

SAFE SPEED STUDY

Evaluation of Posted Speed Limits

City of Lake Forest Park
December 2023



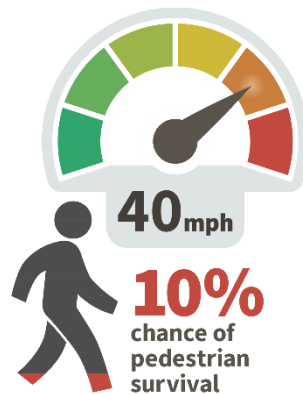
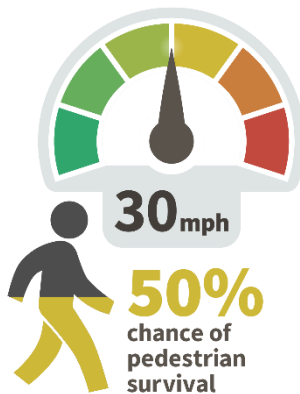
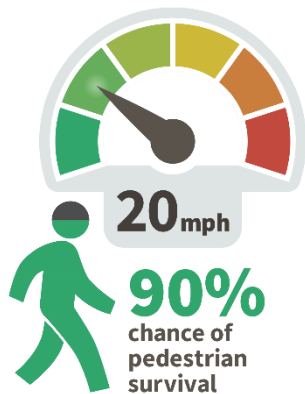
WHAT IS THE PURPOSE OF THE STUDY?

Purpose: *Propose a set of comprehensive speed limit changes based on updated speed limit setting methodology and promote safe speeds throughout the City.*

KEY CONSIDERATIONS

- City Council adoption of NACTO 2020 *City Limits, Setting Safe Speed Limits on Urban Streets* publication on October 13, 2022 in Ordinance 1252.
- Speed limit changes should be based on a set of objective criteria and readily available data
- The City should strive for a consistent set of posted speed limits

THE CASE FOR ADDRESSING SPEEDS



- Vehicle speed is directly linked to crash severity
- Risks for walkers and rollers increase exponentially as speeds increase

CRASH CORRELATION TO SPEED LIMITS



Data supports the need to re-evaluate how speed limits are set, especially in areas where there is a higher mix of vulnerable users.



86%

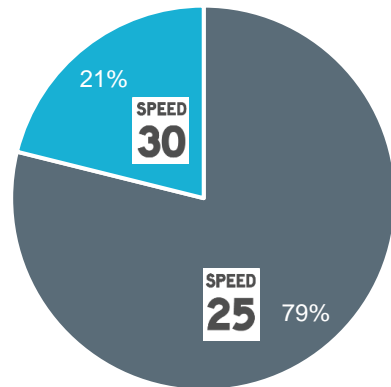
**of serious/fatal crashes
were on roadways with
limits above 25mph**

OVERVIEW OF POSTED SPEED LIMITS

Existing Context

- 13.2 miles of designated arterials and collectors
- Posted speed limits range from 25 to 30 MPH on City arterials and collectors
- Does not include state highways¹ (SR 522 & 104)
- 20 mph on some local streets

Minor Arterials & Collectors



*Existing posted speed limits on
Lake Forest Park
arterials/collectors*

1. WSDOT has jurisdiction over speed limit setting on State Routes

APPROACH TO THE STUDY

Tasks Undertaken

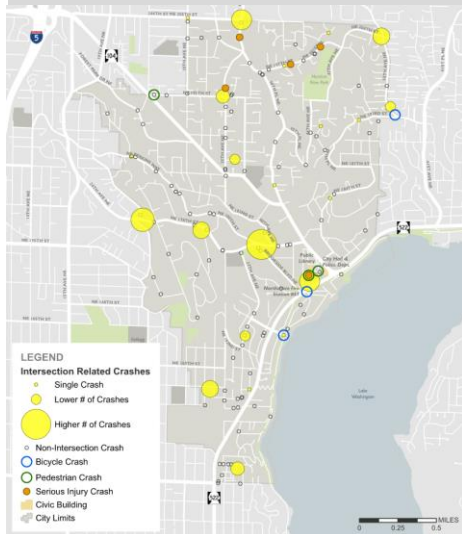
- Collected and reviewed traffic and speed data throughout the City for arterials and collectors
- Developed interactive [online map portal](#)
Username: TranspoProjectTR
Password: TGTRp@ss2023
- Created database summarizing key attributes about all arterials and collectors



APPROACH TO THE STUDY

Created a series of maps to consider different data sets

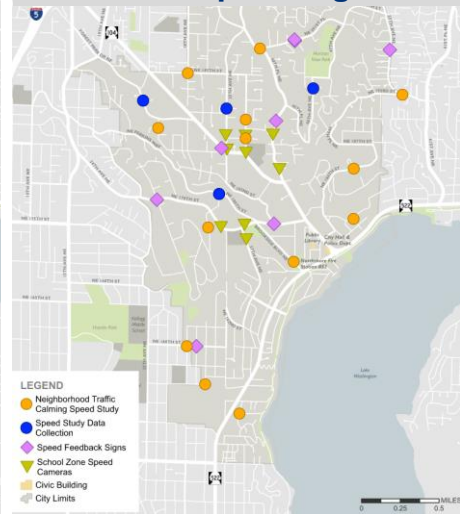
Crash History



Functional Classification



Enforcement Cameras & Radar Speed Signs



ROADWAY SEGMENT DATABASE

Segment	Segment Name	Functional Classification	Existing Speed Limit	85th Percentile Speed	ADT	Serious or Fatal Collis	Ped or Bike Collis	School Zone	Near Park	Land Use	City Designated Walk or Bike Route?
01	30th Ave NE (NE 195th St to NE 205th St)	Collector	25			No	No	Yes	No	RS 7	Walk
02	NE 205th St (30th Ave NE to 37th Ave NE)	Minor Arterial	30			No	No	No	Yes	RS 7	Bike
03	33rd Ave (NE 205th St to 35th Ave NE)	Minor Arterial	25			No	No	No	No	RS 7	No
04	35th Ave NE (195th St to NE 205th St)	Minor Arterial	30			Yes	No	No	No	RS 9 & RS 7	Walk and Bike
05	40th PI NE (35th Ave NE to 45th PI NE)	Minor Arterial	30	36	2,252	No	No	No	Yes	RS 9 & RS 7	Walk and Bike
06	NE 197th St (40th PI NE to 47th Ave NE)	Minor Arterial	30	33	3,682	Yes	No	No	Yes	RS 9	Walk and Bike
07	NE 204th St (NE 201st PI to 55th Ave NE)	Minor Arterial	30			No	No	No	No	RS 9 & RS 7	Bike
08	55th Ave NE (City limits to NE 193rd St)	Minor Arterial	30	28	2,944	No	Yes, Bike	No	No	RS 9 & RS 7	Bike
09	45th PI / 46th Ave NE / NE 195th St / 47th Ave NE (40th PI NE to NE 201st PI)	Collector	25	34	2,271	No	No	No	Yes	RS 9	Walk (partial)
10	NE 195th St (SR 104 to 35th Ave NE)	Minor Arterial	30	35	2,736	No	Yes, Ped	No	No	RM1 & RM 2 & RS 7	Walk (partial)
11	35th Ave NE (195th St to SR 104)	Minor Arterial	30			No	No	Yes	No	RS 7 & RS 10 & Neighborhood business	Walk and Bike
12	37th Ave NE / NF 195th St (SR 104 to 35th Ave NE)	Minor Arterial	25	30	556	No	No	Yes	No	RS 7 & RS 10 & Neighborhood business	No
13	40th PI NE (SR 104 to 45th PI NE)	Minor Arterial	30	29	260	No	No	Yes	No	RS 9 & RS 10	Walk and Bike
14	NE 187th St / 49th PI NE / NE 187th PI / NE 193rd St (53rd Ave to 56th Ave NE)	Minor Arterial	25			No	No	No	No	RS 9 & RS 7 & RS 15 & Neighborhood Business	Walk (partial)
15	NE 175th St / 47th Ave NE / NE 184th St (SR 104 to 53rd Ave NE)	Minor Arterial	25	33	1,620	No	No	No	No	RS 7 & RS 15 & RS 20	Walk (partial)
16	Forest Park Dr (NE 196th St to SR 104)	Minor Arterial	25	31	739	No	No	No	No	RM 1 & RS 10 & RS 15	Walk and Bike
17	35th Ave NE / NE 182nd St / 40th Ave NE (SR 104 to NE 178th St)	Collector	25			No	No	Yes	No	RS 10 & RS 20 & RS 15	Walk and Bike

- Created database with detailed data about each roadway segment
- Includes existing speed limit, speed data, and roadway characteristics
- Helps to 'score' roadway segments and identify New Proposed Speed Limit based on the data

BUILDING ON RECENT RESEARCH

New Publications focused on Speed Limits and Vehicle Speeds

Washington State Injury Minimization and Speed Management Policy Elements and Implementation Recommendations

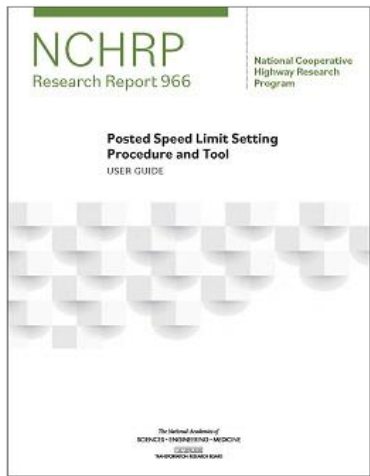
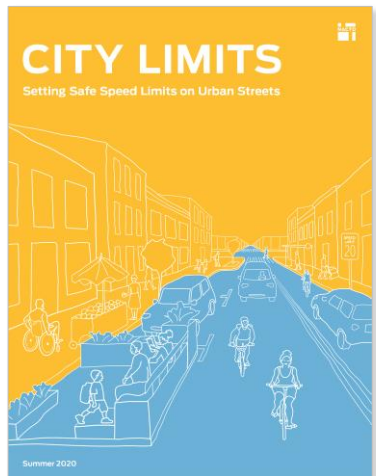
Prepared and Reviewed by:

Washington Injury Minimization and Speed Management Policy and Guidelines Workgroup

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 Scott Waller, Washington Traffic Safety Commission
 Rayn Whitewolf, City of Blaine (WA City Design Standards Committee Member)
 Chris Workman, P.E. Washington Transportation Improvement Board

October 2020

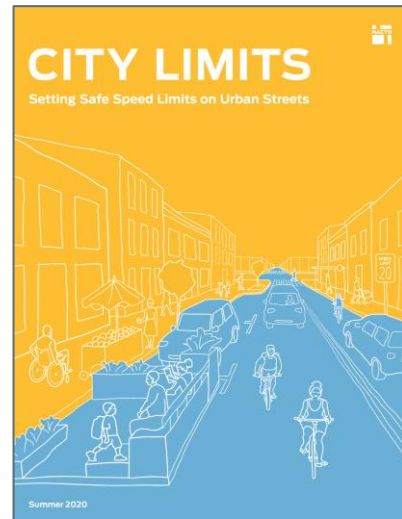


NACTO CITY LIMITS – SETTING SAFE SPEED LIMITS ON URBAN STREETS

Contains New Methodology

Identifies two programmatic-based approaches for changing speed limits

1. Set citywide defaults (for all arterials or based on roadway functional classification). Allow changes where special conditions apply.
2. Set speed limits based on a methodology that measures conflict density and activity level



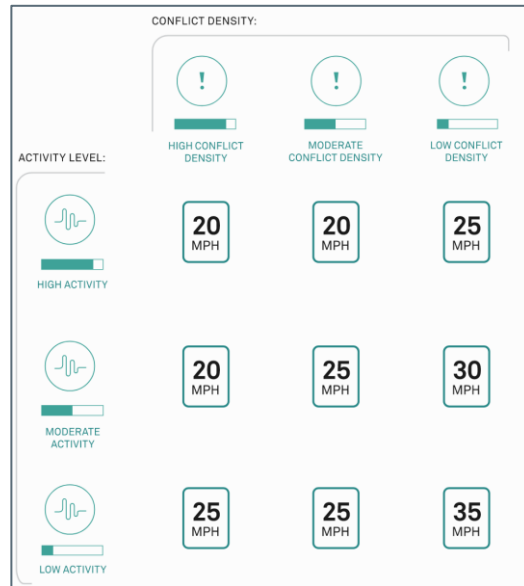
NACTO = National Association of City Transportation Officials

NACTO CITY LIMITS – SETTING SAFE SPEED LIMITS ON URBAN STREETS

Provides a Useful Methodology to Consider

- Conflict density vs. activity level matrix
- Can be modified to fit the context of a community

** Used as a starting point, but modified for the City of Lake Forest Park*



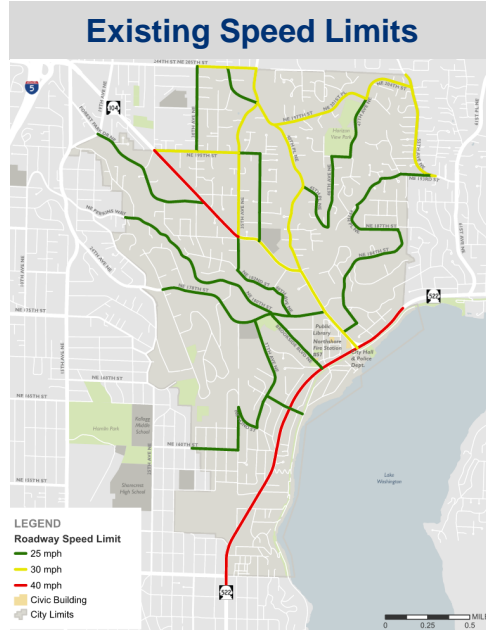
OPTIONS FOR SPEED LIMIT SETTING METHODOLOGY

1. Use 'old' methodology based primarily on 85th percentile speeds
2. Use tailored *City Limits* methodology based on a variety of roadway segment data
3. Set default speed limit on all arterial and collector roadways

OPTION 1 – 85TH PERCENTILE SPEED METHODOLOGY













OPTION 1 – ‘OLD’ 85TH PERCENTILE METHODOLOGY

- Based on 85th percentile speeds
- Results in changes to 2 roadway segments
- Speed limit lowered from 30 to 25 MPH



OPTION 2 – NACTO CITY LIMITS BASED METHOD

SPEED LIMIT SETTING METHODOLOGY

Roadway Context				
Multimodal Safety Index				
		A	B	C
	1			
	2			
	3			

Multimodal Activity and Safety Index

- Level of expected ped/bike activity
- History of safety issues
- 85th percentile speeds

Roadway Context

- Adjoining land uses
- Designated bicycle or pedestrian route

**Arterials & Collectors Only*

ROADWAY CONTEXT APPROACH

Goal

To consider the context of the roadway and the surrounding land uses

Roadways with Lower Speed Limits

- Areas of higher density land uses or activity areas
- Designated pedestrian or bicycle routes

ROADWAY CONTEXT SCORING

Roadway in Town Center
or area of greater density?

Yes

Roadway Context = **A**

No

Roadway is designated
city walk / bike route?

Yes

Roadway Context = **B**

No

Roadway Context = **C**

MULTIMODAL ACTIVITY AND SAFETY INDEX APPROACH

Multimodal Activity and Safety Index

To consider level of roadway activity and any safety concerns

- Higher ped/bike activity = lower speeds
- Lower ped/bike activity = higher speeds
- Locations with lower 85th percentile speeds or safety issues = lower speeds

Limitations to Measuring Ped/Bike Activity

Little data exists to measure ped/bike activity so proximity to ped/bike generators is used as proxy

- Schools, parks and town center

MULTIMODAL ACTIVITY AND SAFETY INDEX SCORING

Scoring Index

Criteria	Measure	Points
Multimodal Activity*	Proximity to School	3
	Proximity to Park	2
	Proximity to Town Center or Neighborhood Business Land Use	2
Collision History	Roadway has at least one serious injury/fatal collision in last five years	3
	Roadway has at least one pedestrian or bicycle collision in last five years	1
Speeding	Roadway has 85 percentile speed within 3 mph of speed limit	3
Daily Traffic	Average Daily Traffic Volumes < 2,000 vehicles	2



1

>6 pts



2

3-6 pts



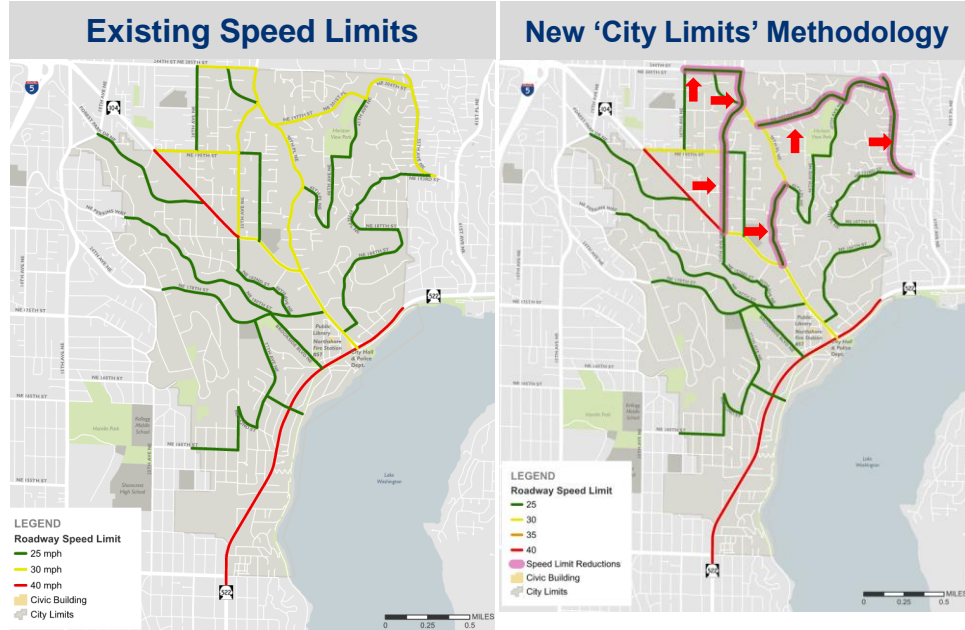
3

<3 pts

* Proximity to pedestrian/bicycle generators used as a proxy for level of activity.

OPTION 2 – NEW NACTO CITY LIMITS METHODOLOGY

- Based on adopted NACTO *City Limits*
- 6 roadway segments would change
- Speed limit lowered from 30 to 25 MPH
- Only 2 remain at 30 mph



SPEED LIMIT SETTING TOOL

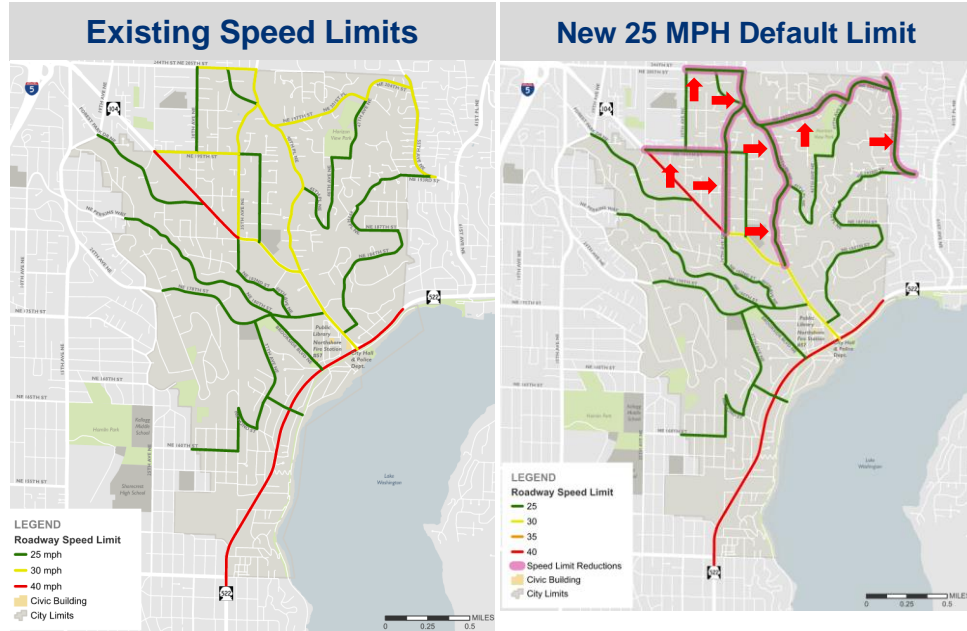
Segment ID	Segment Name	Functional Classification	Existing Speed Limit	85th Percentile Speed	ADT	Serious or Fatal Coll.	Ped or Bike Coll.	School Zone	Near Park	Land Use	City Designated Walk or Bike Route?	Roadway Activity and Safety Score	Roadway Activity and Safety Index	Roadway Context
01	30th Ave NE (NE 195th St to NE 205th St)	Collector	25		No	No	No	Yes	No	RS 7	Walk	7	1 B	
02	NE 205th St (30th Ave NE to 37th Ave NE)	Minor Arterial	30		No	No	No	No	Yes	RS 7	Bike	6	2 B	
03	23rd Ave (NE 205th St to 35th Ave NE)	Minor Arterial	25		No	No	No	No	No	RS 7	No	4	2 C	
04	35th Ave NE (195th St to NE 205th St)	Minor Arterial	30		Yes	No	No	No	No	RS 9 & RS 7	Walk and Bike	7	1 B	
05	40th PI NE (35th Ave NE to 45th PI NE)	Minor Arterial	30	30	2,252	No	No	No	Yes	RS 9 & RS 7	Walk and Bike	2	3 B	
06	NE 197th St (40th PI NE to 47th Ave NE)	Minor Arterial	30	33	3,662	Yes	No	No	Yes	RS 9	Walk and Bike	5	2 B	
07	NE 204th St (NE 201st Pl to 55th Ave NE)	Minor Arterial	30		No	No	No	No	No	RS 9 & RS 7	Bike	4	2 B	
08	55th Ave NE (City limits to NE 193rd St)	Minor Arterial	30	28	2,944	No	Yes, Bike	No	No	RS 9 & RS 7	Bike	3	3 B	
09	45th Pl / 45th Ave NE / NE 195th St / 47th Ave NE (40th PI NE to NE 201st Pl)	Collector	25	34	2,271	No	No	No	Yes	RS 9	Walk (partial)	2	3 B	
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11	35th Ave NE (195th St to SR 104)	Minor Arterial	30		No	No	No	Yes	No	RS 7 & RS 10 & Neighborhood business	Walk and Bike	9	1 B	
12	37th Ave NE / NE 195th St (SR 104 to 35th Ave NE)	Minor Arterial	25	30	556	No	No	Yes	No	RS 7 & RS 10 & Neighborhood business	No	7	1 C	
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16	Forest Park Dr (NE 196th St to SR 104)	Minor Arterial	25	31	739	No	No	No	No	RM 1 & RS 10 & RS 15	Walk and Bike	2	3 B	
17	35th Ave NE / NE 192nd St / 40th Ave NE (SR 104 to NE 178th St)	Collector	25		No	No	No	Yes	No	RS 10 & RS 20 & RS 15	Walk and Bike	7	1 B	
18	NE Perkins Way / NE 180th St (City limits to NE 178th St)	Collector	25	34	1,491	No	No	No	No	RS 10 & RS 15 & RS 20 & RS 9	Walk and Bike	2	3 B	
19	NE 178th St (28th Ave NE to 37th Ave NE)	Minor Arterial	25	29	355	No	No	Yes	No	RS 7 & RS 15 & RS 20	Walk and Bike	5	2 B	
20	NE 178th St (37th Ave NE to SR 104)	Minor Arterial	25	28	2,249	No	No	Yes	Yes	RS 15 & RS 20	Walk and Bike	5	2 B	
21	Brookside Blvd NE (NE 178th St to SR 522)	Minor Arterial	25	30	358	No	No	No	Yes	RS 15 & RS 7	Walk and Bike	4	2 B	
22	37th Ave NE (NE 162nd St to NE 178th St)	Collector	25		No	No	No	Yes	Yes	RS 15 & RS 7	Walk	9	1 B	
23	NE 160th St / 35th Ave NE / NE 162d St (city limits to 37th Ave NE)	Collector	25	25	1,125	No	No	No	No	RS 7	Walk (partial)	4	2 B	
24	NE 165th St (37th Ave NE to Beach Dr NE)	Minor Arterial	25		No	No	No	No	No	RS 7	Walk and Bike	4	2 B	

- Tool automatically 'scores' roadway segments and outputs New Proposed Speed Limit based on data within database

OPTION 3 – DEFAULT 25 MPH ON ARTERIAL & COLLECTOR STREETS

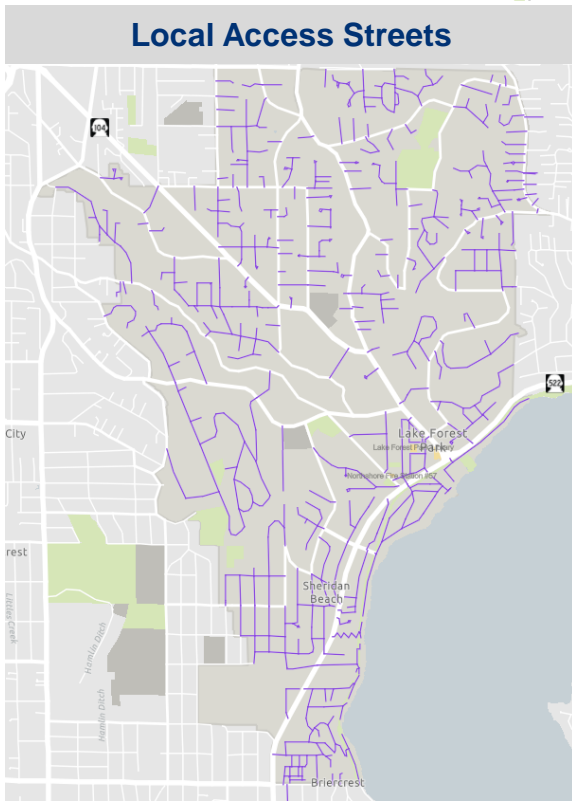
OPTION 3 – IMPLEMENTING DEFAULT 25 MPH LIMIT ON ARTERIALS/COLLECTORS

- Speed limit lowered from 30 to 25 MPH on all existing 30 mph roadways
- Additional enforcement and traffic calming recommended on NE 195th St and 40th PI (the 2 segments remaining in Opt 2)



LOCAL ACCESS STREETS

- Roadways not designated as arterials or collectors, are “local access” streets
- Approximately 39 miles of local access streets in City
- RCW 46.61.415 allows local jurisdictions to “*establish a maximum speed limit of 20 MPH*” and may do so without an engineering and traffic investigation



20 MPH LOCAL STREET SPEED LIMITS

- Seattle - <https://www.seattle.gov/transportation/projects-and-programs/safety-first/vision-zero/speedlimits>
- Tacoma - <https://www.cityoftacoma.org/cms/one.aspx?pageId=190031>
- Bainbridge Island - <https://www.bainbridgewa.gov/1415/Islandwide-Speed-Limit-Study#:~:text=Speed%20limits%20will%20decrease%20by,of%20speed%20limit%20sign%20changes.>
- Outside Washington State - Boulder, CO; Denver, CO; Washington DC, Portland, OR, Salt Lake City, UT;

NEXT STEPS

- Gather Feedback from City Council on Speed Limit Setting Options
 - Arterials and Collectors
 - Local Access Streets
- Finalize Recommendations and Prepare Documentation
- Implementation Strategies and Schedule

CONTACT

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Other Team Members

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- Brett Schock



Q&A

