CAPSTONE REPORT

URBAN DESIGN

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School of Urban Studies
June 2025

UNIVERSITY of WASHINGTON | TACOMA

Snoqualmie Building. Photo courtesy of the University of Washington Tacoma.

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STUDENTS' VISION FOR THE UWT CAMPUS

URBAN DESIGN CAPSTONE

PLAN OVERVIEW

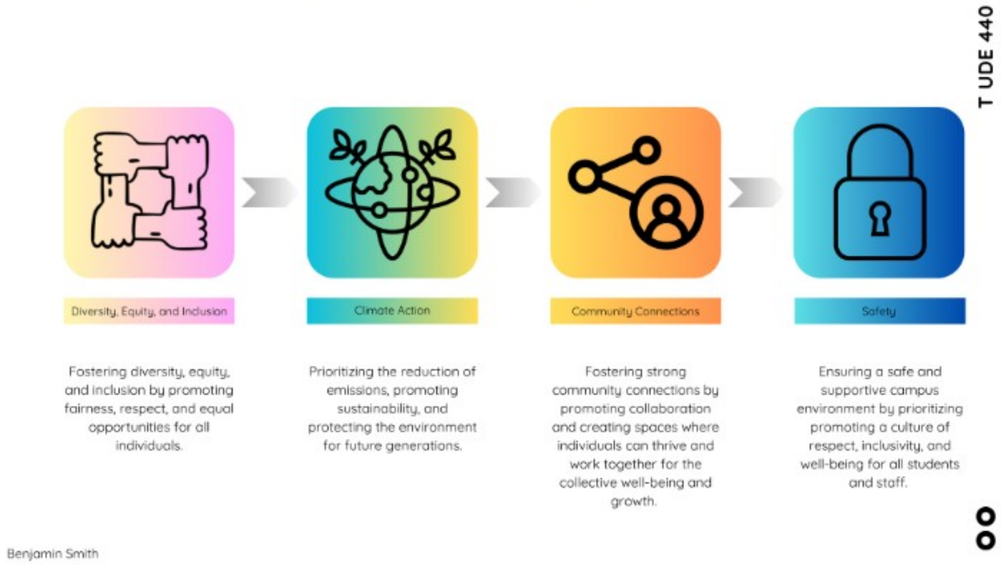
This senior capstone project addresses campus planning at the University of Washington Tacoma through a multifaceted approach that combines student engagement, sustainability, and interdisciplinary design. Key components include a student-led food accessibility campaign, a comprehensive redesign of pedestrian, bike, and ADA infrastructure, and a green stormwater proposal for the EPA RainWorks Challenge. Developed in collaboration with civil engineering students, the project integrates technical and urban design strategies to envision a more inclusive, resilient, and future-oriented campus environment.

Manifesto

This capstone project presents a redesign of the University of Washington Tacoma campus focused on sustainability, accessibility, and student engagement. Key corridors such as Jefferson Avenue and Court C were reimagined to improve walkability, bike infrastructure, ADA access, and stormwater management through green infrastructure. A campus-wide engagement campaign gathered feedback on student priorities, particularly food access and affordability. Collaboration with civil engineering students ensured the design was both visionary and technically feasible. The project reflects a multidisciplinary approach to urban campus planning, aiming to create a more inclusive, resilient, and student-centered environment that supports both daily campus life and long-term growth.

Values and Goals

Our values and goals emphasize a commitment to diversity, equity, and inclusion by promoting representation, fairness, and a sense of belonging for all individuals, with particular attention to marginalized groups. We are dedicated to climate action through the implementation of strategies that both mitigate and adapt to climate change using sustainable practices. Strengthening community connection is also a priority, as we aim to foster meaningful relationships and collaboration between the campus and the surrounding communities. Additionally, we are committed to ensuring safety by creating a secure, accessible environment that supports the physical and psychological well-being of all users.



Our Goals and Values. Photo courtesy of Benjamin Smith.

The University of Washington Tacoma

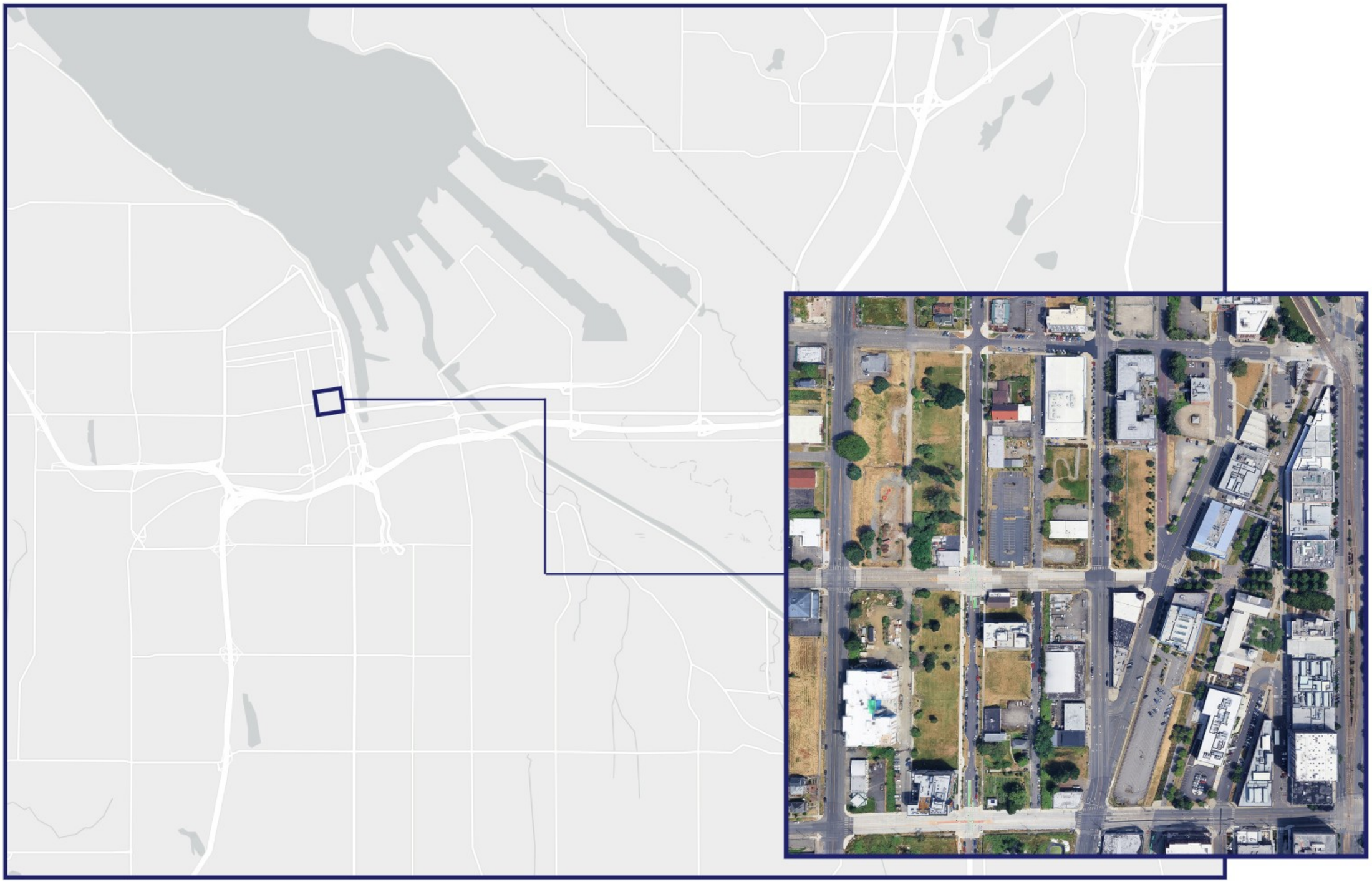
The University of Washington Tacoma is a public, urban-serving campus located in the historic Union Station district of downtown Tacoma. Since its founding in 1990 as a branch of the University of Washington, the campus has played an important role in revitalizing the surrounding area by repurposing old industrial buildings and emphasizing equity, access, and community engagement. The campus is set within a dense urban environment with steep slopes, tight street grids, and close connections to civic and cultural landmarks. This project focuses on a centrally located site within the UW Tacoma campus that helps connect the upper and lower parts of campus while also linking to the broader downtown area. The site brings up a range of challenges, especially when it comes to accessibility, walkability, and sustainable design—but it also offers an exciting opportunity to address those issues in a way that supports the university's long-term goals.

The project site is located within the University of Washington Tacoma campus in downtown Tacoma, part of the South Puget Sound region. The campus sits in the historic Union Station district and is surrounded by a mix of educational, commercial, and cultural spaces, giving it a strong urban character. The site is positioned along a central corridor of campus and is shaped by steep topography that slopes from east to west, which creates both challenges and opportunities.

These conditions make accessibility, movement, and the use of public space important design considerations. The site also plays a key role in connecting the upper campus academic buildings with important destinations in the lower campus, like the Washington State History Museum and the Foss Waterway.

University of Washginton Tacoma. Photo courtesy of ESRI.

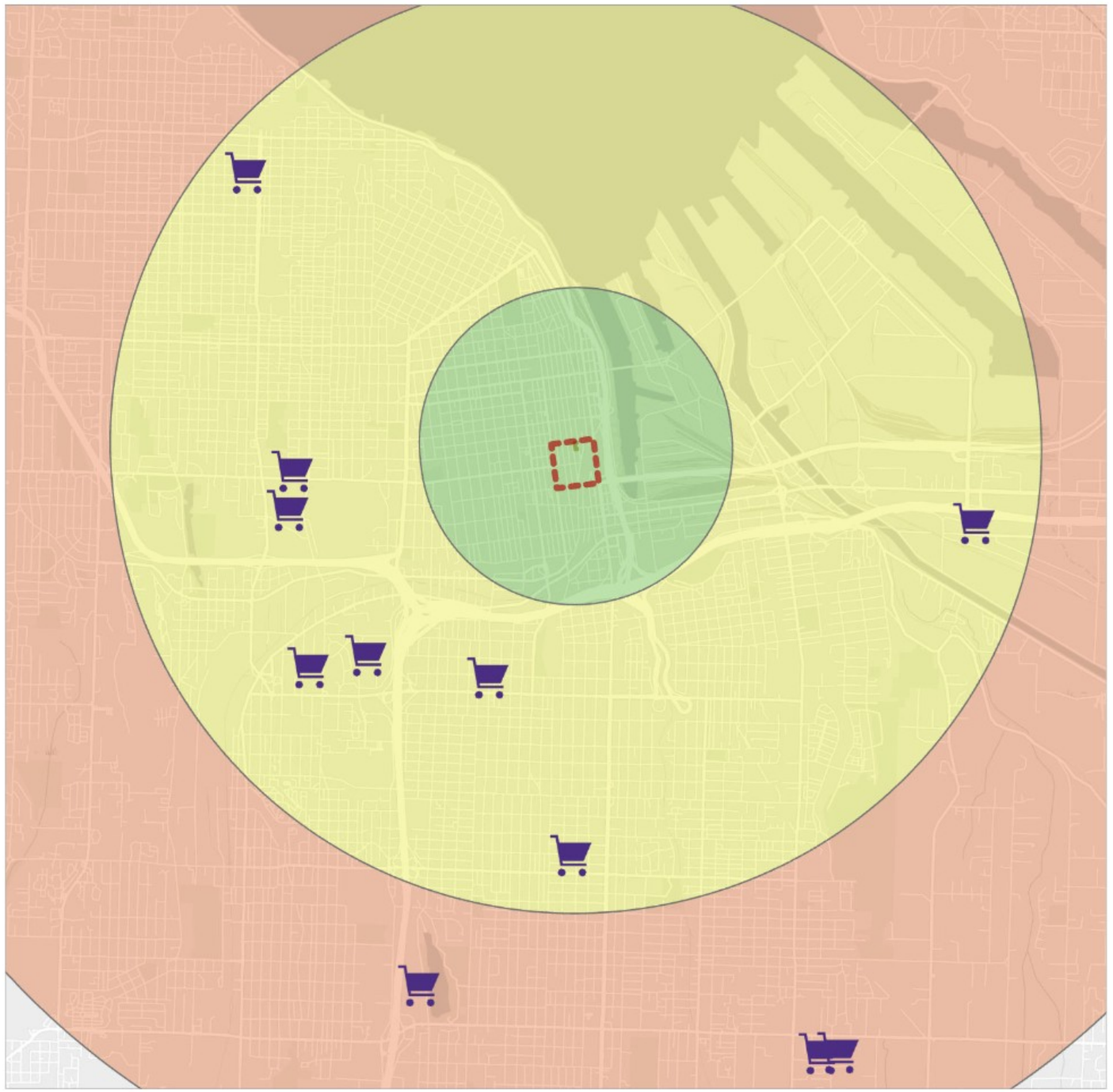
PROJECT SITE OVERVIEW



Greater Pierce County. Photo courtesy of ESRI.

University of Washington Tacoma. Photo courtesy of Google Earth.

As part of the UDE 440 Urban Design Studio at the University of Washington Tacoma, each of us focused on a specific urban system to help inform ideas for a more comprehensive campus redesign. My focus was on food access, specifically looking at where students get food, how affordable it is, and whether healthy options are available. I used tools like proximity maps, price categories, and transit access to analyze grocery stores and restaurants around campus. The results showed that while there are some affordable places to eat nearby, most grocery stores with healthier or organic options are too far to walk to, meaning students need a car or bus. On-campus resources like the Pantry, the Giving Garden, and the Husky Market are helpful, but they're limited in what they offer. Based on these findings, one big opportunity is to create a central food hub or cafeteria that makes food more accessible, affordable, and encourages social connection on campus.



UWT Grocery Store Proximity Analysis. Photo courtesy of Benjamin Smith.

The University of Washington Tacoma offers several on-campus food resources aimed at addressing student needs, yet these services remain limited in scale and accessibility. The Husky Market functions as a campus corner store, providing packaged snacks, beverages, and light meals such as sandwiches and salads from local vendors. William Philip Hall houses the Pantry, which distributes free, healthy food options—including fresh produce, shelf-stable items, and ready-to-eat meals—through partnerships like the Giving Garden. Located at 1953 Fawcett Avenue, the Giving Garden cultivates seasonal produce grown by and for students, promoting food literacy and sustainability. While these services contribute meaningfully to food security, they lack the infrastructure and scale to serve the full student population. Many students express a need for a central, communal dining space that offers affordable, nutritious meals and fosters campus community. The current distribution model presents an opportunity to consolidate and expand food access through a more integrated approach.

Campus food analysis. Photo courtesy of Benjamin Smith.

University Food Options

Giving Garden

1953 Fawcett Ave.

The Giving Garden at the University of Washington Tacoma strives to eliminate food insecurity among students by connecting them back to their food system through hands on experience with fresh food, grown by students, for students.

Husky Market

Tacoma Paper & Stationary (TPS)

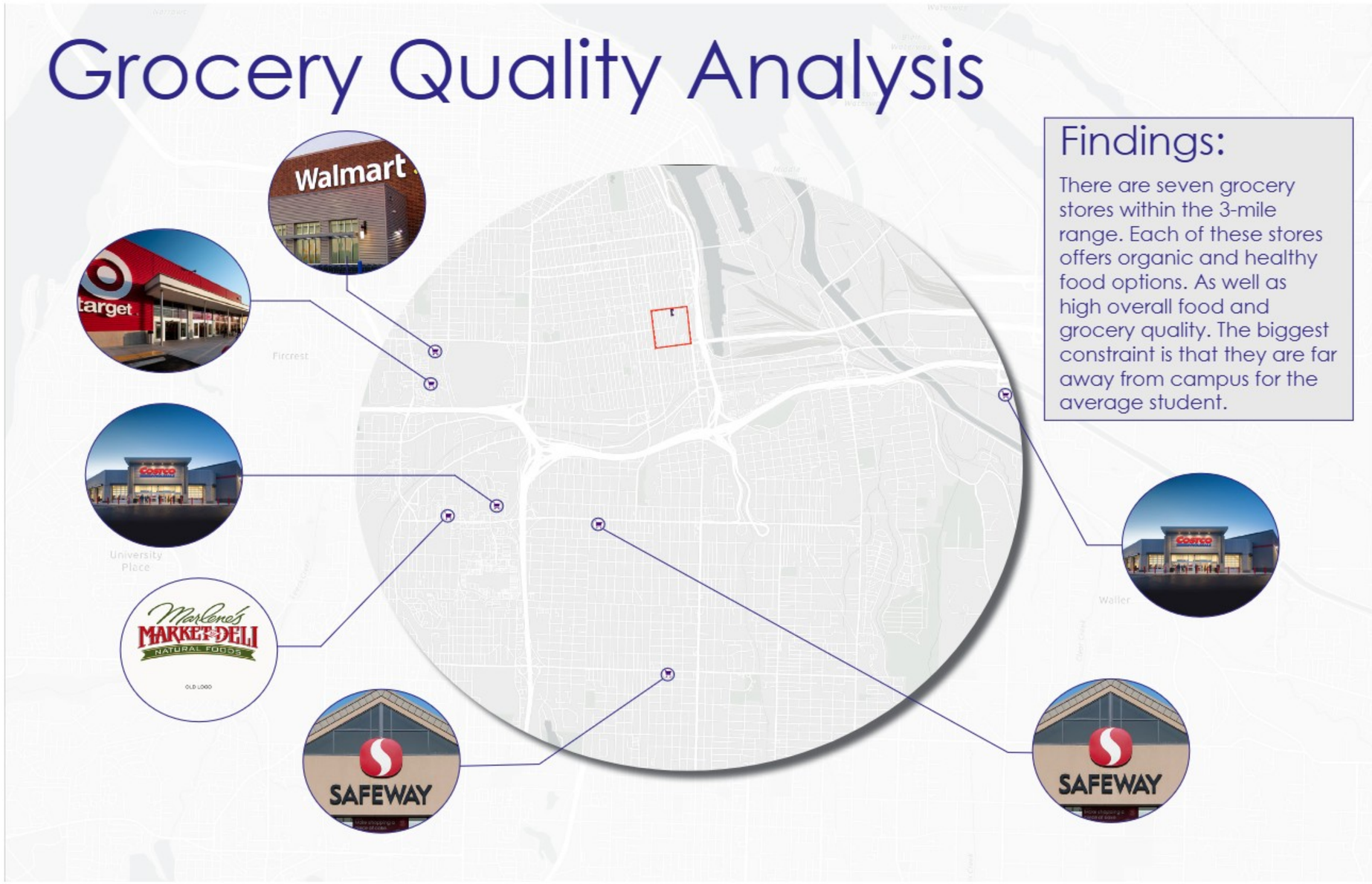
The Husky Market is UW Tacoma's modern corner store. It features snacks, candy, drinks, smoothies, and traditional household essentials, as well as sandwiches, salads, and pastries from local suppliers.

The Pantry

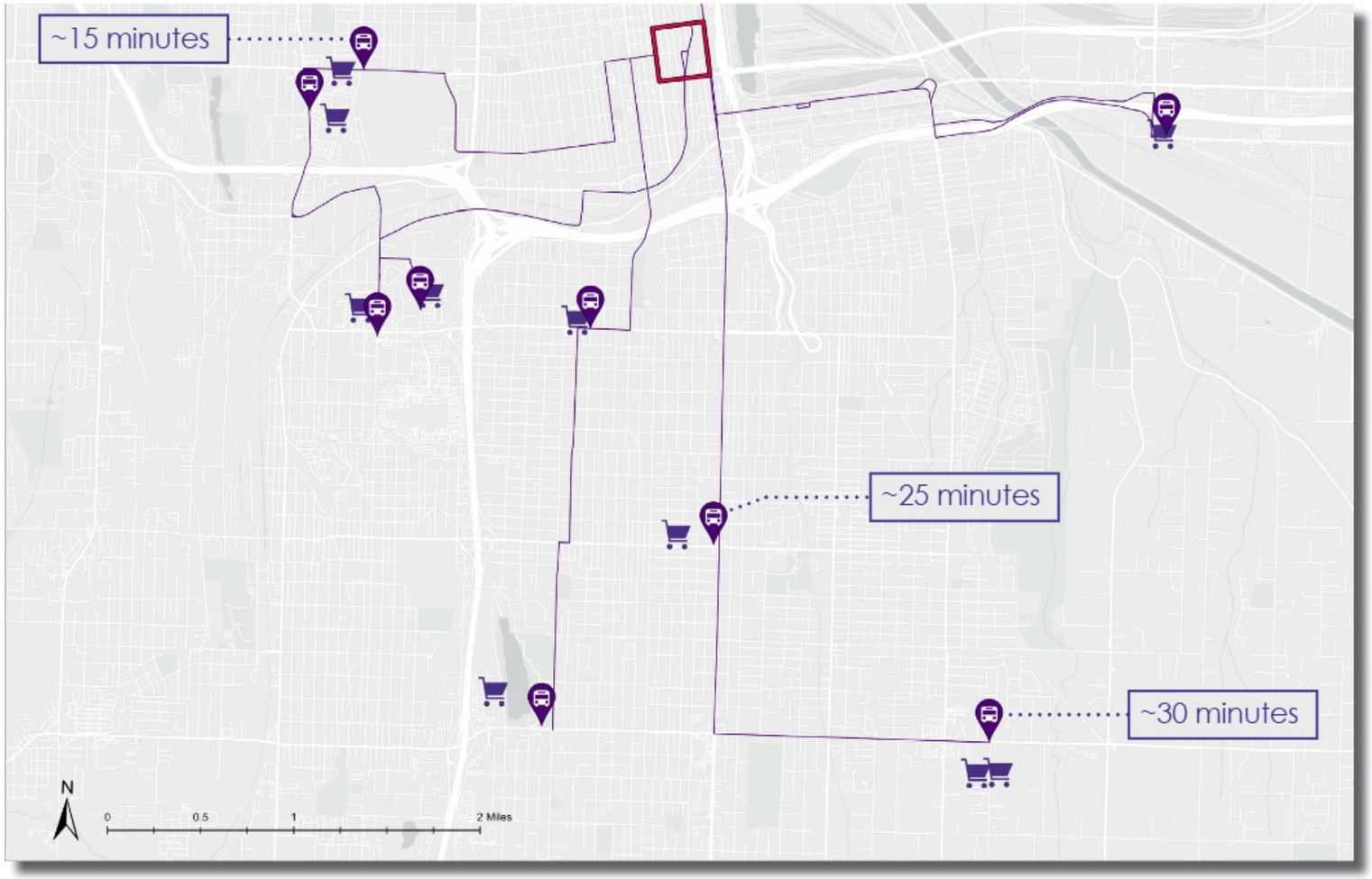
William Philip Hall (WPH)

The pantry stocks a variety of healthy and nutritious food options, including fresh produce, non-perishable items, and ready-to-eat meals. They partner with The Giving Garden on campus to provide fresh, seasonal produce on a weekly basis.

In my off-campus food access analysis for the UWT campus redesign, I found several challenges that make it hard for students to get healthy and affordable food nearby. Out of the ten grocery stores I identified, seven are within a three-mile radius, but none are actually walkable from campus. Many of these stores do offer good-quality and organic food, but they're not realistic options for students who don't have a car. While there are around nine bus stops near campus, getting to some of the farther stores can take 25 to 30 minutes or more, and carrying groceries back adds another layer of difficulty. These barriers highlight a bigger issue when it comes to food access for students living near or on campus. There's a clear need for either closer, student-focused grocery options or improved public transit and delivery services. Improving this would directly support student wellbeing and make campus life more equitable.



Transportation



Findings:

There are a number of different buses that an individual can take from around campus. The quickest it would take an individual to get from campus to the furthest grocery store is approximately 30 minutes. This is quite a long distance for a student to travel on public transport with groceries or food.

Campus boundary

Bus stop

Grocery store

Bus route

Stops Around Campus

Findings:

There are approximately nine bus stops around campus. These provide students with the ability to travel to grocery stores and restaurants that are off campus. These bus stops can help students connect with the surrounding area, making it more convenient for them to grab a meal or stock up on groceries if they do not have personal transportation.

Campus boundary

Existing building

UWT building

Student housing

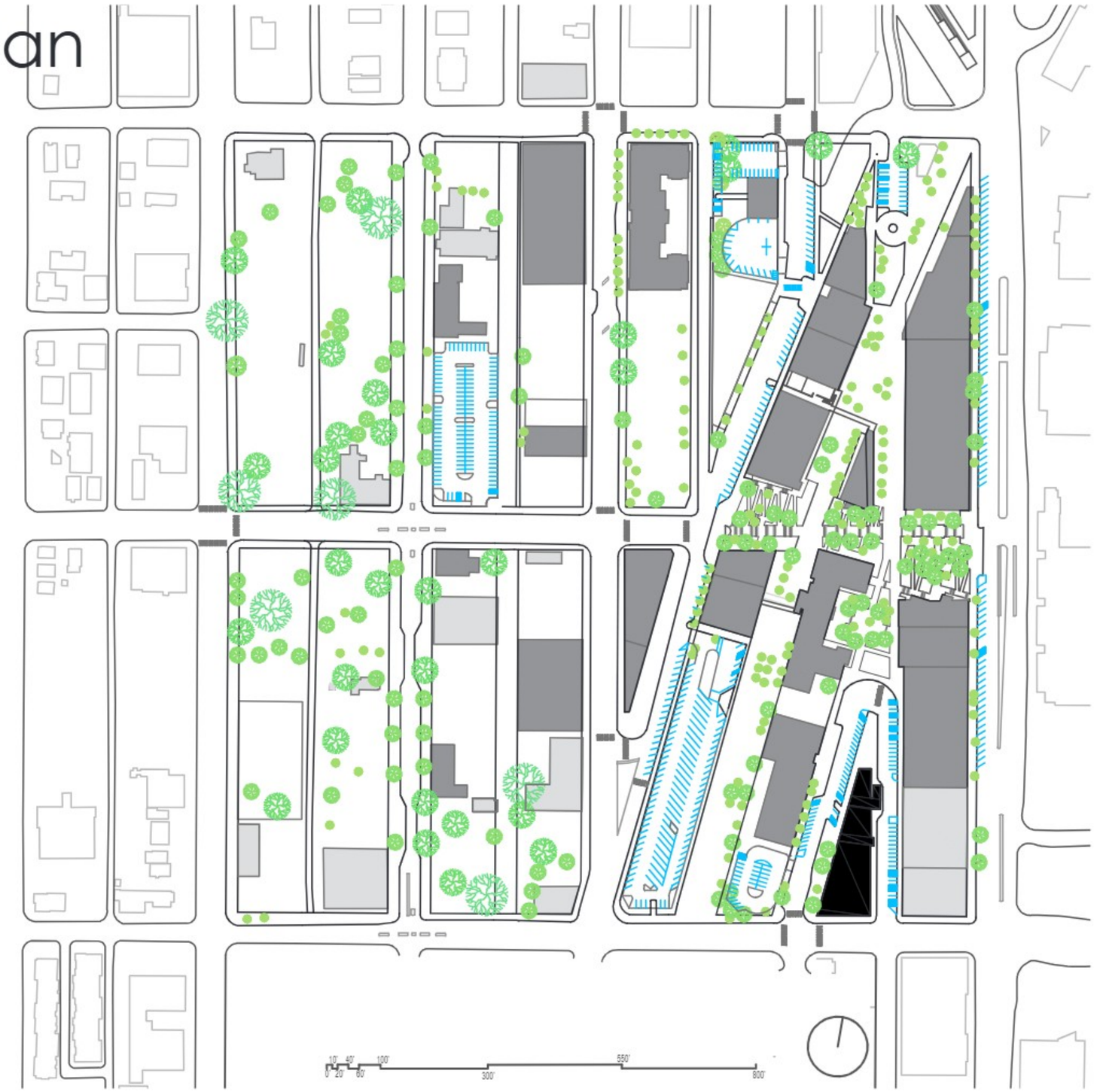
Bus stop

Issues and Opportunities

Issues: The campus lacks a central cefeteria where students can gather and interact. According to outreach, students do not feel inclined to stay on campus. They also feel as though there is no healthy, affordable food options around campus.

Opportunities: Creating a central hub area such as a cafeteria would encourage social interactions between students, helping them form friendships and support networks. With these spaces readily accessible, students are more likely to engage in study groups or discussions. Building an area such as a cafeteria would help to promote a stronger and healthier campus culture, as well as providing healthy food for students

Existing UWT Site Plan



Existing Jefferson Ave. Street Section and Elevation

As part of the UW Tacoma campus redesign project, our cohort ran a student engagement campaign to get input on key issues affecting campus life. We launched the campaign in November 2024 with a strategy that included building a website, handing out flyers, using social media, and creating a survey to hear directly from students. Our class was split into three groups, and each group was responsible for planning and hosting an engagement event to promote the campaign. These events took place during a two-week period in January 2025 and gave us the chance to talk with students face-to-face while encouraging them to fill out the survey. In total, we collected 126 responses, with feedback focused on topics like food access, transportation, and campus amenities. After the survey closed at the end of January, we began analyzing the results to help shape our site analysis and design decisions.

Community campaign flyers. Courtesy of Sabien Adderley and Tu Nguyen

FOOD FOR THOUGHT INSIGHTS

PROJECT OVERIEW

THIS PROJECT IS BEING CONDUCTED BY THE STUDENTS OF THE SENIOR URBAN DESIGN COHORT. IT AIMS TO FIND OUT WHERE STUDENTS GO TO EAT ON CAMPUS AS WELL AS WHAT FOOD OPTIONS STUDENTS WOULD LIKE TO SEE ON-CAMPUS IN THE NEAR FUTURE.

STRATEGIES

Several interesting techniques were used at our TPS booth to **attract** and **engage** students. To get folks to stop by, we first provided **complimentary** juice and chips as a tempting perk. We encouraged student to participate and express their opinions by giving them a **QR code** of the **survey.**

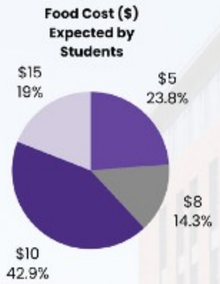
GOALS

- **1ST** Food Cost Expected by Students
- **2ND** Food Culture & Interest
- **3RD** Survey to understand students' food habits on campus

DATA 1 We ask the student on campus, **"Where do you eat, cook and buy food on Campus?"**

This is the interactive map that we use to ask the students on campus

DATA 2 **On-Campus Students** (Community Engagements)



DATA 3 Survey to understand students' food habits on campus

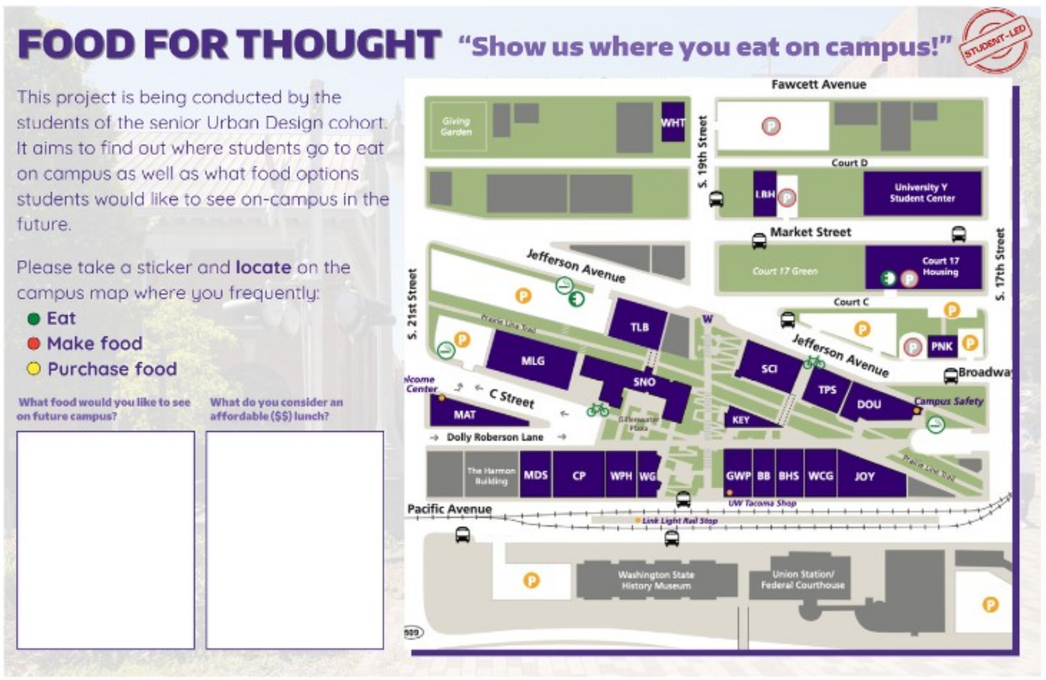
TRENDS

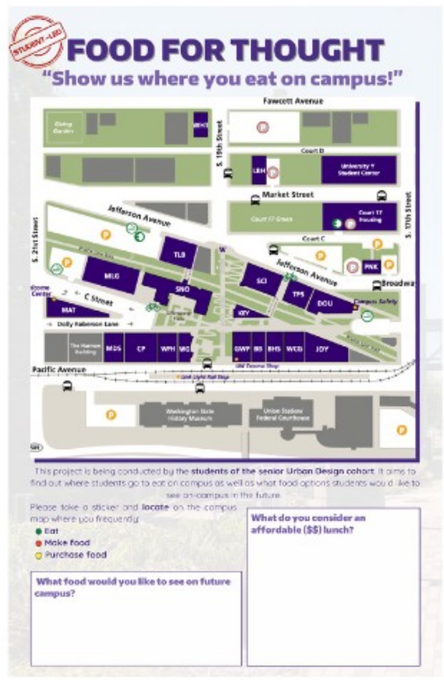
- 27 Students dine at TPS.
- 13 Students purchase food at TPS.
- 6 Students prepare their own food.
- 8 Students bring food from home.

CONCLUSION

Based on the data and survey results, it can be concluded that the students' favorite place to have food on campus is TPS. Most students prefer to spend around $10 on their meals. Additionally, the majority of students enjoy having a meal, with Mexican food being the most popular choice.

PHOTOS





Based on the collected data, most UW Tacoma students prefer to eat and purchase food at TPS, making it the most popular on-campus location. The average expected food cost is around $10, with many students indicating a desire for affordable meal options. Mexican food was the most requested cuisine, followed by healthy and Asian options. While 27 students reported eating at TPS, fewer students cook or bring meals from home. The interactive map and survey also revealed interest in expanding food options across campus. Engagement strategies, including free snacks and QR code surveys, helped gather input from a diverse student group.

Community Engagement

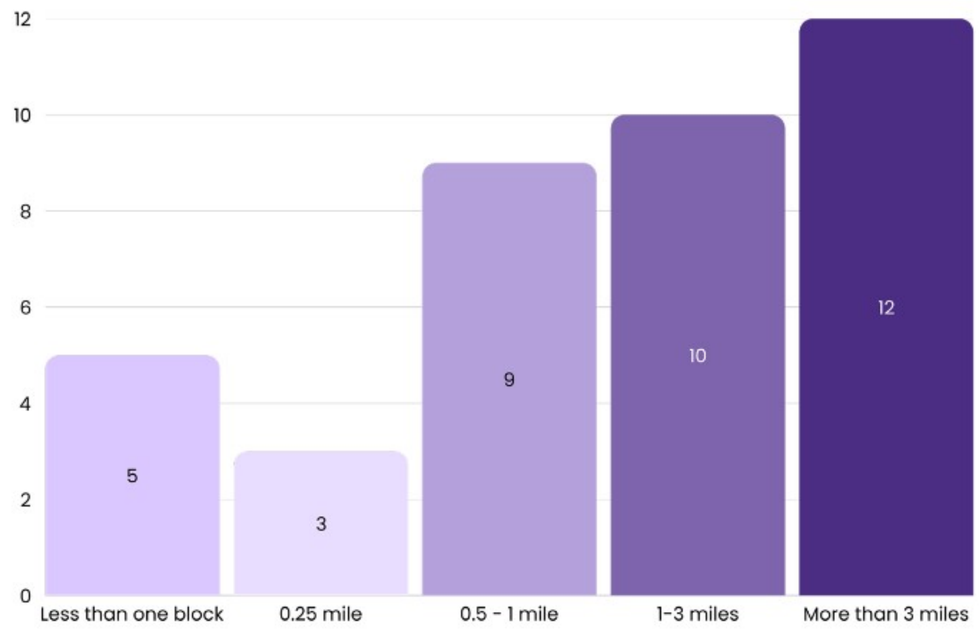
[FOOD]

If you live on campus, how far do you typically travel to get your groceries?

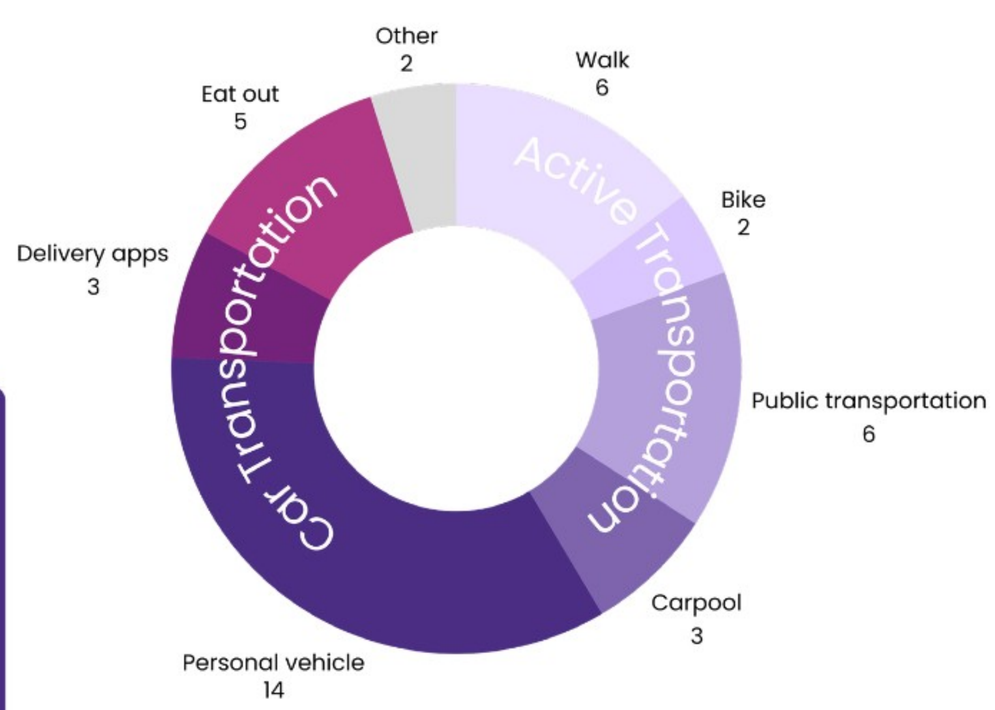
+

If you live on campus, how do you get groceries?

Grocery Travel Distance



Grocery Travel Method



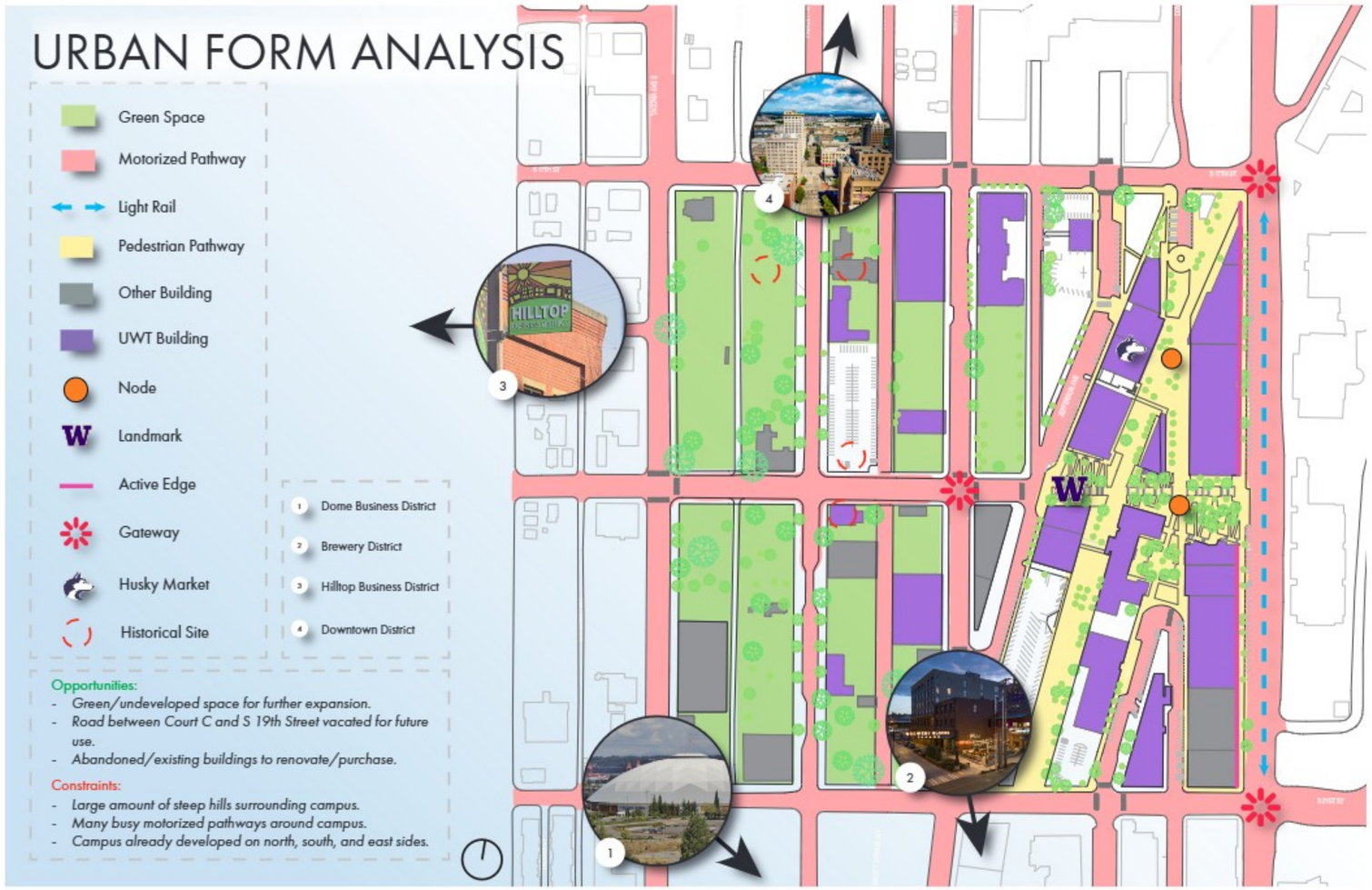
Key Takeaways

The **majority** of students have to travel **more than 3 miles** in their **personal vehicles** to get their groceries.

URBAN FORM ANALYSIS

As part of the UW Tacoma campus redesign, I conducted an urban form analysis to better understand the physical layout, movement patterns, and spatial dynamics of the campus. This analysis identified key nodes, gateways, and active edges, while also mapping major pedestrian and vehicular pathways. It highlighted several opportunities, such as vacant or underutilized green spaces, and constraints like steep topography, heavily trafficked motorized routes, and limited connectivity between upper and lower campus. By analyzing how people move through the site and where activity is concentrated, the urban form map helped frame early design decisions around circulation, accessibility, and public space activation.

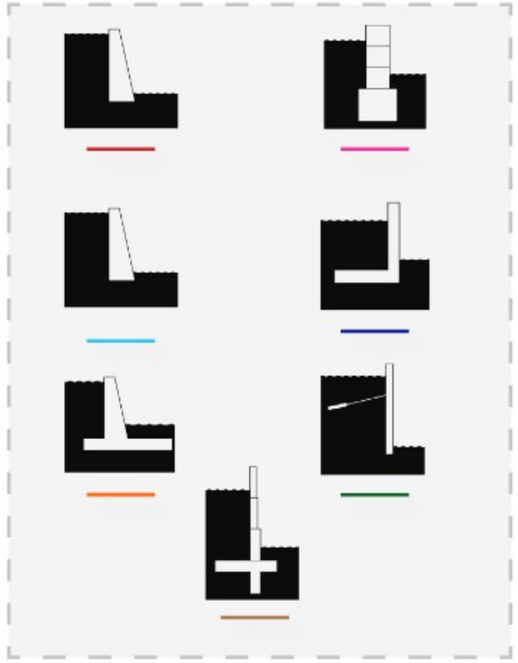
In a separate effort, I worked with civil engineering students to map the retaining walls across campus. This map categorized wall types—such as stone, concrete, and soldier pile—and assessed their structural function in relation to the sloped terrain. Their technical input helped ensure accuracy in both classification and spatial representation, which informed strategies for improving accessibility and integrating landscape features into the design.

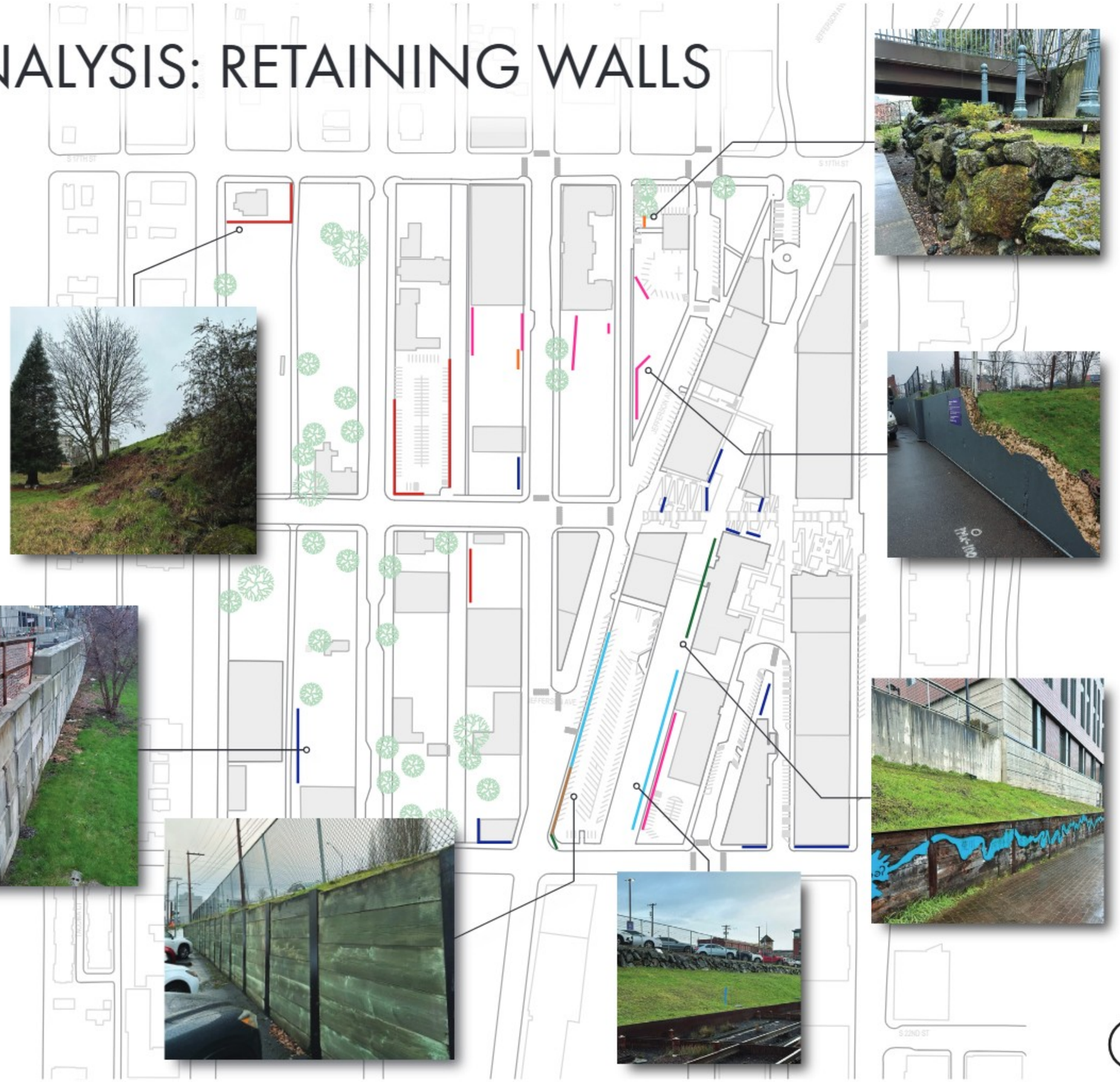


Existing site analysis of the University of Washington Tacoma and surrounding communities.

URBAN FORM ANALYSIS: RETAINING WALLS

- Stone Gravity
- Concrete In-Situ
- Rock Gravity
- Precast Concrete In-Situ
- Gravity
- Soldier Pile
- Wood





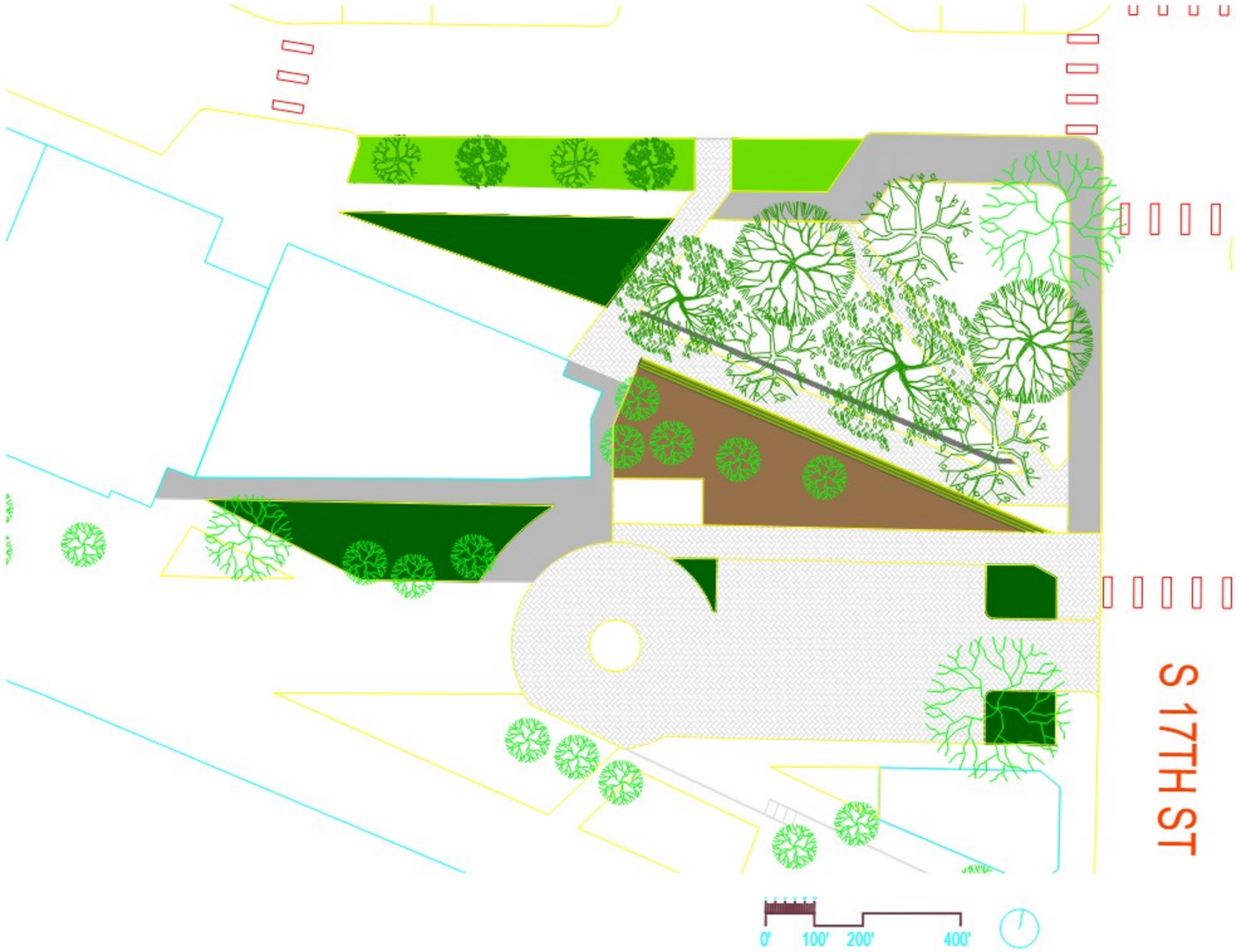
In collaboration with the civil engineering, existing retaining wall analysis. Team: Benjamin Smith, Yasir Al Sammarraie, Kari Lau, Alex D. Alberto, Nicholas Rainwater.

EPA RAINWORKS CHALLENGE

The EPA RainWorks Challenge is a national student competition that encourages innovative green infrastructure solutions to manage stormwater, improve sustainability, and enhance the environmental resilience of college and university campuses.

My contribution centered on redesigning the UW Tacoma microforest into a fully ADA-accessible green infrastructure hub. The design incorporates bioswales, native vegetation, and permeable surfaces to capture and filter stormwater runoff from the upper campus, reducing pollutants before they reach the Foss Waterway. Beyond meeting EPA guidelines, the microforest is reimagined as a multi-functional space that supports environmental education, native habitat restoration, and year-round community use. It serves as a gathering area, promoting sustainability while enhancing both ecological value and campus engagement.

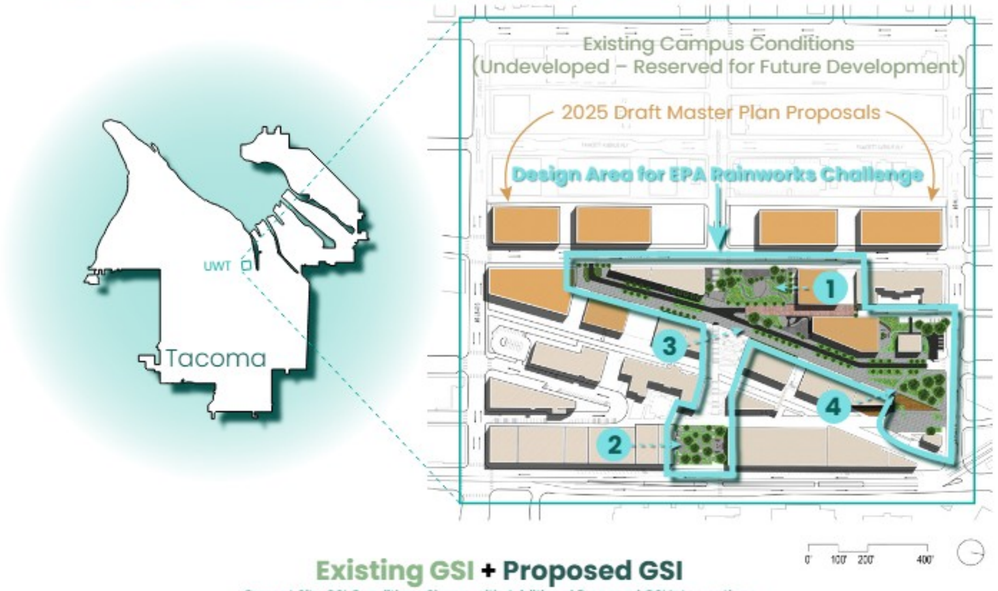
The proposal was developed to support UW Tacoma's future growth and evolving needs, aligning with the campus master plan created by Bjarke Ingels Group (BIG). It reflects key principles by prioritizing flexible, sustainable spaces that foster connectivity, accessibility, and community engagement, while integrating green infrastructure into the campus's long-term development vision.



Microforest 3D Rendering. Courtesy Benjamin Smith

#50

PROTECTING THE SOUND



Existing GSI + Proposed GSI

Current Site GSI Conditions Shown with Additional Proposed GSI Interventions

Existing N. 19th Site Section & Elevation

MicroForest GSI Section

#50

AS IT HITS THE GROUND

50-Year Storm for 30-Minute Duration
Design Storm Assumed

124,269 ft³
Volume of Ttreated Runoff

792,000 ft²
Air Pollutant Removal by Trees (Phase 1)

24,316 ft²
Area of Restored Native Plant Communities

4,500 lbs per year
CO2 Sequestered

≥94%
Reduction in Pollutants

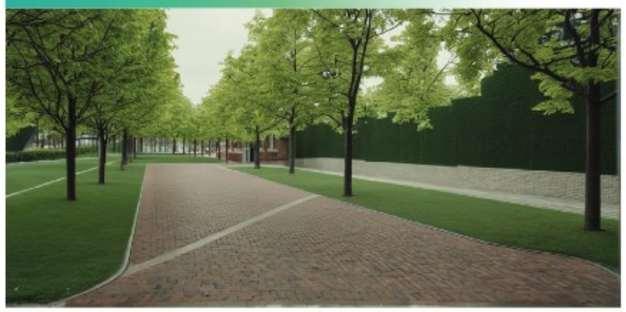
29,000 lbs per year
Vehicle Emissions Reduced

12%
Reduction in Impervious Surfaces

1. THE QUAD

2. ACCESSIBLE RAINGARDENS

3. PERVIOUS AVENUE



4. MICROFOREST

EPA Poster. Courtesy Christy Gonzalez

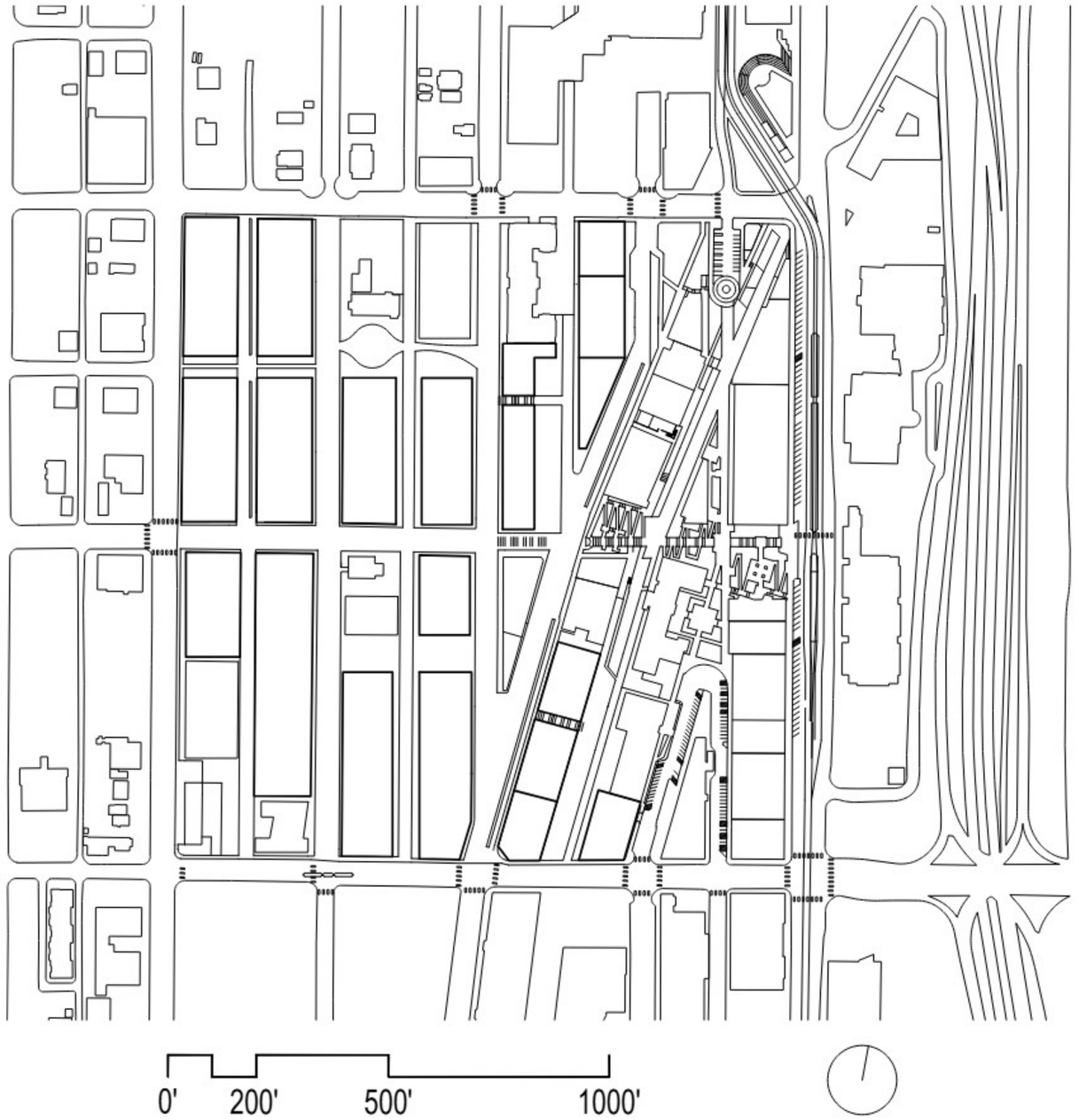
BENJAMIN SMITH

Urban Design Approach

Design proposal focus: pedestrianization, urban green spaces, improved accessibility, and enhanced community connections.

My Urban Design Framework (UDF) for UW Tacoma reimagines the campus as a fully pedestrianized environment by eliminating vehicle access and prioritizing connectivity, safety, and sustainability. The plan enhances student mobility through a network of dedicated pedestrian and bike pathways, while integrating new green and blue spaces that promote relaxation and social interaction. Proposed student housing and institutional expansions support the university's growth goals, fostering a vibrant, active campus life.

The design was heavily influenced by case studies such as Seattle University's Centennial Fountain and New York's Teardrop Park. Centennial Fountain inspired the integration of nodes and gathering spaces to enhance social cohesion, while Teardrop Park's pedestrian-first design informed the creation of green corridors and resting areas throughout the site. These examples demonstrate how small-scale, thoughtfully designed spaces can encourage human interaction, support mental wellness, and promote walkability—principles that directly shaped my proposal's approach to a more accessible and engaging campus.



URBAN DESIGN FRAMEWORK

Disruptive

Design Framework

- Vehicle Pathway
- Light Rail Pathway
- Pedestrian Pathway
- Active Edge
- Landmark
- Historic Location
- Unowned Parcel

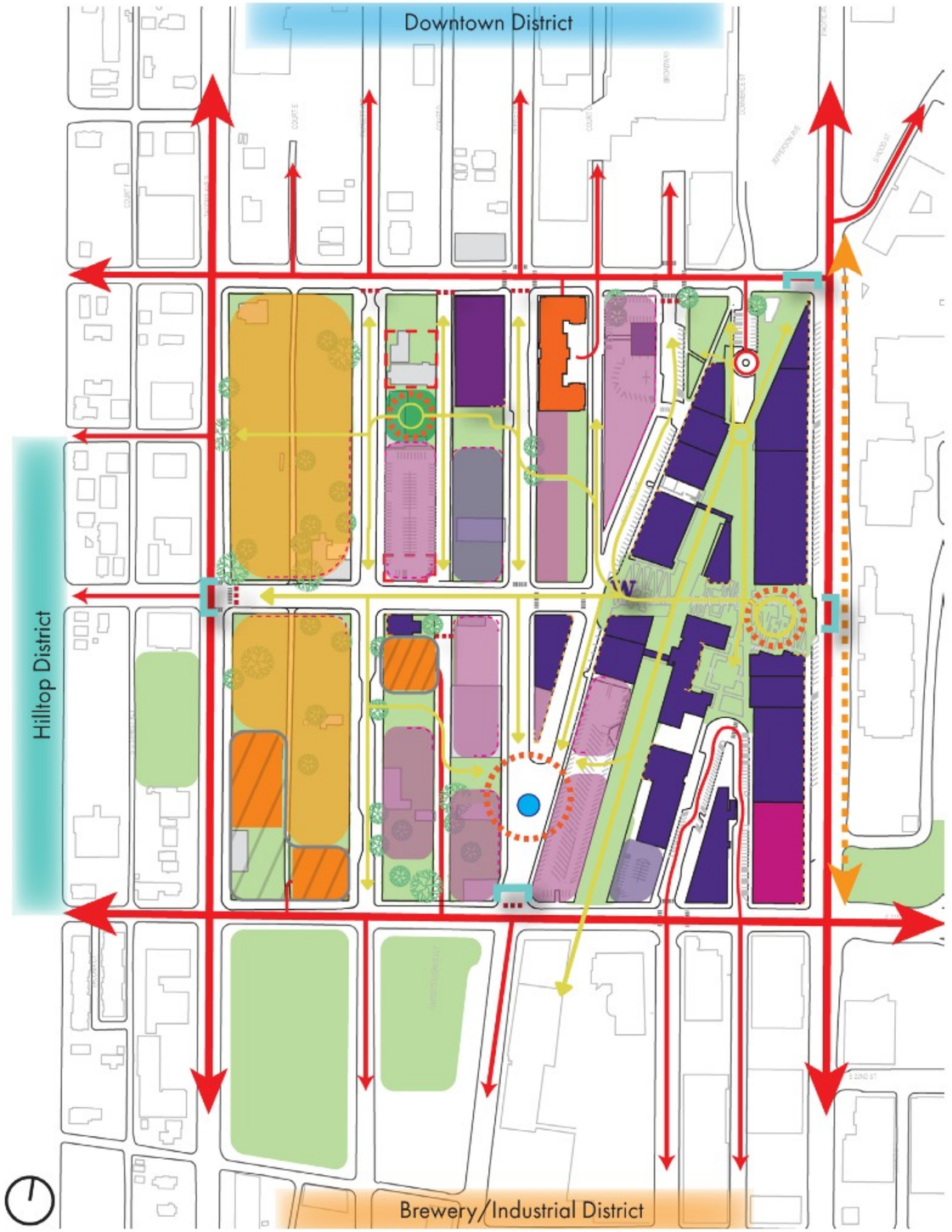
Proposed Land Use

- Proposed Green Space
- Proposed Student Housing
- Proposed Institutional
- Proposed Student Activity Use
- Proposed Blue Space
- Gateway
- Node
- Bollard
- Active Edge

Existing Land Use

- Green Space
- Existing Non-UWT Building
- Existing Institutional
- Existing Student Housing
- Existing Student Activity Use
- Private M.F. Development
- Existing Commercial

By removing automobile traffic, improving student mobility, and creating stronger ties across the urban campus, this UW Tacoma campus design re-imagines the campus as a completely walkable environment. The design incorporates green spaces that encourage student engagement, relaxation, and accessibility, drawing inspiration from case studies of small, pedestrian-friendly places. This plan offers alternate routes that promote both peaceful retreat and social interaction, drawing inspiration from small-scale open spaces that have proven successful. The university's objective of doubling full-time enrollment is supported by new residential structures that further liven up the campus while promoting a vibrant, sustainable, and easily accessible setting that is suited to the demands of the students.



Benjamin Smith | University of Washington Tacoma | Senior Urban Design Capstone | 24 March 2025

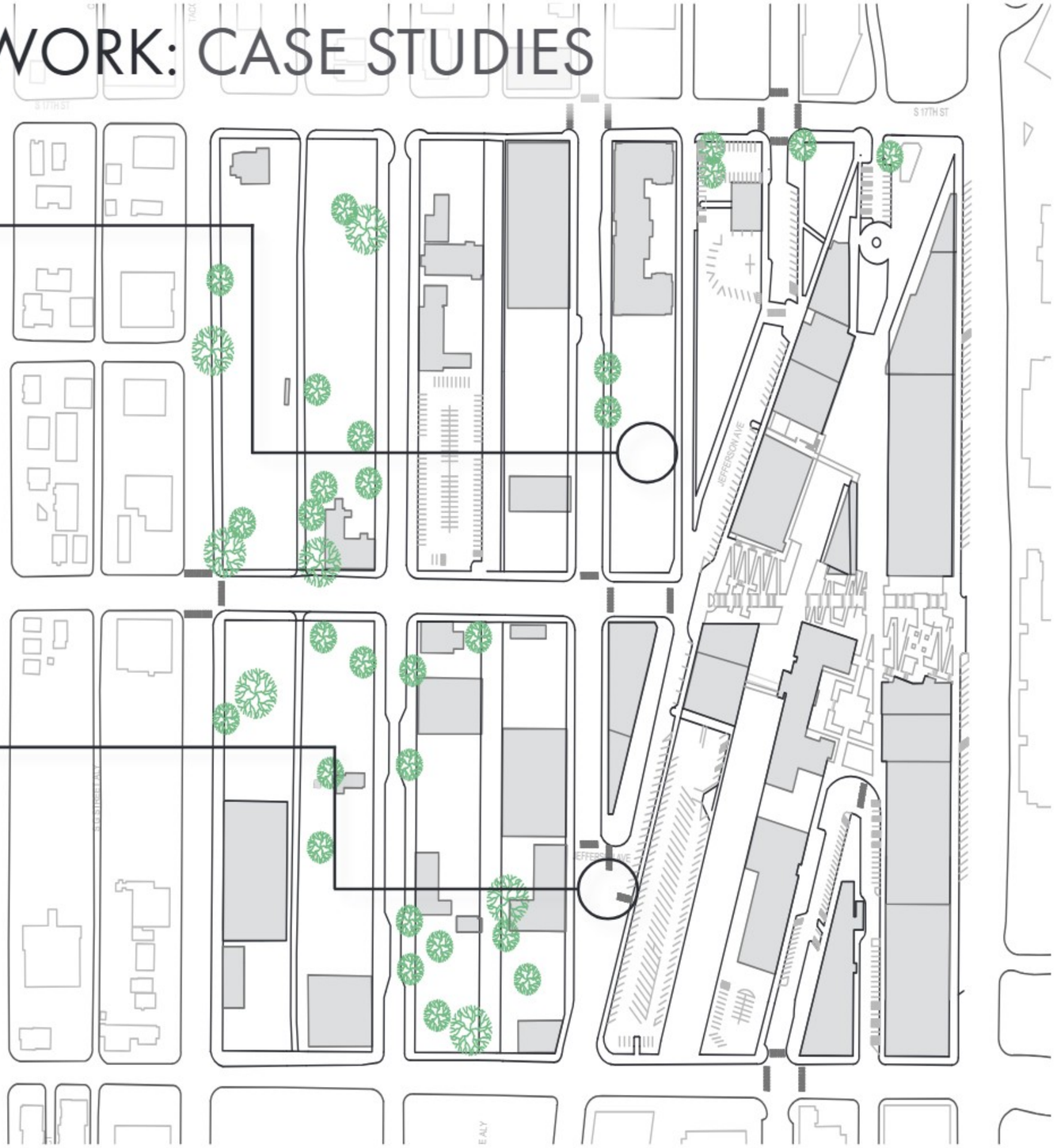
BENJAMIN SMITH

Precedents

URBAN DESIGN FRAMEWORK: CASE STUDIES

Teardrop Park
New York, New York
This park in lower Manhattan provides lots of pedestrian pathways as well as maintaining green space throughout it. This space was designed for pedestrians and passive recreation. There are also areas for pedestrians to sit and/or rest.

Centennial Fountain (Seattle University)
Seattle, Washington
This location on Seattle University's campus provides students with a relaxing space to gather and socialize. There is available seating around the area for individuals to sit. It also serves as a node on campus where people meet and gather.



Rendered Site Proposal

Existing Building

Proposed Building

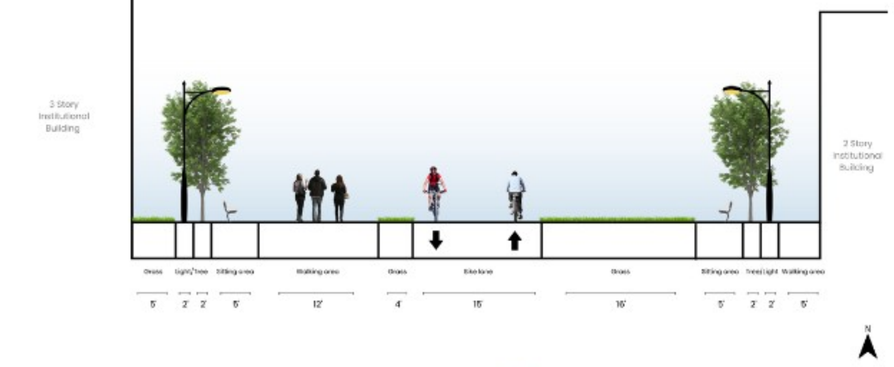
Pedestrian Pathway

BENJAMIN SMITH

Street Sections

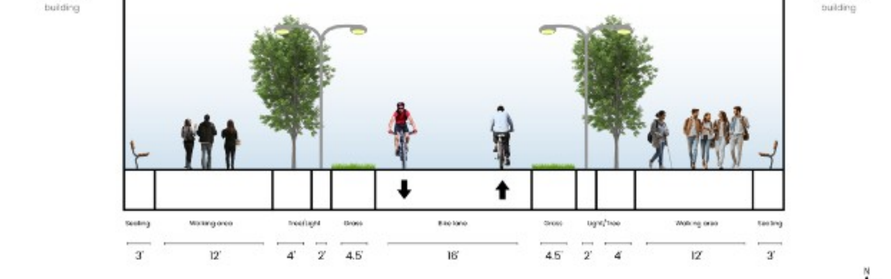
Jefferson Ave. (Proposed)

75'



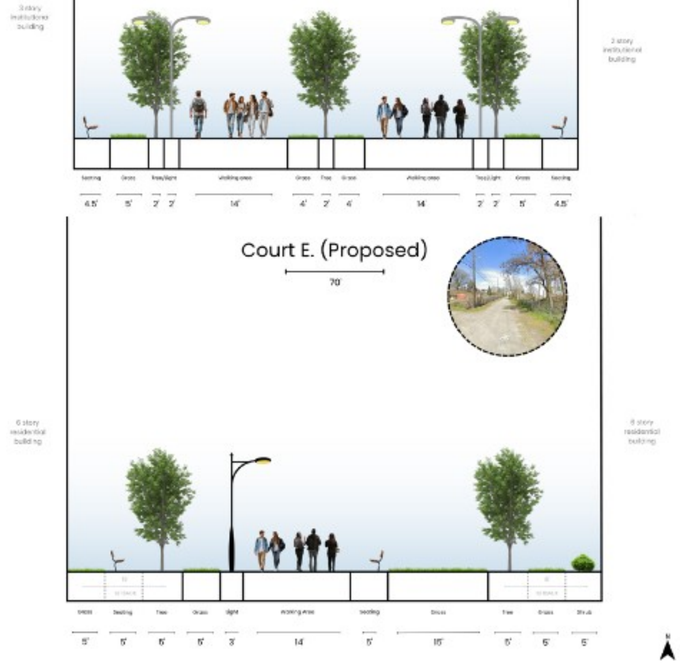
Market St. (Proposed)

87'



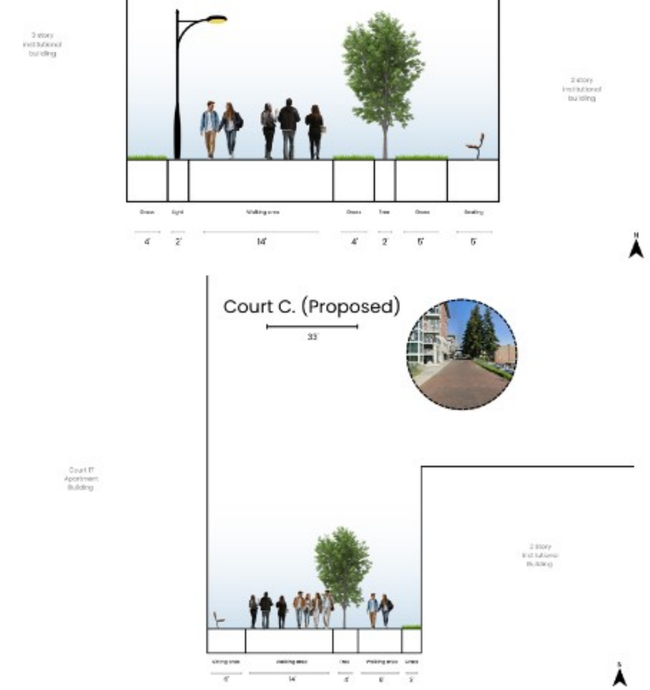
S 19th St. (Proposed)

85'



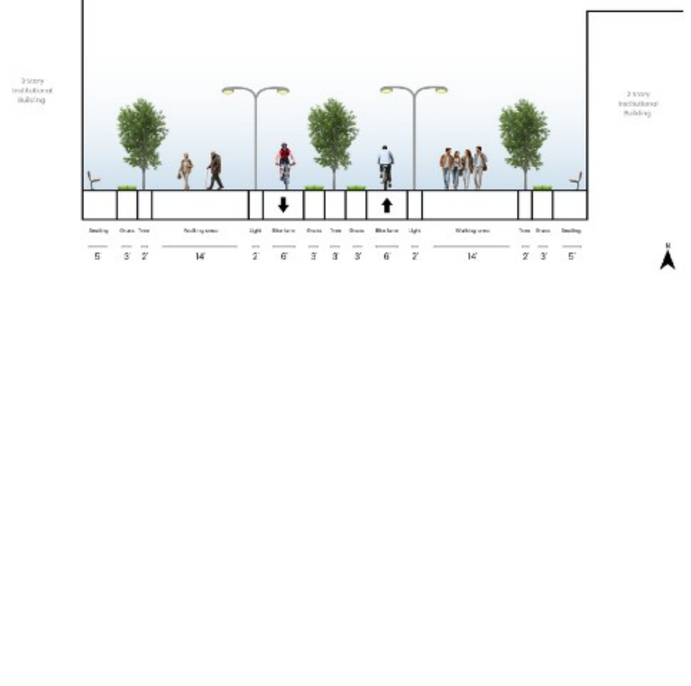
S Court D St. [North](Proposed)

38'



Fawcett Ave. (Proposed)

79'



Court E. (Proposed)

70'

Court C. (Proposed)

33'

CIVIL ENGINEERING COLLABORATION POSTER

Civil Engineering & Urban Design, Spring 2025

UWT CollabCapstone

Urban Design Collaborator(s):
Benjamin Smith

Expert advisor(s):
Bára Šafářová, Nara Almeida

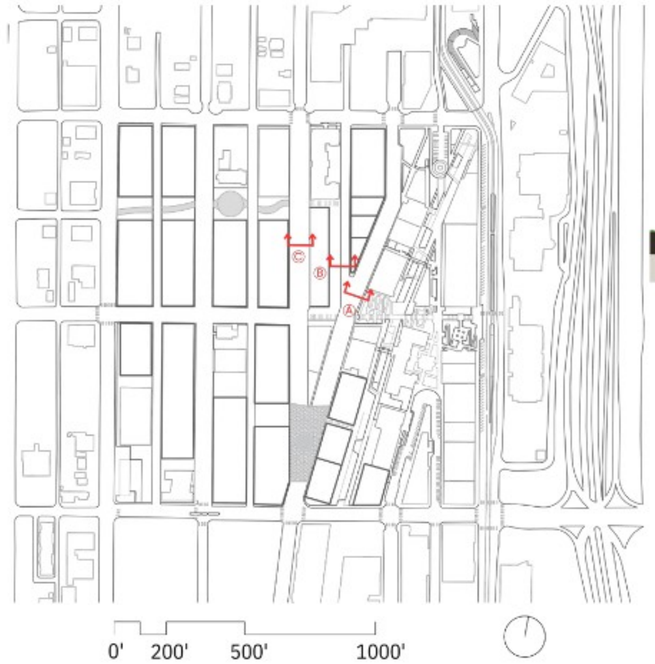
Student: Alexander Robins
Site: Jefferson Ave., Market St., Court C

Problem statement

The core objective of this project is to pedestrianize Jefferson Avenue, Market Street, and Court C within the UW Tacoma campus area. These streets currently function as vehicular corridors despite their location in the heart of a growing university district. There is a significant lack of safe, dedicated space for students and pedestrians to walk, particularly during peak hours when foot traffic is highest.

The existing streetscape prioritizes cars over people, resulting in narrow or disconnected sidewalks, limited crosswalks, and unsafe pedestrian conditions. This project aims to transform these roads into fully walkable, student-centered corridors that support safety, accessibility, and a vibrant campus experience. Pedestrianization will not only improve circulation and comfort but also align the physical environment with the university's long-term goals of sustainability, urban livability, and community integration.

Proposed Site Plan



Existing and Proposed Street Sections

A

Jefferson Ave. (Existing)

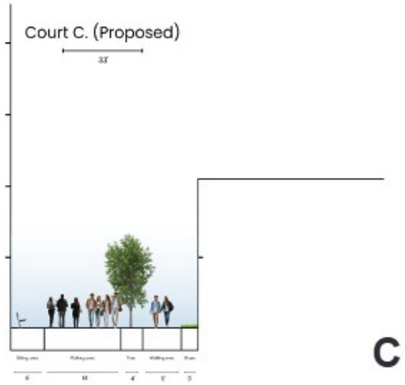
Jefferson Ave. (Proposed)

Jefferson Street from Broadway to 17th Street						
Area Description	Variables	Score Weight	Current Scores	Current Weighted	Expected Scores	Expected Weighted
Urban Tissue	Pedestrian Surface Quality (PSQ):	8	3	0.24	3	0.24
	Sidewalk Existence:	6	2.5	0.15	3	0.18
	Sidewalk Width:	6	2.5	0.15	3	0.18
	Traffic Street Intersections (TSI):	12	1	0.12	3	0.36
	Existence of Stairs:	8	3	0.24	3	0.24
	Existence of Obstacles (EoS):	12	3	0.36	3	0.36
	Land Use Mix (LUM):	8	1	0.08	1	0.08
Urban Scene	Existence of Trees/Vegetation (ETV):	8	2	0.16	3	0.24
	Existence of Urban Furniture (EUF):	8	2	0.16	3	0.24
Safety	Street Lighting Quality (SLQ):	12	2	0.24	3	0.36
	Diversity of Information Signs (DIS):	12	1	0.12	3	0.36
Overall	Index of Space Suitable for Walking	100	23	2.02	31	2.84
	Slope Score	N/A	1	N/A	1	N/A
	Total Score			2.02		2.84
	Walkability Value			64.36%		94.18%
	Improvement					46.33%

B

Court C (Existing)

Court C. (Proposed)



Court C from Jefferson Avenue to 17th Street						
Area Description	Variables	Score Weight	Current Scores	Current Weighted	Expected Scores	Expected Weighted
Urban Tissue	Pedestrian Surface Quality (PSQ):	8	2	0.16	3	0.24
	Sidewalk Existence:	6	2	0.12	3	0.18
	Sidewalk Width:	6	2.5	0.15	3	0.18
	Traffic Street Intersections (TSI):	12	2	0.24	3	0.36
	Existence of Stairs:	8	3	0.24	3	0.24
	Existence of Obstacles (EoS):	12	3	0.36	3	0.36
	Land Use Mix (LUM):	8	3	0.24	3	0.24
Urban Scene	Existence of Trees/Vegetation (ETV):	8	2	0.16	3	0.24
	Existence of Urban Furniture (EUF):	8	1	0.08	3	0.24
Safety	Street Lighting Quality (SLQ):	12	2	0.24	3	0.36
	Diversity of Information Signs (DIS):	12	1	0.12	3	0.36
Overall	Index of Space Suitable for Walking	100	23.5	2.11	33	3
	Slope Score	N/A	1	N/A	1	N/A
	Total Score			2.11		3.00
	Walkability Value			67.64%		100.00%
	Improvement					47.55%

1: bad, 2: acceptable, 3: good
1: N/A, 1.5: one/both sides partial, 2: one side continuous, 2.5: one side continuous, one partial, 3: both continuous
1: SW<0.90m, 1.5: 0.90m ≤ SW<1.20m, 2: 1.20m≤SW<1.50m, 2.5: 1.50 m≤SW<1.80m, 3: SW≥1.80m,
1: 2+, 2: 1 or 2, 3: no intersections
1: 2+ stairs, 2: 1 or 2 stairs, 3: no stairs
1: asymmatically affects walking, 2: occasionally affects walking, 3: no obstacles
1: no land use mix, 2: medium land use mix (2+ different uses), 3: high land use mix (3+ different uses)
1: no trees/vegetation, 2: moderate existence of trees/vegetation, 3: strong existence of trees/vegetation
1: no urban furniture, 2: moderate existence of urban furniture, 3: strong existence of urban furniture
1: bad, 2: acceptable, 3: good
1: low, 2: medium, 3: high
Results will be between 1 and 3
1: S<5%, no stairs, 2: S=5%, few steps/stairs, 3: 5%<S<8%, stairs/many steps, 4: S=8%, stairs/many steps
Scores will be between 0.25 (terrible) and 3 (excellent)
Scores will be between 0% (terrible) and 100% (excellent)

C

Market St. (Existing)

Market Street from 21st to 17th						
Area Description	Variables	Score Weight	Current Scores	Current Weighted	Expected Scores	Expected Weighted
Urban Tissue	Pedestrian Surface Quality (PSQ):	8	3	0.24	3	0.24
	Sidewalk Existence:	6	3	0.18	3	0.18
	Sidewalk Width:	6	3	0.18	3	0.18
	Traffic Street Intersections (TSI):	12	1	0.12	3	0.36
	Existence of Stairs:	8	3	0.24	3	0.24
	Existence of Obstacles (EoS):	12	3	0.36	3	0.36
	Land Use Mix (LUM):	8	3	0.24	3	0.24
Urban Scene	Existence of Trees/Vegetation (ETV):	8	2	0.16	3	0.24
	Existence of Urban Furniture (EUF):	8	2	0.16	3	0.24
Safety	Street Lighting Quality (SLQ):	12	3	0.36	3	0.36
	Diversity of Information Signs (DIS):	12	2	0.24	3	0.36
Overall	Index of Space Suitable for Walking	100	28	2.48	33	3
	Slope Score	N/A	1	N/A	1	N/A
	Total Score			2.48		3.00
	Walkability Value			81.09%		100.00%
	Improvement					23.32%

Market St. (Proposed)

Collaboration Poster with Civil Engineer. Courtesy of Alexander Robins and Benjamin Smith