00 PM
15Pgs $75.00 $11.00 $5.00 $60.00 $151.00

I, Brian Van Bergen, County Clerk for Yamhill County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.
Brian Van Bergen - County Clerk

DECLARATION OF COVENANTS,
CONDITIONS AND RESTRICTIONS
OF OAK MEADOWS II

FIRST AMERICAN TITLE ACO

THIS DECLARATION is made and executed this 15th day of July, 2007, by OAK MEADOWS II, LLC

W I T N E S S E T H:

WHEREAS, Declarant is the owner of certain property located in Newberg City, Yamhill County, Oregon, and more particularly described in "Exhibit A" attached hereto and by reference made a part hereof.

NOW THEREFORE, Declarant hereby declares that all of the properties described in "Exhibit A" attached hereto shall be held, sold and conveyed subject to the following easements, restrictions, covenants, and conditions, which are for the purpose of protecting the value and desirability of, and which shall run with, the real property and be binding on all parties having any right, title or interest in the described properties or any part thereof, their heirs, successors and assigns, and shall inure to the benefit of each owner thereof.

ARTICLE I

DEFINITIONS

Section 1. "Architectural Committee" shall mean the Architectural Control Committee.

Section 2. "Association" shall mean and refer to Springbrook Oak Meadows II Commercial Owners' Association, Inc., its successors and assigns.

Section 3. "Board of Directors" shall mean the Board of Directors of the Association.

Section 4. "Common Area" shall mean all real property and easements (including the improvements thereto) owned by the Association for the common use and enjoyment of the owners. The Common Area which will be owned by the Association consists of any common areas, easements, and conservation easements depicted on the Plat of Oak Meadows II. Additional real property may be conveyed to the Association for the common use and enjoyment of the Owners as the Properties are developed.

Section 5. "Declarant" shall mean and refer to Werth Family, L.L.C., and its successors and assigns if such successors or assigns should acquire and assume all rights and responsibilities of the Declarant under this Declaration by written agreement.

Section 6. "Improvement" shall mean all buildings, outbuildings, alterations, additions, sheds, driveways, parking areas, fences, swimming pools, tennis courts,

DECLARATION OF COVENANTS,
CONDITIONS AND RESTRICTIONS
OF OAK MEADOWS II

FIRST AMERICAN TITLE 0000

THIS DECLARATION is made and executed this 15th day of July, 2007, by OAK MEADOWS II, LLC

W I T N E S S E T H:

WHEREAS, Declarant is the owner of certain property located in Newberg City, Yamhill County, Oregon, and more particularly described in "Exhibit A" attached hereto and by reference made a part hereof.

NOW THEREFORE, Declarant hereby declares that all of the properties described in "Exhibit A" attached hereto shall be held, sold and conveyed subject to the following easements, restrictions, covenants, and conditions, which are for the purpose of protecting the value and desirability of, and which shall run with, the real property and be binding on all parties having any right, title or interest in the described properties or any part thereof, their heirs, successors and assigns, and shall inure to the benefit of each owner thereof.

ARTICLE I

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Section 6. "Improvement" shall mean all buildings, outbuildings, alterations, additions, sheds, driveways, parking areas, fences, swimming pools, tennis courts,

lights and utility pole lines and any other structure, of any type or kind.

Section 7. "Parcel" shall mean and refer to each separate lot and parcel within the Properties as conveyed and recorded in the Public Records of Yamhill County,Oregon, with the exception of any Common Area.

Section 8. "Maintenance" shall mean the exercise of reasonable care to keep the streets, common areas, easements, landscaping, drainage, recreational facilities, and other amenities used in common by Parcel owners in aesthetically pleasing, good and functioning condition.

Section 9. "Member" shall mean every person or entity that holds membership in the association.

Section 10. "Notice" shall mean, unless otherwise specifically required in this Declaration, notice mailed, postage paid, to the last-known address of the person who appears as Member or owner on the records of the Association at the time of such mailing.

Section 11. "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of a fee simple title to any Parcel which is a part of the Properties, including contract sellers, but excluding those having such interest merely as security for the performance of an obligation.

Section 12. "Properties" shall mean and refer to that certain real property described in "Exhibit A" attached hereto, and such additions thereto as may hereafter be brought within the jurisdiction of the Association.

Section 13. "Street" shall include any street, drive, boulevard, road, way, terrace or court as shown on the plat.

Section 14. "Unit" shall mean the following: each Parcel shall be assigned one (1) Unit for each 100 square feet of heated and cooled space which can be constructed on the Parcel. In the event the square footage is not a multiple of 100, the square footage shall be rounded to the next higher number which is a multiple of 100. The assignment of Units to a Parcel shall be based upon the assignment of development rights made by the Declarant with the conveyance of each Parcel and the further assignment of such rights if the Parcel is subdivided. The failure to fully exercise the development rights by not constructing the maximum square footage shall not reduce the number of Units assigned to a Parcel.

ARTICLE II

PROPERTY RIGHTS

Section 1. Owners' Easements of Enjoyment. Every Owner shall have a right and easement of enjoyment in and to the Common Area which shall be appurtenant to and shall pass with the title to every Parcel, subject to the following provisions:

(a) the right of the Association to dedicate or transfer all or any part of the Common Area to any public agency, authority, or utility for such purposes and subject to such conditions as may be agreed to by the members or to mortgage all or any part of the Common Area (no such dedication, transfer or mortgage shall be effective unless an instrument agreeing to such dedication or transfer signed by two-thirds (2/3) of the members has been recorded); and (b) the right of the Association to adopt rules and regulations not inconsistent with this Declaration concerning the use and enjoyment of the Common Areas.

Section 2. Delegation of Use. Any Owner may delegate, in accordance with the By-Laws, his right of enjoyment to the Common Area and facilities to his tenants, guests or invitees.

ARTICLE III

MEMBERSHIP AND VOTING RIGHTS

Section 1. Every Owner of a Parcel which is subject to assessment shall be a member of the Association. Membership shall be appurtenant to, and may not be separated from, ownership of any Parcel which is subject to assessment.

Section 2. The Association shall have one class of voting membership. All Owners shall be Members and shall be entitled to one (1) vote for each Unit held.

ARTICLE IV

COVENANT FOR MAINTENANCE ASSESSMENTS

Section 1. Creation of the Lien and Personal Obligation of Assessments. The Declarant, for each Parcel owned within the Properties, hereby covenants, and each Owner of any Parcel by acceptance of a deed therefore, whether or not it shall be so expressed in such deed, is deemed to covenant and agree to pay to the Association: (1) annual assessments or charges, and (2)special assessments for capital improvements, such assessments to be established and collected as hereinafter provided. The annual and special assessments, together with interest, costs, and reasonable attorneys' fees, shall be a charge on the land and shall be a continuing lien upon the property against which each such assessment is made. Each such assessment, together with interest, costs, and reasonable attorneys' fees, shall also be the personal obligation of the person who was the Owner of such property at the time when the assessment fell due. The personal obligation for delinquent assessments shall not pass to his successors in title unless expressly assumed by them.

Section 2. Purpose of Assessments. The assessments levied by the Association shall be used exclusively to promote the health, safety, and welfare of the Owners and their tenants, guests and invitees, and for the improvement and maintenance of the Common Areas.

Section 3. Rate of Assessment. Both annual and special assessments, other than assessments under Article XIV of this Declaration, shall be determined and fixed based upon the total Units assigned to a Parcel. Each assessment against each Parcel shall be a percentage of the total assessment determined by dividing the Units held by the Owner with respect to a Parcel by the total Units outstanding.

Section 4. Special Assessments for Capital Improvements. In addition to the annual assessments authorized above, the Association may levy, in any assessment year, a special assessment applicable to that year only for the purpose of defraying, in whole or in part, the cost of any construction, reconstruction, repair or replacement of a capital improvement upon the Common Area, including fixtures and personal property related thereto, provided that any such assessment shall have the assent of a majority of the votes of the members who are voting in person or by proxy at a meeting duly called for this purpose.

Section 5. Notice and Quorum for Any Action Authorized Under Sections 4. Written notice of any meeting called for the purpose of taking any action authorized under Section 4 shall be sent to all members not less than 30 days or more than 60 days in advance of the meeting. At such meeting, the presence of members or of proxies entitled to cast thirty percent (30%) of all the votes of the membership shall constitute a quorum.

Section 6. Collection. Assessments may be collected on an installment basis or annual basis at the discretion of the Board of Directors of the Association.

Section 7. Date of Commencement of Annual Assessments; Due Dates. The annual assessments provided for herein shall commence as to all Parcels on the first day of the month following the conveyance of the first Parcel, except as hereinafter provided. The Board of Directors shall fix the amount of the annual assessment against each Parcel at least thirty (30) days in advance of each annual assessment period. Written notice of the annual assessment shall be sent to every Owner subject thereto. The due dates shall be established by the Board of Directors. The Association shall, upon demand, and for a reasonable charge, furnish a certificate signed by an officer of the Association setting forth whether the assessments on a specified Parcel have been paid. A properly executed certificate of the Association as to the status of assessments on a Parcel is binding upon the Association as of the date of its issuance. Notwithstanding anything to the contrary contained herein, as long as the Declarant pays any operating expenses incurred by the Association that exceed the assessments receivable from other members and other income of the Association, the Declarant may elect to be excused from payment of annual assessments related to Parcels owned by the Declarant. In the event the Declarant elects to be excused from payment of annual assessments, the Declarant may at any time thereafter elect to have all Parcels owned by the Declarant subject to assessments. Upon such election, the Declarant's liability for operating expenses shall cease and the Parcels owned by the Declarant shall be subject to assessment. As each Parcel becomes subject to assessment, the annual assessment shall be

prorated according to the number of months remaining in the calendar year.

Section 8. Effect of Nonpayment of Assessments: Remedies of the Association. Any assessment not paid within thirty (30) days after the due date shall bear interest from the due date at the rate of twelve percent (12%) per annum or at the prime rate, as published in the Wall Street Journal, plus four percent (4%), whichever is greater, not to exceed, however, the maximum rate of interest allowed by law. The Association may bring an action at law against the Owner personally obligated to pay the same, or foreclose the lien against the property. No Owner may waive or otherwise escape liability for the assessments provided for herein by non-use of the Common Area or abandonment of his Parcel.

Section 9. Subordination of the Lien to Mortgages. The lien of the assessments provided for herein shall be subordinate to the lien of any first mortgage. The sale or transfer of any Parcel shall not affect the assessment lien. However, the sale or transfer of any Parcel pursuant to mortgage foreclosure or any proceeding in lieu thereof or the bona fide conveyance to a mortgagee in satisfaction of a first mortgage shall extinguish the lien of such assessments as to payments which became due prior to such sale or transfer. No sale or transfer shall relieve such Parcel from liability for any assessments thereafter becoming due or from the lien thereof.

Section 10. Exempt Property. All properties dedicated to, and accepted by, a local governmental or public authority for utility purposes shall be exempt from the assessments created herein.

ARTICLE V

EASEMENTS AND DEDICATION

Section 1. Roadway, Utility and Drainage Easements. As the Properties are developed, the Declarant will grant and convey non-exclusive, perpetual easements to and on behalf of the Association, the Owners, their
grantees, heirs and successors in interest for ingress and egress, utility, drainage and landscape purposes over, across and under portions of the Properties.

Section 2. Maintenance and Interference. Each easement granted and conveyed to the Association shall be maintained by the Association until such time as the property encumbered by the easement has been dedicated and accepted by the local governmental authority and the local governmental authority has assumed such maintenance. The local governmental authority shall not have responsibility for maintenance of the streets and street related drainage facilities located on the Properties unless and until the local governmental authority accepts such maintenance responsibility, and the local governmental authority shall not be responsible for utility trench lines or trench line failures. Within these easements, no structure, planting or other material which may interfere with the use and purpose of the easements shall be placed or permitted to remain.

ARTICLE VI

ARCHITECTURAL CONTROL

Section 1. Approval Required. No building, fence, wall, outbuilding, landscaping or other structure or improvement shall be commenced, erected or maintained upon the Properties, nor shall any exterior addition to or change or alteration therein be made, nor shall any material alteration, addition or deletion be made to the landscaping of a Parcel, until the plans and specifications showing the nature, kind, shape, height, materials, location and all other reasonable detail of the same shall have been submitted to and approved in writing as to harmony of external design and location in relation to surrounding structures and topography by an architectural committee composed of three (3) or more representatives appointed in accordance with this Article (the "Architectural Committee"). In the event any improvement is destroyed in whole or in part, the improvement shall be reconstructed in accordance with the original plans and specifications approved by the Architectural Committee and any subsequently approved modifications thereto, or if the Owner desires to change the plans and specifications, all terms and conditions of this Declaration shall be complied with as if no improvement had been previously constructed.

Section 2. Membership. The Declarant shall appoint the initial Architectural Committee. The Declarant will attempt to appoint an Architectural Committee from the following:

A. The Declarant or Designee - At such time as Declarant no longer wishes to serve or to appoint a designee or is incapable of doing so, the Board of Directors shall have the authority to make the appointment in Declarant's place;
B. An architect;
C. A landscape architect;
D. A builder;
E. A real estate agent or broker; and
F. A member or members of the Association owning a Parcel within the Properties.
The Board of Directors shall have the authority, but shall not be required, to pay compensation to the members of the Architectural Committee. The members of the Architectural Committee shall serve at the pleasure of the Board of Directors. Subsequent members of the Architectural Committee shall be appointed by the Board of Directors and may include any Member of the Association and/or any Board of Directors member.

Section 3. Application Procedures. All notices or submission requests to be given to the Architectural Committee shall be in writing delivered by mail to the principal registered office of the Association as from time to time set forth in the records of the office of the Secretary of State of Oregon, Corporate Division.
Three copies of all such plans and specifications to be approved shall be furnished to the Architectural Committee. The plans and specifications shall include the following information:

(1) Building plans showing floor plans and front, side and rear elevations.
(2) Exterior finish schedule showing material, style, and color for all surfaces.
(3) Site plan showing location of buildings, drives, parking areas, sidewalks, and all other improvements.

(4) Landscape plan, to include all removal of trees, underbrush and vegetation.
(5) Detailed plan for controlling sedimentation.
(6) The contractor who will perform and be responsible for all work.

Section 4. Design Criteria. The Architectural Committee shall have the right to establish certain design criteria, and amend the same, from time to time. Such design criteria may be directed to only certain aspects of designs or acceptable materials and should be applied only as minimum guidelines to facilitate the review process. Materials which are of a higher quality, in the Architectural Committee's opinion, will be allowed. Full compliance with such design criteria will not establish any right to approval hereunder unless all other concerns and conditions have been addressed and met in a satisfactory manner. The architectural design of buildings shall be: (1) buildings in a style consistent with the design of buildings constructed in Springbrook Oaks, Newberg, Oregon and (2) buildings with a fiber cement type lap or panel siding and a 6/12 minimum pitch in roofs. The following are the initial design criteria which are intended to establish minimum standards and guidelines:

(1) Exterior siding material shall consist of brick, natural or manufactured stone, or fiber cement lap siding.
(2) In the event the roof of the building is visible from any street, roof materials shall consist of thirty (30) year architectural style composition shingles, concrete or clay tiles, pressed metal shingles or standing seam Kynar coated (or equivalent) metal roofs, and the roof shall have a 6/12 minimum roof pitch.
(3) The exterior wall and roof colors shall be compatible and harmonious with the colors of nearby buildings.
(4) Highly reflective and bright colors are prohibited.
(5) Any plumbing and heating vents penetrating the roof must be located at the rear of the building whenever possible, and stacks, vents and flashings must have a dark finish to match the color of the roof.
(6) All exposed foundations shall be finished consistent with the exterior siding material.
(7) Windows shall be of a quality that will withstand harsh weather conditions.

Section 5. Purpose and Discretion. The purpose of this Article in providing the Architectural Committee with the authority to approve or disapprove plans and specifications for all improvements constructed on the Parcels is to maintain the value of all Parcels and to protect all Owners against a diminution of value resulting from the construction of a building or other structure incompatible with the proper development of the Properties. The disapproval of such plans and specifications shall be in the sole discretion of the Architectural Committee and shall be based upon the following factors:

(1) Harmony of exterior design with the existing or proposed improvements to the Parcels.
(2) General quality in comparison with the existing improvements to the Parcels.
(3) Location in relation to surrounding improvements.
(4) Location in relation to topography.
(5) Changes in topography.
(6) Aesthetic considerations.

The Architectural Committee may establish and specify for any Parcel, prior to construction, standards and requirements relating to excavation, dirt and fill storage, digging, backfilling, etc. for utility trenches and building construction, the color and composition of roofing materials, the color and composition of bricks, stone or siding, and the style of architecture. Such standards and requirements may include, but not necessarily be limited to, the following: off-site storage of fill, dirt or construction debris; stockpiling of fill from utility trenches; backfilling utility trenches; and the general appearance of the buildings. Such standards and requirements may vary from Parcel to Parcel and may be imposed by the Architectural Committee in its sole discretion so as to minimize disruption of trees, tree roots, existing ground cover, or other natural features. Indiscriminate grading or trenching will be strictly forbidden to minimize harm to natural features which protect and enhance the beauty and privacy of the entire Properties and to encourage the aesthetic standards of the neighborhood.

Section 6. Approval Process. A decision regarding approval of building plans for a particular Parcel will be returned to the applicant in writing no later than thirty (30) days after receipt of complete plans by the Architectural Committee. In the event the Architectural Committee fails to approve or disapprove such plans and specifications within thirty (30) days after complete plans, in a form acceptable to the Architectural Committee, have been submitted to it, the applicant shall give by certified or registered mail written notice to the Architectural Committee stating that no action was taken for thirty (30) days and shall request immediate action within ten (10) days of such notice. If the Architectural Committee fails to approve or disapprove the plans within said ten (10) day period, then approval of said plans shall be deemed to have been given. The applicant shall agree in writing to all changes made to the building plans as mutually agreed by both the Architectural Committee and the applicant. Thereafter, no changes may be made to the plans without the express written approval of the Architectural Committee as set forth in this approval process. Within ten (10) days after the completion of construction of any improvement in the Properties, the Owner, builder or other agent for the Owner, shall give written notice to the Architectural Committee that the improvement is complete and ready for inspection. Within twenty (20) days after receipt of such notice, the Architectural Committee shall inspect the improvement and shall notify the Owner in writing as to any defects or deficiencies which are found. This response from the Architectural Committee shall include a statement as to the corrections which should be made to correct any such deficiencies so as to render the improvement in compliance with the approved plans and specifications. The Owner shall be given a reasonable period within which to correct such deficiencies. After being given a reasonable opportunity to do so, the Architectural Committee shall make such recommendations to the
Board of Directors as it deems necessary for enforcing compliance with the approved plans and specifications. In the event the Architectural Committee fails to inspect the improvement and notify the Owner in writing as to the defects within twenty (20) days after notice of completion, the improvement will be deemed in compliance with the plans and specifications previously approved.

ARTICLE VII

LAND USE AND BUILDING TYPE

No Parcel shall be used except for commercial and/or residential purposes and such other purposes set forth in this Declaration. The density and intensity of development of the Properties is controlled by the terms and conditions of the Springbrook Oaks Specific Plan, and any variance granted by the City of Newberg The Declarant shall assign development rights with each Parcel conveyed by the Declarant. The Owner of each Parcel shall develop and improve the Parcel in accordance with this Declaration, the Springbrook Oaks Specific Plan and any assignment of development rights by the Declarant.

ARTICLE VIII

BUILDING AND FENCE LOCATION

AND SIGHT RESTRICTIONS

Building locations shall be approved by the Architectural Committee, provided, however, no portion of any building shall be located on any Parcel: in violation of applicable set-back restrictions under the Springbrook Oaks Specific Plan unless by a variance approved by the City of Newberg and the Architectural Committee.

ARTICLE IX

NUISANCES

No noxious or offensive activity shall be carried on upon any Parcel or any Common Area, nor shall anything be done thereon which may be or may become an annoyance or nuisance to the neighborhood.

ARTICLE X

TEMPORARY STRUCTURES

No structure of a temporary character, trailer, basement, tent, shack, garage, barn, storage building, or other outbuilding shall be used on any Parcel at any time as a place of business either temporarily or permanently.

ARTICLE XI

SIGNS

No sign of any kind shall be displayed to the public view on any Parcel except such signage as approved by the Architectural Committee and except signs used by Declarant and its agents to advertise Parcels for sale.
Notwithstanding the foregoing, the Declarant shall have the right to use such signs as the Declarant deems appropriate to promote the sale of improved or unimproved Parcels.

ARTICLE XII

RADIO AND TELEVISION ANTENNA,

FENCING AND TANKS

No exterior radio, television or satellite-dish antenna may be installed on any portion of the Properties unless the installation, and the location, color and design of the antenna have been approved by the Architectural Committee. No fence shall be located on any Parcel unless the installation, color and design of the fencing have been approved by the Architectural Committee. No tank for the storage of fuel, water or other substance shall be placed or permitted to remain on any Parcel unless the tank is buried and the location of the tank is approved by the Architectural Committee.

ARTICLE XIII

MAIL BOXES

No mail box or paper box or other receptacle of any kind for use in the delivery of mail, newspapers, magazines or similar materials shall be erected or located on any Parcel. All mailboxes shall be located in clusters in areas designated by the Declarant or the Board of Directors.

ARTICLE XIV

EXTERIOR MAINTENANCE

Each Owner shall maintain the landscaping, including the trees, shrubs and grass within the boundaries of his Parcel, and the exterior of the building, including shutters, doors and windows, located on the Parcel in a neat and attractive condition. Each Owner shall maintain all glass in doors, sidelights and windows and replace the glass as necessary when cracked, broken or fogged. All personal property kept on a Parcel shall be either kept and maintained inside of a building or a proper storage facility or shall be stored at the rear of the building, provided, however, this provision shall not be construed to permit junk cars, old appliances or the like being kept anywhere on the Parcel, including in the front, on the side or to the rear of the Parcel.

Any personal property, if it is to be stored on the Parcel, is to be stored in a completely enclosed structure approved by the Architectural Committee. If an Owner shall fail to comply with the requirements of this Declaration, then upon vote of a majority of the Board of Directors and after not less than ten (10) days' notice to the Owner, the Association shall have the right (but not the obligation) to enter upon such Parcel and provide such maintenance or make such repairs or replacements as it deems necessary or appropriate, and the cost thereof shall be payable to the

Association by such Owner within ten (10) days after the delivery to the Owner of a demand for payment. Amounts due hereunder may be enforced and collected, together with interest at the maximum rate allowed by law, or eighteen percent (18%) per annum if no maximum limit is in effect, and attorneys' fees, in the manner assessments are enforced and collected under Article IV. For the purpose solely of performing the maintenance authorized by this paragraph, the Association's agents and employees shall have the right, after reasonable notice to the Owner, to enter upon any such Parcel between the hours of 7:00 a.m. and 6:00 p.m.

ARTICLE XV

ACCESS TO OTHER PROPERTY

Except for the Declarant, no Owner shall permit or otherwise authorize any portion of any Parcel to be utilized as an easement, roadway, driveway, street or other means or method of access, ingress or egress to areas or property not included within the Properties. The purpose of this provision is to preserve and protect the integrity of the exterior boundaries of the Properties, and to preclude and prohibit any break in those boundaries by any easement, roadway, driveway or street granted, permitted or otherwise created by any Owner other than the Declarant. The Declarant reserves the right to grant such easements or create such roadways upon land or Parcels owned by the Declarant as the Declarant, in the Declarant's sole discretion, determines necessary, appropriate or desirable.

ARTICLE XVI

GARBAGE AND REFUSE DISPOSAL

No Parcel shall be used, maintained, or allowed to become a dumping ground for scraps, litter, leaves, limbs or rubbish. Trash, garbage or other waste shall not be allowed to accumulate on any Parcel or other part of the Properties and shall not be kept except in sanitary containers located and installed in the manner approved by the Architectural Committee. All equipment for the storage or disposal of such material shall be kept in a clean and sanitary condition and shall not be visible from the street or from any private or common driveway except for those times designated for collection by the appropriate waste management and collection authority approved by the Board of Directors.

ARTICLE XVII

OUTSIDE LIGHTING

Floodlighting or any other outside lighting with high intensity, bright lamps is prohibited. Indirect and low level surface lighting is required.

ARTICLE XVIII

LANDSCAPING

Only native vegetation shall be used for landscaping. All landscaping shall be in compliance with the Oregon Department of Environmental Protection regulations. No native vegetation shall be removed from any Parcel except such removal as is reasonably necessary for the construction of improvements and landscaping as approved by the Architectural Committee. No significant vegetation shall be removed from any Parcel without the approval of the Architectural Committee. Only pesticides, herbicides and fertilizers that are consistent with the USDA-SCS Soil Pesticide Interaction Rating Guide will be used. Only pesticides that have a minimum potential for leaching or loss from runoff, and only chemicals with a half-life of seventy (70) days or less will be used. Fertilizers, pesticides, and herbicides which cannot be analyzed in a laboratory will not be applied on site. Spraying unauthorized chemicals shall render the Owner personally liable for any pollution created by said chemicals. Additions to the normal landscape such as birdbaths, statues, water and fish pools, benches, rock or brick borders, and any other such yard decorations are prohibited unless specifically approved by the Architectural Committee.

ARTICLE XIX

CONSTRUCTION ACTIVITIES

Grading and excavating work shall be contained on the building site. Backfilling of trees shall not be permitted. All building debris must be removed and building site kept clean during construction. No tree eight (8) inches in diameter or greater shall be cut without prior approval of the Architectural Committee.

In the event any violation of this Article occurs, all work shall cease until the Parcel is restored in a manner approved by the Architectural Committee. In the event an Owner cuts or removes a tree in violation of this Article, the Owner shall replace each tree improperly cut or removed with a tree of a size and type approved by the Architectural Committee and replant as necessary.

ARTICLE XX

MAINTENANCE OF STREETS AND ROADWAYS

The Association shall be responsible for maintenance, as defined herein, within the Properties. The Association shall be responsible for the maintenance of the private streets and parking lots and common areas within and to the Properties as follows:

A. The Association shall be solely responsible for the maintenance of the private streets within the Properties.
B. The Association shall share responsibility for the maintenance of the round-about at Hayes and Werth streets with the City of Newberg as follows:

* The Association will maintain the landscaping, landscape lighting (if installed)and the irrigation system, within the round-about.
* The City will assume responsibility for the costs of irrigation water and the electricity required for the irrigation system and landscape lighting.
* If by an act of nature, human vandalism or traffic accident, the landscape amenities within the round-about are significantly damaged, the cost of any necessary repairs will be the responsibility of the City of Newberg.

ARTICLE XXI

DECLARANT'S DEVELOPMENT RIGHTS

Nothing contained in this Declaration shall be interpreted or construed to prevent the Declarant, or contractors or subcontractors of the Declarant from doing or performing on all or any part of the Properties actually owned or controlled by the Declarant or upon the Common Areas, whatever the Declarant determines to be reasonably necessary or advisable in connection with the completion of the development of the Properties, including, without limitation:

A. Erecting, constructing and maintaining structures as may be reasonably necessary for the conduct of the Declarant's business of completing and establishing the Properties as a commercial development and disposing of the Parcels by sale, lease or otherwise;
B. Conducting the Declarant's business of completing and establishing the Properties as a commercial development and marketing of the Properties in Parcels;
C. Maintaining such sign or signs as may be reasonably necessary in connection with the sale and marketing of the Parcels;
D. Provided, however, that operations being conducted under subparagraphs A., B., and C. immediately above shall be permitted upon only those parts of the Properties owned or controlled by the Declarant and the Common Areas.

ARTICLE XXII

GENERAL PROVISIONS

Section 1. Enforcement. The Declarant, the Association, or any Owner, shall have the right to enforce, by any proceeding at law or in equity, all restrictions, conditions, covenants, reservations, liens and charges now or hereafter imposed by the provisions of this Declaration. The failure of the Declarant, the Association or any Owner to enforce any covenant or restriction herein contained shall in no event be deemed a waiver of the right to do so thereafter.

Section 2. Severability. Invalidation of any one of these covenants or restrictions by judgment or court order shall in no way affect any other provisions which shall remain in full force and effect.

Section 3. Annexation. Additional property and common areas may be annexed to the Properties by the Declarant. Any such annexation shall subject said land to these

covenants, conditions and restrictions, and the Owners of each Parcel in such annexed area shall have the same rights, benefits, obligations and duties as the Owners of the Parcels described in this Declaration.

Section 4. Amendment. The covenants and restrictions of this Declaration shall run with and bind the land, for a term of twenty (20) years from the date this Declaration is recorded, after which time they shall be automatically extended for successive periods of ten (10) years. This Declaration may be amended (i) with the consent of seventy-five percent (75%) of all Parcel Owners, together with (ii) the approval of the Board of Directors. The aforementioned consent of the Owners may be evidenced by a writing signed by the required number of Owners or by the affirmative vote of the required number of Owners at any regular or special meeting of the Association called and held in accordance with the Bylaws and evidenced by a certificate of the secretary or an assistant secretary of the corporation. No Amendment shall affect the priority of the lien of any first mortgage on any Parcel over the lien of the assessments provided for herein unless the holder of the mortgage joins in the execution of the amendment. Any amendment must be recorded.

IN WITNESS WHEREOF, the undersigned, being the Declarant herein, has caused this Declaration to be executed the day and year first above written.

WITNESSES: Springbrook Oak Meadows II Commercial Owners' Association,

WERTH FAMILY L.L.C. By: _____

Name:

Its: MANAGING MEMBER

Print or type name.

DEAN E. WERTH

OFFICIAL STAMP
STEVE WALTER DANIELS
NOTARY PUBLIC - OREGON
COMMISSION NO. 985649
MY COMMISSION EXPIRES MARCH 31, 2023

Print or type name.

STATE OF Oregon

COUNTY OF Yamhill

The foregoing instrument was acknowledged before me this 19 day of April, ~~2007~~ 2019 by

DEAN WERTH, as MEMBER of Springbrook Oak Meadows II Commercial Owners' Association, limited liability company, on behalf of the company. He or she is personally known to me or has produced PERSONALLY KNOWN as identification.

_____

STEVE W. DANIELS 14/15

Signature — ON PAGE 14 (PREVIOUS)
Print or type name.
NOTARY PUBLIC

Exhibit I: Pre-Application Conference Notes

Pre-Application Meeting Notes

September 9, 2018

Planning Department Notes

Process:

Design Review Section 15.220

Planning Fees - 0.6% of total project cost, $848 minimum, plus 5% technology fee.

Timeline – 30 days completeness check, 2 week agency review, decision in 4-6 weeks depending on workload, max review time generally no more than 2-3 months.

Next Step – Submit application and pay review fees

Applicant Questions – Planning Responses

a. Are there any open processes from from File No. CPTA18-0003

i. Fees, timelines, next step

Response: The process is complete! The only think that is outstanding is updating our online Development Code. I've provided a copy of the PC Order, City Council Ordinance and the DLCD PAPA notice.

b. Discuss setbacks and distance required between buildings

Response:

	Minimum	Maximum
Porch	10'	25'
Dwelling	15'	25' (without porch)
Garage or carport	20'	none
Interior (side and back yards) (RP base zone district)	8'	n/a

- The front of a garage may not be closer to the property line than the front of the house unless each front on different streets.

https://www.newbergoregon.gov/sites/default/files/fileattachments/planning/page/4406/20150220142903332.pdf or do a google search on Springbrook Oaks Specific Plan, it should be the first link that pops up.

Staggered Front setbacks of at least two (2) feet shall be established for attached homes. No two attached dwelling units with the same setback shall be located closer than every two residences on any street frontage.

c. Discuss building height limits – all one-story buildings proposed

Response: Maximum building height is 50 feet (RP District). Garages, rowhouse and townhouse type buildings (Design Standards).

d. Discuss landscaping % requirements

Response: 30% (see Springbrook Oaks design standards), Also Chapter 15.420.

e. Discuss vegetation removal

Response: The City does not have an urban forestry program. Existing trees should be noted on existing conditions map.

f. Discuss specific screening

Response: Parking lot, loading area or drive aisle from a street require to provide partial screening from the street (15.420.010.B.3.c. and "g"). Also, 15.220.

g. Signage – Section 15.435

Response: Submit typical with application. Sign permitting is done by a separate review. **Major freestanding (15.435.050)** provides for 1 square foot per foot of, up to a maximum of 100 square feet. Linear frontage on site is about 113 feet.

h. Trash – contact, services under contract (garbage, recycle glass, compost) review approach

Response: Constructed of brick, concrete block or other similar products. Waste Management, trash, recycle, compost or yard. Requires secondary landscape buffer on three sides of enclosure.

i. Ground equipment, screening

Response: Yes ground equipment must be screened. 15.220.030.B.9

j. Roof equipment, screening

Response: Yes, roof equipment must be screened. 15.220.030.B.9

4.

b. Should we approach this as a single project or a Concept Master Plan?

Response: It is up to the applicant. For circulation purposes it would probably be better to approach it as one development instead of breaking up the duplex part from the apartments.

b. (second) Are there bicycle parking requirements for the community building?

Response: the NDC requires 1 bicycle parking space per every 4 multifamily dwelling units.

Engineering Department Responses

Street: Providence Drive is a Major Collector. Information regarding existing right-of-way and cross-sections can be seen below:

Roadway	Functional Classification	Existing Right-of-way	Existing Pavement Width	Minimum Right-of-way	Minimum Pavement Width	Typical Cross-Section (per Transportation System Plan)
Providence Dr	**Major Collector** (57-feet to 80-feet)	Approx. 60-feet		60-feet For typical section per TSP.	36-feet	• 1-foot from back of walk to right-of-way • 5-foot sidewalk • 5.5-foot planter* • 0.5-foot curb • 6-foot bike lane • 12-foot travel lane • 12-foot travel lane • 6-foot bike lane • 0.5-foot curb • 5.5-foot planter* • 5-foot sidewalk • 1-foot from back of walk to right-of-way

*5-foot minimum per NMC 15.505.030(G)(8)

If more than $30,000 of improvements are made to the property, street improvements can be required, see NMC 12.05.090.

The curb-to-curb cross-section of Providence Drive had already been constructed. The applicant will be responsible for any damage done to the roadway during construction, as well as the installation of the planter strip and sidewalk. It appears that sufficient right-of-way exists however that will need to be confirmed and the applicant with be required to dedicate any additional right-of-way as necessary.

The applicant will be required to verify that existing street lighting meets the City's standard, or propose new/additional street lighting to meet the standards established in the Public Works Design and Construction Standards.

Wastewater: The City's GIS shows a there is an existing 8-inch wastewater line in Providence Drive.

The applicant is responsible for verifying existing capacity is adequate for proposed development, an evaluation of the Fernwood Lift Station will be required. Please see the City's recently adopted Wastewater Master Plan: https://www.newbergoregon.gov/engineering/page/sewerage-master-plan-update

Water: The City's GIS system shows there is an existing 24-inch transmission water line that runs parallel to Providence Drive. The City's preference would be for no new connections to the existing 24-inch transmission water line. A water lateral and meter will need to be provided to the development, and fire flow will need to be verified.

The proposed water lines through the development shall be private see Section 3 of the City's Public Works Design and Construction Standards. Applicant to verify existing capacity is adequate for proposed development.

Any onsite proposed fire hydrants will require public access easements for maintenance.

Stormwater: The City's GIS system shows an 18-inch public stormwater line in Providence Drive. There is also a 24-inch stormwater line along the west side of the property, and a 15-inch stormwater line that connects to the public line in Providence Drive near the east end of the property.

If more than 500 square feet of new impervious area is created on either partitioned property it will require stormwater treatment. Water quality and detention need to be provided per the Public Works Design and Construction Standards, Section 4. A Stormwater Report will need to include a downstream analysis.

The applicant asked questions about underground detention. The applicant will need to demonstrate they've evaluated the stormwater facility hierarchy and why the City's preferred facility types can't be used.

Erosion and Sedimentation Control (ESC): The site is over 1-acre, a 1200-C permit will be required.

Other Utilities: There are no existing overhead utilities (except for existing street lighting) along the property frontage. Any new connection the property will need to be undergrounded. See NMC 15.430.010 for exception provisions.

Applicant Questions:

2. Utilities

    a. Identify public water access and any required improvements

    b. Identify sewer access and any required improvements

    c. Identify storm drainage lines access or on-site management.

See information provided.

4. Site Design Review

a. Will a traffic study be required?

Traffic Analysis. A traffic analysis shall be submitted for any project that generates in excess of 40 trips per p.m. peak hour. A traffic analysis may be required for projects below the 40 trips per p.m. peak hour threshold when the development's location or traffic characteristics could affect traffic safety, access management, street capacity or a known traffic problem or deficiency. The traffic analysis shall be scoped in conjunction with the city and any other applicable roadway authority.

Narrative will need to be provided that addresses whether or not the 40 trips per p.m. peak hour threshold is met. If the threshold is met than a traffic study will be required.

c. May site design review run concurrently with building plans?

Yes. Public Improvement Permit has to be issued before the Building Permit.

d. Will right-of-way improvements be required?

Yes. Cross-sectional information provided above.

e. Are there limitations on when site work and grading can occur in respect to time of year?

This will be dictated by the applicant's 1200-C Permit.

f. Discuss access to site based on preliminary site plan.

Preliminary site plan was not provided.

g. Will design review be required for all or part of the development?

Engineering is primarily concerned with public improvements, however they'll review site plans to develop SDC fees.

Notes:

Yamhill County handles the electrical review/permitting

The Public Improvement Permit is required to be issued before the building permit.

Exhibit J: Lot Consolidation Documents

After Recording Return to:

Lot 5 of Oak Meadows II Subdivision

Deed Restriction Declaration

1. Declarant hereby declares that this Deed Restriction shall run with the land and be binding upon its successors, assigns and heirs.

2. Declarant declares that the Properties described in Exhibit "A" and Exhibit "B" are hereby consolidated as one lot for planning and zoning purposes under the City of Newberg planning and zoning regulations. The consolidated properties are described in Exhibit "C" and shown on Exhibit "D" attached.

3. Declarant declares that the properties shall not be conveyed separate and apart from any other portion, unless and until the Property is divided in accordance with the regulations of the City of Newberg.

   IN WITNESS WHEREOF, Declarant has executed this Deed Restriction as of the date first above written.

DECLARANT: **Friendsview Manor,**
dba Friendsview Retirement Community
an Oregon nonprofit corporation

By:_____
G. Michael Gougler, Chief Operating Officer

STATE OF OREGON)
) ss.
County of _____)

This instrument was acknowledged before me on _____, 2019, by G. Michael Gougler, Chief Operating Officer, **Friendsview Manor, dba Friendsview Retirement Community** an Oregon nonprofit corporation

EXHIBIT "A"

PARCEL 2 OF PARTITION PLAT 2017-06, A DULY RECORDED PLAT IN THE RECORDS OF YAMHILL COUNTY, STATE OF OREGON.

EXHIBIT "B"

LOT 2 OF THE PLAT "OAK MEADOWS II", A DULY RECORDED PLAT IN THE RECORDS OF YAMHILL COUNTY, STATE OF OREGON.

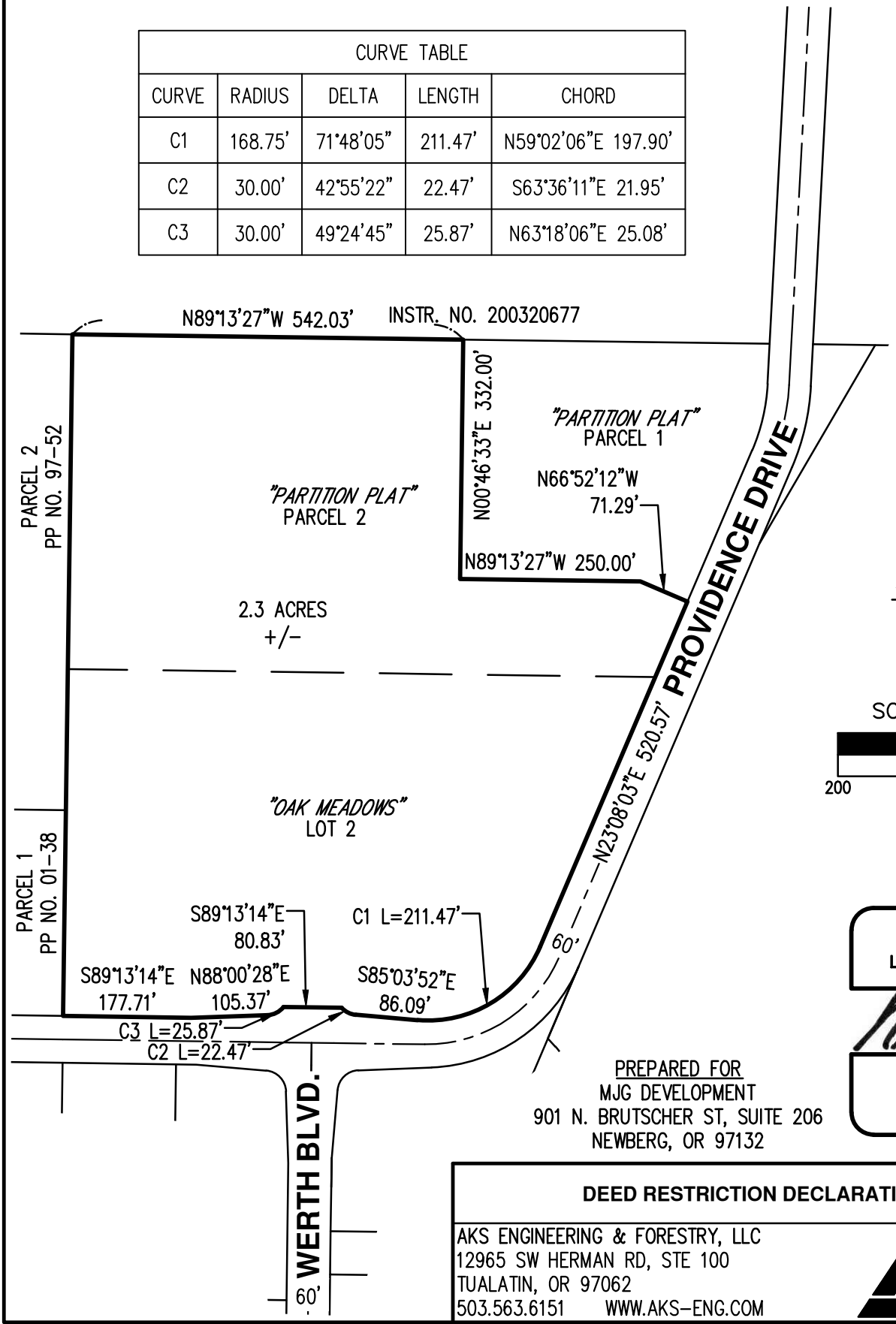
EXHIBIT "C"

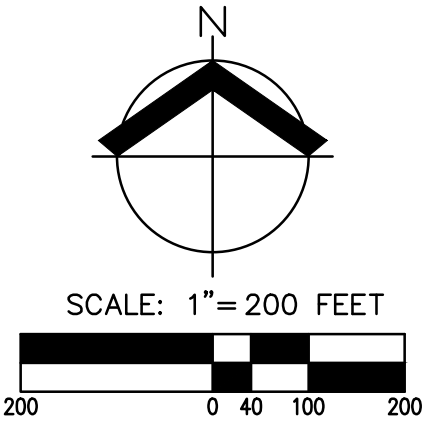
PARCEL 2 OF PARTITION PLAT 2017-06, A DULY RECORDED PLAT IN THE RECORDS OF YAMHILL COUNTY, STATE OF OREGON AND LOT 2 OF THE PLAT OF "OAK MEADOWS II", A DULY RECORDED PLAT IN THE RECORDS OF YAMHILL COUNTY, STATE OF OREGON.

EXHIBIT D

A TRACT OF LAND LOCATED IN THE SE 1/4 OF SEC. 16 AND THE NE 1/4 OF SECTION 21, T3S, R2W, W.M., CITY OF NEWBERG, YAMHILL COUNTY, OREGON

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	168.75'	71°48'05"	211.47'	N59°02'06"E 197.90'
C2	30.00'	42°55'22"	22.47'	S63°36'11"E 21.95'
C3	30.00'	49°24'45"	25.87'	N63°18'06"E 25.08'





07/29/2019

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JANUARY 9, 2007
NICK WHITE
70652LS
RENEWS: 6/30/20

PREPARED FOR
MJG DEVELOPMENT
901 N. BRUTSCHER ST, SUITE 206
NEWBERG, OR 97132

DEED RESTRICTION DECLARATION

EXHIBIT D

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151 WWW.AKS-ENG.COM

DRWN: KJM
CHKD: NSW
AKS JOB: 5680