



October 9, 2024

Regular Meeting | 7:00 p.m.

Troutdale Police Community Center – Kellogg Room
234 SW Kendall Ct, Troutdale, OR 97060

Agenda

1. Call to Order, Roll Call, & Pledge of Allegiance
2. Public Comment on Non-Agenda Items
3. Review and Approval of August and September Minutes
4. Public Hearing
 - a. Land Use Application: LU-0014-2024 1360 SW 257th Dr.
Proposal: The Applicant is seeking Site Development Review and Variance approval for a new multi-family housing development at 1360 SW 257th Dr. The proposed project includes 15 dwelling units and 45 off street parking spaces. The applicant is requesting three variances. The first variance is to reduce the northern side yard setback by 25%. The second variance is to reduce the eastern rear yard setback by 33%. The third variance is to reduce the size of the private outdoor space required for upper-level units by 30%.
5. Staff Communications
6. Commissioner Comments
7. Adjournment

Participation

The public may attend the meeting in person or via Zoom using the link below. Full Zoom details, including call-in information, are available [online here](#).

This meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 48 hours prior to the meeting to the City of Troutdale (comdev@troutdaleoregon.gov or 503-665-5175).

Next Planning Commission Meeting: Wednesday, October 30, 2024, at 7:00 p.m.



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Meeting Minutes

August 14, 2024 | Regular Meeting

Troutdale Police Community Center – Kellogg Room
 234 SW Kendall Ct, Troutdale, OR 97060

1. Call to Order, Roll Call, & Pledge of Allegiance

Chair Staffenson called the meeting to order at 7:00 PM

Commissioners Present: Kevin Minkoff, Zach Andrews, John Leamy
 Vice Chair Shirley Prickett, Paul Wilcox, Chair Tanney
 Staffenson, Rich Allen

Commissioners Absent: None

City Staff Present: Erika Palmer, Community Development Director
 Dakota Meyer, Associate Planner

Others in Attendance: None

2. Public Comment on Non-Agenda Items

None

3. Review and Approval of Minutes

a. July 10, 2024 Regular Meeting

Wilcox page 2 second paragraph, undistinguished who seconded the nomination but it was made by Leamy. Page 5 sentence regarding the parking lot, Wilcox was referring to the City standard, he was not referring to Diplomat Motors. Re-write the sentence to say, "Concern was with the City standard and not with Diplomat Motors".

Mr. Minkoff moved to approve the amended minutes, and Mr. Allen seconded the motion. The motion passed unanimously/7-0 and the minutes were adopted.

4. Public Hearings

Land Use Case File LU-0014-2024 1360 SW 257th Drive.

Mr. Staffenson read a description of the public hearing procedure. Staff stated the applicant has requested a continuance of this application to date certain of October 9, 2024. The applicant has signed a corresponding 120-day waiver, to grant the request with state requirements.

There was no objection to granting the applicant a 120-day continuance to date certain of October 9, 2024.

Mr. Minkoff moved a motion to continue the public hearing of file LU-0014-2024 – 1360 SW 257th Dr to October 9, 2024. Mr. Leamy seconded the motion. The motion passed unanimously/7-0.

5. Discussion Items - Development Code Amendments

There were seven sections to review and amend for the omnibus. Staff was looking for notes, edits and scrivener errors. The hope is to get the code cleaned up by next month or at least by October. With a full code amendment package, we could have a public hearing and then make an official recommendation to City Council. As we review all of Commissioner Wilcox's changes, other PC members may notice other errors or discrepancies. Dakota Meyer, Associate Planner, will send the revised code back to everyone after making changes. When you review it again and see edits, call him to discuss and make changes.

6. Staff Communications

Director Palmer mentioned that Colf Construction was awarded the Sandy Riverfront Trail Project contract. She also reminded and encouraged PC that the regular TCAB meeting is the next day.

7. Commissioner Comments

Commissioner Minkoff asked when the approval for so many variances may trigger a change to the code. For example, the apartment buildings on Halsey went against the code. The code is no higher than 3 stories, but the contractor was able to build Fox Ridge with four stories. Commissioner Minkoff asked if the City has had a work session to discuss Troutdale's identity. Chair Staffenson responded that Troutdale's identity had been discussed, especially the north side of Columbia River Highway since it is a more recent development. When the city looked at implementing additional development standards, the city received pushback. Commissioner Allan stated that the Council had reviewed a branding/marketing study but didn't act on it. Director Palmer stated the development code does have design standards for the Town Center area, and future development code work through a possible Metro grant would extend design standards down Halsey to create more of a cohesive theme of development.

Commissioner Allen appreciated the great effort that Commissioner Wilcox contributed with edits to the code.

Commissioner Prickett thanked Commissioner Wilcox for all his hard work. She also noted that the grounds at Imagination Station are terrible. It is well used but maintenance needs to be kept up. Kids are tripping over the mats. The grounds wear out too quickly. Prickett will also bring this topic up at the Parks Advisory Committee.

Commissioner Wilcox wonders if the city sign standards/variances are too strict.

Commissioner Andrews appreciates Staff and reassures Commissioner Prickett that the Parks Superintendent has the Imagination Station Park as a top priority to move forward, and it is an ongoing conversation.

Chair Staffenson thanked Commissioner Wilcox for his attention to detail. The chair appreciates everyone taking this code work seriously because it can be a dry topic. He responded to Commissioner Minkoff's question on variance. No variance sets a precedent for future LU applications and projects.

Variances are all taken on their merit. Fox Ridge was done when Staff had the latitude to do a 30% variance as a type II application.

Councilor Glantz gave a quick pitch for PC members to run for the 3 City Council and Mayor positions.

8. Adjournment

Chair Staffenson moved to adjourn, and Allen seconded the motion. The vote was unanimous, and the meeting was adjourned at 9:45 PM.



Meeting Minutes

September 11, 2024 | Regular Meeting

Troutdale Police Community Center – Kellogg Room
 234 SW Kendall Ct, Troutdale, OR 97060

1. Call to Order, Roll Call, & Pledge of Allegiance

Chair Staffenson called the meeting to order at 7:00 PM

Commissioners Present: Kevin Minkoff, Zach Andrews, John Leamy
 Vice Chair Shirley Prickett, Paul Wilcox, Chair Tanney
 Staffenson, Rich Allen

Commissioners Absent: None

City Staff Present: Erika Palmer, Community Development Director

Others in Attendance: Frank Stevens, Shelby Staffenson, Diane Castillo-White

2. Public Comment on Non-Agenda Items

None

3. Review and Approval of Minutes

a. August 14, 2024 Regular Meeting

Tanney- He did not move to adjourn

Minkoff –Wants mention that he inquired about study done pre 2017 into the minutes.

The August meeting minutes will be re-submitted during the October 9 Regular meeting for approval.

4. New Business

a. Main Streets on Halsey Cross Section and Street Design Plan

This cross-city project, kicked off 2 years ago, was funded through a Transportation & Growth Management (TMG) Grant through ODOT. Fairview, Troutdale and Wood Village are all working together to enhance and make safer the 3.5-mile corridor that begins from the City of Fairview to SW 257th Ave at the Columbia River Highway intersection.

Today, there is no action for the commission to move forward. This review is a **design concept only**; it is the initial 10% of a project design for improving 3 specific segments (McMenamins/Edgefield, residential and commercial) within the Troutdale jurisdiction of the Halsey Street corridor.

Today, Staff will share recommendations, discuss the implementation and funding process then give next steps.

This project has collected extensive input from public engagement opportunities with all the communities involved.

The McMenamins/Edgefield segment of the plan is to improve the 2-lane road by decreasing the travel lane by 1 foot and increasing the shoulder to 6 feet. The long term conceptual plans include 2 driving lanes with a third turn lane, landscaping, ped sidewalk with 1 foot buffer from the bike lane and lighting.

Proposed improvements to the residential segment include enhanced safety at crossings (especially at SW 257th), increase bus stop locations/times, added benches, trash receptacles, and better lighting.

Proposed improvements to the commercial segment may include parking on one side of the street, plus the same segments of the residential improvements. There are unique parking opportunities to address in this condensed commercial area. A parking management plan is needed.

Lowering the speed limit on Halsey is a state-owned process. There needs to be a way to enhance connection with all the Troutdale downtown amenities to/from the Edgefield property. Currently, less than 2% (aprox) of Edgefield visitors travel to downtown Troutdale.

Along with the grant, other public improvements are spurred by private development of the area. The segment of the areas we are discussing can fall under capital improvement which the county can request federal, state and regional dollars to help build up funds for the project. Long term maintenance will comprise of an IGA with other partners.

Next step:

- Present this packet to City Council on Oct 8th for adoption.
- Director Palmer forwards a project page to the commission.

5. Public Comment on Agenda Items

Diane Castillo-White –Troutdale can create a landscape list for the developer. Rain islands are a concern that they can turn into weed pits, but they can be landscaped/manicured. Not excited about the branding; the orange invokes 'sunset'. Likes Edgefield pallet colors in their branding. Overall, liking what I see.

6. Staff Comments on Agenda Items

Paul Wilcox – Noted on pg 22 it says the Troutdale arch spans Halsey but should read East Historic Columbia HWY

Chair Staffenson – Noted on pg 21 it talks about crashes. What % of those are on Halsey vs NE 257th or SW 238th? It would be good information for council to know as well.

Rich Allen – Noted on pg 29 figure 7 @ the nw corner, the barricades indicate the row, do we need that much of a row? That would be impediment to development. Staff respond 'no'. Allen suggested the line be moved in the figure.

Vice Chair Pricket – Who maintains the flashing speed signs? Staff responded that it is a county asset.

7. Staff Communications

Director Palmer reminded team that the next PC meeting is Oct 9th for Public Hearing for the town home development on SW 257th. There will be a “special” PC meeting on Oct 30 for a second Public Hearing prior to the City Council meeting. Nov 13th is also a Public Hearing for the Code Amendment Package and we’ll share information on other projects the City is currently working on. Don’t forget TCAB meeting next Thursday at 7:00 PM.

8. Commissioner Communications

Vice Chair Prickett – Sugar Pine parking is taking over the Glenn Otto visitor parking. Director Palmer shared that a parking study is wrapping up next Spring which will provide us direction to alleviate parking concerns/issues.

9. Adjournment

Vice Chair Prickett moved to adjourn, and Andrews seconded the motion. The vote was unanimous, and the meeting was adjourned at 9:10 PM.



DATE OF NOTICE: October 2, 2024

DATE OF HEARING: October 9, 2024

FILE NUMBER / NAME **LU-0014-2024 Cherry Park East Luxury Apartments**

APPLICATION TYPE Type III Variance, Site Development Review

PROJECT APPLICANT Tracy Brown PROPERTY OWNER Mike Halstead

PROJECT LOCATION 1360 SW 257th Ave TAX MAP / TAX LOT # 1N3E35AA -05717

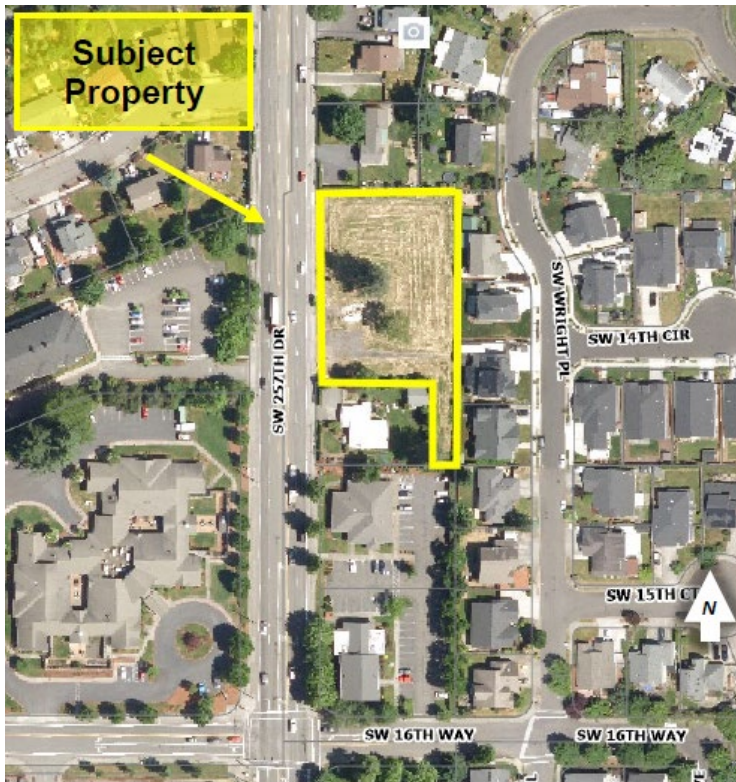
COMPREHENSIVE PLAN DESIGNATION High Density Residential (HDR) LAND USE ACTIVITY Multi-family Development

ZONING DISTRICT High Density Residential (HDR) OVERLAY DISTRICT n/a

PROPOSAL

The Applicant is seeking site development review and variance approval for a new multi-family housing development at 1360 SW 257th Ave. The proposed project includes 15 dwelling units and 45 off street parking spaces. The applicant is requesting three variances. The first variance is to reduce the northern side yard setback by 25% (from 20 feet to 15 feet). The second variance is to reduce the east rear yard parking setback by 50% (from 20 feet to 10 feet). The third variance is to reduce the size of the required private outdoor space for all upper level units by 30% (from 60 square feet to 42 square feet).

VICINITY MAP



STREET VIEW – Google 2023



View of the subject property looking east from SW 257th Ave.

APPLICATION HISTORY

A pre-application meeting was held for this application (PRE-0005-2023) on August 17, 2023. The applicant submitted their application on May 23, 2024, and it was deemed complete June 24, 2024. The public hearing was scheduled for August 14, 2024 and a continuance was issued to October 09, 2024.

Parcel History

The subject parcel one had land use approval via a site development review for the construction of a senior living facility in 2018 (18-004). The land use approval has since expired, and the subject parcel has remained vacant.

PROCEDURE

This application will undergo a Type III quasi-judicial procedure. [TDC 2.060] This procedure requires a Public Hearing and Planning Commission review in order to be adopted. The Planning Commission is the decision-making entity for this application and may approve, approved with conditions, or deny this application. Nearby property owners, relevant review entities, and other stakeholders have been notified accordingly. [TDC 2.075 - 2.090]

APPLICABLE CRITERIA

Listed below are governing standards that shall apply:

- *Troutdale Development Code (TDC): Ch. 1* Introductory Provisions; **Ch. 2** Procedures for Decision Making; **Sec. 3.114** High-Density Residential (HDR) **Sec. 5.600** Erosion Control and Water Quality Standards; **Sec. 5.700** Stormwater Management; **Sec. 5.800** Public Improvements; **Sec. 6.900** Site Development Review; Sec.6.1300 Variance; **Ch.8** Development and Design Standards; **Ch.9** Off-Street Parking and Loading; Ch.17 General Provisions
- City of Troutdale Comprehensive Land Use Plan
- Construction Standards for Public Works Facilities
- Building and Fire Codes

REVIEW ENTITY COMMENTS

Listed below are review entities who received the Notice. If the entity provided comments, they can be found in a corresponding attachment.

Review Entity	Comments	Review Entity	Comments
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CITY OF TROUTDALE | STAFF REPORT

Planning	See Findings of Fact and Final Order	Mid County Lighting	See Attachment 3
Public Works	See Attachment 1		
Multnomah County Transportation	See Attachment 2		

PUBLIC COMMENTS

Travis Perala, July 12, 2024, Exhibit #1 and Exhibit #2

Summary of Comment: This comment expresses opposition to the two variances requesting reduced setbacks. While the comment does not list any specific code criteria, it states that reducing the setbacks will diminish the property values of the homes abutting the north and east property lines of 1360 SW 257th Ave. In addition to Travis Perala, 4 other residents have signed this letter.

Staff Response: This public comment does not refer to any specific code or approval criteria that staff can respond to.

Nick Rector, July 16, 2024, Exhibit #3

Summary of Comment: This comment states strong opposition to the variance reducing the eastern rear parking setback and notes how it will impact property value. The comment fails to address any specific code criteria. Rector also had a number of questions about the development which were answered by email on July 17, 2024.

Staff Response: This public comment does not refer to any specific code or approval criteria that staff can respond to.

RECOMMENDATION

Based upon review of the applicant’s submittal, review of the applicable code, and agency comments, staff finds that the proposed variance to reduce the east rear yard parking setback by 50% (from 20 feet to 10 feet) does not comply with the required standards and approval criteria, specifically TDC sections 8.150(B)(5)(c), and TDC 6.135 (D), and cannot be reasonably conditioned to comply.

Therefore, staff recommends denial of LU-0014-2024 and to adopt the findings for non compliance with TDC 8.150(B)(5)(c), and TDC 6.135 (D).

However, if the commission determines that the applicant has the requirement of TDC 6.135(D), the commission can revise the findings of this section and approve application LU-0014-2024.

As an alternative, the applicant may choose to revise the application to meet the rear yard setback requirement which could include reconfiguring the site plan to come into compliance with TDC section 8.150(B)(5)(c). Under this scenario, the applicant would need to revise and resubmit their site plans for review. The applicant should note that the application timeline for a final decision is December 04, 2024. An extension to the 120-day rule may be granted upon the applicant’s request and the hearing scheduled to a date certain.

Staff has prepared a draft **Findings of Fact and Final Order** document, outlining how the decision criteria for this application were satisfied, along with proposed conditions of approval as outlined by the review entities. Any subsequent approvals from the City shall not be issued until all conditions listed in the attachments are adequately addressed as determined by the appropriate review entity. Planning Commission reserves the right to amend the draft and proposed conditions unless other governing documents or agreements state otherwise.

PROPOSED CONDITIONS OF APPROVAL

City of Troutdale Planning Division

1. Applicant shall be required to satisfy the comments made by review entities included in the corresponding staff report or shall work with Staff to reach an agreement between the parties.
2. The approval of case file LU-0014-2024 shall expire automatically two (2) years from the effective date of the decision unless the approval is enacted either through construction, establishment of use, or recordation of plat or survey within the specified time period. The effective date of the decision shall be the date of the Notice of Decision, unless such decision is appealed.
3. Per 8.060(A)(6) and (7), a landscaping plan shall be required at the time of building permit submittal.
4. Per TDC section 8.060(B)(1) further detail is needed regarding the trash and recycling enclosure at the time of building permit submittal. Specifically, the applicant needs to specify the height of the fence surrounding the enclosure.
5. Per TDC 8.150(B)(7)(a), further detail is needed at the time of building submittal to ensure that no more than 50% of the required recreation area is passive open space.
6. Per the requirements of TDC 9.060 and Troutdale Municipal Code 8.26, a lighting plan shall be required at the time of building permit submittal
7. Per TDC 8.150(B)(4)(b), further detail is needed at the time of building permit to show at least three architectural elements on all building walls that face SW 257th Ave.

City of Troutdale Public Works

1. Applicant shall abandon the existing water service to the site as directed by and in collaboration with City forces.
2. Applicant shall install the commercial water service assembly, meter, fire line, and fire backflow protection vault to serve the site. Installation will occur in the existing easement and will require a UTIL permit from the City. Applicant shall coordinate closely in advance with the affected resident.
3. The applicant shall decommission any existing private water wells on the site in accordance with Oregon Water Resource Department requirements.
4. Applicant shall decommission any existing underground storage and/or septic tanks on the property in accordance with DEQ requirements
5. Applicant shall submit with the building permit applications a detailed stormwater management report demonstrating compliance with the PSWMM, including supporting calculations
6. All UIC's shall be registered (or permitted) through DEQ in accordance with DEQ requirements and may require pretreatment prior to infiltration.
7. The applicant shall prepare and submit an operation and maintenance plan for the stormwater quality facility(s) prior to receiving a Certificate of Occupancy.
8. Applicant shall cure all existing defects (if any) in the public sidewalk on the frontage of the property prior to Certificate of Occupancy.

Multnomah County Transportation Division

1. This Road Rules Variance is only effective on approval of the corresponding land use application with the City of Troutdale (LU-0014-2024).
2. This Road Rules Variance decision expires two (2) years from the effective date (Land Use decision plus any appeal periods), unless condition 3 is satisfied and/or the corresponding land use decision (LU-0014-2024) becomes ineffective.
3. The applicant will need to ensure that the sidewalks along the site frontage on SW 257TH Ave are 6 feet wide and curb ramps and slopes, particularly at the driveway entrance, meet current ADA requirements (MCRR 6.100 B; DCM Table 2.2.1).
 - a. Applicants are required to contact the County Transportation Engineer(row.permits@multco.us) to verify whether standards are met.

CITY OF TROUTDALE | STAFF REPORT

- b. Applicant may be required to submit a “ROW-General” or “ROW-Construction” permit application via the County’s Permit Portal, for these frontage improvements, based on the County Transportation Engineer’s verification review.
- c. The “ROW-General” or “ROW-Construction” required for the new driveway entrance construction will also serve as a ROW Access/Encroachment permit required under MCRR 18.250. No additional permits will be required.

Mid County Lighting

1. Per the District’s Administrative rules, the applicant will be required to submit a Lighting Level Review to the Multnomah County Permit Portal with photometric calculations to assess the lighting levels for all public streets and intersections within their proposed project area frontage. We strongly encourage a review of our Lighting Level Review Instructions prior to submitting the form. If you have not created an account on the Permit Portal for a previous project, you will need to create an account before submitting the Lighting Level Review to the District. The current lighting level for all public streets must meet Districts standards outlined on page 9, Section 5.120 of our Administrative Rules. If District standards are not met, the applicant will need to enter into a Construction Permit with the District to bring the lighting levels to current District standards

GENERAL INQUIRIES

For more information, please contact Nik Ramstad at 503-674-7261 or nik.ramstad@troutdaleoregon.gov .

For building and trade permit inquiries please contact heather.jones@troutdaleoregon.gov



FILE NUMBER / NAME	LU-0014-2024 Cherry Park East Luxury Apartments		
APPLICATION TYPE	Type III Variance, Site Development Review		
PROJECT APPLICANT	Tracy Brown	PROPERTY OWNER	Mike Halstead
PROJECT LOCATION	1360 SW 257th Ave	TAX MAP / TAX LOT #	1N3E35AA -05717
COMPREHENSIVE PLAN DESIGNATION	High Density Residential	LAND USE ACTIVITY	Multi-Family Development
ZONING DISTRICT	HDR - High Density Residential	OVERLAY DISTRICT	None

PROPOSAL

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PROCEDURE

This application will undergo a Type III quasi-judicial procedure. [TDC 2.060] This procedure requires a Public Hearing and Planning Commission review in order to be adopted. The Planning Commission is the decision-making entity for this application and may approve, approved with conditions, or deny this application. Nearby property owners, relevant review entities, and other stakeholders have been notified accordingly. [TDC 2.075 - 2.090]

APPLICABLE CRITERIA

Listed below are governing standards that shall apply:

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PUBLIC COMMENTS

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Staff Response: This public comment does not refer to any specific code or approval criteria that staff can respond to.

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Staff Response: This public comment does not refer to any specific code or approval criteria that staff can respond to.

FINDINGS OF FACT

- Planning Commission received public testimony from Staff, the Applicant, and members of the public at the October 09, 2024 hearing.
- The Findings of Fact contained herein are derived from the specific decision criteria outlined in Section 6.900 and Section 6.1300 of the Troutdale Development Code and are hereby adopted as the Findings of Fact in this matter.
- The Final Order has been reached and [REDACTED] of the application [REDACTED] is hereby issued.

FINDINGS OF FACT–Site Development Review [TDC 6.900]

6.920 In order to approve a site development review application, the decision-making authority shall make findings of fact based on evidence provided by the applicant demonstrating that the proposal is consistent with the applicable approval criteria (A) and (B).

A1. The application complies with all of the applicable provisions of the underlying zone and overlay zone(s), including but not limited to: building and yard setbacks, lot area and dimensions, density and floor area, lot coverage, building height, building orientation, architecture, and other applicable standards, or a variance or adjustment is granted.

3.114 High Density- Residential zoning district

FINDING 1: Multi-family development is an outright permitted use per TDC 3.120. **As such, this criterion is met.**

3.130(E)(1) Minimum lot size. For 15 to 37 dwelling units, the minimum lot area shall be 41,000 sq ft plus 2,000 sq ft for each unit over 15.

FINDING 2: The applicant is proposing 15 dwelling units, and the lot area of the subject parcel is 41,338 sq ft per Multnomah County records, and the applicant’s narrative. Based on the above provision, 41,000 square feet for 15 dwelling units meets the minimum lot area requirements of this code. **As such, this criterion is met.**

3.130(E)(2) Minimum lot width: sixty (60) feet at the front setback line.

Finding 3: The lot width at the front setback line of the subject property is approximately 230 feet in width. 230 feet exceeds the minimum lot width requirement of 60 feet. **As such, this criterion is met.**

3.130(E)(3) Minimum lot depth. Ninety (90) feet when there is approved street access.

Finding 4: The lot dept of the subject parcel is approximately 165 feet. 165 feet exceeds the minimum lot depth requirement of 90 feet. **As such, this criterion is met.**

3.130(E)(4) Minimum lot frontage: Twenty (20) feet.

Finding 5: The lot frontage of the subject parcel is approximately 230 feet. 230 feet exceeds the minimum lot frontage requirement of 20 feet. **As such, this criterion is met.**

3.130(E)(5) and (6) Minimum Density and Maximum Density. The density and lot size table of TDC3.130(E)(6) states that for 15 to 37 dwelling units, the minimum lot area is 41,000 square feet plus 2,000 square feet for each unit over 15.

FINDING 6: The applicant proposes 15 dwelling units on a 41,338 square foot lot, which is compliant with the above density requirements. **As such, this criterion is met.**

3.130(E)(7)(a) Front yard setback: minimum of twenty (20) feet.

Finding 7: The applicant's site plan demonstrates a 20 foot front setback from SW 257th Ave. **As such, this criterion is met**

3.130(E)(7)(b)(i) and (ii) Side yard setback: Adjoining the HDR zoning district or a non-residential district the minimum side yard setback is 5 feet. Adjoining a different residential zoning district, the minimum side yard setback is two times (for two story construction) or three times (for three story construction) the minimum required side yard setback of the adjoining residential district but not less than twenty (20) feet.

Finding 8: The subject property has two side setbacks, one to the north and one to the south. The southern side setback adjoins the HDR district, resulting in a side setback requirement of 5 feet. The applicant has provided a site plan that demonstrates 10 feet of space from the south property line to the closest structure. **As such, this criterion is met**

The northern side setback abuts the LDR-1 and MDR residential zones. The buildings adjacent to the MDR zones are three stories, and the building adjacent to the LDR-1 zone is two stories. The required side setback for the three story buildings is 3 times the MDR required side yard setback of 5, resulting in a 15 foot setback. Because the above provision states that the setback may be no less than 20 feet, the required setback of the three story buildings abutting the MDR zone is 20 feet. The two story building abuts both the MDR and LDR-1 zone. Per TDC section 17.090 Conflicting Regulations, when conditions imposed by this code contradict one another, the more restrictive provision shall govern. In this specific case, the LDR-1 zone offers the more restrictive requirement with a side setback of 10 feet. 2 times 10 results in a 20 foot setback. The required side setback for the three story and two story buildings is 20 feet. The applicant's site plans demonstrate a 15 foot setback., which does not meet the minimum required setback. The applicant has submitted a type III variance request as a part of this application. **As such, this criterion can be met upon variance approval.**

3.130(E)(7)(d)(e)(i) Rear yard setback. When adjoining a different residential district, the minimum rear yard setback is one and a half times (for two-story and greater construction) the minimum rear yard setback of the adjoining residential district but not less than 20 feet.

Finding 9: The subject property abuts the LDR-2 zone, which has a rear yard setback of 20 feet. Based on the above provision, one and a half times 20 results in a required rear setback of 30 feet. As demonstrated on the site plan, both buildings will be located outside of this 30 foot required rear setback. **As such, this criterion is met**

3.130(E)(8) Height Limitation. The maximum height of a structure shall be thirty-five (35) feet.

Finding 10: Based on the supplied plans, the highest proposed building height is 33 feet and 11.5 inches. 33 feet falls within the maximum height limit of 35 feet. **As such, this criterion is met**

A2 The proposal includes required upgrades, if any, to existing development that does not comply with the applicable land use district standards, pursuant to Section 5.300 Nonconforming Uses

Finding 11: The subject property currently does not have any nonconforming uses. **As such, this criterion is met**

A3 The proposal complies with all of the applicable site design and development standards of this Code, such as landscaping and parking.

8.030 Pedestrian Walkways. All industrial parks, commercial developments, and community service uses shall meet the following requirements for pedestrian walkways:

Finding 12: The proposed development is multi-family, and not an industrial park, commercial development, or community service use. **As such, this criterion is not applicable.**

8.040(B) Transit Facilities Standards. All commercial and community service development, and any industrial development designed to accommodate fifty (50) or more employees and located on parcels...

Finding 13: The proposed development is a multi-family development, the above provisions regarding transit facilities does not apply. **As such, this criterion is not applicable.**

8.060 Landscaping and Screening

8.060(A)(1) Minimum Basic Improvements. The minimum area of a site to be retained in landscaping shall be as follows: 25% for multi-family residential.

Finding 14: The submitted plans show that 31.5% of the site will be landscaped, which exceeds the above provision. **As such, this criterion is met.**

8.060(A)(2) For multi-family residential development and mixed-use development, usable recreation areas shall be provided for development containing more than five (5) dwelling units at the rate of two hundred (200) square feet per dwelling unit. Such areas shall be counted as part of the required landscaping percentage. Examples include, but are not limited to, playgrounds, exercise trails, swimming pools, etc.

Finding 15: The proposed development has 15 dwelling units. 15 times the required 200 square feet of usable recreation area results in 3,000 required square feet of usable recreation area. The provided plans show a total of 3,726 square feet of usable recreation area which exceeds the minimum requirement. **As such, this criterion is met.**

8.060(A)(3) Except for portions approved for parking, loading, or traffic maneuvering, a required setback area abutting a public street, and open area between the property line and the roadway in the public street, shall be landscaped. This landscaping shall be counted as part of the required landscaping percentage, except for that portion of the landscaping within the street right-of-way.

Finding 16: The submitted plans demonstrate that the required setback area abutting the public street (257th Ave) is to be landscaped. **As such, this criterion is met.**

8.060(A)(4): Site-obscuring shrubbery or a berm, wall, or fence shall be placed along the boundary of each classification of zone, i.e. residential, commercial or industrial, and around unsightly areas such as a trash or equipment storage area, or an outdoor industrial or commercial activity.

Finding 17: The applicant has stated that a 6 foot wooden fence will be constructed around the three sides of the property that abut residential zones. Any future fence shall be built in compliance with the standards set forth in TDC 5.050. Additionally, the applicant's site plans indicate that the trash area will be enclosed with wooden fencing and a latching gate. **As such, this criterion is met.**

8.060(A)(5): Landscaping that is required by a land use approval shall be irrigated to ensure the survivability of the landscaping.

Finding 18: In the narrative, the applicant has indicated that the landscaping will either be irrigated by hand or via an underground system. In the event that the irrigation is to occur via an underground system, the applicant will acquire any necessary permits before installing such a system. **As such, this criterion is met.**

8.060(A)(6) and (7) At least seventy-five percent (75%) of the required landscaping area shall be planted with a suitable combination of trees, shrubs, or evergreen groundcover. Plant Material.

Finding 19: The submitted plans and applicant narrative demonstrate that at least 75% of the landscaping area shall be in conformance with the two above provisions, however not all of the vegetation species are specified. A landscaping plan will be required at the time of building permit submittal to confirm compliance with these sections. **As such, this criterion can be conditionally met.**

8.060(A)(8) Landscaped areas may include architectural features or artificial groundcovers such as sculptures, benches, masonry, or stone walls, fences, rock groupings, bark dust (medium coarse), decorative hard paving, and gravel areas, interspersed with planted areas. The exposed area developed with such features shall not exceed twenty-five percent (25%) of the required landscaped area. Artificial plants are prohibited in any required landscaped area.

Finding 20: In the narrative, the applicant states that no artificial plant materials will be used in any required landscape areas. **As such, this criterion is met.**

8.060(A)(9) Existing trees with a six (6) inch DBH or greater shall be preserved except when removal is specifically authorized by the Site and Design Review Committee or in the development approval.

Finding 21: Tree removal is not a part of the applicant's proposal. **As such, this criterion is not applicable.**

8.060(A)(10) The area of the vegetation corridor on a site being developed counts toward the required landscape area.

Finding 22: The subject property contains no vegetation corridor. **As such, this criterion is not applicable.**

8.060(B)(1) Garbage and Recycling Container Enclosures. Screening: All enclosures for garbage and recycling containers must be screened from public view. Screening shall consist of six (6) foot high walls constructed of any of the following materials: cyclone fencing with slats, wooden fencing, concrete blocks, or materials other than the above mentioned as approved on a case-by-case basis.

Finding 23: The site plan shows a 10x16 sq ft trash and recycling enclosure that is constructed with wood fencing and a latching gate. The applicant's narrative and plans do not include details regarding the height of the fence. Per the above provision, the height of the garbage and recycling enclosure shall be six feet in height. **As such, this criterion can be conditionally met.**

8.060(B)(2) Gates. Gates must meet the following requirements: (a) Must have a latch or some type of device which will keep the gate shut after it is closed. The device can be stored above or below ground. (b) Must have a mechanism to keep gates open during trash removal. The device can be kept above or below ground. (c) Wheels are not required; however, the hinge must be adequate to support the weight of the gate.

CITY OF TROUTDALE | Findings of Fact & Final Order

Finding 24: The site plan and narrative indicates that the garbage and recycling enclosure's gate will have a latching device that is compliant with this section. **As such, this criterion is met.**

8.060(B)(3) Base Material/Flooring. The entire base dimension must meet the following requirements: (a) Must be made out of concrete. Concrete shall have a nominal thickness of four (4) inches. Exceptions to the base materials may be approved by the Director where warranted. (b) Must be positively sloped to the drainage system.

Finding 25: The narrative and site plan indicate that the base material will be comprised of a concrete pad that is positively sloped to the AC paving of the parking lot that meets this requirement. **As such, this criterion is met.**

8.060(C)(1)(2)(3)(4) Installation and Performance Bond or Security Requirements.

Finding 26: The applicant acknowledges and understands the requirements of this section. **As such, this criterion is met.**

8.060(D) Guarantee. All landscape materials and workmanship shall be guaranteed by the installer and/or developer of time not to exceed two (2) years. This guarantee shall ensure that all plant materials survive in good condition and shall guarantee prompt replacement of dead or dying plant materials.

Finding 27: The applicant acknowledges and understands the requirements of this section. **As such, this criterion is met.**

8.150 Multi-Family Residential Projects and Dwellings

8.150(A) Approval Process. Multi-family residential projects and dwellings are subject to a Site Development Review land use application in accordance with Section 6.900 of this Code.

Finding 28: The proposed project is for a multi-family residential project and is being reviewed in accordance with Section 6.900 of the Troutdale Development Code. **As such, this criterion is met.**

8.150(B)(1) Design Standards. Building Entrances. The primary entrance to buildings that do not have residential units above or below other residential units shall face toward a public or private street, unless the lot configuration, site characteristics, onsite circulation, or other conditions make it impractical to face building's primary entrance to the street. Exception: A primary entrance is not required to face a street designated as an arterial.

Finding 29: The proposed construction has buildings with residential units above and below each other, and therefore the primary entrances do not have to face toward a public or private street. Additionally, the street from which the proposed development gains its access from is an arterial, which means the primary entrances do not need to face the street. **As such, this criterion is not applicable.**

8.150(B)(2) Building Separation. Multiple residential buildings on a single lot shall be separated at least fifteen (15) feet from one another.

Finding 30: Per the submitted plans, the two buildings are separated by more than 15 feet from each other. **As such, this criterion is met.**

8.150(B)(3)(a) Pedestrian access and circulation. Private streets or driveways greater than twenty (20) feet in length and that serve more than one (1) dwelling unit shall have sidewalks on at least one (1) side that connect to the nearest public street.

Finding 31: The proposed development will have a driveway greater than 20 feet in length. Per the applicant's narrative and submitted site plans, a sidewalk that connects each dwelling unit to the nearest public street (SW 257th Ave). **As such, this criterion is met.**

8.150(B)(3)(b) Each primary entrance to a residential building shall be connected to a sidewalk onsite that connects to either a public street, private street, or driveway.

Finding 32: The proposed development does not have a 'primary' entrance, as each unit has direct access to the off street parking area. However, each entrance is connected to a sidewalk that connects to the public street (SW 257th Ave). **As such, this criterion is met.**

8.150(B)(3)(c) Onsite pedestrian circulation shall be continuous and connect streets abutting the site, ground level entrances, common buildings such as laundry and recreation facilities, parking areas, shared open space and play areas, abutting transit stops, and any pedestrian amenities such as plazas, resting areas, and viewpoints. There shall be at least one (1) pedestrian connection to an abutting street frontage for each two hundred (200) linear feet of street frontage.

Finding 33: The proposed pedestrian circulation is continuous, and connects the street abutting the site, all ground level entrances, recreation facilities, parking areas, and shared open space. There is a proposed pedestrian connection to the abutting street frontage. **As such, this criterion is met.**

8.150(B)(3)(d) Vehicle/pedestrian conflicts shall be minimized by providing pedestrian routes that are separated from parking lots, including onsite sidewalks that connect to garbage enclosures or recycling areas and mailboxes.

Finding 34: Per the proposed plans, pedestrian routes are separated from parking lots and connect to the garbage and recycling enclosure. **As such, this criterion is met.**

8.150(B)(4)(a) Architectural elements and building facades. Residential units shall be designed with vertical and horizontal offsets to break up rooflines, define private outdoor areas, allow greater views, and admit light and air to unit interiors. Large, blank walls shall be avoided. Windows and projecting walls shall be used to break up larger walls in order to establish visual interest. No wall of a residential building shall exceed a length of fifty (50) feet without a foundation offset of at least four (4) feet for a distance of at least (16) feet.

Finding 35: The proposed development defines private outdoor areas via fencing, and avoids large blank walls by use of foundation offsets. No residential building wall exceeds fifty (50) feet without an offset. **As such, this criterion is met.**

8.150(B)(4)(b) The wall of a building that faces a public street shall incorporate architectural features including, but not limited to, at least three (3) of the following: i. Porches. ii. Balconies. iii. Dormer windows. iv. Recesses/alcoves. v. Unique entry areas, such as porticos or atriums.

Finding 36: Per the submitted architectural elevations, the building facing the public street does not contain at least three of these elements. The applicant shall revise the side of each building to ensure three of the listed items are being met. **As such, this criterion can be conditionally met.**

CITY OF TROUTDALE | Findings of Fact & Final Order

8.150(B)(4)(c) The same level of architectural design and quality of materials shall be applied to all sides of the building.

Finding 37: As shown on the submitted architectural plans, all sides of the proposed buildings maintain consistent design and quality of materials. **As such, this criterion is met.**

8.150(4)(d) The following window detail shall be incorporated into the building design. i. Windows shall account for at least fifteen percent (15%) of any rear or front building elevation no matter what the building's orientation on the lot is. ii. Windows shall account for at least 10% of any side building elevation no matter what the building's orientation is. iii. All windows shall have outer casings or frames.

Finding 38: Per the applicants narrative and submitted elevations, the front and rear building elevations have at least 15% window coverage, and all elevations have at least 10 % window coverage. All proposed windows have outer casings or frames. **As such, this criterion is met.**

8.150(B)(4)(e) Garages, carports, and accessory structures shall maintain the same level of design, aesthetic quality, and architectural compatibility as the residential structure(s).

Finding 39: As shown in the architectural plans, each garage features a comparable architectural quality to the residential structure. **As such, this criterion is met.**

8.150(B)(4)(f) Roofline offsets shall be provided at intervals of forty (40) feet or less to create variety in the massing of structures and relieve the effect of a single, long roof. Roofline offsets shall be a minimum four (4) foot variation either vertically from the gutter line, or horizontally.

Finding 40: Per the submitted elevations, the proposed structures have adequate roofline offsets to relieve the effect of a single, long roof. **As such, this criterion is met.**

8.150(B)(4)(g) The rooflines of attached dwellings shall be multi-gabled or have varied parapets over every unit's main entrance.

Finding 41: As shown in the architectural plans, the roofline of the attached dwellings is multi-gabled. **As such, this criterion is met.**

8.150(B)(4)(h) rooflines, porches, and doors shall have trim.

Finding 42: As shown in the architectural plans, all rooflines, porches, and doors contain trim as required. **As such, this criterion is met.**

8.150(B)(5)(a) Off-street parking. Parking lots may not be located between a multiple-family structure and the right-of-way the structure fronts on.

Finding 43: No off street parking is located between the right-of-way frontage, and the multiple-family structure. **As such, this criterion is met.**

8.150(B)(5)(b) If there is no parking lot or alley access to attached dwellings, and motor vehicle access is from the street...

Finding 44: The proposed development includes a parking lot. **As such, this criterion is not applicable.**

8.150(B)(5)(c) Side and rear yard setbacks for parking lots and/or garages shall be the same as the minimum building setbacks of the underlying zoning district or the same as the minimum building setback of any adjacent residential zoning district, whichever is more restrictive. Side and rear yard setbacks based on building height shall not be applied to parking lots or the access driveways.

Finding 45: The off street parking lot is located further than 20 feet, the required north side yard building setback, from the northern side property line and is located further than 10 feet, the required south side yard building setback, from the south side property line.

The required rear yard setback of the adjacent zone is 20 feet (TDC 3.130(A)). The required rear yard setback of the base zone, disregarding the building height multiplier, is 20 feet (TDC 3.130(E)(e)). Because the base zone, and the adjacent zone's required setback standards are the same, the rear parking lot setback shall be 20 feet. The site plan shows the parking lot to be located 10 feet from the rear property line, which does not meet the requirement of this code section. The applicant has requested a variance as a part of their application to reduce the rear off street parking setback to 10 feet. The findings for the variance can be found further in this report. **As such, this criterion can be met upon variance approval.**

8.150(B)(6)(a) Outdoor private space. Each ground level dwelling unit shall have an attached accessible outdoor private space of not less than sixty (60) square feet in area. Individual outdoor areas for ground level units must be visually screened from each other by walls, fences, or vegetation screening that is at least six (6) feet high and totally sight-obscuring.

Finding 46: The submitted plans display each ground level unit to have ~ 330 square feet of private outdoor space, with a 6 foot wooden good neighbor fence to provide privacy. **As such, this criterion is met.**

8.150(B)(6)(b): Each upper level unit shall have an attached outdoor private space, such as a balcony, of not less than sixty (60) square feet in area. The area shall be enclosed, screened, or otherwise designed to provide privacy from adjacent units by walls, building offsets, or similar sight-obscuring screening.

Finding 47: The submitted plans show the upper level units having 42 square feet of private outdoor space. The applicant has requested a variance a part of their application to reduce the requirement of upper level required outdoor space to 42 square feet. **As such, this criterion can be met upon variance approval.**

8.150(B)(7)(a) Recreation Areas. Recreation facilities or open space areas are required for attached dwelling developments that contain six (6) or more dwelling units on one (1) lot. Such recreational facilities and open space areas must be located on the development site or on a lot adjacent to the site. Common recreation areas, whether indoor, outdoor, or both, shall be provided at the rate of at least two hundred (200) square feet per dwelling unit. No more than fifty percent (50%) of the required recreation area may be in passive open space Recreation facilities may include children's play structures and play equipment and shall be located outside out bioswales, detention ponds, steep slopes, or a vegetation corridor as defined by in this Code. More than one (1) recreation area may be developed on the site. Any play structure exceeding ten (10) feet in height must comply with the underlying zoning district setbacks.

Finding 48: This development proposes more than 6 dwelling units attached to one another, and therefore this provision is applicable. The proposal includes 15 dwelling units, resulting in a required 3,000 square feet of required recreation facilities and open space. The submitted plans show two recreation areas totaling 3,726 square feet in total area, along with a large pet area. The applicant is not proposing recreation area within bioswales, detention ponds, steep slopes, or within VECO. Its difficult to determine if no more than 50% of the required outdoor recreation area is passive open space per the above requirement - The applicant will need to provided details on what the recreation areas will be composed of, any play structure that exceeds 10 feet in height shall comply with the base zone setback standards. **As such, this criterion can be conditionally met.**

8.150(B)(7)(b) recreation facilities or open space areas are not required for development within the area between Historic Columbia River Highway and 2nd street extended west to its intersection with 257th Drive from 257th Avenue to the SE Sandy Street right-of-way.

Finding 49: 1360 SW 257th Ave. is not within the above-described area. **As such, this criterion is not applicable.**

9.000 Off Street Parking and Loading

9.010 Residential Off-Street Parking Space Requirements. OAR 660-012-0430. Per the Climate Friendly and Equitable Communities Rules (OAR 660-012-000), the city may not require more than one off street parking space per unit in residential developments with more than one dwelling unit on a single legally established lot. Additionally, the city may not require parking for residential units smaller than 750 square feet.

Finding 50: The proposed development has 15 dwelling units, 7 of which are under 750 sq ft. Therefore, the minimum required off street parking for this development is 8 off street parking spaces. The submitted plans show 45 total parking spaces. 21 are standard spaces, 14 are compact spaces, 8 are garage spaces and 2 spaces are ADA. The 45 provided parking spaces exceeds the minimum requirement of 8. **As such, this criterion is met.**

9.045 Landscaping and Screening

9.045(A) Except for a residential development which has landscaped yards, parking areas containing more than twenty (20) vehicle spaces shall include landscaping to cover not less than ten percent (10%) of the area devoted to parking facilities. The landscaping shall be uniformly distributed throughout the parking area and may consist of trees, shrubs, or groundcover.

Finding 51: per the submitted site plan and narrative, the parking area appears to have adequate landscape coverage to meet this requirement. The applicant shall submit a landscaping plan at the time of building permit submittal to detail the species intended to be planted. **As such, this criterion is met.**

9.045(B) Parking areas shall be divided into bays of not more than twenty (20) parking spaces in parking areas with twenty (20) or more spaces. Between, and at the end of each parking bay, there shall be planters which have a minimum width of five (5) feet and be at least seventeen (17) feet in length. Each planter shall contain one major structural tree and groundcover which has been deemed appropriate by the director. Truck parking and loading areas are exempt from this requirement.

Finding 52: The parking area contains no bays with more than 20 parking spaces. The proposed parking area contains the above required planters for the middle parking island. The parking located on the north, south, and east are surrounded by landscaping. The applicant shall submit a landscaping plan at the time of building permit submittal to confirm the proposed tree species is compliant with this code. **As such, this criterion can be conditionally met.**

9.045(c) Parking area setbacks shall be landscaped with major trees, shrubs, and groundcover as specified in Chapter 11, Landscaping and Screening, of this Code.

Finding 53: The applicant's plans show that all parking area setbacks are landscaped however the majority of the plan does not indicate which types of trees, shrubs, or ground cover are to be used. The applicant shall submit a planting schedule at the time of building permit submittal. **As such, this criterion can be conditionally met.**

CITY OF TROUTDALE | Findings of Fact & Final Order

9.045(D) Wheel stops, bumper guards, or other methods to protect landscaped areas shall be utilized. No vehicles may project over a property line. No vehicle shall overhang a public right-of-way, or landscaped area unless adequate area is provided for safe pedestrian circulation.

Finding 54: The submitted plans include wheel stops to ensure that landscaped areas are protected. No vehicles will project over a property line, public right-of-way, or landscaped area. **As such, this criterion is met.**

9.045(E) Fences, walls, or hedges shall not be placed within front or street side setback areas except at the street side edge of parking lots when allowed within setbacks.

Finding 55: per the applicant's plans and narrative, no fences, walls, or hedges are proposed within the front yard setback. **As such, this criterion is met.**

9.045(F) Where parking adjoins a residential zoning district, there shall be a sight-obscuring screen which is at least eighty percent (80%) opaque when viewed horizontally from between two (2) and eight (8) feet above average ground level. The screening shall be composed of materials which are an adequate size so as to achieve the required degree of screening within three (3) years after installation.

Finding 56: The proposed parking lot abuts a residential zone to the east. Per the applicant's site plans and narrative, a sight obscuring good neighbor fence will be installed, along with landscaping materials to satisfy this requirement. **As such, this criterion is met.**

9.050 Paving

9.050(A) Parking areas, driveways, aisles, and turnarounds shall be paved with concrete, asphalt, or comparable impervious surfacing. Porous concrete, grasscrete, or comparable porous paving surfacing may be used in place of impervious surfacing to reduce stormwater runoff, when approved by the Director. Gravel and similar erodible surfaces are not acceptable.

Finding 57: All parking areas, driveways, aisles, turnarounds, and maneuvering areas will be paved with asphalt. **As such, this criterion is met.**

9.050(B) Approaches shall be paved with concrete surfacing constructed to City standards. If a street is not paved, the approach may be maintained to the same standard as the street until the street is paved.

Finding 58: The applicant has indicated in the narrative, and submitted plans, that the approach will be paved with concrete in accordance to city standards. **As such, this criterion is met.**

9.050(C) Temporary overflow parking in conjunction with community events, special events, events of citywide interest, or sporting events...

Finding 59: The applicant is not proposing temporary overflow parking. **As such, this criterion is not applicable.**

9.055 Drainage. Parking areas, aisles, and turnarounds shall have provisions made for the on-site collection of drainage waters to eliminate sheet flow of such waters onto sidewalks, public rights-of-way, and abutting private property.

Finding 60: The applicant has submitted a preliminary stormwater report. Per the conditions imposed by Public Works, the applicant shall submit a detailed stormwater management report demonstrating compliance with the PSWMM including supporting calculations at the time of building permit submittal. Additionally, shall submit an

CITY OF TROUTDALE | Findings of Fact & Final Order

operation and maintenance plan for the stormwater quality facility(s) prior to receiving Certificate of Occupancy. **As such, this criterion can be conditionally met.**

9.060 Lighting. Artificial lighting shall be provided in all required off-street parking areas. Lighting shall be deflected so as not to shine directly into adjoining dwellings or other types of living units and so as not to create a hazard to the public use of a street. Lighting shall be provided in a bicycle parking area so that all facilities are thoroughly illuminated and visible from adjacent sidewalks or motor vehicle parking lots during all hours of use. Lighting fixtures shall also comply with the requirements of the Troutdale Municipal Code, Chapter 8.26.

Finding 61: A lighting plan will be required at the time of building permit submittal. **As such, this criterion can be conditionally met.**

9.070 Driveways

9.070(A) A driveway to an off-street parking area shall be improved from the public roadway to the parking area a minimum width of twenty (20) feet for a two-way drive or twelve (12) feet for a one-way drive, but in either case not less than the full width of the approach for the first twenty (20) feet of the driveway. The improvement shall be constructed to the standards for private drives.

Finding 62: The submitted plans show a 30 feet wide, two-way driveway, which exceeds the minimum requirement of 20 feet. **As such, this criterion is met.**

9.070(B) A driveway for a single-family or two-family dwelling...

Finding 63: The proposed development is not a single or two-family dwelling. **As such, this criterion is not applicable.**

9.070(C) Driveways, aisles, turnaround areas, and ramps shall have a minimum vertical clearance of twelve (12) feet for their entire length and width, but such clearance may be reduced in parking structures.

Finding 64: All driveways, aisles, turnaround areas, and ramps have vertical clearance exceeding the minimum requirement of 12 feet. **As such, this criterion is met.**

9.070(D) Parking lots more than three (3) acres in size...

Finding 65: The proposed parking area is significantly less than 3 acres in size. **As such, this criterion is not applicable.**

9.075 On-Site Circulation

9.074(A) Groups of more than three (3) parking spaces shall be permanently marked.

Finding 66: All parking spaces will be permanently marked as required. **As such, this criterion is met.**

9.075(B) Except for a single-family or two-family dwelling, groups of more than three (3) parking spaces shall be provided with adequate aisles or turnaround areas so that all vehicles may enter the street in a forward manner. No backing movements or other maneuvering shall be permitted within a street right-of-way other than an alley.

CITY OF TROUTDALE | Findings of Fact & Final Order

Finding 67: all parking spaces are provided with adequate aisles and turnaround areas. Each parking spaces has 26 feet of unobstructed maneuvering area to turn around. All vehicles have enough space to enter the street in a forward manner, and no backing movements will occur in the street-right-of-way. **As such, this criterion is met.**

9.075(C) Pedestrian walkways, separation, and differentiation of materials in parking lots three (3) acres or larger intended for public use shall be provided pursuant to Section 8.030 of this Code.

Finding 68: the proposed parking lot is not three acres or larger. **As such, this criterion is not applicable.**

9.080 Bicycle Parking Facilities. Multiple-family developments; industrial, commercial and community service uses; transit transfer stations; and park and ride lots, shall meet the following standards for bicycle parking facilities.

9.080(A) Number/type

9.080(A)(1) The required minimum number of short-term bicycle parking spaces (stays of less than four (4) hours) shall be five percent 5(%) of the total number of automobile parking spaces provided for the use. In no case shall less than one (1) bicycle parking space by provided even then no automobile parking spaces are being provided.

Finding 69: The applicant is proposing to provide 45 off street parking spaces, which means 3 short term bicycle parking spaces (rounded up from 2.25) are required based on the above provision. The submitted plans show a bike rack on the eastern portion of the lot that can accommodate up to 5 bicycles. **As such, this criterion is met.**

9.080(A)(2) The required number of long-term bicycle parking spaces (stays of more than four (4) hours and all-day/monthly) shall be three percent (3%) of the total number of vehicle parking spaces provided for the use and fractions rounded down.

Finding 70: the applicant is proposing to provide 45 off street parking spaces, which means 2 long term bicycle parking spaces (rounded up from 1.35) are required. The submitted plans show two long term bicycle parking spaces on the eastern portion of the lot. The applicant's narrative indicates that the long-term parking will be enclosed. **As such, this criterion is met**

9.080A(3) for transit centers, high-capacity transit stations, inter-city bus and rail stations, and park-and-ride lots...

Finding 71: the subject property does not have, nor is near, any of the listed transit hubs. **As such, this criterion is not applicable**

9.080(B) Location

9.080(B)(1) Bicycle parking shall be located on-site, convenient to building entrances, and have direct access to both the public right-of-way and to the main entrance of the principal use.

Finding 72: The proposed provided bicycle parking is located on-site, is convenient to building entrances, and has access the building main entrance and public-right-way through the parking lot. **As such, this criterion is met**

9.080(B)(2) for facilities with multiple buildings or parking lots, bicycle parking shall be located in areas of greatest use and convenience to bicyclists.

Finding 73: The location of the bicycle parking is in an area that's convenient and easily accessible for bicyclists. **As such, this criterion is met.**

9.080(B)(3) Bicycle parking may be provided within the public right-of-way...

Finding 74: The applicant is not proposed to provide bicycle parking in any right of way. **As such, this criterion is not applicable**

9.080(C) Parking Space Dimensions. Each required bicycle parking space shall be at least two and one half (2.5) feet by six (6) feet, and when covered, provide vertical clearance of at least seven (7) feet. An access aisle of at least five (5) feet wide shall be provided and maintained beside or between each row of bicycle parking. Vertical or upright bicycle storage structures are exempted from the parking space length standard.

Finding 75: As demonstrated on the submitted plans, the proposed bike rack complies with the above parking space dimensions and associated 5 foot access aisle. In the narrative, the applicant also indicates that long term bicycle parking will be accommodated for within the garages of the larger apartment units. **As such, this criterion is met.**

9.080(D) Parking Facilities. Bicycle parking facilities shall offer security. Long-term bicycle parking shall be in the form of a lockable enclosure, a designated bicycle storage area inside a building on-site, a covered rack, or another form of secure parking where the bicycle can be stored, as approved by the Director. Short-term bicycle parking shall be in the form of a stationary object (i.e., a “rack”) or other approved structure, covered or uncovered, to which the bicycle can be locked. Bicycle racks shall be securely anchored to the ground or to a structure and shall be designed to hold bicycles securely by means of the frame. Bicycle parking facilities shall be constructed so as to not obstruct walkways.

Finding 76: The submitted plans state that there will be a long term bicycle parking enclosure will be covered and lockable. The short term bicycle parking facilities, per the submitted plans, are to be an uncovered rack that can hold bicycles securely by the frame. **As such, this criterion is met.**

9.080(E) Signing. Where bicycle parking facilities are not directly visible and obvious from the public right-of-way, entry and directional signs shall be provided to direct bicyclists from the public right-of-way to the bicycle parking facility.

Finding 77: While not directly visible from the public right-of-way, the bicycle parking facility is directly visible from the parking lot and is in a convenient location. **As such, this criterion is met.**

9.085 Setbacks

9.085(A) Parking areas which abut a residential zoning district shall meet the building setback of the most restrictive adjoining residential zoning district.

Finding 78: per the findings of provision 8.150(B)(5)(c), all parking areas that abut a residential district meet the building setback requirements, except for the eastern, rear yard setback. A variance has been applied for as a part of this application. The findings for said variance are included later in this report. **As such, this criterion can be met upon variance approval.**

9.085(B) Required parking shall not be located in a required front or side yard setback area abutting a public street except in industrial districts. For single-family dwellings, required parking may be located in front of a garage.

Finding 79: No required parking is located in required front or side yard setback areas. **As such, this criterion is met.**

CITY OF TROUTDALE | Findings of Fact & Final Order

9.085(C) In industrial districts...

Finding 80: The proposed development is not within an industrial district. **As such, this criterion is not applicable**

9.085(D) Parking areas shall be set back from a lot adjoining a street the same distance as required building setbacks. Regardless of other provisions, a minimum setback of ten (10) feet shall be provided along the property fronting on a public street in an industrial district. The setback area shall be landscaped as provided in this Code.

Finding 81: the western street frontage is the only side of the parking area that adjoins a street. The parking area is setback 20 feet from the street, which is the same as the required building setback. **As such, this criterion is met.**

9.095 Handicapped Parking Facilities. The required number of handicapped parking spaces shall be in conformance with the applicable provisions of the State of Oregon Structural Specialty Code.: ORS 447.233, Table 1106.2 Accessible parking spaces, states that for 26-50 total provided parking spaces, a minimum of 2 ADA spaces are required. Additionally, 1 van accessible space with an associated loading zone is required per 26-50 provided total parking spaces.

Finding 82: The submitted plans show 45 total off street parking spaces, with 2 ADA spaces and an associated access lane for van accessibility. **As such, this criterion is met**

9.110 Design Requirements for Off-Street Parking

9.110(A) Size

9.110(A)(1) The standard size of a parking space shall by 9'x18' (162s.f.)

Finding 83: As seen on the submitted plans, the proposed 21 standard parking spaces will be 9'x18', which is compliant with this provision. **As such, this criterion is met**

9.110(A)(2) The compact size of a parking space shall be 8'x16' (128s.f.). Up to the thirty-five percent (35%) of provided parking spaces may be compact spaces.

Finding 84: As shown on the submitted plans, the 14 proposed compact parking spaces will be 8'x16', which is compliant with the sizing standard above. 14 compact parking spaces makes up ~31% of the total provided parking spaces, which is below the maximum 35% allotment. **As such, this criterion is met**

9.110(A)(3) Handicapped parking spaces shall be in conformance with the State of Oregon Structural Specialty Code, Chapter 11 Accessibility.

Finding 85: The 2 ADA spaces are 9'x18', with an access aisle that is 8'x18'. The Oregon Structural Specialty Code refers to the Standards for Accessible Parking Places set forth by the Oregon Transportation Commission. This space dimensions are in line and compliant with the Oregon Transportation Commission's standards. **As such, this criterion is met**

9.110(A)(4) For parallel parking...

Finding 86: Parallel parking spaces are not included in this application. **As such, this criterion is not applicable**

CITY OF TROUTDALE | Findings of Fact & Final Order

9.110(B) Aisles shall not be less than (1) 25 feet in width for 90 degree parking (2) 20 feet in width for 60 degree parking (3) 20 feet in width for 45 degree parking (4) 12 feet in width for parallel parking on one side (5) 10 feet in width for parallel parking on both sides.

Finding 87: The site plan shows all drive aisles to be 26 feet in width, which meets the minimum width standards listed in the above code provision. **As such, this criterion is met**

9.120 Off Street Parking Plan. A plan drawn to scale, indicating how the off-street parking and loading requirement is to be provided, shall accompany the application for a development permit. The plan shall show all those elements necessary to indicate that these requirements are being fulfilled, and shall include, but no be limited to (A) Delineation of individual parking spaces (B) Circulation area necessary to serve spaces (C) Access to streets, alleys, and properties to be served (D) Curb cuts € Dimensions, continuity, and substance of screening (F) Grading, drainage, surfacing, and subgrading details (G) Delineations of all structures or other obstacles to parking and circulation on the site (H) Specifications as to signs and bumper guards.

Finding 88: An off street parking plan has been submitted as a part of the application for development approval. The off-street parking plan includes the above A – H requirements. **As such, this criterion is met**

A4 The proposal meets all existing conditions of approval for the site or use, as required by a prior land use decision(s), as applicable.

Finding 89: There are no existing conditions of approval or prior land use decisions that apply to this proposed development. **As such, this criterion is met**

B2 If applicable design standards are to be adjusted, the proposed adjustment...

Finding 90: The applicant has applied for variances for all proposed adjustments to design standards. **As such, this criterion can be met upon variance approval.**

FINDINGS OF FACT– Variance [TDC 6.1300]

6.1325 The Planning Commission may grant a variance under the Type III procedure if the request involves expansion or reduction of a quantifiable provision in this Code by more than fifteen (15%); or if the request is referred to the Planning Commission in accordance with Section 6.1335 of this Chapter. The variance shall be granted only if the Planning Commission determines that the criteria in Section 6.1315 of this Chapter are met.

Request #1: The applicant has requested relief from the side yard setback requirement for the northern side yard. the TDC 3.130(E)(7)(b)(i) and (ii) minimum required side yard setback is 20 feet (see finding 8 for details on how this number was determined). **The applicant requests a 25% reduction in the standard and asks for a 15 foot minimum required side setback.**

- A. Special circumstances or conditions including, but not limited to, lot size, lot shape, topography, or size of shape of building, apply to the property, development, or to the intended use and are not typical of the general conditions in the surrounding area; and**

FINDING: The applicant indicates that the subject property is oddly configured with an appendage located at the southeast corner of the lot in such a way that constrains development. The appendage is roughly 3,000 square feet in area, and roughly 30 feet wide. The minimum required rear yard setback for this appendage (and the rest of the parcel) is 30 feet (3.130(E)(7)(d)(e)(i)). Because the width of the appendage is roughly the same size of the required setback, the parcel contains roughly 3,000 square feet of land that can not be used towards housing a structure or parking area. The southeastern appendage makes the subject property uniquely shaped in a matter that is atypical of the general conditions of the surrounding area and creates difficulties for development. **As such, this criterion is met**

- B. The variance authorized will not be injurious to adjacent properties or the surrounding neighborhood or otherwise detrimental to the public welfare; and**

FINDING: Within the narrative, the applicant affirms that reducing the northern side yard setback to 15 feet will not be injurious to adjacent properties, the surrounding neighborhood, or be detrimental to the public welfare. The applicant’s site plans indicate a wooden, 6 foot good neighbor fence to be installed along the border of the abutting parcels to the north, and an additional wooden 6 foot good neighbor fence to be installed at the boundaries of each ground level unit. Not only will these fences contribute to sight obscuration, but the fences reduce the sound of the tenants as well. With a 15 foot side yard setback, the proposed building will be at least 45 feet from nearest adjacent dwelling on the northern property line. A 5 foot reduction in the required northern side setback is not anticipated to be detrimental to the public welfare, nor be injurious to adjacent properties. **As such, this criterion is met**

- C. The variance authorized will be consistent with the general purpose and intent of the provision from which a variance is sought; and**

FINDING: The general purpose and intent of section 3.130(E)(7)(d)(e)(i) is to ensure that when HDR zoned properties abut differing residential zones, the abutting zone’s setbacks are considered in the determination of the subject property’s zone. If the variance is authorized, the proposed northern side setback is still greater than the side setback of the abutting zones. The abutting zones are LDR-2 and MDR, who have side yard setbacks of 7.5 feet and 5 feet, respectively. The applicant’s proposed setback of 15 feet is equal to double the required setback standards of the adjacent properties to the north, which considers the setbacks of the northern abutting zone. **As such, this criterion is met**

- D. The variance is the minimum necessary to relieve a practical difficulty with full compliance and to avoid or minimize the resulting hardship.**

CITY OF TROUTDALE | Findings of Fact & Final Order

FINDING: In the narrative, the applicant notes that the subject property has site constraints via the southeastern appendage that require a reduction in the north property line side yard setback. The applicant states that they considered shifting the project south, but are unable to do so due to other setback requirements, minimum private outdoor space requirements, and the necessity to provide adequate parking for tenants. The variance is the minimum necessary to relieve the constraints imposed by the southeastern appendage. **As such, this criterion is met**

FINDINGS OF FACT– Variance [TDC 6.1300]

6.1325 The Planning Commission may grant a variance under the Type III procedure if the request involves expansion or reduction of a quantifiable provision in this Code by more than fifteen (15%); or if the request is referred to the Planning Commission in accordance with Section 6.1335 of this Chapter. The variance shall be granted only if the Planning Commission determines that the criteria in Section 6.1315 of this Chapter are met.

Request #2: The applicant has requested relief from the required rear yard parking setback. TDC 8.150(B)(5)(c) states that off street parking shall meet the minimum required building setbacks, which is 20 feet for the rear setback (see finding 45 for details on how this number was determined). **The applicant requests a 50% reduction from this standard and asks for a 10 foot rear setback for the off street parking area.**

- A. Special circumstances or conditions including, but not limited to, lot size, lot shape, topography, or size of shape of building, apply to the property, development, or to the intended use and are not typical of the general conditions in the surrounding area; and**

FINDING: The applicant states that they believe special circumstances exist related to lot size, shape of the lot, and other requirements that are not typical of the general conditions in the surrounding area, and that the lot is severely constrained in an east-west direction by the required building and parking setback to 257th Ave. Staff disagrees with the applicant in that the setback from 257th Ave. can be characterized as a unique or special circumstance, given that any multifamily development will be beholden to the same setback requirements and are, as such, not special.

However, staff concurs that the lot is oddly configured in that it has a southeastern appendage that constrains development. The appendage is roughly 3,000 square feet in area, and roughly 30 feet wide. The minimum required rear yard setback for this appendage (and the rest of the parcel) is 30 feet (3.130(E)(7)(d)(e)(i)). Because the width of the appendage is roughly the same size of the required setback, the parcel contains roughly 3,000 square feet of land that cannot be used towards housing a structure or parking area. The southeastern appendage makes the subject property uniquely shaped in a matter that is atypical of the general conditions of the surrounding area and creates difficulties for development. **As such, this criterion is met**

- B. The variance authorized will not be injurious to adjacent properties or the surrounding neighborhood or otherwise detrimental to the public welfare; and**

FINDING: The applicant states that the proposed 10 foot setback will not be injurious to the adjacent properties or otherwise detrimental to the public welfare. The applicant’s narrative and site plan demonstrate that the building will remain compliant with the required rear yard setback, and that this proposed setback variance is only for 5 off street parking spaces. The site plan shows a 6-foot wooden good neighbor fence, that traverses the eastern property line and provides sight obscuration and sound dampening. The plans also show a row of arborvitae trees and autumn blaze maples along the eastern property line to provide further obscuration in addition to the fence. The applicant’s request is not anticipated to be detrimental to the public welfare, nor injurious to the surrounding neighborhood. **As such, this criterion is met**

- C. The variance authorized will be consistent with the general purpose and intent of the provision from which a variance is sought; and**

FINDING: The general purpose and intent of TDC 8.150(B)(5)(c) is to separate land uses and allow light and air between buildings. The applicant’s proposal to install a six foot wooden fence, in addition to a landscaped buffer of arborvitae and maples, ensures that there will be adequate separation and buffer to maintain the general intent and purpose of the setback. **As such, this criterion is met**

D. The variance is the minimum necessary to relieve a practical difficulty with full compliance and to avoid or minimize the resulting hardship.

FINDING: The applicant states that the requested setback reduction is the minimum necessary to allow the proposed development on to the site. A variance may be granted for hardships related to atypical lot size and shape, however the hardship may not be self-imposed. In this case, staff argues the hardship is self imposed due to the amount of parking that will be provided in this proposed development. Per OAR 660-012-0430, the proposed development shall provide a minimum of 8 off street parking spaces. The applicant is providing 45 total parking spaces for 15 dwelling units, which provides significantly more off street parking than 2 spaces per unit. While it is likely that each of the “primary” units may have two cars, it is unlikely that each of the smaller units will have two cars as they are of a size that fits one resident (556 square feet in area). Staff believes a parking lot reconfiguration can occur to ensure compliance with TDC 8.150(B)(5)(c) and still provide ample parking for future tenants and guests. Staff disagrees that a variance is the only relief that can be offered. **As such, this criterion is not met.**

FINDINGS OF FACT– Variance [TDC 6.1300]

6.1325 The Planning Commission may grant a variance under the Type III procedure if the request involves expansion or reduction of a quantifiable provision in this Code by more than fifteen (15%); or if the request is referred to the Planning Commission in accordance with Section 6.1335 of this Chapter. The variance shall be granted only if the Planning Commission determines that the criteria in Section 6.1315 of this Chapter are met.

Request #3: The applicant has requested relief from the minimum required private outdoor space for upper level units. TDC 8.150(B)(6)(b) states that upper level units shall have 60 square feet of private outdoor space. **The applicant requests for a 30% reduction from this requirement and asks to provide 42 square feet of private outdoor space for upper level units.**

- A. Special circumstances or conditions including, but not limited to, lot size, lot shape, topography, or size of shape of building, apply to the property, development, or to the intended use and are not typical of the general conditions in the surrounding area; and**

FINDING: The applicant states that achieving the required 60 square feet of private outdoor space for each upper level unit is practically challenging to achieve. The applicant argues that the provided 42 square foot private outdoor space in the site plans are specifically designed to cantilever over the driveway in a safe, unobstructive manner. If the applicant were to achieve the 60 foot area, they have concerns related to the functionality of the garage below. The applicant further states that it is not practically possible to provide a 60 foot private outdoor space for the upper level units and therefore requests to provide 42 square feet of private outdoor space. **As such, this criterion is met**

- B. The variance authorized will not be injurious to adjacent properties or the surrounding neighborhood or otherwise detrimental to the public welfare; and**

FINDING: Per the site plans and applicant narrative, the decks impacted by this variance request are primarily visible from within the confines of the subject parcel. The applicant providing 18 square feet less of balcony will be, in no way, injurious to adjacent property owners nor detrimental to the public welfare. **As such, this criterion is met**

- C. The variance authorized will be consistent with the general purpose and intent of the provision from which a variance is sought; and**

FINDING: The general purpose and intent of the provision of providing private outdoor space is to provide an amenity for the tenants. Granting a 30% reduction in upper level private outdoor space will still achieve the general purpose and intent of this provision, as the amenity is still being provided in a practicable and usable fashion. Additionally, the proposed development is providing recreation open space that surpasses the minimum requirement. Staff believes that the outdoor space lost by granting this variance can be made up by the ample common outdoor space that is proposed to be provided.

- D. The variance is the minimum necessary to relieve a practical difficulty with full compliance and to avoid or minimize the resulting hardship.**

FINDING: Per the applicant’s narrative and explanation of the special circumstance, the requested variance is the minimum necessary to relieve the demonstrated practical difficulty. **As such, this criterion is met**

FINAL ORDER & DECISION

FINAL ORDER

Based upon the foregoing Findings of Fact, the Troutdale Planning Commission [REDACTED] the Variance and Site Development Review for Case File No. LU-0014-2024 1360 SW 257th Ave on the count of all decision criteria being met, subject to the conditions of approval as stated herein.

DECISION

The Planning Commission hereby adopts these Findings of Fact as stated and has voted to approve the Application as described in the Final Order above and subject to the conditions of approval as stated herein.

This decision shall expire two (2) years from the date of this Final Order.

YEAS:

NAYS:

ABSTAINED:

ABSENT:

Tanney Staffenson, Planning Commission Chair

Date

PROPOSED CONDITIONS OF APPROVAL

City of Troutdale Planning Division

1. Applicant shall be required to satisfy the comments made by review entities included in the corresponding staff report or shall work with Staff to reach an agreement between the parties.
2. The approval of case file LU-0014-2024 shall expire automatically two (2) years from the effective date of the decision unless the approval is enacted either through construction, establishment of use, or recordation of plat or survey within the specified time period. The effective date of the decision shall be the date of the Notice of Decision, unless such decision is appealed.
3. Per 8.060(A)(6) and (7), a landscaping plan shall be required at the time of building permit submittal.
4. Per TDC section 8.060(B)(1) further detail is needed regarding the trash and recycling enclosure at the time of building permit submittal. Specifically, the applicant needs to specify the height of the fence surrounding the enclosure.
5. Per TDC 8.150(B)(7)(a), further detail is needed at the time of building submittal to ensure that no more than 50% of the required recreation area is passive open space.
6. Per the requirements of TDC 9.060 and Troutdale Municipal Code 8.26, a lighting plan shall be required at the time of building permit submittal
7. Per TDC 8.150(B)(4)(b), amend elevation plans to show compliance with this provision.

City of Troutdale Public Works

1. Applicant shall abandon the existing water service to the site as directed by and in collaboration with City forces.
2. Applicant shall install the commercial water service assembly, meter, fire line, and fire backflow protection vault to serve the site. Installation will occur in the existing easement and will require a UTIL permit from the City. Applicant shall coordinate closely in advance with the affected resident.
3. The applicant shall decommission any existing private water wells on the site in accordance with Oregon Water Resource Department requirements.
4. Applicant shall decommission any existing underground storage and/or septic tanks on the property in accordance with DEQ requirements
5. Applicant shall submit with the building permit applications a detailed stormwater management report demonstrating compliance with the PSWMM including supporting calculations
6. All UIC's shall be registered (or permitted) through DEQ in accordance with DEQ requirements and may require pretreatment prior to infiltration.
7. The applicant shall prepare and submit an operation and maintenance plan for the stormwater quality facility(s) prior to receiving a Certificate of Occupancy.
8. Applicant shall cure all existing defects (if any) in the public sidewalk on the frontage of the property prior to Certificate of Occupancy.

Multnomah County Transportation Division

1. This Road Rules Variance is only effective on approval of the corresponding land use application with the City of Troutdale (LU-0014-2024).
2. This Road Rules Variance decision expires two (2) years from the effective date (Land Use decision plus any appeal periods), unless condition 3 is satisfied and/or the corresponding land use decision (LU-0014-2024) becomes ineffective.

3. The applicant will need to ensure that the sidewalks along the site frontage on SW 257TH AVE are 6 feet wide and curb ramps and slopes, particularly at the driveway entrance, meet current ADA requirements (MCRR 6.100 B; DCM Table 2.2.1).
 - a. Applicants are required to contact the County Transportation Engineer(row.permits@multco.us)to verify whether standards are met.
 - b. Applicant may be required to submit a “ROW-General” or “ROW-Construction” permit application via the County’s Permit Portal, for these frontage improvements, based on the County Transportation Engineer’s verification review.
 - c. The “ROW-General” or “ROW-Construction” required for the new driveway entrance construction will also serve as a ROW Access/Encroachment permit required under MCRR 18.250. No additional permits will be required.

Mid County Lighting

1. Per the District’s Administrative rules, the applicant will be required to submit a Lighting Level Review to the Multnomah County Permit Portal with photometric calculations to assess the lighting levels for all public streets and intersections within their proposed project area frontage. We strongly encourage a review of our Lighting Level Review Instructions prior to submitting the form. If you have not created an account on the Permit Portal for a previous project, you will need to create an account before submitting the Lighting Level Review to the District. The current lighting level for all public streets must meet Districts standards outlined on page 9, Section 5.120 of our Administrative Rules. If District standards are not met, the applicant will need to enter into a Construction Permit with the District to bring the lighting levels to current District standards

Attn: Nik Ramstad

7/12/24

Property variances for 1360 sw 257th ave troutdale

Hi Nik my name is Travis Perala I am writing this letter on behalf of all property owners that are directly connected to this property that have signed below because we do not want two of three variances the first is 25% on north side and 33% on east side. We do not want condensed housing pushed any closer and feel it would diminish our property values especially if they are rental or lease propertys

x [Signature] PL 1320 SW 257th Troutdale OR

x [Signature] PL 1320 WY Troutdale OR

x Colonne Newland 1460 S.W. 257, Troutdale, OR 97060

x ASmamaw MISIKIR 1957 SW WRIGHT PL 97060

x Jim Jones 1495 SW WRIGHT PL.

x

x

503 422 6112
Travis 503-422-6112 Please call if you can
Neighbor Behind you 7/12/24 signs

Property variances for 1360 sw 257th ave troutdale

~~XXXXXXXXXX~~

Hi ~~my~~ my name is Travis Perala I am writing this letter on behalf of all property owners that are directly connected to this property that have signed below because we do not want two of three variances the first is 25% on north side and 33% on east side. We do not want condensed housing pushed any closer and feel it would diminish our property values especially if they are rental or lease propertys

Anatoliy 7/15/24
1241 SW Wright PL
Troutdale OR
(503) 449-4415

From: [Nick Rector](#)
To: [Community Development](#)
Subject: LU-0014-2020 1360 SW 257th Dr - Project Comments - Notice of Public Hearing
Date: Tuesday, July 16, 2024 1:58:00 PM

Good afternoon,

In response to the Notice of Public Hearing I received in the mail, I have the below comments/questions on the matter. I plan to attend the hearing on the 14th of August to follow up with these inquires.

1. Per the Gateway Estates CC&Rs registered with Multnomah County, and what I had agreed to at time of closing on my property, the apartment complex on lot 17 was to be a “senior living” environment. Is that the case in this project?
2. What is the purpose of the 33% variance request on the eastside property line?
 1. ***I am respectfully strongly opposed to a granted variance on this side, as it would reduce the value of my home and property, along with my neighbors'. This would be way too close to my backyard property line.***
3. What is the site plan?
4. Will builder need access to the water easement on my property (lot 2) and will it be fully restored to the way it was after completion?
5. What does the “reduce the size of the private outdoor space required for upper level-level units by 30%” variance entail?
 1. Why the variance, because of reduced setback?
6. Is this a 3 story complex?
7. What is the floorplan?
8. Will a permanent fence or barrier be erected along the east side property line?

Thank you and I look forward to discussing this matter further.

Nick Rector
1455 SW Wright Pl
Troutdale, OR 97060
Gateway Estates - Lot 2 Property Owner
503-705-2271



CITY OF TROUTDALE ENGINEERING DIVISION

MEMORANDUM

DATE: July 16, 2024
FROM: Dylan Jay, Engineering Associate
TO: Planning
CC: File
Travis Hultin, PW Director & Chief Engineer
David Schaffer, Water & Streets Superintendent
Shawn Anderson, Wastewater Superintendent
Jona Jacobsen, Parks & Facilities Superintendent
Ryan Largura, Environmental Specialist

RE: Type II Site Development Review, File No. LU-0014-2024 (1360 SW 257th Dr Townhomes)

The Public Works Department has reviewed the Type II Site Development Review submittal for the 1360 SW 257th Dr townhomes. These comments are divided into two categories: general comments and proposed conditions. General comments are informational points to guide the applicant in the proper planning of public works infrastructure for this project, to inform the applicant of possible extraordinary issues and/or to provide the basis for findings. Proposed conditions are requirements that Public Works recommends be formally imposed on the developer in the final order. Note that references to the “City Standards” herein refer to the *Construction Standards for Public Works Facilities*.

General Comments/Findings

1. Any and all utility and transportation plans submitted with this application have been reviewed for the purpose of determining the feasibility of providing utility and transportation facilities for the project in accordance with City Standards. This land use approval does not constitute final approval of details, including but not limited to alignments, materials and points of access, connection or discharge, that are depicted or suggested in the application. The applicant is required to submit detailed construction drawings and/or plat drawings for the project, as applicable. The City of Troutdale Public Works Department will review plans, in detail, when they are submitted and approve, reject or require modifications to the plans or drawings based upon conformance with City Standards, the TDC and the professional engineering judgment of the Chief Engineer.
2. It is the opinion of the Public Works Department that the proposed 1360 SW 257th Dr. Townhomes can be developed in accordance with the requirements of the Troutdale Development Code (as it pertains to Public Works requirements) and Construction Standards, provided it fully addresses the comments and conditions contained herein, and can be approved.



CITY OF TROUTDALE ENGINEERING DIVISION

MEMORANDUM

3. Adequate water service is available to the site and the applicant has indicated the installation of a new commercial water service assembly on the existing 8" stub to the site from the main in SW Wright Pl.
4. Troutdale Municipal Code states that each lot shall be served by only one water service. Since a new service is being installed, the existing water service from the 257th Ave main shall be abandoned at the main, or as otherwise directed by Public Works. Water service abandonment requires a permit from Troutdale Public Works. Abandonment must be executed in collaboration with City forces. Permittee shall coordinate with the Troutdale Water Division (503.674.3300) not less than 72 hours in advance of commencing the abandonment. The applicant is encouraged to coordinate with Multnomah County to potentially execute this abandonment in concert with the County's upcoming 257th Avenue Improvement project. See proposed Condition 1.
5. It will be the developer's responsibility to install the commercial water service assembly, meter, and fire line, and fire backflow protection vault to serve the site. Installation of the water service will require a UTIL permit from the City. This installation will occur in an existing easement on a single-family residential lot behind the project site, and the developer will need to coordinate closely with the affected property owner. See proposed Condition 2.
6. Water system cross-connection (i.e. backflow) protection at the point of service (meter and/or fire vault) is required to protect public health. The type of backflow protection device required at the point of service is dependent on the fixtures, appliances and equipment connected to the onsite plumbing systems, point of use protections to be installed, and the nature of activities onsite. The applicant must consult with a Public Works Cross Connection Specialist (503.674.3300) to determine the type of backflow protection device to be installed at the point of service, and reflect the required device on the plans. Prior to receiving a CofO (Certificate of Occupancy or equivalent), the applicant will be required to arrange a joint backflow protection site visit and consultation with the Public Works Cross Connection Specialist and the Plumbing Official. They will jointly tour the facility with the owner to review backflow protection devices at points of use and the point of service. If backflow protection upgrades are necessary, they will consult with and advise the owner on the most cost-effective means to achieve compliance. If any upgrades are needed, they must be completed prior to receiving a CofO. The applicant may elect to install a Reduced Pressure Backflow Protection Device at the point of service (and reflect it on the plans), in which case the above consultation is unnecessary and the site tour is not required. Upon installation, the developer must have the devices tested by a certified backflow assembly tester and register the device(s) with Public Works.
7. The applicant will be required to decommission any known or discovered existing private water wells on the site (if any) in accordance with Oregon Water Resource Department requirements. See proposed Condition 3.
8. Sanitary sewer service is available to the site and the applicant has indicated connection to the existing stub to the site from the main in SW Wright Pl.
9. The applicant will be required to decommission any existing underground storage tanks present on the site prior to Certificate of Occupancy. Septic tank decommissioning requires a permit from



CITY OF TROUTDALE ENGINEERING DIVISION

MEMORANDUM

the DEQ Sanitarian, stationed with the Portland Bureau of Environmental Services.

Decommissioning of other tanks (e.g. fuel oil tanks, etc.) requires a permit from the DEQ UST Program. See proposed Condition 4.

10. The proposed project will result in more than 2,000 SF of new or redeveloped impervious area. Stormwater quality treatment will be required in accordance with the Portland Stormwater Management Manual (PSWMM). The applicant has submitted a conceptual Stormwater Management Report prepared by Firwood Design Group indicating 100% onsite retention of stormwater. A detailed Stormwater Management Report shall be included with the building permit submittal for review and approval by City staff. See proposed Condition 5.
11. The conceptual Stormwater Management Report proposes that drywells will be used for onsite infiltration. Drywells are class V injection wells under federal and DEQ UIC regulations. They therefore will require UIC registration (or UIC permit) through DEQ and may require pretreatment prior to infiltration. See proposed Condition 6.
12. The applicant is required to provide a Stormwater Quality Operations and Maintenance Plan in accordance with the PSWMM. The O&M plan must be reviewed and approved by Public Works prior to receiving a Certificate of Occupancy (or equivalent). See proposed Condition 7.
13. An erosion control permit will be required during construction. The site is less than one acre. Therefore, a local construction stormwater/erosion control permit, obtained through the City, shall be required prior to commencing ground disturbing construction on the site.
14. 257th Ave is a Multnomah County Road. Any requirements associated with improvements, ROW or easement dedications, or access on 257th Ave shall be the purview of the County.
15. A preliminary trip generation estimate was not included in this submittal. However, Public Works staff can estimate that the expected traffic generation for 15 townhome units will have minimal impact on City streets and will not require any further analysis to meet City code. A Traffic Impact Analysis may still be required by the County.
16. Troutdale Municipal Code specifies that abutting property owners are responsible for maintaining the sidewalk on their street frontages (including on County roads). The applicant will be required to cure any existing defects (if any) in the existing sidewalks on its frontages prior to obtaining a Certificate of Occupancy. Sidewalk repairs on 257th Ave will require a right of way permit from Multnomah County. This work may overlap with planned work in the County's upcoming 257th Avenue improvements project, and the applicant is encouraged to coordinate with Multnomah County Transportation. See proposed Condition 8.
17. System development charges will be due when building permits are issued for the homes. The SDC worksheet is available at <https://www.troutdaleoregon.gov/publicworks/page/system-development-charges>. Contact Public Works if needed for assistance in completing this worksheet and in determining any available credit on the property. System development charges will be adjusted for inflation on January 1st based on the Engineering New Record Construction Cost Index for Seattle, WA. Additionally, the City is in the process of conducting an SDC rate study, and the City Council may make additional adjustments to SDC rates accordingly. The building permit



CITY OF TROUTDALE ENGINEERING DIVISION

MEMORANDUM

issuance date determines applicable rates. Permits issued on or after the corresponding dates will be charged the rates in effect on that date.

Proposed Conditions

1. Applicant shall abandon the existing water service to the site as directed by and in collaboration with City forces.
2. Applicant shall install the commercial water service assembly, meter, fire line, and fire backflow protection vault to serve the site. Installation will occur in the existing easement and will require a UTIL permit from the City. Applicant shall coordinate closely in advance with the affected resident.
3. The applicant shall decommission any existing private water wells on the site in accordance with Oregon Water Resource Department requirements.
4. Applicant shall decommission any existing underground storage and/or septic tanks on the property in accordance with DEQ requirements.
5. Applicant shall submit with the building permit applications a detailed stormwater management report demonstrating compliance with the PSWMM including supporting calculations.
6. All UIC's shall be registered (or permitted) through DEQ in accordance with DEQ requirements and may require pretreatment prior to infiltration.
7. The applicant shall prepare and submit an operation and maintenance plan for the stormwater quality facility(s) prior to receiving a Certificate of Occupancy.
8. Applicant shall cure all existing defects (if any) in the public sidewalk on the frontage of the property prior to Certificate of Occupancy.



1620 SE 190th Ave, Portland OR 97233-5910 • PH. (503) 988-5050 • Fax (503) 988-338

NOTICE OF DECISION

Case File: RRV-2024-0002

Permit: Road Rules Variance

Applicants: Mike Halstead

Owners: CHERRY PARK EAST LLC

Location: 1360 SW 257TH AVE TROUTDALE
 Tax lot: 1N3E35AA -05717
 Alternate Account: R308230850

Proposal Summary: Road Rules Variance for a new driveway access onto SW 257TH AVE, an Urban Major Arterial road within Multnomah County jurisdiction. The Road Rules Variance is required because the new access proposed does not meet access spacing standards set out in County standards (MCRR 4.300).

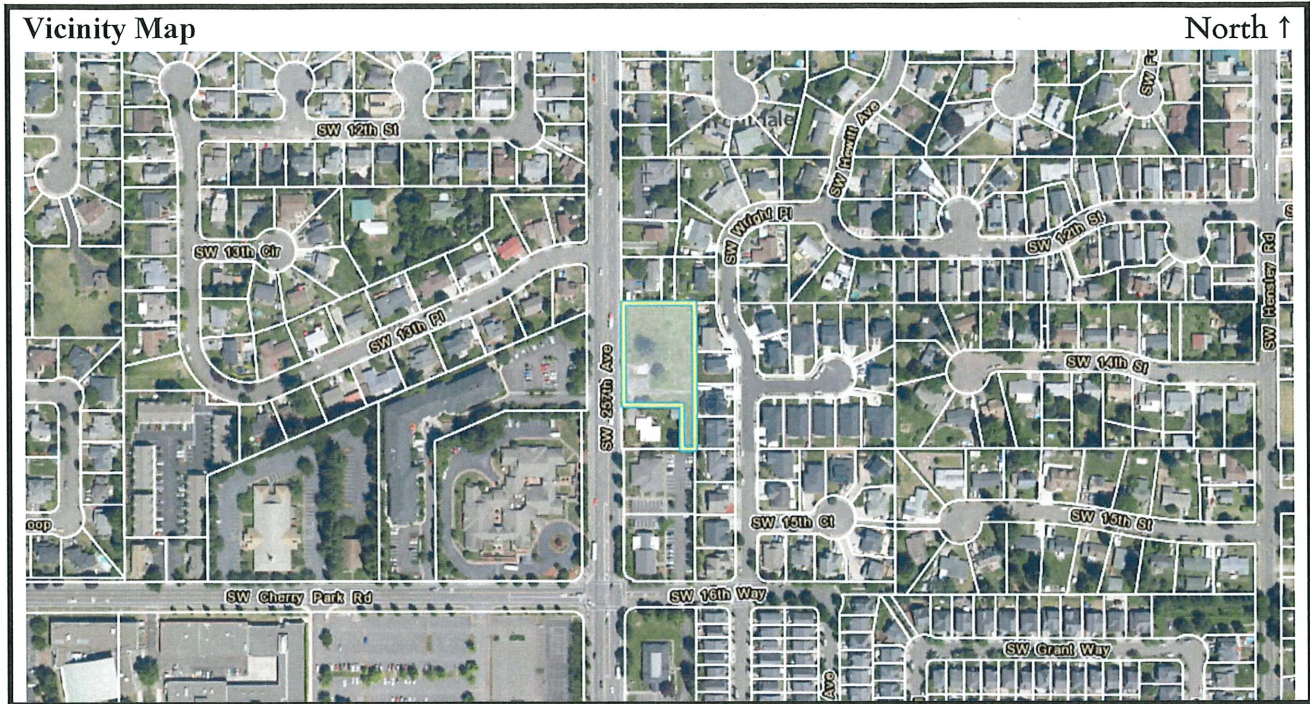
Decision: **Approved with conditions**

This decision is final at the close of the appeal period, unless appealed. The deadline for filing an appeal is August 30, 2024 at 4:00 pm.

Opportunity to Review the Record: The complete case file, including the County Engineer Decision containing Findings, Conclusions, Conditions of Approval, and all evidence associated with this application is available for review at the Transportation Planning & Development office. Copies of all documents are available at the rate of \$0.35/per page. For further information, contact Graham Martin, Senior Planner at row.permits@multco.us

Opportunity to Appeal: An appeal requires a \$250.00 fee and must state the specific legal grounds on which it is based. To obtain appeal forms or information on the procedure, contact the Transportation Planning & Development office at 1620 SE 190th Avenue (Phone: 503-988-3582). This decision is not appealable to the Land Use Board of Appeals until all local appeals are exhausted.

Issued by:	Graham Martin, Senior Planner
For:	Jon Henrichsen, PE, County Engineer
Date:	August 16, 2024



Applicable Approval Criteria:

For this application to be approved, the proposal will need to meet applicable approval criteria below:

Multnomah County Road Rules (MCRR):

Multnomah County Road Rules (MCRR):

- 16.200 General Variance Criteria
- 16.225: B - Access Spacing

Copies of the referenced Multnomah County Road Rules (MCRR) sections and Design and Construction Manual (DCM) can be viewed at the following links:

MCRR: <https://multco.us/file/70143/download>

DCM: <https://www.multco.us/file/119688/download>

Scope of Approval

Approval of this Road Rules variance is based on the submitted written narrative(s) and plan(s). This application and approval is for the variance to Multnomah County Road Rules section 4.000. No work shall occur under this Road Rules variance other than that which is specified within these documents. It shall be the responsibility of the property owner(s) to comply with these documents and the limitations of approval described herein.

Conditions of Approval

The conditions listed are necessary to ensure that approval criteria for this Road Rules Variance are satisfied. Where a condition relates to a specific approval criterion, the code citation for that criterion follows in parenthesis.

1. This Road Rules Variance is only effective on approval of the corresponding land use application with the City of Troutdale (LU-0014-2024).
2. This Road Rules Variance decision expires two (2) years from the effective date (Land Use decision plus any appeal periods), unless condition 3 is satisfied and/or the corresponding land use decision (LU-0014-2024) becomes ineffective.
3. The applicant will need to ensure that the sidewalks along the site frontage on SW 257TH AVE are 6 feet wide and curb ramps and slopes, particularly at the driveway entrance, meet current ADA requirements (MCRR 6.100 B; DCM Table 2.2.1).
 - a. Applicants are required to contact the County Transportation Engineer (row.permits@multco.us) to verify whether standards are met.
 - b. Applicant may be required to submit a "ROW - General" or "ROW - Construction" permit application via the County's Permit Portal, for these frontage improvements, based on the County Transportation Engineer's verification review.
 - c. The "ROW - General" or "ROW - Construction" required for the new driveway entrance construction will also serve as a ROW Access/Encroachment permit required under MCRR 18.250. No additional permits will be required.

Findings of Fact

FINDINGS: Written findings are contained herein. The Multnomah County Road Rules (MCRR) criteria are in **bold** font. Staff analysis and comments are identified as ‘**Staff:**’ and address the applicable criteria. Staff comments may include a conclusionary statement in *italic*.

Project Description:

Road Rules Variance for a new driveway access onto SW 257TH AVE, an Urban Major Arterial road within Multnomah County jurisdiction. The Road Rules Variance is required because the new access proposed does not meet access spacing standards set out in County standards (MCRR 4.300).

Transportation Standards

MCRR 4.000 Access to County Roads

MCRR 4.100 *Application for New or Reconfigured Access:* Applicants for a new, altered or reconfigured access onto a road under County Jurisdiction are required to submit a site plan.

Applicants may be required to provide all or some of the following:

- A. Traffic Study-completed by a registered traffic engineer;**
- B. Access Analysis-completed by a registered traffic engineer;**
- C. Sight Distance Certification from a registered traffic engineer; and**
- D. Other site-specific information requested by the County Engineer including a survey.**

Staff: The applicant has proposed to construct a new access onto SW 257TH AVE. The road is classified as an Urban Major Arterial road. The proposed access is shown on the applicant’s site plan (Exhibit A.1). All required information has been submitted.

MCRR 4.150 *Transportation Review of Existing Access:* The alteration, expansion or other change in use of any building, structure or land will require review by the County Engineer to ensure that access is consistent with these and other County rules and standards. A property owner or other party proposing an altered, expanded or other change in use of any building, structure or land may be required to provide all or some of the following:

- A. Traffic Study-completed by a registered traffic engineer;**
- B. Access Analysis-completed by a registered traffic engineer;**
- C. Sight Distance Certification from a registered traffic engineer; and**
- D. Other site-specific information requested by the County Engineer including a survey.**

Staff: *Criterion not applicable.*

MCRR 4.200 *Number of Accesses Allowed:* Reducing the number of existing and proposed access points on Arterials and Collectors and improving traffic flow and safety on all County roads will be the primary consideration when reviewing access proposals for approval. One driveway access per property is the standard for approval pursuant to the Multnomah County Code. Double frontage lots will be limited to access from the lower classification street. Shared access may be required in situations where spacing standards cannot be met or where there is a benefit to the transportation system. If more than one access is desired, a land use application must be submitted in compliance with applicable Multnomah County Codes.

Staff: The applicant proposes one new access from the subject property onto SW 257TH AVE. This meets the number of accesses allowed per this criterion. *Criterion not met.*

MCRR 4.300 Location: All new access points shall be located so as to meet the access spacing standards laid out in the Design and Construction Manual.

Staff: Any accesses on SW 257TH AVE will be required to meet the access spacing standards for Urban Major Arterial roads [MCRR 4.300; MCDCM Table 1.2.5]. Access spacing shall be 394 feet or greater from other accesses and shall have a setback of 197 feet from intersecting streets. The proposed access is 317 feet from neighboring driveways. The proposed access does not meet this standard. *Criterion not met.*

Applicant has applied for a Road Rules Variance from this standard. See Section 16.000 below.

MCRR 4.400 Width: Driveway, Private road and Accessway widths shall conform to the dimensions laid out in the Design and Construction Manual.

Staff: For a Residential use (multiple dwelling), a new or reconfigured driveway must be 20 to 35 feet wide (MCDCM Table 1.2.4). The proposed driveway will be 30 feet wide (Exhibit A.1). *Criterion is met.*

MCRR 4.500 Sight Distance: All new or altered access points to roads under the County's jurisdiction must have a minimum sight distance equal to the standards in the Design and Construction Manual and AASHTO's A Policy on Geometric Design of Highways and Streets.

Staff: Multnomah County Road Rules Section 4.500 states that access points to roads under the County's jurisdiction must have a minimum sight distance equal to the standards in the County Design and Construction Manual or AASHTO's *A Policy on Geometric Design of Highway and Streets*.

The posted speed limit on SW 257TH AVE is 40 mph. According to MCRR 4.500, and AASHTO standards, an access onto County roads shall have a stopping sight-distance of 455 feet or greater for speeds 40 mph.

The applicant's traffic engineer states that intersection sight distance is 605 feet to the north and 624 feet (Exhibit A.1). *Criterion met.*

MCRR 4.600 County Road Projects: When the County conducts a public works project that includes frontage or other improvements to a County Road, the following conditions are applicable:

A. Driveway drops will be in their existing location, or in an alternative location that can be constructed to meet the standards of the Design and Construction Manual unless the permit specifies a non-standard improvement.

B. Only one driveway drop per frontage will be constructed by the County unless permits for multiple driveways exist or a Variance Request for an additional driveway is granted by the County Engineer. The location of consolidated access points will be determined by the County Engineer. Undeveloped parcels will not have any driveway drops constructed by the County unless an access is already permitted or a Variance Request for a driveway is granted by the County Engineer.

C. Driveway drops will be constructed to meet the standards of the Design and Construction Manual unless the permit specifies a non-standard improvement.

Staff: *Criterion not applicable.*

MCRR 4.700 Existing Nonconforming Accesses:

A. Access locations that were previously approved through a prior land use decision but for which there is no record of an access permit having been granted by the County, are accepted as Existing Non-Conforming Accesses (ENCA). An ENCA is treated as any other accepted non-conforming use and may be subject to waiver of right if the non-conforming use is disrupted for a period of two (2) years or longer.

B. It is the burden of the applicant to show prior land use approval for the ENCA, including the final approved decision of the requisite land use jurisdiction; the following must be met for a valid ENCA:

- 1. Does not qualify for any alteration, replacement or expansion of the existing conditions.**
- 2. Must be reviewed and approved for potential stormwater impacts.**
- 3. Must be reviewed and approved by the local fire district.**

C. An ENCA must obtain an access permit once it is determined to meet these provisions.

Staff: *Criterion not applicable.*

MCRR 5.000 Transportation Impact

MCRR 5.100 To determine if a Transportation Impact is caused by a proposed development, the County Engineer will determine the number of new trips generated by a site by one of the following methods:

A. Calculations from the most recent edition of the Institute of Transportation Engineers' Trip Generation (ITE); or

B. A site development transportation impact study conducted by a professional engineer registered in the State of Oregon and accepted by the County.

MCRR 5.200 The County Engineer will use the information obtained pursuant to sub-section 5.100 and/or the frontage length of the subject property to determine the pro-rata share of the requirements set forth in Section 6.000. The County Engineer determination of pro-rata share of improvements will expire twelve months from the date of the County Engineer's determination or after the associated land use permit is granted or closed. If expired, a review process and new determination will be required.

MCRR 5.300 Except where special circumstances require the County Engineer to make an alternate determination, any new construction or alteration which will increase the number of trips generated by a site by more than 20 percent, by more than 100 trips per day or by more than 10 trips in the peak hour shall be found to have a *Transportation Impact*. A minimum increase of 10 new trips per day is required to find a transportation impact.

Staff: The Multnomah County Road Rules defines a Transportation Impact as the effect of any new construction or alteration which will increase the number of trips generated by a site by more than 20 percent, by more than 100 trips per day or by more than 10 trips in the peak hour [MCRR 3.000]. A

minimum increase of 10 new trips per day is required to find a transportation impact. Any one of these qualifying criteria is sufficient to deem a “transportation impact.”

The applicant’s narrative (Exhibit A.1) includes site generation trips, based on the latest ITE Trip Generation Manual. This is shown in the following table:

1630 SW 257th Avenue: Trip Generation Calculation Summary							
	Morning Peak Hour			Evening Peak Hour			Daily Total
	In	Out	Total	In	Out	Total	
15 Attached Single-Family Homes	2	5	7	5	4	9	108
- 1 Detached Single-Family Home	0	-1	-1	-1	0	-1	-10
Net New Trips	2	4	6	4	4	8	98

98 net new trips per day increases the number of trips to/from the site by more than 20%. *The proposed development on a vacant lot generates a transportation impact.*

MCCR 6.000 Improvement Requirements

MCCR 6.100 Site Development: All subject parties with respect to any property proposed for development, including but not limited to the owner of the site and the applicant (if different than the owner), will be responsible for improvements to the right-of-way for any said development of the property which is found to cause a Transportation Impact, those improvements shall include:

- A. Dedication of Right of Way Requirement:** The subject parties are responsible for a pro-rata share, as determined by the County Engineer, of right-of-way and easement dedications necessary to bring the affected, existing, created or planned public streets and other facilities within and abutting the development to the current County standard. The dedication of the required easements and right-of-way may be conditions of approval of Design Review or any other development permit related to the proposal.

Staff: As there is a transportation impact, per MCCR 5.000, the applicant may be required to dedicate Right of Way (ROW) to meet the proportionate share of meeting County Transportation standards if it is below the minimum width standard (MCCR 6.100 A; MCDCM Table 2.2.2).

The County standard ROW width for a Major Arterial facility is 80 feet (DCM Table 2.2.2). At the property’s frontage on SW 257TH AVE, the current ROW width is 80 feet. No additional Right of Way is required.

Criterion not applicable.

- B. Frontage Improvement Requirements:** Frontage Improvement Requirements: In addition to easement and right-of-way dedication requirements, a prorata share may include half-street improvements along all of the site’s County Road frontage(s). Right of Way improvements shall satisfy the standards of the County Design and Construction Manual based upon the functional classification of the road(s). The commitment to improve the

affected streets or other facilities to the required standards shall be conditions of approval of Design Review or any other development permit related to the proposal. Half-street improvements can include all of the following:

- a. Street widening/improvement
- b. Utility cut restoration
- c. Curb and sidewalk
- d. Driveway relocation/replacement/removal
- e. Traffic controls
- f. Drainage facilities
- g. Lighting facilities
- h. Bicycle facilities
- i. Signal conduit facilities
- j. Street trees
- k. Other appropriate facility or right of way requirements as required by applicable statutes, codes and regulations.

Staff: As the proposal generates a transportation impact, frontage improvements may be required to meet DCM cross-section standards and current ADA requirements.

The applicant will need to ensure that the sidewalks along the site frontage are 6 feet wide (DCM Table 2.2.1) and curb ramps and slopes, particularly at the driveway entrance, meet current ADA requirements. Applicants are required to contact the County Transportation Engineer (row.permits@multco.us) to verify whether standards are met.

Applicant will be required to submit a ROW - General or ROW Construction permit application via the County's Permit Portal, for the driveway access and any additional frontage improvements, based on the County Transportation Engineer's verification review.

As conditioned, criterion met.

- C. Required Submissions by Subject Parties. Subject parties shall submit to the County Engineer the following: engineered plans, traffic studies, traffic analysis, reports, surveys or similar documents as requested or required by the County Engineer under this Subsection 6.100 or as may additionally be required under Section 18.**

Staff: The applicant has submitted sufficient information for the Road Rules Variance application to be deemed complete. *Criterion is met.*

- D. Transportation Demand Management Options that address strategies to reduce travel demand generated by the proposed development.**

Staff: *Criterion not applicable.*

MCRR 6.200 Land Division:

- A. Right-of-way and easement dedications needed to meet County standards may be required as a condition of all land divisions, whether by partition or subdivision.
- B. To the extent a land division has been lawfully approved through a land use decision of the appropriate jurisdiction, and such land division impacts a Public Road under County jurisdiction, and there was no assessment in the record of said decision regarding a

Transportation Impact caused by the decision or the potential development of any affected parcel in a partition or lot in a subdivision, and further provided the County will not have the opportunity as a part of the Right of Way Use Permit Approval Process under Section 18 of these Rules to review the proposed development, the County will require improvements because of the land division as a part of the Section 18 Permit. Land Divisions that create flag lots will be required to make frontage improvements along the entire length of the parent lot.

- C. The County Engineer may allow deferral of this improvement requirement until development of the flag lot(s) occurs. When further reviews or approvals will be necessary before development can occur, the County Engineer may allow deferral of those improvement requirements and not apply them to land division proposals.

Staff: Criterion not applicable.

6.250 Lot-Line Adjustments: Right-of-way and easement dedications needed to meet County standards may be required as a condition of a lot-line adjustment. Lot-line adjustments that would result in a reduction of the County road frontage of a lot planned for development or redevelopment may be conditioned to provide right of way and easement dedications, as well as deed restrictions committing the owner to improve the reconfigured lot's frontage to County standards.

Staff: Criterion not applicable.

6.300 Zone Change: A Transportation impact study over the 20-year planning horizon will be required for all zone changes that would allow more intensive use of a site than allowed by the site's existing zoning. Improvement requirements for zone changes will be based upon, but not bound by, the needs identified in the transportation impact study.

Staff: Criterion not applicable.

MCRR 11.000 Local Access Roads

MCRR 11.100 Improvement Requirements:

- A. For any proposed development where access is to be through a Local Access Road and the development is found to have a Transportation Impact, the owner, applicant or other party responsible for the development (the "Developer") shall be required to improve or cause to be improved the Local Access Road to standards as further provided in this Section.
- B. Right of way and or easement dedications shall be required where the existing right of way is of a substandard width or condition.
- C. The County Engineer may impose requirements for right of way improvements as necessary to address factors including but not limited to: traffic safety, traffic conditions, bicycle access, pedestrian access and vegetation.
- D. Developer shall make required improvements at the County Engineer's request if the transportation impact warrants additional road improvements. Such additional improvements shall not extend beyond the nearest intersection with the publicly maintained road. Improvements will be constructed in a manner consistent with the standards provided in the Design and Construction Manual.

E. All costs relating to Local Access Road improvements shall be borne by the Developer including all administrative and other costs incurred by the County including but not limited to the oversight, review, inspection, etc[.], with respect to design, installation, and construction of any improvements on any Local Access Road under County jurisdiction. County shall not begin any work under this Section unless and until an adequate deposit as determined by the County Engineer has been received by the County to cover these costs.

F. Notwithstanding any required improvements or other installations done in the public right of way of a Local Access Road under this Section 11 of these Rules, the County does not maintain such Local Access Road.

Staff: A Local Access Road is a public road under Multnomah County jurisdiction that is outside a city and is not a county road, state highway, or federal road. The subject property has no frontage or access via a Local Access Road. *Criteria not applicable.*

18.250 Access/Encroachment Permit:

- A. An Access/ Encroachment Permit (A/E Permit) shall be required for the following activities within the right-of-way:
 - 1. New or altered access to roads under County jurisdiction. An access is considered altered when a change in the development that it serves has a Transportation Impact as defined in section 6.000 of these rules;
 - 2. New or reconstructed driveway approaches, private road approaches, curb cuts, or sidewalks;
 - 3. Structures in the right-of-way, such as signs, posts, fences, flags, non-standard mailboxes, etc.; or
 - 4. Any other minor physical alteration of the County right-of-way, including but not limited to any altered landscape design, vegetation planting or placement.

Staff: The applicant is proposing a new access onto SW 257TH AVE, a public road under Multnomah County’s jurisdiction. Therefore, the applicant will be required to obtain an Access / Encroachment Permit as a condition of approval to this road rules variance. *As conditioned, this criterion is met.*

	Road Rules Variance Findings
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MCRR 16.200 General Variance Criteria: In order to be granted a variance, the applicant must demonstrate that:

- A. Special circumstances or conditions apply to the property or intended use that do not apply to other property in the same area. The circumstances or conditions may relate to the size, shape, natural features and topography of the property or the location or size of physical improvements on the site or the nature of the use compared to surrounding uses;

Applicant: The subject property has frontage only on SW 257th Avenue and must therefore take access via this Major Arterial roadway. Since the existing driveways to the north and south of the site are already closer than the county’s access spacing standards, it is not possible to locate a new driveway which would meet the access spacing standard. These conditions do not apply to other property in the same area. Accordingly, this criterion is met.

Staff: The subject property has a single available frontage (SW 257TH AVE) to create an access to a ROW. The proposed access is adequately located on the site's frontage to accommodate the site design. No other location along the site's frontage would meet the access spacing standard for the road classification, consequently special circumstances are required in order to provide a legal access to the site.

Criterion met.

B. The variance is necessary for the preservation and enjoyment of a substantial property right of the applicant and extraordinary hardship would result from strict compliance with the standards;

Applicant: Absent approval of an access driveway for the subject property, it would not be possible to develop the site with uses permitted outright in the underlying zoning. Development of the property is a substantial property right. Accordingly, this criterion is met.

Staff: The right to develop the site is a substantial property right of the applicant. Given the special circumstances (discussed above), denying access on the frontage would remove the applicant's substantial property right and extraordinary hardship would result from strict compliance with the standards.

Criterion met.

C. The authorization of the variance will not be materially detrimental to the public welfare or injurious to other property in the vicinity, or adversely affect the appropriate development of adjoining properties;

Applicant: Having established that a new access driveway is necessary to serve any development within the subject property, the proposed development places the driveway near the center of the site. This accomplishes two purposes. First, it maximizes the access spacing between the proposed site access and the existing off-site driveways to the north and south. And second, it allows a single parking area which will serve the proposed townhome units to be centered between the two buildings so that a single access driveway can efficiently serve all the proposed dwelling units.

The nearest driveways to the north and south will be an existing driveway serving a private home on the east side of SW 257th Avenue centered 163 feet north of the proposed access, and an existing driveway serving the Cherry Park Plaza Assisted Living Home on the west side of SW 257th Avenue centered 103 feet south of the proposed access. (The nearest driveway to the south on the east side of SW 257th Avenue is centered 154 feet south of the proposed access.)

The proposed access plan represents an improvement as compared to existing conditions for the subject property since the site currently has two curb cuts on the east side of SW 257th Avenue, and since both of the existing driveways are south of the proposed driveway location and are therefore closer to the Cherry Park Plaza driveway than the proposed site access. Accordingly, approval of the proposed driveway location will reduce the number of curb cuts along SW 257th Avenue and increase the access spacing, thereby moving in the direction of conformity both in number of accesses and

spacing of accesses.

As described in the prior Gateway Estates Traffic Impact Study prepared by Lancaster Engineering, the most significant safety and operational problem that can arise at closely spaced T-intersections consists of conflicts between opposing major-street left-turn movements. These conflicts occur when the paths of vehicles making left turns cross each other. When simultaneous left turns occur and the paths cross, the turning vehicles (as well as any vehicles following them) both need to stop to avoid a collision, causing the movements to “bind” in a way that would require at least one vehicle to back up in order to clear the travel path of the opposing vehicle before the binding condition can be relieved and normal traffic flow can be restored.

This potential binding problem on the major street occurs only in instances where the direction of driveway offset causes the turning paths to cross. However, the proposed offset alignment with the Cherry Park Plaza driveway is in the direction in which the left-turn movement paths do not cross. As such, this problem cannot arise between these driveways. Additionally, since the driveway to the north is on the same side of the roadway, binding cannot occur between these driveways. While the direction of offset from the proposed driveway and SW 13th Place is in the direction in which binding can occur, the driveway and roadway are spaced approximately 234 feet apart, with plenty of room for the simultaneous turning movements to occur without binding. Based on examination of all potential conflicts between left turning drivers entering the site and drivers entering nearby driveways and roadways, all drivers will be able to make left turns into the proposed site access without creating safety or operational conflicts with either through traffic on SW 257th Avenue or other vehicles accessing the existing roadways and driveways.

Drivers turning right into the proposed site access will also have no conflicts with the closely spaced driveways. Accordingly, the proposed site access can safely and efficiently accommodate vehicles entering the site without negatively impacting the appropriate development of adjoining properties.

In addition to examining the major street turning movements which have priority over drivers turning from site access driveways onto SW 257th Avenue, some consideration must be given to the vehicles exiting from the proposed site access. Both nearby existing driveways will be visible from the proposed site access location, thereby allowing drivers exiting from the closely spaced driveways to see each other and yield appropriately.

Another potential conflict can arise at offset intersections between vehicles making simultaneous left turns into a center median. In this instance, if a driver exits the proposed development by turning left (south) into the center median of SW 257th Avenue at the same time as a driver makes an eastbound left turn from the Cherry Park Plaza driveway into the median, the two vehicles would be facing each other within the center two-way left-turn lane.

Since both driveways serve relatively low volumes of exiting traffic, such simultaneous left turns would not be expected to occur frequently. Further, in order for both turning movements to occur at the same time, it would be necessary for traffic to be clear in all four through travel lanes along SW 257th Avenue (i.e. the southbound lanes must be clear for the vehicle to exit the Cherry Park Plaza driveway into the median, and the northbound lanes must be clear at the same time in order for another driver to exit the proposed development into the median simultaneously). However, if all four through lanes are clear of conflicting traffic, the turning drivers can turn directly into their intended through travel lanes on SW 257th Avenue rather than stopping within the center median. Further, even if such a conflict occurred within the median the 100-foot spacing between the access locations is sufficient to allow both vehicles to enter the median, stop facing each other, and wait for a gap in traffic before exiting the median into the adjacent through travel lane. Lastly, since the

proposed site access will be spaced farther from the Cherry Park Plaza driveway than the existing curb cuts, there will be more space to accommodate these movements under the proposed plan than under the existing site layout. This improvement directly results from the fact that the proposed development plan moves toward conformity with the county's access spacing standards.

Based on the detailed analysis of all entering and exiting movements at the proposed driveway location, the proposed site access will not be materially detrimental to the public welfare or injurious to other property in the vicinity and will not adversely impact the appropriate development of adjoining properties. As such, this approval criterion is also met.

Staff: The applicant has proposed a new access in a central location on the site's frontage. No other location along the site's frontage would meet the access spacing standard. The proposed access will not be detrimental to public safety, as County Transportation concurs that drivers will be able to make left turns for ingress and egress to/from the site via the center turn lane on SW 257TH AVE. The proposed access meets all other access standards (see section 4.000 above).

Criterion met.

D. The circumstances of any hardship are not of the applicant's making.

Applicant: The conditions which lead to the need for this variance were created by existing development surrounding the subject property. As such, the circumstances of this hardship are not of the applicant's making, and this criterion is met.

Staff: The only available access to a ROW is the site's frontage with SW 257TH AVE. The road classification and the corresponding access spacing standards for that road classification are not feasible at any point along the site's frontage. This is not of the applicant's making.

Criterion met.

16.225 Access Variance Standards: Exceptions to access standards may be made by the County Engineer when spacing or other safety considerations make non-standard access acceptable. In addition to the variance requirements of Section 16.200 of these Rules, the applicant will be required to demonstrate that the proposed variance will not negatively impact the safety or capacity of the transportation system for a variance to be granted. The following are examples of variances that may be considered along with specific criteria that must be addressed before such a variance can be granted.

A. Multiple Access Points: The County Engineer may allow multiple access points when all spacing standards can be met, or under the exceptions allowed under the criteria identified below so long as the additional access(es) will not negatively impact the safety or functionality of the transportation system and a single access point cannot reasonably serve a site. Movement restrictions, such as right-in, right-out, may be placed on accesses to protect the safety and/or functionality of the transportation system. The County Engineer may approve and allow a dual access variance if the applicant meets all of the following criteria:

1. The property in question is zoned commercial, industrial, farm or resource lands and the proposed use is in conformance with all applicable laws, planning and zoning codes and regulations.
2. Proposed access points are at least 150 feet apart on any same right of way frontage.
3. The applicant has submitted adequate traffic studies and other reports and information under Subsection 4.100 that indicate the creation of two access points will not present an unsafe condition or unduly interfere with the movement of traffic, including bicycles and pedestrians.
4. Except has provided in this subsection all other aspects of the applicant's dual access proposal are in compliance with these Rules and the DCM.
5. Applicant must comply with all the requirements of Section 16 of these Rules.

Applicant:

Staff: *Criterion not applicable.*

- B. **Access Spacing:** If it is not feasible to access a site and meet the access spacing standards, access may be located so as to provide the best access spacing possible. The County Engineer may require additional measures to mitigate sub-standard access spacing, such as a median or other restrictions.

Applicant: It has been previously established that it is not possible to meet the access spacing standards while providing any form of vehicular access to the subject property. However, in addition to this conclusion the code requires an evaluation to determine "the best access spacing possible."

The proposed development plan accommodates two proposed buildings within the site. These are located on each side of the proposed site access alignment, with shared internal parking and circulation centrally located between the buildings.

To develop the site efficiently, any proposed site access must provide for on-site circulation and parking for all the proposed dwelling units (regardless of the number of buildings and/or dwelling units within the site). This could be accomplished by placing the site access at the center of the site as currently proposed, or by placing the site access at the north or south end of the site. However, placing the site access at the north or south end of the site would result in decreased access spacing as compared to the proposed development plan. Additionally, using a single access for circulation and parking for the site that is located at one end of the site would result in inefficient access for the proposed townhome units.

Since relocating the proposed site access away from the center of the property would result in negative impacts both to on-site circulation and access and access spacing along SW 257th Avenue, it is recommended that the site access be centrally located within the site as currently proposed.

Based on the operational and safety analysis conducted per MCC 16.220(C) above, the proposed site access can safely and efficiently accommodate all entering and exiting turning movements. As such, no turning movement restrictions or medians are recommended in conjunction with the proposed development.

Staff: This criterion requires the applicant to demonstrate that if access to a site is not feasible, an access can be located so as to provide the best spacing possible. As noted by the applicant, and staff responses in the general variance criteria above, no alternative ROW is available to the subject property. The access is considered to provide the best possible location for the proposed site design and with the exception of the access spacing standard, which is based on road classification, all other

access standards are met, including sufficient sight distance (MCRR 4.500) and a center turn lane exists for safe access and egress from the proposed development.

Criterion met.

C. Sight Distance: If it is not feasible to provide enough sight distance to meet County/AASHTO standards, the site's access must be located so as to provide the most sight distance possible. The County Engineer may require additional measures to mitigate sub-standard sight distance.

Applicant:

Staff: *Criterion not applicable.*

D. Notwithstanding any other provision in this Section 16, no variance shall be approved in a public right of way under County jurisdiction that would allow for the installation, placement, or construction of any item of any kind in the "clear zone" of the said public right of way. For purposes of these Rules the phrase "clear zone" shall have the same definition as used and applied in the AASHTO standards.

Applicant:

Staff: *Criterion not applicable.*

16.250 Local Access Roads Variance Standards: The County Engineer will consider a variance from the improvement standards for a Local Access Road in the Design and Construction Manual if the topography or other features of the site make compliance with the improvement standards infeasible. Any variance issued under this Section must meet the criteria of section 16.200 of these rules as well as the minimum requirements of the local police, fire and emergency service providers, any applicable Building Code Requirements, any applicable Land Use Code requirements and meet any other applicable environmental requirements.

Applicant:

Staff: *Criterion is not applicable.*

16.310 Completeness, Timelines, Public Notice, Decision:

E. Public notice of an application for a variance to these Road Rules shall be as follows:

1. For variance applications not in conjunction with a proposed development requiring a land use decision:

a. Notice of the application and invitation to comment shall be mailed to the applicant, the applicable recognized neighborhood association, and all property owners within 100 feet within the urban growth boundary or within 750 feet outside of the urban growth boundary. The County Engineer will accept comments for 14 days after the notice of application is mailed.

Staff: A 14-Day Opportunity to Comment was mailed to neighboring property owners in accordance with MCRR 16.310. Three sets of comments were received. One set pertained to Land Use Planning and the commenter was encouraged to submit these to the City of Troutdale. The other set of comments raised concerns regarding:

- Increased volume of traffic on SW 257TH AVE
- Speeding on SW 257TH AVE

- Property values
- Reporting regarding crashes in the vicinity of Reynolds High School, as well as congestion.
- Comments on SW 257TH AVE Corridor Capital Project

Staff: Please see staff response to MCRR 16.000 criteria above which address the approval criteria of the proposal. Additional information is provided below which respond generally to the sets of comments provided by the neighbor:

- Traffic increases: County Transportation requires mitigation where increased volume of traffic will negatively affect the transportation system. In this case, the land use proposal has not been found to require any off-site improvements.
- Speeding: Speeding is not within the scope of this proposal; speeding is a matter for law enforcement. Signs (school and speed limit) are placed within the requirements of MUTCD and set by the approval process by Oregon Department of Transportation.
- Property values: Transportation has no remit over property values.
- Crashes: Safe ingress and egress were evaluated as part of the proposed access review (see approval criteria above).
- SW 257TH AVE Corridor Capital Project - suggested alternative access location to help deliver project goals Ingress and egress was evaluated as part of the proposed access review and specific road rules variance approval criteria.

This decision was drafted and will be mailed in accordance with MCRR 16.310. *Procedures met.*

	Conclusion
--	-------------------

Based on the findings, narrative, and other information provided herein, this application, as conditioned, satisfies applicable approval criteria required for a variance to allow the subject property access on SW 257TH AVE. Any changes to the scope of the project must be reviewed for transportation impact to County facilities.

Exhibits

‘A’ Applicant’s Exhibits

‘B’ Staff Exhibits

‘C’ Procedural Exhibits

‘D’ Comments Received

Exhibits with a “*”after the exhibit # have been included as part of the mailed decision. All other exhibits are available for review in Case File RRV-2024-0002 at the Transportation Planning and Development Program office.

Exhibit #	# of Pages	Description of Exhibit	Date Received/ Submitted
A.1	1	Site Plan	1/24/2022
A.2	1	Road Rules Variance narrative	1/24/2022
‘B’	#	Staff Exhibits	Date
B.1	3	Transportation Planning Review form and Memo, EP-2023-17206	8/17/2023
‘C’	#	Administration & Procedures	Date
C.1	1	Complete Letter (Day 1)	7/11/2024
C.2	3	Opportunity to Comment	7/19/2024
C.3	17	Administrative Decision	8/16/2024
‘D’	#	Comments Received	Date
D.1	1	Perala comments	7/23/2024
D.2	1	Newland comments	8/1/2024



TO: KrisAnn Washington, City of Troutdale Planning Administrative Assistant

FROM: Chet Hagen, District Administrator

DATE: June 28, 2024

SUBJECT: LU-0014 -2024 Cherry Park East Luxury Apartments Comments

KrisAnn:

Per the District's Administrative rules, the applicant will be required to submit a Lighting Level Review to the [Multnomah County Permit Portal](#) with photometric calculations to assess the lighting levels for all public streets and intersections within their proposed project area frontage. We strongly encourage a review of our [Lighting Level Review Instructions](#) prior to submitting the form. If you have not created an account on the Permit Portal for a previous project, **you will need to create an account** before submitting the Lighting Level Review to the District.

The current lighting level for all public streets must meet Districts standards outlined on page 9, Section 5.120 of our [Administrative Rules](#). If District standards are not met, the applicant will need to enter into a [Construction Permit](#) with the District to bring the lighting levels to current District standards.

Chet Hagen

Chet Hagen
District Administrator



Land Use Application Cover Sheet

PROJECT INFORMATION

Project Name: **Cherry Park East Luxury Apartments**

Location in City: **1360 SW 257th Avenue** Troutdale, OR 97060

Brief Project Description: **Develop a 15 unit apartment complex with associated parking.**

CONTACT INFORMATION

The applicant is considered the **primary contact**. Please list any additional contacts in a narrative or on a separate sheet.

	Applicant		Current Property Owner	(if not the Applicant)
Name:	Tracy Brown		Mike Halstead	
Company:	Tracy Brown Planning Consultants, LLC		Cherry Park East, LLC	
Mailing Address:	17075 Fir Drive, Sandy, OR 97055		4307 SE Oxbow Parkway, Gresham, OR 97080	
Primary Phone #	503-781-0453 <input checked="" type="checkbox"/> cell <input type="checkbox"/> office		503-319-1312 <input checked="" type="checkbox"/> cell <input type="checkbox"/> home/office	
Email:	tbrownplan@gmail.com			
Relationship with Project:	<input checked="" type="checkbox"/> current property owner <input type="checkbox"/> prospective owner <input type="checkbox"/> tenant <input type="checkbox"/> design professional <input checked="" type="checkbox"/> consultant <input type="checkbox"/> other (specify):		Note: If the applicant <i>is not</i> the current property owner, include Form O or a written statement from the owner(s) that acknowledges their knowledge and authorization for the applicant to submit this particular land use application.	

WHAT ARE YOU APPLYING FOR?

Check **all** boxes that apply and include the corresponding form(s) with this cover sheet.

Permit/Review	Form	Permit/Review	Form	Permit/Review	Form
<input type="checkbox"/> Amendment (map/text)	Form A	<input type="checkbox"/> Historic Landmark	Form H	<input type="checkbox"/> Tree Removal Permit	Form T
<input type="checkbox"/> Conditional Use Permit	Form C	<input type="checkbox"/> Land Division	Form L	<input type="checkbox"/> Temporary Use Permit	Form U
<input type="checkbox"/> Development Permit	Form D	<input checked="" type="checkbox"/> Site Development Review	Form R	<input checked="" type="checkbox"/> Variance	Form V
<input type="checkbox"/> Flood Hazard Permit	Form F	<input type="checkbox"/> Sign Permit	Form S	<input type="checkbox"/> Other (specify below)	

Office Notes Only	File Number:	Fee Paid:	Receipt #
	Property ID #		Property Size:
	Zoning District:	Zoning Overlay:	Plan Designation:
	Notes:		



Site Development Review



GENERAL INFORMATION

- Use this Form if you are developing property. *(single-family & two-family dwellings exempted from this review)*
- This review process allows the City and other review entities the chance to review development proposals and ensure consistency with governing provisions. Applications may be approved, approved with conditions, or denied.
- Depending on the type of development, decisions are issued administratively (Type II, 45 day review period) or in a quasi-judicial setting with Planning Commission (Type III, 120 day review period) as the decision-making entity.
- If applying for additional land use approvals, those actions will be concurrently reviewed when possible.

PROJECT INFORMATION

Complete the information below as it relates to the project.

Project Name: **Cherry Park East Luxury Apartments**

Will the property require a change in land use designation or zoning district? <i>If yes, include Form A</i>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Is the land use being proposed a conditional use? <i>If yes, include Form C</i>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Is the property partially or fully located in a Special Flood Hazard Area (SFHA)? <i>If yes, include Form F</i>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Will the project require a change to property lines? <i>If yes, include Form L</i>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Will the project require a variance for relief from a governing provision? <i>If yes, include Form V</i>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Are there any other land use actions that are required? <i>If yes, please identify them in the narrative.</i>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no

SUBMITTAL

Files are to be submitted digitally unless requested. Please email comdev@troutdaleoregon.gov to set up a file transfer.

Checklist

- Land Use Application Cover Sheet
- additional forms *(if required)*
- proof of property ownership
- narrative *(see page 2)*
- plans & attachments *(see page 2)*
- application fee
-
-

Application Fee *(Type I - \$200; Type II - \$400 + 0.1% valuation)*

Project Valuation: _____ Application Fee: _____

Please contact the Community Development Department at 503-674-7247 or comdev@troutdaleoregon.gov for assistance with the payment process.

Applicant Certification

I have completed this form to the best of my knowledge and hereby authorize the City of Troutdale ("City") to process this application and review the submittal according to all governing standards. I acknowledge that the City reserves the right to require additional information if requested.

Signature: *Tracy A. Brown* Date: **5/1/24**

Office Notes	File Number: _____	Fee Paid: _____	Receipt # _____
	Notes: _____		

FORM R – Site Development Review

EXPANDED CHECKLIST

Please review the checklist below to ensure a complete submittal. Please note that items below are those typically are required. Depending on the project, some items may not be required, whereas other projects may require additional items.

Narrative Items	Guidance
<input checked="" type="checkbox"/> overview	Describe the general scope of the project and the type of land use activity on site upon completion.
<input type="checkbox"/> business information	Non-Residential projects only: Describe typical business activities (office, production, services, etc.), the hours of operation, the number and type of employees (full-time, part-time), and if there are work shifts.
<input type="checkbox"/> timeline & phasing	Provide a project timeline or development pro-forma. If applicable, include a phasing description if this application covers a phase in a long-term or on-going development project.
<input checked="" type="checkbox"/> existing conditions	Describe the site in its current natural and/or built state. Provide notice of any demolition, clearing, grading, or decommissioning work that may need to occur prior to or in conjunction with development.
<input checked="" type="checkbox"/> building information	If applicable, give a description on any structures to be located on site, including accessory structures and utility infrastructure. Include building types and occupancy ratings if known.
<input checked="" type="checkbox"/> fire protection	Provide information as requested by Gresham Fire & Emergency Services on existing and/or new fire protection infrastructure on site or nearby, including but not limited to hydrants or suppression systems.
<input type="checkbox"/> traffic impact	Provide a summary of traffic and trip generation results. A separate traffic impact analysis (TIA) report may be required based on review analysis from City of Troutdale, Multnomah County, and/or ODOT.
<input checked="" type="checkbox"/> applicable criteria	Demonstrate how the design meets each standard that is applicable for this project. The criteria are outlined by Staff prior to submittal and listed in the project's <i>Pre-Application Summary</i> .
<input checked="" type="checkbox"/> additional land use actions	If approval requires an additional land use action (conditional use, variance, etc.), describe how the project meets the specific decision criteria in the Troutdale Development Code [TDC] for each process.



CITY OF TROUTDALE

PHONE (503) 665-5175 | www.troutdale.info

Property Owner Affidavit



STATE OF OREGON)
)
) SS.
COUNTY OF MULTNOMAH)

As legal owner of the property located at 1360 SW 257th Avenue, Troutdale, OR 97060

Print Physical Property Address (Street #, Name, City, State & Zip Code)

in Multnomah County, Oregon, I am aware and hereby give permission to Tracy Brown
Print Full Name

to apply for a Land Use Application with the City of Troutdale, Oregon on my behalf.

Mike Halstead

Property Owner Printed Full Name

4307 SE Oxbow Parkway

Property Owner Mailing Address

Gresham, OR 97080

City, State & Zip

503-319-1312

Property Owner Daytime Phone Number

1N3E35AA tax lot 5717

Property Parcel/Tax ID Number

May 1, 2024
Date

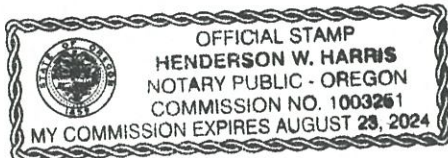
[Signature]
Property Owner Signature

Subscribed and sworn to before me this

1st day of May, 2024.

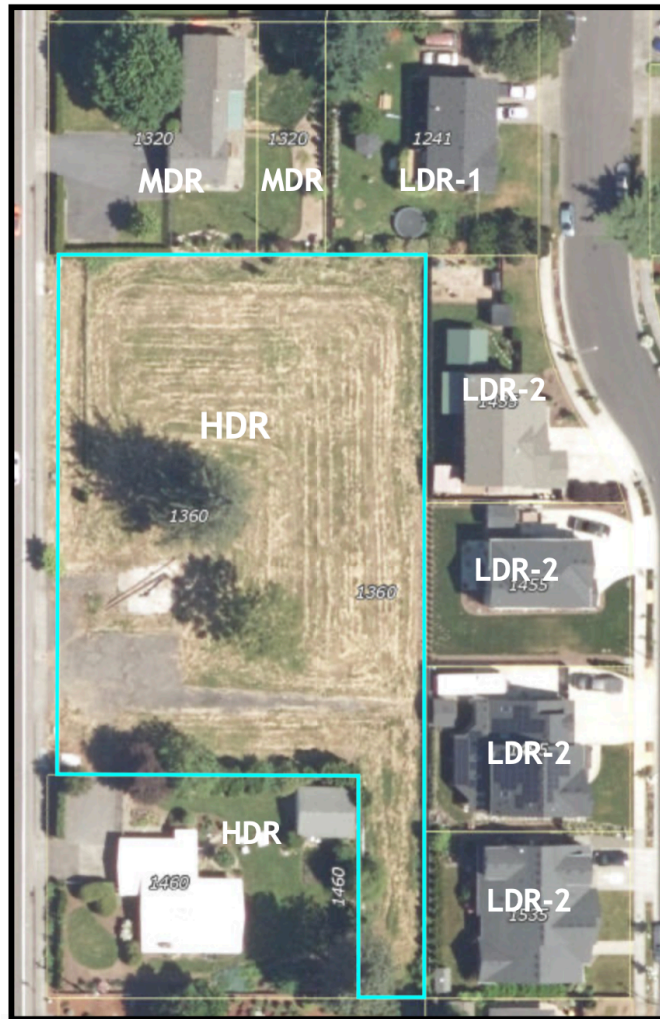
[Signature]
Notary Public

8/23/2024
My Commission Expires



**Project Narrative
For**

**Cherry Park East Luxury Apartments
1360 SW 257th Avenue.
Troutdale, Oregon**



**Prepared by Tracy Brown Planning Consultants, LLC
May 23, 2024**

I. General Project Description

The project site is known as lot 17 of the Gateway Estates Subdivision (Township 1 North, Range 3 East, Section 35AA, tax lot 5717) and is located at 1360 SW 257th Avenue, Troutdale, OR 97060. As identified on the Gateway Estates plat, the subject property contains 41,338 square feet (0.948 acres) and is currently vacant. The topography of the site is generally flat with only a few feet of difference between the south and north property lines. The majority of the lot is planted in grass with one large tree and another medium-sized tree located on the property.

The site is zoned High Density Residential (HDR) which requires site and design review approval for the proposed multi-family residential project. The subject abuts tax lots (5601, 5602, and 3300) along its northern boundary. According to the City's Zoning Map tax lots 5601 and 5602 are both zoned Medium Density Residential (MDR) and tax lot 3300 is zoned Low Density Residential (LDR-1). Properties to the east of the subject property are all zoned Low Density Residential (LDR-2) and the property to the south is zoned HDR.

The applicant proposes constructing two buildings with a total of 15 units. All of the units in the southern building will contain two units each: Unit 1 (#101/#201), Unit 2 (#102/#202), Unit 3 (#103/#203), and Unit 4 (#104/#204) and all of the units in the northern building contain two units except Unit 6 which includes only a single unit: Unit 5 (#105/#205), Unit 6 (a single apartment #106), Unit 7 (#107/#207), and Unit 8 (#108/#208). Unit 5 in the most easterly unit in the northern building is proposed to contain both a ground floor accessible unit with three bedrooms and a three bedroom unit accessed by an exterior stairway on the second floor. The third floor of this unit will not be used. Units 6 - 8 in the northern building are designed the same as units in the southern building with a three bedroom unit on three stories and a one bedroom unit accessed by a stairway on the second floor.

Access to the site will be directly from SW 257th with both a single car garage with each unit and an open parking lot located between the two building. The applicant is in the process of securing an access permit for the driveway location from Multnomah Transportation. A five foot deep right-of-way dedication along 257th Ave. was included as part of the Gateway Estates Subdivision plat to facilitate completion of frontage improvements on 257th Avenue and no additional right of way deduction is needed. The enclosed architectural and civil plans illustrate the details of the proposed project.

A pre-application conference was held with the City to review the project on August 31, 2023.

II. Application Approval Requests

The applicant requests the following approvals with this application:

- Type II Site and Design Review
- Type III Variance to Section 3.130(E) to reduce the northern building side yard setback by 25 percent, from 20 feet to 15 feet.
- Type III Variance to Section 8.150(B)(5)(c) to reduce the eastern rear yard setback for proposed parking, by 33 percent, from 15 feet to 10 feet.

- Type III Variance to Section 8.150(B)(6)(b) to reduce the size of the private outdoor space required for an upper level unit by 30 percent, from 60 square feet to 42 square feet.

III. Items Submitted With This Application

- Land Use Application
- Proof of Ownership
- Form “O” Property Owner Affidavit
- Form “R” Site and Design Review
- Form “V” Variance Request
- Project Narrative
- Architectural Plans
 - Buildings 1 - 4 Plan Sheets
 - Building Elevations
 - Main Floor Plan
 - Second Floor Plan
 - Third Floor Plan
 - Buildings 5 - 8 Plan Sheets
 - Building Elevations
 - Main Floor Plan
 - Second Floor Plan
 - Third Floor Plan
 - Building Renderings
- Civil Plans
 - Cover Sheet and Notes
 - Existing Conditions and Demo Plan
 - Composite Site Plan
 - Grading and Erosion Control Plan
 - Utility Plan
 - Planter Details
 - Details
 - Details
 - Erosion Control Notes and Details
- Preliminary Stormwater Report

IV. Review of Applicable Approval Criteria

Development applications are required to meet development standards set forth in the Troutdale Development Code. This section addresses all applicable review criteria. Pertinent code provisions are cited below followed by a response describing how the proposal complies with this standard.

Chapter 3 - Residential Zoning Districts

3.114 HDR | High-Density Residential

This district is intended primarily for the development of multi-family residential buildings or complexes and to accommodate certain middle housing typologies on appropriately-scaled lots. This zoning district has certain use, dimensional, and design distinctions that are location-dependent as described below and elsewhere within Chapters 3 and 8 of this Code. (Previously A-2)

- A. HDR-zoned areas and lots outside the Town Center district are typically located in areas adjacent to arterial and collector roads, be served by current or expected fixed-route transit service, and be within one-quarter mile of adjacent commercial areas, civic uses, and parks.
- B. HDR-zoned areas and lots within the Town Center district are typically located in certain areas in the western and eastern peripheral neighborhoods surrounding the Downtown area.

Response: *The subject property is identified on the City of Troutdale Zoning Map as HDR, High Density zoning. The subject property is zoned HDR and is located along SW 257th Avenue.*

3.120 Land Use Table for Residential Zoning Districts

- A. Uses that are permitted are marked with a “P”, with specific standards for the use listed in the far-right column as shown below.

Response: *Multi-family (residential only) as proposed is listed as a permitted use in the HDR zone.*

3.130 Dimensional Standards for Residential Zoning Districts

The following standards are outlined below based on the residential use proposed for the respective lot.

- E. Multi-family. The standards within this Subsection shall apply for multi-family residential developments or buildings that do not have a ground-floor commercial component. For vertical-based mixed-use development, dimensional standards for commercial development shall apply unless otherwise referenced within this Code.
 - 1. Minimum lot size. Refer to the table in the Maximum Density and Lot Size provisions of this Section for residential uses; fifty-four hundred (5,400) square feet for all other uses.

Response: *The subject property contains 41,338 square feet (0.948 acres) in compliance with this standard.*

- 2. Minimum lot width:
 - a. Sixty (60) feet at the front setback line.
 - b. Seventy (70) feet at the front setback line of a corner lot.

Response: *The subject property is about 232 feet wide, greater than 60 feet wide and is not a corner lot in compliance with this standard.*

- 3. Minimum lot depth:
 - a. Ninety (90) feet when there is approved street access;
 - b. One hundred (100) feet for any use with access from an alley within an easement that is part of the lot.

Response: *The subject property is about 165 feet deep, greater than 90 feet deep in compliance with this standard.*

- 4. Minimum lot frontage: Twenty (20) feet.

Response: *The subject property contains about 232 feet of frontage on SW 257th Avenue, more than 20 feet of frontage in compliance with this standard.*

5. Minimum Density. See Section 3.140.A of this Code.
Response: Compliance with required density is reviewed in Section 3.140.A below.

6. Maximum Density and Lot Size. Where the number of dwelling units erected on a lot is calculated in accordance with this Section, no greater number of units shall in any

Dwellings	Minimum Lot Area	Max Lot Coverage
5 to 14	9,000 sq. ft. plus 2,500 sq. ft. for each unit over 3	45%
15 to 37	41,000 sq. ft. plus 2,000 sq. ft. for each unit over 15	50%
38 to 94	87,000 sq. ft. plus 1,500 sq. ft. for each unit over 38	50%
95 to 155	172,500 sq. ft. plus 1,000 sq. ft for each unit over 95	55%
Over 155	1,500 sq. ft. per unit	55%

event be permitted at any time unless the lot is within the Town Center Overlay District, or except as may be approved under the Planned Development District.
Response: The subject property contains 41,338 square allowing a maximum of 15 units. As shown on submitted plan, 15 units are proposed in compliance with this standard. This section also allows a maximum lot coverage of 50 percent. The proposal features about 17 percent lot coverage in compliance with this standard.

7. Setbacks.

a. Front yard setback: Minimum of twenty (20) feet.

Response: The west property line is considered the front. The proposed development features a 20 foot front setback in compliance with this standard.

b. Side yard setback:

i. Adjoining the HDR zoning district or a non-residential zoning district: Minimum of five (5) feet.

Response: The south property line side setback exceeds five feet in compliance with this standard.

ii. Adjoining a different residential zoning district:

(a) Single-story construction: One and one-half times the minimum side yard setback of the adjoining residential zoning district but not less than ten (10) feet.

(b) Two-story construction: Two times the minimum required side yard setback of the adjoining residential district but not less than fifteen (15) feet.

(c) Three-story or greater construction: Three times the minimum required side yard setback of the adjoining residential district but not less than twenty (20) feet.

Response: The subject property abuts tax lots (5601, 5602, and 3300) along its northern boundary. According to the City's Zoning Map tax lots 5601 and 5602 are both zoned Medium Density Residential (MDR) and tax lot 3300 is zoned

Low Density Residential (LDR-1). About 61 percent of the northern property line abuts property zoned MDR and only 14 feet of the proposed building overlap tax lot 3300, zoned LDR-1. As detailed on the submitted Architectural Plans, all units contain three stories of livable space, except Unit 5 (#105/#205) abutting tax lot 3300 (zoned LDR-1) is proposed to contain two stories.

As specified in Subsection (ii.c) a three story building requires a side yard setback three times the minimum side yard setback of the adjoining residential district, but not less than 20 feet. The MDR zone (tax lots 5601 and 5602) requires a five foot side setback resulting in a 15 foot setback (3 x 5 = 15), however a minimum 20 foot setback is required by this section. Per Subsection (ii.b), two-story construction requires a side yard setback two times the minimum required side yard setback of the adjoining residential district but not less than fifteen (15) feet. The LDR-1 zone (tax lot 3300) requires a five foot side yard setback. Per Subsection ii.b, two times the five foot LDR-1 side yard setback requires a 10 setback, however a 15 foot setback is required.

The City has indicated they believe Section 17.090, Conflicting Regulations, requires adherence to the most restrictive standards. As applied to the proposal adherence to the requirements of the LDR-1 zone (five foot side yard setback) results in a 20 foot setback for the proposed development.

As shown on the Site Plan, the applicant proposes a 15 foot side yard setback along the entire northern side yard setback and requests a Type III Variance to this standard to reduce the required 20 foot setback by 25 percent to 15 feet.

- iii. No side yard setback shall apply for the interior side property lines of attached dwelling on individual lots.
- iv. Ten (10) foot side yard setback shall apply for the exterior side property line for attached dwelling on individual lot.

***Response:** These sections are not applicable.*

- c. Street side yard setback: Minimum of ten (10) feet unless the street side yard is used for the driveway, in which case the minimum setback shall be eighteen (18) feet to the garage.

***Response:** The subject property is an interior lot and this section is not applicable.*

- d. Rear yard setback:

- i. Adjoining the HDR zoning district or a non-residential zoning district:

- (a) Without an alley: Minimum of fifteen (15) feet.

- (b) With an alley that is platted either as an easement or a separate tract that is at least twenty (20) feet in width:

- (i) Minimum of eighteen (18) feet from the nearest edge of the tract or easement to the garage door.

(ii) Minimum of five (5) feet to any other wall of the garage and all other structures as measured from the nearest edge of the tract or easement.

Response: *The subject property abuts properties zoned LDR-2 along its entire rear yard and this section is not applicable.*

e. Adjoining a different residential zoning district:

i. Without an alley:

(a) Single story construction: The minimum rear yard setback of the adjoining residential zoning district.

(b) Two-story and greater construction: One and one-half times the minimum rear yard setback of the adjoining residential district but not less than twenty (20) feet.

Response: *The subject property abuts properties zoned LDR-2 along its entire rear yard and does not feature an alley. This section requires a rear setback of 1.5 times the rear setback of the adjoining district but not less than 20 feet. As detailed in City of Troutdale File No. 16-045, the four lots abutting the rear property line of the subject property were granted a variance to the rear yard setback. The approval of this variance reduced the rear yard setback for these lots (Lots 1-4 of Gateway Estates Subdivision) to 15 feet. The LDR-2 zone requires a 20 foot rear setback for single family detached dwellings. Both of the buildings abutting this setback are at least two stories. As such the required rear setback is $20 \times 1.5 = 30$ feet. If the rear setback is based on the reduced setback approved with File No. 16-045, the required setback would be 22.5 feet. Regardless of which setback is applied, both buildings are at least 30 feet from the eastern property line in compliance with this section.*

8. Height Limitation. The maximum height of a structure shall be thirty-five (35) feet.

Response: *The proposed building is 33 feet, 11.5 inches tall in compliance with this section.*

3.140 Residential Densities

A. Minimum density.

1. Applicability. Minimum density standards shall apply to all residential development.
2. Standard. Residential development is required to be built at eighty percent (80%) or more of the maximum number of dwelling units per net acre unless another standard is explicitly stated within this Code. For computing the minimum number of dwelling units, if the total contains a fraction, then the number shall be rounded down to the next lower whole number.

Response: *The proposal is designed to provide 100 percent of the maximum allowed density for the site in compliance with this standard.*

B. Maximum density.

1. Single-family detached. Development shall not exceed one hundred percent (100%) of the maximum number of dwelling units per net acre. For purposes of this standard, in computing the maximum number of dwelling units, if the total contains a fraction, then the number shall be rounded down to the next lower whole number.

2. Multi-family residential. See Subsection 3.130.E of this Code.

Response: The proposed multi-family project is proposed to contain 15 units, the maximum number of units allowed on the subject property.

CHAPTER 6 - APPLICATIONS

6.1300 VARIANCE

Response: As noted above, the applicant requests approval of three Type III Variances as detailed below.

- Variance No. 1 - Type III Variance to Section 3.130(E) to reduce the northern building side yard setback by 25 percent, from 20 feet to 15 feet.
- Variance No. 2 - Type III Variance to Section 8.150(B)(5)(c) to reduce the eastern rear yard setback for proposed parking, by 33 percent, from 15 feet to 10 feet.
- Variance No. 3 - Type III Variance to Section 8.150(B)(6)(b) to reduce the size of the private outdoor space required for an upper level unit by 30 percent, from 60 square feet to 42 square feet.

6.1325 Type III Variance

The Planning Commission may grant a variance under the Type III procedure if the request involves the expansion or reduction of a quantifiable provision in this Code by more than fifteen percent (15%), or if the request is referred to the Planning Commission in accordance with Section 6.1335 of this Chapter. The variance shall be granted only if the Planning Commission determines that the criteria in Section 6.1315 of this Chapter are met.

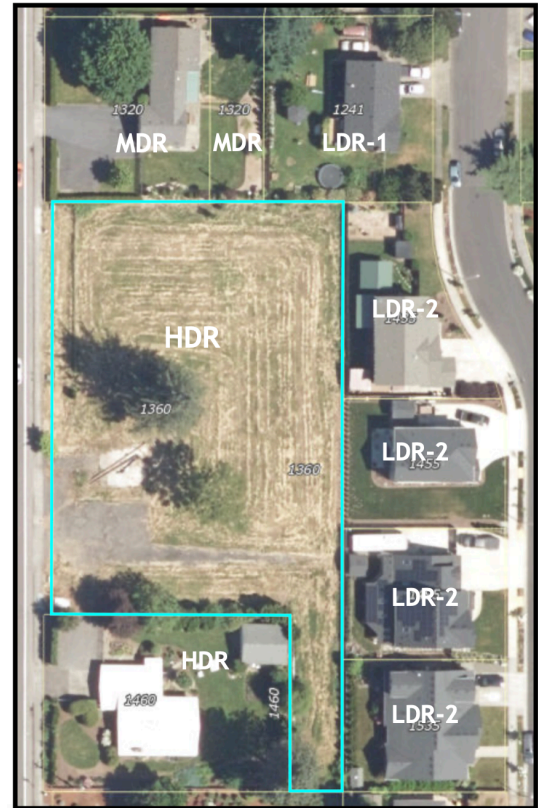
Variance No. 1 - As noted above, the applicant requests a Type III Variance to Section 3.130(E) to reduce the northern building side yard setback by 25 percent, from 20 feet to 15 feet. As discussed above, the subject property abuts two properties zoned MDR and a single property zoned LDR-1. The determination of the side yard standard for the subject property is derived from a calculation of the side yard setback of the adjoining property and the number of stories proposed on the subject property. In this case both the MDR and LDR-1 zoning district require a five foot side yard setback and a 20 foot side yard setback is required.

A. Special circumstances or conditions including, but not limited to, lot size, lot shape, topography, or size or shape of building, apply to the property, development, or to the intended use and are not typical of the general conditions in the surrounding area; and

Response: Development of the subject property is constrained in a north-south direction by building setbacks, parking and landscaping requirements, and the applicant's desire to build premium quality buildings. In addition, the subject property is oddly configured with an appendage located at the southeast corner of the site. Development of the site is also constrained by the setback of and location of SW 257th Avenue. The applicant proposes reducing the north side yard setback by 25 percent, from 20 feet to 15 feet. As shown on the aerial photo below, the subject property is bordered by two tax lots zoned MDR and one zoned LDR-1 and the homes constructed on these properties are located about 30 feet north of the common property line between the properties. This criteria is satisfied.

- B. The variance authorized will not be injurious to adjacent properties or the surrounding neighborhood or otherwise detrimental to the public welfare; and

Response: *The subject property has been zoned for a multi-family use for many years. As shown on the aerial photo, the structures located on the lots to the north of the subject property are about 30 feet from this common property line. As shown on submitted Architectural Plans, the proposed structures are about 32 feet tall and with a five foot reduction in this setback to 15 feet, these structures will be located about 45 feet away. Given these circumstances, the proposed five foot setback reduction will not be injurious to adjacent properties or the surrounding neighborhood, or detrimental to the public welfare. This criteria is satisfied.*



- C. The variance authorized will be consistent with the general purpose and intent of the provision from which a variance is sought; and

Response: *Setbacks are generally intended to separate land uses to allow light and air between buildings. The intent of the increased side yard setback is to separate the increased height of a multi-family project from the single family residences based on the overall height the multi-family project. Structures located on the adjoining tax lots are located about 30 feet north of the common line between the properties. If approved, the rear of the proposed structure would be located approximately 45 feet from the southern wall of these dwellings. The requested five foot setback reduction will have a marginal impact on adjacent residences. Approval of the requested variance is generally consistent with the purpose and intent of this standard. This criteria is satisfied.*

- D. The variance is the minimum necessary to relieve a practical difficulty with full compliance and to avoid or minimize the resulting hardship.

Response: *As noted above, the subject property contains certain site constraints necessitating a reduction in the north property line side yard setback. The proposed five foot reduction of the side yard setback is the minimum necessary to allow the proposed development to be constructed on the subject property. As detailed in this report, the proposal complies with the majority of all other code requirements. The applicant considered shifting the entire project to the south, but parking requirements, rear yard setbacks, requirements to provide adequate private outdoor space for each ground floor unit, and the location of utilities prevented this change. The requested variance is the minimum necessary to minimize this hardship. This criteria is satisfied.*

Variance No. 2 - As noted above the applicant requests a Type III Variance to allow a portion of the proposed outdoor parking to encroach into the required rear yard setback. As shown on submitted plans, the proposed buildings are located greater than 30 feet (31.8) feet from the rear property line as required by Section 3.130(7)(e). To accommodate additional parking and site amenities, the applicant proposes locating parking 10 feet from this rear property line. Section 8.150(B)(5)(c) requires the rear setback for parking lots to be the same as the minimum setback as required by the adjacent property, except the building height multiplier is not applied. As such, per Section 3.130(8)(e) a 20 foot rear setback is required per code. As detailed in City of Troutdale File No. 16-045, the rear yard setback for these lots (Lots 1-4 of Gateway Estates Subdivision) were reduced to 15 feet. Using the reduced setback of 15 feet to calculate the required parking lot rear yard setback for the subject property results in a 15 foot setback. As shown on submitted plans the applicant requests a Type III Variance to reduce the rear parking lot setback by 33 percent, from 15 feet to 10 feet.

c. Side and rear yard setbacks for parking lots and/or garages shall be the same as the minimum building setbacks of the underlying zoning district or the same as the minimum building setback of any adjacent residential zoning district, whichever is more restrictive. Side and rear yard setbacks based on building height shall not be applied to parking lots or the access driveways.

A. Special circumstances or conditions including, but not limited to, lot size, lot shape, topography, or size or shape of building, apply to the property, development, or to the intended use and are not typical of the general conditions in the surrounding area; and

Response: The subject property is severely constrained in an east-west direction by the required setback to 257th Ave., parking lot standards, and landscaping requirements. In addition, the applicant does not have the option of moving either the buildings or parking to the west because of the location of SW 257th Ave and additional requirements limiting parking from being located in front of the structures. As detailed above, the proposed buildings comply with the required 30 foot rear setback. As noted above, a variance was granted to the rear yard setback of the four lots abutting the subject property to the east (City of Troutdale, File No. 16-045). The approval of this variance reduced the rear yard setback for these lots (Lots 1-4 of Gateway Estates Subdivision) to 15 feet. Regardless, the applicant believes special circumstances exist related to lot size, shape of the lot, and other requirements that are not typical of the general conditions in the surrounding area. This criteria is satisfied.

B. The variance authorized will not be injurious to adjacent properties or the surrounding neighborhood or otherwise detrimental to the public welfare; and
Response: As noted above, the original owner of the subject property was also the owner of the property potentially affected by the proposed setback reduction. The subject property has been zoned for a multi-family use for many years and the previously proposed senior housing project is identified in the CC&R for the Gateway Estates Subdivision. The proposed five foot rear setback reduction (33 percent) is

only requested to allow required vehicle parking to be located within this area. Approval of this request will not be injurious to adjacent properties or the surrounding neighborhood, or otherwise detrimental to the public welfare. This criteria is satisfied.

- C. The variance authorized will be consistent with the general purpose and intent of the provision from which a variance is sought; and

Response: *Setbacks are generally intended to separate land uses to allow light and air between buildings. The intent of the required rear yard setback is to separate the parking from the abutting single family residences. As noted in Section 8.150(B)(5)(c) standards related to structure height are not applicable to parking within this setback. Given the proposed parking location and the applicant's proposal to construct a six foot wooden fence and plant a thick landscape buffer along this eastern property line, the requested five foot setback reduction will have a marginal impact on adjacent residences. Approval of the requested variance is generally consistent with the purpose and intent of this standard. This criteria is satisfied.*

- D. The variance is the minimum necessary to relieve a practical difficulty with full compliance and to avoid or minimize the resulting hardship.

Response: *The proposed five foot reduction of the rear yard setback is the minimum necessary to allow the proposed development to be constructed on the subject property. The project complies with the majority of all other code requirements and the addition of the two ADA and three compact parking spaces to be located in this setback are necessary to the approval and functioning of the proposed project. The applicant considered shifting the entire project to the west thereby reducing the front setback in order to provide the full rear yard setback, however this alternative was rejected given the street classification and high traffic volume of SW 257th Avenue along the western property line. This criteria is satisfied.*

Variance No. 3 - The applicant requests a Type III Variance to Section 8.150(B)(6)(b) to reduce the size of private outdoor space for all upper level units by 30 percent, from 60 square feet required to 42 square feet.

- A. Special circumstances or conditions including, but not limited to, lot size, lot shape, topography, or size or shape of building, apply to the property, development, or to the intended use and are not typical of the general conditions in the surrounding area; and

Response: *As shown on the submitted Architectural Plans the majority of the units feature a 2,122 square foot three bedroom primary unit on three floors and a 556 square foot one bedroom unit on the second floor. The required private outdoor space for the primary unit is satisfied by a private 330 square foot backyard. As shown on these plans, the private outdoor space for the small second floor unit is proposed to be an outdoor deck located above the garage of the lower unit, accessed by a door in this unit. This space is 3.5 feet deep by 12 feet wide and is designate to cantilever over a portion of the driveway of the lower unit. Compliance with the 60 square foot space requirement is practically challenging to achieve. To achieve 60 square feet, if the width of the structure*

remains at 12 feet, would require the deck to be extended an additional 1.5 feet (5 x 12 feet). The applicant is concerned the extent of this extension could interfere with the use and functioning of the garage below. Additionally, widening the deck to achieve 60 square feet is not practically possible given the width of the front building facade and the proportions such a deck would create, have been determined to be aesthetically undesirable. Given these constraints and issues, conditions exist that warrant approval of this request. This criteria is satisfied.

- B. The variance authorized will not be injurious to adjacent properties or the surrounding neighborhood or otherwise detrimental to the public welfare; and
Response: *The location of the proposed deck will primarily be only visible within the confines of the apartment complex and will not be visible from any adjacent properties. The requested variance will be marginally noticeable or missed when viewing the units or by the tenants of these units. The requested variance will not be injurious to adjacent properties or the surrounding neighborhood, or otherwise detrimental to the public welfare. This criteria is satisfied.*
- C. The variance authorized will be consistent with the general purpose and intent of the provision from which a variance is sought; and
Response: *The proposed second floor outdoor space will provide an amenity for the tenant(s) of this unit. Approval of the requested variance is generally consistent with the purpose and intent of this standard. This criteria is satisfied.*
- D. The variance is the minimum necessary to relieve a practical difficulty with full compliance and to avoid or minimize the resulting hardship.
Response: *As discussed above, given the practical challenges with constructing this outdoor amenity, the requested variance is the minimum necessary to relieve the difficulty with fully complying with the code and minimize this hardship. This criteria is satisfied.*

Chapter 8 - Development and Design Standards

8.000 SITE AND DESIGN STANDARDS

8.020 Applicability and Exemptions.

Response: *Site development review is required for the proposed project.*

8.030 Pedestrian Walkways. In addition to the standards above, all industrial parks, commercial developments, and community service uses shall meet the following requirements for pedestrian walkways:

A. Number and Placement.

1. At least one pedestrian walkway shall be provided to each street, other than limited access freeways, abutting the property.

Response: *The submitted site plan identifies two pedestrian connections between the sidewalk on 257th Avenue and the buildings.*

2. Pedestrian walkways shall reasonably connect building entrances to one another, to public street entrances, and/or to existing or planned transit

stops.

Response: *The proposed pedestrian walkways connect to the street as required.*

3. Where practicable, on-site walkways shall connect with walkways, sidewalks, bike paths, alleyways, and other bicycle or pedestrian connections on adjacent properties used as, or planned for, industrial parks, commercial, multiple-family, or community service uses.

Response: *The subject property is surrounded on all sides by existing development. No on-site walkways are proposed to connect to these developments.*

4. Where practicable, pedestrian walkways and driveways shall provide a direct connection to walkways and driveways on abutting developments.

Response: *It is not practicable to provide a pedestrian walkway connection to abutting developments.*

5. A required walkway or walkway connection need not be provided where another required sidewalk or walkway route provides a reasonably direct alternate route. An alternate route is reasonably direct if the walking distance increases by less than fifty percent (50%) over the other required route.

Response: *As noted above, the proposed site plan includes two pedestrian connections between 257th Ave. and the proposed buildings. No other connections are practicable or proposed.*

6. Pedestrian walkways are required between those parts of a site that people on the site normally would walk between. Walkways are not required between buildings or portions of a site which are not intended for, or likely to be used by, pedestrians. Such buildings and features include truck loading docks, warehouses not including office/warehouse combinations, automobile sales lots, temporary uses, outdoor storage areas, etc.

Response: *Pedestrian walkways are provided between the buildings and the street.*

B. Routing.

1. Pedestrian walkways shall be as direct as reasonably possible.

Response: *The proposed pedestrian walkways are designed to provide a direct connection as required.*

2. Pedestrian driveway crossings should be minimized. Internal parking lot circulation and design shall maintain ease of access for pedestrians from streets and transit stops.

Response: *Neither of the pedestrian walkways require a driveway crossing.*

3. The on-site pedestrian circulation system shall connect adjacent streets to the main entrance of the primary structure on the site in a reasonably

direct route.

Response: The proposed walkway system provides a direct connection between the street and building entrances.

8.040 Transit Facility Design. Any Type II land divisions where further divisions are possible, and all Type III land divisions, multiple-family developments, community services uses, and commercial or industrial uses located on an existing or future transit route shall meet the requirements of Tri-Met for transit facilities.

Applicants shall consult with Tri-Met to determine necessary transit facility improvements in conjunction with the proposed development. Proposals shall be consistent with the road crossing improvements that are identified in the City Transportation System Plan on streets with existing or planned transit service.

Response: A transit stop is located near the subject property and no additional improvements have been identified by Tri-Met affecting the proposed project.

8.045 Additional Transit Related Design Standards. All commercial and community service development, and any industrial development designed to accommodate fifty (50) or more employees and located on parcels within six hundred (600) feet of existing or planned transit routes shall meet the following requirements:

Response: The proposed project is a multi-family development and does not require compliance with this section.

8.060 Landscaping and Screening

A. Minimum Basic Improvements.

1. The minimum area of a site to be retained in landscaping shall be as follows: Zoning District or Use Percentage: Multi-Family Residential 25%

Response: As shown on submitted plans, 31.5 percent of the site will contain landscaping in compliance with this standard.

2. For multi-family residential development and mixed-use development, usable recreation areas shall be provided for development containing more than five (5) dwelling units at the rate of two hundred (200) square feet per dwelling unit. Such areas shall be counted as part of the required landscaping percentage. Examples include, but are not limited to, playgrounds, exercise trails, swimming pools, etc.

Response: This section requires the development to provide 3,000 square feet of usable recreation area (15 units x 200sf = 3,000sf). As shown on the submitted plans, the proposal includes two recreation areas totaling 3,726 square feet in addition to a large pet area in the southeast corner of the site in compliance with this standard. This standard is satisfied.

3. Except for portions approved for parking, loading, or traffic maneuvering, a required setback area abutting a public street, and open area between the property line and the roadway in the public street, shall be landscaped. This landscaping shall be counted as part of the required landscaping percentage, except for that portion of the landscaping within the street right-of-way.

Response: The submitted plans show the area between the SW 257th Avenue right-of-way and the units will be landscaped in compliance with this standard.

4. Site-obscuring shrubbery or a berm, wall, or fence shall be placed along the boundary of each classification of zone, i.e. residential, commercial or industrial, and around unsightly areas such as a trash or equipment storage area, or an outdoor industrial or commercial activity.

Response: *A six foot wooden “good neighbor” fence will be constructed around the three sides of the property adjoining other residential development.*

5. Landscaping that is required by a land use approval shall be irrigated to ensure the survivability of the landscaping.

Response: *All landscaping will be irrigated by hand or an automatic underground system as required.*

6. At least seventy-five percent (75%) of the required landscaped area shall be planted with a suitable combination of trees, shrubs, or evergreen groundcover.

Response: *The proposed landscaping includes at least 75 percent of the area in plantings as required.*

7. Plant Material:

- a. Trees shall be species having an average mature spread of crown of greater than fifteen (15) feet and trunks which can be maintained in a clean condition with over five (5) feet of clear wood. Trees having an average mature spread of crown less than fifteen (15) feet may be substituted by grouping the same so as to create the equivalent of a fifteen (15) foot crown spread.

Response: *All proposed trees comply with this section.*

- b. Trees shall be a minimum of seven (7) feet in overall height or one and one-half (1½) inches in caliper immediately after planting. Adjacent to any public right-of-way or easement, the following species shall be prohibited: poplar, willow, cottonwood, fruit trees, nut trees, and ailanthus. Selected conifers may be planted adjacent to public rights-of-way or easements if approved by the Director. See the City’s list of recommended tree species.

Response: *All trees comply with this standard.*

- c. Shrubs shall be a minimum of one (1) gallon in size or two (2) feet in height when measured immediately after planting. Hedges, where required to screen and buffer off-street parking from adjoining properties, shall be planted with an evergreen species maintained so as to form a continuous, solid, visual screen at time of planting.

Response: *All shrubs that are planted will comply with this standard.*

- d. Vines for screening purposes shall be a minimum of one (1) gallon in size or thirty (30) inches in height immediately after planting and may be used in conjunction with fences, screens, or walls to meet physical barrier requirements as specified.

Response: *All vines will comply.*

- e. Groundcovers used in lieu of turf, in whole or in part, shall be planted in such a manner as to provide complete coverage within one (1) year.

Response: All groundcover used will comply.

- f. Turf areas shall be planted in species normally grown as permanent lawns in Troutdale. Acceptable varieties include improved perennial rye and fescues.

Response: All turf areas will comply.

- g. The use of native plants throughout the site is encouraged if the site abuts vegetation corridors, steep slopes, wetlands, or floodplain. If native plants are used exclusively, a reduction of five percent (5%) of the minimum landscaping requirement will be authorized.

Response: Native plantings are not proposed.

- h. Plants listed in the current Oregon Department of Fish & Wildlife Oregon Invasive Species Action Plan as invasive are prohibited.

Response: No invasive plant species will be used.

8. Landscaped areas may include architectural features or artificial groundcovers such as sculptures, benches, masonry or stone walls, fences, rock groupings, bark dust (medium coarse), decorative hard paving, and gravel areas, interspersed with planted areas. The exposed area developed with such features shall not exceed twenty-five percent (25%) of the required landscaped area. Artificial plants are prohibited in any required landscaped area.

Response: No artificial plant materials will be used in required landscape areas.

9. Existing trees with a six (6) inch DBH or greater shall be preserved except when removal is specifically authorized by the Site and Design Review Committee or in the development approval.

Response: Given their location and poor quality, the two existing trees located on the subject property will be removed with development.

10. The area of the vegetation corridor on a site being developed counts toward the required landscape area.

Response: No vegetation corridors are located on the subject property.

- B. Garbage and Recycling Container Enclosures. All enclosures used to contain garbage and recycling containers at multiple-family, commercial, industrial, or institutional developments must conform to the following minimum standards:

1. Screening. All enclosures for garbage and recycling containers must be screened from public view. Screening shall consist of six (6) foot high walls constructed of any of the following materials:
- a. Cyclone fencing with slats.
 - b. Wooden fencing.
 - c. Concrete blocks.
 - d. Materials other than the above-mentioned as approved on a case-by-case basis.

Response: The proposed 10 foot x 16 foot garbage enclosure will be constructed of wooden fencing with a closing gate as required.

2. Gates. Gates must meet the following requirements:
 - a. Must have a latch or some type of device which will keep the gate shut after it is closed. The device can be above or below ground.
 - b. Must have a mechanism to keep gates open during trash removal. The device can be above or below ground.
 - c. Wheels are not required; however, the hinge must be adequate to support the weight of the gate.

Response: The proposed enclosure will include a latching gate as required.

3. Base Material/Flooring. The entire base dimension must meet the following requirements:
 - a. Must be made out of concrete. Concrete shall have a nominal thickness of four (4) inches. Exceptions to the base materials may be approved by the Director where warranted.
 - b. Must be positively sloped to the drainage system.

Response: The proposed enclosure will be constructed on a concrete pad with positive drainage to the AC paving of the parking lot.

C. Installation and Performance Bond or Security Requirements.

1. Landscaping must be installed prior to final occupancy.
2. If weather conditions or other circumstances beyond the control of the developer or owner make completion of the landscaping impossible, an extension of up to six (6) months may be applied for by posting “security” equal to forty percent (40%) of the cost of the landscaping with the City, assuring installation within six (6) months. “Security” may consist of a performance bond payable to the City, cash, certified check, time certificates of deposit, assignment of a savings account, or other such assurance of access to funds necessary for completion as shall meet the approval of the City Attorney
3. Upon acceptance of the approved security, the owner may be allowed occupancy for a period of one hundred-eighty (180) days. If the installation of the landscaping improvement is not completed within one hundred-eighty (180) days, the City shall have access to the security to complete the installation and/or revoke occupancy.
4. Upon completion of the installation, any portion of the remaining security minus administrative charges of twenty-five percent (25%) shall be returned to the owner. Costs in excess of posted security shall be assessed against the property, and the City shall thereupon have a valid lien against the property which will come due and payable.

Response: The applicant understands the requirements of this section.

- D. Guarantee. All landscape materials and workmanship shall be guaranteed by the installer and/or developer for a period of time not to exceed two (2) years. This guarantee shall ensure that all plant materials survive in good condition and shall guarantee prompt replacement of dead or dying plant materials.

Response: The applicant understands the requirements of this section.

8.150 Multi-Family Residential Projects and Dwellings

A. Approval process. Multi-family residential projects and dwellings are subject to a Site Development Review land use application in accordance with Section 6.900 of this Code.

Response: *The applicant understands the project will be reviewed following the process detailed for Site Development Review.*

B. Design standards.

1. Building entrances. The primary entrance to buildings that do not have residential units above or below other residential units shall face toward a public or private street, unless the lot configuration, site characteristics, onsite circulation, or other conditions make it impractical to face a building's primary entrance to the street. Exception: A primary entrance is not required to face a street designated as an arterial.

Response: *As shown on submitted Architectural Plans, the front door of the primary unit in each building faces the parking lot as required.*

2. Building separation. Multiple residential buildings on a single lot shall be separated at least fifteen (15) feet from one another.

Response: *The two proposed buildings are separated by greater than 15 feet from one another.*

3. Pedestrian access and circulation.

a. Private streets or driveways greater than twenty (20) feet in length and that serve more than one (1) dwelling unit shall have sidewalks on at least one (1) side that connect to the nearest public street.

b. Each primary entrance to a residential building shall be connected to a sidewalk onsite that connects to either a public street, private street, or driveway.

c. Onsite pedestrian circulation shall be continuous and connect streets abutting the site, ground level entrances, common buildings such as laundry and recreation facilities, parking areas, shared open space and play areas, abutting transit stops, and any pedestrian amenities such as plazas, resting areas, and viewpoints. There shall be at least one (1) pedestrian connection to an abutting street frontage for each two hundred (200) linear feet of street frontage.

d. Vehicle/pedestrian conflicts shall be minimized by providing pedestrian routes that are separated from parking lots, including onsite sidewalks that connect to garbage enclosures or recycling areas and mailboxes.

Response: *The entrance to each unit is connected to a sidewalk that is connected to the sidewalk along SW 257th Avenue. This standard is satisfied.*

4. Architectural elements and building facades. Residential units shall be designed with vertical and horizontal offsets to break up rooflines, define private outdoor areas, allow greater views, and admit light and air to unit interiors. Large, blank walls shall be avoided. Windows and projecting walls shall be used to break up larger walls in order to establish visual interest.

a. No wall of a residential building shall exceed a length of fifty (50) feet without a foundation offset of at least four (4) feet for a distance of at least sixteen (16) feet.

Response: As shown on the submitted Building Elevations, each building features a variety of roof features including a dormer to break up the roof structure and there are no large blank walls on the building. This standard is satisfied.

- b. The wall of a building that faces a public street shall incorporate architectural features including, but not limited to, at least three (3) of the following:
 - i. Porches.
 - ii. Balconies.
 - iii. Dormer windows.
 - iv. Recesses/alcoves.
 - v. Unique entry areas, such as porticos or atriums.

Response: The west elevation of each building features a variety of architectural elements including visible dormers, decorative bracing, and a mix of siding materials. This standard is satisfied.

- c. The same level of architectural design and quality of materials shall be applied to all sides of the building.

Response: As shown on the submitted Architectural Plans, all sides of the proposed building contain the same level of architectural design and quality of materials. This standard is satisfied.

- d. The following window detail shall be incorporated into the building design:
 - i. Windows shall account for at least fifteen percent (15%) of any rear or front building elevation no matter what the building's orientation on the lot is.

Response: As shown on the submitted Architectural Plans, all front and rear building elevations contain greater than 15% window glazing. This standard is satisfied.

- ii. Windows shall account for at least ten percent (10%) of any side building elevation no matter what the building's orientation is.

Response: As shown on the submitted Architectural Plans, all building elevations contain at least 10% windows glazing. This standard is satisfied.

- iii. All windows shall have outer casings or frames.

Response: All proposed windows have a casing and an applied window frame. This standard is satisfied.

- e. Garages, carports, and accessory structures shall maintain the same level of design, aesthetic quality, and architectural compatibility as the residential structure(s).

Response: Each primary unit contains a single car garage containing the same level of architectural quality as the rest of the structure. This standard is satisfied.

- f. Roofline offsets shall be provided at intervals of forty (40) feet or less to create variety in the massing of structures and relieve the effect of a single, long roof.

Roofline offsets shall be a minimum four (4) foot variation either vertically from the gutter line, or horizontally.

Response: *As shown on submitted plans, the roofline of the building contains a dormer to break-up the elevation and add visual interest and variation. This standard is satisfied.*

- g. The rooflines of attached dwellings shall be multi-gabled or have varied parapets over every unit's main entrance.

Response: *All rooflines are gabled over the building entrances. This standard is satisfied.*

- h. Rooflines, porches, and doors shall have trim.

Response: *All rooflines, porches, and doors contain trim as required. This standard is satisfied.*

5. Off-Street parking, garages, and carports. In addition to the standards of Chapter 9, Off-Street Parking and Loading, off-street parking for attached dwellings on a single lot shall include these design standards:

- a. Parking lots may not be located between a multiple-family structure and the right-of way the structure fronts on.

Response: *As shown on the submitted Site Plan, all parking will be located behind the western plane of the buildings in compliance with this section.*

- b. If there is no parking lot or alley access to attached dwellings, and motor vehicle access is from the street, parking must be either in an attached garage that is set back a minimum of five (5) feet behind the front door of the residential structure, in a detached accessory structure located at least fifty (50) feet from the front property line, or in a parking area at the side or rear of the site, or shall comply with the following standards:

- i. The garage door width of the dwelling is 50 percent or less of the width of the street facing elevation, and does not extend beyond the front door; or
ii. The garage door is behind or even with the front door and the dwelling has a roofed front porch, which is at least 1/3 as wide as the front elevation and at least five (5) feet deep. The porch may encroach within the required front yard setback a maximum of five (5) feet without a variance provided the foundation for the dwelling complies with the minimum front setback standard; and
iii. The street facing wall of the dwelling contains at least one (1) window on the ground floor that allows visibility of the street.

Response: *The project includes both garages and a parking lot. This standard is satisfied.*

- c. Side and rear yard setbacks for parking lots and/or garages shall be the same as the minimum building setbacks of the underlying zoning district or the same as the minimum building setback of any adjacent residential zoning district, whichever is more restrictive. Side and rear yard setbacks based on building height shall not be applied to parking lots or the access driveways.

Response: *As noted above the applicant requests a Type III Variance to allow a*

portion of the proposed outdoor parking to encroach into the required rear yard setback. As shown on submitted plans, the proposed buildings are located greater than 30 feet (31.8) feet from the rear property line as required by Section 3.130(7) (e). To accommodate additional parking and site amenities, the applicant proposes locating parking 10 feet from this rear property line. Section 8.150(B)(5) (c) requires the rear setback for parking lots to be the same as the minimum setback as required by the adjacent property, except the building height multiplier is not applied. As such, per Section 3.130(&)(e) a 20 foot rear setback is required per code. As detailed in City of Troutdale File No. 16-045, the rear yard setback for these lots (Lots 1-4 of Gateway Estates Subdivision) were reduced to 15 feet. Using the reduced setback of 15 feet to calculate the required parking lot rear yard setback for the subject property results in a 15 foot setback. As shown on submitted plans the applicant requests a Type III Variance to reduce the rear parking lot setback by 33 percent, from 15 feet to 10 feet.

6. Outdoor private space. Outdoor private space is required for each residential dwelling unit.

- a. Each ground level dwelling unit shall have an attached accessible outdoor private space of not less than sixty (60) square feet in area. Individual outdoor areas for ground level units must be visually screened from each other by walls, fences, or vegetation screening that is at least six (6) feet high and totally sight-obscuring.

Response: *As shown on the Site Plan, each ground floor unit will be provided with 330 square feet of attached outdoor private area in compliance with this standard.*

- b. Each upper level unit shall have an attached outdoor private space, such as a balcony, of not less than sixty (60) square feet in area. The area shall be enclosed, screened, or otherwise designed to provide privacy from adjacent units by walls, building offsets, or similar sight-obscuring screening.

Response: *As detailed above, all upper floor units includes 42 square feet of private outdoor space. As detailed above, the applicant is requesting a Type III Variance to reduce the required outdoor private space for the upper level units by 30 percent from 60 square feet to 42 square feet.*

7. Recreation areas.

- a. Recreational facilities or open space areas are required for attached dwelling developments that contain six (6) or more dwelling units on one (1) lot. Such recreational facilities and open space areas must be located on the development site or on a lot adjacent to the site. Common recreation areas, whether indoor, outdoor, or both, shall be provided at the rate of at least two hundred (200) square feet per dwelling unit. No more than fifty percent (50%) of the required recreation area may be in passive open space. Recreation facilities may include children's play structures and play equipment and shall be located outside of bioswales, detention ponds, steep slopes, or a vegetation corridor as defined in this Code. More than one (1) recreation area may be developed on the site. Any play structure exceeding ten (10) feet in height must comply with the underlying zoning district setbacks.

Response: This standard requires the 15 units to provide 3,000 square feet of common recreation area. As shown on the submitted plans, the proposal includes two recreation areas totaling 3,726 square feet in addition to a large pet area in the southeast corner of the site in compliance with this standard. This standard is satisfied.

- b. Recreation facilities or open space areas are not required for development within the area between Historic Columbia River Highway and 2nd Street extended west to its intersection with 257th Drive from 257th Avenue to the SE Sandy Street right-of-way.

Response: The subject property is not located within the area specified in this section.

Chapter 9 - Off-Street Parking and Loading

9.010 Residential Off-Street Parking Space Requirements. The minimum and maximum off-street parking space requirements are as follows:

Land Use Type	Minimum	Maximum
Multi-family Dwelling	2 spaces per dwelling plus 1 space per three dwelling units for guest parking	No maximum

Response: The 15 units requires a minimum of 35 parking spaces (15 x 2 spaces = 30 tenant spaces + (15/3 = 5) 5 guest spaces = 35). The submitted site plan identifies 45 parking spaces including two required ADA accessible spaces. Proposed parking includes 21 standard spaces, 14 compact spaces, and two ADA spaces uncovered spaces in the parking lot (36 spaces) and eight spaces in the garages. This standard is met.

9.045 Landscaping and Screening.

- A. Except for a residential development which has landscaped yards, parking areas containing more than twenty (20) vehicle spaces shall include landscaping to cover not less than ten percent (10%) of the area devoted to parking facilities. The landscaping shall be uniformly distributed throughout the parking area and may consist of trees, shrubs, or groundcover.

Response: The proposed parking area is bordered on each end by landscape planter beds. The total area of landscaping for the entire project is 31.5 percent. This standard is met.

- B. Parking areas shall be divided into bays of not more than twenty (20) parking spaces in parking areas with twenty (20) or more spaces. Between, and at the end of each parking bay, there shall be planters which have a minimum width of five (5) feet and be at least seventeen (17) feet in length. Each planter shall contain one major structural tree and groundcover which has been deemed appropriate by the Director. Truck parking and loading areas are exempt from this requirement.

Response: The proposed parking lot is divided into four parking bays: two bays adjacent to the buildings containing with 13 spaces each and 4 spaces in the garages, one bay facing east with five spaces, and one central bay containing seven spaces. Each corner of the primary parking lot contains a planter with tree and ground cover as required. This standard is satisfied.

- C. Parking area setbacks shall be landscaped with major trees, shrubs, and groundcover as specified in Chapter 11, Landscaping and Screening, of this Code.

Response: The 20 foot setback between the parking lot and 257th Ave. is proposed to be landscaped with a variety of materials required. This standard is satisfied.

- D. Wheel stops, bumper guards, or other methods to protect landscaped areas shall be utilized. No vehicles may project over a property line. No vehicle shall overhang a public right-of-way, sidewalk, or landscaped area unless adequate area is provided for safe pedestrian circulation.

Response: All parking spaces adjacent to a pedestrian walkway or landscape area includes wheel stops as required. This standard is satisfied.

- E. Fences, walls, or hedges shall not be placed within front or street side setback areas except at the street side edge of parking lots when allowed within setbacks.

Response: No fences, walls or hedges are proposed within the front yard setback. This standard is satisfied.

- F. Where parking adjoins a residential zoning district, there shall be a sight-obscuring screen which is at least eighty percent (80%) opaque when viewed horizontally from between two (2) and eight (8) feet above average ground level. The screening shall be composed of materials which are an adequate size so as to achieve the required degree of screening within three years after installation.

Response: The proposed parking lot abuts a residential zone at its eastern boundary. A sight-obscuring fence will is already constructed a portion of this boundary. The applicant will complete the site-obscuring fence also the rest of the boundary as required. The applicant will also install landscape materials in compliance with this standard as required by the City. This standard is satisfied.

9.050 Paving.

- A. Parking areas, driveways, aisles, and turnarounds shall be paved with concrete, asphalt, or comparable impervious surfacing. Porous concrete, grasscrete, or comparable porous paving surfacing may be used in place of impervious surfacing to reduce stormwater runoff, when approved by the Director. Gravel and similar erodible surfaces are not acceptable.

Response: All parking and maneuvering areas with be paved with asphalt. This standard is satisfied.

- B. Approaches shall be paved with concrete surfacing constructed to City standards. If a street is not paved, the approach may be maintained to the same standard as the street until the street is paved.

Response: The approach to the proposed parking lot will be paved with concrete in accordance with City standards. This standard is satisfied.

- C. Temporary overflow parking in conjunction with community events, special events, events of citywide interest, or sporting events, is allowed on an unpaved parking area on a parcel of at least one-half acre in size, provided such parking does not occur within the Vegetation Corridor and Slope District. If a fee is charged for parking, it shall not be considered a commercial parking lot for purposes of zoning compliance.

Response: This section is not applicable to the project.

- 9.055 Drainage.** Parking areas, aisles, and turnarounds shall have provisions made for the on-site collection of drainage waters to eliminate sheet flow of such waters onto sidewalks, public right-of-ways, and abutting private property.

Response: A stormwater collection system designed by a Civil Engineer is included with this proposal. This system and the parking lot have been designed to eliminate sheet flow of stormwater onto sidewalks, rights-of-way, and abutting private property. A Stormwater Report is included with the application package. This standard is satisfied.

- 9.060 Lighting.** Artificial lighting shall be provided in all required off-street parking areas. Lighting shall be deflected so as not to shine directly into adjoining dwellings or other types of living units and so as not to create a hazard to the public use of a street. Lighting shall be provided in a bicycle parking area so that all facilities are thoroughly illuminated and visible from adjacent sidewalks or motor vehicle parking lots during all hours of use. Lighting fixtures shall also comply with the requirements of Troutdale Municipal Code, Chapter 8.26.

Response: Following land use approval, the applicant will submit a Lighting Plan in compliance with this standard as required.

9.070 Driveways.

- A. A driveway to an off-street parking area shall be improved from the public roadway to the parking area a minimum width of twenty (20) feet for a two-way drive or twelve (12) feet for a one-way drive, but in either case not less than the full width of the approach for the first twenty (20) feet of the driveway. The improvement shall be constructed to the standards for private drives.

Response: A 30 foot wide driveway approach is proposed to access the site as required for two-way traffic. This standard is satisfied.

- B. A driveway for a single-family or two-family dwelling shall have a minimum width of ten (10) feet.

Response: This section is not applicable.

- C. Driveways, aisles, turnaround areas, and ramps shall have a minimum vertical clearance of twelve (12) feet for their entire length and width, but such clearance may be reduced in parking structures.

Response: The proposed parking lot has been designed in accordance with the requirements of this section.

- D. Parking lots more than three (3) acres in size intended for use by the general public shall provide street-like features along driveways, including curbs, sidewalks, street trees or planting strips, and bicycle routes.

Response: The proposed parking lot contains significantly less than three acres and this section is not applicable.

9.075 On-Site Circulation.

- A. Groups of more than three (3) parking spaces shall be permanently marked.

Response: All parking spaces will be permanently marked as required. This standard is satisfied.

- B. Except for a single-family or two-family dwelling, groups of more than three (3) parking spaces shall be provided with adequate aisles or turnaround areas so that all vehicles may enter the street in a forward manner. No backing movements or other maneuvering shall be permitted within a street right-of-way other than an alley.

Response: All parking spaces within the proposed parking lot will be provided with adequate aisles and turnarounds so that all vehicles are able to enter 257th Avenue in a forward manner. This standard is satisfied.

- C. Pedestrian walkways, separation, and differentiation of materials in parking lots three (3) acres or larger intended for public use shall be provided pursuant to Section 8.030 of this Code.

Response: No pedestrian crossings are proposed. This standard is satisfied.

9.080 Bicycle Parking Facilities. Multiple-family developments; industrial, commercial and community service uses; transit transfer stations; and park and ride lots, shall meet the following standards for bicycle parking facilities:

- A. Number/Type.

1. The required minimum number of short-term bicycle parking spaces (stays of less than four (4) hours) shall be five percent (5%) of the total number of automobile parking spaces provided for the use. In no case shall less than one (1) bicycle parking space be provided even when no automobile parking spaces are being provided.

Response: The proposed 45 vehicle parking spaces requires two short term bicycle parking spaces ($45 \times 0.05 = 2.25$). A bike rack to accommodate five short term bicycle parking spaces is proposed in the eastern portion of the site. This standard is satisfied.

2. The required number of long-term bicycle parking spaces (stays of more

than four (4) hours and all-day/monthly) shall be three percent (3%) of the total number of vehicle parking spaces provided for the use and fractions rounded down.

Response: *The proposed 45 vehicle parking spaces require one long term bicycle parking space ($41 \times .03 = 1.35$). An enclosure to accommodate two long term bicycle parking spaces is proposed in the eastern portion of the site. This standard is satisfied.*

B. Location.

1. Bicycle parking shall be located on-site, convenient to building entrances, and have direct access to both the public right-of-way and to the main entrance of the principal use.

Response: *The site plan identifies a five space bicycle rack located at the eastern end of the site. In addition, the garage of the primary apartment unit is designed to accommodate bicycle parking in the garage. This standard is satisfied.*

2. For facilities with multiple buildings or parking lots, bicycle parking shall be located in areas of greatest use and convenience to bicyclists.

Response: *The location of the bicycle rack at the eastern end of the parking lot in complies with this standard. This standard is satisfied.*

3. Bicycle parking may be provided within the public right-of-way in areas without building setbacks, subject to approval of the appropriate governing official and provided it meets the other bicycle parking requirements.

Response: *No bicycle parking is proposed within a public right-of-way.*

- C. Parking Space Dimensions. Each required bicycle parking space shall be at least two and one half (2.5) feet-by-six (6) feet, and when covered, provide vertical clearance of at least seven (7) feet. An access aisle of at least five (5) feet wide shall be provided and maintained beside or between each row of bicycle parking. Vertical or upright bicycle storage structures are exempted from the parking space length standard.

Response: *The proposed bicycle parking spaces comply with the dimensional standards of this section. This standard is satisfied.*

- D. Parking Facilities. Bicycle parking facilities shall offer security. Long-term bicycle parking shall be in the form of a lockable enclosure, a designated bicycle storage area inside a building on-site, a covered rack, or another form of secure parking where the bicycle can be stored, as approved by the Director. Short-term bicycle parking shall be in the form of a stationary object (i.e., a “rack”) or other approved structure, covered or uncovered, to which the bicycle can be locked. Bicycle racks shall be securely anchored to the ground or to a structure and shall be designed to hold bicycles securely by means of the frame. Bicycle parking facilities shall be constructed so as to not obstruct walkways.

Response: *As noted above, a two space long term bicycle parking enclosure*

will be constructed onsite. In addition, long term bicycle parking will be accommodated within the garages of the primary the apartment units. Short term bicycle parking will be provided in the bicycle rack at the east end of the parking lot. This standard is satisfied.

9.085 Setbacks.

- A. Parking areas which abut a residential zoning district shall meet the building setback of the most restrictive adjoining residential zoning district.

Response: The proposed parking lot has been setback from adjoining residences in accordance with these requirements. This standard is satisfied.

- B. Required parking shall not be located in a required front or side yard setback area abutting a public street except in industrial districts. For single-family dwellings, required parking may be located in front of a garage.

Response: No parking is proposed within a required front or side yard setback abutting 257th Ave. This standard is satisfied.

- D. Parking areas shall be set back from a lot line adjoining a street the same distance as required building setbacks. Regardless of other provisions, a minimum setback of ten (10) feet shall be provided along the property fronting on a public street in an industrial district. The setback area shall be landscaped as provided in this Code.

Response: The proposed parking lot is setback 20 feet from 257th Avenue as required.

- 9.090 Truck Parking.** In residential zoning districts, no overnight parking of trucks or other equipment on wheels or tracks exceeding one-ton capacity used in the conduct of a business activity shall be permitted, except vehicles and equipment necessary for farming and truck gardening on the premises where such use is permitted.

Response: No overnight truck parking is anticipated with this proposal. This standard is satisfied.

- 9.095 Handicapped Parking Facilities.** The required number of handicapped parking spaces shall be in conformance with the applicable provisions of the State of Oregon Structural Specialty Code.

Response: The 45 parking spaces requires two ADA accessible parking spaces. Two ADA spaces as required are shown on the Site Plan. This standard is satisfied.

9.105 Off-Street Parking Restrictions.

- A. Parking spaces in a public street, including an alley, shall not be considered required parking.

Response: No parking is proposed or anticipated on 257th Ave. This standard is satisfied.

- B. Required parking shall be available for parking of operable passenger vehicles of residents, customers, and employees only, and shall not be used for the

storage or display of vehicles or materials.

Response: The applicant intends to include language within lease agreements to address the requirements of this section.

9.110 Design Requirements for Off-Street Parking. The following off-street parking development and maintenance shall apply in all cases:

A. Size.

1. The standard size of a parking space shall be 9'x18' (162 s.f.).
2. The compact size of a parking space shall be 8'x16' (128 s.f.). Up to thirty-five percent (35%) of required parking spaces may be compact spaces.
3. Handicapped parking spaces shall be in conformance with the State of Oregon Structural Specialty Code, Chapter 11 Accessibility.
4. For parallel parking, the length of the parking space shall be increased to twenty-two (22) feet.

Response: The proposed parking plan includes 21 standard spaces, eight spaces in garages, 14 compact spaces, and two ADA space for a total of 45 parking spaces. The proposed compact spaces constitute 31 percent of the required parking spaces as required. All spaces comply with the requirements of this section.

B. Aisles shall not be less than:

1. 25 feet in width for 90° parking.
2. 20 feet in width for 60° parking.
3. 20 feet in width for 45° parking.
4. 12 feet in width for parallel parking on one side.
5. 16 feet in width for parallel parking on both sides.

Response: The site plan identifies two 26 foot drive aisles to accommodate a combination of 90 degree and angled parking spaces as required. This standard is satisfied.

9.120 Off-Street Parking Plan. A plan drawn to scale, indicating how the off-street parking and loading requirement is to be provided, shall accompany the application for a development permit. The plan shall show all those elements necessary to indicate that these requirements are being fulfilled, and shall include, but not be limited to:

- A. Delineation of individual parking spaces.
- B. Circulation area necessary to serve spaces.
- C. Access to streets, alleys, and properties to be served.
- D. Curb cuts.
- E. Dimensions, continuity, and substance of screening.
- F. Grading, drainage, surfacing, and subgrading details.
- G. Delineations of all structures or other obstacles to parking and circulation on the site.
- H. Specifications as to signs and bumper guards.

Response: The requirements of this section are included on the submitted site plan. The submitted grading plan details grading for the project. This standard is satisfied.

9.125 Off-Street Parking Construction. Required parking spaces shall be improved and available for use at the time of final building inspection.

Response: The applicant intends to complete all site improvements prior to final building occupancy. This standard is satisfied.

V. Conclusion

The applicant requests site and design review approval to construct a 15 unit multi-family housing project on the subject property. With this application the applicant also requests a Type III Variance to Section 3.130(E) to reduce the northern building side yard setback by 25 percent, from 20 feet to 15 feet, a Type III Variance to Section 8.150(B)(5) (c) to reduce the eastern rear yard setback for proposed parking, by 33 percent, from 15 feet to 10 feet, and a Type III Variance to Section 8.150(B)(6)(b) to reduce the size of the private outdoor space required for an upper level unit by 30 percent, from 60 square feet to 42 square feet. As described in this report based on the information provided in this submittal, the application complies with or exceeds the majority of code standards and can be approved or conditioned to be bring the proposal into compliance with this code.

CHERRY PARK EAST LUXURY APARTMENTS

LOCATED AT 1360 SW 257TH AVENUE, TROUTDALE, OREGON 97060

GENERAL NOTES:

- ALL WORK AND MATERIALS SHALL CONFORM TO THE CITY OF TROUTDALE CONSTRUCTION STANDARDS FOR PUBLIC WORKS FACILITIES AND THE 2008 EDITION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION AND ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND REGULATIONS.
- THE CITY OF TROUTDALE WILL PROVIDE INSPECTION ON ALL PHASES OF WORK. NOTIFY THE PUBLIC WORKS DEPARTMENT FIVE (5) DAYS PRIOR TO COMMENCING WORK AND PROVIDE 48 HOURS NOTIFICATION TO OBSERVE AND INSPECT ALL NECESSARY WORK. CONTRACTOR WILL UNCOVER AT HIS/HER EXPENSE ALL WORK COVERED UP FOR WHICH THE CITY INSPECTOR WAS NOT NOTIFIED TO CONDUCT OBSERVATIONS
- ALL UTILITIES SHOWN HAVE BEEN LOCATED FROM THE BEST AVAILABLE INFORMATION. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE EXISTING UTILITIES AND WHEN ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY CHANGES IN PUBLIC FACILITIES MUST BE REVIEWED AND APPROVED BY THE CITY OF TROUTDALE.
- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND LICENSES PRIOR TO CONSTRUCTION.
- AREAS OF CONSTRUCTION SHALL BE STRIPPED BY REMOVING TOPSOIL, HUMUS, ROOTS AND SOILS NOT SUITABLE FOR COMPACTION. STRIPPED MATERIALS SHALL NOT BE USED FOR ROADWAY EMBANKMENT OF STRUCTURAL FILL. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL; HOWEVER, TOPSOIL MAY BE PLACED AND SPREAD WHERE APPROPRIATE FOR LANDSCAPE AREAS.
- CONTRACTOR AND/OR SUBCONTRACTOR(S) SHALL KEEP AN APPROVED SET OF PLANS ON THE PROJECT SITE AT ALL TIMES.
- TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND OREGON SUPPLEMENTS
- ALL EXCAVATORS SHALL COMPLY WITH ALL PROVISIONS OF ORS 757.542 TO 757.562 AND 757.993 INCLUDING NOTIFICATION OF ALL OWNERS OF UNDERGROUND FACILITIES AT LEAST 48 BUSINESS DAY HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS BEFORE COMMENCING ANY EXCAVATION. "ONE CALL" LOCATE NUMBER IS (503) 246-6699 (811)
- THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES IN THE PLANS. WHEN ERRORS, OMISSIONS OR DISCREPANCIES ARE FOUND, THE ENGINEER SHALL BE NOTIFIED. WORK PERFORMED BY THE CONTRACTOR AS A RESULT OF AN ERROR, OMISSION OR DISCREPANCY IN THE PLANS SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE WHEN SUCH ERROR, OMISSION, OR DISCREPANCY HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ENGINEER.
- PROTECT ALL EXISTING MONUMENTS, BENCHMARKS, PROPERTY CORNERS, AND GOVERNMENT CORNERS.
- IMMEDIATE COLD PATCH REQUIRED FOR ALL TRENCH CUTS IN EXISTING STREETS. MAINTAIN UNTIL PERMANENT PATCHING IS COMPLETE.
- THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET THE INTENT OF THE PROJECT CONTRACT DOCUMENTS, APPLICABLE AGENCY REQUIREMENTS, AND OTHER WORK AS NECESSARY TO PROVIDE A COMPLETE PROJECT.
- THE CONTRACTOR SHALL MAINTAIN AND COORDINATE ACCESS TO ALL PROPERTIES AFFECTED BY CONSTRUCTION ACTIVITIES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS BEFORE THE START OF WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY FIELD MEASUREMENTS AND OTHERWISE VERIFY ALL DIMENSIONS AND EXISTING CONSTRUCTION CONDITIONS INDICATED AND / OR SHOWN ON THE PLANS. SHOULD ANY ERROR OR INCONSISTENCY EXIST, THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK AFFECTED UNTIL REPORTED TO THE PROJECT ENGINEER FOR CLARIFICATION OR CORRECTION.
- ANY INSPECTION BY THE CITY, COUNTY, STATE, FEDERAL AGENCY OR PROJECT ENGINEER SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN COMPLIANCE WITH THE APPLICABLE CODES, REGULATIONS, CITY STANDARDS AND PROJECT CONTRACT DOCUMENTS.
- CONTRACTOR TO VERIFY SAWCUT AND TOP OF CURB ELEVATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH THE CONSTRUCTION DRAWINGS AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE TO THE CITY PROJECT MANAGER AND PROJECT ENGINEER A 24 HOUR CONTACT PERSON AND NUMBER.
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY AND RIGHT OF WAY LINES SHOWN ARE FOR GRAPHICAL PURPOSES ONLY.
- UTILITY LINE LOCATIONS ARE BASED ON PAINT MARKINGS BY UTILITY COMPANIES AND AS-BUILT DRAWINGS FROM THE CITY OF TROUTDALE.
- THE CONTRACTOR SHALL COORDINATE A PRECONSTRUCTION MEETING WITH THE CITY AND THE PROJECT ENGINEER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE WORK WITH ALL UTILITY COMPANIES AS NECESSARY TO COMPLETE THE PROJECT.
- THE CONSTRUCTION SITE IS WITHIN AN ACTIVE PARK. CONTRACTOR SHALL TAKE PRECAUTIONS AT ALL TIMES TO PROTECT PARK USERS AND TO SECURE THE WORK WHEN UNATTENDED. PLACE TEMPORARY CONSTRUCTION FENCING TO SEPARATE PARK USERS FROM WORK AREAS.
- PROTECT METHANE MONITORING WELL HEADS DURING CONSTRUCTION.

SANITARY SEWER NOTES

- PVC SANITARY LINE SHALL CONFORM TO ASTM 3034 SDR 35.
- CLEANOUT PIPE, FITTINGS, AND JOINTS SHALL BE THE SAME SPECIFICATIONS AS FOR THE PIPE.
- GRANULAR BACKFILL IS TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND NATIVE MATERIAL SHALL BE COMPACTED TO 92% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL.
- SANITARY SEWER PIPE AND APPURTENANCES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH APWA REQUIREMENTS AND THE 2008 OREGON PLUMBING CODE.
- ALL MATERIALS, INSTALLATION, TESTS, AND INSPECTIONS TO BE MADE IN STRICT ACCORDANCE WITH THE 2008 OREGON PLUMBING CODE.
- ALL TRENCH BACKFILL IN AC AREAS IS TO BE 3/4" - 0 GRANULAR BACKFILL PER DETAIL ON SHEET

WATER NOTES

- WATERLINE AND ALL RELATED FIXTURES AND DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE 2008 OREGON PLUMBING SPECIALTY CODE
- GRANULAR BACKFILL IS TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND NATIVE MATERIAL SHALL BE COMPACTED TO 92% ON IN-PLACE DRY DENSITY OF SURROUNDING SOIL.
- ALL MATERIALS, INSTALLATION, TESTS, AND CHLORINATION TO BE IN STRICT ACCORDANCE WITH THE STANDARDS AND CODES OF THE CLEAN WATER SERVICES AND THE OREGON STATE HEALTH DIVISION ADMINISTRATION RULES, CHAPTER 333.
- THE CONTRACTOR SHALL NOTIFY THE CLEAN WATER SERVICES'S BUREAU OF WATER WORKS 48 HOURS PRIOR TO CONSTRUCTION.
- NO WATER VALVES SHALL BE OPERATED WITHOUT PRIOR AUTHORIZATION OF THE CLEAN WATER SERVICES'S WATER DEPARTMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE PROPER SEPARATION BETWEEN SANITARY SEWER LINES AND WATERLINES AS REQUIRED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY AND STATE DIVISION OF HEALTH.
- PVC WATERLINES ARE TO BE ASTM D2241 CL 200

PAVING NOTES FOR DENSE MIX MHMAC AREAS:

- SUBGRADE OF NEW PAVED AREAS TO ACHIEVE AT LEAST 95% OF THE MAXIMUM DRY DENSITY FOR A 12" DEPTH PER AASHTO T-99. EMBANKMENTS OR FILLS ARE TO BE CONSTRUCTED IN 6" MAXIMUM LIFTS, WITH EACH LIFT BEING COMPACTED TO 95% OF MAXIMUM DENSITY PRIOR TO PROCEEDING WITH THE NEXT LIFT. IN-PLACE DENSITY TESTS SHALL BE DONE USING AASHTO T310. SEE OSSC 00330.43. AREAS RECEIVING STRUCTURAL FILL ARE TO BE TESTED BY A QUALIFIED TESTING LAB.
- AGGREGATE BASE ROCK SHALL BE 3/4"-0 CRUSHED ROCK. AGGREGATE BASE IS TO BE COMPACTED IN 6" MAXIMUM LIFTS TO 95% OF THE MAXIMUM DRY DENSITY PER AASHTO T-99. IN-PLACE DENSITY TESTS SHALL BE DONE USING AASHTO T310. SEE OSSC 00641.44.
- INSPECTION OF SUBGRADE, BASE ROCK, AND A.C. WILL BE MADE BY A QUALIFIED INDEPENDENT TESTING LAB. THE FINDINGS SHALL BE REPORTED TO THE OWNER.
- ALL MATERIALS, INSTALLATION, TEST, AND INSPECTIONS ARE TO BE IN STRICT ACCORDANCE WITH THE CITY OF TROUTDALE'S STANDARDS.

EROSION CONTROL:

- EROSION CONTROL MEASURES MUST BE INSTALLED AND APPROVED PRIOR TO COMMENCING GRUBBING, STRIPPING, OR EXCAVATION.
- CONTRACTOR TO OBTAIN CITY SITE DEVELOPMENT PERMIT PRIOR TO INSTALLING EROSION CONTROL MEASURES

UTILITY NOTES:

THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FROM THE CITY OF TROUTDALE PRIOR TO BEGINNING CONSTRUCTION.

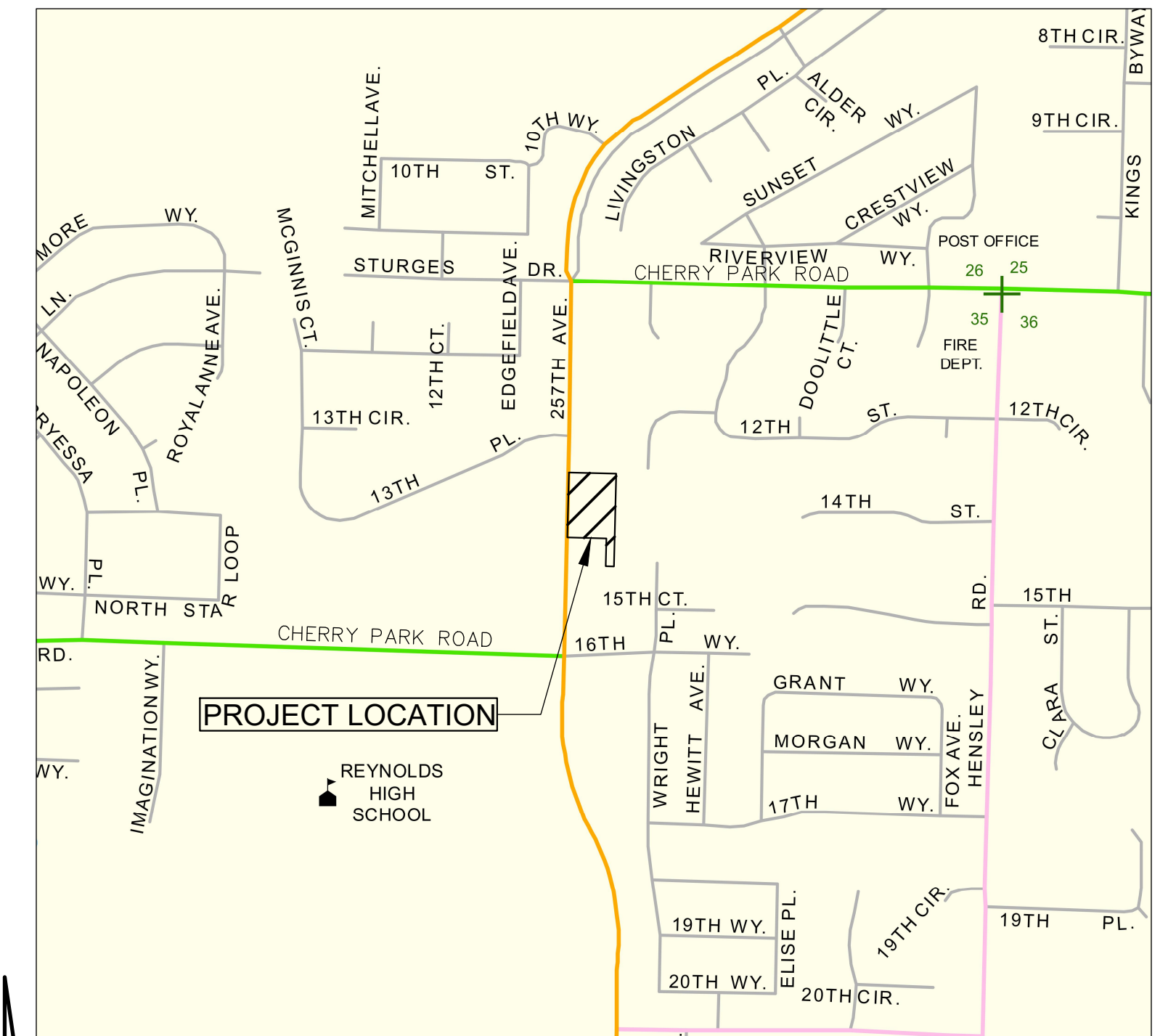
NOTIFICATION:

GENERAL - THE CONTRACTOR SHALL, AS A MINIMUM, COORDINATE THE PROPOSED CONSTRUCTION ACTIVITIES WITH THE CITY OF TROUTDALE, UTILITIES, AND COMPANIES DURING CONSTRUCTION TO AVOID DAMAGE AND TO PREVENT THE INTERRUPTION OF SERVICES AND UTILITIES TO RESIDENTS AND BUSINESSES:

SHEET INDEX

- COVER SHEET AND NOTES
- EXIST CONDITIONS AND DEMO PLAN
- COMPOSITE SITE PLAN
- GRADING AND EROSION CONTROL PLAN
- UTILITY PLAN
- PLANTER DETAILS
- DETAILS
- DETAILS
- EROSION CONTROL NOTES AND DETAILS

DATUM
ASSUMED DATUM



VICINITY MAP
SCALE: 1"=500'

NOTICE TO EXCAVATORS:

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.

CALL THE OREGON ONE-CALL CENTER
1-800-332-2344 OR 811

EMERGENCY TELEPHONE NUMBERS

PGE	503-464-7777
NW NATURAL GAS	503-220-2415
MULTNOMAH COUNTY	503-988-3582
CITY OF TROUTDALE	503-674-3300
COMCAST CABLE	503-617-1212
VERIZON	800- 837-4966



EXPIRES: 06/30/25
SIGNATURE DATE: -----

5/15/2024 4:11:35 PM JASON\project files\projects\23-011 sw 257th townhomes\cod\sheets\23-011 cover sheet and notes.dwg

DATE:	NO.	REVISION

DRAWN:	DESIGNED:	CHECKED: KAG
SCALE: AS SHOWN	DATE: APR 22, 2024	
PROJECT NO. E23-011		

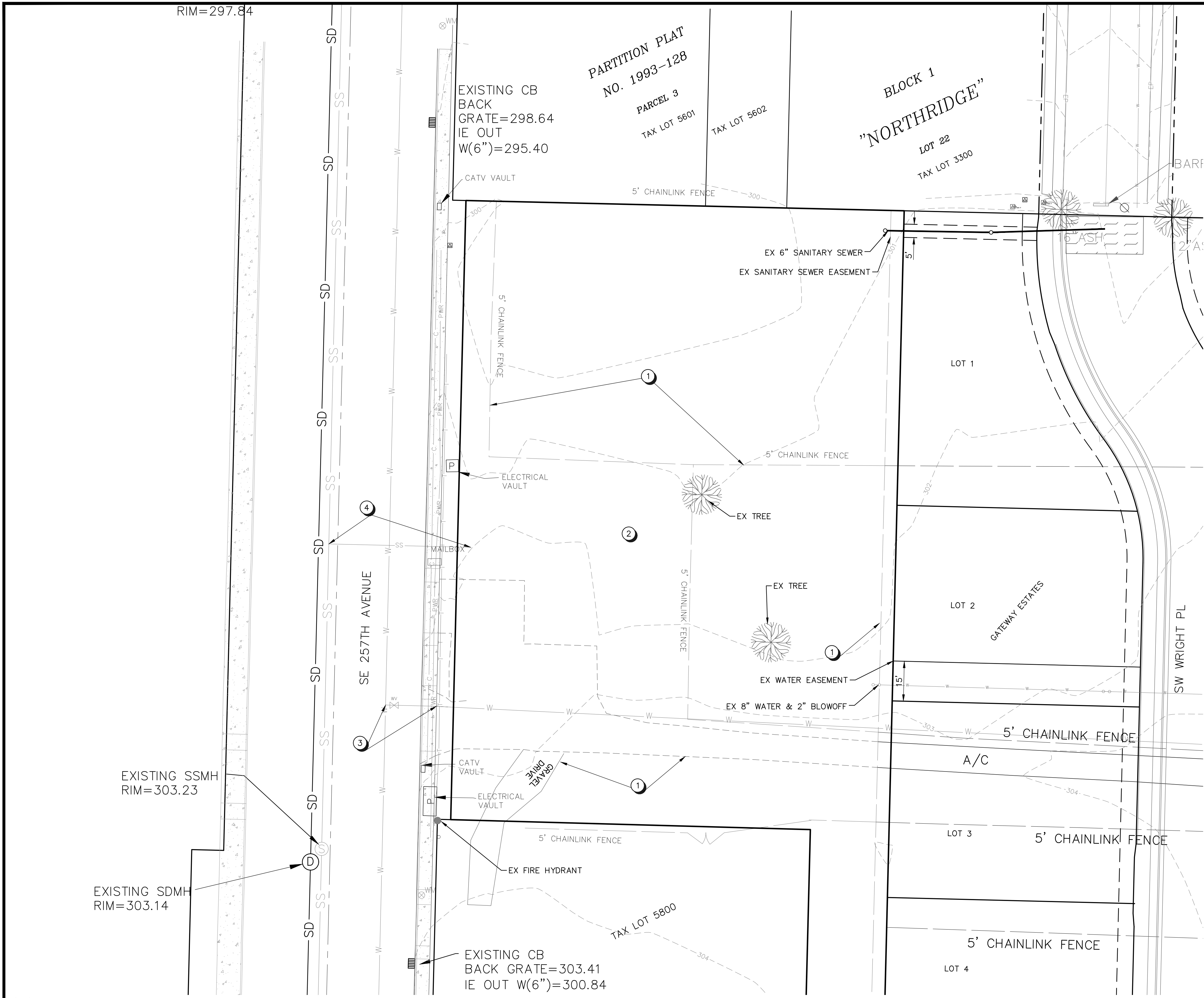


359 EAST HISTORIC COLUMBIA RIVER HIGHWAY
TROUTDALE, OREGON 97060
(503) 668-3737

CHERRY PARK EAST LLC
4307 SE OXBOW PRWY
GRESHAM OR, 97080

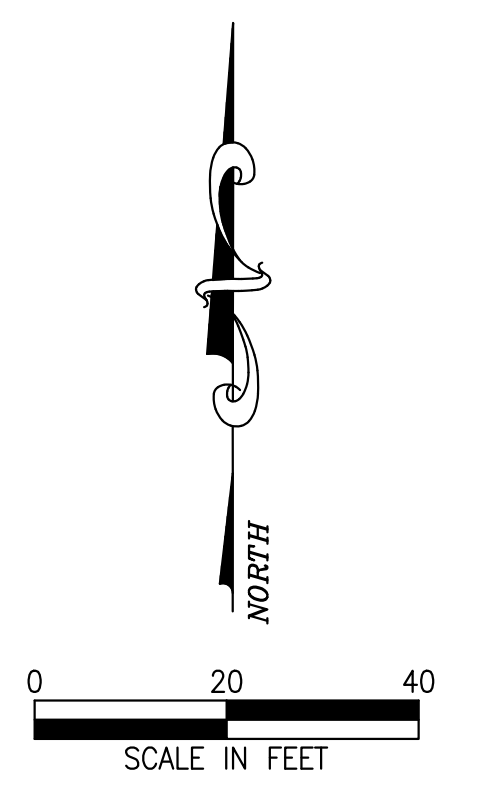
COVER SHEET AND NOTES
1360 SW 257TH AVE
TROUTDALE OR 97060

1
9



KEY NOTES

- ① EXISTING STRUCTURES, FENCES, PAVEMENT SURFACES, AND ALL RELATED APPURTENANCES TO BE REMOVED AND OR ABANDONED PER CITY OF TROUTDALE STANDARDS.
- ② CESSPOOL FOR EXIST HOUSE IS ABANDONED.
- ③ ABANDON EXISTING WATER SERVICE.
- ④ ABANDON EXISTING SANITARY SEWER SERVICE.



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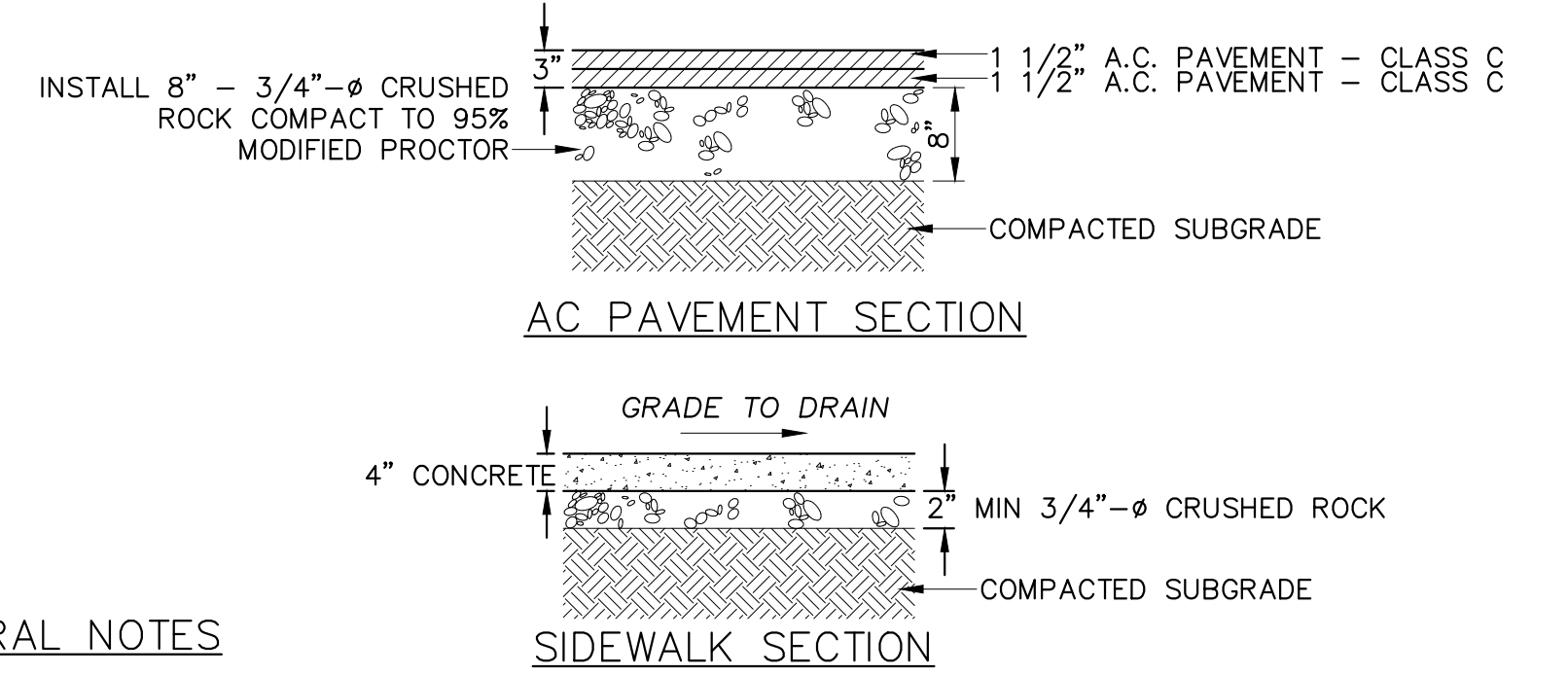
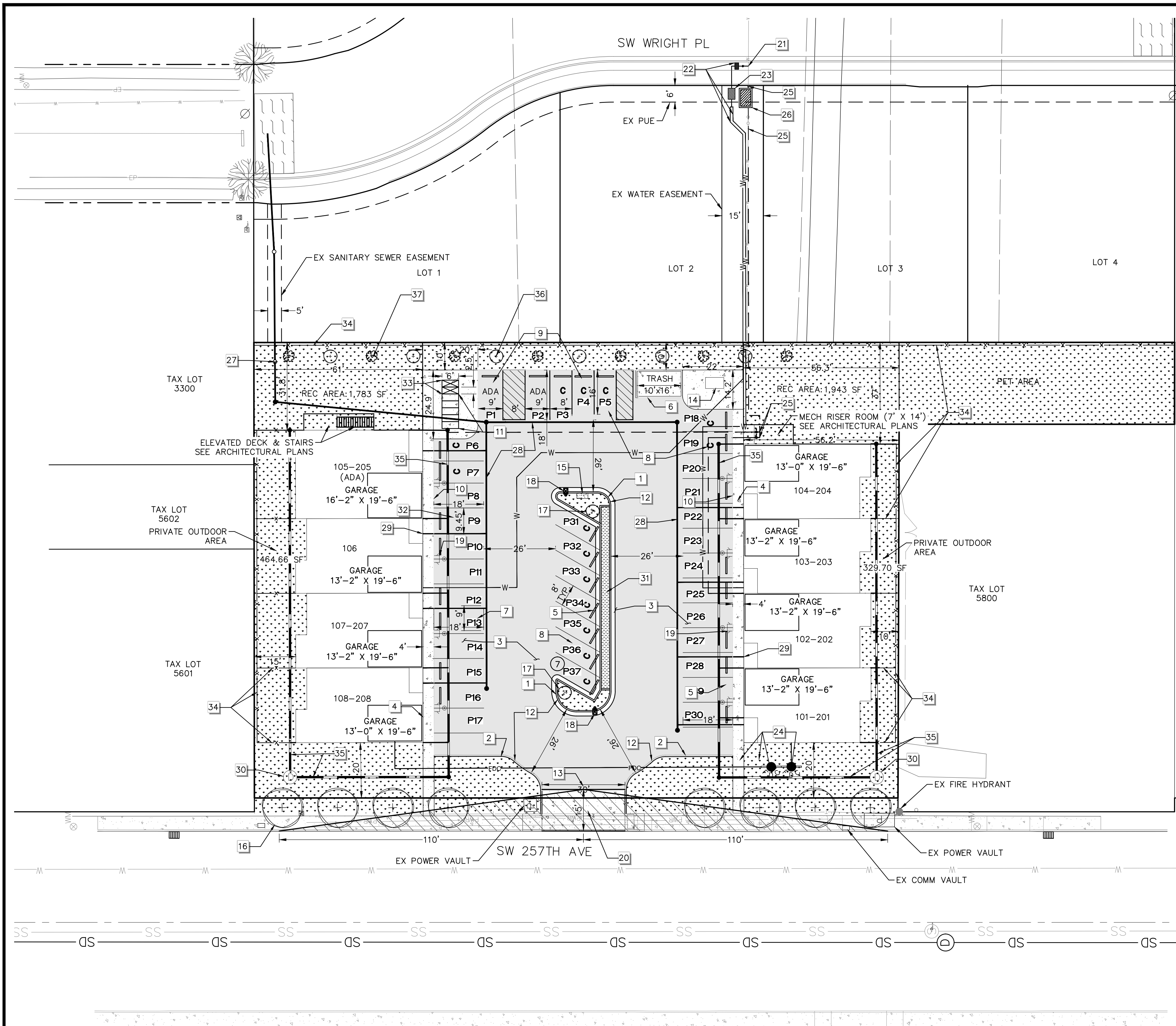
DATE:	NO.	REVISION

DRAWN:	DESIGNED:	CHECKED: KAG
SCALE: AS SHOWN	DATE: APR 22, 2024	
PROJECT NO. E23-011		

FIRWOOD DESIGN GROUP
 Reliable Engineering Solutions
 359 EAST HISTORIC COLUMBIA RIVER HIGHWAY
 TROUTDALE, OREGON 97060
 (503) 668-3737

CHERRY PARK EAST LLC
 4307 SE OXBOW PRWY
 GRESHAM OR, 97080

EXISTING CONDITIONS
 1360 SW 257TH AVE
 TROUTDALE OR 97060



GENERAL NOTES

- BUILDINGS TO BE SPRINKLED.
- KEY NOTES**
- CURB & GUTTER PER DETAIL ON SHEET 7, CURB CUTS TO BE ADDED DURING ENGINEERING.
 - EXTRUDED CURB PER DETAIL ON SHEET 7
 - AC PAVED PARKING AND DRIVE AISLE PER PER SECTION DETAIL THIS SHEET.
 - CONCRETE SIDEWALK PER SECTION DETAIL THIS SHEET.
 - CONCRETE WHEEL STOPS PER DETAIL ON SHEET 7 (TYP)
 - TRASH ENCLOSURE IS SIZED FOR BOTH TRASH AND RECYCLING. IT WILL BE CONSTRUCTED WITH WOOD FENCING AND GATE WITH LATCHING DEVICE TO BE CLOSED AT ALL TIMES. CONCRETE PAD WITH POSITIVE DRAINAGE TO AC PARKING AREA.

- 9' X 18' PARKING STALL (TYP)
- 8' X 16' COMPACT STALL (TYP)
- ADA STALL AND AND ACCESS AISLE
- EDGE OF PAVEMENT FLUSH WITH SIDEWALK ALONG BUILDING FRONTAGE
- BICYCLE PARKING: 5 SPACES
- "NO PARKING FIRE LANE" STRIPING
- 30' WIDE DRIVEWAY PER DETAIL ON SHEET 9
- POTENTIAL POWER VAULT LOCATION
- POTENTIAL COMBINED MAILBOX LOCATION
- STREET TREES-8 TOTAL (TYP)
- ON-SITE TREES-2 TOTAL
- ON-SITE LIGHTS-2 TOTAL
- DOUBLE CONNECTION EV CHARGING STATION AND BOLLARD (TYP).
- CLEAR VISION TRIANGLE
- 2" POTABLE WATER SERVICE CONNECTION
- 1 1/2" POTABLE WATER METER & 2" SERVICE LINES
- POTABLE WATER BACKFLOW PREVENTER
- FDC CONNECTION AND 4" LINE
- FIRE CONNECTION AND 4" FIRE LINE
- FIRE LINE BACKFLOW PREVENTER
- CONNECT TO EX SANITARY LINE
- 6" SANITARY LINE
- 4" SANITARY SEWER LATERAL (TYP)
- STORMWATER DRYWELL
- STORMWATER FACILITY
- NOT USED
- LONG-TERM BICYCLE PARKING: 2 SPACES TO BE CUSTOM BUILT, CEDAR AND PRESSURE TREATED LUMBER, COVERED LOCKING BIKE STORAGE UNITS 6 FEET X 2.5 FEET EACH.

PARKING STATS

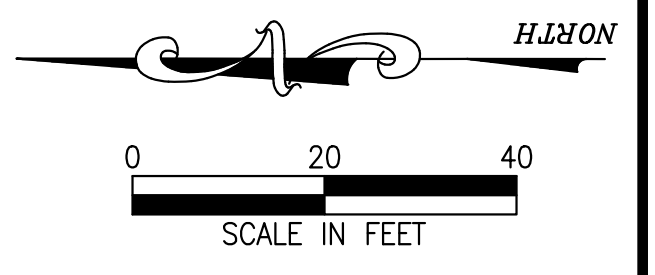
TOTAL PARKING:	21 - STANDARD
#	14 - COMPACT
	8 - GARAGES
	2 - ADA
	45 - TOTAL

LANDSCAPE STATS

PROJECT SITE:	41,336 SF (0.949 AC)
TOTAL LANDSCAPE:	13,013 SF (0.299 AC)
LANDSCAPE COVER:	31.5% (NOT INCLUDING STORM PLANTER)

LANDSCAPE PARKING STATS

LANDSCAPE:	211 SF (NOT INCLUDING STORM PLANTER)
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EXPIRES: 06/30/25
SIGNATURE DATE: -----

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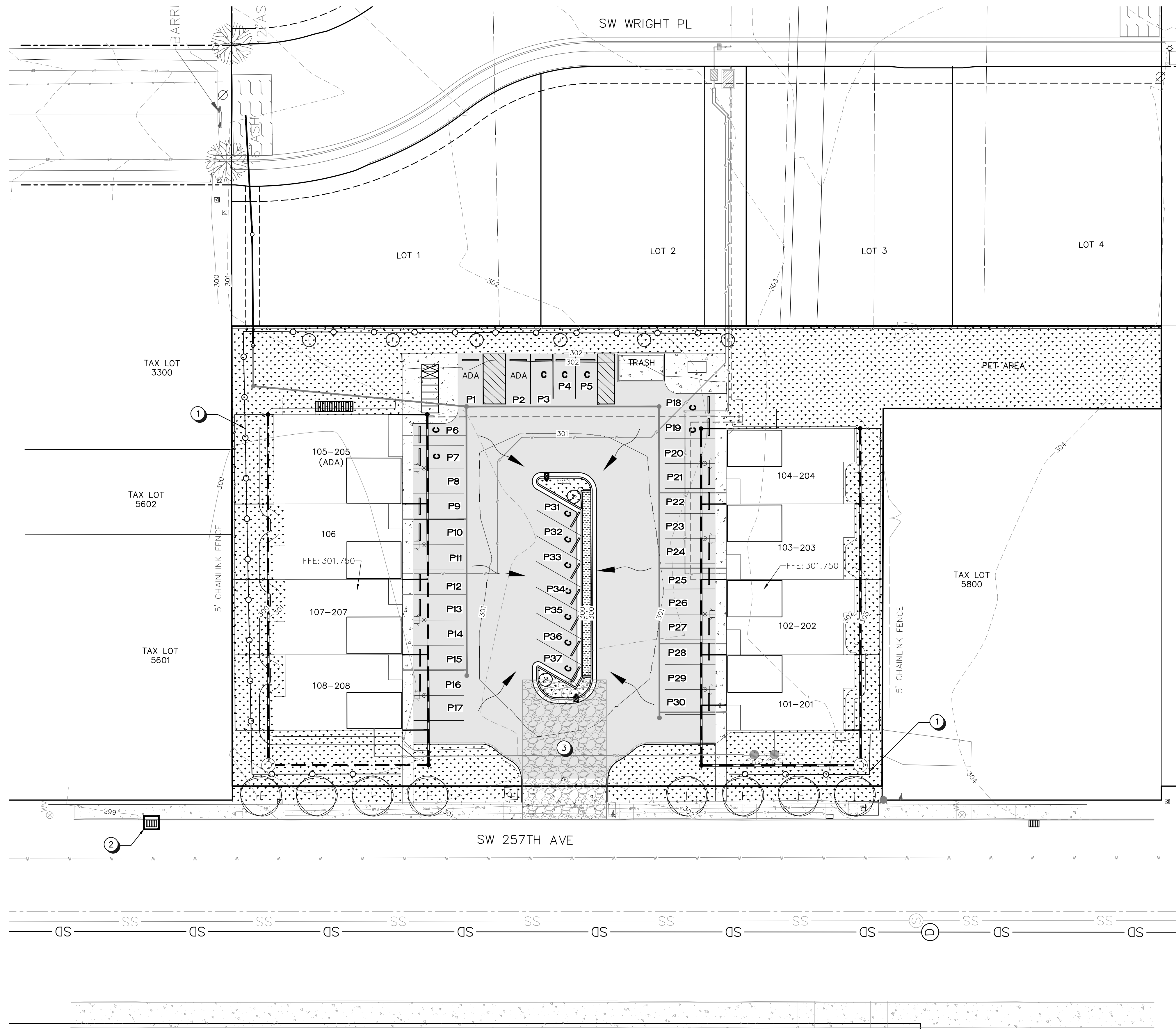
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SCALE: AS SHOWN	DATE: APR 22, 2024	
PROJECT NO. E23-011		

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(503) 668-3737

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4307 SE OXBOW PRWY
GRESHAM OR, 97080

COMPOSITE SITE PLAN
1360 SW 257TH AVE
TROUTDALE OR 97060



KEY NOTES

- ① SILT FENCE PER DETAIL AND NOTES ON SHEET 9 (TYP).
- ② INLET PROTECTION PER DETAIL AND NOTES ON SHEET 9 (TYP)
- ③ INSTALL CONSRUCTION ENTRANCE AT EXIST DRIVEWAY PER DETAIL AND NOTES ON SHEET 9 (TYP).

ESTIMATED SITE DATA

AREA OF DISTURBANCE: 37,900 SF (0.87 ACRES)
 PRELIMINARY FINISH GRADE TO EXISTING GRADE (UNADJUSTED COMPARISON):
 CUT: 570 CY
 FILL: 570 CY
 NET: 0 CY FILL
 ENGINEER'S ESTIMATE IS APPROXIMATE AND PROVIDED FOR REFERENCE ONLY. CONTRACTOR RESPONSIBLE FOR TAKEOFFS USED IN BIDDING AND ACTUAL QUANTITIES OF IMPORTED/EXPORTED MATERIAL AS NEEDED FOR CONSTRUCTION.

LEGEND

- FFE: 100.00 FINISH FLOOR ELEVATION
- 100 — MAJOR CONTOUR
- 101 — MINOR CONTOUR
- 100 — MAJOR CONTOUR (EXISTING)
- 101 — MINOR CONTOUR (EXISTING)

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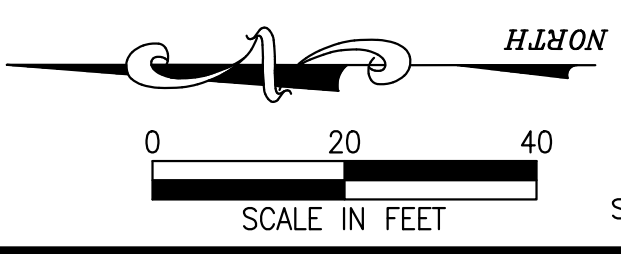
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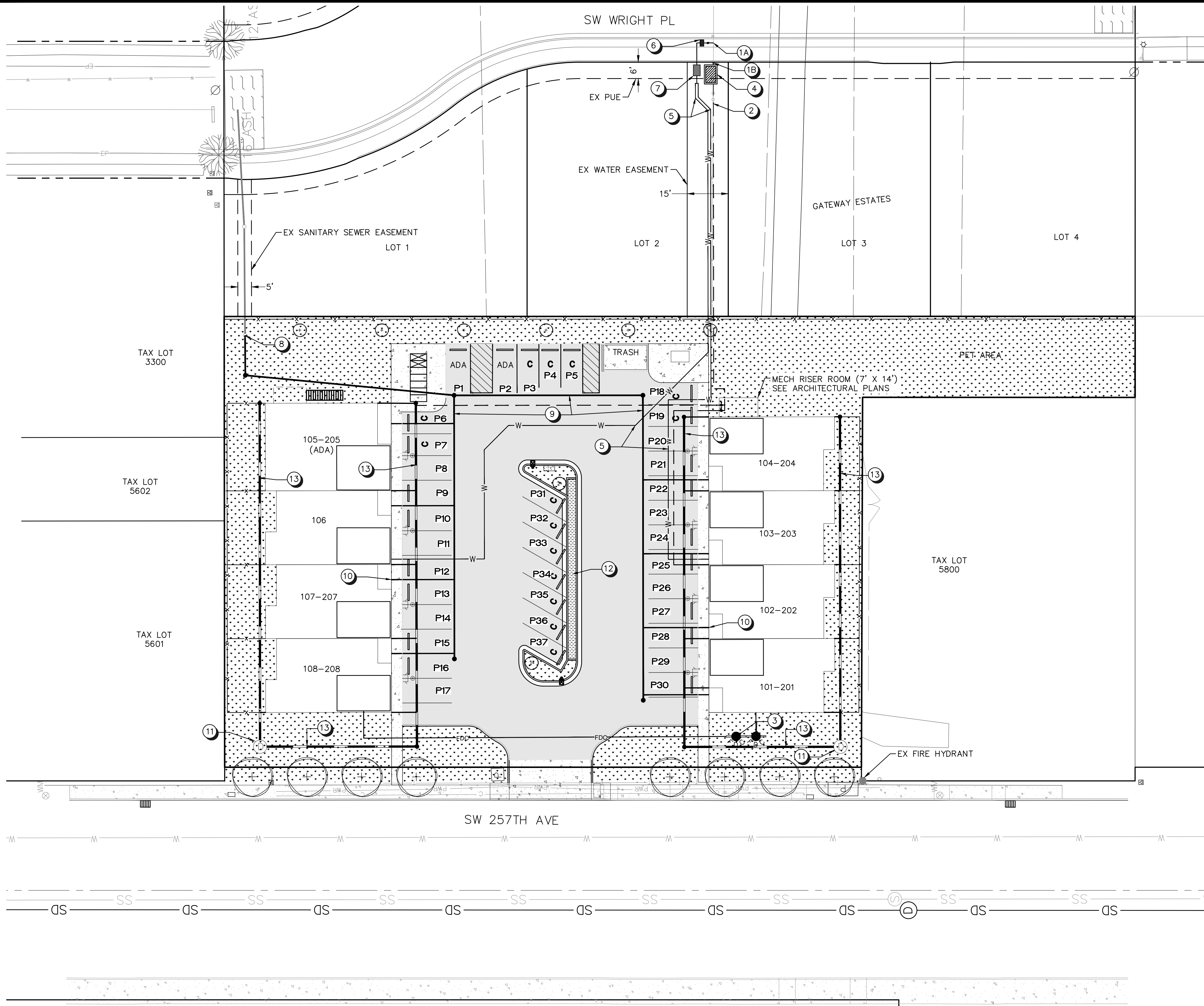
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SCALE: AS SHOWN	DATE: APR 22, 2024	
PROJECT NO. E23-011		

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CHERRY PARK EAST LLC
 4307 SE OXBOW PRWY
 GRESHAM OR, 97080

GRADING AND EROSION CONTROL PLAN
 1360 SW 257TH AVE
 TROUTDALE OR 97060



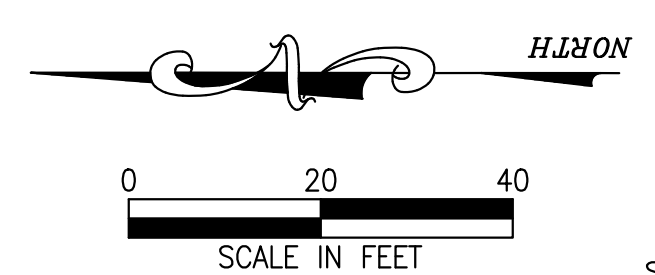


GENERAL NOTES

- 1. BUILDINGS TO BE SPRINKLED.

KEY NOTES

- 1A) REMOVE EX BLOWOFF AND CONNECT 2" POTABLE WATER TO EX 8" DI LINE
- 1B) CONNECT 4" FIRE LINE TO EXIST 8" DI LINE
- 2) 4" FIRE LINE
- 3) FDC AND 4" FDC LINE
- 4) FIRE LINE BACKFLOW PREVENTER AND VAULT
- 5) 2" POTABLE WATERLINE
- 6) 1 1/2" WATER METER
- 7) POTABLE WATER BACKFLOW PREVENTER
- 8) CONNECT TO EX 6" SANITARY SEWER LINE
- 9) NEW 6" SANITARY SEWER LINE
- 10) NEW 4" SANITARY SEWER LATERAL PER DETAIL ON SHEET 8 (TYP)
- 11) DRYWELL FOR ROOF DRAINS ONLY
- 12) STORMWATER FACILITY
- 13) 8" STORMWATER ROOF CONVEYANCE



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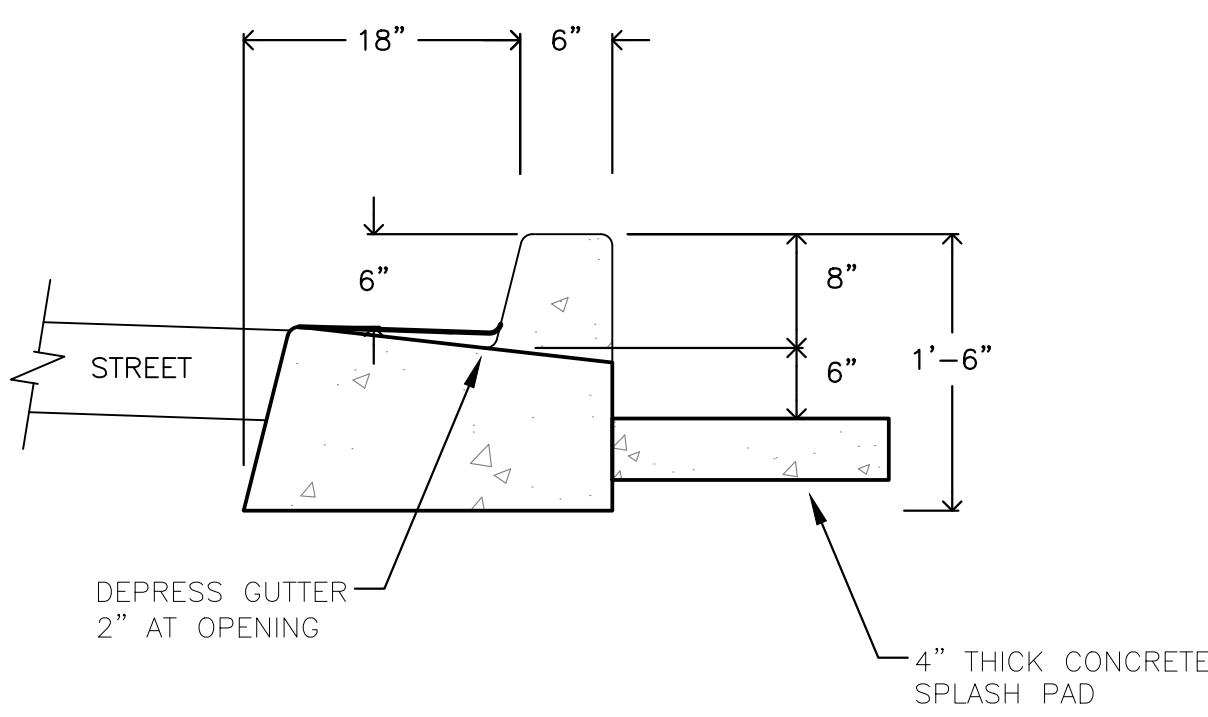
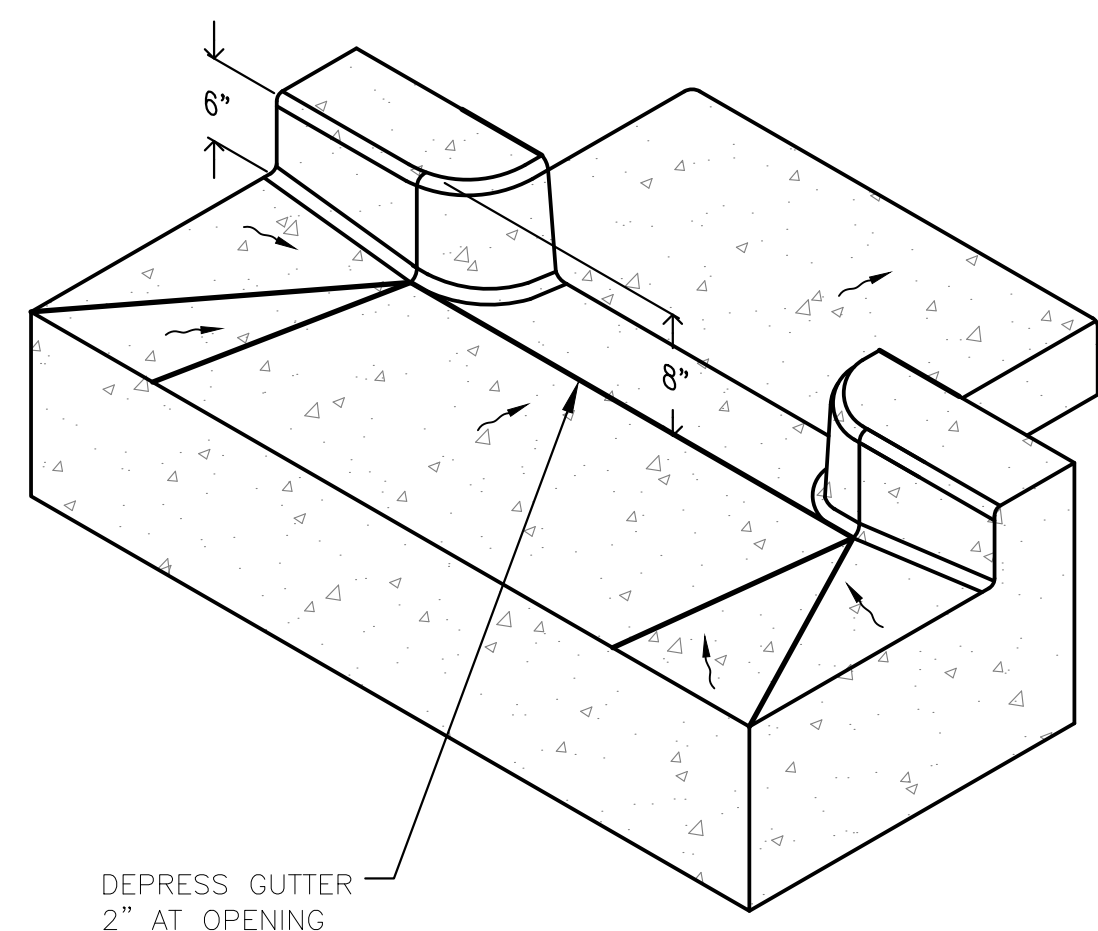
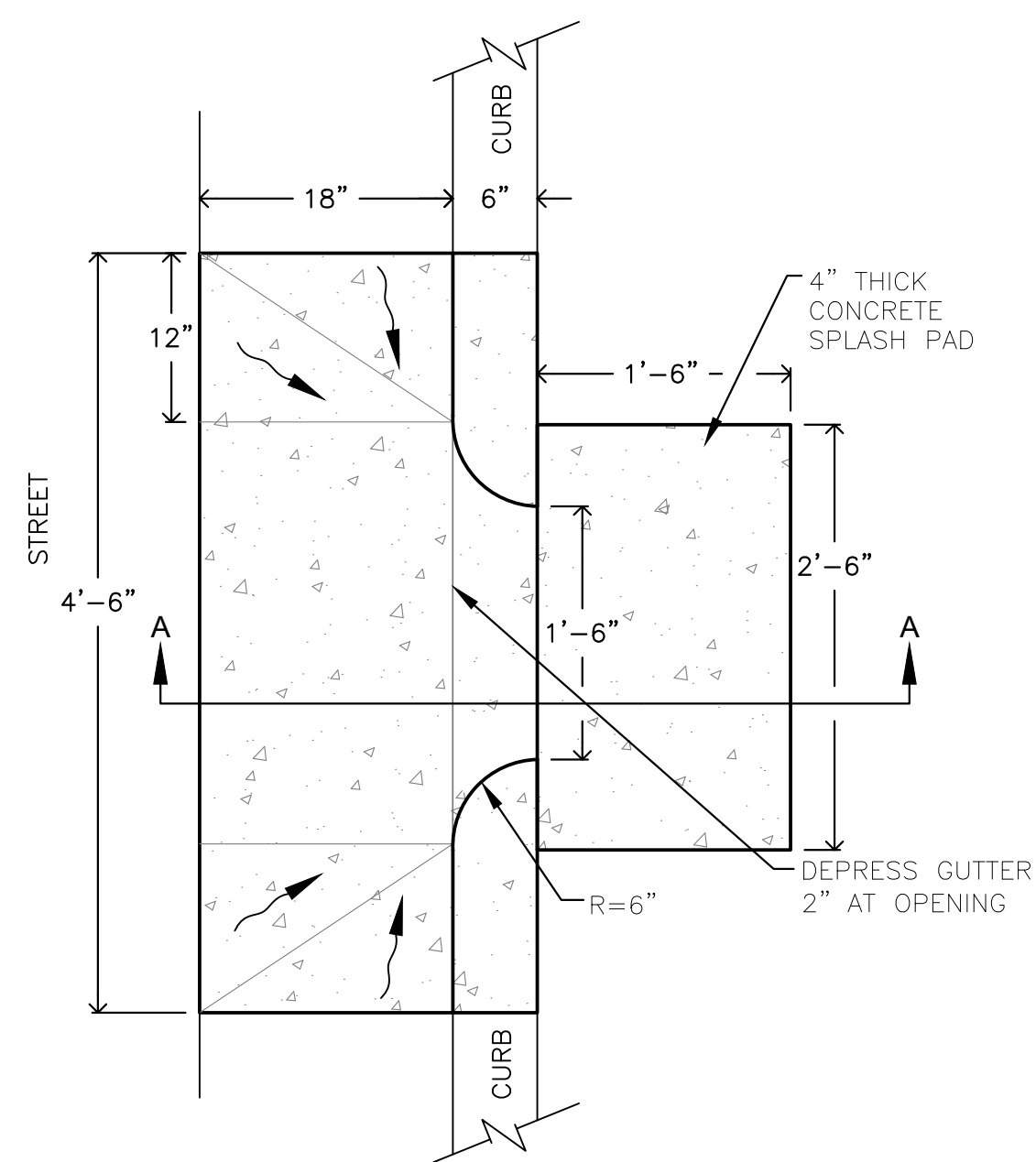
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SCALE: AS SHOWN	DATE: APR 22, 2024	
PROJECT NO. E23-011		

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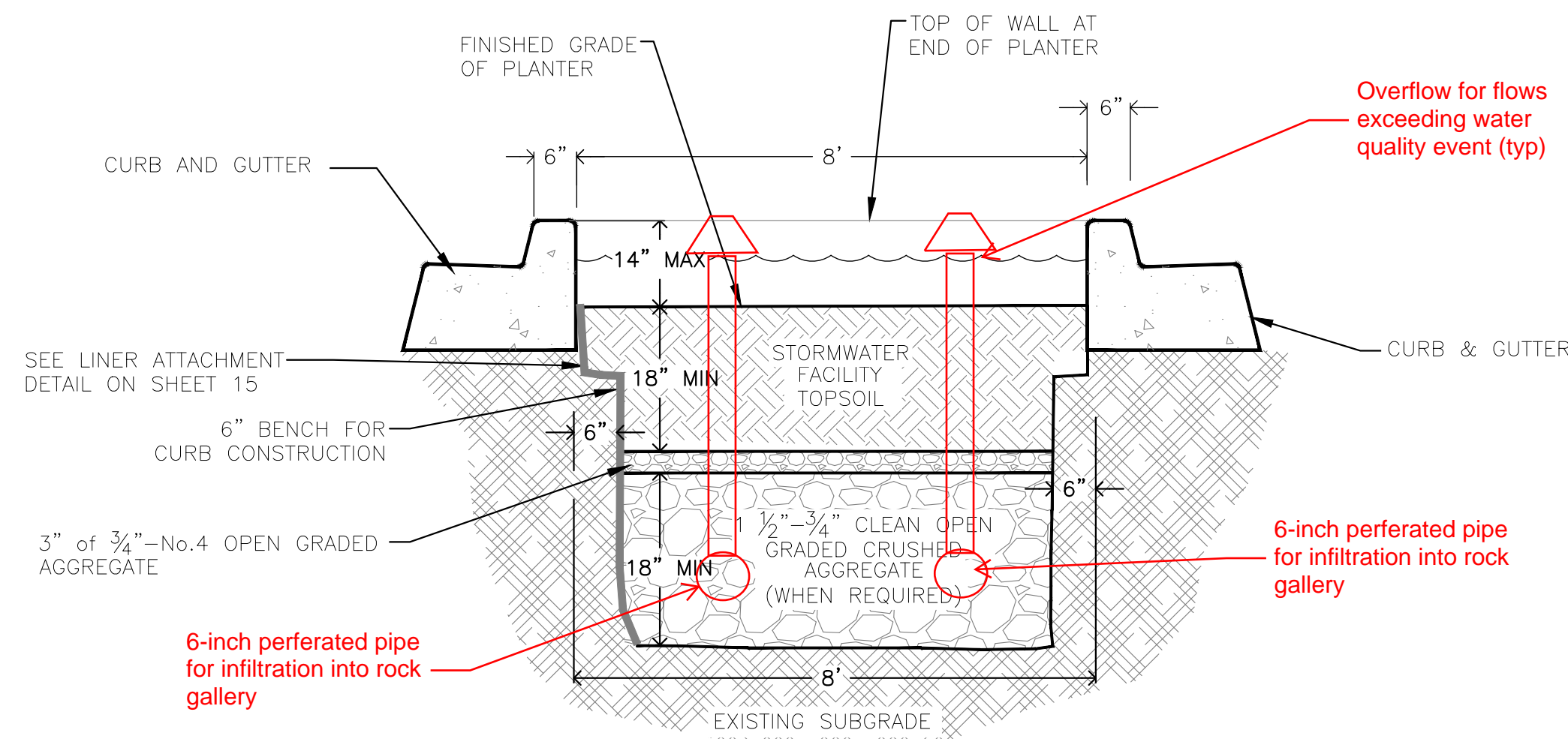
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UTILITY PLAN
 1360 SW 257TH AVE
 TROUTDALE OR 97060

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 9



CURB CUT DETAIL
SCALE: NTS



PLANTER DETAIL
SCALE: NTS

SOIL NOTES:

SEE CITY OF PORTLAND STANDARD CONSTRUCTION SPECIFICATIONS SECTION 01040.14 (D) – STORMWATER FACILITY TOPSOIL.

THE SOIL MIX SHALL CONSIST OF 67% SANDY LOAM TOPSOIL AND 33% COMPOST MATERIAL BY VOLUME. TOPSOIL SHALL BE A SANDY LOAM AS DEFINED BY THE UDSA SOIL TEXTURE CLASSIFICATION. SOIL CLASSIFICATION AND OTHER SPECIFICATIONS MUST BE EVALUATED AND REPORTED BY AN ACCREDITED SOILS TESTING LABORATORY AND APPROVED BY THE ENGINEER PRIOR TO DELIVERY OF TOPSOIL TO PROJECT SITE.

INSTALL TOPSOIL IN A MANNER THAT ENSURES ADEQUATE INFILTRATION. PLACE IN TWO EQUAL LIFTS. (IF NO DRAIN ROCK IS SPECIFIED ROTOTILL THE FIRST LIFT INTO NATIVE SOIL.) LIFTS SHOULD NOT BE COMPACTED, BUT RATHER PLACED IN A MANNER TO REDUCE EXCESSIVE EROSION OR SETTLEMENT. LIFTS MAY BE LIGHTLY WATERED TO ENCOURAGE NATURAL COMPACTION OR, IF NECESSARY, ROLLED WITH A WATER-FILLED LANDSCAPE ROLLER. SLIGHTLY OVERFILL THE FACILITY ABOVE PROPOSED FINISHED GRADE TO ACCOMMODATE NATURAL SETTLEMENT.

3/4"-1/4" WASHED CRUSHED ROCK IS SPECIFIED TO SEPARATE TOPSOIL FROM DRAIN ROCK



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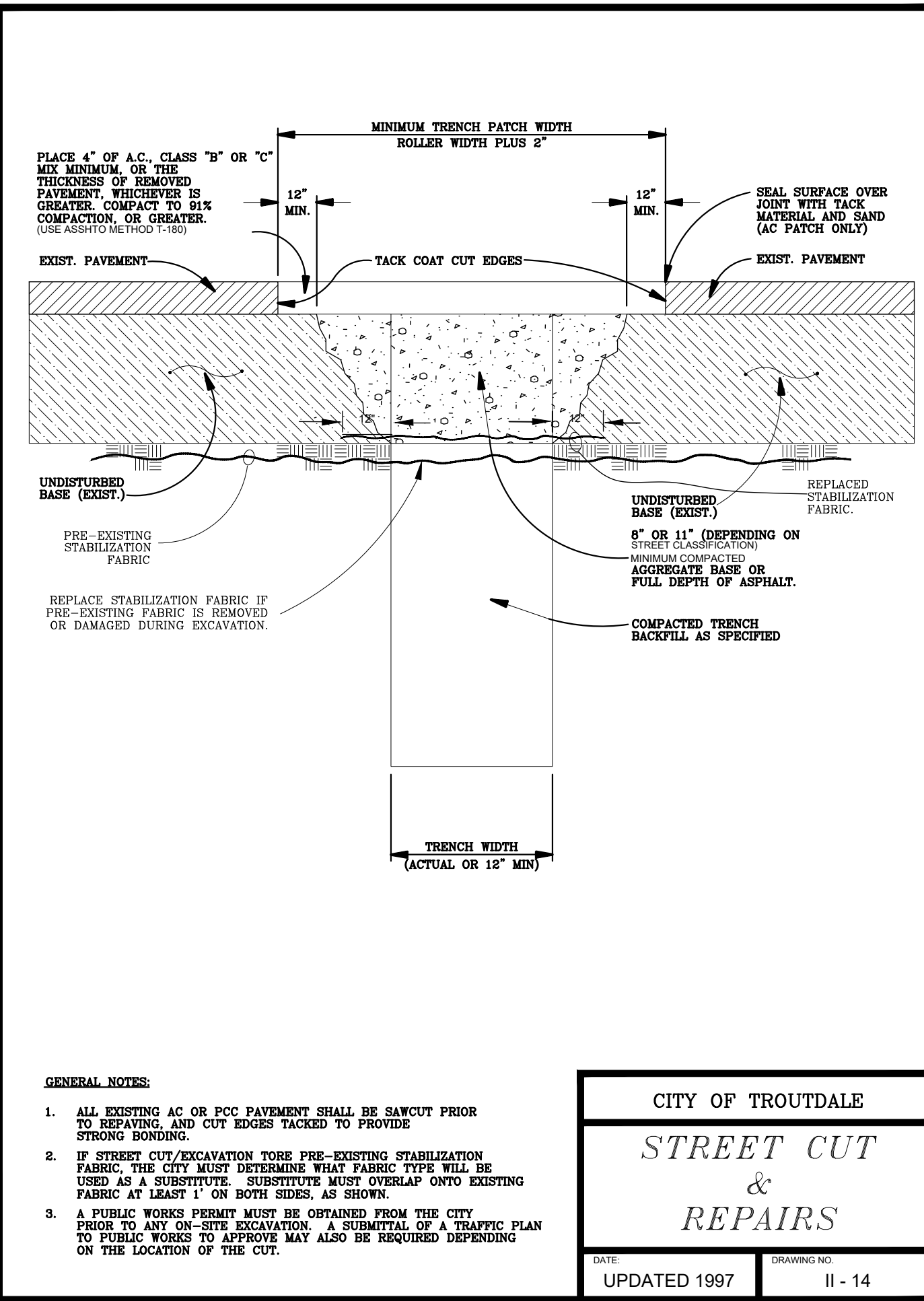
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TROUTDALE, OREGON 97060
(503) 668-3737

CHERRY PARK EAST LLC
4307 SE OXBOW PRWY
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PLANTER DETAILS
1360 SW 257TH AVE
TROUTDALE OR 97060

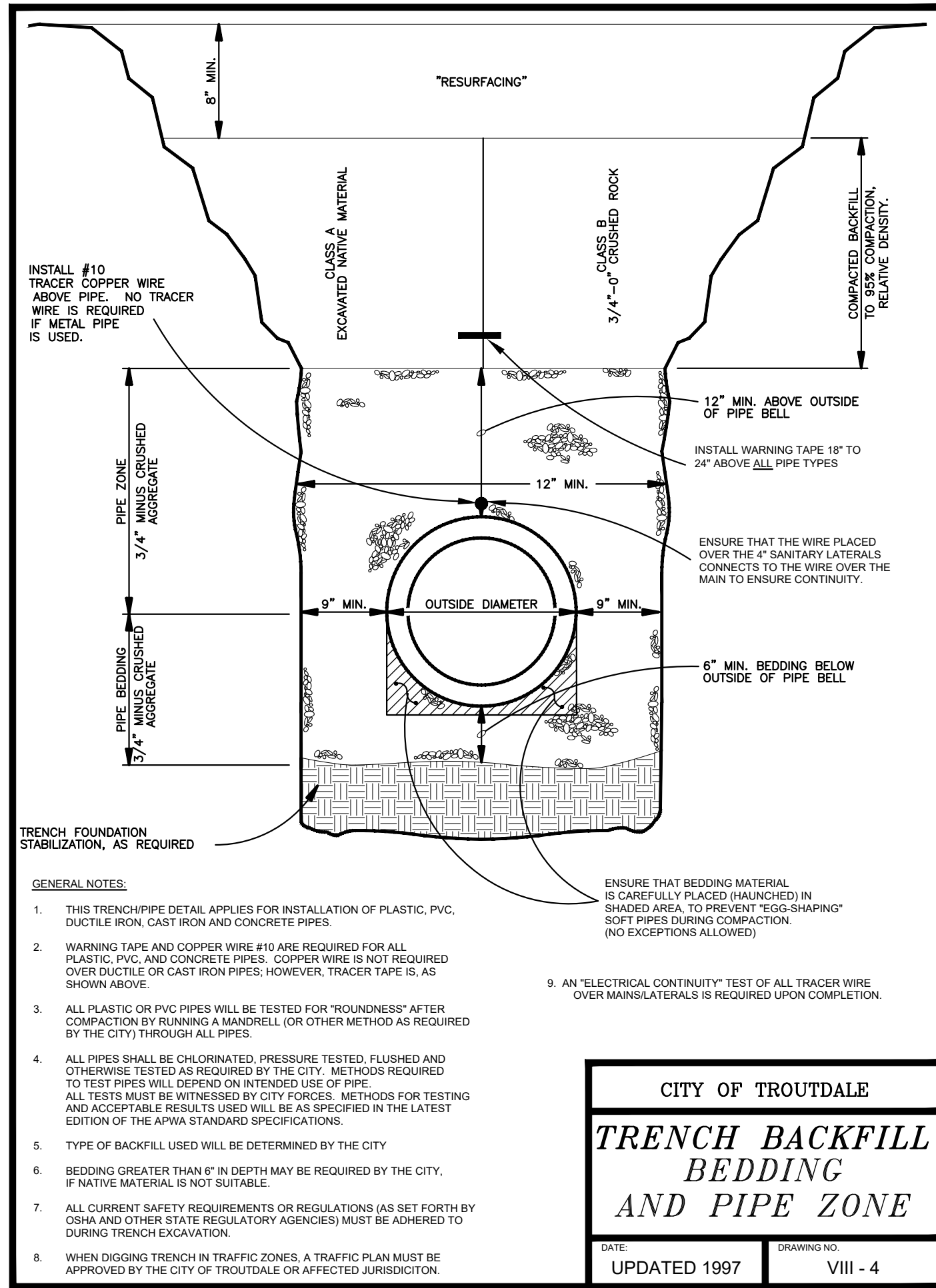


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CITY OF TROUTDALE

STREET CUT & REPAIRS

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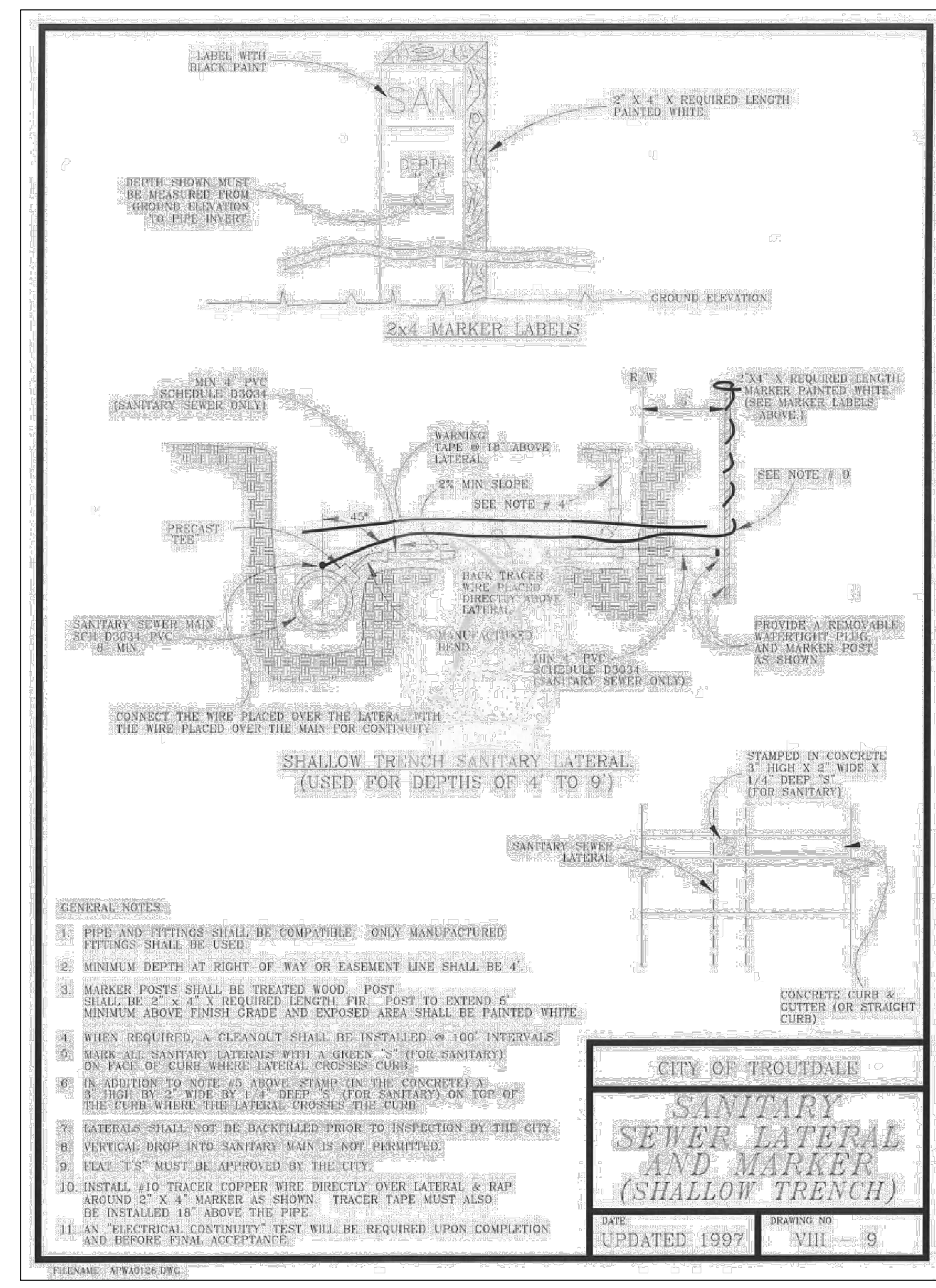


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CITY OF TROUTDALE

TRENCH BACKFILL BEDDING AND PIPE ZONE

DATE: UPDATED 1997 DRAWING NO: VIII - 4

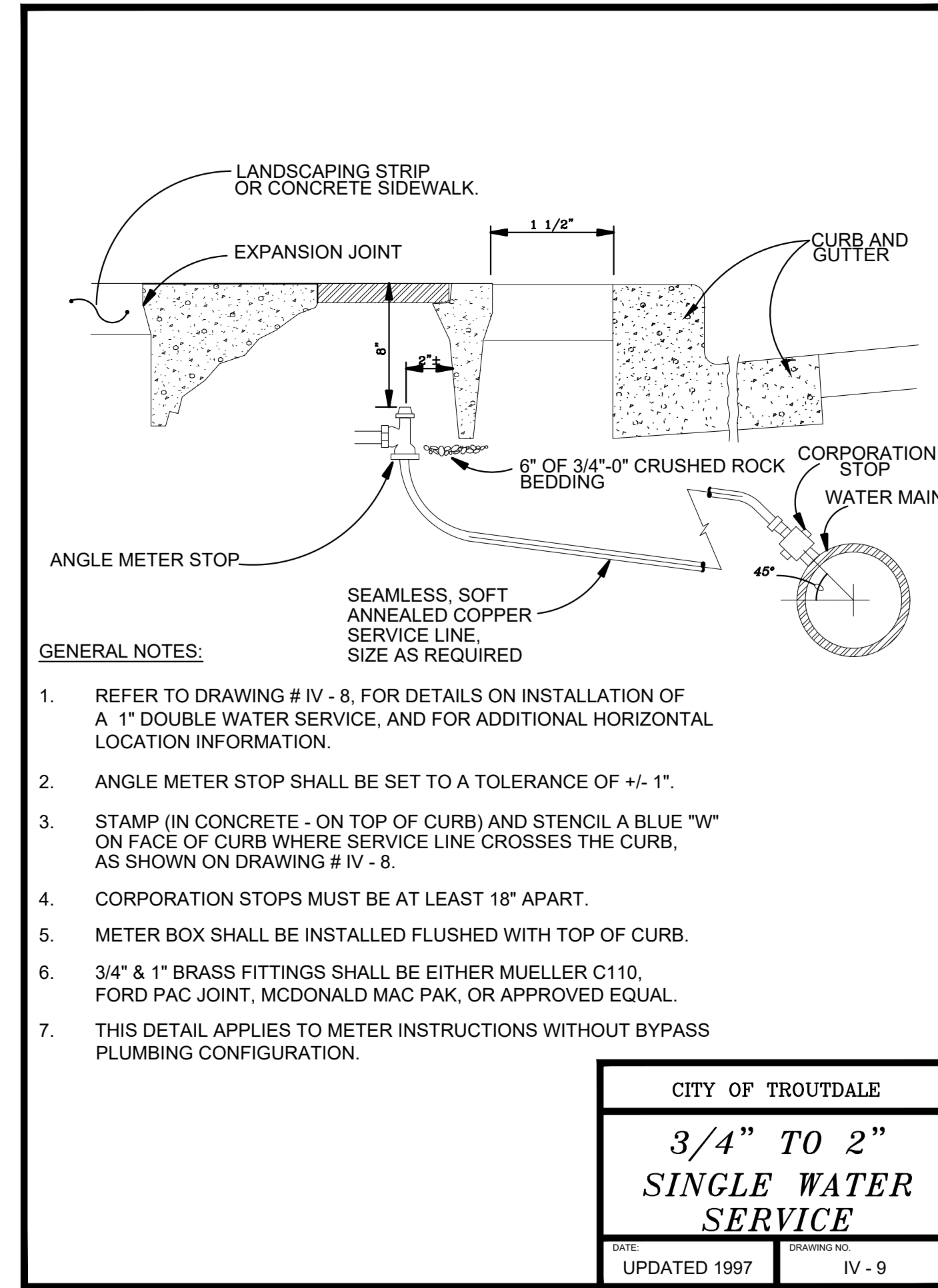


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CITY OF TROUTDALE

SANITARY SEWER LATERAL AND MARKER (SHALLOW TRENCH)

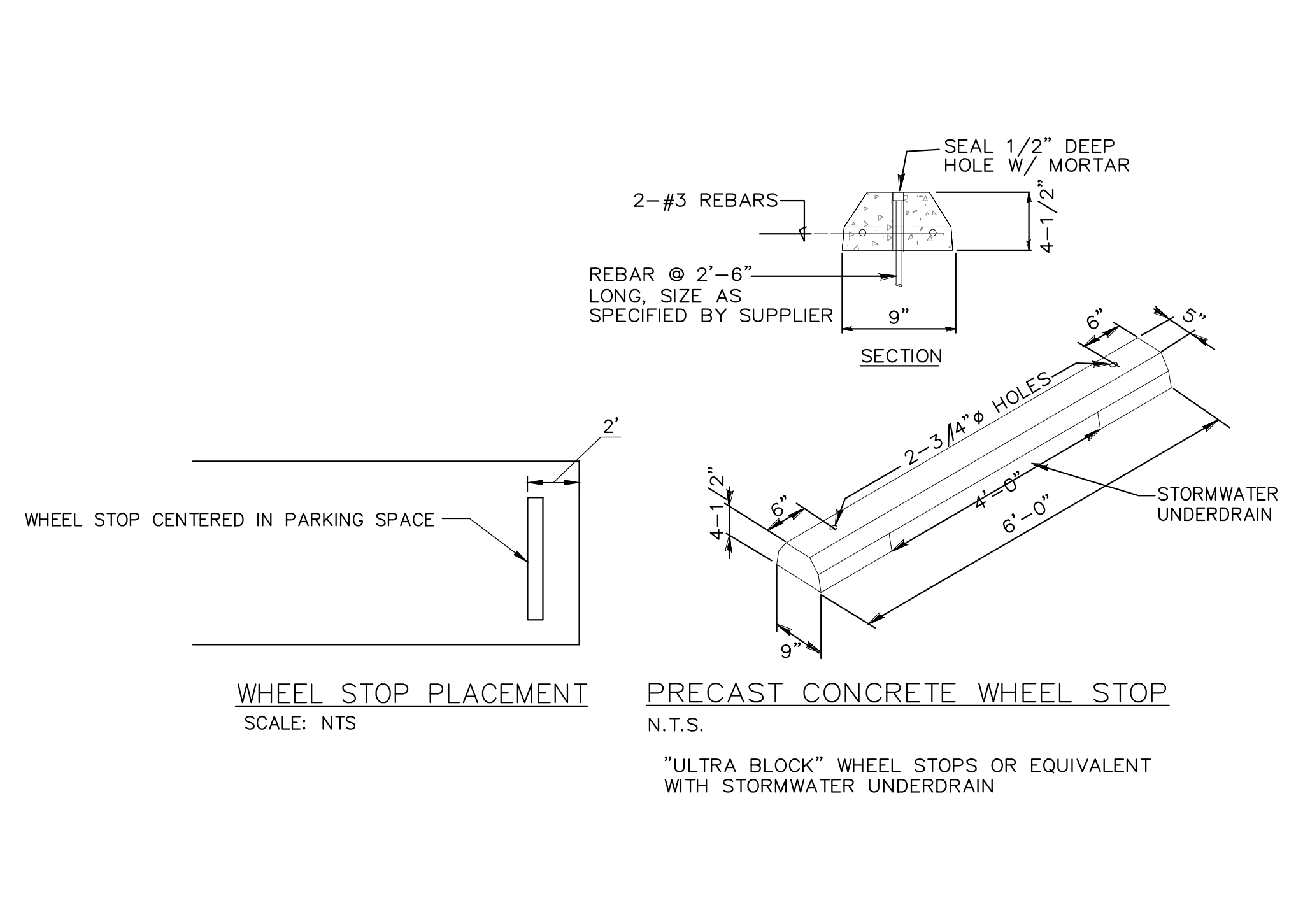
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CITY OF TROUTDALE

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PROJECT NO. E23-011		

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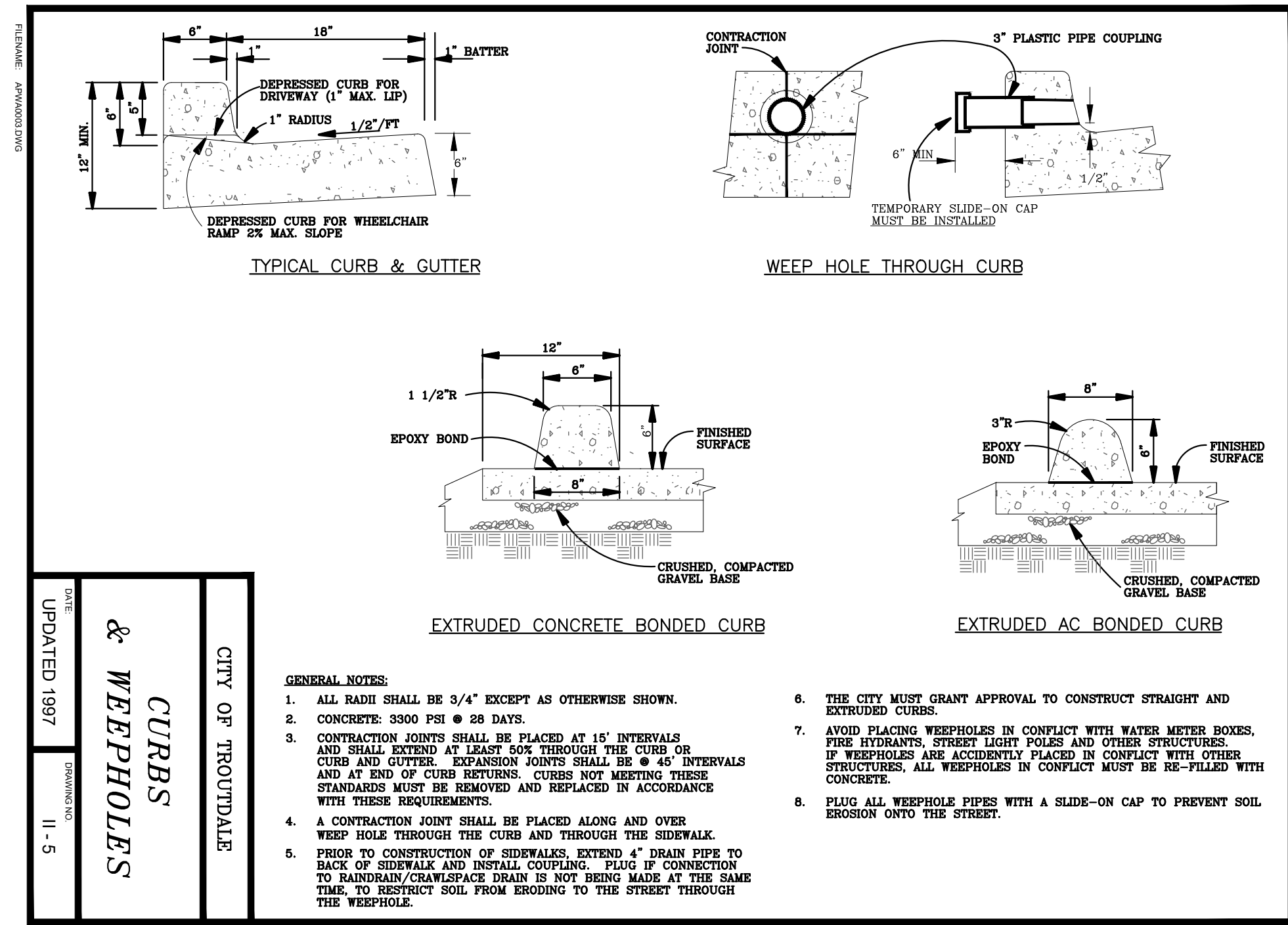
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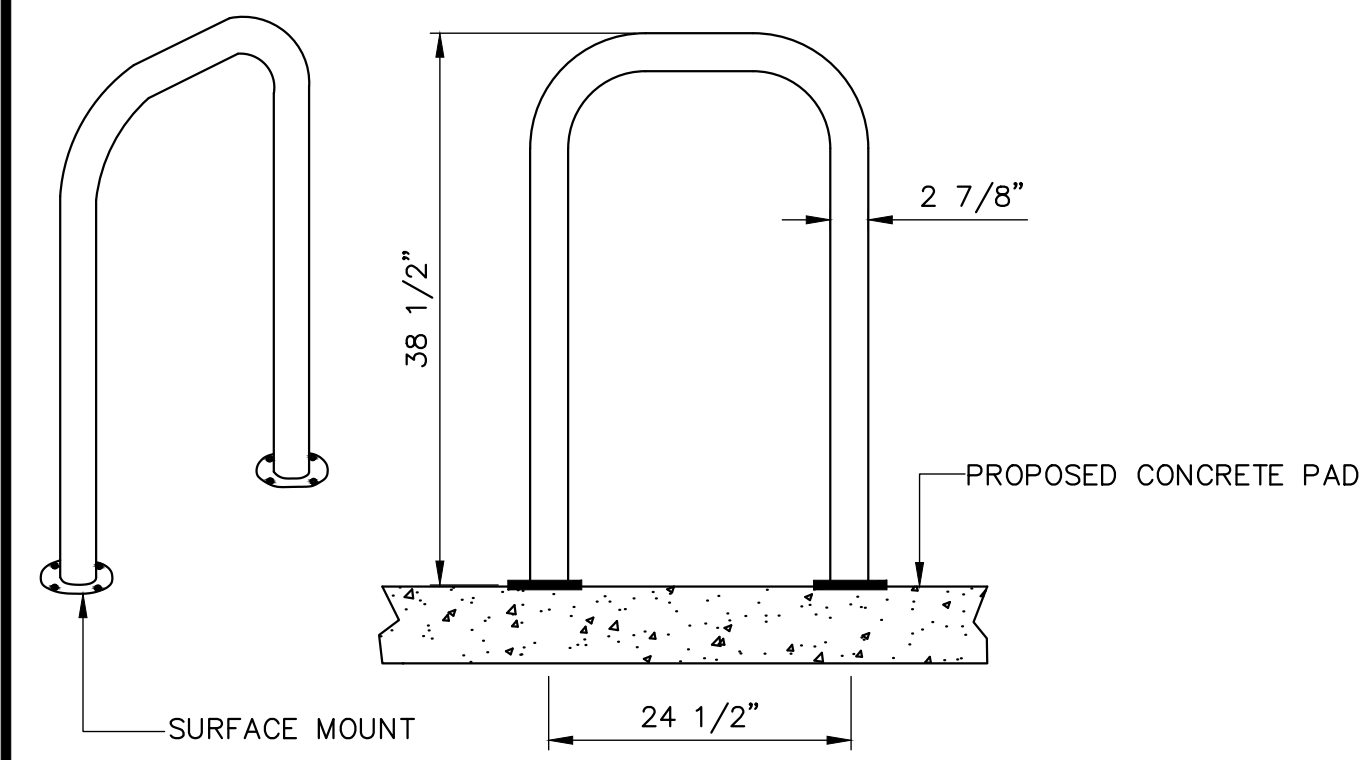
CITY OF TROUTDALE

CURBS & WEPPHOLES

DATE: UPDATED 1997 DRAWING NO: II - 5



- NOTES:**
- 24 1/2" CENTER TO CENTER OVERALL WIDTH WITH A TOTAL HEIGHT OF 38 1/2"
 - MADE OF 2 7/8" 12 GAUGE GALVANIZED STEEL TUBING.
 - COATED WITH THERMO PLASTIC COATING TO PREVENT RUST AND SCRATCHES
 - COLOR TO BE BLACK
 - INSTALL PER MANUFACTURERS INSTRUCTIONS



SURFACE MOUNT "LOOP" BIKE RACK

N.T.S.

"HIGHLAND PRODUCTS GROUP LLC" OR EQUIVALENT

REGISTERED PROFESSIONAL ENGINEER

67149PE
PRELIMINARY
OREGON
JUN 14, 2009
WELLI A. GROVER

EXPIRES: 06/30/25
SIGNATURE DATE: -----

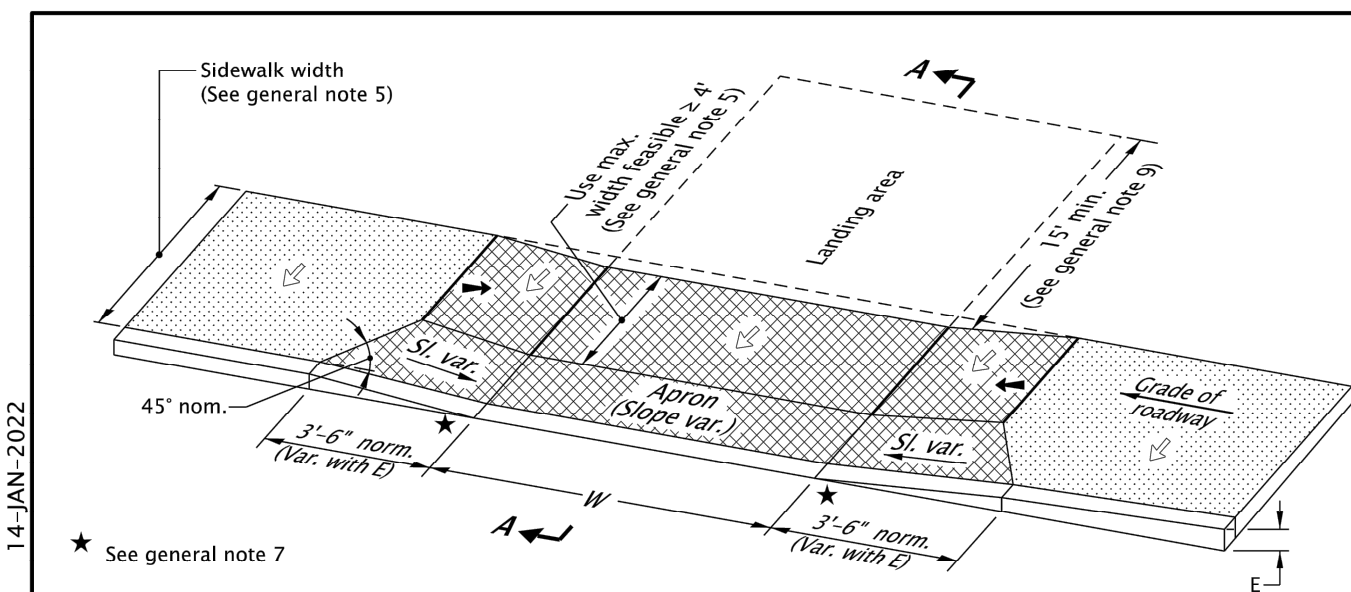
CHERRY PARK EAST LLC

4307 SE OXBOW PRWY
GRESHAM OR, 97080

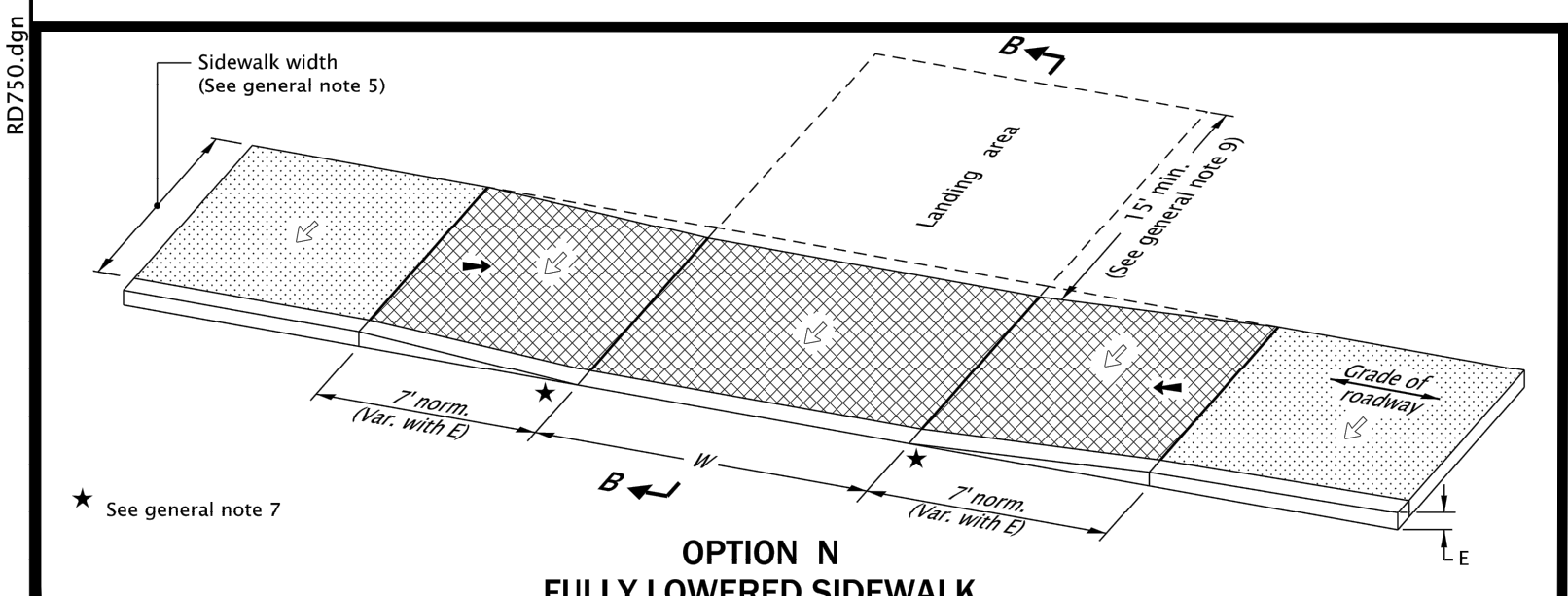
DETAILS

1360 SW 257TH AVE
TROUTDALE OR 97060

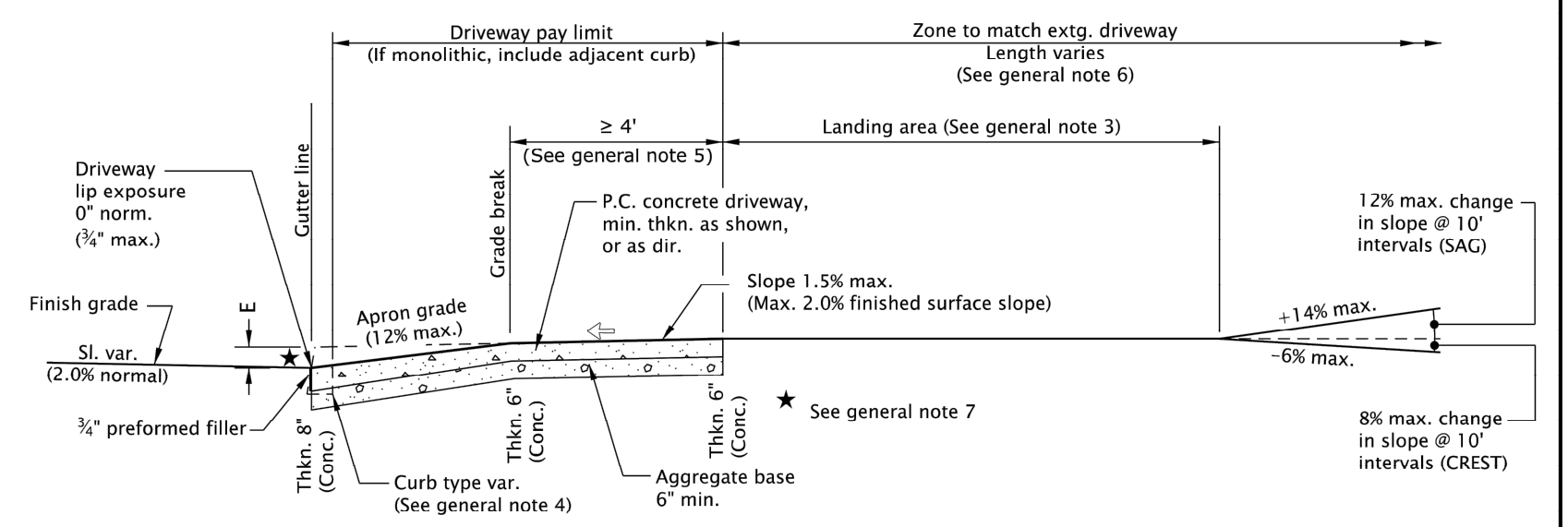
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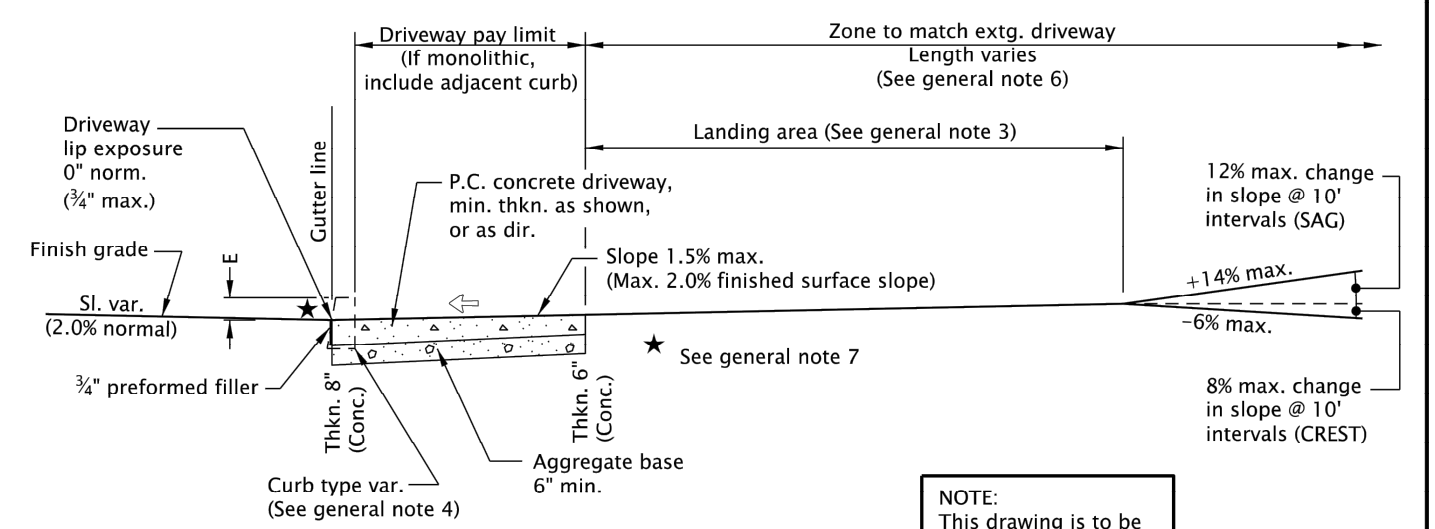
**OPTION M
PARTIALLY LOWERED SIDEWALK**



**OPTION N
FULLY LOWERED SIDEWALK**



SECTION A-A



SECTION B-B

NOTE:
This drawing is to be used by local agencies to assist them in the design of driveways on their facilities.

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Details are based on applicable ODOT Standards.
- Only use details allowed by jurisdiction.
- The following dimensions are as shown on plans, or as directed: driveway width, driveway slope, sidewalk width, curb exposure, driveway lip exposure, landing area length and width. See project plans for details not shown.
- Curb, gutter, and sidewalk types varies, see plans. See Std. Dwg. RD700 & RD701 for curb details. See Std. Dwg. RD720 for sidewalk details. See Std. Dwg. RD722 for joint details.
- A greater than or equal 4' unobstructed clear passage with cross slope 1.5% max. (Max. 2.0% finished surface slope) is required behind driveway apron.
- Where existing driveway is in good condition, and meets slope requirements, construct only as much landing area as required for satisfactory connection with new work.
- Check the gutter flow depth at driveway locations to assure that the design flood does not overtop the back of sidewalk at driveway. If overtopping occurs place an inlet at upstream side of driveway or perform other approved design mitigation.
- Construct a full depth expansion joints with 1#2 (ln) preformed joint filler at ends of each driveway. Tooled joints are required at all driveway slope break lines.
- 15' min. of the driveway behind the sidewalk should be surfaced to prevent tracking of gravel onto the sidewalk.
- Monolithic curb & sidewalk shall retain thickened edge through lowered profile, to accommodate driveway use. See Std. Dwg. RD720 for details.
- Any dimensions except those of general note 5 may be amended by local agencies for their use.

LEGEND:

	Sidewalk
	Driveway pay limit (if monolithic, include adjacent curb) (See project plans for details not shown)
	Cross slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
	Running slope 7.5% max. (Max. 8.3% finished surface slope)
W	Width of driveway
E	Curb exposure

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
CURB LINE SIDEWALK DRIVEWAYS OR ALLEYS (OPTIONS M & N) LOCAL JURISDICTIONS	
DATE	REVISION DESCRIPTION
CALC. BOOK NO.	SOR DATE
N/A	20JUL2020
RD750	

Effective Date: December 1, 2023 – May 31, 2024

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PROJECT NO. E23-011		



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TROUTDALE, OREGON 97060
(503) 668-3737

CHERRY PARK EAST LLC
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DETAILS
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TROUTDALE OR 97060

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EXPIRES: 06/30/25
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EROSION AND SEDIMENT CONTROL NOTES

GENERAL :

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF TROUTDALE'S EROSION AND SEDIMENT CONTROL STANDARDS, ORDINANCES & REFERENCED DOCUMENTS.

2. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.

3. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENT FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR EXPECTED STORM EVENTS AND TO ENSURE THE SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.

4. NO VISIBLE AND MEASURABLE SEDIMENT OR POLLUTANT SHALL EXIT THE SITE, ENTER THE PUBLIC RIGHT-OF-WAY, OR BE DEPOSITED INTO ANY WATER BODY OR STORM DRAINAGE SYSTEM.

5. ANY SOIL THAT ENTERS THE PUBLIC RIGHT-OF-WAY SHALL BE REMOVED WITHIN 24 HOURS.

6. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED TO MEET DEQ AND CITY OF CITY OF TROUTDALE'S STANDARDS AS NECESSARY TO PREVENT SEDIMENT DISCHARGE FROM THE SITE.

7. ESC FACILITIES SHALL BE INSPECTED EVERY 24 HOURS DURING STORM OR RAIN EVENTS TO ENSURE THE MEASURES ARE FUNCTIONING PROPERLY.

8. PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DENUDED DEVELOPMENT SITES IN CONFORMANCE WITH THE FOLLOWING SCHEDULE:

- a. BETWEEN OCTOBER 1 AND APRIL 30, ALL DENUDED SITES SHALL IMMEDIATELY BE PROVIDED WITH EITHER TEMPORARY OR PERMANENT SOIL STABILIZATION.
- b. BETWEEN MAY 1 AND SEPTEMBER 30, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES TO REDUCE DUST AND SEDIMENT TRANSPORT SHALL BE APPLIED AS SOON AS PRACTICABLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER GROUND DISTURBING ACTIVITY OCCURS.
- c. GROUND COVER SHALL BE INSTALLED ON ANY PORTION OF A SITE THAT IS DENUDED FOR MORE THAN 6 MONTHS.
- d. TEMPORARY MEASURES SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE ESTABLISHED.
- e. STOCKPILES SHALL BE SECURED OR PROTECTED THROUGHOUT THE PROJECT WITH TEMPORARY OR PERMANENT SOIL STABILIZATION MEASURES.
- f. EROSION CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION AND FOR 1 YEAR AFTER DEVELOPMENT IS COMPLETED (MAY BE REDUCED BY THE BUILDING OFFICIAL UPON FINDING THAT SOILS ARE COMPLETELY STABILIZED).

9. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE EVERY TWO WEEKS, OR WITHIN 24 HOURS FOLLOWING A STORM EVENT. DAILY INSPECTIONS SHALL BE PERFORMED DURING PROLONGED RAINFALL. LOG OF INSPECTIONS TO BE KEPT AVAILABLE AT THE SITE.

RESEEDING/ESTABLISHMENT OF VEGETATIVE COVER :

1. RECOMMENDED EROSION CONTROL GRASS SEED MIXES ARE AS SPECIFIED AS BELOW. SIMILAR MIXES DESIGNED TO ACHIEVE EROSION CONTROL MAY BE SUBSTITUTED WITH APPROVAL.

IN GENERAL, USE OF QUICK GROWING, STERILE GRASSES AND GRAINS IN MIXTURE WITH PERMANENT VEGETATIVE COVER IS RECOMMENDED TO ACHIEVE QUICK COVER OF EXPOSED SOILS.

a. DWARF GRASS MIX (LOW HEIGHT, LOW MAINTENANCE), 100 POUNDS PER ACRE SEED RATE

- (MINIMUM):
- 1. DWARF PERENNIAL RYEGRASS, 80% BY SEED COUNT.
- 2. CREEPING RED FESCUE, 20% BY SEED COUNT.

b. STANDARD HEIGHT GRASS MIX, 100 POUNDS PER ACRE SEED RATE, MINIMUM.

- 1. ANNUAL RYEGRASS, 40% BY SEED COUNT.
- 2. TURF-TYPE FESCUE, 60% BY SEED COUNT.

2. IT IS RECOMMENDED THAT TOP SOIL ON SLOPES BE PREPARED BY ROUGHENING THE SLOPES BEFORE SEEDING.

3. AREAS THAT FAIL TO ESTABLISH GRASS COVER ADEQUATE TO PREVENT EROSION SHALL BE RESEEDING AS SOON AS SUCH AREAS ARE IDENTIFIED, AND ALL APPROPRIATE MEASURES TAKEN TO ESTABLISH COVER.

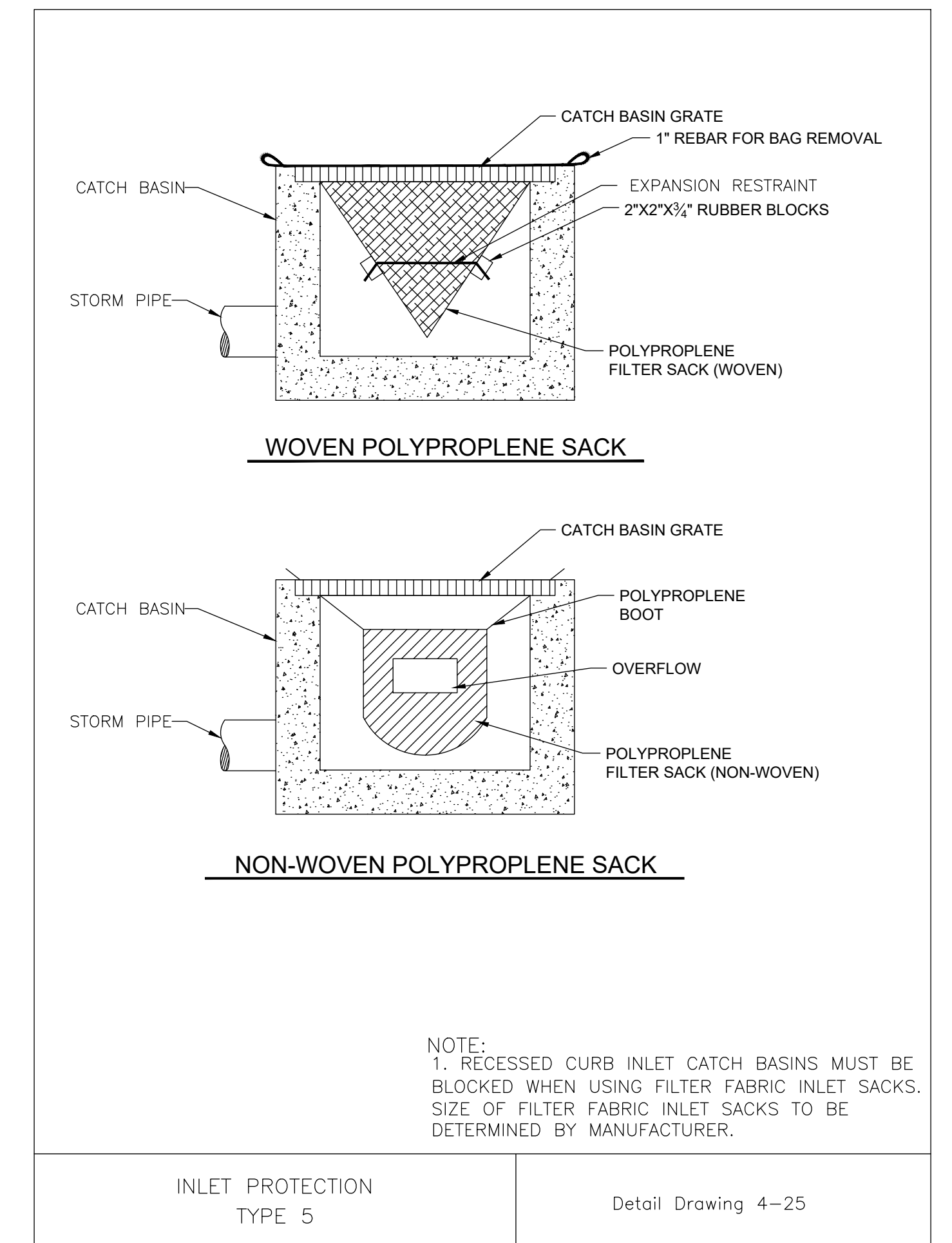
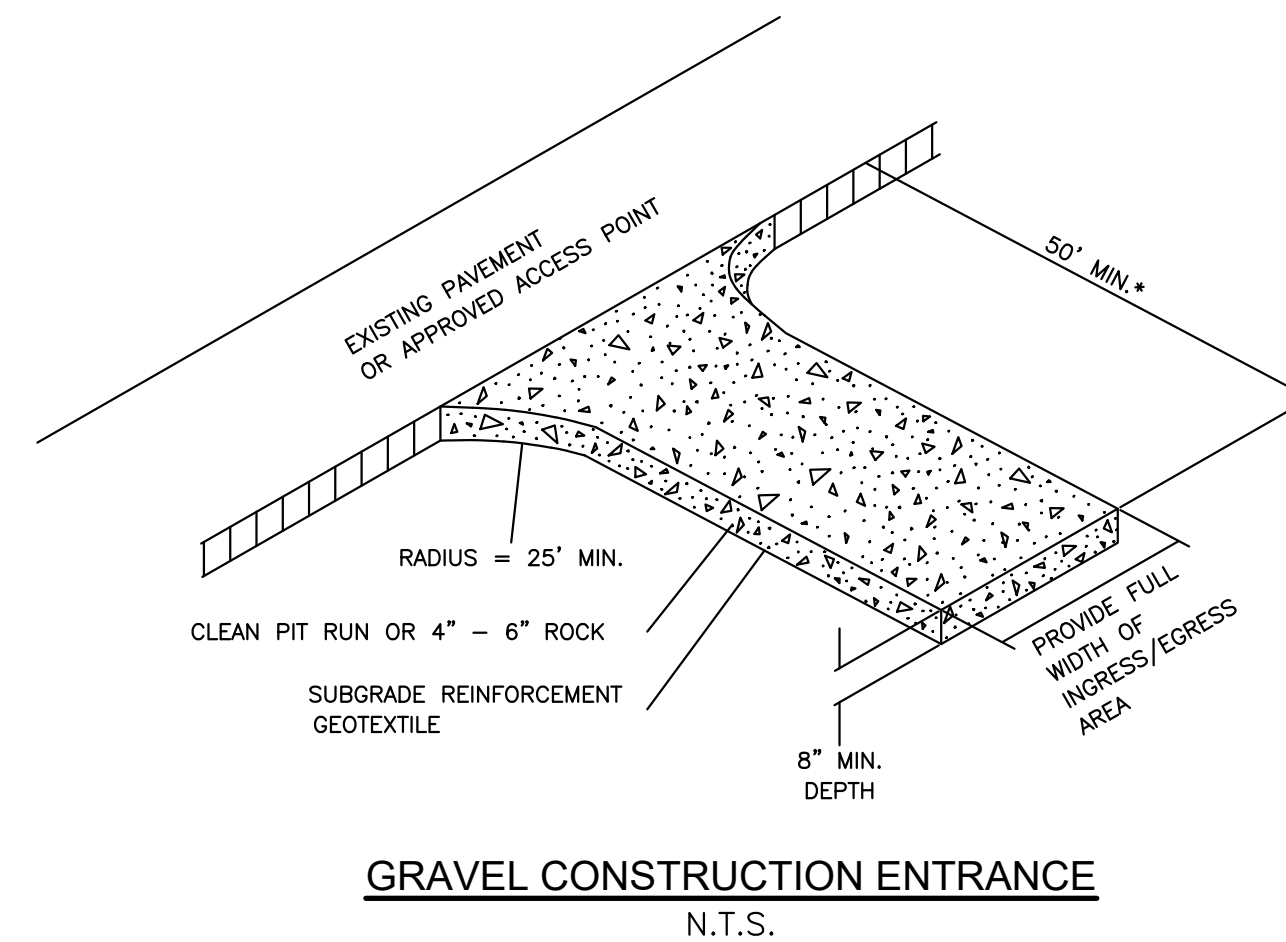
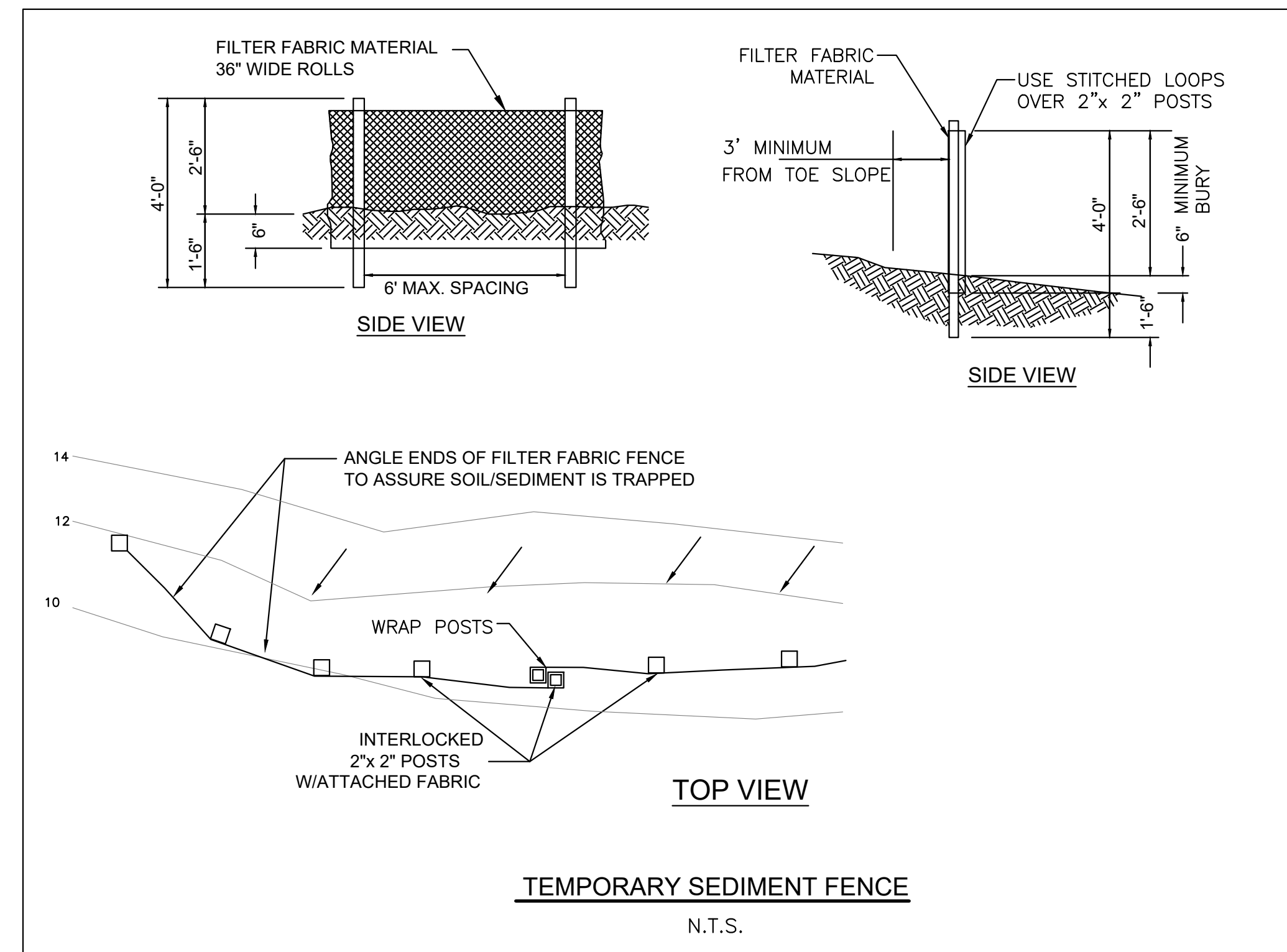
4. EROSION CONTROL MEASURES SHALL BE MAINTAINED BY CONTRACTOR UNTIL GRASS COVER IS ESTABLISHED AND UP TO ONE YEAR AFTER COMPLETION OF CONSTRUCTION, WHICHEVER IS SOONER.

5. MULCH SHALL BE SPREAD UNIFORMLY IMMEDIATELY FOLLOWING SEEDING.

SEDIMENT CONTROL FENCES :

1. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND A SEDIMENT FENCE MORE THAN ONE-THIRD OF THE FENCE HEIGHT ABOVE GROUND. SEDIMENT SHOULD BE REMOVED OR REGRADED ONTO SLOPES, AND THE SEDIMENT FENCES REPAIRED AND REESTABLISHED AS NEEDED.

2. FENCE SHALL BE REMOVED ONLY WHEN UPSLOPE AREAS ARE PERMANENTLY STABILIZED.



GRAVEL CONSTRUCTION ENTRANCES :

- 1. STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- 2. ALL VEHICLES LEAVING THE SITE SHALL LEAVE BY DRIVING ACROSS THE GRAVEL CONSTRUCTION ENTRANCE(S) IF GRAVEL ENTRANCE BECAME FILLED WITH MUD AND IS NO LONGER FUNCTIONAL, ADDITIONAL GRAVEL SHALL BE PLACED. VEHICLE TIRES SHALL BE FREE FROM DIRT BEFORE LEAVING THE SITE.

NOTE:
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

INLET PROTECTION
TYPE 5

Detail Drawing 4-25

DATE:	NO.	REVISION	DRAWN:	DESIGNED:	CHECKED: KAG
			SCALE: AS SHOWN	DATE: APR 22, 2024	
			PROJECT NO. E23-011		



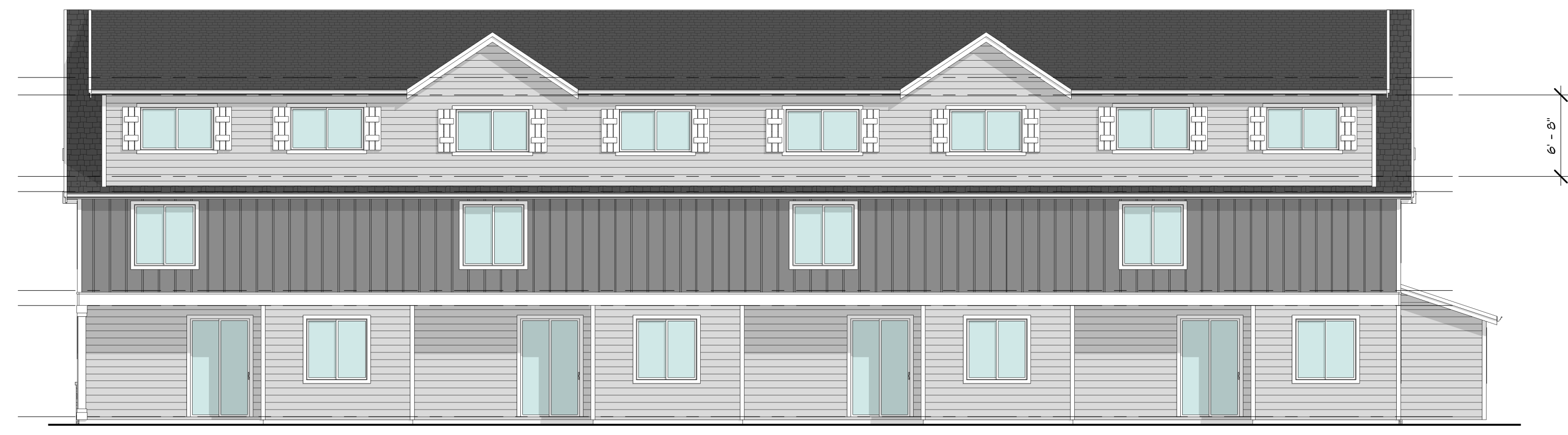








Front Elevation
1/4" = 1'-0"



Rear Elevation
1/8" = 1'-0"



Left Elevation
1/8" = 1'-0"



Right Elevation
1/8" = 1'-0"

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UNITS 1-4

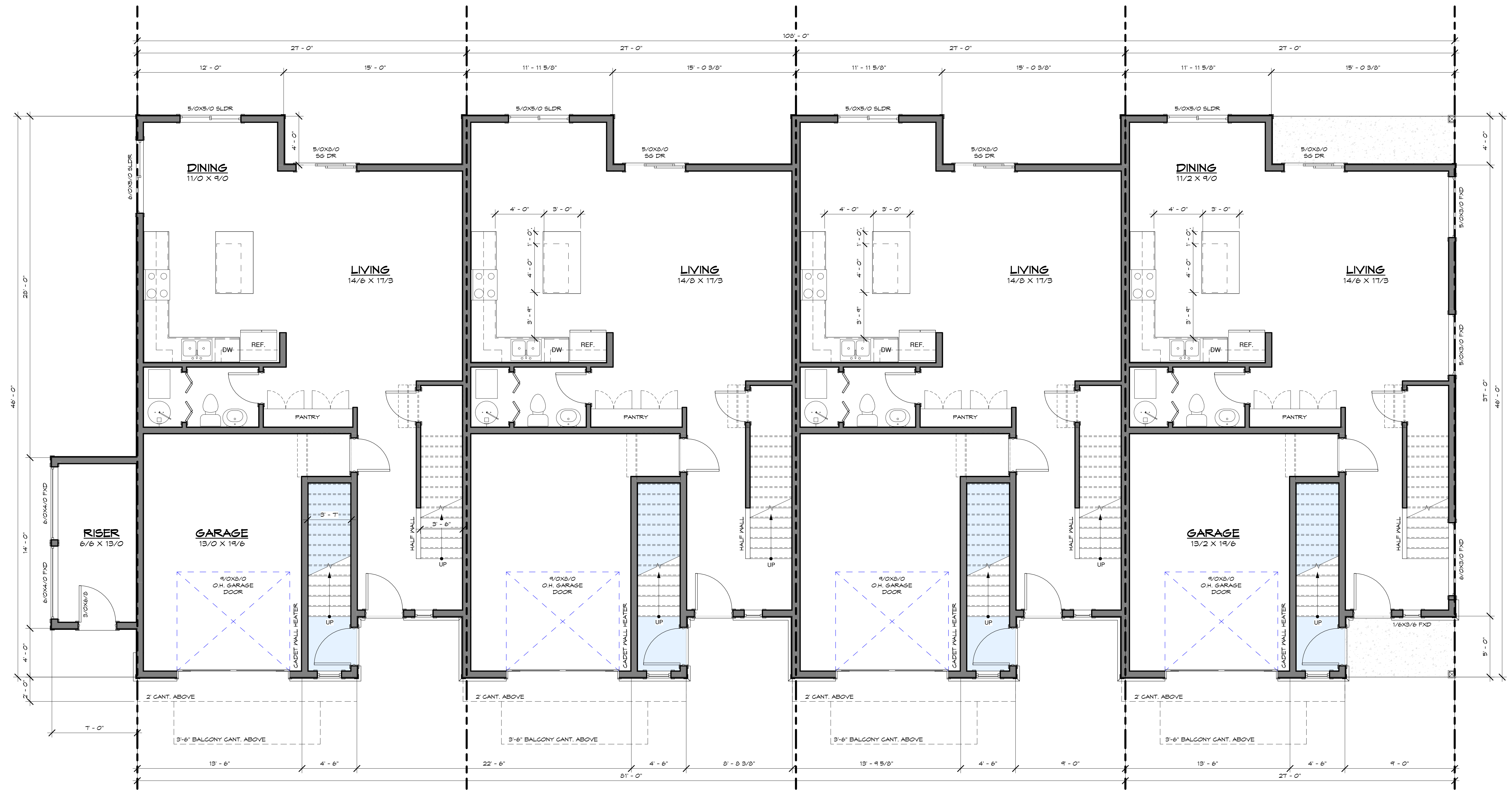
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DRAWN BY:
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SCALE :
As Indicated
PLOT DATE :
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SHEET
Building Elevations

A1

EACH UNIT TO HAVE MINI-SPLITS



784 SF - MAIN UNIT
67 SF - ADU

784 SF - MAIN UNIT
67 SF - ADU

784 SF - MAIN UNIT
67 SF - ADU

784 SF - MAIN UNIT
67 SF - ADU

UNITS 1-4

FILE NAME :
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1/4" = 1'-0"
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4/11/2024
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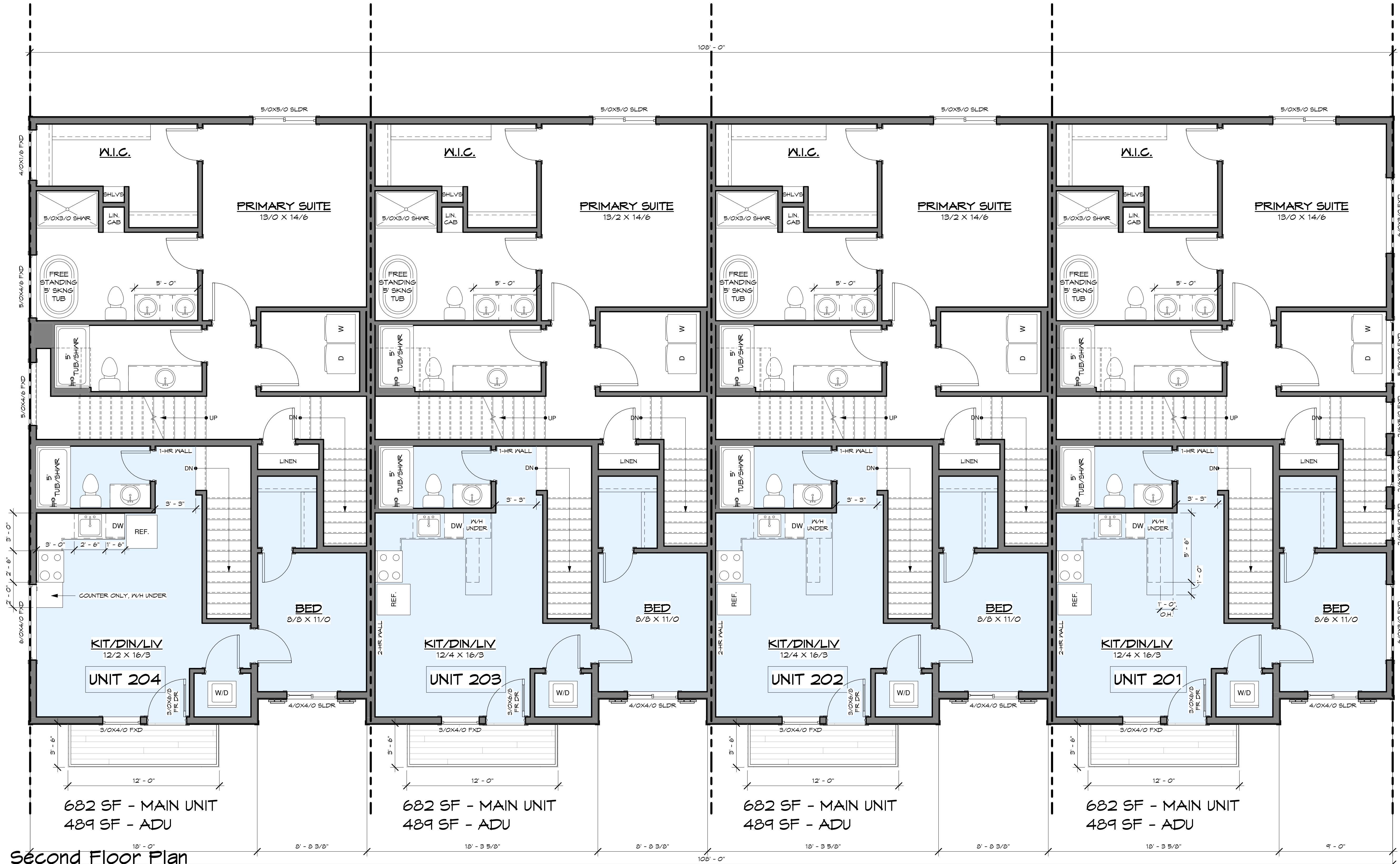
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SHEET
Main Floor
Plan

A3

Main Floor Plan
1/4" = 1'-0"

EACH UNIT TO HAVE MINI-SPLITS



Second Floor Plan
1/4" = 1'-0"

682 SF - MAIN UNIT
489 SF - ADU

682 SF - MAIN UNIT
489 SF - ADU

682 SF - MAIN UNIT
489 SF - ADU

682 SF - MAIN UNIT
489 SF - ADU



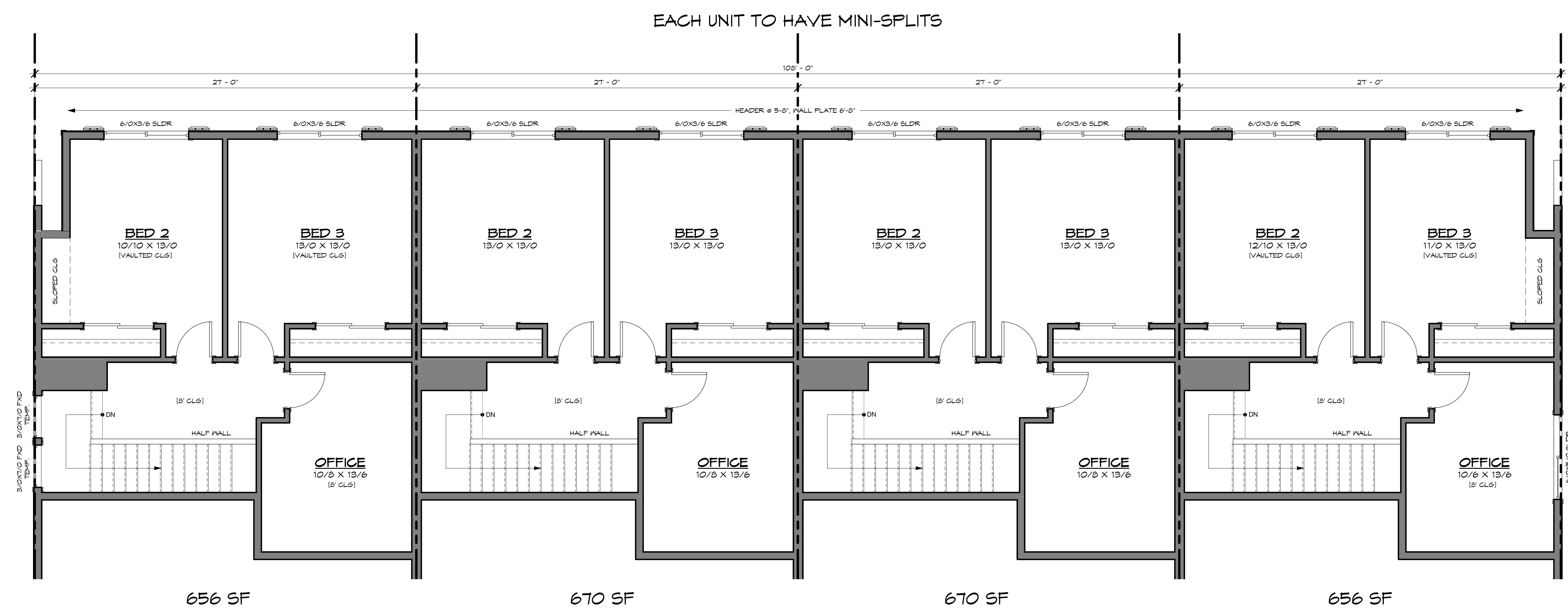
UNITS 1-4

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E DRAFTING
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1/4" = 1'-0"
PLOT DATE :
4/11/2024
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SHEET
Second Floor Plan

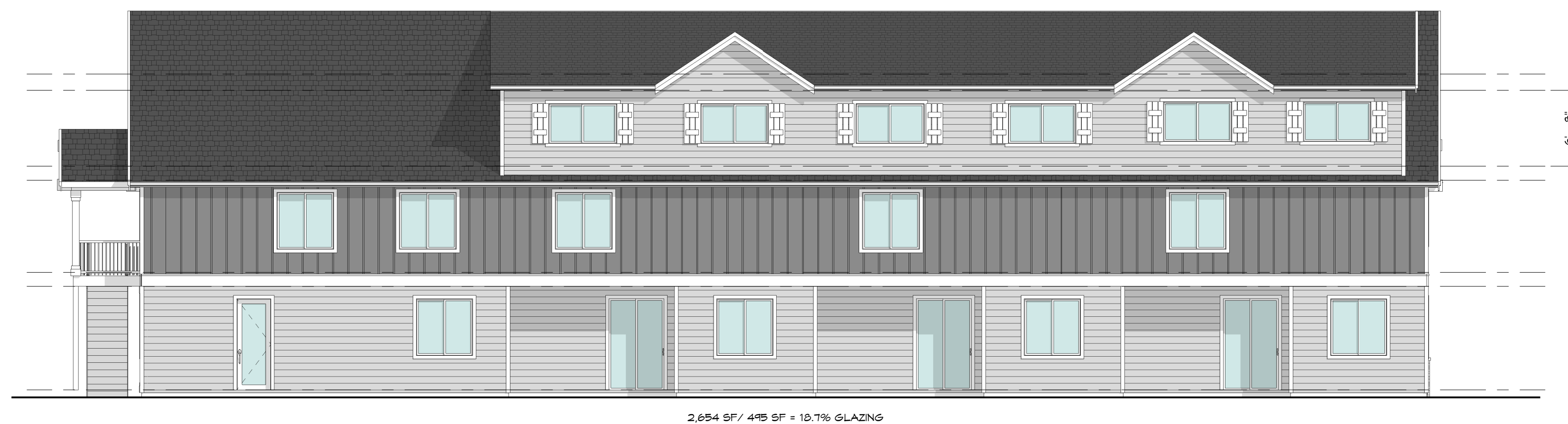
A3.1



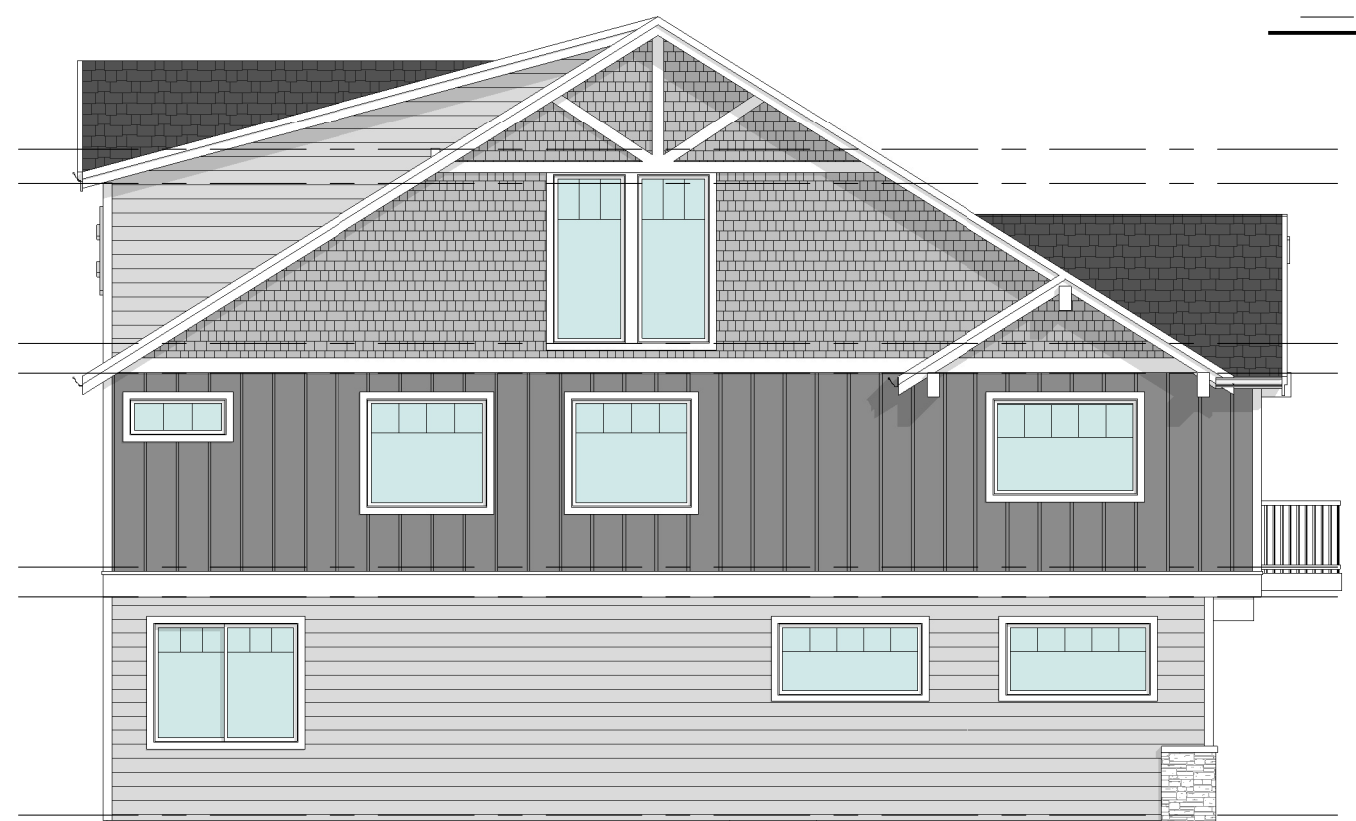
Third Floor Plan
 1/4" = 1'-0"



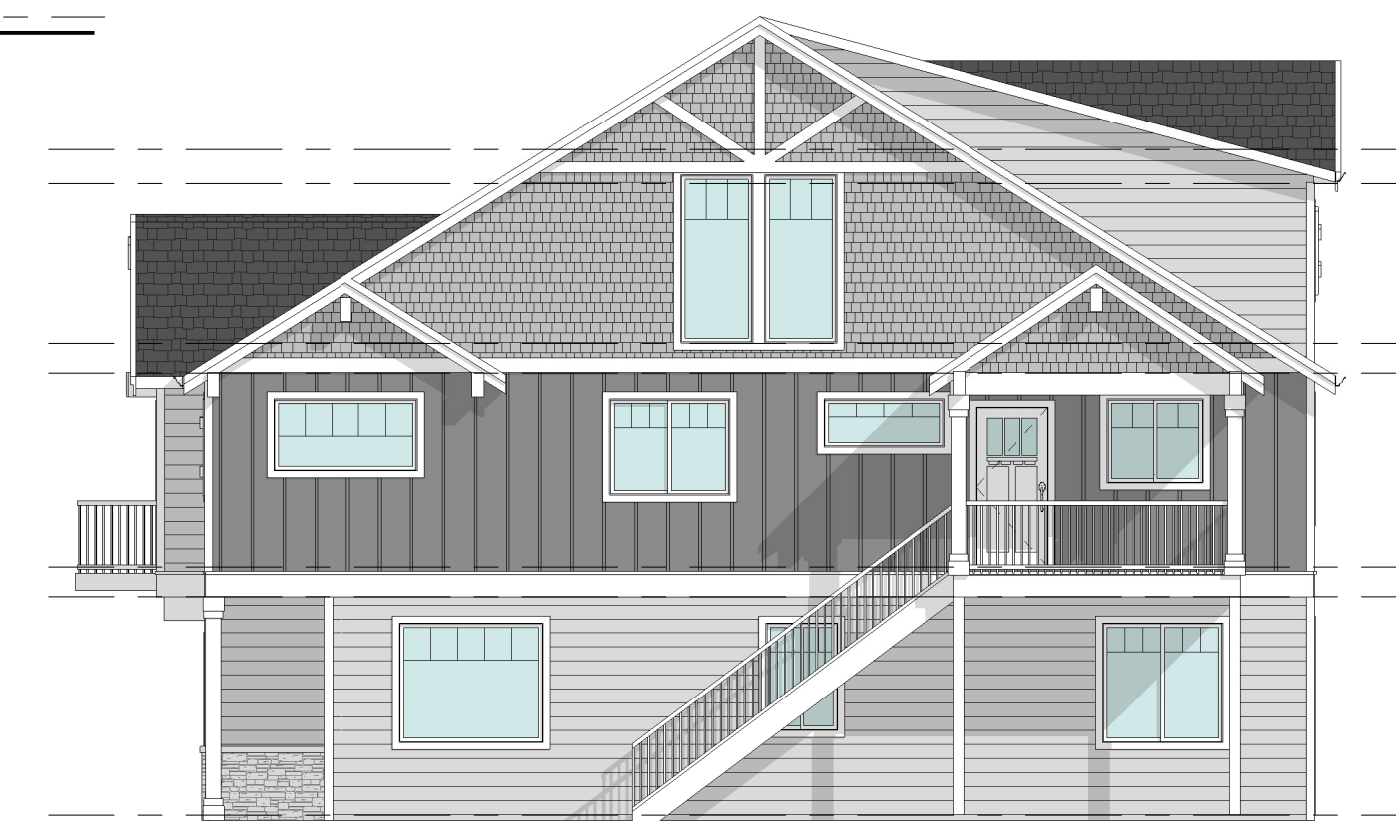
Front Elevation
1/4" = 1'-0"



Rear Elevation
1/8" = 1'-0"



Left Elevation
1/8" = 1'-0"



Right Elevation
1/8" = 1'-0"



UNITS 105-208

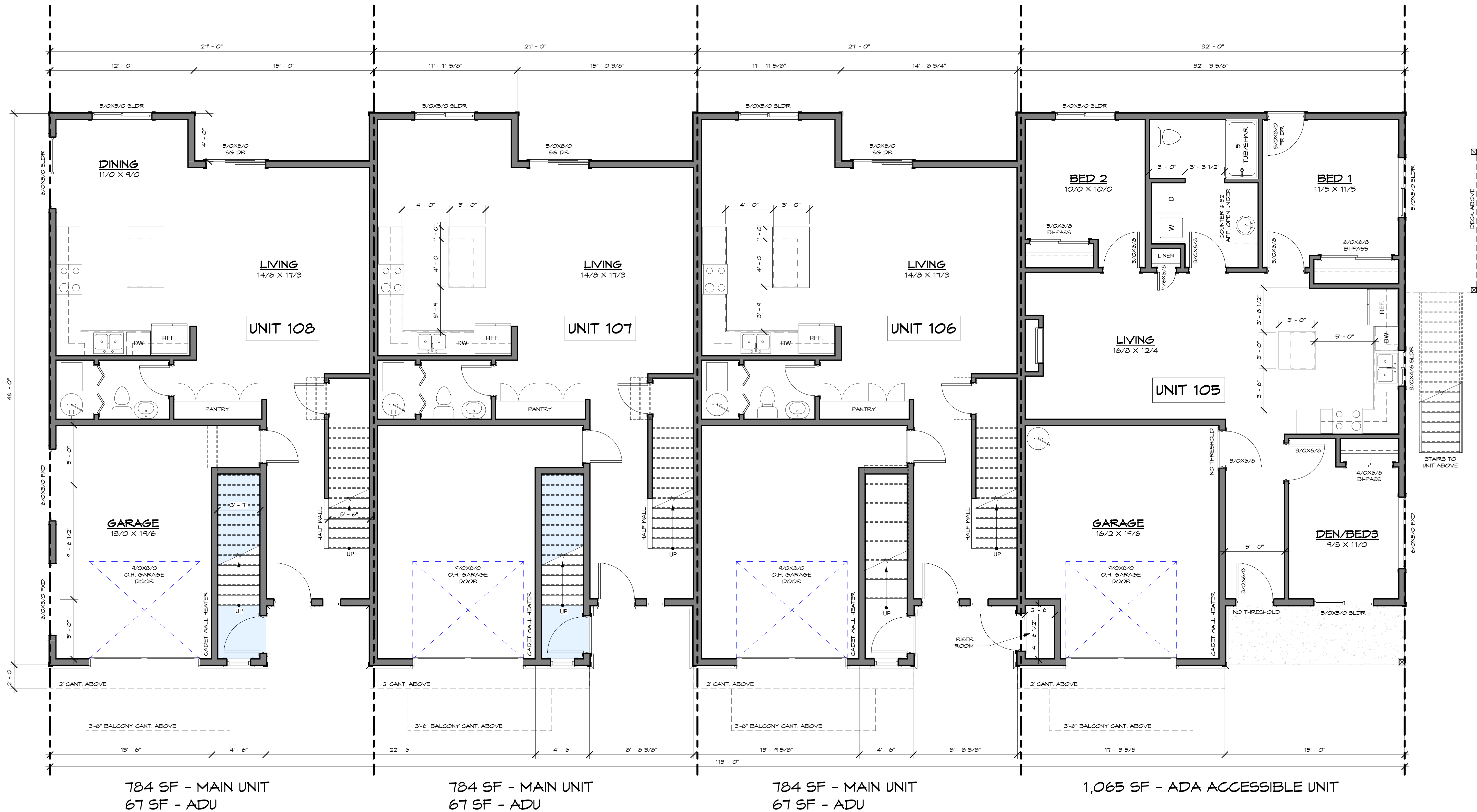
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SHEET
Building Elevations

A1

EACH UNIT TO HAVE MINI-SPLITS



784 SF - MAIN UNIT
67 SF - ADU

784 SF - MAIN UNIT
67 SF - ADU

784 SF - MAIN UNIT
67 SF - ADU

1,065 SF - ADA ACCESSIBLE UNIT

Main Floor Plan
1/4" = 1'-0"



UNITS 105-208

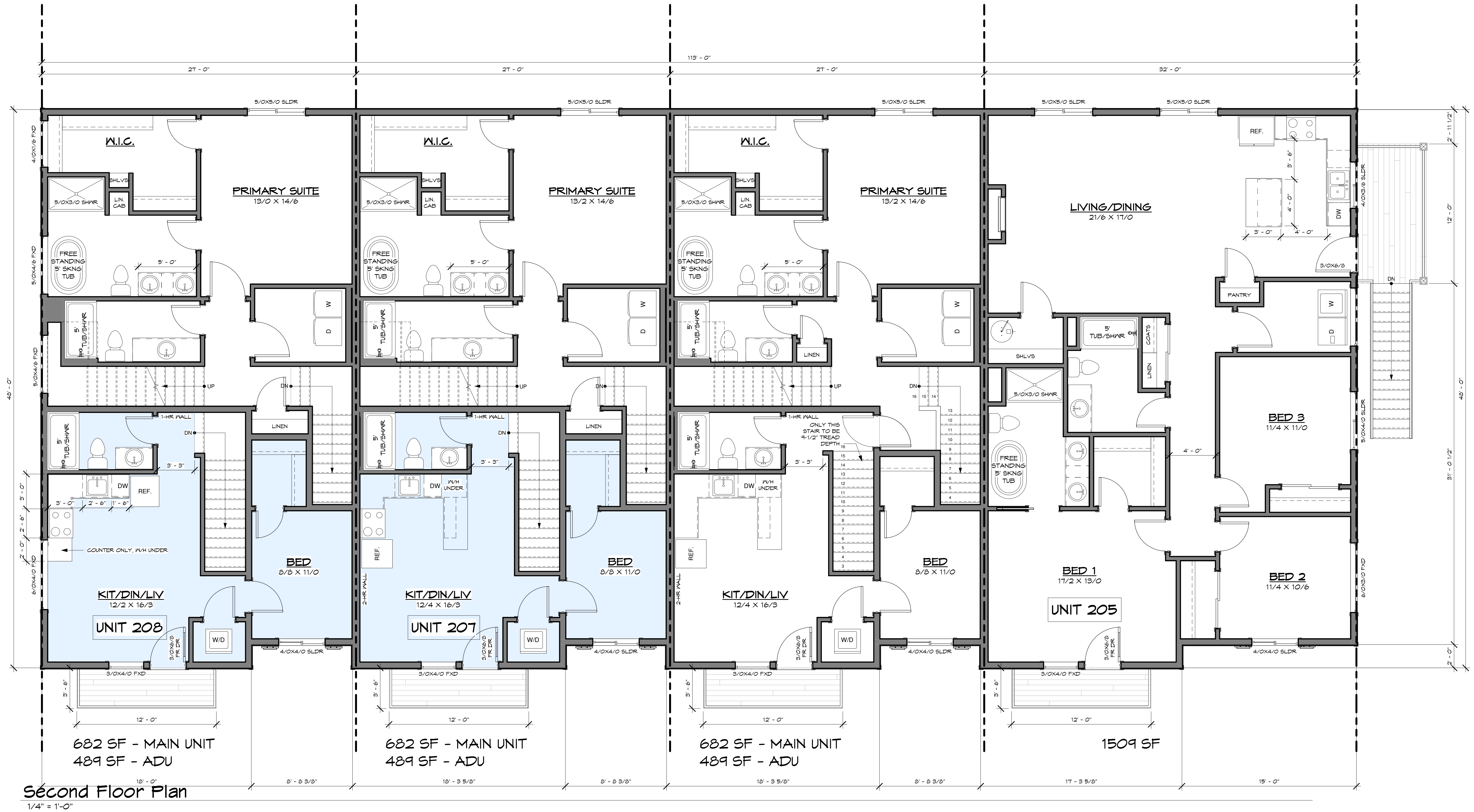
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SHEET
Main Floor
Plan

A3

EACH UNIT TO HAVE MINI-SPLITS



Second Floor Plan
1/4" = 1'-0"



UNITS 105-208

FILE NAME :
XXXX-X-XX-XX
DRAWN BY:
E DRAFTING
SCALE :
1/4" = 1'-0"
PLOT DATE :
4/24/2024
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Written dimensions on these drawings shall have precedence over scaled dimensions. Contractor shall assume responsibility for all dimensions and conditions on the job. The designer must be notified and consent to any variations from dimensions set forth herein. The type of exterior finish, the installation and waterproofing details are all to be the full responsibility of the owner/builder. This Designer assumes no responsibility for the integrity of the building envelope. This document is the property of E Drafting Corp. No reuse or reproduction is allowed without the written consent from E Drafting Corp.

SHEET
Second Floor Plan

A3.1

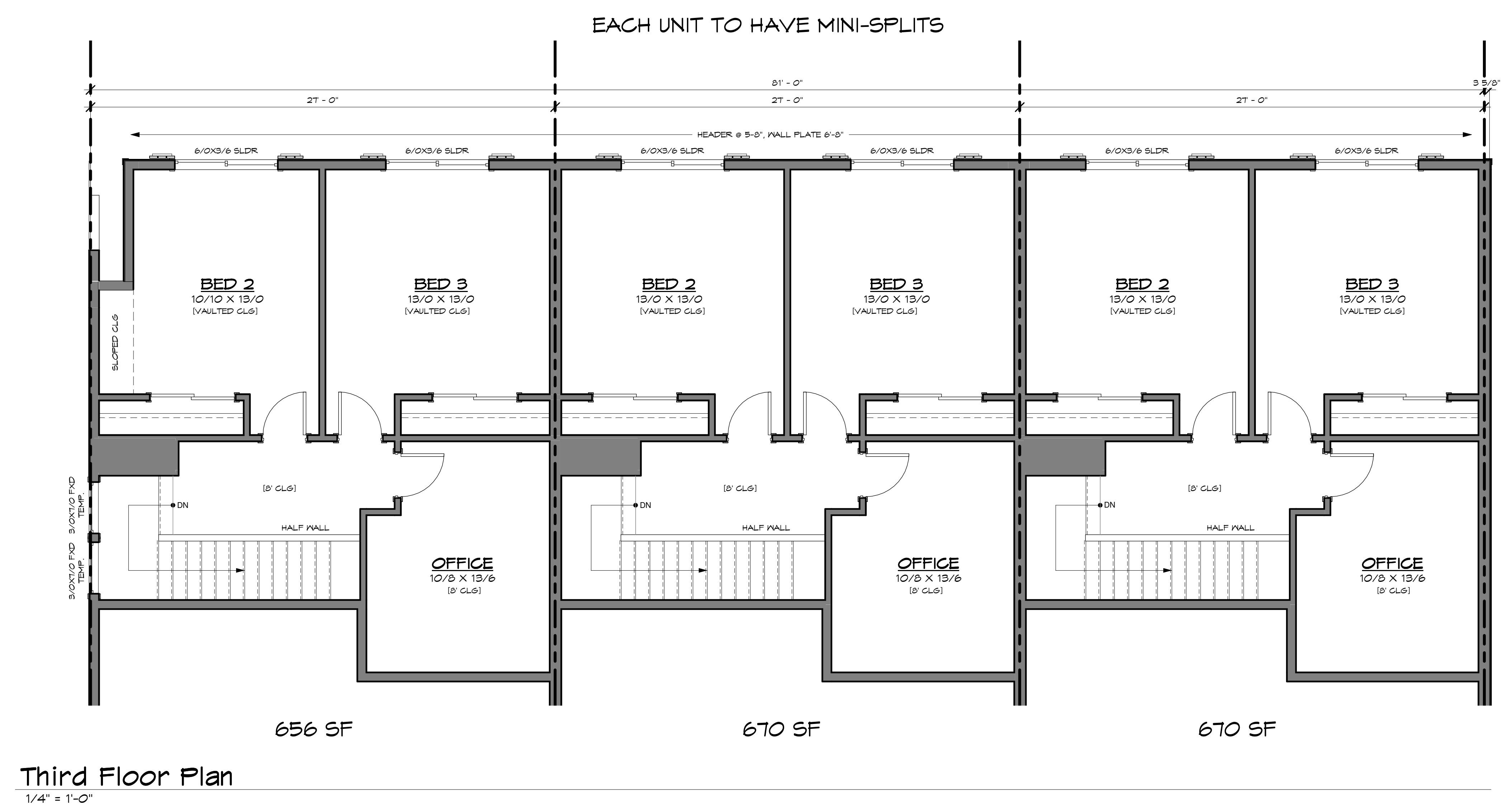
UNITS 105-208

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SHEET
 Third Floor Plan

A3.2



PRELIMINARY STORMWATER REPORT

Cherry Park East Luxury Apartments
1360 SW 257th Ave.
Troutdale, OR 97060

For

Cherry Park East, LLC

May 22, 2024
(FDG # E23-011)

Prepared By:



359 E. Historic Columbia River Highway
Troutdale, OR 97060
503.668.3737- fax 503.668.3788

TABLE OF CONTENTS

- I. OBJECTIVE
- II. METHODOLOGY
- III. REFERENCES
- IV. SITE DESCRIPTION
- V. STORMWATER MANAGEMENT

APPENDICES

- A. HydroCAD Output
- B. Geotechnical Report with Infiltration Data

Stormwater Report

I. OBJECTIVE

The objective is to maximize infiltration on-site in an effort to meet the requirement of complete management of stormwater on-site.

Stormwater discharge from the proposed new impervious parking area will be collected, treated and detained in an infiltration planter structure. The infiltration planter conforms to the City of Portland SWMM requirements. Runoff from the roofs will directly discharge to on-site dry wells.

II. METHODOLOGY

The City of Portland stormwater manual was applied in developing the proposed stormwater management for the impervious surface areas. Per the manual Stormwater Hierarchy, stormwater must be infiltrated onsite to the maximum extent feasible; as the native soils have high infiltration rates, the proposed facilities are designed to infiltrate of all design storm events. Stormwater Hierarchy Category 1 consists of infiltrating the 10-year design storm in a vegetated infiltration facility with no overflow. Category 2 consists of infiltrating the 10-year design storm and meet underground injection control requirements. The proposed facilities meet and exceed Category 2 design standards, as the entire water quality storm event is infiltrated in the vegetated facility and all storm events up to and including the 100-year storm event are infiltrated on-site.

The proposed filtration planter and drywells were designed using the Performance Approach, using native soil infiltration rates from the geotechnical investigation performed for Gateway Estates project at this same site is utilized with an additional safety factor of 2 applied. The geotechnical report has been included with this report for reference and a summary of infiltration rates is provided in the table below.

Test Location	Test Depth, Relative to Surrounding Grade (feet bgs)	Geotechnical Recommended Infiltration Design Rate (inches/hour)	Actual Rate Used in HydroCAD Model
TP-2/IT-1	9	410	100
TP-3/IT-2	9	680	100
TP-4/IT-3	9	560	100
TP-5/IT-4	8.5	380	100

III. REFERENCES:

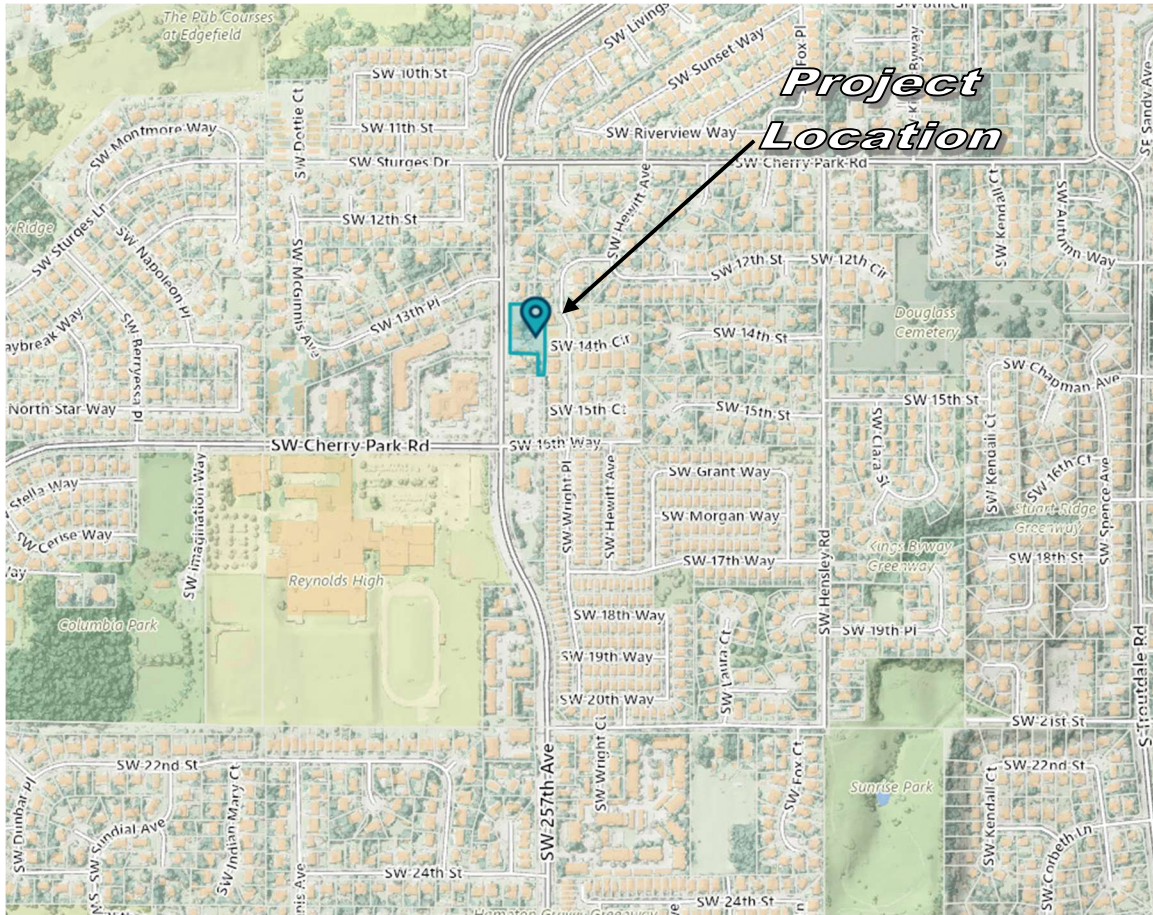
USGS Soil Maps for Multnomah County, Oregon
City of Portland, Stormwater Management Manual
City of Troutdale Development Code

Stormwater Report

Gateway Estates Geotechnical Report

IV. SITE DESCRIPTION:

The existing 0.95 acre site located at 1360 SW 257th has relatively flat topography with slopes ranging from 1-3 percent, no known hazardous conditions exist on site, and the site is not subject to flooding or ponding. Currently the site is a vacant lot. Previously there was a residential structure and several outbuildings all of which have been demolished. Access to this site is currently gained from NE 257th avenue.



The site soils per the USDA Soils maps are predominately classified as Multnomah silt loam (29A) with 0 to 3 percent slopes, Hydrologic Group B. Carlson Geotechnical performed infiltration testing on this site and the adjacent Gateway Estates lots as described in the geotechnical report dated January 31, 2008.

Stormwater Report

V. STORMWATER MANAGEMENT:

The impervious areas in the developed conditions and the runoff direction are tabulated below.

	North Building	South Building	Paved Area
Runoff Source	Roof Drains	Roof Drains	Pavement – Sheet Flow
Area (sq. ft.)	5020 sf	4,730 sf	16,260 sf
Receiving Facility	Drywell	Drywell	Infiltration Planter Box

Roof drains are routed directly to drywells, and site impervious runoff flows to an on-site vegetated infiltration planter box located in the center of the site.

The planter box is designed to City of Portland SWMM specifications and analyzed with the Performance Approach, using a planting medium infiltration rate of 2 inches per hour. All runoff is infiltrated in the planter box in the water quality storm event, and in larger storm events runoff is partially infiltrated in the planter box with the remainder routed to an overflow structure for infiltration into the rock gallery below the growing media.

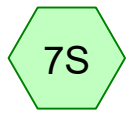
Design storm events for the 2, 5, 10, and 25 year storms used in the HydroCAD model are outlined in Troutdale Interim Change No. 16. The 100-year storm event is included to demonstrate that minimum criteria is exceeded, granting a factor of safety. T

The water quality storm event is per the Portland SWMM. Using HydroCAD and the Santa Barbara Urban Hydrograph (SBUH), the 24-hr design storms were applied to the developed impervious areas of each building to develop a model of the performance of proposed stormwater facilities. A summary of the model is tabulated below; refer to the appendices for the detailed HydroCAD model output.

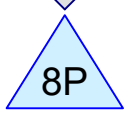
Stormwater Report

Planter & Drywell Performance Summary Table			
	Planter 1	N Bldg Drywell	S Bldg Drywell
WQ Storm Event			
Peak Inflow	0.07 cfs	0.02 cfs	0.02 cfs
Peak Infiltration	0.07 cfs	0.02 cfs	0.02 cfs
2-Yr Storm Event			
	2.7 Inches		
Peak Inflow	0.23 cfs	0.07 cfs	0.07 cfs
Peak Infiltration	0.23 cfs	0.07 cfs	0.07 cfs
5-Yr Storm Event			
	3.3 Inches		
Peak Inflow	0.29 cfs	0.09 cfs	0.08 cfs
Peak Infiltration	0.29 cfs	0.09 cfs	0.08 cfs
10-Yr Storm Event			
	3.8 Inches		
Peak Inflow	0.33 cfs	0.10 cfs	0.10 cfs
Peak Infiltration	0.33 cfs	0.10 cfs	0.10 cfs
25-Yr Storm Event			
	4.1 Inches		
Peak Inflow	0.36 cfs	0.11 cfs	0.10 cfs
Peak Infiltration	0.36 cfs	0.11 cfs	0.10 cfs
100-Yr Storm Event			
	4.9 Inches		
Peak Inflow	0.43 cfs	0.13 cfs	0.13 cfs
Peak Infiltration	0.43 cfs	0.13 cfs	0.13 cfs

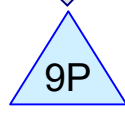
Appendix



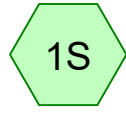
Paved Areas



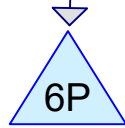
PLANTER Growing Media



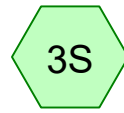
Planter Rock Gallery



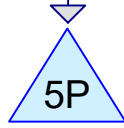
Roof Drainage North Bulding



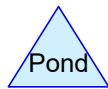
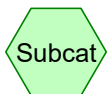
DRYWELL 1



Roof Drains South Building



DRYWELL 2



Routing Diagram for E23-011 STORM

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E23-011 STORM

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Page 2

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 yr	Type IA 24-hr		Default	24.00	1	2.70	2
2	5 yr	Type IA 24-hr		Default	24.00	1	3.30	2
3	10 yr	Type IA 24-hr		Default	24.00	1	3.80	2
4	25 yr	Type IA 24-hr		Default	24.00	1	4.10	2
5	100 yr	Type IA 24-hr		Default	24.00	1	4.90	2
6	Water Quality	Type IA 24-hr		Default	24.00	1	0.90	2

E23-011 STORM

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Page 3

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.373	98	(7S)
0.115	98	ROOF (1S)
0.109	98	Roof (3S)
0.597	98	TOTAL AREA

E23-011 STORM

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Page 4

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.597	Other	1S, 3S, 7S
0.597		TOTAL AREA

E23-011 STORM

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Page 5

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	0.373	0.373		7S
0.000	0.000	0.000	0.000	0.115	0.115	ROOF	1S
0.000	0.000	0.000	0.000	0.109	0.109	Roof	3S
0.000	0.000	0.000	0.000	0.597	0.597	TOTAL AREA	

E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 6

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Drainage North Runoff Area=5,020 sf 100.00% Impervious Runoff Depth=2.47"
Tc=5.0 min CN=0/98 Runoff=0.07 cfs 0.024 af

Subcatchment 3S: Roof Drains South Runoff Area=4,730 sf 100.00% Impervious Runoff Depth=2.47"
Tc=5.0 min CN=0/98 Runoff=0.07 cfs 0.022 af

Subcatchment 7S: Paved Areas Runoff Area=16,260 sf 100.00% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=0/98 Runoff=0.23 cfs 0.077 af

Pond 5P: DRYWELL 2 Peak Elev=0.06' Storage=1 cf Inflow=0.07 cfs 0.022 af
Outflow=0.07 cfs 0.022 af

Pond 6P: DRYWELL 1 Peak Elev=0.06' Storage=1 cf Inflow=0.07 cfs 0.024 af
Outflow=0.07 cfs 0.024 af

Pond 8P: PLANTER Growing Media Peak Elev=1.87' Storage=18 cf Inflow=0.23 cfs 0.077 af
Discarded=0.01 cfs 0.021 af Primary=0.22 cfs 0.056 af Outflow=0.23 cfs 0.077 af

Pond 9P: Planter Rock Gallery Peak Elev=0.01' Storage=1 cf Inflow=0.22 cfs 0.056 af
Outflow=0.22 cfs 0.056 af

Total Runoff Area = 0.597 ac Runoff Volume = 0.123 af Average Runoff Depth = 2.47"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.597 ac

E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 7

Summary for Subcatchment 1S: Roof Drainage North Bulding

Runoff = 0.07 cfs @ 7.88 hrs, Volume= 0.024 af, Depth= 2.47"
 Routed to Pond 6P : DRYWELL 1

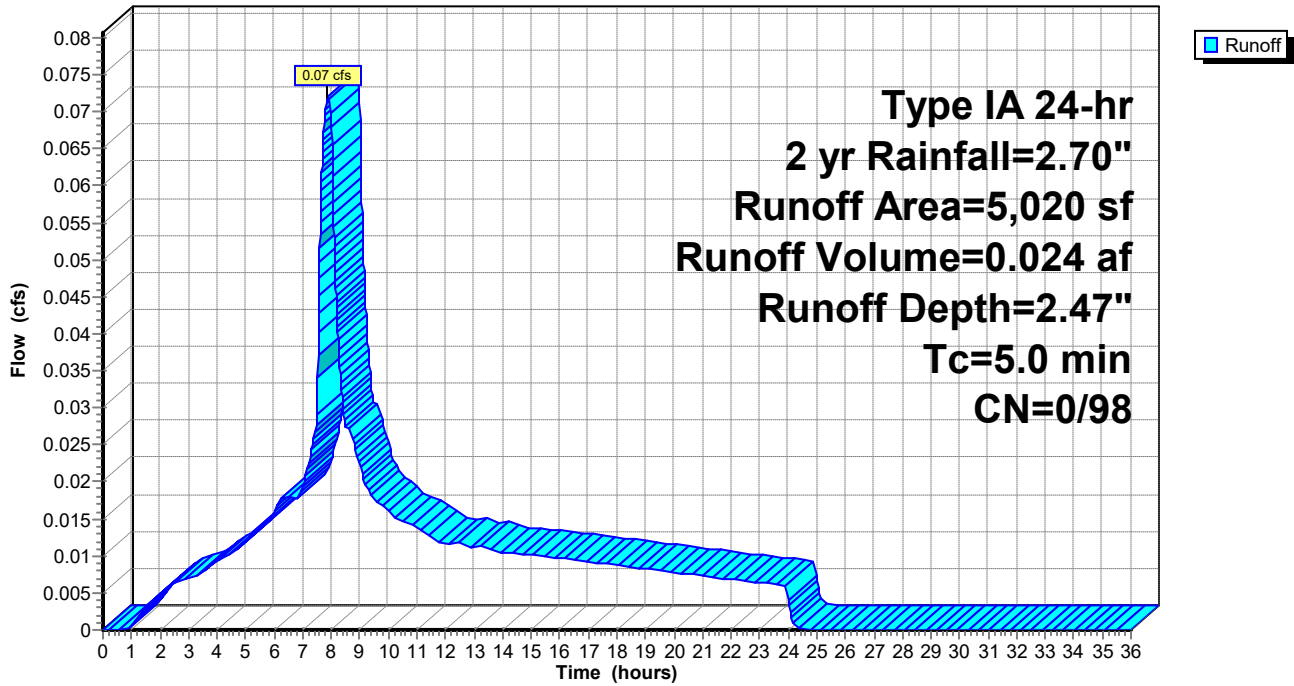
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2 yr Rainfall=2.70"

Area (sf)	CN	Description
* 5,020	98	ROOF
5,020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: Roof Drainage North Bulding

Hydrograph



E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 8

Summary for Subcatchment 3S: Roof Drains South Building

Runoff = 0.07 cfs @ 7.88 hrs, Volume= 0.022 af, Depth= 2.47"

Routed to Pond 5P : DRYWELL 2

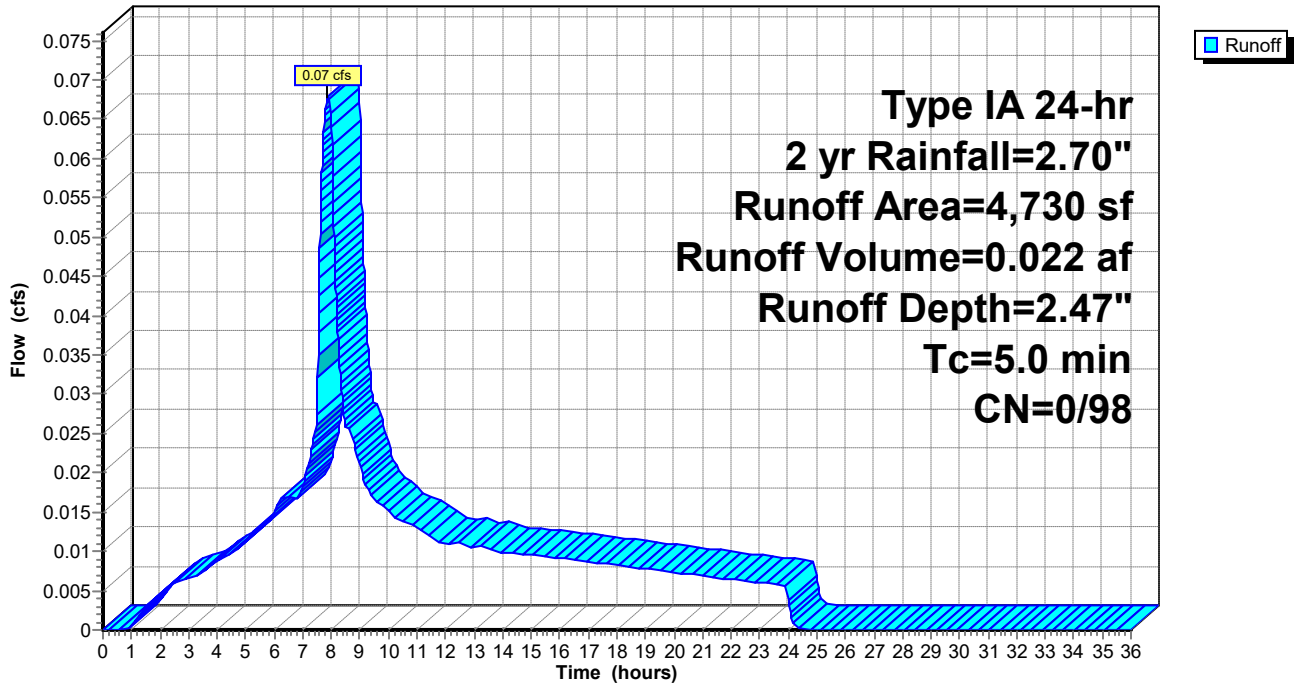
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2 yr Rainfall=2.70"

Area (sf)	CN	Description
* 4,730	98	Roof
4,730		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: Roof Drains South Building

Hydrograph



E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 9

Summary for Subcatchment 7S: Paved Areas

Runoff = 0.23 cfs @ 7.90 hrs, Volume= 0.077 af, Depth= 2.47"

Routed to Pond 8P : PLANTER Growing Media

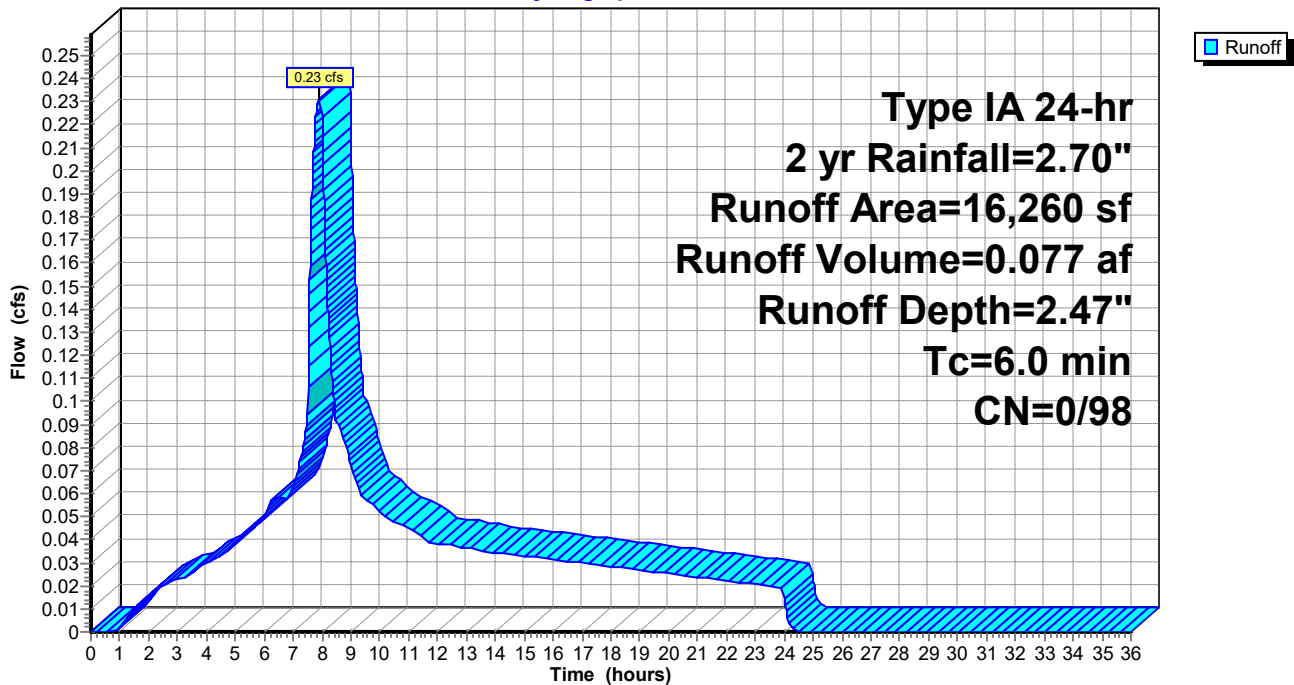
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 yr Rainfall=2.70"

Area (sf)	CN	Description
* 16,260	98	
16,260		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 7S: Paved Areas

Hydrograph



E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 10

Summary for Pond 5P: DRYWELL 2

Inflow Area = 0.109 ac, 100.00% Impervious, Inflow Depth = 2.47" for 2 yr event
 Inflow = 0.07 cfs @ 7.88 hrs, Volume= 0.022 af
 Outflow = 0.07 cfs @ 7.88 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.07 cfs @ 7.88 hrs, Volume= 0.022 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 0.06' @ 7.88 hrs Surf.Area= 46 sf Storage= 1 cf

Plug-Flow detention time= 0.3 min calculated for 0.022 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (670.4 - 670.2)

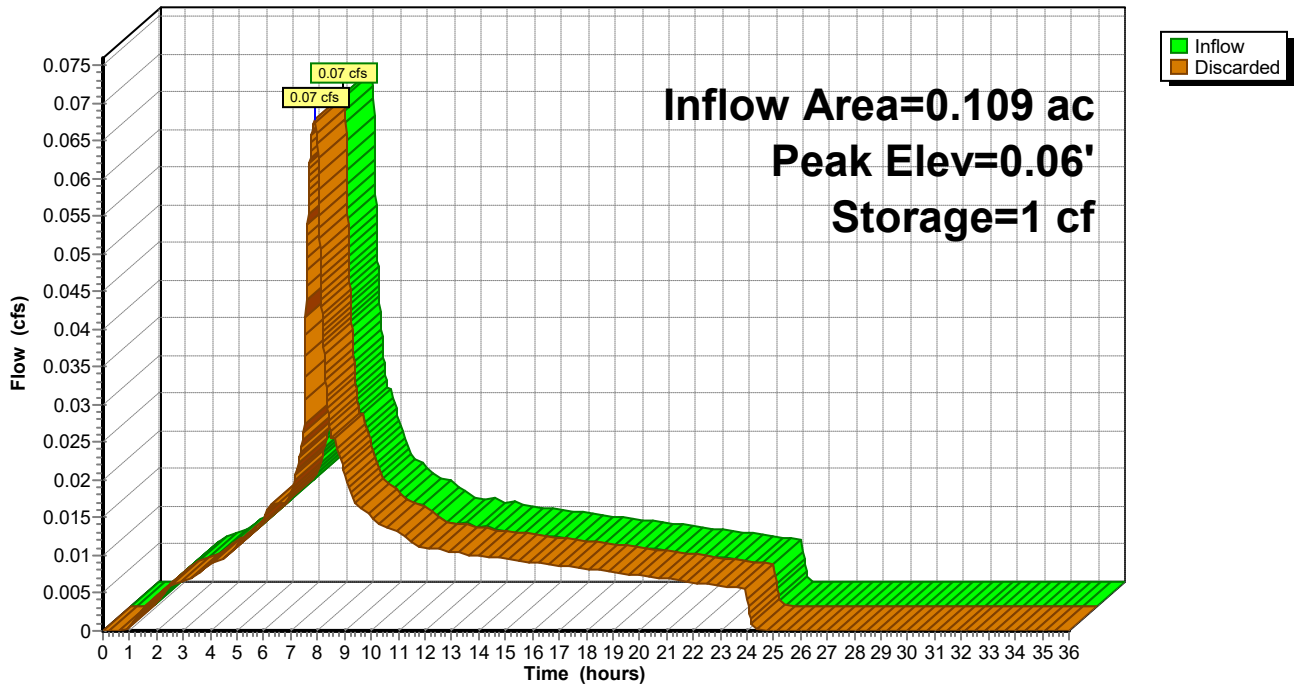
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.06' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 5P: DRYWELL 2

Hydrograph



E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 11

Summary for Pond 6P: DRYWELL 1

Inflow Area = 0.115 ac, 100.00% Impervious, Inflow Depth = 2.47" for 2 yr event
 Inflow = 0.07 cfs @ 7.88 hrs, Volume= 0.024 af
 Outflow = 0.07 cfs @ 7.88 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.07 cfs @ 7.88 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 0.06' @ 7.88 hrs Surf.Area= 46 sf Storage= 1 cf

Plug-Flow detention time= 0.3 min calculated for 0.024 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (670.4 - 670.2)

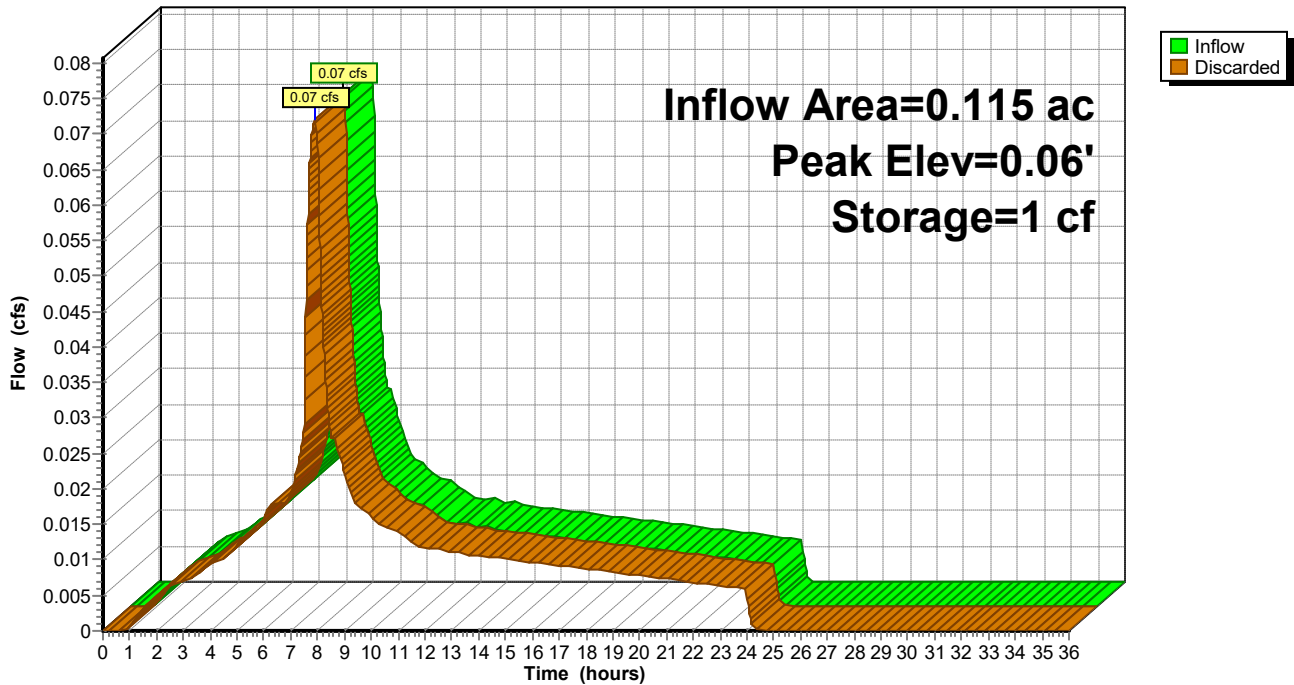
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.06' (Free Discharge)
 ↑=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 6P: DRYWELL 1

Hydrograph



E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 12

Summary for Pond 8P: PLANTER Growing Media

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 2.47" for 2 yr event
 Inflow = 0.23 cfs @ 7.90 hrs, Volume= 0.077 af
 Outflow = 0.23 cfs @ 7.90 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.01 cfs @ 7.90 hrs, Volume= 0.021 af
 Primary = 0.22 cfs @ 7.90 hrs, Volume= 0.056 af
 Routed to Pond 9P : Planter Rock Gallery

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.87' @ 7.90 hrs Surf.Area= 197 sf Storage= 18 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 5.5 min (676.7 - 671.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1.50'	74 cf	3.00'W x 65.80'L x 1.50'H SOIL MEDIA 296 cf Overall x 25.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	1.50'	2.000 in/hr Exfiltration over Wetted area
#2	Primary	1.75'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 7.90 hrs HW=1.87' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.22 cfs @ 7.90 hrs HW=1.87' (Free Discharge)
 ↑2=Orifice/Grate (Weir Controls 0.22 cfs @ 1.14 fps)

E23-011 STORM

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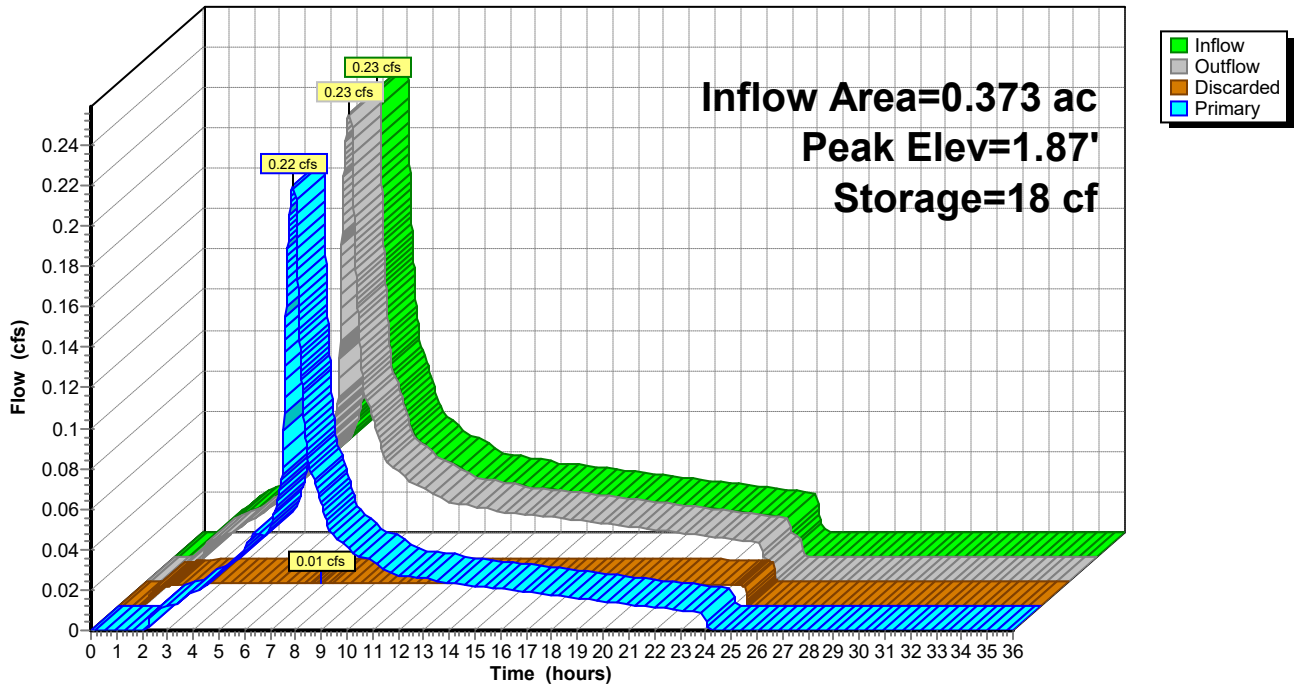
Type IA 24-hr 2 yr Rainfall=2.70"

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Page 13

Pond 8P: PLANTER Growing Media

Hydrograph



E23-011 STORM

Type IA 24-hr 2 yr Rainfall=2.70"

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Page 14

Summary for Pond 9P: Planter Rock Gallery

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 1.80" for 2 yr event
 Inflow = 0.22 cfs @ 7.90 hrs, Volume= 0.056 af
 Outflow = 0.22 cfs @ 7.90 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min
 Discarded = 0.22 cfs @ 7.90 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.01' @ 7.90 hrs Surf.Area= 204 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.056 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (641.1 - 641.1)

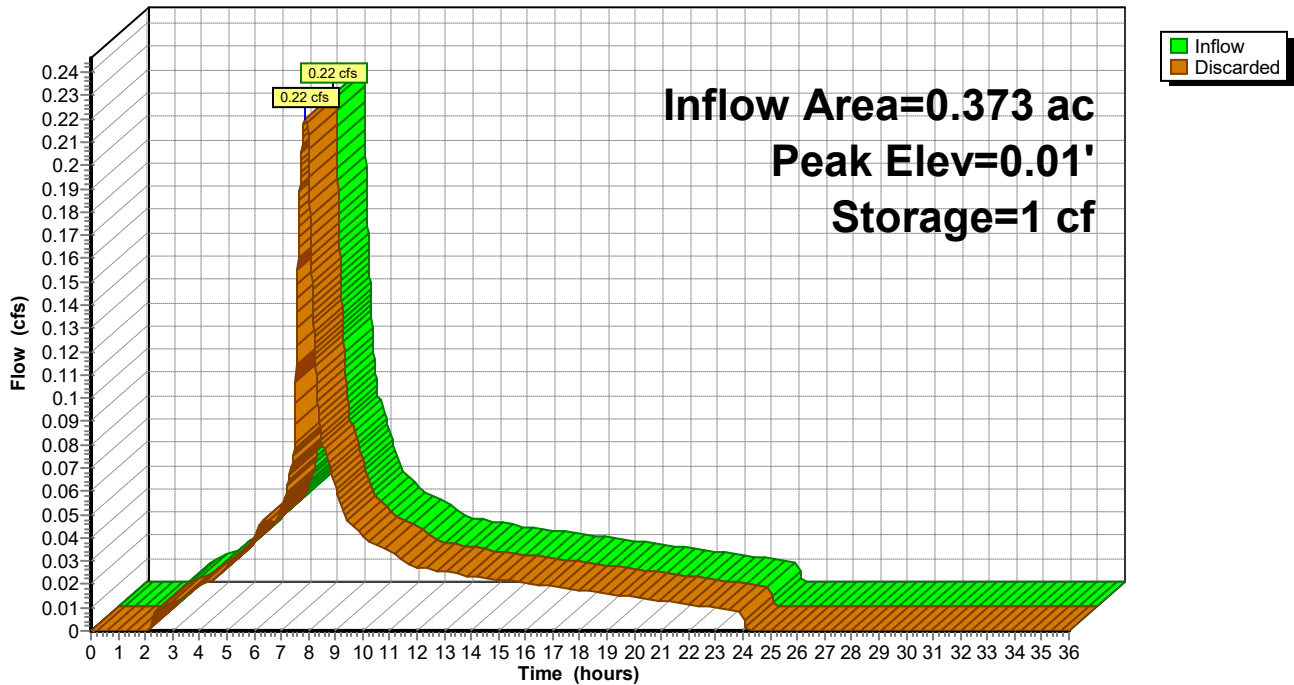
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	143 cf	3.00'W x 68.00'L x 1.75'H Prismatic 357 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.47 cfs @ 7.90 hrs HW=0.01' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.47 cfs)

Pond 9P: Planter Rock Gallery

Hydrograph



E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 15

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Drainage North Runoff Area=5,020 sf 100.00% Impervious Runoff Depth=3.07"
Tc=5.0 min CN=0/98 Runoff=0.09 cfs 0.029 af

Subcatchment 3S: Roof Drains South Runoff Area=4,730 sf 100.00% Impervious Runoff Depth=3.07"
Tc=5.0 min CN=0/98 Runoff=0.08 cfs 0.028 af

Subcatchment 7S: Paved Areas Runoff Area=16,260 sf 100.00% Impervious Runoff Depth=3.07"
Tc=6.0 min CN=0/98 Runoff=0.29 cfs 0.095 af

Pond 5P: DRYWELL 2 Peak Elev=0.07' Storage=1 cf Inflow=0.08 cfs 0.028 af
Outflow=0.08 cfs 0.028 af

Pond 6P: DRYWELL 1 Peak Elev=0.08' Storage=1 cf Inflow=0.09 cfs 0.029 af
Outflow=0.09 cfs 0.029 af

Pond 8P: PLANTER Growing Media Peak Elev=1.89' Storage=19 cf Inflow=0.29 cfs 0.095 af
Discarded=0.01 cfs 0.021 af Primary=0.27 cfs 0.074 af Outflow=0.29 cfs 0.095 af

Pond 9P: Planter Rock Gallery Peak Elev=0.01' Storage=1 cf Inflow=0.27 cfs 0.074 af
Outflow=0.27 cfs 0.074 af

Total Runoff Area = 0.597 ac Runoff Volume = 0.153 af Average Runoff Depth = 3.07"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.597 ac

E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 16

Summary for Subcatchment 1S: Roof Drainage North Bulding

Runoff = 0.09 cfs @ 7.88 hrs, Volume= 0.029 af, Depth= 3.07"
 Routed to Pond 6P : DRYWELL 1

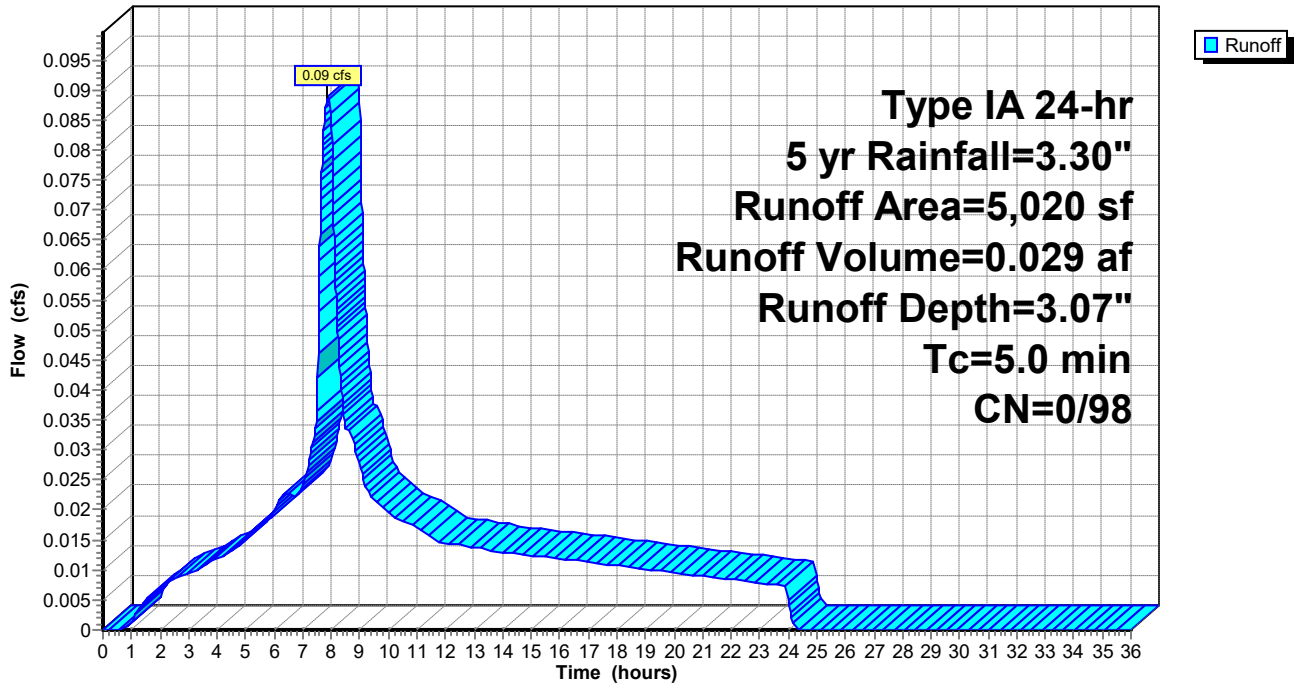
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 5 yr Rainfall=3.30"

Area (sf)	CN	Description
* 5,020	98	ROOF
5,020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: Roof Drainage North Bulding

Hydrograph



E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 17

Summary for Subcatchment 3S: Roof Drains South Building

Runoff = 0.08 cfs @ 7.88 hrs, Volume= 0.028 af, Depth= 3.07"
 Routed to Pond 5P : DRYWELL 2

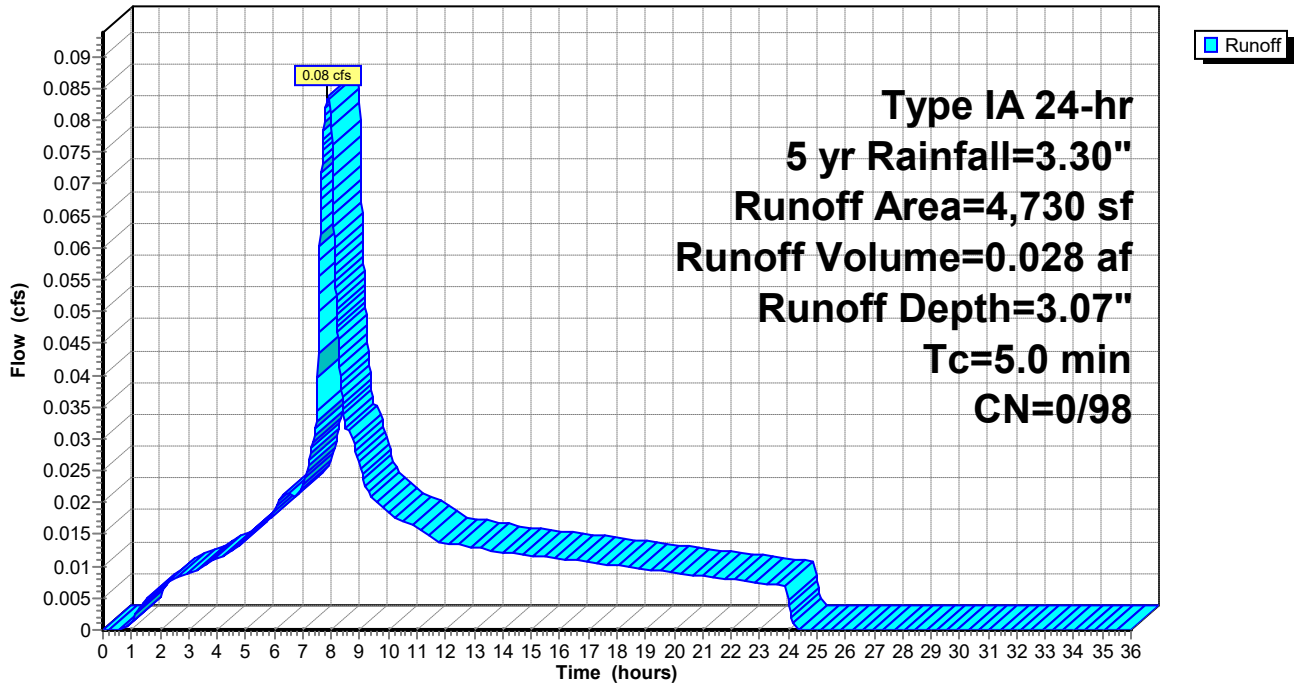
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 5 yr Rainfall=3.30"

Area (sf)	CN	Description
* 4,730	98	Roof
4,730		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: Roof Drains South Building

Hydrograph



E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 18

Summary for Subcatchment 7S: Paved Areas

Runoff = 0.29 cfs @ 7.90 hrs, Volume= 0.095 af, Depth= 3.07"
 Routed to Pond 8P : PLANTER Growing Media

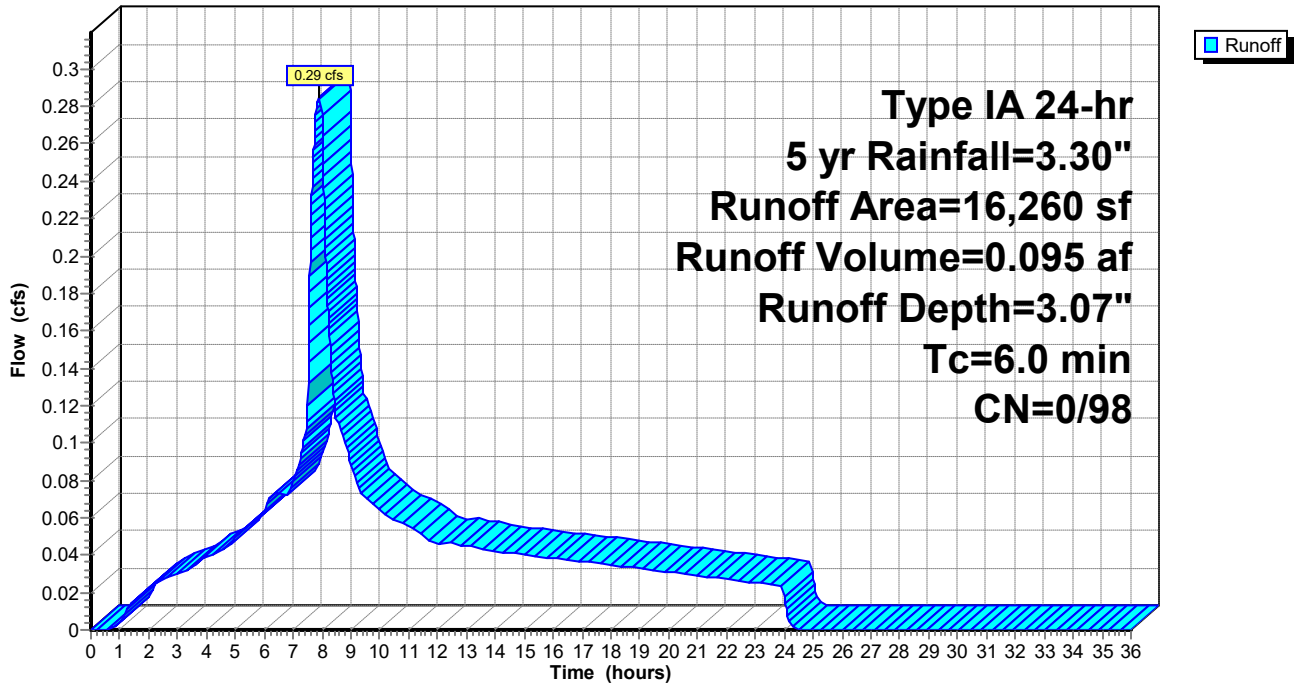
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 5 yr Rainfall=3.30"

Area (sf)	CN	Description
* 16,260	98	
16,260		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 7S: Paved Areas

Hydrograph



E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 19

Summary for Pond 5P: DRYWELL 2

Inflow Area = 0.109 ac, 100.00% Impervious, Inflow Depth = 3.07" for 5 yr event
 Inflow = 0.08 cfs @ 7.88 hrs, Volume= 0.028 af
 Outflow = 0.08 cfs @ 7.88 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.08 cfs @ 7.88 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 0.07' @ 7.88 hrs Surf.Area= 46 sf Storage= 1 cf

Plug-Flow detention time= 0.3 min calculated for 0.028 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (664.7 - 664.4)

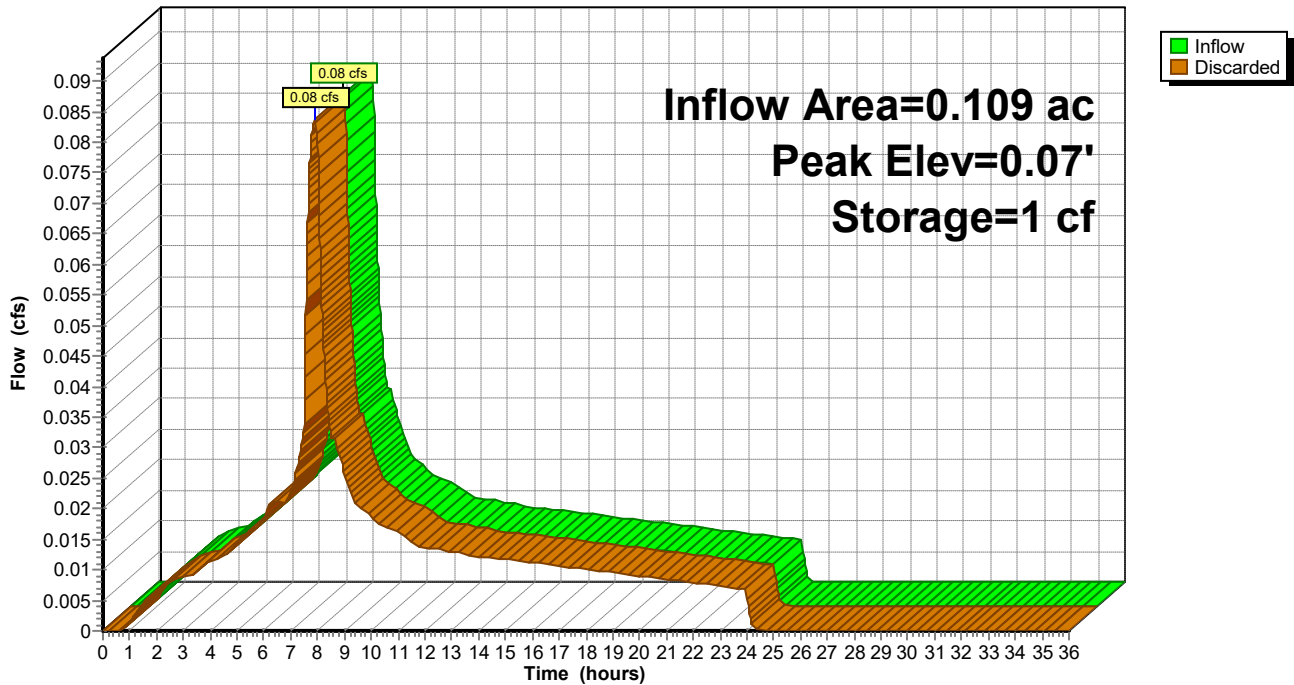
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.07' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 5P: DRYWELL 2

Hydrograph



E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 20

Summary for Pond 6P: DRYWELL 1

Inflow Area = 0.115 ac, 100.00% Impervious, Inflow Depth = 3.07" for 5 yr event
 Inflow = 0.09 cfs @ 7.88 hrs, Volume= 0.029 af
 Outflow = 0.09 cfs @ 7.88 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.09 cfs @ 7.88 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 0.08' @ 7.88 hrs Surf.Area= 46 sf Storage= 1 cf

Plug-Flow detention time= 0.3 min calculated for 0.029 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (664.7 - 664.4)

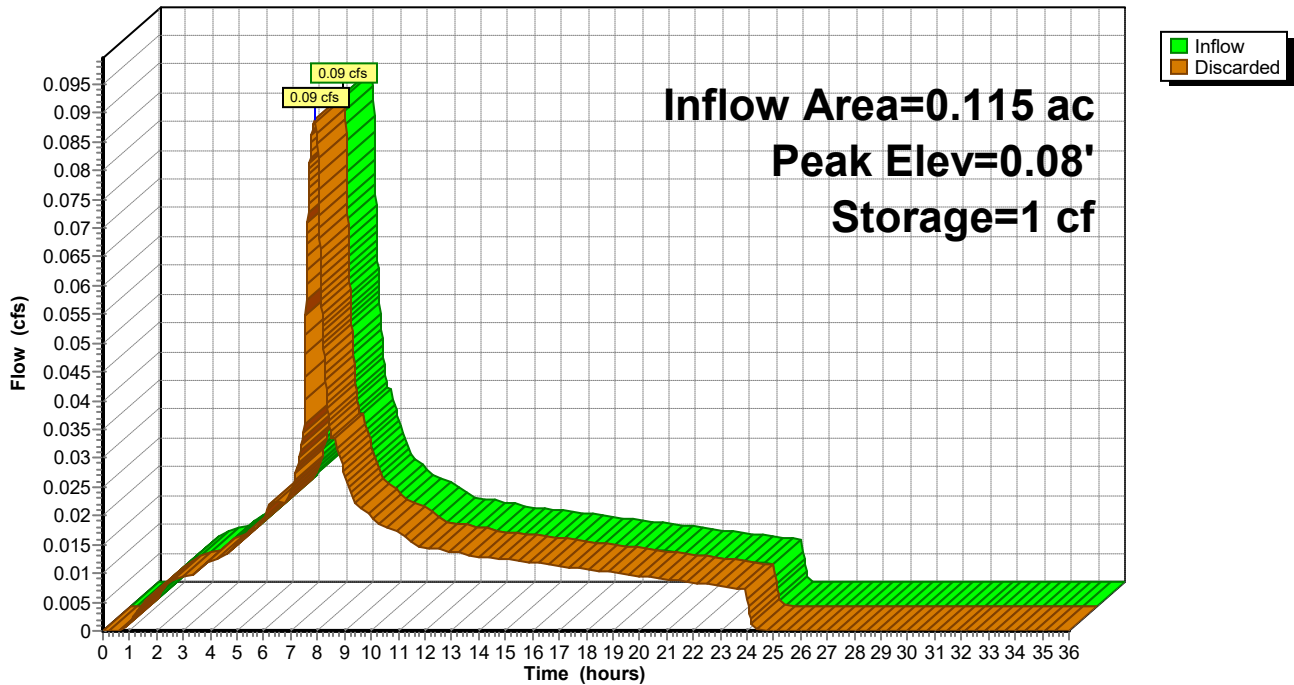
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.08' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.11 cfs)

Pond 6P: DRYWELL 1

Hydrograph



E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 21

Summary for Pond 8P: PLANTER Growing Media

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 3.07" for 5 yr event
 Inflow = 0.29 cfs @ 7.90 hrs, Volume= 0.095 af
 Outflow = 0.29 cfs @ 7.90 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.01 cfs @ 7.90 hrs, Volume= 0.021 af
 Primary = 0.27 cfs @ 7.90 hrs, Volume= 0.074 af

Routed to Pond 9P : Planter Rock Gallery

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.89' @ 7.90 hrs Surf.Area= 197 sf Storage= 19 cf

Plug-Flow detention time= 4.6 min calculated for 0.095 af (100% of inflow)
 Center-of-Mass det. time= 4.6 min (670.0 - 665.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1.50'	74 cf	3.00'W x 65.80'L x 1.50'H SOIL MEDIA 296 cf Overall x 25.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	1.50'	2.000 in/hr Exfiltration over Wetted area
#2	Primary	1.75'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 7.90 hrs HW=1.89' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.27 cfs @ 7.90 hrs HW=1.89' (Free Discharge)
 ↑2=Orifice/Grate (Weir Controls 0.27 cfs @ 1.23 fps)

E23-011 STORM

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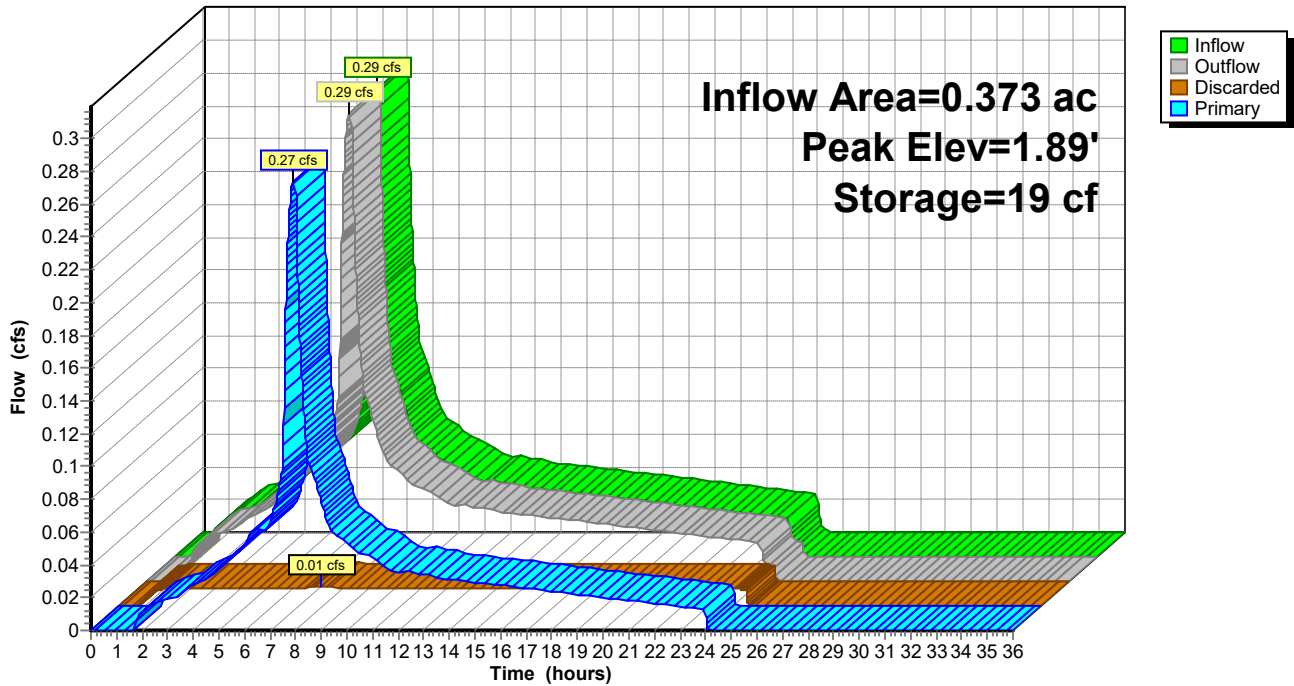
Type IA 24-hr 5 yr Rainfall=3.30"

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Page 22

Pond 8P: PLANTER Growing Media

Hydrograph



E23-011 STORM

Type IA 24-hr 5 yr Rainfall=3.30"

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Page 23

Summary for Pond 9P: Planter Rock Gallery

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 2.39" for 5 yr event
 Inflow = 0.27 cfs @ 7.90 hrs, Volume= 0.074 af
 Outflow = 0.27 cfs @ 7.90 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
 Discarded = 0.27 cfs @ 7.90 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.01' @ 7.90 hrs Surf.Area= 204 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.074 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (642.6 - 642.6)

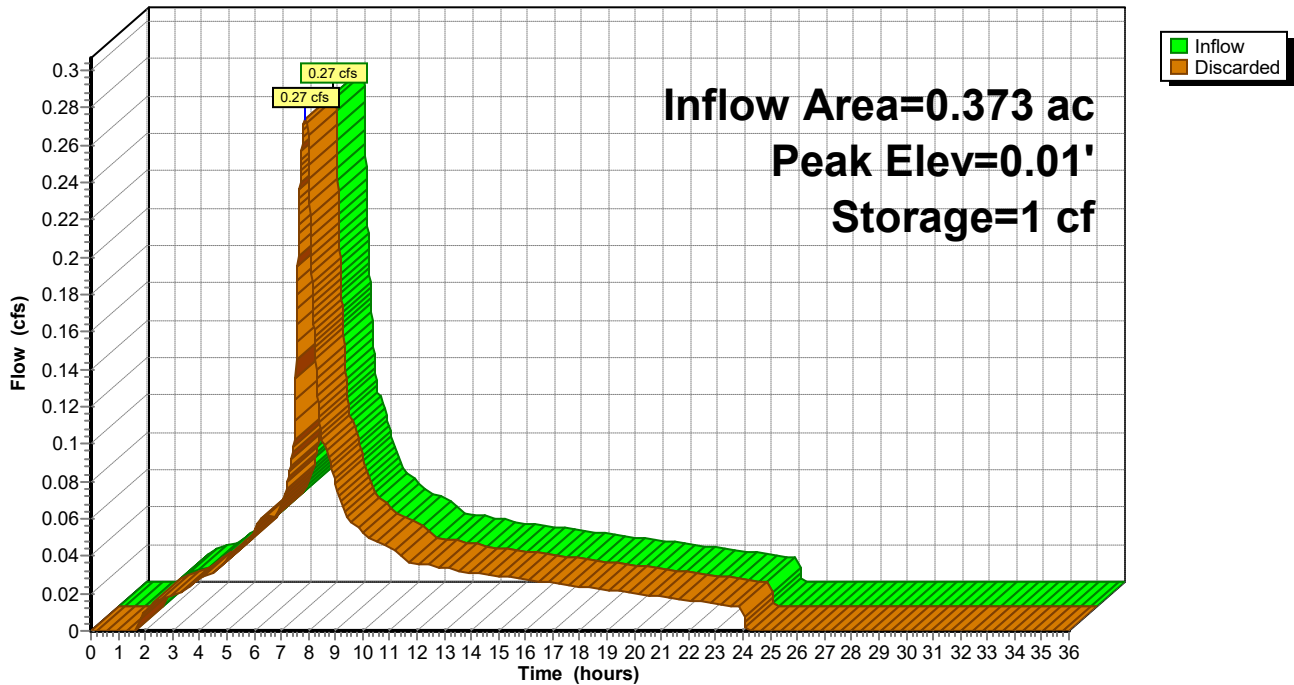
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	143 cf	3.00'W x 68.00'L x 1.75'H Prismatic 357 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.48 cfs @ 7.90 hrs HW=0.01' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.48 cfs)

Pond 9P: Planter Rock Gallery

Hydrograph



E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 24

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Drainage North Runoff Area=5,020 sf 100.00% Impervious Runoff Depth=3.57"
Tc=5.0 min CN=0/98 Runoff=0.10 cfs 0.034 af

Subcatchment 3S: Roof Drains South Runoff Area=4,730 sf 100.00% Impervious Runoff Depth=3.57"
Tc=5.0 min CN=0/98 Runoff=0.10 cfs 0.032 af

Subcatchment 7S: Paved Areas Runoff Area=16,260 sf 100.00% Impervious Runoff Depth=3.57"
Tc=6.0 min CN=0/98 Runoff=0.33 cfs 0.111 af

Pond 5P: DRYWELL 2 Peak Elev=0.09' Storage=2 cf Inflow=0.10 cfs 0.032 af
Outflow=0.10 cfs 0.032 af

Pond 6P: DRYWELL 1 Peak Elev=0.09' Storage=2 cf Inflow=0.10 cfs 0.034 af
Outflow=0.10 cfs 0.034 af

Pond 8P: PLANTER Growing Media Peak Elev=1.91' Storage=20 cf Inflow=0.33 cfs 0.111 af
Discarded=0.01 cfs 0.021 af Primary=0.32 cfs 0.090 af Outflow=0.33 cfs 0.111 af

Pond 9P: Planter Rock Gallery Peak Elev=0.01' Storage=1 cf Inflow=0.32 cfs 0.090 af
Outflow=0.32 cfs 0.090 af

Total Runoff Area = 0.597 ac Runoff Volume = 0.177 af Average Runoff Depth = 3.57"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.597 ac

E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 25

Summary for Subcatchment 1S: Roof Drainage North Bulding

Runoff = 0.10 cfs @ 7.88 hrs, Volume= 0.034 af, Depth= 3.57"
 Routed to Pond 6P : DRYWELL 1

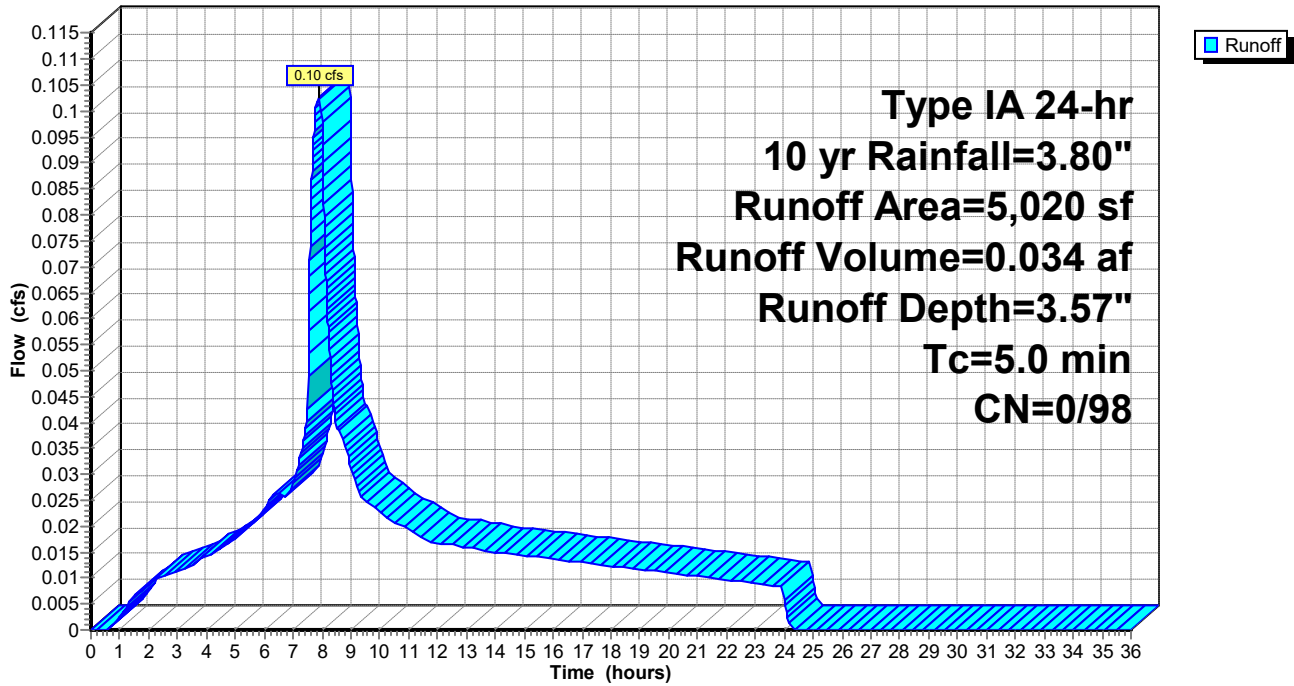
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10 yr Rainfall=3.80"

Area (sf)	CN	Description
* 5,020	98	ROOF
5,020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: Roof Drainage North Bulding

Hydrograph



E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 26

Summary for Subcatchment 3S: Roof Drains South Building

Runoff = 0.10 cfs @ 7.88 hrs, Volume= 0.032 af, Depth= 3.57"
Routed to Pond 5P : DRYWELL 2

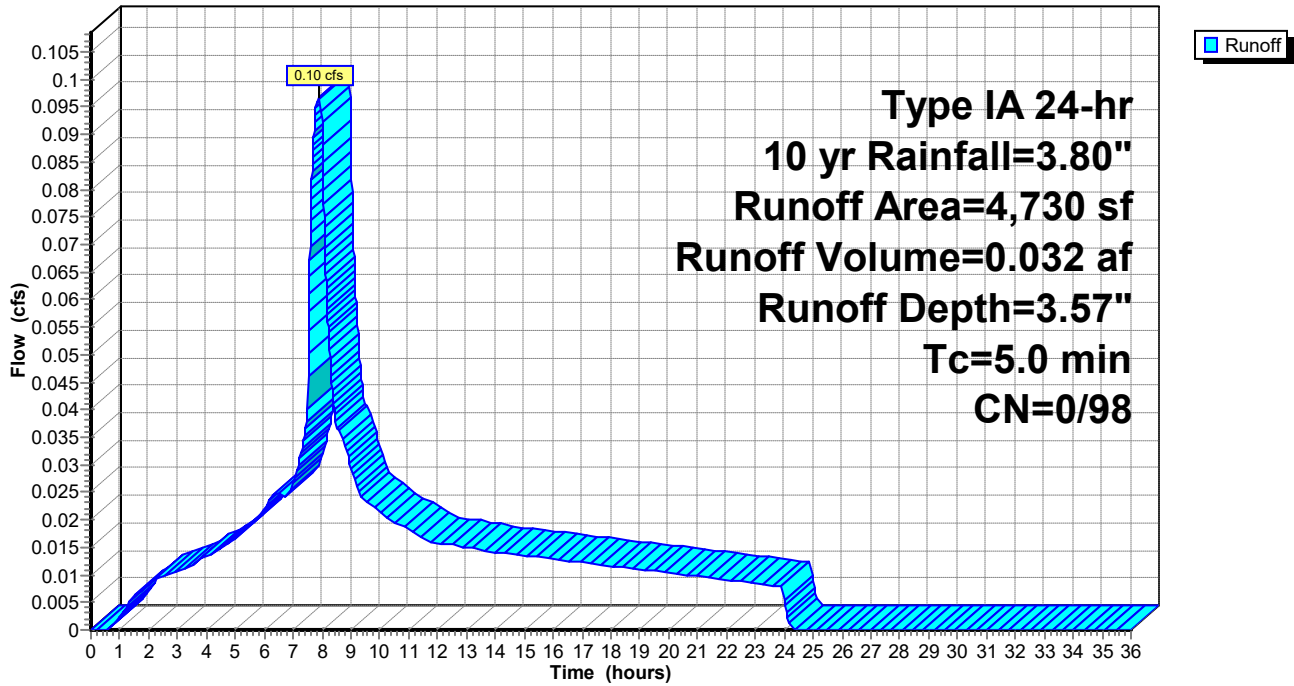
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 yr Rainfall=3.80"

Area (sf)	CN	Description
* 4,730	98	Roof
4,730		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: Roof Drains South Building

Hydrograph



E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 27

Summary for Subcatchment 7S: Paved Areas

Runoff = 0.33 cfs @ 7.90 hrs, Volume= 0.111 af, Depth= 3.57"
 Routed to Pond 8P : PLANTER Growing Media

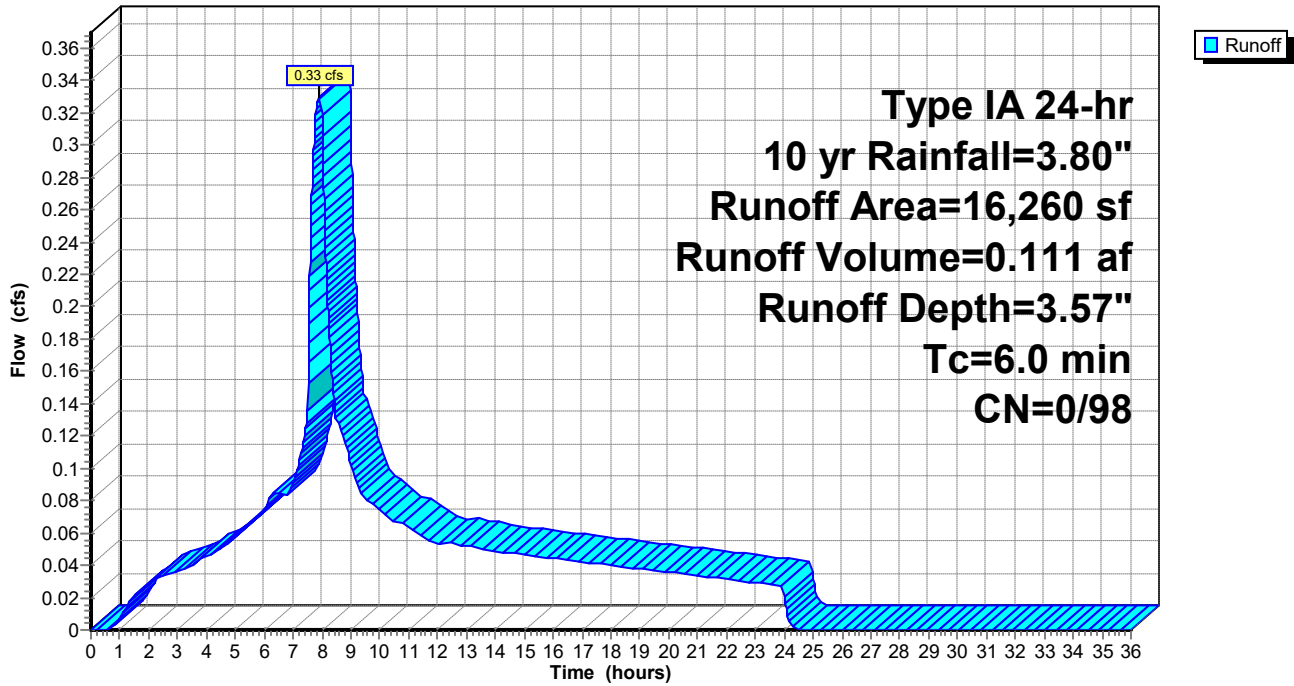
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10 yr Rainfall=3.80"

Area (sf)	CN	Description
* 16,260	98	
16,260		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 7S: Paved Areas

Hydrograph



E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 28

Summary for Pond 5P: DRYWELL 2

Inflow Area = 0.109 ac, 100.00% Impervious, Inflow Depth = 3.57" for 10 yr event
 Inflow = 0.10 cfs @ 7.88 hrs, Volume= 0.032 af
 Outflow = 0.10 cfs @ 7.88 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.10 cfs @ 7.88 hrs, Volume= 0.032 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 0.09' @ 7.88 hrs Surf.Area= 46 sf Storage= 2 cf

Plug-Flow detention time= 0.3 min calculated for 0.032 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (661.0 - 660.8)

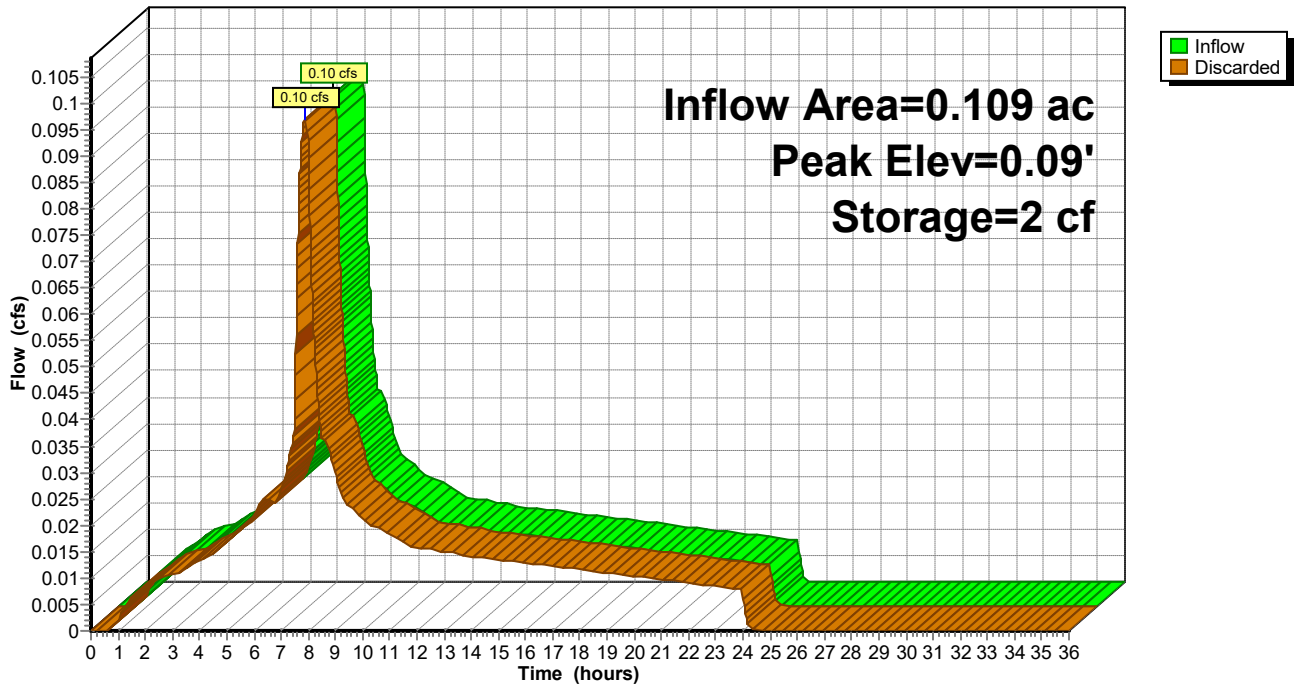
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.09' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 5P: DRYWELL 2

Hydrograph



E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 29

Summary for Pond 6P: DRYWELL 1

Inflow Area = 0.115 ac, 100.00% Impervious, Inflow Depth = 3.57" for 10 yr event
 Inflow = 0.10 cfs @ 7.88 hrs, Volume= 0.034 af
 Outflow = 0.10 cfs @ 7.88 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.10 cfs @ 7.88 hrs, Volume= 0.034 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 0.09' @ 7.88 hrs Surf.Area= 46 sf Storage= 2 cf

Plug-Flow detention time= 0.3 min calculated for 0.034 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (661.0 - 660.8)

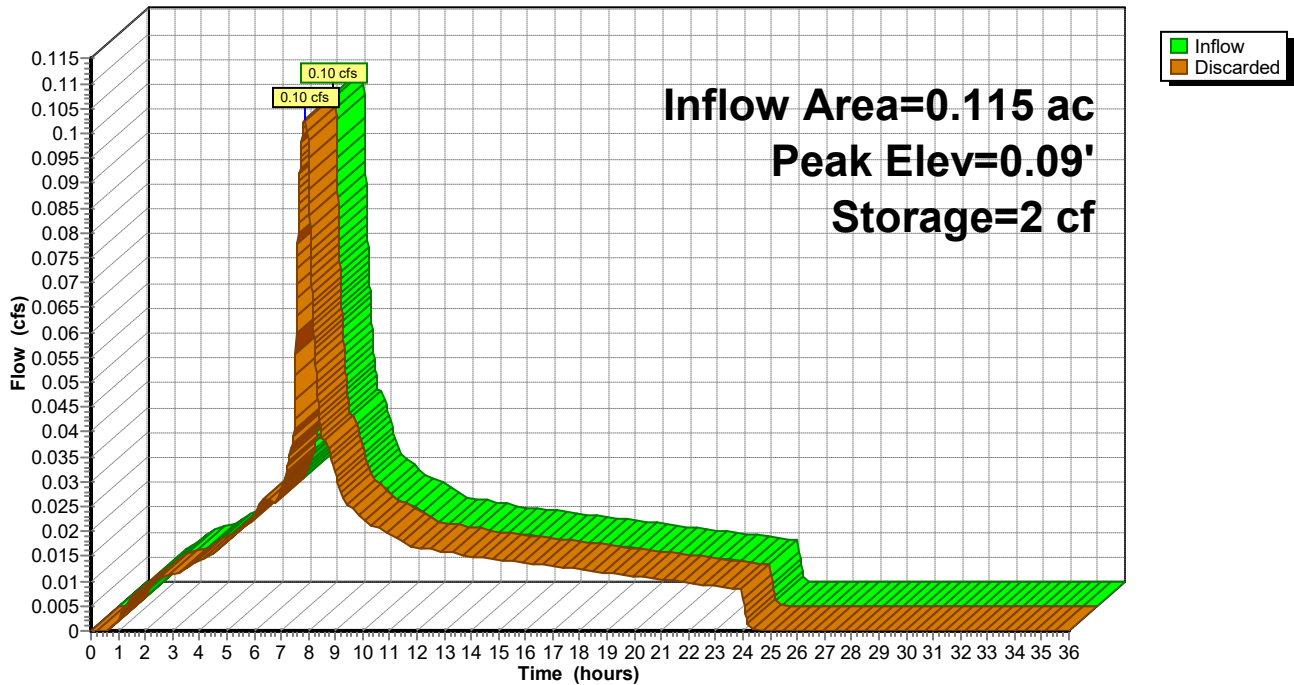
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.09' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 6P: DRYWELL 1

Hydrograph



E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 30

Summary for Pond 8P: PLANTER Growing Media

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 3.57" for 10 yr event
 Inflow = 0.33 cfs @ 7.90 hrs, Volume= 0.111 af
 Outflow = 0.33 cfs @ 7.90 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.01 cfs @ 7.90 hrs, Volume= 0.021 af
 Primary = 0.32 cfs @ 7.90 hrs, Volume= 0.090 af

Routed to Pond 9P : Planter Rock Gallery

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.91' @ 7.90 hrs Surf.Area= 197 sf Storage= 20 cf

Plug-Flow detention time= 4.1 min calculated for 0.111 af (100% of inflow)
 Center-of-Mass det. time= 4.1 min (665.9 - 661.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1.50'	74 cf	3.00'W x 65.80'L x 1.50'H SOIL MEDIA 296 cf Overall x 25.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	1.50'	2.000 in/hr Exfiltration over Wetted area
#2	Primary	1.75'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 7.90 hrs HW=1.91' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.32 cfs @ 7.90 hrs HW=1.91' (Free Discharge)
 ↑2=Orifice/Grate (Weir Controls 0.32 cfs @ 1.29 fps)

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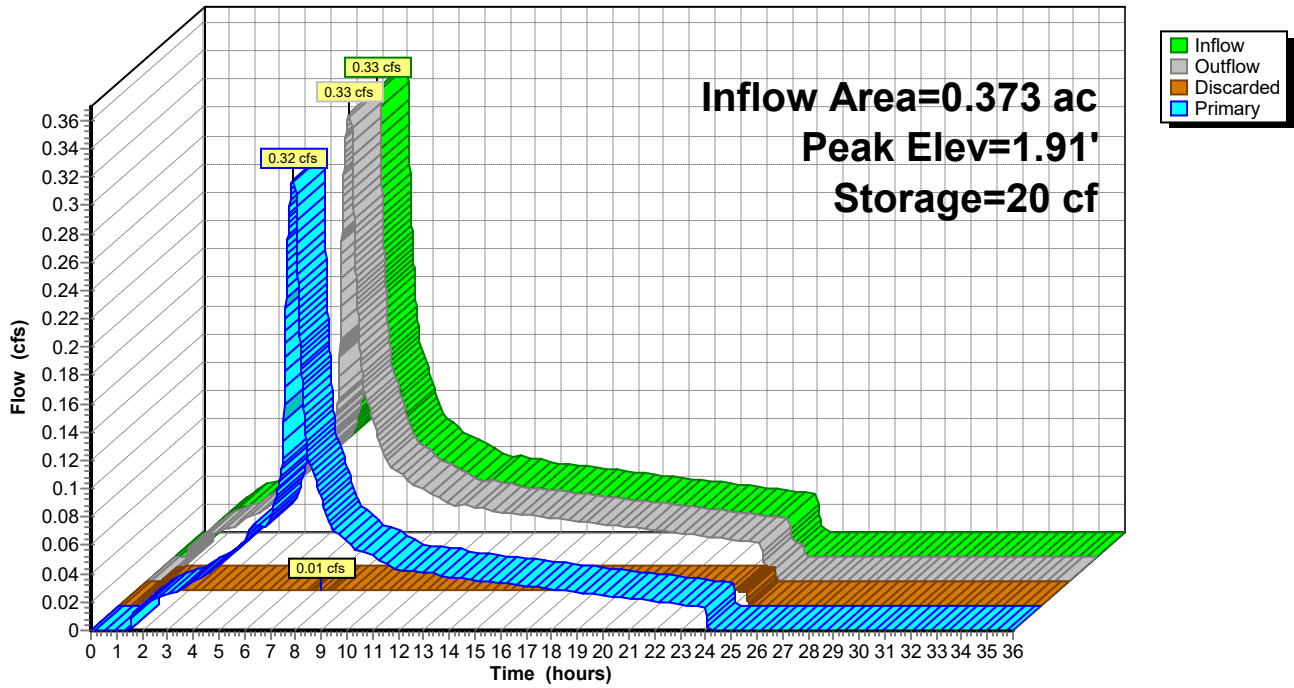
Type IA 24-hr 10 yr Rainfall=3.80"

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Page 31

Pond 8P: PLANTER Growing Media

Hydrograph



E23-011 STORM

Type IA 24-hr 10 yr Rainfall=3.80"

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Page 32

Summary for Pond 9P: Planter Rock Gallery

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 2.88" for 10 yr event
 Inflow = 0.32 cfs @ 7.90 hrs, Volume= 0.090 af
 Outflow = 0.32 cfs @ 7.90 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min
 Discarded = 0.32 cfs @ 7.90 hrs, Volume= 0.090 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.01' @ 7.90 hrs Surf.Area= 204 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.090 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (642.8 - 642.7)

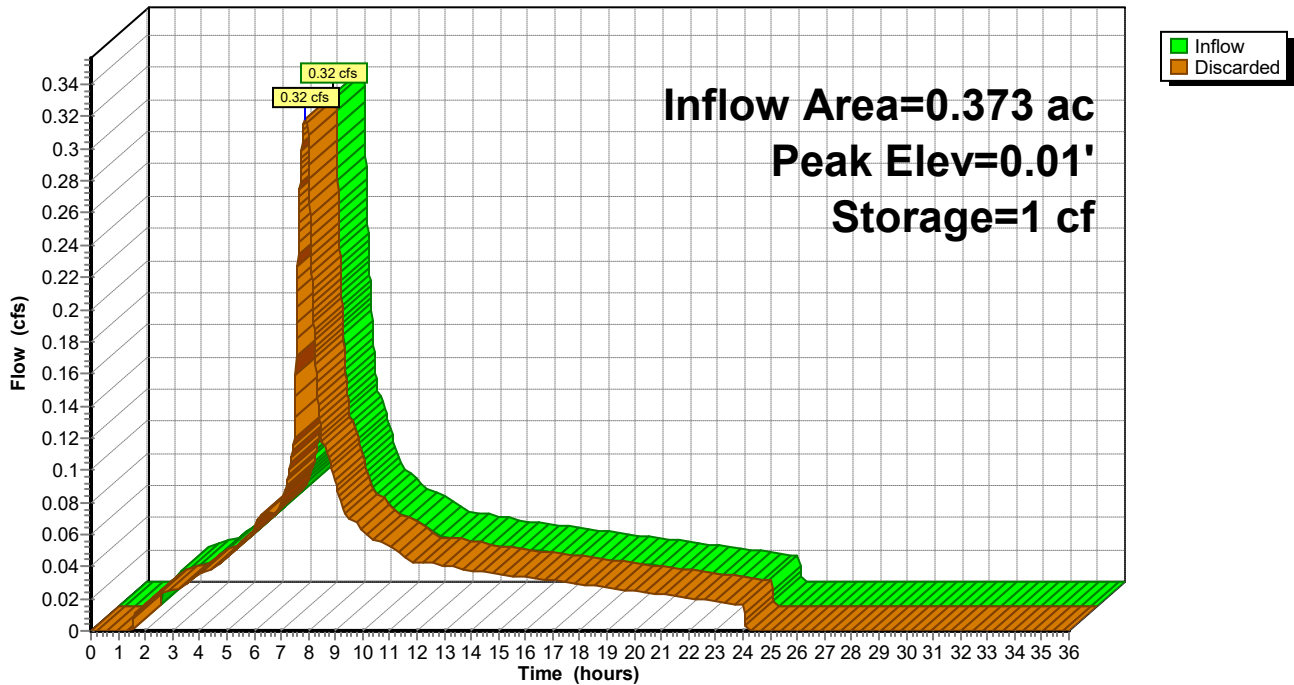
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	143 cf	3.00'W x 68.00'L x 1.75'H Prismatic 357 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.48 cfs @ 7.90 hrs HW=0.01' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.48 cfs)

Pond 9P: Planter Rock Gallery

Hydrograph



E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 33

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Drainage North Runoff Area=5,020 sf 100.00% Impervious Runoff Depth=3.86"
Tc=5.0 min CN=0/98 Runoff=0.11 cfs 0.037 af

Subcatchment 3S: Roof Drains South Runoff Area=4,730 sf 100.00% Impervious Runoff Depth=3.86"
Tc=5.0 min CN=0/98 Runoff=0.10 cfs 0.035 af

Subcatchment 7S: Paved Areas Runoff Area=16,260 sf 100.00% Impervious Runoff Depth=3.86"
Tc=6.0 min CN=0/98 Runoff=0.36 cfs 0.120 af

Pond 5P: DRYWELL 2 Peak Elev=0.09' Storage=2 cf Inflow=0.10 cfs 0.035 af
Outflow=0.10 cfs 0.035 af

Pond 6P: DRYWELL 1 Peak Elev=0.10' Storage=2 cf Inflow=0.11 cfs 0.037 af
Outflow=0.11 cfs 0.037 af

Pond 8P: PLANTER Growing Media Peak Elev=1.92' Storage=20 cf Inflow=0.36 cfs 0.120 af
Discarded=0.01 cfs 0.021 af Primary=0.35 cfs 0.099 af Outflow=0.36 cfs 0.120 af

Pond 9P: Planter Rock Gallery Peak Elev=0.01' Storage=1 cf Inflow=0.35 cfs 0.099 af
Outflow=0.35 cfs 0.099 af

Total Runoff Area = 0.597 ac Runoff Volume = 0.192 af Average Runoff Depth = 3.86"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.597 ac

E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 34

Summary for Subcatchment 1S: Roof Drainage North Bulding

Runoff = 0.11 cfs @ 7.88 hrs, Volume= 0.037 af, Depth= 3.86"
 Routed to Pond 6P : DRYWELL 1

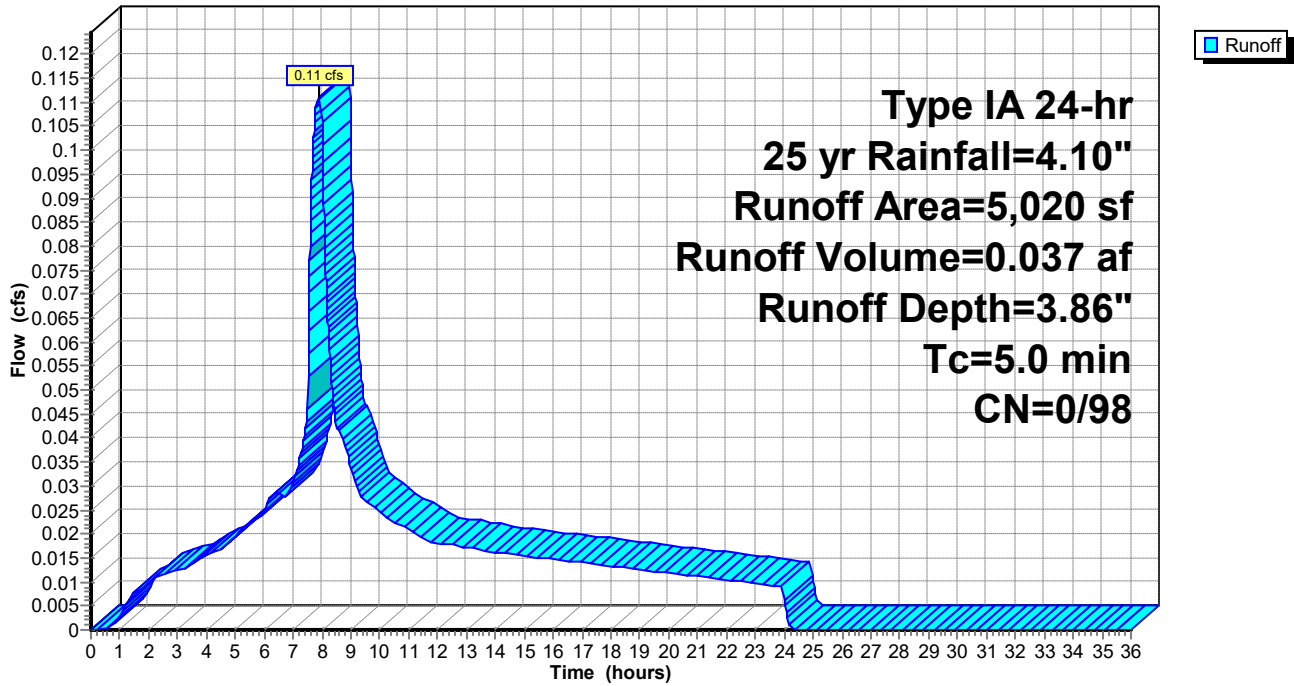
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25 yr Rainfall=4.10"

Area (sf)	CN	Description
* 5,020	98	ROOF
5,020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: Roof Drainage North Bulding

Hydrograph



E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 35

Summary for Subcatchment 3S: Roof Drains South Building

Runoff = 0.10 cfs @ 7.88 hrs, Volume= 0.035 af, Depth= 3.86"
 Routed to Pond 5P : DRYWELL 2

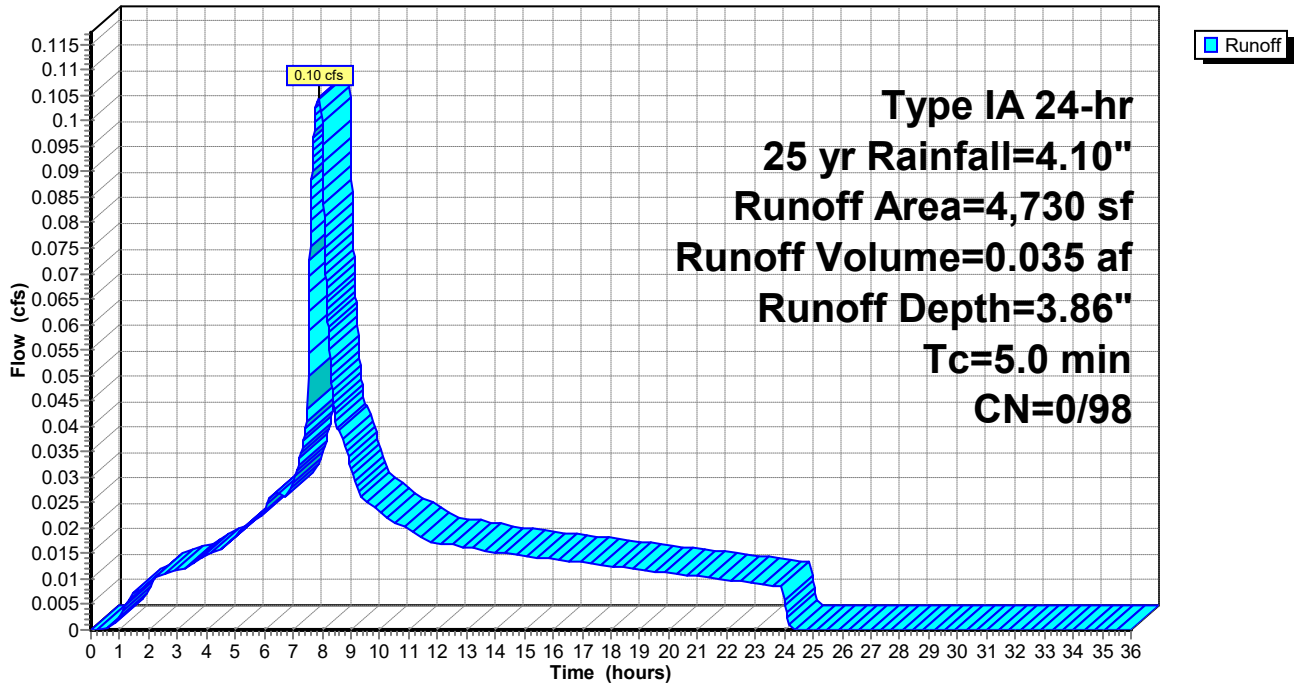
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25 yr Rainfall=4.10"

Area (sf)	CN	Description
* 4,730	98	Roof
4,730		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: Roof Drains South Building

Hydrograph



E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 36

Summary for Subcatchment 7S: Paved Areas

Runoff = 0.36 cfs @ 7.90 hrs, Volume= 0.120 af, Depth= 3.86"
 Routed to Pond 8P : PLANTER Growing Media

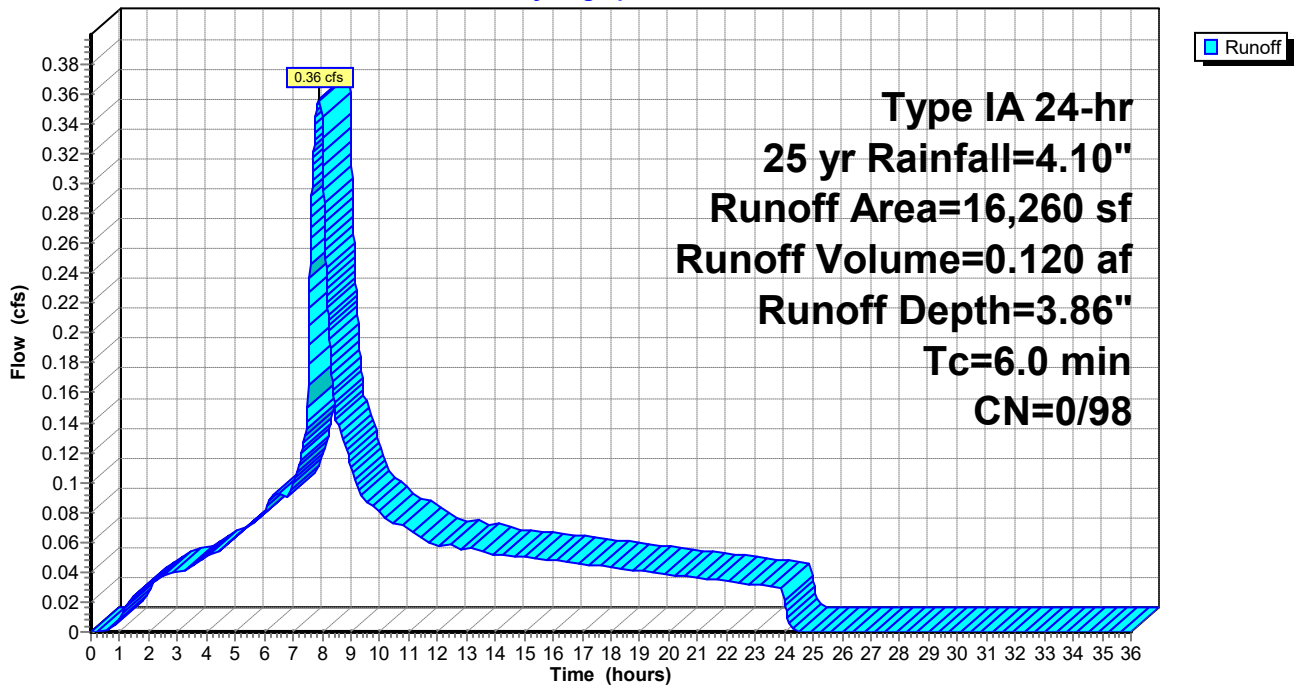
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25 yr Rainfall=4.10"

Area (sf)	CN	Description
* 16,260	98	
16,260		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 7S: Paved Areas

Hydrograph



E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 37

Summary for Pond 5P: DRYWELL 2

Inflow Area = 0.109 ac, 100.00% Impervious, Inflow Depth = 3.86" for 25 yr event
 Inflow = 0.10 cfs @ 7.88 hrs, Volume= 0.035 af
 Outflow = 0.10 cfs @ 7.88 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.10 cfs @ 7.88 hrs, Volume= 0.035 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 0.09' @ 7.88 hrs Surf.Area= 46 sf Storage= 2 cf

Plug-Flow detention time= 0.3 min calculated for 0.035 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (659.2 - 659.0)

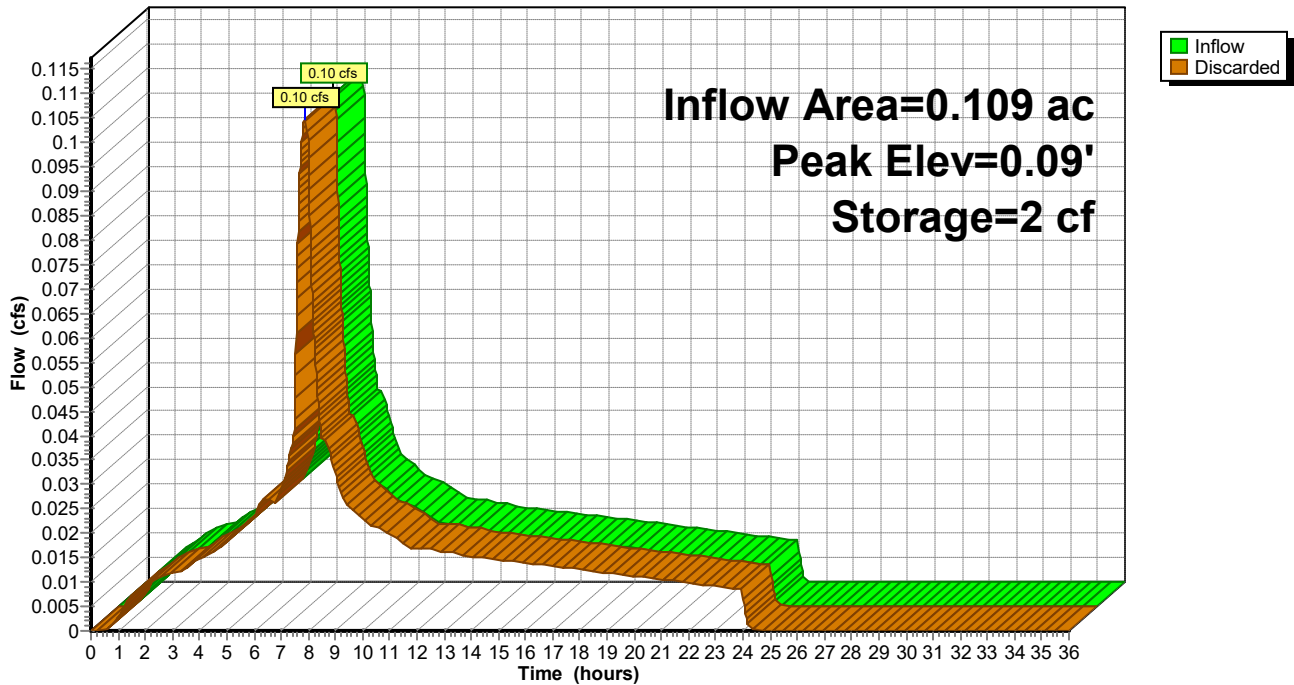
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.09' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 5P: DRYWELL 2

Hydrograph



E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 38

Summary for Pond 6P: DRYWELL 1

Inflow Area = 0.115 ac, 100.00% Impervious, Inflow Depth = 3.86" for 25 yr event
 Inflow = 0.11 cfs @ 7.88 hrs, Volume= 0.037 af
 Outflow = 0.11 cfs @ 7.88 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.11 cfs @ 7.88 hrs, Volume= 0.037 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 0.10' @ 7.88 hrs Surf.Area= 46 sf Storage= 2 cf

Plug-Flow detention time= 0.3 min calculated for 0.037 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (659.2 - 659.0)

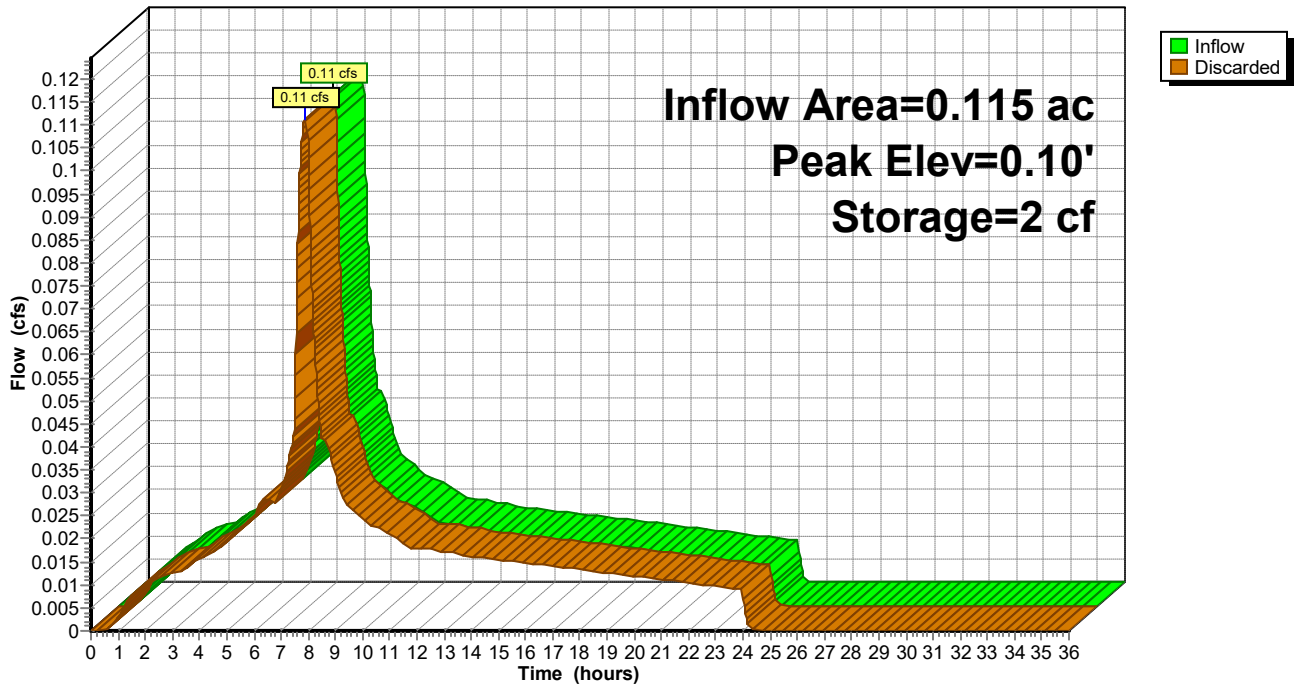
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.88 hrs HW=0.10' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 6P: DRYWELL 1

Hydrograph



E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 39

Summary for Pond 8P: PLANTER Growing Media

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 3.86" for 25 yr event
Inflow = 0.36 cfs @ 7.90 hrs, Volume= 0.120 af
Outflow = 0.36 cfs @ 7.90 hrs, Volume= 0.120 af, Atten= 0%, Lag= 0.3 min
Discarded = 0.01 cfs @ 7.90 hrs, Volume= 0.021 af
Primary = 0.35 cfs @ 7.90 hrs, Volume= 0.099 af

Routed to Pond 9P : Planter Rock Gallery

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 1.92' @ 7.90 hrs Surf.Area= 197 sf Storage= 20 cf

Plug-Flow detention time= 3.8 min calculated for 0.120 af (100% of inflow)
Center-of-Mass det. time= 3.8 min (663.8 - 660.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1.50'	74 cf	3.00'W x 65.80'L x 1.50'H SOIL MEDIA 296 cf Overall x 25.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	1.50'	2.000 in/hr Exfiltration over Wetted area
#2	Primary	1.75'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 7.90 hrs HW=1.92' (Free Discharge)
↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.34 cfs @ 7.90 hrs HW=1.92' (Free Discharge)
↑2=Orifice/Grate (Weir Controls 0.34 cfs @ 1.33 fps)

E23-011 STORM

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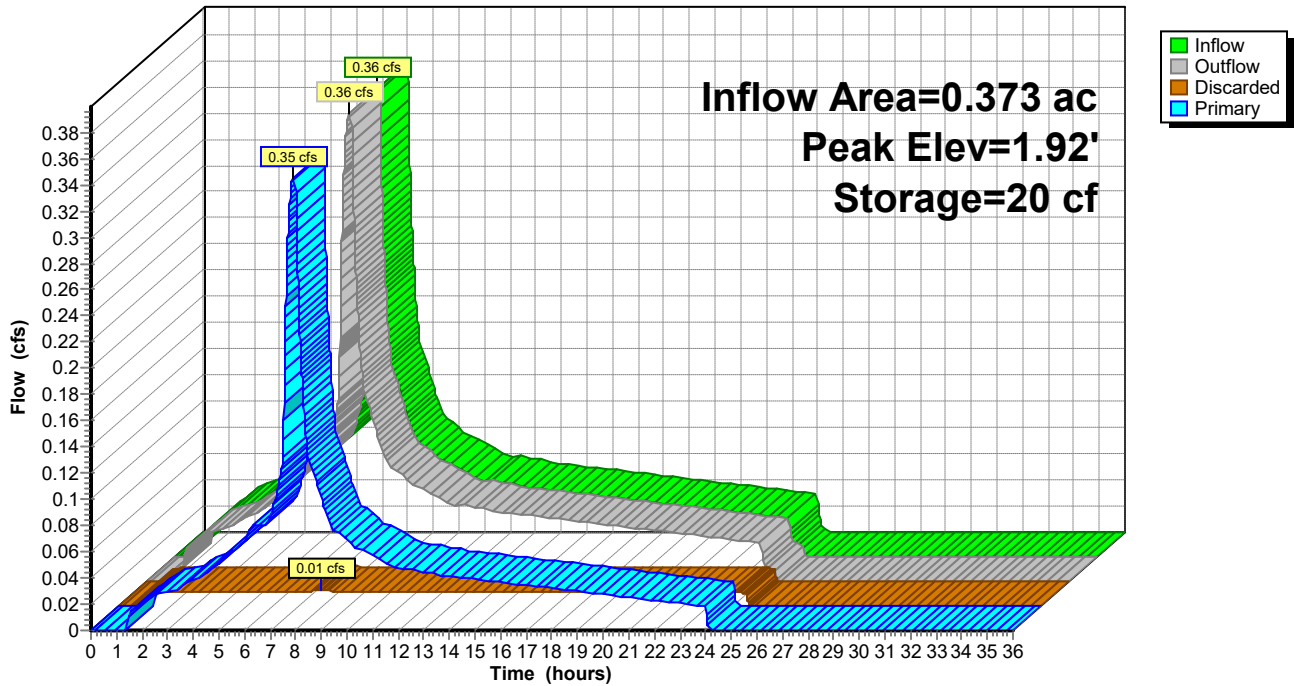
Type IA 24-hr 25 yr Rainfall=4.10"

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Page 40

Pond 8P: PLANTER Growing Media

Hydrograph



E23-011 STORM

Type IA 24-hr 25 yr Rainfall=4.10"

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Page 41

Summary for Pond 9P: Planter Rock Gallery

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 3.17" for 25 yr event
 Inflow = 0.35 cfs @ 7.90 hrs, Volume= 0.099 af
 Outflow = 0.35 cfs @ 7.90 hrs, Volume= 0.099 af, Atten= 0%, Lag= 0.0 min
 Discarded = 0.35 cfs @ 7.90 hrs, Volume= 0.099 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.01' @ 7.90 hrs Surf.Area= 204 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.099 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (642.7 - 642.7)

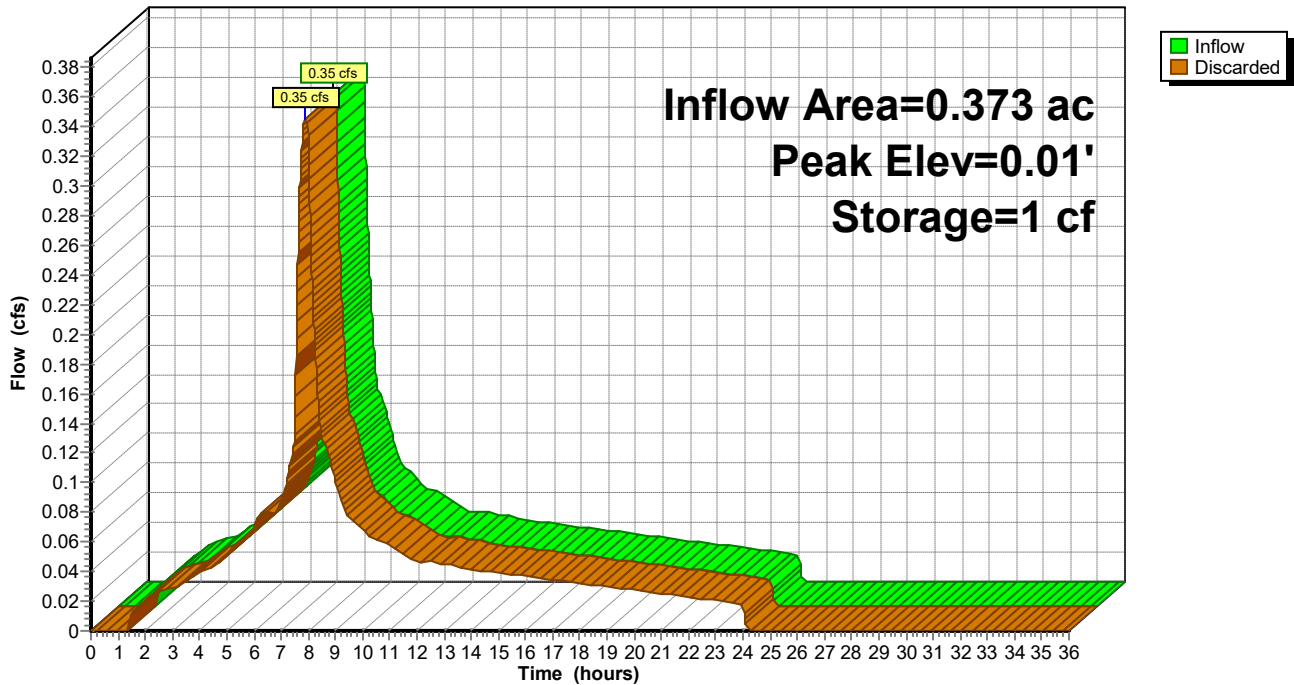
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	143 cf	3.00'W x 68.00'L x 1.75'H Prismatic 357 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.48 cfs @ 7.90 hrs HW=0.01' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.48 cfs)

Pond 9P: Planter Rock Gallery

Hydrograph



E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 42

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Drainage North Runoff Area=5,020 sf 100.00% Impervious Runoff Depth=4.66"
Tc=5.0 min CN=0/98 Runoff=0.13 cfs 0.045 af

Subcatchment 3S: Roof Drains South Runoff Area=4,730 sf 100.00% Impervious Runoff Depth=4.66"
Tc=5.0 min CN=0/98 Runoff=0.13 cfs 0.042 af

Subcatchment 7S: Paved Areas Runoff Area=16,260 sf 100.00% Impervious Runoff Depth=4.66"
Tc=6.0 min CN=0/98 Runoff=0.43 cfs 0.145 af

Pond 5P: DRYWELL 2 Peak Elev=0.30' Storage=6 cf Inflow=0.13 cfs 0.042 af
Outflow=0.12 cfs 0.042 af

Pond 6P: DRYWELL 1 Peak Elev=0.43' Storage=8 cf Inflow=0.13 cfs 0.045 af
Outflow=0.13 cfs 0.045 af

Pond 8P: PLANTER Growing Media Peak Elev=1.94' Storage=22 cf Inflow=0.43 cfs 0.145 af
Discarded=0.01 cfs 0.022 af Primary=0.42 cfs 0.123 af Outflow=0.43 cfs 0.145 af

Pond 9P: Planter Rock Gallery Peak Elev=0.02' Storage=1 cf Inflow=0.42 cfs 0.123 af
Outflow=0.42 cfs 0.123 af

Total Runoff Area = 0.597 ac Runoff Volume = 0.232 af Average Runoff Depth = 4.66"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.597 ac

E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 43

Summary for Subcatchment 1S: Roof Drainage North Bulding

Runoff = 0.13 cfs @ 7.88 hrs, Volume= 0.045 af, Depth= 4.66"
 Routed to Pond 6P : DRYWELL 1

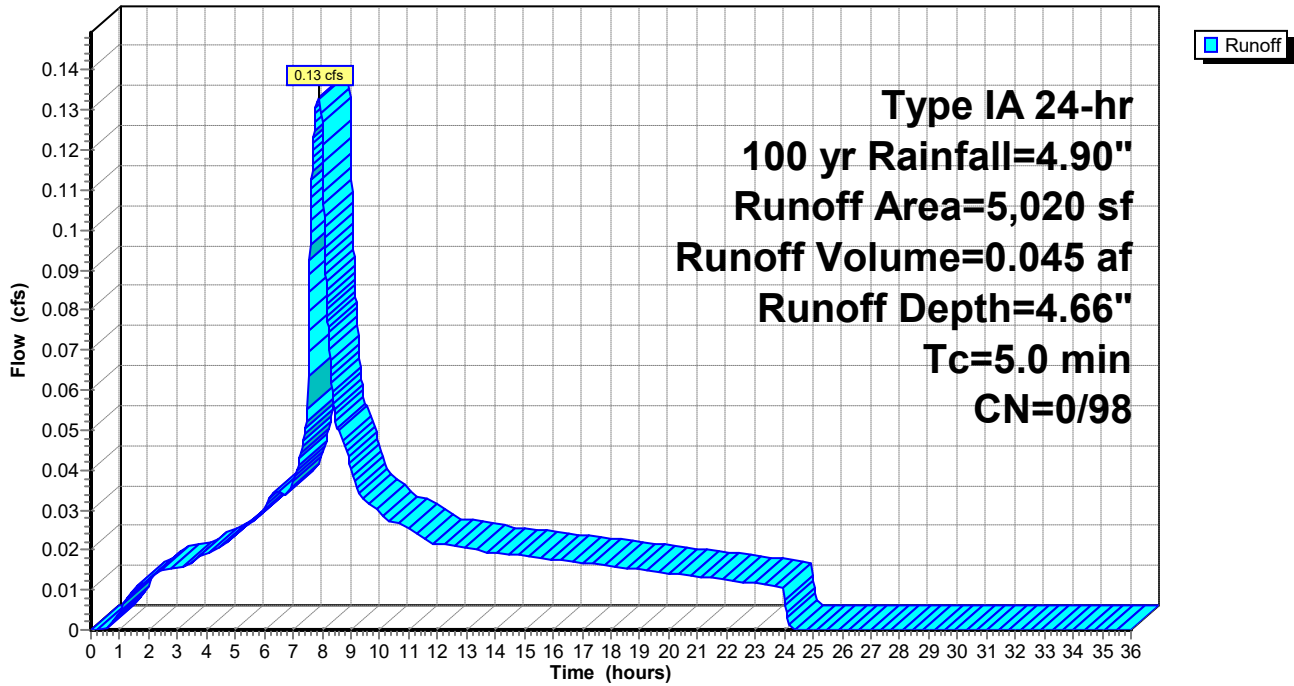
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100 yr Rainfall=4.90"

Area (sf)	CN	Description
* 5,020	98	ROOF
5,020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: Roof Drainage North Bulding

Hydrograph



E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 44

Summary for Subcatchment 3S: Roof Drains South Building

Runoff = 0.13 cfs @ 7.88 hrs, Volume= 0.042 af, Depth= 4.66"
 Routed to Pond 5P : DRYWELL 2

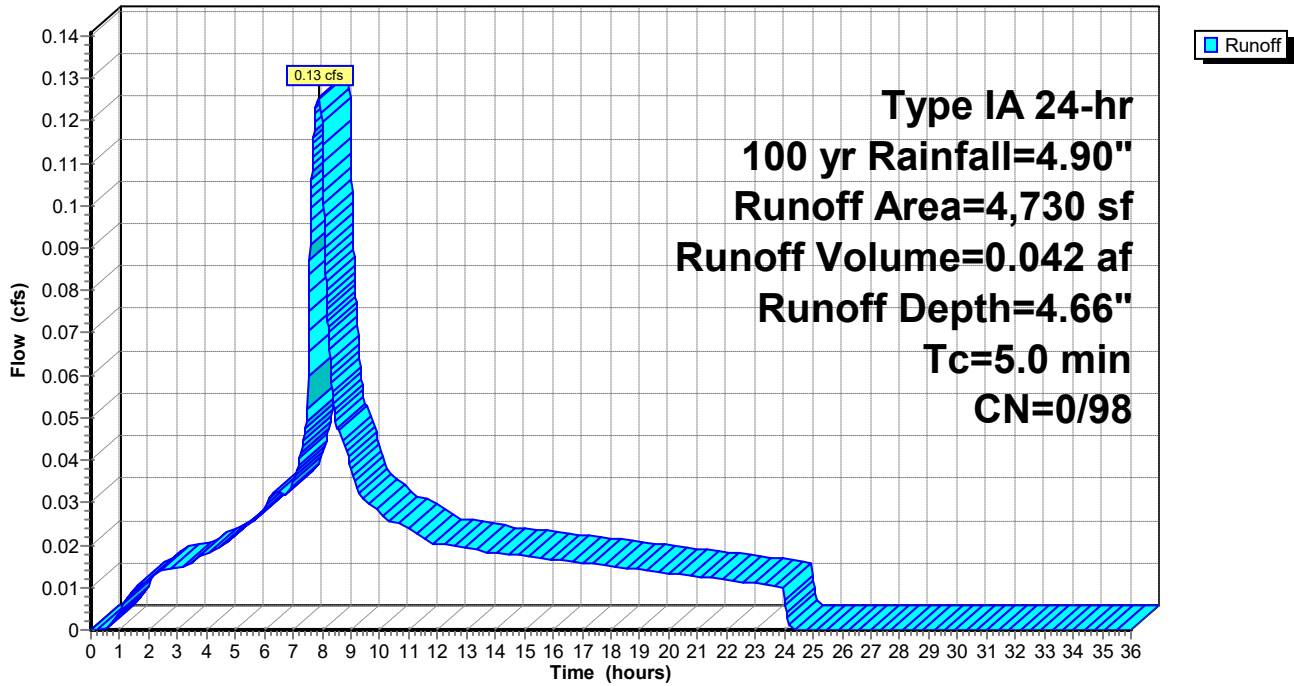
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100 yr Rainfall=4.90"

Area (sf)	CN	Description
* 4,730	98	Roof
4,730		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: Roof Drains South Building

Hydrograph



E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 45

Summary for Subcatchment 7S: Paved Areas

Runoff = 0.43 cfs @ 7.89 hrs, Volume= 0.145 af, Depth= 4.66"

Routed to Pond 8P : PLANTER Growing Media

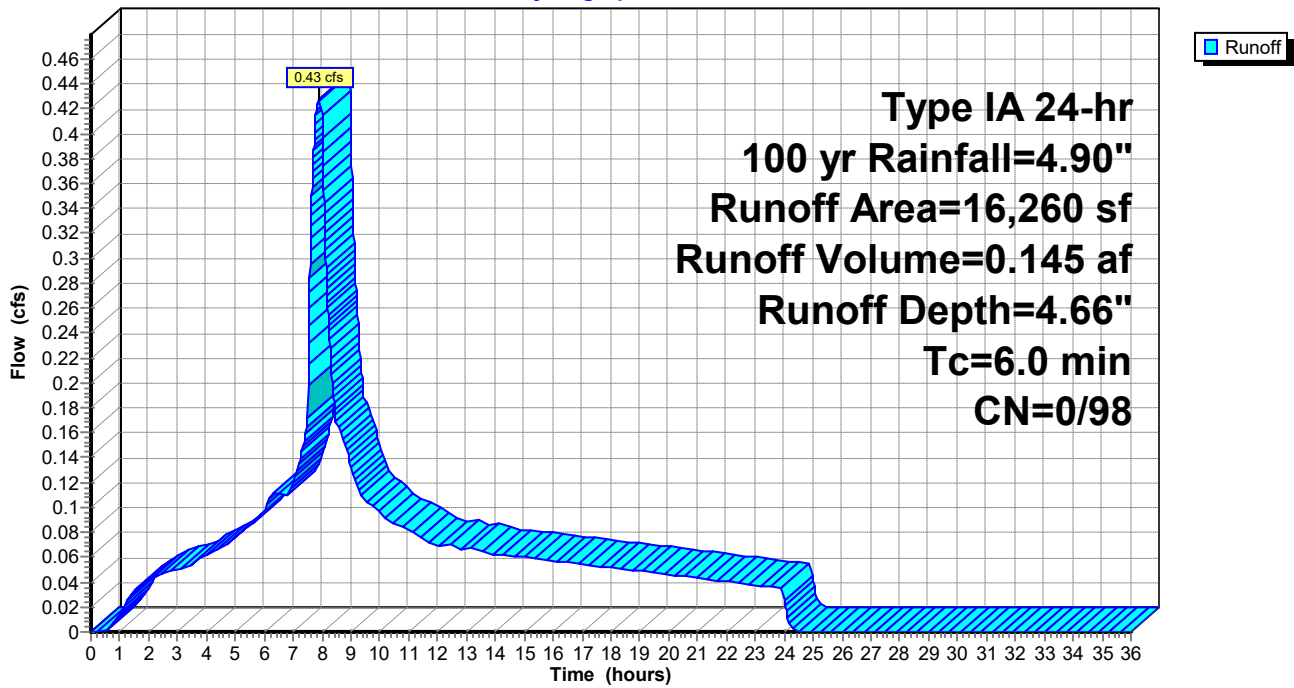
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 100 yr Rainfall=4.90"

Area (sf)	CN	Description
* 16,260	98	
16,260		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 7S: Paved Areas

Hydrograph



E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 46

Summary for Pond 5P: DRYWELL 2

Inflow Area = 0.109 ac, 100.00% Impervious, Inflow Depth = 4.66" for 100 yr event
 Inflow = 0.13 cfs @ 7.88 hrs, Volume= 0.042 af
 Outflow = 0.12 cfs @ 7.96 hrs, Volume= 0.042 af, Atten= 2%, Lag= 4.8 min
 Discarded = 0.12 cfs @ 7.96 hrs, Volume= 0.042 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 0.30' @ 7.96 hrs Surf.Area= 46 sf Storage= 6 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.3 min (655.4 - 655.1)

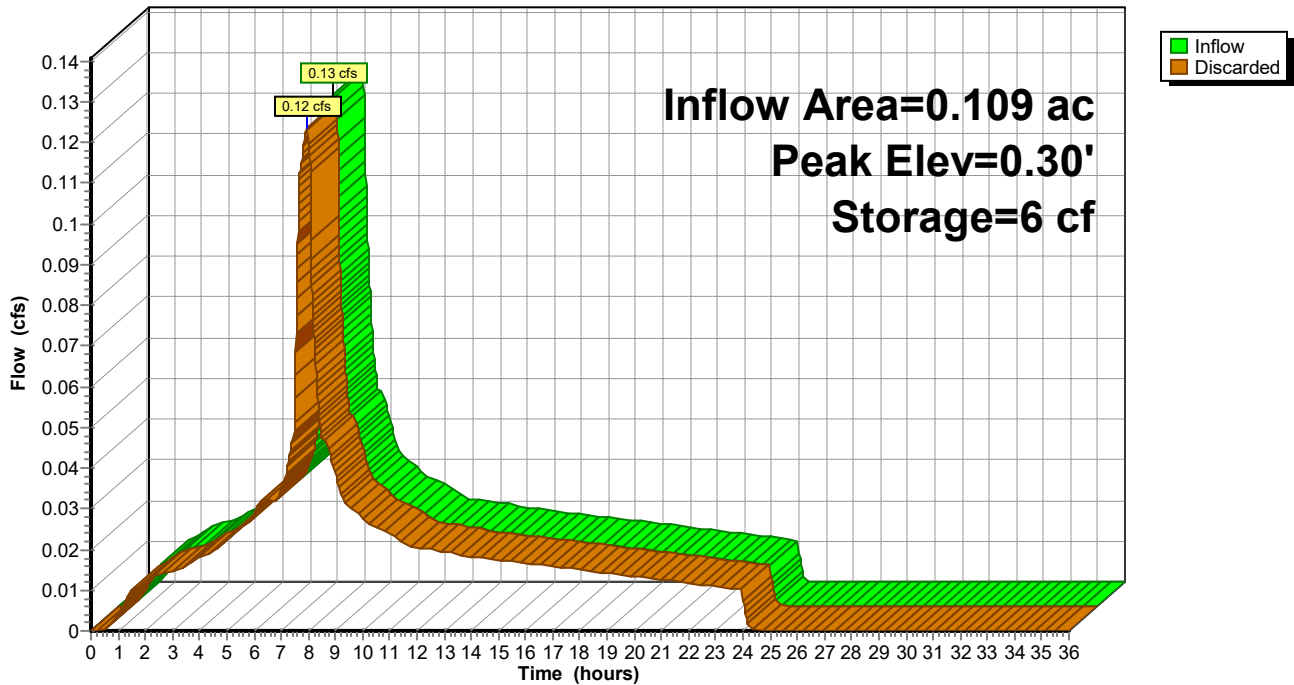
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.12 cfs @ 7.96 hrs HW=0.30' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.12 cfs)

Pond 5P: DRYWELL 2

Hydrograph



E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 47

Summary for Pond 6P: DRYWELL 1

Inflow Area = 0.115 ac, 100.00% Impervious, Inflow Depth = 4.66" for 100 yr event
 Inflow = 0.13 cfs @ 7.88 hrs, Volume= 0.045 af
 Outflow = 0.13 cfs @ 7.96 hrs, Volume= 0.045 af, Atten= 2%, Lag= 5.2 min
 Discarded = 0.13 cfs @ 7.96 hrs, Volume= 0.045 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 0.43' @ 7.96 hrs Surf.Area= 46 sf Storage= 8 cf

Plug-Flow detention time= 0.3 min calculated for 0.045 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (655.4 - 655.1)

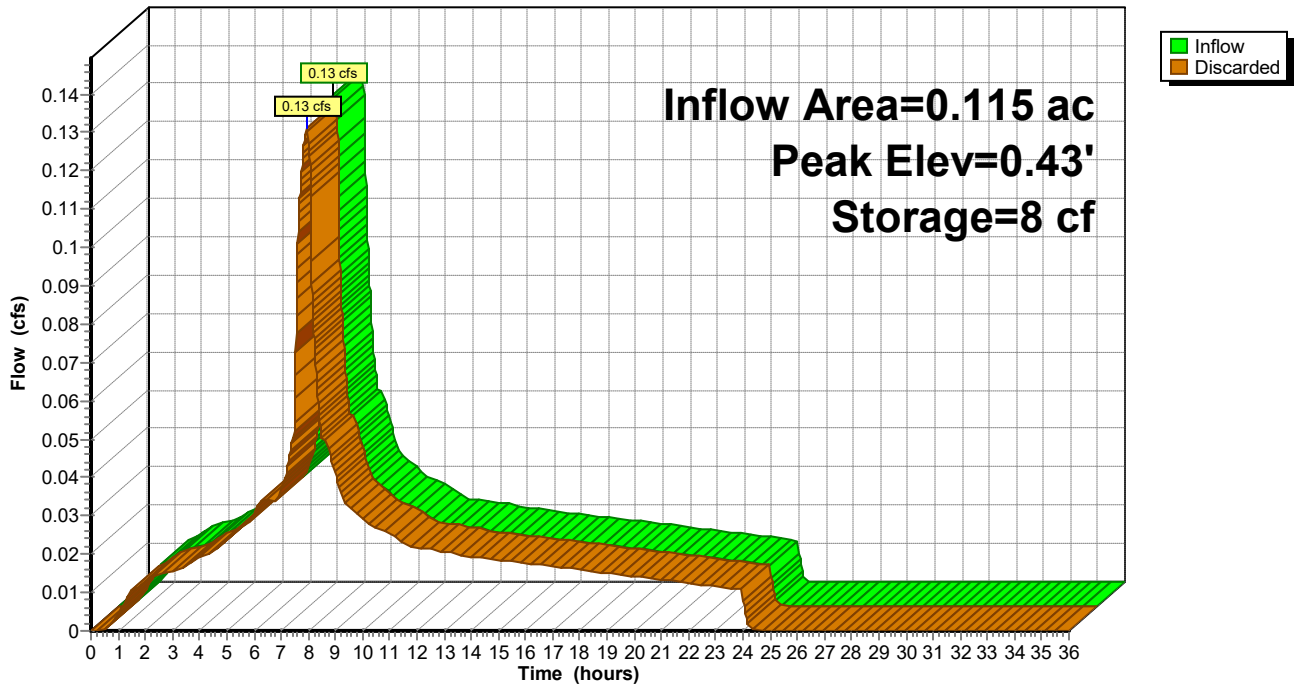
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.13 cfs @ 7.96 hrs HW=0.43' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.13 cfs)

Pond 6P: DRYWELL 1

Hydrograph



E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 48

Summary for Pond 8P: PLANTER Growing Media

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 4.66" for 100 yr event
 Inflow = 0.43 cfs @ 7.89 hrs, Volume= 0.145 af
 Outflow = 0.43 cfs @ 7.91 hrs, Volume= 0.145 af, Atten= 0%, Lag= 0.8 min
 Discarded = 0.01 cfs @ 7.91 hrs, Volume= 0.022 af
 Primary = 0.42 cfs @ 7.91 hrs, Volume= 0.123 af

Routed to Pond 9P : Planter Rock Gallery

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.94' @ 7.91 hrs Surf.Area= 197 sf Storage= 22 cf

Plug-Flow detention time= 3.3 min calculated for 0.145 af (100% of inflow)
 Center-of-Mass det. time= 3.3 min (659.4 - 656.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1.50'	74 cf	3.00'W x 65.80'L x 1.50'H SOIL MEDIA 296 cf Overall x 25.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	1.50'	2.000 in/hr Exfiltration over Wetted area
#2	Primary	1.75'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 7.91 hrs HW=1.94' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.42 cfs @ 7.91 hrs HW=1.94' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.42 cfs @ 2.12 fps)

E23-011 STORM

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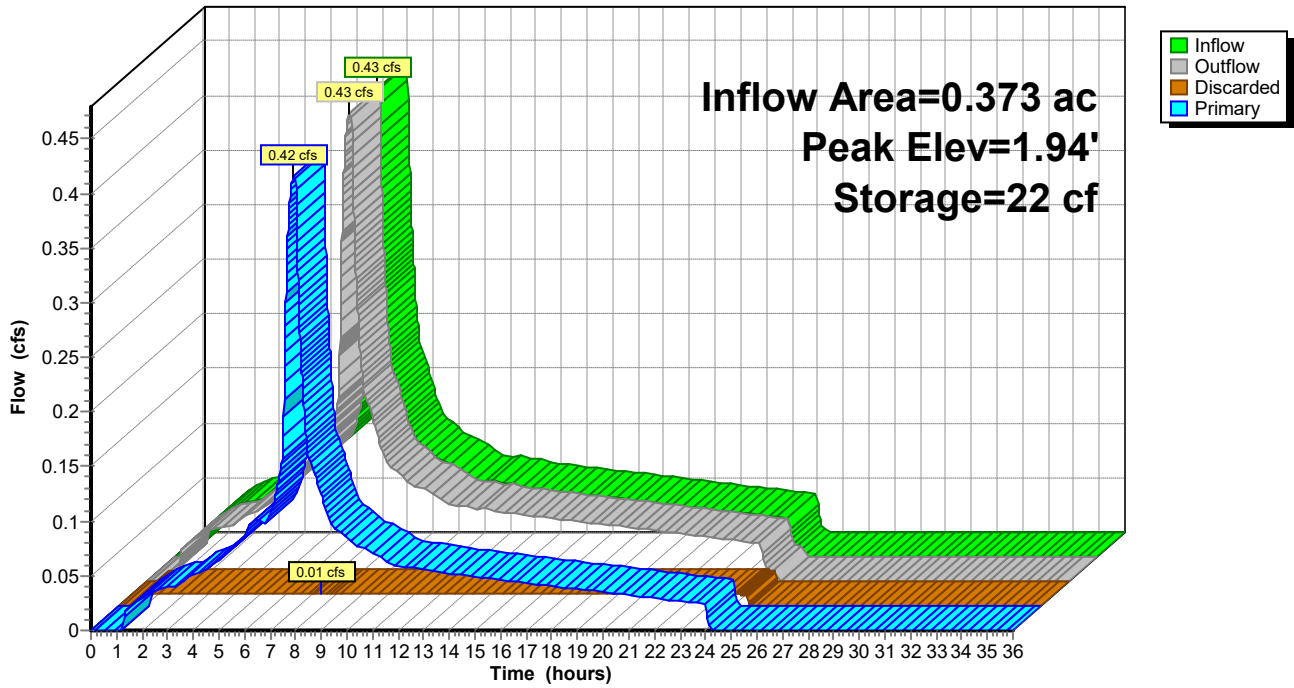
Type IA 24-hr 100 yr Rainfall=4.90"

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Page 49

Pond 8P: PLANTER Growing Media

Hydrograph



E23-011 STORM

Type IA 24-hr 100 yr Rainfall=4.90"

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Page 50

Summary for Pond 9P: Planter Rock Gallery

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 3.97" for 100 yr event
 Inflow = 0.42 cfs @ 7.91 hrs, Volume= 0.123 af
 Outflow = 0.42 cfs @ 7.91 hrs, Volume= 0.123 af, Atten= 0%, Lag= 0.0 min
 Discarded = 0.42 cfs @ 7.91 hrs, Volume= 0.123 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.02' @ 7.91 hrs Surf.Area= 204 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.123 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (642.3 - 642.2)

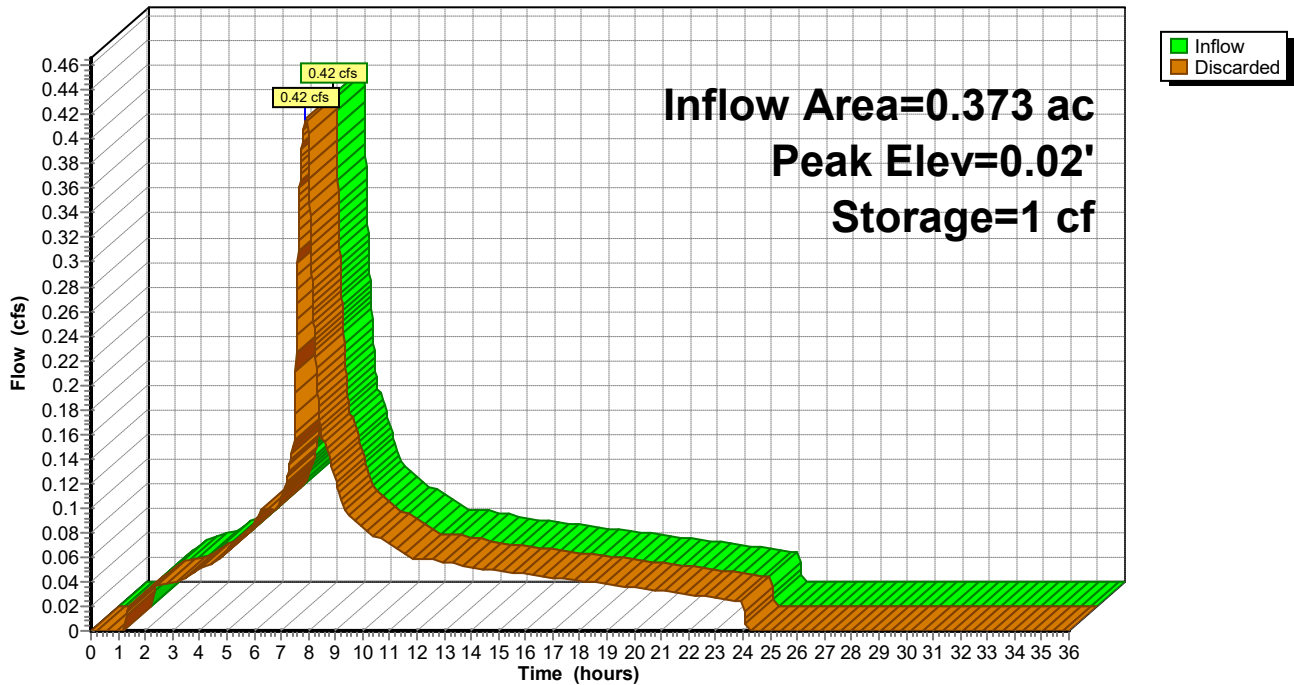
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	143 cf	3.00'W x 68.00'L x 1.75'H Prismatic 357 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.48 cfs @ 7.91 hrs HW=0.02' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.48 cfs)

Pond 9P: Planter Rock Gallery

Hydrograph



E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 51

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Roof Drainage North Runoff Area=5,020 sf 100.00% Impervious Runoff Depth=0.69"
Tc=5.0 min CN=0/98 Runoff=0.02 cfs 0.007 af

Subcatchment 3S: Roof Drains South Runoff Area=4,730 sf 100.00% Impervious Runoff Depth=0.69"
Tc=5.0 min CN=0/98 Runoff=0.02 cfs 0.006 af

Subcatchment 7S: Paved Areas Runoff Area=16,260 sf 100.00% Impervious Runoff Depth=0.69"
Tc=6.0 min CN=0/98 Runoff=0.07 cfs 0.022 af

Pond 5P: DRYWELL 2 Peak Elev=0.02' Storage=0 cf Inflow=0.02 cfs 0.006 af
Outflow=0.02 cfs 0.006 af

Pond 6P: DRYWELL 1 Peak Elev=0.02' Storage=0 cf Inflow=0.02 cfs 0.007 af
Outflow=0.02 cfs 0.007 af

Pond 8P: PLANTER Growing Media Peak Elev=1.80' Storage=15 cf Inflow=0.07 cfs 0.022 af
Discarded=0.01 cfs 0.016 af Primary=0.06 cfs 0.005 af Outflow=0.07 cfs 0.022 af

Pond 9P: Planter Rock Gallery Peak Elev=0.00' Storage=0 cf Inflow=0.06 cfs 0.005 af
Outflow=0.06 cfs 0.005 af

Total Runoff Area = 0.597 ac Runoff Volume = 0.035 af Average Runoff Depth = 0.69"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.597 ac

E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 52

Summary for Subcatchment 1S: Roof Drainage North Bulding

Runoff = 0.02 cfs @ 7.90 hrs, Volume= 0.007 af, Depth= 0.69"
 Routed to Pond 6P : DRYWELL 1

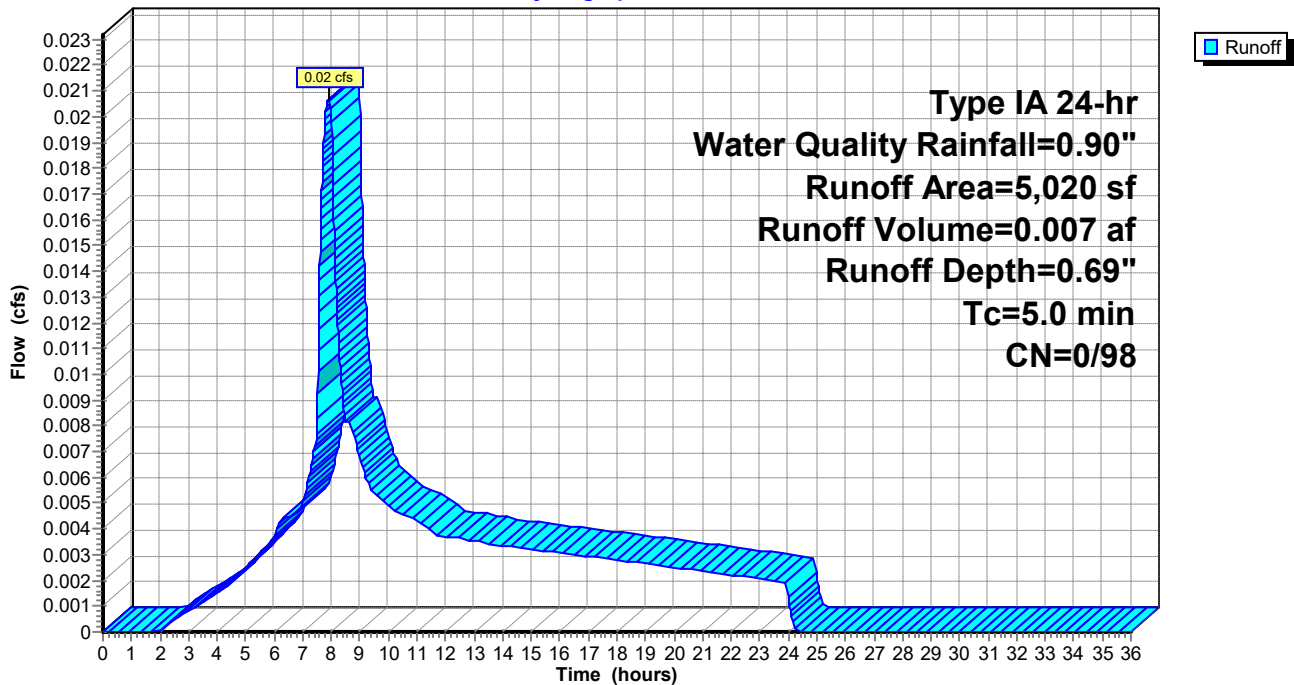
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr Water Quality Rainfall=0.90"

Area (sf)	CN	Description
* 5,020	98	ROOF
5,020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: Roof Drainage North Bulding

Hydrograph



E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 53

Summary for Subcatchment 3S: Roof Drains South Building

Runoff = 0.02 cfs @ 7.90 hrs, Volume= 0.006 af, Depth= 0.69"
 Routed to Pond 5P : DRYWELL 2

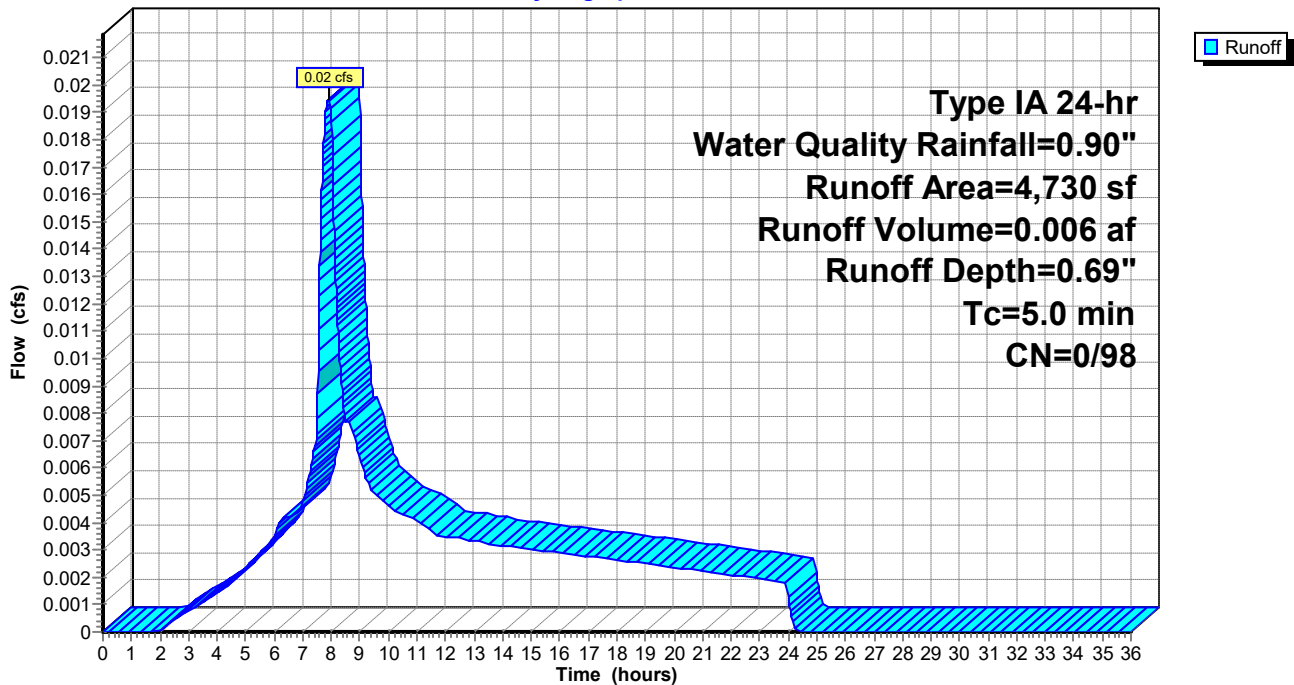
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr Water Quality Rainfall=0.90"

Area (sf)	CN	Description
* 4,730	98	Roof
4,730		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 3S: Roof Drains South Building

Hydrograph



E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 54

Summary for Subcatchment 7S: Paved Areas

Runoff = 0.07 cfs @ 7.92 hrs, Volume= 0.022 af, Depth= 0.69"

Routed to Pond 8P : PLANTER Growing Media

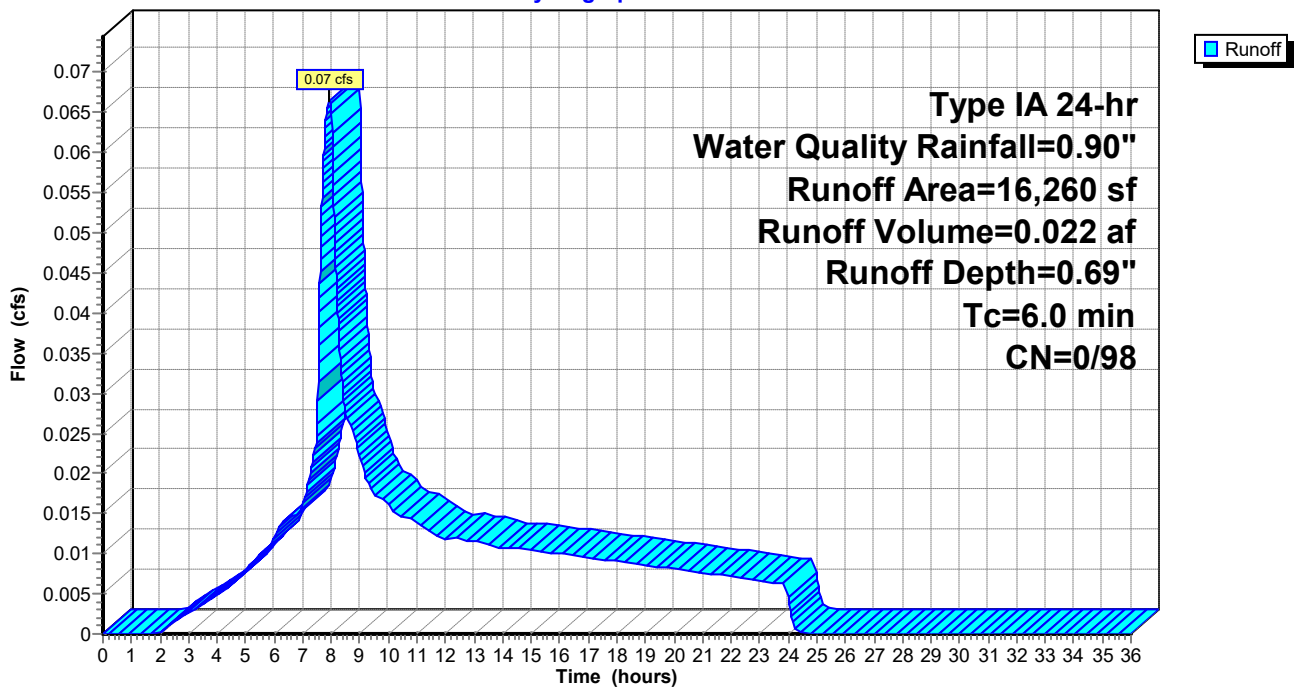
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr Water Quality Rainfall=0.90"

Area (sf)	CN	Description
* 16,260	98	
16,260		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 7S: Paved Areas

Hydrograph



E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 55

Summary for Pond 5P: DRYWELL 2

Inflow Area = 0.109 ac, 100.00% Impervious, Inflow Depth = 0.69" for Water Quality event
 Inflow = 0.02 cfs @ 7.90 hrs, Volume= 0.006 af
 Outflow = 0.02 cfs @ 7.91 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.02 cfs @ 7.91 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 0.02' @ 7.91 hrs Surf.Area= 46 sf Storage= 0 cf

Plug-Flow detention time= 0.3 min calculated for 0.006 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (719.0 - 718.7)

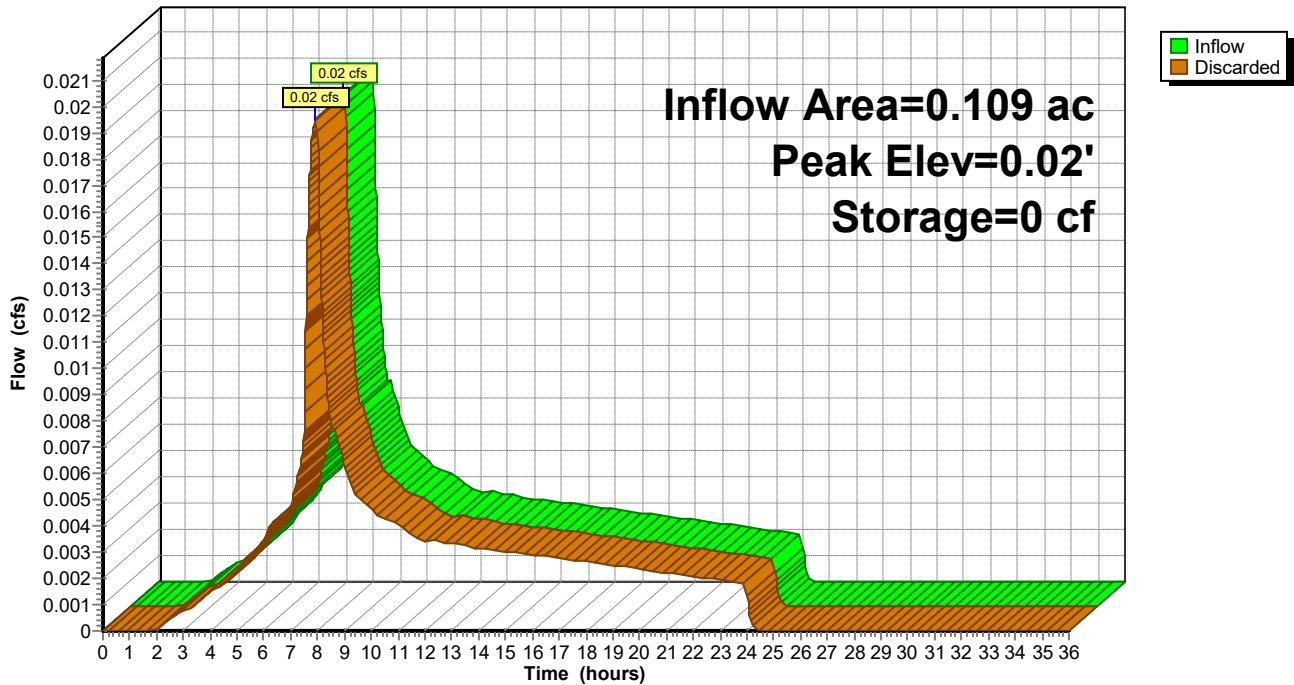
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.91 hrs HW=0.02' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.11 cfs)

Pond 5P: DRYWELL 2

Hydrograph



E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 56

Summary for Pond 6P: DRYWELL 1

Inflow Area = 0.115 ac, 100.00% Impervious, Inflow Depth = 0.69" for Water Quality event
 Inflow = 0.02 cfs @ 7.90 hrs, Volume= 0.007 af
 Outflow = 0.02 cfs @ 7.91 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.3 min
 Discarded = 0.02 cfs @ 7.91 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 0.02' @ 7.91 hrs Surf.Area= 46 sf Storage= 0 cf

Plug-Flow detention time= 0.3 min calculated for 0.007 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (719.0 - 718.7)

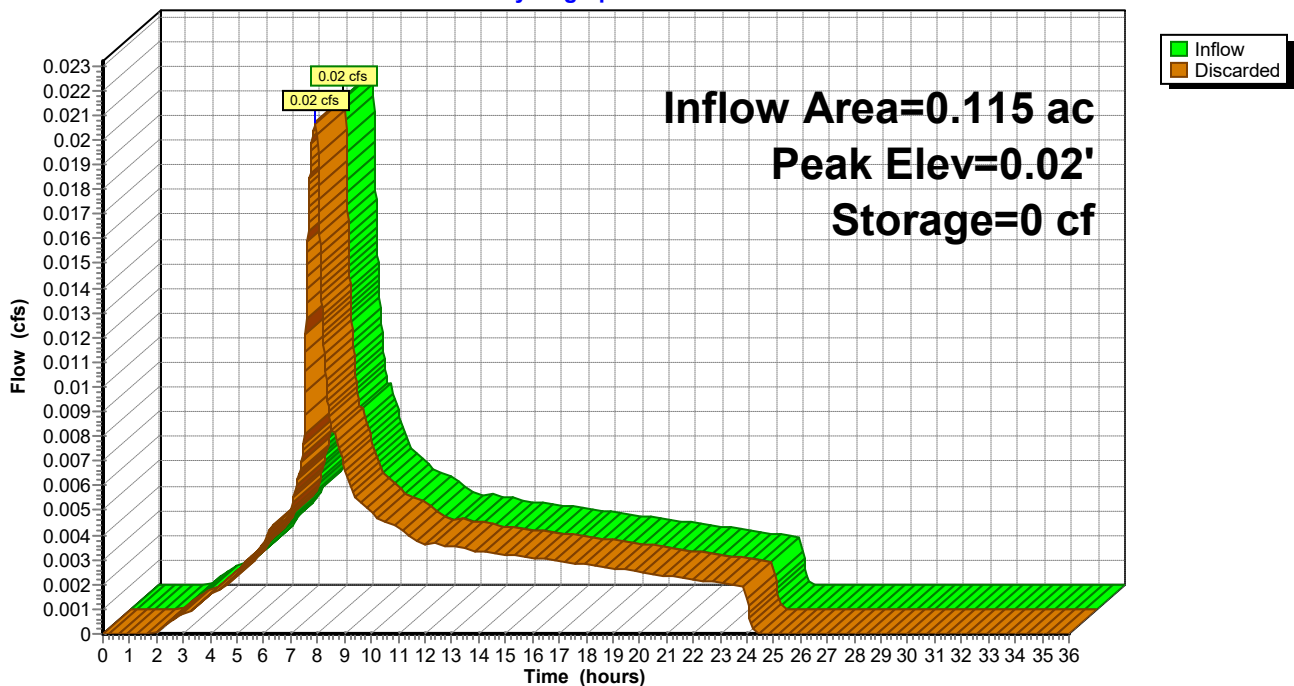
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	185 cf	7.67'D x 10.00'H Vertical Cone/Cylinder 462 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.11 cfs @ 7.91 hrs HW=0.02' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.11 cfs)

Pond 6P: DRYWELL 1

Hydrograph



E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 57

Summary for Pond 8P: PLANTER Growing Media

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 0.69" for Water Quality event
Inflow = 0.07 cfs @ 7.92 hrs, Volume= 0.022 af
Outflow = 0.07 cfs @ 7.93 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.5 min
Discarded = 0.01 cfs @ 7.93 hrs, Volume= 0.016 af
Primary = 0.06 cfs @ 7.93 hrs, Volume= 0.005 af

Routed to Pond 9P : Planter Rock Gallery

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 1.80' @ 7.93 hrs Surf.Area= 197 sf Storage= 15 cf

Plug-Flow detention time= 9.6 min calculated for 0.022 af (100% of inflow)
Center-of-Mass det. time= 9.6 min (729.3 - 719.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1.50'	74 cf	3.00'W x 65.80'L x 1.50'H SOIL MEDIA 296 cf Overall x 25.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	1.50'	2.000 in/hr Exfiltration over Wetted area
#2	Primary	1.75'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 7.93 hrs HW=1.80' (Free Discharge)
↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.06 cfs @ 7.93 hrs HW=1.80' (Free Discharge)
↑2=Orifice/Grate (Weir Controls 0.06 cfs @ 0.72 fps)

E23-011 STORM

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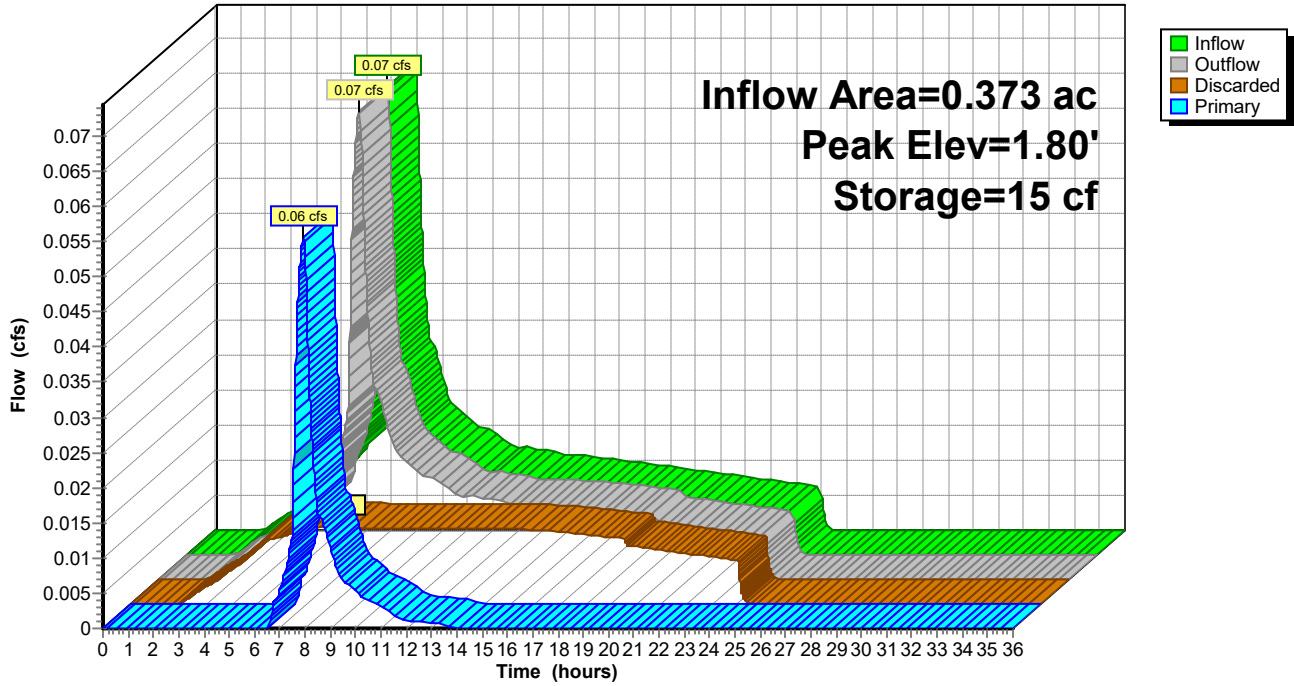
Type IA 24-hr Water Quality Rainfall=0.90"

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Page 58

Pond 8P: PLANTER Growing Media

Hydrograph



E23-011 STORM

Type IA 24-hr Water Quality Rainfall=0.90"

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Page 59

Summary for Pond 9P: Planter Rock Gallery

Inflow Area = 0.373 ac, 100.00% Impervious, Inflow Depth = 0.17" for Water Quality event
 Inflow = 0.06 cfs @ 7.93 hrs, Volume= 0.005 af
 Outflow = 0.06 cfs @ 7.93 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
 Discarded = 0.06 cfs @ 7.93 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.00' @ 7.93 hrs Surf.Area= 204 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.005 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (510.6 - 510.6)

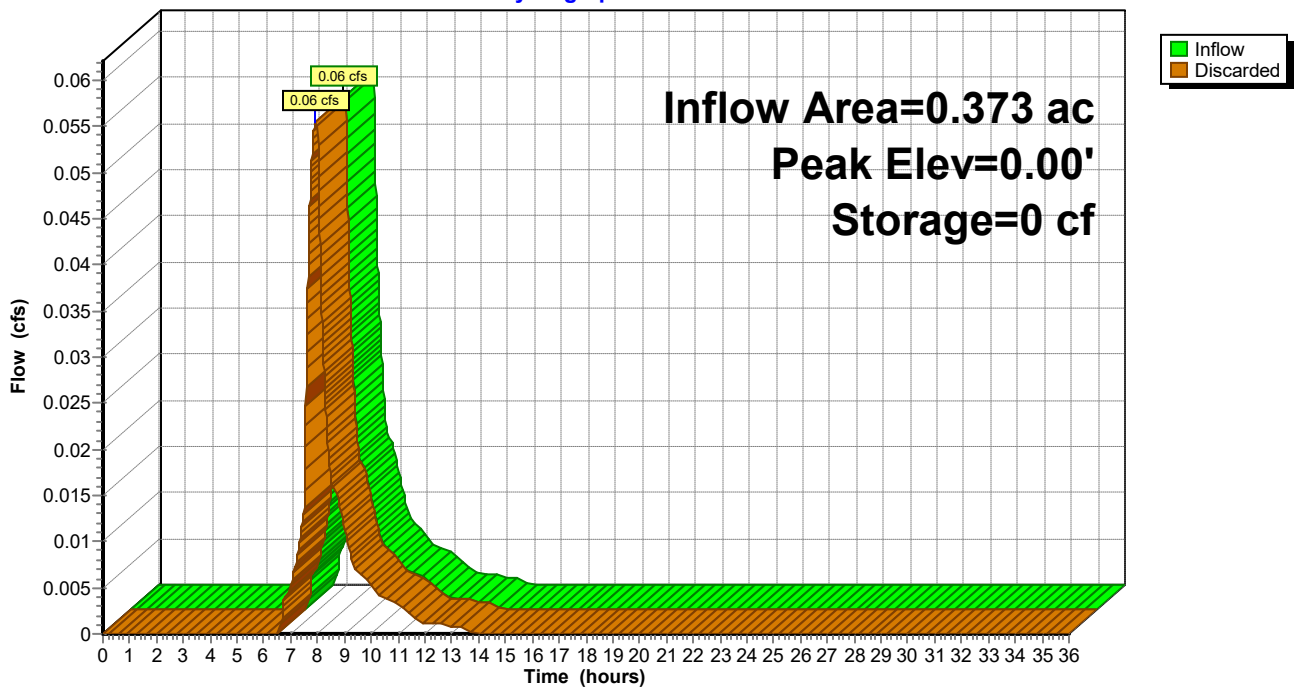
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	143 cf	3.00'W x 68.00'L x 1.75'H Prismatic 357 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	100.000 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.47 cfs @ 7.93 hrs HW=0.00' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.47 cfs)

Pond 9P: Planter Rock Gallery

Hydrograph



Carlson Geotechnical

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January 31, 2008

Mr. Alex Mauck
Goodman Sanitation, Inc.
931 NE Harlow Place
Troutdale, Oregon 97060

**Report of
Preliminary Infiltration Testing
Mauck Partition
1360 SW 257th Avenue
Troutdale, Oregon**

CGT Project Number G0803206

INTRODUCTION

Carlson Geotechnical (CGT) is pleased to submit our Report of Infiltration Testing for the proposed Mauck Partition located at 1360 SW 257th Avenue in Troutdale, Oregon. The location of the site is shown on the attached Site Location, Figure 1. We performed our work in general accordance with CGT Proposal PO4623R, dated October 26, 2007. We received written authorization for our services from our client on January 14, 2008.

The purpose of our work was to explore subsurface conditions at the site in order to perform infiltration testing and provide recommendations for infiltration rates for use in design of the proposed stormwater infiltration systems. Since the preliminary system designs were not complete at the time of this report, our infiltration testing should be considered preliminary. Our scope of work included the following:

- Observe the excavation of one (1) test pit at the site to a depth of about 10 feet below ground surface (bgs). Our field personnel qualitatively evaluated the subsurface soils encountered within the test pit with respect to infiltration characteristics. The test pit was excavated using a Komatsu® PC-75 UU, track-mounted excavator provided and operated by personnel from Goodman Sanitation, Inc. The test pit was loosely backfilled with the excavated materials upon completion by personnel from Goodman Sanitation, Inc.
- Perform four (4) infiltration tests between about 8½ to 9 feet bgs at the site, as requested by Mr. Robert Badgett of Firwood Design Group. The tests were conducted in general accordance with the King County, Washington Falling Head Method. The test pits were prepared using the referenced excavator, and were loosely backfilled with the excavated materials upon completion by personnel from Goodman Sanitation, Inc.

- Classify the materials encountered in the test pits in general accordance with American Society for Testing and Materials (ASTM) D2488 (Visual-Manual Procedure). A qualified member of CGT's staff observed and maintained a detailed log of each test pit.
- Collect representative disturbed samples of the soils encountered within the explorations in order to perform laboratory testing and to confirm our field classifications.
- Complete four (4) sieve wash tests on samples collected from the base of each infiltration test location to determine percent passing the U.S. Standard No. 200 Sieve in general accordance with ASTM C117.
- Provide recommendations for maximum rates of infiltration for use in design of the infiltration systems.
- Provide a written report summarizing the results of our Preliminary Infiltration Testing.

PROJECT INFORMATION & SITE DESCRIPTION

Project Information

Development at the site will consist of subdividing the site into 18 parcels. Mr. Badgett of Firwood Design Group indicated that drywells are planned at the site. He requested that we perform four infiltration tests in the vicinity of the proposed drywells at depths ranging from about 8 to 10 feet bgs.

Site Surface Conditions

The site encompassed approximately 4½ acres, and was occupied by a single-family residence and large shed near the western edge of the property, and a barn structure, manufactured home, and recently demolished barn structure near the east end of the property. The predominantly grass-covered site was relatively flat and level, and contained several fields divided by fences. Photographs of the site taken at the time of our October 23, 2007, site reconnaissance visit are shown on the attached Site Photographs, Figure 2.

Site Subsurface Conditions

Field Exploration

Our field exploration consisted of the following:

Test Pits

On January 17, 2008, five test pits (TP-1 through TP-5) were excavated at the site to depths of up to about 10 feet bgs using a Komatsu® PC-75 UU, track-mounted excavator provided and operated by personnel from Goodman Sanitation, Inc. The approximate test pit locations are shown on the attached Site Plan, Figure 3. The test pits were located in the field using approximate measurements from existing site features shown on the Site Plan. The test pits were loosely backfilled by personnel from Goodman Sanitation, Inc. with the excavated materials upon completion.

General

A member of CGT's staff logged the soils observed within the explorations in general accordance with the Unified Soil Classification System (USCS), and collected representative samples of the materials encountered. CGT has provided an explanation of the USCS on the attached Soil Classification Criteria and Terminology, Figure 4. Our laboratory staff visually examined all samples returned to our laboratory in order to refine the field classifications.

The logs of the explorations are presented on the attached Test Pit Logs, Figures 5 through 9. Elevations indicated on the test pit logs were estimated by field personnel and were based on an assumed elevation of 100 feet at the top of the east curb of SW 257th Avenue adjacent to the site, and should be considered approximate. Results of the referenced laboratory tests are shown on the logs.

Subsurface Materials

The following subsurface materials were encountered at the site:

Organic Topsoil (OL): Silt topsoil was encountered at the surface of the test pits and extended to a depth of about ½-foot bgs. The silt topsoil was general soft to medium stiff, medium brown, moist, and contained rootlets.

Silt (ML): Silt was encountered beneath the topsoil within the test pits and extended to depths ranging from about 2½ to 6 feet bgs. The silt was generally medium stiff, medium brown, moist, and contained coarse-grained sand, coarse gravel, cobbles, and trace boulders.

Silty Gravel (GM): Silty gravel was encountered beneath the silt within TP-5 and extended to a depth of about 5 feet bgs. The silty gravel was generally medium dense, gray brown, moist, coarse, and contained coarse-grained sand and trace boulders.

Silty sand (SM): Silty sand was encountered beneath the silt within TP-3 and extended to the full depth of exploration, about 9 feet bgs. The silty sand was generally medium dense, gray brown, moist, coarse grained, and contained coarse gravel, cobbles, and trace boulders.

Poorly Graded Sand (SP-SM): Poorly graded sand was encountered beneath the silt within TP-1, TP-3, TP-4, and beneath the silty gravel within TP-5. The poorly graded sand extended to the full depth of exploration, 8½ to 10 feet bgs. The poorly graded sand was generally medium dense, gray brown, moist, coarse grained, and contained coarse gravel, cobbles, and trace boulders.

We did not encounter groundwater within the depths explored at the site on January 17, 2008. The subsurface materials are described in more detail on the attached Test Pit Logs, Figures 5 through 9.

INFILTRATION TESTING

We performed four infiltration tests (IT-1 through IT-4) at the site within test pits TP-2 through TP-5 on October 12, 2007. Table 1, Infiltration Test Depths, presents the depths of each test and the subsurface materials encountered at the test depth.

**TABLE 1
 Infiltration Test Depths**

Test Location	Test Depth, Relative to Surrounding Grade (feet bgs)	Subsurface Materials at the Test Depth
TP-2/IT-1	9	Poorly Graded Sand (SP-SM)
TP-3/IT-2	9	Silty Sand (SM)
TP-4/IT-3	9	Poorly Graded Sand (SP-SM)
TP-5/IT-4	8½	Poorly Graded Sand (SP-SM)

We performed infiltration testing in general accordance with the King County, Washington, Falling Head Method. The test pits were excavated to the respective test depths, and a 6-inch-inner-diameter, PVC pipe was pushed approximately 2 to 6 inches into the soil horizon at each test location. The area surrounding the pipe was backfilled with granular bentonite to aid in sealing the interface between the pipe and the subsurface soils.

We attempted to soak the subsurface soils at each test location by pouring approximately 3 to 4 gallons of water into each pipe. The water infiltrated into the subsurface soils in less than 2 minutes at each location. This was repeated a second time with similar results; therefore, we immediately proceeded with the infiltration tests in general accordance with the referenced test method. We measured the amount of time for a determined amount of water (measured vertically) to completely infiltrate the subsurface soils at each test location. Four trials were administered at each infiltration test location.

Tables 2 through and 5 present the raw data and calculated rates of infiltration that we observed:

TABLE 2
Infiltration Test IT-1
9 feet bgs

Trial	Time (seconds)	Drop (inches)	Infiltration Rate (in/hr)
1	81	18 ³ / ₈	817
2	82	18 ³ / ₈	823
3	80	19 ¹ / ₈	861
4	81	20	889

TABLE 3
Infiltration Test IT-2
9 feet bgs

Trial	Time (seconds)	Drop (inches)	Infiltration Rate (in/hr)
1	42	15 ⁷ / ₈	1361
2	41	16 ¹ / ₈	1416
3	44	16 ³ / ₈	1370
4	44	16 ⁷ / ₈	1381

TABLE 4
Infiltration Test IT-3
9 feet bgs

Trial	Time (seconds)	Drop (inches)	Infiltration Rate (in/hr)
1	19	6	1137
2	23	7 ¹ / ₈	1115
3	32	10	1125
4	31	10 ¹ / ₄	1190

TABLE 5
Infiltration Test IT-4
8¹/₂ feet bgs

Trial	Time (seconds)	Drop (inches)	Infiltration Rate (in/hr)
1	45	13 ³ / ₄	1060
2	73	15 ¹ / ₄	752
3	63	14 ³ / ₄	843
4	37	10 ¹ / ₂	1022

LABORATORY ANALYSES

We obtained samples of the native soils within the test pits at each infiltration test depth. Based on our sieve wash tests, the samples contained about 5 to 14 percent of material passing the U.S. Standard Number 200 Sieve (ASTM C117). Table 6, Laboratory Results, shows the results of our sieve wash tests:

**TABLE 6
 Laboratory Results**

Test Location	Sample Depth, Relative to Surrounding Grade (feet bgs)	Percent Passing the U.S. Standard No. 200 Sieve
TP-2/IT-1	9	12
TP-3/IT-2	9	14
TP-4/IT-3	9	6
TP-5/IT-4	8½	5

RECOMMENDATIONS

Based on the results of our infiltration testing, we recommend using the infiltration rates shown in Table 7, Recommended Design Infiltration Rates, for use in the design of the infiltration systems:

**TABLE 7
 Recommended Design Infiltration Rates**

Test Location	Test Depth, Relative to Surrounding Grade (feet bgs)	Recommended Infiltration Rate (inches/hour)
TP-2/IT-1	9	410
TP-3/IT-2	9	680
TP-4/IT-3	9	560
TP-5/IT-4	8½	380

The recommended design infiltration rates were calculated using the lowest observed infiltration rate at the respective test location, and include a factor of safety of 2. These rates should be used for the preliminary design of infiltration systems at the respective test locations and depths. We recommend that the infiltration system designs (provided by others) and locations be reviewed by the geotechnical engineer of record for the site development once the designs are completed. If the locations and/or depths of the systems change from what was indicated at the time of our fieldwork, CGT should be contacted to revise our recommendations, if necessary.

LIMITATIONS

We have prepared this report for use by the owner/developer and other members of the design and construction team for the proposed development. The opinions and recommendations contained within this report are not intended to be, nor should they be construed as a warranty of subsurface conditions, but are forwarded to assist in the planning and design process.

We have made recommendations based on our observations and testing that indicate the soil conditions at the time of our testing at only those specific locations and only to the depths penetrated. These observations do not necessarily reflect soil types, strata thickness, or water level variations that may exist between explorations. If subsurface conditions vary from those encountered in our explorations, CGT should be alerted to the change in conditions so that we may provide additional geotechnical recommendations, if necessary. Observation by experienced geotechnical personnel should be considered an integral part of the construction process.

The owner/developer is responsible for insuring that the project designers and contractors implement our recommendations. When the design has been finalized, we recommend that the design and specifications be reviewed by our firm to see that our recommendations have been interpreted and implemented as intended. If design changes are made, we request that we be retained to review our conclusions and recommendations and to provide a written modification or verification.

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.

Mauck Partition
Troutdale, Oregon
CGT Job Number G0803206
January 31, 2008

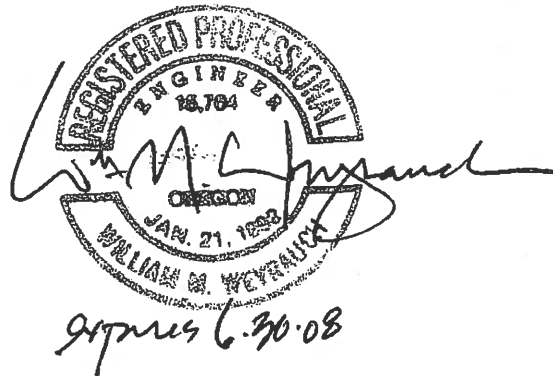
Geotechnical engineering and the geologic sciences are characterized by a certain degree of uncertainty. Professional judgments presented in this report are based partly on our understanding of the proposed construction, familiarity with similar projects in the area, and on general experience. Within 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, expressed or implied, are made. This report is subject to review and should not be relied upon after a period of three (3) years.

We appreciate the opportunity to serve as your geotechnical consultant on this project. Please contact us if you have any questions.

Sincerely,
CARLSON GEOTECHNICAL



Kyle J. Smetana
Geotechnical Project Manager
ksmetana@carlsonstesting.com



REGISTERED PROFESSIONAL
ENGINEER
18,764
OREGON
JAN. 21, 1928
WILLIAM M. WEYRAUCH
Expires 6.30.08

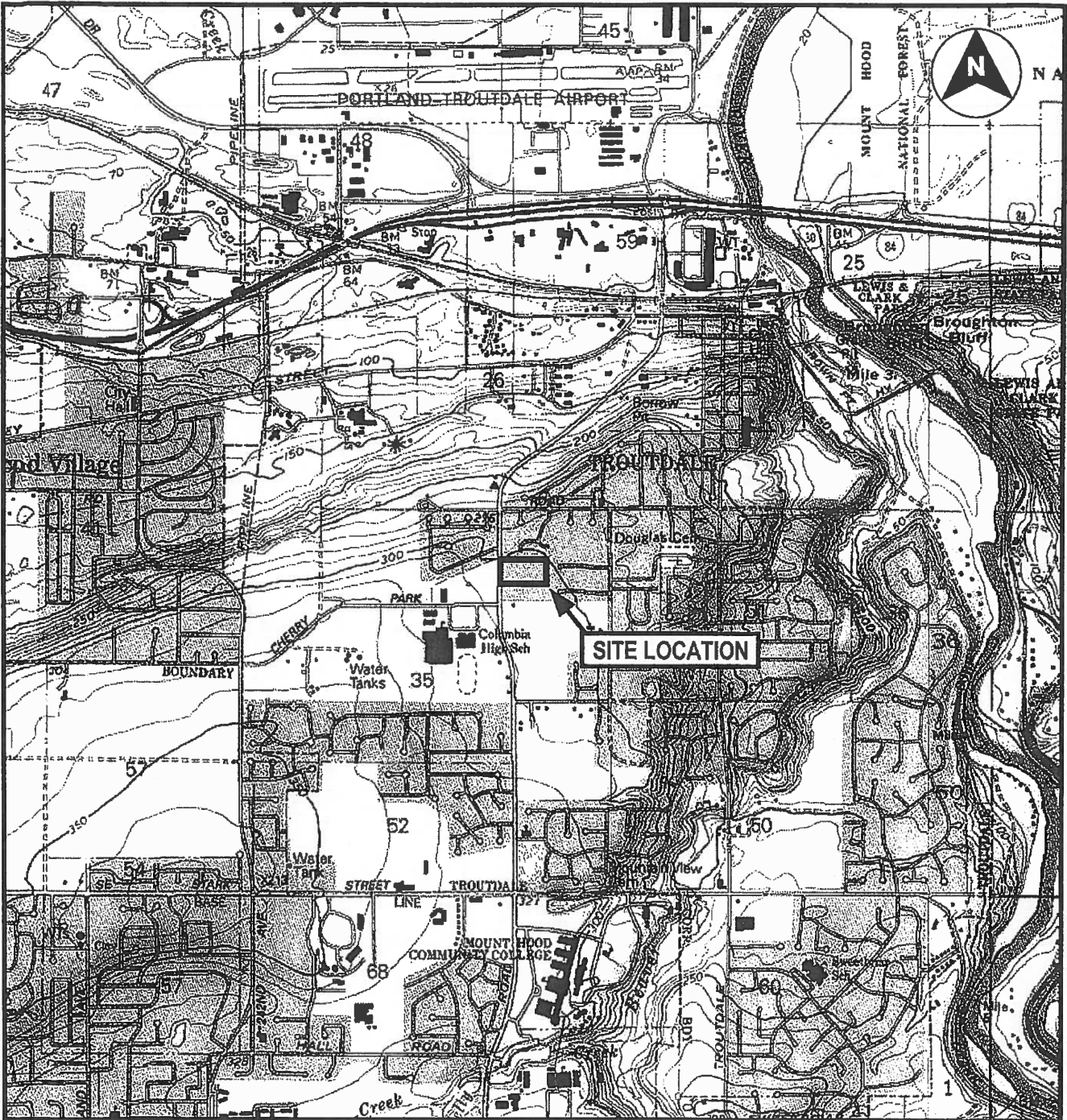
William M. Weyrauch, P.E.
Principal Geotechnical Engineer
bweyrauch@carlsonstesting.com

- Attachments: Site Location, Figure 1
Site Plan, Figure 2
Site Photographs, Figure 3
Soil Classification Criteria and Terminology, Figure 4
Test Pit Logs, Figures 5 through 9

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MAUCK PARTITION - TROUTDALE, OREGON

SITE LOCATION



Map created with TOPO!™, © 2006 National Geographic Holdings
 USGS 7.5 Minute Topographic Map Series, Camas, Oregon Quadrangle.

Scale 1 Inch = 2,000 feet



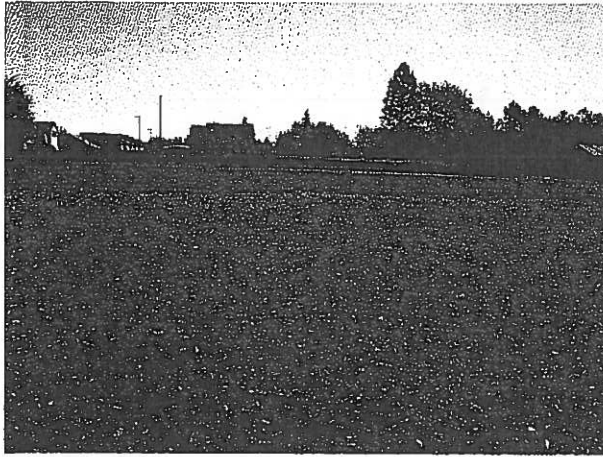
Township 1 North, Range 3 East, Section 35 Willamette Meridian



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CGT Job No. G0803206

MAUCK PARTITION - TROUTDALE, OREGON
SITE PHOTOGRAPHS



Photograph 1: Looking south from the center of the north edge of the site.



Photograph 2: Looking southwest towards the existing residence and shed located near the west edge of the site.



Photograph 3: Looking southeast towards the existing barn located along the south side of the site.

See Figure 3 for approximate photograph locations and directions.

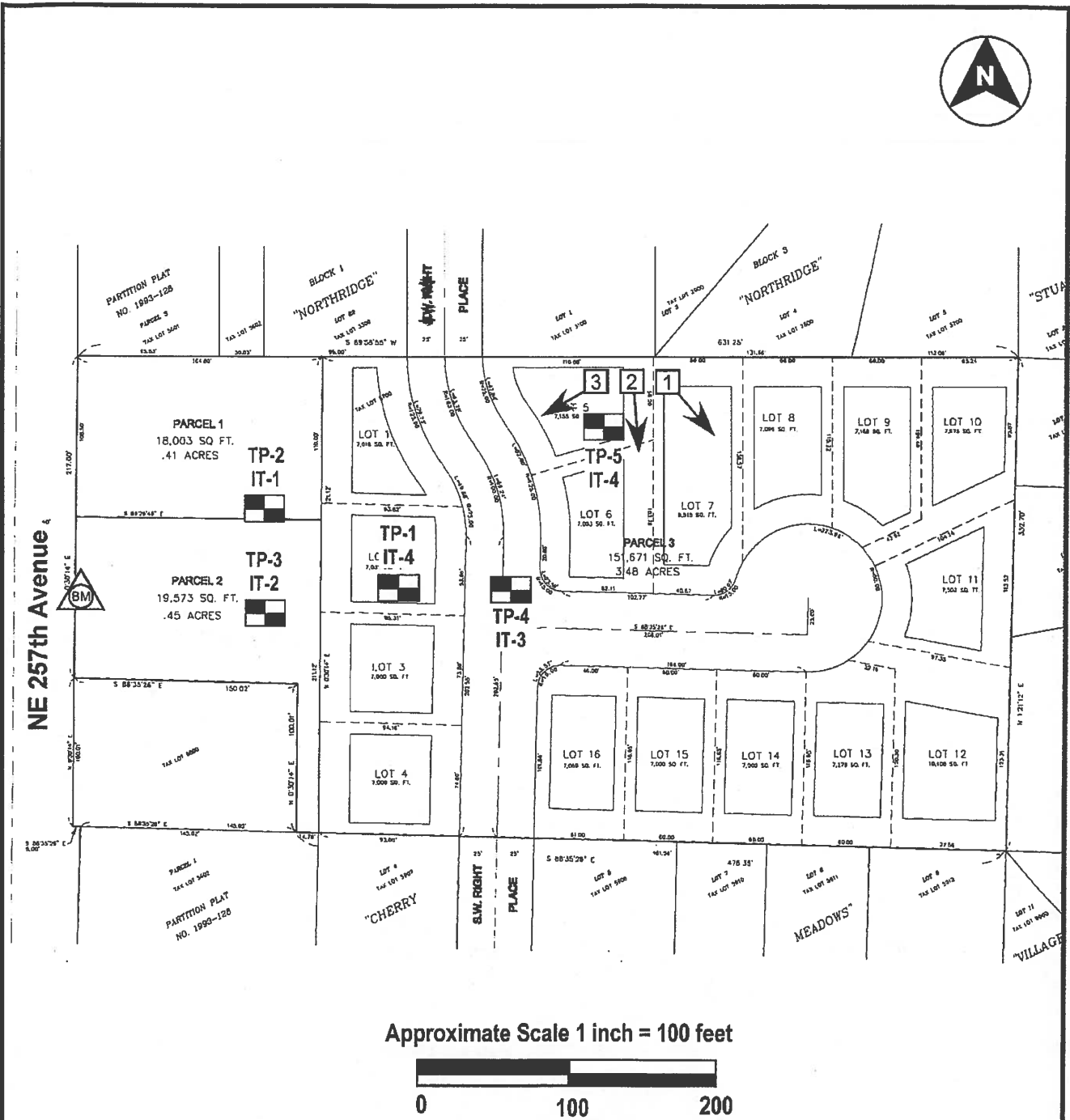


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FIGURE 2

MAUCK PARTITION - TROUTDALE, OREGON SITE PLAN



Approximate Scale 1 inch = 100 feet



NOTES:

Drawing based on site plan provided by Firwood Design Group, and on observations made while on site.



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LEGEND

- TP-2 Approximate location of infiltration test and/or test pit exploration.
- IT-1 Approximate location of infiltration test and/or test pit exploration.
- Number and location of site photographs shown on Figure 2.
- Referenced elevation benchmark - assumed 100' elevation at top of the east curb of SW 257th Avenue adjacent to the site.

CGT Job No.
G0803206

FIGURE 3

MAUCK PARTITION - TROUTDALE, OREGON

SOIL CLASSIFICATION CRITERIA AND TERMINOLOGY

Classification of Terms and Content	USCS Grain Size		
NAME : MINOR Constituents (12-50%); MAJOR Constituents (>50%); Slightly (5-12%) Relative Density or Consistency Color Moisture Content Plasticity Trace Constituents (0-5%) Other: Grain Shape, Approximate gradation, Organics, Cement, Structure, Odor... Geologic Name or Formation: (Fill, Willamette Silt, Till, Alluvium,...)	Fines	<#200 (.075 mm)	
	Sand	Fine	#200 - #40 (.425 mm)
		Medium	#40 - #10 (2 mm)
		Coarse	#10 - #4 (4.75)
	Gravel	Fine	#4 - 0.75 inch
		Coarse	0.75 inch - 3 inches
Cobbles	3 to 12 inches; scattered <15% est., numerous >15% est.		
Boulders	> 12 inches		

Relative Density or Consistency

Granular Material		Fine-Grained (cohesive) Materials				
SPT N-Value	Density	SPT N-Value	Torvane tsf Shear Strength	Pocket Pen tsf Unconfined	Consistency	Manual Penetration Test
		<2	<0.13	>0.25	Very Soft	Easy several inches by fist
0 - 4	Very Loose	2 - 4	0.13 - 0.25	0.25 - 0.50	Soft	Easy several inches by thumb
4 - 10	Loose	4 - 8	0.25 - 0.50	0.50 - 1.00	Medium Stiff	Moderate several inches by thumb
10 - 30	Medium Dense	8 - 15	0.50 - 1.00	1.00 - 2.00	Stiff	Readily indented by thumb
30 - 50	Dense	15 - 30	1.00 - 2.00	2.00 - 4.00	Very Stiff	Readily indented by thumbnail
>50	Very Dense	>30	>2.00	>4.00	Hard	Difficult by thumbnail

Moisture Content

Dry: Absence of moisture, dusty, dry to the touch
 Damp: Some moisture but leaves no moisture on hand
 Moist: Leaves moisture on hand
 Wet: Visible free water, likely from below water table

Structure

Stratified: Alternating layers of material or color >6 mm thick
 Laminated: Alternating layers < 6 mm thick
 Fissured: Breaks along definite fracture planes
 Slickensided: Striated, polished, or glossy fracture planes
 Blocky: Cohesive soil that can be broken down into small angular lumps which resist further breakdown
 Lenses: Has small pockets of different soils, note thickness
 Homogeneous: Same color and appearance throughout

	Plasticity	Dry Strength	Dilatancy	Toughness
ML	Non to Low	Non to Low	Slow to Rapid	Low, can't roll
CL	Low to Med.	Medium to High	None to Slow	Medium
MH	Med to High	Low to Medium	None to Slow	Low to Medium
CH	Med to High	High to V. High	None	High

Unified Soil Classification Chart (Visual-Manual Procedure) (Similar to ASTM Designation D-2488)

Major Divisions		Group Symbols		Typical Names
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: 50% or more retained on the No. 4 sieve	Clean Gravels	GW	Well graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines
		Gravels with Fines	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
			SW	Well-graded sands and gravelly sands, little or no fines
	Sands: more than 50% passing the No. 4 Sieve	Clean Sands	SP	Poorly-graded sands and gravelly sands, little or no fines
			SM	Silty sands, sand-silt mixtures
		Sands with Fines	SC	Clayey sands, sand-clay mixtures
			ML	Inorganic silts, rock flour, clayey silts
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
Fine-Grained Soils: 50% or more Passes No. 200 Sieve	Silt and Clays Low Plasticity Fines	OL	Organic silt and organic silty clays of low plasticity	
		MH	Inorganic silts, clayey silts	
	Silt and Clays High Plasticity Fines	CH	Inorganic clays of high plasticity, fat clays	
		OH	Organic clays of medium to high plasticity	
Highly Organic Soils		PT	Peat, muck, and other highly organic soils	



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Figure 4



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 Fax: 503-670-9147

FIGURE 5

TEST PIT TP-1

CLIENT Goodman Sanitation, Inc. PROJECT NAME Mauck Partition
 PROJECT NUMBER G0803206 PROJECT LOCATION 1360 SW 257th Avenue
 DATE STARTED 1/17/08 ELEVATION DATUM See Figure 3
 EXCAVATION CONTRACTOR Goodman Sanitation, Inc GROUND ELEVATION 100.5 ft
 EXCAVATION METHOD Test Pit GROUND WATER LEVELS:
 LOGGED BY Kyle Smetana CHECKED BY William Weyrauch SEEPAGE ---
 NOTES Komatsu® PC-75 UU track-mounted excavator AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	U.S.C.S.	MATERIAL DESCRIPTION	ELEVATION (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		OL	Soft to medium stiff, medium brown, moist, SILT TOPSOIL with rootlets.	100										
2.5		ML	Medium stiff, medium brown, moist, SILT with coarse sand, coarse gravel, cobbles and trace boulders.							59				64
5.0		SP-SM	Medium dense, gray brown, moist, POORLY GRADED, COARSE SAND with silt, coarse gravel, cobbles, and trace boulders.	95										
7.5														
10.0														
			Test pit terminated at about 10 feet bgs. No groundwater or caving observed during exploration. Test pit loosely backfilled with cuttings by personnel from Goodman Sanitation, Inc. upon completion											

COPY OF GEOTECH.BH COLUMNS G0803206 MAUCK.GPJ GINT US.GDT 1/23/08



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FIGURE 6

TEST PIT TP-2

PAGE 1 OF 1

CLIENT Goodman Sanitation, Inc. PROJECT NAME Mauck Partition
 PROJECT NUMBER G0803206 PROJECT LOCATION 1360 SW 257th Avenue
 DATE STARTED 1/17/08 ELEVATION DATUM See Figure 3
 EXCAVATION CONTRACTOR Goodman Sanitation, Inc GROUND ELEVATION 99 ft
 EXCAVATION METHOD Test Pit GROUND WATER LEVELS:
 LOGGED BY Kyle Smetana CHECKED BY William Weyrauch SEEPAGE ---
 NOTES Komatsu® PC-75 UU track-mounted excavator AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	U.S.C.S.	MATERIAL DESCRIPTION	ELEVATION (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		OL	Soft to medium stiff, medium brown, moist, SILT TOPSOIL with rootlets.											
2.5		ML	Medium stiff, medium brown, moist, SILT with coarse sand, coarse gravel, cobbles and trace boulders.	95										
5.0		ML												
7.5		SP-SM	Medium dense, gray brown, moist, POORLY GRADED, COARSE SAND with silt, coarse gravel, cobbles, and trace boulders.	90										
			<p>Test pit terminated at about 9 feet bgs.</p> <p>Infiltration test IT-1 performed at about 9 feet bgs.</p> <p>No groundwater or caving observed during exploration.</p> <p>Test pit loosely backfilled with cuttings by personnel from Goodman Sanitation, Inc. upon completion.</p>		GB 1					14				12

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FIGURE 7

TEST PIT TP-3

PAGE 1 OF 1

CLIENT Goodman Sanitation, Inc. PROJECT NAME Mauck Partition
 PROJECT NUMBER G0803206 PROJECT LOCATION 1360 SW 257th Avenue
 DATE STARTED 1/17/08 ELEVATION DATUM See Figure 3
 EXCAVATION CONTRACTOR Goodman Sanitation, Inc GROUND ELEVATION 100 ft
 EXCAVATION METHOD Test Pit GROUND WATER LEVELS:
 LOGGED BY Kyle Smetana CHECKED BY William Weyrauch SEEPAGE ---
 NOTES Komatsu® PC-75 UU track-mounted excavator AFTER EXCAVATION ---

DEPTH (ft)	GRAPHIC LOG	U.S.C.S.	MATERIAL DESCRIPTION	ELEVATION (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		OL	Soft to medium stiff, medium brown, moist, SILT TOPSOIL with rootlets.											
2.5		ML	Medium stiff, medium brown, moist, SILT with coarse sand, gravel, cobbles and trace boulders.											
5.0				95										
7.5		SM	Medium dense, gray brown, moist, SILTY, COARSE SAND with coarse gravel, cobbles, and trace boulders.											
			<p>Test pit terminated at about 10 feet bgs.</p> <p>Infiltration test IT-2 performed at about 9 feet bgs</p> <p>No groundwater or caving observed during exploration.</p> <p>Test pit loosely backfilled with cuttings by personnel from Goodman Sanitation, Inc. upon completion.</p>		GB 1					15				14

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FIGURE 8

TEST PIT TP-4

CLIENT Goodman Sanitation, Inc. PROJECT NAME Mauck Partition
 PROJECT NUMBER G0803206 PROJECT LOCATION 1360 SW 257th Avenue
 DATE STARTED 1/17/08 ELEVATION DATUM See Figure 3
 EXCAVATION CONTRACTOR Goodman Sanitation, Inc GROUND ELEVATION 101.5 ft
 EXCAVATION METHOD Test Pit GROUND WATER LEVELS:
 LOGGED BY Kyle Smetana CHECKED BY William Weyrauch SEEPAGE ---
 NOTES _____ AFTER EXCAVATION --

DEPTH (ft)	GRAPHIC LOG	U.S.C.S.	MATERIAL DESCRIPTION	ELEVATION (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		OL	Soft to medium stiff, medium brown, moist, SILT TOPSOIL with rootlets.											
2.5		ML	Medium stiff, medium brown, moist, SILT with coarse sand, coarse gravel, cobbles and trace boulders.	100										
5.0		SP-SM	Medium dense, gray brown, moist, POORLY GRADED, COARSE SAND with silt, coarse gravel, cobbles, and trace boulders.	95										
7.5			Test pit terminated at about 9 feet bgs. Infiltration test IT-3 performed at about 9 feet bgs. No groundwater or caving observed during exploration. Test pit loosely backfilled with cuttings by personnel from Goodman Sanitation, Inc. upon completion.		GB 1					11				6

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 Tigard, OR 97223
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 Fax: 503-670-9147

FIGURE 9

TEST PIT TP-5

PAGE 1 OF 1

CLIENT Goodman Sanitation, Inc. PROJECT NAME Mauck Partition
 PROJECT NUMBER G0803206 PROJECT LOCATION 1360 SW 257th Avenue
 DATE STARTED 1/17/08 ELEVATION DATUM See Figure 3
 EXCAVATION CONTRACTOR Goodman Sanitation, Inc GROUND ELEVATION 102.5 ft
 EXCAVATION METHOD Test Pit GROUND WATER LEVELS:
 LOGGED BY Kyle Smetana CHECKED BY William Weyrauch SEEPAGE --
 NOTES _____ AFTER EXCAVATION --

DEPTH (ft)	GRAPHIC LOG	U.S.C.S.	MATERIAL DESCRIPTION	ELEVATION (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		OL	Soft to medium stiff, medium brown, moist, SILT TOPSOIL with rootlets.											
		ML	Medium stiff, medium brown, moist, SILT with coarse sand, gravel, cobbles and trace boulders.											
2.5		GM	Medium dense, gray brown, moist, SILTY GRAVEL with coarse sand and trace boulders. Coarse gravel content.	100										
5.0		SP-SM	Medium dense, gray brown, moist, POORLY GRADED, COARSE SAND with silt, coarse gravel, cobbles, and trace boulders.											
7.5				95										
			<p>Test pit terminated at about 8.5 feet bgs.</p> <p>Infiltration test IT-2 performed at about 8.5 feet bgs.</p> <p>No groundwater or caving observed during exploration.</p> <p>Test pit loosely backfilled with cuttings by personnel from Goodman Sanitation, Inc. upon completion.</p>		GB 1					12				5

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File No./Escrow No.: 23-175877
 Print Date & Time: 11/15/2023 10:13:29 AM
 Officer/Escrow Officer: Tonya Pierce

WFG National Title Insurance Company
 9200 SE Sunnybrook Blvd., Suite 350
 Clackamas, OR 97015
 (503) 353-9975

Property Address: 1360 SW 257TH DRIVE
 TROUTDALE, OR 97060 (MULTNOMAH)
 (1N3E35AA 05717, R680973)

Buyer: CHERRY PARK EAST, LLC
 4307 SE Oxbow Parkway
 Gresham, OR 97080

Seller: GATEWAY ESTATES, LLC
 4980 Hyline Road
 Ontario, OR 97914

Lender:

Settlement Date: 11/15/2023

Disbursement Date: 11/15/2023

Description	Buyer		
	P.O.C.	Debit	Credit
Deposits, Credits, Debits			
Contract sales price		\$450,000.00	
Sellers closing costs paid by Buyer		\$2,205.00	
Buyers credits Sewer SDC 10.5 ERU's		\$122,587.50	
Funds to Close from Cherry Park East, LLC			\$457,236.78
Funds to Close from Cherry Park East, LLC			\$124,942.74
Prorations			
County taxes 11/15/2023 to 6/30/2024 @ \$5,606.31/Year		\$3,502.02	
Title Charges			
Settlement or closing fee to WFG National Title Insurance Company		\$925.00	
Recording Service to WFG National Title Insurance Company		\$3.00	
Government Recording and Transfer Charges			
Recording fees: Deed \$96.00		\$96.00	
Recording fees: Bargain & Sale Deed \$101.00		\$101.00	
Additional Settlement Charges			
Invoice to Attorney		\$2,500.00	
	P.O.C.	Debit	Credit
Subtotals	\$0.00	\$581,919.52	\$582,179.52
Due To Buyer		\$260.00	
Totals	\$0.00	\$582,179.52	\$582,179.52