

**OPERATING AGREEMENT
OF
NORTHSTAR COMMUNITIES LLC
An Oregon Limited Liability Company**

This Operating Agreement (this "Agreement") is made and entered into effective June __, 2017 (the "Effective Date"), by and among **Eric Lee Meurer, as Trustee of the Eric Lee Meurer Revocable Living Trust dated July 5, 2012**, and **Karl Ivanov** (the "Members").

SECTION 1. THE LIMITED LIABILITY COMPANY

1.1 **Formation.** As of the Effective Date, the Members formed an Oregon limited liability company under the name NORTHSTAR COMMUNITIES LLC, on the terms and conditions set forth in this Agreement and pursuant to the Oregon Limited Liability Company Act (the "LLC Act"). On May 5, 2017, the Members filed Articles of Organization for the Company with the Corporation Division of the Oregon Secretary of State's office. The rights and obligations of the parties are as provided in the LLC Act except as otherwise expressly provided in this Agreement.

1.2 **Name.** The business of the Company will be conducted under the name NORTHSTAR COMMUNITIES LLC.

1.3 **Purpose.** The purpose of the Company is to purchase property in Salem, Oregon and to develop it and construct improvements on it for residential and related purposes, along with any other related purposes allowed under Oregon law.

1.4 **Office.** The Company maintains its principal business office in Oregon at 9550 SE Clackamas Rd, Clackamas, OR 97015.

1.5 **Registered Agent.** Karl Ivanov will be the Company's initial registered agent in Oregon and the registered office will be at 9550 SE Clackamas Rd, Clackamas, OR 97015.

1.6 **Term.** The term of the Company commenced on the Effective Date and will continue until terminated as provided in this Agreement.

SECTION 2. CLASSES OF INTEREST-MEMBERS CAPITALIZATION-CAPITAL ACCOUNTS

2.1 **Classes of Interests.** Membership of the Company shall consist of membership interests, established as a percentage of the initial total capital contributed upon the formation of the Company by each member as provided below in Section 2.2. Each member shall have the rights and privileges set out herein.

2.2 **Members Names and Interests.** The names and addresses of the initial Members of the LLC, their initial capital contributions, and their initial percentage interests are:

Name	Address	Contribution	Percentage Interest
Eric Lee Meurer, as Trustee of the Eric Lee Meurer Revocable Living Trust dated July 5, 2012	517 Lakefair Place N. Keizer, OR 97303	\$ <u>2,000,000.00</u>	20%
Karl Ivanov	9550 SE Clackamas Rd, Clackamas, OR 97015	\$ <u>3,000,000.00</u>	80%

2.3 Other Business Of Members. Any Member may engage independently, or with others, in other business and investment ventures of every nature and description and shall have no obligation to account to the Company for such business or investments or for business or investment opportunities.

2.4 Additional Members. Additional Members shall not be admitted except upon the unanimous vote of all Members. Regardless of the foregoing, a person shall not become an additional Member unless and until such person becomes a party to this Operating Agreement as a Member by signing an Admission Agreement, and execute such documents and instruments as the Members may reasonably request as being necessary or appropriate to confirm such person as Member in the Company, and to evidence such person's agreement to be bound by the terms and conditions hereof.

No additional Members shall be entitled to any retroactive allocation of losses, income or expense deductions incurred by the Company. The Members may at the time an additional Member is admitted close the Company books (as though the Company's tax year had ended) or make pro rata allocations of loss, income and expense deductions to additional Member for that portion of the Company's tax year in which such Member was admitted in accordance with such provisions of Section 706(d) of the Code and the Regulations promulgated thereunder.

2.5 Additional Capital Contributions. Additional capital contributions shall be accepted from existing Members only if the Members unanimously approve after a call for a vote on additional capital contributions by any Member. If the Members do so, the Members shall be required to make such additional capital contributions on a pro rata basis in accordance with their ownership interest. However, upon approval of all Members, the Members may decide to make any future capital contributions on a basis other than pro-rata in accordance with the initial percentages of ownership, in which case the ownership percentages shall change in proportion to total contributed capital.

2.6 No Interest on Capital Contributions. No interest shall be paid on capital contributions.

2.7 **Capital Accounts.** An individual capital account will be maintained for each Member. Each Member's capital account shall be (i) credited with all capital contributions by such Member and the Member's distributive share of all income and gain (including any income exempt from Federal income tax); and (ii) charged with the amount of all distributions of such Member and the Member's distributive share of losses and deductions. Capital accounts shall be maintained in accordance with Federal Income tax accounting principles, as set forth in Treasury Regulation Section 1.704-1(b)(2)(4) or any successor provision.

SECTION 3. ALLOCATION OF PROFITS AND LOSSES; DISTRIBUTIONS

3.1 **Allocations of Income and Loss.** All items of income, gain, loss, deduction, and credit will be allocated among the Members pro rata in proportion to their respective percentage interests.

3.2 **Distributions.** No distribution may be made to any Member if, after giving effect to the distribution, in the judgment of the Members either (a) the Company would not be able to pay its debts as they become due in the ordinary course of business or (b) the fair value of the total assets of the Company would not at least equal its total liabilities. Subject to the foregoing limitation, the Company will make distributions, including draws, to Members at such times and in such amounts as the Members mutually agree. All distributions will be allocated among the Members pro rata in proportion to their respective percentage interests.

SECTION 4. MANAGEMENT OF COMPANY; POWERS AND DUTIES OF MEMBERS

4.1 **Management of Company Business.** The Company is a member-managed limited liability company. The management and control of the Company and its business and affairs are vested exclusively in the Members. The Company does not have "managers," as that term is used in the LLC Act. The Members, or either of them individually, have all the rights and powers that may be possessed by a member in a member-managed limited liability company pursuant to the LLC Act and those rights and powers that are otherwise conferred by law or are necessary, advisable, or convenient to the discharge of the Members' duties under this Agreement and to the management of the Business and affairs of the Company. Without limiting the generality of the foregoing, and subject to the limitations set forth in Section 4.2 of this Agreement, the Members, or either of them individually, have the following rights and powers (which they may exercise at the cost, expense, and risk of the Company):

- (a) To expend the funds of the Company in furtherance of the Company's business;
- (b) To perform all acts necessary to manage and operate the Business, including engaging such persons as the Members deem advisable to manage the Business;
- (c) To execute, deliver, and perform on behalf of and in the name of the Company any and all agreements and documents deemed necessary or desirable by the Members to carry out the Business, including any lease, deed, easement, bill of sale, mortgage, trust deed, security agreement, contract of sale, or other document conveying, leasing, or granting a security interest in the interest of the Company in any of its assets, or any part thereof, whether held in the Company's name, the name of a Member, or otherwise. No other signature or signatures are required; and

(d) To borrow or raise money on behalf of the Company in the Company's name or in the name of the Members for the benefit of the Company and, from time to time, to draw, make, accept, endorse, execute, and issue promissory notes, drafts, checks, and other negotiable or nonnegotiable instruments and evidences of indebtedness, and to secure the payment thereof by mortgage, security agreement, pledge, or conveyance or assignment in trust of the whole or any part of the assets of the Company, including contract rights.

4.2 Limitation on Authority of Individual Member. Notwithstanding any other provision of this Agreement or the LLC Act, no Member is authorized to take any of the following actions without the prior express approval or consent of all the Members:

- (a) Amend the Company's Articles of Organization or this Agreement;
- (b) Sell or otherwise dispose of any assets owned by the Company other than in the ordinary course of business;
- (c) Dissolve the Company;
- (d) Merge the Company with another entity or convert the Company into a different type of entity;
- (e) Admit a new Member;
- (f) Borrow money or otherwise incur indebtedness in the name of the Company or sign an agreement obligating the Company to pay in excess of \$5,000 in a single transaction or in a series of related transactions; or
- (g) Require an additional capital contribution.

4.3 Duties of the Members. The Members will manage and control the Company's business and affairs to the best of their ability and will use their best efforts to carry out the Business. The Members will devote such time to the business and affairs of the Company as is reasonable, necessary, or appropriate. Whenever reasonably requested by any Member, the Members will render a full and complete accounting of all dealings and transactions relating to the Business. Each Member will have a fiduciary responsibility for the safekeeping and use of all funds and assets of the Company, whether or not in his or her immediate possession or control, and the Members may not employ or permit another person to use those funds or assets in any manner except for the exclusive benefit of the Company.

4.4 Limitation on Liability of Members. Subject to the restrictions in Section 4.6, no Member will have any liability to the Company or to the other Member for any loss suffered by the Company or the other Member that arises out of any action or inaction of the Member as long as the Member's conduct was in good faith and the Member reasonably believed that the conduct was in the best interests of the Company.

4.5 Indemnification of Members. Each Member will be indemnified by the Company against any losses, judgments, liabilities, expenses, and amounts paid in settlement of any claims sustained against the Company or against the Member in connection with the Company, as long as the Member's conduct was in good faith and the Member reasonably believed that the conduct was in the best interests of the Company. The satisfaction of any indemnification and any saving harmless will be out of, and limited to, Company assets, and no Member will have any personal liability on account of such indemnification.

4.6 **Restrictions.** No Member will be relieved of liability pursuant to Section 4.4 or be entitled to indemnification pursuant to Section 4.5 for:

- (a) Any breach of the Member's duty of loyalty to the Company;
- (b) Any act or omission not in good faith that involves intentional misconduct or a knowing violation of law;
- (c) Any unlawful distribution to the Members in violation of ORS 63.235; or
- (d) Any transaction from which the Member derives an improper personal benefit.

4.7 **Other Business.** During the term of this Agreement, neither Member may carry on any other business in competition with this Company. Subject to this restriction, nothing in this Agreement will be deemed to restrict in any way the freedom of either Member to conduct any other business or activity whatsoever without any accountability to the Company or the other Member.

4.8 **Loans.** Any Member may, but will not be obligated to, make loans to the Company to cover the Company's cash requirements, and those loans will bear interest at a rate mutually determined by the Members.

4.9 **Dealing with the Company.** Either Member may deal with the Company by providing or receiving property and services to or from the Company, and may receive from others or the Company normal profits, compensation, commissions, or other income incident to those dealings, but the Member must first obtain written consent from the other Member for those dealings.

4.10 **Liability of the Members for Company Obligation.** Except to the limited extent provided in the LLC Act, neither Member will have any personal liability for any Company obligation, expense, or liability. The Members will not, without their consent, be required to make any capital contribution beyond their mutually agreed on capital contributions as expressly described in Section 2.1.

4.11 **Construction Contract.** Member Karl Ivanov agrees to provide a construction contract to the Company with an entity affiliated with Karl Ivanov for construction of infrastructure for a residential subdivision the Company intends to develop and construct, with such contract to be provided on an actual cost basis, without charge for overhead or profit.

SECTION 5. COMPENSATION AND REIMBURSEMENT OF EXPENSES

5.1 **Organization Expenses.** The Company will pay all expenses incurred in connection with organization of the Company.

5.2 **Other Company Expenses.** The Members may charge the Company for their actual out-of-pocket expenses incurred in connection with the Company's Business. Any amounts paid by a Member to satisfy obligations of the Company will be treated as loans to the Company under Section 4.9.

SECTION 6. BOOKS OF ACCOUNT; ACCOUNTING REPORTS; TAX RETURNS; FISCAL YEAR; BANKING

6.1 **Books of Account.** The Company's books and records, a register showing the names of the Members and the respective interests held by each of them, and this Agreement will be maintained at the principal office of the Company. The Members will have access to those books and records at all reasonable times. The Members will keep and maintain books and records of the operations of the Company that are appropriate and adequate for the Company's Business and for carrying out this Agreement.

6.2 **Accounting Reports.** The Members will be furnished with copies of internally prepared financial statements of the Company.

6.3 **Tax Returns.** The Members will cause all federal and state income tax returns for the Company to be prepared and timely filed with the appropriate authorities as necessary. As soon as practicable after the end of each taxable year, each Member will be furnished with a statement that may be used by the Member in preparing the Member's income tax returns, showing the amounts of any distributions, gains, profits, losses, or credits allocated to or against the Member during the fiscal year.

6.4 **Fiscal Year; Taxable Year.** The fiscal year and the taxable year of the Company is the calendar year.

6.5 **Banking.** All funds of the Company must be deposited in a separate bank account or in an account or accounts of a savings and loan association in the Company's name as the Members determine. Those funds may be withdrawn from the account or accounts on the signature of the person or persons who are designated by the Members.

SECTION 7. TRANSFER OF MEMBERSHIP INTEREST; VOLUNTARY WITHDRAWAL

7.1 **Transfer Prohibited.** No Member may assign, pledge, mortgage, sell, or otherwise transfer ("Transfer") any part of his or her interest in the Company, and no Member has any right to substitute an assignee or any other person in the Member's place, and no assignee or any other person may be admitted to the rights of either Member without the prior written unanimous consent of all Members. This consent may be given or withheld in the absolute discretion of the Members. The Members are entering into this Agreement to carry on the Business in mutual reliance on the close personal relationship between the Members and all agree that the foregoing restriction on the Members' ability to transfer their interest in the Company is reasonable under the circumstances.

7.2 **Voluntary Withdrawal.** A Member may withdraw from the Company at any time for any reason or for no reason but only on six months' prior written notice to the other Members. For purposes of this Agreement, the death of a Member will be treated as a withdrawal

by the deceased Member and the six-month notice requirement will not apply. On withdrawal by a Member, the other Members will have the right, in their sole discretion, to elect to:

- (a) Dissolve the Company as provided in Section 9;
- (b) Continue the Company and treat the withdrawing Member or his or her representative as an assignee of the economic rights and benefits of the membership interest of the withdrawing Member, in which case the withdrawing Member will cease to have any voting or other management rights under this Agreement with respect to such membership interest and neither the other Member nor the Company will have any obligation to purchase or redeem the membership interest of or otherwise make any liquidating distribution to the withdrawing Member before the dissolution of the Company; or
- (c) Continue the Company (with or without the admission of another member to retain the status of the Company as a partnership for income tax purposes) and cause the Company to purchase the membership interest of the withdrawing Member or his or her representative for the price and subject to the payment terms described in Section 8.

SECTION 8. PURCHASE PRICE AND PAYMENT TERMS

8.1 Purchase Price. On election by the other Member to purchase the membership interest of a withdrawing Member pursuant to Section 7.2(c), the purchase price will be the amount of the withdrawing Member's total unreturned capital contribution, increased by interest at a commercially reasonable annual interest rate, calculated from the date of contribution.

8.2 Payment. The purchase price determined as provided in Section 8.1 will be payable, together with interest at the rate determined in 8.1 above, in 120 substantially equal monthly installments of principal and interest commencing no later than 180 days after the effective date of the withdrawal. The Company may prepay the purchase price at any time without penalty. The deferred purchase price will be an unsecured obligation of the Company.

SECTION 9. DISSOLUTION AND WINDING UP OF THE COMPANY

9.1 Dissolution. The Company will be dissolved on the occurrence of any of the following events:

- (a) The agreement of all Members;
- (b) The election of the nonwithdrawing Member as described in Section 7.2(a); or
- (c) Otherwise by operation of law.

9.2 Winding Up. On dissolution of the Company, the Members will take full account of the Company's assets and liabilities, and the assets will be liquidated as promptly as is consistent with obtaining their fair value, and the proceeds, to the extent sufficient to pay the Company's obligations with respect to the liquidation, will be applied and distributed in the following order:

- (a) To payment and discharge of the expenses of liquidation and of all the Company's debts, including debts and liabilities owed to the Members;
- (b) To the Members to the extent of, and allocated among them pro rata in proportion to, their respective previously unreturned capital contributions; and

(c) To the Members and allocated among them pro rata in proportion to their respective percentage membership interests.

SECTION 10. SPECIAL COVENANTS

10.1 **Single Purpose Entity.** The Company is organized solely for the purpose of (i) acquiring, developing, owning, and resale of real property, (ii) entering into any borrowing arrangement required for acquisition and the documents related thereto, and (iii) engaging in any activity that is incidental, necessary, or appropriate to accomplish the foregoing; The Company has not, since the date of its formation, and shall not:

(a) engage in any business or activity other than the ownership, development and resale of Property, and activities incidental thereto;

(b) acquire or own any material assets other than (i) the Property, and (ii) such incidental Personal Property as may be necessary for the operation of the Property;

(c) merge into or consolidate with any person or entity or dissolve, terminate or liquidate in whole or in part, transfer, or otherwise dispose of all or substantially all of its assets or change its legal structure;

(d) fail to preserve its existence as an entity duly organized, validly existing and in good standing (if applicable) under the laws of the jurisdiction of its organization or formation, and qualification to do business in the state where the Property is located, if applicable, or without the prior written consent of Lender, amend, modify, terminate or fail to comply with the provisions of, Articles of Organization, Operating Agreement or similar organization documents, as the case may be;

(e) own, form or acquire any subsidiary or make any investment in, any person or entity;

(f) comingle its assets with the assets of any of its Members, general partners, affiliates, principals, or of any other person or entity nor fail to hold all of its assets in its own name;

(g) incur any debt, secured or unsecured, direct or contingent (including guaranteeing any obligation), other than the debt except the borrowing for construction of the building and related improvements, except for trade payables in the ordinary course of its business of owning and operating the Property ("Trade Payable Debt"), provided that such Trade Payable Debt is not evidenced by a note and is paid when due;

(h) become insolvent or fail to pay its debts and liabilities from its assets as the same shall become due;

(i) fail to maintain its records, books of account and bank accounts separate and apart from those of the Members, partners, principals, and affiliates of the Company, the affiliates of a Member, partner or principal of Company, and any other person or entity or fail to maintain such books and records in the ordinary course of its business;

(j) enter into any contract or agreement with any Member, general partner, principal or affiliate of Company, guarantor or indemnitor or any Member, general partner, principal or affiliate thereof, except upon terms and conditions that are intrinsically fair, commercially reasonable and substantially similar to those that would be available on an arms-length basis with third parties other than any Member, general partner, principal or affiliate of Company, guarantor or indemnitor, or any Member, general partner, principal or affiliate thereof;

(k) guaranty or become obligated for the debts of any other person or entity or hold out its credit as being able to satisfy the debts of another person or entity;

(l) make any loans or advances to any third party, including any Member, general partner, principal or affiliate of Company, or any Member, general partner, principal or affiliate thereof, nor buy or hold evidence of indebtedness issued by any other person or entity (other than cash or investment grade securities);

(m) fail to file its own tax returns, nor file a consolidated federal income tax return with any other equity, unless required by law; or

(n) fail to hold itself out to the public as a legal entity separate and distinct from any other entity or person, fail to conduct its business solely in its own name, mislead others as to the identity with which such other party is transacting business, or suggest that Company is responsible for the debts of any third party (including any Member, general partner, principal or affiliate of Company, or any Member, general partner, principal or affiliate thereof).

SECTION 11. MISCELLANEOUS PROVISIONS

11.1 Amendments. Amendments to this Agreement may be proposed by any Member. A proposed amendment will be adopted and become effective as an amendment only on the written approval of all the Members.

11.2 Governing Law. This Agreement and the rights and obligations of the parties under it are governed by and interpreted in accordance with the laws of the state of Oregon (without regard to principles of conflicts of law).

11.3 Waiver of Action for Partition. Each of the Members irrevocably waives, during the existence of the Company and during the period of its winding up and liquidation following any event of dissolution, any right that the Member may have to maintain any action for partition with respect to any of the assets of the Company.

11.4 Counterparts. This Agreement may be executed in any number of counterparts with the same effect as if all parties had signed the same counterpart. All counterparts will be construed together and will constitute one and the same Agreement. A single counterpart may be introduced as evidence of this Agreement.

11.5 Parties in Interest. Subject to the limitations on transfers of membership interests set forth in Section 7 of this Agreement, each and every covenant, term, provision, and agreement is binding on and inures to the benefit of the parties and their heirs, successors, assigns, and legal representatives.

11.6 Entire Agreement; Modification. This Agreement constitutes the entire understanding and agreement between the Members with respect to the subject matter of this Agreement. There are no agreements, understandings, restrictions, representations, or warranties between the Members other than those in this Agreement or referred to or provided for in this Agreement. No modification or amendment of any provision of this Agreement will be binding on any Member unless it is in writing and signed by all the Members.

11.7 **Attorney Fees.** In the event of any suit or action to enforce or interpret any provision of this Agreement (or that is based on this Agreement), the prevailing party is entitled to recover, in addition to other costs, reasonable expert and attorney fees in connection with the suit, action, or arbitration, and in any appeals. The determination of who is the prevailing party and the amount of reasonable attorney fees to be paid to the prevailing party will be decided by the court or courts, including any appellate courts, in which the matter is tried, heard, or decided.

11.8 **Further Effect.** The parties agree to execute other documents reasonably necessary to further effect and evidence the terms of this Agreement, as long as the terms and provisions of the other documents are fully consistent with the terms of this Agreement.

11.9 **Severability.** If any term or provision of this Agreement is held to be void or unenforceable, that term or provision will be severed from this Agreement, the balance of the Agreement will survive, and the balance of this Agreement will be reasonably construed to carry out the intent of the parties as evidenced by the terms of this Agreement.

11.10 **Captions.** The captions used in this Agreement are for the convenience of the parties only and will not be interpreted to enlarge, contract, or alter the terms and provisions of this Agreement.

11.11 **Notices.** All notices required to be given by this Agreement will be in writing and will be effective when actually delivered or, if mailed, when deposited as certified mail, postage prepaid, directed to the addresses first shown above for each Member or to any other address that a Member may specify by notice given in conformance with these provisions to the other Members.

The parties enter into this Agreement as of the date first written above. Separate counterpart signature pages follow.

NORTHSTAR COMMUNITIES LLC
OPERATING AGREEMENT
MEMBER SIGNATURE PAGE

Members:

 TRUSTEE

Eric Lee Meurer, as Trustee of the Eric Lee Meurer
Revocable Living Trust dated July 5, 2012


Karl Ivanov

Design Exception Request

2014 City of Salem's Public Works Administrative Rules Chapter 109, Division 004

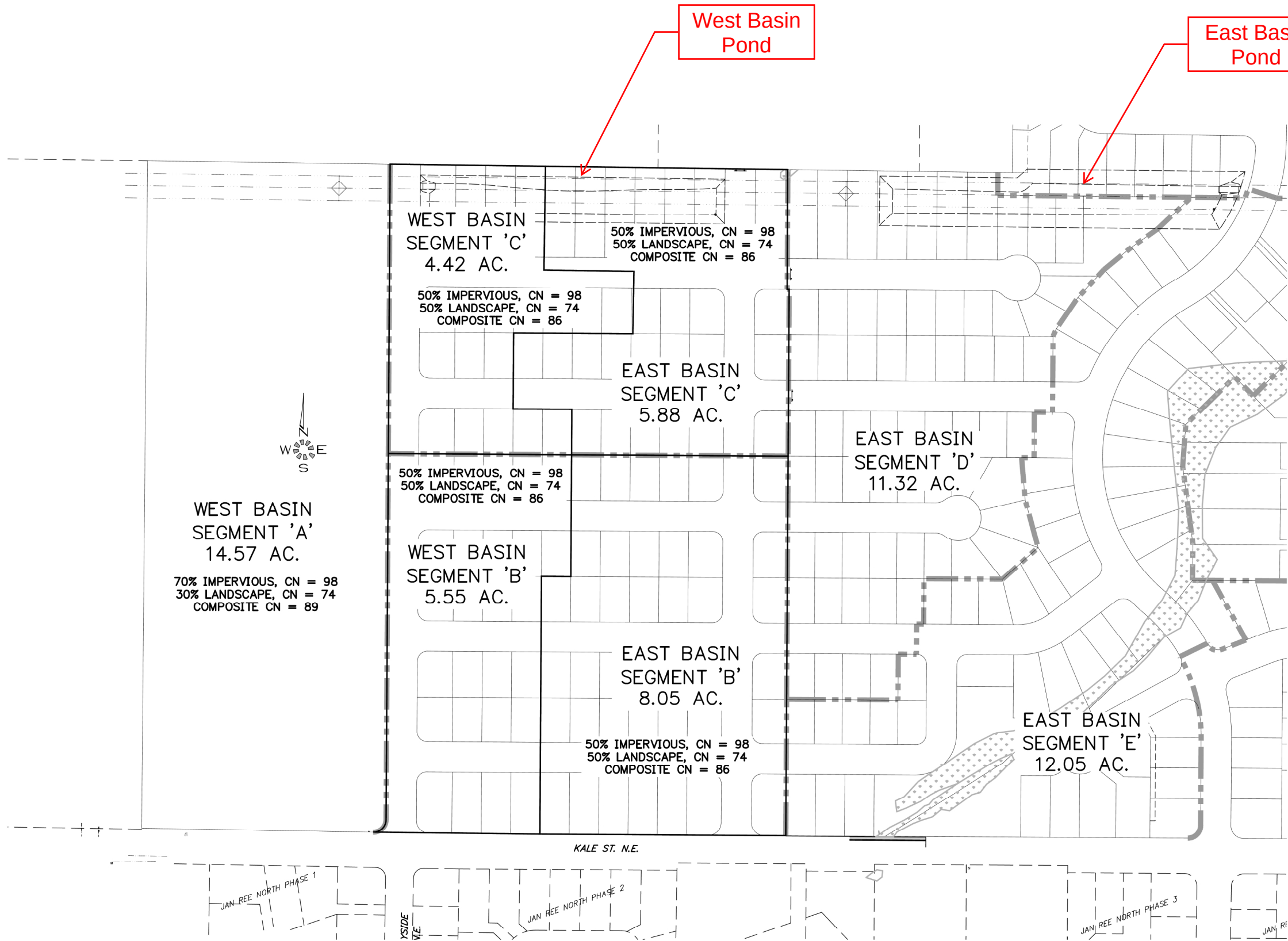
Northstar – Segment A

19-122763-DR & 19-122762-RP



Division	Section	Exception	Reason	City Engineer Approval Initials	Date
Stormwater System	4E.7	Discretionary Approach	The Northstar Segments A through E site has been designed with regional detention and water quality facilities. Detention has been designed per the 2002 Public Works Design Standards with 2007 revisions. The 50-year event stormwater runoff will be controlled for the developed condition to the pre-developed 5-year storm event. In order to meet the hydraulic capacity requirement outlined in Condition 11 of the landuse decision, runoff from half the 2-year storm event under post developed conditions will be released at a pre-developed flow rate for the same event. 2002 City standards did not require water quality treatment but has been designed for the development in the form of a regional system to be constructed during Segment E. Because of impacts to wetlands, half of the 2-year storm event was used to size water quality treatment facilities. The 24-hour rainfall depth is 1.1 inches. This meets Oregon DEQ and National Marine Fisheries SLOPE V requirements. Because of Class 3 Plan Review and Design Review requirements for Segment A, water flow rates were adjusted to meet the Class 3 requirements and current City standards. The current water quality design storm event is 1.38 inches per 24-hour period. Attached to this exception request is the supporting analysis demonstrating design water quality facilities can treat the addition flow from Segment A using current standards.	APPROVED On Behalf of Brian Martin, PE, City Engineer James Lofton, PE 12/16/2019	

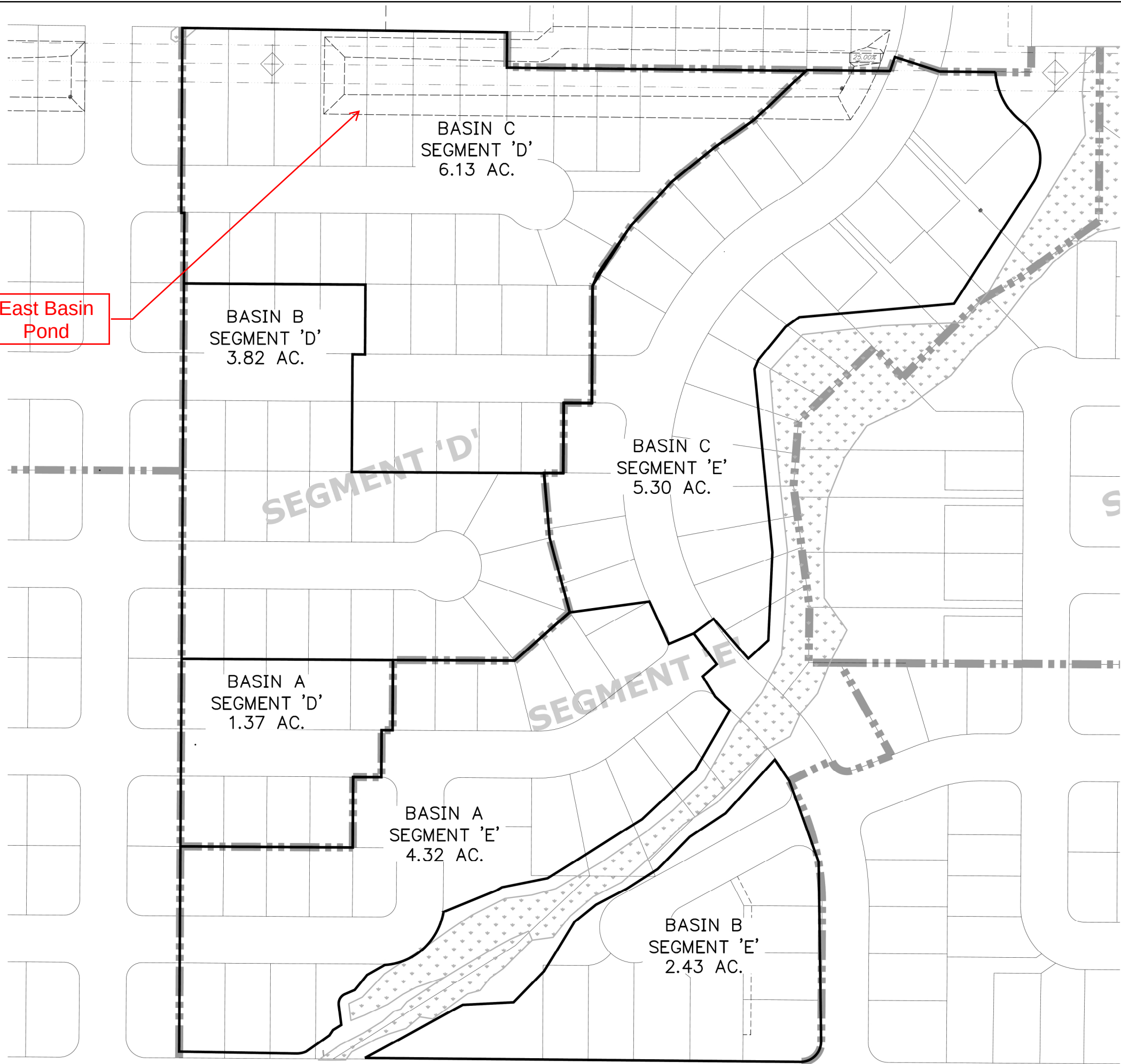
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ALL DEVELOPED BASINS ARE:
50% IMPERVIOUS, CN = 98
50% LANDSCAPE = 74
COMPOSITE CN = 86

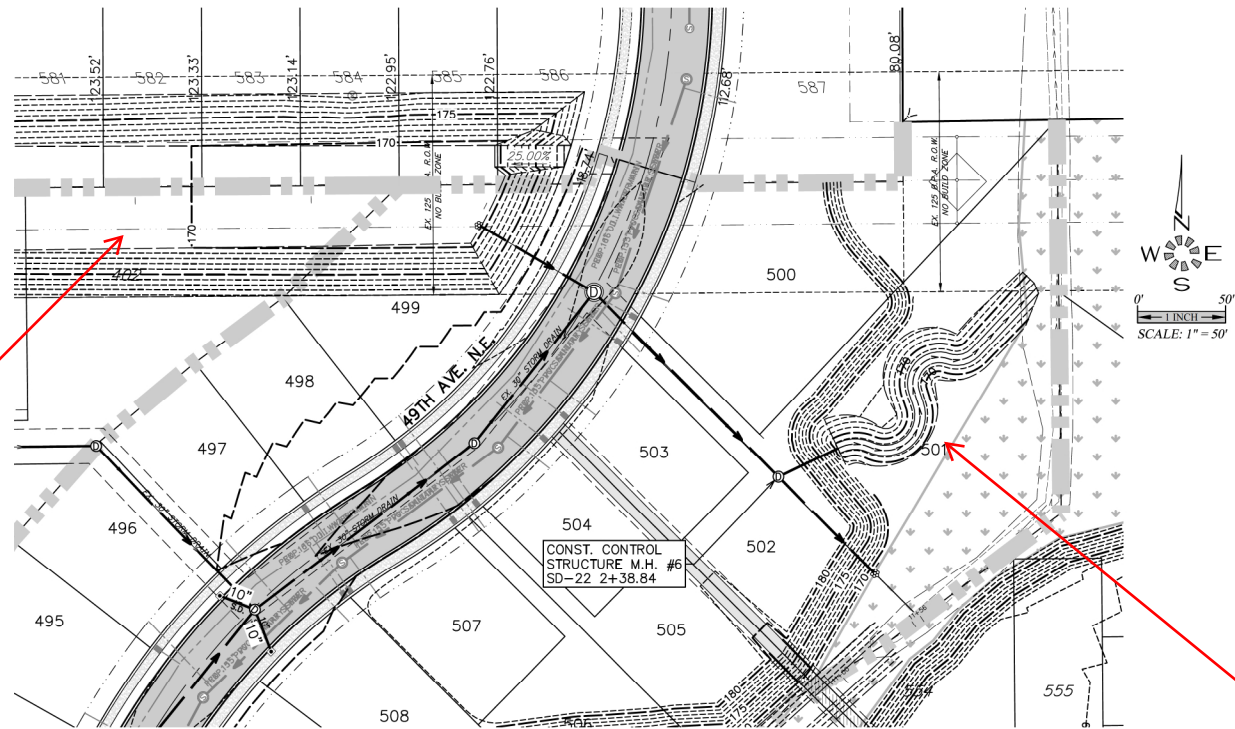
East Basin
Pond



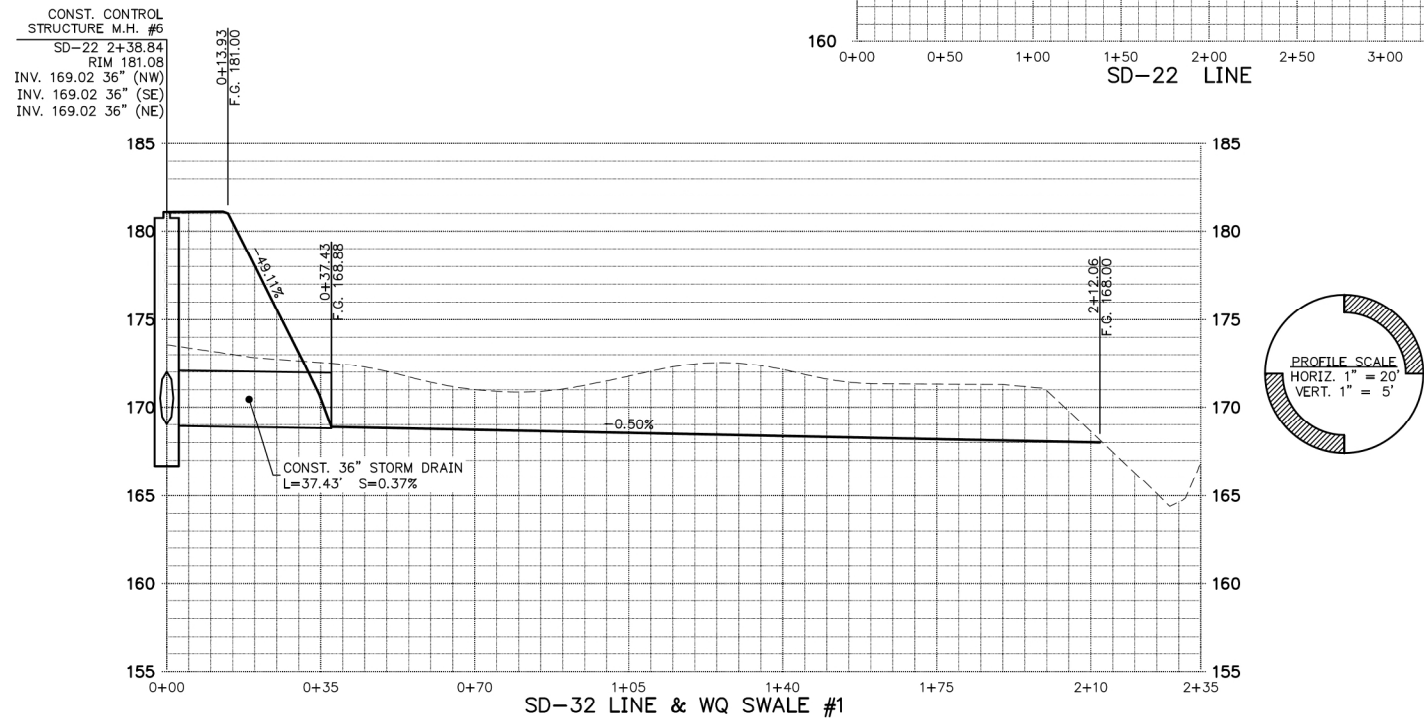
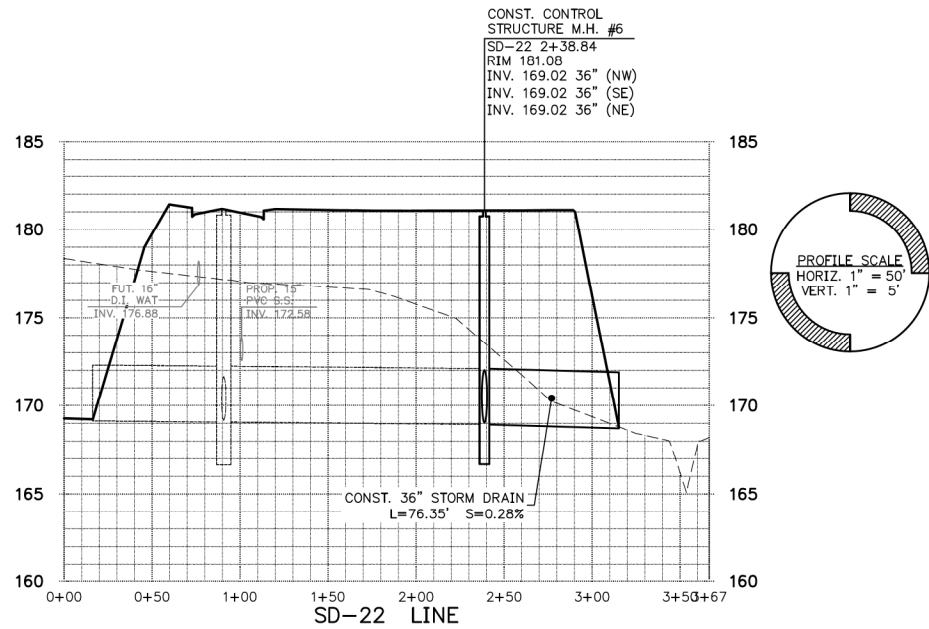
 ENGINEERING SERVICES, INC. 1155 1/2th ST. S.E. SALEM, OR 97302 PH: (503) 353 - 9227 FAX: (503) 364-1260 www.mtengineering.net office@mtengineering.net	
DEVELOPED CONDITIONS BASIN MAP	
NORTHSTAR SEGMENT 'D-E'	
MULTI/TECH ENGINEERING EXEMPT FROM LIABILITY IF NOT STAMPED APPROVED	
NOT FOR CONSTRUCTION UNLESS STAMPED APPROVED HERE	
NO CHANGES, MODIFICATIONS OR REPRODUCTIONS TO BE MADE WITHOUT WRITTEN AUTHORIZATION FROM THE DESIGN ENGINEER. DIMENSIONS & NOTES TAKE PRECEDENCE OVER GRAPHICAL REPRESENTATION.	
Design: M.W.H. Drawn: C.F.S. ProjMgt: J.J.G. Date: AUG. 2019 Scale: AS SHOWN As-Built: _____	
JOB # 6610	

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East Basin
Pond



Water Quality
Swale



Drawing is NOT to scale

STORM DRAIN
IMPROVEMENTS

NORTHSTAR
SEGMENT 'E'

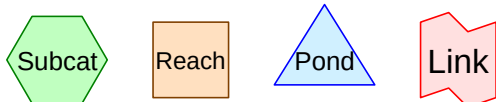
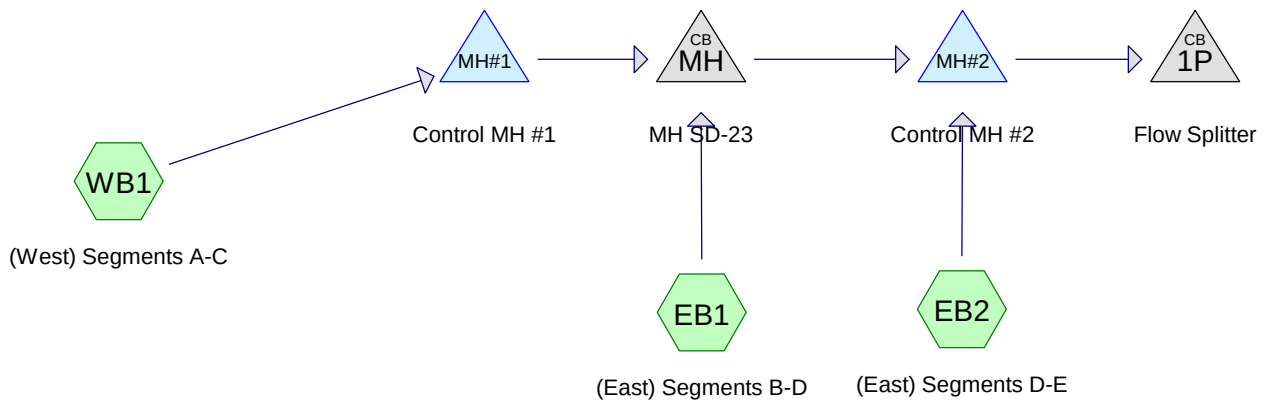
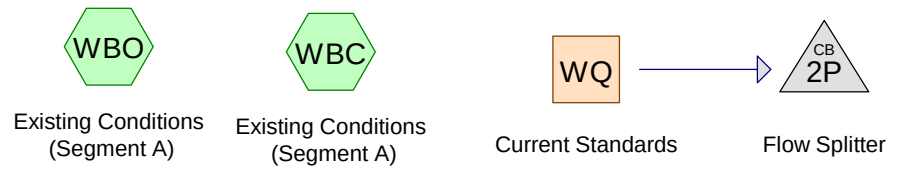
MULTI/TECH ENGINEERING EXEMPT FROM
LIABILITY IF NOT STAMPED APPROVED
NOT FOR
CONSTRUCTION
UNLESS STAMPED
APPROVED HERE

NO CHANGES, MODIFICATIONS
OR REPRODUCTIONS TO BE
MADE WITHOUT THE WRITTEN
AUTHORIZATION FROM THE
DESIGN ENGINEER.
DIMENSIONS & NOTES TAKE
PRECEDENCE OVER
GRAPHICAL REPRESENTATION.

Design: M.D.G.
Drawn: C.F.S.
Checked: J.J.G.
Date: OCT. 2019
Scale: AS SHOWN
As-Built: _____

REGISTERED PROFESSIONAL
ENGINEER
MARK D. GARY
JULY 14, 1978
EXPIRES: 06-30-2021

JOB # 6876



Water quality

Prepared by Multitech Engineering Services, Inc.

HydroCAD® 10.00-17 s/n 09412 © 2016 HydroCAD Software Solutions LLC

Type IA 24-hr Half of 2 year Rainfall=1.10"

Printed 12/12/2019

Summary for Subcatchment WBO: Existing Conditions (Segment A)

Runoff = 0.11 cfs @ 19.39 hrs, Volume= 5,295 cf, Depth= 0.10"

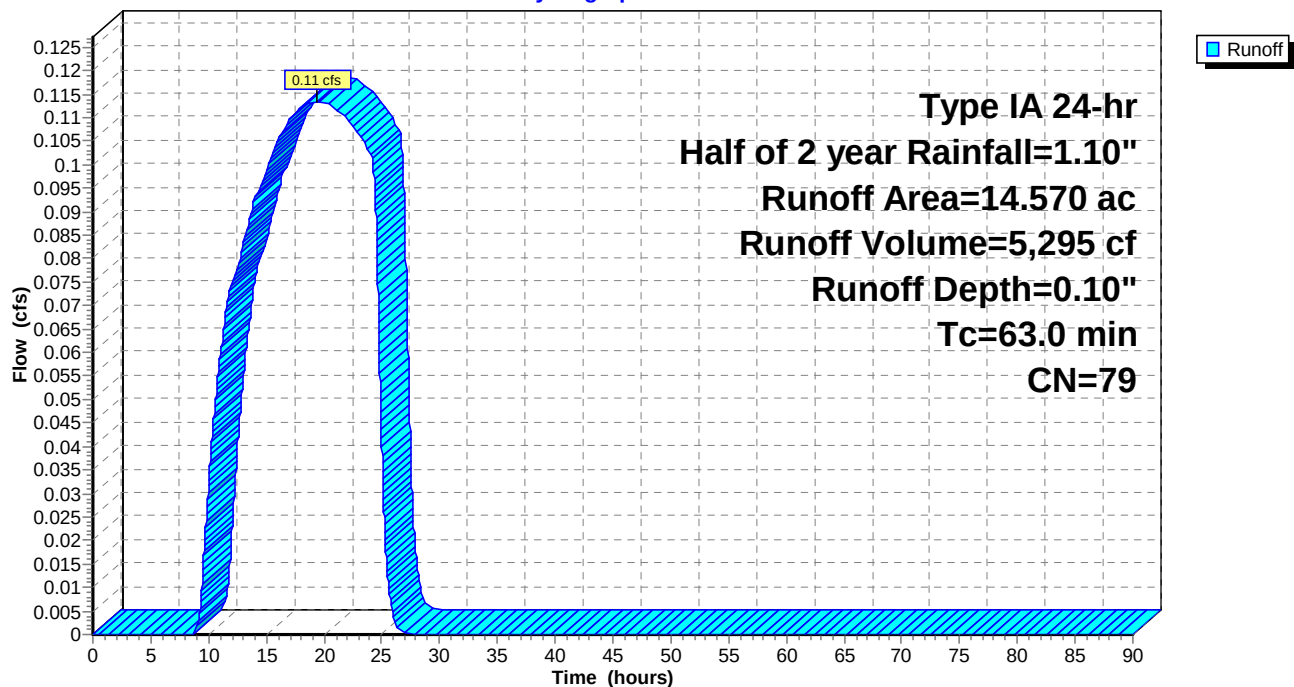
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-90.00 hrs, dt= 0.01 hrs
Type IA 24-hr Half of 2 year Rainfall=1.10"

Area (ac)	CN	Description
14.570	79	Pasture/grassland/range, Fair, HSG C
14.570	79	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.0					Direct Entry, TR-55 Worksheet in Appendix C

Subcatchment WBO: Existing Conditions (Segment A)

Hydrograph



Water quality

Prepared by Multitech Engineering Services, Inc.

HydroCAD® 10.00-17 s/n 09412 © 2016 HydroCAD Software Solutions LLC

Type IA 24-hr WQ Rainfall=1.38"

Printed 12/12/2019

Summary for Subcatchment WBC: Existing Conditions (Segment A)

Runoff = 0.20 cfs @ 17.57 hrs, Volume= 10,855 cf, Depth= 0.21"

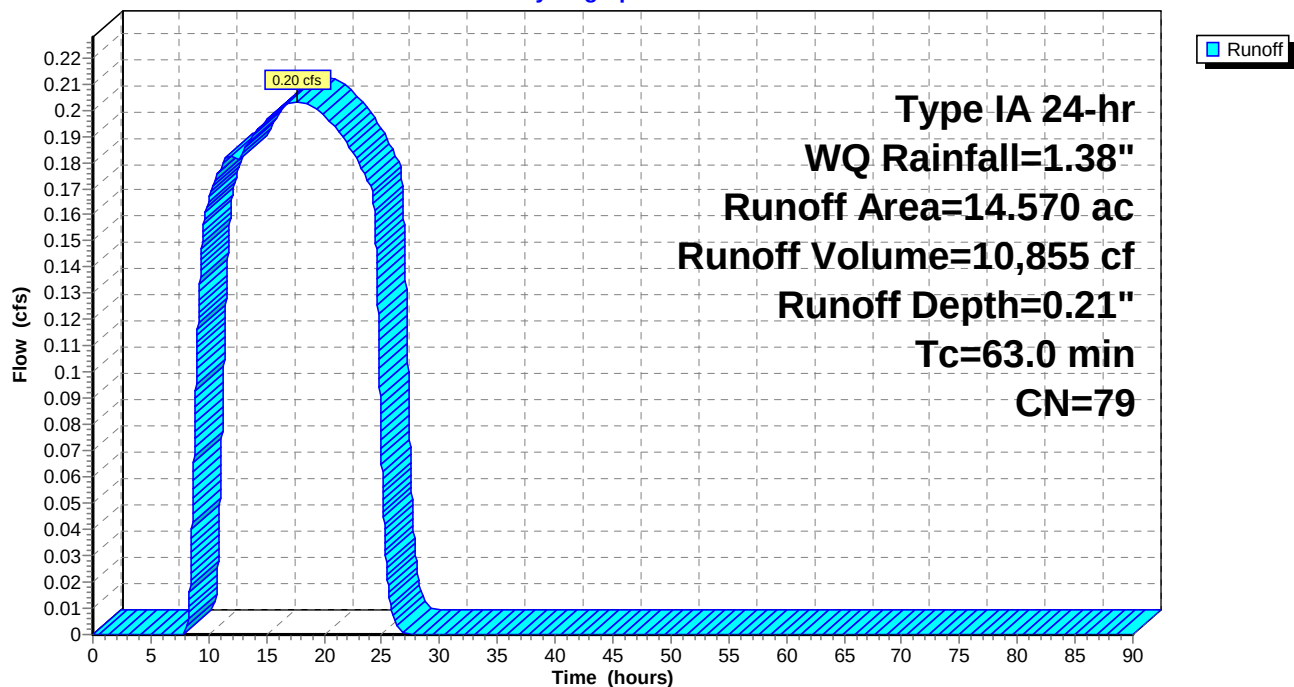
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-90.00 hrs, dt= 0.01 hrs
Type IA 24-hr WQ Rainfall=1.38"

Area (ac)	CN	Description
14.570	79	Pasture/grassland/range, Fair, HSG C
14.570	79	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.0					Direct Entry, TR-55 Worksheet in Appendix C

Subcatchment WBC: Existing Conditions (Segment A)

Hydrograph



Flow Differential

0.20 cfs - 0.11 cfs = 0.09 cfs

Water quality

Type IA 24-hr Half of 2 year Rainfall=1.10"

Prepared by Multitech Engineering Services, Inc.

Printed 12/12/2019

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Summary for Pond MH#2: Control MH #2

Inflow Area = 2,340,043 sf, 55.45% Impervious, Inflow Depth > 0.27" for Half of 2 year event
 Inflow = 0.96 cfs @ 8.10 hrs, Volume= 53,126 cf
 Outflow = 0.23 cfs @ 24.21 hrs, Volume= 52,685 cf, Atten= 76%, Lag= 966.3 min
 Primary = 0.23 cfs @ 24.21 hrs, Volume= 52,685 cf

Routing by Stor-Ind method, Time Span= 0.00-90.00 hrs, dt= 0.01 hrs
 Peak Elev= 170.97' @ 24.21 hrs Surf.Area= 0 sf Storage= 20,323 cf
 Flood Elev= 176.50' Surf.Area= 0 sf Storage= 272,789 cf

Plug-Flow detention time= 846.3 min calculated for 52,685 cf (99% of inflow)
 Center-of-Mass det. time= 817.2 min (2,693.9 - 1,876.7)

Volume	Invert	Avail.Storage	Storage Description
#1	169.50'	272,789 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
169.50	0
170.00	3,659
170.50	10,530
171.00	20,862
171.50	34,425
172.00	50,980
172.50	70,460
173.00	91,846
173.50	114,330
174.00	137,921
174.50	162,627
175.00	188,457
175.50	215,422
176.00	243,529
176.50	272,789

Device	Routing	Invert	Outlet Devices
#1	Primary	169.15'	36.0" Round 36" Pipe L= 150.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 169.15' / 169.02' S= 0.0009 ' / Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	169.15'	2.6" Vert. Orifice #1 C= 0.600
#3	Device 1	171.00'	13.0" Vert. Orifice #2 C= 0.600
#4	Device 1	175.50'	36.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.23 cfs @ 24.21 hrs HW=170.97' (Free Discharge)

↑ **1=36" Pipe** (Passes 0.23 cfs of 12.77 cfs potential flow)
 ↑ **2=Orifice #1** (Orifice Controls 0.23 cfs @ 6.31 fps)
 ↑ **3=Orifice #2** (Controls 0.00 cfs)
 ↑ **4=Overflow** (Controls 0.00 cfs)

Water quality

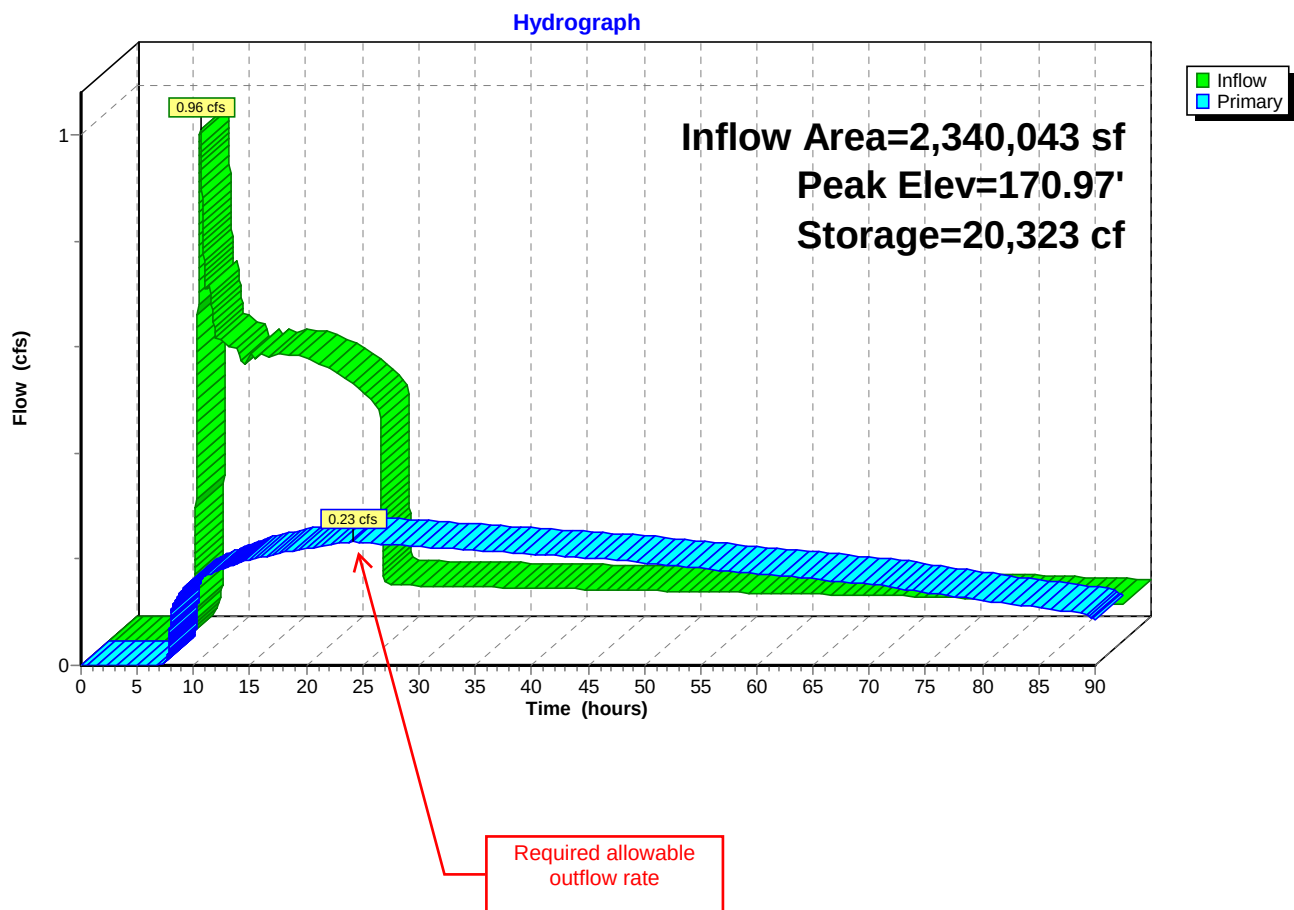
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Type IA 24-hr Half of 2 year Rainfall=1.10"

Printed 12/12/2019

Pond MH#2: Control MH #2



Water quality

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Type IA 24-hr Half of 2 year Rainfall=1.10"

Printed 12/12/2019

Summary for Pond 1P: Flow Splitter

Inflow Area = 2,340,043 sf, 55.45% Impervious, Inflow Depth > 0.27" for Half of 2 year event
Inflow = 0.23 cfs @ 24.21 hrs, Volume= 52,685 cf
Outflow = 0.23 cfs @ 24.21 hrs, Volume= 52,685 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.23 cfs @ 24.21 hrs, Volume= 52,685 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-90.00 hrs, dt= 0.01 hrs

Peak Elev= 169.30' @ 24.21 hrs

Flood Elev= 181.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	169.02'	12.0" Round Culvert L= 37.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 169.02' / 168.88' S= 0.0037 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	169.35'	36.0" Round Culvert L= 76.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 169.35' / 168.80' S= 0.0072 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

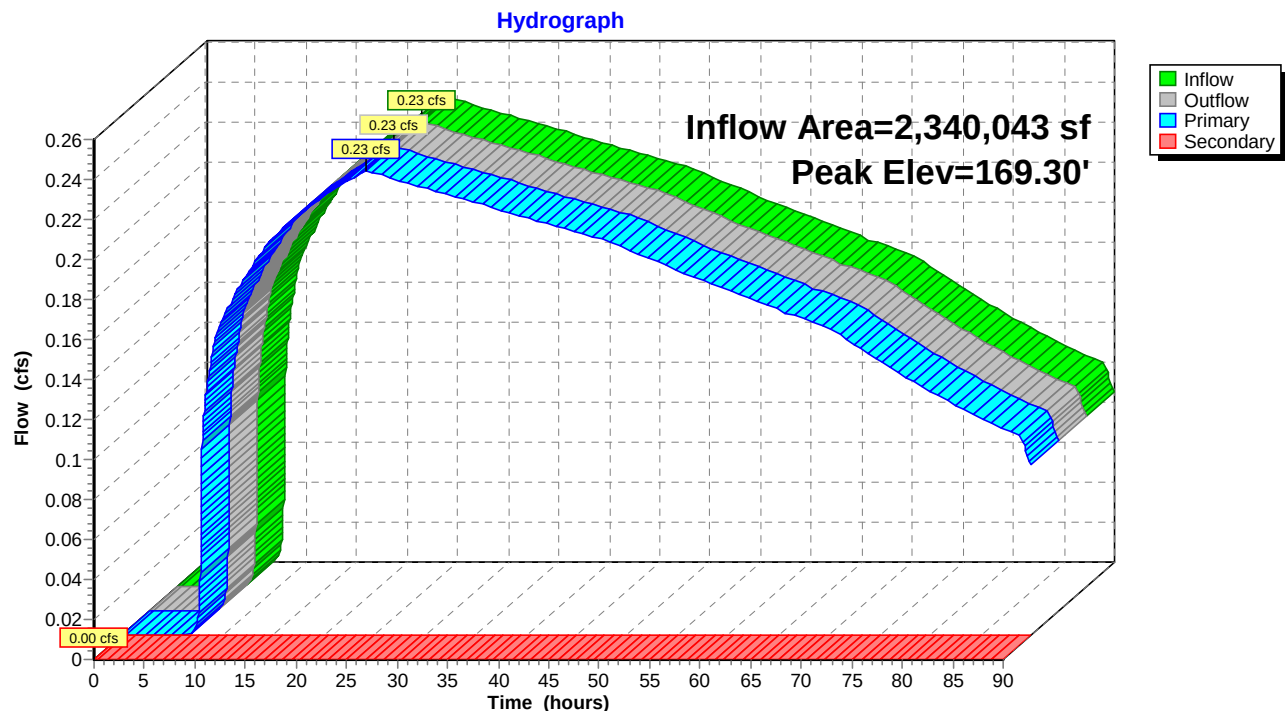
Primary OutFlow Max=0.23 cfs @ 24.21 hrs HW=169.30' (Free Discharge)

↑**1=Culvert** (Barrel Controls 0.23 cfs @ 1.85 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=169.02' (Free Discharge)

↑**2=Culvert** (Controls 0.00 cfs)

Pond 1P: Flow Splitter



Water quality

Prepared by Multitech Engineering Services, Inc.

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Type IA 24-hr WQ Rainfall=1.38"

Printed 12/12/2019

Summary for Reach WQ: Current Standards

Inflow = 0.32 cfs @ 0.00 hrs, Volume= 103,692 cf, Incl. 0.32 cfs Base Flow
Outflow = 0.32 cfs @ 1.03 hrs, Volume= 103,639 cf, Atten= 0%, Lag= 61.8 min

Routing by Stor-Ind method, Time Span= 0.00-90.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.03 fps, Min. Travel Time= 2.4 min

Avg. Velocity= 1.03 fps, Avg. Travel Time= 2.4 min

Peak Storage= 46 cf @ 1.03 hrs

Average Depth at Peak Storage= 0.27'

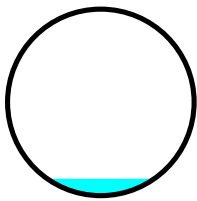
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 19.64 cfs

36.0" Round Pipe

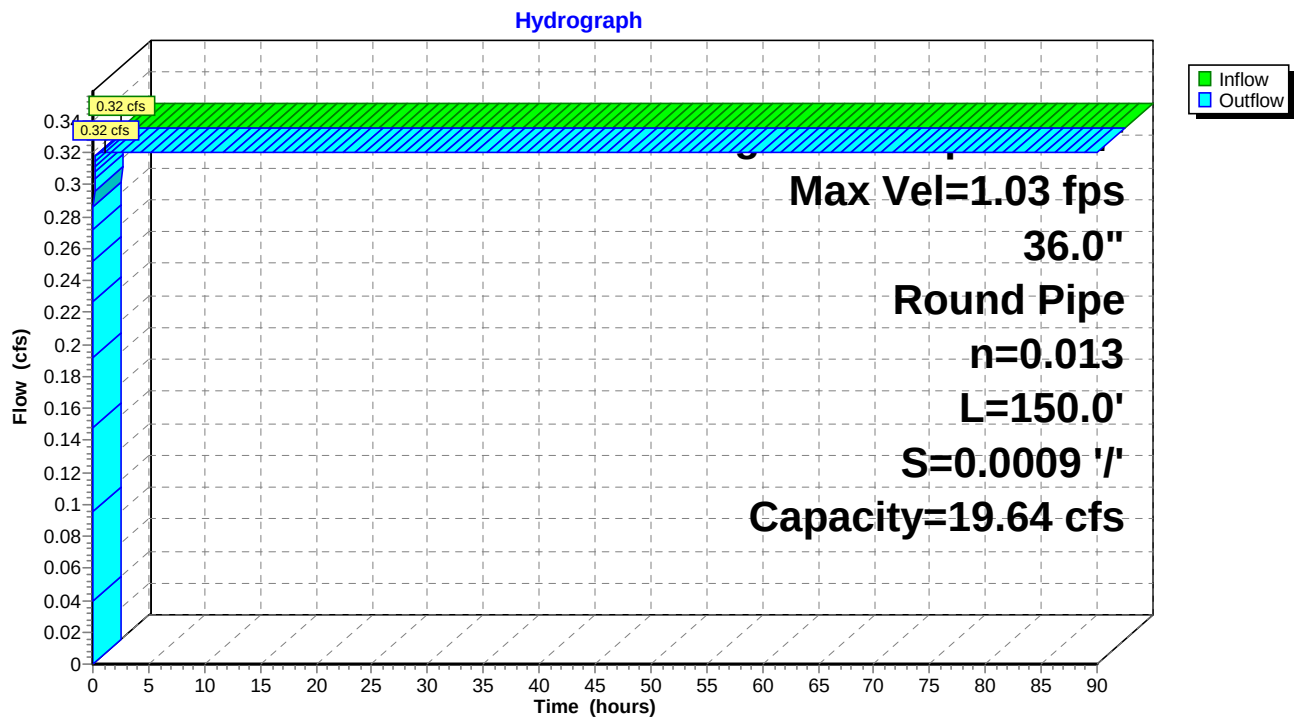
n= 0.013

Length= 150.0' Slope= 0.0009 '/'

Inlet Invert= 169.15', Outlet Invert= 169.02'



Reach WQ: Current Standards



Adjusted WQ Flow Rate

0.09 cfs + 0.23 cfs = 0.32 cfs

Water quality

Prepared by Multitech Engineering Services, Inc.

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Type IA 24-hr WQ Rainfall=1.38"

Printed 12/12/2019

Summary for Pond 2P: Flow Splitter

Inflow	=	0.32 cfs @	1.03 hrs,	Volume=	103,639 cf	
Outflow	=	0.32 cfs @	1.06 hrs,	Volume=	103,639 cf,	Atten= 0%, Lag= 1.8 min
Primary	=	0.32 cfs @	1.06 hrs,	Volume=	103,300 cf	
Secondary	=	0.00 cfs @	1.06 hrs,	Volume=	340 cf	

Routing by Stor-Ind method, Time Span= 0.00-90.00 hrs, dt= 0.01 hrs

Peak Elev= 169.36' @ 0.87 hrs

Flood Elev= 181.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	169.02'	12.0" Round Culvert L= 37.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 169.02' / 168.88' S= 0.0037 ' / Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	169.35'	36.0" Round Culvert L= 76.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 169.35' / 168.80' S= 0.0072 ' / Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

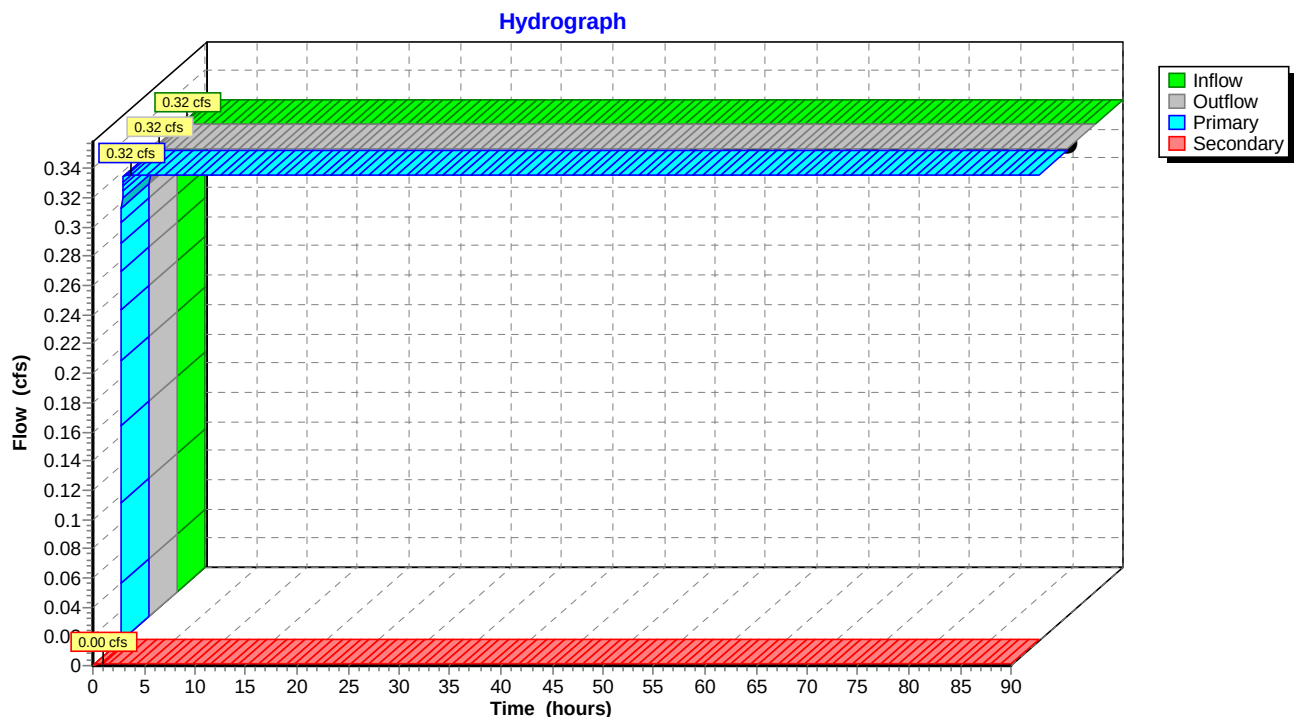
Primary OutFlow Max=0.32 cfs @ 1.06 hrs HW=169.36' (Free Discharge)

↑**1=Culvert** (Barrel Controls 0.32 cfs @ 2.04 fps)

Secondary OutFlow Max=0.00 cfs @ 1.06 hrs HW=169.36' (Free Discharge)

↑**2=Culvert** (Barrel Controls 0.00 cfs @ 0.22 fps)

Pond 2P: Flow Splitter



WQ Analysis Swale #1 Adjusted



Type: Trapezoidal

Define...

Side Slope 1 (Z1): 3.0 H : 1V

Side Slope 2 (Z2): 3.0 H : 1V

Channel Width (B): 5.0 (ft)

Pipe Diameter (D): 0.0 (ft)

Longitudinal Slope: 0.005 (ft/ft)

☐ Override Default

Manning's Roughness: 0.2500

☐ Use Lining

Lining Type: Woven Paper Net

☒ Enter Flow: 0.320 (cfs)☐ Enter Depth: 0.311 (ft)

Calculate

Plot...

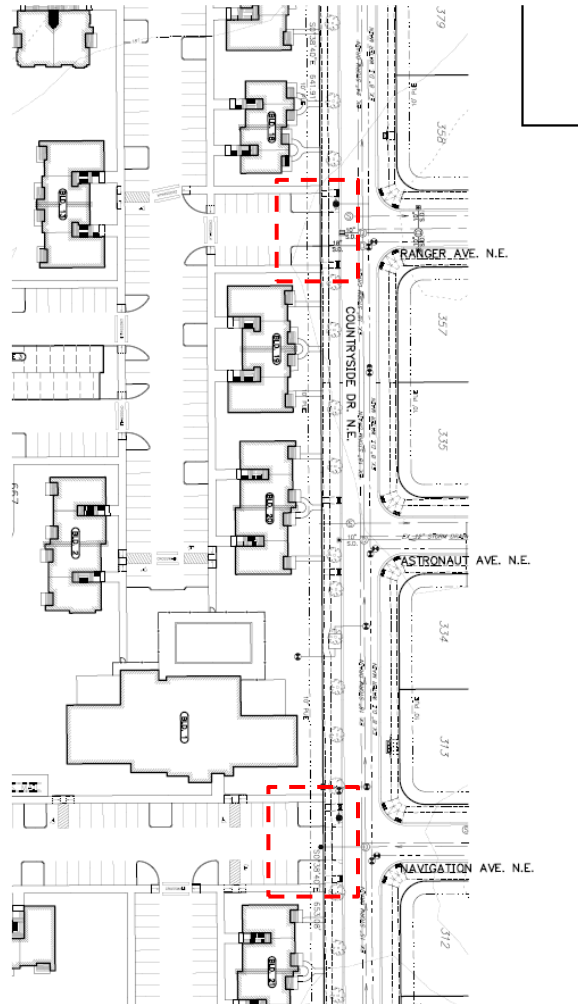
Compute Curves...

OK

Cancel

Parameter	Value	Unit
Flow	0.320	cfs
Depth	0.311	ft
Area of Flow	1.847	sq ft
Wetted Perimeter	6.968	ft
Hydraulic Radius	0.265	ft
Average Velocity	0.173	fps
Top Width (T)	6.867	ft
Froude Number	0.059	
Critical Depth	0.050	ft
Critical Velocity	1.247	fps
Critical Slope	2.50608	ft/ft
Critical Top Width	5.299	ft
Max Shear Stress	0.097	lb/ft ²
Avg Shear Stress	0.083	lb/ft ²

Class 2-Driveway Approach Permit



SRC 804.025 (d) Criteria. A Class 2 Driveway Approach Permit shall be granted if:

(1) The proposed driveway approach meets the standards of this Chapter and the Public Works Design Standards;

Applicant Response: The subject property is 14.72 acres in size, zoned RM2, and located on Kale Road (062W32C/Tax Lots 700 and 800).

The applicant is proposing a development consisting of 324 apartment units as shown on the site plans. The proposed development will have access onto Countryside Drive that runs north/south adjacent the property. Countryside Drive is designated as a 'local' street on the Salem Transportation System Plan. Both driveway approaches will meet Public Works design

standards. As shown on the site plan the driveway approach is required for access to the site and is in compliance with design standards.

(2) No site conditions prevent placing the driveway approach in the required location;

Applicant Response: The location of the driveway approach was taken into consideration prior to laying the site out. Access onto Kale Road is not allowed, so all access for the development is taken from Countryside Drive. The location of the proposed driveway takes into consideration the location of internal streets adjacent to the site and access onto Countryside Drive. Therefore, all factors were taken into consideration and there are no conditions on the site that prevent the driveway approach.

(3) The number of driveway approaches onto an arterial are minimized;

Applicant Response: Countryside Drive is a 'local' street. There are no driveways proposed onto an arterial. Therefore, this criterion has been met.

(4) The proposed driveway approach, where possible:

(A) Is shared with an adjacent property; or

(B) Takes access from the lowest classification of street abutting the property;

Applicant Response to (4)(B): The subject property is located on Kale Street to the south and Countryside Drive to the east. Access to Kale Street is not allowed for this development. All access will be onto Countryside Road. There are two driveway approaches proposed onto Countryside Drive. There are no adjacent driveways to share access with and Countryside Drive is a 'local' street. Therefore, there are no lower classified streets abutting the property. Therefore, this criterion has been met.

(5) The proposed driveway approach meets vision clearance standards;

Applicant Response: Through the pre-app process, the applicant has been working with Public Works to ensure that the driveway approach is in the required location and meets vision clearance standards. As shown on the site plan, this criterion has been met.

(6) The proposed driveway approach does not create traffic hazards and provides for safe turning movements and access;

Applicant Response: The driveway approach does not create traffic hazards. As shown on the site plan, this criterion has been met.

(7) The proposed driveway approach does not result in significant adverse impacts to the vicinity;

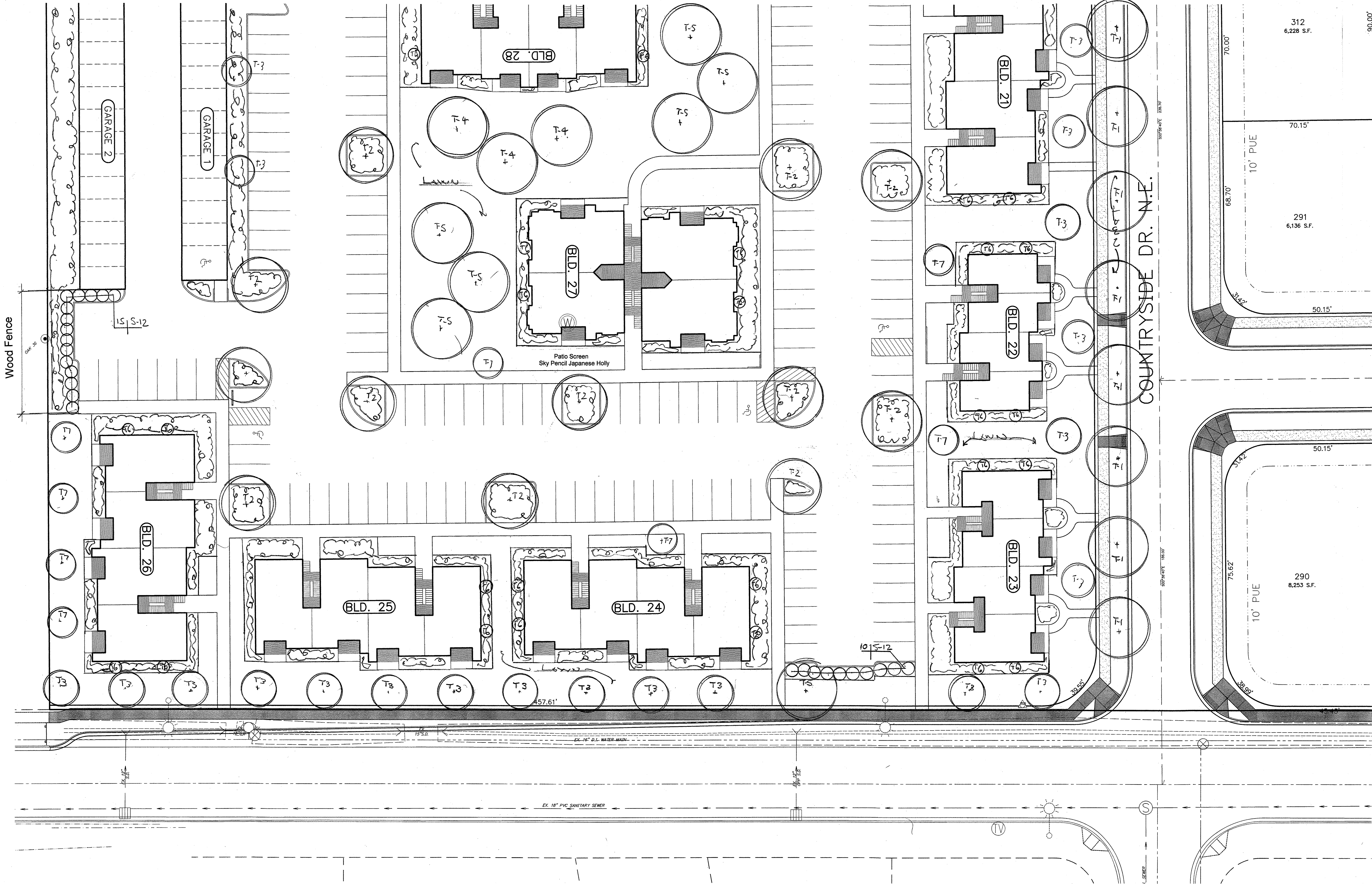
Applicant Response: Public Works has had the opportunity to review the site plan for any adverse impacts. No adverse impacts to the vicinity have been identified. As shown on the site plan, the location of the driveway will not have any impacts on the subject property or adjacent properties. This criterion has been met.

(8) The proposed driveway approach minimizes impact to the functionality of adjacent streets and intersections; and

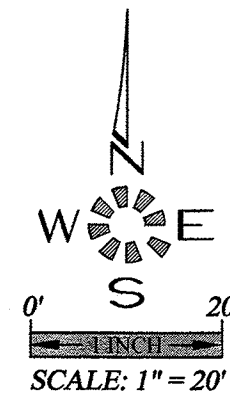
Applicant Response: The applicant has been working with Public Works to ensure that the driveway approach is in the required locations to minimize impacts to adjacent streets and intersections. As shown on the site plan, this criterion has been met.

(9) The proposed driveway approach balances the adverse impacts to residentially zoned property and the functionality of adjacent streets.

Applicant Response: The applicant has been working with Public Works to ensure that the driveway approach is in the required location to help balance the adverse impacts to residentially zoned property. The location of the proposed driveways takes into consideration the location of internal streets adjacent to the site and access onto Countryside Drive. As shown on the site plan, this criterion has been met.



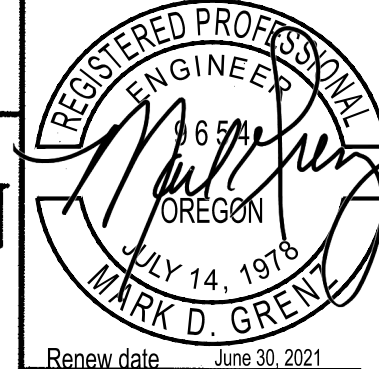
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Drawn: G.L.D.
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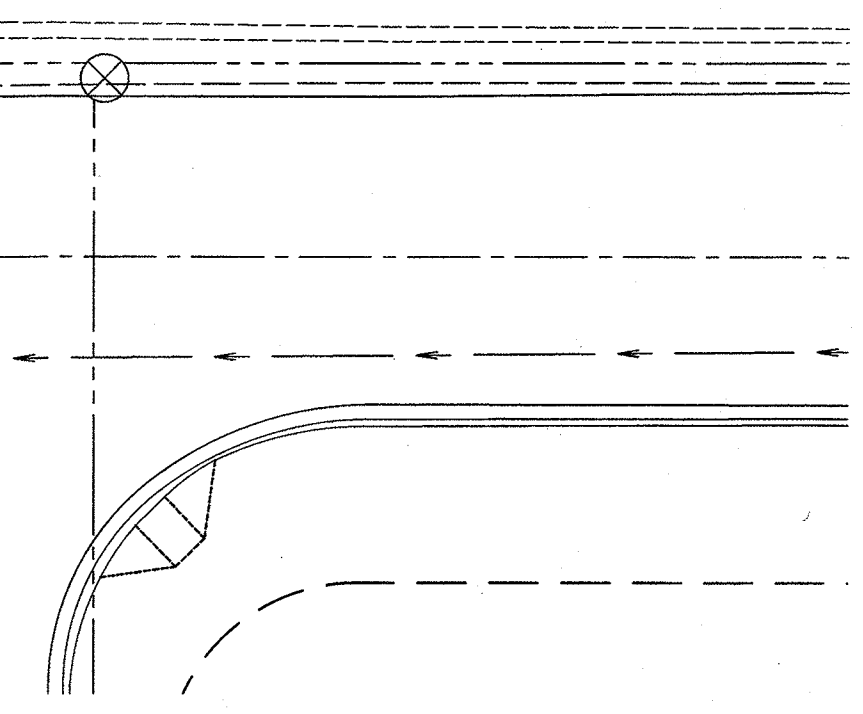
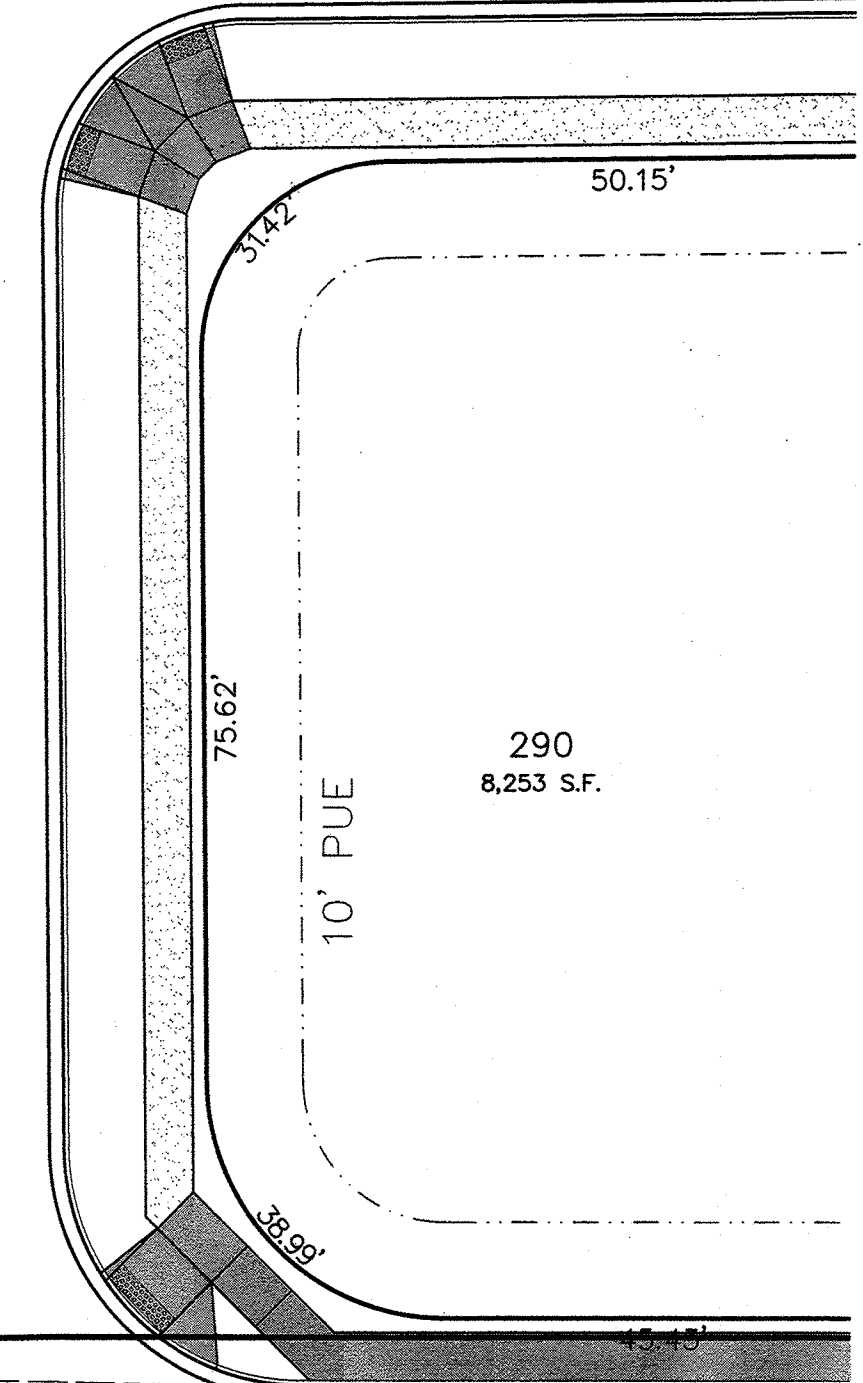
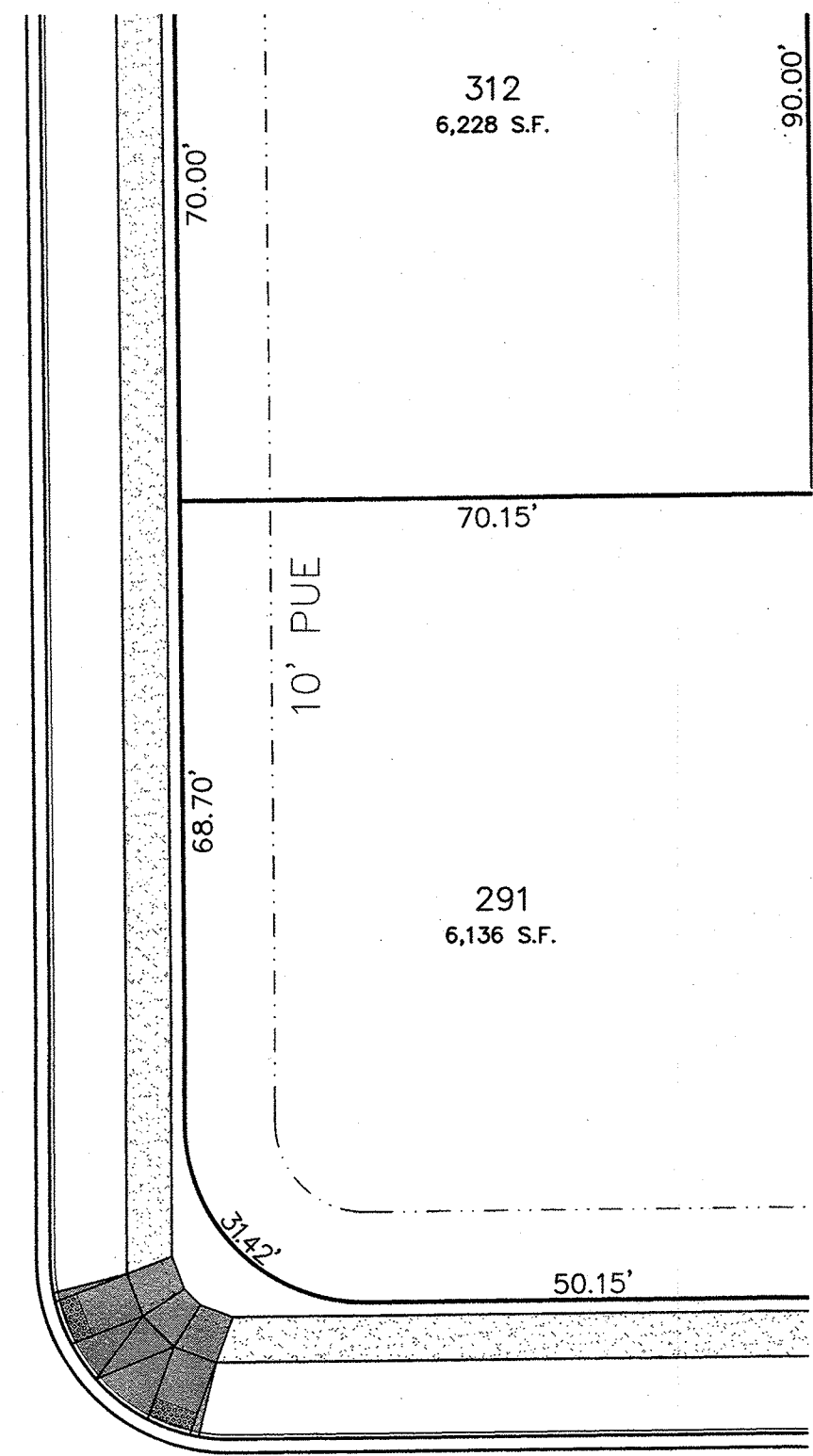
JOB # 6826

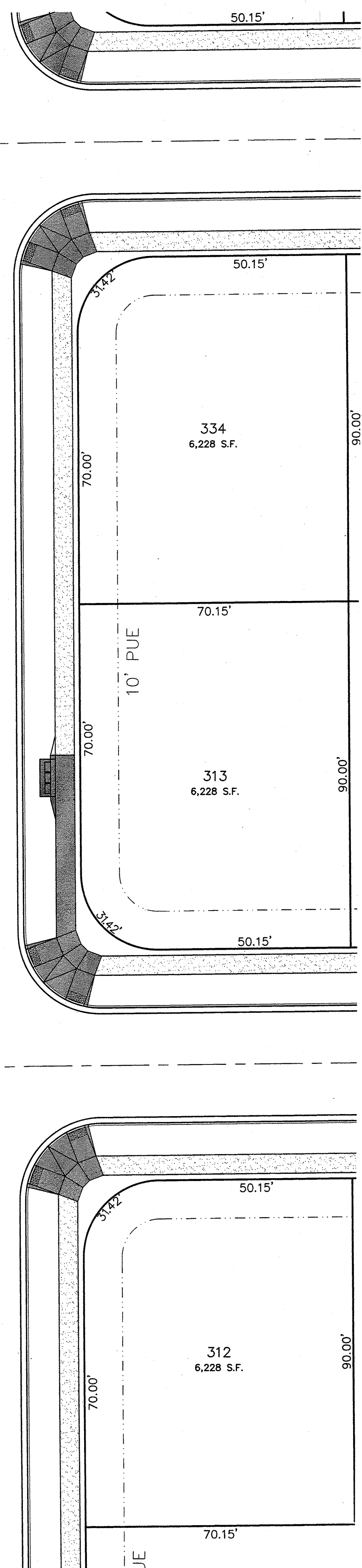
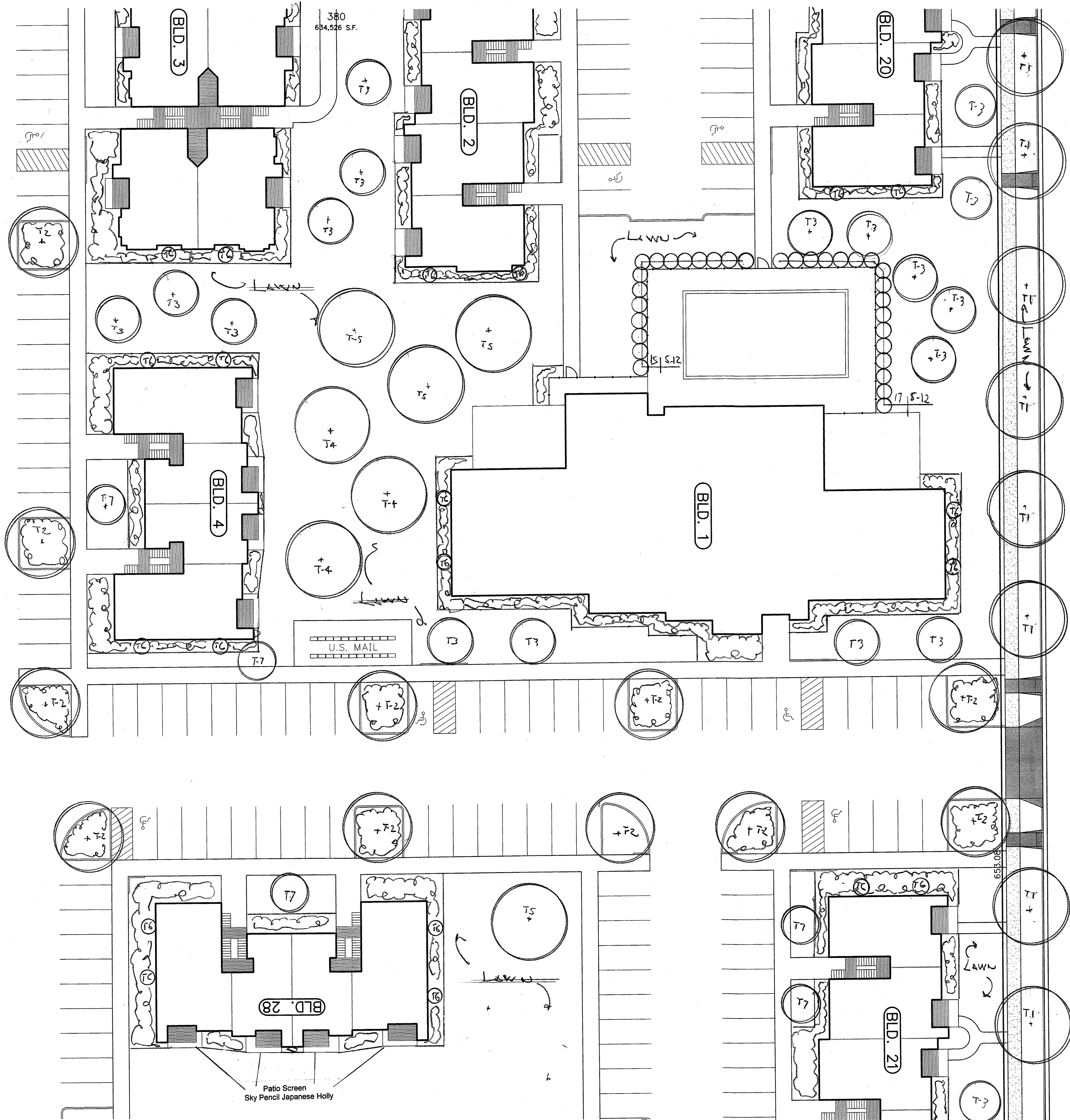
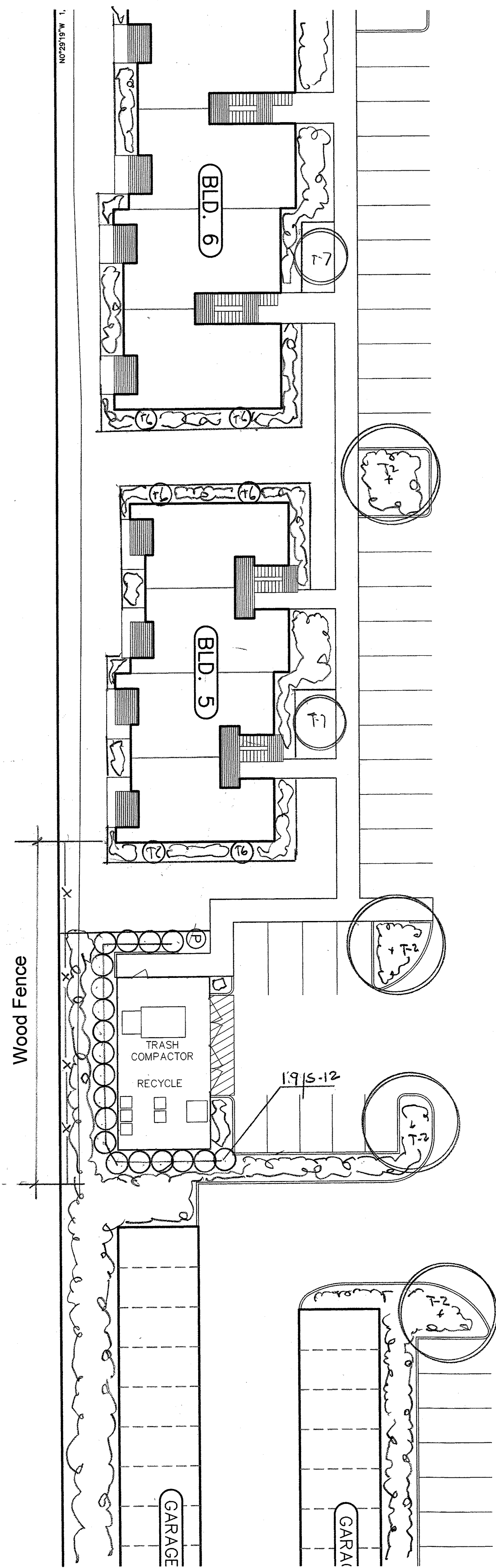
L1.1

**NORTHSTAR APARTMENT
COMPLEX**

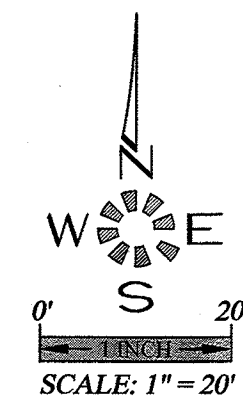
**LANDSCAPE
PLAN**

MULTI/TECH
ENGINEERING SERVICES, INC.
1155 13TH ST. S.E. SALEM, OR. 97302
PH: (503) 563 - 9227 FAX (503) 364-1260
www.mtechengineering.net cnc@techengineering.net

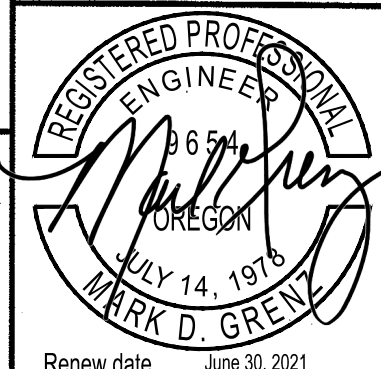




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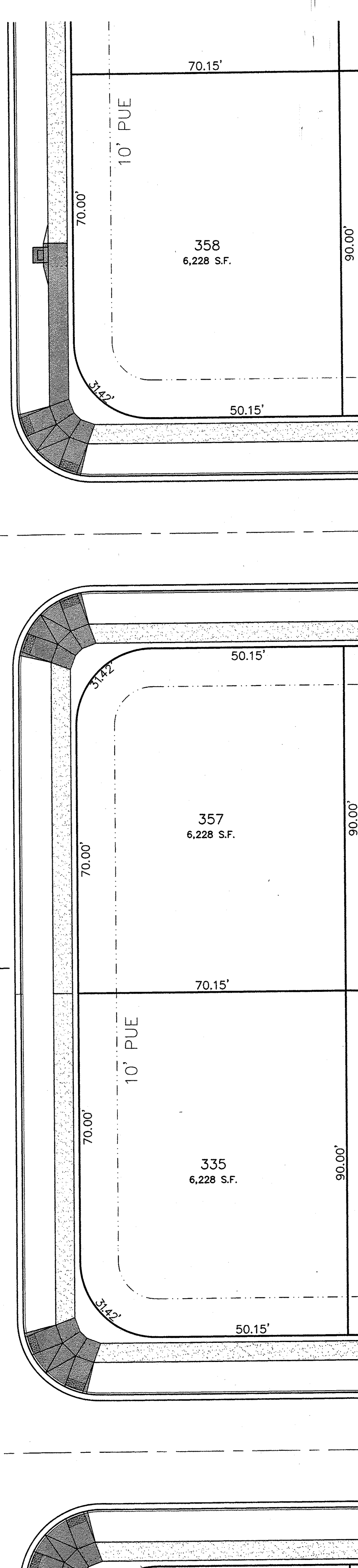
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NORTHSTAR APARTMENT COMPLEX

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 ENGINEERING SERVICES, INC.
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 PH: (503) 363 - 9227 FAX (503) 364-1260
 www.mtengineering.net office@mtengineering.net

6826 L1.2
 JOB # 6826
L1.2



RENEWAL DATE: June 30, 2021

JOB # **6826**

L1.3

68260 L1.3

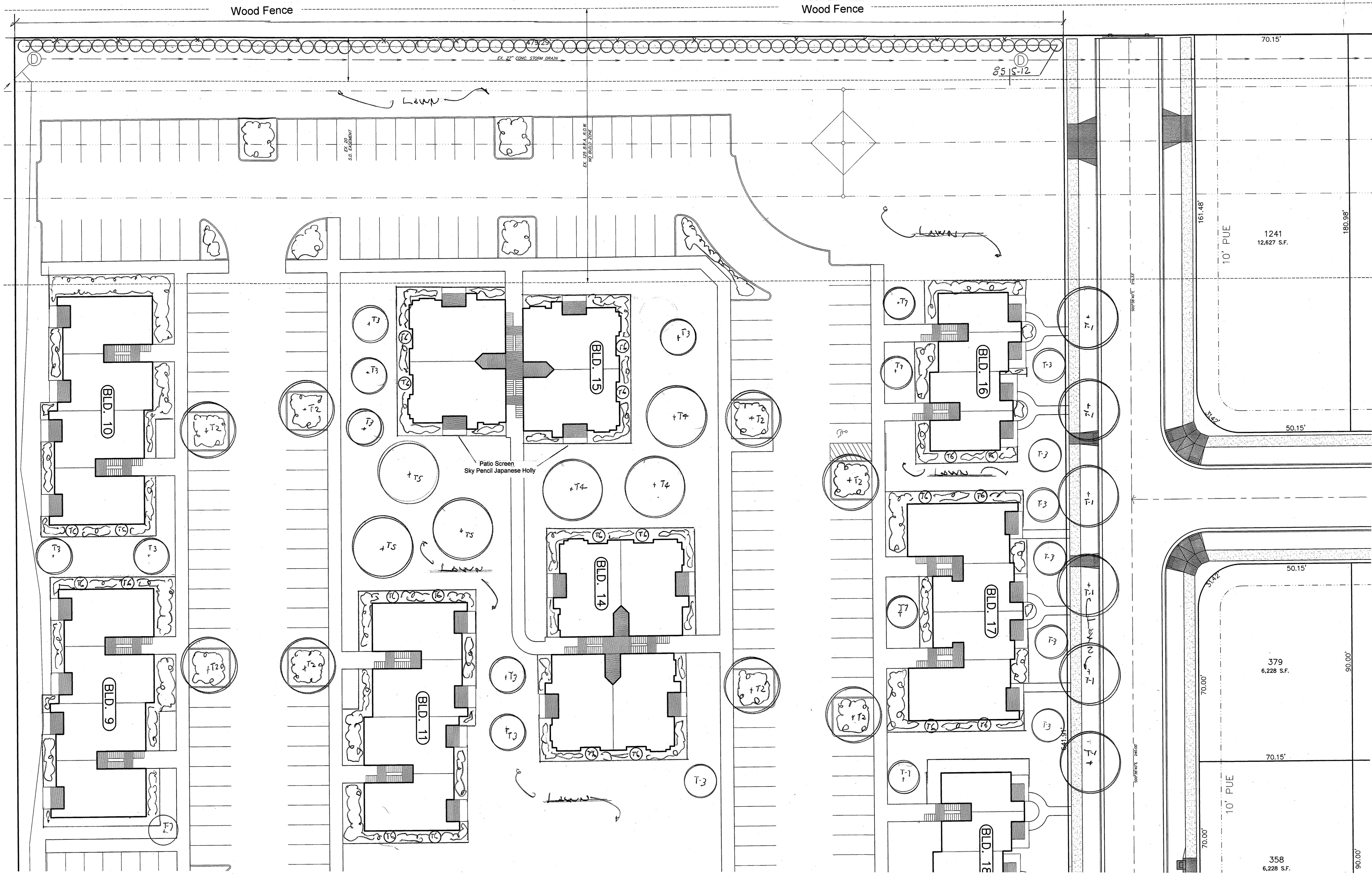
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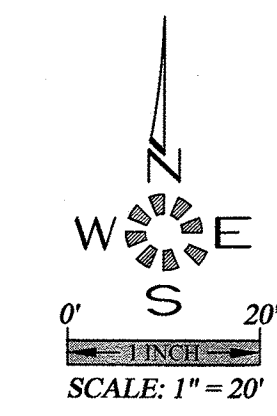
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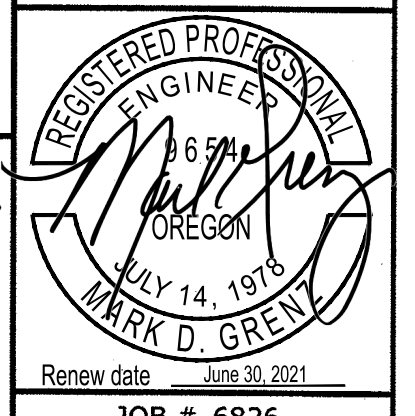
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ENGINEERING SERVICES, INC.
1155 13th ST. S.E. SALEM, OR. 97302
PH: (503) 363 - 9227 FAX (503) 364-1260
www.mteengineering.net office@mteengineering.net

GENERAL LANDSCAPE NOTES:

General:

- All local, municipal, state, and federal laws regarding uses, regulations, governing or relating to any portion of the work depicted on these plans are hereby incorporated into and made part of these specifications and their provision shall be carried out by the Contractor. The Contractor shall at all times protect the public throughout the construction process.
- The Contractor shall carefully correlate construction activities with earthwork contractor and other site development.
- The Contractor shall verify drawing dimensions with actual field conditions and inspect related work and adjacent surfaces. Contractor shall verify the accuracy of all finish grades within the work area. The Contractor shall report to the Landscape Design & Consultants LLC (LDC) or Owner all conditions which prevent proper execution of this work.
- The exact location of all existing utilities structures and underground utilities, which may not be indicated on the drawings, shall be determined by the Contractor. The Contractor shall protect existing structures and utility services and is responsible for their replacement if damaged.
- Disturbance and impacts to existing native trees/shrubs shall be minimized to the greatest extent practicable.
- The Contractor shall keep the premises free from rubbish and debris at all times and shall arrange material storage to not to interfere with the operation of the project. All unused material, rubbish, and debris shall be removed from the site.
- All plant material and planting supplies shall be warranted for a period of not less than one year from the completion date of installation. All replacement stock shall be subjected to the same warranty requirement as the original stock. Any damage due to replacement operations shall be repaired by the Contractor. At the end of the warranty period, inspections shall be made by LDC, Owner/General Contractor. All plant and lawn areas not in a healthy growing condition shall be removed and replaced with plants and turf cover of a like kind and size before the close of the next planting season.

Grading / Erosion Control:

- The design and placement of the building on the site lends itself to minimal slope conditions with positive drainage being maintained around the entire building. In this case standard landscaping procedures of topsoil, lawn, and a two inch layer of bark mulch on all planting beds will be sufficient to control erosion. In the event site conditions change or there are Slopes / Bio Swale / Detention Ponds on the project with slopes greater than 30% Poly tight Jute Netting shall be installed with anchoring pins as per manufactures recommendations prior to planting. Recommend DeWitt PJN4216 Erosion Control Poly Jute Netting and DeWitt anchor pins or approved equal.
- Seed recommendation is Pro Time 700 Low Profile or approved equal over the jute netting at a rate of 2 lbs. per 1000 sq. feet. The address of Pro Time is 1712 SE Ankeny, Portland OR 97214. Phone 503-239-7518. There email is info@protimeawnseed.com
- The work limits shown on this plan shall clearly be marked in the field prior to construction. No disturbance beyond the work limits shall be permitted.
- Grading shall be performed during optimal weather conditions.
- Erosion control measures shall be constructed in conjunction with all clearing and grading activities, and in such a manner as to ensure that sediment and sediment-laden water does not enter the drainage system or violate applicable water standards
- Prior to the commencement of construction activities, Contractor shall place orange construction fencing around perimeters of construction impact areas, and sediment fencing at downhill portions of the site. Contractor is responsible for proper installation, maintenance, replacement, and upgrading of all erosion and sediment control measures, in accordance with local, state, and federal regulations.

Plant Material:

- Contractor shall verify all plant & tree quantities with LDC or Owner prior to construction.
- In the event of a discrepancy between plants materials listed on the drawings, the drawings shall govern the plant species and quantities required.
- Plant material shall be first quality stock and shall conform to the code of standards set forth in the current edition of the American Standards for Nursery Stock sponsored by the American Association of Nurserymen, Inc. (AAN)
- Species and variety as specified on the drawings and delivered to the site shall be certified true to these genus, species and variety and as defined within the current edition International Code of Nomenclature for Cultivated Plants.
- Obtain freshly dug, healthy, vigorous plants nursery-grown under climatic conditions similar to those in the locality for the project for a minimum of two years. Plants shall have been lined out in rows, annually cultivated, sprayed, pruned, and fertilized in accordance with good horticultural practice. All container plants shall have been transplanted or root pruned at least once in the past three years. Balled-and-burlapped (B&B) plants must come from soil which will hold a firm root ball. Heeled in plants and plants from cold storage are not acceptable.
- Planting stock shall be well-branched and well-formed, sound, vigorous, healthy, free from disease, sun-scaled, windburn, abrasion, and harmful insects or insect eggs; and shall have healthy, normal, unbroken root systems. Deciduous trees and shrubs shall be symmetrically developed, uniform habit of growth, with straight trunks or stems, and free from objectionable disfigurements. Evergreen trees and shrubs shall have well-developed symmetrical tops with typical spread of branches for each particular species or variety. Only vines and ground cove plants well-established shall be used. Plants budding into leaf or having soft growth shall be sprayed with an anti-desiccant at the nursery before digging.
- Contractor shall not make substitutions of plant materials. If required landscape material is not obtainable, submit proof of non-availability and proposal for use of equivalent material. When authorized, adjustments of contract amount (if any) will be made by change order.
- Plant sizes and grading shall conform to the latest edition of American Standard for Nursery Stock as sponsored by the American Association of Nurserymen Inc. (AAN)
- All vegetation shown on this plan shall be maintained in a healthy and vigorous growing condition throughout the duration of the proposed use. All vegetation not so maintained shall be replaced with new vegetation at the beginning of the next growing season.

Planting:

- Planting shall be installed between March 1st to April 30th or between October 1st to November 30th. If planting is installed outside these times frames, additional measures may be needed to ensure survival and shall be pre-approved by the owner.
- Plant material shall be transported to the sit in a timely manner to minimize on-site storage. Where storage is required, all plants shall be kept moist and shaded.
- Plant stock shall be handled in a manner that will not break, scrape, or twist any portion of the plant. Protect plants at all times from conditions that can damage the plant (e.g., sun, wind, freezing conditions).
- Provide the following clearance for planting of trees where applicable:
Maintain 30 feet vision triangles at all intersections and corners
5 feet from all street/parking lot light standards
10 feet from fire hydrants
5 feet from all utility vaults, meter boxes, etc.
- No trees or shrubs shall be planted on existing or proposed utility lines.
- All shrub beds shall receive a minimum 2" layer of bark mulch evenly applied immediately after panting is completed. All plant beds shall drain away from buildings.
- Excavate plant pits for shrubs and trees as follows:
Container stock: width = 2 times the container diameter, depth = container depth.
Bare root stock: width = 2 times the widest diameter of the root, depth = of root system.
B & B: width = 2 times ball diameter, depth = ball depth.
Scarify sides and bottom of plant pits to roughen surfaces.
- Place plants plumb in the pit. Backfill with native soil or top soil mixture to the original plant soil line, and tap solidly around the ball and roots. Water plants immediately after planting if soil is not saturated to the surface.

Lawn Areas /Hydro-Seeding/Sod:

- All lawn area shall be seeded unless otherwise directed by Owner to install Sod. Seed or Sod shall be procured through Kuenzi Turf Nursery. Seed or Sod shall be Rhizomatous Tall Fescue (RTF). Seed mix shall be applied at a rate of 10 lbs. per 1000 sq. feet. Contact Kuenzi Turf Nursery at (503)585-8337 or approved equal.
- All areas shown on the plan shall be seeded between March 1st, and May 1st, or between September 1st and October 15th.
- Scarify soil surface to a depth of 3 inches, to ensure adequate seed contact with soil.
- Prior to seeding, clearly delineate seeding limits using flags or non-toxic paint.
- Hydro-seed application rate shall be 60 lbs. per 100 gallons of hose work or 75 lbs. per 100 gallons of tower work
- If, at the end of one complete growing season, the planted and seeded area fail to exhibit well-established plant communities, or exhibit patchiness in the patterns of vegetative cover, supplemental seeding and planting shall occur.
- Seeding of slopes greater than 30% shall be done by Hydro Seeding using a seed mix of Pro Time 700 Low Profile or approved equal at a rate of 2 lbs. per 1000 sq. feet.

Top Soil Mixture:

- A 2" to 4" layer of garden care compost, mushroom compost or similar material sterilized at 105 degrees Fahrenheit shall be incorporated into the existing soil prior to planting and seeding/sod lawns.
Incorporate into existing soil prior to planting the following fertilizers at a rate specified per 1000 sq. ft. of planting area.
20 lbs. 10-6-4 50% Slow Release
30 lbs. 38-0-0 Nitroform
10 lbs. Iron Sulfate 21%
20 lbs. 0-18-0 Super Phosphate
25 lbs. Dolomite Lime
10 lbs. 13-0-11 Potassium Nitrate

Bark Mulch:

- All shrub beds shall receive a minimum 2" layer of fine hemlock or fir bark mulch evenly applied immediately after panting is completed. All plant beds shall drain away from buildings.

Poly Jute Netting:

- Tight net Poly Jute Netting shall be installed on Bio Swales/Detention Ponds/Vegetated Swale and Rain Gardens as a soil stabilizer and erosion control agent. Jute Netting shall be installed with anchoring pins as per manufactures recommendations prior to planting. Recommend DeWitt PJN4216 Erosion Control Poly Jute Netting and DeWitt anchor pins or approved equal.

Bio Swales/Detention Ponds/Vegetated Swales:

- Bark Mulch shall not be applied to Bio Swales/Detention Ponds or Vegetated Swales.

Weed Control Agent:

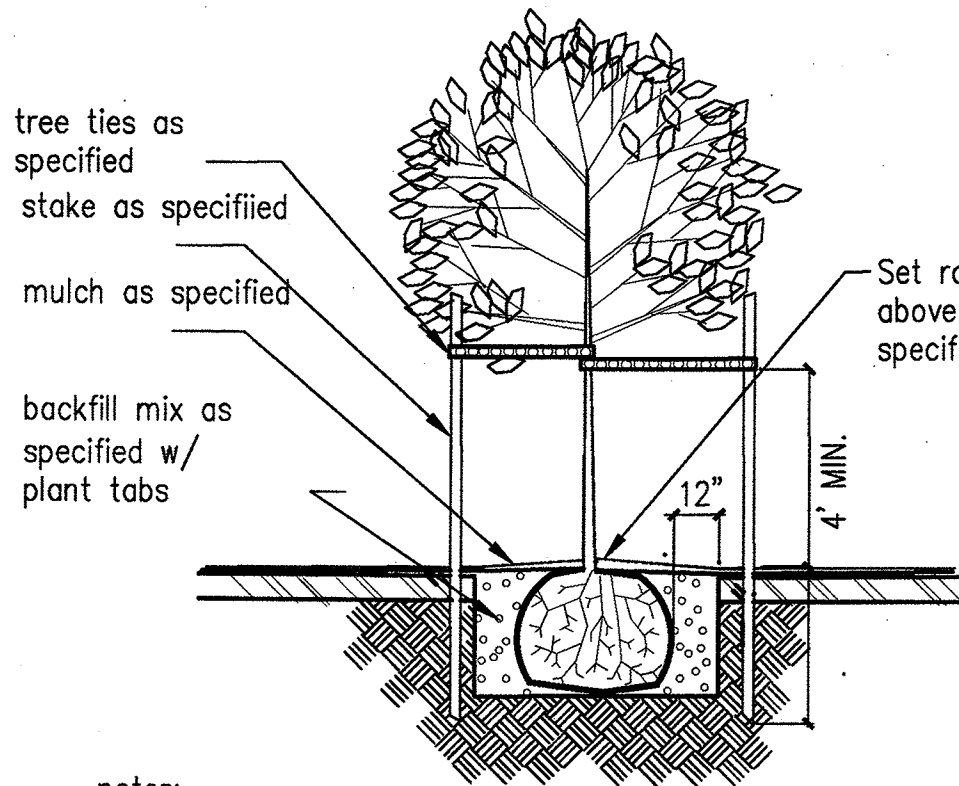
- Apply casoron as a weed control agent after planting as per manufactures specified recommendations around building or approved equal.

Non-Native Plant Species:

- All non-native, invasive plant species shall be removed from the site.

Growing Medium for Stormwater Bio Swales/Vegetated Swales/Rain/Gardens/Planter Boxes:

- Growing Medium shall comply with City of Salem Department of Public Works Administrative Rules, Chapter 9, and Division 004 Appendix G-Key Material Specifications for Storm Water Quality Facilities.

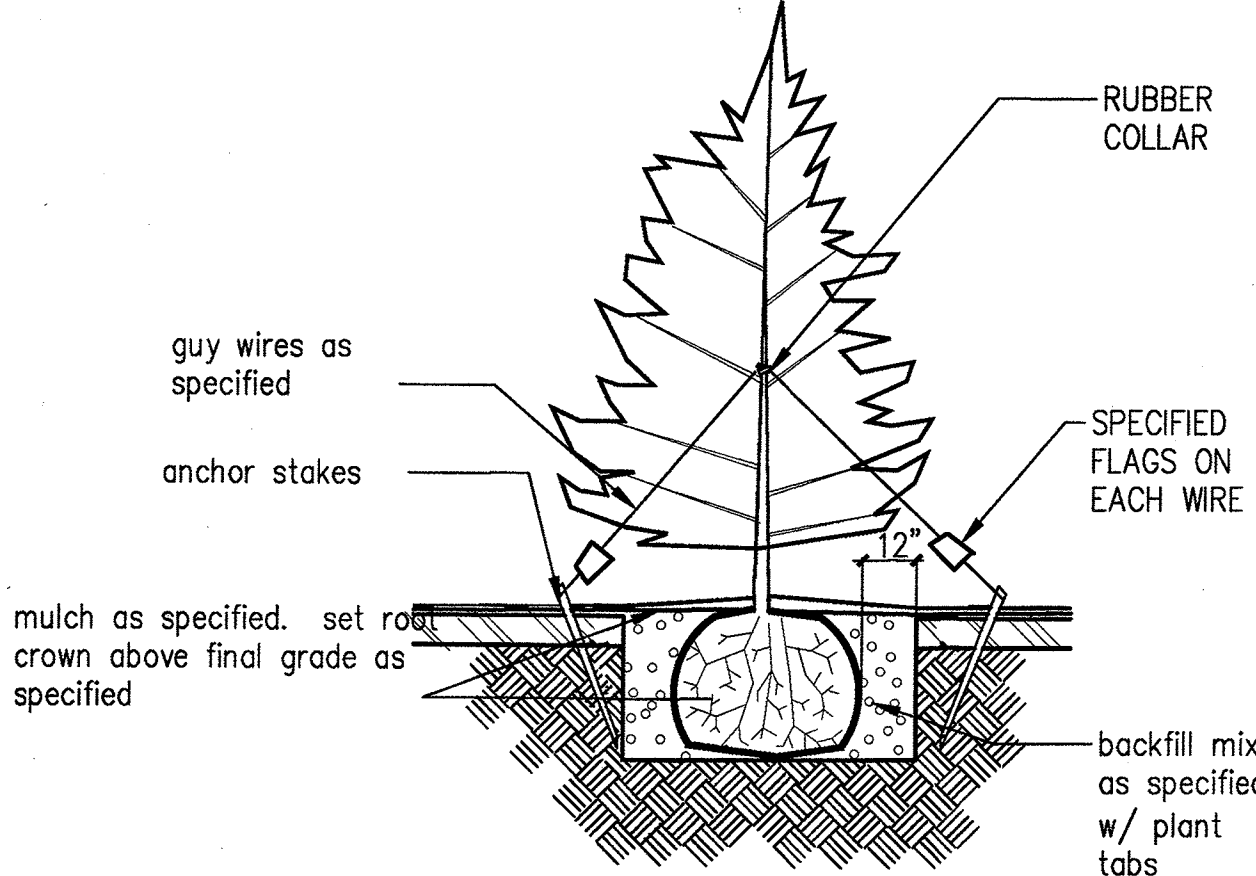


notes:

- cut and remove all bindings from the top and sides of the root ball prior to backfilling
- remove stakes and ties one year after planting

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

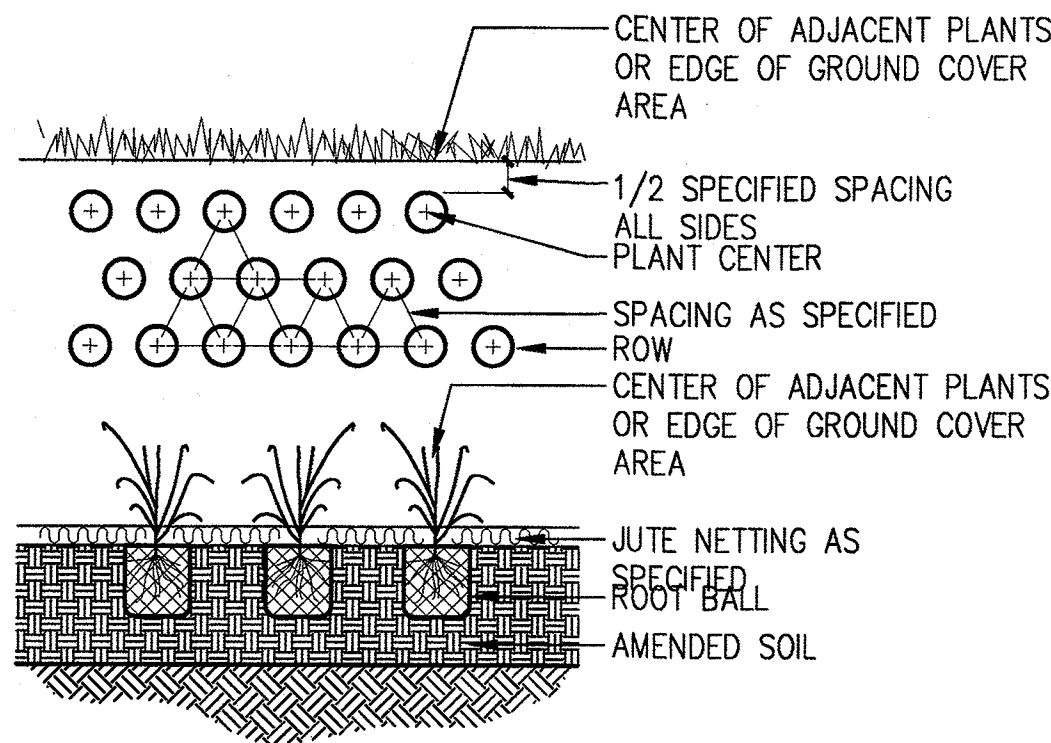


notes:

- cut and remove all bindings from the top and sides of the root ball prior to backfilling
- remove stakes and ties one year after planting

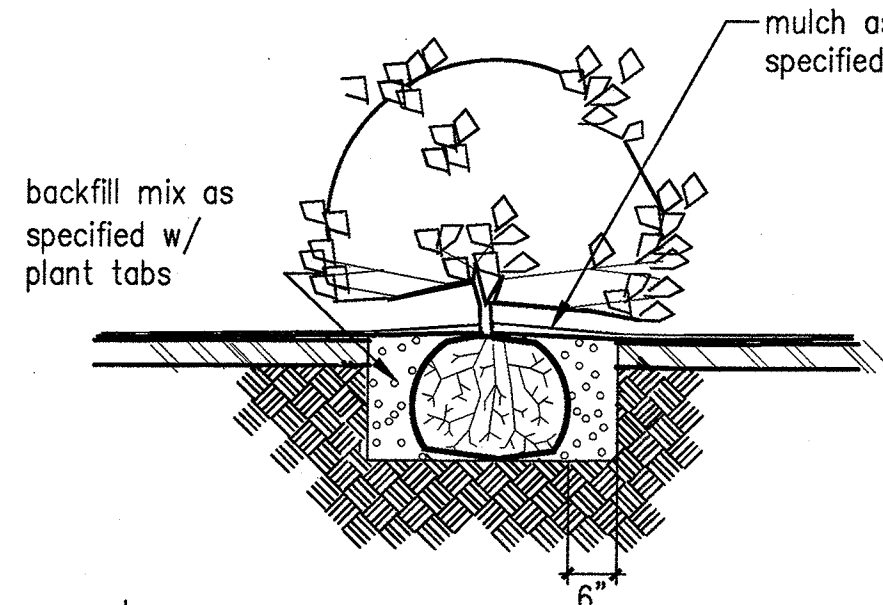
CONIFEROUS TREE PLANTING DETAIL

NOT TO SCALE



PLANTING plugs and 4" pots

NOT TO SCALE



notes:

- cut and remove all bindings from the top and sides of the root ball prior to backfilling
- remove stakes and ties one year after planting

shrub PLANTING DETAIL

NOT TO SCALE

APARTMENTS PLANT PALETTE

QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
TREES					
31	T-1 Acer rubrum 'Autumn Blaze'	Autumn Blaze Maple	1 1/2"- 2" cal.	B & B	6' Standard
54	T-2 Acer rubrum 'Armstrong'	Armstrong Red Maple	1 1/2"- 2" cal.	B & B	6' Standard
56	T-3 Cercis occidentalis	Western Redbud	1 1/2"- 2" cal.	B & B	6' Standard
12	T-4 Ginkgo biloba 'Autumn Gold'	Autumn Gold Ginkgo	1 1/2"- 2" cal.	B & B	6' Standard
12	T-5 Japanese Zelkova 'Green Vase'	Green Vase Zelkova	1 1/2"- 2" cal.	B & B	6' Standard
90	T-6 Juniperus Virginiana 'Skyrocket'	Skyrocket Juniper	4'-5' Tall	B & B	Full/Natural
44	T-7 Pyrus calleryana 'Chanticleer'	Chanticleer Flowering Pear	1 1/2"- 2" cal.	B & B	6' Standard
SHRUBS					
S-1	Abelia grandifolia 'Ed Goucher'	Edward Goucher Abelia	2 gal.	cont.	Full
S-2	Arctostaphylos uva-ursi (Kinnikinnick)	Kinnikinnick	2 gal.	cont.	Planted 3" o/c
S-3	Calamagrostis x acutiflora 'Avalanche'	Avalanche Feather Reed Grass	2 gal.	cont.	Full
S-4	Cornus stolonifera 'Kelsey'	Kelsey Dwarf Redwig Dogwood	2 gal.	cont.	Full
S-5	Daphne odora	Winter Daphne	2 gal.	cont.	Full
S-6	Deschampsia cespitosa Northern Lights	Northern Lights Tufted Hair Grass	2 gal.	cont.	Full
S-7	Euonymus alatus 'Compacta'	Burning Bush Winged Euonymus	2 gal.	cont.	Full
S-8	Euonymus japonica Golden	Golden Euonymus	2 gal.	cont.	Full
S-9	Ilex crenata 'sky pencil'	Sky Pencil Japanese Holly	3-4" Tall	cont.	Full
S-10	Nandina domestica 'Moon Bay'	Moon Bay Dwarf Nandina	2 gal.	cont.	Full
S-11	Ophiopogon japonica	Mondo Grass	2 gal.	cont.	Full
S-12	Ligustrum japonicum Texanum	Texas Wax-Leaf Privet	5 gal.	cont.	Full
S-13	Pennisetum alopecuroides Hameln	Dwarf Fountain Grass	2 gal.	cont.	Full
S-14	Pennisetum alopecuroides 'Chinese'	Chinese Fountain Grass	2 gal.	cont.	Full
S-15	Pennisetum setaceum rubrum	Purple Fountain Grass	2 gal.	cont.	Full
S-16	Pieris japonica 'Astrid' Compacta	Astrid Japanese Andromeda Compacta	5 gal.	cont.	Full
S-17	Rhododendron 'PJM'	PJM Rhododendron	18"-24"	w/buds	Full
S-18	Spiraea japonica 'Double Pink'	Double Pink Spirea	2 gal.	cont.	Full
S-19	Viburnum davidii	Davidii Viburnum	2 gal.	cont.	Full

CONTRACTOR TO VERIFY ALL QUANTITIES OF PLANT MATERIALS WITH LANDSCAPE DESIGN & CONSULTANTS PRIOR TO INSALLATION
PLANT MATERIAL SUBSTITUTIONS MAY BE MADE BY THE OWNER FOR PLANT MATERIALS OF SIMILAR HABIT, FLOWERING CHARACTERISTIC
AND/OR STRUCTURE OF GROWTH DUE TO AVAILABILITY, WATER, SOIL, AND SUN REQUIREMENTS.

LANDSCAPE & IRRIGATION DESIGN BY:

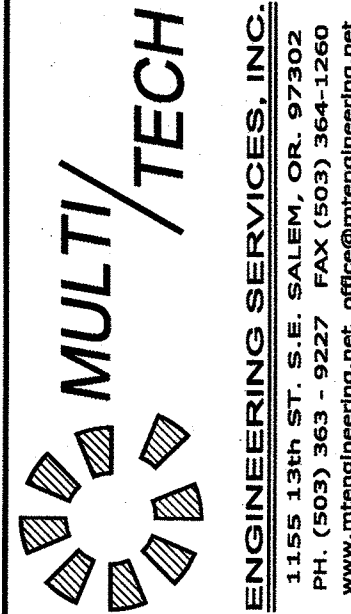
LANDSCAPE DESIGN

&

CONSULTANTS LLC

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LANDSCAPE
PLAN

NORTHSTAR APARTMENT
COMPLEX

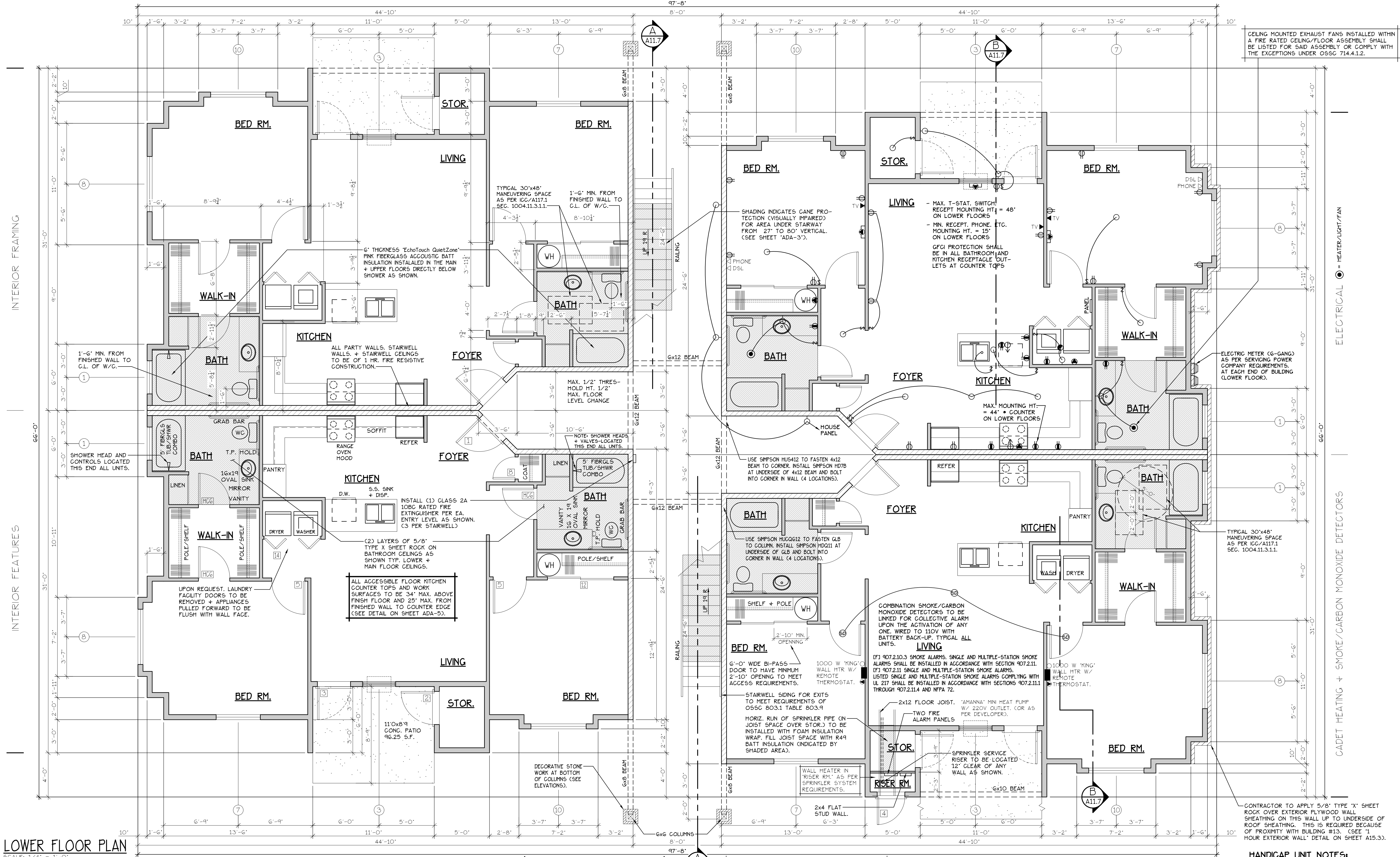
NO CHANGES, MODIFICATIONS TO BE
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PRECEDENCE OVER
GRAPHICAL REPRESENTATION.

Design: M.D.G.
Drawn: C.F.S.
Checked: ---
Date: OCT 2018
Scale: AS SHOWN



Job # 6826

L1.5



LOWER FLOOR PLAN
SCALE: 1/4" = 1'-0"
CHANDICAP ADAPTABLE/ACCESSIBLE)
'E' UNIT = 1162 S.F.

TYPE E UNITS BLD. 3,14,15+27

CONSTRUCTION TYPE V B SPRINKLED
SEE WALL DETAIL SHEETS FOR SHEETROCK APPLICATION.

SEE 'GENERAL STRUCTURAL NOTES'
ON SHEET A11.7 BEFORE BEGINNING
ANY CONSTRUCTION.

DOOR SCHEDULE									
DOORS				FRAMES		REMARKS			
NO.	WIDTH	HEIGHT	THICK	TYP.	MATL.	FIN.	TYP.	MATL.	FIN.
101	3'-0"	6'-8"	1-3/4"	NIL	GLAD	PAINT	A	METAL	PAINT
102	3'-0"	6'-8"	1-3/4"	NIL	GLAD	PAINT	B	METAL	PAINT
103	3'-0"	6'-8"	1-3/4"	NIL	GLAD	PAINT	C	METAL	PAINT
104	2'-6"	6'-8"	1-3/4"	NIL	GLAD	PAINT	D	METAL	PAINT
105	3'-0"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	E	HEMLOCK	STAIN
106	2'-10"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	F	HEMLOCK	STAIN
107	2'-10"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	G	HEMLOCK	STAIN
108	2'-10"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	H	HEMLOCK	STAIN
109	2'-10"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	I	HEMLOCK	STAIN
110	4'-0"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	J	HEMLOCK	STAIN
111	5'-8"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	K	HEMLOCK	STAIN
112	2'-10"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	L	HEMLOCK	STAIN
113	4'-0"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	M	HEMLOCK	STAIN
114	5'-0"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	N	HEMLOCK	STAIN
115	6'-0"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	O	HEMLOCK	STAIN
116	11'-8"	6'-8"	1-3/8"	H.C.	BRCH	STAIN	P	HEMLOCK	STAIN

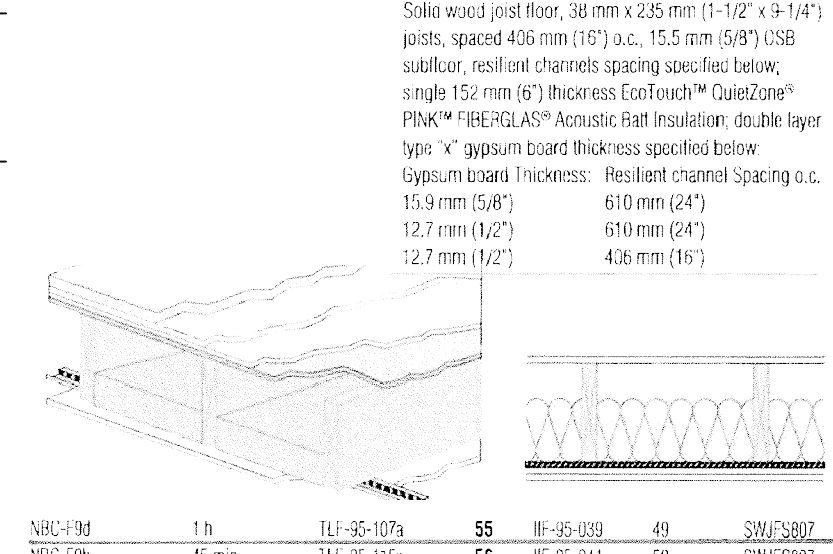
WINDOW SCHEDULE									
NO.	SIZE	TYPE	MFG.	COLOR	INSUL.	REMARKS	HEADERS	FOOTERS	FINISH
101	3'0 X 1'0	VINYL STAT.	MILGARD	WHITE	YES	STATIONARY W/ FROSTED GLASS	DF #1 4x12	DF #1 4x12	DF #1 4x12
102	3'0 X 1'6	VINYL STAT.	MILGARD	WHITE	YES	STATIONARY W/ FROSTED GLASS	DF #1 4x12	DF #1 4x12	DF #1 4x12
103	3'0 X 4'6	VINYL SGL.	MILGARD	WHITE	YES	SINGLE HUNG W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
104	3'6 X 4'6	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
105	4'0 X 3'6	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
106	4'0 X 4'6	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
107	4'0 X 3'0	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
108	2'0 X 2'6	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
109	2'0 X 4'6	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
110	2'0 X 3'0	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
111	6'0 X 4'6	VINYL SLD.	MILGARD	WHITE	YES	HORIZ. SLIDER W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12
112	4'0 X 2'0	BASEMENT	MILGARD	WHITE	YES	BASEMENT W/ SCREEN	DF #1 4x12	DF #1 4x12	DF #1 4x12

NOTE: ALL LOWER FLOOR OPERABLE WINDOWS + HARDWARE TO COMPLY WITH O.S.S.C. 2014 CHAPTER 11 SEC. 1107.2 ON TO ICC/ANSI A117.1 THEN SEC. 1002.9. OPERABLE PARTS SHALL COMPLY WITH SEC. 309. SEE 'OPERABLE WINDOWS' N ACCESSIBLE LOCATIONS' DETAIL ON SHEET ADA-5. ALL LOWER FLOOR WINDOW HEADERS TO BE SET MIN. 7'-0" A.F.F. UNO.

NOTE: MAX. U-VALUE FOR ALL WINDOWS AS PER TABLE 401.1(2) OESG U-0.32.

NOTE: WINDOW SILLS MORE THAN 72" ABOVE FINISH GRADE SHALL BE A MINIMUM OF 36" ABOVE FINISH FLOOR SURFACE (COR) BE INSTALLED WITH WINDOW OPENING CONTROL DEVICES IN COMPLIANCE WITH THE 2014 OESG SECTIONS 1013.8.1 AND 1029.4.

NOTE: FOR WINDOW PLACEMENT SEE 'WINDOW PLACEMENT FOR EGRESS AND FALL PROTECTION' DETAIL ON SHEET A15.40.



FLOOR/CEILING ASSEMBLY
CONSTRUCTION TYPE V B SPRINKLED.

- GENERAL NOTES:
- ALL EXTERIOR WALLS TO BE 2 X 6 STUDS. ALL OTHER WALLS TO BE 2 X 4 STUDS UNLESS OTHERWISE NOTED.
 - FIRE BLOCK CONCEALED SPACES (VERTICAL + HORIZONTAL) AS PER OESG 718.2.2 AND OESG 718.2.3.
 - PRIOR TO INSTALLATION OF FIBERGLASS TUB/SHOWER + SHOWER UNITS, SHEET ROCK SHALL BE APPLIED TO STUD WALLS AS INDICATED ON PLANS.
 - ALL BATH FANS TO HAVE MIN. 80 CFM RANGE HOOD EXHAUST FANS TO HAVE MIN. 150 CFM.
 - ELECTRIC OUTLETS IN 1 HR. WALL MAY NOT BE BACK TO BACK AND MUST BE SEPARATED BY HORIZONTAL DISTANCE OF 2'-0".
 - ALL EXTERIOR FLOOD LIGHTING SHALL BE CONNECTED TO GROUNDING SYSTEMS LOCATED IN ON-SITE UTILITY ROOMS + STORAGE BLDGS.
 - AS PER OESG HIGH-EFFICIENCY LIGHTING SYSTEMS - A MINIMUM OF 50 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE COMPACT OR LINEAR FLUORESCENT, OR A LIGHTING SOURCE THAT HAS A MINIMUM EFFICIENCY OF 40 LUMENS PER WATT.
 - ALL 'TYPE A' ACCESSIBLE UNITS REQUIRE THE PATIO TO BE AT SAME LEVEL AS DWELLING UNIT.

HANDICAP UNIT NOTES:

THE UNITS HAVE BEEN DESIGNED TO COMPLY WITH OESG 2014 REVISED TO BE EFFECTIVE APRIL 1, 2014. CHAPTER 11 OF THE OESG 2014 AS REVISED INCORPORATES AS PART OF IT, AMERICAN NATIONAL STANDARD ICC/ANSI A117.1-1003. WITHIN ICC/ANSI A117.1, CHAPTER 10 SETS OUT SPECIFIC CODE REQUIREMENTS FOR DWELLING AND SLEEPING UNITS. CHAPTER 10 SETS OUT THE CODE REQUIREMENTS THAT ALL GROUND FLOOR UNITS MUST MEET.

THE INTENT IS THAT 'ALL' GROUND FLOOR UNITS ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE.

WITHIN THE PROJECT THERE ARE ALSO TYPE 'B' UNITS WHICH MUST MEET SPECIFIC REQUIREMENTS SET OUT IN ICC/ANSI A117.1, CHAPTER 10, SECTION 1003.

WITHIN THE PROJECT THERE ARE ALSO TYPE 'B' UNITS WHICH MUST MEET SPECIFIC REQUIREMENTS SET OUT IN ICC/ANSI A117.1, CHAPTER 10, SECTION 1004. ALL ACCESSIBLE FLOOR UNITS WITHIN THIS PROJECT ARE TO BE TYPE 'B' UNITS UNLESS SPECIFICALLY DESIGNATED TYPE 'A' UNITS. WITHIN THESE TYPE 'B' UNITS THE MAIN BATHROOM COR ONLY BATHROOM SHALL BE DESIGNATED AS AN 'OPTIONAL' ADAPTABLE BATHROOM WHICH MUST MEET THE REQUIREMENTS OF ICC/ANSI A117.1, SECTION 1004.1.3.2.

ATTACHED TO THE DRAWING SETS ARE OUR SHEETS ADA-1 THRU 5 THAT SET OUT SPECIFIC INFORMATION FROM OESG 2014, CHAPTER 10 AS WELL AS THE REFERENCED DOCUMENTS. THE DRAWINGS SET OUT SPECIFIC MINIMUM ELEMENTS AND DIMENSIONS THAT MUST BE MET TO ASSURE COMPLIANCE WITH THIS CODE.

Design: P.L.M.
Drawn: G.L.D.
Checked: M.D.G.
Date: Aug-19
Scale: AS SHOWN

JOB # 6826

REGISTERED PROFESSIONAL ENGINEER
Mark D. Gault
July 1, 1978
Renew date: June 30, 2021

A7.31