

September 29, 2025

To: James R. Jordan, Pinnacle Development Solutions, and
Chip McBroom, Broker / Land Consultant, WE Lakeside

From: Jeff Hee, PE, Sr. Traffic Engineer

Subject: Park Heights Traffic Study

File No.: SUB25-00184



This technical memorandum evaluates the traffic impacts associated with Park Heights, formerly Montebanc, and as requested by the City of Kirkland, see July 23, 2025, staff comments attached.

Project Description

Park Heights includes separate applications for a 9 lot-short plat and boundary line adjustment for King County Tax Parcels nos. 9194100890, 9194100760, 9194100790, and 9194100840 in the Goat Hill area of Kirkland's Finn Hill neighborhood which will result in a total of 12 single-family residential lots, a net increase of 8 lots. The properties are zoned RSA 4, Low Density Residential and are currently undeveloped, except for an existing cul-de-sac turnaround located at the northerly terminus of 89th Place NE.¹ The project site is south of Juanita Heights Park. A vicinity map is attached as **Figure 1**.

A Level 1 Transportation Impact Analysis Review (TIAR) was prepared for the development, dated March 7, 2025. A copy of the March 2025 TIAR is attached.

Figure 2 includes the proposed site plan. The Applicant proposes a private road network through the site with an easement for public services. The private road network would satisfy the City's minimum Neighborhood Access road requirements.

¹ The cul-de-sac was constructed within a private easement prior to the applicant's acquisition of the property. The City owns adjacent property and has easement rights. The applicant would replace the existing cul-de-sac with a standard road section when the final short plat is complete.

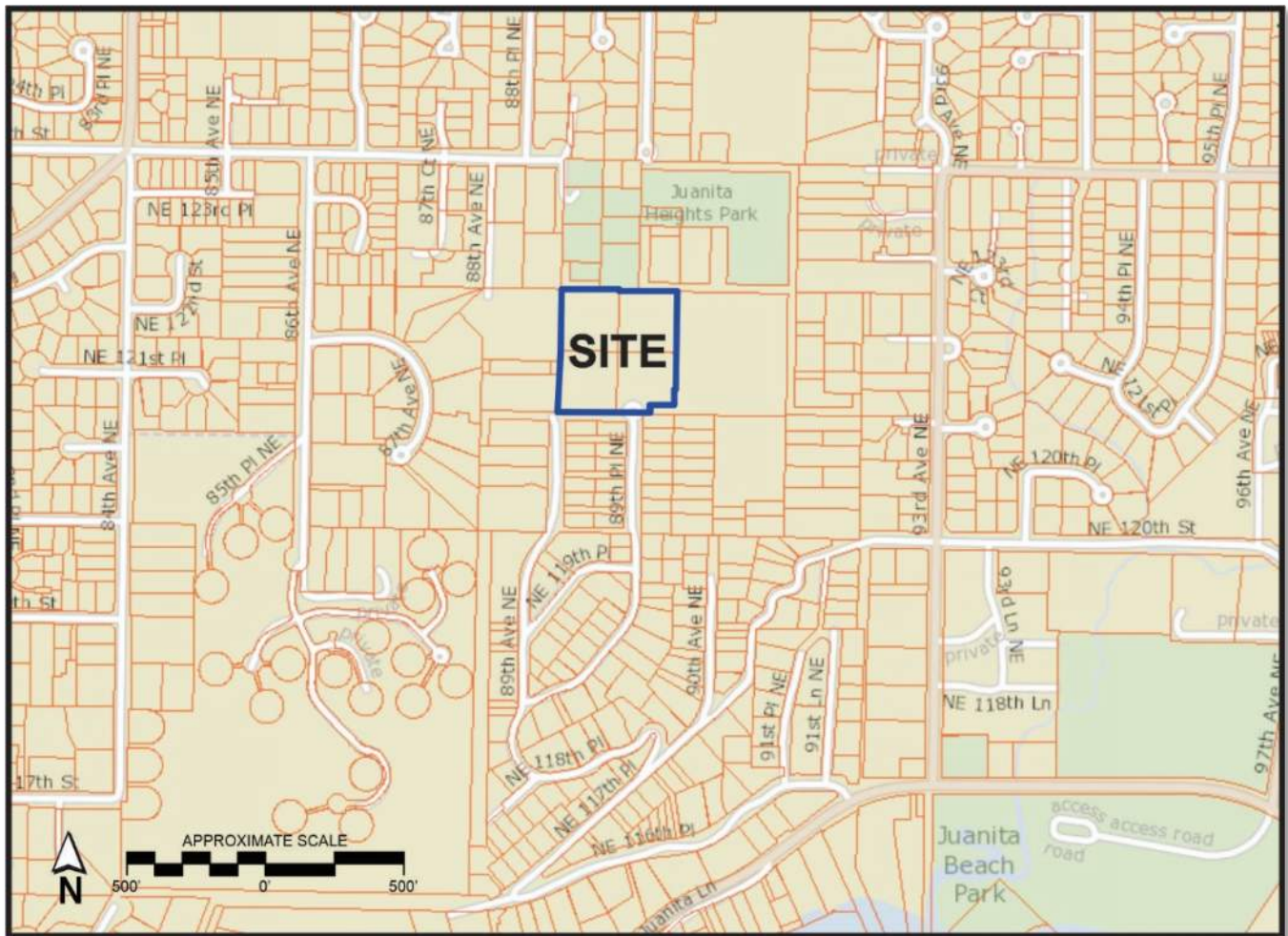


Figure 1: Vicinity Map

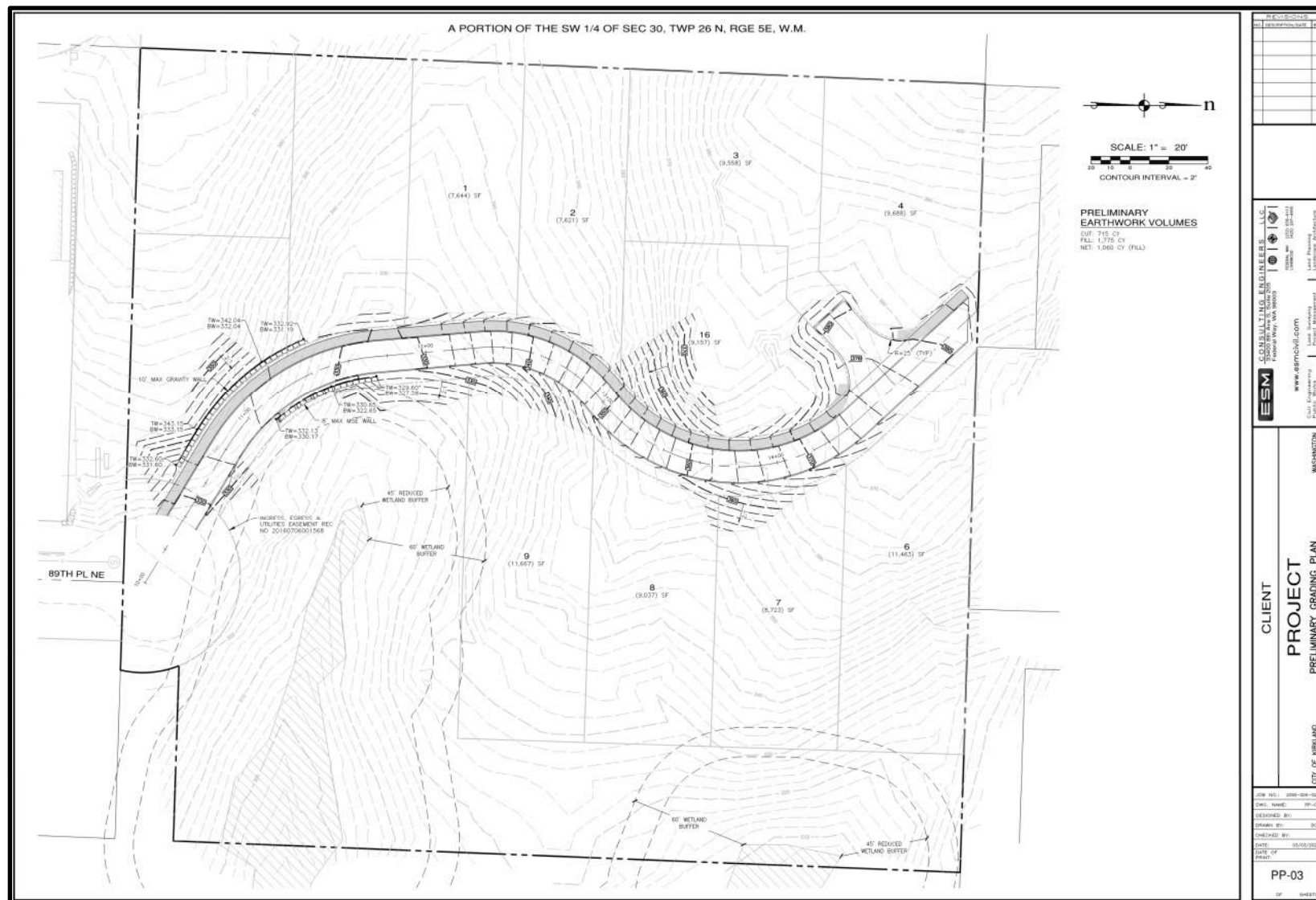


Figure 2: Site Plan / Preliminary Grading Plan

Trip Generation

The March 2025 TIAR included the following trip generation forecast for the project, see Table 1 below.

Table 1. Project Trip Generation

Time Period	Size	Average Trip Rate ¹	In	Out	Total
Weekday	12 dwelling units	9.43 / dwelling unit	57	57	114
AM Peak	12 dwelling units	0.70 / dwelling unit	2	6	8
PM Peak	12 dwelling units	0.94 / dwelling unit	7	4	11

¹ Source: ITE *Trip Generation Manual*, 11th Edition, Land Use 210, "Single-Family Detached Housing."

Table 2 on the following page is from Kirkland's Pre-Approved Plans, Policy R-38 Transportation Impact Analysis Review (TIAR) and outlines the basic SEPA review and levels of traffic analysis required based on a development's forecasted trip generation.

Table 2. Kirkland TIA Thresholds

TIA Thresholds	No Analysis	Level 1 Analysis	Level 2 Analysis
SEPA Review Requires			Yes
Gross Peak Hour Trips ¹			
5 > trips	X		
5 < trips < 50		X	
50 or more			X

¹ Gross peak hour trips are the number of peak hour trips the proposed development will generate, excluding pass-by, diverted linked and internal trips.

A Level 2 TIA is not required under City standards based on the project's forecasted trip generation.

Traffic Conditions

NE Juanita Drive is classified as a Principal Arterial east of 116th Place NE and as a Minor Arterial west of 116th Place NE. The section east of 116th Place NE is 3 lanes wide and has 25 MPH posted speed. The section west of 116th Place NE is 2 lanes wide and has a 35 MPH posted speed.

Primary access to the site from NE Juanita Drive is via NE 116th Place to NE 117th Place to NE 118th Place to 89th Ave NE to 89th Place NE. These segments are classified as Neighborhood Access roads and are also referenced in City documentation as local streets (see Figure 4).

The functional roadway classifications are from the City's 2024 - 2044 Transportation Strategic Plan Adopted November 2024.

Kirkland Zoning Code (KZC) Chapter 110.20 notes that Neighborhood Access roads are intended to carry less than 1,500 vehicles per day for an average 7-day period.

KZC Chapter 110.30 includes standards for R-20 Neighborhood Access Roads. R-20 designated streets include roadways that provide access only to properties designated Low Density Residential in the Comprehensive Plan. These streets include a minimum pavement width of 20 feet, 30-45 feet of right-of-way, parking on 1 side only is allowed, vertical curb, gutter, and stormwater collection and conveyance, 4.5-foot-wide landscaping strips with or without sidewalks, and 5-foot-wide sidewalks.

In 2020, Kirkland published the Goat Hill Pavement Width Map to show preexisting deficiencies in the Neighborhood Access road widths north of NE Juanita Drive. This Pavement Width Map is shown at **Figure 3**.

Subsequently, the Applicant completed a lidar survey on the access roadways north of NE Juanita Drive to 89th Place NE. **Figure 4** is the lidar survey.

The City map and the Applicant's lidar survey are reasonably consistent with each other and identify road width deficiencies on NE 116th Place, NE 117th Place, NE 118th Place, 89th Ave NE, 89th Place NE.

Several sections on NE 116th Place, NE 117th Place, NE 118th Place, 89th Ave NE and 89th Place NE are also noted in Kirkland's Transportation Strategic Plan as having poor pavement conditions.

The City has no planned "roadway-link" connections to north of 89th Place NE, through the project site, and through Juanita Heights Park.

The City of Kirkland's Transportation Strategic Plan and Citywide Transportation Connections Map highlight potential shared-use path and pedestrian connections through Juanita Heights Park connecting NE 117th Place to NE 124th Street and to 93rd Ave NE from 89th Place NE. These improvements are part of the Juanita Heights Park Master Plan, which is unfunded and referenced in the City's 2025-2030 Capital Improvement Plan.

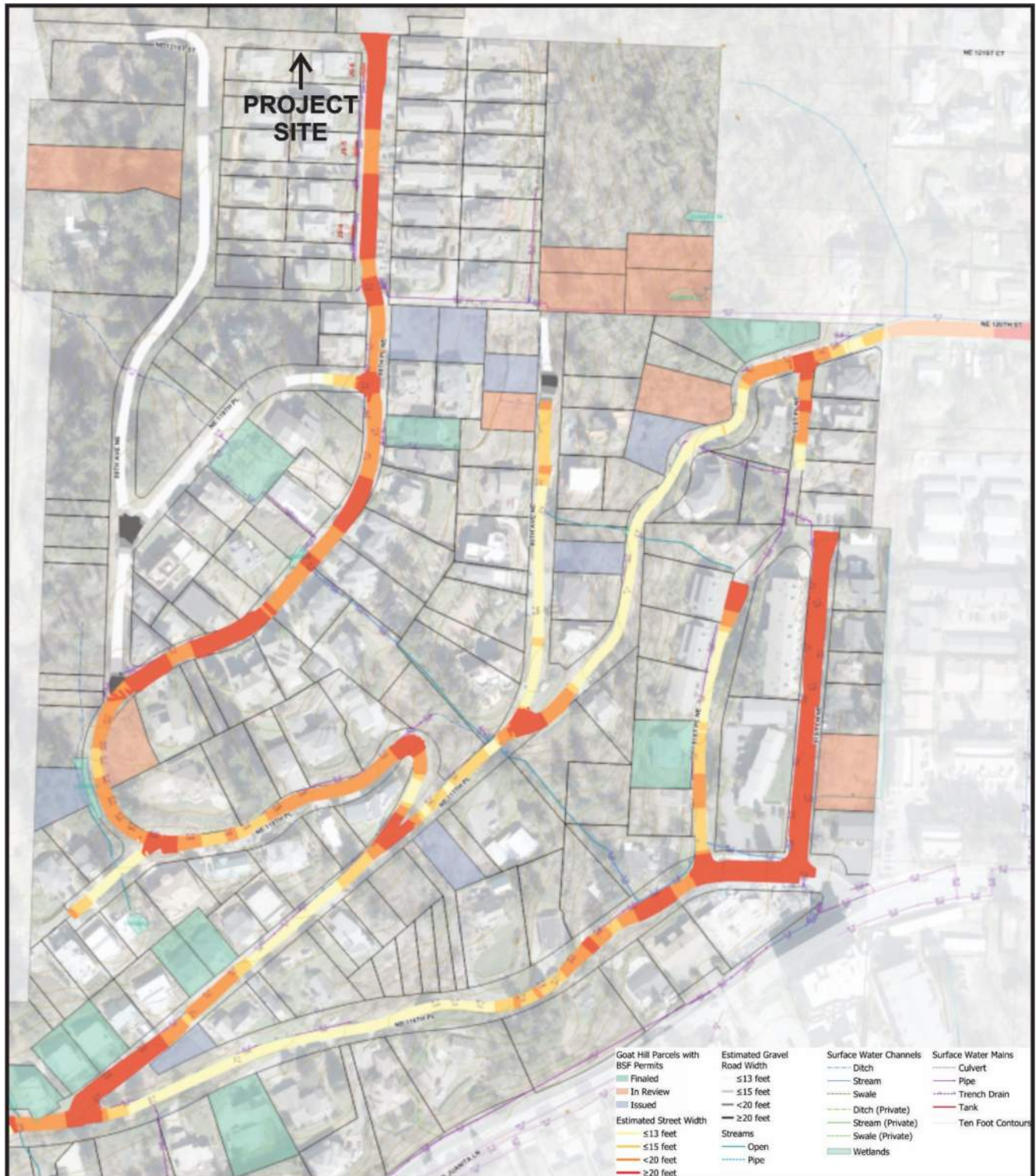


Figure 3: City of Kirkland Goat Hill Pavement Width Exhibit



Traffic Volumes

The City's Goat Hill Drainage project includes improvements to stormwater drainage, slope stability, and repaving on NE 116th Place, north of NE Juanita Drive and on NE 117th Place between NE 116th Place NE and 91st Place NE. Construction is anticipated to be completed in October 2025. The construction project has closed sections of NE 117th Place to through-traffic since Spring 2024.

Due to the roadway closures resulting from the drainage project, local traffic volumes were collected on NE 118th Place north of NE 117th Place Tuesday-Thursday, September 9 to 11, 2025. **Figure 5** shows the location of the tube counter.

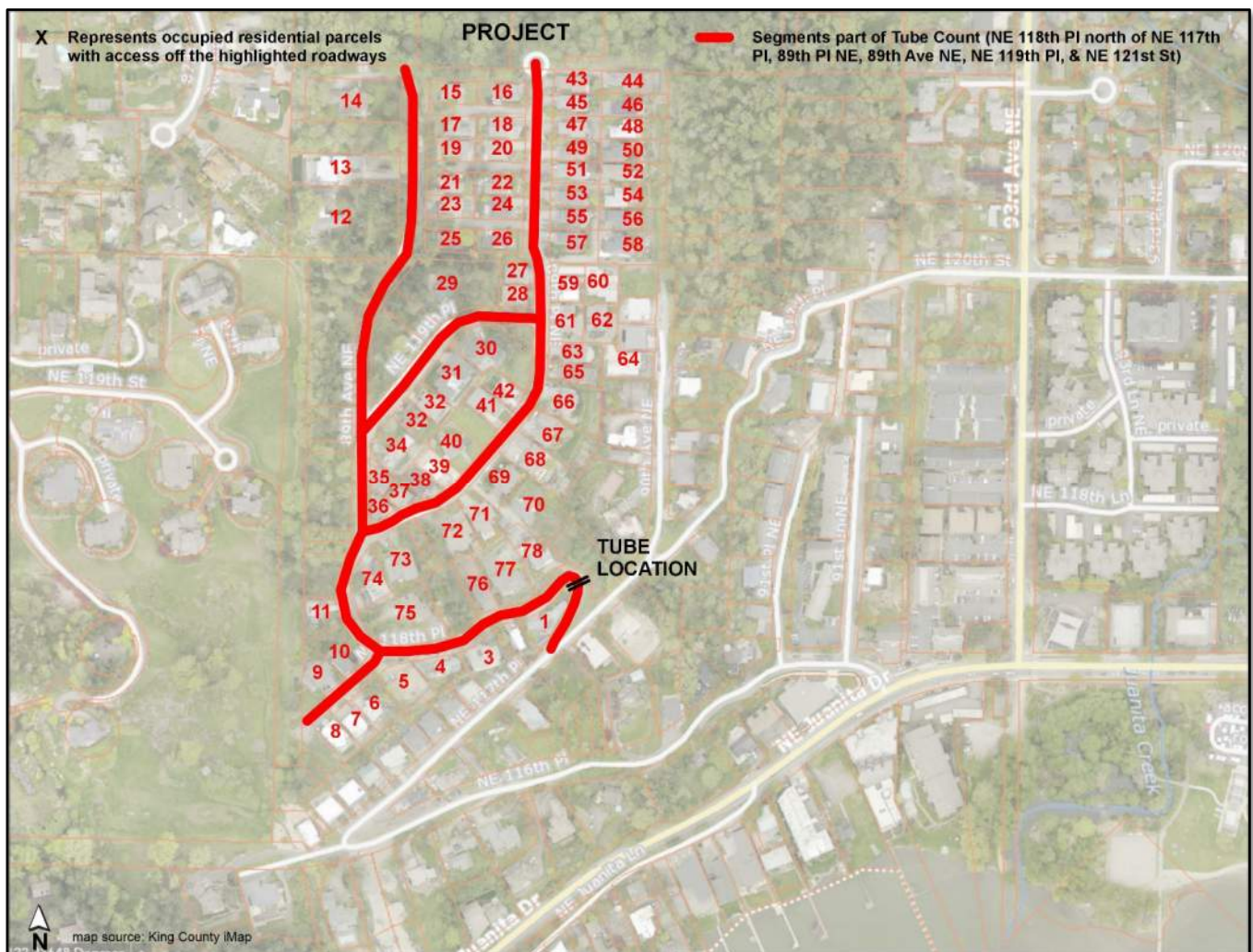


Figure 5: Tube Count Location & Impacted Parcels

There are 78 single-family homes with access to NE 118th Place north of NE 117th Place, see the King County Assessor's maps. The tube counter was located to capture weekday trips generated via the occupied land parcels north NE 117th Place. These roadways (and subsequently the local parcels) are outside of the area immediately impacted by road closures related to the City's drainage project.

The weekday Tuesday-Thursday volumes collected on NE 118th Place north of NE 117th Place are summarized in **Table 3** below and the count data is attached.

Table 3. Hourly Volumes

Interval	Tuesday, 9/9	Wednesday, 9/10	Thursday, 9/11	Average
12:00:00 AM	1	1	3	2
1:00:00 AM	0	0	0	0
2:00:00 AM	0	0	0	0
3:00:00 AM	0	1	1	1
4:00:00 AM	0	1	3	1
5:00:00 AM	4	4	2	3
6:00:00 AM	27	17	29	24
7:00:00 AM	45	42	53	47
8:00:00 AM	54	59	56	56
9:00:00 AM	53	51	32	45
10:00:00 AM	38	39	23	33
11:00:00 AM	34	49	31	38
12:00:00 PM	28	33	41	34
1:00:00 PM	37	50	37	41
2:00:00 PM	60	48	37	48
3:00:00 PM	48	28	56	44
4:00:00 PM	67	50	49	55
5:00:00 PM	50	53	55	53
6:00:00 PM	37	47	58	47
7:00:00 PM	33	40	39	37
8:00:00 PM	21	31	27	26
9:00:00 PM	10	12	15	12
10:00:00 PM	9	10	8	9
11:00:00 PM	8	9	2	6

The average weekday daily traffic volume to/from NE 118th Place is 665 vehicles. The average AM peak hour volume was 59 vehicles between 7:30 AM and 8:30 AM. The average PM peak hour volume was 58 vehicles between 4:15 PM and 5:15 PM.

The following reviews the project's trip impacts on road segments with primary access to the site. The primary access-way includes NE 116th Place from Juanita Drive to NE 117th Place, to NE 118th Place, to 89th Place NE. This study area is illustrated in **Figure 6**.

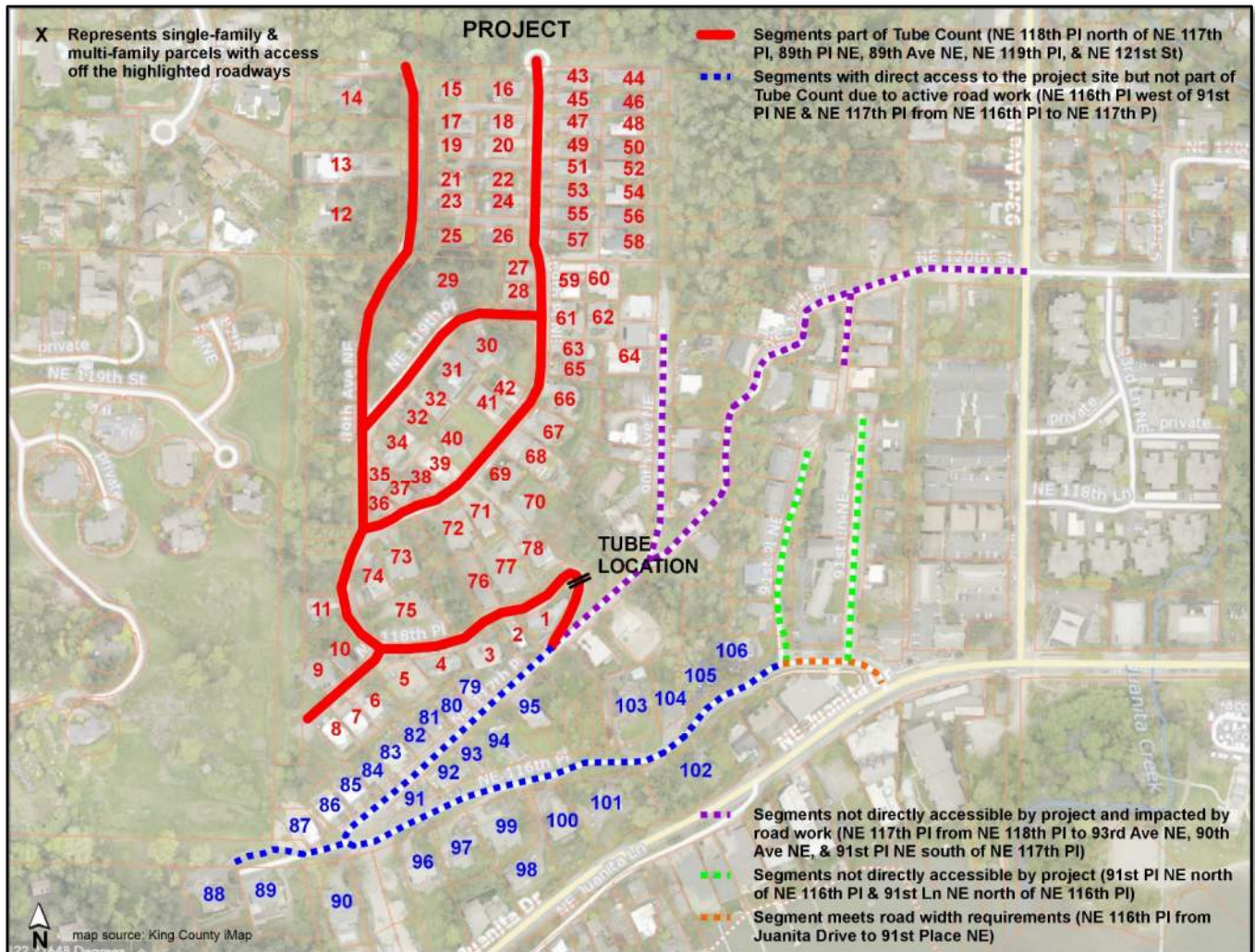


Figure 6: Road Segments north of NE Juanita Drive & Study Area for Volume Analysis

The study area excludes:

- NE 117th Place east of NE 118th Place (and 90th Ave NE and 91st Place NE south of NE 117th Place). These segments were excluded as a primary route to the site due to the very sharp turn from westbound NE 117th Place to NE 118th Place and vice versa.
- NE 116th Place from NE Juanita Drive to 91st Place NE (and 91st Place NE and 91st Lane NE). The NE 116 Place section meets the city's road width requirements; and thus, was excluded from the "study area." 91st Place NE and 91st Lane NE access this NE 116th Place segment.

The study area includes:

- *NE 116th Place west of 91st Place NE and NE 117th Place from NE 116th Place to NE 118th Place.* These segments have sections where the road width does not meet the city's road width requirements. Road work related to the drainage project did not allow data collection on these segments. There are 28 existing single-family land parcels accessible off these segments.
- *NE 118th Place, 89th Ave NE, 89th Place NE, NE 119th Place, and NE 121st Street.* These segments converge at the tube count location on NE 118th Place north of NE 117th Place. The project is north of the existing terminus of 89th Place NE. As stated above, there are 78 existing single-family land parcels accessible off these segments.

Table 4 forecasts the trip generation for the 28 single-family land parcels off NE 116th Place west of 91st Place NE and NE 117th Place from NE 116th Place to NE 118th Place.

Table 4. Trip Generation – Parcels between NE Juanita Drive, NE 118th Place and 93rd Ave NE

Time Period	Size	Average Trip Rate ¹	In	Out	Total
Weekday	28 dwelling units	9.43 / dwelling unit	132	132	264
AM Peak	28 dwelling units	0.70 / dwelling unit	5	15	20
PM Peak	28 dwelling units	0.94 / dwelling unit	16	10	26

¹ *Trip Generation Manual*, Land Use 210, "Single-Family Detached Housing."

Table 5 summarizes the combined trips generated by:

1. 78 single-family properties north of NE 117th Place, based on the tube counter.
2. 28 other single-family parcels on NE 116th Place west of 91st PI NE and NE 117th Place from NE 116th Place to NE 118th Place. These were not part of the tube count due to road work on NE 117th Place (Goat Hill Drainage project).
3. 12 proposed single-family parcels with the project.

The combined trip generation is:

- 1,043 weekday daily trips,
- 87 AM peak hour trips, and
- 95 PM peak hour trips

Project trips are forecast to increase trip generation in the affected (Goat Hill) area by:

- +114 weekday daily trips, +11%,
- +8 AM peak hour trips, +9%, and
- +11 PM peak hour trips, +12%

Table 5. Trip Generation & Project Share Impact

Time Period	In	Out	Total
118 th PI n/o 117 th PI (Tube Count Table 3)	331	335	665
116 th PI w/o 91 st PI and 117 th PI w/o 118 th PI (ITE Table 4)	132	132	264
Project Trips (ITE Table 1)	57	57	114
Total Weekday Daily Trips	520	524	1043
Project Share			11%
118 th PI n/o 117 th PI (Tube Count Table 3)	12	46	59
116 th PI w/o 91 st PI and 117 th PI w/o 118 th PI (ITE Table 4)	5	15	20
Project Trips (ITE Table 1)	2	6	8
Total AM Peak Trips	19	67	87
Project Share			9%
118 th PI n/o 117 th PI (Tube Count Table 3)	28	30	58
116 th PI w/o 91 st PI and 117 th PI w/o 118 th PI (ITE Table 4)	16	10	26
Project Trips (ITE Table 1)	7	4	11
Total PM Peak Trips	51	44	95
Project Share			12%

Vehicle Turnaround

Figure 6 shows a blow-up of the project's hammerhead turnaround for emergency, delivery, and garbage trucks. The design as shown is consistent with the City of Kirkland's Turn-Around Street standard plan No. CK-R.16. Please refer to Civil Engineering Solutions for additional details.

Currently, these vehicles use the cul-de-sac at the north end of 89th Place NE as a turnaround. The cul-de-sac currently provides access to one single-family home. Some parking use in the cul-de-sac has been observed; however, cul-de-sac parking is contrary to standards for Neighborhood Access roads per KZC 110.30. Gardening beds are on the west side of 89th Place NE south of the cul-de-sac with single-family driveways on the opposite side of the roadway.

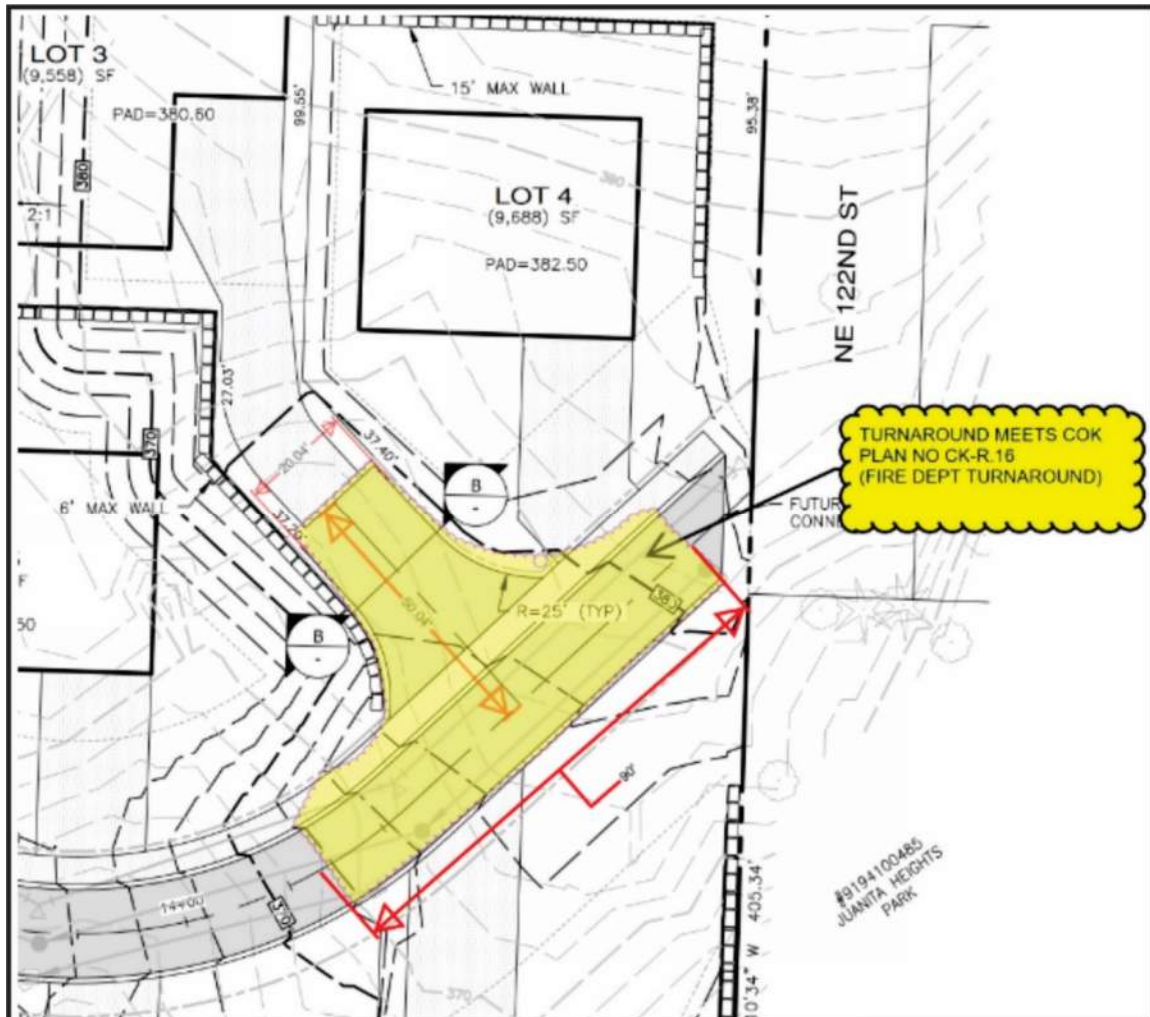


Figure 6: Park Height Hammerhead Turnaround

Existing Emergency Vehicle Access

An exhibit from the AutoTurn program modeling fire truck access from Juanita Drive to the project entrance is attached. The truck route is overlayed on the City of Kirkland Goat Hill Pavement Width Exhibit. For this analysis, a 30.5-foot-long Pumper Truck was used as the design vehicle.

The exhibit highlights areas where the truck will require use of most of the available pavement width and most of the curved roadway sections at NE 116th Place & NE 117th Place and on NE 118th Place north of NE 117th Place. However, the analysis shows that a 30.5 foot long pumper truck can travel from Juanita Drive to the end of 89th Place NE even with the pre-existing narrow roadway sections.

The City of Kirkland Fire Department's Standards of Coverage and Deployment Plan, last updated in June 2014, recommended constructing a connection between the switchback on Goat Hill at NE 116th Place & NE 117th Place and 86th Ave NE (Component I – Overall Evaluation and Recommendations; Improvement Goal D: Reduce Travel Time). This improvement was not completed, nor is it part of the City's 2025-2030 Capital Improvement Plan.

Construction Staging

Initial staging for construction is proposed from the cul-de-sac; with the contractor present to move vehicles onto the site for emergency vehicle use of the cul-de-sac. An area onsite and outside of the cul-de-sac can then be used for staging after onsite clearing and grading. We understand that the developer anticipates continued authorized use of the cul-de-sac, under its current condition, and construction vehicles and equipment will be managed to allow its continued use.

Completion of the project will include reconstructing the cul-de-sac as a standard road section, per City requirements.

Detailed traffic control plans will be prepared during Civil Review.

Traffic Mitigation

Park Heights will be responsible for a concurrency testing fee, to obtain a certificate of concurrency, and payment of traffic impact fees.

A Concurrency Application is submitted as a separate document.

Kirkland's 2025 Transportation Impact Fee Schedule assesses new single-family detached homes at a rate of \$8,109.28 per dwelling. The impact fee is due prior to the issuance of a building permit.

While analysis above shows that the existing access from Juanita Drive to the end of 89th Place NE is adequate for a 30.5 foot long pumper vehicle, the Applicant and the City have previously discussed the potential for alternate emergency access north of the project site through Juanita Heights Park.

Figure 7 shows a preliminary plan and profile, developed by the Applicant, of a feasible alternate connection between the project site and NE 124th Street, through Juanita Heights Park. Constructing this connection as an emergency vehicle access will improve emergency vehicle access to the Goat Hill area from the north and through the project site.

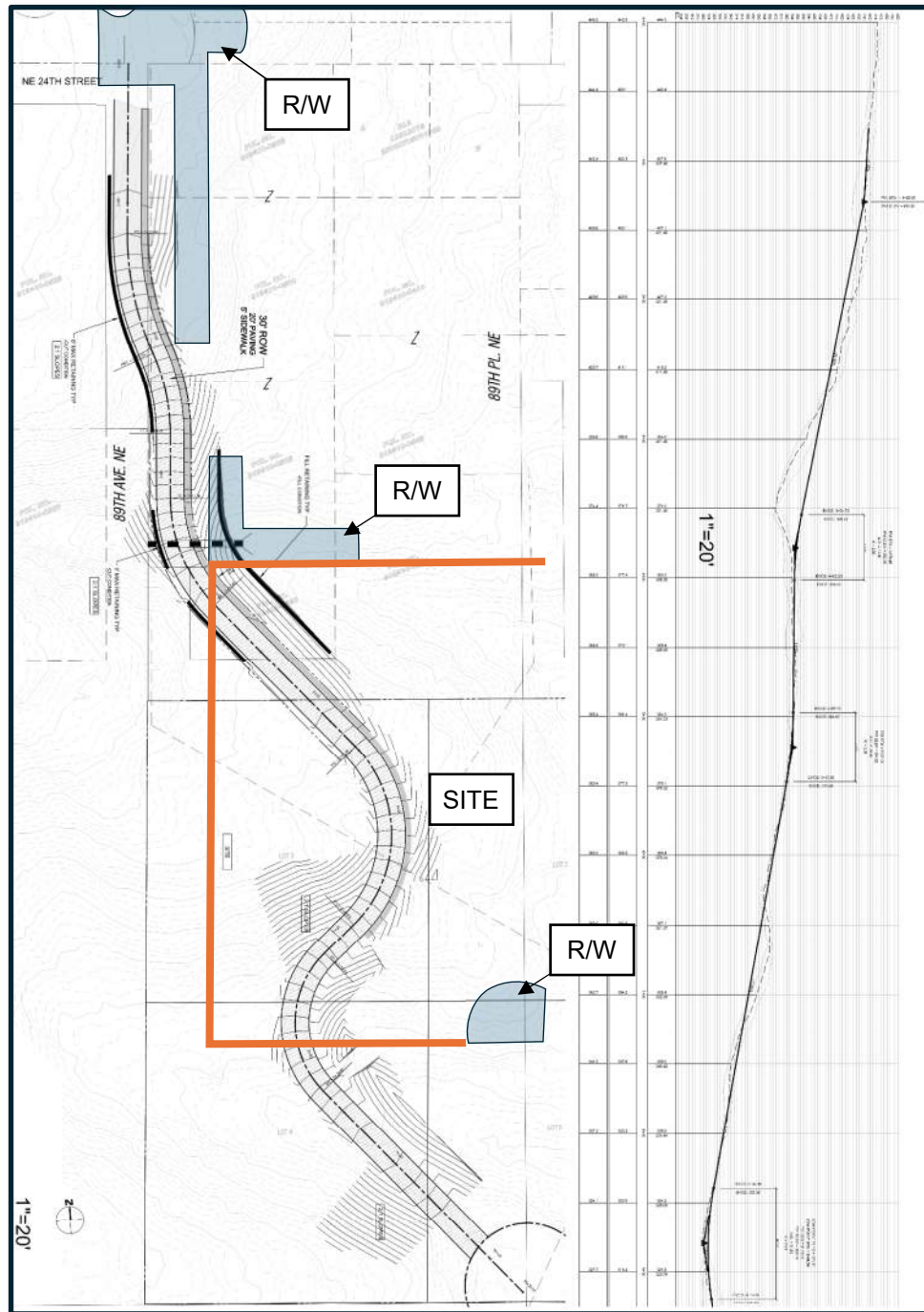
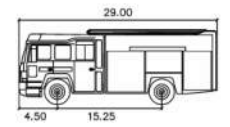
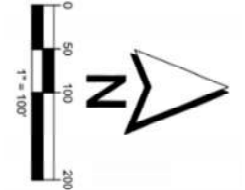
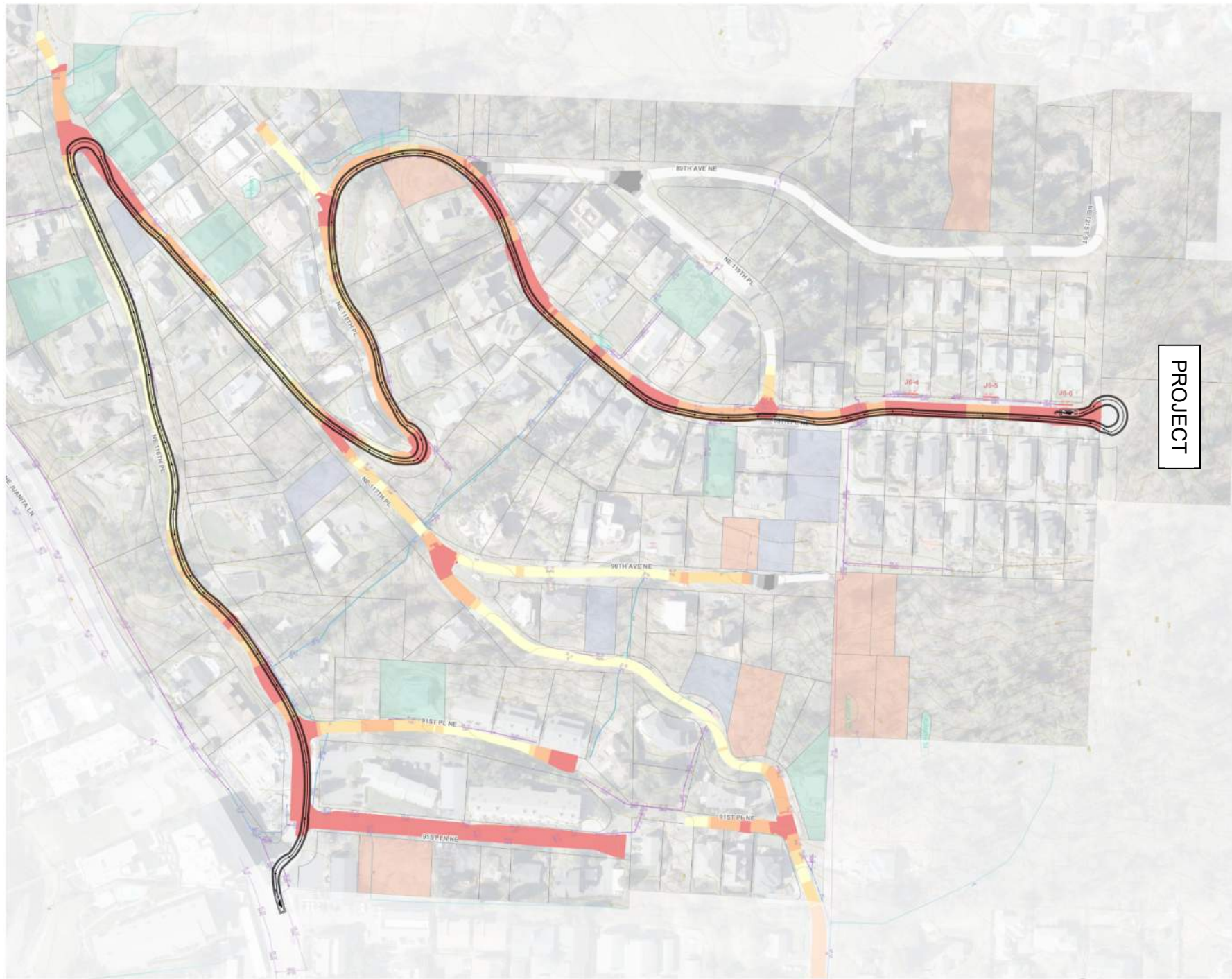


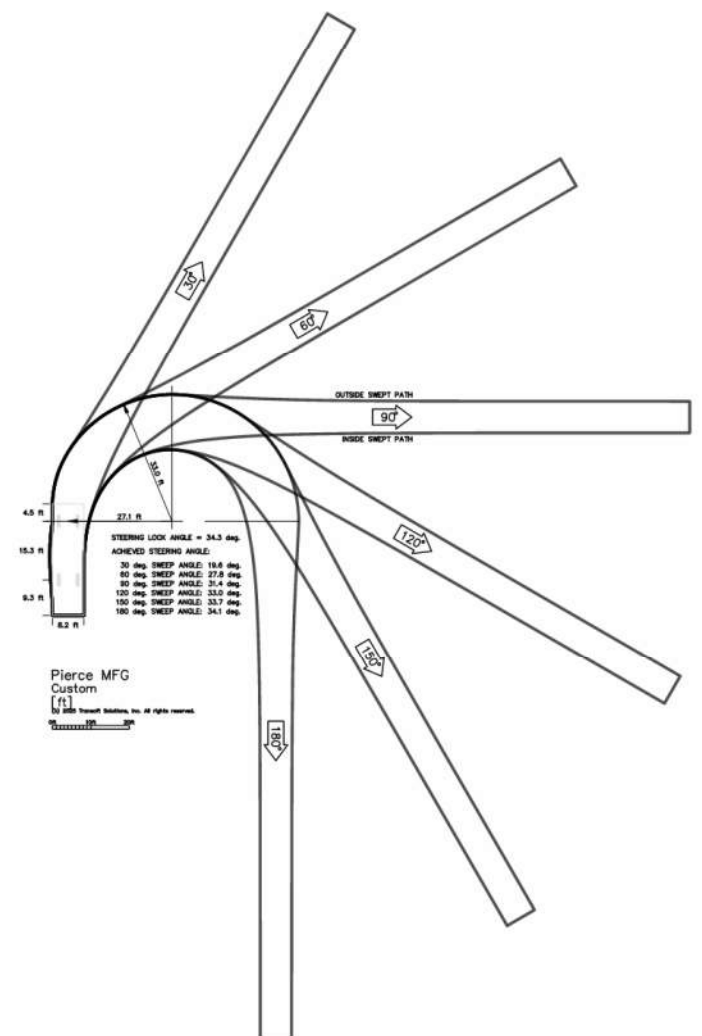
Figure 7: Northerly Connection

Conclusions

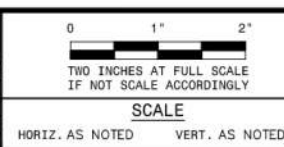
- The project proposes a 9 lot-short plat and boundary line adjustment which will result in a total of 8 new residential lots north of 89th Place NE. This traffic study addresses traffic impacts of a total of 12 future single-family homes on the existing and proposed number of lots.
- Construction of 12 single-family homes on the resulting lots is forecast to generate 114 weekday daily, 8 AM peak hour, and 11 PM peak hour trips to the existing street network north of NE Juanita Drive.
- A review of site access shows several pre-existing roadway sections where the travel-way is less than 20 feet wide. A vehicle turn template for a 30.5-foot long pumper (fire) truck shows that it can navigate the pre-existing roadways to access properties north of NE Juanita Drive, and the project site.
- The proposed 12 single-family homes are forecast to increase the number of weekday daily trips on the roadways north of NE Juanita Drive by 11%.
- The sum of the project's trip generation, trips generated by the 78 single-family homes north of NE 117th place, based on a tube counter, and trips forecast from 28 other single-family homes on NE 116th Place west of 91st PI NE and NE 117th Place from NE 116th Place to NE 118th Place is 1,043 weekday daily trips, which is less than the City's daily volume threshold (1,500 trips) for a Neighborhood Access road.
- The project proposes a hammerhead turnaround at the north property boundary, consistent with City standard plan requirements.
- An emergency access could be feasibly constructed north of the project site to NE 124th Street.
- Detailed traffic control plans will be prepared during Civil Review.



Pierce MFG
feet
Width : 8.20 Lock to Lock Time : 6.0
Track : 5.74 Steering Angle : 34.3



REVISIONS			
NO	DESCRIPTION	DATE	BY



PLOT DATE	CITY OF XXX		
8/29/2025	DEPARTMENT		
	DIVISION		
DRAWING NO.	DRAWN BY: E. RIVERA	DESIGN BY: J. HEE	CHECKED BY: J. HEE



DEAL NE FIRST & 100TH AVE	
AUTOTURN EXHIBIT	
FIRE TRUCK ROUTE	

DWG NO.
AT1
SHEET
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OF
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July 23, 2025

To: James Jordan
Subject: Park Heights SEPA – Follow up to July 14th Meeting

Hello,

A summary of our discussion on SEPA requirements can be found below:

Per the Notice of Application Incomplete issued for SUB25-00184, the SEPA application that is submitted with the short plat resubmittal should include:

- 1) Concurrency test certificate;
- 2) SEPA checklist;
- 3) Traffic impact analysis: scope and contents to be determined in coordination with Public Works; and
- 4) An analysis of emergency access to the subject property

As part of the SEPA application, please provide the following information:

- 1) Analysis of existing emergency access and the impact of additional units:
 - a) Survey of the road from NE Juanita Dr to the project site that identifies the areas where access is insufficient and to what degree;
 - b) A traffic and access analysis that addresses the required turnaround for waste management and emergency services; and
 - c) Proposal of mitigation measures that address the issues identified
- 2) Discussion of construction impacts
 - a) Traffic control plan, circulation plan, construction staging plan
- 3) Analysis of the feasibility of secondary access to Goat Hill from the north side of the subject property.

Mariah Murphy (mmurphy@kirklandwa.gov), the Kirkland Parks Planning & Development Manager, has provided a summary of Parks' stance on the proposed secondary access through park land:

Parks is committed to preserving public parkland and ensuring it is maintained for community use—no loss of parkland will be supported. In the event a developer proposes a land swap, such a request would only be considered if it demonstrates a clear and measurable added benefit to the community—a value that must exceed the contributions of the existing property being considered for secondary access. Furthermore, any evaluation of a secondary access route and land swap would include a careful review of current community use patterns, including existing social trails and informal access points within the area.

The details of the critical area determination will be provided separately. If you have any questions, please contact me at pvellaipadian@kirklandwa.gov.

Sincerely,

PLANNING AND BUILDING DEPARTMENT

Priya Vellaipandian
Planner

To: Paul Devenzio Montebanc Management LLC
From: Jeff Hee, PE PH Consulting
Subject: Montebanc LLA and Short Plat
Level I Transportation Impact Analysis Review (TIAR)
Date: March 7, 2025

INTRODUCTION

This Level I TIAR describes the proposed project and summarizes the project's trip generation and traffic impacts per Kirkland Policy R-38 Transportation Impact Analysis Review (TIAR).

PROJECT DESCRIPTION

Montebanc is proposed at King County land parcels nos. 9194100890, 9194100760, 919100790, and 9194100840 in the Goat Hill area of Kirkland's Finn Hill neighborhood. The property is zoned RSA 4, Low Density Residential and is currently undeveloped. A vicinity map is attached as **Figure 1**.

The project proposes a lot line adjustment (LLA) of the 4 existing parcels and the larger remaining parcel will be short platted into 9 single-family homes. The LLA and Short Plat will create a total of 12 single-family home sites. Site access is proposed as an extension of 89th Place NE to the north of an existing cul-de-sac. The layout of the project and proposed project access are attached as **Figure 2**.

TRIP GENERATION

The ITE Trip Generation Manual, 11th Edition, was used to forecast trip generation for the 12 single-family detached housing units (ITE LU 210). **Table 1** summarizes the trip generation forecast for the project.

Table 1: Project Trip Generation

Time-Period	Size	Average Trip Rate	In	Out	Total
Weekday	12 dwelling units	9.43 / dwelling unit	57	57	114
AM Peak	12 dwelling units	0.70 / dwelling unit	2	6	8
PM Peak	12 dwelling units	0.94 / dwelling unit	7	4	11

The project generates less than 50 new peak hour trips and does not trigger a SEPA review based on the trip generation.

TRIP DISTRIBUTION

The Applicant will construct a northerly road section of 89th Place NE, to extend from an existing cul-de-sac through the project site. Based on access to the site, all project trips will be to/from the south to/from NE 117th Place.

89th Place NE, NE 118th Place, NE 117th Place, NE 116th Place, and NE 120th Street are local access roads in the vicinity of the project site. These local roadways do not have curbs, gutters, sidewalks, bike lanes, or roadway centerline striping. This collection of roadways includes local access signs and narrow road and 10 mph warning signs.

TRANSPORTATION IMPACT FEE ESTIMATE

Kirkland's 2025 Transportation Impact Fee schedule assesses single-family development impact fees based on \$8,109.28 per dwelling unit (2025 dollars). The project's Transportation Impact Fee is estimated to be: \$97,311.36.

SITE ACCESS AND SAFETY

The WSDOT Crash Portal Application was used to review crashes on 89th Place NE in the immediate vicinity of the project site. There were no crashes reported on 89th Place NE near the site between 2020 and 2024. The following outlines the crashes reported on the local roads south of the site:

- 2020. No crashes.
- 2021. 2 property damage only crashes: 1 at NE 117th & NE 116th Place and 1 at NE 116th Place & 91st Lane NE.
- 2022. No crashes.
- 2023. 3 property damage only crashes: 1 on NE 118th north of NE 117th Place NE, 1 at NE 117th Place NE & 90th Ave NE, and 1 at Juanita Drive & NE 116th Place.
- 2024. 1 property damage only crash at Juanita Drive & NE 116th Place. 2 crashes resulting in suspected minor injuries both at NE 120th St and 93rd Ave NE.

The project is forecast to add 114 daily and 11 peak hour trips to the local road network. The crash history does not show any significant person injury-related trends that may be exacerbated by the project's trips generation. Project impacts do not trigger the need for major upgrades to the local road network.

The 89th Place NE road extension through the project parcel includes a 20-foot-wide pavement section and 5-foot-wide sidewalks. Kirkland sight distance standards are outlined in Policy R-13: Intersection Sight Distance.

- At Type F1 driveways, that generate less than 10 PM peak hour trips and where the major road volume is less than 6,000 vehicles per day, the driveway sight distance for a 25-mph roadway is 155 feet measured along the intersecting roadway approach from a point at the center of the exiting lane of the driveway and offset 10 feet back from the edge of the intersecting roadway.
- All single-family driveways should also satisfy the city's pedestrian sight distance requirements, which are measured from a point at the center of the exiting lane of the driveway and offset 14 feet back from the back of sidewalk to points offset 15 from the edges of the driveways along the back of sidewalk.

Sight distance triangles shall be included on the site plan, as the site plan is developed, and driveways are identified.

CONCLUSIONS

The project generates between 5 and 50 new peak hour trips and satisfies the Level 1 TIAR requirements. The project's trip generation does not warrant additional analyses of offsite traffic operations.

The project will construct an extension of 89th Place NE from its existing cul-de-sac to the north through the site property and include access to the respective lots and single-family homes.

As the site plan is developed, engineering plans to show the individual driveways and include sight distance triangles as applicable.

Should you or the reviewer have any questions, please contact me at your earliest convenience.

