115 Ramsdell Street
Fircrest, WA 98466
253-564-8901
www.cityoffircrest.net

April 24, 2025

Washington State Department of Commerce
Growth Management Services

Attn: Lilith Vespier, Residential Infill Manager
Lilith.Vespier@commerce.wa.gov

Attn: Eric Guida, Senior Planner
Eric.Guida@commerce.wa.gov

RE: Formal Application for Timeline Extension for Implementation of House Bill 1110

Dear Ms. Vespier,

Pursuant to the City of Fircrest's Notice of Intent ("NOI") submitted to the Department of Commerce on February 4, 2025, we are hereby submitting our Formal Application requesting a timeline extension for the full implementation of House Bill ("HB") 1110.

This extension request is based on existing infrastructure issues, specifically related to our sewer, water, and stormwater systems. The City requires adequate time to address these infrastructure issues, which must be resolved in order to support Fircrest's long-range planning efforts and ensure responsible implementation of HB 1110.

Additionally, the City of Fircrest will be entering negotiations with the City of Tacoma to discuss a Memorandum of Understanding (MOU) to amend the 2014 Wastewater Agreement. Tacoma has indicated that Fircrest currently exceeds peak hydraulic effluent limits on a significant number of days each year. The forthcoming MOU will outline strategies to reduce peak flows and establish provisions to ensure compliance with Tacoma's obligations under the federal Clean Water Act.

Enclosed with this letter is the Commerce Application Form for Certification/Approval related to Residential Infill, along with all required supporting materials as listed on the Commerce Middle Housing webpage.

We respectfully request your review and certification of Fircrest's Formal Application for a timeline extension to the full implementation of House Bill 1110.

We look forward to working with you. you. Please don't hesitate to contact me if you need any additional information or any assistance from me.

Sincerely,

Dawn Masko
City Manager

CC: Fircrest City Council
Fircrest Middle Housing Citizen Ad Hoc Committee

Commerce Application Form for Certification/Approval related to Residential Infill

Jurisdiction Summary

Jurisdiction	City of Fircrest, Pierce County, WA Incorporated 9/14/1925
2020 OFM Population	7,156
Middle Housing Applications: Provide the date you adopted or expect to adopt middle housing regulations (RCW 36/70A.635-638).	The City is requesting a five-year deferment of implementation of HB 1110 until December 31, 2030.
Accessory Dwelling Unit Applications: Provide the date you adopted or expect to adopt ADU regulations (RCW 36.70A.680-681).	Fircrest adopted regulations allowing ADUs in SFR areas prior to the adoption of HB 1110. If required, Fircrest will adopt additional ADU regulations prior to the deadline required by law.
Co-living Applications: Provide the date you adopted or expect to adopt co-living regulations RCW 36.70A.535).	Fircrest will adopt any required co-living regulations prior to the deadline required by law.

Jurisdiction Contact Information

Name of the lead contact:	Dawn Masko
Lead contact title:	City Manager
Lead contact department:	Administration
Lead contact phone number:	253-564-8901
Lead contact email:	dmasko@cityoffircrest.net
Name of authorized official:	Dawn Masko
Authorized official title:	City Manager
Authorized official email:	dmasko@cityoffircrest.net

1. Certification/Approval Request (check all applicable boxes)

a. **Certification/Approval Application Type** - A notice of intent process must precede submittal of a formal application by at least 30 calendar days.

☐ Notice of intent to apply for certification/approval
☒ Formal application for certification/approval

b. **Certification/Approval Application Subject (Check all that apply)**

Request for alternative density approach certification (RCW 36.70A.635(4))

☐ Middle housing timeline extension for areas at risk of displacement (RCW 36.70A.637)
☒ Middle housing timeline extension for areas lacking infrastructure capacity (RCW 36.70A.638)
☒ Excluded lots exceed 25% (RCW 36.70A.635)

Request for alternative action approval (RCW 36.70A.636(3))

☒ Substantially similar (RCW 36.70A.636(3)(b))
☒ Significant reduction or elimination of single family zoned areas (RCW 36.70A.636(3)(c))

Empirical parking study certification

☐ Middle housing (RCW 36.70A.635(7)(a))
☐ Accessory dwelling units (RCW 36.70A.681(2)(b)(i))
☐ Co-Living housing (RCW 36.70A.535(3)(b)(i))

2. Cover Letter

For both the **notice of intent to apply** and **formal application**, please include a brief cover letter describing the request, explaining why the request is being made and confirming that the application includes all required materials.

3. Application Materials

The Commerce Middle Housing web page includes fact sheets and other materials that identify what must be submitted with a notice of intent to apply and formal application. Please review the materials carefully as not including the necessary application materials will result in a delay in considering the certification or application request.

4. Submittal Process

Certification and approval applications, including both the notice of intent to apply and the formal application, must be made submitted to Lilith Vespier: lilith.vespier@commerce.wa.gov

5. Authorization Signature

I acknowledge that I am authorized to submit this certification or approval request on behalf of the jurisdiction. In submitting this application, I further acknowledge that Commerce may approve or deny the formal application.

Name: Dawn Masko
Title: City Manager
Date: 4/24/2025

Signature: Dawn Masko
(wet or image)

City of Fircrest

Middle housing timeline extension for areas lacking infrastructure capacity

RCW 36.70A.638

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Application Requirement #1

*A **cover letter** from the city requesting certification and a complete application.*

This extension request is due to infrastructure challenges, primarily related to sewer, water, and stormwater systems. The City of Fircrest requires additional time to address these infrastructure deficiencies and collaborate, negotiate, and work with both Pierce County and the City of Tacoma to resolve key infrastructure concerns essential to implementing long-range plans for the City of Fircrest.

Relative to sewer infrastructure incapacity, Fircrest has had a sewer service agreement with the City of Tacoma since 1947. This agreement has been extended and amended over the years. Currently, the city of Tacoma and the City of Fircrest are discussing a Memorandum of Understanding between the City of Tacoma and Fircrest amending the 2014 Wastewater Agreement. The amendment will detail Tacoma's acceptance of wastewater generated in Fircrest for treatment and disposal based on flow data received. Tacoma has calculated that Fircrest exceeds peak hydraulic limits of effluent at times for a significant number of days during the year. Tacoma has requested that each city assign representatives to develop a meeting schedule to create a mutually agreeable amendment of the 2014 Wastewater Treatment Agreement for consideration and action by both cities. This new agreement will have provisions to verify and ensure compliance with Tacoma's obligations under the federal Clean Water Act.

Application Requirement #2

A map or maps showing the geographic areas for which the time extension request is made.

The specific area for which we are requesting the infrastructure time extension is for the entire City of Fircrest. Furthermore, as stated earlier, Fircrest has very little area available to develop or add additional housing. The City of Fircrest is approximately **98%** built out per our Planning Department.

In consultation with our Public Works Department and our consulting civil Professional Engineer, we have a system-wide challenge in that all Fircrest sewage has to be pumped through only two lift stations to the City of Tacoma.

(Exhibit 5 – City Boundary and zoning)

(Exhibit 6 – City Sewer infrastructure)

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Application Requirement #3

A narrative demonstrating how specific capital facilities lack capacity to support middle housing densities, in the areas where an application for a timeline extension is requested.

Through our Formal Application**,** we believe we can demonstrate Fircrest's commitment to accommodating its allocated population growth for the next 20 years. Prior to the passage of HB 1110, the City had already been working to develop the Four Corners area - a prime location for walkability, multifamily housing, and mixed-use growth. This area is located near Tacoma Community College. Ongoing discussions between Pierce County, Fircrest, and the City of Tacoma regarding sewer effluent routing that will result from such development are complex and will require time to address and resolve the concerns of all three municipalities. This is important as it provides possible assistance and perhaps a long-term solution for Fircrest's overcapacity issues by employing the Pierce County Sewer District's Chambers Creek Wastewater Treatment facility.

We also believe that to properly evaluate our application, one must understand how our community has developed over the last century.

1. The City of Fircrest was incorporated on September 14, 1925, and is a middle-class neighborhood bordering Tacoma and University Place.
2. The population of Fircrest as of 2020 was 7,156.
3. Fircrest is only 1.58 square miles, standing as the densest city in Pierce County. Fircrest already allows for middle housing throughout the city rather than in just targeted locations. This housing consists of apartments, townhomes, duplexes, fourplexes, sixplexes, cottage homes, and ADUs. **(Exhibit 1)**
4. Our current density and the surrounding area have a significant impact on wear and tear on all our infrastructure systems, physically and environmentally. **(Exhibit 2)**
5. Prior to HB 1110, Fircrest underwent decades of land planning per state code using density per acre/or dwelling units per acre according to DOE guidelines. Infrastructure engineering for the city was based on that method of determining density. Now, it is being asked to rapidly change to 2+ units per lot when the current infrastructure is already over capacity with the current zoning and at the current population level. This is additionally difficult for Fircrest as our footprint is only 1.58 square miles (very little area for additional development), and the current infrastructure will not support the increased density contemplated by HB 1110 without infrastructure solutions, which will require significant time, planning, and financial resources.
6. The infrastructure issues in Fircrest are additionally impacted by an extremely high water table, which causes periodic flooding as well as inflow and infiltration issues (I&I). I&I issues are also present, with even normal rainfall causing overcapacity problems with outdated sewer infrastructure. **(Exhibit 3)**

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7. Presumably, the courts or the legislature will decide whether a house plus an ADU equates to the two housing units required to be allowed per SFR lot under HB 1110. Currently, Commerce does not define an ADU as a middle housing unit under HB 1110. Since Fircrest already zones all SFR lots (other than those lots with covenant restrictions or HOAs) for both a principal residence as well as an ADU, Fircrest believes that such zoning does provide for two housing units per lot and should be considered adequate under HB 1110. If Commerce, the legislature, or the courts determine that an ADU qualifies under the law as an HB 1110 housing unit, then Fircrest has met its obligation to have zoning for two units per lot in SFR areas. See the Fircrest Residential zones that allow ADUs **(Exhibit 4)**

Lastly, when one researches the origin of the term "missing middle housing' coined by Daniel Parolek in 2010, you find an interesting corollary to the history of Fircrest. Starting in the early 1920's these types of housing units were quite popular. In 1925, Fircrest officially became a city. A variety of middle housing types have existed in Fircrest since its inception. **(Exhibit 1)**

The majority of our infrastructure was built from the early 1920s through 1970. Smaller new areas were added with more current codes and requirements, such as not combining sewer and storm into the same system. Many jurisdictions are dealing with this issue. One of our Town Topics issues speaks to Fircrest's I&I challenges with a specific reference to our overcapacity with the City of Tacoma. **(Exhibit 7)**

Additional challenges for Fircrest include soil types, groundwater levels, and soil permeability issues. **(Exhibit 8)**

Please see **Exhibit 9** from a Fircrest resident who is a retired hydrologist.

DOE's standard for sewer system design and construction further complicates Fircrest's challenges due to soil types and water table. **(Exhibit 10)**

Another significant factor that must be considered are the rules established by DOE dealing with stormwater runoff. Adding any increase of impervious surface to existing lots (i.e., two units/lot) is virtually impossible, exacerbating and increasing the infrastructure capacity issues that Fircrest is working on. One of the needs for an extension of time is to give Fircrest the time and ability to map soil permeability in areas throughout the city and track seasonal variations in water table elevations in the shallow sediments. **(Exhibit 11)**

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Application Requirement #4

Proposed improvements to address the lack of capacity. In cases where a special district is responsible for providing the necessary infrastructure, provide additional information.

As a 100-year-old city, virtually built out and one of the densest cities in Western Washington, the following points need to be made clear: **our sewer effluent is being treated by the City of Tacoma. The other key point is that the City of Fircrest is in the sewer service area of Pierce County, and there are ongoing issues among the entities as to where the effluent in some areas can and should go.**

When Fircrest needed a treatment facility, the only one available was the City of Tacoma. An agreement was reached in 1947 and has been extended and amended over time. **(Exhibit 12)**

Importantly, since 1947, University Place has grown and incorporated, and the Chambers Creek Regional Wastewater Treatment Plant was created. It is located near Tacoma and Fircrest in Pierce County, WA. The plant uses a combination of physical and biological treatment processes to treat residential and commercial wastewater and sewage. It is a part of the Pierce County Department of Public Works and Utilities.

Fircrest has worked hard to maintain and upgrade all of its infrastructure. This includes being out front with pipe bursting on sewer line replacements and upgrades. **(Exhibit 13)**

There is a list of CIP projects from our current Comp Plan under Capital Facility Maintenance. While additional analysis is required to determine the full scope and cost of these projects, preliminary estimates provided by city staff suggest that the remaining improvements could exceed $4.5 - $5 million. This list of sewer projects represents a period from 2000 to 2029 of proactive measures in maintaining and improving our systems, including lift/pump stations. The water system is also included for approximately the same time period. **(Exhibit 13)**

A significant issue impacting the city's ability to fully implement HB1110 is inflow and infiltration (I&I), as previously outlined. Additionally, the City of Tacoma approached the City of Fircrest with a proposed draft MOU, attached as Exhibit 14, identifying potential sewer overcapacity issues. **(Exhibit 14.)** This MOU has not been fully negotiated or signed by either party. The City of Fircrest is currently reviewing additional data regarding this issue, which was only recently received from the City of Tacoma. This aids in our request for a time extension due to infrastructure issues and **'service area'** providers.

In a Hearing Examiners' decision for a project located in this area, a specific requirement was to determine whether the City of Tacoma or Pierce County would provide said sewer treatment. **(Exhibit 15.)** This document is further supported by a Pre-Annexation Agreement from 1996 **(Exhibit 16)**, where the sewer treatment provider needed to be determined as to

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who would be able to best meet the needs of the Owners and City. **Presently**, Pierce County has maintained that **it will provide sewer treatment to the Four Corners Project as it is located within their sewer area. They have also agreed to fund the sewer lift station necessary to have the flow go to their Chambers Creek treatment facility. This agreement has yet to be formalized.**

The Washington State Legislature recognized that one size does not fit all when it provided for cities to request extensions under HB1110. It charged the Washington State Department of Commerce with facilitating the implementation of the law and providing technical assistance to the cities. Based on the above and documents presented, we respectfully feel they serve to validate/justify our request for an extension of the implementation of HB1110 as provided by the legislature. This will allow Fircrest the necessary time to work on and address the infrastructure issues detailed throughout this Application.

Application Requirement #5

Policies and regulations which address Middle Housing requirements.

The City of Fircrest Public Works Department has been very proactive in maintaining our infrastructure throughout the City. In earlier Exhibits, our CIP projects listed very specific areas, systems, maintenance, and/or replacement. Where necessary, specific contracts have been issued for 'pipe bursting'. **(Exhibit 17)**

Furthermore, Fircrest, as presented both in our history and by our former Community Development Director, has shown by example that we substantially comply with the intent of HB 1110. Per RCW 36.70, the Growth Management Board grants deference to cities in how they plan for growth. GMA goals also allow communities to adopt plans and regulations that suit their unique circumstances.

Also, when one looks at our large percentage of area that is platted with active HOA/CCRs (all in existence prior to HB 1110), one can see we have a very limited area for potential growth. **(Exhibit 18)**

Per a letter from our resident historian, the original area of Fircrest (Regents Park) was laid out in a lots and blocks plat, which is considered to be a formal type of plat in the State of Washington to this day. **(Exhibit 19)** Per RCW 58.17, arguably changes to this or any other plat require approval of the residents of that area. **(Exhibit 19A)**

Nonetheless, we believe that in time we have the ability to accept an increase in our projected population. As outlined in the draft Memorandum of Understanding (MOU) currently under negotiation with the City of Tacoma, Tacoma is requesting that Fircrest agree to a series of maintenance and upgrade measures, some of which are currently underway. These items are identified in paragraph 4 on page 2 of the draft MOU. To that end, as stated

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in paragraph 5 on page 2, both cities are working to develop a meeting schedule to work toward an amendment to the 2014 Wastewater Agreement. Tacoma has identified specific topics for discussion, including reduction of peak hydraulic flows, updates to ongoing I&I work, identification of priority targets, the development of an inspection and disconnection program and schedule for stormwater side sewers, and the development of repair programs and schedules for the older sections of Fircrest. Additionally, identifying viable funding sources will be critical to addressing Fircrest's sewer overcapacity issues and implementing the necessary infrastructure improvements.

The granting of our requested time extension will allow the City of Fircrest time to negotiate and eventually resolve our overcapacity issues with Tacoma. It is possible that Fircrest can negotiate with Pierce County to accept sewer effluent from other areas of Fircrest in addition to the Four Corners area. There are options that could arise during this 5-year extension time that would allow Fircrest to upzone the area called Four Corners or 19th and Mildred.

Fircrest will follow all applicable RCWs in working to meet its growth targets with developer-supported infrastructure to ensure these targets are accomplished.

Application Requirement #6

Any additional information that the city believes supports the request for approval of a timeline extension based on a lack of infrastructure capacity.

In conversation with City staff and Public Works individuals who are very familiar with our system and Pierce County, options may be available. Time is necessary to validate said options and expenses. Cost is a significant issue that will drive this discussion. Appropriate engineering consultants will need to fairly represent the City of Fircrest.

This, with the above-mentioned MOU with Tacoma, establishing meetings to discuss options on how to deal with our overcapacity, may come up with alternative methods to correct said issue.

In summary, please review the conclusions of our two consultants (**Exhibit 20)**.

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Exhibit #1:
City of Fircrest Existing Middle Housing Stock

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Introduction

222 Farallone Avenue - Internal ADU

The purpose of this document is to present a visual sample of the existing middle housing within the city rather than an exhaustive list.

The intention is to demonstrate gentle density and highlight how existing middle housing is hiding in plain sight. You or your neighbors may already live in one of the middle housing units throughout Fircrest.

The goal of the City's new housing laws is to meet the minimum requirements of state law compliance while protecting the small-town character that we all love.

This document was presented to the Planning Commission at the September 3, 2024 Regular Meeting and is provided to the public for reference.

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What is Middle Housing?

- Middle housing refers to housing types between single-family detached homes and mid-to high rise apartments

The WA State Department of Commerce defines middle housing as:

Buildings that are compatible in scale, form and character with detached single-family houses; typically, "house-scale" and are similar in bulk and form

This means similar building heights, setbacks, building coverage, and yard space as single-family homes

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What Does Middle Housing Look Like in Fircrest?

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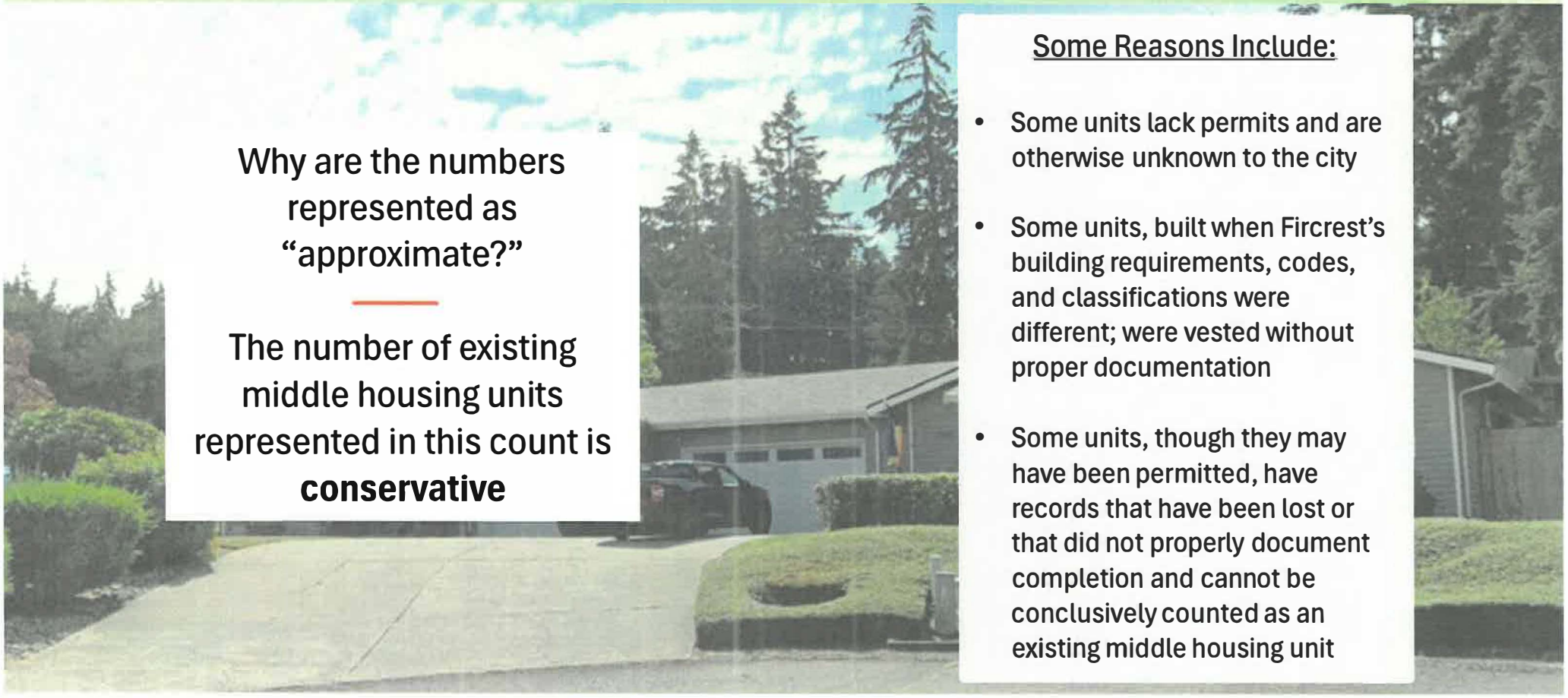
What Does the Count Include?



Why are the numbers represented as "approximate?"

The number of existing middle housing units represented in this count is **conservative**

Some Reasons Include:

- Some units lack permits and are otherwise unknown to the city
- Some units, built when Fircrest's building requirements, codes, and classifications were different; were vested without proper documentation
- Some units, though they may have been permitted, have records that have been lost or that did not properly document completion and cannot be conclusively counted as an existing middle housing unit

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Accessory Dwelling Units (ADU)

Fircrest has about 8 detached, permitted ADUs

Detached ADUs, also called DADUs, are stand-alone structures separate from the primary residence

Detached Accessory Dwelling Units in Fircrest


414 Buena Vista Avenue


439 Spring Street


609 Electron Way

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Accessory Dwelling Units (ADU)

Fircrest has about 10 permitted, attached or internal ADUs

There are likely many more internal ADUs in Fircrest as many older homes commonly incorporated internal ADU aspects in their builds

Attached or Internal ADUs are within or attached to the primary residence, typically served by a separate entrance

Attached Accessory Dwelling Units in Fircrest

720 Dartmouth Street

610 Fir Park Lane

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Duplexes

Fircrest has approximately 112 duplexes making up 224 units

Duplexes make up the largest portion of Fircrest's existing middle housing

Most are not new; many having been constructed between 1980 and 1990

A duplex is a multifamily home on a single plot of land made up of two-units separated by a wall or floor with separate entrances, typically having a mirrored design

Duplexes in Fircrest

1314/1316 Boise Street

1220/1222 Alameda Avenue

1315/1317 Contra Costa Avenue

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Duplexes

Duplexes in Fircrest


1064/1066 11th Tee Drive


1334/1336 Contra Costa Avenue


602/612 Drake Street


1108/1110 Garden Circle


1323/1325 Contra Costa Avenue

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Triplexes and Fourplexes

Fircrest has about 3 triplex units making up 9 units and about 14 fourplex units making up 56 units

Most are not new, with the majority having been built around 1980

Triplexes and fourplexes are similar to duplexes, often having mirrored layouts but units may be more likely to have a shared entrance

1301/1303/1305/1307 Boise Street

Triplexes and Fourplexes in Fircrest


1301/1303/1305/1307 Boise Street


1201 Mar Vista Drive

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Multiple units on Spruce Street

Townhouses in Fircrest

137/141 Wild Rose Street

Townhouses

Fircrest has approximately 33 townhouses making up 66 units

Most are contained within the 'Commons at Fircrest,' having been constructed in the early 2000s

Townhouses are tall, narrow, multi-story houses attached to one or more similar houses by shared walls, typically three stories or more

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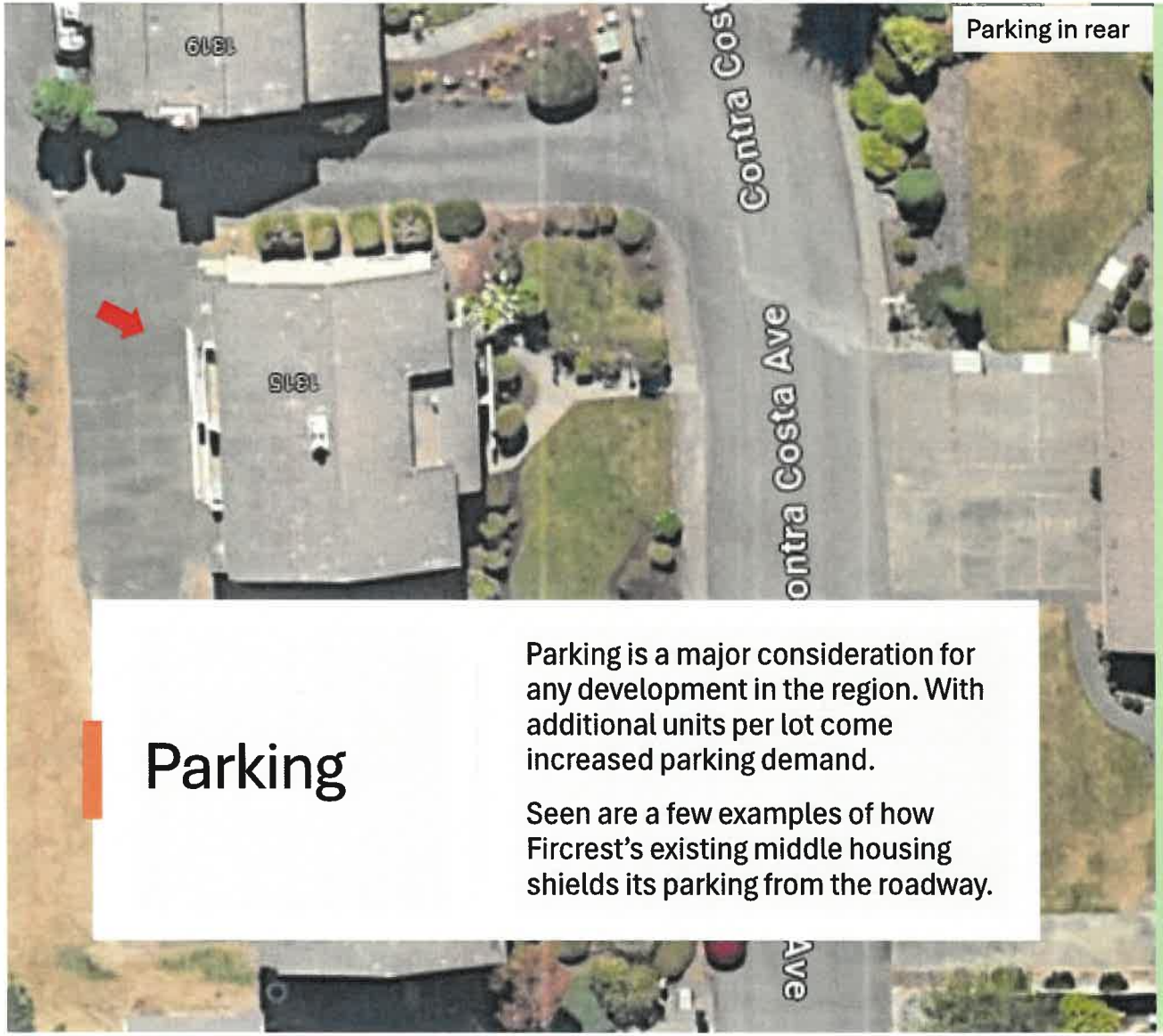

Parking

Parking is a major consideration for any development in the region. With additional units per lot come increased parking demand.

Seen are a few examples of how Fircrest's existing middle housing shields its parking from the roadway.

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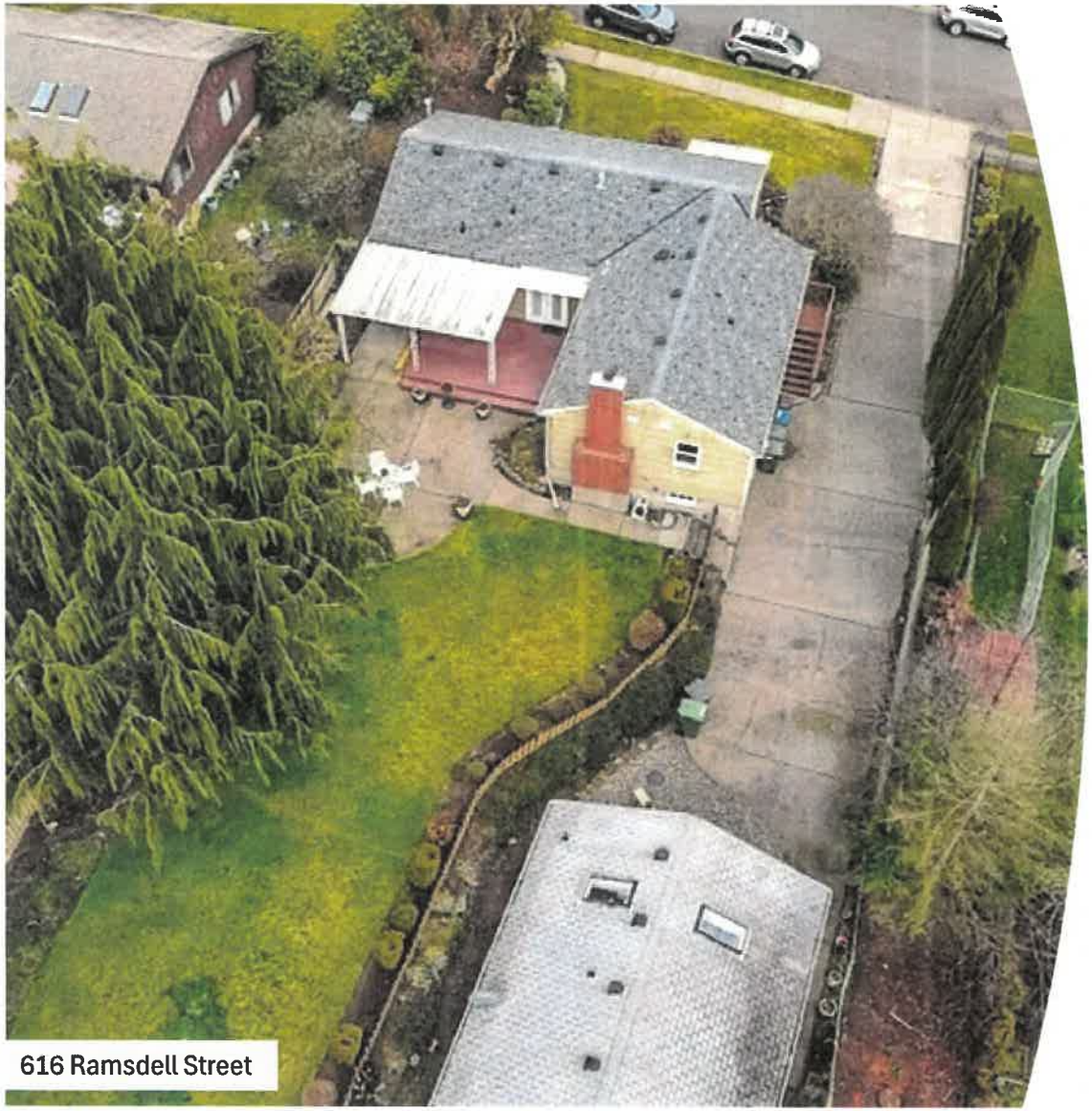

616 Ramsdell Street

Does Fircrest's Middle Housing receive more complaints than its Single-Family Housing?

No.

The data shows that over a four-year period and 278 submissions, Planning and Building received only 5 compliance complaints about residences that were middle-housing units.

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616 Ramsdell Street

Next Steps

Please look out for a middle housing survey that will be mailed out to all Fircrest households this Fall 2024.

Survey responses will be reviewed and analyzed by our Middle Housing consultant and City staff which will then be incorporated into draft development regulations. These regulations will be presented during public hearings in 2025.

Click Here to Subscribe to Middle Housing Updates

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Exhibit #2:
Citizen's Comment

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Outlook

Fw: A citizens comment on HB 1110

From Frank Ladenburg <frank@ladenburglaw.com>
Date Wed 1/22/2025 5:03 PM
To jim blackrockllc.net <jim@blackrockllc.net>

FYI

Get Outlook for iOS

From: frank@ladenburglaw.com <frank@ladenburglaw.com>
Sent: Wednesday, January 22, 2025 4:31 PM
To: David Viafore <dviafore@cityoffircrest.net>
Subject: Re: A citizens comment on HB 1110

David, Impressive and on point. I would like to meet him. Frank

Get Outlook for iOS

From: David Viafore <dviafore@cityoffircrest.net>
Sent: Wednesday, January 22, 2025 4:20:23 PM
To: Frank Ladenburg <frank@ladenburglaw.com>
Subject: A citizens comment on HB 1110

Frank.....great e mail I received this week....DMV

Dear Councilmembers,

I first want to take a moment to offer you all richly deserved praise and gratitude for the work you have done for Fircrest. My family and I moved here from a nearby neighborhood in Tacoma in March 2024, and my wife and I are reminded almost daily of how lucky we were to make the decision to live here. The events you plan and sense of community your leadership fosters make Fircrest one of the safest and happiest places to raise children I've ever seen, and I look forward to watching my children grow here over the coming years.

That very character of Fircrest is my purpose in writing to you. I recently completed the survey you sent out regarding planning changes for Middle Housing within Fircrest in response to HB 1110 requirements. Having reviewed HB 1110 and Chapter 4 of the Fircrest Comprehensive Plan, I feel it important to write to you about concerns that do not appear considered either at the State or local level.

As I write, Los Angeles continues to fight raging wildfires that destroyed broad swaths of communities. This disaster comes more than two years after the Lahaina Fire in Hawaii, where many homes still have not been rebuilt. Notably, 2024 was the first year in Washington history in which there were more

wildfires west of the Cascades than east of them. Western Washington continues to experience drought conditions during the summer. It is also remarkable that, at present, geologists estimate a 37% chance that the Cascadia Subduction Zone will generate an earthquake of magnitude 6.5 or higher in the next 50 years. The 1949 quake which destroyed Lowell Elementary registered a 6.7.

I don't mean to fear-monger and I hope that you don't think of me as a chicken little. Rather, my intent is to point out a peculiar dichotomy in the rationale driving HB 1110. This is a state known for its level-headedness and reliance on science. Climate change is real, you can't nuke hurricanes, and vaccines work. But if that is who we are, I have deep reservations about legislation and outside pressures that emphasize increased housing density and population growth devoid of any considerations of the world as it is, as it will be in fifty years, or how our decisions today will influence it.

As HB 1110 and Vision 2040 make apparent, the primary concern of government right now is to accommodate smaller affordable homes. This appears to be a knee-jerk reaction to the problem-of-the-moment without due consideration given to what problems today's solutions will create tomorrow. There seems to be a similar disconnect in genuine planning demonstrated in the state department of commerce's estimates that Fircrest's population will increase by 7% and that Fircrest should create homes to accommodate it. These issues beg profound questions:

- How exactly does the state expect the population to grow within Fircrest if Fircrest doesn't have the capacity to hold it?
- If cities and counties are required by the state to build greater population capacity, has the state developed a plan to help cities and counties expand public utilities, emergency services, and civic resources for the increased population?
- Has the state considered the increased likelihood of fire or other man-made disaster that results from increased population density, and has it accounted for the exacerbating effects higher population density have on the delivery of emergency services during disaster situations?

I'm not an economist or demographer, but I am an engineer and former Army Officer who has worked for the Seattle District of the Army Corps of Engineers, which is to say I don't feel completely out of my element when talking about long-term plans, civic infrastructure, or science.

I apologize for the length of this letter as it is, so I will close in saying that I believe the issues I've raised are of extreme importance to the long-term health and safety of Fircrest and the state at large now and in the future. I urge you as representatives of Fircrest to raise these issues with County and state representatives and demand answers. If we must comply with these edicts, the state owes us a plan to guarantee the enduring tranquility and domestic welfare that is our right.

Thank you for taking the time to read and I hope to join you for the next council meeting at the end of the month.

Regards,
Jim Gourley
429 Golden Gate Avenue

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Exhibit #3:
Town Topics

Serving the Community Since 1925

Public Works:

Fall and winter have arrived here in the PNW and the Fircrest Public Works team works diligently to keep the storm systems clear. Our street sweeper is out, following the posted schedule Street Sweeping Map, to combat the "fall" debris. Public Works staff encourage residents to not blow leaves and other yard debris into the streets, as plugged storm drains are the leading contributor to flooding streets in the City. Residents along with Public Works share the responsibility to keep storm drains clear. It takes all of us working together to keep our streets free of debris and safe for all.

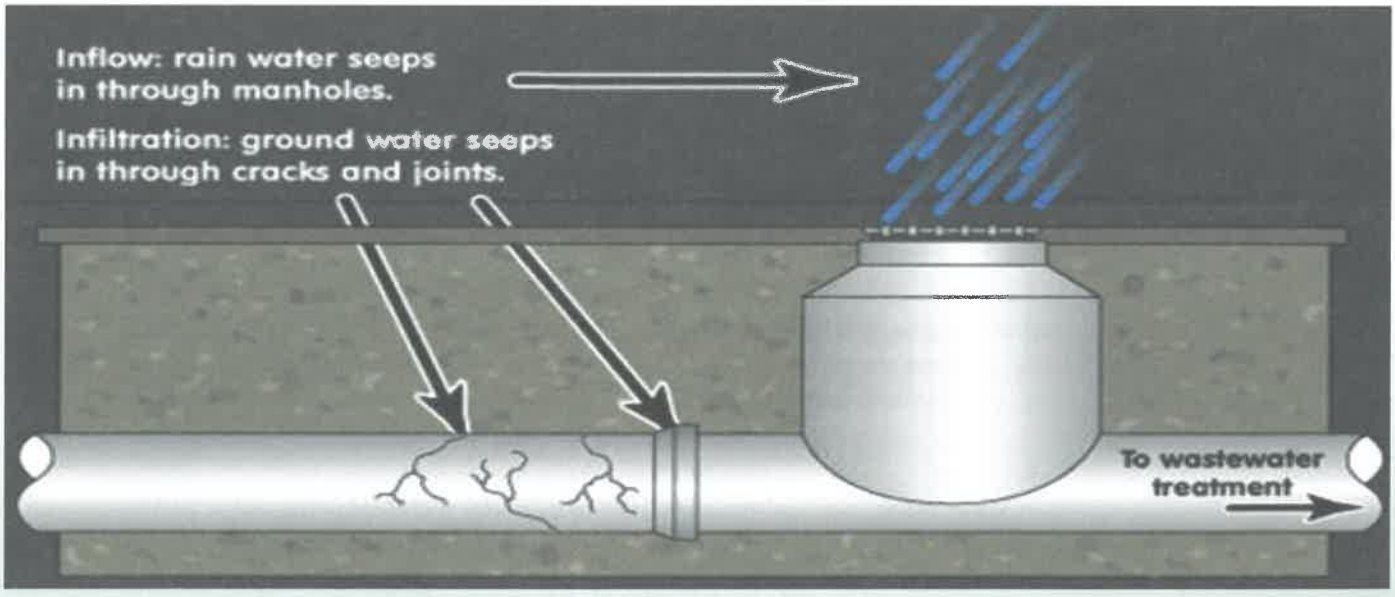
As temperatures drop, we may see snow and ice impact our city streets. Public Works staff can proactively apply salt brine to pretreat roads and/or reactively fight compact snow and ice along with use of our two plow trucks. Snow and Ice removal schedules will be followed as in years past.

The City of Fircrest (COF) owns and operates its wastewater conveyance system. All wastewater is pumped to the City of Tacoma for treatment. The City maintains a positive partnership with Tacoma Environmental Services, and as part of this partnership, Fircrest is committed to an ongoing Inflow and Infiltration (I&I) reduction program.

A sewer system is one of the most valuable assets in an urban area. After years of operating, these infrastructures need to be repaired or replaced. Inflow and infiltration (I&I) are two major problems in a separate sewer system (which is designed to convey household wastewater to the Wastewater Treatment Plant). Inflow represents the precipitation entering sewers from illicit connections of roof downspouts and yard drains. Apart from household connections, leaky manhole covers and misconnections of storm drains and local creeks may contribute to a high proportion of rainwater inflow. Infiltration represents the water intruding sewers through pipe cracks or loose joints.

I&I causes different types of problems, including decreasing available hydraulic capacity of sewers, urban flooding and consequent public health hazards, high pumping costs and energy usage, and accelerating structural deterioration.

It is not permissible to connect roof downspouts to side sewer, sewer main, or stormwater mains. Connections to stormwater mains or catch basins can impact the structural integrity of those systems. The City does allow for downspout splash pads and/or daylighting roof downspouts at the gutter line of the road. In some scenarios a drywell (underground injection control system) may be permissible.



The Fircrest Municipal Code (FMC) states in chapter 20.04.160 Violations of plumbing or sewage standards.
https://www.codepublishing.com/WA/Fircrest/#!/Fircrest20/Fircrest2004.html#20.04.160

If you have questions, please call Public Works at (253) 564-8900 or email at publicworks@cityoffircrest.net

Join us! City Council Meetings are held the 2nd & 4th Tuesdays of the month at 7:00 p.m. Council Study Sessions are the 3rd Monday of the month at 6:00 p.m. & Planning Commission Meetings are the 1st Tuesday of the month at 6:00 p.m.

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Exhibit #4:
City Code

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2/10/2025

City of Fircrest

Mark Newman

Accessory Dwelling Units are Allowed in the Following Residential Zones:

22.32 Residential-4 District (R-4)
22.34 Residential-4-Conservation District (R-4-C)
22.36 Residential-6 District (R-6)
22.38 Residential-8 District (R-8)
22.40 Residential-10-Traditional Community Design District (R-10-TCD)
22.42 Residential-20 District (R-20)
22.43 Residential-30 District (R-30)

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Exhibit #5:
2022 Zoning Map

2022 Zoning Map

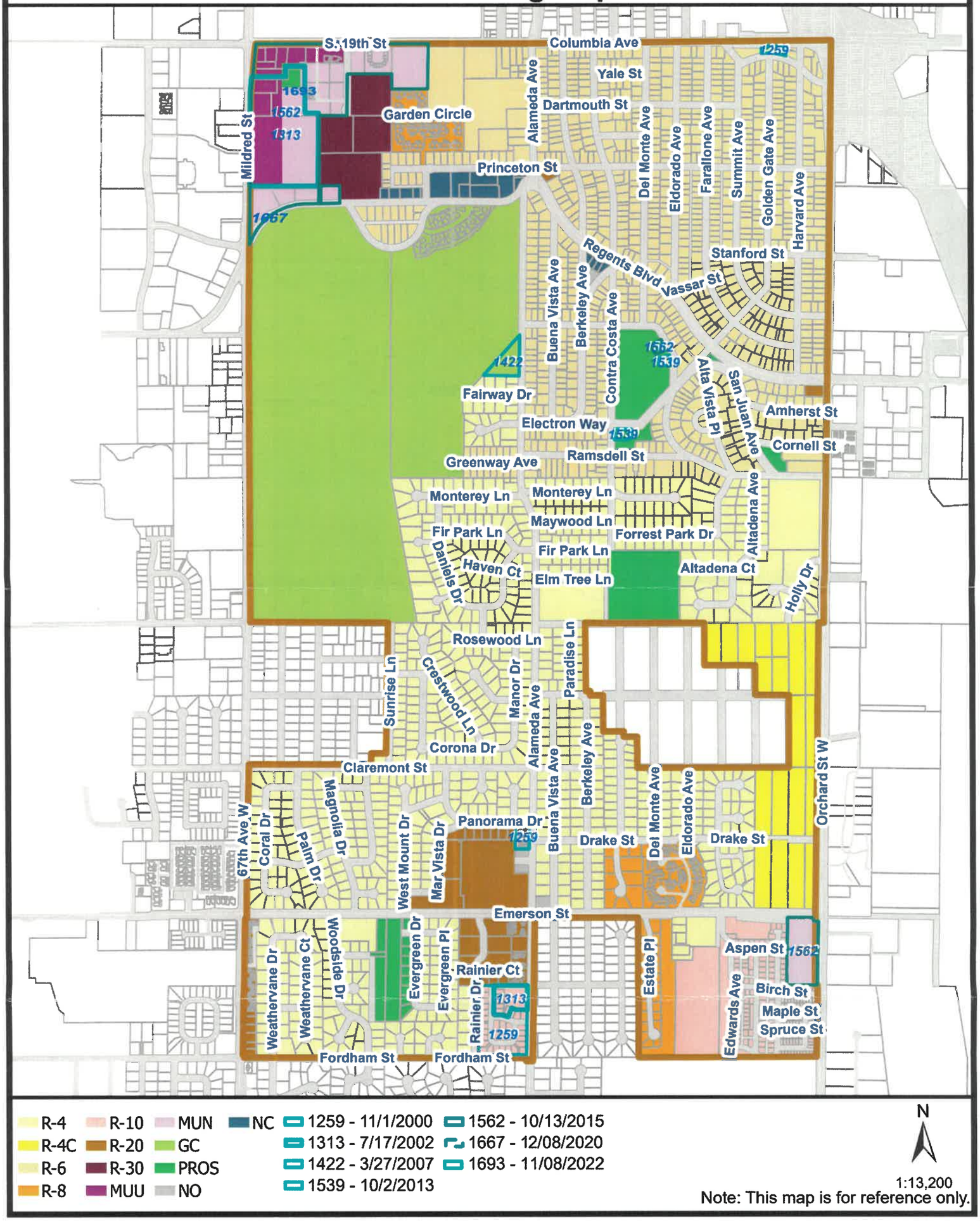

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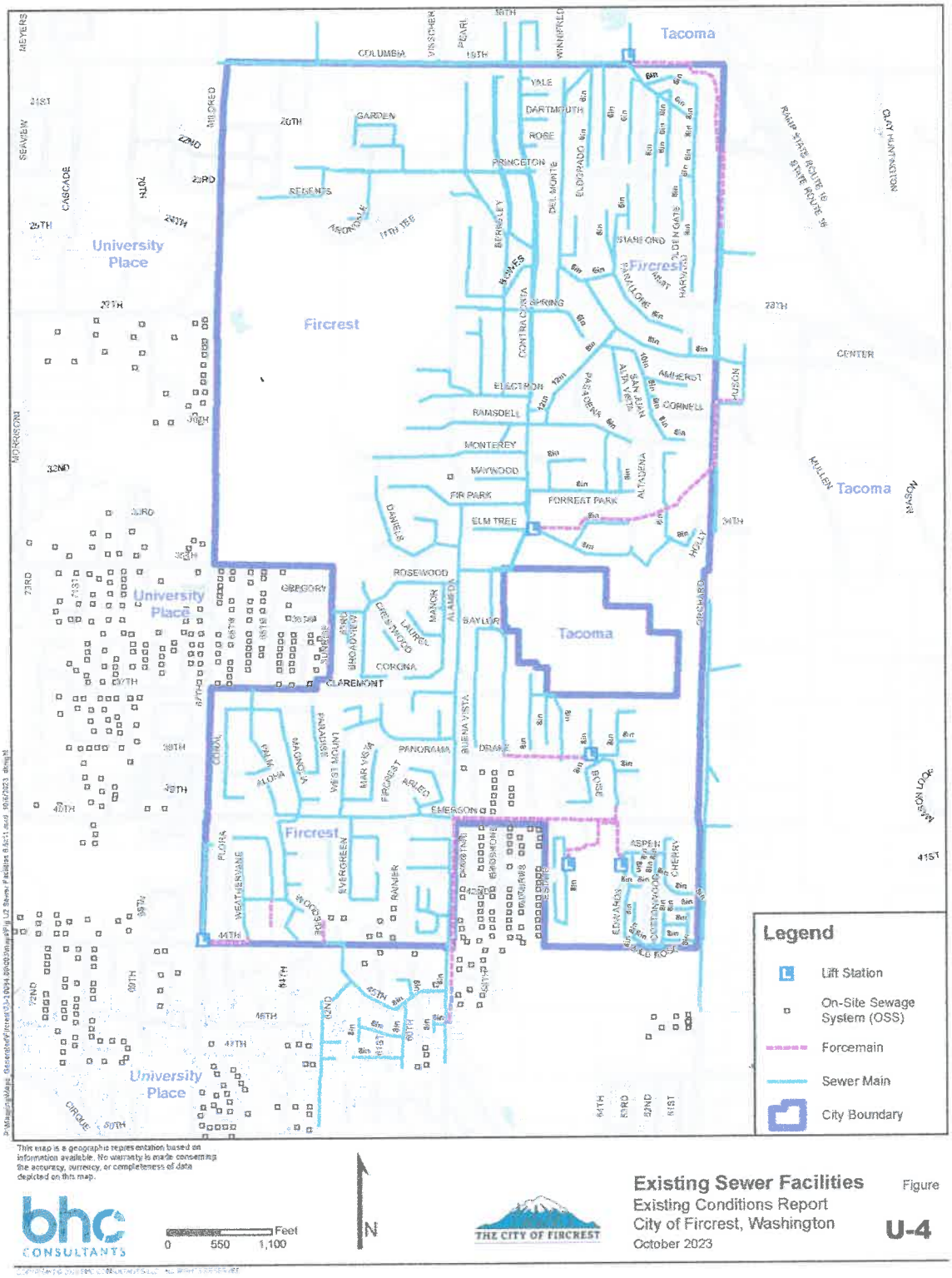
Exhibit #6:
Figure 4 Existing Sewer Facilities

Figure 4 Existing Sewer Facilities



SERVICE LEVELS AND STANDARDS

Table 3 summarizes the service levels and standards applicable in Fircrest.

Table 3 Service Levels and Standards

Service Parameter	Service Level
Capacity	220 gallons per day (gpd) per single-family dwelling, which is referred to as a *residential equivalent* (one RE); service levels for multi-family dwellings, commercial and industrial businesses, public service organizations, etc. are expressed in numbers of REs; for example, multi-family units are expected to produce .83 RE or 183 gpd.
Average daily and peak flows	Average daily flow in 2014: 482,000 gpd Peak flow in 2014: 790,000 gpd
Wastewater quality	Sewage quality must conform to County Sanitary Sewer Utility Administrative Code and county Pretreatment Code requirements.
Design and construction of facilities	Construction of new facilities and rehabilitation of old facilities must conform to the standards of the wastewater treatment service provider.

DEMAND AND ADEQUACY

This section discusses current and future demand for sanitary sewer services and adequacy of facilities to meet demand.

Current demand from Fircrest's service area was studied by a consulting firm under the supervision of the Fircrest Public Works Department. The system is capable of handling current demand and future projected growth demand.

Future demand is based on assumptions of successful reduction of infiltration and inflow and of decreased residential water consumption. Therefore, a standard effluent rate of 220 gallons/RE has been used for computing future demand. Table 4 summarizes future residential demand in Fircrest.

Future demand is based on assumptions of successful reduction of infiltration and inflow and of decreased residential water consumption. Therefore, a standard effluent rate of 220 gallons/RE has been used for computing future demand. The following table summarizes future residential demand in Fircrest.

Table 4 Projected Residential Demand in 2035

Area	Single-family (millions of gallons/day [mgd])	Duplex, Multi-family and ADUs (mgd)	Total (mgd)
Total projected residential demand	0.558 (2,535 units)	0.162 (884 units)	0.720 (3,419 units)

Stormwater Management

Surface water and stormwater in Fircrest originate with precipitation falling in and north, west, and east of Fircrest. Fircrest is located in the approximate center of this drainage area, which is known as the Leach Creek drainage subbasin. The Leach Creek subbasin has a total of 7.18 square miles and is a portion of the larger Chambers Bay drainage basin. This drainage basin is located in the Chambers - Clover Creek Watershed Resource Inventory Area 12 (WRIA 12). A small portion of Fircrest falls within the Tacoma West drainage basin. Figure 5 illustrates those portions of the Chambers Bay and Tacoma West drainage basins located in close proximity to Fircrest.

Stormwater within the Leach Creek subbasin, along with stormwater from the entire Chambers Bay basin, eventually reaches Puget Sound via Chambers Bay. The following section provides a general overview of flows in the Leach Creek subbasin.

SUMMARY OF SERVICES AND FACILITIES

Stormwater flows over the surface into dry wells, swales, ponds, and basins where some of it percolates through the soil into groundwater. The remainder is conveyed to detention facilities via ditches and subsurface storm drainage pipes. Fircrest owns and operates stormwater systems in conjunction with the City of Tacoma. Much of the stormwater originating in the northern portion of the Leach Creek subbasin is collected in the Leach Creek holding basin, which provides sediment removal, infiltration to groundwater, peak discharge control, and outflow to Leach Creek. Subsurface water at Fircrest Park, the former site of Spring Lake, also is intercepted and piped to the holding basin. The remainder flows over the surface into dry wells, swales, ponds, and basins, where it percolates through the soil.

In the southern portion of Fircrest, stormwater is conveyed to a pond within Thelma Gilmur Park. Like the holding basin, this pond provides sediment removal and infiltration with overflow to Leach Creek. Leach Creek flows into Chambers Creek, which flows into Puget Sound via Chambers Bay.

A small amount of stormwater within the western boundary of Fircrest sheds west toward Puget Sound rather than east; this area is part of the Tacoma West drainage basin. The small number of facilities in that area conveys stormwater away from Fircrest and Leach Creek.

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Exhibit #7:
Town Topics

Serving the Community Since 1925

Planning & Building

We are thrilled to announce that Mark Newman has joined our team as the City's Community Development Director. Mr. Newman is an AICP-certified planner and has served as the Community Development Director and Interim Public Works Director for the City of Pacific.

He has previous planning experience with the cities of Phoenix, Mukilteo, and Sammamish and with Pierce County Sewer. He earned a bachelor's degree from Temple University and a master's degree in urban and regional planning from UC Irvine.

Mr. Newman brings with him a wealth of knowledge and experience in urban planning, community development, and public works. We are confident that his expertise will be invaluable to our team as we continue to work towards our goals.

Please join us in welcoming Mark to our team!

Public Works: CITY OF FIRCREST INFILTRATION AND INFLOW (I&I) REDUCTION PROGRAM

WHAT IS INFILTRATION AND INFLOW (I&I), AND WHY SHOULD I CARE?

Before the 1940s, it was common to have stormwater from roof downspouts connected to side or rear yard sewer lines. Separating Storm Water from Sewage has been required in Fircrest since 1947.

"IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE OR CAUSE TO BE DISCHARGED ANY STORM SEWAGE INTO THE SANITARY SEWERS OF THE CITY OF FIRCREST." (Ord. 1280 § 2, 2001 and Ord. 116 § 2, 1947).

Since the early 2000s, the City of Fircrest has actively been working to reduce INFILTRATION whereby groundwater seeps into cracked pipes or joints and where stormwater gets in through leaky utility holes.

Excess I&I increases sewer treatment costs and individual bills and causes environmental pollution.

INFLOW from roof gutters, sump pumps, and other clear water connections into the sanitary sewer system must be reduced and disconnected. Please check your downspouts and, if connected, disconnect and cap the sewer inlet. Use a splash block or otherwise divert downspouts away from your building. For downspouts, consider rain barrels or rain gardens.

Fircrest is required to further reduce its I&I into the Tacoma sewage treatment system. For more information, contact us at publicworks@cityoffircrest.net.

INCORRECT

CORRECT

Join us! City Council Meetings are held the 2nd & 4th Tuesdays of the month at 7:00 p.m. Council Study Sessions are the 3rd Monday of the month at 6:00 p.m. & Planning Commission Meetings are the 1st Tuesday of the month at 6:00 p.m.

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Exhibit #8:
Review of Soils Map of Fircrest

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Craig A. Peck & Associates

12737 Olalla Valley Road SE
Olalla, Washington 98359

technical assistance
253-229-0923
peckassoc@gmail.com

TO: Fircrest Middle Housing Ad Hoc Committee
DATE: March 24, 2025
RE: Review of Soils Map of Fircrest

I completed a brief review of USDA Natural Resources Conservation Service, Web Soil Survey, National Cooperative Soil Survey Map of Fircrest. That map presents generalized locations of typical soils found in Fircrest. I reviewed the most common soil types and presented their characteristics including wet weather depths to groundwater and prepared a table of those depths.

My conclusion is that the depth to groundwater in these common areas of Fircrest is not adequate to meet requirements for infiltration facilities as defined by the Stormwater Management Manual for Western Washington, Washington State Department of Ecology.

My review documents are attached.

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FIRCREST SOIL TYPES AND WATER TABLE

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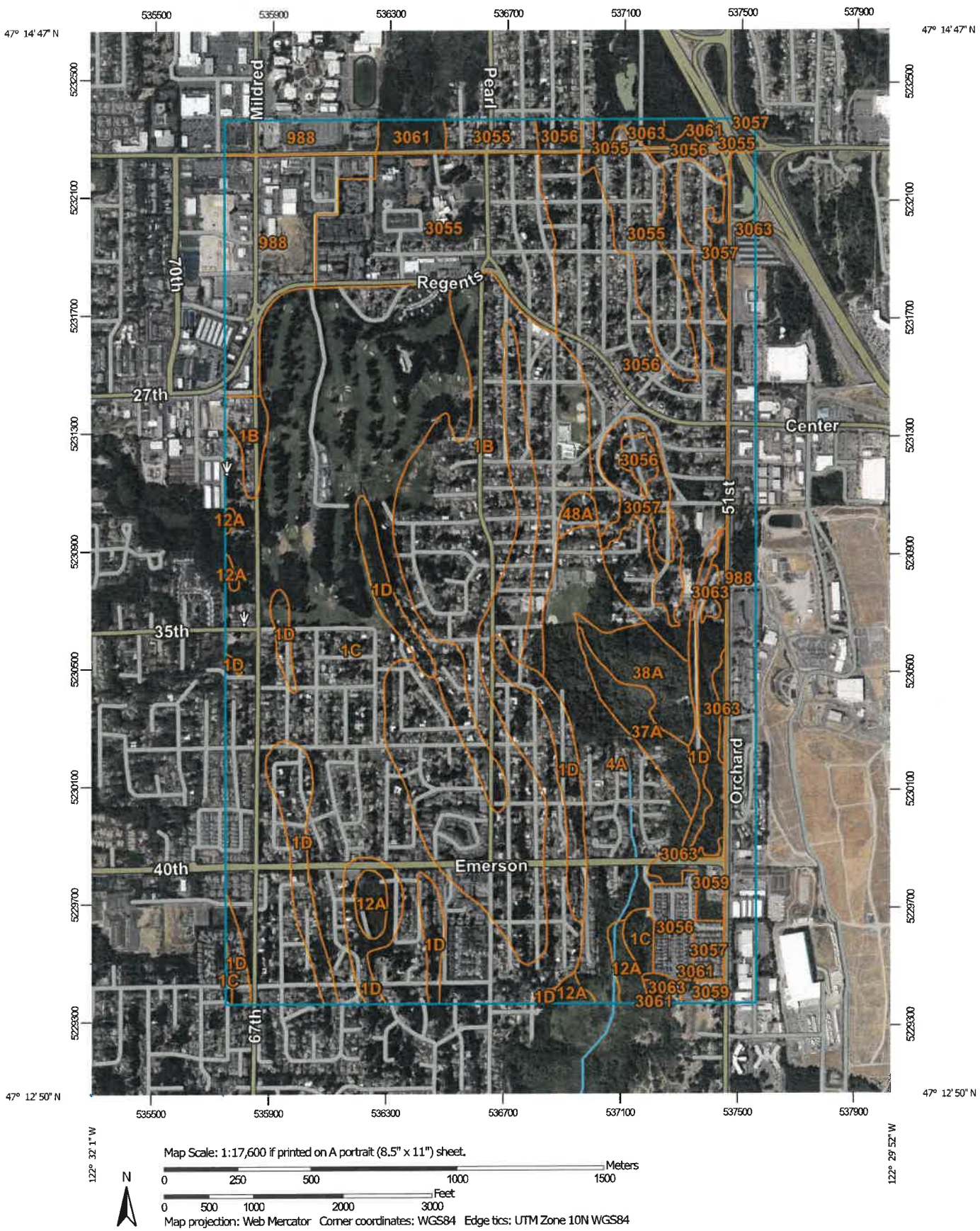
Soil Map—City of Tacoma, Washington, and Pierce County Area, Washington
(Fircrest, Soils)



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SOIL TYPES IN FIRCREST	Depth to Water Table (Inches)
Alderwood gravelly sandy loam 0 to 8 percent slopes	18 to 37 (1.5'to 3'-1" Inadequate for infiltration)
Alderwood gravelly sandy loam 8 to 15 percent slopes	18 to 37
Alderwood gravelly sandy loam 15 to 30 percent slopes	18 to 37
Bellingham silty clay loam	0 to 12
Dupont muck	0
Semiahmoo muck	0 to 12
Shalcar muck	0

Pierce County Area, Washington

1B—Alderwood gravelly sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t625
Elevation: 50 to 800 feet
Mean annual precipitation: 25 to 60 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Alderwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B

Pierce County Area, Washington

1C—Alderwood gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t626
Elevation: 50 to 800 feet
Mean annual precipitation: 20 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Alderwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B

Pierce County Area, Washington

1D—Alderwood gravelly sandy loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2t627
Elevation: 0 to 1,000 feet
Mean annual precipitation: 25 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Alderwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B

Pierce County Area, Washington

4A—Bellingham silty clay loam

Map Unit Setting

National map unit symbol: 2hr7
Elevation: 0 to 820 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 150 to 210 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Bellingham and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bellingham

Setting

Landform: Till plains
Parent material: Alluvium

Typical profile

H1 - 0 to 4 inches: silty clay loam
H2 - 4 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F002XA007WA - Puget Lowlands Wet Forest
Forage suitability group: Wet Soils (G002XN102WA)
Other vegetative classification: Wet Soils (G002XN102WA)

Pierce County Area, Washington

12A—Dupont muck

Map Unit Setting

National map unit symbol: 2hp3
Elevation: 150 to 1,000 feet
Mean annual precipitation: 30 to 70 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 150 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Dupont and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dupont

Setting

Landform: Till plains
Parent material: Organic material and diatomaceous earth

Typical profile

H1 - 0 to 13 inches: muck
H2 - 13 to 16 inches: diatomaceous earth
H3 - 16 to 60 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 26.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: R002XA003WA - Puget Lowlands Bogs and Fens
Forage suitability group: Wet Soils (G002XF103WA)
Other vegetative classification: Wet Soils (G002XF103WA)
Hydric soil rating: Yes

Pierce County Area, Washington

37A—Semiahmoo muck

Map Unit Setting

National map unit symbol: 2hqm
Elevation: 10 to 1,300 feet
Mean annual precipitation: 35 to 70 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 125 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Semiahmoo, drained, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Semiahmoo, Drained

Setting

Landform: Flood plains
Parent material: Herbaceous organic material

Typical profile

H1 - 0 to 12 inches: muck
H2 - 12 to 53 inches: muck
H3 - 53 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: R002XA003WA - Puget Lowlands Bogs and Fens
Forage suitability group: Wet Soils (G002XN102WA)
Other vegetative classification: Wet Soils (G002XN102WA)
Hydric soil rating: Yes

Pierce County Area, Washington

38A—Shalcar muck

Map Unit Setting

National map unit symbol: 2hqn
Elevation: 50 to 700 feet
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Shalcar and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shalcar

Setting

Landform: Flood plains
Parent material: Organic material over alluvium

Typical profile

H1 - 0 to 12 inches: muck
H2 - 12 to 27 inches: mucky peat
H3 - 27 to 46 inches: silty clay
H4 - 46 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 21.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: R002XA003WA - Puget Lowlands Bogs and Fens
Forage suitability group: Wet Soils (G002XS101WA)
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

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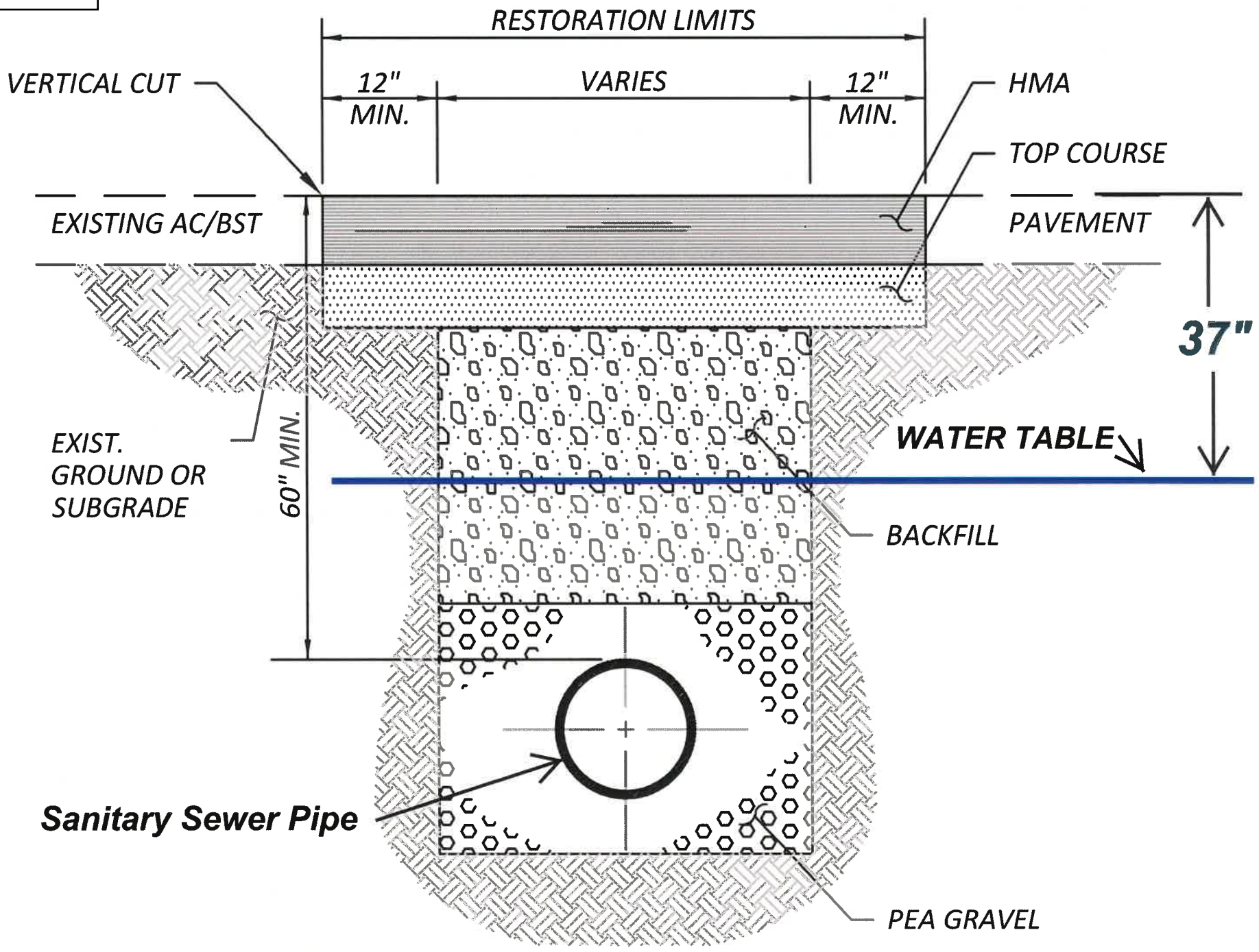

Water Table Depth in Fircrest Soils

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Exhibit #9:
Letter from Steve Cox
Hydrologist

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April 10, 2025

MEMORANDUM

To: City of Fircrest Middle Housing Committee

Date: April 8, 2025

Re: Hydrologic Issues Regarding Addition of Middle Housing

From: Stephen Cox, PHg

314 Contra Costa, Fircrest WA

Hydrologist, U.S. Geological Survey (1988-2024, retired)

Bachelor of Science –University of Puget Sound-Environmental Science

Registered Professional Hydrogeologist– Washington (2138) 2001-2021

Thank you for the opportunity to provide hydrologic insights pertinent to the development of additional 'Middle Housing' within Fircrest. As noted in the Ad Hoc Committee's draft Notice of Intent letter of 1/21/2025, there are several hydrologic issues that pertain to the construction of additional dwelling units in Fircrest, including the lack of additional capacity of the existing sewer and stormwater infrastructure. Of particular concern are sewer flows that are pumped from Fircrest to the City of Tacoma's Wastewater Treatment plant. During the rainy winter and spring months the daily volume of pumped sewer flows from Fircrest often exceeds the agreed pumpage volumes.

Precipitation is the dominant source of surface water runoff and groundwater recharge within the City of Fircrest. Largescale construction of Middle Housing will likely alter the surface hydrology of Fircrest resulting from increased land area covered by impervious surfaces, reduced canopy coverage of large conifer trees (which will increase the amount of rainfall reaching ground level), and focus of groundwater recharge to locations where rainwater detention structures are built. Areas of impermeable surfaces as well as canopy coverage of large evergreen trees are two factors that have been shown to have a significant impact on the generation of surface runoff and groundwater recharge in a hydrologically similar area of Kitsap County, (see Bidlake and Payne, 2001). Groundwater flooding can occur in the glacial terrain of Southern Puget Sound at times when several years of above average precipitation raise regional ambient groundwater levels, see Jones and others, (2000).

Surface water runoff and the movement of groundwater are processes that are largely controlled by the underlying geological framework of the area. Fircrest lies within a glaciated area of Southern Puget Sound that is covered by a thick sequence of accumulated glacial sediments. Recent groundwater modeling in the Chambers Creek watershed (Savoca and others, 2010), show that surficial sediments in some parts of Fircrest consist of highly permeable sediment that when saturated with water would be considered an aquifer. Where present within Fircrest, the thickness of these sediments ranges from 0 to 35 feet. Underlying these localized sediments is an aerially

extensive low permeable layer of glacial till which averages about 60 feet in thickness. Permeability of the glacial till sediment is much lower and inhibits the movement of groundwater.

Soil in much of the Fircrest area was classified within the Alderwood soil series by Zulauf, (1979). The permeability rate of Alderwood soils generally exceeds precipitation rates experienced in Fircrest; thus, surficial ponding is not widespread. However, continued downward percolation of rainfall within the sediments will be inhibited by the underlying glacial till. The resulting accumulation of percolating rainwater will raise the water-table elevation and in some areas create temporary, or perched water table conditions as noted by Zulauf, (1979). Similarly, basement flooding has often been reported in Fircrest during rainy periods of the year.

Before modification of zoning ordinances in Fircrest are promulgated as a result of HB 1110 it would be prudent for the City of Fircrest to request additional time to evaluate the conditions that generate the excess sewer flows that are pumped to the City of Tacoma. The seasonal rise in water table elevation in Fircrest is likely related to the excess sewer flows that have been reported. Coordination and integration of management plans for both sewer flows and stormwater runoff are needed so that water quality issues are not transferred from one water source to another.

Information on the seasonal variation in the elevation of the water table within the shallow surficial sediment in areas near existing sewer lines should be collected; particularly from the areas where construction of additional middle housing is proposed. Identification of unregulated input of stormwater to sanitary sewers needs to be identified and eliminated where possible. Identification and repair of leaky portions of sewer pipe where excessive infiltration of groundwater occurs. Also, it would be prudent to identify areas where stormwater retention and storage structures could be built which would have only limited impact on infiltration to sewer flows. Specifically, will the construction of rain-infiltration basin along street parking exacerbate stormwater infiltration to sewer lines. The management of stormwater runoff is an additional hydrologic factor that should be integrated when planning development of additional middle housing construction.

References:

Bidlake, W.R., and Payne, K.L., 2001, Estimating recharge to ground water from precipitation at Naval Submarine Base Bangor and Vicinity, Kitsap County, Washington: U.S. Geological Survey Water- Resources Investigations Report 01-4110, 33 p.

Jones, M.A., Jones, J.L., and Olsen, T.D., 2000, Ground-Water Flooding in Glacial Terrain of Southern Puget Sound, Washington: U.S. Geological Survey Fact Sheet 111-00

Savoca, M.E., Welch, W.B., Johnson, K.H., Lane, R.C., Clothier, B.G., and Fasser, E.T., 2010, Hydrogeologic framework, groundwater movement, and water budget in the Chambers-Clover Creek Watershed and vicinity, Pierce County, Washington: U.S. Geological Survey Scientific Investigations Report 2010–5055, 46 p.

Zulauf, A.S., 1979, Soil Survey of Pierce County Area, Washington: U.S. Department of Agriculture, Soil Conservation Service, 130 p.

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Information needed to identify locations for middle housing development in Fircrest.

Identification of areas where seasonal high-water tables increase stormwater infiltration into sewer flows.

1. Collect monthly water-level data from 15-25 wells located within affected areas of Fircrest on the seasonal variation in the elevation of shallow groundwater occurring within 10 to 20 feet of existing land surface in low lying areas of Fircrest where seasonal shallow ground water contributes to excess sewer flows during the rainy winter and spring months. Data collection should minimally be once a month for cover from 18 to 24 months.
    a. Search government records (WA Ecology well log files) of existing resource protection wells to identify existing wells where shallow water table data might be collected. (Estimated cost, $15,000)
    b. Utilize same record for descriptions of shallow soils and glacial sediment to facilitate mapping of low permeability sediments. (cost included in a.)
    c. Drill and install shallow monitoring wells (5-10) in areas where no wells are available. Estimated cost, $30,000 to $40,000.
2. Refine existing soils maps of Fircrest area to identify low permeable zones.
    a. Determine if historical predevelopment data is available from Soil Conservation Service.
    b. Conduct soil percolation test at locations where rainwater detention storage and infiltration basins are planned. (Estimated cost, $15,000-20,000.)
3. Identify sewer lines heavily affect by stormwater infiltration and unregulated inflows to identify areas where sewer inflow and infiltration need to be reduced.
    a. Conduct tracer-dilution test along sewer line during time periods identified as having high potential for developing excess sewer flows pumped to City of Tacoma. Compare results to similar test during times periods without significant precipitation. (Estimated cost, $30,000 to $60,000)

Stephen Cox

April 22, 2025

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Exhibit #10:
Review of Sanitary Sewer Flow Data from Fircrest

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Craig A.
Peck &
Associates

12737 Olalla Valley Road SE
Olalla, Washington 98359

technical assistance
253-229-0923
peckassoc@gmail.com

TO: Fircrest Middle Housing Ad Hoc Committee
DATE: March 24, 2025
RE: Review of Sanitary Sewer Flow Data from Fircrest

I reviewed the Tacoma-Fircrest Agreement dated June 24, 2014 for the treatment of sewage and an unexecuted Memorandum of Understanding dated May 31, 2023, between Tacoma and Fircrest. I also reviewed sewer pump data for Fircrest for the periods of October 1, 2021 to May 31, 2022 and October 31, 2022 and to November 31, 2022. The raw data and the graphical presentation of that data prepared by the City of Tacoma clearly indicate that the flows to Tacoma exceed the instantaneous rate of 2.25 Million Gallons per Day (MGD) specified in their agreement on a regular basis. Those flows frequently exceed 2.25 MGD by more than 15 percent.

The City sewer system experiences Infiltration and Inflow (I and I) conditions. Infiltration is caused by deterioration of pipe materials and failing pipe joints. Inflow is caused by stormwater runoff entering the sanitary sewer by way of direct illegal connects of roof or area drains or overflows of stormwater facilities. I and I is a common condition allowable in small volumes as noted in the "Criteria for Sewage Works Design", Washington State Department of Ecology. However, larger quantities of I and I are not. Fircrest, like many other communities like Tacoma, are making efforts to reduce I and I by replacing sewer piping and eliminating stormwater connections. In Fircrest, high wet weather groundwater conditions in most soils in the area aggregate or intensify infiltration of stormwater.

My conclusion is that the pumping rate from the Fircrest pump stations to the Tacoma sewer collection system regularly exceeds the terms in their agreement.

My review documents are attached.

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SANITARY SEWER CAPACITY

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TACOMA-FIRCREST SEWER AGREEMENT

This Agreement is made and entered into as of the day of 24 day of June, 2014 by and between the CITY OF TACOMA, WASHINGTON (hereinafter referred to as "Tacoma") and the City of FIRCREST, WASHINGTON (hereinafter referred to as "Fircrest").

WHEREAS, Tacoma presently owns and operates a sewage system consisting in part of lateral sewers, trunk sewers, and sewage treatment and disposal facilities for the benefit of the citizens of Tacoma; and

WHEREAS, Fircrest presently owns and operates a system of lateral and trunk sewers for the benefit of its citizens, but does not own or operate any sewage treatment or disposal facilities; and

WHEREAS, Tacoma and Fircrest have previously executed a Sewer Service Agreement dated July 11, 1947, renewed January 1, 1967, and amended on March 28, 1979 for the joint use of their respective sewer systems; and

WHEREAS, it has been determined desirous by both parties to this Agreement and in the best interest of the public health, safety and welfare of the territory served by both parties, that this Agreement be entered into;

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained and for other good and valuable consideration, it is hereby agreed as follows:

1. AUTHORITY FOR CONTRACT- COMPLETENESS -TERM.

This Agreement is made and entered into pursuant to the authority vested in Tacoma and Fircrest by the provisions of RCW 35.67.300 and Chapter 39.34 RCW. This Agreement, except where otherwise provided, shall be complete within itself and shall remain in effect for a period of thirty-five (35) years from the effective date hereof, or as may be amended as contained herein.

This Agreement may be renewed at the end of the present term and each subsequent term for additional thirty-five (35) year periods by mutual agreement of both parties.

2. PERMISSION TO DISCHARGE.

Tacoma hereby grants Fircrest permission to discharge sanitary sewage from the Fircrest Sewer System into the Tacoma Sewer System at the intersection of South 30th Street and Huson Street, the intersection of Orchard Street and Princeton Street, the intersection of Bennett Street and W. 19th Street, and at other locations as may be determined by mutual agreement in the future. Any additional consent to discharge granted by either party shall be memorialized in a mutually executed amendment hereto.

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11. FIRCREST CAPACITY RIGHTS IN TACOMA SEWER SYSTEM.

In consideration of mutual promises and covenants Tacoma has previously granted Fircrest certain capacity rights in the Tacoma Sewer System. These capacity rights are herein defined at 0.75 million gallons per day (MGD) average dry weather flow and 2.25 MGD peak hydraulic flow.

The hydraulic capacity of the treatment works should be based on the maximum expected flow. The process design of treatment units should be based on either the average design flow or the peak design flow, whichever is controlling. The following items should be determined from the observed rate of flow during the significant period of discharge. Items to be considered in determining design flows are as follows:

- Peak flow rates continuing over a length of time sufficient to adversely affect the detention time of treatment units or the flow characteristics in conduits.
- Applicable data from similar municipalities.
- Wet weather flows.
- Recirculation and inplant recycle flows.

The design organic loading should be computed in the same manner used in determining design flow.

G2-1.2.3 Existing Systems

Treatment plants designed to serve existing sewerage systems should be designed on the basis of characteristics of sewage obtained from the operating records of the treatment works.

The design engineer or owner shall provide a plan acceptable to Ecology for eliminating or handling excessive inflow/infiltration (I/I) so that there will be no discharge of inadequately treated wastewaters or impairment of the treatment process.

G2-1.2.4 New Systems

Sewage treatment plants to serve new sewerage systems should be designed on the basis of information in Table G2- 2. Numbers of persons per dwelling should be based on planning projections derived from an official source. Any deviations should be based on sound engineering judgment substantiated in the engineering report.

Table G2- 2. Design Basis for New Sewage Works

Discharge Facility	Design Units	Flow* (gpd)	BOD (lb/day)	SS (lb/day)	Flow Duration (hr)
Dwellings	per person	100	0.2	0.2	24
Schools with showers and cafeteria	per person	16	.04	.04	8
Schools without showers and with cafeteria	per person	10	.025	.025	8
Boarding schools	per person	75	0.2	0.2	16
Motels at 65 gal/person (rooms only)	per room	130	0.26	0.26	24
Trailer courts at 3 persons/trailer	per trailer	300	0.6	0.6	24
Restaurants	per seat	50	0.2	0.2	16

Discharge Facility	Design Units	Flow* (gpd)	BOD (lb/day)	SS (lb/day)	Flow Duration (hr)
Interstate or through-highway restaurants	per seat	180	0.7	0.7	16
Interstate rest areas	per person	5	0.01	0.01	24
Service stations	per vehicle serviced	10	0.01	0.01	16
Factories	per person per 8-hr shift	15-35	0.03-0.07	0.03-0.07	Operating period
Shopping centers	per 1,000 sq ft of ultimate floor space	200-300	0.01	0.01	12
Hospitals	per bed	300	0.6	0.6	24
Nursing homes	per bed	200	0.3	0.3	24
Homes for the aged	per bed	100	0.2	0.2	24
Doctor's office in medical center	per 1,000 sq ft	500	0.1	0.1	12
Laundromats, 9 to 12 machines	per machine	500	0.3	0.3	16
Community colleges	per student and faculty	15	0.03	0.03	12
Swimming pools	per swimmer	10	0.001	0.001	12
Theaters, drive-in type	per car	5	0.01	0.01	4
Theaters, auditorium type	per seat	5	0.01	0.01	12
Picnic areas	per person	5	0.01	0.01	12
Resort camps, day and night, with limited plumbing	per campsite	50	0.05	0.05	24
Luxury camps with flush toilets	per campsite	100	0.1	0.1	24

*Includes normal infiltration

Based on approximate Fircrest residential population only:

(7500 residents)(100 gals/person/day) = 750,000 gallons/day
= 0.75 Million Gallons per Day (MGD)

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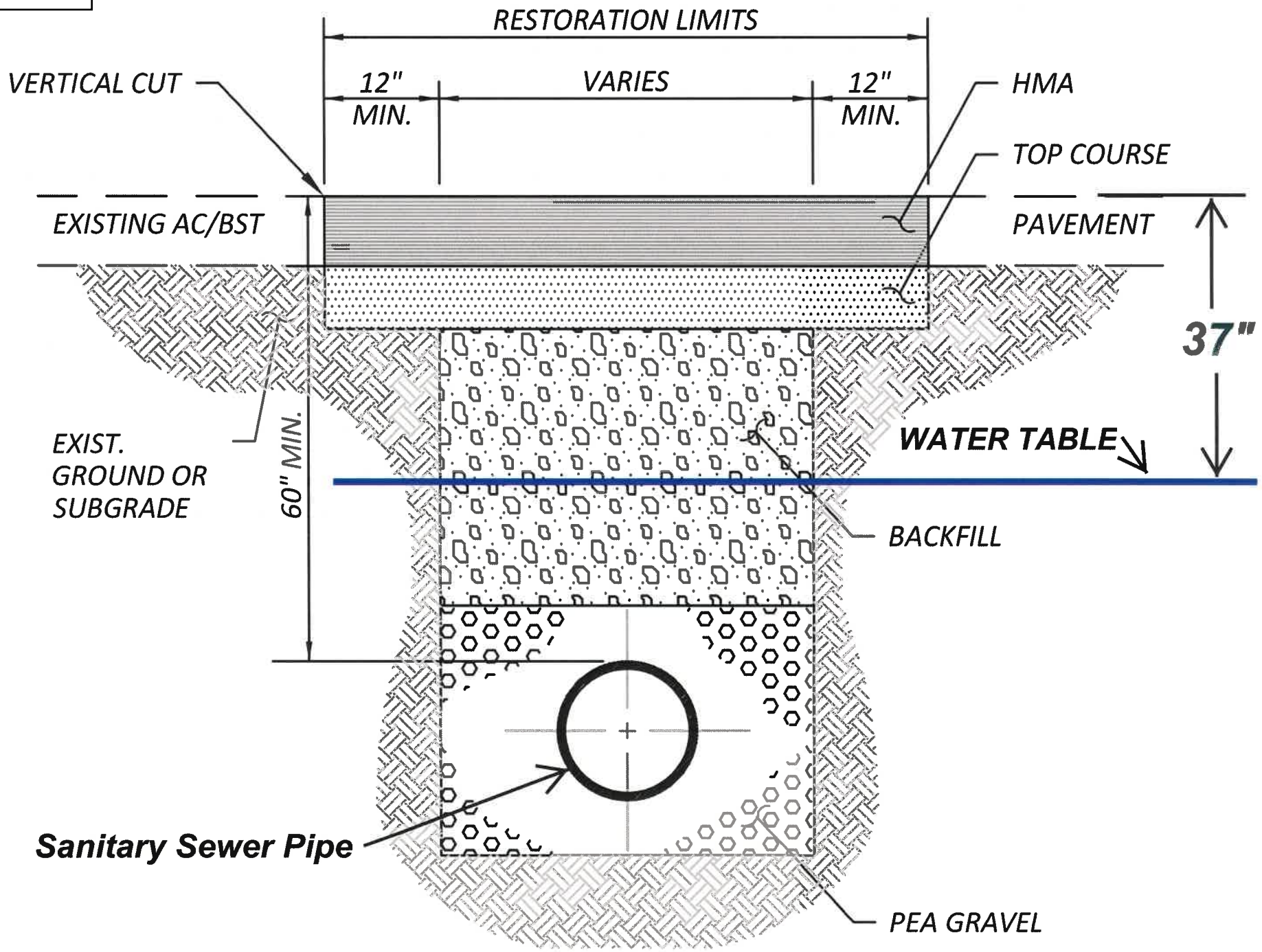

Water Table Depth in Fircrest Soils

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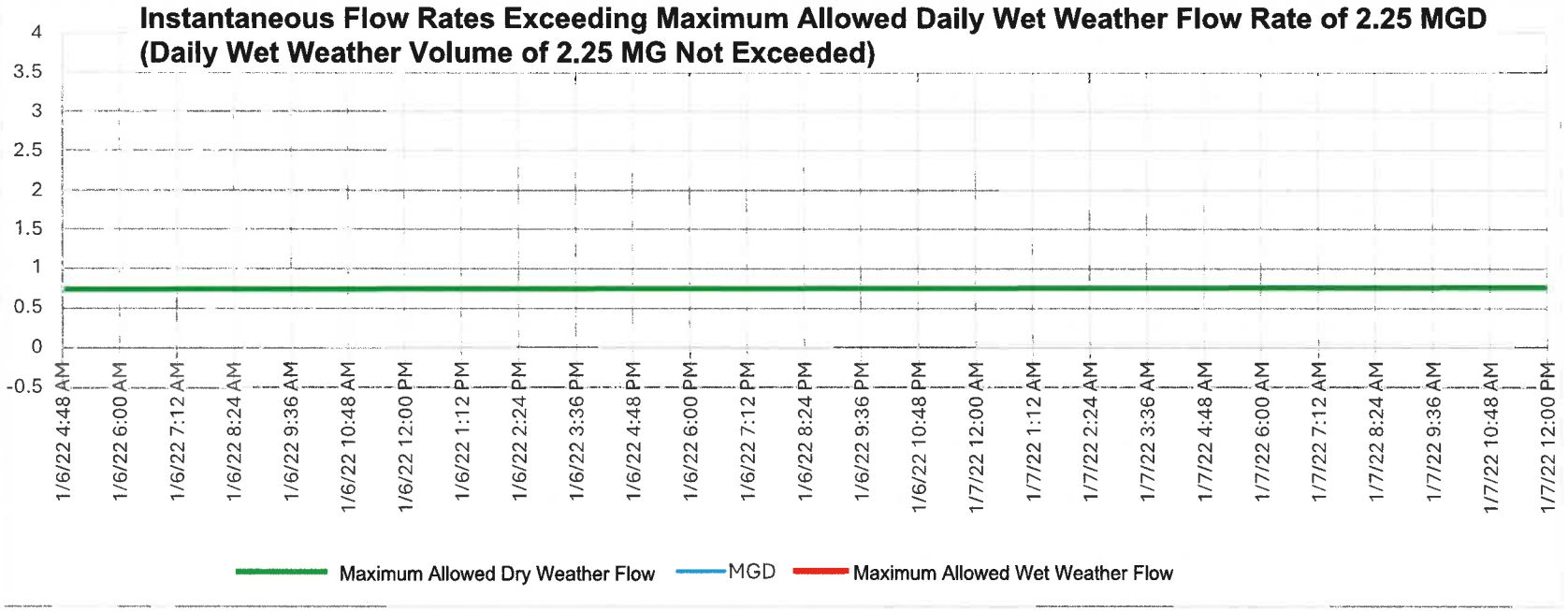

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Exhibit #11:
Stormwater Requirements Review

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Craig A. Peck & Associates

12737 Olalla Valley Road SE
Olalla, Washington 98359

technical assistance
253-229-0923
peckassoc@gmail.com

TO: Fircrest Ad Hoc Committee
DATE: March 24, 2025
RE: Stormwater Requirements Review

I completed a brief review of current Western Washington Stormwater regulations and its effects on placing multiple residential units on lots currently zoned for one residential unit. Those regulations encourage the use of infiltration for treatment of runoff from impervious and pervious surfaces. The location of those infiltration facilities requires setbacks from structures as well as from property lines. My review included current setbacks for structures in Fircrest residential zones R-4 and R-6.

My conclusion is that there is not adequate space to add another structure to the existing lots and meet the setback requirements for infiltration facilities in most cases.

My review documents are attached.

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STORMWATER RUNOFF REQUIREMENTS

FOR NEW CONSTRUCTION

All new construction must comply with current stormwater runoff regulations from all impervious surfaces including roofs, sidewalks, decks, patios, and driveways.

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Figure I-3.1: Flow Chart for Determining Requirements for New Development

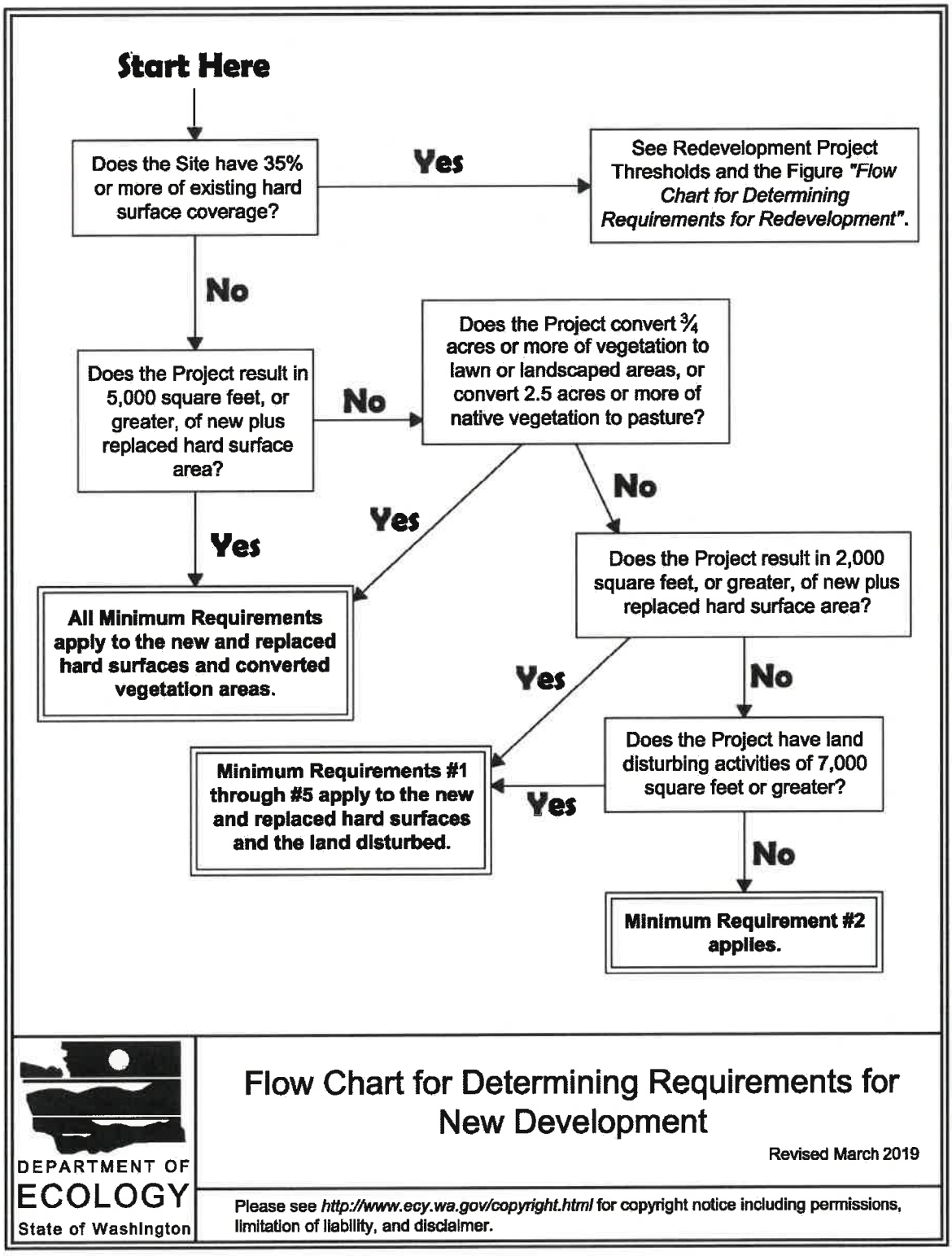

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Figure I-3.2: Flow Chart for Determining Requirements for Redevelopment

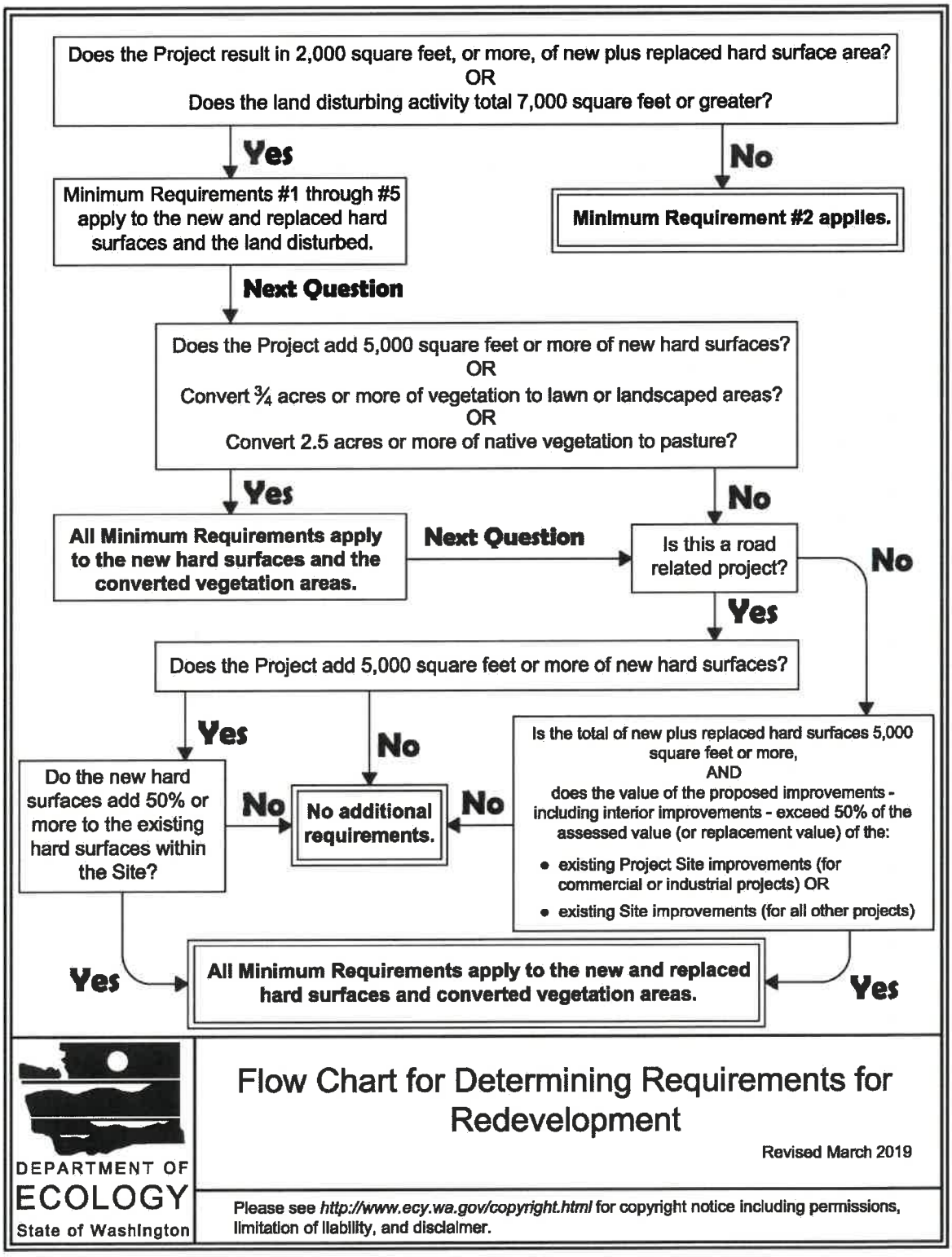

Table I-3.2: The List Approach for MR5 Compliance

List #1 (For MR #1 - #5 Projects That Are Not Flow Control Exempt)	List #2 (For MR #1 - #9 Projects That Are Not Flow Control Exempt)	List #3 (For Flow Control Exempt Projects)
Surface Type: Lawn and Landscaped Areas		
BMP T5.13: Post-Construction Soil Quality and Depth	BMP T5.13: Post-Construction Soil Quality and Depth	BMP T5.13: Post-Construction Soil Quality and Depth
Surface Type: Roofs		
1. BMP T5.30: Full Dispersion or BMP T5.10A: Downspout Full Infiltration	1. BMP T5.30: Full Dispersion or BMP T5.10A: Downspout Full Infiltration	1. BMP T5.10A: Downspout Full Infiltration
2. BMP T5.14: Rain Gardens or BMP T7.30: Bioretention	2. BMP T7.30: Bioretention	2. BMP T5.10B: Downspout Dispersion Systems
3. BMP T5.10B: Downspout Dispersion Systems	3. BMP T5.10B: Downspout Dispersion Systems	3. BMP T5.10C: Perforated Stub-out Connections
4. BMP T5.10C: Perforated Stub-out Connections	4. BMP T5.10C: Perforated Stub-out Connections	
Surface Type: Other Hard Surfaces		
1. BMP T5.30: Full Dispersion	1. BMP T5.30: Full Dispersion	BMP T5.12: Sheet Flow Dispersion or BMP T5.11: Concentrated Flow Dispersion
2. BMP T5.15: Permeable Pavements or BMP T5.14: Rain Gardens or BMP T7.30: Bioretention	2. BMP T5.15: Permeable Pavements	
3. BMP T5.12: Sheet Flow Dispersion or BMP T5.11: Concentrated Flow Dispersion	3. BMP T7.30: Bioretention	
	4. BMP T5.12: Sheet Flow Dispersion or BMP T5.11: Concentrated Flow Dispersion	
Notes for using the List Approach: 1. Size BMP T5.14: Rain Gardens and BMP T7.30: Bioretention used in the List Approach to have a minimum horizontal projected surface area below the overflow which is at least 5% of the area drain-		

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Procedure for Evaluating Feasibility

1. Have one of the following prepare a soils report to determine if soils suitable for infiltration are present on the site:
    - A professional soil scientist certified by the Soil Science Society of America (or an equivalent national program)
    - A locally licensed on-site sewage designer
    - A suitably trained person working under the supervision of a professional engineer, geologist, hydrogeologist, or engineering geologist registered in the State of Washington.

    The report shall reference a sufficient number of soils logs to establish the type and limits of soils on the project site. The report should at a minimum identify the limits of any outwash type soils (i.e., those meeting USDA soil texture classes ranging from coarse sand and cobbles to medium sand) versus other soil types and include an inventory of topsoil depth.

2. Complete additional site-specific testing on lots or sites containing outwash (coarse sand and cobbles to medium sand) and loam type soils.

    Individual lot or site tests must consist of at least one soils log at the location of the infiltration system, a minimum of 4 feet in depth from the proposed grade and at least 1 foot below the expected bottom elevation of the infiltration trench or dry well.

    Identify the NRCS series of the soil and the USDA textural class of the soil horizon through the depth of the log, and note any evidence of high ground water level, such as mottling.

3. Downspout full infiltration is considered feasible on lots or sites that meet all of the following:
    - 3 feet or more of permeable soil from the proposed final grade to the seasonal high ground water table.
    - At least 1-foot of clearance from the expected bottom elevation of the infiltration trench or dry well to the seasonal high ground water table.
    - The downspout full infiltration system can be designed to meet the minimum design criteria specified below.

Setbacks

Local governments may require specific setbacks in sites with slopes over 40%, land slide areas, open water features, springs, wells, and septic tank drain fields. Adequate room for maintenance access and equipment should also be considered. Examples of setbacks commonly used include the following:

1. All infiltration systems should be at least 10 feet from any structure, property line, or sensitive area (except slopes over 40%).
2. All infiltration systems must be at least 50 feet from the top of any slope over 40%. This setback may be reduced to 15 feet based on a geotechnical evaluation, but in no instances may it

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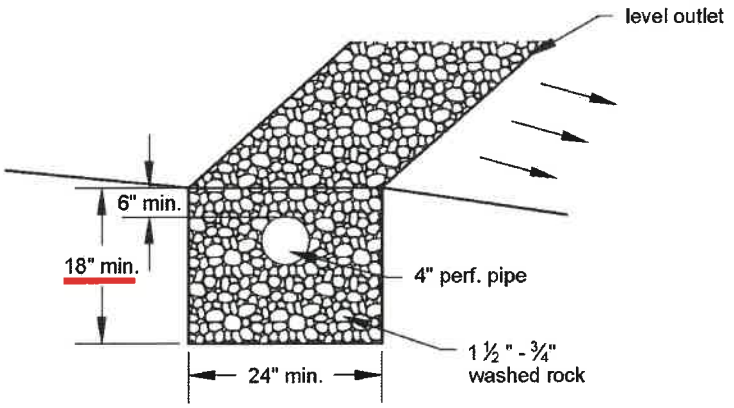
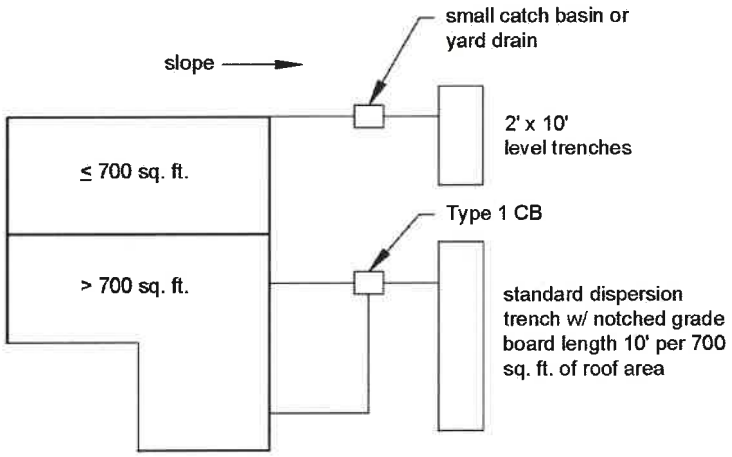
Figure V-4.4: Typical Downspout Dispersion Trench



Trench X-Section



Plan View of Roof

Source: King County Department of Natural Resources, 1998

NOT TO SCALE

DEPARTMENT OF
ECOLOGY
State of Washington

Typical Downspout Dispersion Trench

Revised December 2016

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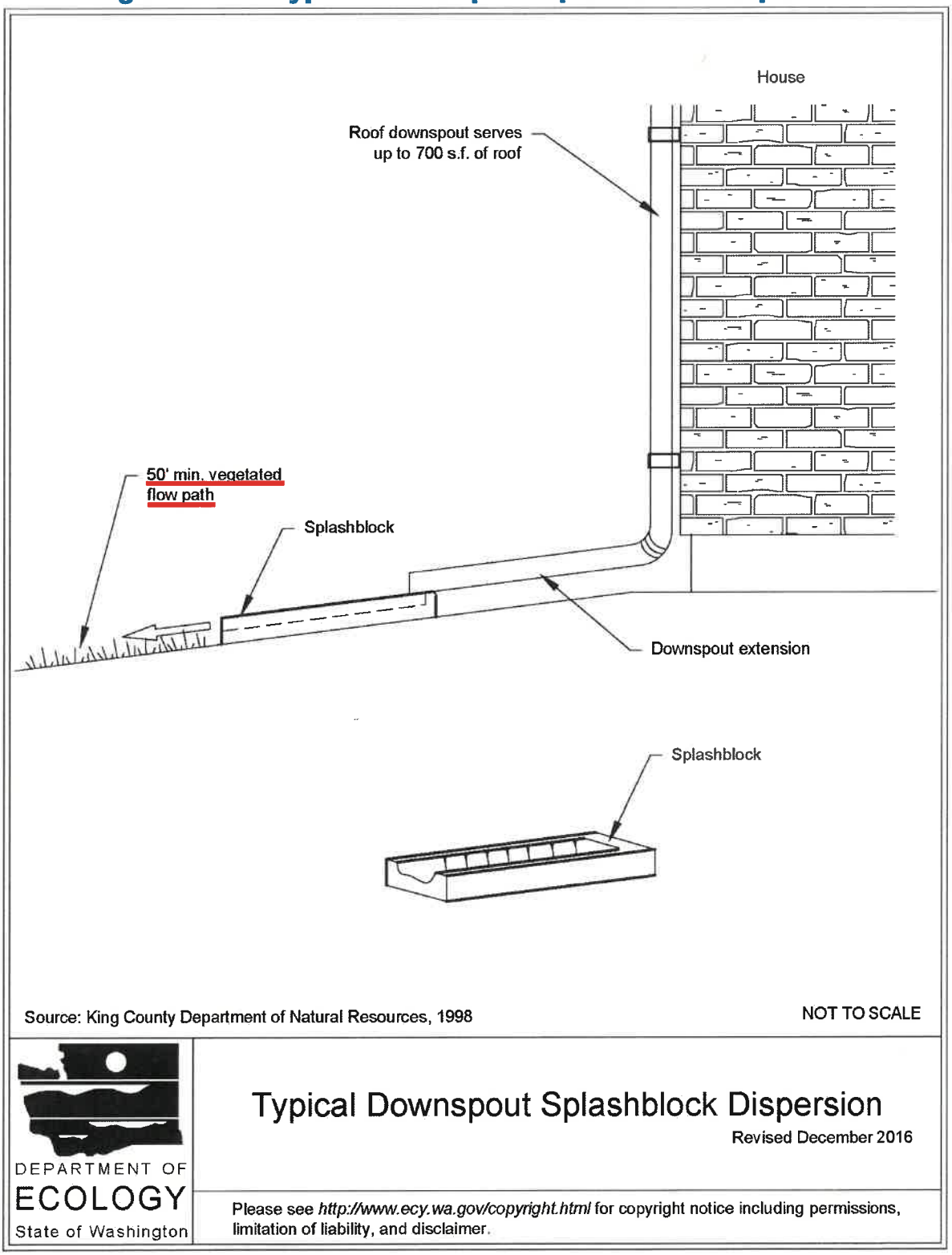
Figure V-4.6: Typical Downspout Splashblock Dispersion



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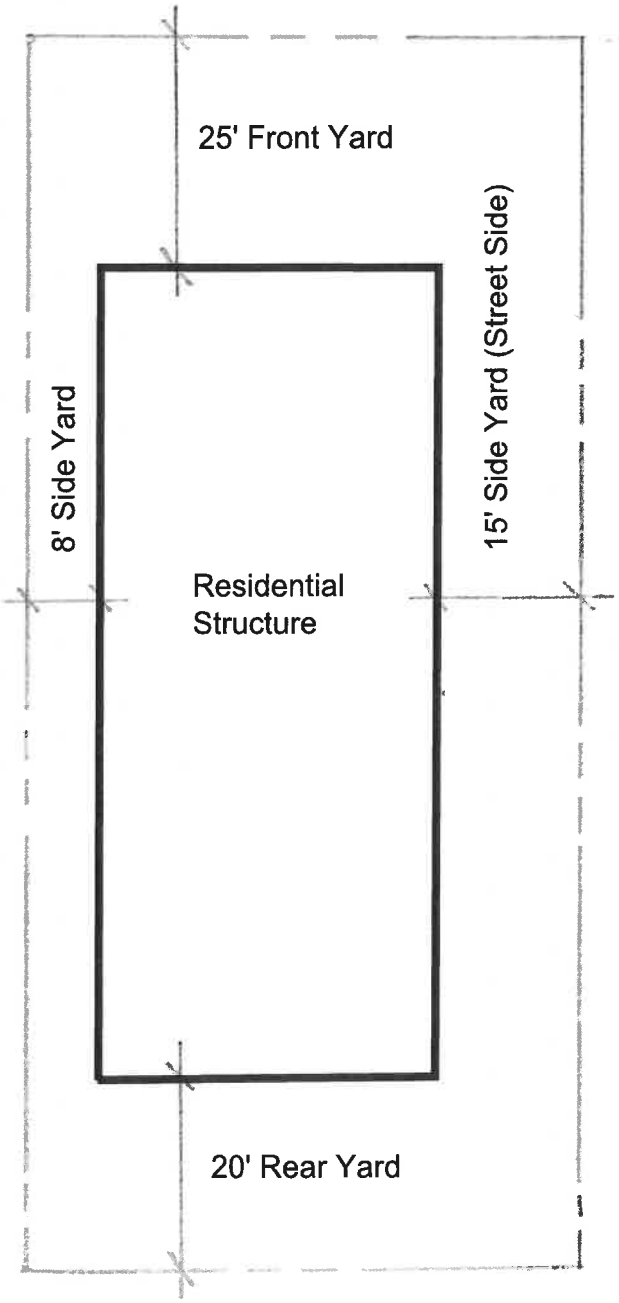
Stormwater standards require 10' minimum setbacks on each side of an Infiltration Facility - therefore there is may be no available location other than the front yard.



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Chapter 22.32
RESIDENTIAL-4 DISTRICT (R-4)

Sections:

22.32.001 Purpose.

22.32.002 Permitted uses.

22.32.003 Accessory uses.

22.32.004 Conditional uses.

22.32.005 Development standards.

22.32.001 Purpose.

The R-4 zoning district is intended to implement the comprehensive plan's low density residential land use designation. The district standards aim to preserve and enhance the character of neighborhoods that have a well-established suburban development pattern. The predominant land uses in these neighborhoods are detached single-family dwellings located on 8,000- to 12,000-square-foot lots. New construction must fit within this context. (Ord. 1246 § 2, 2000).

22.32.002 Permitted uses.

Uses permitted subject to administrative design review approval, when applicable, in accordance with Chapter 22.66 FMC:

(a) Single-family dwelling.

(b) Family group home, including adult family home.

(c) Nonmotorized recreational trail or passive recreational park with no permanent on-site staff.

(d) Necessary public or quasi-public utility building, structure or equipment, unstaffed and less than or equal to 500 square feet in gross floor area (subject to compliance with landscape standards in Chapter 22.62 FMC). Excludes substation. (Ord. 1562 § 5, 2015; Ord. 1246 § 2, 2000).

22.32.003 Accessory uses.

Uses permitted in conjunction with, or accessory to, a principal use permitted in FMC 22.32.002:

(a) Accessory dwelling unit (subject to compliance with FMC 22.58.012).

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22.32.005 Development standards.

Maximum density	4 dwelling units per gross acre.
Minimum lot area	8,000 square feet.
Maximum height	30 feet. See FMC 22.58.007 for exceptions.
Maximum floor area ratio	0.35. See FMC 22.58.026 for FAR standards.
Minimum front yard setback	25 feet. See FMC 22.58.002 for setback reduction and allowable encroachments.
Minimum interior side yard setback	8 feet. See FMC 22.58.002 for allowable encroachments.
Minimum side street side yard setback	15 feet. See FMC 22.58.002 for allowable encroachments.
Minimum rear yard setback	20 feet. See FMC 22.58.002 for allowable encroachments.

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Chapter 22.36
RESIDENTIAL-6 DISTRICT (R-6)

Sections:

22.36.001 Purpose.

22.36.002 Permitted uses.

22.36.003 Accessory uses.

22.36.004 Conditional uses.

22.36.005 Development standards.

22.36.001 Purpose.

The R-6 zoning district is intended to implement the comprehensive plan's low density residential land use designation. The district standards aim to preserve the historic development pattern established in the city's original residential neighborhoods (the circa 1907 Regents Park I and II plats). These neighborhoods include an eclectic mix of architecture within a pedestrian-oriented urban grid development pattern. The predominant land uses are detached modestly-scaled single-family dwellings located on 5,000- to 8,000-square-foot lots. New construction must fit within this context. (Ord. 1246 § 4, 2000).

22.36.002 Permitted uses.

Uses permitted subject to administrative design review approval, when applicable, in accordance with Chapter 22.66 FMC:

(a) Single-family dwelling.

(b) Family group home, including adult family home.

(c) Nonmotorized recreational trail or passive recreational park with no permanent on-site staff.

(d) Necessary public or quasi-public utility building, structure or equipment, unstaffed and less than or equal to 500 square feet in gross floor area (subject to compliance with landscape standards in Chapter 22.62 FMC). Excludes substation. (Ord. 1562 § 9, 2015; Ord. 1246 § 4, 2000).

22.36.003 Accessory uses.

Uses permitted in conjunction with, or accessory to, a principal use permitted in FMC 22.36.002:

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(a) Accessory dwelling unit (subject to compliance with FMC 22.58.012).

22.36.005 Development standards.

Maximum density	6 dwelling units per gross acre.
Minimum lot area	5,000 square feet.
Maximum height	27 feet (where minimum roof slope of 6:12 for all parts of the roof above 18 feet is provided). Otherwise, 18 feet. See FMC 22.58.007 for exceptions.
Maximum floor area ratio	0.35. See FMC 22.58.026 for FAR standards.
Minimum front yard setback	20 feet. See FMC 22.58.002 for setback reduction and allowable encroachments.
Minimum interior yard setback	5 feet for first story. 8 feet for side second story. See FMC 22.58.002 for allowable encroachments.
Minimum side street side yard setback	15 feet. See FMC 22.58.002 for allowable encroachments.

INFILTRATION FACILITIES REQUIRE GREATER SETBACKS

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Exhibit #12:
City of Tacoma Contract Information

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3.12.00

City of Tacoma

City of Fircrest
Contract Information Cover Sheer

Company/ Municipality	City of Tacoma		
Start Date	6/24/14		
End Date	6/24/49		
Service	Sewer agreement		
Department	Public Works		
Resolution No.	1332	Date	6/24/14
Notification to Cancel	one year notification		

Comments	

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TACOMA-FIRCREST SEWER AGREEMENT

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WHEREAS, Tacoma presently owns and operates a sewage system consisting in part of lateral sewers, trunk sewers, and sewage treatment and disposal facilities for the benefit of the citizens of Tacoma; and

WHEREAS, Fircrest presently owns and operates a system of lateral and trunk sewers for the benefit of its citizens, but does not own or operate any sewage treatment or disposal facilities; and

WHEREAS, Tacoma and Fircrest have previously executed a Sewer Service Agreement dated July 11, 1947, renewed January 1, 1967, and amended on March 28, 1979 for the joint use of their respective sewer systems; and

WHEREAS, it has been determined desirous by both parties to this Agreement and in the best interest of the public health, safety and welfare of the territory served by both parties, that this Agreement be entered into;

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained and for other good and valuable consideration, it is hereby agreed as follows:

1. AUTHORITY FOR CONTRACT- COMPLETENESS -TERM.

This Agreement is made and entered into pursuant to the authority vested in Tacoma and Fircrest by the provisions of RCW 35.67.300 and Chapter 39.34 RCW. This Agreement, except where otherwise provided, shall be complete within itself and shall remain in effect for a period of thirty-five (35) years from the effective date hereof, or as may be amended as contained herein.

This Agreement may be renewed at the end of the present term and each subsequent term for additional thirty-five (35) year periods by mutual agreement of both parties.

2. PERMISSION TO DISCHARGE.

Tacoma hereby grants Fircrest permission to discharge sanitary sewage from the Fircrest Sewer System into the Tacoma Sewer System at the intersection of South 30th Street and Huson Street, the intersection of Orchard Street and Princeton Street, the intersection of Bennett Street and W. 19th Street, and at other locations as may be determined by mutual agreement in the future. Any additional consent to discharge granted by either party shall be memorialized in a mutually executed amendment hereto.

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3. QUALITY OF SEWAGE.

All sewage discharged into the system shall conform to the requirements set forth by the then prevailing regulations applicable to Tacoma sewage.

There shall be reserved to Tacoma the right to inspect all sewer facilities of Fircrest included within this Agreement in order to enable Tacoma to comply with any and all conditions of its current or any future National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permits, including, but not limited to, the monitoring of wastes and necessary construction of monitoring station facilities.

If, in order for Tacoma to meet Federal and/or State Laws, Rules, and Regulations, it is necessary to monitor any Fircrest sewer customer, Fircrest shall be responsible for assuring that its customer complies with all reasonable conditions to meet those monitoring requirements.

4. DESIGN AND CONSTRUCTION STANDARDS.

Design and construction standards and methods for all sewage facilities covered by this Agreement shall conform to the prevailing written specifications, codes, methods, and standards equal to or better than those used by Tacoma, or as mutually agreed upon at the time of construction. Each party reserves the right to make any check of construction plans or inspection of construction in this Agreement area (upstream from the terminus of the 14- inch diameter pressure line deemed necessary to uphold this requirement and reject any such plans or work not conforming to Tacoma's then prevailing specifications, codes, methods, and standards, or as mutually agreed upon.

5. CONTRA COSTA PUMP STATION PRESSURE LINE.

Title to the portion of the existing 14-inch diameter pressure line from the Contra Costa pump Station to the east City Limits of Fircrest at approximately South 32nd Street and Orchard Street shall vest in Fircrest and the portion of said pressure line from the above point on the west City Limits of Tacoma to its terminus in the intersection of South 30th Street and Huson Street shall vest in Tacoma. Fircrest shall maintain and repair and pay the total cost of all maintenance and repairs of that portion of said pressure lines of which ownership is vested in Fircrest, and Tacoma shall maintain and repair and pay the total cost of all maintenance and repairs of that portion of said pressure lines of which ownership is vested in Tacoma

6. SEWER SYSTEM MAINTENANCE.

Should either of the parties hereto fail to properly maintain or repair any of its sewers through which sewage of the other party flows, or shall permit said sewers to become stopped, and fails to correct said condition after notice and reasonable time to correct the same, the other party is hereby permitted and authorized to do the necessary work to correct such condition and to collect the reasonable cost of such work from the party owning said sewers. Each of the parties hereto shall save the other harmless from any damages to property of the other or claims from third parties caused by the negligence of said party, its agents, or employees.

Fircrest shall notify Tacoma in the event of any sanitary sewer overflows occurring at the Contra Costa Pump Station.

City7. ENLARGEMENTS - TACOMA SEWER SYSTEM.

In the event that any Tacoma treatment and/or trunkage facilities need enlarging, and which Fircrest did not participate in the construction of, but that Fircrest discharges sewage to, Fircrest and Tacoma agree to negotiate a fair and equitable cost for Fircrest's share of such enlargement.

8. UPGRADING - TACOMA SEWAGE TREATMENT FACILITIES.

In the event that treatment processes need to be upgraded, the costs shall be shared between Fircrest and Tacoma on a ratio of average dry weather capacity or peak flow capacity (whichever is the controlling factor in causing the upgrade to be made) required by or granted to each party. Total capacity shall be the amount contributed by each party at the time of the upgrading plus the amount required by either party for future anticipated flows.

9. ENLARGEMENT AND UPGRADING COST OBLIGATIONS.

Wherever in this Agreement Fircrest is obligated to pay to Tacoma all or any portion of the cost of any improvements, enlargements, or additions to any part of the sewer system involved in this Agreement, or to the treatment plant, the term "cost" shall mean the actual sum paid or to be paid by Tacoma out of its normal revenues, or funds borrowed by it by the sale of bonds or otherwise, which it is obligated to repay, but shall not include any sums received and paid from any Federal, State, or other outside aid or source of revenue.

10. FIRCREST SEWER SYSTEM AREA - DEFINED.

It is mutually agreed that the sewer service area for Fircrest, under this Agreement, shall not, without the prior written agreement of Tacoma, extend beyond the following limits:

On the North:	19th Street
On the South:	48th Street
On the East:	Orchard Street
On the West:	Mildred Street north of Regents Boulevard and Anderson-Pierce Road (67th Avenue West) south of Regents Boulevard

No assignment of capacity rights within the above described areas shall be made to any sewer district without the written mutual consent of both parties hereto.

11. FIRCREST CAPACITY RIGHTS IN TACOMA SEWER SYSTEM.

In consideration of mutual promises and covenants Tacoma has previously granted Fircrest certain capacity rights in the Tacoma Sewer System. These capacity rights are herein

defined at 0.75 million gallons per day (MGD) average dry weather flow and 2.25 MGD peak hydraulic flow.

Nothing in this Section 11 shall prevent Fircrest from acquiring and Tacoma from relinquishing to Fircrest additional capacity rights in any existing facilities of the Tacoma Sewer System.

12. SEWERAGE SERVICE RATES AND CHARGES.

A. DETERMINATION OF RATE.

For sewerage service provided to Fircrest by Tacoma, Fircrest shall pay Tacoma an annual sewerage service charge. This charge shall be based on the metered flows from Fircrest into the Tacoma sewerage system. Flows will be measured at the Contra Costa, China Lake and Princeton pump stations. Composite rates will be developed using the constituent concentration rates put forth in TMC 12.08.390 on the measured constituent strengths and characteristics which will include Biological Oxygen Demand, Total Suspended Solids, and Flow of the waste waters discharged from the three pump stations. A composite rate will be calculated for discharges from each pump station. The composite rate will by multiplied by the flow from each pump station resulting in a charge for the discharge from each pump station. The charges from each pump station will be summed and this number shall be the Fircrest sewerage service Rate. The Fircrest sewer charge shall be calculated as follows:

China Lake Flow from Fircrest Discharge Point X China Lake Constituent Rate
Plus
Contra Costa Flow X Contra Costa Constituent Rate
Plus
Princeton Flow X Princeton Constituent Rate

= Fircrest Sewerage Rate

Fircrest Sewerage Rate X Ratio of Applicability = Fircrest Sewerage Charge

The ratio of applicability is the Fircrest sewerage expense divided by the total sewerage service expense.

B. DEFINITIONS.

I. "ccf"

"ccf" shall mean one hundred (100) cubic feet.

II. "Fircrest Capacity"

The "Fircrest Capacity" shall be determined by the flow of sewage originating from within the boundaries of the Fircrest Sewer System described in Section 11, or as may hereafter be amended.

III. "Residential Equivalent"

A "Residential Equivalent" is a unit of service being a single-family residence or living unit.

IV. "Sewage"

Sewage" shall mean sanitary sewage only, consisting of domestic, commercial, and industrial waste material.

V. Sewerage Service Expense.

a. "Total Sewerage Service Expense"

The "Total Sewerage Service Expense" shall be the total of the following items as listed in the annual Summary of Expenditures in the current Statistical and Cost Data Report for the Sewer Utility Division:

(1) Direct Operation and Maintenance.
(2) General Expense.
(3) Taxes.
(4) Engineering.
(5) Capital Improvements.
(6) Debt Service except on bonds issued by the City of Tacoma to finance further enlargements and treatment plant upgrading in those situations where Fircrest's share is contributed directly.

It is understood that the above items are account titles currently being used by the City in its Statistical and Cost Data Report. The City agrees that composition and maintenance of these accounts shall be the same in substance throughout the duration of this Agreement.

b. "Fircrest Sewerage Service Expense"

The "Fircrest Sewerage Service Expense shall include only the total cost for treatment in the Tacoma Sewer System as listed in Tacoma's current Statistical and Cost Data Report with Customer Billing and Customer Service as listed in Tacoma's current Statistical and Cost Data Report deleted from the total cost thereof.

C. PAYMENT OF SEWERAGE SERVICE CHARGE.

Tacoma shall bill Fircrest for sewerage service charges on a quarterly basis. Sewerage service charges shall be based on the actual metered flows discharged from the Fircrest system to the Tacoma system.

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Fircrest shall submit to the City all information necessary to compile sewer service charges quarterly for the billing periods on or before the fifteenth (15th) day of January, April, July, and October of each year. The City shall compute the charges and submit the bill to Fircrest on or about the fifteenth (15th) day of February, May, August, and November.

All Fircrest sewerage service charges shall be due and payable to Tacoma within thirty (30) days of receipt by Fircrest of the Tacoma Sewer Utility invoice.

The amount shown on the invoice shall be considered correct unless the City is notified to the contrary within twenty (20) days. If corrections are necessary, the thirty (30) days shall begin upon receipt by Fircrest of the corrected invoice.

Any charges, credit, or portion thereof not paid within the thirty (30) days shall begin accruing interest at the rate of eight percent (8%) per annum beginning with the thirty-first (31st) day.

D. FEDERAL AND STATE REGULATIONS.

Tacoma and Fircrest agree to abide with all Federal and State Laws, Rules and Regulations regarding user charges and industrial cost recovery charges.

E. EFFECTIVE DATE FOR SERVICE RATES AND CHARGES.

The effective date for implementation of this Section 14 shall be June 1, 2014.

13. INSURANCE- LIABILITY.

Fircrest shall secure and maintain with responsible insurers all such insurance as is customarily maintained with respect to sewage systems of like character against loss of or damage to the sewage facilities operated and maintained by Fircrest and against public and other liability to the extent that such insurance can be secured and maintained at reasonable cost. Any liability incurred by Tacoma solely as a result of the operation of its treatment facility and not caused or occasioned by any act of Fircrest or any of its customers, or resulting from the connection to Fircrest facilities, shall be the sole liability of Tacoma.

14. DISPUTES.

In the event of any dispute or disagreement arising under this Agreement, the City's Director of Environmental Services and the Fircrest Director of Public Works shall agree on and appoint a third person. These three individuals shall comprise an arbitration committee which shall be charged with the function of resolving any disputes or disagreement arising under this Agreement to the extent permitted by law. The expenses of the third person shall be shared equally by the City and Fircrest.

15. AGREEMENT RELEASE.

In the event Fircrest determines it to be necessary or practical to construct its own sewage disposal system, or to join with the County or others in another and different system of sewage disposal, Fircrest shall be released from further obligations under this Agreement upon the following terms and conditions:

A. Fircrest shall give Tacoma not less than one year advance notice of its desire to connect to another sewage disposal system, with the estimated or actual date of such connection.

B. Fircrest shall remain liable to Tacoma for its share of the cost of any improvements, additions, or enlargements undertaken by mutual agreement by Tacoma and/or Fircrest under the terms of this Agreement prior to receipt of such notice by Tacoma.

16. REVIEW.

The terms of this Agreement shall be reviewed at five (5) year intervals or at such time as may be mutually agreed upon by both parties.

Notwithstanding any such termination as provided under Section 15, each party shall remain liable to the other for its proportionate share of the cost of any improvements, enlargements, or additions authorized herein; provided, however, no such improvements, enlargements, or additions shall be undertaken by either party during the period, where notice of termination has been given, without the written approval and agreement concerning the sharing of costs, if any, of both parties hereto.

17. INSPECTIONS - VIOLATIONS.

Both parties hereto shall have the right when they deem it necessary and appropriate to cause inspections to be made of sewer installations within the boundaries of the other city or within any area connected to said sewer lines for the purpose of determining whether or not the plumbing installations in questions conform to the requirements of the governing sewer ordinances of Tacoma and Fircrest. In connection with the right to make said inspections, both the parties hereto shall have the right to conduct such tests as may be appropriate in order to further the purposes of said inspection. All tests and inspections made pursuant to the provisions of this Section shall be at the sole expense of the party making said inspection or test.

In the event that either party hereto shall find existing a violation of a sewer ordinance, it shall promptly advise the other party thereof and both parties hereto agree and warrant that upon receipt of such notice they will undertake to have the necessary corrections made so that all sewage collected in said system shall conform to the requirements set forth in Section 3 hereof. In the event that either party hereto shall be unable to compel the property owner to change his plumbing fixtures or apparatus so as to conform with the provisions of the governing ordinances, then and in that event said property owner shall not be entitled to further sewer service until such correction has been made, and both the City of Tacoma and the City of Fircrest hereby represent and warrant that they will undertake to remove said violator from the sewer system.

18. DESIGNATED REPRESENTATIVES.

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For purposes of this Agreement, the parties designated representatives are as follows:

18.1 Tacoma Representative:

T.C. Broadnax, City Manager
747 Market Street
Tacoma, WA 98402

18.2 Fircrest Representative:

Rick Rosenbladt, City Manager
115 Ramsdell Street
Fircrest, WA 98466

Phn. (253) 564-8901
e-mail: rrosenbladt@cityoffircrest.net

19. NO SEPARATE ENTITY CREATED.

This Agreement does not create any separate or administrative entity. This Agreement shall be administered by the parties' representatives defined in Section 18.1 and 18.2 above.

20. MODIFICATION OF AGREEMENT.

This Agreement may be amended at any time in writing, upon approval of each parties' respective legislative body, or as their internal processes may otherwise dictate.

21 . NOTIFICATION

Any notice required or permitted to be given pursuant to this Agreement shall be in writing, and shall be sent postage prepaid by U.S. Mail, return receipt requested, to the following addresses or be electronic mail to the parties' representatives defined in subsections 18.1 and 18.2 herein, unless otherwise indicated by the parties to this Agreement.

22. VENUE

This Agreement shall be deemed to be made in the County of Pierce, State of Washington, and the legal rights and obligations of Tacoma and Fircrest shall be determined in accordance with the laws of the state of Washington. All legal actions in connection with this Agreement shall be brought in the County of Pierce, State of Washington.

23. NO THIRD PARTY BENEFICIARIES

This Agreement is entered into solely for the mutual benefit of the parties. This Agreement is not entered into with the intent that it shall benefit any other person or entity and no other such person or entity shall be treated as a third-party beneficiary of this Agreement.

24. SEVERABILITY

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The provisions of this Agreement are hereby declared to be separate and severable, and the invalidity of any clause, sentence, paragraph, section, subsection, or portion of this Agreement or the invalidity of its application to any person or circumstance shall not affect the validity of its application to other persons and circumstances.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their proper officers on this 24 day of June, 2014

CITY OF TACOMA:

for
T.C. Broadnax, City Manager

Michael P. Slevin III, P.E.
Director of Environmental Services

Andy Cherullo, Finance Director

ATTEST:

Doris Sorum 6.9.2014
Doris Sorum, City Clerk

APPROVED AS TO FORM:

Deputy City Attorney

CITY OF FIRCREST;

Rick Rosenbladt
~~Mayor~~ City Manager

ATTEST:

Lisa Kelly
City Clerk

APPROVED:

Michael B. Smith
~~Deputy~~ City Attorney

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CITY OF FIRCREST
RESOLUTION NO. 1332

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FIRCREST, WASHINGTON, AUTHORIZING THE CITY MANAGER TO EXECUTE THE TACOMA-FIRCREST SEWER AGREEMENT BETWEEN THE CITY OF TACOMA AND THE CITY OF FIRCREST.

WHEREAS, Tacoma presently owns and operates a sewage system consisting in part of lateral sewers, trunk sewers, and sewage treatment and disposal facilities for the benefit of the citizens of Tacoma; and

WHEREAS, Fircrest presently owns and operates a system of lateral and trunk sewers for the benefit of its citizens, but does not own or operate any sewage treatment or disposal facilities; and

WHEREAS, Tacoma and Fircrest have previously executed a Sewer Service Agreement dated July 11, 1947, renewed January 1, 1967, and amended on March 28, 1979 for the joint use of their respective sewer systems; and

WHEREAS, it has been determined desirous by both parties to this Agreement and in the best interest of the public health, safety and welfare of the territory served by both parties, that this Agreement be entered into; Now, Therefore:

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FIRCREST:

Section 1. The City Manager is hereby authorized and directed to execute the Tacoma-Fircrest Sewer Agreement between the City of Tacoma and the City of Fircrest.

APPROVED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF FIRCREST, WASHINGTON, at a regular meeting thereof this 24th day of June 2014.

APPROVED:

David M. Viafore, Mayor

ATTEST:

Lisa Keely, City Clerk

APPROVED AS TO FORM:

Michael B. Smith, City Attorney

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Exhibit #13:
Sanitary Sewer Project List

Table 5 Sanitary Sewer Project List

Year	Project Type	Lineal Feet	Pipe Diameter	Project Name
2000	Dig In	450	8" SDR 35	Harvard - Regents/Farollone
2001	Lift Station			44th St/67th Ave W - Upgrade
2003	Dig In	900	8" SDR 35	500 Block Berkeley Ave
2003	Dig In	1680	8" SDR 35	100-300 Block Berkeley Ave
2003	Dig In	240	8" SDR 35	600 Block Regents
2005	Dig In	260	8" SDR 35	700 Block Fir Park Lane - Sewer Rebuild / Redirected Service Line
2005	Dig In	200	8" SDR 35	400 Block Del Monte
2005	Dig In	1670	8" SDR 35	Princeton St from Arondale to Contra Costa
2006	Dig In	900	8" SDR 35	Ramsdell from Contra Costa to Alameda
2007	Dig In	460	8" SDR 35	Dartmouth from Del Monte to Contra Costa
2007	Dig In	235	8" SDR 35	1200 Block Berkeley - Claremont to 1209 Berkeley Ave
2007	Dig In	350	8" SDR 35	Electron from Tennis Courts to Pasadena
2007	Dig In	700	8" SDR 35	San Juan Ave 660ft from Ramsdell to Cornell Manhole to Amherst St
2008	Lift Station			Contra Costa Improvement - Rebuild
2011	Dig In	360	8" SDR 35	400/500 Block Columbia - New Main Connecting to China Lake Lift Station
2012	Pipe Burst	1000	8" HDPE	400 Block Alameda/Buena Vista
2013	Lift Station			Princeton St - New
2013	Dig In	1080	8" SDR 35	100/200 Blocks Del Monte
2013	Dig In	400	8" SDR 35	700 Block Regents
2013	Dig In	520	8" SDR 35	Alameda from Baylor to Rosewood Lane - Replaced 12"-15" Main
2014	Dig In	710	8" SDR 35	100 Block Harvard

Year	Project Type	Lineal Feet	Pipe Diameter	Project Name
2014	Dig In	1070	8" SDR 35	300 Block Farollone / El Dorado
2016	Pipe Burst	1300	8" HDPE	100-300 Block Summit / Golden Gate
2016	Pipe Burst	840	8" HDPE	300 Block Del Monte / El Dorado
2016	Pipe Burst	1030	8" HDPE	100-200 Block Summit / Farallone
2018	Dig In	600	8" SDR 35	100 Block Golden Gate / Harvard
2018	Lift Station			Alameda - Rebuild
2019	Lift Station			Drake St - Rebuild
2019	Pipe Burst	200	6" SDR 35	100 Block Farollone between 114-116
2021	Lift Station			The Commons - Upgrade
2021	Pipe Burst	530	8" HDPE	Between Cornell and Amherst from San Juan to Orchard
2021	Pipe Burst	260	8" HDPE	900 Block between Daniels and Alameda
2022	Lift Station			Estate Place - Upgrade
2022	Pipe Burst	395	6" HDPE	Annapolis between Alameda and Paradise Lane
2023	Pipe Burst	375	6" HDPE	100 El Dorado and Farollone
2024	Lift Station			44th St/67th Ave W - Upgrade
2024	Pipe Burst		8" HDPE	900 block from Linwood between Sunrise and Crestwood (300ft)
2025	Pipe Burst		8" HDPE	1200 block from Drake between Contra Costa and Del Monte (1000ft)
2026	Pipe Burst		8" HDPE	1000 block from Linwood between Sunrise and Broadview (1300ft)
2027	Dig In		8" SDR 35	100 and 200 blocks of El Dorado (750ft)
2028	Dig In		8" SDR 35	300 block from Princeton to Regents (3000ft)
2029	Pipe Burst		8" HDPE	1000 block between Crestwood and Laurel Ct (700ft)
Total Main Replaced		**18715**		

Table 6 Water Capital Project List

Water Department Capital Project List					
Year	**Lineal Feet**	**Pipe Diameter**	**Location**	**From**	**To**
1995	1700	12"	Electron Way	Regents Blvd	Buena Vista Ave
	280	8"	Electron Way	Buena Vista Ave	Alameda Ave
1995	725	12"	Arondale Dr	Regents Blvd	FGCC Maint Shop
	430	8"	Flora Dr	67th Ave W	Cul De Sac
1996	1000	16"	FGCC Reservoir	FGCC Reservoir	9th Fairway T
	400	12"	9th Fairway	9th Fairway T	Clubhouse
	500	12"	Regents Blvd	Costless (west) Driveway	Columbia Bank

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Exhibit #14:
DRAFT
Memorandum of Understanding by and between the City of Fircrest and the City of Tacoma

(as proposed by the City of Tacoma - pending negotiations. This draft is for illustrative purposes only and does not necessarily reflect what the final terms will be.)

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MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
THE CITY OF FIRCREST
AND
THE CITY OF TACOMA

(Peak Hydraulic Flow Capacity)

This Memorandum of Understanding (**MOU**) is executed this **31st day of May, 2023** by and between the City of Fircrest, by and through its Interim City Manager, and the City of Tacoma, by and through the Director of Environmental Services, for the purposes set forth herein.

WHEREAS the City of Fircrest (**Fircrest**) and the City of Tacoma (**Tacoma**) have entered into a wastewater service agreement dated the 24th day of June, 2014 (the "**2014 Wastewater Agreement**"), and

WHEREAS Tacoma has agreed to accept wastewater generated in Fircrest for treatment and disposal in accordance with the terms and conditions of the 2014 Wastewater Agreement, and

WHEREAS the 2014 Wastewater Agreement limits the amount of wastewater discharged by Fircrest to the Tacoma Publicly Owned Treatment Works (POTW) to 0.75 million gallons per (**MGD**) average dry weather flow and 2.25 MGD peak hydraulic flow, and

WHEREAS based upon data provided by Fircrest, Tacoma has calculated the current average dry weather flow discharged by Fircrest to the POTW and determined that the current average dry weather flow is 0.51 MGD leaving an estimated available contract dry weather flow capacity of 0.24 MGD, and

WHEREAS based upon flow data provided by Fircrest, Tacoma has calculated the current peak hydraulic flows discharged by Fircrest to the POTW and determined that peak hydraulic flows exceed the 2.25 MGD capacity limit as set forth in **Exhibit A** attached hereto, and

WHEREAS Fircrest and Tacoma desire to enter into an amendment to the 2014 Wastewater Agreement to implement a sanitary sewer inflow and infiltration reduction program and compliance schedule to reduce the peak hydraulic flows to maintain compliance with the current peak hydraulic flow capacity limit, and

WHEREAS the purpose of this memorandum of understanding is to set forth the understanding of Fircrest and Tacoma with respect to the purpose and scope of the proposed amendment to the 2014 Wastewater Agreement,

NOW THEREFORE, Fircrest and Tacoma by and through this MOU set forth their mutual understanding regarding the proposed amendment to the 2014 Wastewater Agreement as more specifically described herein,

1. Purpose. The purpose of this MOU is set forth in the above-stated recitals.

2. Capacity Calculation. The graphs set forth in Exhibit A attached hereto represent peak hydraulic flows based upon calculations using flow data provided by Fircrest for the time-period of October 1, 2021 through May 31, 2022. Based on the flow data received, the peak hydraulic limit of 2.25 MGD was exceeded by:

   - more than 10% of the day, 144 days out of the 242 days
   - more than 15% of the day, 23 days out of the 242 days
   - more than 20% of the day, 12 days out of the 242 days

3. Capacity limit. Fircrest and Tacoma acknowledge and agree that the flow data indicates that during periods wet weather, storm water and ground water and inflowing and infiltrating the Fircrest sanitary sewer system in quantities that cause Fircrest wastewater discharges to the POTW to exceed the peak hydraulic flow capacity limit set forth in the 2014 Wastewater Agreement.

4. Amendment of 2014 Wastewater Agreement. Fircrest and Tacoma agree that Fircrest must reduce its peak hydraulic flows to levels that are compliant with the capacity limit and that achieving compliance can be accomplished through a mutually agreeable amendment (**Amendment**) to the 2014 Wastewater Agreement. Fircrest and Tacoma further agree that the Amendment will establish an inflow and infiltration program in Fircrest to reduce peak hydraulic flows in accordance with a compliance schedule to meet the capacity limit set forth in the 2014 Wastewater Agreement (**I&I Program**). The I&I Program may include, (1) updating the Fircrest I&I Study and identifying priority targets, (2) developing and commencing an inspection/disconnect program for stormwater connections to private side sewer lines, ~~and~~ (3) continuing a pipebursting program and other repairs in the older sections of Fircrest, and (4) other programs to reduce I&I. The Amendment will also include provisions to verify and ensure compliance with the compliance schedule and may include other amendments to ensure that the 2014 Wastewater Agreement complies with Tacoma's obligations under the federal Clean Water Act and Tacoma NPDES permits.

5. Schedule. Upon execution of this MOU, Fircrest and Tacoma intend to assign representatives to develop a meeting schedule, and in accordance with that meeting schedule, commence meeting to develop a mutually agreeable Amendment consistent with this MOU for consideration and action by the respective governing bodies of Fircrest and Tacoma by a date no later than December 31, 2023.

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Fircrest and Tacoma, by and through their representatives, set forth their mutual understanding as set forth herein on this 31st day of May, 2023.

CITY OF TACOMA

Approved by:

_____
Michael P. Slevin, III, P.E.
Environmental Services Director

_____
Kurt Fremont,
Division Manager, Business Services
Environmental Services Department

CITY OF FIRCREST

Approved By:

_____
Bob Jean
Acting City Manager

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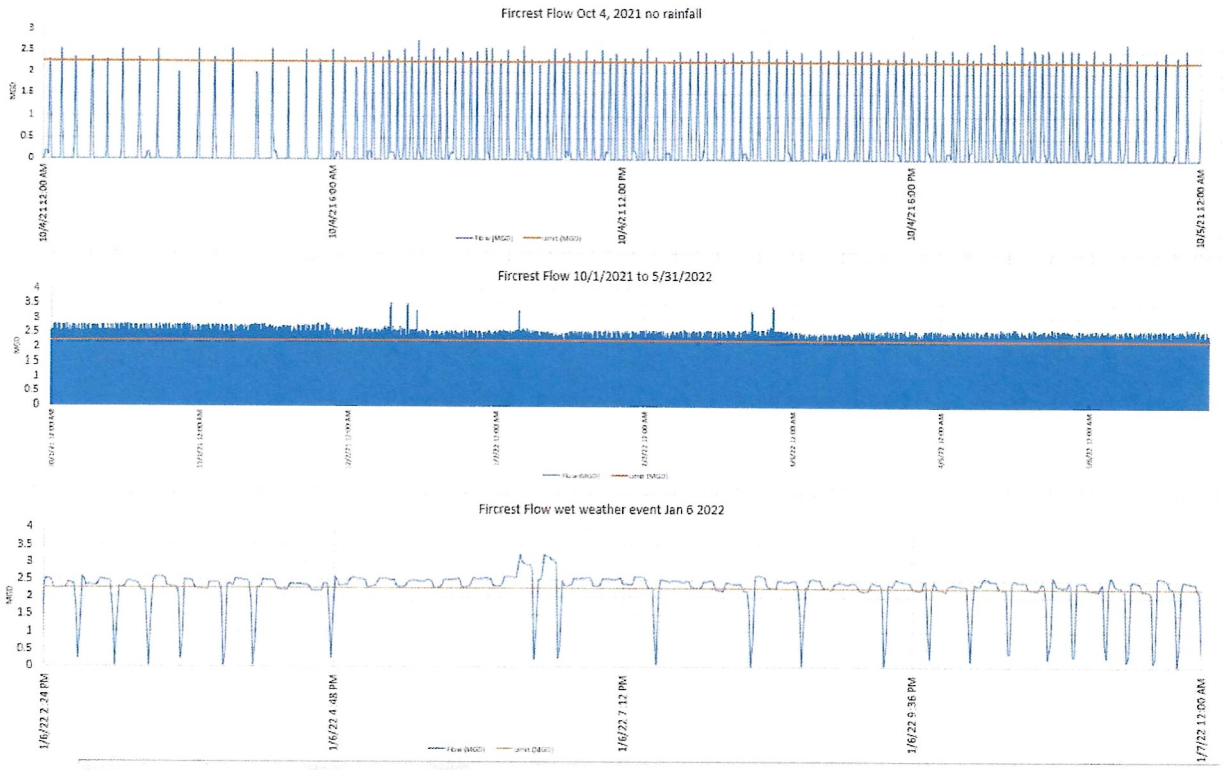
EXHIBIT A

(*Peak Hydraulic Flows*)

The orange line is the peak hydraulic limit.



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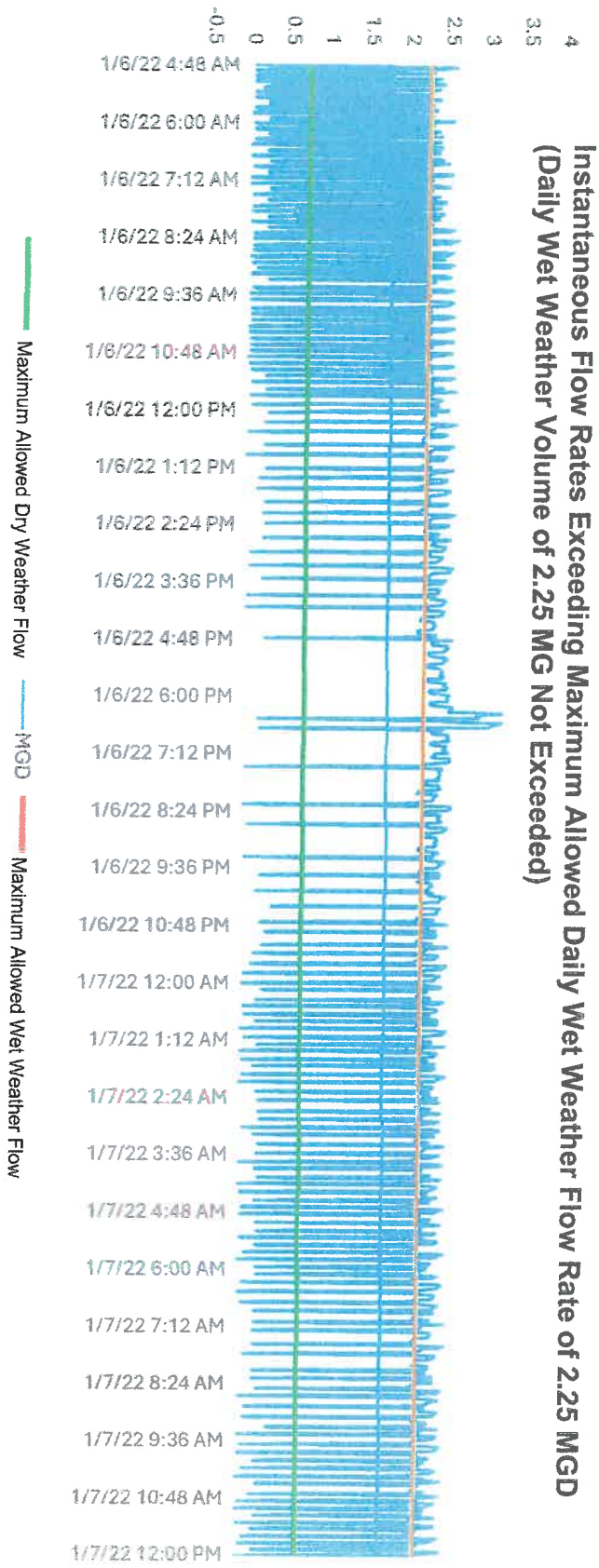

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Exhibit #15:
H.E. Report on Alliance Project

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H.E. report on Alliance project

DATED this 14th day of March 2023. City of Fircrest Hearing Examiner

Pierce County Public Works submitted a letter, Ex. 23, identifying that the project area is located within its sewer service area. It's letter further asserted that the application materials erroneously identified the City of Fircrest as the sewer provider. The exhibits in admitted into the record do not identify who will be providing sewer to the project. The conditions of approval require that this issue be resolved prior to administrative site plan approval.

DECISION The preliminary major site plan application approved subject to the following conditions: 1. The proposal shall comply with the mitigation measures adopted in the January 30, 2023 MDNS for the project. 2. The issue of who will provide sewer service to the project site shall be resolved prior to administrative site plan approval. 3. The proposal shall comply with the proposed design and all the recommendations in Exhibits 1-16, to the extent applicable to the proposed final site design. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 4. The Applicant shall provide the City with additional detailed plans and supporting documentation to demonstrate code compliance as outlined in the staff report discussions with respect to: • FMC 22.26 Sign Regulations. • FMC 22.57 Form-Based Code. • FMC 22.58.008 Performance Standards. • FMC 22.58.018 Outdoor lighting. • FMC 22.60 Parking and Circulation. • FMC 22.62 Landscaping Regulations. • FMC 22.64 Design Guidelines. DATED this 14th day of March 2023. City of Fircrest Hearing Examin

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Exhibit #16:
Preannexation Agreement

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PREANNEXATION AGREEMENT

This agreement is entered into this 20th day of May, 1996, by and between the City of Fircrest, Washington, hereinafter referred to as the "City", and Robert M. Freeman, M.D. and Douglas W. Brown, President, Pace Industries, Puget Division, Inc., hereinafter collectively referred to as the "Owners".

WHEREAS, the Owners have real property located in Pierce County, Washington, within a proposed annexation area commonly known as the "Mildred-19th Street Area", the legal description of which is set forth in Exhibit "A" to this agreement, attached hereto and incorporated herein by this reference as if set forth in full; and

WHEREAS, the Owners have committed to signing petitions to annex their properties to the City upon reaching agreement on the issues listed below; and

WHEREAS, both the City and the Owners have agreed to the following conditions, which they believe are in the best interests of all parties to the agreement;

NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL BENEFITS and conditions hereafter contained, the parties hereby agree as follows:

1. Zoning. Zoning for the properties shall remain Manufacturing (M-1), Commercial (C), or a comparable designation allowing a mix of commercial and industrial uses, unless an alternative designation is mutually agreed to by the City and Owners.

2. Building Construction. Construction of buildings comparable in construction type and materials to those on the properties at the time of this agreement, as well as other construction types such as concrete block and concrete tilt-up, shall be permitted subject to compliance with all applicable codes. One and two story buildings and parking garages shall be permitted subject to compliance with all applicable codes.

3. Utility Services. Recognizing that at the time of this agreement, the properties are served by a variety of utility service providers in addition to the City of Fircrest, property owners/occupants shall retain the right, in perpetuity, to maintain and obtain services from utility service providers which are able to best meet the needs of the Owners and City, based on availability, existing infrastructure located on site, cost of service, or future demand for service.

4. Street Widening. With respect to any future widening of 67th Avenue West (Mildred Street), the City shall actively assist the Owners in any attempt to ensure that said property owners are treated equitably relative to owners of property located west of the street and are not required to bear a disproportionate burden in terms of providing the land necessary for such a project.

5. Exemption of Bonded Indebtedness. All properties shall be exempt from City of Fircrest bonded indebtedness existing at the time of this agreement.

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6. Non-Waiver - Extensions. Failure of the City to insist on the strict performance of any of the terms, agreements, and conditions herein contained shall not constitute or be construed as a waiver or relinquishment of the City's right thereafter to strictly enforce any such term, agreement, or condition, but the same shall continue in full force and effect.

7. Binding Effect. This Agreement shall be binding upon the respective heirs, legal representatives, assignees, transferees and successors of each of the parties hereto, and the burdens and obligations of this Agreement shall run with the land described on Exhibit "A" to this Agreement.

8. Recording. This Agreement shall be recorded with the Pierce County Auditor and the cost of said recordation shall be paid by the Owners.

DATED this 20 day of May, 1996.

CITY OF FIRCREST

Dennis Richards, City Manager

ATTEST/AUTHENTICATED:

Susan Clough, City Clerk

APPROVED AS TO FORM:

Pat Comfort, City Attorney
BY: MICHAEL B. SMITH
ASSISTANT CITY ATTORNEY

OWNERS

Robert M. Freeman, M.D.

Douglas W. Brown, President
Pace Industries Puget Division, Inc.

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Exhibit #17:
City of Fircrest
Resolution No. 1925

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CITY OF FIRCREST
RESOLUTION NO. 1925

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FIRCREST, WASHINGTON, AUTHORIZING THE CITY MANAGER TO EXECUTE A PUBLIC WORKS CONTRACT WITH PACIFIC TRENCHLESS INC. / BUDGET SEWER FOR THE PIPE BURSTING UPGRADE PROJECT ON THE 500 BLOCK OF BUENA VISTA AVENUE.

WHEREAS, the City of Fircrest owns, operates, and maintains its sewer conveyance system; and

WHEREAS, funding for the Sewer Main Pipe Bursting Project is included in the Sewer Capital Fund in the 2024 Adopted Budget; and

WHEREAS, Pacific Trenchless Inc. / Budget Sewer was the lowest responsible bidder for this project; and

WHEREAS, the City desires to enter into a Public Works contract with Pacific Trenchless Inc. / Budget Sewer to perform the construction work necessary to complete the pipe bursting upgrade project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FIRCREST:

Section 1. The City Manager is hereby authorized and directed to execute a Public Works contract with Pacific Trenchless Inc. / Budget Sewer for the pipe bursting upgrade project on the 500 block of Buena Vista Avenue in the amount of $132,360.00, including tax.

Section 2. This Resolution shall become effective upon adoption.

APPROVED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF FIRCREST, WASHINGTON, at a regular meeting thereof this 10th day of September 2024.

APPROVED:

S. Reynolds
Shannon Reynolds, Mayor

ATTEST:

Arlette Burkhart, Acting City Clerk

APPROVED AS TO FORM:

Robert Zeinemann, City Attorney

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Exhibit #18:
Zoning Map with HOAs

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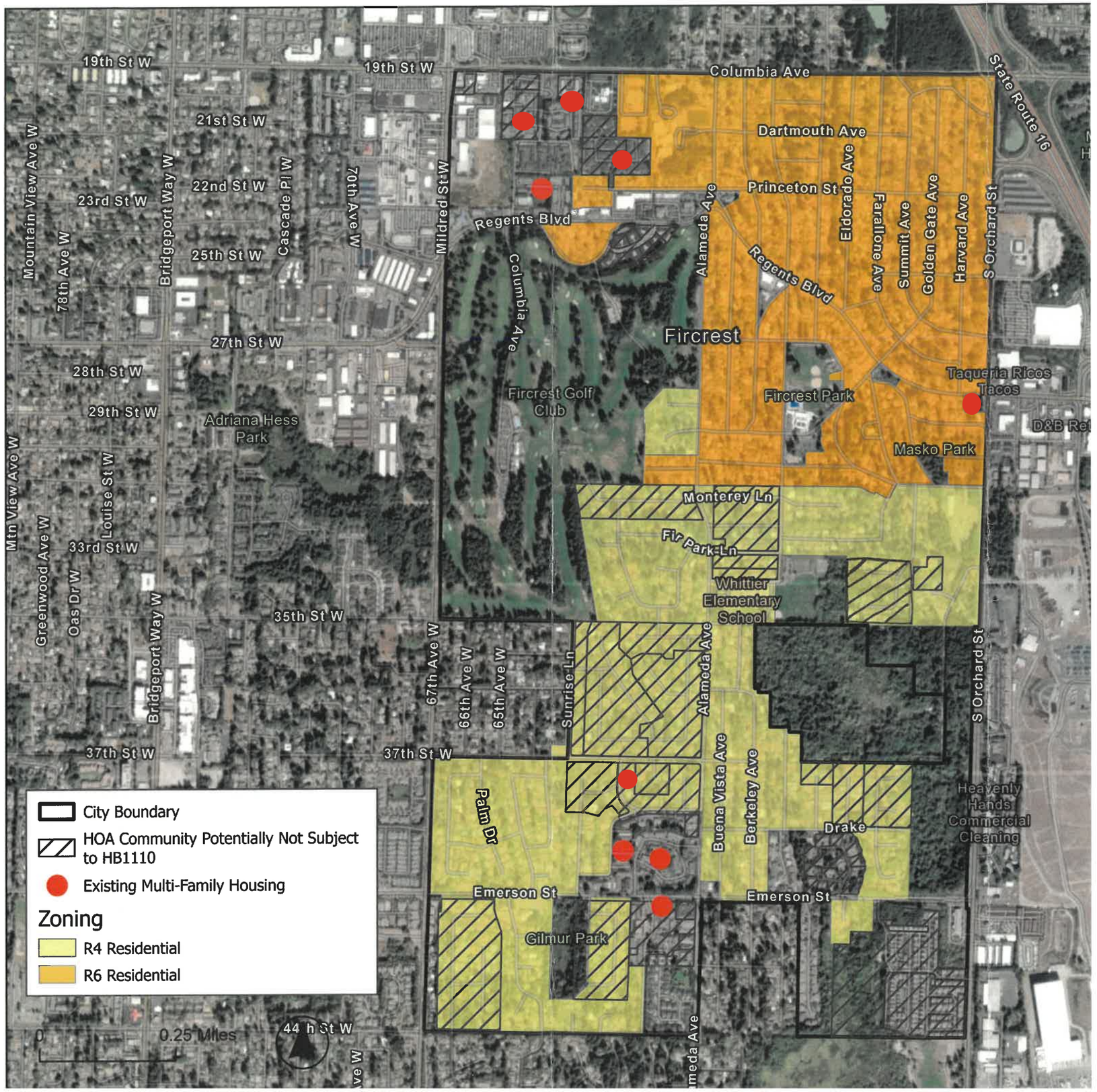

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Exhibit #19:
Middle Income Housing Addressed in Fircrest
Historic Overview

EXERCISE SCIENCE CENTER

March 18, 2025

Middle Housing Addressed in Fircrest

Regents Park (City of Fircrest) was the first pre-planned community in Washington State (1907-1910). All of the zoning, platting, dedicated parks, streets, sidewalks, and utility infrastructures were built before a house was even erected. A state legislated overlay of the zoning and platting would aversely impact the original concepts used in the planning of a strong community. The city has shown crime statistics far lower of any surrounding city approaching our population density. The city was pre-planned purposefully to do just that, *through design build a strong community*.

The current density on the City of Fircrest is the highest in Pierce County, with a population of nearly 7000 residents in a 1.58 square mile footprint. With annexations the city has recognized the need for "Middle" housing and adapted its inclusion into our city zoning and forward-thinking comprehensive planning.

Examples include Princeton place condominiums and The Valley Firs, and the Commons that are options for our aged populations. Rather than move to a retirement community Fircrest created a place where lifetime Fircrest residence needing to downsize, could remain a viable and important segment of our city's populations.

Whereas most cities would charge an additional utility service charges and fees for extended family housing, as in having an aging parent live in a downstair apartment. Fircrest thought that families should be rewarded not penalized for taking in and accommodating family members. The double charging of utility costs would not be based on if a range or stove was present. We felt strongly that our community should do whatever possible to strengthen the Fircrest family unit.

In our small city, we have zoned numerous apartment complexes: The Lofts, the Wellington Fircrest, Rainier Court Apartments, Regents Apartments, Alameda West, 13 Colonies, Fircrest Manor Apartments, and Haddow Properties, and many more. Even with so many apartments in a 1.5 square mile area, there is over 1000-1500 more apartment units being built or slated to be built in the next few years across the street and within 2 blocks of our city's borders, impacting

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our cities storm water, traffic and cities public, (i.e. groceries stores, police and fire support services, street maintenance, mass transit, etc ...).

The County Comprehensive plan for 2020 Fircrest looking forward including planning for high density housing, and commissioned a citizens committee that recommended the new Fircrest Commons development of 8 units per acre, but the city council overturned the recommendation to 12 units per acre instead. Also, a park on 44th and Alameda was sold to a developer to provide a large housing complex to be built because of the Cities growing population.

Since 2020 the Fircrest population has dropped over 1% per year, and the planning accommodated seems to have peaked with the population saturation of the city of Fircrest's developable lands.

For future planning Fircrest has passed ordinances recognizing various forms of ADU's that are conducive to strengthening our community values and financial viability. Examples include one of the largest undeveloped tracts of land on Mildred between Regents and 19th. The designated area has had numerous opportunities for citizens input, and developer and landscaping designs suggested. Among these are 1.5 floors of retail space, and with apartment above. The previous height requirements were lifted considerably by council, and extended to accommodate more living units. This has worked in earlier models of zoning as in the downstairs retail spaces in the Reesman's building on the 600 block of Regents, and the Quarrels property on the 1200 block on Regents.

Fircrest strongly believes we have met and dramatically exceeded the intent of the state legislative mandate for "middle housing". We have managed our population growth while keeping the community strong and viable. This is the city of Fircrest's 100-year birthday in 2025. Be a shame to alter what has worked for over 100 years with legislation that has not given us adequate time to study the impact it would have on our cities next 100 years.

Blake Surina

Blake J Surina

Exercise Science Center
1101Regents Blvd
Fircrest, WA. 98466
Town Historian and former City Councilmember

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Exhibit #19A:
RCW 58.17.215

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RCW 58.17.215

Alteration of subdivision—Procedure.

When any person is interested in the alteration of any subdivision or the altering of any portion thereof, except as provided in RCW 58.17.040(6), that person shall submit an application to request the alteration to the legislative authority of the city, town, or county where the subdivision is located. The application shall contain the signatures of the majority of those persons having an ownership interest of lots, tracts, parcels, sites, or divisions in the subject subdivision or portion to be altered. If the subdivision is subject to restrictive covenants which were filed at the time of the approval of the subdivision, and the application for alteration would result in the violation of a covenant, the application shall contain an agreement signed by all parties subject to the covenants providing that the parties agree to terminate or alter the relevant covenants to accomplish the purpose of the alteration of the subdivision or portion thereof.

Upon receipt of an application for alteration, the legislative body shall provide notice of the application to all owners of property within the subdivision, and as provided for in RCW 58.17.080 and 58.17.090. The notice shall either establish a date for a public hearing or provide that a hearing may be requested by a person receiving notice within fourteen days of receipt of the notice.

The legislative body shall determine the public use and interest in the proposed alteration and may deny or approve the application for alteration. If any land within the alteration is part of an assessment district, any outstanding assessments shall be equitably divided and levied against the remaining lots, parcels, or tracts, or be levied equitably on the lots resulting from the alteration. If any land within the alteration contains a dedication to the general use of persons residing within the subdivision, such land may be altered and divided equitably between the adjacent properties.

After approval of the alteration, the legislative body shall order the applicant to produce a revised drawing of the approved alteration of the final plat or short plat, which after signature of the legislative authority, shall be filed with the county auditor to become the lawful plat of the property.

This section shall not be construed as applying to the alteration or replatting of any plat of state-granted tide or shore lands.

[1987 c 354 s 4.]

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Exhibit #20:
Consultants Conclusions

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Craig A. Peck & Associates

12737 Olalla Valley Road SE
Olalla, Washington 98359

technical assistance
253-229-0923
peckassoc@gmail.com

TO: Fircrest Middle Housing Ad Hoc Committee
DATE: April 4, 2025
RE: Areas of Concern Regarding Addition of Middle Housing to the City

Craig A. Peck, P.E.
Civil Engineer

Bachelor of Science – Civil Engineering – University of Washington, 1968
Registered Professional Engineer – Washington current - formerly Oregon, and California

Craig Peck has more than 57 years of experience in Civil Engineering design and project management. The experience of Mr. Peck includes planning, research, analysis, project team building, grant writing, agency coordination, infrastructure design, administration, and construction management. Projects have included stormwater runoff analysis, collection system design, treatment, storage, and discharge; sanitary sewer facilities planning/feasibility studies, collection system design, pump stations, treatment plants and discharges; water supply, storage, and distribution; roadway design; residential developments including single family and multifamily projects; golf courses; commercial/retail center developments; and marina permitting and development. Mr. Peck assists his clients with the selection of appropriate team members to successfully complete their projects.

Altogether, I estimate I have spent approximately 45 hours in meetings, reviewing documents for Fircrest sewer, soils, zoning code relative to property line setbacks, and stormwater runoff design criteria; and preparing graphics. I completed reviews of three areas of concern regarding the addition of middle housing to the City of Fircrest. Those areas are:

- **Stormwater Runoff**
- **Sanitary Sewers**
- **Soils**

The review documents I prepared are attached.

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Stormwater Runoff

Current Western Washington Stormwater regulations effects placement of multiple residential units on lots currently zoned for one residential unit. Those regulations encourage the use of infiltration for treatment of runoff from impervious and pervious surfaces. The location of those infiltration facilities requires setbacks from structures as well as from property lines. My review included current setbacks for structures in Fircrest residential zones R-4 and R-6.

Sanitary Sewers

Tacoma-Fircrest Agreement dated June 24, 2014 for the treatment of sewage and an unexecuted Memorandum of Understanding dated May 31, 2023, between Tacoma and Fircrest restrict the discharge of sewage from Fircrest to Tacoma. Following review of sewer pumps raw data for Fircrest for the periods of:

October 1, 2021 to May 31, 2022 and
October 31, 2022 and to November 31, 2022

and the graphical presentation of that data prepared by the City of Tacoma clearly indicate that the pumped flows to Tacoma exceed the instantaneous rate of 2.25 Million Gallons per Day (MGD) specified in their agreement on a regular basis. Those flows frequently exceed 2.25 MGD by more than 15 percent.

The City sewer system experiences Infiltration and Inflow (I & I) conditions. Infiltration is caused by deterioration of pipe materials and failing pipe joints. Inflow is caused by stormwater runoff entering the sanitary sewer by way of direct illegal connects of roof or area drains or overflows of stormwater facilities. I & I is a common condition allowable in small volumes as noted in the "Criteria for Sewage Works Design", Washington State Department of Ecology. However, larger quantities of I & I are not. Fircrest, like many other communities like Tacoma, are making efforts to reduce I & I by replacing sewer piping and eliminating stormwater connections. In Fircrest, high wet weather groundwater conditions in most soils in the area aggregate or intensify infiltration of stormwater.

Soils

I reviewed the USDA Natural Resources Conservation Service, Web Soil Survey, National Cooperative Soil Survey Map of Fircrest. That map presents generalized locations of typical soils found in Fircrest. The most common soil types are presented with their characteristics including wet weather depths to groundwater in a table with those depths.

Conclusions:

I believe that there is not adequate space remaining in the community to add another residential structure to the existing developed lots and meet the setback requirements for infiltration

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facilities in most cases. The resulting increase in impervious surfaces of roofs, driveways, patios, and sidewalks would increase runoff and decrease the area of pervious surfaces to absorb the runoff, resulting higher demand on the storm drainage infrastructure in Fircrest.
The sewage pumping rates from the Fircrest pump stations to the Tacoma sewer collection system regularly exceed the terms in their agreement. Adding more residential units will increase the frequency of periods that pumping exceeds the Tacoma agreement.

The depth to seasonally high groundwater levels in the soils in many areas of Fircrest is not adequate to meet requirements for infiltration facilities as defined by the Stormwater Management Manual for Western Washington, Washington State Department of Ecology. The higher groundwater levels increase the infiltration into the sanitary sewer collection system which also increases the frequency of periods of pumping that exceed the agreed capacity.

House Bill 1110 provides a means whereby a City can request an initial 5-year extension to implement the zoning requirements of the bill based upon infrastructure deficiencies and incapacities. My professional opinion is that Fircrest needs and qualifies for such an extension. Implementing new zoning laws now and allowing for duplexes on single family residential zoned properties does not make sense given Fircrest's current significant infrastructure incapacities. In fact, implementation of HB 1110 at this time would only add to and exacerbate the current Fircrest sanitary sewer and stormwater challenges and insufficiencies, making it more difficult for Fircrest to succeed in improving its systems. Fircrest needs and requires adequate time to amend the 2014 Wastewater Agreement with Tacoma and to establish a program to reduce peak hydraulic flows, to implement I & I priority targets, to augment and improve an inspection and disconnect program for illicit connections and to continue with and improve a pipe bursting program schedule as set forth in the Fircrest Capital Improvement Program.

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Information needed to identify locations for middle housing development in Fircrest.

Identification of areas where seasonal high-water tables increase stormwater infiltration into sewer flows.

1. Collect monthly water-level data from 15-25 wells located within affected areas of Fircrest on the seasonal variation in the elevation of shallow groundwater occurring within 10 to 20 feet of existing land surface in low lying areas of Fircrest where seasonal shallow ground water contributes to excess sewer flows during the rainy winter and spring months. Data collection should minimally be once a month for cover from 18 to 24 months.
    a. Search government records (WA Ecology well log files) of existing resource protection wells to identify existing wells where shallow water table data might be collected. (Estimated cost, $15,000)
    b. Utilize same record for descriptions of shallow soils and glacial sediment to facilitate mapping of low permeability sediments. (cost included in a.)
    c. Drill and install shallow monitoring wells (5-10) in areas where no wells are available. Estimated cost, $30,000 to $40,000.
2. Refine existing soils maps of Fircrest area to identify low permeable zones.
    a. Determine if historical predevelopment data is available from Soil Conservation Service.
    b. Conduct soil percolation test at locations where rainwater detention storage and infiltration basins are planned. (Estimated cost, $15,000-20,000.)
3. Identify sewer lines heavily affect by stormwater infiltration and unregulated inflows to identify areas where sewer inflow and infiltration need to be reduced.
    a. Conduct tracer-dilution test along sewer line during time periods identified as having high potential for developing excess sewer flows pumped to City of Tacoma. Compare results to similar test during times periods without significant precipitation. (Estimated cost, $30,000 to $60,000)