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MEMORANDUM

To: Houghton Community Council
Kirkland Hearing Examiner

From: Tony Leavitt, Senior Planner
Jeremy McMahan, Planning and Building Deputy Director
Thang Nguyen, Transportation Engineer

Date: August 7, 2019

Subject: ZON16-02063, Northwest University Master Plan, Response to Questions from June 11th Hearing

During the June 11, 2019 Public Hearing for the Northwest University Master Plan, the Houghton Community Council requested additional information from staff and the applicant to address issues that were raised during the public hearings on May 14th and June 11th.

The issues raised during the hearing and the responses from staff are summarized below. The applicant's responses are included in Attachment 2.

Public Athletic Field Use

As part of the Master Plan, the applicant is proposing to open the athletic fields up for public use. During the public hearings, the Houghton Community Council had concerns about noise impacts associated with the field, including the use of speakers; traffic and parking impacts associated with the public field use; and ensuring community use of the fields.

Staff Response:

Noise: The applicant has submitted a Noise Study (see Attachment 1, Exhibit C) to address the concerns regarding noise impacts. The Noise Study concludes that public use of the fields for soccer practices/games and similar sports activities will comply with City of Kirkland and WAC noise standards. It also concludes, in the professional opinion of SSA Acoustics, that there will be no significant adverse noise impacts associated with the Master Plan proposal.

Additionally, the applicant is proposing to construct an acoustical barrier (see Attachment 1, Exhibit D) along the northern edge of the fields to further mitigate any potential noise impacts on the neighboring property owners. The applicant is willing to accept a condition requiring construction of the acoustical barrier along the northern property line.

Traffic and Parking: The applicant's transportation engineer has provided additional information about the assumptions that were made in the transportation impact analysis related to public use of the field (see Attachment 1, Exhibit E). The memo concludes the following:

- *The worst-case transportation impacts of public use of the field would occur during the weekday PM peak hour when the University is in full session. As a practical matter, Northwest University (not third parties) would be expected to use the fields at those times, but the traffic analysis evaluated the worst-case scenario to understand the full range of anticipated impacts. Any public use of the fields on weekends would occur when traffic on the campus and surrounding transportation system traffic is low, so transportation impacts on weekends would be less than studied in the environmental review.*
- *In regard to parking, the parking analysis shows 355 available parking spaces at 5 p.m. with public use of the field. The available parking continues to increase after 5 p.m.; therefore, even if there were an overlap with additional use of the field, there would still be parking available. The University will use parking management strategies to ensure that there is available parking proximate to the fields when public use will occur. These strategies may include assigning students and employees to other parking lots to minimize parking in fields near the lots.*

Community Use of Fields: In order to address the HCC concerns regarding the community use of the fields, the applicant had a meeting John Lloyd, City of Kirkland Parks and Community Services Deputy Director (see Attachment 1, Exhibit B). In their July 31st memo to the HCC, the Parks and Community Services Department confirmed the City's interest in the use of the fields by the City and community organizations and outlined the City's Interlocal Agreement with the Lake Washington School District (LWSD). That agreement employs a priority system to ensure that local non-profit uses are prioritized above other uses when scheduling fields. The University has proposed an additional permit condition to utilize a similar tiered system for field use and willingness to enter into an ILA with the City for the City to schedule all non-University field use similar to the arrangement with the LWSD.

Traffic and Parking Impacts

A number of questions related to transportation and parking analysis and impacts were raised at the public hearing. Issues included trip generation of the proposed uses, parking accommodations and management, effectiveness of the existing Transportation Management Program and how will the new one be improved, addressing cut through traffic, traffic signal location along 108th Avenue NE, and the Master Plan relationship to the 6th Street Corridor Study.

Staff Response:

Trip Generation: The applicant's transportation engineer has provided the following table showing a summary of the anticipated total Master Plan trip generation in 2022 and 2037 by the proposed land uses (see Attachment 1, Exhibit E). The land use category "Northwest University Campus" represents the vehicle growth anticipated with the proposed Master Plan buildings and the anticipated increase in campus population associated with the Master Plan development. This Northwest University Campus vehicle growth is equated to a student count; however, it is inclusive of all traffic for all proposed campus uses.

Table 1. Master Plan Estimated New Vehicular Trip Generation by Horizon Year

Land Use	Size	Trip Rate[1,2]	2022 Total	2022 In	2022 Out	2037 Total	2037 In	2037 Out
Weekday Daily								
Northwest University Campus[3]	+370 students (2022) +770 students (2037)	4.22 per student	1,560	780	780	3,250	1,625	1,625
Tennis Center[3]	6 courts	38.70 per court	250	125	125	250	125	125
Public Sports Field Use	-	-	384	192	192	384	192	192
Total			***2,194***	***1,097***	***1,097***	***3,884***	***1,942***	***1,942***
Weekday AM Peak Hour								
Northwest University Campus	+370 students (2022) +770 students (2037)	0.23 per student	85	51	34	177	106	71
Tennis Center	6 courts	3.58 per court	22	11	11	22	11	11
Public Sports Field Use	-	-	0	0	0	0	0	0
Total			***107***	***62***	***45***	***199***	***117***	***82***
Weekday PM Peak Hour								
Northwest University Campus	+370 students (2022) +770 students (2037)	0.32 per student	118	59	59	246	123	123
Tennis Center	6 courts	3.58 per court	22	12	10	22	12	10
Public Sports Field Use	-	-	192	160	32	192	160	32
Total			***332***	***231***	***101***	***460***	***295***	***165***

1. Site specific trip rates calculated based on field observations for the campus daily and peak hour conditions and Eastside Tennis Center peak hour conditions. Daily trip rate for tennis center based on Institute of Transportation Engineers *Trip Generation*, 9th Edition tennis/racket club land use (#491).
2. Trip generation for the sports fields is based on use of the fields for youth soccer.
3. Trip generation rounded up to the nearest 5 vehicles.

<u>Parking Accommodations and Management</u>: In regard to parking accommodation and management, the applicant's analysis shows a minimum of approximately 300 available (surplus) spaces on-campus with complete build out of the proposed Master Plan, including the tennis center and public use of the fields. The available number of parking stalls continues to increase after 5:00 p.m. as the number of classes decreases and commuter students and employees are no longer on-campus. Given the available parking, additional activities/special events can be accommodated in the evening hours on weekdays.

Northwest University will develop a parking and event management plan that will be approved by the City prior to any building permit issuance or public use of the fields under the proposed Master plan. The general framework and key elements of the Parking Management Plan will include items such as:

- *Assign the campus population, such as residents and commuters, to specific parking lots on campus to manage available parking and ensure parking is open near the fields or other areas where public use may occur.*
- *Manage event schedules to minimize concurrent high activity events on-campus.*
- *Designate specific event parking lots.*
- *Provide way-finding signage to direct visitors to specific parking facilities and pick-up/drop-off area.*
- *Active enforcement of parking restrictions.*
- *Post no parking sign along NE 53rd Street during events and visually monitor neighborhood parking during the event.*
- *Designate a representative from Northwest University to coordinate public use of facilities including parking management associated with the activities.*
- *Provide parking monitors and flagger to direct visitors to on-campus parking lots.*

<u>Transportation Management Program</u>: Thang Nguyen, Transportation Engineer, has outlined in his memo the current and future TMP requirements, the Draft Transportation Management Plan and the Commute Trip Reduction Survey from April of 2017 (see Attachment 2). The current drive-alone rate for employees is 76 percent based on the 2017 Commute Trip Reduction survey.

According to the applicant's transportation engineer, overall driving trips to the campus are less when the total population is considered (students and employees). The campus vehicle counts conducted for the Transportation Impact Analysis (TIA) showed a driving rate of 0.32 vehicles per student headcount during the weekday PM peak hour.

The new TMP that will be required with the Master Plan is anticipated to decrease drive alone rates further by implementing more strategies that have proven to work both locally and nationally. The goal of this TMP shall be that no more than 65 percent of the Northwest University Kirkland Campus commute trips occur by single-occupant vehicles. The goal will apply to both student and employee commuter trips. New strategies being considered for the TMP are:

- *Transit pass subsidy for benefited employees and commuter students*
- *Incentives for benefited employees using alternative modes*

The Master Plan also includes increased on-campus housing, which will assist in decreasing drive alone trips.

<u>Cut Through Traffic</u>: In order to address cut through traffic, the applicant is proposing a condition that with any building permit application proposing a building that exceeds 5,000 sq. ft. or provisions of public use of sports field 3-years after the approval of the Master Plan will include an analysis of existing and projected cut-through traffic impact on non-arterial streets related to Northwest University. If cut through traffic impacts are identified that are projected to worsen as a result of the proposed project, Northwest University shall be required to pay a mitigation fee to the City's Neighborhood Traffic Control Program that is proportionate to its impact, not to exceed $15,000 per Master Plan project over 5,000 sq. ft. or public use of the sports field for the life of the Master Plan.

The Northwest University Master Plan includes 6 buildings over 5,000 square-feet and public use of the sports field, which would require payment of the cut-through traffic mitigation of $15,000 each if impacts are identified. The potential cut-through traffic mitigation fee is up to $105,000. The applicant has provided table showing the costs of various traffic calming devices and the pros and cons of each type. Any traffic devices in the neighborhood would involve a public process involving neighbors impacts by the traffic calming.

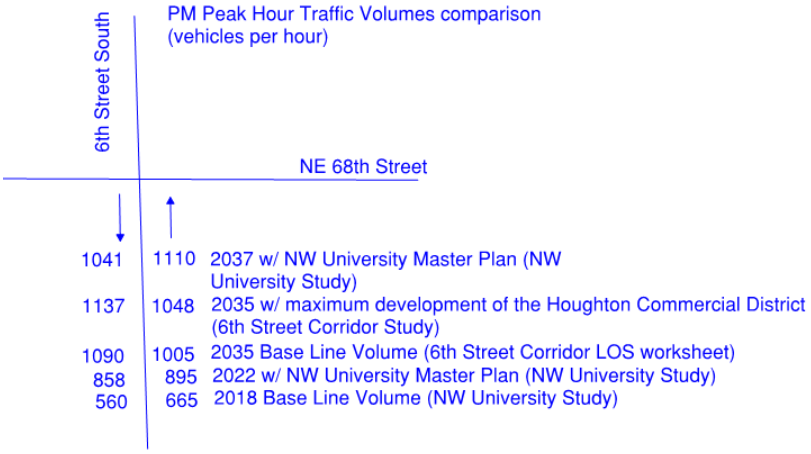
The Staff Recommendation for the project includes a condition to install a traffic signal at the intersection of 108th Avenue NE and NE 53rd Street. Some Houghton Community Council Members asked if a signal located at the main entrance to the campus and 108th Avenue NE would be a better location.

Thang Nguyen states in his memo that the Public Works Department does not support signalizing the University's main entrance on 108th Avenue NE instead of the intersection of 108th Avenue NE/NE 53rd Street because it will not alleviate the poor level of service at the intersection of 108th Avenue NE/NE 53rd Street. Furthermore, signalizing the campus main entrance will not allow the opportunity to incorporate the crosswalk south of NE 53rd Street into the intersection of 108th Avenue NE/NE 53rd Street to improve crossing safety. The signalization of 108th Avenue NE/NE 53rd Street is a requirement of the current Master Plan and was based on the neighborhood's desire to improve the operation at the intersection. Furthermore, signalizing the

University's main entrance will conflict with the City's 6th Street Corridor plan improvement to add a bus lane in that area.

<u>6th Street Corridor Study</u>: Finally, the HCC requested that Staff provide the projected traffic from the 6th Street Corridor Study and the phases of the Master Plan. Thang Nguyen provides the following response:

> *The figure below provides the PM Peak hour forecasted traffic on 108th Avenue NE for the various scenarios. The 2035 forecasted traffic volumes are from the 6th Street Corridor Study. The Baseline Volume represents the traffic adopted 2035 land use within the City Comprehensive Plan and 2035 with maximum development of the Houghton Community District represents the maximum redevelopment potential of the Houghton Community District added on top of the adopted 2035 land use. More detailed information on traffic growth are provided on page 25, 47, 48, 108 and 114 of the 6th Street Corridor Study.*
>
> *The 2022 and 2037 traffic volumes are from the Northwest University traffic impact analysis report; these volumes include a 2% per year growth added on top of the existing traffic volumes plus pipeline traffic volumes from other approved development projects.*



<u>Tennis Center</u>

During the Public Hearing, both the HCC and Community members expressed concerns about bulk and height of the tennis center, the private use of the tennis center, and community access to the facility.

The applicant explored several options for reducing the bulk of the building, but they were unable to identify an option that would retain the building's functionality.

As a result, the applicant has decided they would be willing to convert the proposed Tennis Center to an academic building, if recommended and so conditioned by the HCC and/or Examiner.

If so conditioned, the applicant has indicated the following reduced impacts:

- Based on initial, conceptual renderings, the overall building footprint would decrease from 52,000 sq. ft. to approximately 35,600 sq. ft. if the Tennis Center were converted to an academic building.

- The academic building would be limited to 30′ above Finished Grade or Existing Grade (whichever is lower) as measured from the center point of the West Facade for a distance of at least 75′ East of the PSAA property line. East of this line, the standard and existing building height limits would be applied (specifically 30′ ABE within 100′ of the campus boundary and 40′ ABE for portions exceeding 100′ from the campus boundary). Attachment 1, Exhibit F provides an illustration of proposed height, bulk and scale of the academic building, as compared to the Tennis Center.
- The applicant would propose to retain the existing, 50′ buffer and rain garden (which was originally proposed to mitigate impacts associated with the increased height requested for the Tennis Center).

After reviewing the potential conversion from Tennis Center to academic building, staff supports conditioning the project accordingly, subject to compliance with existing height limits and retention of the 50′ buffer and rain garden. Specific design of the building would be reviewed and evaluated by staff through an administrative process, similar to the other buildings proposed in the Master Plan. The conversion would have lesser impacts in terms of building mass and would not increase the proposed enrollment.

The Houghton Community Council did have a question regarding any examples of commercial uses located within an institutional use. Staff was unable to find any examples of commercial uses located on public or private colleges or schools within the City. However, it should be noted that some Lake Washington School District schools within the City do host non-profit organizations likes churches and sporting events. LWSD policies state that for-profit or commercial groups are not permitted without the prior approval of the Board of Directors.

Attachments

1. Applicant's Response to HCC Comments and Questions
2. Memo from Thang Nguyen, Transportation Engineer

MEMORANDUM

TO:	Houghton Community Council City of Kirkland Hearing Examiner Tony Leavitt, City of Kirkland
FROM:	Northwest University
DATE:	August 1, 2019
RE:	Northwest University Master Plan, Response to HCC Comments/Questions

This memorandum and its attachments respond to the questions and comments raised by the Houghton Community Council ("HCC") and members of the public at the May 14, 2019 and continued June 11, 2019 public hearings on Northwest University's proposed Master Plan.

This memorandum is organized into four topical sections, based on the key areas of focus identified at the hearings: (1) public use of the fields; (2) noise impacts associated with public use of the fields; (3) transportation review and mitigation, to include potential parking impacts; and (4) the height, bulk, and scale of the proposed Tennis Center.

Some of the HCC's comments are more appropriately addressed by City staff, and we understand the City will be submitting a separate response memorandum.

Northwest University ("NU") appreciates the opportunity to provide this response, and we look forward to continued discussion at the hearing on August 15. At the close of the hearing, NU will respectfully request that the HCC and Hearing Examiner recommend approval of the Master Plan to the City Council.

Public Field Use

Current Master Plan Proposal and Draft Field Use Policy

NU is proposing to improve the existing athletic fields on its campus with new turf surfacing and reconfigure both fields. The reconfiguration will change the current configuration from football fields originally installed for the Seahawks training facility, reducing the total number of fields from three (one turf football field and two grass football fields) to two, to be used for soccer, softball (south field only) and other sports.

Lighting is proposed to be installed on the south field only. A new field house and potential bleacher seating is proposed to be located south of the fields between the fields and the lower

Barton parking lot. New fencing has been proposed to fully enclose the buffer along the north property line, quarterly inspection and maintenance of the buffer would be required, and a 30' net would be installed to control errant balls. *See City's Master Plan Advisory Report, Findings, Conclusions and Recommendations, Attachment 2, p. 69 ("Project Narrative, Phase 5: Athletic Field Improvements").*

During the extensive outreach campaign associated with the Master Plan proposal, NU became aware of the critical need for youth play fields in the Kirkland area. Given that need, NU decided to offer use of its fields to youth sports leagues and schools when not in use by NU. No profit is anticipated from this shared use, but rental fees would help defray field operating and replacement costs.

In collaboration with various stakeholders, including the City, neighbors, and potential users of the fields, NU crafted a draft "Field Use Policy" intended to govern shared use. This policy has been repeatedly revised to incorporate comments from stakeholders. *See Master Plan Advisory Report, Attachment 2, pp. 73 - 75 ("Shared Use of Athletic Fields")* and *Appendix F ("Outside Use of Facilities Policy Guidelines")* for more detail regarding the proposed Field Use Policy.

Key points from the current Master Plan proposal are as follows:

Northwest University Use of Athletic Fields

- The athletic fields can be used for any organized Northwest University (NU) sports team activity, including, games, tournaments, practices, intramural uses, and sport camps and recruiting efforts, including supervised practices of high school teams.
- The athletic fields can be used by guests who have engaged NU for conference services and other NU-affiliated uses that facilitate recruiting, academic and student engagement efforts.

Outside Community Use of Athletic Fields

- NU may rent or lease the athletic fields to youth sports leagues, or other K-12 schools. NU may utilize Kirkland Parks and Recreation for assistance in scheduling the fields.
- NU will have scheduling priority over community use of the fields.

Hours

- Team games, practices, tournaments, etc., will begin after 8:00am and must end prior to 9:30pm.
- Individual coaching and use of the fields for fitness training of athletes can occur before 8:00am, as long as conversations and noise are kept to a minimum.
- Outside community use will be limited to no more than 8 hours per day.

Lighting

- NU may light the southern field only. Lights will be for evening use only and will be programmed to turn off at 9:30pm. Lights will be LED lights and focused inward toward the field to minimize light and glare impacts on adjacent properties.

- Field lighting will only be in operation when fields are in use. The proposed use of LED lighting will allow immediate on/off capabilities. Field lighting controls will be in a central location, only for operation by the NU Facility Manager and NU staff.

Noise

- Use of air horns on the fields is not permitted. Outside organizations are not allowed to use megaphones on the fields.
- When only one field is in use at a given time, NU will schedule the event on the south field away from neighboring homes.
- If speakers are used, they must face the Barton Building rather than face north.

Questions were raised at the Master Plan hearings regarding noise and traffic impacts associated with shared use of the fields, which are addressed below and in the attached Noise Study, prepared by SSA Acoustics, and Transportation/Parking Memorandum, prepared by Transpo Group.

Several HCC members were highly focused on ensuring that community sports leagues are prioritized over for-profit, "entrepreneurial" sports leagues when programming field use. To address this concern, NU representatives met on June 27 with John Lloyd, Deputy Director of the City's Parks and Community Services Department. He provided copies of the City's Interlocal Agreement ("ILA") with the Lake Washington School District ("LWSD"), the City's Athletic Field Use Policies (*attached as Exhibit A*), and information related to use of the various fields the City schedules.

Mr. Lloyd confirmed that there is a shortage of fields in the Kirkland area, and that the City is highly supportive of NU's proposal to make its fields available. Further, Mr. Lloyd indicated the City and LWSD employ a priority system to ensure that local non-profit uses are prioritized above other uses when scheduling fields. Mr. Lloyd and NU discussed the possibility of entering into an ILA, whereby the City would schedule all public use of the fields pursuant to a priority system that emphasizes local, non-profit youth sports. Mr. Lloyd has submitted a letter memorializing the discussion and proposal, *attached as Exhibit B*.

Outlined below are the additional field use conditions proposed by NU at the previous Master Plan hearings related to public field use, as well as a new proposed condition related to NU's proposed partnership with the City's Parks Department.

Proposed Master Plan Conditions Related to Field Use

NU proposed the following additional conditions at the June 11, 2019 Master Plan Hearing:

Noise

- Non-NU users of the field are not permitted to use speakers

Enforcement/Complaints

- Northwest University will hire "Field Use Coordinators" whose responsibilities will include ensuring that the requirements of the Field Use agreement are enforced (including the morning and evening timing restrictions) and logging and responding to complaints of any kind. The University's Athletic department will be required to submit twice yearly reports to the City summarizing all complaints received and how the complaint was handled. Additional mitigation measures could be considered by the City if substantiated by the reports.

The conditions above were proposed to address noise concerns raised by northern neighbors and the HCC, and to ensure that any complaints will be promptly logged, responded to, and provided to the City.

Additionally, in order to ensure that shared use of the fields prioritizes community/non-profit groups, NU is proposing a scheduling priority system, similar to the one used by the City and LWSD, as follows:

- Tier 1 – NU and NU-Affiliated Groups (to include NU games, practices, intramural uses, sports camps and recruiting efforts; ancillary use by guests who have engaged NU for conference services; and ancillary use by affiliated groups, to include local, non-profit schools with academic or athletic relationships with NU
- Tier 2 – City-sponsored youth leagues
- Tier 3 – Local, non-profit youth organizations ("local" is defined as a group comprised of 65% or greater Kirkland residents)
- Tier 4 – School (local elementary, middle, and high) and other non-profit youth organizations
- Tier 5 – For-profit youth organizations

Adult league sports would not be permitted.

NU is willing to enter into an ILA with the City under which the City would schedule all Tier 2 through Tier 5 field use. If unanticipated, adverse impacts arise as a result of public use of the fields, the City would have authority to modify field scheduling to address those impacts. For instance, the City could schedule fewer games/practices, or it could schedule field use so that arrival and departure times are staggered.

We believe the additional restrictions, along with the proposed partnership with the City's Parks Department, will minimize impacts to adjacent property owners while allowing the community to benefit from shared use of the fields.

<u>Noise Impacts Associated with Shared Field Use</u>

HCC members raised questions about noise impacts associated with shared use of the fields and asked NU to provide a noise study that analyzes those impacts. The comprehensive Noise Study prepared by SSA Acoustics is attached, *Exhibit C*. The Noise Study outlines the relevant

City Code and Washington Administrative Code ("WAC") noise standards, measures current, ambient noise levels in the vicinity of the fields, and then evaluates noise impacts associated with public field use based on data collected at a recent soccer tournament at 60 Acres Field in Redmond.

The Noise Study concludes that public use of the fields for soccer practices/games and similar sports activities will comply with City of Kirkland and WAC noise standards. It also demonstrates, in the professional opinion of SSA Acoustics, that there will be no significant adverse noise impacts associated with the Master Plan proposal.

However, in recognition of the fact that noise remains a concern for the community and the HCC, NU has investigated installation of an acoustical barrier along the north property line that would further mitigate noise impacts to the northern neighbors. The acoustical barrier would be placed between the edge of the field and the vegetated buffer along the north property line, and it would reduce noise impacts by 10 – 12 dBA. *See attached Exhibit D*.

NU is willing to accept a condition requiring construction of the acoustical barrier along the northern property line.

Transportation Analysis

A number of questions related to transportation and parking analysis and impacts were raised at the public hearings. Many of those questions were previously addressed in a memorandum prepared by Transpo Group dated June 10, 2019. Additional questions raised at the June 11 hearing are addressed in the attached memorandum, *Exhibit E*.

Transpo's analysis demonstrates that the assumptions in the Transportation Impact Analysis ("TIA") were accurate and conservative (assumed worst-case conditions), that transportation impacts will be adequately mitigated, and that there will be ample parking to accommodate the uses proposed in the Master Plan.

With respect to cut-through traffic, the TIA evaluated potential future impacts based on license plate matching surveys, which showed that during the AM and PM peak hours, there were 11 cut-through vehicles (8 to the north and 1 to the south). The City required that rate to be *doubled* for purposes of determining future impacts and mitigation, which is reasonable (and conservative). Based on that data, the City's SEPA determination imposed mitigation designed to address anticipated cut-through impacts.

In addition to the mitigation required by the SEPA determination, NU is voluntarily proposing a cut-through condition that would authorize the City to require further mitigation if warranted:

> **Cut-Through Traffic Evaluation and Mitigation.** In recognition of the fact that it is difficult to predict future levels of cut-through traffic associated with development of the Master Plan projects, any building permit application proposing a building that

exceeds 5,000 sq. ft. or provisions of public use of sports fields 3-years after the approval of Master Plan will include an analysis of existing and projected cut-through traffic impact on non-arterial streets related to Northwest University. If cut-through traffic impacts are identified that are projected to worsen as a result of the proposed project, Northwest University shall be required to pay a mitigation fee to the City's Neighborhood Traffic Control Program that is proportionate to its impact, not to exceed $15,000 per Master Plan project over 5,000 sq. ft. or public use of the sports field for the life of the Master Plan.

Future cut-through impacts are speculative at this point, so there is no basis to impose additional mitigation at this time. This condition will ensure that the City has authority to require additional mitigation in the future if necessary.

Tennis Center

HCC members, and several members of the community who reside south of NE 53rd Street, have expressed concern about height and bulk impacts associated with the western façade of the proposed Tennis Center. The NU team has explored a number of options for reducing the bulk of the building, but it has not identified an option that would retain its functionality.

Therefore, after careful consideration and reevaluation of NU's future academic needs and opportunities, NU has decided it would be willing to convert the proposed Tennis Center to an academic building, if recommend by the HCC and/or Examiner.

Based on initial, conceptual renderings, the overall building footprint would decrease from 52,000 sq. ft. to approximately 35,600 sq. ft. if the Tennis Center were converted to an academic building. And significantly, the academic building would stay within current Master Plan height limits. Specifically, the academic building would be limited to 30' above Finished Grade or Existing Grade (whichever is lower) as measured from the center point of the West Facade for a distance of at least 75' East of the PSAA property line. East of this line, the standard and existing building height limits would be applied - specifically 30' ABE within 100' of the campus boundary and 40' ABE for portions exceeding 100' from the campus boundary. *Please see the attached Exhibit F*, for an illustration of proposed height, bulk and scale of the academic building, as compared to the Tennis Center. NU would propose to retain the existing, 50' buffer and rain garden (which was originally proposed to mitigate impacts associated with the increased height requested for the Tennis Center).

All the impacts associated with an academic building would be the same as, or less than, Tennis Center impacts evaluated through the SEPA process. Traffic generation is proposed to slightly decrease, but it would not affect the overall analysis or conclusions, nor would it affect the mitigation required in the SEPA determination.

If the HCC and/or Examiner are receptive to this proposal, a recommendation could be made to the City Council supporting conversion of the Tennis Center to an academic building, subject to

compliance with existing height limits, retention of the 50' buffer and rain garden, etc. Specific design of the building would be reviewed and evaluated by staff through an administrative process, similar to the other buildings proposed in the Master Plan.

Summary and Conclusion

This memorandum addressed questions raised at the public Master Plan hearings related to (1) public use of the fields; (2) noise impacts associated with public use of the fields; (3) transportation review and mitigation, to include potential parking impacts; and (4) the height, bulk, and scale of the proposed Tennis Center.

The record confirms that the proposed Master Plan complies with all applicable City regulations and protects public, health and safety. However, in order to respond to concerns raised at the Master Plan hearing, NU is willing to accept additional conditions on the Master Plan approval, summarized below:

- Noise. Speaker use will be prohibited for public users of the field.
- Noise. NU is willing to install a 10 – 12' acoustical barrier along the northern edge of the sports field to provide additional noise mitigation for northern neighbors.
- Enforcement/Complaints
    - Northwest University will hire "Field Use Coordinators" whose responsibilities will include ensuring that the requirements of the Field Use agreement are enforced (including the morning and evening timing restrictions) and logging and responding to complaints of any kind. The University's Athletic department will be required to submit twice yearly reports to the City summarizing all complaints received and how the complaint was handled. Additional mitigation measures could be considered by the City if substantiated by the reports.
- Field Use Priorities. Field use would be prioritized as follows:
    - Tier 1 – NU and NU-Affiliated Groups (to include NU games, practices, intramural uses, sports camps and recruiting efforts; ancillary use by guests who have engaged NU for conference services; and ancillary use by affiliated groups, to include local, non-profit schools with academic or athletic relationships with NU
    - Tier 2 – City-sponsored youth leagues
    - Tier 3 – Local, non-profit youth organizations ("local" is defined as a group comprised of 65% or greater Kirkland residents)
    - Tier 4 – School (local elementary, middle, and high) and other non-profit youth organizations
    - Tier 5 – For-profit youth organizations
    - (Adult league sports would not be permitted)
- Field Use Scheduling. NU would enter into an Agreement with the City Parks Department, whereby the City would schedule all public field use, subject to the

priority list above. The City would have discretion to limit or adjust public field use as necessary to address adverse impacts.

- Cut-Through Traffic. NU would accept an additional cut-through condition, requiring future mitigation impacts in the event the Master Plan results in additional cut-through traffic.
    - Cut-Through Traffic Evaluation and Mitigation**.** In recognition of the fact that it is difficult to predict future levels of cut-through traffic associated with development of the Master Plan projects, any building permit application proposing a building that exceeds 5,000 sq. ft. or provisions of public use of sports fields 3-years after the approval of Master Plan will include an analysis of existing and projected cut-through traffic impact on non-arterial streets related to Northwest University. If cut-through traffic impacts are identified that are projected to worsen as a result of the proposed project, Northwest University shall be required to pay a mitigation fee to the City's Neighborhood Traffic Control Program that is proportionate to its impact, not to exceed $15,000 per Master Plan project over 5,000 sq. ft. or public use of the sports field for the life of the Master Plan.
- Conversion of Tennis Center to academic building. NU would be willing to convert the Tennis Center to an academic building, consistent with the following conditions:
    - Height. The academic building would be limited to 30' above Finished Grade or Existing Grade (whichever is lower) as measured from the center point of the West Facade for a distance of at least 75' East of the PSAA property line. East of this line, the standard and existing building height limits would be applied - specifically 30' ABE within 100' of the campus boundary and 40' ABE for portions exceeding 100' from the campus boundary.
    - Buffer. The existing, 50' buffer and rain garden would be retained.

We appreciate your attention to this memorandum and look forward to addressing these issues further with you on August 15.

Exhibit A, City of Kirkland Athletic Field Use Policies

CITY OF KIRKLAND
ATHLETIC FIELD USE POLICIES

City of Kirkland
Parks and Community Services Department
123 5th Avenue, Kirkland, WA 98033
www.kirklandwa.gov
Phone: 425.587.3342
Last Updated: November 2018

PURPOSE

The purpose of the Athletic Field Use Policies is to manage City of Kirkland athletic fields and Kirkland area Lake Washington School District fields in a manner to assure equitable distribution and maximum use of the City and District facilities by the public. This will be accomplished by means of the following:

- Outline available fields
- Outline amenities at each
- Outline available seasons
- Outline facility scheduling procedures and policies
- Define fees and charges for use of facilities
- Define rules and regulations regarding use
- Manage the limited number of athletic fields in a fair and equitable manner

DEFINITIONS

- **City** – The City of Kirkland
- **Parks Department** – The City of Kirkland Parks and Community Services Department
- **LWSD/District** – Lake Washington School District
- **Recreational Youth Programs** – Programs that offer youth under the age of 18 equal opportunity to actively participate on a team (no cuts) or in a program. The primary purpose of the program is developmental and participatory.
- **Independent/Select Youth Programs** – Programs that offer a limited number of participants, youth under the age of 18, the opportunity for play. Generally, select teams use try-outs, skill levels, and special invitation to form teams.
- **Local/Kirkland Resident** – An individual who lives within and/or works full time within the City boundaries.
- **Lake Washington School District Resident –** An individual who resides within the district boundaries of the Lake Washington School District.
- **Kirkland Based Team** – A team that carries a minimum of 65% Kirkland residents on the team (rosters required and will be verified). Participants are Kirkland residents and/or attend schools within the Kirkland city limits.
- **Lake Washington School District Based Team** - A team that carries a minimum of 65% LWSD residents on the team (rosters required and will be verified). Participants are LWSD residents and/or attend LWSD schools.
- **Non-Local** – Individuals or teams who don't meet the 65% Kirkland or District area threshold of residing or attending schools within the Kirkland city limits or LWSD district limits.

POLICIES, RULES AND ORDINANCES

Field users are required to obey City of Kirkland Park use rules and regulations as outlined within this policy, within the Park Rules section of the Kirkland Municipal Code (KMC, Chapter 11.80), within Kirkland Facility Use polices and Lake Washington School District policies as well (for LWSD sites). City, state, county and federal laws apply.

WHEN A FIELD USE/FACILITY USE PERMIT IS REQUIRED

A Field Use/Facility Use Permit is required if one or more of the following circumstances applies:

a) When use of an athletic field is by a league or organization, company or school, is an organized social use (birthday parties, picnics, etc.), or is a community event or Special Event use
b) When a specific reserved time is desired
c) When services by the City are desired or required
d) When a gathering is large enough – either in attendance or in size (a group of approximately 20 to 25 people most often triggers the need for a Permit and/or one person or more want to consume a field for a unique activity or purpose)
e) When hired services are an element of the use
f) When the gathering includes any high risk activities
g) When the gathering is for a business purpose, involves sales, advertising, or admissions
h) When the use requires permission to exceed park hours, noise levels, etc.
i) When a gathering is beyond the scope of normal/intended use of a facility

These are examples only. Other elements may cause the need for a Facility Use Permit. Individuals are encouraged to inquire with the City of Kirkland Parks Department to ensure whether a gathering would require a permit for use (425.587.3342 or nosborn@kirklandwa.gov).

INTERLOCAL AGREEMENT BETWEEN LAKE WASHINGTON SCHOOL DISTRICT AND THE CITY OF KIRKLAND

The City of Kirkland and Lake Washington School District have an Interlocal Agreement pertaining to City facilities and District facilities within the city limits of Kirkland. The District and City have a mutual interest in supporting programs for the community in the area of athletics, recreation and education. Through this cooperative arrangement, City and District's athletic fields and facilities can be used to meet broader community needs for education, recreation and athletic activities than either party can provide separately. A copy of the Interlocal Agreement is available upon request.

Generally speaking, this Agreement includes two athletic field related areas:

- Field Coordination and Facility Use
- Field Design, Construction, Improvements and Maintenance

FIELD COORDINATION AND FACILITY USE

As a result of the Kirkland/LWSD Interlocal Agreement, the City is able to offer for community use not only the City's fields, but LWSD fields (within Kirkland) as well. The Interlocal Agreement provides the District with access to City fields and provides the City with an opportunity for access to District gymnasiums for City programs. A goal of the Interlocal Agreement is for field use throughout Kirkland to be allocated efficiently, with the least possible expenditure of public funds, via one central administrator coordinating all community use of District and City fields within Kirkland. District operations and programs do take priority at District sites, so community use hours and dates available are limited. School site details are provided within the Available Athletic Field Locations table below and within the City/School Interlocal agreement, which is available upon request.

One exception to the agreement is the high school stadiums. High school stadiums are coordinated by the District at each high school.

FIELD DESIGN, CONSTRUCTION, IMPROVEMENTS AND MAINTENANCE

Through the Interlocal Agreement, the City and District also join forces on the development and maintenance of certain District facilities. Examples of past joint projects are Kirkland Middle School Fields 1 and 2, Lakeview Elementary, Mark Twain Elementary, Ben Franklin Elementary, etc. At schools where the City and District combine efforts in development and construction, the City often provides field maintenance. (Maintenance is limited to the field area only, not to general landscaping.) The District locations the City currently maintains are identified in the table below.

ATHLETIC FIELD LOCATIONS

The following City and LWSD fields are offered for permitted use through City of Kirkland Parks and Community Services:

City of Kirkland Parks With Fields	Address	Original/Primary Purpose of Field(s)
132nd Square Park	13159 132nd Ave NE	Little League Baseball/Softball and Soccer
Crestwoods Park	1818 6th ST	Adult Softball, Little League Baseball and Soccer
Everest Park	500 8th ST South	Little League Baseball and Softball Games/Tournaments
Juanita Beach Park	9703 NE Juanita Dr	Little League Baseball/Softball
Lee Johnson Field at Peter Kirk Park	202 3rd ST	80' and 90' Baseball Games & Tournaments
LWSD Schools With Fields With Maintenance Provided by the City	**Address**	**Original/Primary Purpose of Field(s)**
Emerson High	10903 NE 53rd ST	Open Space
Kirkland Middle Fields 1 & 2	430 18th Ave NE	80' and 90' Baseball and Softball
Finn Hill Middle School Fields 1 & 2	8040 NE 132nd ST	80' Baseball and Softball
Ben Franklin El Both Fields	12434 NE 60th ST	Little League Baseball/Softball and Soccer
Juanita El Rear Field	9635 NE 132nd ST	Little League Baseball/Softball and Soccer
Lakeview El	10400 NE 68th ST	Little League Baseball/Softball and Soccer
Mark Twain El	9525 130th Ave NE	Little League Baseball/Softball and Soccer
Rose Hill El Field One	8110 128th Ave NE	Little League Baseball/Softball and Soccer

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LWSD Schools With Fields With Maintenance Provided by the District	Address	Original/Primary Purpose of Field(s)
Juanita High	10601 NE 132nd ST	Baseball, Softball and Soccer (field 3)
Lake WA High	12033 NE 80th ST	Baseball and Softball
Finn Hill Middle	8040 NE 132nd ST	Baseball, Softball, Football, Soccer, Track
International/Community School	11133 NE 65th ST	Open Space
Kamiakin Middle	14111 132nd Ave NE	Baseball, Softball, Football, Soccer, Track
Kirkland Middle Football Field and Track	430 18th Ave NE	Football, Soccer and Track
AG Bell El	11212 NE 112th ST	Little League Baseball/Softball and Soccer
Carl Sandburg El	12801 84th Ave NE	Little League Baseball/Softball and Soccer
Helen Keller El	13820 108th Ave NE	Little League Baseball/Softball and Soccer
John Muir El	14012 132nd Ave NE	Little League Baseball/Softball and Soccer
Juanita El Front Field	9635 NE 132nd ST	Little League Baseball/Softball and Soccer
Peter Kirk El	1312 6th ST	Little League Baseball/Softball and Soccer
Robert Frost El	11801 NE 140th ST	Little League Baseball/Softball and Soccer
Rose Hill El Field 2	8110 128th Ave NE	Little League Baseball/Softball and Soccer
Thoreau El	8224 NE 138th ST	Little League Baseball/Softball and Soccer

NEIGHBORHOOD PARKS

The following neighborhood parks may also be available, although the primary purpose of neighborhood parks is for immediate neighborhood use. Non-neighborhood practice use may be considered, though parking and restrooms don't exist on-site, so the type of use considered is limited.

City Of Kirkland Neighborhood Parks	Address	Original/Primary Purpose
Highlands Park	11210 NE 102nd Street	Neighborhood Park
Spinney Homestead Park	11710 NE 100th Street	Neighborhood Park
Terrace Park	10333 NE 67th Street	Neighborhood Park

MAPS

A map of Kirkland parks is available on the City of Kirkland website at https://www.kirklandwa.gov/depart/parks/Parks_and_Open_Spaces/Online_Parks_Guide.htm .

A map of Lake Washington School District schools is available on the Lake Washington School District website at: https://www.lwsd.org/uploaded/Website/Schools/Attendance_Areas/Printable-District-Map.pdf.

Aerial maps of each location, with fields, is available on the City of Kirkland website at: https://www.kirklandwa.gov/depart/parks/Permits_and_Reservations/Facility_Rentals/132nd_Square_Park_Ball_Fields.htm.

AVAILABILITY

The City of Kirkland reserves the right to limit the amount of play permitted on sport field complexes. Fields with dirt infields and grass fields are available for athletic use approximately March 1 through September 30th, October 15th or October 31st (dates vary by location). Dirt fields are open for athletic use approximately March 1 through October 31st. Weather, current field conditions and project needs can cause opening and closing dates to fluctuate. Opening dates and closing dates can also vary due to the impacts of use of any certain type of activity/athletics.

City of Kirkland Parks and Community Services (and Lake Washington School District) reserve the right to suspend field availability at any time during periods of inclement weather, poor playing conditions, damage (which may cause hazardous safety considerations), excessive wear, and for necessary field maintenance or improvement projects. Closures can impact a single use, a full day or can last as long as needed.

On dates the fields are open and offered for use, City of Kirkland fields are available 8am to dusk seven days a week, with the exception of Lee Johnson Field at Peter Kirk Park, which is available until 11pm. District fields are generally

available, per the Interlocal Agreement, during the hours listed below. School District programs and events take priority and can cause the hours available to fluctuate.

District site use can be bumped at any time, without advance notice, for District events, maintenance, projects or District athletic program needs.

Middle Schools & High Schools	Mon., Tues., Thurs., Fri.	Wednesday	Saturday	Sunday
September Through June	6pm to Dusk	6pm to Dusk	8am to Dusk	9am to Dusk
July, August and Breaks	8am to Dusk	8am to Dusk	8am to Dusk	9am to Dusk
Elementary Schools	**Mon., Tues., Thurs., Fri.**	**Wednesday**	**Saturday**	**Sunday**
September Through June	4:15pm to Dusk	3pm to Dusk	8am to Dusk	9am to Dusk
July, August and Breaks	8am to Dusk	8am to Dusk	8am to Dusk	9am to Dusk

FIELD PURPOSE & AMENITIES

Each field has a primary/intended purpose. Other uses may be possible depending on safety, expense, staff resources and community impacts. Below is a list of the intended primary and secondary use for each field, the amenities readily available on-site, and the approximate season each field or program is commonly permitted. The neighborhood parks listed (Spinney Homestead, Highlands and Terrace Park) are primarily intended for immediate neighborhood use. Non-neighborhood use may be considered, though parking is slim or does not exist on-site, so the type of uses considered are limited.

City Of Kirkland Parks with Fields *(**NOTE**: All City fields close annually approximately September 30th or October 15th for maintenance.)*				
	Common Seasonal Uses/Limitations	**Existing Amenities** *(Lights at Lee Johnson)*	**Approx. Seasons**	**Field Type/Area**
132nd Square Park – *13159 132nd Ave NE, Kirkland*				
Field 1	Up to U10 Baseball & Select Softball	60' Base Path 40 & 46' Rubber	March 1 – July 31	Dirt Infield/Grass Outfield
	Micro Soccer Practice in outfield		August 1 – Oct 15	Grass Outfield
Field 2	Up to U10 Baseball & Select Softball	60' Base Path 40' & 46' Rubber	March 1 – July 31	Dirt Infield/Grass Outfield
	Micro Soccer Practice in outfield		August 1 – Oct 15	Grass Outfield
Field 3	Soccer through Adult	Portable Goals	March 1 – Oct 15	Grass
Crestwoods Park – *1818 6th Street, Kirkland*				
Field 1	Softball through Adult	65 & 60' Base Path 50' & 43' Rubber	March 1 – July 31	Dirt Infield/Grass Outfield No Fence
	Youth Soccer In Outfield		August 1 – Oct 15	Grass Outfield
Field 2	Softball through Adult	65 & 60' Base Path 50' & 43' Rubber	March 1 – July 31	Dirt Infield/Grass Outfield No Fence
	Youth Soccer In Outfield		August 1 – Oct 15	Grass Outfield
Field 3	Multi-Use Soccer/Lacrosse through Adult	Portable Goals	March 1 – Oct 15	Grass
Field 4	Up to U10 Baseball & Select Softball	60' Base Path 46' Rubber	March 1 – July 31	Dirt Infield/Grass Outfield 200' Fence
	Youth Soccer In Outfield		August 1 – Oct 15	Grass Outfield
Everest Park – *500 8th Street South, Kirkland*				
Field A	Up to U12 Baseball & Collegiate Softball Games & Tournaments	60' Base Path, 43' Rubber, 46' Temp	Mar 1 – Sept 30/Oct 15	Dirt Infield/Grass Outfield 200' Fence
Field B	Up to U12 Baseball & Collegiate Softball Games & Tournaments	60' Base Path 46' Rubber	Mar 1 – Sept 30/Oct 15	Dirt Infield/Grass Outfield 200' Fence
Field C	Up to Collegiate Softball Games & Tournaments	60' Base Path 40' & 43' Rubber	Mar 1 – Sept 30/Oct 15	Dirt Infield/Grass Outfield 200' Fence
Field D	Up to U12 Baseball & Collegiate Softball Games & Tournaments	60' Base Path 43' Rubber, 46' Temp	Mar 1 – Sept 30/Oct 15	Dirt Infield/Grass Outfield 200' Fence

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City of Kirkland Parks With Fields *(continued)* *(**NOTE**: All City fields close annually approximately September 30th or October 15th for maintenance.)*				
	Common Seasonal Uses/Limitations	**Existing Amenities** *(Lights at Lee Johnson)*	**Approximate Seasons**	**Field Type/Area**
Highlands Park – A Neighborhood Park - *11210 NE 102nd Street, Kirkland*				
One Field	Practice use up to U10 Baseball & Youth Softball	Backstop	March 1 – July 31	Dirt Infield/Grass Outfield
	Practice youth soccer in Outfield		August 1 – Oct 15	Grass Outfield
Juanita Beach Park – *9703 NE Juanita Drive, Kirkland*				
Field 1	Up to U10 Baseball & Youth Softball	60' Base Path 46' Rubber	March 1 – July 31	Dirt Infield/Grass Outfield Fence
	Pee Wee/Micro Soccer in outfield		August 1 – Oct 15	Grass Outfield
Field 2	Up to U10 Baseball & Youth Softball	60' Base Path 46' Rubber	March 1 – July 31	Dirt Infield/Grass Outfield Fence
	Pee Wee/Micro Soccer in outfield		August 1 – Oct 15	Grass Outfield
Open Space	Practice, Multi-Use Youth Sports		March 1 – Oct 15	Grass
Lee Johnson Field at Peter Kirk Park – *202 3rd Street, Kirkland*				
One Field	U13+ Baseball Games & Tournaments	80' & 90' Bases 54' & 60'6" Rubber Lights	Mar 15 – July 31	Dirt Infield/Grass Outfield Fence
	Adult Softball	65' Bases, 50' Rubber	Aug 1-Sept 30/Oct 15	
Spinney Homestead Park – A Neighborhood Park – *11710 NE 100th Street, Kirkland*				
One Field	Practice use up to U10 Baseball & Youth Softball		March 1 – July 31	Dirt Infield/Grass Outfield
	Practice youth soccer in Outfield		August 1 – Oct 15	Grass Outfield
Terrace Park – A Neighborhood Park – *10333 NE 67th Street, Kirkland*				
One Field	Practice, Multi-Use Youth Sports		March 1 – Oct 15	Grass

Lake Washington School District Kirkland Area Schools with Fields All coordinated by the City. Fields with "*" are also maintained by City. All others are maintained by District. All fields close to use approximately October 15th or October 31st annually.				
	Common Seasonal Uses/Limitations	**Existing Amenities** *(Lights at Lee Johnson)*	**Approximate Seasons**	**Field Type/Area**
High Schools				
International/Community School – *11133 NE 65th Street, Kirkland*				
One Field	T-Ball/Soccer Practice	Open Space	March 1 – Oct 15	Open Grass Field
Emerson* - *10903 NE 53rd Street, Kirkland*				
One Field*	T-Ball/Soccer Practice	Backstop	March 1 – Oct 15	Grass Field
Juanita – *10601 NE 132nd Street, Kirkland*				
Field 1	High School Level Softball	60' Bases 43' Rubber	March 1 – Oct 15	Dirt Infield, Grass Outfield 200' Fence
Field 2	High School Level Baseball	80' & 90' Bases 54' & 60'6" Rubber	March 1 – Oct 15	Dirt Infield, Grass Outfield Fence
Stadium not available through Joint Use Agreement. Contact High School directly.				
Lake Washington – *12033 NE 80th Street, Kirkland*				
Field 1	High School Level Baseball	80' & 90' Bases 54' & 60'6" Rubber	March 1 – Oct 15	Synthetic Infield, Grass Outfield Fence
Field 2	High School Level Softball	60' Bases, 43' Rubber	March 1 – Oct 15	Synthetic Infield, Grass Outfield Fence
Stadium not available through Joint Use Agreement. Contact High School directly.				

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Lake Washington School District Kirkland Area Schools with Fields *(continued)* All coordinated by the City. Fields with "*" are also maintained by City. All others maintained by District. All fields close to use approximately October 15th or October 31st annually				
	Common Seasonal Uses/Limitations	**Existing Amenities** *(Lights at Lee Johnson)*	**Approximate Seasons**	**Field Type/Area**
Middle Schools				
Finn Hill – *8040 NE 132nd Street, Kirkland*				
Field 1	Baseball	Backstop	March 1 – Oct 15	Dirt Infield, Grass Outfield
Field 2	Baseball/Softball	Backstop	March 1 – Oct 15	
Football Fld	Football/Soccer		March 1 – Oct 15	Grass
Track	Track		March 1 – Oct 15	Cinder
Kamiakin – *14111 132nd Ave NE, Kirkland*				
Field 1	Baseball	80' & 90' Bases 54' & 60'6" Rubber	March 1 – Oct 15	Dirt Infield, Grass Outfield
Field 2	Baseball/Softball	60' Bases, 43' Rubber	March 1 – Oct 15	Dirt Infield, Grass Outfield
Open Space	Open Space		March 1 – Oct 15	Grass
Football Fld	Football/Soccer		March 1 – Oct 15	Grass
Track	Track		March 1 – Oct 15	Cinder
Kirkland* - *430 18th Ave NE, Kirkland*				
Field 1*	Baseball	60', 80' & 90' Bases 54' & 60'6" Rubber	March 1 – Oct 15	Dirt Infield, Grass Outfield
Field 2*	Baseball/Softball	60' Bases 43' & 46' Rubber	March 1 – Oct 15	Dirt Infield, Grass Outfield
Football Fld	Football/Soccer		March 1 – Oct 15	Grass
Track	Track		March 1 – Oct 15	Cinder
Elementary Schools				
AG Bell – *11212 NE 112th Street, Kirkland*				
Field 1	Tball/Soccer Practice		March 1 – Oct 31	Dirt Field
Field 2	Tball/Pee Wee Soccer	Goals and Backstop	March 1 – Oct 15	Grass Field
Ben Franklin* - *12434 NE 60th Street, Kirkland*				
Field 1*	Up to U10 Little League/Soccer Practice	Backstop	March 1 – Oct 15	Grass Field
Field 2*	Up to U10 Little League/Soccer Practice		March 1 – Oct 15	Grass Field
Carl Sandburg – *12801 84th Ave NE, Kirkland*				
Field 1	Up to U10 Little League/Soccer Practice	Goals and Backstop	March 1 – Oct 31	Dirt Field
Field 2	T-Ball/Pee-Wee Soccer		March 1 – Oct 15	Grass Open Space
Helen Keller – *13820 108th Ave NE, Kirkland*				
Field 1	Up to U10 Little League/Soccer Practice	Backstop	March 1 – Oct 31	Dirt Field
Field 2	Soccer Practice	Goals	March 1 – Oct 31	Dirt Field
John Muir – *14012 132nd Ave NE, Kirkland*				
One Field	Up to U8 Little League/Soccer Practice	Backstop	March 1 – Oct 31	Dirt Field
Juanita* - *9635 NE 132nd Street, Kirkland*				
Field 1 (Rear)*	T-Ball/Pee-Wee Soccer	Backstop	March 1 – Oct 15	Grass Field
Field 2 (Front)	T-Ball/Pee-Wee Soccer	Backstop	March 1 – Oct 15	Grass Field
Lakeview* - *10400 NE 68th Street, Kirkland*				
One Field	Up to U10 Little League/Soccer Practice	Goals and Backstop	Year Round	Synthetic Field

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Lake Washington School District Kirkland Area Schools with Fields *(continued)* All coordinated by the City. Fields with "*" are also maintained by City. All others maintained by District. All fields close to use approximately October 15th or October 31st annually				
	Common Seasonal Uses/Limitations	**Existing Amenities** *(Lights at Lee Johnson)*	**Approximate Seasons**	**Field Type/Area**
Mark Twain* - *9525 130th Ave NE, Kirkland*				
Field 1*	T-Ball/Micro Soccer	Backstop	March 1 – Oct 15	Grass Field
Peter Kirk – *1312 6th Street, Kirkland*				
Field 1	Up to U10 Little League/Soccer	Backstop	March 1 – Oct 31	Dirt Field
Field 2	Soccer	Goals	March 1 – Oct 31	Dirt Field
Rose Hill* - *8110 128th Ave NE, Kirkland*				
Field 1	T-Ball/Soccer Practice	Backstop	March 1 – Oct 15	Grass
Field 2*	T-Ball/Soccer Practice	Open Space	March 1 – Oct 15	Grass
Robert Frost – *11801 NE 140th Street, Kirkland*				
One Field	T-Ball/Micro Soccer	Goals and Backstop	March 1 – Oct 15	Grass
Thoreau – *8224 NE 138th Street, Kirkland*				
Field 1	Up to U10 Little League/Soccer Practice	Backstop	March 1 – Oct 31	Dirt
Field 2	Soccer Practice	Goals	March 1 – Oct 31	Dirt

How to Check Field/Specific Date Availability

Field availability can be checked by email or phone at eparks@kirklandwa.gov or (425) 587.3330. For existing users, to enhance efficiency and to verify a team's status within an organization/league, league communication is funneled through one primary contact per organization. Coaches within existing leagues should contact their designated primary league contact to inquire about availability of additional field locations, dates, times, etc. The primary contact may seek availability, changes or additional time on behalf of teams.

Availability is not guaranteed. An available date or field can be taken at any time by the first person to apply.

Allocations & Priorities of Use

Fields are allocated based on seasonal priorities (i.e. baseball/softball in the spring and summer, soccer and football in the fall) and the following tier level of applicant/use consideration:

1. First Tier
    - City of Kirkland and LWSD programs and events
2. Second Tier
    - City-Sponsored/local youth recreation leagues
    - City-Sponsored adult leagues
    - Local youth select leagues
    - Local adult leagues
3. Third Tier
    - Youth recreation leagues from outside the local area
    - Select youth leagues from outside the local area
    - Adults from outside the local area
4. Fourth Tier
    - Independent, local uses (i.e. company uses, resident sponsored uses, neighborhood activities, picnics, social functions)
    - Independent, non-local uses (i.e. non-local company, non-local social functions)

City use and Lake Washington School District use take precedence for all park and school locations. Athletic user groups, clubs, and organizations residing within Kirkland for Kirkland fields, within the District for District fields (groups with 65%

or greater local residents), follow in priority. If field space availability is limited enough that not all permissible types of programs and uses can be accommodated, users with past historical use may take precedence over new user groups.

Scheduled league games and tournaments shall have priority consideration for use of a facility over practice use. Application requirements are equivalent for practices, games and tournaments.

Requests which are for uses other than the designated primary uses of a field will be considered based upon field availability, safety and potential impacts. The City of Kirkland has the authority to approve or deny requests. Special Event Use, social use or informal use of a field may be considered. Special Event application process and the Facility Use application process and guidelines apply. Please visit the City of Kirkland website for Special Event guidelines (http://www.kirklandwa.gov/depart/parks/Permits_and_Reservations/SpecialEvents.htm), application forms and instructions.

"Local" is defined as a group comprised of 65% or greater from within the City limits of Kirkland for users requesting use of a City field, or within the boundaries of LWSD, for users requesting use of a District field.

TITLE VI/NON-DISCRIMINATION

It is the City of Kirkland's policy to ensure full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination. No person shall be denied or subjected to discrimination in receipt of the benefit of any services or activities made possible or resulting from this policy on the grounds of sex, race, color, creed, national origin, age (except minimum applicant age) and retirement provisions, marital status, or the presence of any sensory, mental or physical handicap. For additional Title VI information, visit the City's website: http://www.kirklandwa.gov/Help/title6.htm. Any person who believes his/her Title VI protection has been violated, may file a complaint with the City of Kirkland. For questions regarding Kirkland's Title VI Program, or to file a complaint with the City of Kirkland, please contact the Title VI Coordinator at 425-587-3011 or TitleVICoordinator@kirklandwa.gov.

APPLICATION SEASONS, DEADLINES AND REQUIREMENTS

APPLICATION SEASONS

Formal athletic field allocations are split into two seasons. The first season is approximately March 1st through July 31st*. The second season is August 1st through September 30th, October 15th or October 31st*. End dates vary depending on the type of field, its durability, safety, the type of program/use and the weather.

* There are two exceptions to allocation periods: summer camp use; and Lakeview Elementary use.

- Summer camp daytime use applications may be submitted with the First Season allocation period.
- Lakeview Elementary is open year round, with First Season allocations January 1st through July 31st and Second Season allocations August 1st through December 31st.

APPLICATION DEADLINES

To be considered within the formal field allocation process, applications for the First Season are due by December 1st, and applications for the Second Season are due by May 1st. If a league/organization misses the formal allocation process, an application can be submitted and will be considered after allocations are complete.

Applications for field use can also be submitted outside of the allocation process. Those not received during the allocation period will be considered after the allocation process is complete, first come, first served. Field Use applications (i.e. league or other high risk use applications) must be submitted a minimum of 30 calendar days prior to the requested date of use. Applications for informal, social use of a field must be submitted a minimum of 8 calendar days in advance. Applications submitted beyond the minimum required are encouraged.

APPLICATION REQUIREMENTS

To submit an application, a league must be in good standing status and applicants must meet the requirements as outlined within.

The league is responsible for requesting fields/sites appropriate for the type(s) of program(s), in size, and for the age group and skill level of participants. Programs which are inappropriate uses, exceed field limitations or dimensions, or are a safety and property concern will be denied. Improper representation or use by a league is not permissible and may result in complete cancellation of a league's use for a season or more.

The application materials below are required for league/athletic organizations. Materials are available on the City's website at www.kirklandwa.gov.

1. Athletic Field Use Application Checklist
2. Athletic Field Use Application
3. League Roster
4. Certificate of Insurance and Additional Insured Endorsement (insurance requirements are detailed below) (a requirement which applies to high risk programs or uses)
5. Signed Gender Equity Compliance Statement *(a requirement of all leagues) and* Signed Zackery Lystedt/Concession/Head Injury and Sudden Cardiac Arrest Compliance Statement *(a requirement of youth, non-profit leagues)*
6. Rental Fee

1. ***Athletic Field Use Application Checklist*** – An application checklist is available by clicking here: https://www.kirklandwa.gov/Assets/Parks/Parks+PDFs/Athletic+Field+Use+Application+Checklist.pdf.

2. ***Athletic Field Use Application*** - An Athletic Field Formal Use Application is available by clicking here: https://www.kirklandwa.gov/depart/parks/Permits_and_Reservations/Facility_Rentals/132nd_Square_Park_Ball_Fields.htm. One application for each program or tournament, per age group is required. All time needed on-site must be requested within the application, including equipment set-up, team warm-ups, practice/game time and breakdown.

3. ***League Roster*** - A league roster must be via an Excel spreadsheet and include the full league's names of players, players' home addresses, and the schools the players attend. Rosters are verified.

4. ***Insurance Requirements*** - Organizations/ leagues and high risk users are required to be secure and maintain, at no expense to the City of Kirkland, a comprehensive general liability insurance policy issued by one or more companies authorized to do business in the State of Washington. Insurance requirements are as follows:
   - Insurance Provider with no less than an A.M. Best rating of A-VII
   - General Liability Insurance
   - $2,000,000 General Aggregate
   - $1,000,000 Per Person, Per Incident
   - City of Kirkland named as Additional Insured
   - The type of event and all activities applied for must be uses covered by the policy.
   - If requesting a Lake Washington School District site, the Lake Washington School District, its Board, Officers and Volunteers must also listed as Additional Insured (in addition to the City)

   Two documents are required, a Certificate of Insurance and an Additional Insured Endorsement. Example documents are available by clicking here:
   - https://www.kirklandwa.gov/Assets/Parks/Parks+PDFs/Parks_Features/Insurance+Requirements+for+City+of+Kirkland+Athletic+Field+Use.pdf
   - https://www.kirklandwa.gov/Assets/Parks/Parks+PDFs/Parks_Features/Insurance+Requirements+for+Lake+Washington+School+District+Athletic+Field+Use.pdf

   Insurance verification is conducted at the time of application review. The organization, league coordinator or president shall, at the time of application submittal, file with the City the Certificate of Insurance and Additional Insured Endorsement documents detailing coverage current from the start date of field use through the end date. Use is not be permissible without proper, current insurance on-file. It is up to the league to maintain current proof

of insurance on file with the City, prior to expiration. Use is required to be immediately cancelled if renewed documentation is not provided to the City.

5. ***Gender Equity, Cardiac Arrest, Zackery Lystedt Law Compliance Statements*** - In 2009, Washington State House Bill 1824, the Zackery Lystedt Law (head injury and concussion law), the Sudden Cardiac Arrest Law, and House of Representative Bill ESSB 5967, the Gender Equity Bill, were passed. The City of Kirkland Parks Department has a vested interest in ensuring not only that City programs operate with these laws in practice, but also that athletic organizations receiving field use permits from the City are operating with the same laws in practice as well. Annually, all league users, must agree via Compliance Statement(s) these laws are fully enforced and in practice within their organization. The Zackery Lystedt Law Head Injury and Sudden Cardiac Arrest and Gender Equity Act information sheets and Compliance Statements are available by clicking here: https://www.kirklandwa.gov/Assets/Parks/Parks+PDFs/Parks_Features/Gender+Equity+Agreement.pdf and here: https://www.kirklandwa.gov/Assets/Parks/Parks+PDFs/Parks_Features/Lystedt+Law+Agreement.pdf and by request.

   Zackery Lystedt Law – Concussion / Head Injury and Sudden Cardiac Arrest Policy
   The Zackery Lystedt and Sudden Cardiac Arrest Law requires all non-profit, **youth** programs that use publically owned playfields be in compliance with policies for the management of sudden cardiac arrest, concussions and head injuries in youth sports. Each private, non-profit **youth** sports group requesting fields will need to comply and verify via a Compliance Statement with the following requirements:
   - All coaches, athletes and their parents/guardians must comply with mandated policies for the management of sudden cardiac arrest and concussions and head injuries as prescribed by House Bill 1824
   - All coaches (paid or volunteer) are required to be educated in the nature and risk of sudden cardiac arrest and concussion or head injury prior to the first practice/competition
   - Athletes and their parents/guardians within organizations are required to annually be informed about the nature and risk of sudden cardiac arrest and concussions and head injuries
   - Leagues, parents/guardians are responsible to immediately remove any athlete showing signs or symptoms of sudden cardiac arrest or concussions/brain injury and are not allowed to permit the athlete to return to play until written clearance has been received by the league from a license health care provider trained in the evaluation and management of such injuries

   Gender Equity Act, House of Representatives ESSB 5967
   The Washington Constitution and statutory law prohibits discrimination based on sex. In 1972, Washington voters approved the Equal Rights Amendment to the Washington Constitution. The Equal Rights Amendment provides that "equality of rights and responsibilities under the law shall not be abridge on account of sex."
   - Cities, towns, counties and districts are prohibited from discriminating against any person on the basis of sex in the operation, conduct, or administration of community athletics programs **for youth or adults**.
   - District means a metropolitan park district, park and recreation service area, or park and recreation district.
   - A third party, receiving a lease or permit for a community athletics program on a City of Kirkland site or Lake Washington School District site, also may not discriminate against any person on the basis of sex in the operation, conduct participation or administration of the program.
   - Leagues are required to confirm via a signed Compliance Statement their private, non-profit group does not discriminate against any person (or group) on the basis of gender in the operation, conduct or administration of their program and is required to confirm the league is operated in a manner that promotes equal opportunities.

6. ***Rental Fee*** **-** For applicants who are seeking a single use, the rental fee is due at the time of permit issuance. Leagues in good standing with on-going use will be invoiced prior to use throughout the season. Leagues previously not in good standing will be required to pay for all permitted dates at the time of permit issuance. Please see the "Fees and Charges" section below for specific rental fee rates and due dates.

The following are required for all social use applicants:

1. Athletic Field Use Application – One application form per use.
2. Rental Fee
3. Additional requirements may apply, depending on type of event, attendance and activities.

ALLOCATION PROCESS, PERMITS, LEAGUE ACCEPTANCE OF ALLOCATIONS

The Program Coordinator will review and consider all applications, equitably allocate and assign game and practice dates and times per the tier level of application consideration, per the policies, requirements and guidelines outlined within. Allocations are based on leagues in good status meeting all application requirements, the total number of requests received, field/location availability, roster review and tier levels assigned, recreational uses versus select uses, and seasonal considerations/program priority as outlined/detailed above. A roundtable allocations meeting hosted by the City including all current applicants may be required if necessary to discuss a particular season's requests.

Formal permit(s) including locations, dates, times, and service levels will ultimately be provided to approved applicants. Whenever possible, the preliminary allocation process will be complete and distributed by approximately February 1st for the first season and July 1st for the second season.

The league is required to initial and sign each permit to accept as is or is required to return unwanted allocated dates, times or locations, in writing, within a week from receipt of the original permit issuance. Permits accepted are the financial responsibility of the league, time used or not. Dates and times returned by leagues during the allocation process will be redistributed whenever possible. Dates and times returned after the allocation process may be refunded to the league depending on the timing of the return, according to the Cancellation Policy below. Once a slot is returned and the cancellation policy is applied, the financial connection to the date with the original league is complete, regardless of if the date is reassigned.

League representatives (coaches/managers) are required to have copies of approved permits in hand during use while on site at a field.

SUBLETTING/TRADING

Subletting and trading between leagues *is not allowed*. Unneeded time is required to be returned to the City for redistribution by the City. Subletting may result in immediate revocation of a league's use.

LEAGUE SCHEDULES AND NO SHOWS

Organization schedulers are required to submit a full season master schedule of game times per park via an Excel spreadsheet. The spreadsheet is to include specific game details including park name, field number, game date, start and end time (including equipment set-up and team warm-up through cool down), base length, pitching distance, and assigned teams. The schedule must be submitted a minimum of three weeks prior to season commencement or one month prior to the first date of a tournament. Mid-season booking additions may be considered if a request is received with a minimum of 8 calendar days' notice. The league is responsible for keeping the City up to date on any in-season changes by ten business days prior to allow the ability to redistribute the slot and two business days prior to the game date for smaller changes like base lengths. Note the cancellation policy below applies to refunds for cancellations.

No shows or non-use of a location are not an inefficient use of City staff and facilities. Leagues with multiple "no shows" in a season may be assessed an additional fee and may be sanctioned with potential consequences such as revocation of field time in the current season. The league may also fall into an unfavorable league status with the City, which would have an impact on the league's allocation potential for the following season.

FEES AND CHARGES

Fees are assessed for all field use. All time needed on-site must be requested and paid for, including equipment set-up, warm-ups, practice/game, and breakdown. Standard field use fees are outlined below. Activities requiring additional field preparation or a higher level of use may be assessed additional fees. City of Kirkland Parks and Community Services reserves the right to increase usage fees when the department may incur additional cost. Fees are subject to change without notice.
Services available at District sites are limited. Not all District sites have the same service options as City sites. Please inquire with the Program Coordinator regarding District locations and what services are available per site.

2019 Field Use Fees are detailed within. Fees are subject to change. A current Park User Fee schedule is available on the City of Kirkland website: https://www.kirklandwa.gov/Assets/Parks/Parks+PDFs/Park+User+Fees.pdf.

Field Use Fees - ***Per Hour, Two Hour Minimum***		Resident	Non-Resident
Kirkland Premium Fields	Regular Rate	$15	$18
	Non-Profit Rate	$5	$6
Kirkland Maintained Fields *(except Lakeview Elementary)*	Regular Rate	$7	$8.50
	Non-Profit Rate	$2	$2.50
LWSD Maintained Fields *(except LWHS Fields 1 and 2)*	Regular Rate	$1	$1.50
	Non-Profit Rate	$0	$1
Lakeview Elementary Field	Youth	$25	$35
	Adult	$35	$50
Lake Washington High School Fields 1 and 2	Youth	$50	$60
	Adult	$80	$90

Add On Fees / Services	Regular Rate	Non-Profit Rate
Game Prep Fee Per Prep	$25	$10
Tournament Game Fee Per Game	$30	$25
Light Fee Per Hour	$20	$20

Athletic Field Categories				
Premium Fields	**Kirkland Maintained Fields**	**LWSD Grass/Dirt Maintained Fields**	**LWSD Combined Synthetic and Natural Grass Maintained Fields**	**Kirkland Maintained LWSD Synthetic Grass Field(s)**
Crestwoods Park	132nd Square Park	Intrntnl/Cmnty School	Lake WA HS 1 & 2	Lakeview Elementary
Everest Park	Juanita Beach Park	Juanita High School		
Lee Johnson	Highlands Park	Finn Hill		
	Spinney Park	Kamiakin		
	Terrace Park	Kirkland Football & Track		
	Emerson	AG Bell Elementary		
	Kirkland Middle School Fields 1 & 2	Carl Sandburg Elementary		
	Ben Franklin El	Helen Keller Elementary		
	Juanita El Rear Field	John Muir Elementary		
	Mark Twain Elementary	Juanita Elementary Front Field		
	Rose Hill Elementary Field 1	Peter Kirk Elementary		
		Robert Frost Elementary		
		Rose Hill Elementary Field 2		
		Thoreau Elementary		

PAYMENTS AND LEAGUE INVOICING

For full season league users included in the allocation process, fees are invoiced per the schedule below. The invoice will detail the season's use, applicable fees and the date the payment is due. Payment not received within a timely fashion will affect a league's standing for the following year. Any credits/deposits held will be applied to the final invoice.

For camps, mid-season applicants, one-time, occasional users, and leagues not in good standing, payment is due in full at the time of permit issuance.

Athletic Field Rental Dates	Payment Due Date For Allocated Leagues
First Season	
January 1 through February 29	December 15
March 1 through April 30	February 15
May 1 through June 30	April 15
July 1 through August 30	June 15
Second Season	
August 1 through September 30	July 15
October 1 through November 30	September 15
December 1 through December 31	November 15

CANCELLATION/CHANGE POLICY

Cancellations

A cancellation of a scheduled use must be made in writing, by email to eparks@kirklandwa.gov. The cancellation should be made within a timeframe that can allow the maximum possibility to redistribute the opening, at a minimum of 10 business days. League assigned field use through the allocation process who returned time during the allocation process provided return period will not accrue charges. After the allocation return period and for all other users, the following fees apply:

- Written notice received at least 90+ days prior will be refunded 100% of all rental, game prep and light fees, less a $25 Administrative Fee per cancellation request.
- Written notice received at least 31 to 89 days prior will be refunded 50% refund of the hourly rental fees and all game prep and light fees, less a $25 Administrative Fee per cancellation request.
- Written notice received at least one business day to 30 days in advance of use will receive a game prep and light fee refund, however no hourly rental fee refund, less a $25 Administrative Fee per cancellation request.

Mid-Season Changes

Full season game schedules are due three weeks prior to the start of the season. Tournament schedules are due 30 calendar days prior to the first tournament date. A partnership of efficient and respectful use of city staff is expected. Once schedules are received, excessive changes to times and base or pitching length details may assess a $25 Administrative Fee.

MAINTENANCE/GAME SERVICES, LIMITED PLAY AND FACILITY CARE

Maintenance at City fields is conducted by the City. Maintenance at District sites is conducted by the District, except at Emerson High School, Kirkland Middle School Fields 1 and 2, Ben Franklin Elementary Fields 1 and 2, Juanita Elementary rear field, Lakeview Elementary, Mark Twain Elementary Field 1 and Rose Hill Elementary Field 2. The City, through the City/District Interlocal Agreement, does provide maintenance of these nine District fields. City fields used for league game use will be maintained by the City at game standard.

Baseball and softball games, on City fields, will be prepped for by City staff (game dimension needs and game schedules must be on file). Prepping services include dragging, lining and proper base placement. Leagues are responsible for providing the Program Coordinator game need details (base length and pitching rubber needs) for the full season by the seasonal deadline. League volunteers are welcomed, with prior written agreement, permission and instructions provided by the City to conduct limited services.

Fields booked for practice sessions will not be lined. Bases may be provided for practices, if time permits.

City staff and District staff control use of facilities and reserve the right to limit the amount of play on a sport field during any given season. Field use may be limited to prevent excessive wear, to prevent potential damage, and out of consideration of maintenance resources. Potential wear impacts include:

- size and number of users
- type of use
- frequency of use
- weather conditions
- type of sports equipment to be used
- existing condition of the site
- safety

Leagues are required to rotate drills/warm-ups around a playing field to prevent deep wear from over use in any one area of a field.

Fields cannot be modified, improved, dug in to, repaired, wrongly used or modified in any way without advance written permission from the City or District. The cost for repairs to correct damage caused by a league (volunteer, parent, player, etc.) will be the responsibility of the league. Leagues are responsible for educating volunteers, umpires, coaches, parents and visitors about monitoring players and their actions while on a field, in a dugout, etc. For example, a little t-baller standing in one spot digging during an entire inning can cause havoc on a field, a visiting team warming up in the wrong area can cause damage, as can a volunteer who spreads chalk on the lawn, moves water off a field incorrectly, or puts gravel into a hole.

Garbage, restroom and concession stand topics are covered below.

GAME TIMES AND FIELD ACCESS

Specific game time options for each field will be determined by the City each season. Times available can vary from season to season. At a minimum, game times cannot be before 9am on any field and use must end by dusk on unlit fields and by 11pm on Lee Johnson Field (without exception, per City ordinance, lights shut off strictly at 11pm).

The time before, after and in-between games is not available (unless two back to back time periods are scheduled). Early arrival or overstay may impact other users or the crew to be able to properly prepare the field. Field use is permissible within the permitted time for each league only. The permitted time is to include equipment set-up, team warm-ups, and full game time. City crew may ask a group to not enter early or to exit a field if necessary.

Teams are not allowed to warm up or conduct infield use while maintenance crew are prepping an infield. Light warm up activities may be allowed in the outfield if the use doesn't interfere with maintenance crew responsibilities or safety. A team can be removed from the field if safety issues arise or maintenance is interfered with.

Drop-in use is not allowed. Teams may not use ballfields unless prescheduled.

Coaches/Managers are required to carry a copy of the league's City of Kirkland issued field use permit while on-site. Use of fields is authorized for the date, time and field listed on the permit only.

FIELD CLOSURES & RAINOUTS

City rainout evaluations are provided for game uses at locations where City staff provide game prepping services, including at Lee Johnson, Everest Park, Crestwoods Park, 132nd Square Park and Juanita Beach Park. Once a field is prepped for a game, rainout decisions are often then left to the league or umpires to make on-site.

Practice uses are not evaluated for rain. Leagues are responsible for independently determining in person if a site is too wet for use. If an infield is too wet, use of only the outfield is a possibility. If both the infield and outfield are too wet, use should be cancelled by the league altogether. For fields not inspected by City staff, common sense applies - do not use a saturated field.

City of Kirkland staff will have final say on city field playability and safety during inclement weather conditions. District and City staff have final say on district field playability and safety. Once a field is officially closed, it cannot be used until

reopened by the City (or District). Closures may also result from poor playing conditions or out of concern use could potentially damage the field and create a hazard or the need for excessive repairs.

Damage that is caused by excessive or improper use or with disregard may result in a field being closed until repairs are complete and a league being assessed for the cost of repairs to bring the field back to a playable condition.

For field rainout notification, leagues will not be contacted directly. "Closed Field" signs will be posted, whenever possible, and field status will be available at the City's Ballfield Rainout Hotline at 425.587.3345 or at the City's Rainout Line service at https://rainoutline.com/search/dnis/4258830227/. Individuals and leagues can check field status independently on the Rainout Line webpage, or to receive notification directly by phone, text or email, individuals can download the app or sign up for alters.

Games rained out by the City will be refunded to the league prior to the following billing cycle. Games rained out by the league or an umpire will remain an expense of the league. It is the responsibility of the organization to contact the Program Coordinator to arrange for rescheduling. Practice uses rained out by leagues may be refunded to the league upon request by the league if requested by the deadline required. Contact the City for current rainout refund procedures.

RESTROOMS

Players, coaches, spectators, etc. must use appropriate restroom facilities. The outdoors may not be used. School restrooms/District building access is not included with any school field assignments, nor are restrooms available at every City site. To request a port-o-potty at a particular site, requests by the league to place a league provided port-o-potty unit on-site may be submitted in writing, a minimum of 10 business days in advance. If use of a unit is approved, the league will be responsible for the coordination of the port-o-potty including maintenance, billing and any issues or problems that arise throughout the season.

GARBAGE

Garbage produced during athletic field use can be a huge problem. At District sites, maintenance is provided at a minimum at several sites, not on weekends at all, and very minimally during school year breaks. At all locations (City and District fields alike) leagues are asked to "pack it in, pack it out." If garbage complaints are received, permission to use the site(s) may be immediately revoked and/or fees may be assessed. Leagues are asked to have teams walk the field, bleachers, dugouts, parking lot and park area for garbage and to pick up and remove all garbage and litter, to place garbage completely within a can and to remove garbage from the site entirely if the can is full. If a site is not left in a totally clean, damage free condition, maintenance fees can be assessed and/or field assignments can be revoked.

CONCESSION STAND CARE

For leagues with concessions, leagues and their concessionaires are responsible for cleanliness within the concession stand and within a minimum of 15' surrounding the stand. Operators must dispose of packing materials, boxes, containers, etc. in a pre-approved dumpster on-site or they must remove all garbage. The City of Kirkland's Public Works Department F.O.G. (Fats, Oils and Grease) Program regulations apply. Any damage or maintenance fees resulting from concession use will be the responsibility of the league.

STORAGE OF EQUIPMENT AND DELIVERIES

Loading, delivery, drop off and pick-up of equipment must occur within the league permitted and paid for timeframe. City staff is not authorized to accept deliveries. Equipment may not be left on-site after use or overnight. Any equipment left beyond is subject to removal and fines. Equipment left 30 days or more will be destroyed and/or donated. Equipment that may be left behind, if it must be removed by the City, will be subject to a $75 an hour per crew person labor charge for removal of the equipment plus all expenses associated with the cost for dumping.

CLAIMS OF INJURY AND/OR DAMAGE (INJURY TO OTHER PERSONS OR DAMAGE OF OTHER PROPERTY)

Claims that may result from damage to field neighbors, to facilities, to vehicles or persons, etc. caused by a league or a league's guest (especially as a result of improper conduct or use of a site) is the responsibility of the permitted league. Leagues are required to provide any person who asks, their league name, league contact email address and phone number, league insurance company name, policy number and insurance company contact information. Coaches must have this information on hand when using a field and must readily provide it if asked. Leagues are responsible for handling league caused claims.

Leagues are responsible not only for their actions while on a field, but for visiting teams' actions while on a field as well. The user permitted by the City is ultimately responsible for the supervision of all use while on-site.

ADMISSIONS/DONATIONS

Teams or organizations hosting events with the intent of charging admission or accepting donations at the field for an event must receive preauthorization from the Parks and Community Services Department. The desire to charge an admission must be disclosed at the point of initial inquiry and at the time of application submittal. Additional requirements, permitting processes, and taxes may apply.

BUSINESS ACTIVITY/USE AND SOLICITATIONS

Solicitations are not allowed.

It is unlawful to conduct any type of business activity in any park without first entering into a concession contract, a Park Use Permit, or Special Event Permit. Business activity shall include, but not be limited to, sale of food, beverages or merchandise, providing classes or other forms of instruction for a fee or other valuable consideration, or use of a park facility for advertising any business, product or service.

Park Use Permit and Special Event information is available http://www.kirklandwa.gov/depart/parks/Permits_and_Reservations/SpecialEvents.htm or by contacting Special Project Coordinator at seklayssi@kirklandwa.gov or at 425.587.3347.

Businesses/vendors seeking an opportunity to enter a possible contract to sell merchandise or services, may contact the Program Coordinator at 425.587.3342.

EMERGENCY CANCELLATIONS BY THE CITY

The City or District, acting in good faith, may cancel use in circumstances where the facility or park becomes unsafe for the intended use. Such circumstances include but are not limited to: weather, natural disasters, environmental hazards, civil disturbances or other events affecting public health and safety. If a use is cancelled by the City or District, the customer will receive 100% refund of the Rental Fee or the customer may choose to move their event to an alternative available date.

CAPACITY AND SKILL LEVEL/AGE APPROPRIATE USE

Capacity of sites is limited from park to park and will vary depending upon many factors, including available parking on-site, field/stand options, other events nearby, and the potential of neighborhood impacts. Requests may not be approved if the event does not meet a site's limitations. For safety reasons, applicants are required to select venues that are appropriate to the age, skill level and intended use of the field.

PARKING

Users are asked to encourage carpooling and to remind parents, coaches, players and volunteers to follow parking laws. With the hope of preventing potential negative parking impacts, the City of Kirkland reserves the right to request large groups/events to create and provide effective plans for parking, traffic and crowd control. If an event is one larger in size, a parking plan or carpool agreement may be required. Users are asked to schedule games, practices, etc. with sufficient time in-between groups leaving and arriving to allow parking areas to clear in-between uses.

AMPLIFICATION

Amplification is allowed. Out of respect for other park users and residential and business neighbors, field users are asked that the volume be kept at a low level, not audible 50' from the source, and ask amplification/announcements be minimal. Amplification must end by 10:00 p.m.

DOGS AND OTHER ANIMALS

Animals are not allowed on any athletic field area. Dogs are permissible in bleachers and other park areas, however they must be on a leash at all times. District rules regarding animals at District sites pertain.

ALCOHOL AND TOBACCO/SMOKING

Alcoholic beverages, in possession opened or unopened, are not permitted on any City or District field. Having alcohol at an athletic field would be in violation of local and state laws and may result in a police citation. City of Kirkland parks and District facilities are also smoke and tobacco free.

IMPORTANT MISCELLANEOUS "DAY-OF" RULES, RESPONSIBILITIES AND REMINDERS OF APPROVED USERS

Leagues are responsible for abiding by the following "day-of" rules of use and for passing these rules on to all coaches, umpires, volunteers, parents, etc.:

- The City of Kirkland encourages coaches training in all programs utilizing City and District facilities.
- Organizations should make any necessary changes, amendments or alterations to their league rules and regulations concerning the duration of games knowing the possibility of games needing to end to accommodate dusk or to accommodate a maintenance window and back to back game schedules.
- League coordinators, presidents, etc. are directly responsible for informing teams, coaches, representatives and league volunteers of City of Kirkland and Lake Washington School District policies regarding field rentals and usage.
- At all times, teams, players, coaches, parents, etc. are to respect Lake Washington School District staff and City of Kirkland staff.
- Field users (coaches and managers) are required to have copies of approved permits in hand during use. Organized use of fields may occur by permit only. Non-permitted use by a league/organization is strictly **not** allowed.
- Use can't begin any early than 8am and must cease at dusk on unlit fields and use must end by City ordinance by 11pm on lighted fields. Organizations should make any necessary changes, amendments or alterations to their league rules and regulations concerning the duration of games knowing the possibility of games needing to end to accommodate dusk or to accommodate a maintenance window and back to back game schedules.
- Share space with *permitted* users when required and safe to do so. Formal field use is allowed by permit only.
- School District field use can be cancelled/bumped for a District program, activity or event at any time, and without advanced notice. School District needs take priority over community use at District sites. Users need to be prepared to leave a site immediately if asked to by District or City staff.
- Juanita High School Rainout Hotline number is 425.936.1678. Lake Washington High School's rainout information is provided at www.twitter.com/LWBaseballField.
- Leagues and Tournament Directors are responsible to ensure individual teams fully clean-up a site. After use, teams are required to walk the field, bleachers, dugouts, parking lot and park area for garbage, pick up and remove all garbage, and ensure all garbage is completely contained within a can and/or remove garbage entirely if necessary. If a site is not left in a clean, damage free condition, maintenance fees can be assessed and/or field assignments can be revoked.
- Use of peripheral items or equipment, such as scoreboard controls, P.A. systems, City equipment/tools is permitted by special request only. All special requests must be made in advance. Authorized and trained personnel only can conduct use or operation of any peripherals.
- The City of Kirkland is not responsible for any personal property loss, damage to vehicles, etc. Cars should be parked correctly and safely with doors locked. Cars improperly parked can be towed.
- Damage that may occur (especially as a result of improper use) to neighbor dwellings/property, vehicles or persons, by the permitted league or by their visiting league will be the responsibility of the permitted league. Leagues are required to provide any person who asks their league name, their league contact email and phone number and their

insurance company name, policy, and contact information. Coaches must have this contact information on hand when using a field. Leagues are responsible for quickly responding to all claims and handling those deemed valid.

- Teams are not allowed to warm up or conduct infield use while maintenance crew are prepping the infield. Light warm up activities may be allowed in the outfield if the use doesn't interfere with maintenance crew responsibilities or safety. A team can be removed from the field if safety issues arise or maintenance is interfered with.
- Batting Practice is NOT allowed on outfield grass.
- Do not use a closed field.
- Do not allow players to damage or dig in a field.
- Do not modify/"improve" a field in any way without prior written approval from the City or District.
- Treat field(s) respectfully. If damage is found, permission to use the site(s) may be revoked and fees assessed.
- Site specific limitations apply to the use of synthetic fields (water only, no gum or sunflower seeds, no pets, etc.). On-site signage regarding limitations must be reviewed and adhered to. Damages may be assessed to the league.
- Fences and backstops cannot be used for soft toss.
- Move warm-ups and drills around a field from day to day or week to week to prevent excessive wear.
- Remind players, coaches, volunteers, etc. to please be especially watchful for children when driving in/around parks.
- Driving on lawn or fields is not allowed for any reason.
- In the case of an athletic field emergency (such as a double booking, lights not on, sprinklers coming on), before 3pm weekdays leagues can call the Parks Coordinator at 425.587.3342. After 3pm, weekends and holidays, leagues can call the City of Kirkland Ball Field Emergency number at 425.864.3431. This is for day-of, site emergencies only. It is not for field scheduling nor is it for special requests. The crew will return a call if a voicemail message is left within approximately ten to twenty minutes.
- The City of Kirkland Ball Field Rainout Hotline for rainout/closure information of City fields for softball and baseball game use is 425.587.3345. The hotline is not updated for practices, soccer, football, etc. use. Softball and baseball games rained out *by the City of Kirkland* will not be charged for.
- Kirkland Municipal Code Park Rules (Section 11.80) and posted rules on-site apply at all times in addition to those listed within and above. Additional Lake Washington School District rules of use apply to use LWSD sites.

ALTERNATE FORMAT

Persons with disabilities may request materials in alternative formats. Persons with hearing impairments may access the Washington State Telecommunications Relay Service at 711 or for any other type of assistance, contact Nicci Osborn at 425.587.3342 or at nosborn@kirklandwa.gov.

Kirkland Municipal Code **Chapter 11.80 PARK RULES**

11.80.010 Title of chapter.
This chapter may be cited as the park rules for the city of Kirkland. (Ord. 4334 § 6 (part), 2011)

11.80.020 Police power.
This chapter is hereby declared to be an exercise of the police power of the city for the public peace, health, safety and welfare and its provisions are to be liberally construed. (Ord. 4334 § 6 (part), 2011)

11.80.030 Definitions.
The terms herein used, unless clearly contrary to or inconsistent with the context in which used, shall be construed as follows:
(1) "Director" means the director of the parks and recreation department of the city as established by Chapter 3.68.
(2) "Park" means and includes all city parks and all areas within the boundaries of a city park, including structures, regardless of whether the area is under the management and control of the park and recreation department.
(3) "Park board" means the board of park commissioners as established and created by Chapter 3.36.
(4) Wherever consistent with the context of this chapter, words in the present, past or future tenses shall be construed to be interchangeable with each other and words in the singular number shall be construed to include the plural. (Ord. 4334 § 6 (part), 2011)

11.80.040 Posting signs, posters and notices.
(a) It is unlawful for any person, without prior written permission of the director, to attach any notice, bill, poster, sign, wire, rod or cord to any tree, shrub, railing, post or structure within any park; provided, that the director may permit the erection of temporary directional signs or decorations on occasions of public celebration and picnics.
(b) It is unlawful for any person, without prior written permission of the director, to use, place or erect any signboard, sign, billboard, bulletin board, post, pole, or device of any kind for advertising in any park, or to place or erect in any park a permanent or temporary structure of any kind; provided, that before granting any such permit, the director shall establish general rules and regulations pertaining hereto, including provisions pertaining to removal, protection of the city park department and its employees, protection of the interests of the general public, and of persons using said park. (Ord. 4334 § 6 (part), 2011)

11.80.050 Injury to park property unlawful.
It is unlawful for any person to remove, destroy, mutilate or deface any structure, or any part of any structure, or any fixture therein, or attached thereto, or any monument, statue, vase, fountain, wall, fence, railing, vehicle, bench, shrub, tree, fern, plant, flower, lighting system or sprinkling system, or any other property lawfully located within any park. (Ord. 4334 § 6 (part), 2011)

11.80.060 Animals at large prohibited.
The provisions of Chapter 8.04 of the Kirkland Municipal Code, including all portions of the King County Code adopted by reference, shall apply in all parks. It is unlawful for any person to allow or permit any animal owned by him or within his possession or under his control to run at large in any park or enter any designated swimming area located therein. The director, acting pursuant to Section 11.80.220, may adopt rules prohibiting dogs or other types of domesticated animals from entering certain parks or certain portions of parks after consultation with the city council. (Ord. 4334 § 6 (part), 2011)

11.80.070 Firearms and explosives.
It is unlawful to shoot, fire or explode any firearms, fireworks, firecracker, torpedo or explosive of any kind or to shoot or fire any air gun, bows and arrows, B.B. gun, or use any slingshot or other propelling device wherein the applied human energy or force is artificially aided, directed or added to in any park, except in such designated recreational areas as may by the department of parks and recreation be developed and provided for such activities. (Ord. 4334 § 6 (part), 2011)

11.80.080 Teasing, annoying or injuring animals prohibited.
It is unlawful for any person in any park, in any manner, to tease, annoy, disturb, molest, catch, injure or kill or to throw any stone or missile of any kind at or strike with any stick or weapon any animal, bird or fowl; or to catch any fish or feed any fowl except at those places as may be so designated for the catching of fish or the feeding of fowl by the director. (Ord. 4334 § 6 (part), 2011)

11.80.090 Certain vocations and loudspeakers prohibited.

It is unlawful to sell, solicit or peddle in any park without first obtaining a written permit from the director. It is also unlawful to operate or use any loudspeaker or sound amplification devices in any park without first obtaining a written permit from the director. (Ord. 4334 § 6 (part), 2011)

11.80.100 Business activity in parks.

It is unlawful to conduct any type of business activity in any park without first entering into a concession contract according to the rules and regulations of the parks and recreation department therefor with the city. As used in this section, "business activity" shall include, but not be limited to, the following:

(1) Sale of food, beverages or merchandise;

(2) Providing classes or other forms of instruction for a fee or other valuable consideration; or

(3) Use of park facilities for advertising any business, product or service. (Ord. 4334 § 6 (part), 2011)

11.80.110 Watercraft.

It is unlawful for any person to have, keep or operate any boat, float, raft or other watercraft in or upon any bay, lake, slough, river, or creek, within the limits of any park, or to land the same at any point upon the shores thereof bordering upon any park, except at such places as shall be set apart for such purposes by the director and so designated by signs. (Ord. 4334 § 6 (part), 2011)

11.80.120 Emergency aid by watercraft.

It is unlawful for any person to land or dock a boat at any swimming dock or float, nor shall any boat be allowed within a swimming area except in an emergency involving rescue or lifesaving. (Ord. 4334 § 6 (part), 2011)

11.80.130 Riding vehicles and animals.

It is unlawful for any person to ride or drive any vehicle or animal over or through any park except along and upon the park drive parkways, park boulevards, and bicycle paths, or at a speed in excess of the posted speed limit or in excess of fifteen miles per hour where no speed limit is so posted or to stand or park any vehicle in any park except in areas designated for such purpose by the director and so posted by signs, or to stand or park any vehicle between the hours of eleven p.m. and seven a.m. of the following day except in such areas as may be designated for such purpose by the director and so posted by signs. (Ord. 4334 § 6 (part), 2011)

11.80.140 Camping areas.

It is unlawful for any person or group of persons to "camp out" in any park except at places set aside for such purposes by the director and so designated by signs. (Ord. 4334 § 6 (part), 2011)

11.80.150 Practicing and playing games.

It is unlawful for any person to practice or play golf, baseball, cricket, lacrosse, polo, archery, hockey, tennis, badminton or other games of like character or to hurl or propel any missile except at places set apart and developed for such purposes by the department of parks and recreation and so designated by the director. (Ord. 4334 § 6 (part), 2011)

11.80.160 Depositing refuse and litter.

It is unlawful for any person to throw any refuse, litter, broken glass, crockery, nails, shrubbery, trimmings, junk or advertising matter in any park or to deposit any waste or abandoned material therein except in designated receptacles. (Ord. 4334 § 6 (part), 2011)

11.80.180 Permit for assemblies required.

It is unlawful for any person to hold, sponsor, or participate in any organized assembly without first giving to the director notice thereof and obtaining therefrom his written permit to do so. Such notice shall be given at least seventy-two hours prior to the date established for such assembly. Pursuant to Chapter 3.68 and Section 11.80.220, the director is hereby ordered to establish forthwith such rules and regulations pertaining to the issuance of assembly permits as shall permit the fullest peaceful utilization of the parks by all of the general public (including such persons attending such assemblies and such other persons utilizing the park, but not in attendance at such assembly) as shall be reasonably possible and consistent with the health, safety, and general welfare. In this connection, and in addition to the conduct requirements of this chapter, such rules and regulations may require the deposit of "cleanup" undertakings, the furnishing of waste and sanitary conveniences and effective plans for traffic and crowd control and management. (Ord. 4334 § 6 (part), 2011)

11.80.190 Races prohibited.

It is unlawful for any person in any park to engage in, conduct or hold any trials or competitions for speed, endurance or hill climbing involving any vehicle, boat, aircraft or animal, except at specified places and times designated for such activities by the director upon his determination that:

(1) Adequate provision has been made to ensure that the health and safety of participants in and spectators of any such activities will not be subject to undue hazard;
(2) Such activities will be conducted in such a manner as to minimize potential damage to public or private property;
(3) Such activities will not constitute a public nuisance; and
(4) Such activities will not unduly interfere with the use of park facilities by the general public. (Ord. 4334 § 6 (part), 2011)

11.80.200 Building fires.

It is unlawful for any person to build any fire in any park except in such areas as may be designated by the director and such designation is clearly defined by signs posted in such area. (Ord. 4334 § 6 (part), 2011)

11.80.210 Intoxicating liquors and drugs prohibited.

It is unlawful for any person to possess a container of any alcoholic beverage, whether opened or unopened, while in any city park. Any person having a container within one's immediate reach or control (such as at a bench, picnic table, blanket, or motor vehicle where that person is sitting) within a city park may be considered to be in possession of the container for the purposes of this section. A person is exempt from this section to the extent that his/her actions are in accordance with a parks department special alcohol permit. (Ord. 4334 § 6 (part), 2011)

11.80.220 Adoption of rules and regulations by director.

The director shall have the power, pursuant to Chapter 3.68, to promulgate and adopt reasonable rules and regulations pertaining to the operation, management and use of the parks, and shall post the same in conspicuous places in the parks. Such rules and regulations shall include a procedure for granting blanket permits encompassing any particulars of this chapter to locally and nationally recognized organizations or associations. Such rules and regulations may include the establishment of hours during which any park or portion thereof, as designated by signs located within the designated portion, shall be closed to the general public; such closures may be for reasons of public safety, welfare and convenience, or for reasons of park maintenance. It is unlawful for any person to violate or fail to comply with any park rule or regulation duly adopted and posted by the department. (Ord. 4334 § 6 (part), 2011)

11.80.230 Aiding and abetting violations.

Any person participating in a violation of any provision of this chapter whether directly committing the act or omitting to do the thing constituting the offense or who aids or abets the same, and whether present or absent, and anyone who directly or indirectly counsels, encourages, hires, commands, induces, or otherwise procures another to commit such offense, shall be proceeded against and prosecuted as such. (Ord. 4334 § 6 (part), 2011)

11.80.250 Parks closed between ten p.m. or eleven p.m. and dawn.

The provisions of this section shall apply to all parks, improved and unimproved, within the city or owned by the city.
(1) Except as otherwise provided herein, all waterfront parks, including vehicle parking areas within the parks, within the city or owned by the city shall be closed to the general public between the hours of ten p.m. and dawn of the following day.
(2) Except as otherwise provided herein, all other parks, including vehicle parking areas within the parks, within the city or owned by the city shall be closed to the general public between the hours of eleven p.m. and dawn of the following day.
(3) It is unlawful for any person, other than a police officer or authorized park department employee, to enter into or remain within a park within the city or owned by the city at any time between the closing hour designated above and dawn of the following day.
(4) For the purposes of this section, "dawn" means the time of official sunrise for the particular day as published by the U.S. Weather Service. (Ord. 4334 § 6 (part), 2011)

Exhibit B, Letter of Support from City Parks and Community Services Department

CITY OF KIRKLAND
Department of Parks & Community Services
123 Fifth Ave, Kirkland, WA 98033 · 425.587.3300
www.kirklandwa.gov

MEMORANDUM

To: Rick Whitney, Chair - Houghton Community Council

From: Lynn Zwaagstra, Director – Parks and Community Services
John Lloyd, Deputy Director – Parks and Community Services

Date: 7/31/19

Subject: Northwest University Athletic Field Partnership

Northwest University approached the City of Kirkland Parks and Community Services Department in June of this year to discuss a potential partnership related to scheduling and use of their athletic fields. While many details are unknown, and no agreement has been reached, the City is interested in a potential partnership with Northwest University to better serve the community as a whole. Through such partnerships, we are able to serve more people, more efficiently.

The City has a history of partnership, both formal and informal, with the Lake Washington School District, dating back to the 1980's. Recognizing that through cooperation, City and District athletic fields and facilities could be used to meet the broader community needs for education and recreation better than either party could provide separately, the City and District formalized this partnership by entering into an Interlocal Joint Use Agreement in October of 1991. This partnership has proven to be very successful and beneficial to the community.

Demand for athletic fields grows each year. As the local population increases, the need for more athletic field space also grows. Currently, the City schedules use of 51 athletic fields throughout Kirkland, including 34 District fields. In 2018, the city processed 18,705 hours of athletic field reservations across 27 locations for 51 unique organizations. Additional fields at Northwest University will add much needed recreation space in the City. Based on early discussions about the potential plans for Northwest University's athletic fields, the City believes a partnership could be beneficial and would like to continue discussions about developing a formal agreement.

Under the agreement we have discussed, Northwest University would schedule field use for its own teams and affiliated uses, and then provide windows of time to us when the fields would be available for third party use. We would schedule all third party use according to the priority system Northwest University provides, which would prioritize non-profit youth sports. If any adverse impacts are identified as a result of third-party use (i.e., traffic impacts or noise), the City would be authorized to reduce the number of practices/games, stagger start times, make other schedule adjustments, or work directly with field users to address impacts. Again, the details of the agreement have not been finalized, but the City is receptive to this approach.

Exhibit C, Noise Study prepared by SSA Acoustics

Northwest University

SEPA Noise Study

Submitted to:

Eric L. Drivdahl, AIA
GHD Architecture

John Jordan
Northwest University

Document Information

FILE:	Northwest University SEPA Noise Study
PROJECT #:	19-7197
PREPARED BY:	Alan Burt, P.E.
SIGNED:	
DATE:	July 31, 2019

I. Introduction

This report presents the results of the noise survey performed to analyze the noise impacts of Northwest University's proposed Master Plan. The purpose of this report is to document noise impacts associated with making the Northwest University fields available for use by youth sports leagues, primarily for soccer. This report contains data on the existing and predicted noise environments, impact criteria, and evaluation of the data as they relate to the criteria and recommendations for improvement where appropriate.

Currently the fields are used for soccer, softball practice, cross country/track, intramural activities, and other Northwest University-related activities (including orientation in August). Given the need for additional youth sports fields in the City of Kirkland, Northwest University is proposing to make the fields available to third parties when not needed for University activities. It is important to note that the types of sound generated by public use will be the same as that currently generated by Northwest University, though the University is proposing additional restrictions (such as prohibiting speaker use) on the public use.

The current field use consists of the following:

Field Use	**Schedule**
Softball	20 – 25 fall practices 30 – 35 spring practices
Intramural / Club Activity	30 – 40 games / practices / year
Men's soccer	10 – 12 games / year Daily fall practices 3 – 4 days / week spring practices 2 days / week summer practices
Women's soccer	10 – 12 games / year Daily fall practices 3 – 4 days / week spring practices 2 days / week summer practices
Cross Country / Track	60 – 75 fall practices 70 – 85 spring practices
Orientation	August

Currently amplification is used only for soccer games and orientation.

II. ZONING AND CODE REQUIREMENTS

ZONING & CODE REQUIREMENTS

The property is located at 5520 108th Ave NE in Kirkland, WA. According to the City of Kirkland, the project site and nearest adjacent properties are currently zoned as follows:

Property	Zoning
Project Site	PLA-1 (Institutional)
North	RS 8.5 (Residential)
West	RS 8.5 (Residential)
South (Across NE 53rd St)	RS 8.5 (Residential)
East	I-405

The following figure shows a zoning map of the project site and surrounding properties:

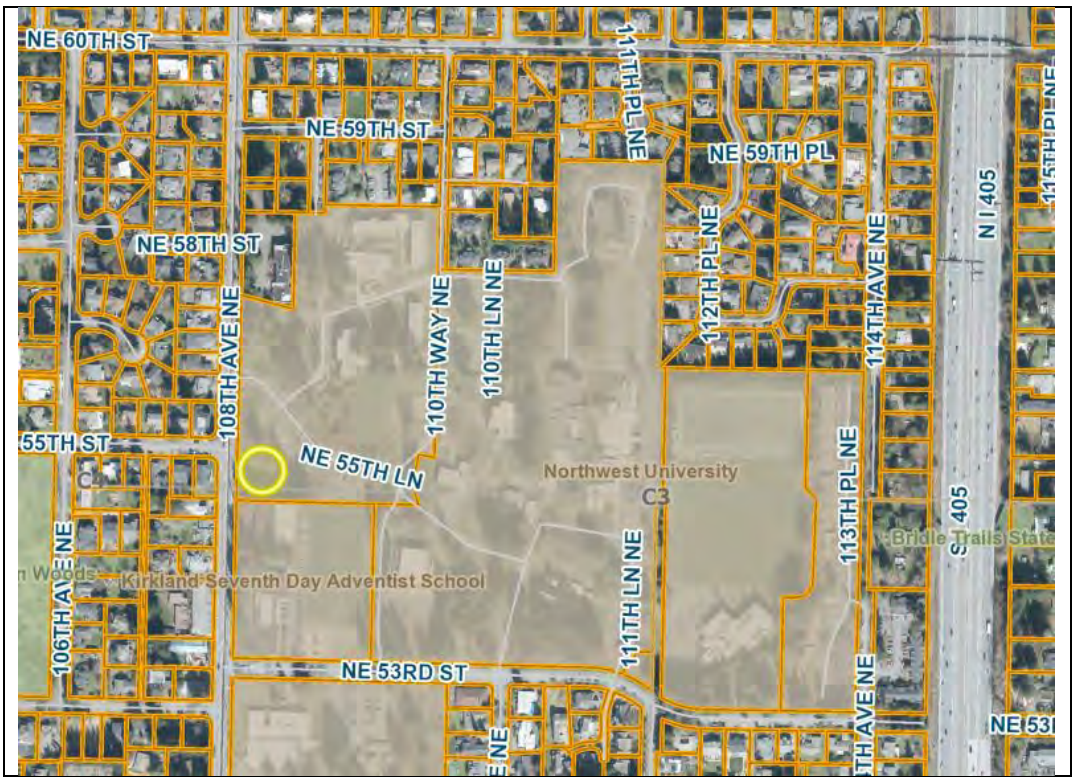


Figure 1: Northwest University Site and Zoning (City of Kirkland GIS)

Noise Code Limits and Guidelines

Under Kirkland Zoning Code section 115.95 Noise Regulations, the City of Kirkland adopts by reference the maximum environmental noise levels established pursuant to chapter 173-60 WAC.

Under WAC 173-60-040, Institutional property is classified as a Class B EDNA property, and residential properties are classified as Class A EDNA. According to WAC 173-60, noise levels from a Class B EDNA property are limited as follows:

Class A EDNA Receiver: Noise is limited to 57 dBA during daytime hours. During nighttime, defined as the hours between 10 p.m. and 7 a.m., maximum sound levels are reduced by 10 dBA for receiving properties within Class A EDNA's. Equipment operating between 10 PM and 7 AM must meet the 47 dBA nighttime code limit.

Modifications to maximum permissible sound levels are as follows:

In addition, for short-term noises, WAC allows that during any one-hour period, the basic noise limits can be exceeded by 5 dBA for a total of 15 minutes, 10 dBA for a total of 5 minutes, and 15 dBA for total of 1.5 minutes. WAC 173-60-040(2)(c)(iii).

Additionally, sounds created by unamplified human voices are exempt from the provisions of WAC 173-60-040.

The EPA has established non-statutory guidelines for evaluating noise increases caused by a project over existing sound levels. Noise increases of 0 – 5 dBA at residential receivers are considered a slight impact, 5 – 10 dBA a significant impact, and over 10 dB a serious impact. These criteria are guidelines only and have no statutory authority, but are provided as a way to quantify the impact of noise levels compared to existing levels.

AMBIENT CONDITIONS

Existing ambient noise levels were measured on site with Svantek 971 noise monitors on 4/23 – 4/24, 2019. Measurements were conducted as close to the proposed location as possible and the property lines in accordance with WAC 173-60-020.

The noise environment is primarily from I-405 and local traffic on the major roadways that border the site.

The weather during the measurements was overcast or partially cloudy with intermittent rain.

Hourly average noise levels were between 41 – 60 dBA Leq. Hourly noise levels during daytime hours were between 48 – 60 dBA.

Please see the appendix for a summary of the measurements and noise data.

IV. PREDICTED NOISE LEVELS

The following figure shows the proposed soccer / softball fields in the master plan:

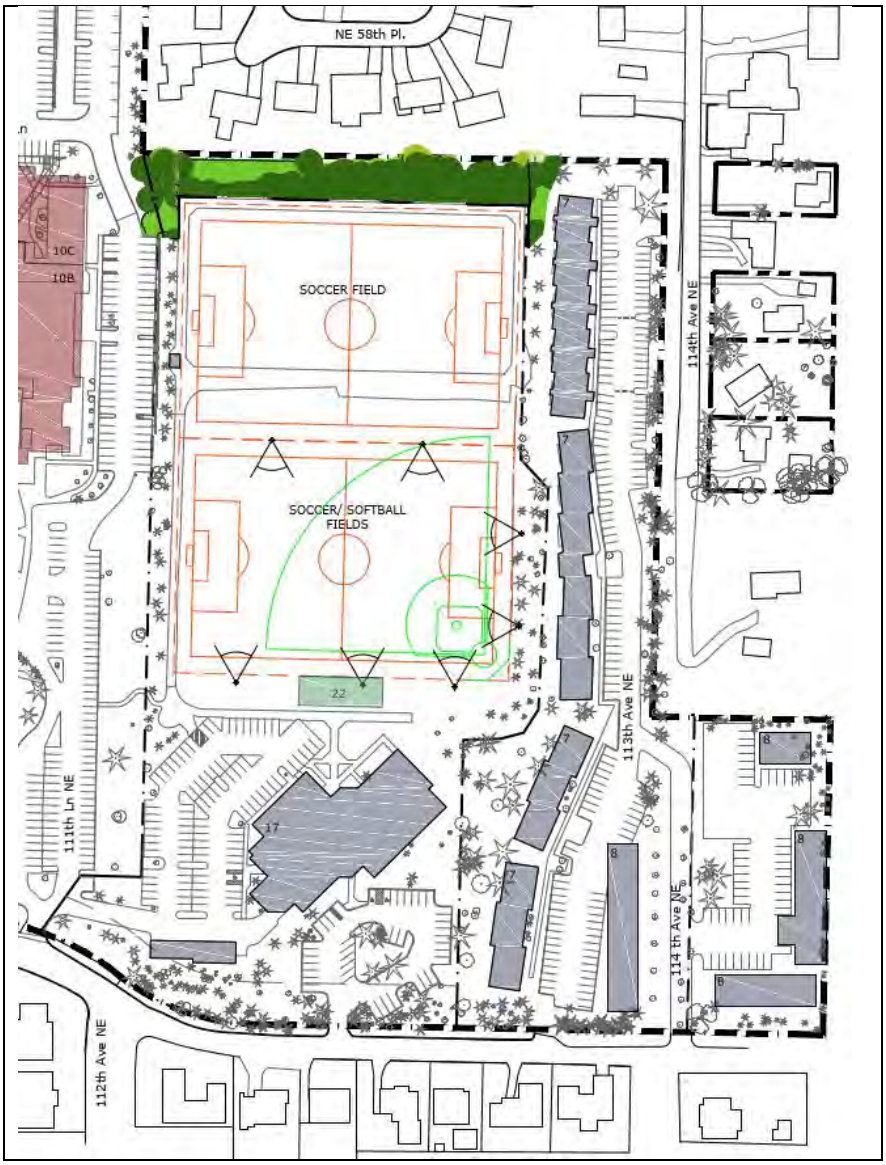


Figure 2: Northwest Master Plan – Soccer / Softball Fields

The residential properties directly north of the soccer field are the nearest receiving properties. Noise levels were evaluated to these properties. Levels at the other properties, which are further away, will be significantly lower and not have an impact to these properties.

Master Plan Proposal:

The following items are addressed in the current SEPA and Master Plan Submittals:

Proposed measures to reduce or control noise impacts:

- Team games, practices, tournaments, etc., will begin after 8:00 am and must end prior to 9:30 pm.
- Individual coaching and use of the fields for fitness training of athletes can occur before 8:00am, as long as conversations and noise are kept to a minimum.
- Outside community use will be limited to no more than 8 hours per day.
- Outside organizations are not allowed to use speakers, air horns or megaphones on the fields.
- When only one field is in use at a given time by outside organizations, the event will be scheduled on the south field away from neighboring homes.
- If speakers are used by Northwest University, they must face the Barton Building rather than face north.
- Northwest University will hire “Field Use Coordinators” whose responsibilities will include ensuring that the requirements of the Field Use agreement are enforced (including the morning and evening timing restrictions) and logging and responding to complaints of any kind. The University’s Athletic department will be required to submit twice yearly reports to the City summarizing all complaints received and how the complaint was handled. Additional mitigation measures could be considered by the City if substantiated by the reports.

SOCCER / SOFTBALL FIELDS

The primary noise sources associated with the fields during a soccer or softball game include the following:

- Whistles
- Crowds cheering and clapping
- Individuals shouting
- Baseball bat noise

Reference Noise Levels:

The following are reference noise levels obtained from measurements of similar events / sources:

Soccer Referee Whistle: 80 dBA @ 50' (1 sec duration - Lmax)
Soccer referee whistle assumed active 60 sec / hr (60 blows / hr)

Softball bat: 73 dBA @ 50' (1 sec duration)
Softball bat assumed to be 30 s / hr (30 hits / hr)

Spectators cheering: Leq: 58 dBA @ 50'

Individual shouting: Leq: 54 dBA @ 50'

Soccer Event Levels:

The predominant use of the fields is anticipated to be for youth soccer practices and games. Accordingly, SSA measured noise levels during a soccer tournament at 60 Acres Park in Redmond on June 1, 2019 (see appendix for details) to obtain similar source data. The following levels were measured at the event:

Table 1: Soccer Event Measured Noise Levels

Source	Leq Range (dBA)	Lmax Range (dBA)
General Crowd Cheering	58 – 68	59 – 70
Referee Whistle	60 – 62	62 – 64
Yelling	58 – 66	59 – 67

Noise levels were measured approximately 30 feet from the edge of the field, and on average 50 feet from the nearest crowds. The noise measurements obtained at the soccer tournament were then used to determine expected noise levels from a similar event at the Northwest University fields.

Note that Leq levels are the average sound level of an event over the time period of the measurement duration. Lmax is the highest RMS instantaneous sound level from a source / event and occurs for 1 second or less. With regard to the code limits, the Leq level is compared to the hourly code limit, and the Lmax noise level is compared to the 1.5 minute exceedance allowed during any one-hour period. Please refer to the appendix for more information.

Predicted Noise Levels

North Soccer Field:

The north soccer field is nearest the north receiving property. There is a 50 foot vegetated buffer between the north property line and edge of the playfield. There is an 8 foot walking surface starting at the north edge of the field, and then a 20 foot coaching and team area between the walking surface and soccer field boundary stripe.

Receiver: North Receiving Properties:

The following are the predicted noise levels from the north soccer field to the north receiving properties. It is important to note that unamplified human voices are exempt from noise code limits and WAC. They are included in this analysis for disclosure purposes. In order to evaluate the significance of impacts associated with unregulated, unamplified human voices, we use the EPA guidance criteria cited in this report.

Spectator Cheering:

Spectators cheering along the northern sideline would be closest to the north receiving properties. The property line is approximately 78 feet to the north of the sideline, on average. Spectators would be within the 20 foot coaching / team area, for purposes of this evaluation the source is assumed to be at the sideline:

Table 2A: Predicted Noise Levels – North Receiving Property – Spectator Cheering L_{EQ}

Source	Source Level (dBA)	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit[1]
Spectators Cheering	58 – 68	75	-4	54 – 64	57
Individual Shouting	58 – 66	75	-4	54 – 62	57

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

Table 2B: Predicted Noise Levels – North Receiving Property – Spectator Cheering L_{MAX}

Source	Source Level (dBA)	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit[1]
Spectators Cheering	59 – 70	75	-4	55 – 66	72
Individual Shouting	59 – 67	75	-4	55 – 63	72

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

According to the predicted levels, average levels from spectator cheering and individual shouting at the north sideline will be within the range of hourly daytime levels. Also, levels are within the code limit under typical conditions and would be considered to have a slight impact above ambient to the receiving properties.

Again, unamplified human voices are exempt from regulation under City Code and the WAC, so the “code limits” in the table are provided for reference and to illustrate that they would result in only a slight exceedance (between 0 – 5 dBA, per the EPA guidance) above the limit.

Referee Whistle:

Referee whistles would occur at various locations around the field; the average distance from the north half of the field is about 100 feet to the property line. As noted previously, soccer referee whistles are intermittent; and would be assumed to be active no more than 60 sec / hr (60 blows / hr) and as such would be considered to be within the 1.5 minute code limit exceedance. This is a very conservative estimation. In practice, the amount of referee whistle blows are less frequent.

Table 3: Predicted Noise Levels – North Receiving Property – Whistle L_{MAX}

Source	Source Level (dBA) At 50 ft	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit
Whistle	66 – 80	100	-6	60 – 74	72

According to the predicted levels, referee whistles at the north sideline would be below to slightly above the 1.5 minute code limit. In practice, whistle blows will be intermittent and the referee location will vary significantly. As such, noise from referee whistles are expected to comply with City Code and the WAC. In terms of the EPA guidance, noise levels would be considered to have no more than a slight impact above ambient to the receiving properties.

SOUTH FIELD

Noise levels from the south field, which is further away, will be significantly lower and within ambient levels and the code limits. Please refer to the appendix for more information.

MITIGATION

Note that while human voice levels are exempt from the City's noise ordinance and the WACs, and occasional referee whistles are within the allowed Code/WAC limit for short-term exceedances, Northwest University is nevertheless proposing the following mitigation measures to reduce the noise impact to the north receiving properties:

PROPOSED ACOUSTICAL BARRIER ALONG NORTH SIDE OF FIELD

An acoustical barrier is proposed to be installed along the northern side of the field to reduce noise from the field at the northern receiving properties. The barrier would be at least 10 feet tall and run the length of the north side of the field. The proposed barrier will be constructed out of precast concrete. The following figure presents a plan of the proposed barrier, please also refer to the plans, sections and additional information provided by the architect:

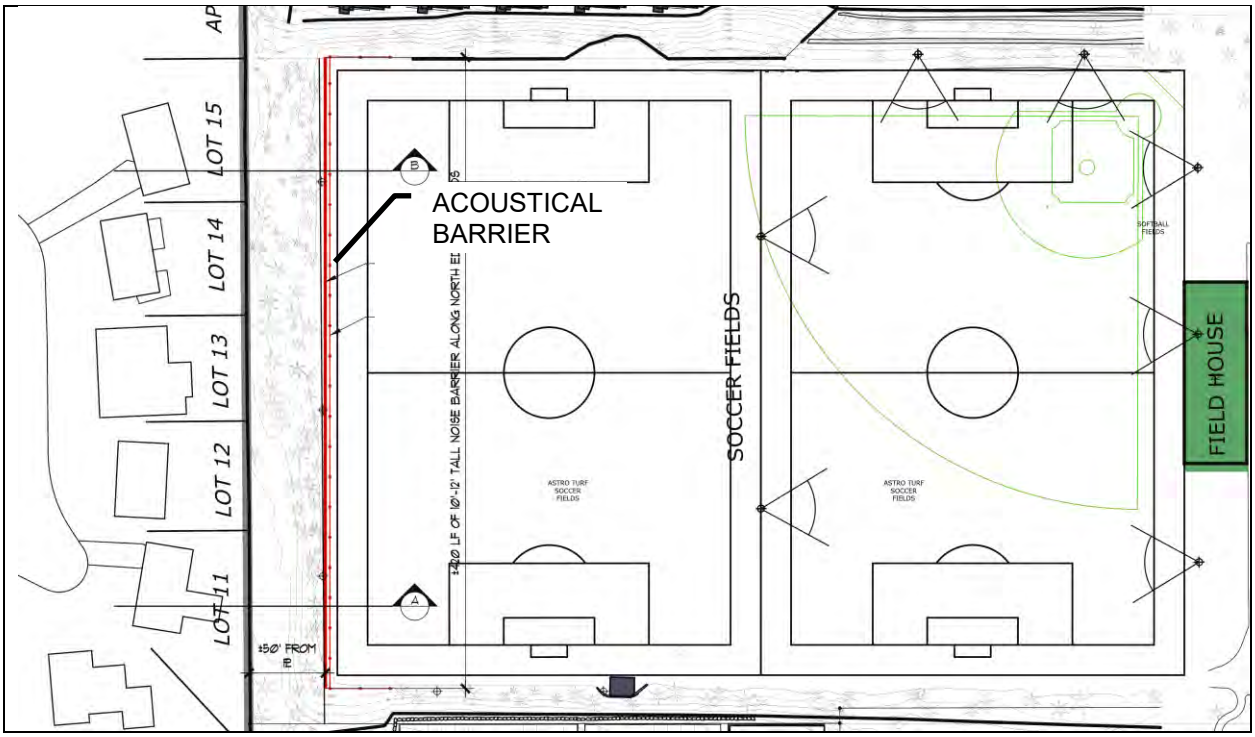


Figure 3: Acoustic Barrier - Plan

Predicted Noise Levels – With Mitigation

North Receiving Properties:

The following are the predicted noise levels from the north soccer field at the north receiving properties with the acoustic barrier installed.

Spectator Cheering:

Levels were predicted to 5' above grade of the receiving property as well as 15' above grade of the receiving property to account for upper stories / outdoor decks.

Spectators cheering along the northern sideline would be approximately 75 feet from the north receiving properties.

Below are the predicted noise levels from the north sidelines with the 10-foot tall acoustical barrier along the north side of the field to the back yards and decks of the northern receiving properties.

Table 4A: Predicted Noise Levels – North Receiving Property Yard – Spectator Cheering L_{EQ}

Source	Source Level (dBA) At 100 ft	Distance to Receiver (ft)	Distance Reduction	Noise Reduction (Barrier)	Level (dBA)	Code Limit[1]
Spectators Cheering	58 – 68	75	-4	-12	42 – 53	57
Individual Shouting	58 – 66	75	-4	-12	42 – 52	57

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

Table 4B: Predicted Noise Levels – North Receiving Property Yard – Spectator Cheering L_{MAX}

Source	Source Level (dBA) At 100 ft	Distance to Receiver (ft)	Distance Reduction	Noise Reduction (Barrier)	Level (dBA)	Code Limit[1]
Spectators Cheering	59 – 70	75	-4	-12	43 – 54	72
Individual Shouting	59 – 67	75	-4	-12	43 – 51	72

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

Table 4C: Predicted Noise Levels – North Receiving Property Deck – Spectator Cheering L_{EQ}

Source	Source Level (dBA) At 100 ft	Distance to Receiver (ft)	Distance Reduction	Noise Reduction (Barrier)	Level (dBA)	Code Limit[1]
Spectators Cheering	58 – 68	75	-4	-10	44 – 51	57
Individual Shouting	58 – 66	75	-4	-10	44 – 54	57

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

Table 4D: Predicted Noise Levels – North Receiving Property Deck – Spectator Cheering L_{MAX}

Source	Source Level (dBA) At 100 ft	Distance to Receiver (ft)	Distance Reduction	Noise Reduction (Barrier)	Level (dBA)	Code Limit[1]
Spectators Cheering	59 – 70	75	-4	-10	44 – 55	72
Individual Shouting	59 – 67	75	-4	-10	45 – 52	72

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

According to the predicted levels, with the acoustical barrier installed, spectator cheering and individual shouting at the north sideline will be within the range of hourly daytime levels under typical conditions and would be considered to have no impact above ambient to the receiving properties.

Referee Whistle:

Referee whistles would occur at various locations around the field; the average distance from the north half of the field is about 100 feet to the property line.

Table 5: Predicted Noise Levels – North Receiving Property – Whistle L_{MAX}

Source	Source Level (dBA) At 50 ft	Distance to Receiver (ft)	Distance Reduction	Noise Reduction (Barrier)	Level (dBA)	Code Limit
Whistle	66 – 80	100	-6	-12	48 – 62	72

According to the predicted levels, referee whistles at the north sideline will be well below the code limit. Noise levels would be considered to have a slight impact above ambient to the receiving properties.

IV. SUMMARY

The Master Plan proposes making the fields available for third-party youth sports when they are not being used by Northwest University. The types of noise generated by third-party / public use will be the same as the noise that is currently generated on the fields. Public use will be available only between 8:00 AM and 9:30 PM and will be limited to 8 hours per day. Air horns, megaphones and speakers will not be allowed for public use. Additionally, the south field will be scheduled for third-party use when only one field is in use at a time. The University is proposing that the City will schedule third-party use, but the University will hire field use coordinators to log and promptly respond to any noise-related complaints.

The highest anticipated noise levels from the fields will be from crowd noise, individuals yelling, and whistles. Crowd noise and individuals yelling are technically exempt from the noise ordinance, however, impacts from those noise sources are evaluated in this report.

According to the evaluation, noise from these sources when the south soccer field is in use will be well within Code/WAC limits and have only a slight impact above existing ambient noise levels to the receiving properties.

Noise from the north soccer field will also be within Code/WAC limits and have no more than a slight impact above ambient levels to the north receiving properties. Referee whistles, which this noise study conservatively assumes will be blown 60 times/hour, are exempt from Code/WAC standards as short-term, intermittent noise. However, even if the Code/WAC limits were to apply, they would only slightly exceed the limit.

In sum, this analysis shows that the noise impacts associated with third-party use of the field will comply with the City's noise ordinance and the WACs. However, to further reduce the impact, the University is proposing mitigation in the form of an acoustical barrier along the northern property line. That mitigation will result in a 10 – 12 dBA decrease in noise to the northern receiving properties, well below Code/WAC limits. This acoustical barrier is not necessary for the fields to

meet the code requirements, but it will provide a significant reduction in noise levels from the fields to the north receiving properties.

Please contact us if you have questions or need further information.

APPENDIX I: DESCRIPTORS

A. Descriptors and Terminology

A-Weighted Decibel (dBA) Human exposure to noise is typically measured as an **A-weighted sound level** in units of decibels, symbolized as **dBA**. The A-weighting is a frequency-specific weighting that corresponds approximately to the sensitivity of human hearing at the various frequencies.

Sound levels vary significantly, depending on location and activities. Locations near highways or urban arterials may be 70 dBA, whereas quiet rural areas may be 40 dBA. People normally experience sound levels between about 30 and 90 dBA, depending on their activity. For example, a nearby noisy vehicle, radio or power tool may produce 90 dBA; normal conversation is about 55 to 65 dBA; and a bedroom or quiet office is about 30 to 40 dBA.

Loudness is judged by an average listener to double for each 10 dBA increase in sound level. For example, 60 dBA is judged to be twice as loud as 50 dBA and four times as loud as 40 dBA.

Leq: When measuring noise that is fluctuating over time it is common practice to use a descriptor called **equivalent A-weighted sound level, Leq**. The Leq is the constant sound level in dBA, which contains the same amount of sound energy over a given time period as the measured fluctuating noise. Descriptors that are commonly used to describe noise from the environmental noise are the Leq(h), the 24-hour Leq and the Ldn. The Leq(h) is the average sound in dBA over a one hour period during the day or night. The 24-hour Leq is the average sound in dBA over a 24 hour period calculated using the hourly Leqs.

Lmax The Lmax is the highest RMS instantaneous sound level for a given sound event or time period.

LDN/DNL: The day-night noise level (**DNL** or **Ldn**) is a 24-hour average with a 10 decibel penalty added to the hourly leqs between 10 pm and 7 am. These are the most common references in HUD guidelines, and Federal and State regulations.

STC/TL: Considering the acoustic performance of a building element such as a wall or floor, the ability of the system to block the transmission of sound waves is important. The **sound transmission loss (TL)** of a material or building partition is a measure of sound isolation ability. Since TL is very frequency dependent, it is generally reported in the third octave frequency bands between, as a minimum, 125 Hz and 4,000 Hz. As a convenience, a single number rating method has been developed which allows a single value to be given to a transmission loss spectrum. This rating is referred to as the **sound transmission class (STC)** rating which has been defined in the American Society for Testing and Materials (ASTM) Standard E413. This standard defines a procedure for determining the STC rating for a TL spectrum by fitting a contour to the one-third octave band TL data.

APPENDIX II: SITE NOISE MEASUREMENTS

Long and short-term ambient noise measurements were conducted April 23 – 24, 2019. Noise levels were measured by Svantek 971 integrating sound level meters.

Noise measurements of a soccer tournament at 60 Acres Park in Redmond, WA were collected on June 1, 2019. The following figure presents an overview of the fields:

All measurements were conducted at Field 17. The event was primarily targeted at middle-school and younger soccer teams. There were on approximately two matches going on concurrently on Field 17 during measurements, and 5 – 7 matches occurring on Fields 17 – 25 during the measurements. The red arrow below indicates the primary measurement location.

The following are noise level ranges of the soccer matches measured at 60 Acre Park:

Soccer Match Measurement Ranges

	Lmax Range (dBA)	Leq Range (dBA)
General Crowd Cheering	59 – 70	58 – 68
Referee Whistle	62 – 64	60 – 62
Yelling	59 – 67	58 – 66

Hourly Noise Levels:

Date	**Time**	**Leq (dBA)**	
		M1	M2
4/23/2019	12:00:00 PM	56	50
4/23/2019	1:00:00 PM	54	50
4/23/2019	2:00:00 PM	54	48
4/23/2019	3:00:00 PM	54	49
4/23/2019	4:00:00 PM	55	51
4/23/2019	5:00:00 PM	53	49
4/23/2019	6:00:00 PM	56	51
4/23/2019	7:00:00 PM	55	51
4/23/2019	8:00:00 PM	53	49
4/23/2019	9:00:00 PM	53	49
4/23/2019	10:00:00 PM	52	47
4/23/2019	11:00:00 PM	51	47
4/24/2019	12:00:00 AM	49	44
4/24/2019	1:00:00 AM	45	41
4/24/2019	2:00:00 AM	46	41
4/24/2019	3:00:00 AM	47	43
4/24/2019	4:00:00 AM	50	46
4/24/2019	5:00:00 AM	53	48
4/24/2019	6:00:00 AM	53	52
4/24/2019	7:00:00 AM	53	50
4/24/2019	8:00:00 AM	53	49
4/24/2019	9:00:00 AM	53	50
4/24/2019	10:00:00 AM	56	49
4/24/2019	11:00:00 AM	54	50
4/24/2019	12:00:00 PM	54	50
4/24/2019	1:00:00 PM	60	49

Short-Term Measurements:

Location	Leq (dBA)
S1	56
S2	53
S3	49
S4	50
S5	54
S6	50
S7	53
S8	54
S9	53
M1	55

South Soccer / Softball Field:

The south soccer / softball field will be the primary field available for outside use.

This field will be used for both Soccer and Softball. The following are the predicted noise levels from the field to the north and south receiving properties:

Predicted Noise Levels – North Receiving Properties

Spectators cheering along the northern sideline would be closest to the north receiving properties. The property line is approximately 360 feet to the north of the sideline.

Table 1A: Predicted Noise Levels – North Receiving Property – Spectator Cheering L_{EQ}

Source	Source Level (dBA)	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit[1]
Spectators Cheering	58 – 68	360	-17	41 – 51	57
Individual Shouting	58 – 66	360	-17	41 – 49	57

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

Table 1B: Predicted Noise Levels – North Receiving Property – Spectator Cheering L_{MAX}

Source	Source Level (dBA)	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit[1]
Spectators Cheering	59 – 70	360	-17	42 – 53	72
Individual Shouting	59 – 67	360	-17	42 – 50	72

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

According to the predicted levels, spectator cheering and individual shouting at the north sideline will be lower than the range of hourly daytime levels and would be inaudible above ambient levels.

Referee Whistle:

Referee whistles would occur at various locations around the field; the average distance from the north half of the field is about 410 feet.

Table 2: Predicted Noise Levels – North Receiving Property – Whistle

Source	Source Level (dBA) At 50 ft	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit
Whistle	66 – 80	410	-18	48 – 62	72

According to the predicted levels, referee whistles will be within the code limit. Additionally, noise levels will be slightly above the range of hourly daytime levels and would be considered to have a slight to significant impact above ambient to the receiving properties.

Softball Bats:

Softball Bat noise would occur at the batter location in the softball field. The location is approximately 580 feet to the north property line.

Table 3: Predicted Noise Levels – North Receiving Property – Bat

Source	Source Level (dBA) At 50 ft	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit
Bat	73	580	-21	52	72

According to the predicted levels, bat noise levels will be within the code limit. Additionally, noise levels will be within the range of hourly daytime levels and would be considered to have a slight impact above ambient to the receiving properties.

Predicted Noise Levels – South Receiving Properties:

The following are the predicted noise levels to the residential properties to the south:

Spectator Cheering:

Spectators cheering along the southern sideline would be closest to the south receiving properties. The property line is approximately 500 feet to the south of the sideline.

Table 4A: Predicted Noise Levels – South Receiving Property – Spectator Cheering L_{EQ4}

Source	Source Level (dBA)	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit[1]
Spectators Cheering	58 – 68	500	-20	38 – 48	57
Individual Shouting	58 – 66	500	-20	38 – 46	57

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

Table 4B: Predicted Noise Levels – South Receiving Property – Spectator Cheering L_{MAX}

Source	Source Level (dBA)	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit[1]
Spectators Cheering	59 – 70	500	-20	39 – 50	72
Individual Shouting	59 – 67	500	-20	39 – 47	72

Table Notes:

1. Unamplified human voices are exempt from the code limit provisions, limit is provided for reference.

Referee Whistle:

Referee whistles would occur at various locations around the field; the average distance from the south half of the field is about 530 feet.

Table 5: Predicted Noise Levels – North Receiving Property – Whistle

Source	Source Level (dBA) At 50 ft	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit
Whistle	66 – 80	530	-21	45 - 59	72

According to the predicted levels, referee whistles will be within the code limit. Additionally, noise levels will be within the range of hourly daytime levels and would be considered to have a slight impact above ambient to the receiving properties.

Softball Bats:

Softball Bat noise would occur at the batter location in the softball field. The location is approximately 500 feet to the south property line.

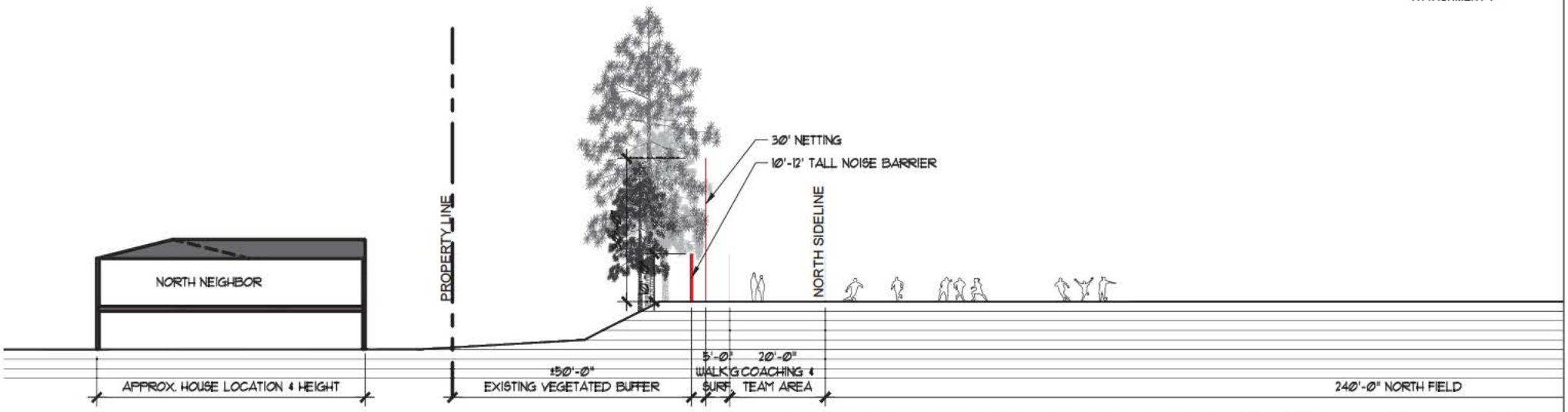
Table 6: Predicted Noise Levels – North Receiving Property – Bat

Source	Source Level (dBA) At 50 ft	Distance to Receiver (ft)	Distance Reduction	Level (dBA)	Code Limit
Bat	73	500	-20	53	72

According to the predicted levels, bat noise levels will be within the code limit. Additionally, noise levels will be within the range of hourly daytime levels and would be considered to have a slight impact above ambient to the receiving properties.

Exhibit D, Proposed Acoustical Barrier Detail

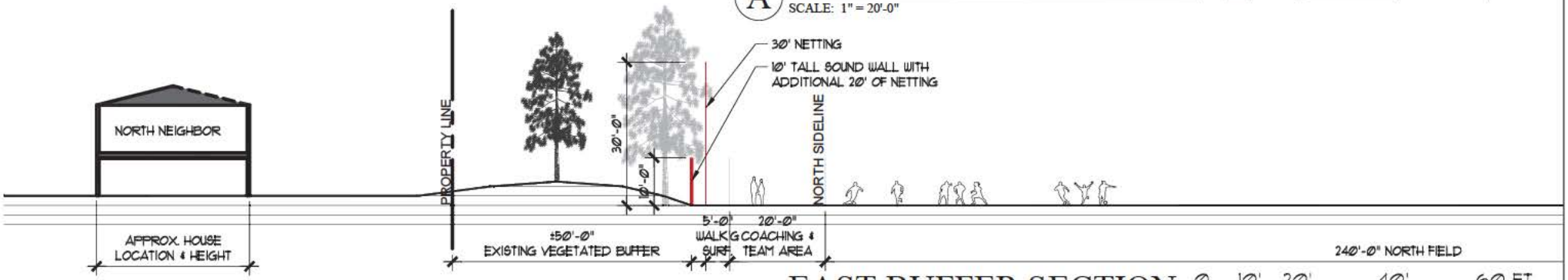
ATTACHMENT 1



A WEST BUFFER SECTION

SCALE: 1" = 20'-0"

0 10' 20' 40' 60 FT.



B EAST BUFFER SECTION

SCALE: 1" = 20'-0"

0 10' 20' 40' 60 FT.

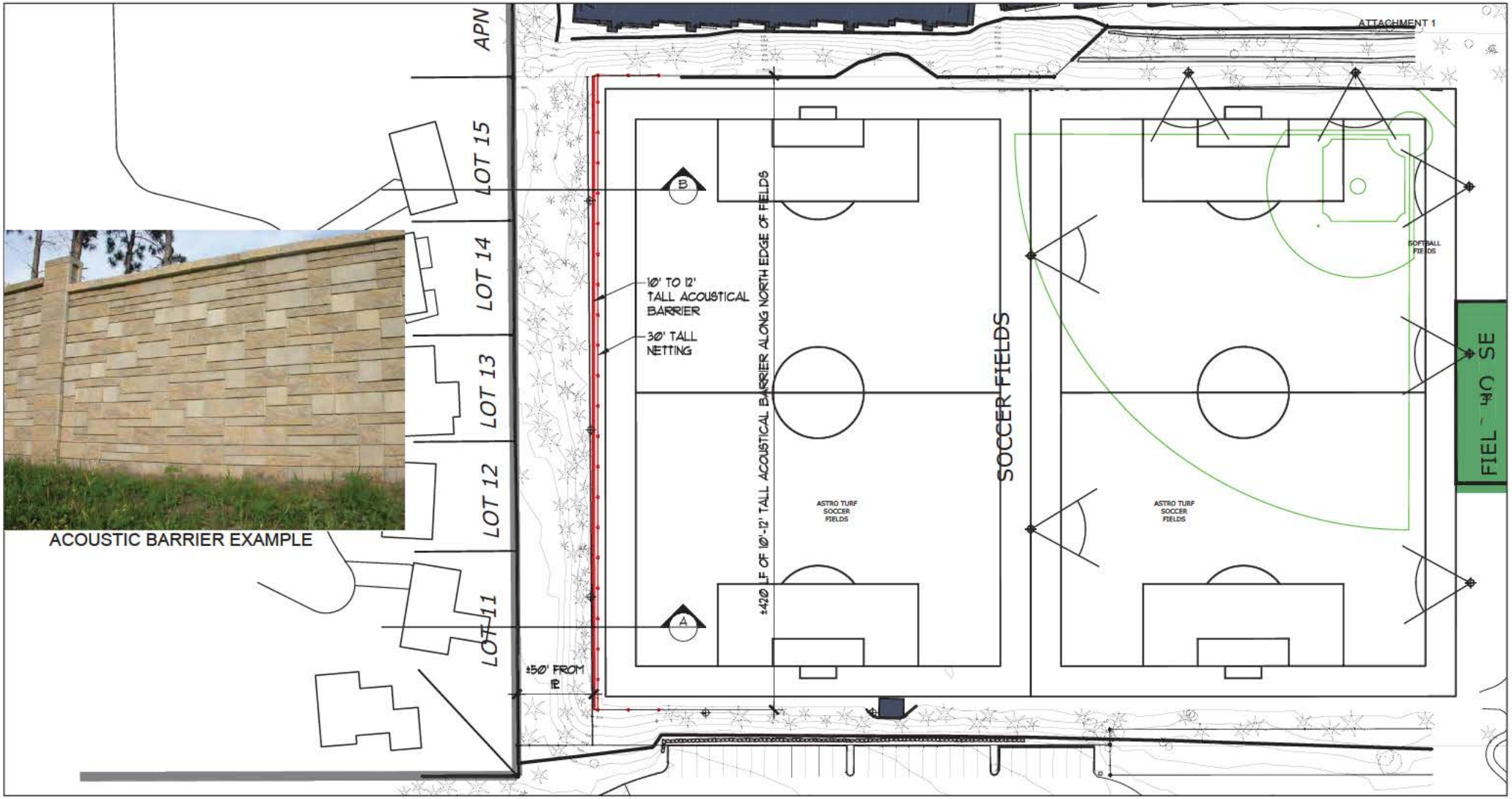
NORTHWEST UNIVERSITY MASTER PLAN

AUGUST 1, 2019

GELOTTE HOMMAS DRIVDAHL
ARCHITECTURE
THEARTOFARCHITECTURE.COM
425.828.3081

ATHLETIC FIELDS - ACOUSTICAL BARRIER SITE SECTIONS

SCALE: 1" = 20'-0"



NORTHWEST UNIVERSITY MASTER PLAN

AUGUST 1, 2019

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425.828.3081

ATHLETIC FIELDS - ACOUSTICAL BARRIER PLAN

SCALE: 1" = 60'-0"

0 30' 60' 120' 180 FT.

Exhibit E, Transpo Group Memorandum

MEMORANDUM

Date:	August 1, 2019	**TG:**	16024.00
To:	Susan Drummond, City of Kirkland Hearing Examiner Houghton Community Council Members		
From:	Mike Swenson and Stefanie Herzstein – Transpo Group		
cc:	Courtney Flora and Jack McCullough – McCullough Hill Leary John Jordan – Northwest University Tony Levitt and Thang Nguyen – City of Kirkland		
Subject:	Northwest University Master Plan – Additional Transportation Information		

This memorandum provides additional transportation and parking information for the Northwest University Master Plan that was requested by Houghton Community Council members during the June 11, 2019 Master Plan hearing. Attachment 1 includes the June 10, 2019 memorandum prepared by Transpo providing clarification for questions asked at the May 14, 2019 Master Plan Hearing. The additional information in this memorandum is provided for the following topics:

- Trip generation by Master Plan use
- Parking management strategies
- Public use of the fields
- Existing TMP and its overall effectiveness
- Cut-through measures and context for evaluating options
- Traffic impacts associated with potential conversion of the Tennis Center to academic building

What is the trip generation by proposed Master Plan use?

Table 1 provides a summary of the anticipated total Master Plan trip generation in 2022 and 2037 by the proposed land uses. The land use category “Northwest University Campus” represents the vehicle growth anticipated with the proposed Master Plan buildings and the anticipated increase in campus population associated with the Master Plan development. This Northwest University Campus vehicle growth is equated to a student count; however, it is inclusive of all traffic for all proposed campus uses.

Table 1. Master Plan Estimated New Vehicular Trip Generation by Horizon Year

			2022			2037		
Land Use	**Size**	**Trip Rate[1,2]**	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Weekday Daily								
Northwest University Campus[3]	+370 students (2022) +770 students (2037)	4.22 per student	1,560	780	780	3,250	1,625	1,625
Tennis Center[3]	6 courts	38.70 per court	250	125	125	250	125	125
Public Sports Field Use	-	-	384	192	192	384	192	192
Total			***2,194***	***1,097***	***1,097***	***3,884***	***1,942***	***1,942***
Weekday AM Peak Hour								
Northwest University Campus	+370 students (2022) +770 students (2037)	0.23 per student	85	51	34	177	106	71
Tennis Center	6 courts	3.58 per court	22	11	11	22	11	11
Public Sports Field Use	-	-	0	0	0	0	0	0
Total			***107***	***62***	***45***	***199***	***117***	***82***
Weekday PM Peak Hour								
Northwest University Campus	+370 students (2022) +770 students (2037)	0.32 per student	118	59	59	246	123	123
Tennis Center	6 courts	3.58 per court	22	12	10	22	12	10
Public Sports Field Use	-	-	192	160	32	192	160	32
Total			***332***	***231***	***101***	***460***	***295***	***165***

1. Site specific trip rates calculated based on field observations for the campus daily and peak hour conditions and Eastside Tennis Center peak hour conditions. Daily trip rate for tennis center based on Institute of Transportation Engineers *Trip Generation*, 9th Edition tennis/racket club land use (#491).
2. Trip generation for the sports fields is based on use of the fields for youth soccer.
3. Trip generation rounded up to the nearest 5 vehicles.

How will parking be accommodated and managed on-site?

At the June 11 Master Plan Hearing, a memorandum dated June 10, 2019 to Susan Drummond, City of Kirkland Hearing Examiner and Houghton Community Council Members titled *Northwest University Master Plan – Clarification on Transportation Questions* from Transpo Group was provided (see Attachment 1). This memorandum provided clarification how parking demand was calculated inclusive of all uses on-site i.e., commuter and residential students, employees, public use of the fields and the tennis center. The parking demand analysis was conservative, and it showed that there will be ample parking on site to accommodate the uses proposed in the Master Plan.

The following addresses how the different parking needs will be accommodated on-site and how the University will manage parking.

The University has 1,166 parking spaces on-site, which are shared amongst all the site users (commuter students, residents, employees and visitors). These parking spaces are also available for University special events and chapel services. Figure 1 shows what percentage full parking lots within campus are currently. As shown, most of the parking lots are under 65 percent utilized.

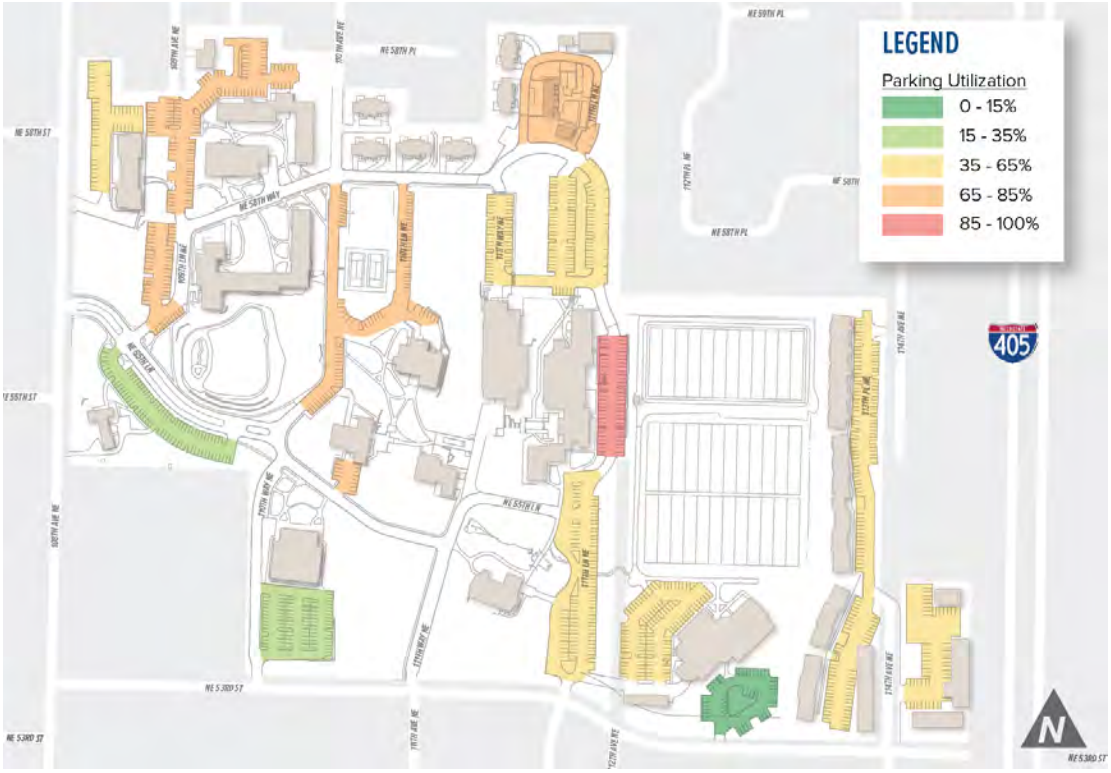


Figure 1. Peak Campus Parking Utilization (10 – 11 a.m.)

The University plans to build up to 178 additional parking spaces with the Master Plan for a total of 1,344 parking spaces. These new parking spaces will be on-campus between NE 53rd Street and NE 55th Lane (Main Driveway) next to and under the proposed Master Plan buildings. The new and existing parking will also be utilized by the Master Plan uses such as the resident hall students.

Parking for Northwest University is less on weekends than the weekday because there are no classes. Figure 2, on the following page, illustrates how parking is used on a typical weekday between 8 a.m. and 9 p.m. The illustration shows the existing parking use, additional parking with the Master Plan and available parking on campus. The parking demand is reflective of the campus use as a whole; however, it is important to note that resident student auto ownership is approximately 50 percent and is less than the commuter population, where auto ownership is shown to be approximately 90 percent.

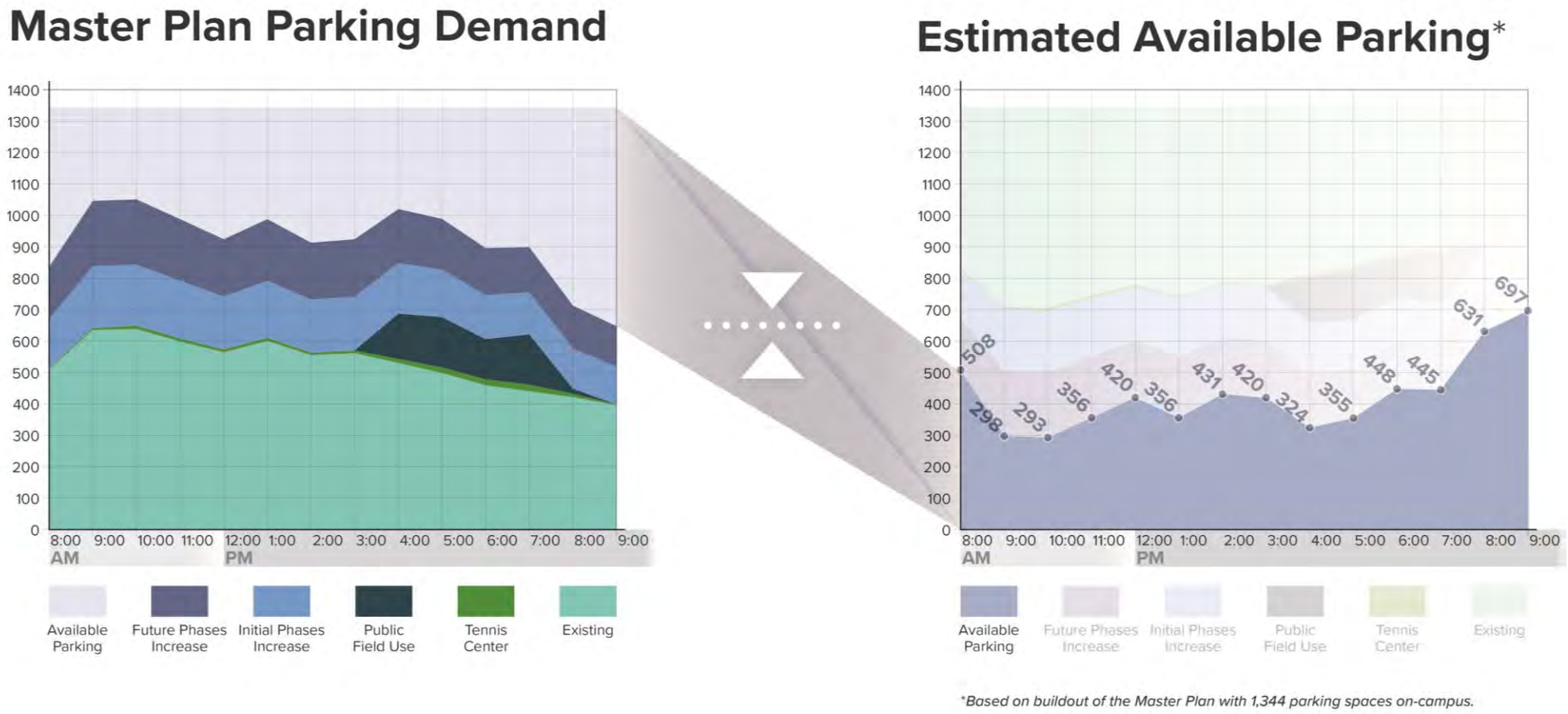


Figure 2. Weekday Hourly Master Plan Parking Demand and Available Parking

As shown in Figure 2, there is substantially more parking on-campus than needed to accommodate the future proposed uses. The analysis shows a minimum of approximately 300 available spaces on-campus with the proposed Master Plan, including the tennis center and public use of the field. The available parking continues to *increase* after 5 p.m. as the number of classes decreases and commuter students and employees are no longer on-campus. Given the available parking, additional activities/special events can be accommodated in the evening hours on weekdays. This would also include having a second group use the public fields. In addition, smaller events could be accommodated during the day time hours.

There is ample parking on campus to accommodate special events. Typically, with special events there is carpooling such that there would not be one parked vehicle per guest. Therefore, if there were a 500-person event (maximum capacity) at the Welcome Center, there would not be 500 cars. And again, Northwest University resident students (only half of whom have cars) would be expected to walk to the Welcome Center. Finally, the University would manage such events through parking strategies such as temporary valet services being required as part of the rental of the facility depending on the size of the event and the estimated parking demand.

Northwest University will develop a parking and event management plan that will be approved by the City prior to any building permit issuance or public use of the fields under the proposed Master plan. The general framework and key elements of the Parking Management Plan will include items such as:

- Assign the campus population such as residents and commuters to specific parking lots on campus to manage available parking and ensure parking is open near the fields or other areas where public use may occur.
- Manage event schedules to minimize concurrent high activity events on-campus.
- Designate specific event parking lots.
- Provide way-finding signage to direct visitors to specific parking facilities and pick-up/drop-off area.
- Active enforcement of parking restrictions.
- Post no parking sign along NE 53rd Street during events and visually monitor neighborhood parking during the event
- Designate a representative from Northwest University to coordinate public use of facilities including parking management associated with the activities.
- Provide parking monitors and flagger to direct visitors to on-campus parking lots.

What were the assumptions in the transportation analysis related to public use of the field?

The worst-case transportation impacts of public use of the field would occur during the weekday PM peak hour when the University is in full session. As a practical matter, Northwest University (not third parties) would be expected to use the fields at those times, but the traffic analysis evaluated the worst-case scenario to understand the full range of anticipated impacts. Any public use of the fields on weekends would occur when traffic on the campus and surrounding transportation system traffic is low, so transportation impacts on weekends would be less than studied in the environmental review.

The transportation analysis assumed the following for public use of the fields:

- 32 coaches and 128 players (16 teams with 8 games at one time equivalent to under 8 youth soccer)

- No players or coaches carpooling resulting in 160 vehicles
- Arrival during the one-hour weekday PM peak between 4 and 6 p.m.
- Additional practice/game sessions would start outside the peak hour

These assumptions are conservative for the following reasons:

- Maximum capacity of the fields with 16 teams is not typical because it leaves minimal space between fields and average conditions will include less teams programmed at one time
- Carpooling will occur at a minimum between siblings and parents who are coaches driving their children
- Evening use of the field on weekdays is likely to be after 6 p.m. (occurring outside the weekday PM peak hour) because the University will have practice and they will have priority use of the fields
- Use of the fields by older children or adults will generate less players and coaches since they will need more field space; therefore, the analysis accounts for larger teams or fans
- The City of Kirkland can stagger programming of the field as needed

As described in the previous section of this memorandum, the Master Plan parking demand including public parking related to the field can be accommodated within the campus parking supply. The parking lots closest to the field have a combined 240 parking spaces. The parking analysis shows 355 available parking spaces at 5 p.m. with public use of the field as described above. The available parking continues to increase after 5 p.m.; therefore, even if there were an overlap with additional use of the field, there would still be parking available. The University will use parking management strategies to ensure that there is available parking proximate to the fields when public use will occur. These strategies may include assigning students and employees to other parking lots to minimize parking in fields near the lots.

How effective is the existing TMP and how will the new TMP be an improvement?

The current drive alone rate for employees is 76 percent based on the 2017 Commute Trip Reduction survey. Overall, driving trips to the campus is less when the total population is considered (students and employees). The campus vehicle counts conducted for the Transportation Impact Analysis (TIA) showed a driving rate of 0.32 vehicles per student headcount during the weekday PM peak hour.

The new TMP that will be required with the Master Plan is anticipated to decrease drive alone rates further by implementing more strategies that have proven to work both locally and nationally. The goal of this TMP shall be that no more than 65 percent of the Northwest University Kirkland Campus commute trips occur by single-occupant vehicles. The goal will apply to both student and employee commuter trips. New strategies being considered for the TMP are:

- Transit pass subsidy for benefited employees and commuter students
- Incentives for benefited employees using alternative modes

The Master Plan also includes increased on-campus housing, which will assist in decreasing drive alone trips.

What is the City's process on implementing measures in the neighborhood to reduce cut-through traffic and what is the cost of devices?

The City of Kirkland has a Neighborhood Traffic Control Program (NTCP) that is charged with implementing traffic control within neighborhoods. There is a three phased approach to implementing neighborhood traffic control. Phase I includes community education, enforcement and less restrictive traffic management measures such as pavement markings or enhanced signage. Phase I provides for simple solutions that are often effective at solving neighborhood traffic problems. If neighborhood traffic issues continue, then Phase II or III solutions may be tried. Phase II solutions include radar speed check signs and other simple devices that do not impede or redirect traffic flow. Phase III solutions require a 70 percent approval from the neighborhood and could include devices that impede traffic flow such as speed cushions, traffic islands and chicanes.

There is no evidence that cut through will increase as a result of the Master Plan proposal, but Northwest University has acknowledged that it is difficult to predict future behavior. Accordingly, Northwest University is proposing a voluntary cut-through mitigation condition, beyond what the City imposed in the SEPA determination:

Cut-Through Traffic Evaluation and Mitigation. *In recognition of the fact that it is difficult to predict future levels of cut-through traffic associated with development of the Master Plan projects, any building permit application proposing a building that exceeds 5,000 sq. ft. or provisions of public use of sports field 3-years after the approval of the Master Plan will include an analysis of existing and projected cut-through traffic impact on non-arterial streets related to Northwest University ~~vehicles~~* [RECOMMENDED EDIT TO PREVIOUSLY PRESENTED CONDITION]*. If cut-through traffic impacts are identified that are projected to worsen as a result of the proposed project, Northwest University shall be required to pay a mitigation fee to the City's Neighborhood Traffic Control Program that is proportionate to its impact, not to exceed $15,000 per Master Plan project over 5,000 sq. ft. or public use of the sports field for the life of the Master Plan.*

The Northwest University Master Plan includes 6 buildings over 5,000 square-feet and public use of the sports field, which would require payment of the cut-through traffic mitigation of $15,000 each if impacts are identified. The potential cut-through traffic mitigation fee is up to $105,000.

As discussed previously, implementation of Phase I neighborhood traffic control measures could include pavement markings and enhanced signage. Phase II could include radar speed check signs. These types of measures are typically $3,000 to $5,000; therefore, $15,000 could support pavement markings and signage and/or radar speed check signs.

Additional neighborhood traffic calming measures could be implemented if traffic problems continue and Phase I or II measures are ineffective. Northwest University would contribute toward these measures if the cut-through evaluation identified that traffic associated with the University was significantly impacting the neighborhood streets. Table 2 identifies potential Phase III neighborhood traffic calming devices costs as well as pros and cons.

Table 2. Phase III Neighborhood Traffic Calming Devices

Device	Description[1]	Estimated Cost	Pros[1]	Cons[1]
Speed Cushions	Modified speed humps that have a wheel path cut through them. The wheel path is designed so that emergency response vehicles can straddle the hump and avoid delays caused by conventional humps.	$12,000	• Can effectively reduce speeds • Inexpensive • Do not change intersection operations	• Increase noise from deceleration and acceleration • Not visually attractive • Vehicles often try to straddle, swerving out of their lane • To be effective, need more than one
Traffic Circles	Raised islands, placed at intersections, around which traffic circulates. Circles prevent drivers from speeding through intersections by impeding straight-through movement and forcing drivers to slow down to yield.	$20,000	• Effectively reduce vehicle speeds • Visually attractive	• Can require some removal of on-street parking • Can cause bicycle/ auto conflicts at intersections due to narrowed travel lane • Slows emergency vehicles, increasing response time
Curb Extensions	Narrowing the roadway by extending the curb toward the middle of the street. Narrows the intersection approach or the road. Can be done using simple materials (e.g., paint, delineators and reflective pavement markings) or more expensively with standard concrete curb.	$5,000 – 20,000	• Reduces street crossing distance for pedestrians • Gives the road a narrow feel, often slowing traffic as a result. • Can slow turning traffic.	• May require removal of on-street parking • Can cause bicycle/ auto conflicts due to narrowed travel lane
Chicane	Series of two or more staggered curb extensions on alternating sides of the roadway. It creates a serpentine route along the street.	$5,000-20,000	• Can slow traffic down because of the weaving and need to share the travel lane around the chicane.	• May require removal of on-street parking • Slows emergency vehicles, increasing response time
Medians	Raised islands placed at the center of a roadway that separate two directions of traffic.	$20,000	• Separates opposing vehicle travel lanes • Can slow traffic because of narrower travel lanes, • Can slow turning traffic. • Prevents vehicle from passing other vehicles • May visually enhance the street through landscaping • Can be designed with breaks in the landscaping to provide pedestrian refuge	• May require major parking removal • Can prevent left turns, so might not be suitable where numerous driveways exist

1. City of Kirkland June 26, 2019 www.kirklandwa.gov/depart/Public_Works/Transportation_and_Traffic/Traffic_Calming_Devices.htm.

Why is a traffic signal required at the 108th Avenue NE/NE 53rd Street intersection rather than the University main driveway (55th Lane NE)?

Installation of a traffic signal at the 108th Avenue NE/NE 53rd Street intersection is a requirement of the previous Master Plan. The City is carrying this requirement forward into the new Master Plan because traffic signal warrants are met with or without the new Master Plan. The 108th Avenue NE/NE 53rd Street intersection currently operates at LOS F during the weekday AM and PM peak hours. A sensitivity analysis shows that without University traffic the 108th Avenue NE/NE 53rd Street intersection would operate at LOS E/F during the weekday peak hours. The poor LOS operations means it is difficult for traffic including neighborhood and University associated vehicles to turn from NE 53rd Street onto 108th Avenue NE. In addition, there are pedestrian safety issues at this intersection and conflicts with the existing school activity. Installation of a traffic signal would improve pedestrian crossings and access to and from the neighborhood providing an overall community benefit. This traffic signal is also consistent with the planned improvements associated with the 108th Avenue NE corridor. Finally, if a traffic signal was installed at the main campus entrance, it would conflict with the City's planned 108th Avenue NE corridor improvements.

The Northwest University campus parking is oriented under existing conditions and with the proposed Master Plan such that it is primarily accessed via the main driveway (55th Lane NE). The main driveway is anticipated to operate at LOS D or better during the weekday peak hours and the need for a traffic signal has not been identified. Installation of a traffic signal at the 108th Avenue NE/NE 53rd Street intersection will increase gaps in traffic along 108th Avenue NE for the main driveway, which could reduce delays for vehicles turning from the main driveway onto 108th Avenue NE.

NE 53rd Street is classified as collector street. Collector streets distribute traffic from the arterials to the local or neighborhood streets. Given the location of the fields, it is likely that the public using the fields would access the parking via NE 53rd Street. The transportation analysis accounts for traffic associated with public use of the fields using NE 53rd Street.

Would conversion of the Tennis Center to an academic building affect the transportation analysis?

Converting the tennis center to an academic building would not change the conclusions of the Master Plan transportation impact analysis. The conversion would result in no new transportation impacts. In fact, trip generation would decrease slightly, because outside trips associated with the Tennis Center would be eliminated.

The Master Plan includes up to 2,000 students, and this cap on students would remain in place, regardless of whether an academic building was constructed in place of the Tennis Center. Table 3 provides a summary of the potential transportation impacts related to converting the Tennis Center to an academic building.

Table 3. Summary of Academic Use in Place of Tennis Center Potential Transportation Impacts

Element	Comparison of Impact to Current Master Plan TIA?	Discussion
Trip Generation	Less	The Tennis Center is projected to generate 250 daily trips with 22 trips during both the weekday AM and PM peak hours. With no Tennis Center, these trips would not occur, and no additional trips would occur with the academic use since all academic uses are already accounted for in the Master Plan TIA and there would be no additional students.
Parking	Less	The peak parking demand for the Tennis Center is 11 vehicles. With no Tennis Center, this parking would not occur. Parking associated with the academic uses is already accounted for in the Master Plan TIA.
Traffic Operations	No Changes	With the slight reduction in trip generation, offsite intersection impacts are anticipated to be the same as described in the Master Plan TIA. The Master Plans proportional share would be slightly less, but the University is not proposing any adjustments to the transportation mitigation identified in the SEPA determination.
Access	No Changes	The number and location of access points would remain the same.

/

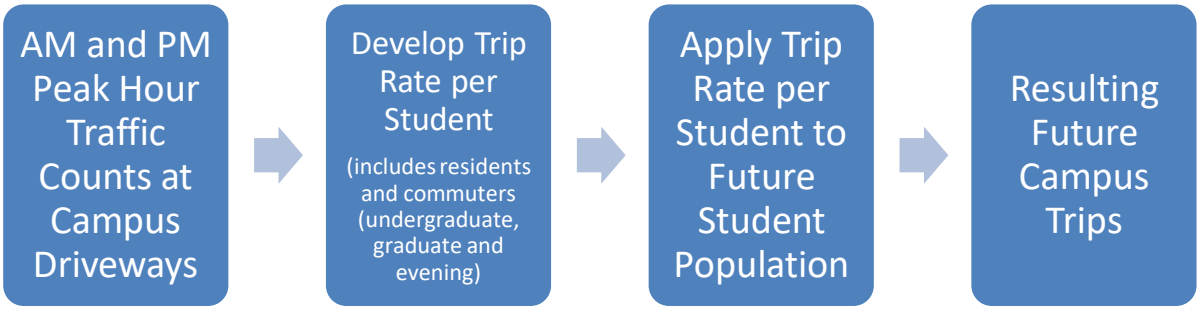
MEMORANDUM

Date:	June 10, 2019	**TG:**	16024.00
To:	Susan Drummond, City of Kirkland Hearing Examiner Houghton Community Council Members		
From:	Mike Swenson and Stefanie Herzstein – Transpo Group		
cc:	Courtney Flora and Jack McCullough – McCullough Hill Leary John Jordan – Northwest University		
Subject:	Northwest University Master Plan – Clarification on Transportation Questions		

Transpo attended the Northwest University Master Plan hearing on May 14, 2019. This memorandum provides additional clarification related to several questions asked of the project team related to the transportation analysis performed for the Northwest University Master Plan.

How was the future campus population addressed in the trip generation estimates?

Estimated trip generation for the Northwest University Master Plan is presented in the *Final Transportation Impact Analysis Northwest University Master Plan Kirkland Main Campus*, June 14, 2017. The future trip generation for the campus growth (i.e., increase in students) was based on the existing Northwest University Kirkland campus trip generation characteristics including consideration of residents and commuters (undergraduate, graduate and evening class students) applied to future population forecasts. The campus trip generation process is illustrated below.



The process included:

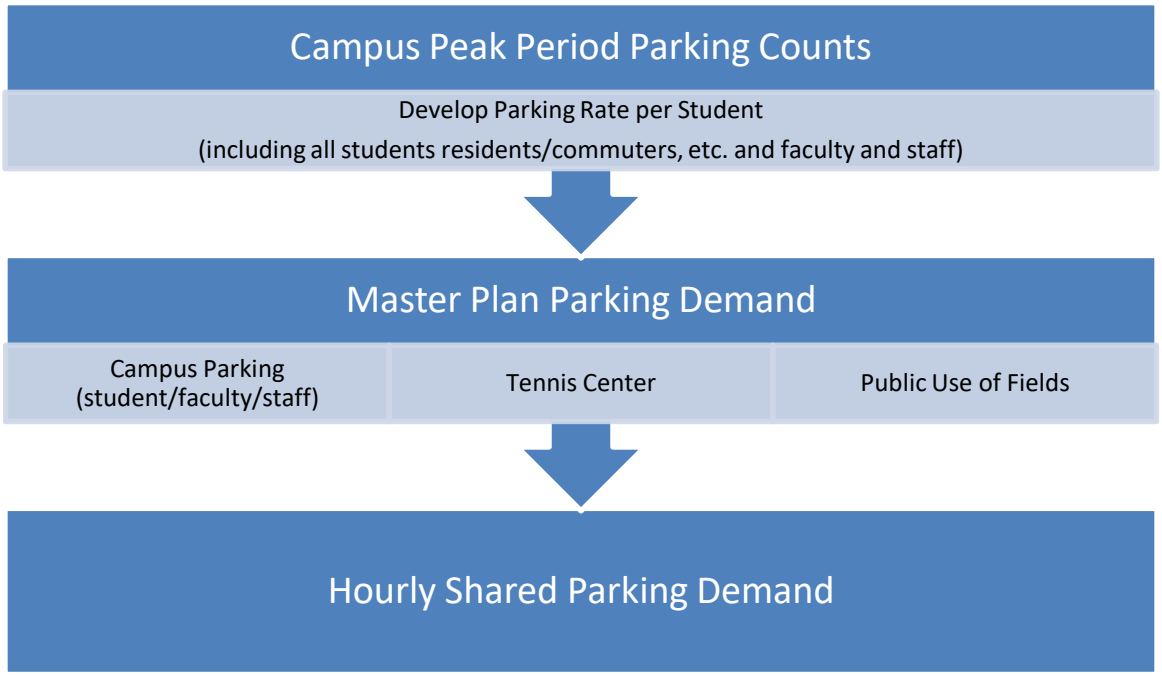
1. **Peak Hour Traffic Counts at Campus Driveways.** Transpo collected traffic counts at all the campus driveways weekday AM (7-9 a.m.) and PM (4-6 p.m.) peak periods on three (3) separate days. All traffic accessing the campus, whether faculty, staff, on-campus resident, commuter student, or visitor was captured in the counts.
2. **Develop Trip Rate per Student**. A trip rate per student (number of trips generated per student) was developed based on the highest AM and PM peak hour traffic counts observed. This trip rate incorporates the entire campus population including resident and commuter students (undergraduate, graduate and evening class students) and faculty and staff.
3. **Apply Trip Rate per Student to Future Student Population.** The existing trip rate per student was applied to the future student population of 2,000 students to determine the

future campus trips. The percent of commuter and resident students was assumed to be consistent with existing conditions.

The trip generation for the Northwest University Master Plan is based on existing conditions and includes the full campus population. It is likely in the future, with improvements in transit and required Transportation Management Plan (TMP), vehicle trips for the campus would decrease. The transportation impact analysis does not assume any decrease in trip generation with the proposed Master Plan.

How will the On-Campus Residential Parking be accommodated?

Residential parking will be accommodated on-campus utilizing existing and future parking proposed with the Master Plan. Future parking demand for the campus was determined utilizing a method similar to that described for the trip generation estimates. The forecast of parking considers resident and commuter students including undergraduate, graduate and evening class students. In addition, the proposed Master Plan uses that are not currently on-campus – tennis center and public use of the sports fields – were also considered. The campus parking demand forecast process is illustrated below.



The process included:

1. **Peak Period Parking Counts on Campus.** Collect parking counts for all campus parking including commuter and residents from 9 a.m. to 12 p.m. All parking on-campus, whether faculty, staff, on-campus resident, commuter student, or visitor was captured in the counts.
    a. **Develop Parking Rate per Student**. A parking rate per student (number of vehicles parked per student) was developed based on the highest hourly parking count. This parking rate incorporates the entire campus population including resident and commuter students (undergraduate, graduate and evening class students) and faculty and staff. Therefore, this parking rate captures the future parking demand associated with the resident hall proposed as part of the Master Plan.

2. **Master Plan Parking Demand.** The overall Plan parking demand consists of the campus demand plus the proposed tennis center and public use of the fields.
    a. **Apply Parking Rate per Student to Future Student Population.** The existing parking rate per student was applied to the future student population of 2,000 students to determine the future campus trips. The percent of commuter and resident students was assumed to be consistent with existing conditions.
    b. **Tennis Center Parking.** The tennis center parking was based on the Institute of Transportation Engineers, *Parking Generation*, 4th Edition data for the Racquet/Tennis Club (LU 491).
    c. **Public Use of Sports Fields.** The parking for public use of the sports fields assumed all the coaches and 90 percent of the children would arrive between 4-5 p.m., 25 percent of the parents would leave after dropping off the children, practice is only 1-hour and only one soccer practice session would occur during the weekday evening.
3. **Shared Parking Demand.** Parking demand associated with general University operations would peak at a different time of the day compared to the tennis center and public use of the field. The hourly parking demand for the campus was based on existing campus parking counts.

The parking demand for the Northwest University Master Plan is based on existing conditions and includes the full campus population. It is likely in the future with improvements in transit and the required Transportation Management Plan (TMP) the parking demands for the campus would decrease.

What will be included in the Transportation Management Plan?

A Transportation Management Plan (TMP) is a requirement of the Master Plan prior to issuance of the first building permit. The TMP will include a goal to reduce the campus single-occupancy vehicle (SOV) rate. The SOV goal will likely be 65 percent and include the entire population (faculty, staff and students). The TMP will likely include the following key elements:

- Campus transportation coordinator
- Transit pass subsidy for benefited employees and commuter students
- Incentives for benefited employees using alternative modes
- Preferential parking for vanpool and carpool
- Increased bicycle parking

The Master Plan also includes increased on-campus housing, which will assist in decreasing SOV trips.

How will parking for events be managed?

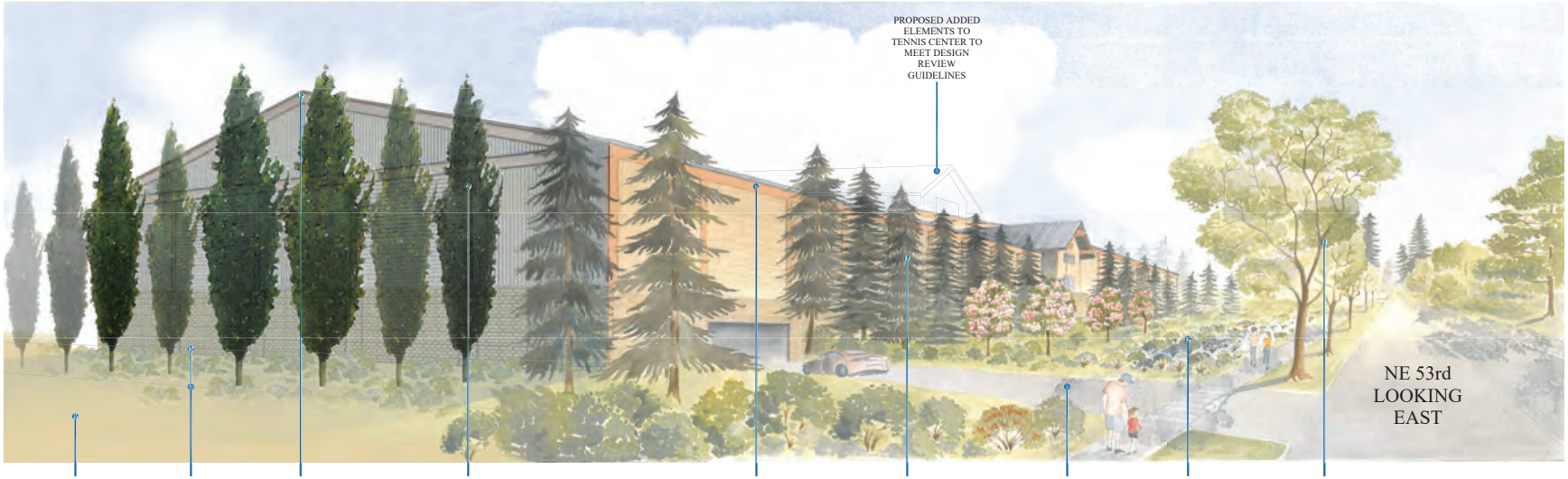
The TIA shows that Northwest University has sufficient parking to accommodate peak demands generated by the Master Plan. Northwest University will develop a parking and event management plan that will be approved by the City prior to any building permit issuance or public use of the fields under the proposed Master plan. The general framework and key elements of the Parking Management Plan will include items such as:

- Manage event schedules to minimize concurrent high activity events on-campus.
- Designate specific event parking lots.

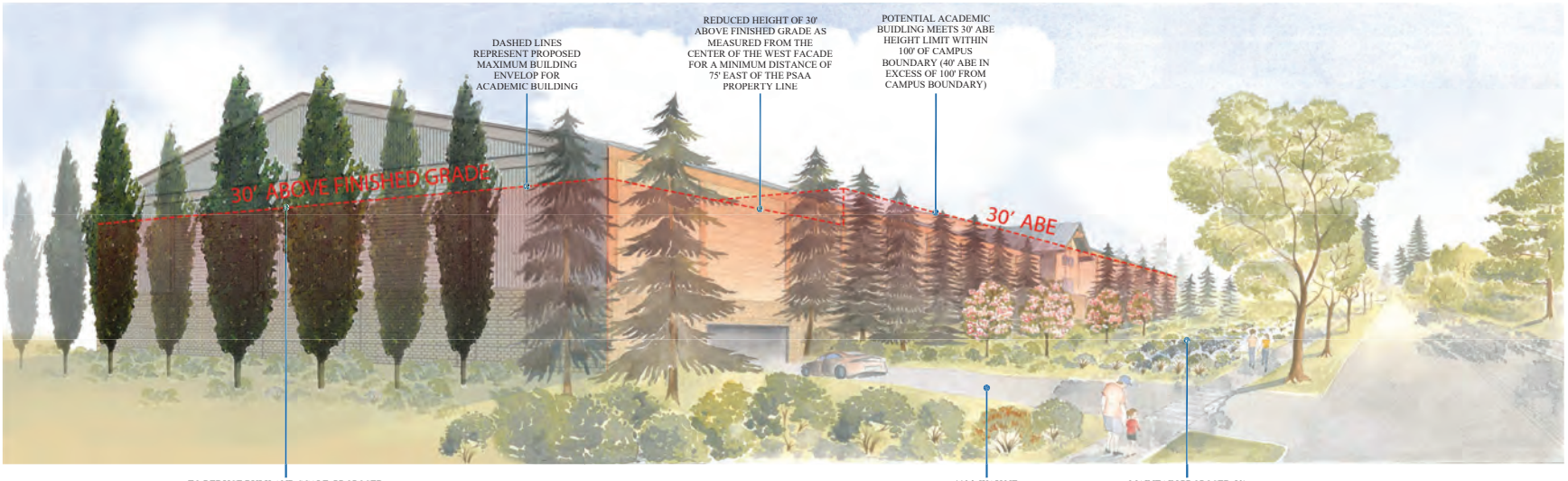
- Provide way-finding signage to direct visitors to specific parking facilities and pick-up/drop-off area.
- Active enforcement of parking restrictions.
- Post no parking sign along NE 53rd Street during events and visually monitor neighborhood parking.
- Designate a representative from Northwest University to coordinate public use of facilities including parking management associated with the activities.
- Provide parking monitors and flagger to direct visitors to on-campus parking lots.

Exhibit F, Height, Bulk, and Scale Comparison, Tennis Center vs. Academic Building

PROPOSED TENNIS CENTER STREET VIEW EXTENDED RENDERING WITH MATURE LANDSCAPING



POTENTIAL MAXIMUM ACADEMIC BUILDING ENVELOPE OVERLAY



Northwest University

Gelotte Hommas
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www.gelottehommas.com

Northwest University
Master Plan Update

NO.	DATE	REVISION
2	2/10/17	PERMIT REVS
1	pending	HSC OPTIONS

DATE: 07/05/2019
JOB NUMBER: 1423
PM: ELD
FILE: Tennis Center

TENNIS CENTER EXTENDED RENDERINGS

A5.5a

CITY OF KIRKLAND
Department of Public Works
123 Fifth Avenue, Kirkland, WA 98033 425.587.3800
www.kirklandwa.gov

MEMORANDUM

To: Tony Leavitt, Senior Planner

From: Thang Nguyen, Transportation Engineer

Date: July 30, 2019

Subject: Northwest University Master Plan

This memo provides the additional traffic and parking related information that the Houghton Community Council requested at the June 11th Northwest University Master Plan SEPA hearing.

HCC: What are the current and future TMP requirements?

Measures	Current TMP	Updated TMP
Population Affected	Employees & Students	Employees & Students
Mode Split Survey	Employees	Employees & Students
Mode Split Targets	Employees- 35% Non-drive alone	Employees- 35% non-drive alone Students- 35% non-drive alone
Current Mode Split	Employees- 24% Non-drive alone Students- not surveyed	To Be Determined
Transit Subsidy	If goal not met, provide a minimum of 50% of the cost of a monthly two-zone transit pass. Currently, none offered.	100% subsidy for employees working and students enrolling in classes on the main campus
Other Alternative Transportation Subsidies	If goal not met, provide subsidy comparable to the transit subsidy for other modes. Currently, none offered.	Up to $50 per month based on the participation level for employees working and students enrolling in classes on the main campus
Commuter Parking Rates	Employees- Free, students- $70 per academic year	Employees- $50 per month if TMP goal is not met, students- $70 per academic year, $150 if TMP is not met
Preferential Carpool Parking	None	Free Parking for employee
Preferential Vanpool Parking	Yes	Yes
Guaranteed Ride Home using alternative commute	Yes, to employees & students	Yes, to employees & students for employees and students

		working or enrolled in classes on the main campus
Personal Ridematching Service	No	Yes
Commuter Information Center	Yes	Yes
Covered Bicycle Parking	No, 35 uncovered bicycle racks	Yes, 1 per 12 parking spaces supply
Uncovered bicycle parking	Yes	Yes
Clothes Lockers	Yes	Yes
Showers for Commuters	Yes	Yes
On-site Loading/Unloading Zone or Shelters for Non-SOVs	Yes	Yes
Employees Commuter Benefits Brochure	No	Yes
Student Alternate Transportation Information Packet	No	Yes
Alternative Transportation Promotion	No	Quarterly
Annual Report	Biennial	Biennial
Biennial Commuter Survey	Yes	Yes
Transportation Information Center	No	Yes
Offer Flex-time, Compressed Work Week, Staggered Work Hours, and Telecommuting	Yes	Yes
Assigned Commute Transportation Coordinator (CTC)	Yes	Yes
CTC Training	Yes	Yes
Spill-over Parking Management	No	Yes

The draft TMP is provided in Enclosure 1. Additionally, Staff is providing the Commute Trip Reduction Survey from April of 2017 (see Enclosure 2).

HCC: What is the effective distance between each speed hump?
The City no longer uses speed humps; instead, speed cushions are used no lessen the impact to emergency vehicle response. The effective distance between the speed cushion is 250 to 300 feet. However, many other factors such as roadway alignment, on-street parking, lane narrowing, etc. are factors in designing and locating the speed cushions. The City has a public process for traffic calming that involves residents impacted by the traffic calming.

HCC: What happens if the proposed signal at 108th Avenue NE/NE 53rd Street is relocated to the University Main Campus entrance?

The Public Works department does not support signalizing the University's main entrance on 108th Avenue NE instead of the intersection of 108th Avenue NE/NE 53rd Street because it will not alleviate the poor level of service at the intersection of 108th Avenue NE/NE 53rd Street. Furthermore, signalizing the campus main entrance will not allow the opportunity to incorporate the crosswalk south of NE 53rd Street into the intersection of 108th Avenue NE/NE 53rd Street to improve crossing safety. The signalization of 108th Avenue NE/NE 53rd Street is a requirement of the current Master Plan and was based on the neighborhood's desire to improve the operation at the intersection. Furthermore, signalizing the University's main entrance will conflict with the City's 6th Street Corridor plan improvement to add a bus lane in that area.

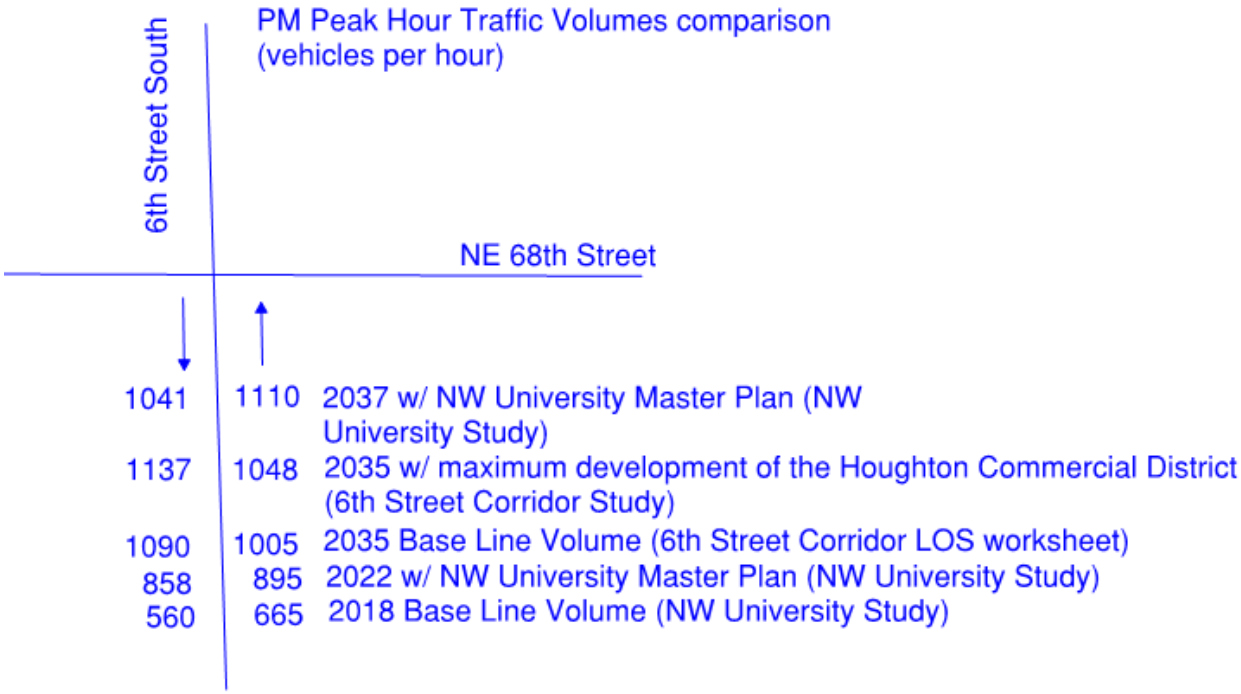
HCC: Provide the 6th Street Corridor Study into the SEPA record

See Enclosure 3.

HCC: Provide the projected traffic from the 6th Street Corridor Study and the Phases of the NW University Plan

The figure below provides the PM Peak hour forecasted traffic on 108th Avenue NE for the various scenarios. The 2035 forecasted traffic volumes are from the 6th Street Corridor Study. The Baseline Volume represents the traffic adopted 2035 land use within the City Comprehensive Plan and 2035 with maximum development of the Houghton Community District represents the maximum redevelopment potential of the Houghton Community District added on top of the adopted 2035 land use. More detailed information on traffic growth are provided on page 25, 47, 48, 108 and 114 of the **6th Street Corridor Study**.

The 2022 and 2037 traffic volumes are from the NW University traffic impact analysis report; these volumes include a 2% per year growth added on top of the existing traffic volumes plus pipeline traffic volumes from other approved development projects.



Enclosures

1. Draft Transportation Management Plan
2. Commute Trip Reduction Survey, April 14, 2017
3. 6th Street Corridor Study

Enclosure 1
Draft TMP

This Transportation Management Plan (TMP) has been developed for the Northwest University (NU), which is generally located at 5520 108th Avenue NE, Kirkland WA 98083-0579. This TMP shall supersede the previous 2001 TMP requirements and shall be implemented within 12 months from date of approval of the Northwest University Master Plan. The purpose of the TMP is to reduce the number of drive-alone vehicle trips generated by NU employees and students and to assist in mitigating the traffic impacts of the latest NU Master Plan.

The City of Kirkland is authorized to require a TMP under policy T-3.4 and T-5.5 of the City's Transportation Master Plan, the Comprehensive Plan, and the State Environmental Policy Act (SEPA).

The build-out of the NU Master Plan has been estimated to result in the campus including a total of 762,966 square feet (sf) of building area, 1,056 residential beds, 1,344 parking spaces and a maximum 2,000 student enrollment (1,500 day-time students and 500 evening students), and 385 full-time staff/faculty.

TMP Goal

The goal of this TMP shall be that no more than 65 percent of the NU Campus commute trips occur by single-occupant vehicles (student and employee trips independently).

TMP Plan Management and Information Requirements

a. **Campus Transportation Coordinator (CTC).** Upon the approval of the NU Master Plan, a permanent CTC shall be appointed to manage the TMP for the main campus and off-campus locations within the City of Kirkland. The CTC will coordinate and administer the University's TMP responsibilities and shall receive sufficient support and direction from the university president to carry out these responsibilities effectively. The name, phone number and email address of the CTC shall be forwarded to the City of Kirkland (City) staff person in charge of administering the City's commute trip reduction (CTR), transportation demand management (TDM) and TMP programs or its agent. The CTC will perform the following duties:

    a. **Student Alternate Transportation Information Packet:** The CTC shall prepare a Student Alternative Transportation Information Packet with a brochure, containing information on all commute-related amenities, programs and benefits provided by Northwest University for students. The brochure and packet contents shall be updated annually. The information packet shall be completed prior to receiving an occupancy permit for any building greater than 5,000 square feet.

    b. **Students Awareness:** The CTC shall work with the Dean of Students to distribute the Student Alternative Transportation Information Packets, along

with any other commuter information deemed appropriate by the City, at the New/Transfer Student orientation each semester. Further, the Dean of Students Office shall provide training to Residential Staff to encourage the use alternate transportation modes by students.

c. **Employees Commuter Benefits Brochure:** The CTC shall prepare a Commuter Benefits brochure, containing information on all commute-related amenities, programs and benefits provided by Northwest University for employees. The CTC shall distribute this, along with any other commuter information deemed appropriate by the City, to employees. The brochure and packet contents shall be updated and distributed on an annual basis to all employees, and to new employees at the time of occupancy/hiring. The commuter benefits brochure shall be completed prior to the occupancy permit for any building greater than 5,000 square feet.

d. **Promotions:** The CTC shall promote alternatives to single occupant vehicle (SOV) commuting by implementing regular promotional campaigns. These promotional campaigns will occur at least quarterly.

e. **Training/Network Group Meetings:** The CTC shall attend a TMP training session made available by the City or its representative and any time a new person takes on the CTC responsibilities that person shall attend the necessary training.

f. **Network Group Meetings:** The CTC will attend local network group meetings as made available by the City or its representative.

g. **Annual Report:** The CTC shall complete and submit a report form each year or at a time designated by the City, documenting TMP activities. The applicable form will be provided by the City or its agent. If NU is subject to the Washington State CTR Act requirements and deemed appropriate by the City transportation planner, the CTR report may be submitted for this purpose.

h. **Biennial Commute Survey:** The CTC will conduct biennial surveys to determine the modes of travel that employees and students use to commute to the campus, and whether the level of SOV commuting is within the TMP goal defined above. The TMP survey questionnaires will be developed by the City or its representative. If appropriate, the CTR reports may also be used to fulfill this requirement. The survey must differentiate between employee and student travel behaviors. Northwest University shall be responsible for printing, distributing, and collecting the survey questionnaires. The survey may also be administered electronically, as long as a response rate of 75% is achieved. A data analysis consultant, selected by the City of Kirkland, shall perform the data entry, tabulation, and preparation of a report of the survey data. Northwest University shall pay for the cost of work performed by the

data analysis consultant, chosen by the City, through a third-party contact with the City of Kirkland.

TMP-Supportive Infrastructure and Site Management

Required Trip Reduction Program Elements. Northwest University shall implement the following elements:

a. **Transportation Information Center (TIC).** The University shall provide and install a TIC in an area(s) approved by the City. This information will also be made available electronically to all students and employees. The TIC shall include information about nearby transit routes, stop locations, and schedules, on-site bicycle amenities, and off-site bicycle and trail facilities that connect to the site. Information on other alternative transportation modes would also be provided, including how to form vanpool and carpool. The format and mechanism to distribute information may change over time, and could include displays, electronic kiosks, on-site staff, or alternative electronic formats such as intranet and/or smart phone applications. The information provided should be updated at least twice per year. The TIC shall display the name, telephone number, and office location of the CTC. The mechanism(s) used to distribute commuter information shall be described in reports to the City. Display boards/Transportation Information Centers shall be established in highly visible and accessible areas of student lounges, faculty lounges and staff lounges.

b. **Charged Parking.** Students shall be charged for parking at a rate of $70 per academic year initially. Employee and student vehicles must be registered with the CTC in order to enforce the parking requirement. Along with charged parking, Northwest University shall implement a neighborhood parking plan to mitigate spillover parking into the neighborhood. If the TMP goals are not met within two years of the implementation of this TMP, students shall be charged for parking at a rate of $150 per semester and employee shall be charged for parking at a rate of $50 per month.

c. **Spillover Parking.** If there are complaints from the nearby residents about spill over parking into the neighborhood by the University employees, the University shall conduct a study to identify those employees parking on the street and require those employees to purchase a monthly parking pass and park on campus. If the spillover parking problem persists, the City will require the University to provide additional measure(s) to mitigate the parking impacts, such as funding the administration and enforcement of a residential parking zone surrounding the campus.

d. **Provide reserved free preferential parking spaces for employee vanpools.** Reserve parking in a preferred location located in close proximity to most commonly used employee entrance for registered vanpools in location(s) approved by the City. Upon completion of the first building of the master plan exceeding 5,000 square feet, six vanpool stalls will be designated on the school campus. This quantity shall be increased to match the number of vanpools that are formed by site employees that are registered with a public transit agency.

Vanpools registered with a public transit agency shall be provided free on-site parking.

e. **Provide reserved free preferential parking spaces for student and employee carpools.** The school shall provide a preferred location for designated carpool stalls as needed to support carpool demand. Designated spaces will be located in close proximity to most commonly used employee entrance and be reserved for carpools. The location(s) would be approved by the City. Initially, the University shall designate 10% of the parking spaces as carpool stalls. The number of carpool stalls may be adjusted based on the result of the biennial commute survey. Carpools parking shall be provided free on-site.

f. **Preferential Parking.** Preferential parking for vanpools and carpools shall be regulated by parking stickers, or other identifying mechanism approved by the City, issued through the Dean of Students office and the Human Resources office. The CTC working with the Supervisor of the Security department shall be responsible for enforcement of the preferential parking stalls.

e. **Provide bike parking.** Provide at least the minimum 1 bike stall for every 12 parking stalls. The bike parking stalls shall be covered and secured. The quantity of long-term bike stalls shall be reevaluated based on the results of the biennial commute survey. If the biennial survey shows an increase in bicyclist demand, the number of bike stalls provided shall be equal to at least 85% of the number of cyclists determined by the survey. Provide a facility nearby the bike parking area with basic tools for bike maintenance/repair. Short-term bike racks for visitors shall be provided in convenient locations near building entrances.

g. **Bike Parking Locations.** The bicycle racks shall be located throughout the NU Campus in a covered, safe and convenient locations approved by the City. Dorm locations shall be lockable and covered. All bike racks shall be permanently mounted to the ground.

h. **Provide shower and locker facilities.** Provide separate men's and women's shower and locker facilities for commuters who walk or bike to the campus. The shower facilities shall be located on-site in convenient location(s) for all employees. The men's and women's changing facilities shall include 38 lockers, three showers and two toilets each. The number of lockers shall be increased based on the mode split survey.

i. **Provide transit pass subsidy to employees and students.** The value of the subsidy shall equal or exceed a two-zone King County Metro Transit pass or equivalent ORCA Business Passport pass to students enrolled in classes and employees working on the main campus.

j. **Provide ride-match information.** Provide information to employees about ride-match programs that are available through King County Metro and other transit agencies. These programs can help match employees and students with potential carpool and vanpool partners who live in close proximity.

k. **Flex-time, compressed work week, staggered work hours, and telecommuting** will be used on a continuing basis to manage the impact of traffic to the campus.

l. **Provide incentives for alternative modes.** Provide up to $50 monthly incentives to employees living outside of the NU campus that use other transportation modes other than drive-alone. The levels of incentive should be as follow:

Non-Drive-alone	Full-time (over 20 hours per week)	Part-time (20 hours or less per week)
1 days	$20	$10
2 days	$30	$20
3 days	$50	$30

m. **Offer guaranteed ride home to employees who commute by alternative modes.** Provide a guaranteed ride home for employees who use alternative forms of transportation to commute but need to get home quickly in an emergency or after available transit service has stopped. The ride home can be by taxi, company-owned vehicle, Uber, Lift or car-sharing vehicle. This program reassures employees that they will have transportation during emergencies, so they are more comfortable using transit, carpools or other non-drive-alone modes.

n. **Full Size Vans.** Five full size vans shall be maintained to provide transportation of 5-15 persons to a common venue.

o. **Bus Shelter.** Install a bus shelter pad on 108th Avenue NE that meets the requirements of METRO. This pad shall be located just West of the Northwest University Administration Building at the time that METRO deems it necessary.

Other Provisions

p. **Modifications.** The TMP may be subject to modifications based on the progress toward the TMP goal as measured by biennial surveys. If the goals of the TMP are not met, NU shall modify the TMP as mutually agreed upon with the City of Kirkland to meet the TMP goal. All modifications must be approved by the City of Kirkland and recorded with King County as part of the covenants, conditions and restrictions of the project to assure its implementation. The TMP shall run for the life of the NU and shall be binding on the heirs, successors and assignees of the parties.

q. **Recording.** This TMP shall be recorded with King County as part of the covenants, conditions and restrictions of the project to assure its implementation. The TMP shall run for the duration of the NU Master Plan and shall be binding on the heirs, successors and assignees of the parties.

r. **Kirkland Green Trip (KGT) Website.** For as long as it is available, the University is encouraged to use the Kirkland Green Trip website to manage and promote the TMP. City staff and/or its agent can train the CTC on the KGT website.

ENTERED into this ____ day of _____, 2017.

Legal entity,

By President: _____

Name: _____

Its: _____

Washington State Department of Transportation

Employer ID: T80011

ENCLOSURE 2

CTR Employer Survey Report

Thank you for completing your Commute Trip Reduction survey. This report contains the survey results.

Employer Id : T80011
Employer : Northwest University
Worksite :
Street : 5520 108th Ave Ne
Jurisdiction : City of Kirkland

Participation : CTR
Status : Affected
Survey Type : Online
Response Rate : 74%
Survey Date : 4/14/2017

Non-Drive Alone & One-Way VMT Rates at this Worksite

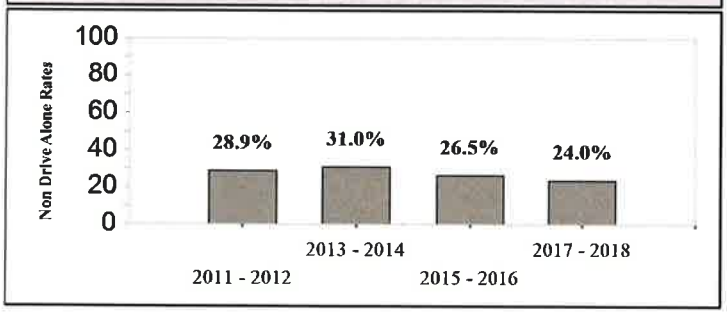
Non-Drive Alone Rate : 24.0%
Drive Alone Rate : 76.0%
One-Way VMT per employee : 9.1
Average One-Way distance home to work : 10.5

Employees and Survey Response Information

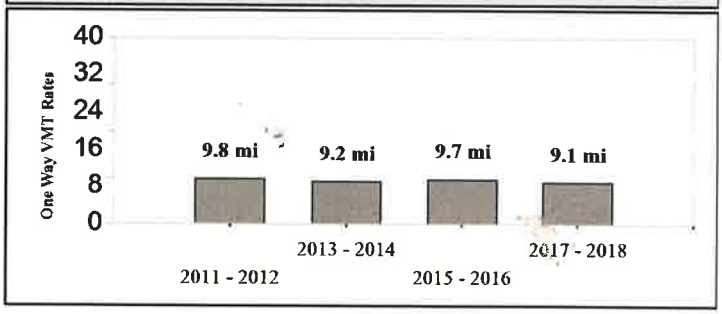
Reported Total Employees at Worksite: 483
Surveys Distributed : 186
Surveys Returned : 137
Surveys Returned by CTR Affected* Employees : 123
Total Estimated CTR Affected Employees at Worksite : 167

**CTR Affected employees filled out the survey as being full-time and commuting (typically) to work at least twice between 6a and 9a, Monday through Friday.*

Non Drive Alone Rates - ALL Employees



One Way VMT per Employee - ALL Employees



Site History and Targets

Annual Metric Tons CO2e Pounds CO2e

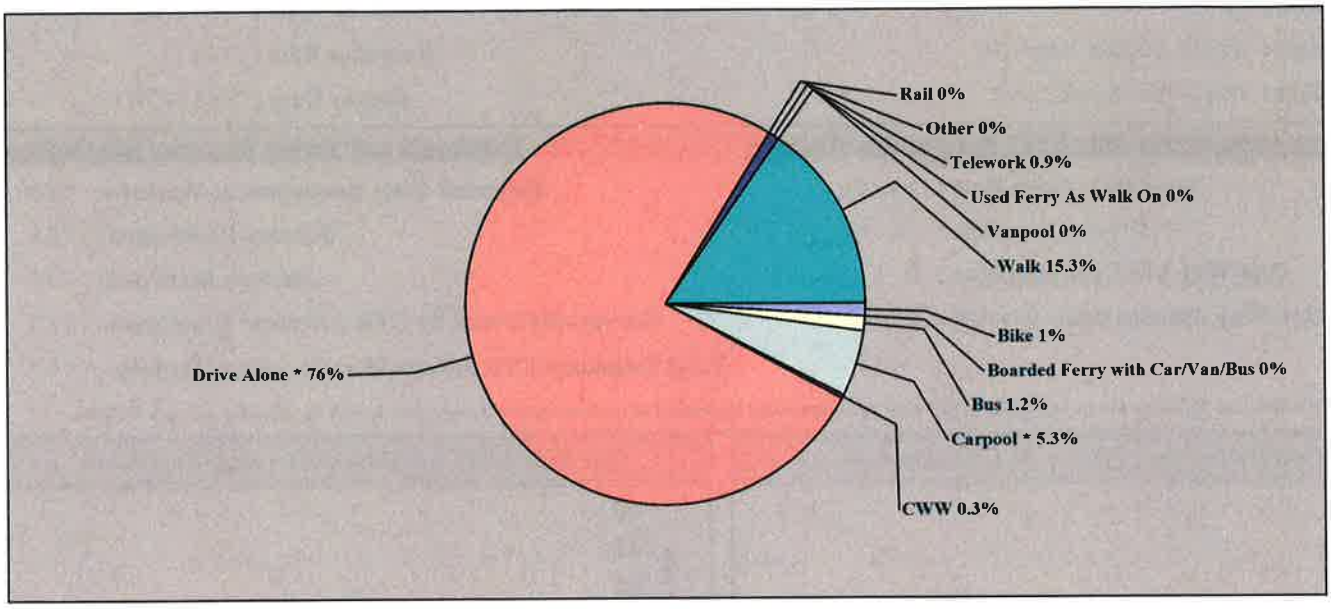
Cycle	Non Drive Alone Rate - All	Non Drive Alone Rate - CTR Affected	Emissions for Surveyed Employees	Estimated Emissions for Total Employment	GHG per Employee's Roundtrip	VMT per Employee - All	VMT per Employee - CTR Affected
2007 - 2008	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2009 - 2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2011 - 2012	28.9%	29.7%	430	932	17.0	9.8	9.0
2013 - 2014	31.0%	33.1%	232	1246	22.7	9.2	8.7
2015 - 2016	26.5%	28.0%	284	1006	18.4	9.7	9.2
2017 - 2018	24.0%	26.3%	272	960	17.5	9.1	8.5
Target	34.9%				Target:	8.0	
% Point Change Target:	6.0				% Change Target:	-18.0%	
% Point Change from Baseline:	-4.9				% Change from Baseline:	-7.1%	

GHG calculations are based on VMT and estimated total round-trip commutes for all employees. Modes that contribute to GHG include driving alone, carpooling, vanpooling, and riding a motorcycle. The use of other modes (e.g., transit, rail, walking, ferry) do not increase a worksite's GHG calculation. For more information about how GHG is calculated, please contact your jurisdiction's representative.

Commute Trips By Mode - All Employees

Q.4: Last week, what type of transportation did you use each day to commute TO your usual work location? (Mode used for the longest distance.)

Mode Split - All Employees



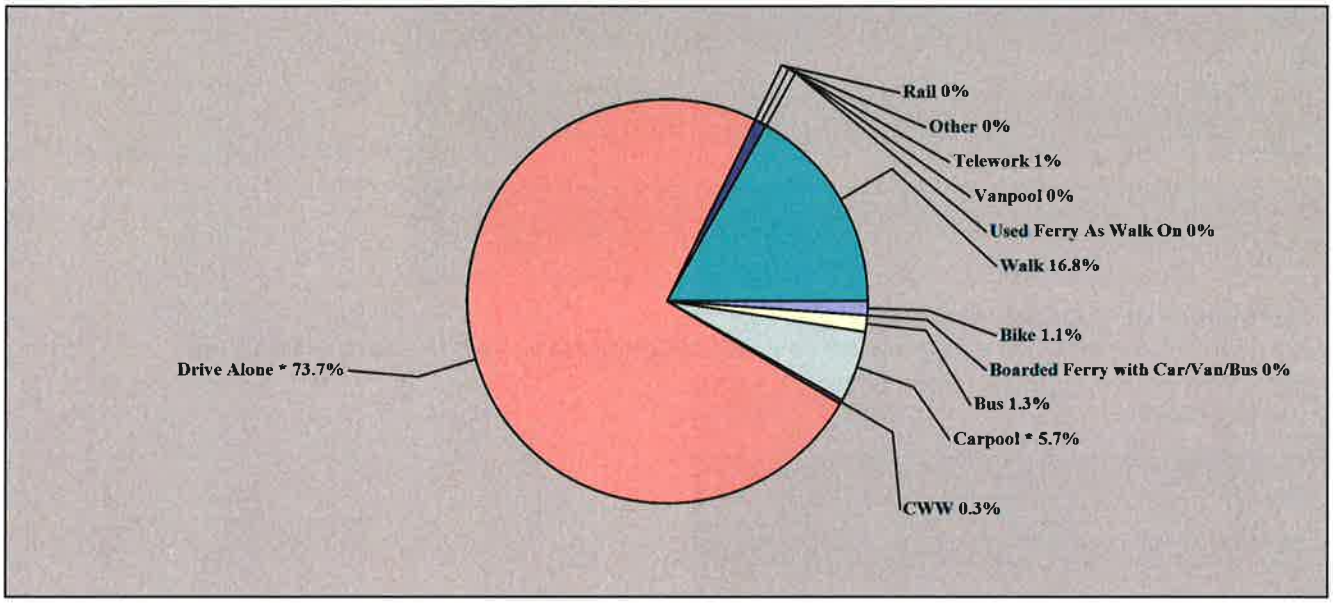
Mode	Trips During This Survey	% of Trips During This Survey	% of Trips During Previous Survey	Employees Who Used This Mode at Least Once During This Survey	% of Employees Who Used This Mode at Least Once During This Survey	% of Employees Who Used This Mode at Least Once During Previous Survey
Drive Alone *	512	76.0%	73.5%	114	83.2%	82.9%
Carpool *	36	5.3%	7.5%	12	8.8%	13.6%
Vanpool	0	0.0%	0.0%	0	0.0%	0.0%
Bus	8	1.2%	1.6%	3	2.2%	2.9%
Rail	0	0.0%	0.0%	0	0.0%	0.0%
Bike	7	1.0%	1.3%	3	2.2%	1.4%
Walk	103	15.3%	13.8%	24	17.5%	15.0%
Telework	6	0.9%	2.3%	4	2.9%	7.1%
CWW	2	0.3%	0.1%	1	0.7%	0.7%
Boarded Ferry with Car/Van/Bus	0	0.0%	0.0%	0	0.0%	0.0%
Used Ferry As Walk On	0	0.0%	0.0%	0	0.0%	0.0%
Other	0	0.0%	0.0%	0	0.0%	0.0%

** Motorcycle-1 is now included in Drive Alone and Motorcycle-2 is included in Carpool. Information about these trips is still available by request.*

Commute Trips By Mode - Affected Employees

Q.4: Last week, what type of transportation did you use each day to commute TO your usual work location? (Mode used for the longest distance.)

Mode Split - CTR Affected Employees



Mode	Trips During This Survey	% of Trips During This Survey	% of Trips During Previous Survey	Employees Who Used This Mode at Least Once During This Survey	% of Employees Who Used This Mode at Least Once During This Survey	% of Employees Who Used This Mode at Least Once During Previous Survey
Drive Alone *	451	73.7%	72.0%	100	81.3%	81.3%
Carpool *	35	5.7%	7.9%	11	8.9%	13.8%
Vanpool	0	0.0%	0.0%	0	0.0%	0.0%
Bus	8	1.3%	1.8%	3	2.4%	3.3%
Rail	0	0.0%	0.0%	0	0.0%	0.0%
Bike	7	1.1%	1.5%	3	2.4%	1.6%
Walk	103	16.8%	14.6%	24	19.5%	16.3%
Telework	6	1.0%	2.1%	4	3.3%	5.7%
CWW	2	0.3%	0.2%	1	0.8%	0.8%
Boarded Ferry with Car/Van/Bus	0	0.0%	0.0%	0	0.0%	0.0%
Used Ferry As Walk On	0	0.0%	0.0%	0	0.0%	0.0%
Other	0	0.0%	0.0%	0	0.0%	0.0%

** Motorcycle-1 is now included in Drive Alone and Motorcycle-2 is included in Carpool. Information about these trips is still available by request.*

Alternative Modes - Number of Employees Who Used a Non-Drive Alone Mode:

Non-Drive Alone Number Of Days	Exactly this # of Employees	Exactly this % of Employees	At least # of Employees	At least % of employees
0 Day	91	66%	137	100%
1 Days	8	6%	46	34%
2 Days	9	7%	38	28%
3 Days	6	4%	29	21%
4 Days	2	1%	23	17%
5 Days	18	13%	21	15%
6 or More Days	3	2%	3	2%

Count by Occupancy of Carpools and Vanpools

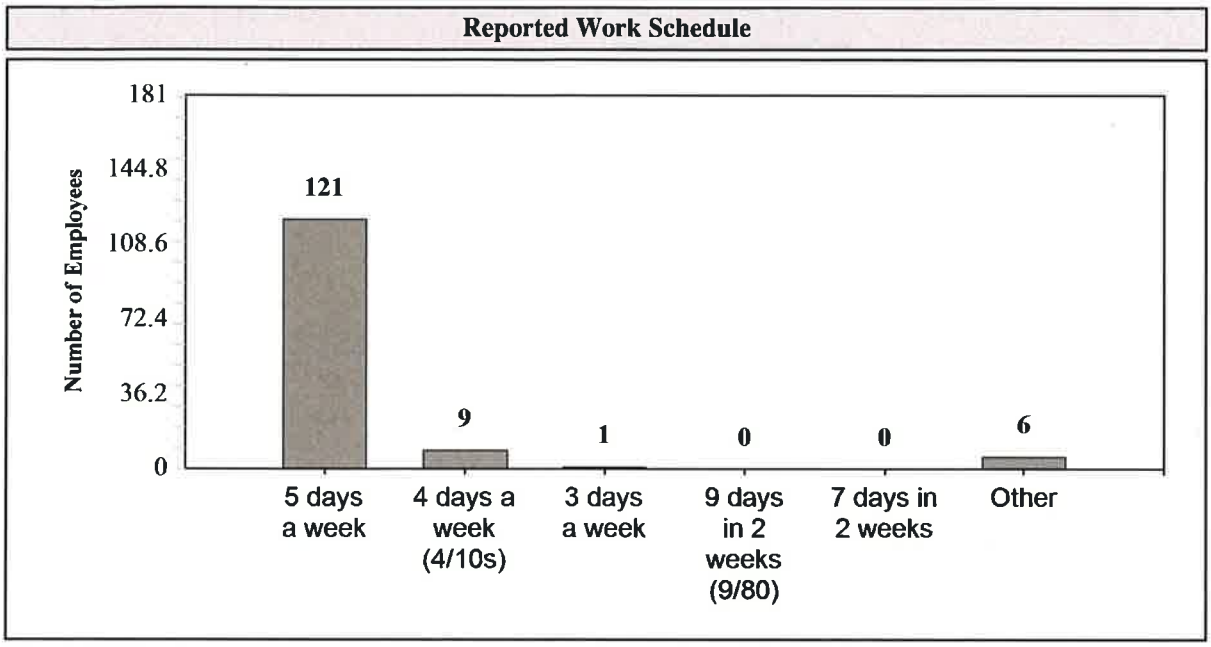
Q.4 If you used a carpool or vanpool as part of your commute, how many people (age 16 or older) are usually in the vehicle?

Ridesharing Occupancy	Mode	Response Count
2*	Carpool	36
3	Carpool	0
4	Carpool	0
5	Carpool	0
>5	Carpool	0
<5	Vanpool	0
5	Vanpool	0
6	Vanpool	0
7	Vanpool	0
8	Vanpool	0
9	Vanpool	0
10	Vanpool	0
11	Vanpool	0
12	Vanpool	0
13	Vanpool	0
14	Vanpool	0
>14	Vanpool	0

* Motorcycle-2 counted with Carpool-2 for this table.

Reported Work Schedule - All Employees

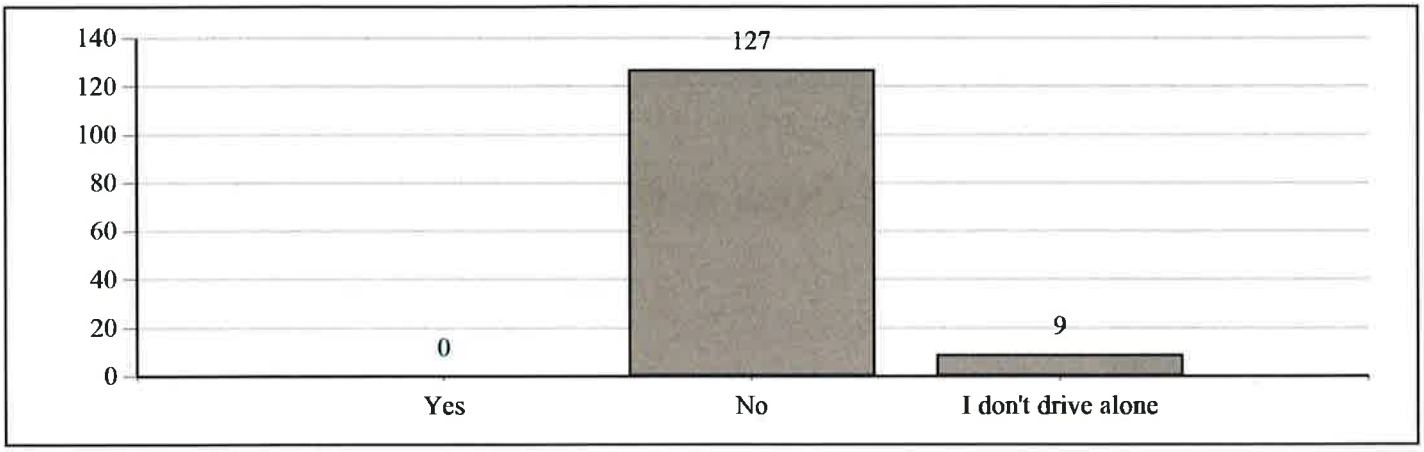
Q.8 Which of the following best describes your work schedule?



Reported Work Schedule	# Of Responses	% Of Employees
5 days a week	121	88.3%
4 days a week (4/10s)	9	6.6%
3 days a week	1	0.7%
9 days in 2 weeks (9/80)	0	0%
7 days in 2 weeks	0	0%
Other	6	4.4%

Parking and Telework

Q.9: On the most recent day that you drove alone to work, did you pay to park? (Mark "yes" if you paid that day, if you prepaid, if you are billed later, or if the cost of parking is deducted from your paycheck.)



Q.10: How many days do you typically telework?

Telework Frequency	# of Responses	% of Responses
No Answer/Blank	1	0.7%
I don't telework	85	62.0%
Occasionally, on an as-needed basis	28	20.4%
1-2 days/month	5	3.6%
1 day/week	11	8.0%
2 days/week	4	2.9%
3 days/week	3	2.2%

Reasons for driving alone to work/not driving alone to work

Q11. When you do not drive alone to work, what are the three most important reasons?

Question Text	# of Responses	% of Responses
Personal health or well-being	40	16.5%
Other	31	12.8%
To save money	30	12.4%
To save time using the HOV lane	30	12.4%
Driving myself is not an option	27	11.2%
I have the option of teleworking	25	10.3%
Environmental and community benefits	25	10.3%
Financial incentives for carpooling, bicycling or walking.	14	5.8%
Cost of parking or lack of parking	7	2.9%
Free or subsidized bus, train, vanpool pass or fare benefit	5	2.1%
Emergency ride home is provided	5	2.1%
Preferred/reserved carpool/vanpool parking is provided	2	0.8%
I receive a financial incentive for giving up my parking space	1	0.4%

Q12. When you drive alone to work, what are the three most important reasons?

Question Text	# of Responses	% of Responses
I like the convenience of having my car	90	26.7%
Riding the bus or train is inconvenient or takes too long	82	24.3%
My commute distance is too short	41	12.2%
Other	34	10.1%
Family care or similar obligations	33	9.8%
My job requires me to use my car for work	31	9.2%
Bicycling or walking isn't safe	14	4.2%
I need more information on alternative modes	11	3.3%
There isn't any secure or covered bicycle parking	1	0.3%

Washington State Department of Transportation

Employer ID: T80011

Commute Mode By ZipCode for All Employees

Q6. What is your home zip code?

			Weekly Count of Trips By Mode												
Home Zip code	Total Employees	Employee Percentage	Drive Alone	Carpool	Vanpool	Motorcycle	Bus	Train	Bike	Walk	Telework	CWW	Ferry (Car/Van/Bus)	Ferry (walk-on)	Other
98033	42	30.66%	106	0	0	0	6	0	0	103	1	0	0	0	0
98034	17	12.41%	69	12	0	0	0	0	6	0	0	0	0	0	0
98012	7	5.11%	33	2	0	0	0	0	0	0	0	0	0	0	0
98021	7	5.11%	29	0	0	0	0	0	1	0	0	0	0	0	0
98052	7	5.11%	36	0	0	0	0	0	0	0	0	0	0	0	0
98059	6	4.38%	23	5	0	0	0	0	0	0	0	0	0	0	0
98020	4	2.92%	13	5	0	0	0	0	0	0	0	0	0	0	0
98026	3	2.19%	14	0	0	0	0	0	0	0	0	0	0	0	0
98036	3	2.19%	13	2	0	0	0	0	0	0	0	0	0	0	0
98004	2	1.46%	10	0	0	0	0	0	0	0	0	0	0	0	0
98008	2	1.46%	9	0	0	0	0	0	0	0	0	0	0	0	0
98011	2	1.46%	12	0	0	0	0	0	0	0	0	0	0	0	0
98019	2	1.46%	10	0	0	0	0	0	0	0	0	0	0	0	0
98028	2	1.46%	10	0	0	0	0	0	0	0	0	0	0	0	0
98058	2	1.46%	8	0	0	0	0	0	0	0	0	0	0	0	0
98072	2	1.46%	9	0	0	0	0	0	0	0	0	0	0	0	0
98087	2	1.46%	10	0	0	0	0	0	0	0	0	0	0	0	0
98115	2	1.46%	10	0	0	0	0	0	0	0	0	0	0	0	0
98133	2	1.46%	8	0	0	0	0	0	0	0	2	0	0	0	0
98208	2	1.46%	6	2	0	1	0	0	0	0	1	0	0	0	0
98258	2	1.46%	8	0	0	0	0	0	0	0	2	0	0	0	0
98272	2	1.46%	10	0	0	0	0	0	0	0	0	0	0	0	0
	1	0.73%	0	0	0	0	0	0	0	0	0	0	0	0	0
98007	1	0.73%	5	0	0	0	0	0	0	0	0	0	0	0	0
98027	1	0.73%	3	0	0	0	0	0	0	0	0	2	0	0	0
98038	1	0.73%	4	0	0	0	0	0	0	0	0	0	0	0	0

Report generated on 11/3/2017

Washington State Department of Transportation

Employer ID: T80011

			Weekly Count of Trips By Mode												
Home Zip code	Total Employees	Employee Percentage	Drive Alone	Carpool	Vanpool	Motorcycle	Bus	Train	Bike	Walk	Telework	CWW	Ferry (Car/Van/Bus)	Ferry (walk-on)	Other
98042	1	0.73%	5	0	0	0	0	0	0	0	0	0	0	0	0
98045	1	0.73%	5	0	0	0	0	0	0	0	0	0	0	0	0
98102	1	0.73%	3	0	0	0	2	0	0	0	0	0	0	0	0
98117	1	0.73%	5	0	0	0	0	0	0	0	0	0	0	0	0
98119	1	0.73%	5	0	0	0	0	0	0	0	0	0	0	0	0
98155	1	0.73%	5	0	0	0	0	0	0	0	0	0	0	0	0
98177	1	0.73%	7	0	0	0	0	0	0	0	0	0	0	0	0
98178	1	0.73%	2	3	0	0	0	0	0	0	0	0	0	0	0
98225	1	0.73%	0	0	0	0	0	0	0	0	0	0	0	0	0
98405	1	0.73%	1	5	0	0	0	0	0	0	0	0	0	0	0
98926	1	0.73%	5	0	0	0	0	0	0	0	0	0	0	0	0

Report generated on 11/3/2017

CITY OF KIRKLAND

6th Street Corridor

Prepared for The City of Kirkland
Prepared by Transpo Group | www.transpogroup.com

December 2017

16090

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EXECUTIVE SUMMARY

Current Corridor Context

The City of Kirkland's natural north-south orientation relies heavily on north-south corridors, including 6th Street S/108th Avenue NE, Interstate 405 (I-405), and Lake Washington Boulevard NE. The 6th Street Corridor, which extends from Central Way to the South Kirkland Park-and-Ride, and parallel corridors are subject to significant recurring peak congestion. This congestion impacts the livability of the community and ability to address and accommodate future growth.

Growth and Land Use

The City of Kirkland anticipates both population and employment growth in the next decade. Consistent with the state Growth Management Act, the City has adopted Kirkland 2035 and the Transportation Master Plan to address growth and plan for the mobility of people and goods. These plans define the importance of the 6th Street Corridor for all modes of transportation and convey core City values to create a walkable, vibrant, livable, connected, and green community. This corridor study identifies strategies and potential solutions for meeting current and future mobility needs for this essential City corridor.

Developing Solutions

Key tasks for this study included data collection, public outreach, analysis of current and future conditions, analysis of land use options within the Houghton Everest Neighborhood Center, development of potential solutions, and description of recommended solutions with implementation plans. The study included an evaluation of different transportation solutions to meet current and future transportation needs, from education and policies to capital improvements.

Conclusion

The 6th Street Corridor is an important north-south transportation corridor for Kirkland. Peak congestion and includes long queues and delays that are frustrating for auto and transit commuters. For the neighborhoods adjacent to this corridor, the corridor is central to their community and impacts their quality of life. With investments (largely in transit) to help improve regional mobility, the corridor can move people and start to address growth. Investing in pedestrian, and bicycle improvements can also further improve the quality and livability of the corridor.

CURRENT CORRIDOR CONTEXT

Addressing potential improvements to help address City-wide and regional growth needs for mobility requires an in-depth review of the corridor operations including all modes, collecting data and engaging with the community for their perspectives.

By the numbers:

Only 5% of all north/south regional[1] traffic uses the 6th Street Corridor. I-405 carries most regional traffic.

Of the north-south Kirkland local[2] traffic, one third uses the 6th Street Corridor

During the peak period, 74–82% of vehicles using the 6th Street Corridor are accessing homes or jobs in Kirkland. The other trip end may be outside Kirkland.

In 20 years, daily traffic has varied between 10,000 –13,000 vehicles per day

The study area for the 6th Street Corridor Study includes the roadway designated as 6th Street, 6th Street S, and 108th Avenue NE between Central Way and Northup Way. For this report, it is hereinafter defined as the 6th Street Corridor. The corridor is designated as a minor arterial, which runs north-south from Central Way at the north end to Northup Way and the South Kirkland Park-and-Ride in the south. The corridor is bisected by the NE 68th Street/NE 70th Street corridor, which is the only east-west arterial connection along the corridor. The 6th Street corridor provides connections to downtown Kirkland (through the Moss Bay Neighborhood), Lake View Neighborhood, I-405, and SR 520. The Cross Kirkland Corridor (CKC) is directly adjacent to the corridor and provides a valuable north-south alternative connection to the 6th Street Corridor.

The 6th Street Corridor Study was conducted with the Houghton-Everest Neighborhood Center Land Use Study to take advantage of the opportunity to coordinate public outreach regarding transportation improvements. As part of Kirkland 2035 (the City Comprehensive Plan update), a Transportation Master Plan was developed, and its goals and objectives were incorporated into the Transportation Element of the Comprehensive Plan. The goals and objectives of the Transportation Master Plan were used to guide the outcomes of the 6th Street Corridor Study.

Study Limits and Function

Figure 1 illustrates the project corridor, surrounding vicinity, and the parallel corridors. **Figure 2** highlights the 6th Street / 108th Avenue NE corridor and key traffic control. A broad range of data were readily available through the City and other transportation providers. Transpo aimed to maximize this as much as possible. Transpo leveraged existing turning movement count data, bicycle and pedestrian counts on the CKC, and daily volumes on the 6th Street Corridor. Where data did not exist, Transpo collected parking and travel time data, and used StreetLight data to obtain origin-destination data and better understand travel patterns and behavior. StreetLight combines a variety of data sources such as in vehicle GPS sources to better understand travel patterns.

[1] Regional traffic are trips that have no origin or destination in Kirkland.

[2] Local traffic refers to trips with either an origin or destination in Kirkland.

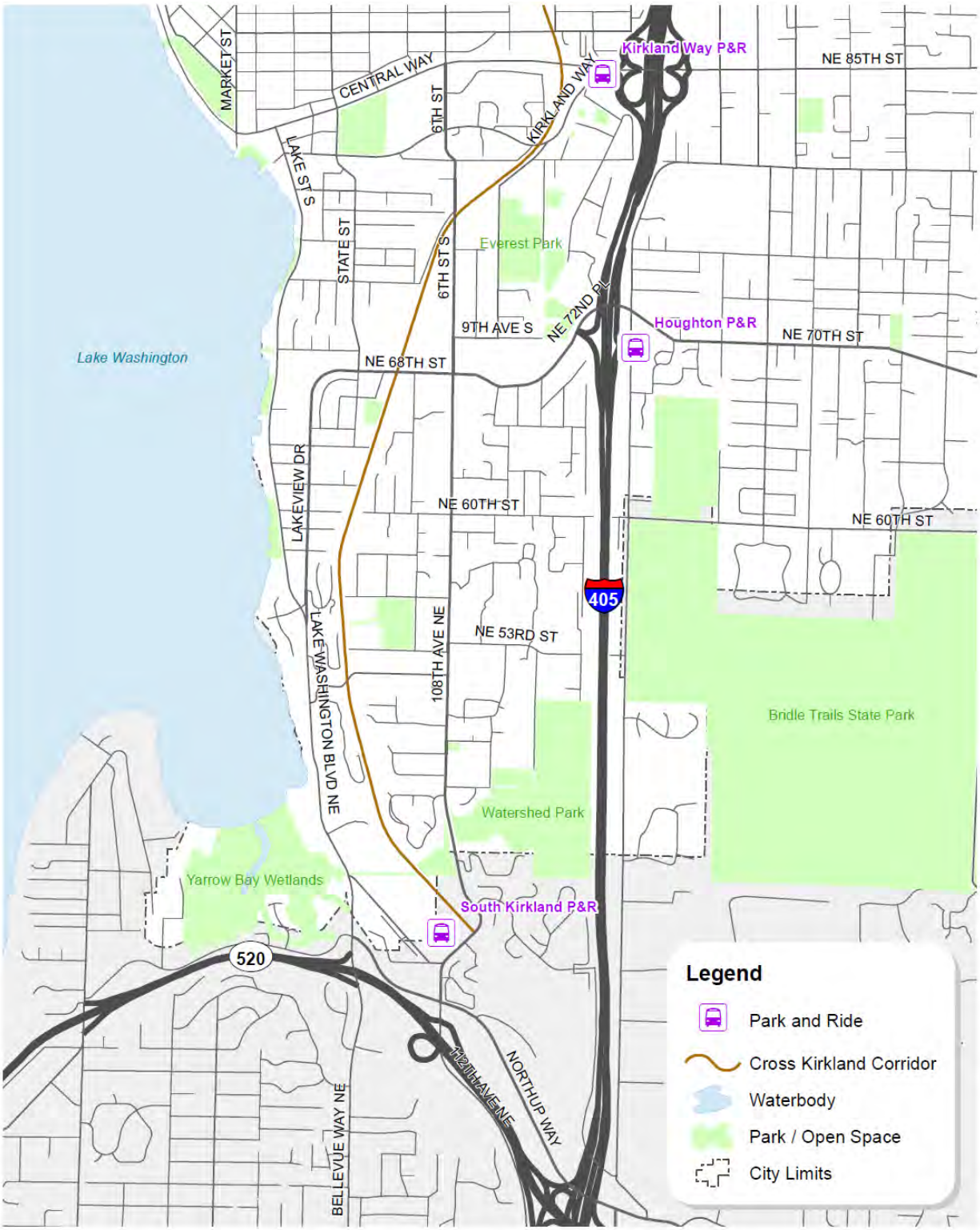


Figure 1 - Study Area

Corridor Characteristics

Within the 2.5 miles of the corridor today, there are 4 traffic signals (or almost 1.5 per mile) and 20 crosswalks (or over 7 per mile). Of these 20 crosswalks, 8 are protected with Rectangular Rapid Flashing Beacons (RRFBs). There are transit stops every ¼ mile.

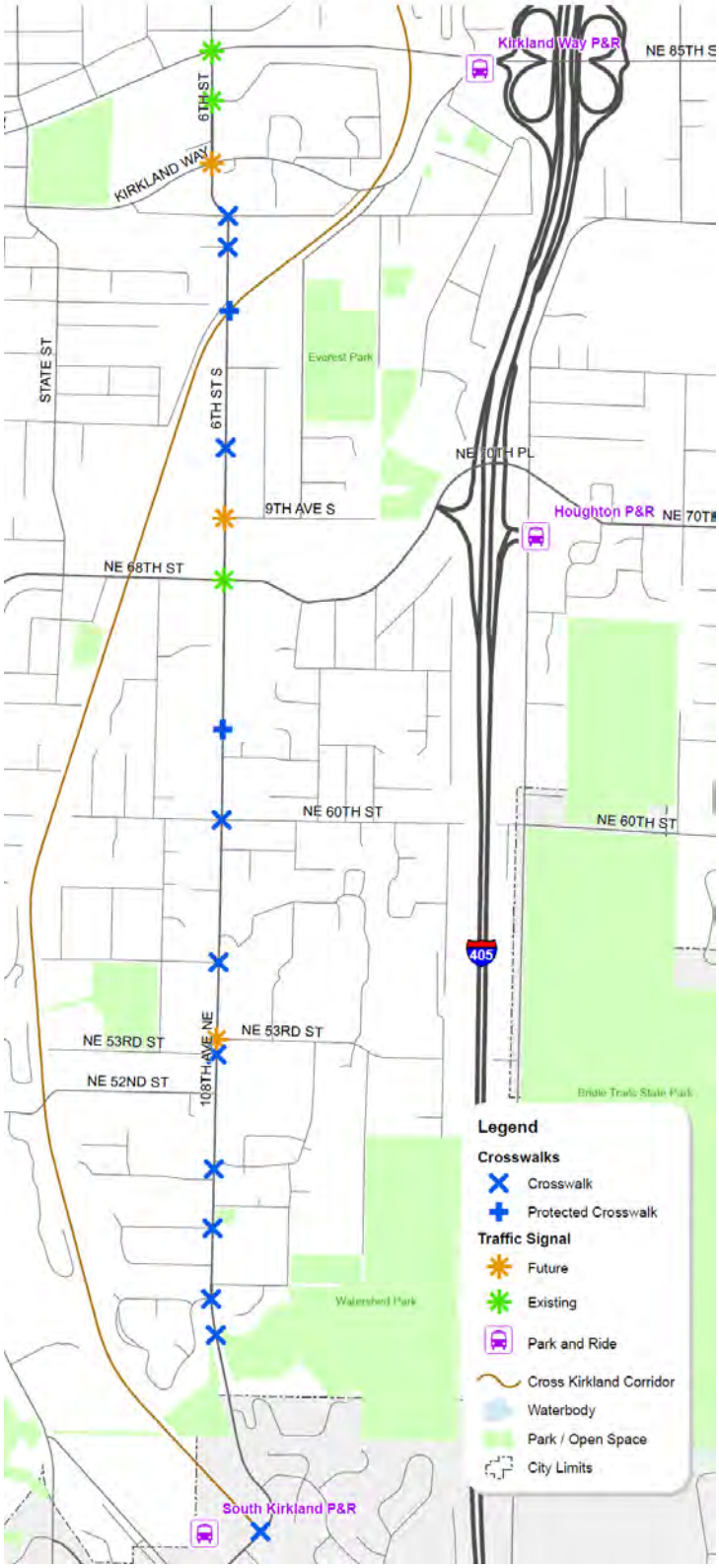


Figure 2 – 6th Street Corridor

Study Limits and Parallel Corridors
For the purposes of the study Transpo cast a broad net to collect data for the study area generally bounded by NE 85th Street/Central Way to the north, 116th Avenue to the east, Lake Washington Boulevard/Lake Street to the west and SR 520 to the south. The primary focus was on 6th Street /108th Avenue and its relationship to the parallel facilities that make up this transportation corridor including:

- NE 116th Street: NE 85th Street to Northup Way
- Lake Washington Boulevard NE: SR 520 to Northern Terminus
- Lake Street S: Southern Terminus to Kirkland Avenue
- State Street: NE 68th Street to Kirkland Avenue
- I-405: SR 520 to NE 85th Street
- Cross Kirkland Corridor: 108th Avenue NE to NE 85th Street

Study Analysis Years and Time Periods
For the purposes of this study, the focus was on PM peak period (identified as the most congested). Analysis was focused on 2016 (existing) and 2035 (long term). The 2035 horizon year aligns with travel demand analysis in the City Transportation Master Plan.

Data Collection

In defining the type and expanse of data to be used for the study, data were collected to support expected performance measures that align with the goals of this study. These goals included

- developing a short- and long-term multimodal transportation project and programs
- strategies to improve transportation conditions
- align with the goals of the Transportation Master Plan

Additionally, feedback from the neighborhoods defined perceived transportation problems in the corridor. Data were collected to substantiate and address these comments, including:

- movement of people
- operations and access of all modes
- growth
- access
- travel times
- travel patterns
- queues
- delays
- parking utilization
- auto volumes
- bike volumes
- transit travel times
- transit ridership
- park-and-ride utilization

Other data and information used for this study included information and forecasted growth from the Comprehensive Plan travel demand model, Inrix fused data of vehicle speeds, and vehicle origin-destination data from StreetLight.

Current Corridor Characteristics

There are pedestrian, bicycle, transit, and vehicle transportation systems operating in the 6th Street corridor today.

Pedestrians & Bikes

Since the opening in 2015 of the interim trail on the CKC, pedestrian and bicycle activity has increased not only along the trail but along the corridors connecting to the trail.

Pedestrian facilities, including sidewalks, are present along all major, minor, and collector streets as well as many neighborhood streets. Sidewalks provide an important system for school children and their caregivers while walking to the many schools in the corridor. Sidewalks adjacent to the retail center along NE 68th Street carry high volumes of pedestrians, yet are of minimum width and cannot accommodate walking more than two abreast. Some linkages for pedestrians are provided through or between residential and commercial parcels not along roadways and provide additional pedestrian connections. These include connections to or across the CKC, the Northwest University Campus, the five parks in the study area (Everest Park, Terrace Park, Phyllis A. Needy Park, Carillon Woods, and Watershed Park),

the pedestrian crossing of I-405 at NE 60th Street and adjacent to the fire station linking to NE 66th Place and 5th Avenue S.

Bicycle use within the study area is growing. This could be due in part to the opening of the interim trail on the CKC in 2015 and increasing overall bicycle demand. Automatic bicycle counters were installed along the corridor and counts of pedestrian and bicycles for the month of June in 2016 are shown in **Figure 3**.

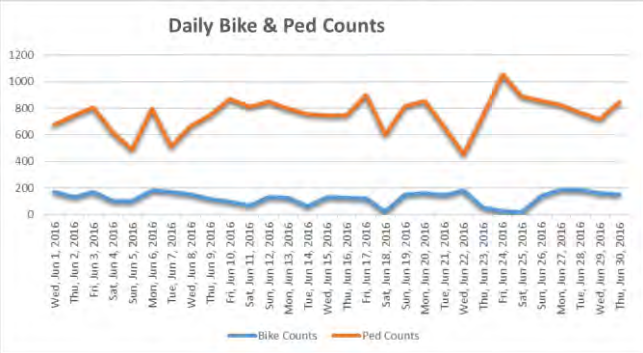


Figure 3 - June 2016 Ped & Bike Counts

Cross Kirkland Corridor
The Transportation Master Plan (TMP) includes the CKC as a regional trail with an existing interim trail. It is envisioned to serve as a multimodal transportation corridor connecting with other segments of the Eastside Rail Corridor and eventually with segments of the regional transportation network. The CKC Master Plan defines objectives for the corridor, including potential high-capacity transit. The CKC Master Plan defines existing and planned locations for access to the CKC.

Bicycle Network
To support bicycling in Kirkland, the TMP defines a Bicycle Network that notes existing bike lanes, recommended bike lanes, and recommended greenways. Greenways are lower-volume, lower-speed roadways that may be more ideal for bicycling for the broader community, including those who are not as comfortable biking.
A list of each type of facility in the study area is listed below:

Existing Bike Lanes
- 6th Street S
- 108th Avenue NE (missing northbound segment near NE 53rd Street/52nd Street)
- Lake Washington Boulevard NE
- Lakeview Drive
- NE 68th Street/NE 70th Street
- Kirkland Way (West of 6th Street)

Recommended Greenways
- NE 60th Street
- NE 52nd Street
- NE 53rd Street

The CKC is an important element of the regional bicycle network. An important connection between the CKC and the SR 520 bike lanes was recently completed along Northup Way in Bellevue.

Transit Service and System

Transit service is an important use for providing mobility along the corridor with Metro and Sound Transit service connecting the City and South Kirkland Park-and-Ride with regional destinations including University of Washington, Downtown Seattle, Bellevue, and Redmond.

Transit Routes
Transit routes using the 6th Street corridor serve Kirkland with connections to Downtown Seattle, University of Washington, and Factoria via Overlake/Redmond/Eastgate/Bellevue College. In addition to these routes, the South Kirkland Park-and-Ride provides additional connections to Bothell/Kenmore, Overlake/Microsoft, and Downtown Bellevue.

Transit routes using the corridor are listed below:

Metro 234/235 – Kenmore/Bothell to downtown Bellevue via Lake Washington Boulevard, with all day service

Metro 245 – Downtown Kirkland to Overlake/Crossroads/Eastgate/Factoria via 6th Street, with all day frequent service

Metro 255 - Totem Lake/Juanita to Downtown Seattle via 6th Street/108th Avenue NE, with all day frequent service

Metro 249 – Microsoft/Overlake/North Bellevue College to Downtown Bellevue via South Kirkland Park-and-Ride, with all day service

Sound Transit 540 – Downtown Kirkland to University of Washington via 6th Street/108th Avenue NE, with all day frequent service

Transit Network

The TMP defines a transit network including a Primary Transit Network and Secondary Transit Network. Within the study area, these routes are classified as part of the Transit Network:

Primary Transit Network

- 6th Street S
- 108th Avenue NE
- NE 85th Street/Central Way
- Kirkland Way
- NE 70th Street (East of 108th Avenue NE)
- 3rd Street

Secondary Transit Network

- Lake Street S
- NE 68th Street (State Street to 108th Avenue NE)
- Lakeview Drive
- Lake Washington Boulevard NE

Transit stops are located every ¼ mile along the corridor; however, almost half of the riders using regional service in the corridor board the bus at the South Kirkland Park-and-Ride. While this park-and-ride was expanded from 596 spaces to 785 spaces in 2015, it remains at capacity (see **Figure 4**). Metro is piloting a program to reserve spaces in park-and-rides for carpoolers. Transit, including private shuttles, Sound Transit's route 540, and Metro's route 255 and 245, all use the corridor and are subject to recurring peak congestion. King County Metro (and Sound Transit) provided Automatic Vehicle Location (AVL) data for the transit routes serving the corridor from an average week in Spring 2016, which can be used to analyze

Figure 4 - S Kirkland Park-and-Ride Use

transit system performance including travel time and delay.

Figure 5 provides a visual display noting where delays occur for all the routes using the corridor. AVL data were provided by King County Metro and Sound Transit for routes in the corridor. Most of the delay is related to passenger boarding and alighting and stopped delay at intersections. As shown, Metro Route 255 accumulates the most delay, including delay in Seattle. Sound Transit Route 540 connects Downtown Kirkland and the University of Washington with less frequent peak service. Metro Route 245 connects Kirkland and Factoria with all day service and half hour headways.

Automatic Passenger Count data from Spring 2016 suggests that nearly half of the bus volumes board and alight at the South Kirkland Park-and-Ride. Private, employer-funded shuttles also use this corridor and serve employers in Seattle as well as Google in Kirkland. Google, which is a Commute Trip Reduction (CTR)-affected site, operates shuttles north for commuters (two in the morning and two in the evening) and south every hour between the Google offices in Kirkland and Seattle.

Figure 6 shows the home locations of license plates observed at the South Kirkland Park-and-Ride for a day Spring 2015. Transit routes serving that park-and-ride are overlaid on the map and suggest that Metro Route 255 and Sound Transit Route 540 pass by many of the homes of people using the park-and-ride. Because transit is delayed on city arterial streets at intersections and during boarding, transit

customers choose to drive to the park-and-ride, adding to arterial congestion, rather than take a bus closer to home. Throughout the corridor, buses stop in-lane to serve bus stops and this blocks general traffic. Private company shuttles from Google, Amazon, and Facebook that provide service for their employees also travel the corridor.

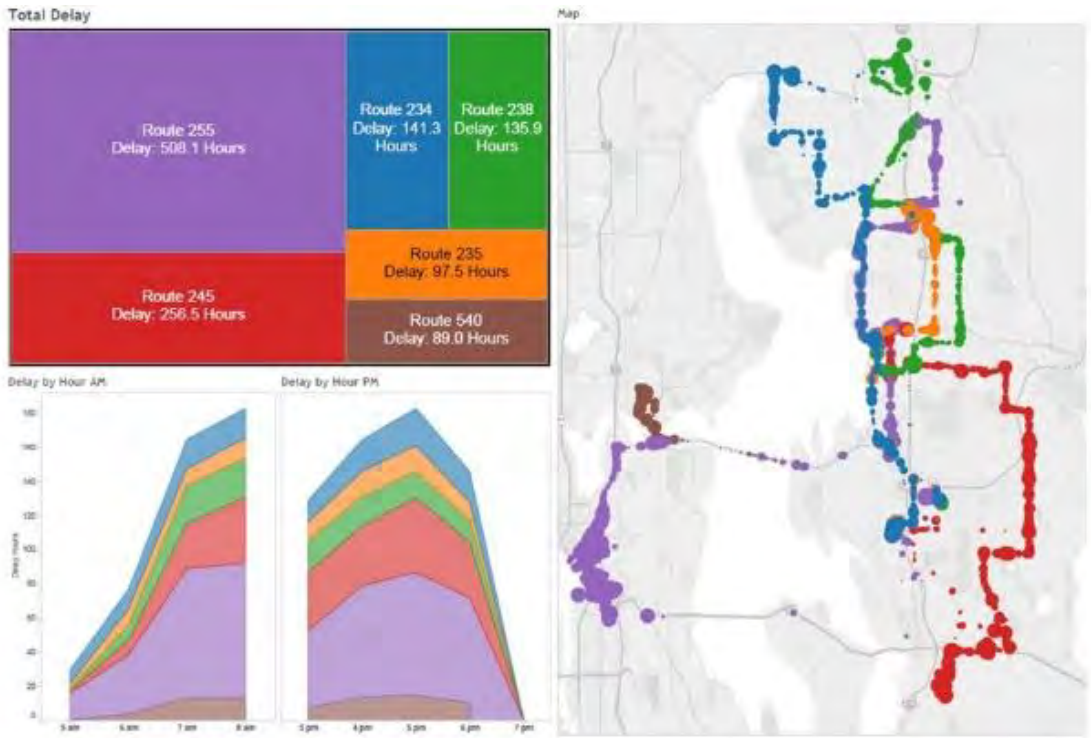


Figure 5 - Transit Delay (Spring 2016)

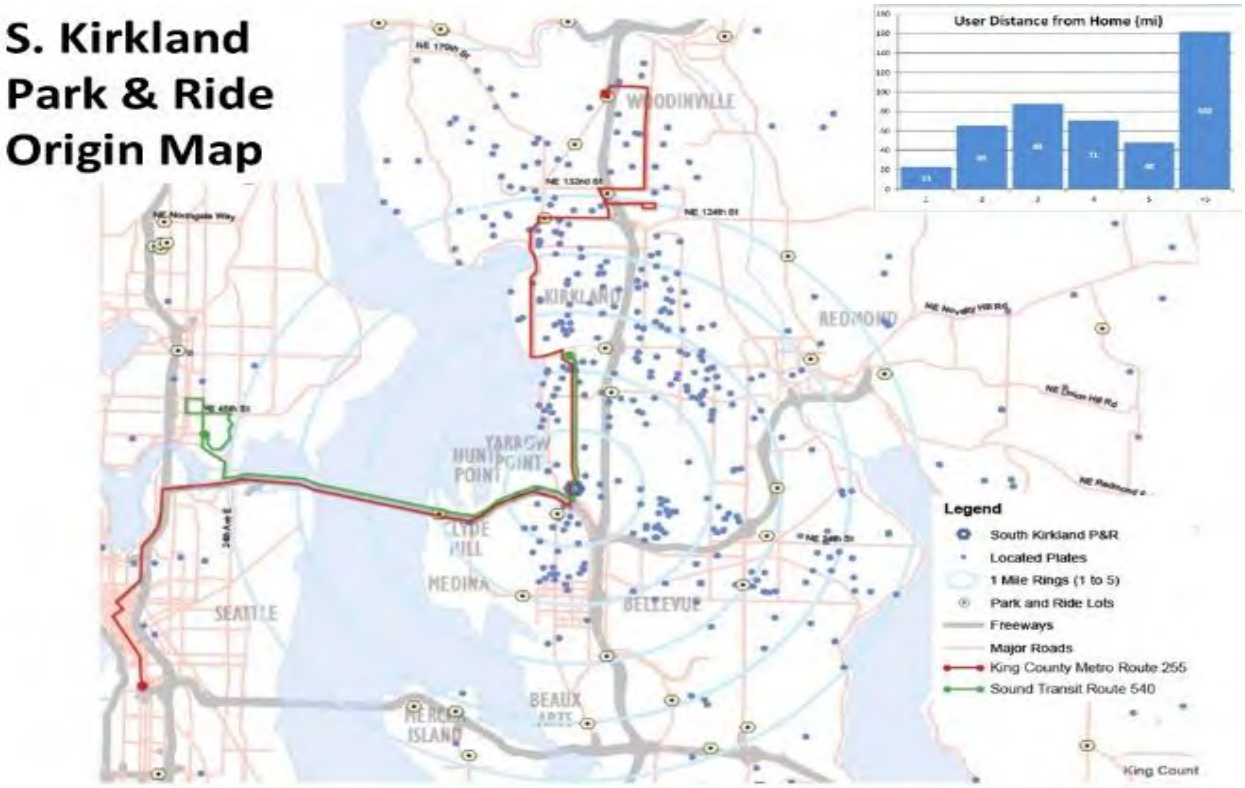


Figure 6 - S Kirkland Park-and-Ride License Plate Origins and Routes (2015)

Figure 1 - Kirkland P&R Routes and Origins

Vehicle Network

Currently the 6th Street corridor is a key arterial for the City of Kirkland. This corridor connects many neighborhoods and is an important link to the regional transportation system. For much of its roughly 2.5-mile length, the corridor provides two travel lanes, sidewalks, and bicycle lanes. South of NE 68th Street, the corridor includes a two-way center left-turn lane. North of NE 68th Street, the corridor includes some segments with on-street parking and some two-way center left-turn lanes. Mid-block crosswalks are located throughout the corridor with some raised center medians. Many crossings are protected with Rectangular Rapid Flashing Beacons. An example of this type of protection is provided at the CKC interim trail crossing on 6th Street S.

Parallel arterial roadway corridors to the 6th Street corridor include I-405 and Lake Washington Boulevard/Lakeview Drive/State Street. I-405 is a multi-lane interstate with two express toll lanes and three general purpose lanes in each direction. Lake Washington Boulevard is a principal arterial with two lanes in each direction and bike lanes between the southerly city limit and Lakeview Drive, and one lane in each direction and bike lanes and on-street parking north of Lakeview Drive. A relative comparison of volumes for the parallel corridors is provided below in **Figure 7**, which reflects the proportion of daily traffic on the three corridors. Only 5 percent of the over 222,500 daily trips use the 6th Street corridor.

The CKC is also a parallel transportation corridor that currently consists of the interim trail. The CKC Master Plan envisions a multimodal corridor with a regional trail and high-capacity transit linking Kirkland and the region. It utilizes a former rail corridor and is part of a regional trail system. It runs parallel to the 6th Street corridor, crossing it at 5th Place S in the north and crossing 108th Avenue NE near the South Kirkland Park-and-Ride.

Currently, the 6th Street corridor roadway carries between 10,000 and 13,000 vehicles per day. **Figure 8** shows that in the last 17 years, daily volumes have remained relatively constant. The corridor is highly directional, with peak traffic southbound in the morning and northbound in the afternoon.

Street Network

The TMP defines a hierarchy of the roadway network that prioritizes movement of vehicles in contrast to access. It also identifies facilities emphasizing other modes.

Arterial roadways are shown in **Figure 1**. The Functional Classification of Streets within the TMP defines the following classifications within the study area:

State Routes
- I-405 – Interstate

Principal Arterial
- Lake Washington Boulevard
- NE 85th Street/Central Way

Minor Arterial
- 6th Street S / 108th Avenue NE
- Lakeview Drive
- NE 68th Street/NE 70th Street
- Kirkland Way/Kirkland Avenue
- State Street S

Collector
- 9th Avenue S
- 8th Street S/Railroad Avenue
- NE 52nd Street
- NE 53rd Street

Arterials that cross the 6th Street corridor include NE 68th Street/NE 70th Street, Kirkland Way and NE 85th Street/Central Way. These arterials include sidewalks and serve transit. Sidewalks and bike lanes are provided or planned on these arterials and provide connections to other facilities that serve people walking and biking. The arterials crossing the corridor have a single travel lane in each direction with some medians.

Two large land uses in the study area are Northwest University, which is updating its Master Plan, and Google, which opened their second campus building in early 2016. Downtown Kirkland is located at the north end of the corridor, and continues to grow into a dynamic mixed-use center as a result of projects such as Kirkland Urban, an 11.5-acre mixed use development with 650,000 square feet (SF) of office, 225,000 SF of commercial and 300,00 SF of residential. Fire Station 22 is located on 108th Avenue NE just south of the NE 68th Street intersection.

Figure 7 - Parallel Corridor Roadway Volumes

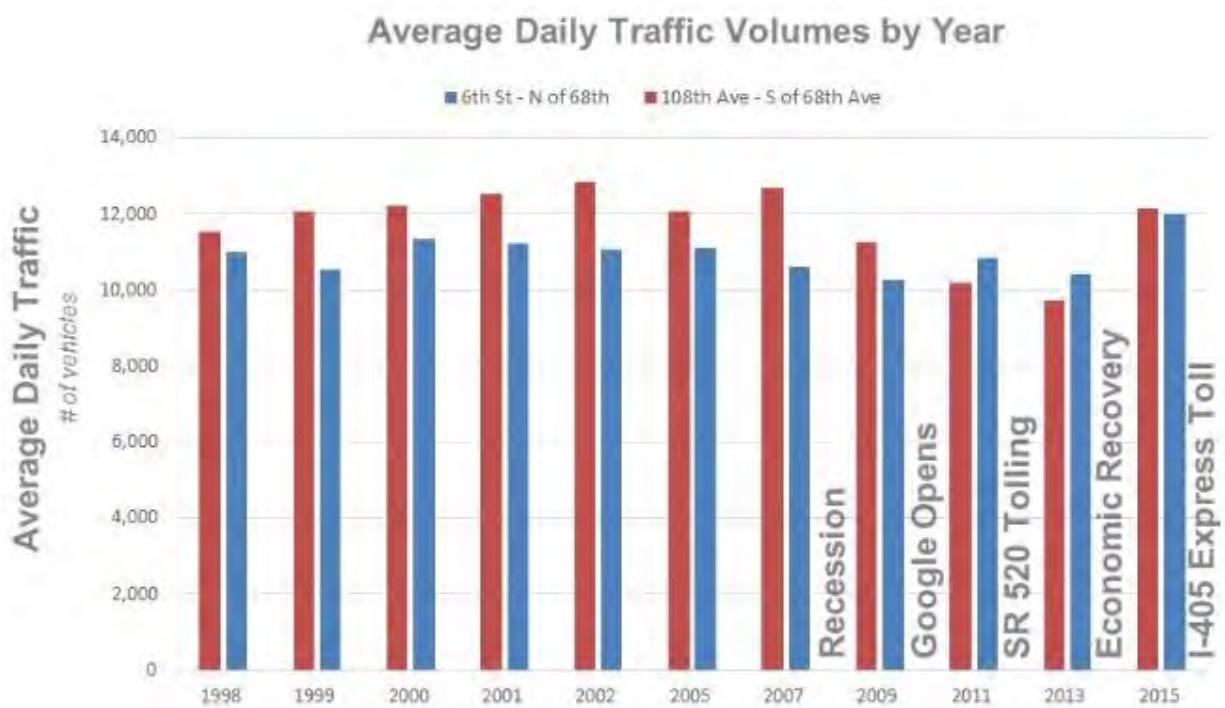


Figure 8 - Daily Volumes Historical Trend

The land use around the 6th Street corridor is integral to the effectiveness of the transportation system. The corridor serves a dynamic mix of existing land uses, including single-family residential, neighborhood retail, commercial, industrial, schools, and a university. Notably, the study area also includes several schools (Emerson, International Community School, Community Elementary School, Lakeview Elementary School, Puget Sound Adventist Academy, Kirkland Children's School, and Northwest University), and the corridor provides important access and circulation for students walking and biking to schools.

The neighborhoods in the 6th Street corridor study area lack a grid of connected local streets. Roadways that do provide secondary circulation and connectivity, specifically 8th Street S in Everest Neighborhood and 106th Avenue in Houghton, have complaints from neighbors of speeding and high volumes. A neighborhood traffic control program works to protect these types of streets from cut-through traffic with traffic calming strategies like speed humps and traffic circles and these strategies have been implemented on both routes and continue to be monitored. Data collected as part of the study did not indicate high use of these two corridors.

The Houghton Everest Neighborhood Center (consisting largely of retail with some office and high density residential) occupies the land surrounding the intersection of NE 68th Street/108th Avenue/6th Street. Access into and out of this center is unorganized and poorly managed. Driveways are close to the intersection creating confusion for drivers with too many decision points or potential conflict points where collisions could occur. Multiple driveways are provided onto the arterials with a midblock crosswalk on NE 68th Street that also creates potential conflict points with pedestrians. The excessive number of potential conflict points from driveways on NE 68th Street and 108th Avenue NE are noted in **Figure 9**. These potential conflicts indicate the potential for vehicle collisions with vehicles, pedestrians, and bicycles. Actual collision history is described in **Figure 12** and does reflect more frequent collisions with pedestrians and bikes on these segments**.**

Conflicts NE 68th Street

- **55 Vehicle - Vehicle**
- **25 Vehicle - Ped/Bike**

Conflicts 108th Ave NE

- **69 Vehicle - Vehicle**
- **24 Vehicle Ped/Bike Conflicts**

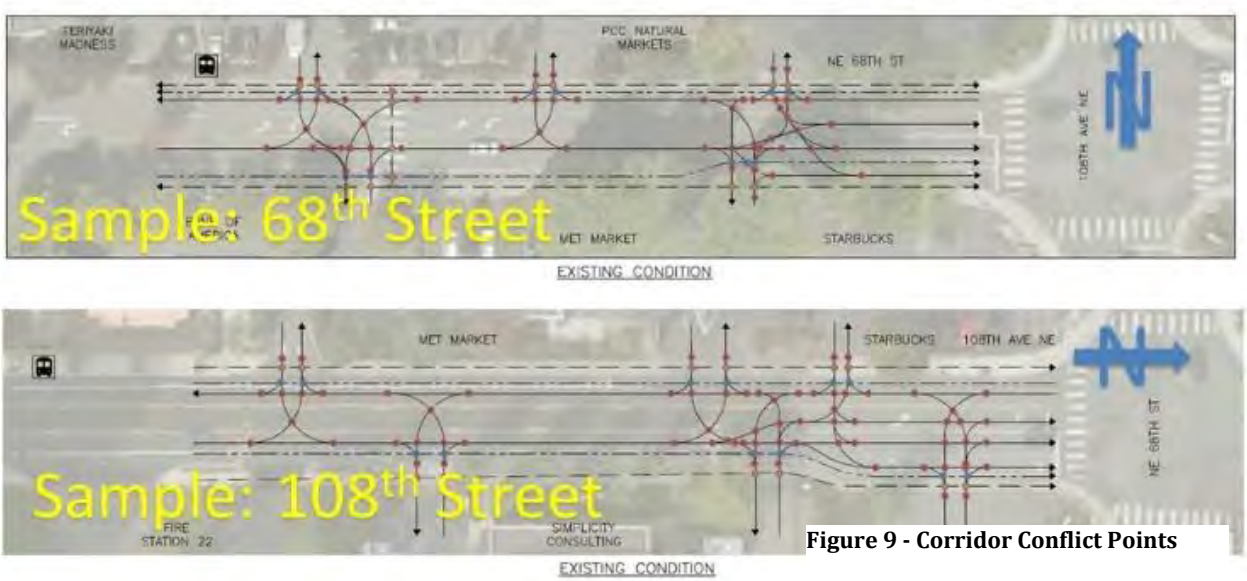


Figure 9 - Corridor Conflict Points

This 2.5-mile long 6th Street corridor currently has very few traffic signals to introduce delay. Congestion typically lasts less than two hours but increases travel time by 15 to 20 minutes as compared to non-peak times.

Afternoon peak northbound queues on the corridor were measured on 108th Avenue NE south of NE 68th Street as 1.25 miles or roughly 250 cars long. Northbound PM Peak period queues on 6th Street south of Kirkland Way has been increasing and been observed to extend as much as 4,000 feet or 160 cars. Extensive queueing lasts for no more than two hours, but during that period, travel times can increase by as much as 15 minutes.

Afternoon peak hour intersection operations were calculated applying methods in the most recent (2010) Highway Capacity Manual. Level of service (LOS) is a qualitative measure used to describe the quality of transportation service provided by a system based on different traffic demands. LOS is used to analyze transportation elements, such as intersections and roadways and is based on performance measures such as vehicle delay. It is reported in levels from A to F with A representing free-flowing conditions and F reflecting very congested or failing conditions. LOS for intersections is described in **Appendix B. Figure 10** provides a summary of existing PM peak hour intersection level of service. As noted in the figure most signal controlled intersections operate poorly, at LOS D–E. The side-street, stop-controlled intersection of 9th Avenue S at 6th Street S currently operates at LOS F due to delays on the side street.

Existing travel behavior was captured using data from a data vendor, StreetLight (www.streetlightdata.com). The StreetLight data are big data fused from a variety of sources and connect signals from vehicles and geolocates them on roadway networks. While these data do not capture every vehicle, they do begin to define patterns in travel by fusing all of the data from several months. In looking at PM peak period data for trips using the corridor, the following pattern emerged: of the PM peak trips using the corridor coming from SR 520 (eastbound from Seattle) and 112th Avenue NE (northbound from Bellevue), 26–38 percent are heading east of I-405, 33–48 percent are heading north of the corridor, and 18–26 percent are accessing I-405. This excludes those trips that have one of their trip ends in the study area. It suggests that much of the traffic using the corridor is destined for Kirkland neighborhoods east and north of the corridor.

108th Avenue NE Typical Queue

Typical Congestion with Transit

Figure 10 – PM Peak Intersection Level of Service

Parking

Through the workshop and neighborhood meetings, parking was identified as being inadequate. Issues related to parking are noted below:

- Parking at the Houghton Everest Neighborhood Center is over capacity and spilling over on to local streets.
- On-street spaces are being used by retail employees at the Houghton Everest Neighborhood Center.
- Parking is occurring on neighborhood streets during the day to access transit (due to crowding at the park-and-ride).
- Parking on neighborhood streets is occurring during the day to access office jobs.

Parking utilization counts were collected on a weekday and indicated parking was adequate. Through a field survey of parking utilization, less than 50 percent of available spaces were occupied in on-street spaces and less than 80 percent in the retail areas with the larger market lots under 60 percent. These are shown in **Figure 11**.

Figure 11 – Study Area Parking Utilization (2016)

Collisions and Safety

Collision data from the City of Kirkland were evaluated for the period from 2012 through 2015. **Figure 12** provides a summary of collisions along the corridor. Over the last three years, there were 97 collisions on the 6th Street corridor between Central Way/NE 85th Street and the southern city limits. Of these, 6 (or 6 percent) involved pedestrians and 2 (or 2 percent) involved bicycles. On NE 68th Street/NE 70th Street between Lakeview Drive and I-405, there were 46 collisions, one of which involved a pedestrian (or 2 percent) and two involved bicycles (or four percent). One of the pedestrian-related collisions occurred in the NE 68th Street mid-block area noted for a high number of potential conflict points, including a mid-block crosswalk. Of the 23 collisions at the intersection of NE 68th Street/108th Avenue NE, 4 collisions involved bicycles or pedestrians. Also at this intersection, 10 collisions (or almost half) were rear ends, typically associated with congestion.

Access management is a strategy that can help reduce collisions

68th St / 108th Ave intersection

- 23 total collisions
- 12 injuries
- 4 involving a bicycle or pedestrian
- 10 rear-ends

On 6th / 108th Corridor

- 97 total collisions
- 6 pedestrian collisions
- 2 bicycle collisions

NE 68th St

- 46 total collisions
- 1 pedestrian collision
- 2 bicycle collisions

Figure 12 - Safety Data Collection

Public Outreach

The City of Kirkland encourages broad and creative opportunities to engage with the community. The outreach for this corridor study was done in coordination with the Houghton Everest Neighborhood Center land use study. Outreach consisted of the following:

Outreach at Everest Neighborhood Picnic

- Key stakeholder interviews with neighborhood community organizations

- Outreach at events like the community picnics (see image)

- Providing information to businesses

- A broad public survey, including outreach at fairs, neighborhood meetings, and through City media.

- Outreach with transportation partners, including King County Metro and City of Bellevue

- A community workshop that defined issues, key values, and potential solutions on November 2, 2016


Status of the project was posted in many places including the CKC

- Signs placed throughout the corridor with information and status updates (see right)

- Staff workshops to develop ideas

- Review and guidance by the Transportation Commission, Planning Commission and Council

Results of the survey, prior to the community workshop, were summarized in a survey report (see **Appendix C**). They suggested that the community was most interested in addressing and "fixing" regional congestion but not expanding the corridor and adding lanes. There was interest in creating livable and walkable community solutions, specifically to address pedestrian circulation.

Observations and Issues Summary

Review of the corridor through data collection and outreach helped frame the overall issues within the 6th Street Corridor as follows:

Peak Periods Traffic Impacts the City and Neighborhood

Peak period/peak direction congestion is a growing problem that is influenced by regional congestion and exacerbated by the lack of a connected grid network. The corridor is constrained by its current capacity, specifically during the PM peak period. Long queues and congestion increases travel times, blocks access to neighborhoods, and impacts emergency response times.

Because roadway widening for general purpose lanes along the corridor would be very costly and extremely disruptive to property owners for vehicle travel lanes, it is not considered to be feasible, at this time, for addressing peak period congestion. As a priority for ***moving more people, regional transit connections were considered a priority***. More cars could be removed from the corridor if more people stayed on the bus north of the South Kirkland Park-and-Ride to get to their homes. For example, moving transit more efficiently to improve speed and reliability is a priority.

The CKC, with the interim trail, is an underutilized regional transportation asset. There are substantial obstacles to expanding the CKC as a transportation corridor, including cost and the concerns from some members of the community.


The CKC and 6th St / 108th Ave are parallel transportation corridors

Protecting the accessibility and enhancing connectivity of the neighborhoods is key to preserving livability of the community.

Arterials adjacent to the retail center have poorly defined and managed access/driveways that contribute to congestion and increase conflict-points, particularly with pedestrians.

There is very ***high interest by the community to improve the walkability of the area***, especially for walking school children. The TMP does not identify any significant gaps in sidewalks in this area, and there are no gaps on the 6th Street Corridor. Some missing sidewalk segments remain on local neighborhood streets. Providing continuous sidewalks would enhance the walkability of the corridor. There is a desire for improved protected pedestrian connections, protected crosswalks, wider sidewalks, fewer conflicts, removal of barriers, and safety enhancements for bicycling.

The interim CKC trail has resulted in increased bicycle use on the corridor as well as on arterial streets connected to the trail. Most arterials include bike lanes; however, there are gaps and lanes don't extend through signal-controlled intersections.

Parking data do not suggest parking is currently a problem on-street or in the retail center; however, ***improving education and management related to parking could improve understanding*** and reduce conflicts

While cut-through traffic was noted from the public, data fused from vehicles using the area (Streetlight) suggested very low use of these routes.

GROWTH AND CHANGES

This section describes growth and future conditions within the identified study area. This includes the adjacent roadway network, planned improvements, future traffic volumes, traffic operations, traffic safety, non-motorized facilities, and transit.

Forecasted Growth

The City's Comprehensive Plan and Transportation Master Plan imagines a future horizon year of 2035 guided by the vision of a walkable, vibrant, livable, connected, and green community. The Puget Sound Region is experiencing tremendous growth. Between 2010 and 2040 the region's population will increase by 35 percent and employment will increase by 57 percent. Within Kirkland, population is anticipated to grow by 13 percent and employment doubling by growing over 117 percent between the years 2010 and 2035. Regionally, investments such as Sound Transit (ST) 2, and ST 3 are being made to expand transit as opposed to widening roads. This aligns with the regions and City goals to promote sustainable transportation choices.

Planned and Programmed Improvements

This study defined data collection and methods in **Appendix A**. Specifically, it defined a future design horizon year of 2035 that aligns with the Comprehensive and Transportation Master Plan. Improvements are identified and planned in the corridor including future traffic signals at the intersections of 9th Avenue S at 6th Street S, Kirkland Way at 6th Street S, and NE 53rd Street at 108th Avenue NE. Other infrastructure improvements in the area include completion of the SR 520 Bridge Replacement and modifications in transit service assumed to be in place with regional investments identified and assumed to be in place by 2035 from the ST 2 and ST 3 plans. Most notably, these include extension of light rail to Bellevue, Overlake and downtown Redmond and BRT on I-405 by 2024. The transit service, largely provided by King County Metro is defined in the 2025 and 2040 METRO CONNECTS service plan that identifies RapidRide service though Kirkland. Beyond 2035, the ST 3 plan includes a light rail line from Kirkland to Issaquah.

While the CKC Master Plan includes expansion with a fully developed regional trail and some form of high capacity transit, there is no current funding identified that would advance these plans. It was assumed in the future that the Interim trail remained in place as a base case. Additionally, King County has developed the Eastside Rail Corridor Master Plan, of which the CKC is a central segment. The County will continue to develop trail segments as funding becomes available.

Land use changes will be consistent with the Comprehensive Plans for Kirkland; however, this study also addressed potential land use options related to the Houghton Everest Neighborhood Center. This analysis is provided in the last section of this report. The City is growing with several new dense, mixed-use commercial, office, and residential developments. Examples of this include Kirkland Urban and development of the Antique Mall site in Downtown Kirkland. The large Totem Lake redevelopment is underway in the north half of the city, outside the study area. Northwest University has also proposed a Master Plan for their campus along the corridor. This 20- year Master Plan is not approved and is still in review; therefore, it was not included in the future development baseline.

Land Use in Houghton Everest Neighborhood

As part of this 6th Street Corridor study, the analysis will also be applied to an area within the corridor to assess potential land use changes in the Houghton Everest Neighborhood Center. These land use changes slightly increase travel demand on the corridor.

The neighborhood center area is shown in **Figure 19** and analyzed in the last section of this report.

The full memo analysis is provided in **Appendix E**.

Traffic Volumes

Comparative growth in PM peak hour growth traffic volumes on the 6th Street Corridor is provided in **Figure 13**. Constraints on the corridor capacity result in limited traffic growth on the corridor, with the most notable peak hour traffic growth on the segment near Northup Way.

Bicycle and Pedestrian Changes

In addition to further development of the CKC to the Master Plan, future expansion of regional trails includes implementing elements of the Eastside Rail Corridor (ERC) and completion of the SR 520 Bridge Replacement with a bike and pedestrian trail connection across Lake Washington from the University of Washington to Redmond.

Transit Service Changes

One of the most dramatic changes that may occur in the region is the investment in transit infrastructure and service. Sound Transit long-range plans ST2 and ST 3 are funded regional transit expansions. In Kirkland, investments include the I-405 Bus Rapid Transit System, and elsewhere light rail extensions to Redmond, Federal Way, and Lynnwood will be in place by 2035. Beyond the 6th Street Corridor Study plan year of 2035, the ST 3 Plan includes extension of light rail between Issaquah and the South Kirkland Park-and-Ride as well as high-capacity transit studies along the CKC/ERC and SR 520.

METRO CONNECTS is a long-range vision of service for the years 2025 and 2040 to meet future transit needs in King County and to integrate with planned and programmed light rail as it expands throughout the region. In Kirkland, METRO CONNECTS includes expansion of RapidRide with frequent service connections for Kirkland from Kingsgate to Eastgate by way of Downtown Bellevue. METRO CONNECTS will require additional resources beyond current King County Metro revenue sources to implement. As such, the service network depicted does not represent a revenue-backed service plan, and refinements to this vision through plan updates and service processes are expected.

Capital Improvements

Recent improvements in the corridor have included new sidewalks on the west side of 6th Street south of 5th Place S to provide an important missing link, and on-street parking. Capital infrastructure investments that are planned or programmed for the corridor include installation of traffic signals at three locations (6th Street S at Kirkland Way, 6th Street S at 9th Avenue S, and 108th Avenue NE at NE 53rd Street), a left-turn pocket on Kirkland Way to Railroad Avenue, and intelligent transportation system (ITS) improvements throughout the city. King County Metro has also discussed the potential need to provide traffic signals at the entrance to the South Kirkland Park-and-Ride on 108th Avenue NE. These new signals will reduce signal spacing along the corridor (currently there are four signal controlled intersections and in the future, there could be seven). With increased signals, it will be important to coordinate the signals to make sure they are optimized and efficient.

As noted in the last section of this report, with development and land use changes in the Houghton Everest Neighborhood Center, there are opportunities for infrastructure investments as part of development approvals. These improvements include but are not limited to:

- Consolidate or close driveways to better manage access as parcels develop.
- Combine parcels and improve internal site circulation to help better manage traffic.
- Contribute right-of-way and make improvements to the intersection of 6th Street S / 108th Avenue NE and NE 68th Street to facilitate better movement of pedestrians, bicycles, transit, and vehicles.
- Contribute right-of-way to consolidate driveways, widen sidewalks, remove mid-block crosswalks, and provide medians to better manage access.
- Install traffic control that accommodates safe signal-controlled pedestrian access across NE 68th Street.
- A new planned signal at 6th Street S at

9th Avenue S could provide additional access to other parcels north of the center.

Emerging Trends

The way transportation and mobility are delivered in the United States is destined to change dramatically due to new trends and technologies. These emerging trends may modify future transportation in ways that are currently not fully understood. These trends and technologies are described below:

Changing travel behavior – Changing travel behavior among millennials (defined as those reaching adulthood in the early 21st century) suggests this generation may be choosing alternatives to driving alone for travel. A study by the University of Michigan Transportation Research Institute indicates that driver licensing for teens and young adults is declining. For example, the number of 19-year-olds with drivers' licenses dropped from 87 percent in 1983 to 69 percent today.[3] Availability of a range of travel choices will support this trend.

Smart Signal Technology – Traffic signal operations and control are being improved through better real-time information, data fusion that improves understanding of travel patterns, and improved operations of traffic signals to better respond to actual traffic patterns and vehicle types. The City of Kirkland has developed an ITS strategy and owns, manages, and operates traffic signals around the City. The City is implementing ITS with traffic signals throughout the city to reduce delays and meet other objectives.

Shared-Use Mobility and Auto Transportation Network Companies – While rideshare programs through transportation network companies (TNCs) like Lyft and Uber and carshare programs like Car2Go, Zipcar, and ReachNow are popular and gaining in popularity, there are limited data related to these programs' impact or effectiveness in reducing drive-alone behavior. Ride hail services like Lyft and Uber are currently available in Kirkland to enhance mobility.

Bike Share – A cycle-share program, Pronto, was implemented in Seattle in 2015 with mixed success. The program, which included memberships for short- and long-term bicycle rental, ended in March 2017. The future of bikeshare is uncertain; however, there is ongoing interest in developing bikeshare programs in the future as the technology improves. Funding has been identified in the Connecting Washington Partners program for additional bike share. A bike share program could be expanded with development of other bike and trail investments such as the CKC an Eastside Rail Corridor.

Autonomous and Semi-Autonomous Vehicles
There are projections that in the next 20 years, autonomous vehicles may broadly replace the automobile fleet. Semi- autonomous vehicles are already on the market, assisting drivers and helping avoid crashes. In the future, these vehicles could be completely autonomous and potentially reduce congestion (vehicles are expected to operate safely with reduced distance between vehicles and potentially higher speeds). Autonomous vehicles have been proposed to operate cleanly (potentially electrically), for a variety of vehicle types—buses, trucks, and passenger vehicles—and potentially for shared use, thus further reducing the need for automobile ownership. As the technology evolves, autonomous vehicles may become part of fleets such as transit that deliver people and goods. Space may be needed to accommodate drop-offs and storage.

These emerging trends suggest that transportation resources will become more fluid, and while it is important to preserve facilities for different transportation modes as assets, their use and operation may evolve over time. For example, autonomous vehicles may reduce park-and-ride demand; however, the space may be better used for shared-use and transfers.

Summary

In the corridor, regional and localized land use will increase travel demand; however, there is limited expansion of roadway capacity. Delays and

[3] http://www.umtri.umich.edu/what-were-doing/news/more-americans-all-ages-spurning-**drivers**-licenses, 2016.

congestion are likely to increase or extend the peak period. There is significant planned increased investment in transit. This investment in transit aligns with the Comprehensive Plan vision for a more green and sustainable community. Moving transit efficiently, encouraging transit service and flexibility and maintaining investments in transit service will be important for regional mobility.

Within the 6th Street Corridor there are some planned changes to increase local access to the corridor through installation of traffic signals. While new signals create safe and controlled crossings of 6th Street, there could be more improvements to increase the connectedness and livability within and parallel to the corridor.

Within the 2.5 miles of the corridor, there are currently four traffic signals (or <1.5 per mile). In the future this could increase to seven signals, with new signals proposed in the corridor at Kirkland Way, 9th Avenue S, and NE 53rd Street

The corridor has 20 crosswalks (or >seven per mile) today, and of these, eight are protected with signals of rectangular rapid flashing beacons (RRFBs). There are no current plans to increase the number of crosswalks.

There are transit stops every ¼ mile along the corridor. Buses like the Sound Transit Route 540 are express type service and don't serve each stop. In the future this corridor is anticipated to be served by frequent Metro's RapidRide service. The standard stop spacing for Rapid Ride is ½ mile. It is possible that in the future with RapidRide stop frequency could be reduced.

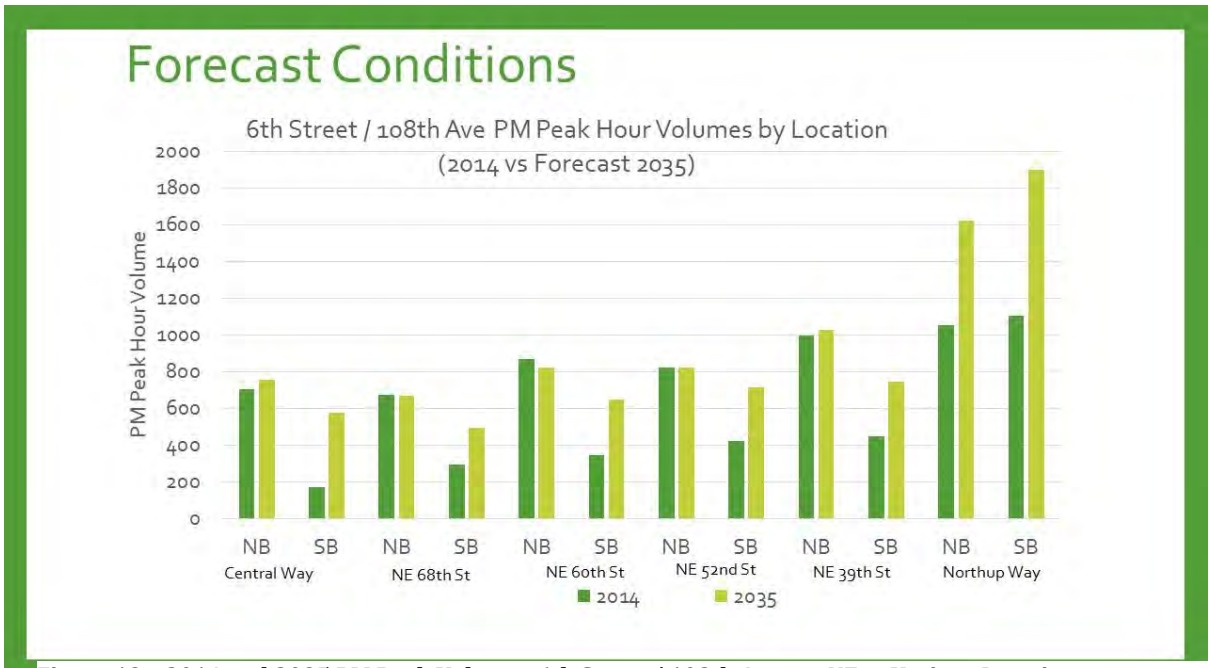


Figure 13 – 2014 and 2035 PM Peak Volumes 6th Street / 108th Avenue NE at Various Locations

POTENTIAL SOLUTIONS

This section describes the development of solutions to address needs in the 6th Street Corridor. Solutions were developed to meet needs according to community values.

Workshop Feedback

Community Workshop November 2, 2016

The corridor study offered numerous opportunities to provide feedback and help define potential solutions. Solutions were developed to address issues and challenges defined in the corridor context setting and review of growth.

Solutions were defined to address bottlenecks throughout the corridor, move transit more efficiently, and improve community connections for all modes.

Community Workshop Developing Solutions November 2, 2016

An initial set of ideas and solutions was developed as part of the November 2, 2016, Community Workshop held at Northwest College. The workshop reviewed initial survey results (as summarized in **Appendix C**) and reviewed the initial baseline and future conditions. While regional congestion was identified as a major challenge, ***most constituents were opposed to widening the corridor beyond its current three-lane configuration***. Roadway capacity recommendations included improving I-405 and connecting NE 60th Street across I-405 for vehicles. Community members worked in small groups to define potential solutions. The workshop also gained feedback about community values and priorities. When asked, the group agreed that the 6th Street Corridor must:

- Be designed to reduce congestion.
- Move people (not just vehicles) efficiently throughout the entire corridor now and into the future.
- Connect community and neighborhood destinations, safely.

Potential Improvements

The solutions raised by community members included improvements to reduce bottlenecks, improve transit, improve connections for pedestrians and bicycles. The initial list of potential improvements identified at the workshop are listed in **Table 1** and keyed to **Figure 14** in the map.

Potential Solutions

Using the list of potential improvements in **Table 1** and shown **Figure 14** as a starting point, a more refined list of potential improvements was developed through stakeholder outreach, data collection, and analysis. The results are shown in **Table 2** and **Figure 14**. These investments are located throughout the corridor. This list of solutions is intended to be practical and achievable and emphasizes community interest. Solutions were identified to promote use of transit as a way to increase the capacity of this corridor, better connect the community especially for pedestrians and bicyclists and improve/enhance safety through better management of access, specifically in the neighborhood center.

Feedback

Solutions were discussed with City staff and agency partners to further refine solutions. Solutions were discussed with the Transportation Commission and

City Council and adjusted to best meet values of the community and needs of the City.

Appendix D provides a summary of a draft evaluation of solutions with recommendations on solutions to be carried forward and for discussion with the Transportation Commission.

These solutions were further refined and adjusted to best meet values of the community.

Connection to Values

Solutions were evaluated for their ability to meet the values of the community specifically to:

- Address regional congestion and move people.
- Improve the livability of the community by improving connections within and between the neighborhoods.
- Address the needs of the future.

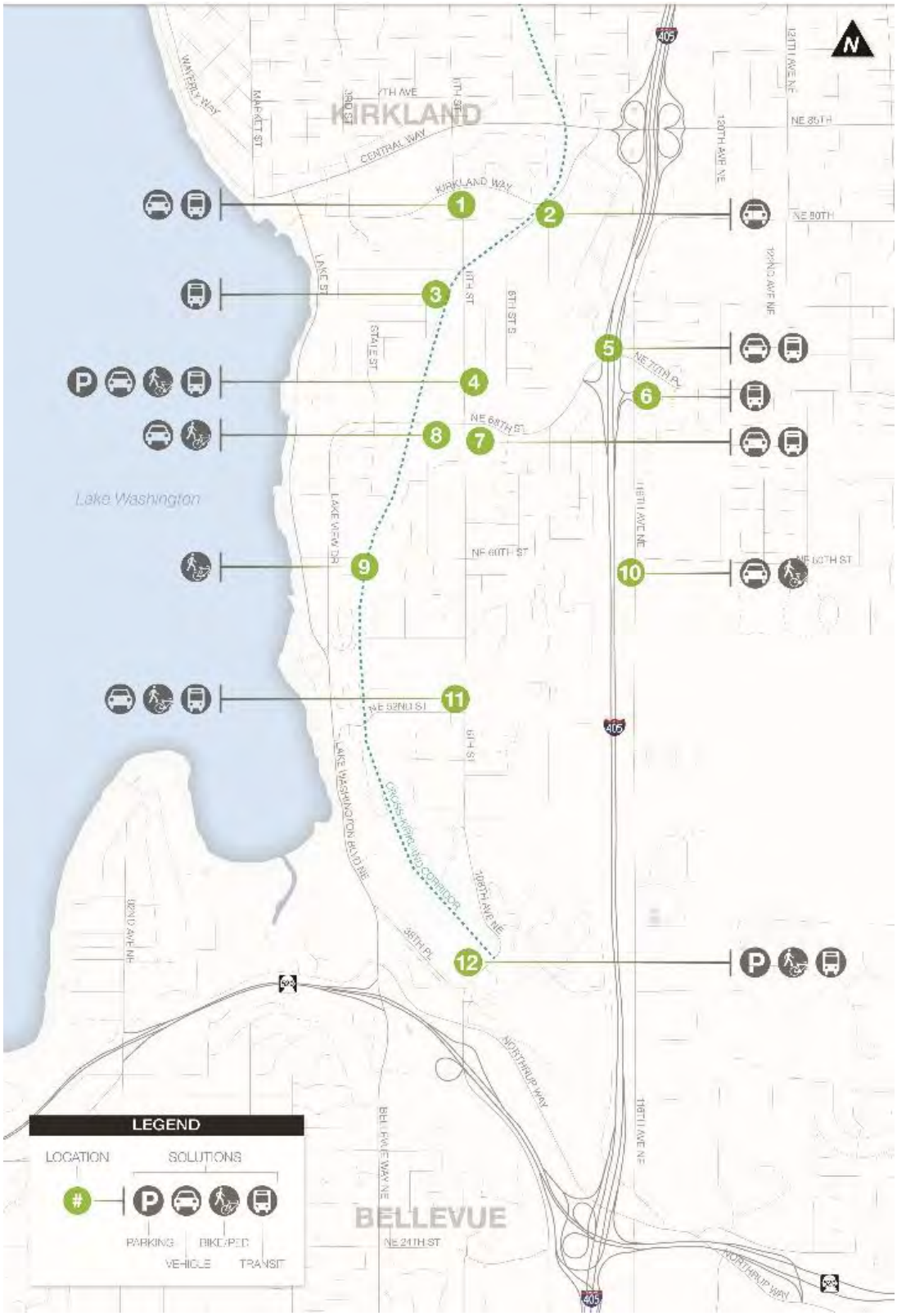


Figure 14 - Improvement Locations

Table 1. Suggested Corridor Improvements from the November 2, 2016, Community Workshop

Numbers	Potential Solution Ideas	Type
1A	Transit Signal Priority northbound on 6th Street S at Kirkland Way - Peak Hour - Left-turn lead lag	Transit
1B	Signal coordination (Intelligent Transportation System) along 6th Street S between Central Way and Kirkland Way	Operations
2	9th Street S and Railroad at Kirkland Way intersection safety - Radar speed - Westbound left-turn pocket	Safety
3A	High Capacity Transit on CKC bypass 108th Avenue NE to South Kirkland Park-and-Ride	Transit
3B	Bus intersection with queue jump at 6th Street and CKC	Transit
4	Reassess the installation of traffic signals at 6th Street S at 9th Street S	Operations
5A	Improve / expand NE 70th Street overpass to widen and rechannelize for bikes/pedestrians/vehicles	All modes
5B	Bus rapid transit planning near NE 70th Street with park-and-ride	Transit
6A	Lease Houghton Park-and-Ride for private shuttles	Transit
7A	Transit signal priority and queue jump (108th Avenue NE) - Left turn lane for transit only - Overhead signs time of day - C-Curb to restrict driveways	Transit
7B	Transit signal priority for left turns - combines bus and lefts	Transit
8A	Access management and multimodal access on NE 68th Street and 108th Avenue NE - Median control - Driveway consolidation - Wider sidewalks	Roadway Vehicular Pedestrians and Bikes Safety
8B	Access management and multimodal access on NE 68th Street and 108th Avenue NE - New full access signals at 106th Avenue NE - Consolidate driveways - Wider sidewalks and roadway with bike lanes	Roadway Vehicular Pedestrians and Bikes Safety

Table 1. Suggested Corridor Improvements from the November 2, 2016, Community Workshop

Numbers	Potential Solution Ideas	Type
8C	Access management NE 68th Street - Selectively close driveways	Roadway Vehicular Pedestrians and Bikes Safety
8D	Full bicycle intersection at 6th Street /108th Avenue NE	Pedestrians and Bikes
8E	Green bike boxes 6th Street S / 108th Avenue NE	Bikes Safety
9A	Improved CKC access / connection for bikes (at NE 60th Street)	Bike/Pedestrian
10A	Enhanced vehicle access crossing I-405 at NE 60th Street - Grade separation of 114th Avenue NE - new signal NE 60th Street/108th Avenue NE	Vehicles
10B	Enhanced pedestrian and bike access for NE 60th Street creating a greenway	Pedestrians and Bikes Safety
11A	Signal at NE 53rd Street (proposed by Northwest University) Relocate and improve bus stop with and adjust crosswalk with Metro	Pedestrians and Transit
12A	Park-and-ride permitting for transit users (Metro)	Transit
12B	Improve access/egress from park-and-ride for buses (City of Bellevue) - Speed/radar - Pavement marking	Transit
12C	Signal control at South Kirkland Park-and-Ride access (City of Bellevue)	Transit
12D	Improve CKC access to South Kirkland Park-and-Ride and increase bike parking at park-and-ride	Transit and Bikes
P1	Residential parking zones to eliminate casual and long-term parking by retail employees	Parking
P2	On-street parking time limits or management to reduce park-and-ride	Transit / Parking
E1	Education campaign on the value of transit in Kirkland's Mobility Future	Transit
E2	Monitor person movement speed/efficiency	Transit Vehicles
E3	Greenway promotion of NE 60th Street and other connections	Pedestrians and Bikes
E4	Continue to monitor speeding and cut-through traffic	Vehicles

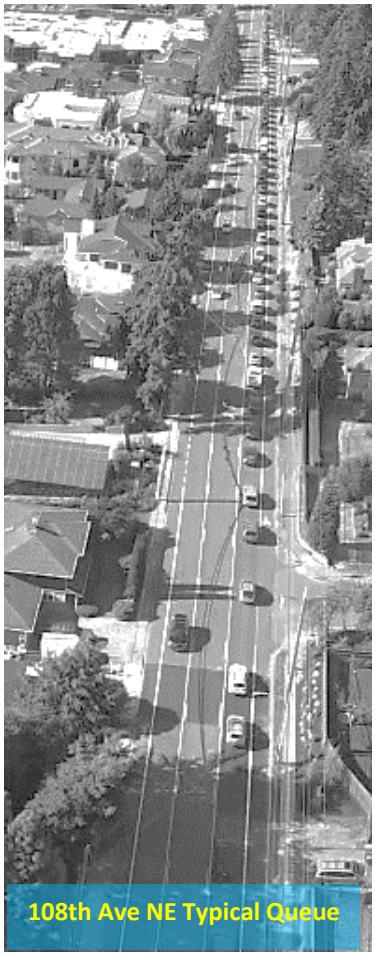
CORRIDOR IMPROVEMENTS

Through community and City feedback, solutions were further refined and adjusted. Some more complex ideas were developed further and are summarized in Appendix F.

Capital Improvements

Concepts were further developed to test their feasibility and effectiveness using traffic operations analysis for some and developing them as concepts for others.

Moving people more effectively through the corridor with transit was an important proposal. Several options for moving transit past long peak period queues in the afternoon were suggested.



108th Ave NE Typical Queue

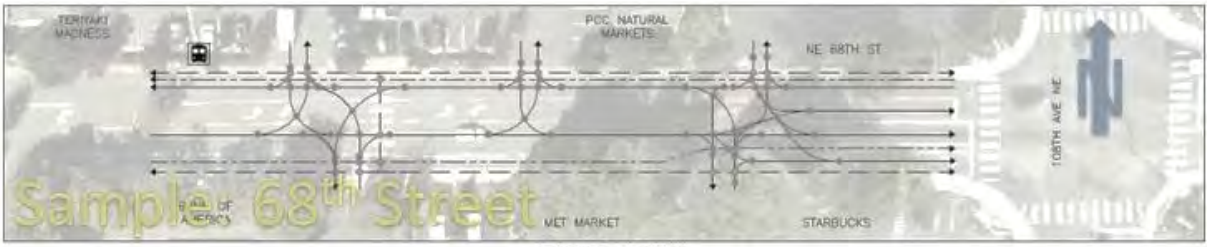
These transit priority treatments were evaluated using VISSIM a micro-simulation analysis that can measure comparative transit travel time advantages for transit vehicles as compared other automobiles.

The proposed solution would create two queue jumps at NE 60th Street and NE 68th Street, advancing transit past long queues. Two 1,000-foot-long jumps would result in over 2 minutes of travel time savings for northbound buses. This is a significant savings, especially considering the number of people on each bus.

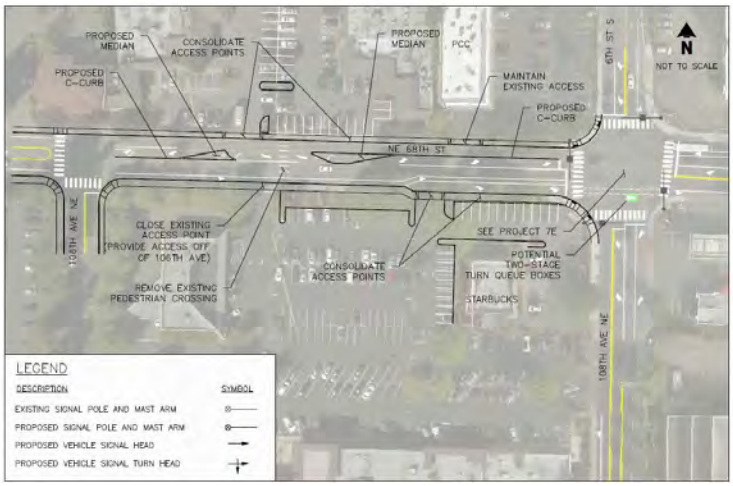
One of Two Potential Transit Queue Jumps on the Corridor. This one at NE 60th Street

This travel time savings is shown in **See Table 5**.

One of these queue jumps is shown left and would include a new traffic signal at NR 60th Street and would relocate bike lanes adjacent to the sidewalk for safety. The other queue jump at NE 68th Street would require modifications at the traffic signal and would relocate bike lanes adjacent to the sidewalk. This solution (7E) is further described in **Appendix F**.



EXISTING CONDITION



Access management solutions were developed to address potential vehicle and pedestrian conflicts on NE 68th Street. Developing concepts to improve access included considering medians, driveway consolidation and turn restrictions.

For NE 68th Street, extending medians and c-curbs can reduce potential vehicle and pedestrian conflicts. Consolidating driveways could also reduce conflicts; however, this would require willing participation by the property owners. **Appendix F** includes the option below (8A) as well as an option that envisions redevelopment, potential dedication of right-of-way to extend bike lanes and increase sidewalks with greater reduction in potential conflicts (8C).

This list of recommended corridor improvements builds on feedback through stakeholder outreach to the community and public, an evaluation of data from a wide range of sources, a workshop with City staff, and reviews by the Transportation Commission and Council. The resulting solutions that were agreed to are listed below and are also shown as part of modal (transit, bike, and pedestrian) and total transportation systems on the following maps. These solutions were evaluated against values defined by the community. More detailed explanation of capital projects recommended as part of this effort are provided in **Appendix D**.

Policies

Two policy/strategies were recommended.

P3. Parking management strategies (shared parking and joint parking) to maximize use. Look for opportunities for shared parking where parking is available, for example, at Seventh Day Adventist Church where parking is generally used only on the weekends. A suggested example included shared parking of church for market employees.

P4. Trail-oriented development, which includes development of land use and regulatory policies that support lower parking use through access to regional trails. This includes promotion and prioritization of shared use mobility strategies – car share (car to go), bike share, and TNCs.

Education

Three education strategies were recommended, including:

E1. Developing a campaign to help convey the value of transit in moving people in Kirkland.

E2. Consider performance monitoring and develop a performance monitoring system and promote the results to educate the value and benefits of transit in moving people. Develop performance measures, such as person travel times.

E3. Education campaign to promote the use and benefits of the Greenways program including working with neighborhoods, schools, and youth organizations to promote the connectivity and benefits of Greenways using maps, brochures, school education program and other promotions.

E4. Monitor speeding on secondary cut-through streets 8th Street Sand 106th Avenue NE. Potential traffic-calming strategies are posted on the City

website. (http://www.kirklandwa.gov/depart/Public_Works/Transportation_and_Traffic/Traffic_Calming_Devices.htm). New traffic calming strategies continue to emerge

Next Steps

Implementation of these recommended corridor solutions will require additional design, cost estimates, an assessment of right-of-way needs or other impacts, and continued outreach to communities with environmental review. Coordination with agency partners would be required for transit investments and investments affecting state facilities.

Table 2. Recommended Corridor Improvements

#	Solution Ideas	Type	Description
	1. 6th Street at Kirkland Way		
1 A	Transit Signal Priority Northbound - Peak hour - Left turn lead lag	Transit	The City is in the process of designing and implementing traffic signals at the intersection of 6th Street and Kirkland Way. Metro's heavily used route 255 turns northbound left at this intersection and eastbound right. Transit signal priority at this intersection for the northbound left turns could provide a short travel time advantage for transit.
1 B	Signal Coordination along 6th Street with future increased demand	Vehicles	To better and more efficiently travel along the 6th Street Corridor between Central Way and Kirkland Way. Interconnecting the signals (including the signal at 4th Street) could improve the efficiency and reduce stops and delays.
1 C	Crosswalk improvements at Kirkland Avenue	Pedestrian	To improve access across 6th Street for pedestrians, put in place Manual on Uniform Traffic Control Devices (MUTCD) approved pedestrian activated warning device.
	2. 9th Street S and Railroad Avenue		
2 A	9th Street S and Railroad at Kirkland Way Intersection Safety - Radar Speed - Left turn lane (**See concept in Appendix F**)	Vehicles	A safety concern for neighborhoods include sight distance near the existing CKC trestle over Kirkland Way at Railroad Avenue and 9th Street S. Radar speed signs may help reduce speeds and improve safety for accessing Kirkland Way. There may be the opportunity to add a westbound left turn pocket at railroad Avenue to improve turning movements. Project is included in the City Capital Improvement Plan (CIP).
	3. CKC for Transit		
3 A	High Capacity Transit on CKC bypass 108th Avenue NE to South Kirkland Park-and-Ride	Transit	To reduce transit delay incurred on 6th Street and 108th Avenue NE, especially northbound during PM peak periods, constructing transit facilities within the CKC, similar to the CKC Master Plan. Transit on the CKC, especially in the segment between the South Kirkland Park-and-Ride and 6th Street could still connect to local neighborhoods and would dramatically reduce overall transit travel time. When implementing transit on the CKC in the future consider implementation of new technologies including autonomous transit vehicles and an all-electric fleet.

Table 2. Recommended Corridor Improvements

#	Solution Ideas	Type	Description
3 B	Bus Intersection at 6th Street S/5th Place S and the CKC **(see Concept in Appendix F)**	Transit	Transit signal priority at the CKC trail intersection on 6th Street. This would require a new signal, removal of on-street parking, and existing crosswalk with a signal controlled crossing to give transit priority in both north and southbound directions. Realign the 5th Place leg of the intersection to be consistent with future plans for the CKC and realign to be closer to a 90-degree intersection with small curb radii in order to make it more pedestrian and neighborhood friendly. Additionally, consider grade-separation of the CKC by going under the 6th Street S/5th Place S intersection.
4. 6th Street at 9th Avenue S			
4 A	Install traffic signals at 6th Street and 9th Street S	Vehicles / Pedestrians / Bikes / Transit	The City is in the process of designing and constructing a new traffic signal at the intersection of 6th Street and 9th Street S. This signal will improve neighborhood access to and from the 6th Street Corridor. This signal could support redevelopment of adjacent land uses. Project is included in City CIP
5. **NE 70th Street over I-405**			
5 A	Improve and expand NE 70th Street overpass	Vehicular	The existing NE 70th Street corridor and structure over I-405 is curved, steep, and constrained. Better organization and improvements in this corridor could provide better and protected space for pedestrians and add space for cyclists which does not exist today. There is also a need to improve operations and access for transit and reduce delay for vehicles in the vicinity of I-405.
5 B	Bus Rapid Transit Planning near NE 85th Street/NE 70th Street and Park-and-Ride	Transit	Passage of ST 3 includes development of bus rapid transit on I-405 and potential station development within the freeway right of way near NE 85th Street. City transit planning would support coordination and integration with the local street system to most effectively connect these new stations to the local communities and other transit sources.
6. Houghton Park-and-Ride			
6 A	Houghton Park-and-Ride lease for private shuttles	Transit	Private shuttles are operated in Kirkland by large employers including Google, Microsoft Connector, and most recently, Facebook and Amazon. Parking for employees meeting the shuttles currently use the South Kirkland Park-and-Ride and other leased space. With underutilization at the Houghton (70th

Table 2. Recommended Corridor Improvements

#	Solution Ideas	Type	Description
			Street) Park-and-Ride, this space could be leased to these private shuttle operators leaving spaces in South Kirkland Park-and-Ride to meet public transit demands.
7. 108th Avenue NE at NE 68th Street			
7 C	Continue and complete bike lanes	Bikes	Complete the bike lanes along 108th Avenue NE - From Bellevue city limits to NE 41st Street - NB Near NE 53rd/52nd Streets (along the frontage of Emerson High School) - Through NE 68th Street intersection
7 D	Install "Don't Block the Box' pavement markings at Fire Station Driveway	Vehicles	Install pavement markings that keep the fire station driveway clear of vehicle queues. (Will be included in the City Annual Striping Program.) This was recently completed.
7 E	Widen to provide curbside northbound transit-only lanes **(see concept in Appendix F)**	Transit	Widen 108th Avenue NE to create extensive segments of transit lanes to bypass queues. One segment would provide a long northbound queue jump lane for transit at NE 68th Street, and one segment provides a long northbound queue jump lane for transit at NE 60th Street. A new signal would be required at NE 60th Street.
8. NE 68th Street at 108th Avenue NE (Access)			
8 A	Access Management - extend curbs - selectively close driveways (assumes no redevelopment) **(see concept in Appendix F)**	Vehicles / Pedestrians / Bikes	Closely spaced driveways and intersections, bike lanes, as well as crosswalks on NE 68th Street result in numerous conflict points between vehicles, pedestrians, and bicycles. As part of development review with redevelopment, access management strategies could include closing all driveways on NE 68th Street and consolidating driveways, using medians to separate conflicting movements, and reorganizing adjacent development sites to better circulate and organize traffic off arterial streets. An initial set of strategies could include consolidation of driveways on NE 68th Street, removal of crosswalks, medians for the left turn pocket, and wider sidewalks. Without any redevelopment or widening, there could be some access management strategies implemented including extending medians to restrict lefts from driveways, closing or consolidating driveways, and potentially removing the pedestrian crossing.

Table 2. Recommended Corridor Improvements

#	Solution Ideas	Type	Description
8 C	Access Management and Multimodal improvements on NE 68th Street at 108th Avenue NE (assumes re-development) - Median control - Driveway consolidation - Wider sidewalks - Extend bike lanes including Intersection - Consolidate and protect crosswalks - Southbound right-turn lane **(See concept in Appendix F)**	Vehicles / Pedestrians / Bikes	With redevelopment, the number of driveways could be reduced, thus reducing potential conflicts. New traffic control for crosswalks could improve access. A southbound right- turn pocket on 6th Street could improve overall intersection operations. With redevelopment of the adjacent land uses, this option could be developed with widened sidewalks, extending and completing bike lanes, and adding green bike boxes or other features like a full bike intersection through the NE 68th Street/108th Avenue NE intersection and adding a southbound right-turn lane.
9. CKC Connectivity			
9 A	Improved trail access and connection for Bikes	Pedestrians / Bikes	As part of the Interim Trail development of the CKC, the City has developed key connections to the local street system from the trail to neighborhoods. Continuing to enhance some of these facilities as better bike connections would be desirable, for example, similar to how the NE 60th Street Corridor connects with the CKC.
10. NE 60th Street Connections			
1 0 A	Enhanced pedestrian and bike access for NE 60th Street Neighborhood Greenway at 108th Avenue NE	Pedestrians / Bikes	The City of Kirkland Transportation Master Plan includes designation of a system of Neighborhood Greenways. These greenways promote safe, low-volume, slow speed roadways to promote use by pedestrians and bicycles. One of these connections is NE 60th Street. This connection could be enhanced for bicycles and promote places for less confident bike riders. NE 60th Street as a greenway can be a key connection across I-405 to connect Lake Washington Boulevard to Overlake. A signal-controlled intersection at 108th Avenue NE is proposed as part of 7E.

Table 2. Recommended Corridor Improvements

#	Solution Ideas	Type	Description
11. Signal at NE 53rd (access to Northwest University)			
11A	Signal at NE 53rd Street (proposed by Northwest University) Relocate and improve bus stop. Coordinate and adjust crosswalk with Metro.	Pedestrians / Transit	As part of expansion and permitting for new development at Northwest University, the University has proposed installation of a traffic signal on 108th Avenue NE at NE 53rd Street. Design and development of signals at this location is complicated with an offset alignment of NE 53rd and NE 52nd Streets, a protected crosswalk, and a busy transit stop serving the University, Emerson High School, and the neighborhood. Installation of traffic signals would be implemented when engineering standards (per MUTCD signal warrants) are met.
12. South Kirkland Park-and-Ride			
12A	Park-and-Ride permitting for transit users	Transit / Parking	The South Kirkland Park-and-Ride is often full. Prioritize park-and-ride spaces for carpoolers through permitting. This could be the simplest strategy to promote transit. Metro is currently piloting a carpool reservation program at park-and-rides.
12B	Improve access/egress from park-and-ride at NE 38th Place for buses - Speed/radar - Pavement marking	Transit / Parking	Improve site operations by improving egress from the park-and-ride for buses. Metro has studied this and is working with local agencies. A potential solution includes using speed radar and pavement markings to improve sight distance for exiting buses.
12C	New signal control access to Park-and-Ride (City of Bellevue)	Transit / Parking	As congestion increases and it becomes increasingly challenging to access the park-and-ride on 108th Avenue NE, traffic signals should be considered at the access. This signal would be within the jurisdiction of the City of Bellevue and would be most effective to be interconnected with the adjacent signals on 108th Avenue NE that are part of Bellevue's adaptive signal system. Could be annexed into City of Kirkland.

Table 2. Recommended Corridor Improvements

#	Solution Ideas	Type	Description
12D	Improve trail access to Park-and-Ride	Transit / Bike / Pedestrians	The Cross Kirkland Corridor (CKC) runs adjacent to the South Kirkland Park-and-Ride; however, there is a grade change and gap that limits access for bikes and pedestrians along the corridor to using the sidewalks and bike lane on 108th Avenue NE. As this volume increases, access to the adjacent park-and-ride structured garage would be desirable to more easily access transit. With the passage of ST 3, there is a planned light rail station at South Kirkland Park-and-Ride that may include amenities such as bike parking and an elevator. This connection from the CKC to the park-and-ride should be considered in the planning and development of a future rail station.
12E	Bike Share/Bike Racks at Park-and-Ride	Transit / Bikes	With the close proximity of the CKC to the park-and-ride, increased use of bikes to access transit will result in the need for bike parking/racks and the potential desire for shared use bike, especially with an improved connection (12D).
12F	Park-and-Ride management strategies with real time information	Transit / Bikes	Advances in technology and pilot studies with Sound Transit and Metro to expand real time information on parking occupancy. There are opportunities with transit partners to look for improved management strategies. These strategies can increase efficiency of the facility for moving people through strategies such as permit parking, premium/reservation parking, and improved access to park-and-rides using shared use resources such as Bike Share and Car Share or Transportation Network Companies.
Policies (P) and Education (E)			
P3	Parking management strategies (shared parking and joint parking) to maximize use.	Parking	Look for opportunities for shared parking where private or public parking is available and consider management strategies.
P4	Trail-Oriented Development	Land Use	Development of land use and regulatory policies that support lower parking use through access to regional trails, including promotion and prioritization of shared use mobility strategies such as car share (car to go), bike share, and TNCs.

Table 2. Recommended Corridor Improvements

#	Solution Ideas	Type	Description
E 1	Education Campaign on the value of transit in Kirkland's Mobility Future	Transit	Develop an education campaign to help convey the value of transit in moving people in Kirkland.
E 2	Monitor person movement speed/efficiency	Transit	Develop a performance monitoring system and promote the results to educate the value and benefits of transit in moving people. Develop performance measures, such as person travel times.
E 3	Greenway promotion of NE 60th Street and other connections	Pedestrians / Bikes	Education campaign to promote the use and benefits of the Greenways Program, including working with neighborhoods, schools, and youth organizations to promote the connectivity and benefits of Greenways using maps, brochures, school education programs, and other promotions

These solutions are organized by investment type below. Listed below are the investments that support **vehicular travel**.

1B. Signal Coordination along 6th Street.

2A. Kirkland Way and Railroad Ave Intersection Improvements.

5A. Improve and expand NE 70th Street Overpass.

7D. Install "don't block the box" pavement markings at Fire Station Exit on 108th Avenue NE.

8A. Driveway consolidation around NE 68th Street / 108th Avenue NE businesses.

8C. Reduce business access on NE 68th Street and 108th Avenue NE to signalized intersections and install new signal at 106th Avenue NE.

P3. Citywide Parking Management strategies such as shared parking and joint parking use.

Below and in **Figure 15** are the investments supporting connectivity for **pedestrians.**

1C. Crosswalk Improvements at 6th Street & Kirkland Way Intersection.

9A. Improve CKC trail access (also for bikes), especially at NE 60th Street.

12D. Connect the CKC trail to the north end of the South Kirkland Park-and-Ride.

P4. Develop land use policies promoting "trail -oriented development."

E3. Greenway promotion of NE 60th Street as well as other corridors across the city.

Below and in **Figure 16** are the investments supporting connectivity for **biking.**

7C. Continue and complete Bike Network connections along 108th Avenue NE.

8D. Full Bicycle Intersection at NE 68th Street and 108th Avenue NE.

8E. Install green bike boxes in intersection to allow safer bike left turns.

10A. Designate NE 60th Street as Neighborhood Greenway.

12E. Install bike racks or bike share at South Kirkland Park-and-Ride.

Listed below and in **Figure 17** are the investments supporting regional mobility and **transit**.

1A. Transit Signal Priority at 6th Street and Kirkland Way.

3A. High Capacity Transit on the CKC.

3B. Bus Intersection at 6th Street and CKC.

5B. Houghton Park-and-Ride lease for private shuttle use.

7E. Widen 108th Avenue NE to provide the maximum level of queue jump & install new signal at NE 60th Street.

11A. Install new signal at NE 53rd Street and relocate and improve existing bus stop.

12A. Park-and-Ride permitting for transit users at South Kirkland Park-and-Ride.

12B. Improve Access / Egress from South Kirkland Park-and-Ride.

12C. New signal controlled access to South Kirkland Park-and-Ride.

12F. Install real time parking occupancy at South Kirkland Park-and-Ride.

E1. Education Campaign promoting the value of transit in Kirkland.

E2. Monitor Performance (in person throughput) along 6th Street to understand need for transit investment.

The cumulative map of solutions is provided in **Figure 18**.

Figure 15 - Pedestrian and Trail Recommendations

Figure 16 - Bike Recommendations

Figure 17 - Transit System Recommendations

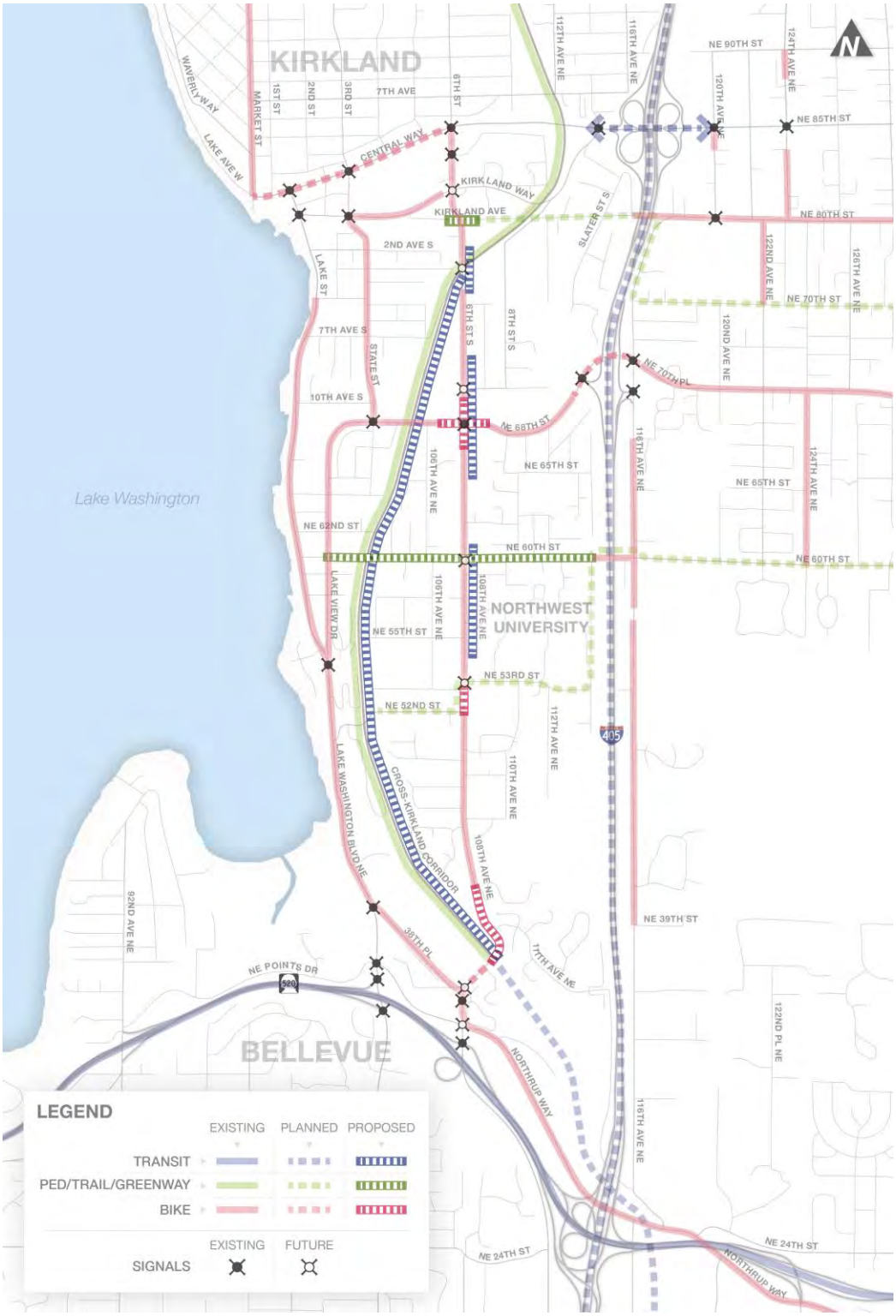


Figure 18 – Transportation System Recommendations

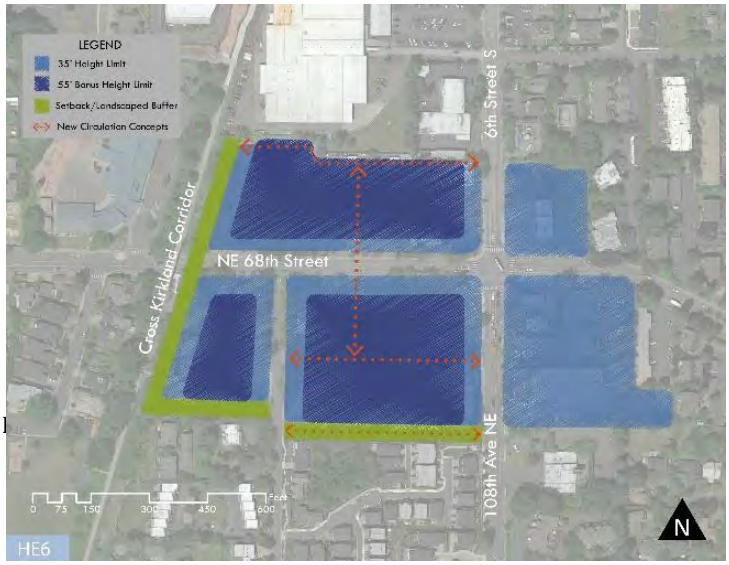
RELATIONSHIP TO LAND USE

HOUGHTON EVEREST NEIGHBORHOOD CENTER

This section addresses the transportation effects of changes in land use at the Houghton Everest Neighborhood Center.

Houghton Everest Land Use

This section summarizes the baseline scenario development and potential investments against comparative growth scenarios in vehicle trips resulting from proposed land use options in the Houghton Everest Neighborhood Center. The Houghton Everest Neighborhood Center is located adjacent to 6th Street S/108th Avenue NE and NE 68th Street intersection in Kirkland (see **Figure 19**). As part of the Houghton / Everest Neighborhood Center and 6th Street Corridor Study, the City of Kirkland is evaluating land use alternatives for the center while evaluating transportation alternatives in the area to serve anticipated growth in vehicle, transit, pedestrian, and bicycle trips.



Two land use scenarios were studied in comparison to the current 'maximum' land use allowed under the comprehensive plan (2035 Comp Plan Scenario) with maximum height of 30 feet. The two other scenarios are (1) a modest development scenario with a maximum development height of 35 feet (Modest Change Scenario), and (2) a greater development scenario with a maximum development height of 55 feet (Greater Change Scenario).

These conditions of an assumed 2035 timeframe with and without growth in the Center are also compared with potential investments in the corridor that could be in place. A memorandum describing the trip generation and intersection level of service results is attached. This section summarizes the results and impact of different corridor investments.

Trip growth was calculated for four land use scenarios provided by BERK Consulting for the proposed development. These scenarios include existing "Existing 2016" conditions, "2035 Current Comp Plan," "2035 Modest Change," and "2035 Greater Change," which represent increases in development building height. The land uses

contain a combination of apartments, office space, retail, supermarket, convenience store, and coffee shop land uses. Commercial land uses are consistent between the 2035Comp Plan, Modest Change, and Greater Change scenarios, with the difference being the number of total residential dwelling units. Land use by scenario is shown in **Table 3** and reflects changes in the number of dwelling units. These are assumed to be multi-family housing above ground level office and retail.

Table 3. Land Use Comparison

Use	Existing	2035 Comp Plan	Modest Change (35')	Greater Change (55')
Residential (Dwelling Units)	*39*	*360*	*574*	*862*
Retail (Square Feet)	*105,092*	*113,480*	*113,480*	*113,480*
Office (Square Feet)	*73,150*	*122,476*	*122,476*	*122,476*

Trip generation was calculated for the PM peak hour and Daily for each of the development scenarios using the ITE Trip Generation manual assuming the different land use types. As noted in the graphs below in **Figure 20** and **Figure 21**, trips for the daily and PM peak are highest with the Greater Change scenario with the least trips for existing conditions.

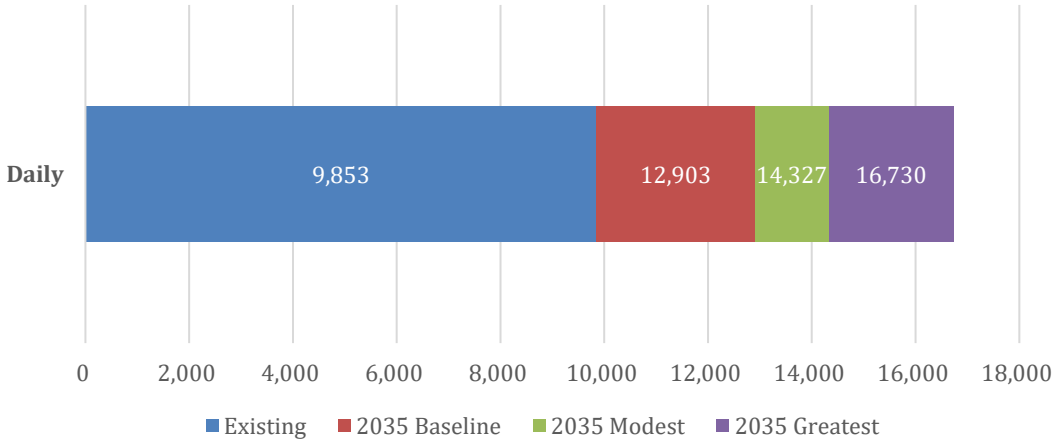


Figure 20 - Daily Trips to/from Development

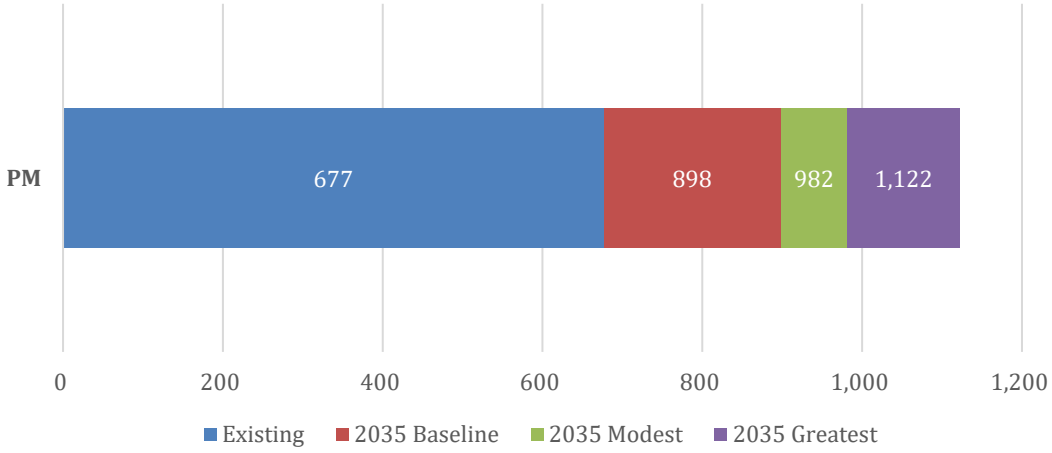


Figure 21 - PM Peak Trips to/from Development

Development Impact

In order to understand the relative impact of the trip generated by the development scenarios as compared to the future Comprehensive Plan, impacts of these development scenarios were analyzed assuming future infrastructure investments along the 6th Street Corridor. A portion of the trips were distributed from future development on to existing operations. It is important to note not all development related trips use this central intersection as other routes are available for trips. It should also be noted that the baseline growth in 2035 assumes development on the site consistent with what is currently approved in the comprehensive plan.

Table 4 compares intersection operations at NE 68th Street and 108th Avenue NE for Existing, Baseline 2035, Modest Development Scenario and Greatest Development Scenario. Existing intersection level of service is at LOS E, which will grow to LOS F in the future baseline scenario. Future development will further increase the average delay per vehicle to well beyond reasonable intersection operations in all future cases. The Greater Change development assumes an added southbound right-turn lane. This could be added to the intersection in any scenario that assumes redevelopment of the Northwest Corner parcel, as right-of-way is needed for this lane.

Table 4. Operations NE 68th Street /108th Avenue NE Intersection

Scenario	Level of Service	Average Delay in seconds per vehicle	Worst Movement	Total Entering Vehicles
Existing – 2016	E	62	SB	2,520
Baseline – 2035	**F**	**142**	*SB*	***3,855***
Modest - 2035	**F**	**148**	*SB*	***3,920***
Greater Change Development - 2035	**F**	**119***	*SB*	***4,025***

Notes: * Assumes added southbound right turn lane as part of Greater Change option

It is expected that new development in the Houghton Everest Neighborhood Center would also provide an opportunity to improve NE 68th Street corridor, which currently has many conflicting movements and poorly controlled access points. As part of this 6th Street Corridor Study, improving safety by reducing conflicts was studied. Without any major changes or new development, the most that could be done would be to install medians, close driveways, and reduce crosswalks. It was assumed that with the Greater Change option, additional roadway right-of-way (up to 80 feet) could be dedicated and would accommodate extending full bike lanes, adding a median, widening sidewalks, and closing driveways while adding a new signal at 106th Avenue NE. One of the largest operational benefits for vehicular traffic in the corridor would come from a southbound right-turn lane, which could be implemented as part of the redevelopment in the Greater Change option. This is reflected in the operations noted in **Table 4** above. **Appendix E** provides details on the corridor travel times that were also simulated for future (2035) operations with and without the proposed transit investments in the corridor, including transit queue jumps northbound on 6th Street Corridor at NE 68th Street and at NE 60th Street. Details of these queue jumps are provided as option 7E in Appendix F. Travel times with these investments are noted in **Table 5** indicating a travel time benefit for vehicles and transit with these added lanes.

Table 5. 2035 PM Peak Travel Times on the Corridor with Transit Queue jumps at NE 60th Street and NE 68th Street

Scenario	GP Northbound Travel Time (minutes)	Transit Northbound Transit Travel Time
Future Baseline	11:32	11:59
Future With Improvements	8:57	9:37
Delta (reduction)	**-2:35 (-22%)**	**-2:22 (-23%)**

APPENDICES

The following Appendices contain supporting information and memos referenced throughout this 6th Street Corridor Study. The memos served as interim products and supported in the development of this final report.

APPENDICES

The following Appendices contain supporting information and memos referenced throughout the Corridor Study. The memos served as interim products and supported in the development of this final report.

- A: Data Collection and Methods Memo
- B: Level of Service Descriptions
- C: Survey Summary
- D: Solutions Memo
- E: HENC Analysis Results
- F: Project Detail Pages

APPENDIX A: DATA COLLECTION AND METHODS MEMO

transpoGROUP
WHAT TRANSPORTATION CAN BE.

MEMORANDUM

Date:	Updated August 11, 2016	**TG:**	16090.00
To:	Joel Pfundt, City of Kirkland		
From:	Jeanne Acutanza/TranspoGroup Paul Sharman/TranspoGroup		
cc:	Walker Cheng/TranspoGroup Brent Turley/TranspoGroup Deborah Munkberg/3SquareBlocks Angela Ruggeri/City of Kirkland		
Subject:	6th Street Corridor Kirkland – Updated Draft Data Collection/Methods		

The purpose of this memorandum is to communicate and start assembling a list of data for the 6th Street Corridor Study to create a broad understanding of the transportation context. This memo also outlines the draft methodology for analysis of the corridor. A broad range of data already exists through other providers or projects we have worked on and we will maximize this as much as possible. The data desired for the corridor and the status of acquisition is summarized in **Table 1** and we would like your comments or ideas prior to collecting or assembling the data, specifically on potential use of StreetLight origin destination data. Where data is not currently available we will work with the City on a strategy to either collect the data or consider surrogates for the data.

Study Limits and Parallel Corridors

For the purposes of the study we are looking to cast a broader net for data collection for a study area (as shown in **Figure 1)** generally bounded by NE 85th Street/Central way to the north, 116th Avenue to the east, Lake Washington Boulevard/Lake Street to the west and SR 520 to the south. Our primary focus will be on **6th Street/108th Avenue** and to a lesser degree the parallel facilities that make up this transportation corridor including:

- 116th Street 85th to Northup Way
- Lake Washington Boulevard SR 520 to Northern Terminus
- Lake Street Southern Terminus to Kirkland Ave
- State Street 68th Street to Kirkland Ave,
- Interstate 405 SR 520 to NE 85th
- Cross Kirkland Corridor108th Avenue to 85th

We will look at these facilities between Kirkland Way and Northup Way but will focus greater attention and depth of analysis on 6th Street/108th Avenue.

Study Analysis Years and Time Periods

For the purposes of this study we will focus on PM peak period (identified as the most congested) and will focus on analysis years of 2016 (existing), 2025 (near term) and 2035 (long term). The 2035 horizon year aligns with the City Transportation Master Plan and modeling.

Data Goals and Measures of Effectiveness

In defining the type and expanse of data to be collected, data collected is intended to support expected performance measures that align with the goals of this study. These goals currently include

- developing a short- and long-term multimodal transportation project, programs,
- strategies to improve existing and anticipated conditions
- align with the goals of the Transportation Master Plan.

Notably, this study requires broad public outreach that will help refine goals. Initial outreach and discussion with staff indicates that measures should address

- movement of people
- operations and access of all modes
- growth
- access
- travel time

If other measures arise from further outreach we will attempt to accommodate with available data or resources.

Figure 1 - Study Area

Table 1 Data Collection Types

Data Type	Description	Source	Location (s)	Status
Daily Hourly Traffic Volumes	Most recent (last 5 years) Available 24-hour weekday and weekend directional vehicle counts	City/WSDOT	For all of the corridors and anywhere within the study area	Have daily counts (not directional) for city roads
Peak Hour Turning Movements	Most Recent (last 5 years) Available intersection peak period turning movement counts	City/WSDOT / Bellevue/Consultant	6th Street at: Central Way; Kirkland Avenue; Kirkland Way; 68th Street 108th Avenue at: 68th Street (mentioned above); 60th Street, 53rd Street, NE 39th NE 37th Court; NE38th Place; Northup Way 68th Street at: State Street; 106th Avenue; 108th/ Avenue 6th Street (mentioned above); 110th Avenue; 111th Avenue; 112th Avenue; SB I-405 ramps;	See **Figure 2** for map of locations where Transpo has previously collected data
Pedestrian and Bicycle Proximity/ Connectivity	GIS based travel proximity and access to transport	Consultant		Transpo to Build
Pedestrian Volumes	Most Recent (5 Years) Available Pedestrian use of each corridor **Crossing/Crosswalk volumes**	City/Consultant	On Arterials and Trails within the study area	Do not have
Bicycle Volumes	Most Recent (5 Years) Available Bicycle Counts along each corridor	City/Consultant	On Arterials and Trails within the study area	Do not have
Transit Routes/Volumes	Routes and Frequency	Metro/ST/**Microsoft**	Along all corridors within the study area	Requested from KCM Seeking ETC/TDM coordinator Google
Average Vehicle Travel Times & Variability / Seasonality	Available Average vehicle travel times and speeds	INRIX	Along all corridors within the study area	Have INRIX data
Travel Time Variability	Available Metro and ST Vehicle Location	Metro/ST	Along all corridors within the study area	Requested from KCM
Transit Travel Times/Delays	Available Metro and ST Vehicle Location	Metro/ST	Along all corridors within the study area and at stops	Requested from KCM
Transit Passengers	Available Metro and ST Ridership/APC	Metro/ST	Along all corridors within the study area	Requested from KCM
Park and Ride Occupancy/ Utilization	Available Historic Park and Ride Occupancy and Utilization	Metro	South Kirkland P & R, NE 70th P & R and Kingsgate P & R	Have P&R Data for Houghton, Kingsgate and S Kirkland P&R Seeking historic data
Park and Ride License Plate	Available Historic Park and Ride License Plate Origins Study 70th, 132nd and S Kirkland P/R	Metro/Streetlight	South Kirkland P & R, NE 70th P & R and Kingsgate P & R	Have P&R Data for Houghton, Kingsgate and S Kirkland P&R
Origins-Destinations	Travel Demand Model O-D and StreetLight O-D	City/Consultant (StreetLight & City Travel Demand Model)	Screenlines (north south and east west)	Have 2013 Model – need to get updated model from City, haven't ordered Streetlight data yet,

				see below for Streetlight details
Collisions	Most Recent (5 Years) Available Frequency, severity, propensity	City/WSDOT/Bellevue	Along all corridors within the study area	Have Collision Data
Parking	Available On Street Parking Restrictions and occupancy	City/Consultant	Houghton Everest Neighborhoods	Don't have any on-street parking info May need to collect
Travel Demand	Have 2013 Data Banks Looking for latest BKR data	City/Bellevue	Citywide	City to provide data and TAZ files
Other improve-ments	Improvements planned or programmed within the corridor for the next 5 years including private development that could influence transportation in the study area	City/State/Bellevue	Along all corridors within the study area	Transpo to propose

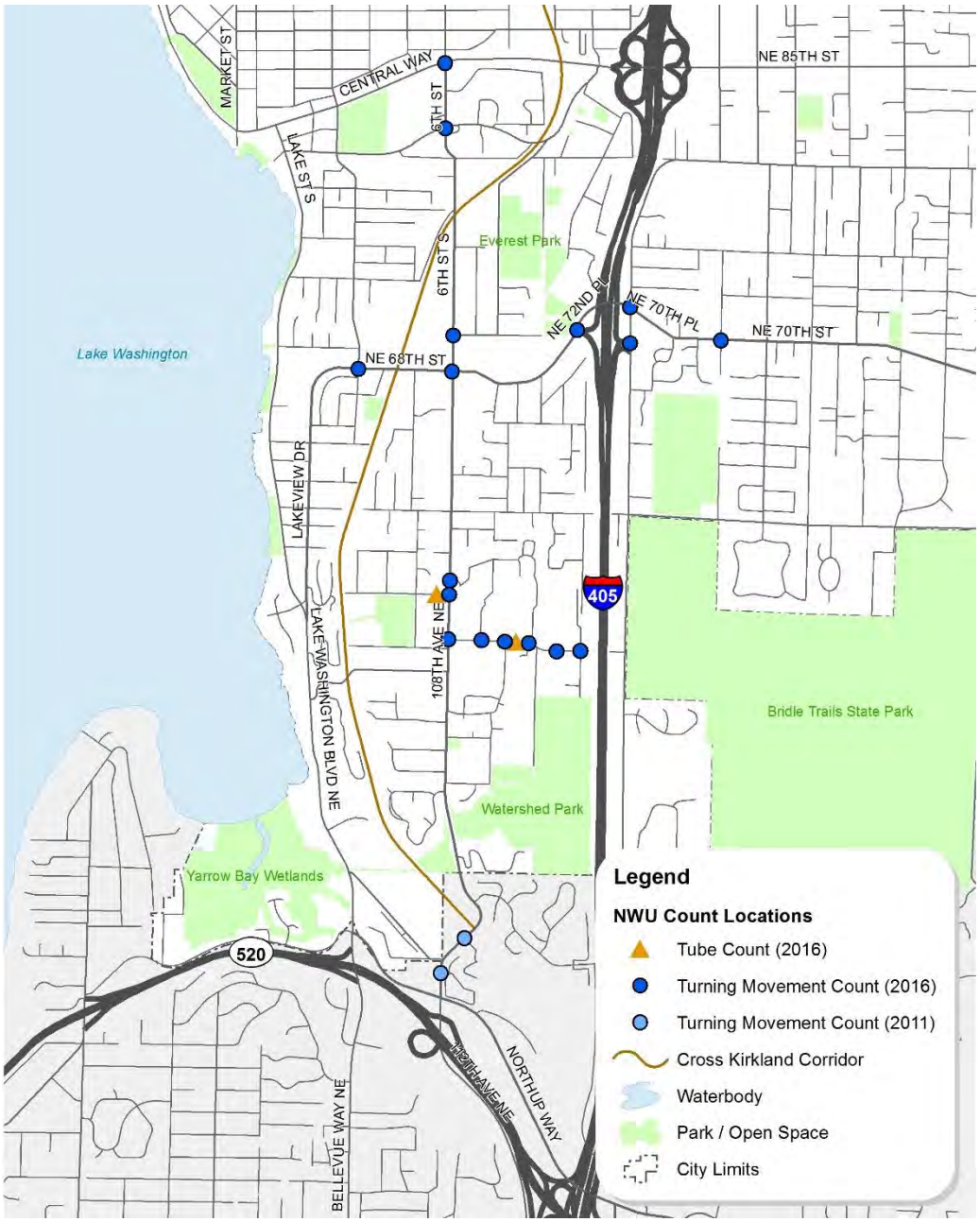


Figure 2 - Data Collection Status

Streetlight Data Availability

Based on conversations with representatives at Streetlight, it is expected that the data capture rate would be between 3-5% for all vehicles moving within the study area. Capture rates would likely be slightly higher for commercial vehicles. The data would be able to provide a customized set of origin destination pairs for both general purpose and commercial vehicles moving in and out of the study area by any access point of our selection. The figure on the left in **Figure 3**, below, represent the study area boundaries and the customizable "entry points" into the study area, as well as the "middle points" for which vehicles would have to cross in order to be counted in the data set. The right most figure below shows a sample exit point (112th Ave On Ramp to SR 520 WB) and the percent of vehicles that begin at the designated entry point then pass through the middle point and exit at the exit point. In this case, it demonstrates the cut-through traffic that uses 6th Street during the designated time period. The color of the polygons in the figures below represent the relative percentage of trips entering the study area from the entry point, passing through the middle point and then terminating in either the orange or red polygon (orange = 10-35%, red = 35-48%).

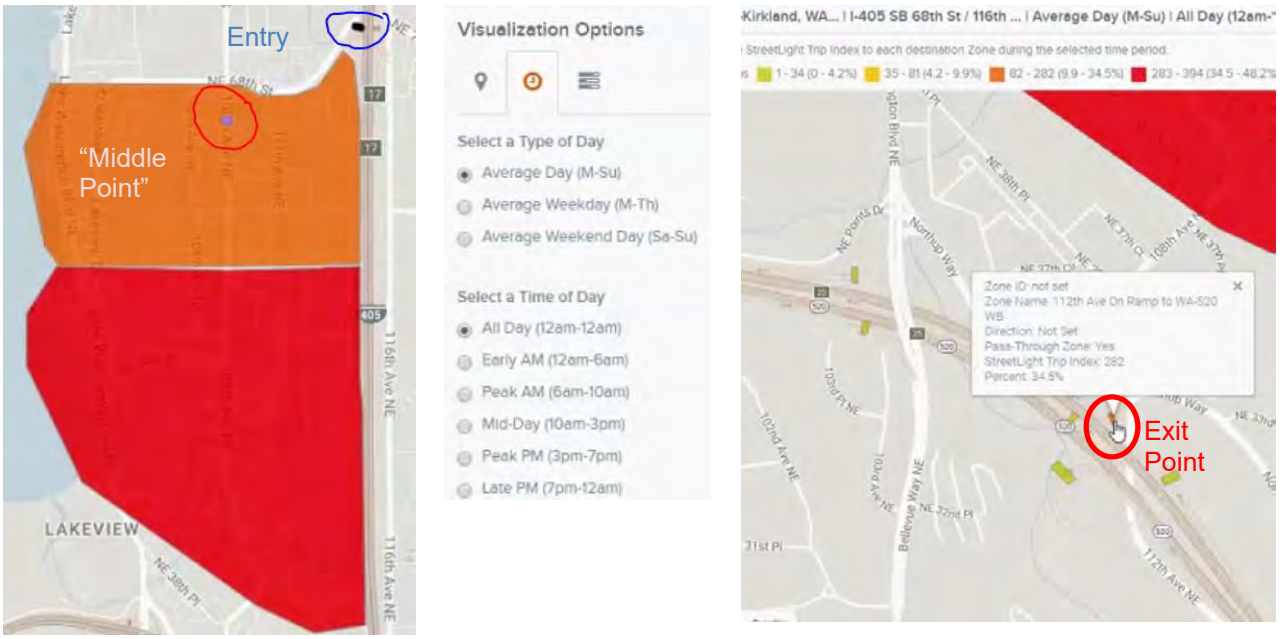


Figure 3 - Sample Streetlight Interface

A map of potential locations (up to 22) for middle and end points is shown in **Figure 4.**

Methodology

This section outlines methods to support analysis and development of solutions for the 6th Street/108th Avenue Corridor.

Study Limits

As noted above the analysis will be conducted along the 6th Street /108th Avenue NE corridor between the limits between Northup Way and Kirkland Avenue. Other parallel corridors (Lake Washington Boulevard, 116th Avenue NE and I-405 as well as NE 68th/70th Street from Lake Washington Boulevard to 116th Avenue. The study is also evaluating the Cross Kirkland Corridor, which is currently an interim soft-surface trail.

Study Years

The study will consider 2016 as the existing conditions and 2035 as the design year. An interim year will be considered as 2025.

Performance Measures

Performance measures that have been identified by stakeholders are described below

- Movement of people – ability of the corridor to move people efficiently during peak times
- Operations of all modes – level of service in terms of queue, travel time, and level of service
- Access – amount of blocked neighborhood access and access provided
- Travel time – estimated total comparative travel time

Analysis Tools & Parameters

Tools that will be used to support analysis are assumed to be:

- **Travel Demand Model (EMME)** – Translates land use into trips and traffic. The most recent validated BKR model will be used to evaluate TAZ land use, travel patterns, and growth. Other mid-year analysis will be created from interpolated land use. Additional land use (rezone) will also be analyzed
- **Operations Analysis (Synchro)** – Intersection analysis using existing and projections of afternoon peak traffic volumes, vehicle types, signal timing, and roadway features.
- **Microsimulation (VISSIM)** – Corridor analysis using roadway features, projections of traffic volumes, travel behavior, vehicle characteristics

Assumed Background Improvements

Table 2 below a base set of background improvements anticipated to be in place in by 2035.

Table 2 Background

Elements	Description	Year	
		2025	2035
Signal 9th/6th Street	Installation of new traffic signals	X	X
Signal Kirkland Way/6th Street	Installation of new traffic signals	X	X
Signal 53rd/108th Avenue	Installation of new traffic signals as part of Northwest University	X	X
CKC Permanent Regional Trail	Expansion of the CKC with regional permanent trail	X	X
I-405 Corridor Completion	Completion of the I-405 corridor improvements	X	X
Northwest University	Expansion of the Northwest University Campus	X	X
Kirkland Urban	New mixed use development	X	X
Maximum Density with current zoning	Increase development to meet current permitted zoning	X	X
Houghton Everest Up-zone	Development above zoning	X	X
Light Rail to S Kirkland Park and Ride	Extension of light rail from S. Kirkland park and ride to Issaquah by way of Bellevue		X

Figure 4 - Suggested Data Points for Streetlight Data

APPENDIX B: LOS DEFINITIONS & WORKSHEETS

LOS DEFINITIONS

Signalized Intersections

Signalized Intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle in experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table B1 summarizes the LOS criteria for signalized intersections, as described in the *Highway Capacity Manual 2010* (Transportation Research Board).

Unsignalized Intersections

LOS criteria can be further reduced into two intersection types: all-way stop and two-way stop control. All-way stop control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table B2 shows LOS criteria for unsignalized intersections as described in the *Highway Capacity Manual 2010* (Transportation Research Board).

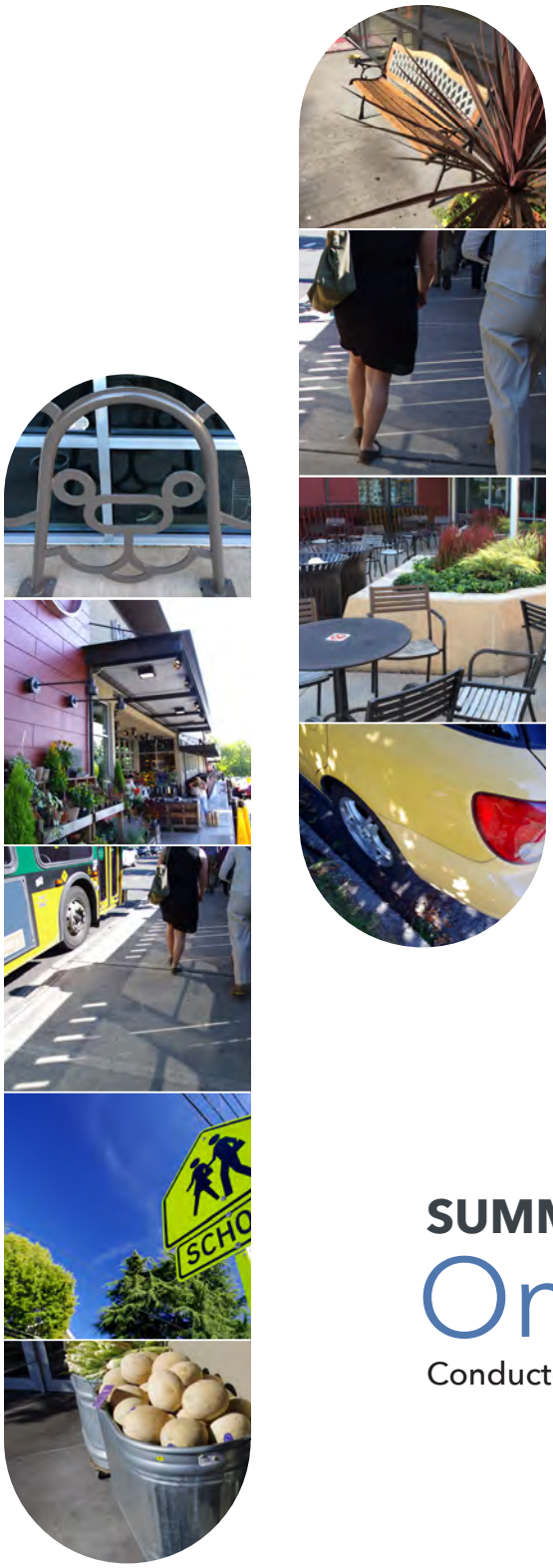
Table B1. Level of Service Criteria for Signalized Intersections

LOS	Avg. Control Delay (sec/veh)	General Description
A	≤10	Free Flow
B	>10-20	Stable Flow (slight delays)
C	>20-35	Stable Flow (acceptable delays)
D	>35-55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55-80	Unstable flow (intolerable delay)
F[1]	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual* 2010, Transportation Research Board (TRB)

1. If the volume-to-capacity ratio for a lane group exceeds 1.0 LOS F is as-signed to the individual lane group. LOS for overall approach or intersection is determined by the control delay.

APPENDIX C: SURVEY SUMMARY



CITY OF KIRKLAND WASHINGTON

HE6th

• HOUGHTON / EVEREST NEIGHBORHOOD CENTER
• 6TH STREET CORRIDOR

SUMMARY REPORT

Online Survey

Conducted August 22 – October 28, 2016

Contents

I. Introduction

As part of the public outreach process for the Houghton/Everest Neighborhood Center and 6th Street Corridor Project, the City conducted an online survey, using MetroQuest, a digital public engagement software platform. The purpose of this approach was to:

- Engage a large number of participants within the project area and throughout the city;
- Provide a convenient option for interested citizens to provide feedback, opinions and comments; and
- Gain insight into public opinion about the project.

The survey was organized in five parts (referred to in this report as "screens"), included in Attachment 1 and briefly described below:

SCREEN 1
Welcome screen that briefly described the project

SCREEN 2
Asked for neighborhood preferences related to land use, development, and circulation patterns in the neighborhood center and mobility and transportation options along the 6th Street Corridor

SCREEN 3
Asked about preferences for different transportation strategies addressing pedestrians, bicycles, neighborhoods, congestion, and transit

SCREEN 4
Asked for image ratings of commercial and mixed use buildings, residential buildings, public spaces, streetscapes and parking, and urban design details

I. Introduction

SCREEN 5
Provided information about how to stay involved in the planning process and asked demographic questions.

Survey Participation

Survey responses were collected for a 10-week period, from August 22 through October 28, 2016. A total of 753 persons participated in the survey. Over half of the participants came from the neighborhoods that contain or are near to the Neighborhood Center or 6th Street Corridor – Central Houghton, Everest, Lakeview and Moss Bay. Please see the discussion of Screen 5 for additional information about the demographics of survey participants.

Because participation in the survey was self-selected, findings are not statistically significant, but do provide a robust qualitative snapshot of over 750 participants' opinions and preferences during the survey period. The survey represents one element of the City's larger public outreach effort, which includes opportunities to comment on the project website and other public events, including a community workshop, informal open houses, Planning Commission and Transportation Commission meetings and a public hearing with the City Council. Please see the project website (kirklandwa.gov/HE6th) for additional public involvement activities.

To encourage participation in the survey, posters were displayed throughout the neighborhood (above) and calling cards with local images on the reverse were distributed at events and at various locations (below).

II. Survey

The survey structure was created based on the MetroQuest software platform. The software organizes questions according to different "screen types," described by MetroQuest as "…standardized screens that guide participants through the process of learning about the project and providing input." For example, different screen types allow for priority ranking, scenario ranking, image rating, strategy rating, budget allocation, among others. For the purposes of this survey, questions that allowed for strategy rating, neighborhood preferences and image rating were selected as the most useful and informative.

The City worked with the consultant team to develop question content. Draft questions were reviewed and revised for clarity and to capture all potential opinions.

The survey was launched on August 22, 2016. While the outreach focused on the vicinity around the Neighborhood Center and 6th Street Corridor, the City recognized that all neighborhoods use and have an interest in these areas. Therefore, outreach to publicize the survey included specific efforts to promote participation both in project-area neighborhoods and on a citywide basis.

Materials developed to publicize the survey included small "calling cards" with information a link to the survey, posters and handouts with information about the project and inviting comment through the survey, and "fortune tellers" that provided similar information.

II. Survey

The survey was publicized through a variety of methods:

Electronic Notification E-mails were sent to those who requested updates up via the City of Kirkland and the Houghton and Everest neighborhood associations. Emails sent at the beginning of the survey period and prior to the close of the survey.

Blogs Notices were posted on NextDoor and KirklandViews.

Posters with survey information were posted at the Kirkland Library, North Kirkland Community Center, City Hall, and stores and coffee shops throughout the city.

Handouts were provided at the Peter Kirk Day Camp and Lakeview Elementary for children to take home to their families.

In-person Events Staff spent time at Everest, Houghton Beach, and Crestwoods Park, Puget Consumers Co-op, Northwest University and the Cross Kirkland Corridor handing out information about the survey and encouraging people to participate.

To encourage participation in the survey and other events, large informational signs were posted at six locations in the Neighborhood Center.

Flyers were provided to businesses along the 6th Street Corridor.

Informational signs were posted at six locations in the Neighborhood Center with information and links to the survey.

The survey period ended on October 28, 2016. Over the survey period, a total of 1,507 persons visited the website and 753 persons responded to the survey. The number of site visits is an indicator of the success of the publicity and notice for the survey. According to MetroQuest representatives, a typical response rate for their surveys is 45 to 50%, consistent with this survey.

III. Summary & Observations

Preference for small scale development in the Neighborhood Center. In response to image rating questions, the majority of participants rated large-scale development (3 stories and up) more negatively than smaller scale development for both mixed use and residential development. One outlier to this trend is the moderately negative response to the option of continuing existing low-scale development in future neighborhood center development patterns (Question 2A).

Preference for retail, restaurant and other commercial uses in the Neighborhood Center. Participants consistently expressed a preference for more retail and restaurants compared to a general lack of support for housing or office uses in the Neighborhood Center. Preferred uses in the Neighborhood Center include grocery stores, drug stores, restaurants, coffee shops and small neighborhood retail.

Interest and support for public amenities. Most preferred amenities include multi-use wide sidewalks, flexible public plazas, sidewalk café seating, flexible seating and pedestrian focused streets. There is relatively less support of public art, wayfinding signs or unique design features.

Interest and support for pedestrian and bicycle improvements in the 6th Street Corridor. There is general support for increased crosswalk safety, more pedestrian connections, and increased accessibility to pedestrian routes, more bike lanes, bike parking and increased on-street safety for bikes.

Broad concern over PM peak commute congestion and a mix of opinions about solutions. PM peak commute congestion is identified as the most significant mobility concern. However, there is little agreement over what types of improvements should be pursued to increase mobility. There is some support for increased transit service, although participants did not identify increased use of transit as an option that they would use to improve mobility on the corridor.

IV. Detailed Findings

A series of questions on screens 2, 3 and 4 asked participants to rank preferences, concerns, or images in order from least preferred (1 star) to most preferred (5 stars). Responses to each question are compiled in bar charts showing totals for each preference rating and their average. Each chart is accompanied by a brief summary characterizing the overall trends and findings for the question.

All of the survey responses are presented in the same format. The title of the chart corresponds to the survey question. The bars show the number of responses to each rating, from one star (lowest) to five stars (highest), for each question. The average rating for each question is also indicated.

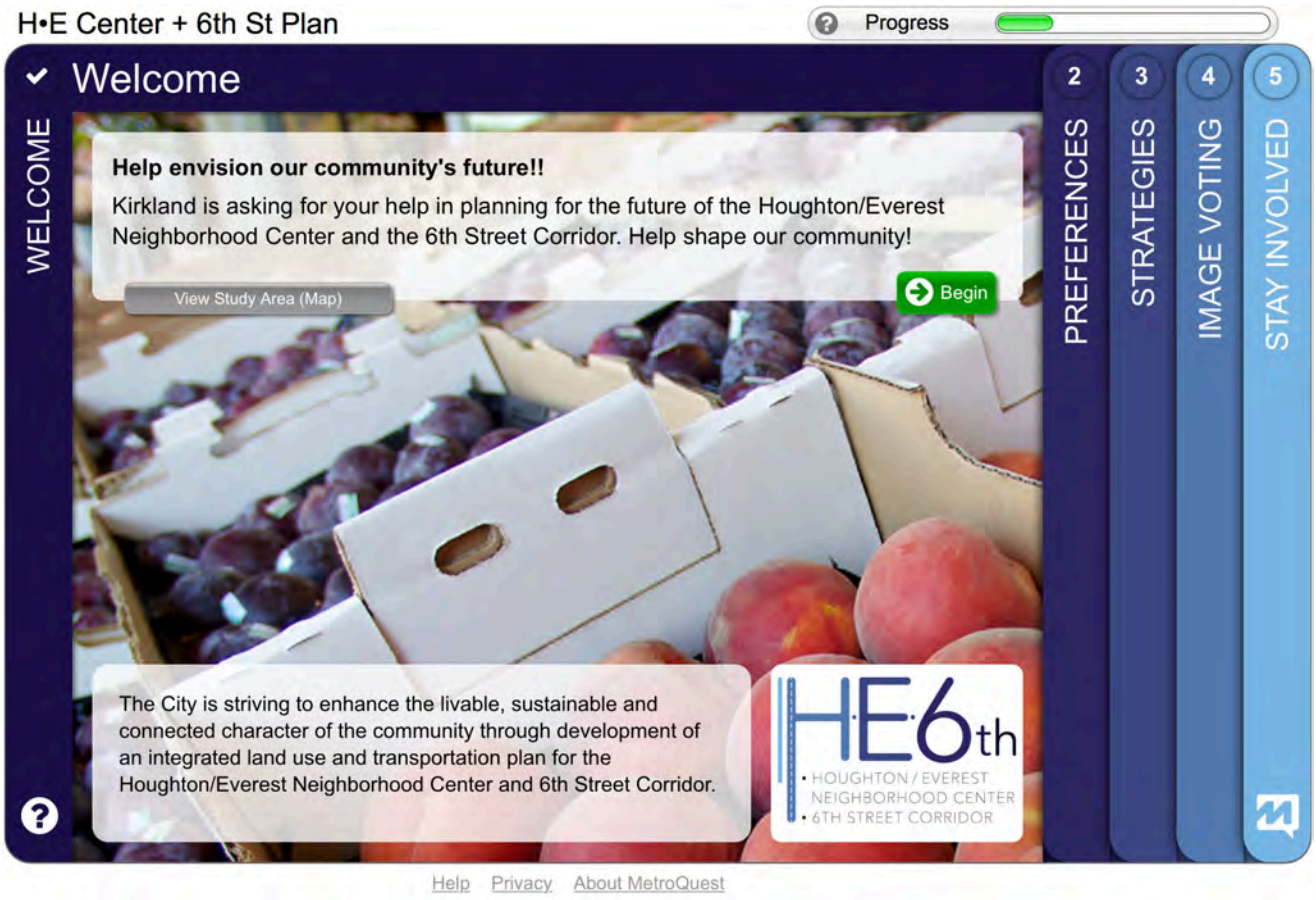
Many of the questions also a field for written comment for respondents to explain their preference rating, identify specific locations, express opinions or otherwise discuss the question. All written comments have been compiled and included as Attachment 2 to this report.

IV. Detailed Findings

SCREEN 1

Welcome

Screen 1 served as a survey overview and did not include any questions.

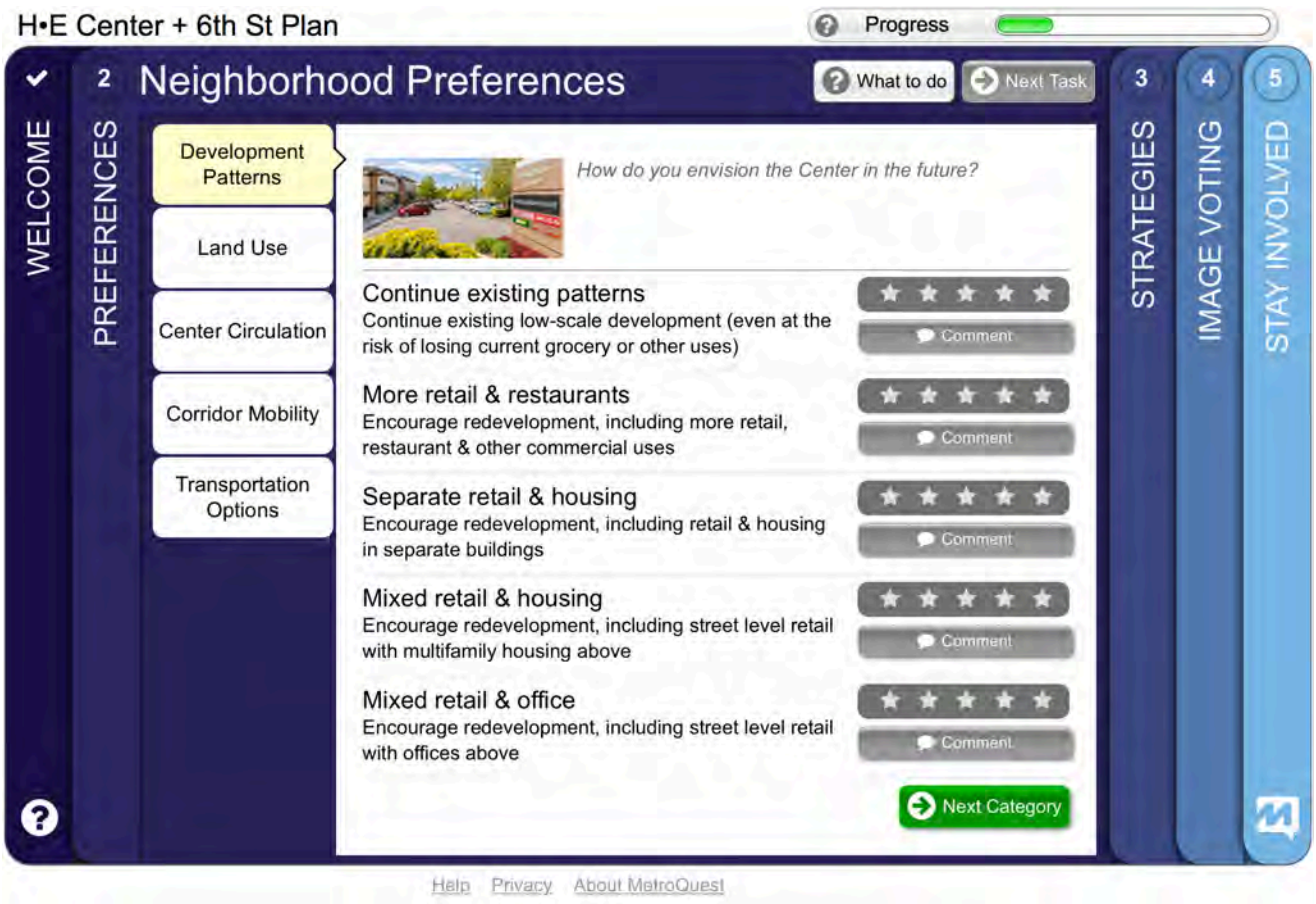


IV. Detailed Findings

SCREEN 2

Neighborhood Preferences

Screen 2 asked for neighborhood preferences related to development patterns, land use, center circulation, corridor mobility and transportation options. Respondents ranked five statements from 1 star (lowest rating) to 5 stars (highest rating).



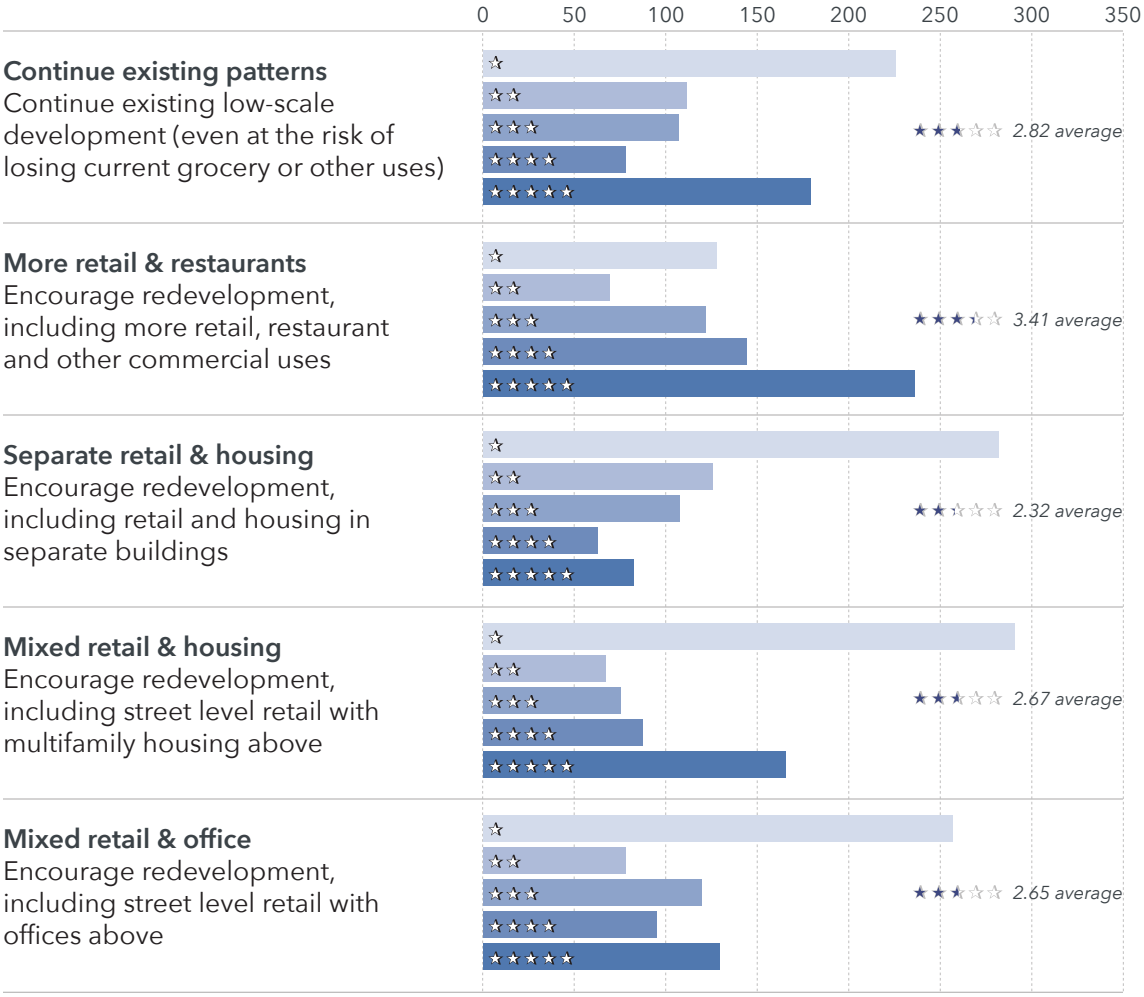
SCREEN 2

Neighborhood Preferences

Five statements ranked from 1 (low) to 5 (high)
Relating to: development patterns ·· land use ·· center circulation ·· corridor mobility ·· transportation options

QUESTION 2A: **DEVELOPMENT PATTERNS**

How do you envision the Center in the future?



FINDINGS

Highest rating Encourage redevelopment, including more retail, restaurant & other commercial uses

Lowest ratings Options proposing a mix of retail and housing or office uses. Lowest average rating for retail and housing in separate buildings

Notes High and low ratings for continue existing patterns and mixed retail and housing. Consistent with responses to Question 2B, which also show high ratings for retail and restaurant uses

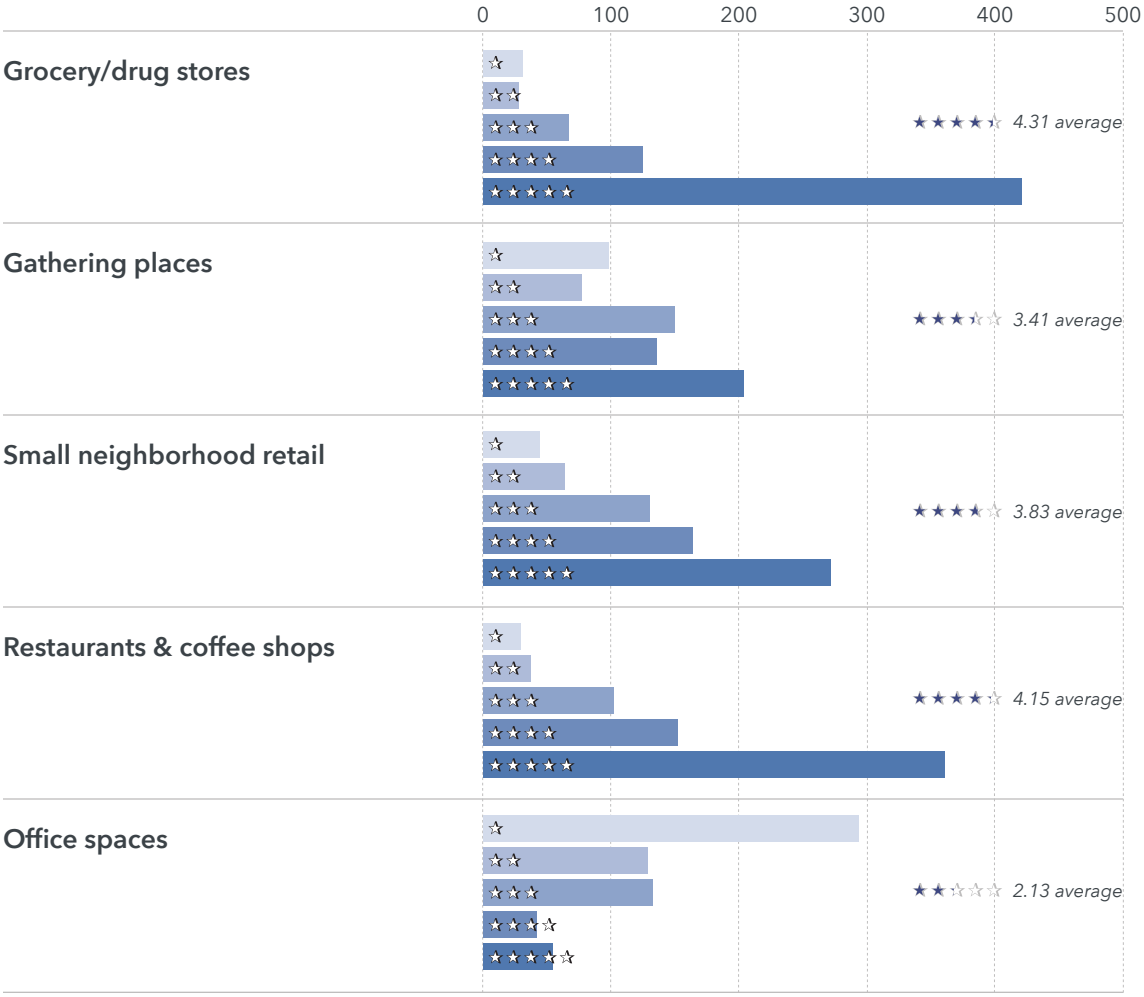
SCREEN 2

Neighborhood Preferences

Five statements ranked from 1 (low) to 5 (high)
Relating to: development patterns ·· land use ·· center circulation ·· corridor mobility ·· transportation options

QUESTION 2B: **LAND USE**

What uses would you like to see in the Center?



FINDINGS

Highest rating Grocery and drug stores

Other high ratings Restaurants and coffee shops, small neighborhood retail, gathering places

Lowest rating Office spaces

Notes Ratings are consistent with responses to Question 2A, which also show high ratings for retail and restaurant uses

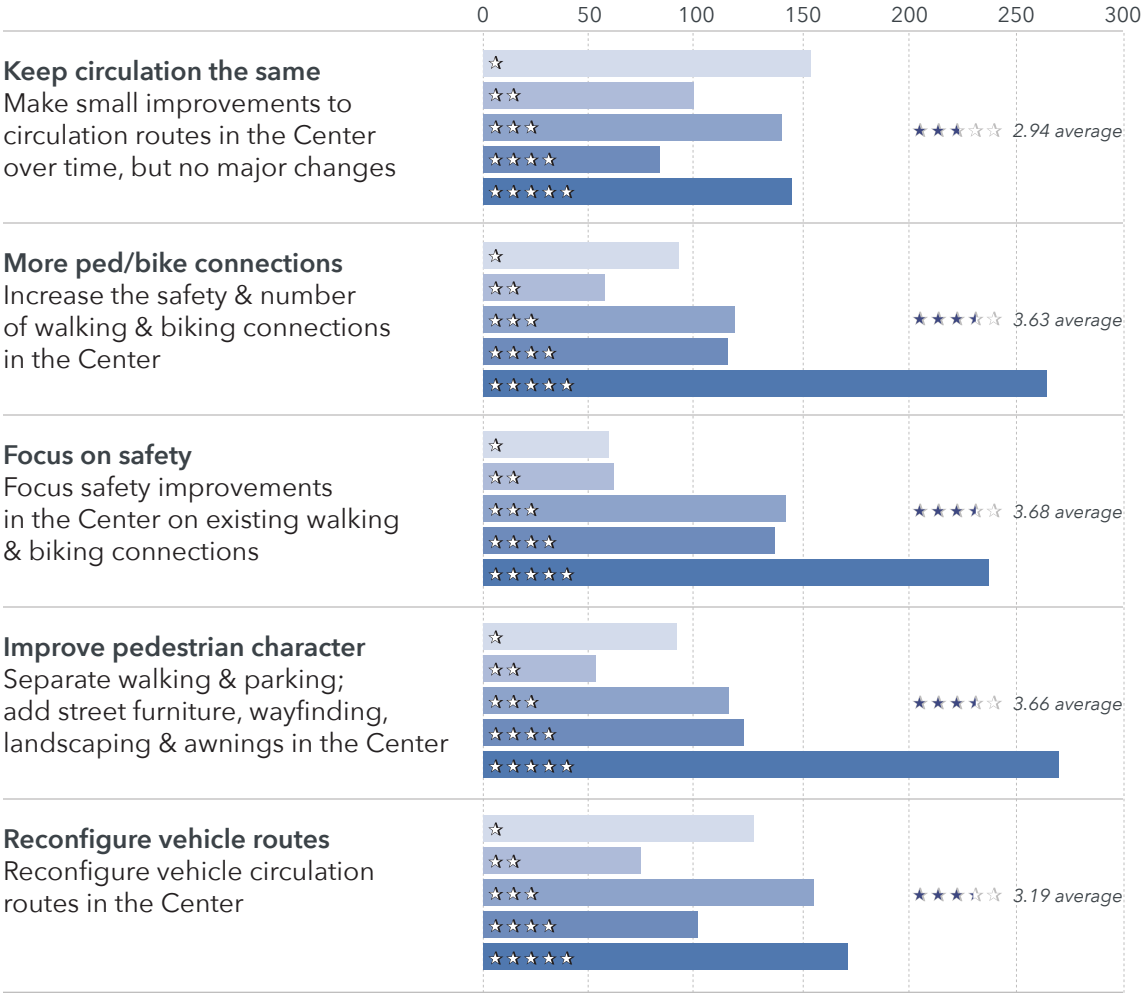
SCREEN 2

Neighborhood Preferences

Five statements ranked from 1 (low) to 5 (high)
Relating to: development patterns ·· land use ·· center circulation ·· corridor mobility ·· transportation options

QUESTION 2C: **CENTER CIRCULATION**

How would you balance circulation in the Center



FINDINGS

Highest ratings Options that support a focus on safety improvements for existing bicycle and pedestrian improvements, improved pedestrian character, and more pedestrian/bicycle connections

Low ratings Options for keeping circulation the same and reconfiguring vehicle routes See note below

Notes Options for keeping circulation the same and reconfiguring vehicle routes include relatively similar levels of high, low and moderate ratings

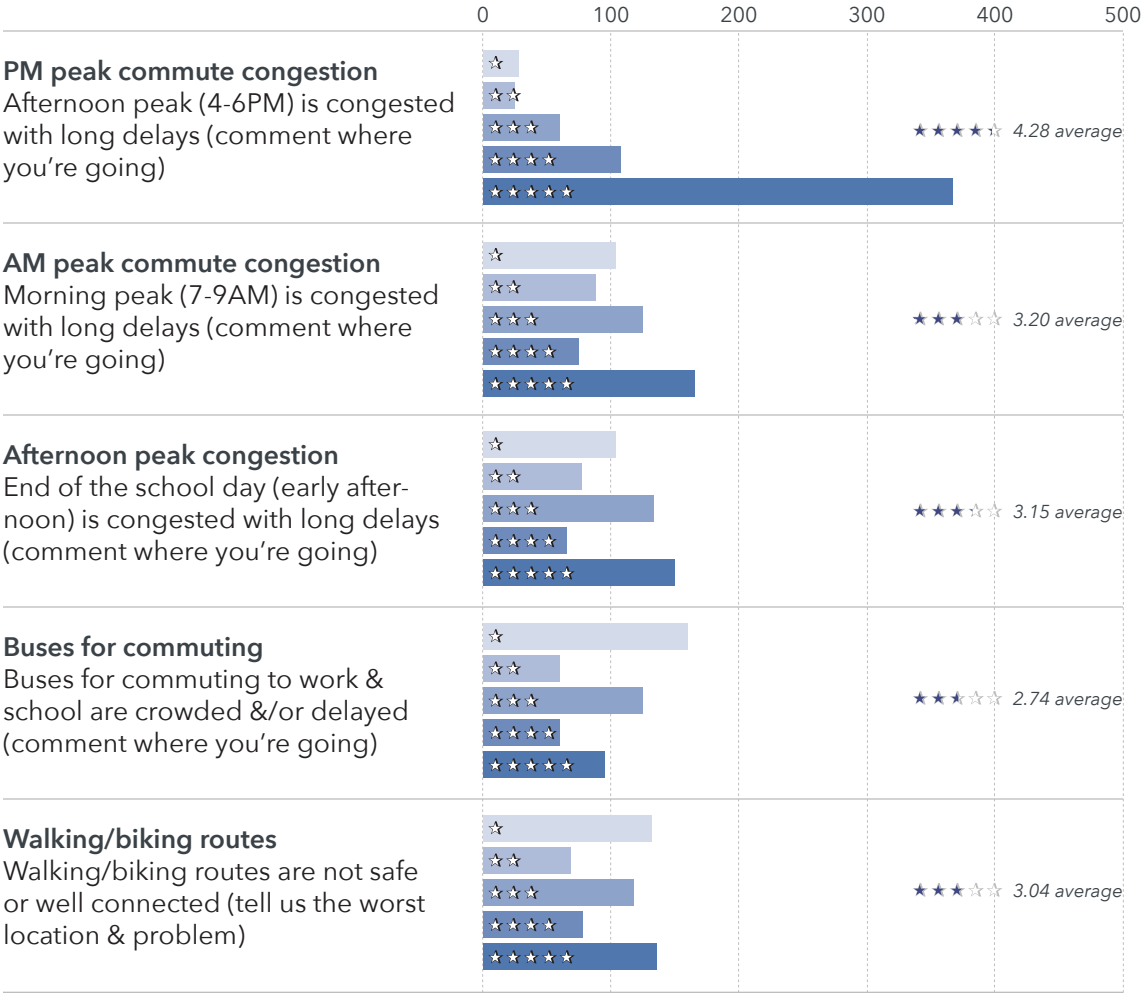
SCREEN 2

Neighborhood Preferences

Five statements ranked from 1 (low) to 5 (high)
Relating to: development patterns ·· land use ·· center circulation ·· corridor mobility ·· transportation options

QUESTION 2D: **CORRIDOR MOBILITY**

What are your mobility concerns in the corridor?



FINDINGS

Highest rating By a large margin, pm peak congestion ranked as highest mobility concern along the 6th Street Corridor

Lowest rating Buses for commuting ranked as lowest mobility concern along the 6th Street Corridor

Notes Peak congestion in the am and afternoon were also identified as a concern, although to a much lesser degree than pm peak congestion Walking/biking routes were rated at relatively similar low, moderate and high levels of concern On average, responses to Question 2D show a high concern over pm peak congestion Notably lower averages were given for all of the remaining mobility concerns

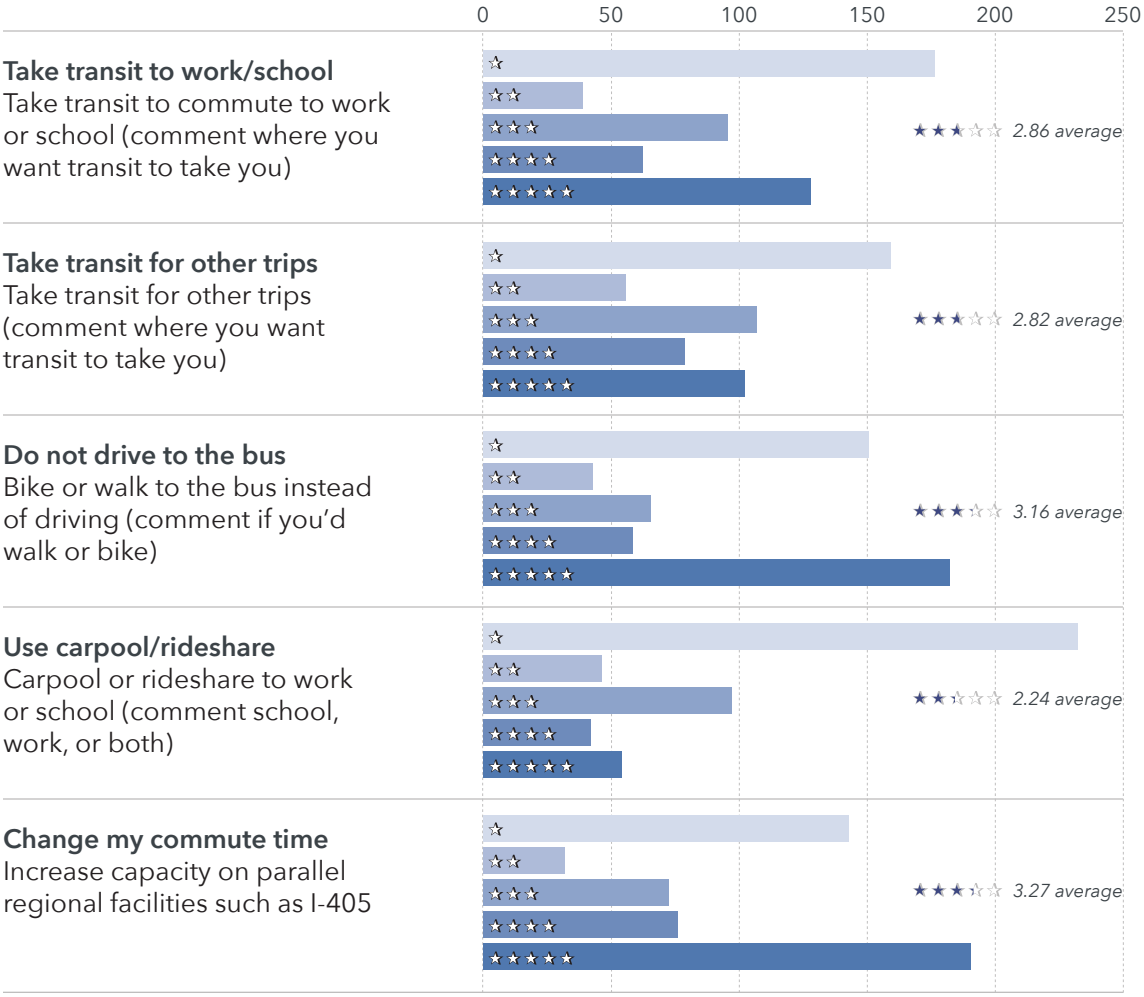
SCREEN 2

Neighborhood Preferences

Five statements ranked from 1 (low) to 5 (high)
Relating to: development patterns ·· land use ·· center circulation ·· corridor mobility ·· transportation options

QUESTION 2E: **TRANSPORTATION OPTIONS**

How would you help improve travel in the corridor?



FINDINGS

Highest rating Change my commute time, followed by do not drive to the bus

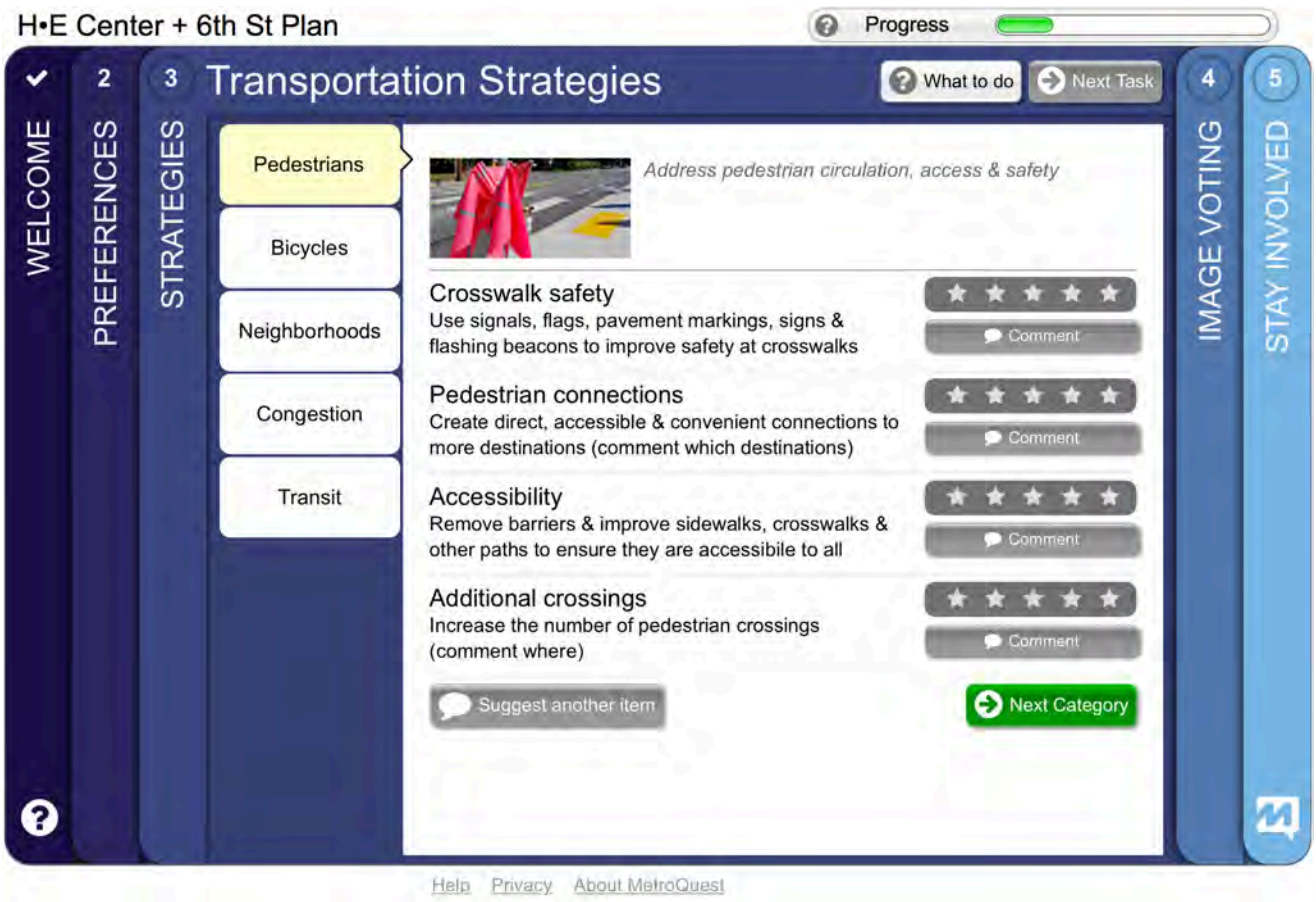
Lowest ratings Use carpool/rideshare, followed by take transit to work/school and take transit for other trips

Notes Some options, including take transit to work/school, do not drive to the bus, and change my commute time had a relatively similar high and low ratings Overall, the average rating for all options were relatively low, compared to other questions in the survey

SCREEN 3

Transportation Strategies

Screen 3 asked participants to rate a range of different strategies to improve conditions for pedestrians, bicycles, vehicular congestion, transit, and neighborhood access. Respondents ranked five statements from 1 star (lowest rating) to 5 stars (highest rating).



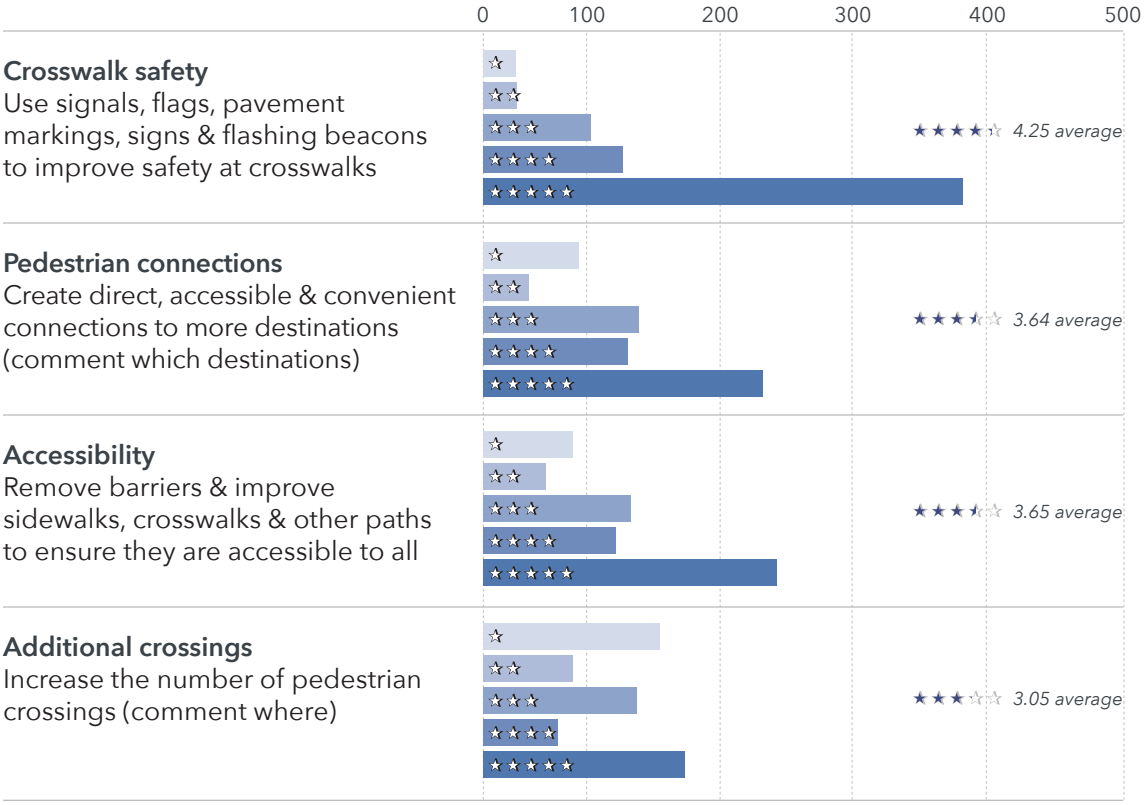
SCREEN 3

Transportation Strategies

Four strategies ranked from 1 (low) to 5 (high)
Relating to improving conditions for: pedestrians ·· bicycles ·· vehicular congestion ·· transit ·· neighborhood access

QUESTION 3A: **PEDESTRIANS**

Address pedestrian circulation, access & safety



FINDINGS

Highest rating Crosswalk safety

Other high ratings Accessibility, pedestrian connections

Lowest rating Additional crossings (though well supported)

Notes Options for this question received the highest ratings overall, relative to other survey questions

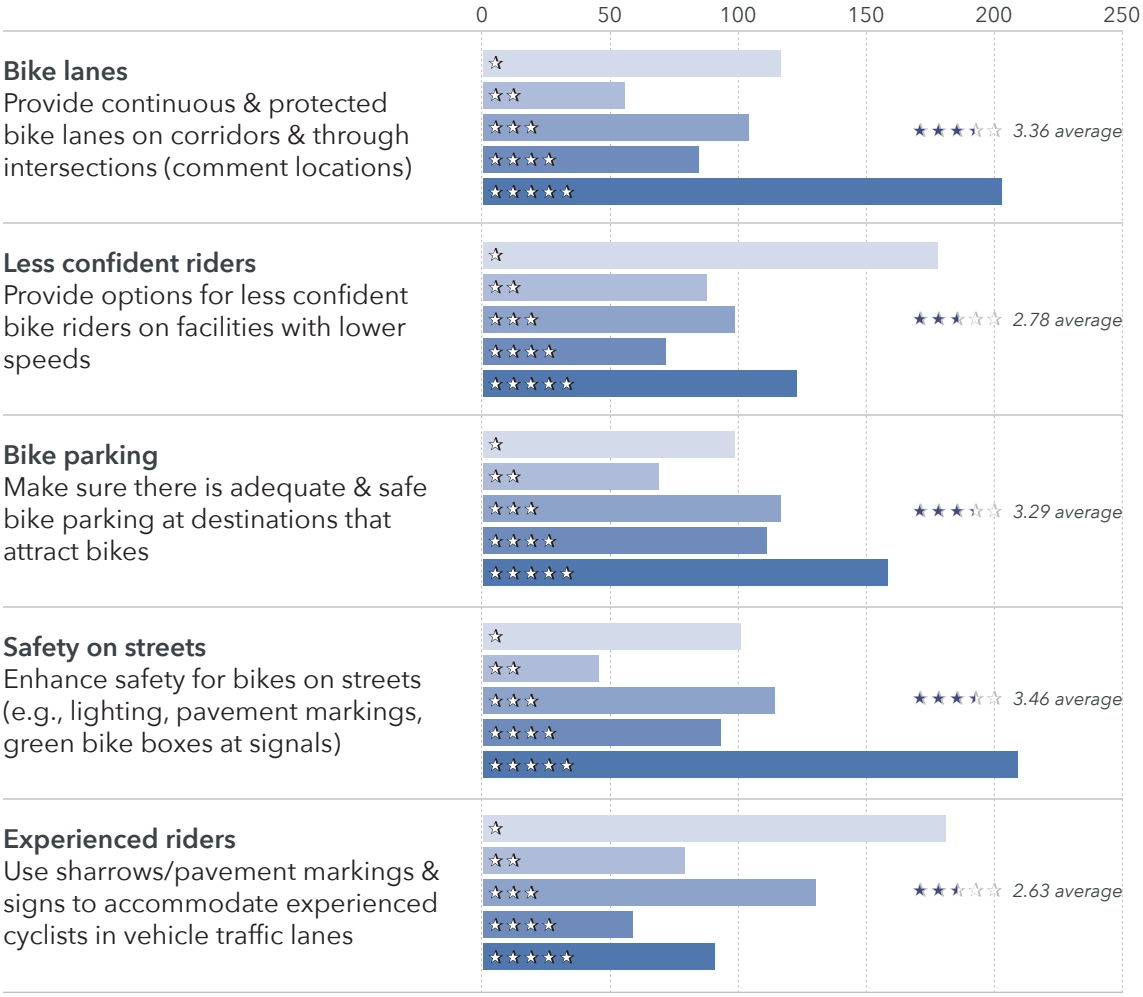
SCREEN 3

Transportation Strategies

Five strategies ranked from 1 (low) to 5 (high)
Relating to improving conditions for: pedestrians ·· bicycles ·· vehicular congestion ·· transit ·· neighborhood access

QUESTION 3B: **BICYCLES**

Address safety & mobility for bicycles



FINDINGS

Highest ratings Enhance safety on streets, provide continuous and protected bike lanes

Other high rating Provide adequate and safe bike parking

Lowest ratings Accommodate experience cyclists in vehicle traffic lanes, provide options for less confident bike riders

Notes Highest rated options also had a relatively large number of low ratings

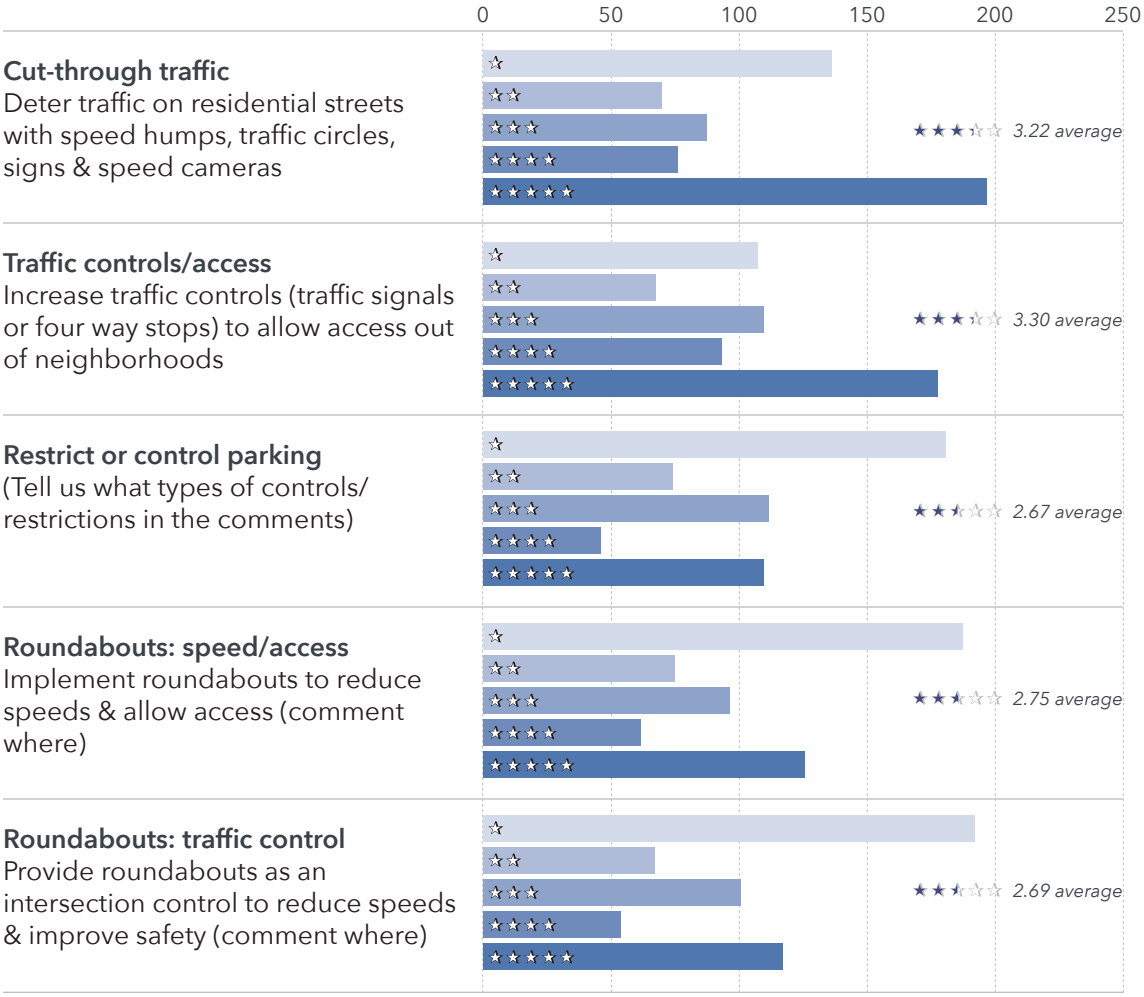
SCREEN 3

Transportation Strategies

Five strategies ranked from 1 (low) to 5 (high)
Relating to improving conditions for: pedestrians ·· bicycles ·· vehicular congestion ·· transit ·· neighborhood access

QUESTION 3C: **NEIGHBORHOODS**

Provide protection & access for neighborhoods



FINDINGS

Highest ratings Deter cut-through traffic on residential streets, and increase traffic control measures to allow access out of neighborhoods

Lowest ratings Restrict or control parking and both options for roundabouts

Notes All options had a range of relatively high and low ratings

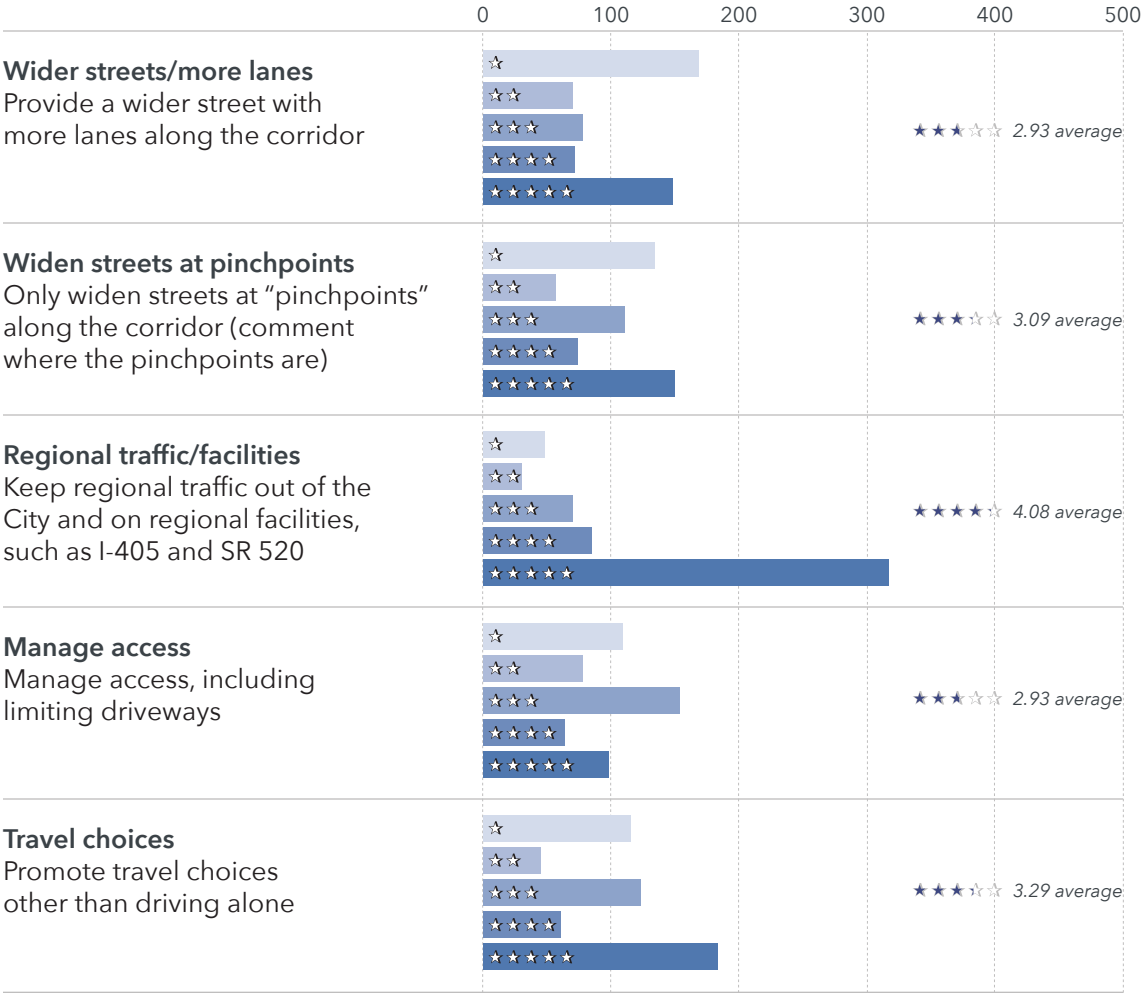
SCREEN 3

Transportation Strategies

Five strategies ranked from 1 (low) to 5 (high)
Relating to improving conditions for: pedestrians ·· bicycles ·· vehicular congestion ·· transit ·· neighborhood access

QUESTION 3D: **CONGESTION**

Reduce current & future congestion



FINDINGS

Highest rating Keep regional traffic out of the City and on regional facilities, such as I-405 and SR 520 (by a large margin)

Lowest ratings Options for widening the street either at "pinchpoints" or along the corridor

Notes With the exception of "regional traffic/facilities," responses to options had relatively large numbers of low, moderate and high ratings

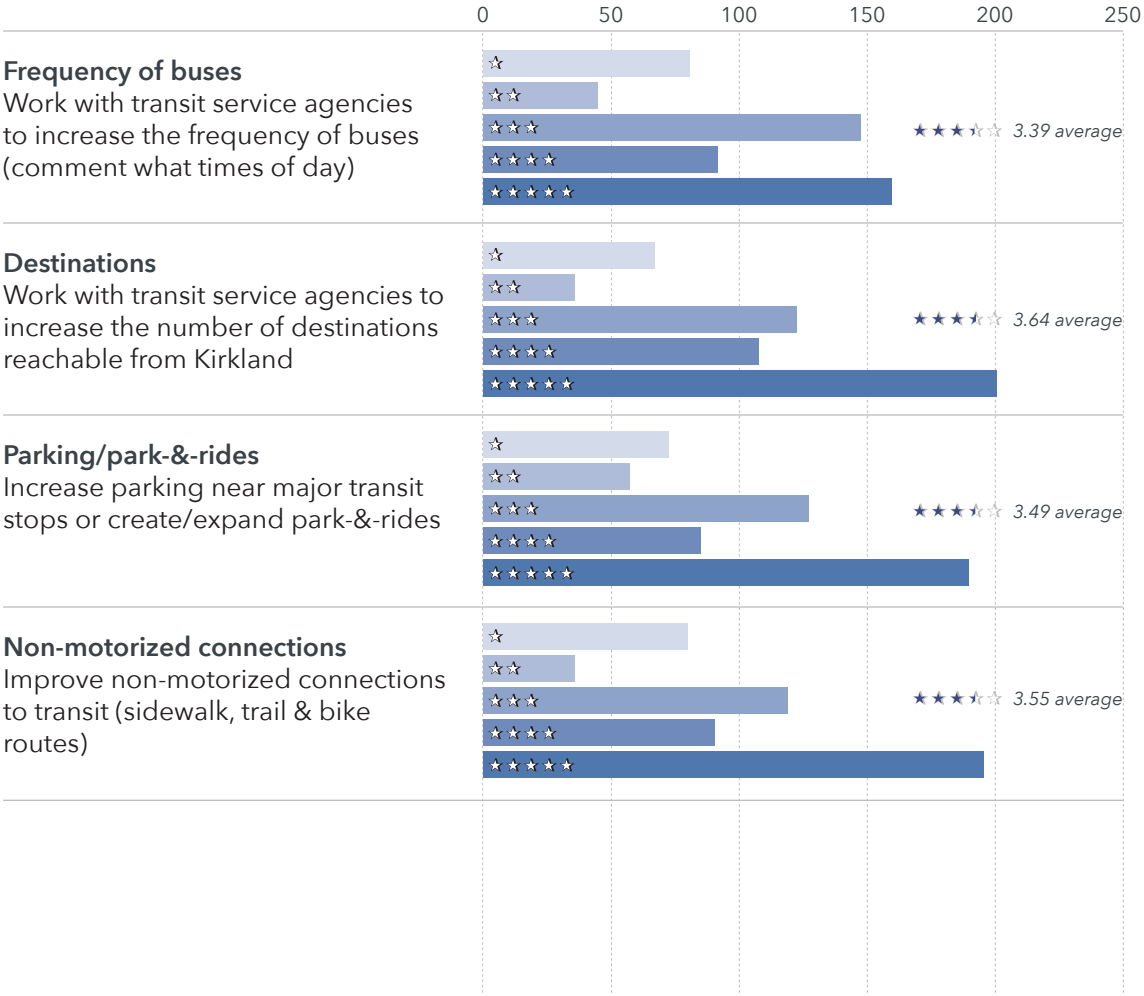
SCREEN 3

Transportation Strategies

Five strategies ranked from 1 (low) to 5 (high)
Relating to improving conditions for: pedestrians ·· bicycles ·· vehicular congestion ·· transit ·· neighborhood access

QUESTION 3E: **TRANSIT**

Move people through the corridor with transit



FINDINGS

Highest ratings All options received high ratings, with the highest rating for working with transit agencies to increase destinations from Kirkland

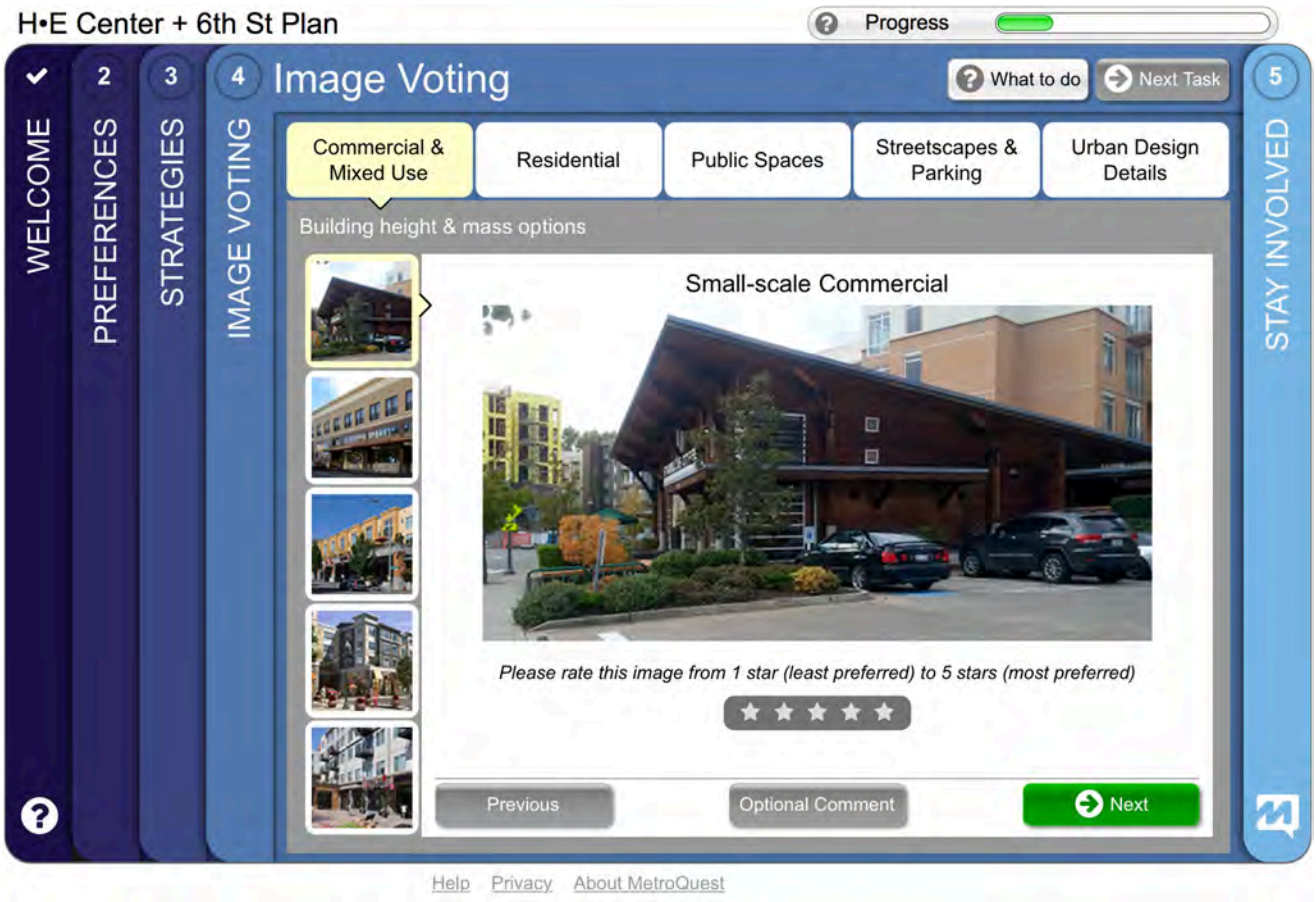
Lowest ratings Although still positive, working with transit agencies to increase bus frequency was rated to lowest among the options

Notes High ratings among all transit options

SCREEN 4

Image Voting

Screen 4 participants were shown images of different types of development, including mixed use, residential, public spaces, streetscapes and urban design details. Respondents ranked five images from 1 star (lowest rating) to 5 stars (highest rating).



SCREEN 4

Image Voting

Five images ranked from 1 (low) to 5 (high)
Relating to types of development, including: mixed use ·· residential ·· public spaces ·· streetscapes ·· urban design details

QUESTION 4A: **COMMERCIAL AND MIXED USE**

Building height & mass options

FINDINGS

Highest rating Image showing mall scale commercial image

Lowest ratings Images showing larger mixed use developments, specifically the 3-, 4- and 5-story images, by a large margin

Notes The 2-story image received a mix of ratings, with relatively low numbers of high and low ratings and a high-number of moderate ratings Responses to this question are consistent with the responses to Question 4B, which shows a preference for smaller-scale development

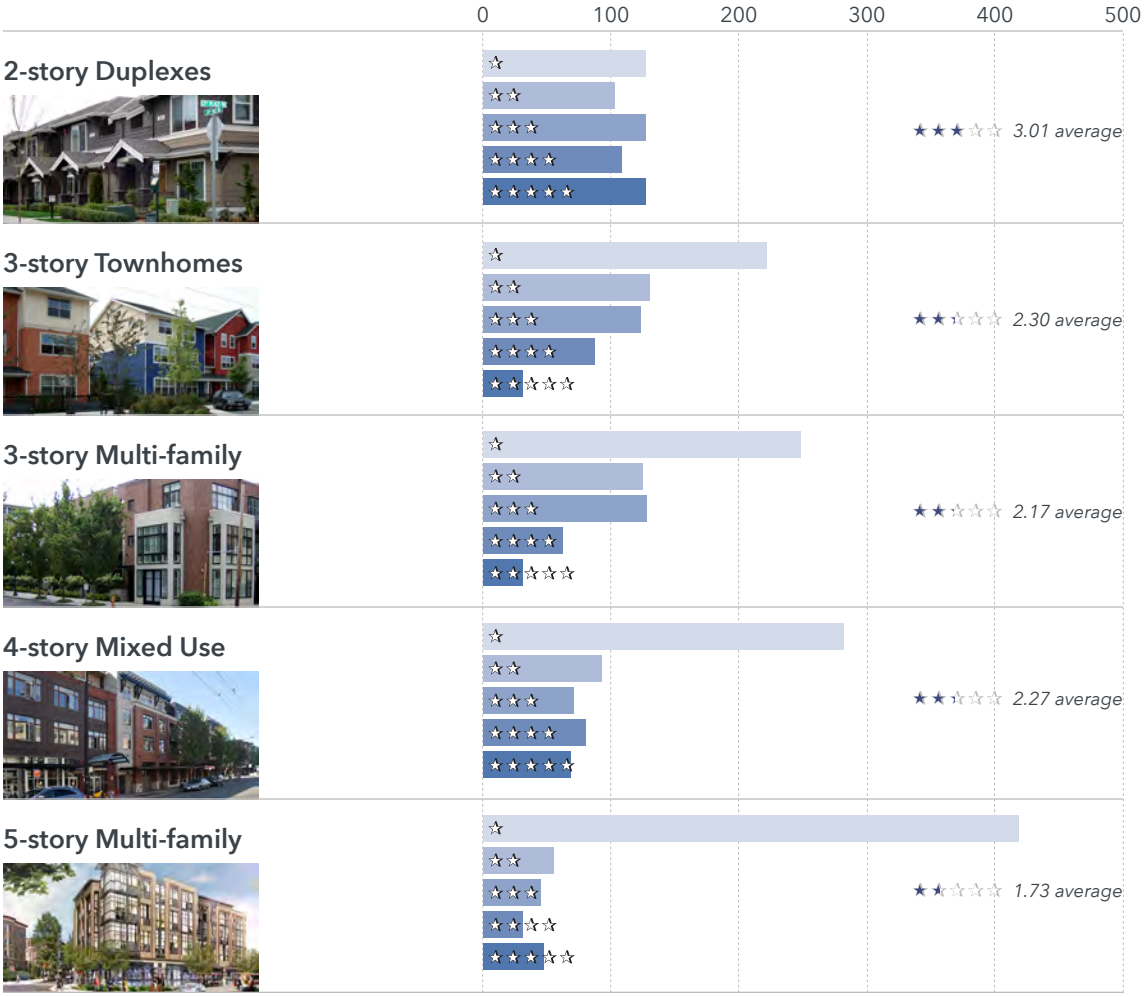
SCREEN 4

Image Voting

Five images ranked from 1 (low) to 5 (high)
Relating to types of development, including: mixed use ·· residential ·· public spaces ·· streetscapes ·· urban design details

QUESTION 4B: **RESIDENTIAL**

Building height & mass options



FINDINGS

Highest rating Images showing 2-story duplexes, although the overall rating was mixed, with an equal number of low, moderate and high ratings

Lowest ratings Images showing larger residential developments, specifically the 3-, 4-, and 5-story images, by a large margin

Notes Overall, there were no clearly positive responses to any of the images shown in this question Responses to this question are consistent with the responses to Question 4B, which shows a preference for smaller-scale development

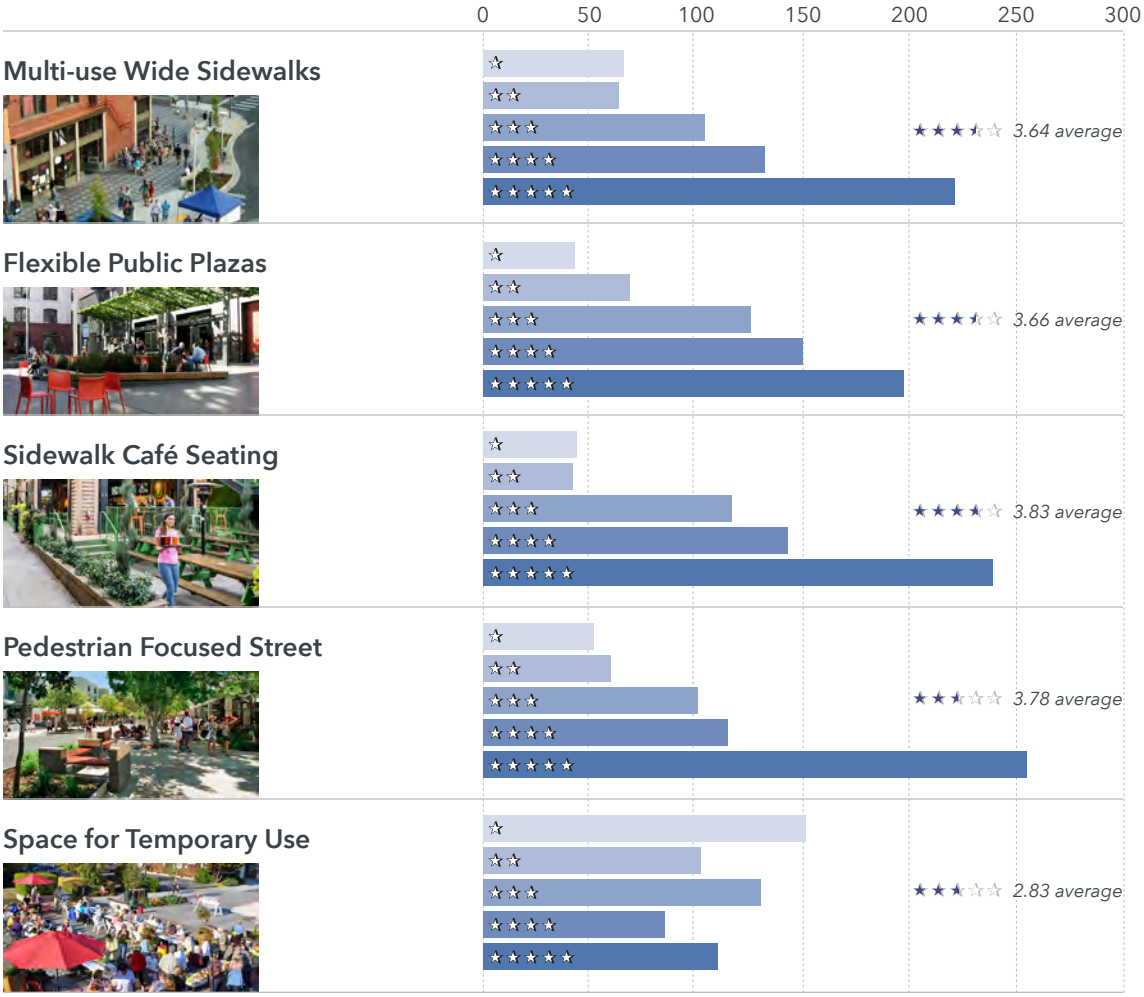
SCREEN 4

Image Voting

Five images ranked from 1 (low) to 5 (high)
Relating to types of development, including: mixed use ·· residential ·· public spaces ·· streetscapes ·· urban design details

QUESTION 4C: **PUBLIC SPACES**

Physical design & programming options



FINDINGS

Highest ratings Images showing sidewalk café seating and pedestrian-focused street

Other high ratings Images showing flexible public plazas and multi-use wide sidewalks

Lowest rating Image showing space for temporary use

Notes Ratings for these images for generally positive, with only the image for space for temporary use receiving a relatively large number of low ratings

SCREEN 4

Image Voting

Five images ranked from 1 (low) to 5 (high)
Relating to types of development, including: mixed use ·· residential ·· public spaces ·· streetscapes ·· urban design details

QUESTION 4D: **STREETSCAPES & PARKING**

Streetscape & parking treatment options

FINDINGS

Highest ratings Images showing active streetscapes and ample landscaping

Other high rating Image showing angled parking

Lowest ratings Images showing surface and parallel parking

SCREEN 4

Image Voting

Five images ranked from 1 (low) to 5 (high)
Relating to types of development, including: mixed use ·· residential ·· public spaces ·· streetscapes ·· urban design details

QUESTION 4E: **URBAN DESIGN DETAILS**

Gateways, signage, public art & design details

FINDINGS

Highest rating Image showing flexible seating

Other high ratings Attractive bike parking and interactive public art

Lowest ratings Wayfinding signs and unique design features

Notes Most images had a mix of ratings, with relatively large numbers of high, moderate and low rated responses

SCREEN 5

Stay Involved

Screen 5 thanked participants for their input, provided a link to the project website and asked a five optional demographic questions–not all participants responded. Questions asked about neighborhood of residence, whether and how long participants had lived or worked in Kirkland, age and whether participants lived in single family or multifamily homes.

SCREEN 5

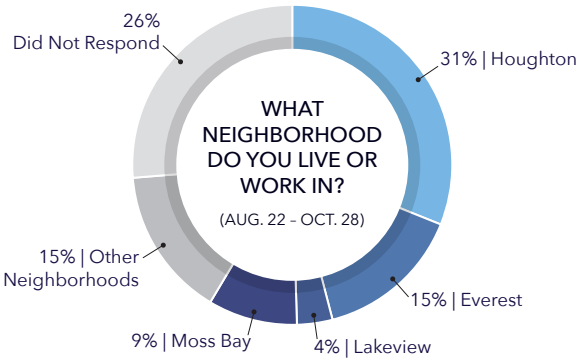
Stay Involved

Optional demographic questions
Relating to: neighborhood ·· living or working in Kirkland (status and duration) ·· age ·· living in single family or multifamily home

All of the Screen 5 questions were identified as optional. Approximately one-quarter of participants elected not to respond, as shown in each of the charts below.

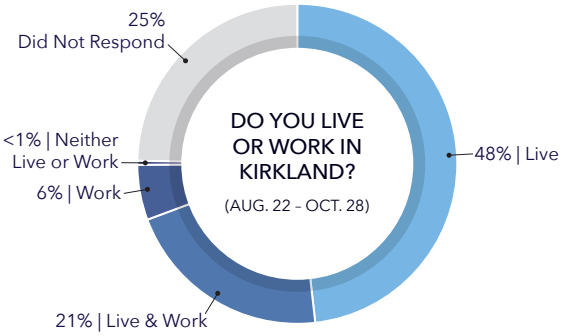
QUESTION 5A

What neighborhood do you live or work in?



QUESTION 5B

Do you live or work in Kirkland?



Note: During the survey period, an effort was made to encourage employees along the 6th Street Corridor to participate, including those at Northwest University.

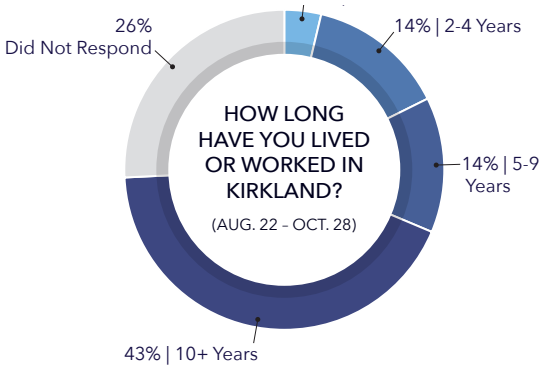
SCREEN 5

Stay Involved

Optional demographic questions
Relating to: neighborhood ·· living or working in Kirkland (status and duration) ·· age ·· living in single family or multifamily home

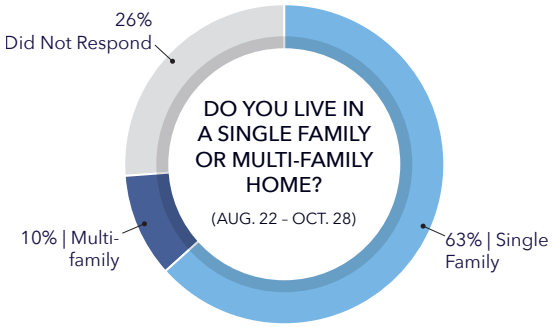
QUESTION 5C

How long have you lived or worked in Kirkland?



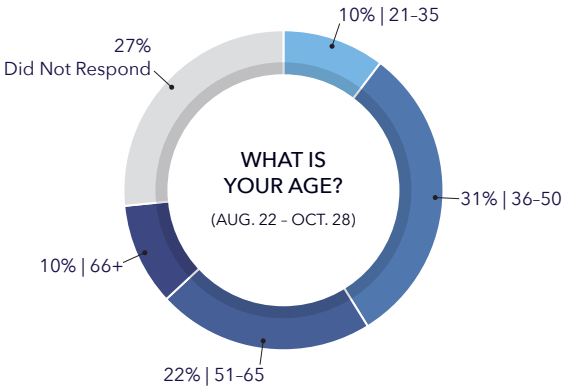
QUESTION 5D

Do you live in a single family or multi-family home?



QUESTION 5E

What is your age?



Attachments

1. Complete text of questions
2. Written comments

APPENDIX D: SOLUTIONS MEMO

MEMORANDUM

Date:	January 23, 2017	**TG:**	16090.00
To:	Joel Pfundt, City of Kirkland		
From:	Jeanne Acutanza/TranspoGroup Paul Sharman/TranspoGroup		
cc:	Deborah Munkberg/3SquareBlocks Angela Ruggeri/City of Kirkland		
Subject:	6th Street Corridor Kirkland – Potential Solutions evaluation		

The purpose of this memorandum is to summarize the evaluation of potential solutions developed to meet the NE 6th Street/108th Avenue corridor transportation needs. This effort is being conducted in conjunction with a study of the Houghton / Everest Neighborhood Center.

In summary, this list of solutions builds on what we heard, and what we learned through stakeholder outreach to the community and public, an evaluation of data from a wide range of sources, a workshop with City staff, and reviews by the Transportation Commission and Council. The resulting solutions that we will be evaluating are provided in the list attached. The locations of these investments are shown on the figure attached. These solutions will be evaluated against values defined by the community. More details of this effort are provided below.

Stakeholder Outreach

Outreach for this effort consisted of the following:
- Key stakeholder interviews with neighborhood community organizations
- A broad public survey
- Outreach with agency stakeholders with transportation responsibilities – Metro and Bellevue
- A community workshop that defined issues and key values as well as developed ideas
- Staff workshop of initial ideas
- Review and guidance by the Transportation Commission

Data collected and analysis conducted

Working with City staff, Transpo assembled data and information from a range of public and private data sources including Kirkland, Metro, WSDOT, PSRC, INRIX, Google, and Streetlight. Transpo also conducted field studies of parking, traffic operations and queueing.

Potential Solutions

Through stakeholder outreach and understanding of data and analysis, a set of solutions was developed and is attached as **Table 1**. These investments are located throughout the corridor as shown in **Figure 1**. This list of solutions is intended to be practical and achievable and emphasizes community interest. Solutions were identified to promote use of transit as a way to increase the capacity of this corridor, better connect the community especially for pedestrians and bicyclists and improve/enhance safety through better management of access, specifically in the neighborhood center.

Evaluation and Values

Values were discussed with the public at the community workshop meeting and will be used to evaluate solutions. These values emphasize movement of people, better connection of the community and considering capacity for the future. **Table 1** provides a summary of a draft evaluation of corridor solutions with recommendations on solutions to be carried forward and for discussion with the Transportation Commission.

Table 1 - NE 6th Street Corridor Study Potential Solutions – January 23, 2017

Numbers	Potential Solution Ideas	Type	Description	Timeline	Cost	Movement of People	Connect Communities	Capacity for the Future	Notes	Recommended
1. 6th Street at Kirkland Way										
1A	Transit Signal Priority Northbound - Peak Hour - Left turn lead lag	Transit	The City is in the process of designing and implementing traffic signals at the intersection of 6th Street and Kirkland Way. Metro's heavily used route 255 turns northbound left at this intersection and eastbound right. Transit signal priority at this intersection for the Northbound Lefts could provide a short travel time advantage for transit.	1-5 Years	$$	2	2	2	Yes, will provide some benefit for transit	6✓
1B	Signal Coordination along 6th Street with future increased demand	Vehicles	To better and more efficiently travel along the 6th Street corridor between Central Way and Kirkland Way. Interconnecting the signals (including the signal at 4th) could improve the efficiency, reduce stops and delays.	1-5 years	$$	3	1	3	Yes, will improve operations and reduce delay	✓
1C	Crosswalk improvements	Ped	To improve access across 6th Street for pedestrians, put in place RRFB crossing.	1-5 Years	$	3	3	2	Yes, will enhance safety	✓
2. 9th and Railroad Avenue										
2A	9th and Railroad at Kirkland Way Intersection Safety - Radar Speed - Left turn lane	Vehicles	A safety concern for neighborhoods include sight distance near the existing CKC trestle over Kirkland Way at Railroad Avenue and 9th Street. Radar speed signs may help reduce speeds and improve safety for accessing Kirkland Way. There may be the opportunity to add a westbound left turn pocket at railroad Avenue to improve turning movements.	1-5 Years	$	1	2	2	Yes, under design	✓
3. CKC for Transit										
3A	BRT on CKC bypass 108th to S Kirkland Park and Ride	Transit	To reduce transit delays incurred on 6th Street and 108th Avenue, especially northbound during PM peak periods, constructing transit lanes within the CKC, similar to the Master Plan. Transit on the CKC, especially in this segment could still connect to local neighborhoods but would dramatically increase overall transit travel times. Construction of this facility would be very expensive including structures over NE 68th Street and development of stations/stop, and take years to implement.	10 + Years	$$$$	3	3	3	Yes, consistent with the Master Plan and initial phase	✓
3B	Bus Intersection at 6th Street and the CKC	Transit	Another opportunity for transit signal priority would be at the CKC trail intersection on 6th Street. This would require a new signal, removal of on-street parking to give transit a bypass to north bound queues that can be over 200 feet long.	5-10 Years	$$$	2	2	2	Yes, potential first phase of 3A	✓
4. 6th Street at 9th Avenue S										
4A	Re-Assess the installation of traffic signals at 6th Street and 9th	Vehicles / Peds / Bikes / Transit	The City is in the process of designing and constructing a new traffic signal at the intersection of 6th Street and 9th. This signal could provide a shortcut for cut through traffic and may impact the adjacent intersection at NE 68th Street and 108th Avenue. This signal could support redevelopment of adjacent land uses. Deferral and delay of this signal might be helpful as a consideration of future development and rezone consideration.	1-5 Years	$	1	2	3	Yes, will improve access from Everest Neighborhood	✓

Numbers	Potential Solution Ideas	Type	Description	Timeline	Cost	Movement of People	Connect Communities	Capacity for the Future	Notes	Recommended
5. **70th Street over I-405**										
5A	Improve expand 70th Overpass	Vehicular	The existing NE 70th Street Corridor and structure over I-405 is curved, steep and constrained. Better organization and improvements in this corridor, could provide better and protected space for pedestrians and add space for cyclists which does not exist today. There is also a need to improve operations and access for transit and reduce delay for vehicles in the vicinity of I-405.	10+ Years	$$$	3	3	2	Yes, consider as part of BRT planning	✓
5B	BRT Planning near 85th/70th and Park and Ride	Transit	Passage of ST 3 includes development of Bus Rapid Transit on I-405 and potential station development within the freeway right of way near 85th. City transit planning would support coordination and integration with the local street system to most effectively connect these new stations to the local communities and other transit sources.	5-10 Years (Proposed as 2024)	$	3	3 (add ped connections)	2	Yes, part of a long range look at Transit	✓
6. Houghton Park and Ride										
6A	Houghton Park and Ride lease for private shuttles	Transit	Private shuttles are operating in Kirkland for large employers including Google, Microsoft Connector and most recently Facebook and Amazon. Parking for employees meeting the shuttles currently use the S Kirkland Park and ride and other leased space. With underutilization at the Houghton (7th) park and ride, this space could be leased to these private shuttle operators leaving spaces in South Kirkland Park and Ride to meet Public transit demands.	1-5 Years	$	3	2	2	Yes, requires coordination with partners	✓
7. 108th Avenue at NE 68th Street										
7A	Transit Signal Priority and queue jump - Left turn lane Transit only - Overhead signs time of day - C-Curb driveway restrictions	Transit	Transit operating on 108th Avenue is delayed with other vehicles. Few signal controlled intersections along the corridor mean fewer opportunities for transit signal priority. An option for implementing signal priority might include utilizing the northbound left-turn lane for transit only (currently 8 buses in the peak hour) as a queue jump (roughly 1000 feet) for transit by restricting turns with C-Curb and implementing a phase for that left turn for transit. To implement this as a changeable by time of day system would require overhead signs and continue to allow driveway access for emergency vehicles. Restricting full access at driveways may be an impact along with less efficient signals for moving vehicles (however moving people may improve). Queues along 108th, which are extensive (over 1 mile long) could become longer. In the future as part of Metro Connects, transit on 108th is assumed to be Rapid/BRT style with more dispersed stops (1/2 mile instead of ¼ mile) Requires accommodations for U-Turns	5-10 years	$$	1	2	2	No, limited, if any, benefit for peak period transit and extends queue and restricts access	
7B	Transit Signal Priority for left turns - combines bus and lefts	Transit	A variation of 5A could be to combine left-turning vehicles with transit vehicles.	5-10 years	$$	2	2	2	No, limited benefit	
7C	Continue and complete bike lanes	Bikes	Complete the bike lanes along 108th Avenue NE where missing.	1-5 Years	$	3	3	3	Yes, requires added Right of Way	✓

Numbers	Potential Solution Ideas	Type	Description	Timeline	Cost	Movement of People	Connect Communities	Capacity for the Future	Notes	Recommended
7D	Install "Don't Block the Box' pavement markings at Fire Station Driveway	Vehicles	Install pavement markings that keep the fire station driveway clear of vehicle queues. (Will be included in the City Annual Striping Program)	1-5 Years	$	1	2	2	Yes, underway	✓
7E	Widen to provide curbside Northbound Transit only lanes	Transit	Widen 108th Avenue to create an extensive Northbound through lanes for transit to bypass queues. May be adjacent to a bike lane and also conflict with high volume of right turns at NE 68th Street	10+	$$$$	3	1	2	No, impacts neighborhoods	
8. NE 68th Street at 108th Avenue NE (Access)										
8A	Access Management and Multimodal Access on NE 68th Street and 108th. - Median Control - Driveway Consolidation - Wider sidewalks - remove crosswalks - on street parallel parking	Vehicles / Peds / Bikes	Closely spaced driveways and intersections, bike lanes, as well as crosswalks on NE 68th Street results in numerous conflict points between vehicles, pedestrians and bicycles. Access management strategies can include closing or consolidating driveways, using medians to separate conflicting movements and reorganizing development sites to better circulate and organize traffic off of arterial streets. An initial set of strategies could include consolidation of driveways on NE 68th Street, removal of crosswalks, medians for the left turn pocket and wider sidewalks. With redevelopment of the adjacent land uses this option includes widening sidewalks, extending bike lanes and adding on street parking.	5-10 Years	$$	3	3	2	Yes, as an interim solution with no development	✓
8C	Access Management - Selectively close driveways	Vehicles / Peds / Bikes	Similar to 8A but without any redevelopment or widening, there could be some access management strategies implemented including closing or consolidating driveways and potentially removing the pedestrian crossing.	1-5 Years	$	2	3	2	Yes, as an interim solution with no development	✓
8D	Full Bicycle Intersection at 6th/108th	Peds / Bikes	Bicycle lanes are provided on NE 68th Street and 108th Avenue and bicycle use is growing; however, these bicycle lanes do not continue through the intersection of 108th Avenue NE at NE 68th Street. One way to do this would be to create a bicycle intersection that extends bike lanes and protects bike movements. This type of intersection can also promote pedestrian safety with ped bulbs making pedestrians more visible.	5-10	$$	2	3	2	Yes, with full development	✓
8E	Green Bike Boxes	Bikes	Similar to 8D, Green Bike Boxes could enhance bike visibility by placing a painted green bike at the front of vehicle queues. This may require widening.	5-10 Years	$	3	3	2	Yes, improves safety for bicycles	✓
9. CKC Connectivity										
9A	Improved trail access and connection for Bikes	Peds / Bikes	As part of the Interim Trail development of the CKC, the City has developed key connections to the local street system from the trail to neighborhoods. Continuing to enhance some of these facilities as better bike connections would be desirable, for example where the NE 60th Street Corridor connects with the CKC.	5-10 years	$$	3	3	3	Yes, improves trail access and encourages bike use	✓

Numbers	Potential Solution Ideas	Type	Description	Timeline	Cost	Movement of People	Connect Communities	Capacity for the Future	Notes	Recommended
10. NE 60th Street Connections										
10A	Enhanced ped and bike access for 60th Neighborhood Greenway	Peds / Bikes	The City of Kirkland Transportation Master Plan includes designation of a system of Neighborhood Greenways. These greenways promote safe, low volume, slow speed roadways to promote use by pedestrians and bicycles. One of these connections is NE 60th Street. This connection could be enhanced and promoted to reduce bicycle conflicts on arterial streets and promote places for less confident bike riders. NE 60th Street as a greenway can be a key connection across I-405 connecting Lake Washington Boulevard to Overlake.	5-10 Years	$	3	3	3	Yes, consistent with Master Plan and provides safer cycling routes	✓
10B	New East West Connection across I-405 and Connecting to Lakeview	Vehicles / Transit	There is a long extent of 108th Avenue and I-405 with limited east-west vehicle connections. A logical crossing for an East West Connection would be NE 60th Street connecting across I-405 south of the Houghton Park and Ride to Lakeview Drive. This Connection would potentially require new signals at 116th Avenue NE, 108th Avenue NE and Lakeview Drive as well as a new vehicle crossing of the CKC. This may require closure of driveways, and 114th Avenue west of I-405 to accommodate grades.	10 + Years	$$$$	3	3	1	No, impacts neighborhoods	
11. Signal at NE 53rd (access to NU)										
11A	Signal at 53rd (proposed by NU) Relocate and improve bus stop. Coordinate and adjust crosswalk with Metro	Pedestrian / Transit	As part of expansion and permitting for new development at Northwest University, the University has proposed installation of a traffic signal on 108th Avenue at NE 53rd Street. Design and development of signals at this location is complicated with an offset alignment of NE 53rd and NE 52nd Streets, a protected crosswalk, and a busy transit stop serving the University, Emerson High School and the neighborhood. Installation of traffic signals would be implemented when engineering standards (per MUTCD signal warrants) are met.	1-5 years	$$	1	3	3	Yes, part of NU Mitigation not moving forward, but continue to monitor as a future planned project	✓
12. South Kirkland Park and Ride										
12A	Park-and Ride permitting for transit users	Transit / Parking	The South Kirkland Park and Ride is often full. Prioritize park and ride spaces for transit riders through permitting. This could be the simplest strategy to promote transit. There will be different trade-offs.	1-5 Years	$	2	2	3	Yes, potentially part of Metro Study	✓
12B	Improve Access/Egress from Park and Ride for Buses - Speed/Radar - Pavement Marking	Transit / Parking	Improve site operations by improving egress from the Park and Ride for buses. Metro has studied this and are working with the Cities. A potential solution includes using speed radar and pavement markings to improve sight distance for exiting buses.	1-5 Years	$	2	2	2	Yes, Metro recommendation	✓
12C	New signal control access Park and Ride Access (City of Bellevue)	Transit / Parking	As congestion increases and it becomes increasingly challenging to access the Park and Ride on 108th Avenue, traffic signals should be considered at the access. This signal would be within the jurisdiction of the City of Bellevue and would be most effective to be interconnected with the adjacent signals on 108th that are part of Bellevue's adaptive signal system. Could be annexed into City of Kirkland.	1-5 Years	$$	2	2	2	Yes, future Metro recommendation	✓

Numbers	Potential Solution Ideas	Type	Description	Timeline	Cost	Movement of People	Connect Communities	Capacity for the Future	Notes	Recommended
12D	Improve trail access to Park-and-Ride (On hold)	Transit / Bike / Peds	The Cross Kirkland Corridor (CKC) runs adjacent to the South Kirkland Park and Ride, however there is a grade change and gap that limits access for bikes and peds along the Corridor to using the sidewalks and bike lane on 108th Avenue. As this volume increases access to the adjacent park and ride structured garage would be desirable as a way to more easily access transit. With the passage of Sound Transit 3, there is a planned light rail station at South Kirkland Park and Ride that may include amenities such as bike parking and an elevator. This important connection for bikes and peds from the CKC to the park and ride is important and should be considered in the planning and development of a future rail station.	5-10 Years	$$	3	3	3	Future with ST 3	✓
12E	Bike Share/Bike Racks at Park and Ride	Transit / Bikes	With the close proximity of the CKC to park and ride, increased use of bikes to access transit will result in the need for bike parking/racks and the potential desire for shared use bike, especially with an improved connection (12D).	1-5 Years	$	3	3	2	Yes, potentially incremental implementation or with ST 3	✓
12F	Park and Ride management strategies with real time information	Transit / Bikes	Advances in technology and pilot studies with Sound Transit and Metro to expand real time information on parking occupancy. There are opportunities with transit partners to look for improved management strategies. These strategies can increase efficiency of the facility for moving people through strategies such as permit parking, premium/reservation parking, improved access to Park and Rides using shared use resources such as Bike Share and Car Share or Transportation Network Companies.	1-5 Years	$$	3	2	2	Yes, part of Metro Access study	✓
Policies (P) and Education (E)										
P1	Residential Parking Zones to eliminate casual and long term parking (employees)	Parking	Residents have noted that retail employees park off-site and on residential streets. Policy and regulations could discourage this activity through residential parking zones or parking time regulations.	1-5 Years	$	1	2	1	No, not recommended as parking is available	
P2	On Street parking time limits to reduce park and ride	Transit / Parking	Similar to P1 but issue driven by transit rider parking in neighborhoods.	1-5 Years	$	1	2	1	No, not recommended as parking is available	
P3	Parking management strategies (shared parking and joint parking) to maximize use. Example: Shared parking of church for market employees.	Parking	For the issues listed in P1 and P2, look for opportunities for shared parking where parking is available for example at Seventh Day Adventist Church where parking is generally used on the weekends only.	1-5 Years	$	1	2	1	Yes, recommend as part of potential mitigation of development	✓
P4	Trail Oriented Development	Land Use	Development of land use and regulatory policies that support lower parking use through access to regional trails. Including promotion and prioritization of shared use mobility strategies – Car share (car to go), bike share and Transportation Networking Companies (TNCs)	5-10 Years	$	3	3	2	Yes, recommend as part of potential development	✓
E1	Education Campaign on the value of transit in Kirkland's Mobility Future	Transit	Develop an education campaign to help convey the value of transit in moving people in Kirkland.	1-5 Years	$	1	3	3	Yes, consistent with City Policy	✓

Numbers	Potential Solution Ideas	Type	Description	Timeline	Cost	Movement of People	Connect Communities	Capacity for the Future	Notes	Recommended
E2	Monitor person movement speed/efficiency	Transit	Develop a performance monitoring system and promote the results to educate the value and benefits of transit in moving people. Develop performance measures, such as person travel times.	1-5 Years	$	3	2	3	Yes, consistent with City Policy	✓
E3	Greenway promotion of 60th and other connections	Peds / Bikes	Education campaign to promote the use and benefits of the Greenways program including working with neighborhoods, schools, and youth organizations to promote the connectivity and benefits of Greenways using maps, brochures, school education program and other promotions	1-5 Years	$	1	3	3	Yes, consistent with City Policy	✓

Evaluation Criteria

Cost Parameters

$: <$1,000,000

$$: $1,000,000-$5,000,000

$$$: $5,000,000-$10,000,000

$$$$: >$10,000,000

Movement of People

3. Increases throughput of people without impacting operations

2. Increases throughout of people but may impact some operations

1. Does not increase throughput of people

Connects Communities

3. Provides a new or improved connectivity for peds and/or bikes

2. Neither impacts nor improves ped/bike connections

1. Negatively impacts connectivity for peds and bikes

Capacity for the Future

3. Provides capacity and choices aligned with the Transportation Master Plan

2. Neither conflicts nor aligns with the Transportation Master Plan

1. Conflicts with the Transportation Master Plan

APPENDIX E: HENC ANALYSIS RESULTS MEMO

transpoGROUP
WHAT TRANSPORTATION CAN BE.

MEMORANDUM

Date:	March 17, 2017	**TG:**	16090.00
To:	Joel Pfundt, City of Kirkland Angela Ruggeri, City of Kirkland		
From:	Jeanne Acutanza, Josh Steiner, Paul Sharman, Transpo Group		
cc:	Jeff Arango, BERK		
Subject:	Houghton / Everest Neighborhood and 6th Street Corridor - Proposed Land Use Trip Generation Comparison and Methods		

Purpose and Background

The purpose of this memorandum is to summarize the baseline scenario of development and potential investments against comparative growth scenarios in vehicle trips resulting from proposed land use options in the Houghton / Everest Neighborhood Center. The Houghton / Everest Neighborhood Center is located adjacent to 6th St S/108th Ave NE & NE 68th St intersection in Kirkland, WA. As part of the Houghton / Everest Neighborhood Center and 6th Street Corridor Study, the City of Kirkland is evaluating land use alternatives for the center while evaluating transportation alternatives in the area to serve anticipated growth in vehicle, transit, pedestrian, and bicycle trips.

Two land use scenarios are being studied in comparison to the current 'maximum' land use allowed under the comprehensive plan (2035 Comp Plan Scenario) with maximum height of 30 feet. The two other scenarios are: a modest development scenario with a maximum development height of 35 feet (Modest Change Scenario), and a greater development scenario with a maximum development height of 55 feet (Greater Change Scenario). This memorandum outlines the effects of the Greater Change Scenario against the future baseline scenario of planned growth represented by the 2035 Comp Plan Scenario. These are also reflected against anticipated 2035 land use conditions and anticipated background infrastructure investments. These conditions of an assumed 2035 timeframe with and without growth in the Center are also compared to potential investments that could be in place if this greater development occurred. This memorandum describes the methods applied and results.

Trip Generation Methodology

Trip generation estimates have been prepared for the project based on trip rates identified using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition (2012). The methodology used in this analysis also accounts for pass-by trips, which are those trips that are attracted to the land use but are not directly generated by the land use. Pass-by trip rates are provided in the ITE *Trip Generation Manual*, 9th Edition (2012) and applies for the PM peak hour of certain land uses, which in this study are ITE 850 Supermarket and ITE 851 Convenience Store.

Trip generation was calculated for the PM peak hour and Daily for each of the development scenarios. Substitutions needed to be made to account for the ITE manual not containing all the same daily land uses as the PM period. These substitutions include replacing ITE 223 Mid-Rise Apartment with ITE 220 Apartment and ITE 936 Coffee/Donut Shop without Drive-Through Window with ITE 932 High-Turnover (Sit Down) Restaurant. Consideration was given to the similarity in land use type when deciding on a land use alternative. ITE also provides rates for the proportion of vehicles entering and exiting the land use during the study period. These rates are

different based on the study period; however, daily rates are not available so a 50%-In/50%-Out split was assumed. This represents a vehicle both entering and exiting the land use each day. Existing (2016) trips are based on volumes in the City's travel demand model. Existing Zoning (2035) calculated trips were added to the Existing (2016) volumes to arrive at 2035 baseline (Existing Zoning) volumes. Modest and Greater Change are compared to the 2035 baseline.

Development Land Use

Trip growth was calculated for four land use scenarios provided by BERK Consulting for the proposed development. These scenarios include existing "Existing 2016" conditions, "2035 Current Comp Plan," "2035 Modest Change," and "2035 Greater Change," which represent increases in development building height. The land uses contain a combination of apartments, office space, retail, supermarket, convenience store, and coffee shop land uses. Commercial land uses are consistent between the "Comp Plan," "Modest," and "Greater" scenarios, with the difference being the number of total residential dwelling units. Land use by scenario is shown in Table 1 and reflects changes in the number of dwelling units. These are assumed to be multi-family housing above ground level office and retail.

Table 1. ***Houghton Everest Neighborhood Land Use***

	Existing	2035 Comp Plan	2035 Modest Change	2035 Greater Change
Scenario			**35 ft.**	**55 ft.**
Residential (Dwelling Units)	*39*	*360*	*574*	*862*
Retail (Square Feet)	*105,092*	*113,480*	*113,480*	*113,480*
Office (Square Feet)	*73,150*	*122,476*	*122,476*	*122,476*

Trip Generation Results for each Land Use Scenario

Trip generation rates for each land use in the Houghton / Everest Neighborhood Center were multiplied by the existing and proposed number of development units to arrive at PM and Daily trips generated for each land use. To create a consistent application of trip generations, ITE trip generation was applied to all cases, even existing. This is appropriate to provide relative comparisons. Table 2 summarizes the resulting net new weekday daily and PM peak hour vehicle trip generation for each scenario.

Table 2. Trips Generated by Houghton Everest Neighborhood Center by Scenario

Scenario	Daily	PM Peak Hour
Existing Trips	***9,853***	***677***
2035 Comp Plan	***12,903***	***898***
Increased Trips	*3,050*	*221*
Percent Change over Existing	***31%***	***33%***
2035 Modest Change	***14,327***	***982***
Increased Trips	*1,424*	*84*
Percent Change over Comp Plan	***11%***	***9%***
2035 Greater Change	**16,730**	***1,122***
Increased Trips	*3,827*	*224*
Percent Change over Comp Plan	***30%***	***25%***

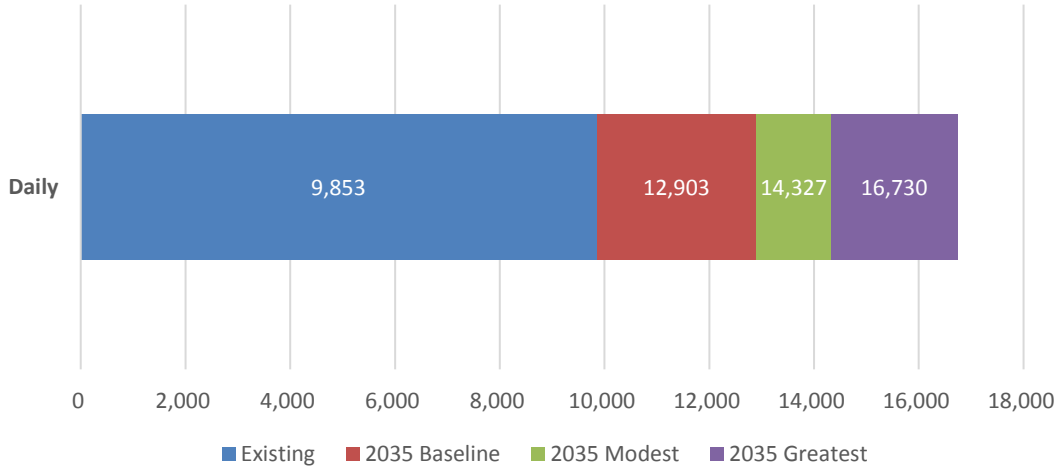
Notes: Vehicle volumes are Total Entering Volume (TEV) which account for vehicles entering the intersection.
Existing Zoning (2035) assumes PM peak hour growth rate applied to Existing (2016) volumes.
PM Volumes are derived from the City's comprehensive plan model.
Daily volumes assume 12% increase over Existing (2016), consistent with average change in PM Peak Hour volumes

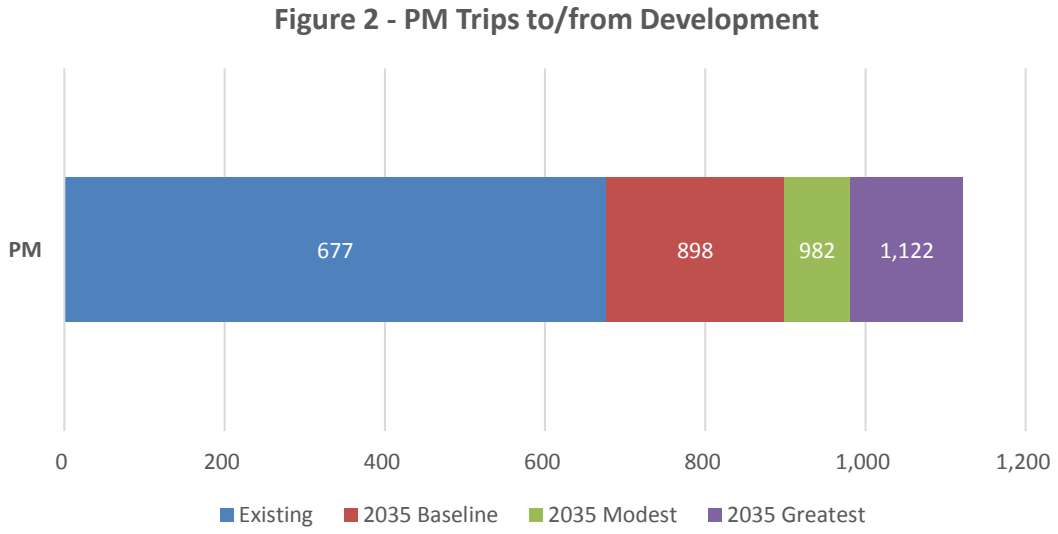
More extensive trip generation summaries broken out by specific land uses can be found in **Attachment A.**

As shown in Table 2, the development is anticipated to generate up to 3,827 new daily trips, and 224 PM peak hour trips in the "Greater" scenario compared to the Existing Comp Plan (2035) scenario. A lesser number of trips are expected to be generated in the "Moderate" scenario.

Figures 1 and 2 highlight the daily and PM peak hour number of trips traveling to and from the development, respectively, by scenario. In future growth scenarios, the baseline growth accounts for the slightly less than half of trip growth between existing and the greatest build scenario.

Figure 1 - Daily Trips to/from Development





Impact on Corridor

In order to understand the relative impact of the trip generated by the development scenarios as compared to the future Comprehensive Plan, we have analyzed the impacts of these development scenarios assuming future infrastructure investments along the 6th / 108th corridor. First we distributed a portion of the increased traffic from future development on to existing operations. It is important to note not all development related trips use this central intersection as other routes are available for trips. It should also be noted that the baseline growth in 2035 assumes development on the site consistent with what is currently approved in the comprehensive plan.

Table 3 compares intersection operations at NE 68th Street & 108th Avenue for Existing, Baseline 2035, Modest Development Scenario and Greatest Development Scenario. Existing intersection level of service is at LOS E, which will grow to LOS F in the future baseline scenario. Future development will further increase the average delay per vehicle to well beyond reasonable intersection operations in all future cases.

Table 3. NE 68th Street & 108th Ave NE Intersection Operations by Scenario

Scenario	LOS	Delay (sec/veh)	Worst Movement	Total Entering Vehicles
Existing – 2016	E	62	SB	2,520
Baseline – 2035	**F**	**142**	*SB*	***3,855***
Modest - 2035	**F**	**148**	*SB*	***3,920***
Greater Change Development - 2035	**F**	**119***	*SB*	***4,025***

Notes: * Assumes added southbound right turn lane as part of Greater Change option

It is expected that new development in the Houghton Everest Neighborhood Center would also provide an opportunity to improve NE 68th Street Corridor which currently has many conflicting movements and poorly controlled access points. As part of the corridor study improving access to reduce conflicts was studied. Without any major changes or new development, the most that could be done would be to install medians, close driveways and reduce crosswalks. It was assumed that with the “Greater Change” option, additional roadway right of way (up to 80 feet) could be

dedicated and would accommodate extending full bike lanes, adding a median, wider sidewalks and closing driveways while adding a new signal at 106th Avenue NE. A southbound right-turn lane is also assumed as part of the redevelopment in the “Greater Change” option and is reflected in the operations noted in Table 3 above. **Attachment B** includes conceptual images of NE 68th Street currently in 60’ of right of way and with the Greater Change and an 80’ wide right of way.

Corridor travel times were also simulated using VISSIM for future (2035) operations with and without the transit investments (68th Street northbound Business Access and Transit (BAT) lane and 60th Street northbound queue jump). The corridor results are summarized in Table 4.

Table 4. 6th Street Corridor Future (2035) Operations with and without Transit Investments

Scenario	GP Northbound Travel Time (minutes)	Transit Northbound Transit Travel Time
Future Baseline	11:32	11:59
Future With Improvements	8:57	9:37
Delta (reduction)	**-2:35 (-22%)**	**-2:22 (-23%)**

Attachment C provides a concept of this transit signal priority and queue jump for Northbound Transit on 108th Avenue that requires right of way and property acquisition.

Potential background investments

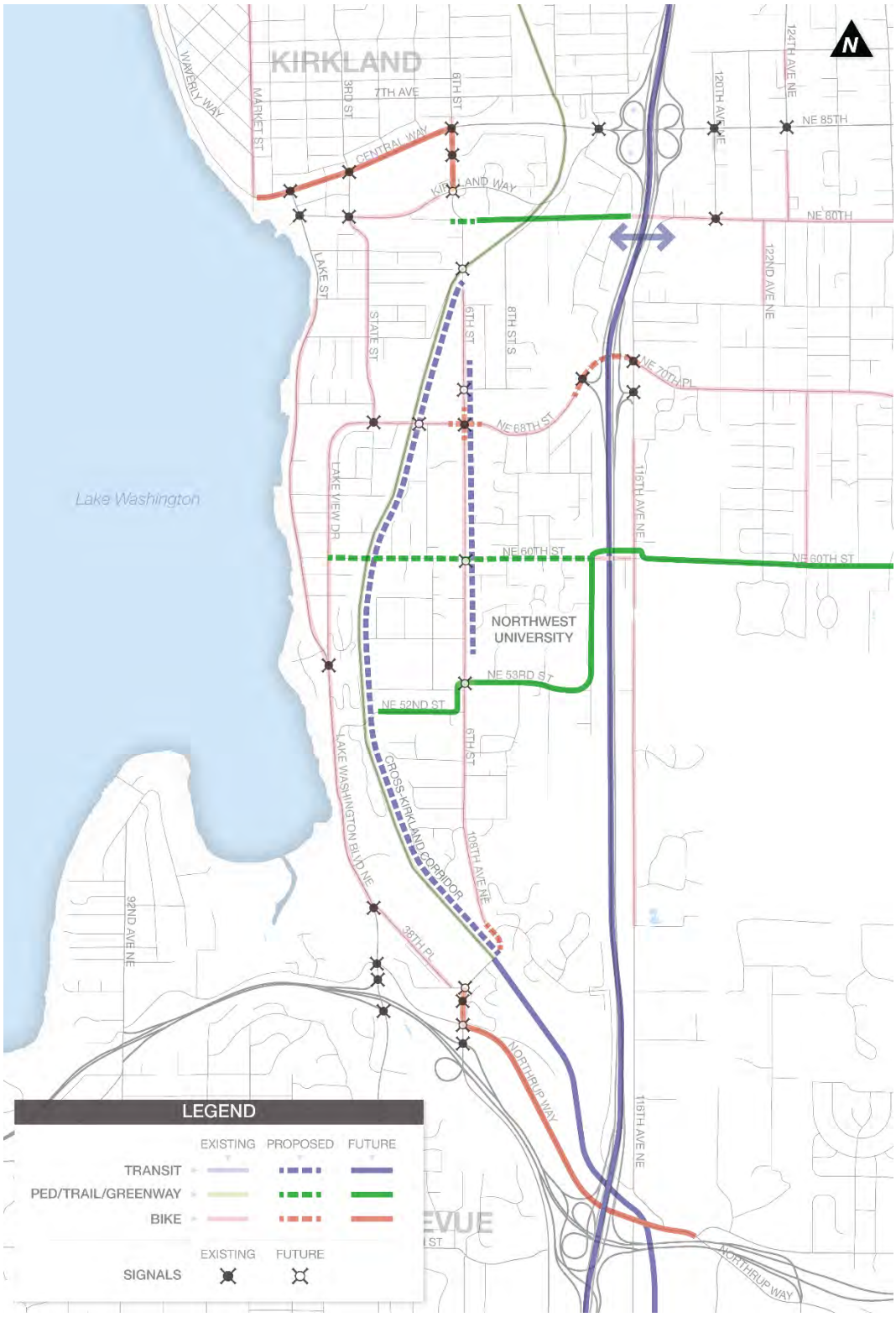
The corridor study is proposing potential solutions that meet community values as developed during a community workshop and feedback throughout the course of this project. These values were described as moving people, connecting communities and accommodating future growth. An initial set of solutions and a preferred set of recommendations is described in a previous memorandum. Table 5 provides a brief summary of the solutions recommended including the improvements on NE 68th Street to improve access (shown in **Attachment B**) and the transit signal priority concept (shown in **Attachment C**).

Table 5. Potential Infrastructure Investments by Mode

Transit Improvements	Pedestrian Improvements	Bike Improvements	Vehicular Improvements
1A. Transit Signal Priority at 6th Street and Kirkland Way	1C. Crosswalk Improvements at 6th Street & Kirkland Way Intersection	7C. Continue and complete Bike Network connections along 108th Ave.	1B. Signal Coordination along 6th Street
3A. Bus Rapid Transit on the Cross Kirkland Corridor (CKC)	9A. Improve CKC trail access (also for bikes), especially at 60th St.	8D. Full Bicycle Intersection at 68th St & 108th Ave Ne	*2A. Kirkland Way and Railroad Ave Intersection Improvements*
3B. Bus Intersection at 6th Street & CKC	12D. Connect the CKC trail to the back of the S Kirkland P&R	8E. Install green bike boxes in intersection to allow safer bike left turns	*4A. Reassess installation of planned signal improvement at 6th Street & 9th Ave*
5B. Houghton Park and Ride lease for Private Shuttle Use	P4. Develop land use policies promoting "trail oriented development"	10A. Designate 60th St as Neighborhood Greenway	*5A. Improve and expand 70th Street Overpass*
7E. Widen 108th to provide the maximum level of queue jump & install new signal at 60th	E3. Greenway promotion of 60th Street as well as other corridors across the city.	12E. Install bike racks or bike share at S Kirkland P&R	*7D. Install "don't block the box" pavement markings at Fire Station Exit on 108th*
11A. Install new signal at 53rd and relocate & improve existing bus stop			*8A. Driveway consolidation around 68th St / 108th Ave businesses*
12A. Park and Ride permitting for transit users at S Kirkland Park and Ride			*8C. Reduce business access on 68th & 108th to signalized intersections and install new signal at 106th.*
12B. Improve Access / Egress from S Kirkland P&R			*P3. Citywide Parking Management strategies such as shared parking and joint parking use.*
12C. New signal controlled access to S Kirkland P&R			
12F. Install real time parking occupancy at S Kirkland P&R			
E1. Education Campaign promoting the value of Transit in Kirkland			
E2. Monitor Performance (in person throughput) along 6th Street to understand need for transit investment			

How these investments improve the transportation network are shown in Figure 3, below. Each color denotes a specific modal priority given to that corridor. Dashed lines represent classifications proposed as a result of this project. The primary proposed network changes include classifying the Cross Kirkland Corridor as a Transit facility, creating a neighborhood greenway on 60th Street, investing in transit improvements along the 6th Street / 108th Ave corridor and finishing bike network connections throughout the 6th Street corridor where they are lacking.

Figure 3 – Proposed Corridor Transportation Network with Improvements



The major transit investment along the 6th Street / 108th Ave corridor is the addition of two northbound transit queue jumps at 60th Street and 68th Street. Conceptual drawings of how these queue jumps would operate are attached in **Attachment B**. In order to understand the benefit provided by these queue jumps, VISSIM was used to simulate travel time savings for transit users with and without transit queue jumps. The results of these simulations are summarized in Table 4.

Conclusion

Transportation analysis results anticipate increasing traffic volumes, which will impact operations along the 6th Street Corridor into the future. Potential infrastructure investments to meet growth as well as address other objectives such as connecting the community and moving people have a range of trade-offs. Significant forecasted growth in Kirkland's Comprehensive Plan along with anticipated regional growth outside of Kirkland will provide challenges for traffic across the entire 6th Street Corridor. Development in the Houghton / Everest neighborhood center would result in new businesses, residents and amenities in the neighborhood that could bring up to two hundred trips to and from the neighborhood center over current planned growth in the PM peak hour. By investing in multi-modal transportation solutions, especially those that meet the community values, we can help to relieve the new demands on the transportation system. Investing in transit infrastructure along 6th Street / 108th Ave or, in the long term, on the Cross Kirkland Corridor will have the biggest impact on congestion relief and the ability to move more people. Additionally, with further pedestrian and bicycle network improvements we can make the 6th Street / 108th Ave corridor attractive for all users.

ATTACHMENT A – Trip Generation by Scenario

ATTACHMENT A

Daily Trip Generation:

Existing

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	39	*Dwelling Units*	130	130	259
Office	73,150	*ft²*	403	403	807
Retail	61,217	*ft²*	1,357	1,357	2713
Supermarket	39,000	*ft²*	1,994	1,994	3987
Convenience Store	2,400	*ft²*	886	886	1771
Coffee Shop	2,475	*ft²*	157	157	315
Retail LU Total	*105,092*				
		Total	**4,926**	**4,926**	**9,853**

2035 Baseline:

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	360	*Dwelling Units*	1,197	1,197	2,394
Office	122,476	*ft²*	675	675	1,351
Retail	69,605	*ft²*	1,542	1,542	3,085
Supermarket	39,000	*ft²*	1,994	1,994	3,987
Convenience Store	2,400	*ft²*	886	886	1,771
Coffee Shop	2,475	*ft²*	157	157	315
Retail LU Total	*113,480*				
		Total	**6,452**	**6,452**	**12,903**
		Growth (2035 - Existing)	1,525	1,525	3,050
					31%

Modest Development:

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	574	*Dwelling Units*	1,909	1,909	3,818
Office	122,476	*ft²*	675	675	1,351
Retail	69,605	*ft²*	1,542	1,542	3,085
Supermarket	39,000	*ft²*	1,994	1,994	3,987
Convenience Store	2,400	*ft²*	886	886	1,771
Coffee Shop	2,475	*ft²*	157	157	315
Retail LU Total	*113,480*				
		Total	**7,163**	**7,163**	**14,327**
		Growth (Modest - 2035)	712	712	1,424
					11%

Greatest Development:

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	862	*Dwelling Units*	2,868	2,868	5,735
Office	122,476	*ft²*	675	675	1,351
Retail	61,217	*ft²*	1,357	1,357	2,713
Supermarket	47,388	*ft²*	2,422	2,422	4,845
Convenience Store	2,400	*ft²*	886	886	1,771
Coffee Shop	2,475	*ft²*	157	157	315
Retail LU Total	*113,480*				
		Total	**8,365**	**8,365**	**16,730**
		Growth (Greatest - 2035)	1,914	1,914	3,827
					30%

PM Peak Hour Trip Generation:

Existing

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	39	*Dwelling Units*	9	6	15
Office	73,150	*ft²*	19	90	109
Retail	61,217	*ft²*	73	93	166
Supermarket	39,000	*ft²*	121	116	237
Convenience Store	2,400	*ft²*	25	24	49
Coffee Shop	2,475	*ft²*	50	50	101
Retail LU Total	*105,092*				
		Total	**296**	**380**	**677**

2035 Baseline:

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	360	*Dwelling Units*	81	59	140
Office	122,476	*ft²*	31	151	182
Retail	69,605	*ft²*	83	106	189
Supermarket	39,000	*ft²*	121	116	237
Convenience Store	2,400	*ft²*	25	24	49
Coffee Shop	2,475	*ft²*	50	50	101
Retail LU Total	*113,480*				
		Total	**392**	**506**	**898**
		Growth (2035 - Existing)	95	126	221
					33%

Modest Development:

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	574	*Dwelling Units*	130	94	224
Office	122,476	*ft²*	31	151	182
Retail	69,605	*ft²*	83	106	189
Supermarket	39,000	*ft²*	121	116	237
Convenience Store	2,400	*ft²*	25	24	49
Coffee Shop	2,475	*ft²*	50	50	101
Retail LU Total	*113,480*				
		Total	**440**	**542**	**982**
		Growth (Modest - 2035)	48	35	83
					9%

Greatest Development:

Land Use	Size	Units	Inbound Trips	Outbound Trips	Total Trips
Mid-Rise Apartment	862	*Dwelling Units*	195	141	336
Office	122,476	*ft²*	31	151	182
Retail	61,217	*ft²*	73	93	166
Supermarket	47,388	*ft²*	147	141	288
Convenience Store	2,400	*ft²*	25	24	49
Coffee Shop	2,475	*ft²*	50	50	101
Retail LU Total	*113,480*				
		Total	**521**	**601**	**1,122**
		Growth (Greatest - 2035)	130	95	224
					25%

ATTACHMENT B – NE 68th Street Concepts for Consolidating Access

8 A NE 68th Street existing 60’ Right of Way

8 C Greater Change and 80’ Right of Way

NE 68th Street Existing 60’ Right of Way

NE 68th St - Improvement Concept A

Kirkland 6th Street Corridor

January 25, 2017

transpogroup
WHAT TRANSPORTATION CAN BE.

FIGURE
8A

Feb 09, 2017 – 4:46pm trungl M:\16\16090.00 – 6th Street Study\Engineering\CAD\Conceptual\NE 68th St at 108th Ave.dwg Layout: 1 (NO CALLOUTS)

NE 68th Street Greater Change and 80’ Right of Way

NE 68th St - Improvement Concept C

Kirkland 6th Street Corridor

January 25, 2017

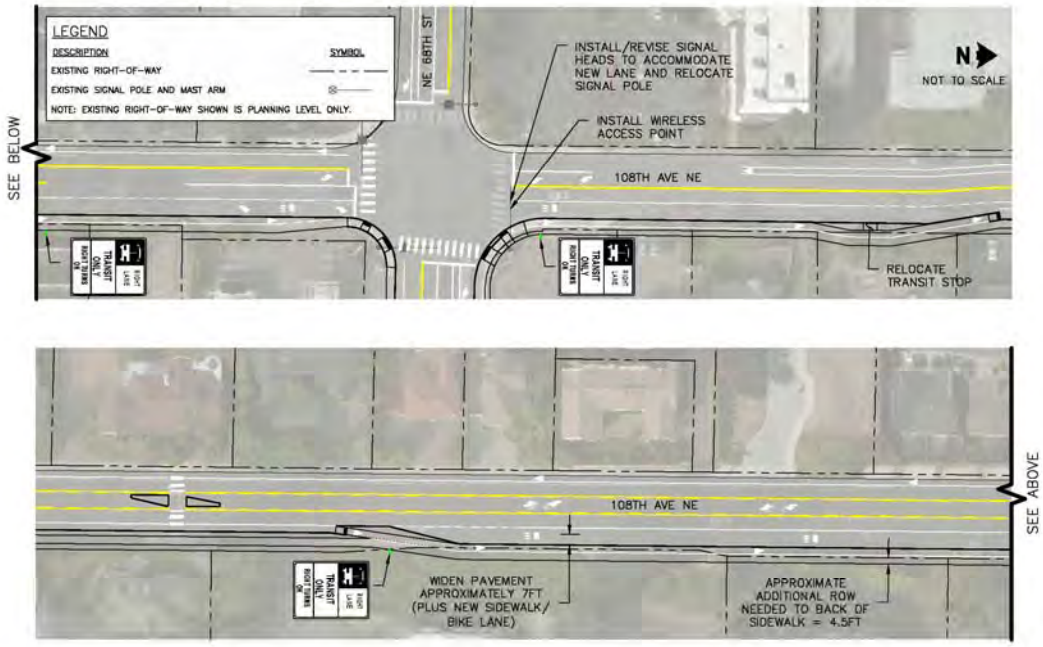
transpogroup WHAT TRANSPORTATION CAN BE.

FIGURE **8C**

Feb 09, 2017 – 4:43pm trungl M:\16\16090.00 – 6th Street Study\Engineering\CAD\Conceptual\NE 68th St at 108th Ave.dwg Layout: 3 (NO CALLOUTS)

ATTACHMENT C – 108th Avenue NE Transit Signal Priority and Queue Jump Concept

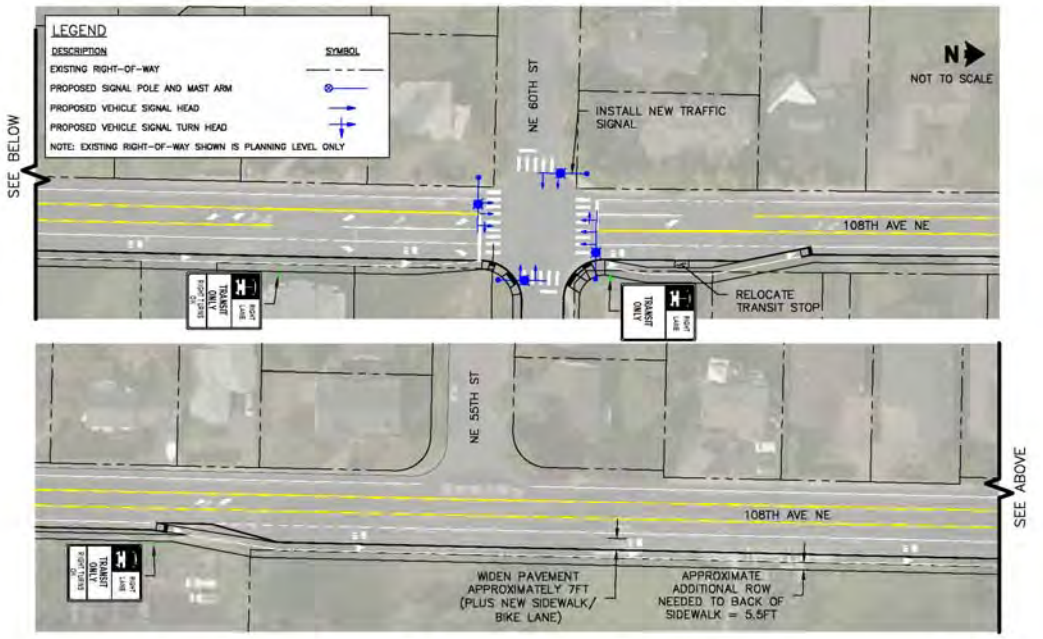
108th Avenue Transit Signal Priority & Queue Jump NE 68th to NE 53rd



108th Ave NE and NE 68th St - Transit Signal Priority Improvement Concept F February 9, 2017 FIGURE 7F

Kirkland 6th Street Corridor

transpo group



108th Ave NE and NE 60th St - Transit Signal Priority Improvement Concept E February 10, 2017 FIGURE 7E

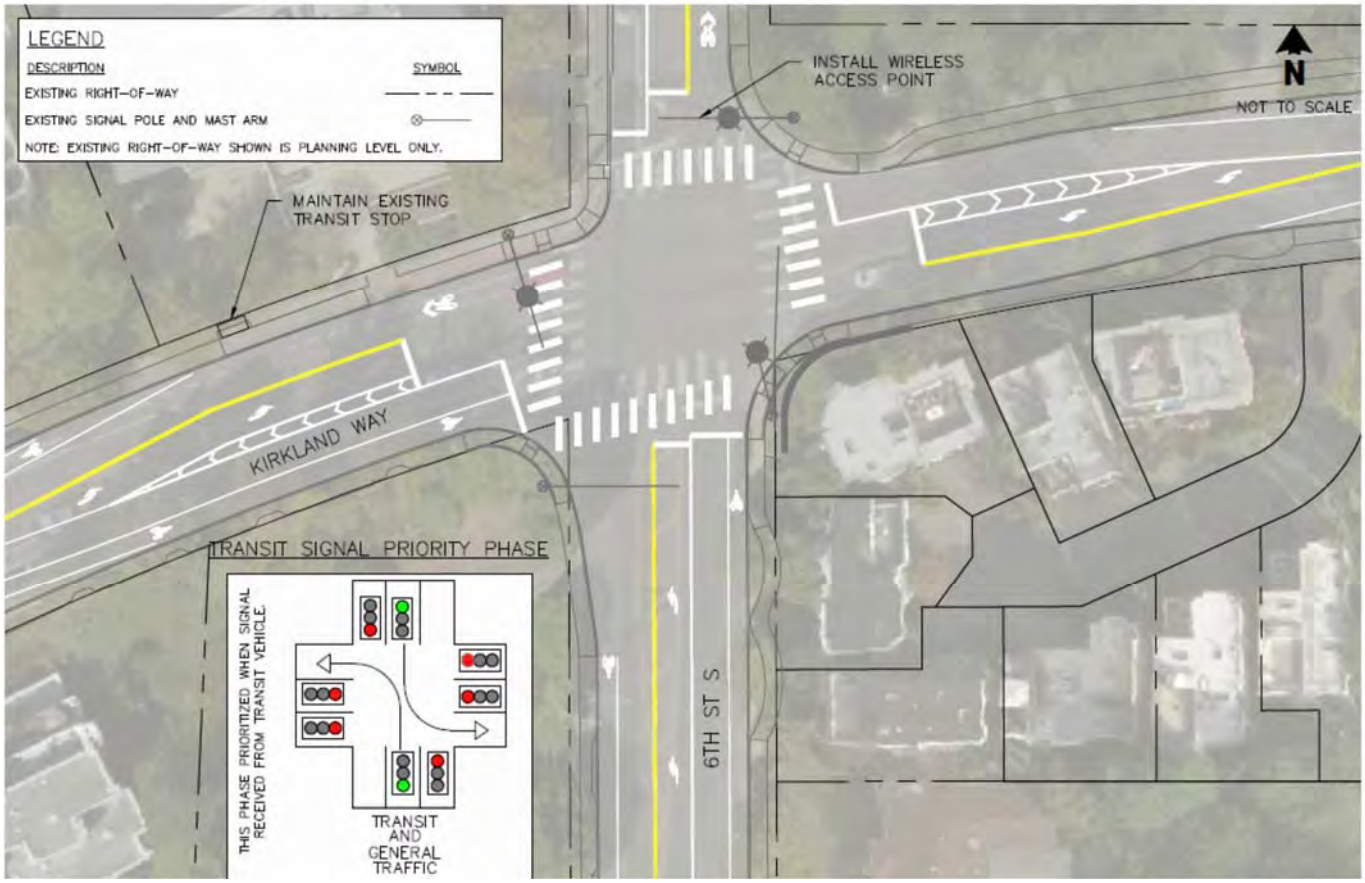
Kirkland 6th Street Corridor

transpo group

Feb 10, 2017 – 9:10am melissaw M:\16\16090.00 – 6th Street Study\Engineering\CAD\Conceptual\108th Ave & 68th – 60th st.dwg Layout: 2– 8.5 x 11

APPENDIX F: PROJECT PAGES

Project 1A – 6th Street S/S Kirkland Way Transit Signal Priority



Project Description

The City is in the process of designing and installing traffic signals at the intersection of 6th Street and Kirkland Way. Metro's frequent and heavily used route 255 turns northbound left at this intersection and eastbound right. This is also a future Rapid Ride route. Transit signal priority at this intersection for the northbound left-turns could provide a short travel time advantage for transit.
Benefits: Provides transit travel time advantage

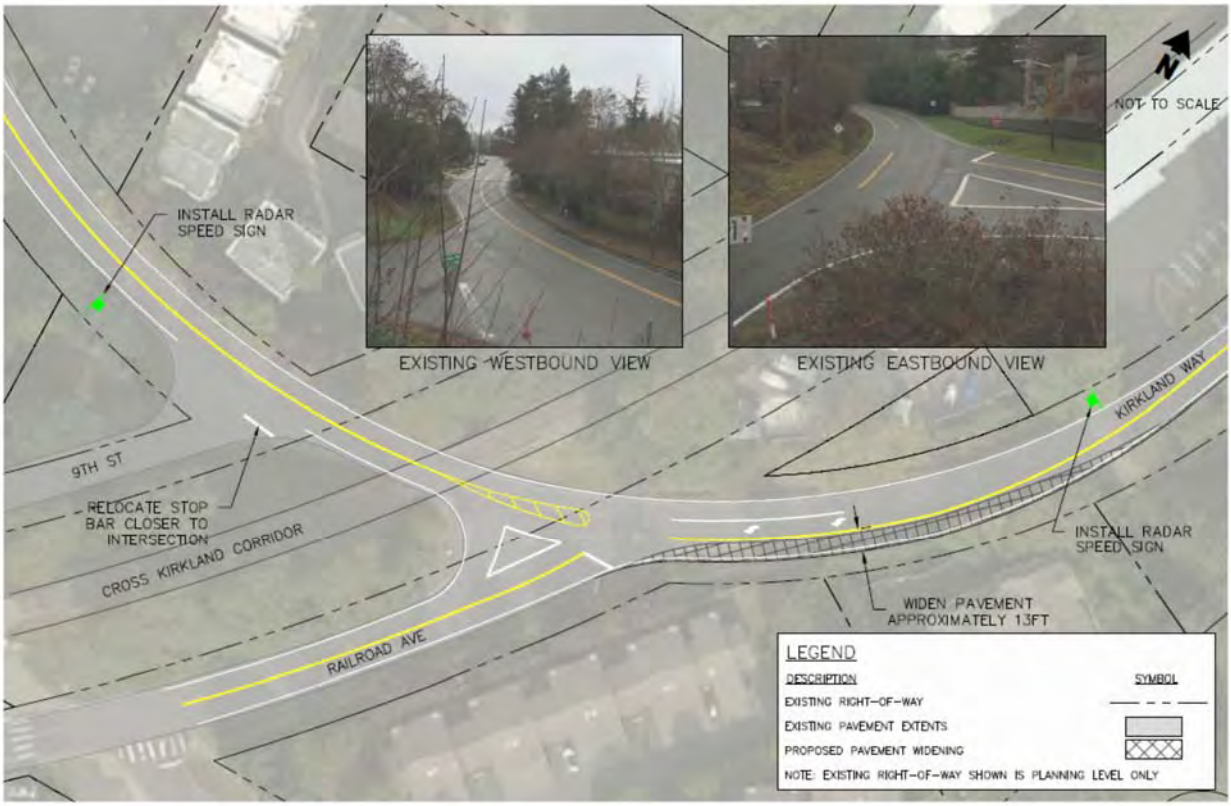
Implementation

Cost Range: $200-$500K

Coordination: Metro & Sound Transit. Review in Transit Plan

Project included in City CIP

Project 2 – Railroad Avenue / Kirkland Way Turn Pocket



Project Description

A safety concern for neighborhoods include sight distance near the existing CKC trestle over Kirkland Way at Railroad Avenue and 9th Street. Radar speed signs may help reduce speeds and improve safety for accessing Kirkland Way. There is an opportunity to add a westbound left-turn pocket at railroad Avenue to protect turning movements. Radar speed signs could be implemented to further note speeds.
Benefits: Improves Safety

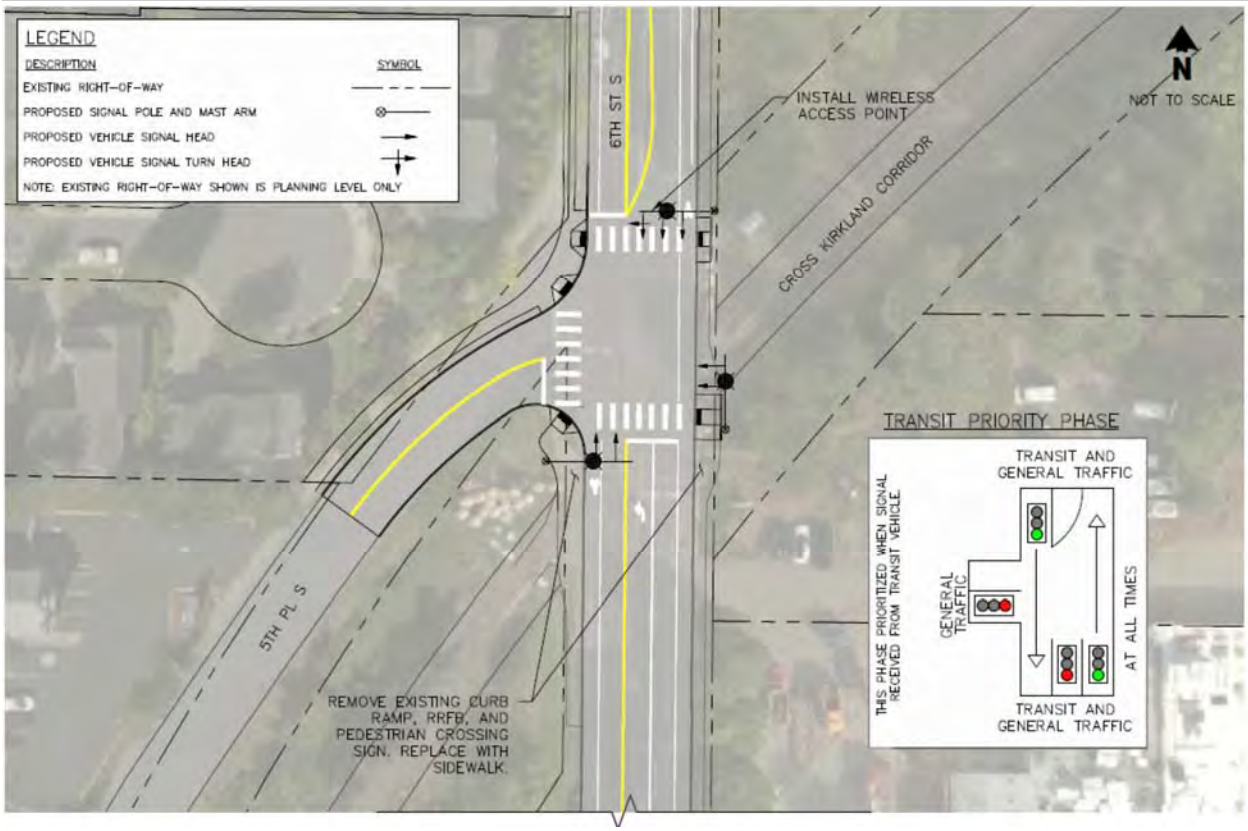
Implementation

Cost Range: $100-150K

Coordination: Neighborhood

Project included in City CIP

Project 3B – 6th Street S / 5th Place / CKC Transit Signal Priority



Project Description

Another opportunity for transit signal priority and to improve pedestrian, bike and vehicle access is at the CKC trail intersection on 6th Street. Add a new traffic signal, realign 5th Place S, remove existing RRFB crossing, remove parking and either extend green time or advancing a call for transit at the signal.
Benefits: Provides transit travel time advantage, and improved safety and operations.

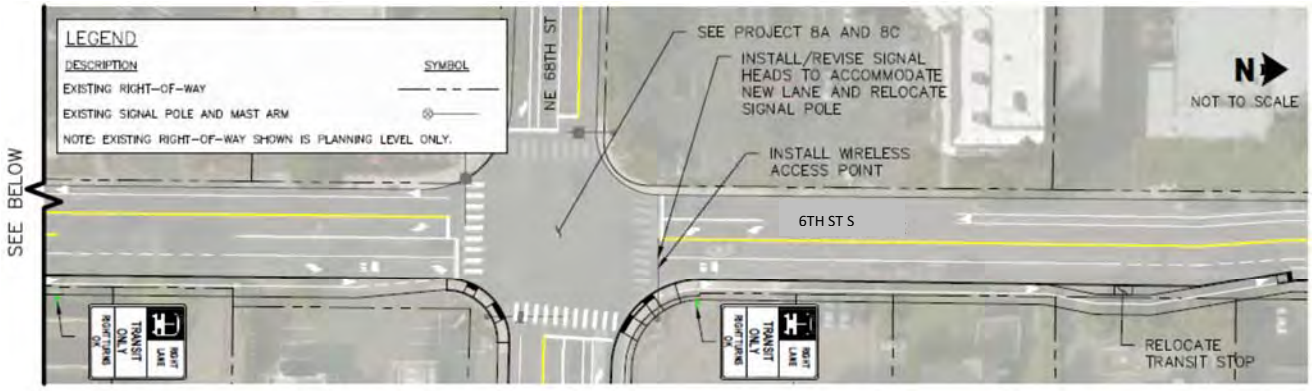
Implementation

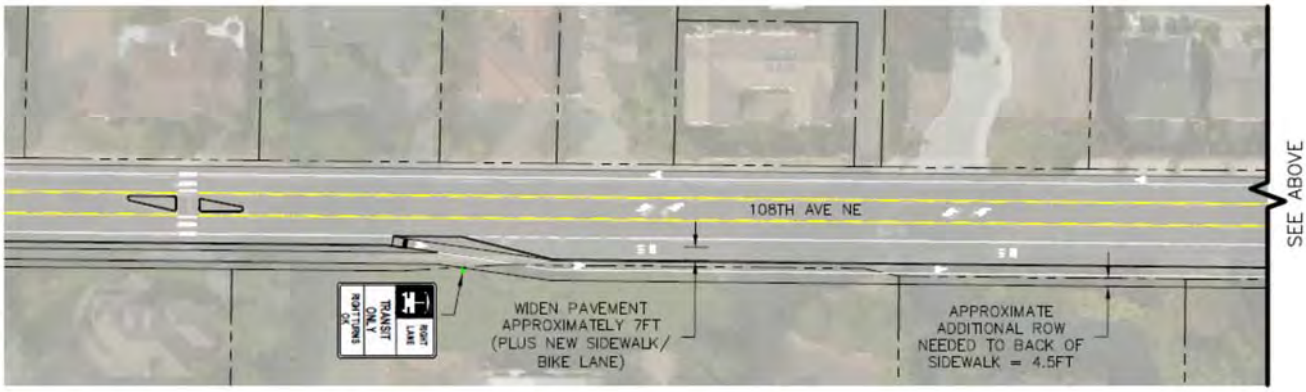
Cost Range: $2.5 - 3 M

Coordination:

- Metro & Sound Transit
- On-Street Parking Removal
- Coordinate with Transit Plan

Project 7E Part 1 – 108th Avenue Transit Queue Jumps at 68th St





Project Description

Widen 108th Avenue to create two long (~1,000') Northbound through lanes (queue jump) for transit to bypass queues. May be adjacent to a bike lane and conflict with high volume of right turns at NE 68th Street. Requires widening and property acquisition.

Benefits: Provides transit travel time advantage

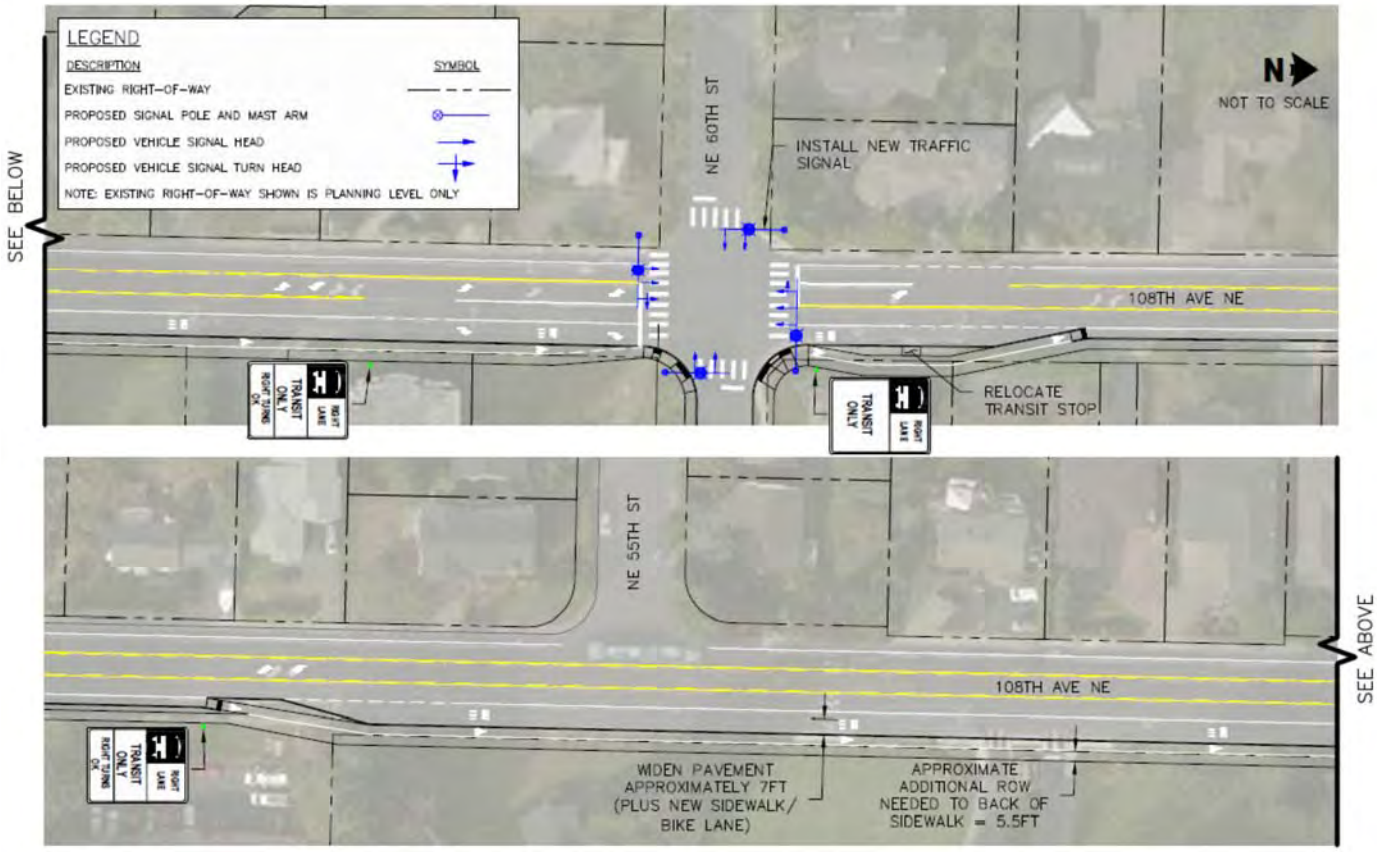
Implementation

Cost Range: $4-6M (does not include ROW)

Coordination:

- Metro & Sound Transit
- Utility Relocation
- Property Impacts
- Relocation of Bike Lanes
- Coordinate with City Transit Study

Project 7E Part 2 – 108th Avenue Transit Queue Jump at 60th St



Project Description

Widen 108th Avenue to create two long (~1,000') Northbound through lanes (queue jumps) for transit to bypass queues. May be adjacent to a bike lane. Requires widening and property acquisition. Includes new signal control at NE 60th street replaces protected ped crossing. Remove RRFB Crossing.
Benefits: Provides transit travel time advantage

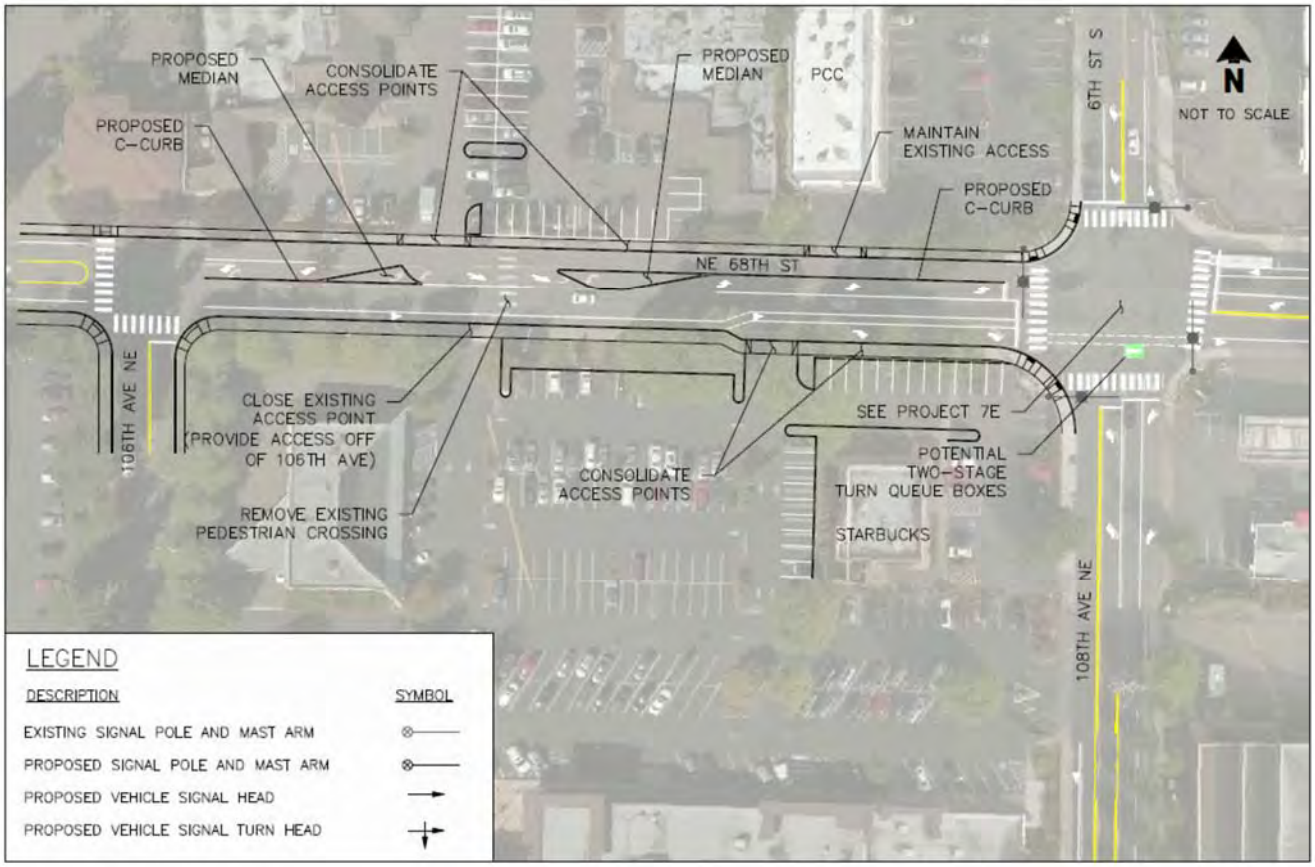
Implementation

Cost Range: $4-6M (does not include ROW)

Coordination:

- Metro & Sound Transit
- Utility Relocation
- Property Impacts
- Relocation of Bike Lanes
- Coordinate with City Transit Study

Project 8A – NE 68th Street Access Management (without redevelopment)



Project Description

Access management strategies could include closing or consolidating driveways, using medians to separate conflicting movements. Within existing right-of-way consolidation of driveways require Property Owner participation. Other improvements include consolidation of crosswalks, new medians and C-Curb. Install Bike Boxes as feasible.

Benefits: Improves Safety

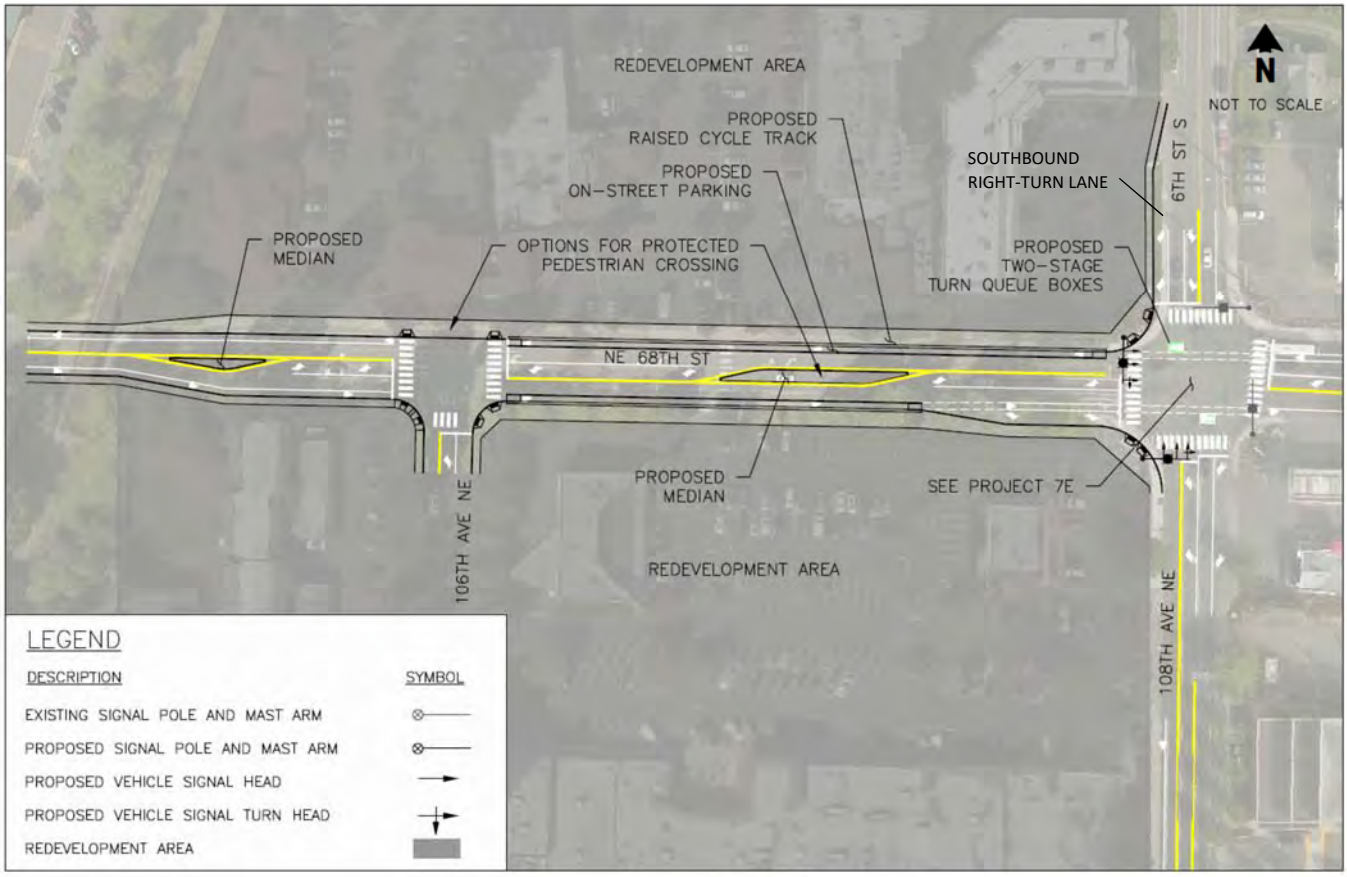
Implementation

Cost Range: TBD

Coordination:

- Neighborhood
- Property Owner Negotiation

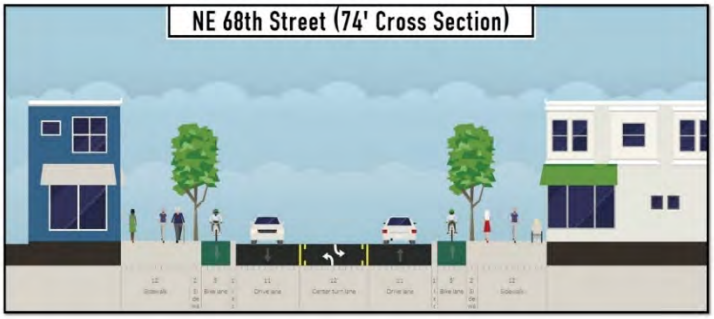
Project 8C – NE 68th Street Intersection Improvements Access Management



Project Description

Access management strategies can reduce conflict points between vehicles, peds and bikes. Add a southbound right-turn pocket, extend bike lanes and add green bike boxes, widen sidewalks and consolidate protected ped crossing. Replace two signal poles to accommodate new intersection layout, including illumination and ITS equipment.

Benefits: Improves safety and operations



Implementation

Cost Range: $3-5M

Coordination: Neighborhood and Property Owners. Additional right of way and potential utility relocations.