# University of Washington

# Stadium Expansion Parking Plan and Transportation Management Report



# 2022 Report

January 2023

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# **Executive Summary**

The UW Husky Stadium Expansion Parking Plan and Transportation Management Program (TMP) was first adopted in 1986 to help UW meet and exceed its primary goal of accommodating peak football crowds while also minimizing parking impacts in nearby residential neighborhoods. Each year, UW evaluates the TMP to determine how effectively it meets these goals. The annual evaluation process entails conducting a Husky Gameday Survey and collecting data from several government agency partners (Seattle Police Department, KC Metro, Sound Transit, and departments within UW).

The 2022 Gameday Survey was managed by UW Transportation Services (UW TS) in collaboration with UW Intercollegiate Athletics (ICA). Data was recorded through a brief inperson survey ("intercept survey") of patrons attending the Husky football games on <u>September</u> <u>24, 2022 vs Stanford, and November 4, 2022 vs Oregon State</u>. The survey was conducted by a team of approximately 15 survey administrators who were stationed at Husky Stadium gates and who briefly engaged the patrons as they entered the stadium.

As in previous years, interviewers administered the survey by targeting a sample size based on anticipated game attendance and incorporating a reasonable statistical confidence interval<sup>1</sup>.

Paid game attendance on September 24 was 65,438, and actual game attendance was  $46,187^2$ . The survey effort resulted in 648 completed survey responses providing a margin of error of +/-2.9%.

Paid game attendance on November 4 was 62,142, and actual game attendance was 36,080. This survey effort resulted in 547 completed surveys providing a margin of error of +/-3.3%

The total number of completed surveys was 1,195 and total actual attendance was 82,267 providing an overall margin of error of  $\pm 22\%$ .

The observed difference in gameday transportation mode split between driving and non-driving options outlined in the TMP implementation exceeds the mode split goal set forth in the 1986 *Stadium Expansion Parking Plan and Transportation Management Program* (Table 1).

<sup>&</sup>lt;sup>1</sup> "Confidence interval" indicates a range of values that is likely to encompass the true value. In other words, the CI around the sample statistic is calculated in such a way that it has a specified chance of surrounding (or "containing") the value of the corresponding population parameter.

<sup>&</sup>lt;sup>2</sup> In 2010 Intercollegiate Athletics began monitoring *actual* game attendance in addition to *paid* game attendance (based on sales). The latter now serves as the baseline for future TMP monitoring, so only actual game attendance numbers are reported in the 2022 Report.

Mode	Mode Split Goal – 1986	Mode Split Achieved – 2021	Performance*
Personal Vehicle (including ride hail)	71.0%	36.7%	Exceeded Goal
Transit	16%	45.1%	Exceeded Goal
Walk	8.1%	14.4%	Met Goal
Boat	3.9%	0.2%	Met Goal
Personal Bike	-	2.2%	-
Other	-	1.5%	-

\* Accounting for 2.9% margin of error.

#### Table 1 Gameday Commute Mode Split, 1986 vs 2022

Key findings from the 2022 evaluation are as follows:

- 1. <u>Overall automobile usage (36.7%) decreased 12 percentage points compared to last year</u> (48.9% in 2021). Automobile utilization includes carpool, RV's, single occupancy vehicles (SOV), and transportation networking companies (TNC).
  - Carpools (29%) decreased by 10 percentage points from 2021 (39.6%).
  - SOVs (2.8%) remained similar to 2021 (2.6%).
  - TNC use (4.9%) increased by nearly 2 percentage points from 2021 (6.7%).
- 2. <u>Overall Transit (45.1%) increased significantly from 2021 (37%)</u>. This category includes both bus and light rail.
  - Metro/charter bus (9%) remained similar to 2021 (9.7%).
  - Link Light Rail (36.2%) increased nearly 9 percentage points compared to 2021 (27.8%).
- 3. <u>Walking (14.4%) increased nearly 4 percentage points compared to 2021 (10.5%)</u>.
- 4. <u>Boating (0.2%) was lower than 2021 (1.1%) and 2019 (5.5%)</u>. This category includes personal boat, ferries, and other kinds of boat commutes.
- 5. <u>Bicycling (2.4%) increased 1 percentage point from 2021 (1.6%) and 2019 (1.2%)</u>. This category includes personal bicycles and bike shares.
- 6. <u>The number of RPZ parking citations issued per game decreased from 90 in 2021 to 72 in</u> 2022.
- 7. <u>Average automobile occupancy (2.8 occupants/vehicle) was similar to 2021 (3.13 occupants/vehicle) and 2019 (3.03 occupants/vehicle)</u>.

# Background

In 1987, Husky Stadium was expanded from a capacity of 58,000 to accommodate 72,200 spectators. The Transportation Management Program (TMP) was first implemented in 1987 to mitigate the additional impacts of traffic on the surrounding community. During football games, high volumes of people travel to and from Husky Stadium over short periods of time. The TMP serves to monitor and reduce the number and impact of automobiles in the area before and after football games, and to reduce parking impacts on surrounding neighborhoods. The University of Washington (UW) is responsible for encouraging patrons to either carpool or use non-automobile transportation options, such as walking, mass transit, or bicycling. The City of Seattle is responsible for traffic management and parking enforcement in residential parking zones. As Husky Stadium is near navigable water, boating is also an important component of gameday transportation.

Seattle City Council Resolution 27435 requires UW and the city to collect data during each football season, which is then used to monitor the performance of the TMP. Data collected in 1986 serves as a baseline for comparing impacts after the stadium expansion in 1987. This document summarizes the data collected for the 2022 season and compares it to past seasons.

In 2012, the stadium was renovated to accommodate 70,138 spectators. The renovations included changing sight lines for existing seating, revamping the south side stands and adding a parking garage to the south side of the stadium. Husky Stadium reopened for the start of the 2013 football season.

The number of transportation options to UW football games has evolved since the implementation of the TMP. In 2016, Sound Transit began operating Link light rail service to Husky Stadium, which provides reliable and frequent mass transit. The year 2016 also saw the widespread availability of Transportation Networking Companies (TNC) like Lyft and Uber as an option for commuting to the game. In 2018, UW began partnering with bike share companies to provide rentable dockless bikes for use on campus (and football games), and by 2019 the majority of bike shares included electric-assist bicycles. Finally, 2021 saw the opening of three Link light rail stations north of the stadium (Northgate, Roosevelt, and University District).

# Introduction

The UW hosted seven football games at Husky Stadium during the 2022 season (Table 2). All games except the game held on Friday, November 4, 2022 were held on a Saturday afternoon/evening.

Date	Opponent	Actual Game Attendance	Sales Attendance		
September 3, 2022	Kent State	33,095	56,112		
September 10, 2022	Portland State	31,964	57,518		
September 17, 2022	Michigan State	50,060	68,161		
*September 24, 2022	Stanford	46,187	65,438		
October 15, 2022 Arizona		36,144	63,189		
*November 4, 2022	Oregon State	36,080	62,142		
November 19, 2022	Colorado	43,358	67,969		
AVERAG	GE	39,555	62,933		

\*Date of Intercept Survey

# Table 2 UW Husky Home Football Games and Attendance, 2022 Season

During the 2022 season, the TMP was implemented to provide transportation options to football fans. The plan discourages single occupant vehicle (SOV) trips to the stadium and encourages non-SOV modes, including carpooling, transit, charter buses and boating, as well as active transportation modes (walking and bicycling). In addition, the plan monitors parking impacts to the university and surrounding neighborhoods.

The purpose of this report is to evaluate the effectiveness of the TMP during the 2022 season using the following indicators:

- Transportation mode choice utilization
- Average automobile occupancy
- Parking location choice
- Neighborhood parking impacts

# **Transportation Management Plan Elements**

# Automobiles (Cars / RVs)

Automobiles are the least desirable gameday transportation mode due to their effect on traffic congestion and their parking space requirements on a per-commuter basis. Management is focused on increasing automobile occupancy rates and mitigating the effects of gameday parking.

# Carpool Incentives

Carpool parking rates are designed to promote carpooling and discourage single occupancy vehicle commuting.

Parking Group	Rate
Carpool Vehicles (3+ passengers)	\$30
Non-carpool vehicles (Fewer than 3 Passengers)	\$40
RV's / Motor Homes	\$120
Trailers	\$30
Charter Buses	\$100

# The 2022 parking rates were unchanged from the previous year (Table 3).

#### Table 3 UW Campus Gameday Parking Rates, 2020-2021

(source: https://transportation.uw.edu/park/events)

# Restricted Parking Zones

In some surrounding neighborhoods, Special Event Restricted Parking Zones (RPZ) limit gameday parking to neighborhood residents. Seattle's parking enforcement officers patrol these zones and issue citations to non-residents who parked in the restricted zones.

# Transportation Networking Companies

Transportation Networking Companies are relatively new, and are growing as a mode of transportation for people attending Husky games. While TNC's tend to add to traffic congestion to and from Husky Stadium, they do not require parking spaces. To increase rider dropoff / pickup efficiency, UW coordinated with Lyft and Uber prior to the football season to establish pickup points and wayfinding for TNC users. Signs were placed on the sidewalk along 15th Avenue near the gatehouse and along Stevens Way to guide travelers to TNC staging areas. UW Intercollegiate Athletics (ICA) worked with Lyft and Uber to have attendees walk to a specific part of campus to be picked up after the game. A map to the TNC pickup locations can be found at: <a href="https://gohuskies.com/documents/2019/8/9/Husky\_Rideshare\_Map\_2019\_.pdf?id=16526">https://gohuskies.com/documents/2019/8/9/Husky\_Rideshare\_Map\_2019\_.pdf?id=16526</a>.

# Transit Modes

The TMP aims to promote public transit as a preferred mode of transportation to the stadium. In addition to regular Saturday bus and Link light rail service, King County Metro operated the following special services in support of this goal, including Husky Special Service and Park and Ride gameday shuttles (Figure 1) as of October 2021.

#### Husky Special Service

There were no substantial changes to Husky Special Service bus operations in 2022. Public Transit Routes to Husky Stadium



This map valid for 6 home weekend football games in 2022. Weekday games will have a separate transit plan. Redondo Heights and Shoreline buses are only available to fans that purchase a season bus pass for these routes.

#### Figure 1 Public Transit Routes to Husky Stadium<sup>3</sup>

(source: https://gohuskies.com/documents/2022/8/15/2022 Football Transit Map.pdf)

#### ADA Service

King County Metro Access ADA service was relocated to the west side of Montlake at NE Pacific Place.

# Park and Ride Service

Transit service from Park and Ride facilities provided an essential connection between more distant population centers and the stadium (Table 4). In 2022 Saturday gameday shuttle service was available from six regional Park and Ride lots (a decrease from seven in 2019). This service was operated by King County Metro at four locations and UW ICA at two locations (Shoreline and Redondo Heights). For all Park and Ride shuttles, a gameday pass was \$16 per game per person (up from \$15 in 2019), and a season pass was \$70 per person (up from \$60 in 2019). Shuttles began boarding at the lots two hours prior to kickoff, with 20-minute interval departures. Following the game, fans boarded buses at specified locations to return to their designated lots. The final buses departed approximately 50 minutes prior to kickoff.

Managed By	Location	Address
Metro	Eastgate	14200 SE Eastgate Way
Metro	Houghton	7024 116th Avenue NE
Metro	Kingsgate	12837 116th Avenue NE
Metro	South Kirkland	3801 108th Avenue NE
UW ICA	Redondo Heights	27454 Pacific Hwy S
UW ICA	Shoreline	19000 Aurora Avenue N

#### **Table 4 Park and Ride Shuttle Service**

(source: https://gohuskies.com/sports/2019/3/10/football-transportation-public-transportation)

In 2021, UW ICA discontinued a shuttle service from the Northgate Park and Ride to the opening of the Northgate Link light rail station.

The Redondo Heights and Shoreline Shuttles (contracted non-Metro service) were only available through the purchase of a season pass.

# **Boats**

Husky Stadium borders Lake Washington with nearby connections to Lake Union and Puget Sound, making boat access convenient. Increasing the number of gameday boating commuters can help reduce traffic congestion and parking space requirements.

# Boat Moorage

Husky Harbor can dock up to 150 private boats of varying sizes on gameday. Permits for boat moorage were available through a season pass or on a single-game basis. Due to high demand in 2022, season permits were sold out, and single game permits were made available through a waitlist *(source: Husky Harbor - University of Washington Athletics (gohuskies.com)*). Moorage was assigned based on boat length overall (LOA).

# Shuttle Service

Continuing in 2022, guests could anchor their private vessels in Union Bay and a boat shuttle service would assist them in getting to Husky Stadium. The shuttle service took fans to the Husky Stadium boat dock for free and returned them to their boats after the game for a fee of \$10

per person (children under 2 years old ride for free). Shuttles were available 2 hours prior to kickoff and 1 hour post-game (*source: <u>Husky Harbor - University of Washington Athletics (gohuskies.com</u>)).* 

#### Charter Boats

Charter boats were an option as a form of travel to Husky Stadium. Several charter companies operated a range of boats with capacity ranging from 20 to 500 passengers.

# Active Transportation (Bicycles)

The UW promotes active transportation options as healthy, pollution-free modes of gameday transportation.

#### Bike Valet

UW Transportation Services (TS) continued to provide free bicycle valet parking at Rainier Vista during the 2022 football season. Fans could leave their bike with an attendant who parked and monitored bicycles throughout the game, addressing issues of bicycle parking capacity and security. Signage along popular bicycle routes directed bicyclists to the bike valet. In addition to the bike valet, patrons could find free, unattended bicycle parking at numerous racks located around the stadium.

#### **Bike Share**

During the survey period, Lime provided dockless, electric-assist bikeshare service. UW did not partner directly with bikeshare companies to promote use of bikeshare or provide a bikeshare corral service.

# **Marketing Efforts**

ICA posted transportation information on the official Husky Football website, <u>http://www.gohuskies.com/gameday/</u>. The web site focused on providing information to assist patrons in using one of the modes encouraged in the TMP. The website provided contact information as well as information about transit, boating, walking, biking, and parking. UW TS also promoted the bike valet service for gameday commutes with signage directing bicyclists to the valet, and tags placed on bike racks encouraging patrons to use the bike valet service if they were planning to attend the game.

# **Data Collection**

Data collection for the TMP report consisted of the following:

- 1) Intercept survey of game attendees conducted by UW TS at two football games during the season:
  - a. September 24 vs Stanford
  - b. November 4 vs Oregon State.
- 2) Bus ridership data collected by King County Metro for 2022 UW football home games.
- 3) Link light rail ridership data collected by Sound Transit for 2022 UW football home games.
- 4) Campus parking data, bike valet, and bike rack counts collected by UW TS.
- 5) Parking citations data collected by the Seattle Police Department.
- 6) Boat passenger, stadium lot counts, and game attendance data collected by ICA.

# Intercept Survey Methodology

Surveyors were deployed to stadium entrances in proportion to the number of game attendees predicted to enter through each gate. These survey administrators were deployed based on each gate's opening time and adjusted based on the flow of patrons through the gates.

The survey administrators were provided with tablets, laminated pictograms (Figure 2) and keywords/parking map (Figure 3). These figures served to aid the survey taker in understanding the target transportation modes and parking zones to improve survey accuracy.

Teams were instructed to conduct the survey according to the following instructions:

- 1. When you approach the patron, say, "Hello, I am with the University of Washington and we're conducting a quick, 4 question survey.<sup>4</sup> *How did you get to the game today*?" Begin walking with them to their destination and guide them to an answer by showing the pictogram displaying various commute options.
- 2. If they refuse to answer your question, circle "**REFUSED**" on the survey form.
- 3. If they answer CAR/RV, circle "CAR/RV" on the survey form then ask:
  - a. "How many passengers, including you, came to the game in that vehicle?"
  - b. Circle their answer in question 2 on the form.
  - b. Then say, "Please point to your approximate parking location on this map" and show them the map.
  - c. When they point to an area, circle the corresponding letter on the survey form. If the patron was dropped off and the driver of the car did not park and come to the game circle "X: Dropped off, did not park."
  - d. "What is your Home Zip Code?"

<sup>&</sup>lt;sup>4</sup> This question appeared on the 2016 survey using the wording "Did you drive or ride in a car driven to the game today?" It was modified in the 2017 survey to more easily distinguish between riding in a personal vehicle and taking Lyft or Uber to the game.

- 4. If they answered no to CAR/RV for your first question, circle "MODE" on the survey form and ask:
  - a. "What type of transportation did you use to come to the game today?"
  - b. Circle the mode they said, then ask:
  - c. "What is your Home Zip Code?"
  - d. Write down Zip.
- 5. End the survey with, "Thank you, enjoy the game!"
- 6. While one partner administers the survey, the other counts out the next 25<sup>th</sup> (team of 3) or 45<sup>th</sup> (team of 2) person and prepares to signal their partner.

Car RV		TNC*	UBER Iyr
Bike	50	Bike Share	
Walk	<u>ب</u>	Boat	¢
Bus	<b>İ</b>	Light Rail	Â
Other		?	

# How did you get to the game today?

\*Transportation Networking Company

Figure 2 Pictogram for Commute Mode Survey Question

# Parking Zone Map Key Words

Question 3 asks Patrons where they parked their CAR/RV. The following list of key words can help Surveyors pinpoint which Area a Patron parked in on the laminated Parking Zone Map.

Ltr	Color	Key Words	Area
x	Dropped Off	N/A	Not Parked
А	Green	<u>SW</u> NEIGHBORHOOD (BUT LET'S CLARIFY IF NEIGHBORHOOD IMPACT ZONE)     Eastlake north of 520, across University Bridge, Fairview Ave, Fuhrman Ave.	SW neighborhood
в	Orange	<ul> <li><u>S</u> NEIGHBORHOOD (BUT LET'S CLARIFY IF NEIGHBORHOOD IMPACT ZONE)</li> <li>West of Washington Arboretum, South of 520, north of Boyer Ave, off 24<sup>th</sup></li> </ul>	S neighborhood
с	Blue	<ul> <li><u>N</u> NEIGHBORHOOD (BUT LET'S CLARIFY IF NEIGHBORHOOD IMPACT ZONE)</li> <li>Montlake north of 520, near the Montlake Bridge, south of the Montlake cut or Bridge</li> <li>Laurelhurst, near Sand Point</li> <li>Ravenna, along Ravenna Ave</li> <li>East of I-5, West of Roosevelt, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> Ave</li> </ul>	N neighborhood
D	Pink	<ul> <li>NW NEIGHBORHOOD (BUT LET'S CLARIFY IF NEIGHBORHOOD IMPACT ZONE)</li> <li>Wallingford, west of I-5, north of Portage Bay, south of 51<sup>st</sup> St</li> </ul>	NW neighborhood
E	Red	<ul> <li>RETAIL</li> <li>University Village, U Village</li> <li>U District east of Roosevelt and west of 15<sup>th</sup>, on the Ave, Brooklyn, 11<sup>th</sup>, 12<sup>th</sup>, north to 50<sup>th</sup> Ave</li> </ul>	Retail area
F	Yellow	<ul> <li>ON-CAMPUS, CAMPUS</li> <li>Padelford Garage above Montlake Ave, Portage Bay Garage off 15<sup>th</sup> Ave</li> <li>E-1, E-19 parking lot</li> <li>Any parking lot designated with the letters C, N, or S</li> <li>Near the driving range, along Boat Street</li> </ul>	On campus
G	White	<ul> <li>LET'S CLARIFY IF NEIGHBORHOOD OR N/A</li> <li>West of Thackery, north of 51<sup>st</sup>, north of 55<sup>th</sup>, north of Ravenna, north of 65<sup>th</sup></li> <li>Eastlake south of 520</li> <li>East of Washington Arboretum</li> </ul>	White area
н	N/A	Patron doesn't know	Patron doesn't know



Figure 3 Map of Parking Impact Zones

The pink, blue, green, and orange areas are neighborhood impact areas surrounding Husky Stadium. These are residential areas with varying levels of public, permitted, or restricted parking. The red sections are the retail areas at University Village and University District. The yellow section identifies on-campus parking. The white area on the map is not considered an impact zone for gameday parking.

# **Survey Results**

Paid game attendance on September 24 was 65,438, and actual game attendance was  $46,187^5$ . The survey effort resulted in 648 completed survey responses providing a margin of error of +/-2.9%.

Paid game attendance on November 4 was 62,142, and actual game attendance was 36,080. This survey effort resulted in 547 completed surveys providing a margin of error of  $\pm$ 2.2%. Note that there were severe traffic delays on November 4<sup>th</sup> causing I-5 Northbound and Southbound to shut down for several hours prior to game time. Additionally, there were electrical problems with the light rail causing delays.

The total number of completed surveys was 1,195 and total actual attendance was 82,267 providing an overall margin of error of +/-2.79%.

The population was defined as game attendees who pass through the gates, and the sample was taken from only this population. This population did not include game workers who did not pass through the gates. The travel behavior of game workers was not measured.

Like any survey, this one was subject to non-response error as a result of people who refused to take the survey. Transportation surveys also suffer from social desirability bias. For example, respondents sometimes say that they carpooled when in fact they drove alone in order to portray themselves favorably to the surveyors. Little can be done to suppress social desirability biases; however, it is expected that the proportion of this bias remains constant between years and therefore the data still provide accurate insight on *relative* changes in traveler behavior.

<sup>&</sup>lt;sup>5</sup> In 2010 Intercollegiate Athletics began monitoring *actual* game attendance in addition to *paid* game attendance (based on sales). The latter now serves as the baseline for future TMP monitoring, so only actual game attendance numbers are reported in the 2022 Report.

# Gameday Transportation Mode Split

The gameday transportation mode split indicates how the available transportation options were utilized (Table 5).

- About 37% of attendees traveled to the game by car
  - $\circ$  29% by carpool
  - $\circ~~2.8\%$  by SOV, and
  - $\circ~~$  4.9% by TNCs (which do not park during the game).
- About 45% of attendees traveled to the game by public transportation
  - $\circ$  36% by light rail, and
  - $\circ \quad 9\% \ by \ bus$

Transportation Mode		nsportation Mode		Transportation Mode		Survey Day Attendees (9/24)	Survey Responses (11/4)	Survey Day Attendees (11/4)	Mode (Two	e Split days)
	Personal	SOV	21	1,497	12	793	2.8%	36.7%		
Car	Car / RV	Carpool (2+)	170	12,117	176	11,630	29%			
	TNC		31	2,210	28	1,850	4.9%			
iss nsit	Bus		51	3,635	56	3,701	9.0%	AE 4.0/		
Ma Trar	Light Rail		282	20,100	150	9,912	36.2%	45.1 %		
ation	u Walk		71	5,061	101	6,674	14.4%			
Active sporta	Bike		10	713	16	1,057	2.2%	16.8%		
Tran	Bikeshare		2	143	0	0	0.2%			
	Boat		2	143	0	0	0.2%	0.2 %		
	Other		8	570	7	463	1.3%	1.3 %		
	Total		648	46,187	547	36,080	100 %	100 %		

• The remainder (21%) used other modes of transportation

Table 5 Intercept Survey Responses and Projected Mode Share, 2022



2022 Average Game

Commute

Boat

0%

Other

1%

Car

37%

# Mode Split Trended

A few important trends can be observed over a ten-year span of the intercept survey (there was no survey in 2012 due to Husky Stadium renovations nor in 2020 due to the COVID-19 pandemic) and the baseline observations made in 1986 (Table 6).

- Automobile use was decreasing until the introduction of TNC's in 2016. Automobile use has continued to decline again and is now similar to 2015 levels.
- Walking has generally been decreasing over the years
- Bicycling remains relatively flat since the introduction of bikeshare
- Boating captured its lowest measured share in 2022.

Mada	Share (%)										
Niode	1986	2011	2013	2014	2015	2016	2017	2018	2019	2021	2022
Automobile (includes TNCs beginning in 2016)	72.0	45.4	44.8	47.0	32.7	47.8	41.9	48.1	48.9	48.9	36.7
<b>Transit</b> (Charter, Metro, Link)	16.0	32.2	25.3	25.4	19.6	31.2	36.6	27.8	25.1	37.4	45.1
Walk	8.1	14.5	20.6	18.9	35.7	15.8	15.5	18.5	17.1	10.5	14.4
Boat	3.9	4.5	5.2	3.9	2.6	3.4	3.7	3.7	5.5	1.1	0.2
<b>Bike</b> (includes Bike Share beginning in 2018)	N/A	0.5	0.5	0.8	0.9	0.7	1.3	1.2	1.2	1.6	2.4

Table 6 Historic Transportation Mode Split, 2009 – 2022 (2022 is Combined Friday/Saturday)

# Automobile Occupancy and Parking

Automobile utilization can be summarized by the number of passengers per vehicle (Table 7). A small number of attendees who arrived by automobile drove alone (9%), which is higher than observations over the last few years.

Automobile	Share (%)									
Occupancy	2017	2018	2019	2021	2022					
1	2.4	1.5	2.1	6.1	9					
2	25.2	27.7	28.5	41.3	45					
3	17.3	15.8	17.6	20.1	18					
4	27.7	24.9	23.5	20.0	18					
5+	27.4	30.2	28.4	12.5	10					

# Table 7 Estimated Split of Automobile Occupancy, 2017-2022

Across the surveyed days, an estimated 72,354 people arrived in 25,885 vehicles, with an average automobile occupancy of 2.8 passengers per car (Table 8). These vehicles parked in one of four type of areas:

- Campus parking lots
- Retail areas (University Way corridor and University Village)
- Neighborhoods within the TMP parking impact area Areas outside the TMP parking impact area



Parking area	Passengers	Automobiles	Avg. Occupancy
Dropped Off	964	482	2.0
Retail	3,098	1,446	2.1
Campus	53,697	16,001	2.8
Neighborhood	11,428	3,786	3.0
Out of Area	1,928	620	3.1
Don't know/ Not Reported	1,239	551	2.3
Total	72,354	25,885	2.8

# Table 8 Average Passenger Occupancy of Automobiles by Parking Location, 2022 Both Gamesexpanded to population

# Parking on Campus and in Neighborhood Impact Areas

Of the attendees who arrived by car, 73% indicated they parked on campus for an estimated total of 19,000 automobiles across both days surveyed.

An estimated 3,786 vehicles were parked in neighborhoods identified as parking impact areas.

- Approximately 1,446 cars were parked in retail areas.
- About 620 cars were parked in neighborhoods outside the impact areas.
  - The share of cars parked in impact areas (including neighborhoods and retail zones) continues to increase since 2017.

The impacts to individual neighborhood zones were also estimated (Figure 3).



Figure 3 Estimated Number of Cars Parked by Impact Zone, 2022 Both Games

# **Transportation Networking Companies**

Transportation Networking Companies continues to be an important mode for gameday transportation (Table 9). Approximately 5% of survey responses used Lyft, Uber or another TNC to travel to the game, which was a decrease from recent years.

	2016	2017	2018	2019	2021	2022
Responses	67	80	65	78	133	59
Mode Share (%)	7.6	9.3	8.0	13.3	6.7	4.9

Table 9 TNC Survey Responses	, 2016 – 2022
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# Gameday Bus Service

Survey respondents indicated 9% of gameday travel occurred via Metro or charter bus, which was similar to 2021 but a decrease from 2018 and 2017. This mode includes ridership on KC Metro regular routes, Husky Special Service and Park and Ride shuttle service.

# King County Metro Bus Ridership Estimates

In addition to the intercept survey, data on bus ridership to Husky football games was provided by KC Metro:

- KC Metro employees count Park and Ride bus passengers as they board the buses.
- KC Metro employees count regular transit and Husky Special riders when they leave buses at the stadium. A significant number of passengers may leave the buses in the University District or before they reach the stadium and then walk several blocks to reach the ticket gates. These passengers are not included in the count for of this report.
- Oregon State numbers were not provided since this game occurred on a weekday.

# ICA Contracted Charter Bus Ridership Estimates

UW ICA has been managing charter buses for Northgate and Shoreline routes since 2017 and provided the count of charter bus passengers for each game in the 2022 season.

For 2022, the average KC Metro passenger count for all gameday services (Table 10) was 1,501 pre-game and 2,100 post-game. These numbers are lower than the 2019 counts of 4,545 pre-game and 4,731 post-game.

	Pre-Game				Post-Game			
	Metro P&R + Special Service		ICA Shuttle	Metro P&R + Special Service			ICA Shuttle	
Game	Trips	Riders	Riders per trip	Riders	Trips	Riders	Riders per trip	Riders
Sep 3 Kent State	64	1,805	28.2	489	50	2,207	44.1	452
Sept 10 Portland State	64	1,375	21.5	524	58	2,016	34.8	508
Sept 17 Michigan State	64	2,213	34.6	561	62	2,993	48.3	544
Sept 24 Stanford	64	1,421	22.2	500	56	2,348	41.9	462
Oct 15 Arizona	64	1,519	23.7	489	45	2,239	49.8	416
Nov 19 Colorado	64	1,758	27.5	606	53	2,277	43.0	816
Season Total (Saturdays)	384	10,091	26.3	3,169	324	14,080	43.5	3,198
Season Average (Saturdays)	64	1,682	26.3	528	54	2,347	43.5	533
Nov 4 Oregon State (Friday)	64	413	6.5	590	9	620	68.9	561

Table 10 KC Metro and ICA Bus and Shuttle Ridership Counts, 2022

# Park and Ride Shuttles

Park and Ride shuttles accounted for a majority of gameday bus service.

- Metro reported an average count of 1,330 pre-game and 1,838 post-game Park and Ride shuttle passengers for the 2022 season.
- ICA contracted charter bus shuttles (operating from Northgate and Shoreline Park and Rides) served, on average, 537 pre-game and 537 post-game passengers per game.

For KC Metro's Husky Special Service, the 2022 passenger average per game was 199 for inbound and 306 for outbound service. These numbers are higher than 2019 (Figure 4). These passenger counts should be considered a lower estimate of total gameday bus ridership since they do not include counts of regular Metro service passengers.



Figure 4 Average Ridership for Husky Special Service Routes, 2011-2021

# Link Light Rail

The survey results show that 36% of attendees arrived by Link light rail.

- This is roughly 10 percentage points higher than 2021.
- This accounts for a Saturday season average of approximately 14,448 gameday attendees.
- The Friday game on Nov 4 had approximately 12,989 attendees arrived via light rail.

# Sound Transit Link Light Rail Passenger Estimates for the Season

Sound Transit provides daily total ridership counts of passengers who traveled to the UW Station on every game day during the football season. In order to make comparisons with the intercept survey data, it is important to consider the following:

- ST counts total ridership for the day, which would be approximately double the number of game attendees estimated in the intercept survey.
- The intercept survey does not include data on how people return home, therefore it is unknown if some people who use light rail to arrive at the game use a different transportation mode to return home.
- ST counts all passengers at the Husky Stadium Station which, in addition to gameday patrons, includes normal Saturday riders as well as gameday workers not counted in the intercept survey.

The data provided by Sound Transit shows an average of 9,608 passengers tapped off the light rail at the Husky Stadium station for the six Saturday games. This is substantially higher than 5,949 taps in 2021.

Date	Opponent	UW Station - Ridership Estimate
9/3/2022	Kent State	9,671
9/10/2022	Portland State	9,465
9/17/2022	Michigan State	9,608
9/24/2022	Stanford	9,876
10/15/2022	Arizona	9,494
11/4/2022	Oregon State	10,781
11/19/2022	Colorado	9,536
Season Average (S	Sat Games Only)	9,608
Friday	Game	10,781

Table 11 Sound Transit Light Rail Ridership Counts, 2022

# **Active Modes**

# Walking

Approximately 14% of the 2022 attendees walked to the stadium on gameday, more than 2021 (10.5%).

# Bicycles

Approximately 2% of surveyed attendees arrived by bicycle, higher than 2021 (1.3%). In addition to survey responses, TS also determined a season average count of bikes parked at the bike valet.

• The bike valet had an average of 113 bikes over the two games surveyed. as well as a count of bikes parked around Husky Stadium on the survey gameday (Table 12).

The UW also conducted a count of bicycles parked in bike racks near the stadium.

• The 2022 gameday surveys did not include bike. The necessity of conducting future bike counts will be assessed prior to 2023 season.

	2016	2017	2018	2019	2021	2022
Bike Valet	65	-	37	130	78	113
Stadium Bike Racks	-	171	129	127	96	NOT PERFORMED

Table 12 Bike Count Summary, 2016 – 2022

# **Boats**

Based on 2022 gameday survey data, less than 1% of people reported they arrived by boat (private or charter).

# **UW ICA Boat Passenger Estimates**

ICA provides boat passenger counts from the following sources:

- Counts of the number of permitted boats moored in "Husky Harbor" and estimates the number of passengers based on boat size for each Husky football game.
- Charter boat companies provide ICA with actual passenger counts from the charter boats.
- Counts of shuttle ticket sales for the number of passengers in boats anchored offshore.

For the 2022 season, ICA estimated an average of 1,816 people arriving by boat per game, about the same as 2021 (1,796).

Charter service provided an average of 4.4 boats per game that carried an average of 743 passengers. Shuttle service carried an average of 266 passengers per game.

# **Other Modes**

In 2022, approximately 1.3% of survey responses indicated 'Other' for travel mode, which was higher than 2021 (0.6%). These 'Other' modes may include motorcycle, airplane, limousine, or private/party bus (as indicated in some survey records). Some of these modes may reflect a survey respondent misunderstanding the question and providing a mode that did not constitute the final leg of the trip to the game. In addition, the lower number of usable survey records and inclusion of some records previously considered to be erroneous compared to other years may have increased the observed mode share for this survey.

# Pre-1986 Stadium Expansion Comparison

Each year, the TMP compares actual bus and automobile mode shares and vehicles parked on campus with a 1984 baseline and post-expansion projections (from the 1986 Stadium Expansion Plan TMP) using survey gameday data (Figure 5). The observed actuals are better than the expectations set in the *Stadium Expansion Parking Plan and Transportation Management Program* in all major categories.

- At 37% (including TNC), the percentage of patrons who came by personal car was much lower than projected (71%).
- The total number of cars parked has declined rather than growing as the projections assumed.
- The total of 45% of patrons arriving by transit greatly exceeded the 1986 projection of 16%.



Figure 5 Comparison of Baseline, Actual, and Projected Travel Behavior 1984 – 2022

# Parking Enforcement in Neighborhood Parking Impact Areas

Gameday neighborhood parking impact areas (refer to map in Figure 4) are defined by City Council Resolution 27435. Portions of these parking impact areas have Special Event RPZs (Residential Parking Zones) for football game days.

The 1986 *Stadium Expansion Parking Plan and Transportation Management Program* cited the need for the City of Seattle to increase enforcement and monitoring in neighborhood parking impact areas during Husky games.

The Seattle Police Department provided a summary of parking citations issued in neighborhood parking impact areas during the seven games for the 2022 season, which was compared to historic averages (Table 13).

- On average, 113 citations were issued per game in 2022, a 20% decrease from 142 average citations per game in 2021.
- The number of RPZ citations issued in 2022 continued the decreasing trend that has been shown over the past decade.

	Average Police Resources / Game			ge Citation	Average	
Year	Parking Enforcement Officers	Overtime Hours	RPZ	Other	Total	Citations / Officer Hour
2010	26	155	96	30	126	0.81
2011	26	166	85	55	140	0.84
2013	31	209	184	35	219	1.05
2014	34	228	139	18	157	0.69
2015	39	246	144	26	170	0.69
2016	45	259	157	14	171	0.66
2017	38	221	151	57	208	0.94
2018	50	320	103	15	118	0.37
2019	46	323	153	13	166	0.51
2021	43	324	90	52	142	0.44
2022	45	285	72	41	113	0.40

Table 13 Citation Statistics for Husky Stadium Parking Impact Zones 2011-2022

# **Trip Origins of Survey Respondents**

The intercept survey asked respondents to provide their home zip code as an estimate of trip origin to the game. Of the 1,195 survey respondents, 1,075 provided zip codes of their home address.

It is important to note that home address might not necessarily represent gameday trip origin. Because of this, and the lower response rate with respect to reported zip codes, the data in this section is presented to demonstrate relative trends in travel behavior and transportation mode.

For each mode of transportation, travel distance was calculated as the straight-line distance from the center of each zip code to Husky Stadium. The number of responses for each zip code was then plotted against these distances.

# Automobiles (SOV, Carpool and TNC)

Travel by cars (SOV and Carpool) appears to have a fairly even distribution across travel distance to the game (Figure 6).



# Figure 6 Count of Travelers by Estimated Trip Distance via Car

Most trips by TNC are less than 20mi from the stadium, with a large cluster less than 5mi (Figure 7). It is a reasonable expectation that a trip would not exceed much more than 30-40mi for this mode of transportation



Figure 7 Count of Travelers by Estimated Trip Distance via TNC

# Transit (Bus and Light Rail)

While bus commuters seem to be commuting from a number of locations around the region, a large cluster appear to be traveling a distance around 20mi (Figure 8).



Figure 8 Count of Travelers by Estimated Trip Distance via Bus

Surprisingly, a large number of gameday commuters using Link Light Rail are reporting a travel distance greater than the current total track length (Figure 9). As with previous years, this suggests Link light rail serves a large number of out-of-town visitors reporting their home zip code.



# Figure 9 Count of Travelers by Estimated Trip Distance via Light Rail

# Active Transportation (Walking and Biking)

The vast majority of walkers to the stadium are travel a distance of only a few miles (Figure 11). The distribution of travel distance by walking highlights the problematic nature of using home zip code for trip origin. While most walkers are less than 5mi from the stadium, there are several responses that are much greater than this distance, which is not a reasonable travel distance for this mode. This likely a product of respondents using home zip code instead of campus or local zip code.



Figure 10 Count of Travelers by Estimated Trip Distance via Walking

Although the mode split for biking to the stadium is fairly low, a majority of bikers are riding less than 10mi to the stadium (Figure 11).



Figure 11 Count of Travelers by Estimated Trip Distance via Bike

# Boating

Most boating commuters travel a distance of 20mi or less (Figure 12).



Figure 12 Count of Travelers by Estimated Trip Distance via Boat

# 2022 Inter-Season Survey Comparison

A total of two gameday intercepts were conducted, the September 24 game against Stanford and the November 4th against Oregon State (Friday game). Paid game attendance for the Stanford game was 65,438 with actual attendance being 46,187. Paid attendance for the Friday game was 62,142 and actual attendance was 36,080.



Figure 13 Gameday Commute Mode Split for November 29, 2022

Key comparisons of the data from between these two games (Table 9) are as follows:

- <u>Personal automobile usage increased</u>
   4.9 percentage points for the Friday game.
- 2. <u>TNC</u> use increased by 0.3 percentage points for the Friday game.
- <u>Overall Transit decreased significantly</u>. Bus ridership increased slightly (2.4 PP), and Light Rail decreased significantly (16 pp) for the Friday game.
- 4. Boating increased slightly.
- 5. Bicycling increased significantly.

	Mode Split (%)			
Mode	September 24	November 4		
Car/RV	29.5	34.4		
TNC	4.8	5.1		
Transit	51.4	37.8		
Bike	1.8	2.9		
Walk	11.0	18.5		
Boat	0.3	0.0		
Other	1.2	1.3		

Table 14 Interseason Commute Mode SplitComparison, Sep 24 vs Nov 4