INFORMATIONAL MEMORANDUM

TO: Transportation and Infrastructure Services Committee

FROM: Hari Ponnekanti, Public Works Director

BY: Joshua Hartley, Deputy Director of Public Works

Cyndy Knighton, Senior Program Manager

CC: Mayor Ekberg

DATE: **November 18, 2022**

SUBJECT: Neighborhood Traffic Calming Program

Project No. 80010301

Project Update

ISSUE

Provide a status update to Council for the Top 10 List in the Neighborhood Traffic Calming Program (NTCP), including the Allentown Neighborhood Transportation Study Update.

BACKGROUND

In 2021, the Council reinstated the full \$400,000 budget for 2022 by using ARPA funding made available to the City from the Federal Government. Public Works presented a Staff Top 10 Recommended NTCP Projects List that would utilize this funding. As of October 2022, Public Works has encumbered roughly \$374,000 on projects identified in the Top 10 List. The remaining balance (\$26,000) will be spent on replenishing normal stock items used in traffic calming such as street signs, luminaires, speed feedback signs, speed cushions for future installation, etc.

DISCUSSION

This year, three NTCP projects have been completed, and three more are well underway. Project A – Allentown Neighborhood Speed and Safety Study, Project E – Tukwila Community Center Pedestrian Crossing Safety Improvements and Project J – S 144th Street/46th Avenue S ADA Ramps have all been completed.

The Allentown Neighborhood Transportation Study was completed in October 2022. At the March 2022 and April 2022 Allentown Community meetings, the draft study was shared with residents and businesses, and feedback was collected to help determine traffic calming recommendations for the neighborhood. There are at least nine recommendations provided in the attached report. The recommendations include speed limit reductions on 115th, additional signage and pavement markings, installing rectangular rapid flashing beacons (RRFBs), additional crosswalks, intersection geometry improvements at S. 124th Street and 50th Place S., speed cushions, and other traffic calming measures. Public Works is reviewing the report now and developing potential scope of work for future projects.

The City is actively searching and applying for grants to fund the recommendations identified in the Allentown Neighborhood Transportation Study. An application was submitted to the Washington State Department of Transportation's Pedestrian and Bicycle Improvements grant for a raised crosswalk,

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curb bulb outs, and an RRFB at the S 119th street bridge crossing on 42nd Ave S, which was a recommended improvement in the study. The City was recently notified by WSDOT that this project has been identified as a tier one funding priority. The City will be notified in early 2023 if the project is selected for funding.

NTCP projects that are still underway include: Project B – Tukwila Elementary School Safety Improvements, Project C – Impact Charter School Safety Improvements and Project D – Cascade View Elementary School Safety Improvements. Each of these projects have completed preliminary planning studies and are awaiting coordination with the individual schools before moving to final design of the recommended improvements. Each site has specific challenges and operations that need to be discussed to ensure appropriate design elements are considered and that specific needs are met.

FINANCIAL IMPACT

Projects on the Staff Top 10 List, including the recommendations made in the attached study, are now anticipated to cost at least \$1.2 million, potentially higher, based on the recommendations from projects such as Macadam Road and S. Ryan Way. Some of these costs can be borne by the existing \$400,000 annual budget, and Public Works staff are actively applying for grants where possible to provide additional funding for future projects in the Top 10 List.

RECOMMENDATION

For Discussion Only.

ATTACHMENTS: Top 10 Recommended NTCP Projects List Updated 11-04-22

Top 10 Recommended NTCP Projects Map Final Allentown Transportation Analysis

Staff Top-10 Recommended NTCP Projects

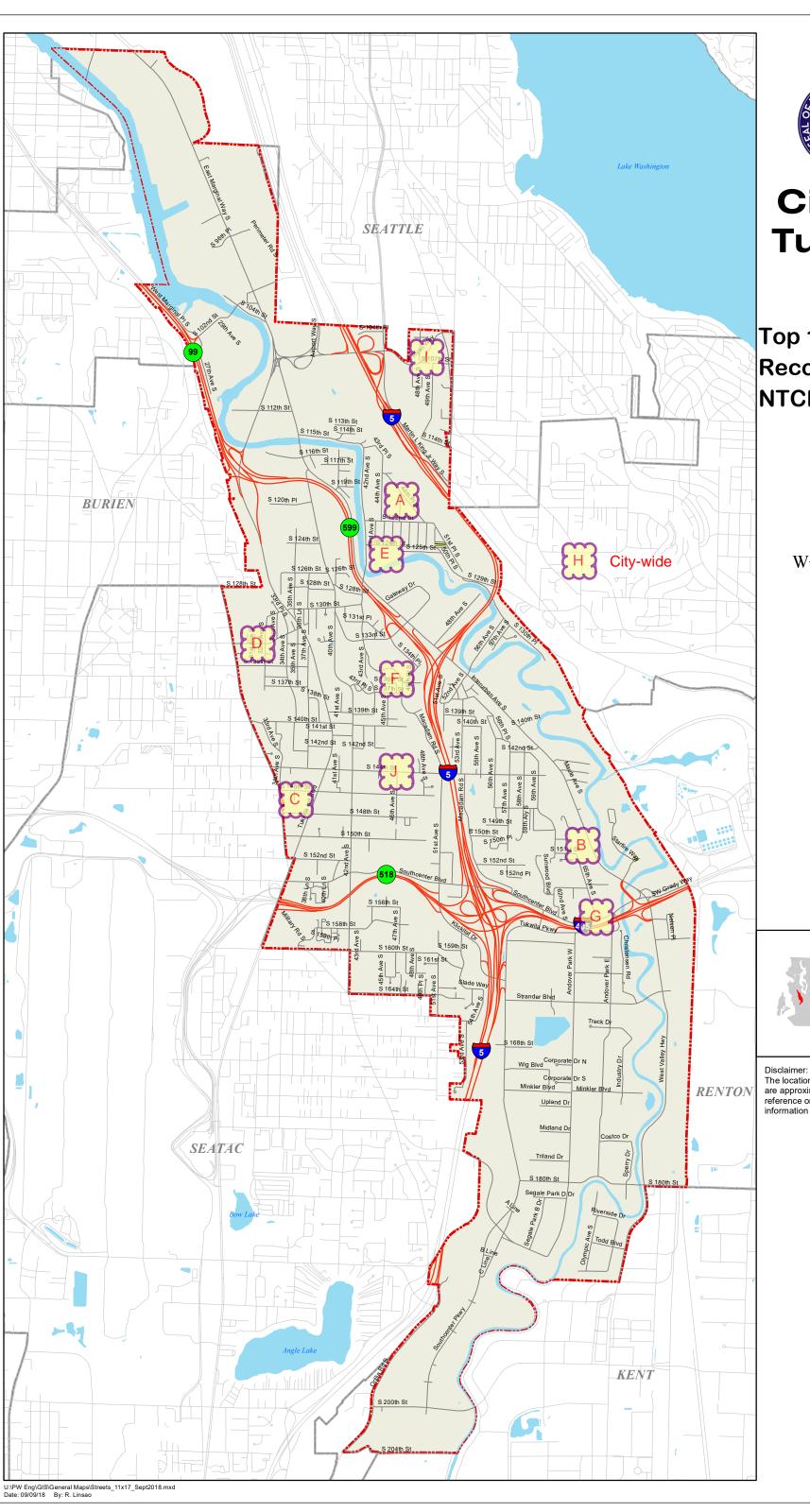
Modified 11/2/2022

	Project	Details	Potential Treatment Options	Status	Complete?	Original Cost Range Estimate	Updated Cost Estimate
Α	safety issues. Design plan for Level 1 and Level 2 treatments marking modification		Level 1: Improved signage; radar feedback signs; pavement	PW Staff reviewing recommendations and developing scope of work for future projects.	Yes	\$50,000-80,000	\$20k for study \$640k for CN of study recommendations
IК	Tukwila Elementary School Safety Improvements	Since 2018, 12 traffic calming requests have been made in the near Tukwila Elementary School. Common complaints have be Additionally, the Council has asked for proactively addressing improvements have been made around Tukwila Elementary S	Have reached out to Tukwila School District/Tukwila Elementary School staff to gain understanding of	Underway	\$30,000-80,000	TBD	
		Address speeding and crosswalk safety concerns.	Level 1: Improved signage; radar feedback signs; pavement marking modifications Level 2: Curb extensions; RRFB installation; ADA ramp upgrades; improved illumination	operations and challenges. Improvements will be made in 2023.			
I C	Impact Charter School Safety Improvements		ntential improvements for children's safety. Additionally, the concerns, specifically around school zones.	Awaiting a proposed private development for possible ADA ramp improvement.	Underway	\$8,000-15,000	TBD
		on S 146th Street, if needed. Provide school crossing improvements, observe operating speeds, if necessary establish speed zone.	S 146th Street; crosswalk installation Level 2: ADA ramp improvements; curb extensions	d Abaramp improvement.			
I D	Cascade View Elementary School Safety Improvements	Since 2018, the Tukwila Hill neighborhood has seen 9 request speeding, school crossing and pedestrian safety around the Co-30MPH in the 25MPH zones have been recorded, but analyst school zone has not been done. Additionally, the Council has a	Study for improved signage and crosswalk underway Design for ADA	Underway	\$8,000-15,000	TBD	
		Upgrade School Zone signing, design and install pedestrian crossing improvements.	Level 1: Improved signage for school zones on S 148th Street and S 146th Street; crosswalk installation Level 2: ADA ramp improvements; curb extensions	improvements later in year with construction likely in 2023			
Ε	Tukwila Community Center Pedestrian Crossing Safety Improvements	throughout the City. The TCC is a well-utilized facility by the A		Complete	Yes	\$80,000-100,000	\$15k PE \$47k RRFB units \$78k RRFB Installation
		Design and install mid-block pedestrian safety improvements on S 124th Street.	improved illumination				
I F	Salety improvements	warranted to determine what other improvements could be unextremely limited sight distance due to the curvy nature of the	but requests have continued to be made. Additional analysis is used to address the speeding, especially where Macadam has be roadway.	Individual Project to begin design 1Q 2023.		\$10,000 - 30,000	TBD
		Design and install treatments addressing speeding and curve safety north of S 144th Street.	modifications Level 2:				

Staff Top-10 Recommended NTCP Projects

Modified 11/2/2022

	Droigst	Dotaile	Potential Treatment Ontions	Status	Complete?	Original Cost Range	Updated Cost
G	Southcenter Boulevard/65th Avenue S Pedestrian Safety Improvements	Staff identified the need for improvement pedestrian safety or roadway with known speeding issues along with curves that raccessing the King County Metro bus stop that services both t County transit network, justifies improving pedestrian crossing future, but interim pedestrian safety improvements should be	Funding available for design of full signal in 2022 CIP. Design to begin in 2022. Recommended	Completed	\$50,000-\$90,000	TBD	
		Design and install pedestrian safety improvements	illumination	improvements will be incorporated into signal project in the CIP.			
н	City-wide Residential Speed Limit Review	posted speed limits is recommended by staff. State law estable completed to justify higher speed limits. Most residential street posted at 30MPH or 35MPH. Likely, those speed limits are leg	acies of past annexation areas, where a speed study was that most residents and elected officials would be happier with	Reviews to begin in early 2023.		\$5,000-8,000	TBD
		25MPH. Conduct volume, speed and safety review.	Level 1: Modify speed limit ordinance; as needed; install new signs; as needed. Level 2:				
	S Ryan Way Pedestrian Safety Improvements	2021. New developments are coming forward that will increase	Ryan Way, coupled with the new housing developments increasing	Planning and Design to begin in early 2023. Will be stand alone project based on recommendations provided		\$10,000-100,000	TBD
		Recommend Level 1 and Level 2 improvements. Design and construct improvements.	Level 2: Curb extension, improved illumination	by the designer.			
	ADA Ramps		e the RRFB was installed, the City was also submitting a grant ct, which would improve pedestrian safety between this a raised pedestrian crosswalk at the RRFB or install ADA- requires ADA ramps be brought up to current standards anytime ies for the larger improvement are not expected in the short term,	Complete	Yes	\$15,000-20,000	\$15k PE \$90k Construction
		Design and install ADA-compliant ramps at the intersection.	Level 1: Level 2: ADA upgrades to ramps at RRFB (not done at time of RRFB installation due to budget constraints)				





Top 10 Staff Recommended NTCP Projects



Not to Scale

Vicinity Map



Disclaimer:
The location of features and boundaries are approximate and are intended for reference only. Data is based on best information available.





Memorandum

To: Public Works Department, City of Tukwila

From: KPG Psomas

Date: October 10, 2022

Re: Allentown Neighborhood Transportation Study

The City has received several requests for traffic calming from citizens in the Allentown Neighborhood. As part of the Neighborhood Traffic Calming Program, the City hired KPG Psomas to evaluate existing roadway and non-motorized facilities, adjacent land uses, vehicle speeds, vehicle volumes, signage, and five years of historical crash data. KPG Psomas and City staff met with the Neighborhood several times to understand their issues and concerns, hear feedback on potential improvements, and share recommended improvements. Based on this analysis and community input, KPG Psomas and the City developed a set of recommended improvements to calm traffic, improve safety, and enhance pedestrian mobility.

The approximate boundaries of the Allentown Neighborhood are the Duwamish River to the south and west, S 115th Street to the north, and I-5 to the east. The primary land uses in the Neighborhood are residential, Tukwila Community Center, and BNSF Railway Intermodal facility. **Figure 1** shows a map of the Allentown Neighborhood study area.

Street Network

Due to the Duwamish River, BNSF Railroad tracks, and I-5 being located around the perimeter of the Allentown Neighborhood, there are only three vehicle access points to the Neighborhood at S 115th Street, 42nd Avenue S bridge over the Duwamish River, and 50th Place S that connects to S 129th Street. S 129th Street provides one of the few crossings of the BNSF Railroad tracks and I-5 in the area.

There are two street classification types in the Allentown Neighborhood: Collector Arterials and Local Streets. The Collector Arterials are S 115th Street, 42nd Avenue S, S 124th Street, and 50th Place S. The Collector Arterials are intended to carry the majority of the traffic through the Neighborhood. Local Streets are intended to provide circulation and access to adjacent properties. Except for local access, trucks are restricted on S 115th Street and the segment of 42nd Avenue S, north of S 124th Street.

Truck Traffic

The BNSF Railway Intermodal facility is located along the eastern boundary of the Neighborhood with its primary access on S 124th Street at 51st Place S. This facility generates a high volume of truck traffic as containers are transferred between trains and trucks. Baker Commodities, a

rendering plant, also generates truck trips along S 124th Street and 50th Place S as the only access to the plant is from Railroad Avenue S which intersects 50th Place S at the southeast corner of the Neighborhood. There are other manufacturing and industrial businesses in the Neighborhood along 44th Place S and 51st Place S that generate truck traffic and trucks must use Local Streets to access these businesses.

S 115th St BASE RAILWAY INTERNODAL FACILITY PEDESTRIAN **BRIDGE** S 122nd St 599 S 124th St S 125th St **TUKWILA** COMMUNITY **CENTER**

TRAFFIC DATA COLLECTION

COLLECTOR ARTERIALS

LOCATION

Related Projects in Allentown

Allentown Truck Reroute Project

This project is evaluating potential alternative routes to access the BNSF Railway Intermodal facility. Alternatives include maintaining the existing access at S 124th Street or relocating the access to the north or south. An Environmental Impact Statement (EIS) is currently being prepared to assess the impacts of each alternative, and recommend a preferred access location.

Replacement of 42nd Avenue S bridge over Duwamish River

The 42nd Avenue S bridge over the Duwamish River connects the Allentown Neighborhood with Interurban Avenue S. In December 2021, the bridge was damaged by an over-height truck load and was closed to all modes of travel pending repairs. The existing bridge is considered structurally deficient and the bridge is currently only open in the southbound direction. The City is designing a new bridge that will be constructed at the same location.

Traffic Calming

Traffic calming uses information, educational, and physical improvements and other strategies to slow vehicle speeds and improve safety through neighborhood areas. Traffic calming treatments include signs, striping and pavement markings (paint), on-street parking, narrowing the roadway, raised curb, curb bulbs, chicanes, roundabouts, center medians, speed cushions, raised crosswalks, and other treatments. The decision on whether to install traffic calming should consider the potential for diverting traffic to parallel routes, emergency vehicle response times, type of vehicles using the roadway, travel delay, and neighborhood support.

For collector arterial streets such as S 115th Street, 42nd Avenue S, S 124th Street, and 50th Place S, KPG Psomas does not recommend the installation of speed humps or cushions for the following reasons:

- Inappropriate for collector arterials which are intended to carry the majority of traffic.
- Potential for vehicles to shift from arterials to parallel local streets.
- Negative impacts to emergency vehicle response times (including Tukwila Fire Station 53).
- Noise impacts to homes due to vehicles crossing cushions, braking and accelerating.
- Not compatible with truck operations that access existing businesses in the Neighborhood.

Analysis Findings and Recommended Improvements

Transportation volume and speed data were collected from 2020 to 2022 during the COVID-19 pandemic when traffic volumes were potentially lower due to more people working from home and fewer people traveling for social and recreational activities. The 42nd Avenue S bridge over the Duwamish River was closed for repairs when the 2022 traffic data was collected on 42nd Avenue S, north of S 124th Street. As part of the analysis, KPG Psomas also evaluated five years of historical crash data. A summary of the crash data is provided in **Appendix A**.

The following sections describe the characteristics of individual streets in the Neighborhood and the recommended improvements to calm traffic, improve safety, and enhance pedestrian mobility. **Figure 2** shows the recommended improvements. The implementation of these improvements will depend on available funding for design and construction. Cost estimates for the recommended improvements are included in **Appendix B**.



Figure 2. Allentown Neighborhood Recommended Improvements

S 115th Street

3 115(115(115(115(115)))						
Street Classification	Collector Arterial					
Speed Limit	30 mph					
Eastbound Average Vehicle Speed	21 mph					
Eastbound 85th Percentile Vehicle Speed	36 mph					
Westbound Average Vehicle Speed	21 mph					
Westbound 85th Percentile Vehicle Speed	36 mph					

Note: Data collected July 2020.

S 115th Street runs east-west between East Marginal Way S and 42nd Avenue S. The street provides access to the Duwamish Hill Preserve and the Allentown Neighborhood. There is a sidewalk on the north side of the street.

Recommended Improvements

A. Speed limit reductions – lower the speed limit on S 115th Street from 30 mph to 25 mph to lower speed entering the Allentown Neighborhood and to be consistent with the speed limit on 42nd Avenue S. On East Marginal Way approaching the 115th Street intersection, install 25 mph advisory speed limit signs to warn drivers of turning vehicles.



East Marginal Way and S 115th Street intersection

42nd Avenue S

	Segment north of	Segment south of
	S 124th Street ¹	S 124th Street ²
Street Classification	Collector Arterial	Collector Arterial
Speed Limit	25 mph	25 mph
Northbound Average Vehicle Speed	31 mph	25 mph
Northbound 85th Percentile Vehicle Speed	36 mph	30 mph
Southbound Average Vehicle Speed	31 mph	23 mph
Southbound 85th Percentile Vehicle Speed	36 mph	29 mph
Average Weekday Traffic Volume	3,900	9,300

Notes: ¹Data collected 1/13/2022-1/22/2022 when 42nd Avenue S bridge over Duwamish River was closed. ² Data collected August 2021.

42nd Avenue S runs along the Duwamish River with residential homes along the east side of the street. There is a pedestrian bridge crossing of the river at S 119th Street and the Duwamish Park is located at approximately S 117th Street. A continuous sidewalk runs along the east side of the street between S 115th Street and Interurban Avenue S, except for a missing segment at the S 124th Street/42nd Avenue S intersection. The 42nd Avenue S corridor experienced 10 crashes during the five-year study period.



42nd Avenue S at S 119th Street (looking north)

Recommended Improvements

- B. 25 mph pavement markings paint 25 mph markings on southbound 42nd Avenue S, south of S 115th Street and on northbound 42nd Avenue S, north of S 124th Street.
- C. Improved pedestrian crossing and traffic calming construct a Rectangular Rapid Flashing Beacon (RRFB) system, raised crosswalk, curb bulbs, and ADA sidewalk improvements at the S 119th Street pedestrian bridge crosswalk to shorten the pedestrian crossing distance, narrow travel lanes, and calm traffic.

S 124th Street

Street Classification	Collector Arterial
Speed Limit	25 mph
Eastbound Average Vehicle Speed	27 mph
Eastbound 85th Percentile Vehicle Speed	33 mph
Westbound Average Vehicle Speed	27 mph
Westbound 85th Percentile Vehicle Speed	33 mph
Average Weekday Traffic Volume	8,100

Note: Data collected July and August 2021.

S 124th Street provides access to single family homes, Tukwila Community Center, and BNSF's Intermodal facility at the east end of the street. There is curb and sidewalk along the frontage of the Community Center and the north side of the street has a pedestrian walkway with segments of extruded curb that provide a buffer from the roadway between 42nd Avenue S and 49th Avenue S. An eastbound vehicle speed radar feedback sign is located at 45th Avenue S. S 124th Street experienced 8 crashes during the five-year study period. In 2019, there was a fatal vehicle-pedestrian crash at the S 124th Street/46th Avenue S intersection.



S 124th Street at 46th Avenue S (looking west)

Recommended Improvements:

- D. Improved pedestrian crossings install Rectangular Rapid Flashing Beacon (RRFB) systems at 44th Avenue S (Community Center driveway) and 46th Avenue S. Construct raised curbs and sidewalks to separate pedestrians and vehicles, narrow the pedestrian crossing distance, and provide traffic calming.
- E. North side pedestrian walkway between 49th Avenue S and 51st Place S construct a continuous pedestrian walkway along north side of S 124th Street.
- F. Reconfigure S 124th Street/50th Place S intersection remove eastbound right turn slip lane to calm traffic and improve safety. Currently eastbound right turning vehicles are not required to stop. Reconfigure the intersection with single-lane approaches and require all vehicles to stop.



S 124th Street/50th Place S intersection

S 125th Street

S 125th Street is a local street along the Duwamish River that connects between 46th Avenue S and 50th Place S. Residents along the street have expressed concerns regarding speeding and cutthrough traffic. There have been 3 crashes at the S 125th Street/50th Place S intersection over the last 5 years. This intersection is just south of the S 124th Street/50th Place S intersection, which has an eastbound right turn slip lane that does not require vehicles to stop.

Recommended Improvements

G. Speed cushions – continue to monitor vehicle speeds and volumes in order to evaluate potentially installing speed cushions. Coordinate with residents along S 125th Street to determine if they support speed cushions. Speed cushions could be an appropriate treatment along this street because there is not a parallel local street that could be impacted by diverting traffic.

50th Place S

Street Classification	Collector Arterial
Speed Limit	25 mph
Northbound Average Vehicle Speed	32 mph
Northbound 85th Percentile Vehicle Speed	36 mph
Southbound Average Vehicle Speed	33 mph
Southbound 85th Percentile Vehicle Speed	39 mph
Average Weekday Traffic Volume	7,300

Note: Data collected July and August 2021.

50th Place S connects between S 124th Street and S 129th Street. S 129th Street crosses the BNSF tracks and I-5, and is the southeast entrance to the Allentown Neighborhood. 50th Place S serves residential properties and Codiga Park along the Duwamish River. There is a segment of sidewalk on the west side of the street along the Park's frontage. The eastside of the street has a striped paved shoulder that has a few segments of extruded curb that provide separation from vehicles.



50th Place S, looking south

Recommended Improvements

- H. Pedestrian walkway construct a continuous pedestrian facility on either the west or east side of the street.
- I. Northbound vehicle radar feedback sign add a feedback sign at Railroad Avenue, where 50th Place S enters the Allentown Neighborhood.

Local Streets

Within the Allentown Neighborhood, the local streets are low-volume streets that provide access to homes and businesses. These local streets typically do not include formal pedestrian facilities and on-street parking is typically allowed.

Recommended Improvements

J. Reduce default speed limit from 25 mph to 20 mph for local streets – this could be part of a citywide speed limit reduction effort.

Appendix A.

Allentown Neighborhood Crash Data by Corridor – 5 Year Period

Corridors	Rear end	Sideswipe	Head On	Left Turn	Angle	Fixed Object	Exits Roadway	Pedestrian	Pedal-cyclist	Other	Total
42nd Ave S				3	1	4 (1)	1 (1)			1	10 (2)
S 124th St ¹	1		1	2	2			1 (1)		1	8 (1)
50th PI S ²	1				1	2					4
46th Ave S		1				2					3
S 122nd St				1	1						2
S 125th St						1				1	2
S 115th St						1					1
S 116th St										1	1
45th Ave S						1					1
Total	2	1	1	6	5	11 (1)	1 (1)	1 (1)	0	4	32 (3)

Source: WSDOT crash data from (9/10/2016 - 9/9/2021).

Notes: (#) indicates severe (fatality or serious injury) crashes.

¹ Crashes at the 42nd Avenue S/S 124th Street intersection are included with the 42nd Avenue S corridor.

² Crashes at the S 124th Street/50th Place S intersection are included with S 124th Street corridor.

Appendix B.

Cost Estimates Summary

ID	Project	Cost Estimate
Α	S 115th Street - Speed limit reduction from 30 mph to 25 mph	\$2,000
В	42nd Avenue S – Two 25 mph pavement markings	\$5,500
С	42nd Avenue S – RRFB system with raised crosswalk and curb bulbs at S 119th Street	\$245,000
D	S 124th Street – Improved crosswalks with RRFBs and curb bulbs at 44th Avenue S and 46th Avenue S [COMPLETE 2022]	\$70,000
Е	S 124th Street – North side pedestrian walkway between 49th Avenue S and 51st Place S	\$624,000
F	S 124th Street – Reconfigure S 124th Street/50th Place S intersection to single-lane approaches and all-way stop control	\$750,000
G	S 125th Street – Speed cushions (\$5,000 each)	\$10,000
Н	50th Place S – Continuous pedestrian facility	\$185,000
I	50th Place S – Northbound vehicle radar feedback sign	\$10,000