
CITY OF TACOMA: VISION ZERO ROAD SAFETY AUDITS

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE

JULY 2024 | FINAL

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This report is provided for informational purposes only, and all results, recommendations, preliminary concepts, cost opinions, and commentary contained herein are based on limited data available at the time of preparation. Further engineering analysis and design are necessary prior to implementing any of the recommendations contained herein. Toole Design makes no representations or warranties regarding the accuracy of the underlying source data. Motor vehicle crashes are complex occurrences that often result from multiple contributing factors. The success of these safety recommendations depends on multiple factors outside of Toole Design Group's control.

INTRODUCTION

The purpose of this study is to conduct a road safety audit (RSA) for a study area that includes one corridor segment and its intersections: South Yakima Ave between S 8th St and S 25th St. This report was developed in accordance with the FHWA Road Safety Audit (RSA) guidelines and combines findings from crash data analysis and other available data.

SAFE SYSTEM APPROACH

The Tacoma Vision Zero Road Safety Audit is framed around the Safe System Approach (Figure 1). The Federal Highway Administration (FHWA) provides guidance on the Safe System Approach, which recognizes that road safety is a shared responsibility between those that design, build, operate, and use the road system. It recognizes that to reduce risks to humans all parts of the transportation system must be strengthened, so that if one part fails, the other parts still protect people.

Safe System Principles are illustrated in the outer ring of the graphic with the Safe System elements found on the inner ring: Safer People, Safer Vehicles, Safer Speeds, Safer Roads, and Post-Crash Care.

The Safe System Approach aims to eliminate fatal and serious injury crashes using a proactive approach that anticipates human mistakes- and reduces the severity of crashes that do happen, so the impact is less likely to be fatal or cause serious injury. The strategies and practices included in this memo are framed around safer people, safer vehicles, safer roads, safer speeds, and post-crash care.



Figure 1: Safe System Approach Wheel (Source: FHWA)

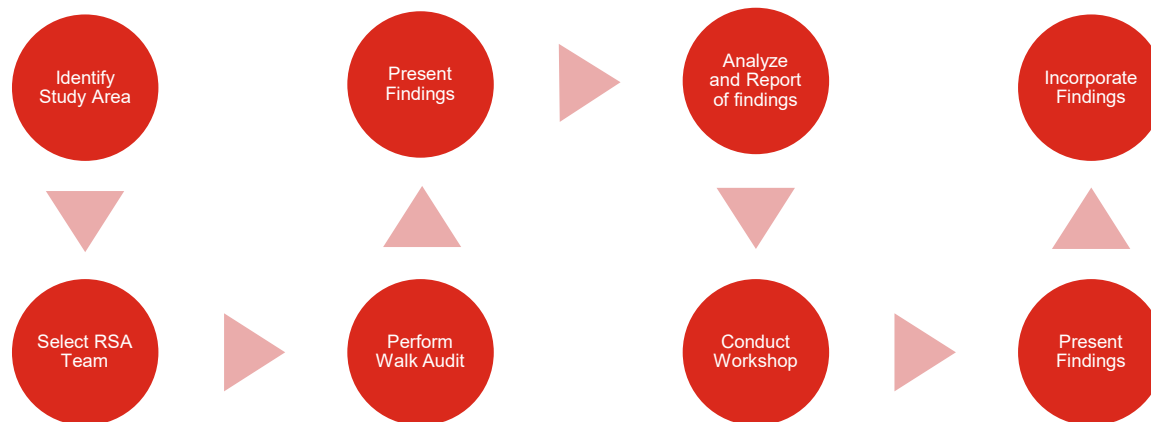
WHAT IS A ROAD SAFETY AUDIT?

PURPOSE

An RSA is the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users. The aim of an RSA is to answer the following questions:

- What elements of the road may present a safety concern: to what extent, to which road users, and under what circumstances?
- What opportunities exist to eliminate or mitigate identified safety concerns?

PROCESS



STUDY AREA

The study area for this RSA is under the jurisdiction of the City of Tacoma. It includes South Yakima Ave between S 8th St and S 25th St. This segment is identified in the Tacoma Vision Zero Local Roads Safety Plan as an Arterial High Risk Network Priority Corridor.¹

Table 1 describes the segments details and Figure 2 displays where the segment is located within the City of Tacoma. Appendix B includes existing speed data shared by City of Tacoma staff during the workshop.

Table 1: South Yakima Ave Segment Details

Extent	WSDOT Functional Classification	Tacoma Arterial Classification	Length	Speed Limit
S 8 th St to Earnest S Brazill St	Other Principal Arterial	Principal Arterial	0.29 miles	30 MPH
Earnest S Brazill St to S 25 th St	Minor Arterial	Principal Arterial	0.94 miles	30 MPH

¹ Arterial High Risk Network Priority Corridors were prioritized based on analysis of three primary components: speed differential between posted speed and operating speeds; number of KSI crashes; and sliding window scores. These corridors strongly need roadway safety countermeasures focused on both reducing speed and improving safety.

NEIGHBORHOOD PROFILE, ZONING, AND LAND USE

South Yakima Ave is located in downtown Tacoma within the Downtown Regional Growth Center and is a boundary for the Hilltop Neighborhood Business District. Figure 3 displays the zoning for this area and includes the boundaries for the Hilltop Neighborhood Business District, nearby parks, schools, and key locations.

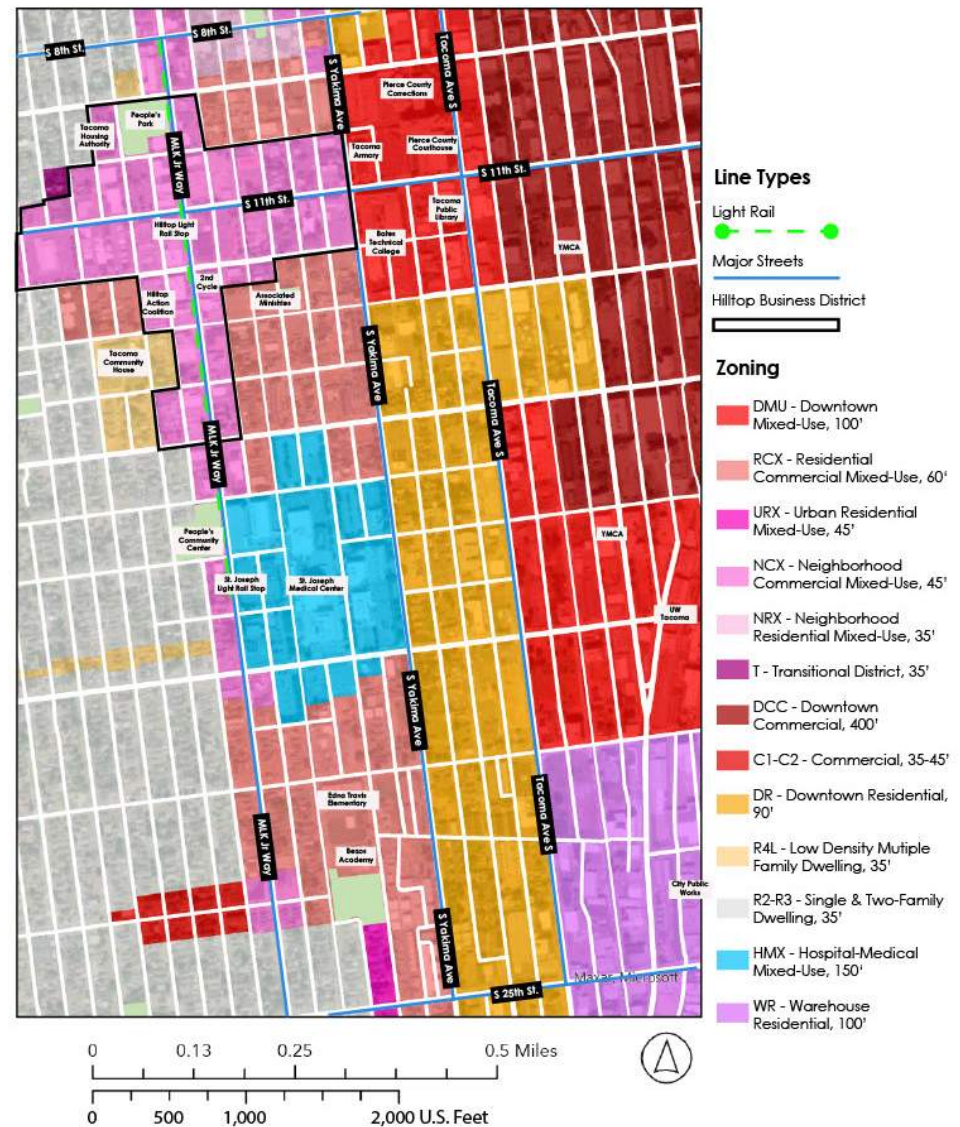


Figure 3: South Yakima Ave Neighborhood Map (Source Tacoma, 2023)

CORRIDOR FACILITIES

South Yakima Ave is used as a primary emergency response route for emergency vehicles and the full extent of the segment falls within this route.

Figure 4 displays facilities along South Yakima Ave. The map includes locations of existing bicycle facilities, traffic signals, stop signs, and bus stops.

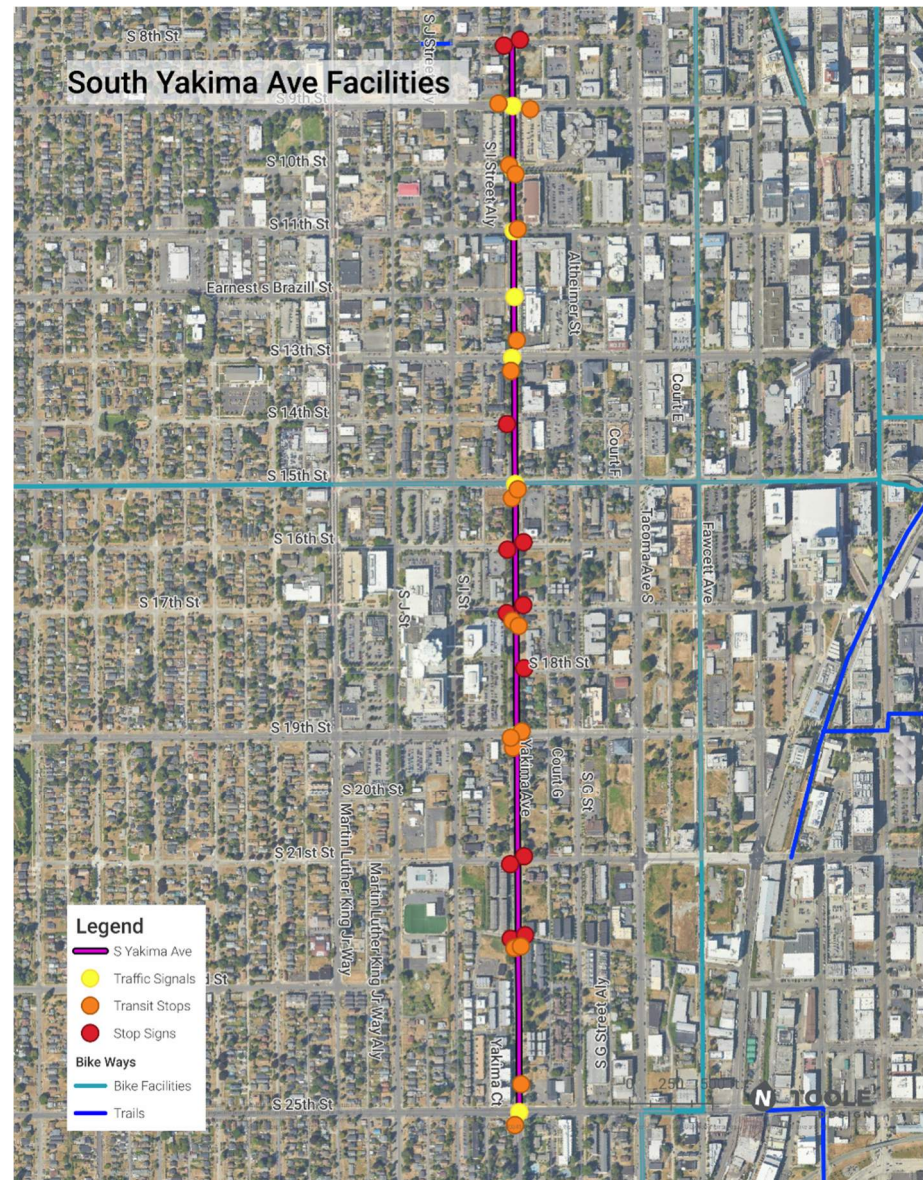
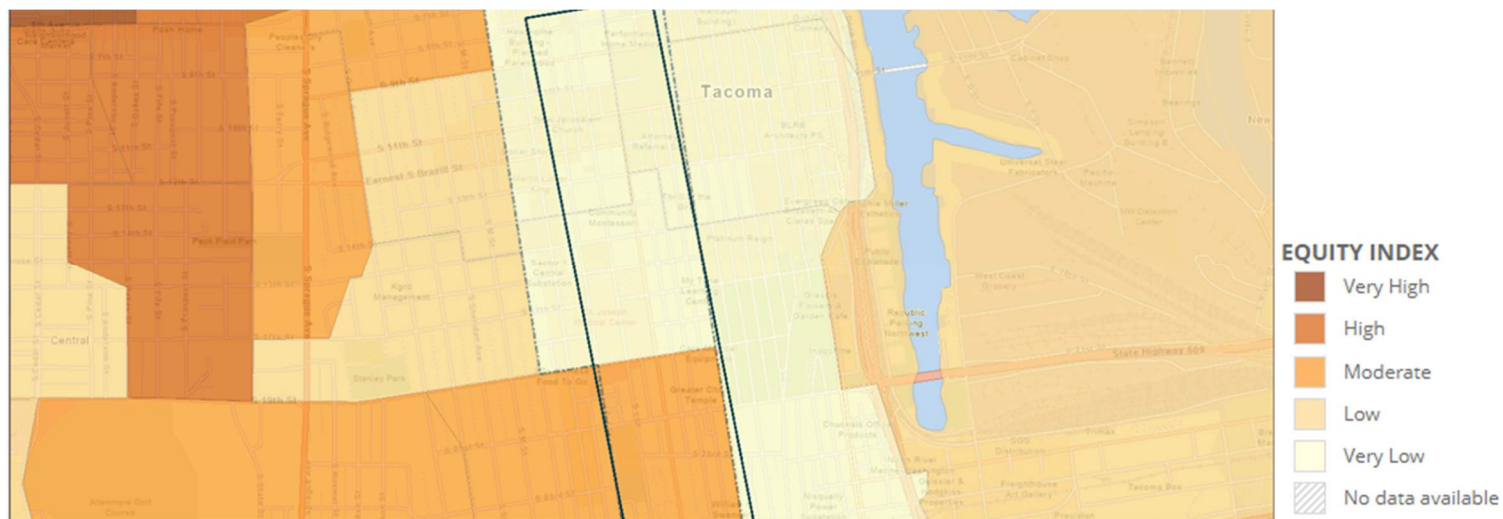


Figure 4: South Yakima Ave Facilities

CITY OF TACOMA EQUITY INDEX MAP

The City of Tacoma Equity Index is a tool which highlights areas of Tacoma where residents have the most access to opportunity and where residents are further away from opportunity. The tool looks at five categories: livability, accessibility, economy, education, and environmental health. Areas that have the most access to opportunities are shaded the darkest or identified as “Very High” opportunity and areas where residents are furthest from opportunity are shaded the lightest or identified as “Very Low” opportunity. The following graphics describe the equity and opportunity of residents living near S Yakima Ave and show that the corridor is within “Very Low” to “Moderate” opportunity areas.



Equity Overview



Population
4,490



**Individuals with
Disabilities**
22%

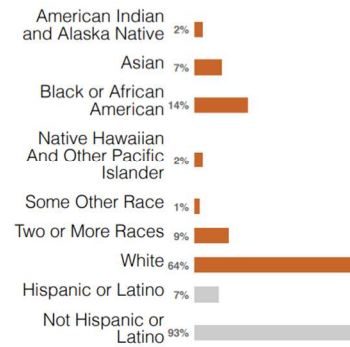
Top Countries of Immigration



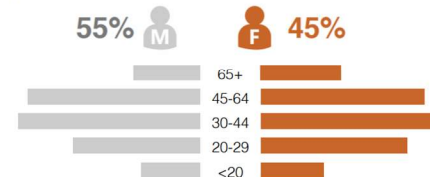
Mexico	28%	
Vietnam	12%	
Oceania NEC	10%	
Korea	8%	
Philippines	6%	

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Race & Ethnicity



Age & Gender



Foreign Born Population
11%



Limited English
3%

Livability



Average Life Expectancy
75

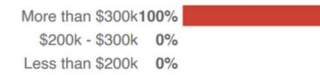


Insured Rate
90%



Pedestrian / Bicyclist Crashes
7

Median Home Value



Owner Cost Burden
32%



Renter Cost Burden
62%



413
Personal Crimes
Total in 2022-2023



917
Property Crimes
Total in 2022-2023

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Accessibility



Voter Participation Rate
28%



Households with Internet
86%



Sidewalks and Bikeways
0.07



Household Vehicle Access
84%

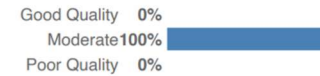


Healthy Food Availability
0.27

Parks & Open Space



Average Pavement Condition



Transit Access Score



Economy



200% of Poverty
47%



Employment Rate
94%



Poverty Rate
21%



Quality Jobs Index
46.66



Median Household Income
\$47,064

Median Household Income



Education



**Average Student
Mobility**
7%



**High School
Graduation Rate**
93%

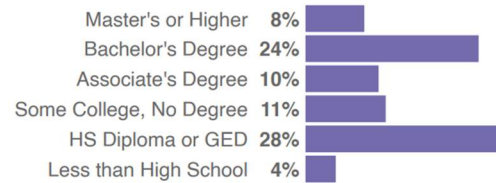


**Average Testing
Proficiency**
21%



**Kindergarten
Readiness Rate**
64%

Highest Educational Attainment



Environmental Health



**Ozone
Concentration**
50 Micrograms /
cubic meter



**PM 2.5
Concentration**
7 Parts/billion



Diesel Emissions
0.52 Tons/km2/year



**Heavy Traffic
Roadways**
327 Inverse
Distance
Weighted
Annual Daily
Traffic Count



Toxic Risk
1390 RSEI
Calculated
Score



**Urban Heat Island
Index**
87°



Urban Tree Canopy
18%

COLLISION HISTORY

The following sections include tables summarizing the killed and serious injury (KSI) crashes from 2017 to 2023 (Tables 2 and 3). Figure 5 displays the crash mode and severity of crashes along the segment from 2017 to 2023. Figures 6-7 illustrate the crash diagrams. Each crash includes a corresponding number based on crash location from north to south. The corresponding number in the collision diagrams relates to the ID column in Table 3, which includes additional crash details.

Table 2: Number of KSI Crashes by Severity in Study Area by Year, 2017-2023

	2017	2018	2019	2020	2021	2022	2023
Serious Injury	0	1	1	2	1	0	1
Fatal	0	0	0	0	0	0	1

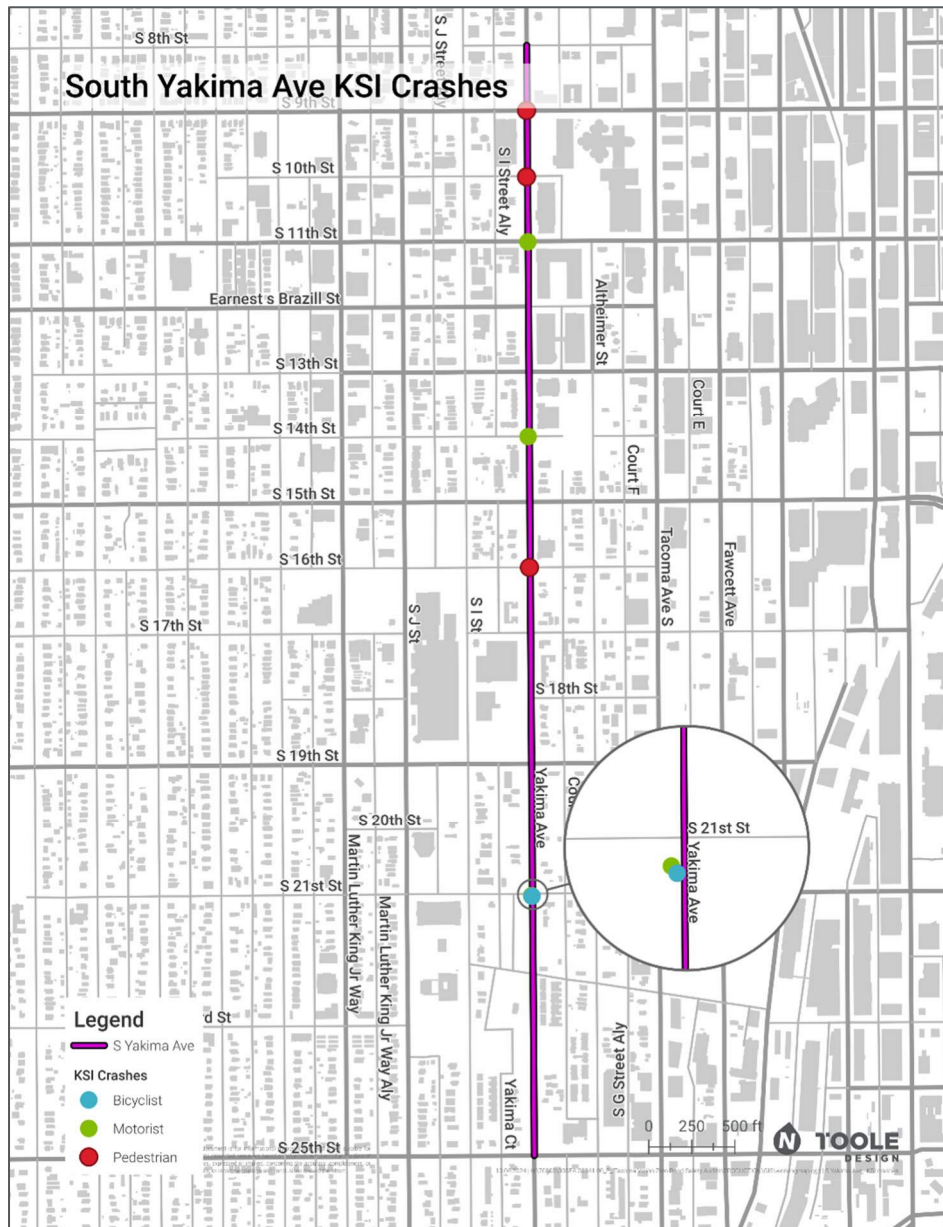


Figure 5: South Yakima Ave KSI Crashes Map

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Table 3: KSI Crash Details

ID	Injury Severity	Crash Modes	Crash Actions	Location Type	Intersection Control	Lighting	Contributing Factors	Year	Nearest Cross Street
1	Suspected Serious Injury	Pedestrian	Vehicle turning left hits pedestrian (Xing at intersection with signal, marked crosswalk)	Intersection	Traffic Signal	Dark-Street Lights On	-	2023	S 9 th St
2	Suspected Serious Injury	Pedestrian	Making Left Turn - Xing at Intersection with Signal (marked crosswalk)	Intersection	Traffic Signal	Daylight	-	2018	S 10 th St - S Nollmoyer Ln
3	Suspected Serious Injury	Motorist	Entering at angle	Intersection	Traffic Signal	Dark-Street Lights On	-	2021	S 11 th St
4	Suspected Serious Injury	Motorist	Making Left Turn - Going Straight Ahead	Intersection	Partial Stop	Daylight	-	2019	S 14 th St
5	Suspected Serious Injury	Pedestrian	Going Straight Ahead - Xing at Intersection (unmarked crosswalk) - No Signal	Intersection	Partial Stop	Dark-Street Lights On	Distracted Driver	2020	S 16 th St
6	Suspected Serious Injury	Motorist	Going Straight Ahead - Going Straight Ahead	Intersection	Partial Stop	Daylight	-	2020	S 21 st St
7	Fatal	Bicyclist	Bicyclist Strikes Moving Vehicle - Bicyclist Riding with Traffic – Vehicle Going Straight	Intersection	Partial Stop	Daylight	-	2023	S 21 st St

SOUTH YAKIMA AVE COLLISION DIAGRAMS

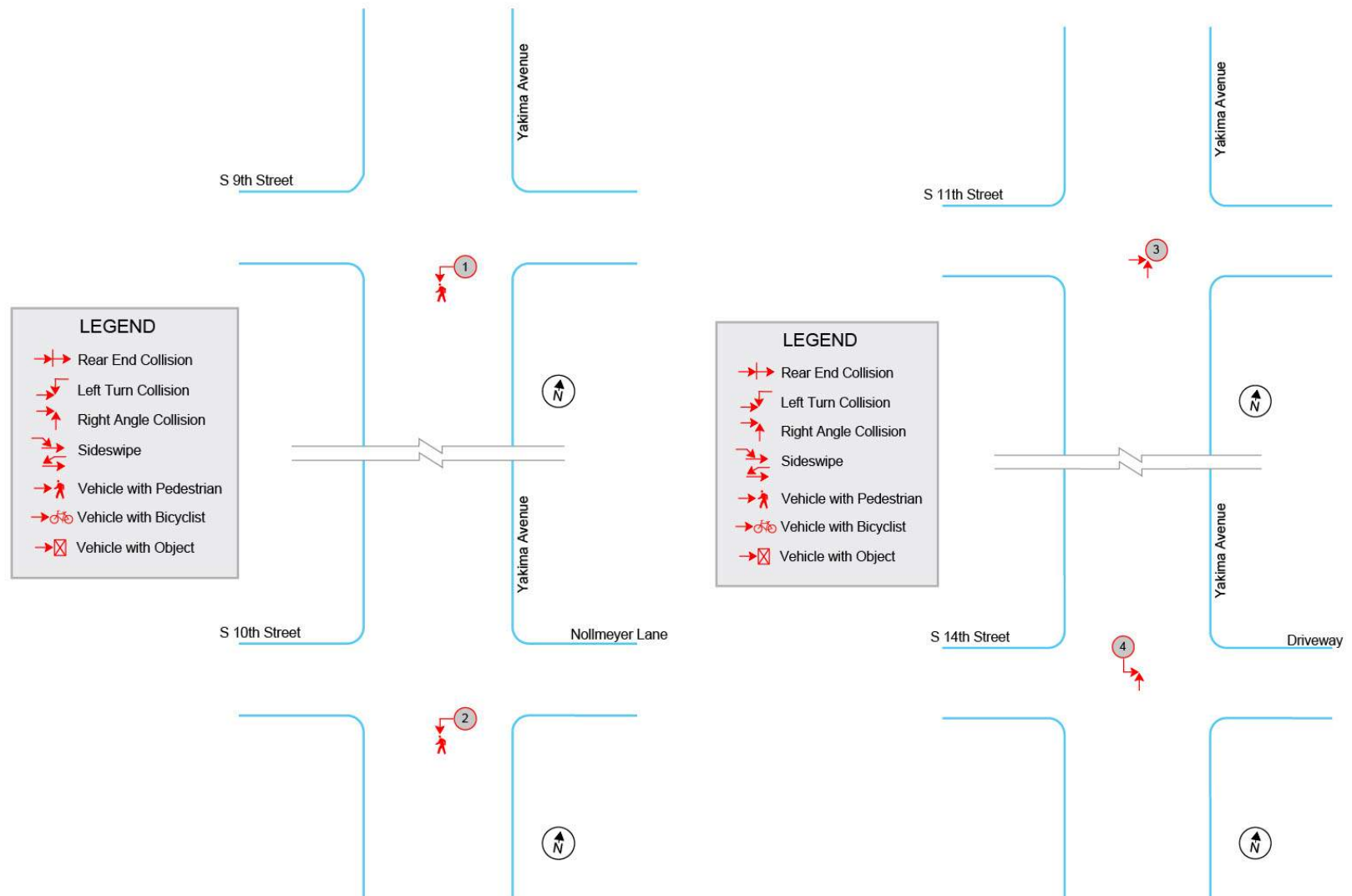


Figure 6: South Yakima Ave Collision Diagrams (Crashes 1-4)

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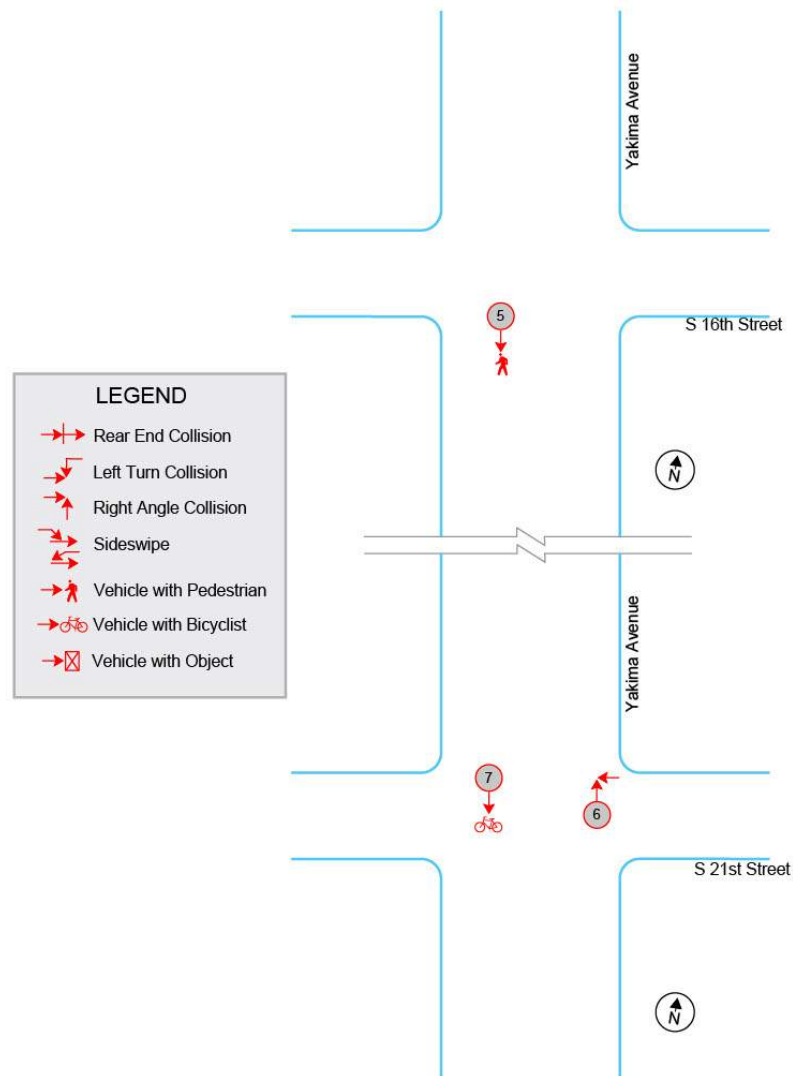


Figure 7: South Yakima Ave Collision Diagrams (Crashes 5-7)

WALKING AUDIT AND RSA WORKSHOP

On Tuesday, June 25, 2024, the RSA team, comprised of City of Tacoma staff, consultant team, and a few community members, participated in a walking audit of South Yakima Ave. The walking audit is a formal safety performance examination of an existing roadway and intersections. The walking audit team thoroughly examines the corridor and estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users.

The walking audit included the following participants:

- City of Tacoma
 - Brian Churchill
 - Carrie Wilhelme
 - Grayson Reim
 - Vicki Marsten
 - Daniel Brewer
 - Liz Kaster
 - Matt Fleming
 - Luke Faulkner
 - Brian Wang
 - Carl Metz
 - Adam Barnett
- Pierce Transit
 - Anna Peterson
 - Tina Vaslet
- Community Stakeholders
 - Laura Svancarek
- Toole Design
 - Alex DuVall
 - Cody Wuestney
 - Jaxon Roller
 - Maimoona Rahim
 - Michael Houston
- MAKERS
 - Queenie Gipaya
 - Rachel Miller
- DKS Associates
 - Sarah Keenan
 - Alexander Emmons

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On Wednesday, June 26, 2024, the RSA team held a virtual workshop to discuss the area in more detail. Workshop attendees included most people who attended the walking audit. The RSA team reviewed study area, segment packet provided in advance of the walking audit, and shared findings from the walking audit. The workshop followed this schedule:

<i>Time</i>	<i>Agenda</i>
8:30-8:45	Join & Attendance
8:45-9:00	Overview & Practice
9:00-9:10	Countermeasure Toolkit
9:10-10:00	Northern Extent
10:00-10:10	Coffee Break
10:10-11:00	Middle Extent
11:00-11:10	Coffee Break
11:10-12:00	Southern Extent
12:00-12:30	Wrap up and Next Steps

To promote brainstorming, the consultant team used the MIRO digital visual collaboration tool that provided the opportunity for simultaneous written input from all participants. The facilitator led a verbal discussion alongside to supplement the written inputs. Figure 8 shows a screenshot of the MIRO board used during the workshop and Appendix A provides “zoom in” of each of the subareas of the RSA study.

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RSA 2: South Yakima Ave

The purpose of this study is to conduct a road safety audit (RSA) for a study area that includes one corridor segment and its intersections: South Yakima Ave between S 8th St and S 25th St.

AGENDA:

8:30-8:45: Join & Attendance
8:45-9:00: Overview & Practice
9:00-9:10: Countermeasure Toolkit
9:10-10:00: Northern Extent
10:00-10:10: Coffee Break
10:10-11:00: Middle Extent
11:00-11:10: Coffee Break
11:10-12:00: Southern Extent
12:00-12:30: Reserve

Welcome! COME HERE TO PRACTICE !

A Logistics & Tips

As with all tools, there's a learning curve! Be patient with yourself, others, and technology. Here are some helpful tips to get us started on the right foot.

Tech: A chrome browser is key. Sometimes you need to refresh the page.

The Basics: See list on the left. Most importantly: move and zoom!

Issues?: Please use meeting chat or raise your hand for assistance

Cursors Off: Other users' cursors will be hidden to reduce confusion

B Your Avatar

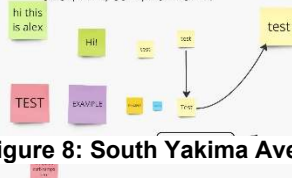
Every Miro user invited to this board is represented with an avatar at the top of the screen. Your avatar is highlighted.

C Follow Your Facilitator

1. Facilitator will note where on the screen we are focused on
2. Facilitator may occasionally use the feature "bring everyone to me" which will bring everyone's screen to the same location

D Practice

CLICK, TYPE, COPY, DUPLICATE!



Safe System Approach

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Safe System Principles are illustrated in the outer ring of the graphic with the Safe System elements found on the inner ring: Safer People, Safer Vehicles, Safer Speeds, Safer Roads, and Post-Crash Care.

The Safe System Approach aims to eliminate fatal and serious injury crashes using a proactive approach that anticipates human mistakes and reduces the severity of crashes that do happen, so the impact is less likely to be fatal or cause serious injury. The strategies and practices included in this memo are framed around safer people, safer vehicles, safer roads, safer speeds, and post-crash care.



Road Safety Audit



COUNTERMEASURE TOOLKIT



Other Safety Ideas



VISION BOARD

North Extent: S 8th St to S 14th St



MIDDLE EXTENT: South of S 14th St to S 19th St

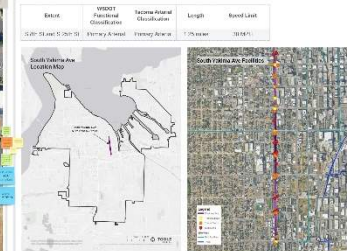


SOUTH EXTENT: South of S 19th St to S 25th St

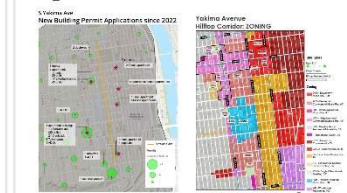


REFERENCES

Segment Details



Neighborhood Profile



Other Projects



Collision History

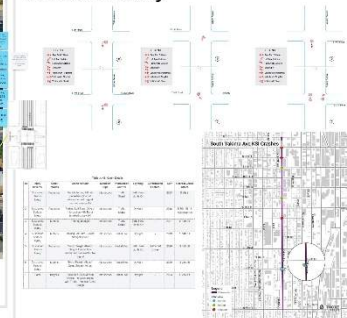


Figure 8: South Yakima Ave MIRO Board

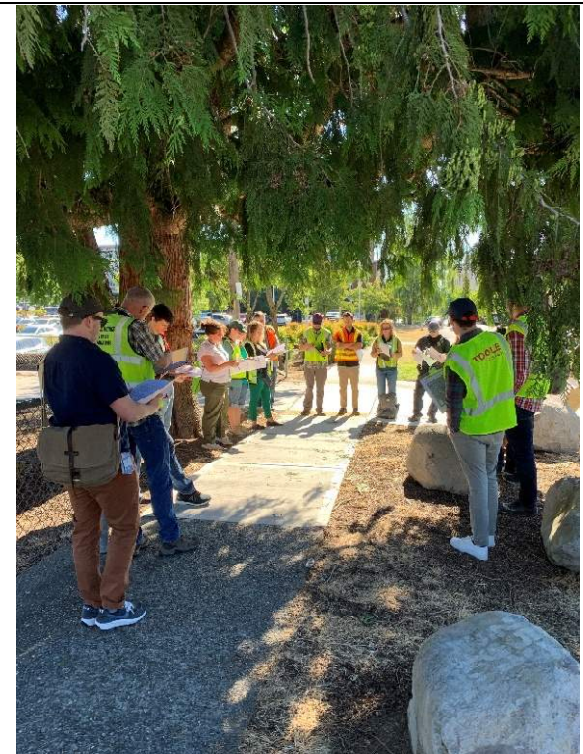
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The quantity of feedback, comments, photos, and safety treatment recommendations provided was much greater than what can be captured in a typical brainstorm setting. The consultant team captured all verbal input shared by attendees to help inform the safety recommendations in the next section.

The following section summarizes the comments and suggestions from the team participating in the walking audit and workshop. These suggestions were taken into consideration for the development of recommended improvement considerations shown in the Recommended Safety Treatments section of this memo.

WHOLE EXTENT: SOUTH YAKIMA AVE FROM SOUTH OF S 8TH ST TO S 25TH ST

- Yakima currently not preferred by emergency responders or bicycle rider compared to adjacent streets.
- Upgrade old storm inlet grates to vaned grates.
- Bus stops could use trash cans and seating and shelters.
- There are a lot of wide planting strips, which is rare. Definitely an opportunity for true canopy trees along the corridor.
- Access management and driveway consolidation needed; Design manual is getting updated but already has some guidance on driveways off alleys.
- Intersection visibility improvements needed at all unsignalized locations.
- Look at streetlighting along the corridor; Ensure proper spacing between trees and lights. Consider dark skies lighting.
 - Trim/remove street trees to allow streetlighting to reach the ground.
- Trees along the corridor need limbed up (8' sidewalk side, 14' street side)
- Boulders are not a great landscape experience.
- Consider curb extensions to accommodate in-lane bus stops.
- There are a lot of lifted and cracked sidewalk panels along this whole corridor, due to tree roots.



Project team gathered at the beginning of the walk audit on S 8th St

NORTHERN EXTENT: SOUTH YAKIMA AVE FROM S 8TH ST TO S 14TH ST

At the intersection of South Yakima Ave and S 8th St

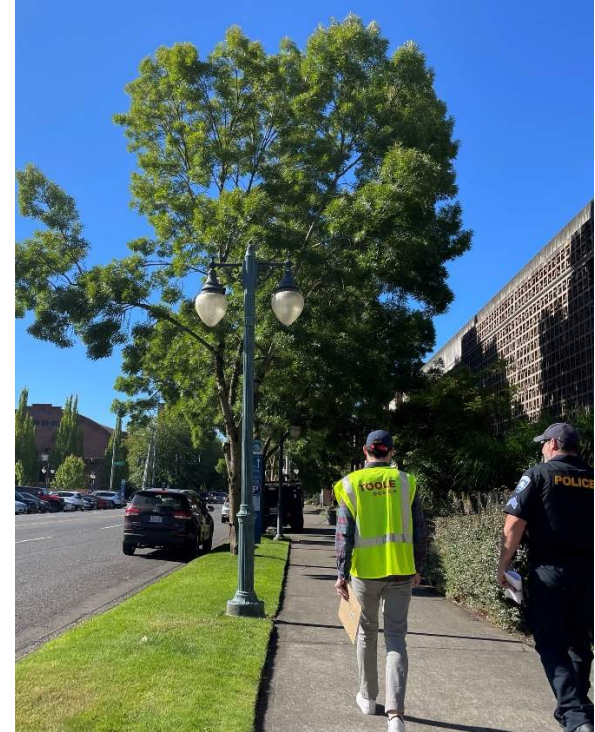
- Consider connections to 6th Ave bike lane.
- Ramps are compliant per inventory.
- Prevent parking close to intersection with curb extension.
- There are visibility issues north of intersection due to curve and posted speed at intersection.
- There is only one streetlight at the intersection.
- Consider/investigate possible pedestrian crossing enhancement. May need advanced warning.
- Envisioned bike boulevard but needs improved bike/pedestrian crossing.

Along South Yakima Ave between S 8th St and S 9th St

- For future buffered bike lane, will need to either remove lane of parking or forego center turn lane.
- Consider road diet with center turn lane or raised median (4->3 lanes).

At the intersection of South Yakima Ave and S 9th St

- To address all signal comments, signal system would need to be completely reconstructed. Signal comments:
 - No left-turn phasing.
 - No detection.
 - No pedestrian countdown heads.
 - No accessible pedestrian signals.
 - Fixed signal timing.
 - No conduits.
 - 12,8,8 signal heads.
- Southwest corner is ADA compliant, other corners are not complaint.
- Install streetlight with any signal upgrades.
- Consider curb extension into Yakima to provide better pedestrian visibility.



Pedestrian scale lighting between S 9th St and S 10th St

Along South Yakima Ave between S 9th St and S 10th St

- There's lots of pedestrian scale lighting; Pedestrian lights on the east side are paid for by Pierce County Jail project and pedestrian lights on west side were paid for by MLK business district.
- Consider additional juror wayfinding.
- Except for lighting near tree, the spacing (tree, sidewalk, light, etc.) is good here.
- Opportunity to rethink curb lane on east side (currently back-in parking) to a style of parking to better suit the street volume/speed such as parallel parking. Could put protected bike lane next to sidewalk and have parking on-street.
- Vista toward Rainier. Potential for a bit of placemaking. Lunch spot for jurors, etc.

At the intersection of South Yakima Ave and S 10th St

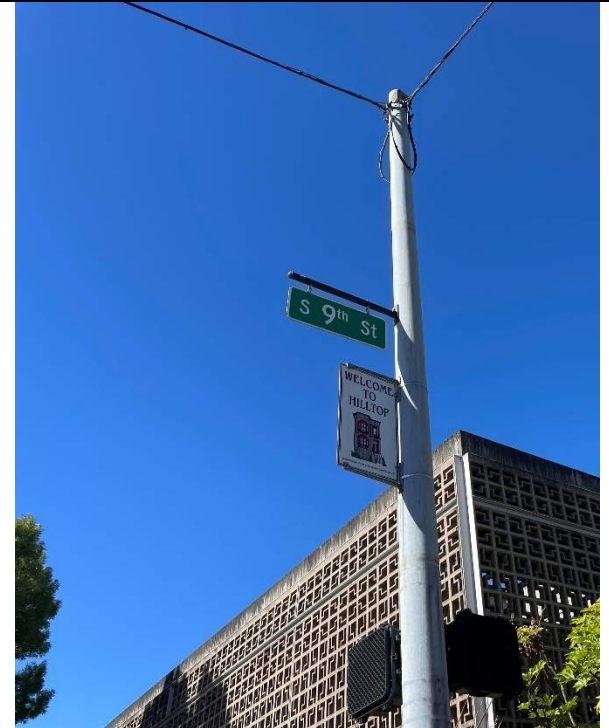
- Curb ramps need to be updated.
- Bus stop (on the north side heading southbound) has no landing pad, seat or shelter. Needs upgrades and evaluate moving to far side.
- Non-compliant existing curb ramps. Warning surfaces needed for driveway crossing dependent on ADT.
- Signal comments:
 - No accessible pedestrian signals.
 - No detection.
 - 12,8,8 signal heads.
 - Appears to have countdown ped heads, but some are not operational.
 - Fixed signal timing.

Along South Yakima Ave between S 10th St and S 11th St

- There is a privately owned parking lot on Southwest corner near S 11th St and there are no permits/pre-apps found for this parcel.

At the intersection of South Yakima Ave and S 11th St

- Opportunity to celebrate Armory/arts/ Bates with intersection/ street murals.
- Westbound bus had to make an awkward stop at an angle very close to intersection.
- Compliant ramp slopes per curb ramp inventory.



"Welcome to Hilltop" sign at S Yakima Ave and S 9th St

- Planned protected bike lanes on S 11th St.
- Extend curb extensions on south side to increase pedestrian visibility.
- Pleasant corner. There are some shops across the street here. Potential for activation/urban furniture/shops.
- To address all signal comments, signal system would need to be completely reconstructed. Signal comments:
 - No accessible pedestrian signals.
 - No detection.
 - 12,8,8 signal heads.
 - Appears to have countdown pedestrian heads, but some are not operational.
 - No conduits.
 - No left-turn phasing
 - Signal pole on the southwest corner is close to the building and building canopy is built around the pole.
- Provide curb extension with accessible bus pad.

Along South Yakima Ave between S 11th St and Earnest S Brazill St

- Preserve street parking for the small commercial cluster and add ADA parking stall per PROWAG requirements.
- Sidewalk is narrower here.
- Parking lot owned by Bates college on South corner near Earnest S Brazill St.
- The driveway here is likely not used for vehicles. Doorway labeled "Service." Could be for garbage. Should confirm with Bates purpose/use.

At the intersection of South Yakima Ave and Earnest S Brazill St

- Buses turning from Earnest to head south on Yakima can have issues when cars are parked too close to intersection on west side of Yakima.
- North side crossing was required as a part of the new building and replacement of the south was due to new sidewalk.
- Bates College did not update curb ramps on southwest side. ADA ramps not compliant on west side for N/S and the receiving ramp on the south.
- To address all signal comments, signal system would need to be completely reconstructed. Signal comments:



Beautiful Vista toward Mt. Rainier near Bates College.

- No accessible pedestrian signals.
- No detection.
- 12,8,8 signal heads.
- No countdown pedestrian heads.
- No conduits.
- Only 2 streetlights.
- Appears to be some ADA compliant ramps.

Along South Yakima Ave between Earnst S Brazill St and S 13th St

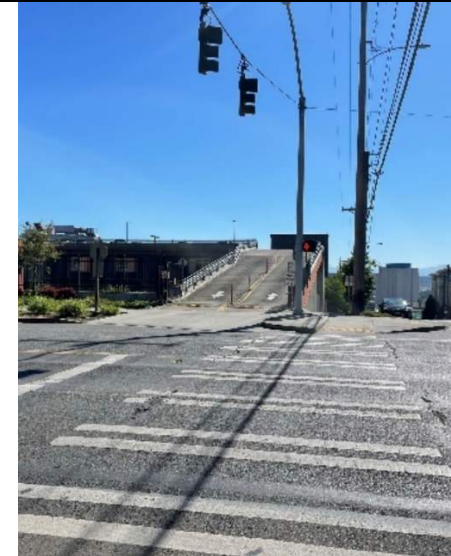
- Vista toward Rainier. Potential for a bit of placemaking.
- Driveway very close to intersection. Right out only.
- Narrower sidewalk here.

At the intersection of South Yakima Ave and S 13th St

- S 13th St sign missing on north side of intersection.
- Tire marks from donuts.
- No curb ramp inventory data for southwest and southeast corners. Address tripping hazard at southwest corner. Install bulbouts for pedestrian visibility.
- Very awkward curb, planter strip, sidewalk setup on SW corner of S 13th St.
- To address all signal comments, signal system would need to be completely reconstructed. Signal comments:
 - No accessible pedestrian signals.
 - No detection.
 - 12,8,8 signal heads.
 - Existing countdown pedestrian heads.
 - Appears to be some ADA compliant ramps.
 - Minimal conduits.

Along South Yakima Ave between S 13th St and S 14th St

- Bus stop 3278 (southwest corner of S 13th St) has lifted panels at the rear pads where they meet the sidewalk.
- Limb up tree for visibility.



Right-out only driveway very close to S 13th St intersection



Tire marks from donuts at S 13th St intersection

At the intersection of South Yakima Ave and S 14th St

- No ADA receiving ramp on northwest side.
- Northeast ramp is non-compliant, missing receiving ramp on northwest corner.
- Because of high pedestrian use, could use more trash cans, benches, etc.
- High pedestrian volume. Should restrict lefts out of driveway or make it right-in right-out only.
- Driveway functions like intersection due to vehicle volume; driveway could be right-in right-out.
- Prefers real signal and/or other improvements instead of rectangular rapid flashing beacons (RRFB). Drivers often ignore RRFBs and give false sense of safety.
- Based on Yakima traffic volumes, an RRFB is not appropriate. Consider HAWK or pedestrian signal (preferred recommendation).
- Use best practice and accompany RRFB with a pedestrian refuge.
- Unclear if ramps ADA compliant.
- Need enhanced pedestrian crossing here.
- Detectable warning surfaces for driveway crossing depending on ADT.
- Access management improvements needed here.

MIDDLE EXTENT: SOUTH YAKIMA AVE FROM SOUTH OF S 14TH ST TO S 19TH ST

Along South Yakima Ave between S 14th St and S 15th St

- No comments.

At the intersection of South Yakima Ave and S 15th St

- Potential bike crossing treatment crossing Yakima.
- No existing crosswalks.
- Existing bike lanes connect from S Cedar St (central Tacoma) to Thea Foss Waterfront.
- Very busy intersection compared to most. Traffic from I-705 uses S 15th St.
- S 15th St and S 16th St bicycle routes often used for east-to-west connection and access to downtown.
- Signal comments:
 - No accessible pedestrian signals.
 - No detection.
 - 12,8,8 signal heads.
 - Existing countdown pedestrian heads.
 - No left-turn phasing.
- Ramps not ADA compliant.
- Only 2 streetlights.
- Vista toward Rainier at southeast corner.

Along South Yakima Ave between S 15th St and S 16th St

- Great landscaping!
- One of the two bus stops with benches (the other is at Bates). Install more near high ridership use such as bus stops near the hospital.
- Remove driveway at bus stop (northbound).
- Bus stop 3281 (southwest corner of S 15th St) needs front and rear pads and shelter pad behind the sidewalk.
- On-street parking is dropped; Parking not utilized from S 15th St to S 19th St.
- Several city-owned properties slated for future development.



Bus stop at S 15th doesn't have front or rear pads.

- Consider parking on one side so widths work with curb to curb with lane widths: 11' thru lanes, and 8.5' parking.
- Very little visual friction in this area. High speeds are encouraged by sudden lack of parking.
- Where parking is dropped, add edge line on outside lane so lane isn't so wide.
- "Welcome to Hilltop" signing revise to be on cross streets. City would prefer to have those on own poles and not signal poles; Check with community groups if updated design/plan.
- Instead of large boulders, new landscape that looks good visually and also dissuades unintended uses.

At the intersection of South Yakima Ave and S 16th St

- Ramps not ADA compliant.
- Only 1 streetlight.
- Building foundations c. 2006 but no action since (parcel on Northwest corner).

Along South Yakima Ave between S 16th St and S 17th St

- Large change in grade on both sides of S Yakima Ave.
- Instead of large boulders, new landscape that looks good visually and also dissuades unintended uses.

At the intersection of South Yakima Ave and S 17th St

- Missing north and east side crosswalks.
- Truncated domes installed incorrectly on northwest ramp.
- Only 1 streetlight.
- Appears to be some ADA compliant ramps.
- All curb ramps would require replacement. Consider curb extension into S 17th St

Along South Yakima Ave between S 17th St and S 18th St

- Bus stop 3283 (southwest corner of S 17th St) needs min front and rear pads and perhaps pad for a bench/shelter, if ROW available.



Large uncontrolled and unmarked intersection
at S 16th St

- Large change in grade on both sides of S Yakima Ave.
- Need to assess pedestrian generators and destinations.
- Upgrade bus pads (northbound).
- Concrete interruptions to otherwise continuous (very large) planter strip.
- Big potential for canopy trees here.
- Compliant driveways needed.

At the intersection of South Yakima Ave and S 18th St

- There is a non-compliant mid-block crossing. It should be removed, and pedestrians directed to S 19th St or S 17th St.
- Only 1 streetlight.
- Ramps not ADA compliant and missing ramp on southwest corner.
- Add curb bulbs if possible.

Along South Yakima Ave between S 18th St and S 19th St

- Evaluate maintaining crossings or upgrading with crosswalks.
- Sidewalks near St Joseph Medical Center (hospital) are wider than the standard - more paving than needed for pedestrian volumes.
- If maintaining parking on one side, propose keeping it on east side due to parking garages on west side.
- Residential trash cans are put out here.
- Evaluate waste collection along corridor. Confirm alley vs street pick-up.

At the intersection of South Yakima Ave and S 19th St

- ADA mats were a vanguard “paint on application” and they are worn off. These mats could be replaced with Tufile screw down ADA mats and avoid the need to reconstruct all 4 corners as a cost saving measure. Alternatively replace the older style ramps with ADA compliant ramps per current standard.
- Bus stop 2587 on northeast corner of S 19th St could use some ADA upgrades and a shelter pad if there is ROW. Very high ridership.



Bus stop without front or rear pads at S 17th St

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

- Appears to be some ADA compliant ramps, but paint on truncated domes and non-directional. Compliant ramp slopes. Multi-directional ramps may not provide adequate clear area - potentially dangerous for pedestrians.
- Bus stop 2588 on southwest corner of S 19th St needs ADA improvement but I believe there is not enough ROW.
- Donuts in this intersection
- Signal comments:
 - Existing accessible pedestrian signals.
 - Existing 12,12,12 signal heads; Signal upgraded in 2020 by City project.
 - Existing Protected permissive left-turn signal.
 - Existing countdown pedestrian heads.
 - Existing video detection.
- North and southbound bus stops south of S 19th St to be improved by Greater Christ Temple Church Senior Housing (#s 3284 & 3285).
- S 19th St is connection to Interstate 5, so there may be higher volumes. S 21st St is main connection though. Vicki confirmed routing will be updated to S 21st St in the near future.
- Central route to University of Washington Tacoma (UWT) - ongoing UWT Master Plan Update – no bike connection proposed at this time.
- Tree limb on the SE corner tree is very low and should be removed. Visual hinderance.



People waiting for bus with no bus shelter or benches.

SOUTHERN EXTENT: SOUTH YAKIMA AVE FROM SOUTH OF S 19TH ST TO S 25TH ST

Along South Yakima Ave between S 19th St and S 21st St

- No sidewalk buffer on east side.
- Pre-app c. 2022 for large multi-family development. No permits.
- Pre-app c. 2023 for large affordable senior housing. No permits.
- Planned redevelopment to include 7' sidewalks.
- Close unused driveways and add new landscaping for better aesthetics and also prevents unintended uses.

At the intersection of South Yakima Ave and S 21st St

- Safe routes to schools needed; there are no bike planned facilities on S 21st St; missing sidewalks on cross street east of S Yakima Ave.
- More flexibility on S 21st St on west side of S Yakima Ave - maybe a shared use path on one side between S J St & S Yakima Ave?
- Gravel accumulation at NW corner pedestrian ramp.
- Erosion present on NW corner. Install pedestrian curb at back of walk to prevent accumulation of gravel.
- Appears to be some ADA compliant ramps.
- Only 1 streetlight.
- Very busy intersection. Local I-705 traffic to the west; Planned major driving route to I-705 to the east.
- Unconfirmed traffic study at this intersection.
- Upcoming construction will lead to a sidewalk being built on S 21st St.
- Previous request for signal control.

Along South Yakima Ave between S 21st St and S 23rd St.

- Needs street trees.
- Lack of buffer here on east side.
- When/if developed, only the sidewalk adjacent to the parcel will be improved. Sidewalk near intersections not improved.



Dirt and gravel covering sidewalk at northwest corner near S 21st St



Rowhouses between S 21st St and S 23rd St

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

- Sidewalk is caving on west side of S Yakima Ave, north of S 23rd St.
- Vista toward Rainier.
- Some expired permits but nothing recent midblock property east side.
- Edna Travis Elementary School and Park on west side of S I St.

At the intersection of South Yakima Ave and S 23rd St

- Increasing housing + no marked crossing for ~1/4 mile. Need for improved crossing here.
- Only 1 streetlight.
- Unclear if ramps ADA compliant.

Along South Yakima Ave between S 23rd St and S 25th St

- Recent pre-app for portion of vacant site for 12-unit multi-family oriented to Yakima Court (alley).
- Bus stop 3289 southwest corner of S 23rd St needs ADA improvements. Perhaps oversized pad to accommodate bench/shelter.
- Bus stop 3288 currently on SE corner at S 23rd St, consider moving to the north of S 23rd St.
- No landscape buffer on the east side.
- Comprehensive parking changes. Zoning code is not likely to change, but parking requirements might.
- Some really unfortunate ground level building facades.
- Large change in grade on both sides of S Yakima Ave.
- Narrow and minimal common entry at S Yakima Ave.
- Drain across sidewalk on west side.
- Parking garage entry even though they have alley access.
- Possible edge line location on west side as well. Perhaps not needed because of recent development, improvements, hydrant, and driveway.
- No parking sign is often stolen; lanes narrow from mid-block on east side to turn lane; parking issues reported by resident.
- Possible edge line location to clarify parking.



Sidewalk uneven and caving between S 21st St and S 23rd St



Large, unmarked intersection at S 23rd St

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

- Bus stop 3290 (northeast corner of S 25th St) needs ADA upgrades/bench pad behind the sidewalk.
- Appears that Vue25 has ground floor commercial space that is vacant. Can city economic development programs to help fill?

At the intersection of South Yakima Ave and S 25th St

- Funded cycling connection on S 25th St.
- Signal comments:
 - No existing protected / permissive LT signal phasing.
 - Existing accessible pedestrian signals.
 - Existing 12,12,12 signal heads.
 - Existing countdown pedestrian heads.
 - NW corner is non-compliant. Existing accessible pedestrian signals looks difficult to access. Ramp does not have landing space.
 - Existing video detection but will be upgraded with newer system shortly by a project.

OTHER PROJECTS

The following projects and project descriptions are listed in the City of Tacoma's Capital Projects Tacoma GIS file.²

S YAKIMA AVE (S 12TH ST - S I ST) OVERLAY (TIP ONLY)

Work will include a grind and overlay, pedestrian improvements at 3 intersections, and utility work and signal improvements as needed. Curb ramp upgrades will also be included as needed according to the ADA.

SOUTH 11TH ST AND EARNEST S BRAZILL ST PROTECTED BIKE LANE COUPLET / PAVING PROJECT (TIP & CFP)

Fill a critical missing link in Tacoma's bikeway network along S 11th St and Earnest S Brazill St. The construction of planned bicycle facilities would require narrowing vehicle lanes along South 11th Street and Earnest S Brazill. On South 11th Street from Tacoma Avenue South to South Sprague Avenue, there will be a full grind and overlay. This project also includes intersection upgrades with improvements including bicycle detection, accessible pedestrian signals, and accessible curb ramps.

J STREET BICYCLE BOULEVARD (TIP & CFP)

This project will construct a two-mile bicycle boulevard on South J Street from North 3rd Street to South 27th Street, along with improved east/west bicycle connections via 6th Avenue, South 11th Street, Earnest S Brazill Street, South 17th Street, and South 18th Street. The five east/west connections, ranging from one to three blocks in length, will provide access to Link Light Rail stops and key neighborhood destinations including the Hilltop Business District and People's Community Center.

LINKS TO OPPORTUNITY (TIP & CFP)

The project will enhance the corridor along Sound Transit's Hilltop Tacoma LINK extension route to increase accessibility and safety for residents and businesses. The scope of the improvements includes varying sidewalk color and designs, pedestrian lighting, street furniture, wayfinding signage, bicycle facilities, local art, granite inscriptions and poetry, street trees, and landscaping. The project serves one of Tacoma's oldest historically Black neighborhoods and business districts, and the design was informed by nearly two years of grassroots outreach to the Hilltop community. Downtown: On the Go!, Hilltop Action Coalition, and Tacoma Housing Authority all assisted in the outreach effort. The final design is informed and defined by the community that it will serve and will honor the history of the corridor.

² https://data.cityoftacoma.org/datasets/ae4dfd060eff49e7b85789ae02441703_0/explore

S 25TH ST TRAFFIC SAFETY ENHANCEMENTS (TIP & CFP)

This project is approximately 1.3 miles in length and is located on S 25th Street between the Scott Pierson Trail and Prairie Line Trail. The project includes installing bicycle facilities such as bike lanes, shared lane markings, parking protected bike lanes, bicycle wayfinding signage, green bike lane pavement markings, bike box, bike detection, and a shared use path. It also includes installing marked crosswalks and curb ramps and implementing leading pedestrian intervals as needed at locations along S 25th Street approximately between the Scott Pierson Trail and Hood Street. Project includes associated ADA and utility work as needed.

Sound Transit has various projects planned in Tacoma. The TCC T Line Extension connects the new St Joseph stop on the T Line to Tacoma Community College.

TCC T LINE EXTENSION

The T Line will extend from its 2023 terminus in the Hilltop neighborhood to add six new stations including Tacoma Community College. With the TCC extension, the T Line will grow to 8.4 miles with 18 stations, all connected to regional light rail at Tacoma Dome Station (opening 2039).³

³ <https://www.soundtransit.org/system-expansion/tcc-tacoma-link-extension>

RECOMMENDED SAFETY TREATMENTS

As part of Tacoma’s Vision Zero Action Plan, a list of roadway safety countermeasures was created, with the intent that Tacoma could quickly deploy those countermeasures to advance safety. The list of countermeasures was reviewed by Tacoma staff from various departments to ensure feasibility. This list of countermeasures resulted in the Safety Countermeasure Guide (the “Guide”), which provides instruction on how to use the Safety Countermeasure Toolkit (the “Toolkit”), both developed specifically for the City of Tacoma. The safety countermeasures featured in the Guide are not an extensive list of every available option to improve roadway safety, but rather a tailored list of proven countermeasures that have a demonstrated history of improving safety around context and crash causes that may be most effective in Tacoma. Refer to the full Guide and Toolkit for more comprehensive information, including safety benefits and considerations. While developing the following recommended safety treatments for RSA 2, the consultant team referred to both the Guide and the Toolkit, with the intent of streamlining the implementation of safety improvements along the corridor. Not all recommended safety treatments are in the Guide and Toolkit, but many of them are.

KEYS/LEGENDS

Estimated Implementation Cost Key	
\$	<= \$75,000
\$\$	\$75,000-\$150,000
\$\$\$	\$150,000-\$300,000
\$\$\$\$	>= \$300,000

Abbreviations	
ADA	America with Disabilities Act
APS	Accessible Pedestrian Signals
CMF	Crash Modification Factor
LPI	Leading Pedestrian Intervals
RRFB	Rectangular Rapid Flashing Beacon

Timeframe Key	
Near-term (Near)	<= 2 years
Intermediate (Int.)	2-5 years
Long-term (Long)	>= 5 years

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT



CORRIDOR-WIDE: SOUTH YAKIMA AVE FROM S 8TH ST TO S 25TH ST

LOCATION CODE	POTENTIAL IMPROVEMENTS FOR CONSIDERATION	TIMEFRAME			COST	CMF*	LEAD
		NEAR	INT.	LONG			
South Yakima Street between S 8 th St and S 25 th St	Update all existing signals to use 12" signal heads with reflective backplates. Evaluate whether the signal span needs to be replaced as part of this upgrade.	✓			\$\$- \$\$\$\$	0.85	CoT
	Evaluate all street lighting	✓			\$\$	-	CoT
	Evaluate 4 to 3 lane reconfiguration		✓		\$\$\$	0.53	CoT
	Install pedestrian scale lighting			✓	\$\$\$\$	-	CoT
	Limb up all trees within the ROW to 8' on sidewalk side and 14' on street side	✓			\$	-	CoT
	Resurface roadway and refresh/replace thermoplastic pavement markings after evaluating 4 to 3 lane reconfiguration		✓		\$	0.887	CoT
	Install edgeline between outside travel lane and parking lane, or where parking is dropped, between the outside travel lane and shoulder	✓			\$	-	CoT

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

	Widen sidewalks to 7' per COT standards for arterial roads, unless otherwise specified			✓	\$\$\$\$	-	CoT
	Upgrade existing storm inlet grates with parallel openings to new standard inlet grates or replace the whole structure		✓		\$- \$\$\$	-	CoT

*Crash Modification Factor from CMF Clearinghouse. CMF is approximate for the general countermeasure. A specific CMF should be determined for each unique scenario. For selection of specific CMFs for specific locations in Tacoma, explore the CMF clearing house and apply all relevant factors. All CMFs reported are taken from Tacoma's Countermeasure Toolkit or FHWA's list of Proven Safety Countermeasures and should be used as a general reference.

NORTHERN EXTENT: S YAKIMA AVE FROM S 8TH ST TO S 14TH ST

LOCATION CODE		POTENTIAL IMPROVEMENTS FOR CONSIDERATION	TIMEFRAME			COST	CMF*	LEAD
			NEAR	INT.	LONG			
Intersection: S 8th St	N1	Evaluate all-way stop warrants to replace two-way stop with all-way stop when bicycle facility on S 8 th St is constructed. Install advance warning signs north of this intersection where the road curves and sightlines are limited.	✓			\$	0.319	CoT
		Evaluate appropriate crossing device per the City Design Manual, if a 4 to 3 lane reconfiguration is installed corridorwide and if the all-way stop is not installed		✓		\$\$- \$\$\$\$	0.64 (RRFB)	CoT
		Install a pedestrian/bicyclist signal at this intersection if the 4 to 3 lane reconfiguration is not installed and if the all-way stop is not installed			✓	\$\$\$\$	0.432	CoT
		Evaluate raised median at existing crosswalks			✓	\$\$\$\$	0.54- 0.86	CoT
Segment: S 8th St - S 9th St	N2	None	-	-	-	-	-	-

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

Intersection: S 9th St	N3	Install ADA compliant curb ramps on all corners, except SW corner which is already ADA compliant. Install curb bulb-outs with planters or other vertical elements that work with the existing and planned bicycle infrastructure.		✓		\$\$	-	CoT
		Update all existing signals to APS with pedestrian countdown signal heads. Program existing signals to include a leading pedestrian interval (LPI), after APS and ADA compliant curb ramps are in place.			✓	\$\$\$\$	0.81 (LPI)	CoT
Segment: S 9th St - S 10th St	N4	Revise angle parking to parallel parking on east side of roadway		✓		\$	-	CoT
Intersection: S 10th St	N5	Install ADA compliant curb ramps on west side, and install ADA compliant warning surfaces at the driveway on the east side (dependent on ADT). Update all existing signals to APS (with new controller) with pedestrian countdown signal heads. Program existing signals to include a leading pedestrian interval (LPI), after APS and ADA compliant curb ramps are in place. Install standard 12" signal heads with retroreflective backplates.		✓		\$\$\$\$	0.81 (LPI)	CoT
Segment: S 10th St - S 11th St	N6	None	-	-	-	-	-	-
Intersection: S 11th St	N7	Provide accessible bus pad for westbound bus stop on S 11 th St		✓		\$\$	-	Pierce Transit/CoT
		Update all existing signals to APS with pedestrian countdown signal heads. Program existing signals to include a leading pedestrian interval (LPI), after APS and ADA compliant curb ramps are in place.		✓		\$\$\$- \$\$\$\$	0.81 (LPI)	CoT
		As a near term solution, lengthen no parking zone near westbound bus stop	✓			\$	-	Pierce Transit/CoT

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

Segment: S 11th St - Earnest S Brazill St	N8	None	-	-	-	-	-	-
Intersection: Earnest S Brazill St	N9	Install ADA compliant curb ramp on SW corner of intersection and south ramp on the NW corner of intersection. Update all existing signals to APS with pedestrian countdown signal heads. Program existing signals to include a leading pedestrian interval (LPI), after APS and ADA compliant curb ramps are in place.			✓	\$\$\$\$	0.81 (LPI)	CoT
		Lengthen no parking zone on SW side of intersection for bus turning movements from Earnest S Brazill St onto S Yakima Ave	✓			\$	-	CoT
Segment: Earnest S Brazill St - S 13th St	N10	None	-	-	-	-	-	-
Intersection: S 13th St	N11	Verify whether curb ramps on SW and SE corners are ADA compliant. If ramps are not compliant, install ADA compliant curb ramps. Update all existing signals to APS with pedestrian countdown signal heads. Program existing signals to include a leading pedestrian interval (LPI), after APS and ADA compliant curb ramps are in place.			✓	\$\$\$\$	0.81 (LPI)	CoT
		Provide curb bulb-outs on the SW and SE corners, with accessible bus pad for southbound bus stop (3278)		✓		\$\$\$\$	-	Pierce Transit/CoT
		Install S 13th St street sign on the north side of intersection	✓			\$	-	CoT
		Relocate Hilltop neighborhood sign to cross streets, on a standalone pole (not traffic or streetlight pole)	✓			\$	-	CoT/comm unity partners

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

Segment: S 13th St - S 14th St	N12	None	-	-	-	-	-	-
Intersection: S 14th St	N13	Install trash cans, benches, and other pedestrian amenities due to high pedestrian generating land uses at this intersection (food bank, family center, foster care center, housing, and clinic)	✓			\$-\$	-	CoT
		Evaluate appropriate crossing device per City Design Manual		✓		\$-\$ \$\$\$	0.64 (RRFB) 0.432 (ped signal)	CoT
		Install ADA compliant curb ramps on the north side of the intersection. Install detectable warning surfaces for driveway on east side of intersection (dependent on ADT).		✓		\$\$\$	-	CoT
		Revise access to driveway to right-in-right-out. Consider installing a median or slope-mountable curb along centerline of roadway to eliminate left turns.	✓			\$- \$\$\$\$	-	CoT

*Crash Modification Factor from CMF Clearinghouse. CMF is approximate for the general countermeasure. A specific CMF should be determined for each unique scenario. For selection of specific CMFs for specific locations in Tacoma, explore the CMF clearing house and apply all relevant factors. All CMFs reported are taken from Tacoma's Countermeasure Toolkit or FHWA's list of Proven Safety Countermeasures and should be used as a general reference.

MIDDLE EXTENT: S YAKIMA AVE FROM SOUTH OF S 14TH ST TO S 19TH ST

LOCATION CODE	POTENTIAL IMPROVEMENTS FOR CONSIDERATION	TIMEFRAME			COST	CMF*	LEAD
		NEAR	INT.	LONG			
Segment: S 14th St - S 15th St	M1 None	-	-	-	-	-	-

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

Intersection: S 15th St	M2	Install high visibility bar pair crosswalk markings with ADA compliant curb ramps on all legs of intersection. Update all existing signals to APS with pedestrian countdown signal heads. Program existing signals to include a leading pedestrian interval (LPI), after APS and ADA compliant curb ramps are in place. Install standard 12" signal heads with retroreflective backplates.		✓		\$\$\$\$	0.6 (xwalk), 0.81 (LPI)	CoT
		Provide curb bulb-outs on all legs, with bus pads, seating, shelter, and shelter pads for both southbound (3281) and northbound (3280) bus stops. Evaluate moving the northbound bus stop to far-side. Curb bulb-outs should be designed to work with the existing bicycle infrastructure along S 15 th St.		✓		\$\$\$\$	-	Pierce Transit/CoT
		Relocate Hilltop neighborhood sign to cross streets, on a standalone pole (not traffic or streetlight pole)	✓			\$	-	CoT/community partners
Segment: S 15th St - S 16th St	M3	Evaluate parallel parking on east side of road in conjunction with corridorwide lane reconfiguration		✓		\$\$\$	-	CoT
Intersection: S 16th St	M4	Install ADA compliant curb ramps on all corners		✓		\$\$\$	-	CoT
Segment: S 16th St - S 17th St	M5	None	-	-	-	-	-	-
Intersection: S 17th St	M6	Install high visibility bar pair crosswalk markings on north and east legs of intersection	✓			\$	0.6	CoT

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

		Evaluate appropriate crossing device per City Design Manual		✓		\$\$- \$\$\$\$	0.64 (RRFB) 0.432 (ped signal)	CoT
		Install ADA compliant curb ramps on all corners		✓		\$\$\$	-	CoT
		Provide curb bulb-outs on all corners, with accessible bus pad for southbound (3283) and northbound (3282) bus stops. Evaluate moving the northbound bus stop to far-side.			✓	\$\$\$\$	-	Pierce Transit/CoT
Segment: S 17th St - S 18th St	M7	Plant additional street trees in landscape strip on east and west side		✓		\$\$\$	-	CoT/property owners
Intersection: S 18th St	M8	Install ADA compliant curb ramps on NE, NW, and SE corners. Replace non-ADA compliant receiving ramp on NW side of intersection. Install ADA compliant receiving ramp on SW corner.		✓		\$\$\$	-	CoT
		Install high visibility bar pair crosswalk markings on east leg of intersection	✓			\$	0.6	CoT
Segment: S 18th St - S 19th St	M9	Evaluate parallel parking on east side of road in conjunction with corridorwide lane reconfiguration	✓			\$	-	CoT
Intersection: S 19th St	M10	Upgrade eastbound bus stop (2588) on SW corner with ADA compliant bus pads. Evaluate moving the eastbound bus stop to far-side.		✓		\$\$\$\$	-	Pierce Transit/CoT
		Evaluate moving the northbound bus stop to far-side.		✓		\$	-	Pierce Transit/CoT
		Upgrade westbound bus stop (2587) on NE corner with ADA compliant bus pads, shelter, and shelter pad. Evaluate moving the westbound bus stop to far-side.		✓		\$\$\$	-	Pierce Transit/CoT

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

		Replace "paint-on" application ADA mats with "Tuftile screw down" ADA mats on all corners. Otherwise, curb ramps are ADA compliant. Program existing signals to include a leading pedestrian interval (LPI), after ADA compliant curb ramps are in place.		✓		\$	0.81 (LPI)	CoT
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SOUTHERN EXTENT: S YAKIMA AVE FROM SOUTH OF S 19TH ST TO S 25TH ST

LOCATION CODE		POTENTIAL IMPROVEMENTS FOR CONSIDERATION	TIMEFRAME			COST	CMF*	LEAD
			NEAR	INT.	LONG			
Segment: S 19th St - S 21st St	S1	Evaluate parallel parking on east side of road in conjunction with corridorwide lane reconfiguration		✓		\$\$\$	-	CoT
Intersection: S 21st St	S2	Install erosion control features at back of walk on NW corner (i.e., raised curb) and clear sidewalk of dirt/gravel build up	✓			\$\$	-	CoT
		Evaluate appropriate crossing device per City Design Manual, in coordination with the I-705 route upgrade		✓		\$-\$-\$-\$-\$	0.64 (RRFB) 0.432 (ped signal)	CoT
Segment: S 21st St - S 23rd St	S3	Plant street trees in landscape strip on west side		✓		\$\$\$	-	CoT
		Repair sidewalk base destabilized at water services west side of road approx. 50 feet north of S 23 rd St		✓		\$-\$-\$-\$-\$	-	CoT/utilities
	S4	Install ADA compliant curb ramps on all corners		✓		\$\$\$	-	CoT

RSA TECHNICAL MEMO #2: SOUTH YAKIMA AVE | DRAFT

Intersection: S 23rd St		Evaluate appropriate crossing device per City Design Manual		✓		\$\$- \$\$\$\$	0.64 (RRFB) 0.432 (ped signal)	CoT
		Upgrade southbound bus stop (3289) to provide ADA accessible bus pads, shelter, and shelter pad		✓		\$\$\$\$	-	Pierce Transit/CoT
		Move northbound bus stop (3288) from near-side to far-side		✓		\$\$\$	-	Pierce Transit/CoT
Segment: S 23rd St - S 25th St	S5	Evaluate parallel parking on east side of road in conjunction with corridorwide lane reconfiguration		✓		\$\$\$	-	CoT
		Install more "no parking" signs and/or red curb paint on east side for approx. 300 feet from intersection with S 25 th St	✓			\$	-	CoT
Intersection: S 25th St	S6	Upgrade northbound bus stop (3290) to provide ADA accessible bus pads, shelter, and shelter pad		✓		\$\$\$\$	-	Pierce Transit/CoT
		Install curb bulb-outs that work with the planned/designed bicycle infrastructure on S 25 th St			✓	\$\$\$\$	-	CoT
		Evaluate and program protected or protected/permissive left turns		✓		\$	0.58- 0.85	CoT
		Install ADA compliant curb ramps on the NW corner. Evaluate accessibility of APS push buttons on all corners. Update APS (with new controller). Program existing signals to include a leading pedestrian interval (LPI), after APS and ADA compliant curb ramps are in place.		✓		\$\$\$\$	0.81 (LPI)	CoT

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NEXT STEPS

Tacoma should move forward on those short-term safety treatments deemed feasible and highest priority and track the effectiveness of those treatments. For short-term, intermediate, and long-term safety countermeasures, City staff are prioritizing all projects and evaluating the feasibility of those projects, and for those with promise begin identifying funding sources. This could include the development of grant applications to seek State and Federal funding.

The RSA findings should be revisited regularly, and Tacoma may consider conducting a follow-up RSA every 5 years, or on a schedule determined by the City during development of a citywide RSA program.

APPENDIX A: MIRO BOARD

VISION ZERO TACOMA

RSA 2: South Yakima Ave

The purpose of this study is to conduct a road safety audit (RSA) for a study area that includes one corridor segment and its intersections: South Yakima Ave between S 8th St and S 25th St.

AGENDA:

8:30-8:45: Join & Attendance
8:45-9:00: Overview & Practice
9:00-9:10: Countermeasure Toolkit
9:10-10:00: Northern Extent
10:00-10:10: Coffee Break
10:10-11:00: Middle Extent
11:00-11:10: Coffee Break
11:10-12:00: Southern Extent
12:00-12:30: Reserve

Welcome! COME HERE TO PRACTICE !

A Logistics & Tips

As with all tools, there's a learning curve! Be patient with yourself, others, and technology. Here are some helpful tips to get us started on the right foot.

Tech: A chrome browser is key. Sometimes you need to refresh the page.

The Basics: See list on the left. Most importantly: move and zoom!

Issues?: Please use meeting chat or raise your hand for assistance

Cursors Off: Other users' cursors will be hidden to reduce confusion

B Your Avatar

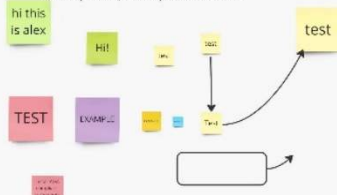
Every Miro user invited to this board is represented with an avatar at the top of the screen. Your avatar is highlighted.

C Follow Your Facilitator

- Facilitator will note where on the screen we are focused on
- Facilitator may occasionally use the feature "bring everyone to me" which will bring everyone's screen to the same location

D Practice

CLICK, TYPE, COPY, DUPLICATE!



Safe System Approach

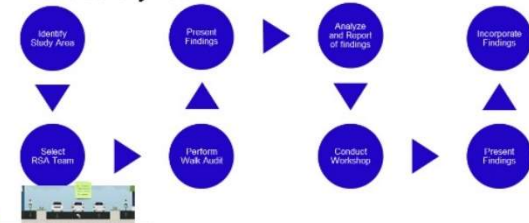
The Tacoma Vision Zero Road Safety Audit is framed around the Safe System Approach. The Federal Highway Administration (FHWA) provides guidance on the Safe System Approach, which recognizes that road safety is a shared responsibility between those that design, build, operate, and use the road system. It recognizes that to reduce risks to humans all parts of the transportation system must be strengthened, so that if one part fails, the other parts still protect people.

Safe System Principles are illustrated in the outer ring of the graphic with the Safe System elements found on the inner ring: Safer People, Safer Vehicles, Safer Speeds, Safer Roads, and Post-Crash Care.

The Safe System Approach aims to eliminate fatal and serious injury crashes using a proactive approach that anticipates human mistakes- and reduces the severity of crashes that do happen, so the impact is less likely to be fatal or cause serious injury. The strategies and practices included in this memo are framed around safer people, safer vehicles, safer roads, safer speeds, and post-crash care.



Road Safety Audit



COUNTERMEASURE TOOLKIT



Other Safety Ideas



VISION BOARD

North Extent: S 8th St to S 14th St



MIDDLE EXTENT: South of S 14th St to S 19th St



SOUTH EXTENT: South of S 19th St to S 25th St



REFERENCES Segment Details



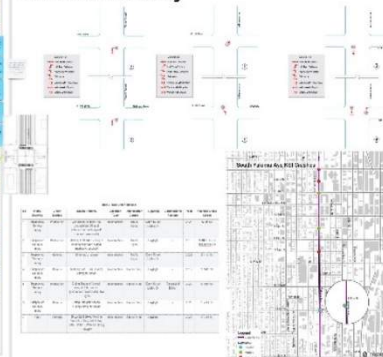
Neighborhood Profile



Other Projects

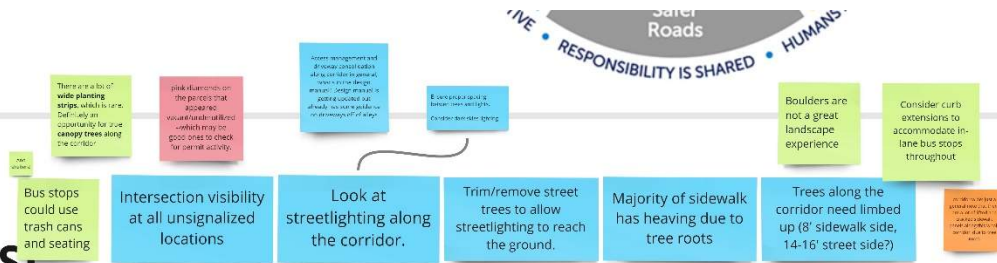
Other projects in the area include...

Collision History



VISION BOARD

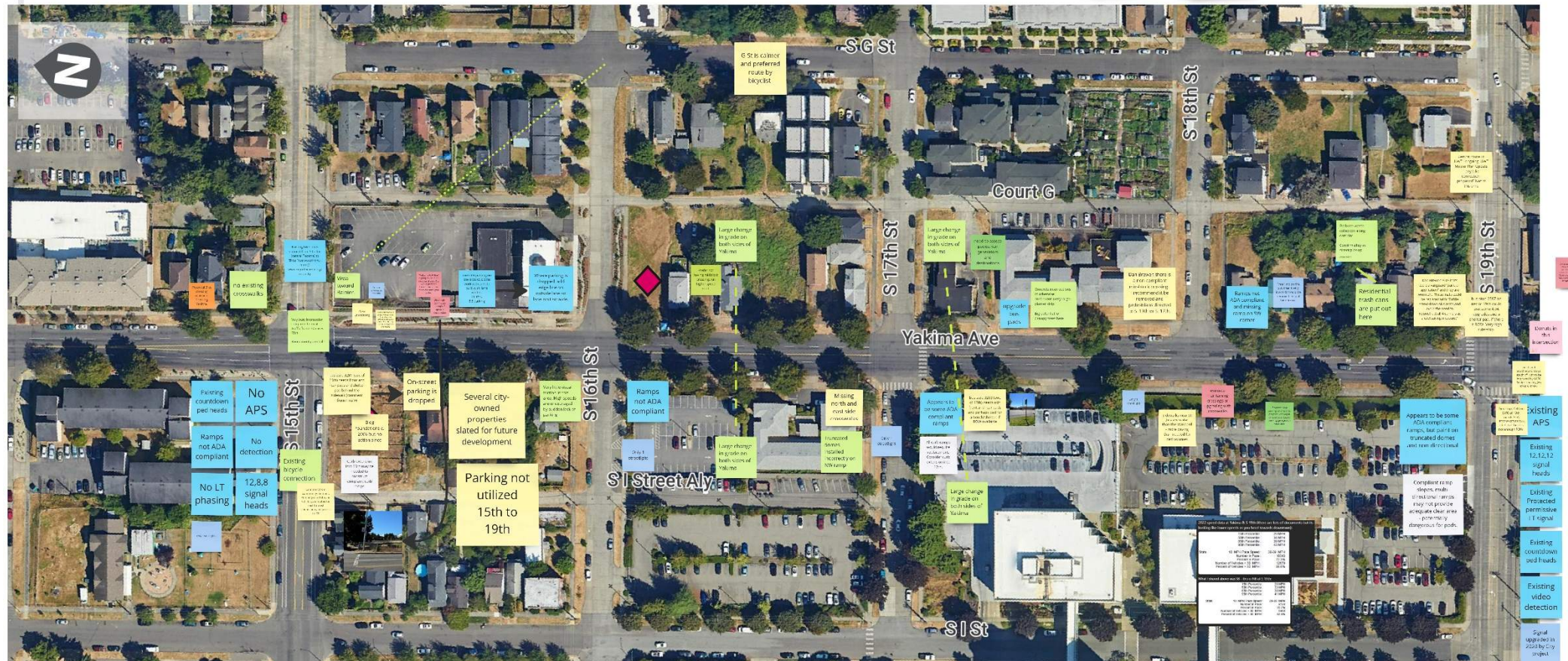
North Extent: S 8th St to S 14th St



MIDDLE EXTENT: South of S 14th St to S 19th St

Changing "Welcome to Hilltop" signage from North-South facing poles to East-West facing poles.
Ideally on its own pole

Yakima currently not preferred by emergency responders or bicycle rider compared to adjacent streets



SOUTH EXTENT: South of S 19th St to S 25th St

