# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABOUT LIVABLE CITY YEAR</td>
<td>01</td>
</tr>
<tr>
<td>ABOUT TACOMA</td>
<td>02</td>
</tr>
<tr>
<td>TACOMA 2025 STRATEGIC PLAN</td>
<td>03</td>
</tr>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>05</td>
</tr>
<tr>
<td>BACKGROUND</td>
<td>07</td>
</tr>
<tr>
<td>20-MINUTE NEIGHBORHOOD</td>
<td>09</td>
</tr>
<tr>
<td>RESILIENCE</td>
<td>10</td>
</tr>
<tr>
<td>TRANSIT</td>
<td>13</td>
</tr>
<tr>
<td>GREENWATER INFRASTRUCTURE</td>
<td>15</td>
</tr>
<tr>
<td>LEGIBILITY AND WAYFINDING</td>
<td>19</td>
</tr>
<tr>
<td>MOBILITY AND RIGHT-OF-WAY</td>
<td>21</td>
</tr>
<tr>
<td>BICYCLE</td>
<td>22</td>
</tr>
<tr>
<td>PEDESTRIAN</td>
<td>23</td>
</tr>
<tr>
<td>TRANSIT</td>
<td>25</td>
</tr>
<tr>
<td>BUILT FORM</td>
<td>27</td>
</tr>
<tr>
<td>HISTORIC BUILT FORM</td>
<td>29</td>
</tr>
<tr>
<td>BLOCK TYPOLOGY AND ADAPTABILITY</td>
<td>35</td>
</tr>
<tr>
<td>FACADES</td>
<td>39</td>
</tr>
<tr>
<td>PUBLIC SPACE ACTIVATION</td>
<td>41</td>
</tr>
<tr>
<td>FLUX SPACE</td>
<td>43</td>
</tr>
<tr>
<td>ALLEYWAYS</td>
<td>45</td>
</tr>
<tr>
<td>INTANGIBLE HERITAGE PRESERVATION PROCESSES</td>
<td>43</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>45</td>
</tr>
</tbody>
</table>

**ACKNOWLEDGMENTS**

We would like to thank the City of Tacoma for providing this unique opportunity for students of the UW Urban Design and Planning program to learn, practice, and refine our urban design thinking and representation. In particular, we would like to thank Lauren Flemister, Senior Planner for the City of Tacoma and the LCY City contact for our project, for her valuable support, guidance, and feedback to students throughout the quarter. Leading us on a bus tour of three Tacoma neighborhoods, as well as making multiple trips to Seattle to review our projects and offer feedback, Lauren’s time and energy greatly contributed to the depth of our learning and the quality of our work. Mackenzie Winter, instructor of URBDP 573 Digital Design Program at UW, also offered helpful critique and direction, particularly regarding ways we could improve our graphic representation. Finally, we would like to thank those who listened, asked questions, and provided feedback at our final presentation in Tacoma. Each of your contributions strengthened our projects and fostered a positive, fruitful, and memorable learning experience — we are extremely grateful.

Lauren Flemister, Planning and Development Services
Stephen Atkinson, Planning and Development Services
Daniel Mulkis, Community and Economic Development, Housing Division
Maureen Fife, Tacoma-Pierce County Habitat for Humanity
Josh Jorgensen, Tacoma Housing Authority
Luke Sturgeon, Tacoma-Pierce County Health Department
Jeff Dado, Sound Outreach

**CREDITS**

For this report
City of Tacoma Project Lead
Lauren Flemister
Instructor: Dan Abramson
Student Author: Laura Durgerian

For the City of Tacoma
Mayor (2018 – Present)
Victoria Woodards
City Manager: Elizabeth Pauli
LCY Program Managers
Tanisha Jumper
Stephen Atkinson
Lauren Flemister
LCY Liaison: Chris Bell

For the University of Washington LCY Program
LCY Faculty Co-Directors
Branden Born
Jennifer Otten
Anne Taufen
Program Manager: Teri Thomson Randall
Editor: Evan H. Carver
Copy Editor: Stephanie Rodriguez
Graphic Designers: Ka Van (Karen) Lee
Communications
Daimon Eklund
Claudia Frere-Anderson

Permission to use: This report represents original student work and recommendations prepared by students in the University of Washington Livable City Year Program for the City of Tacoma. Text and images contained in this report may be used for not-for-profit purposes.

ABOUT LIVABLE CITY YEAR

The University of Washington's Livable City Year (LCY) initiative enables local governments to engage UW faculty and students for one academic year to work on city-defined projects that promote local sustainability and livability goals. The program engages hundreds of students each year in high-priority projects, creating momentum on real-world challenges while enabling the students to serve and learn from communities. Partner cities benefit directly from bold and applied ideas that propel fresh thinking, improve livability for residents and invigorate city staff. Focus areas include environmental sustainability, economic viability, population health, and social equity, inclusion, and access. The program's 2017–2018 partner is the City of Tacoma; this follows a partnership with the City of Auburn in 2016–2017.

The LCY program is led by faculty directors Branden Born (Department of Urban Design and Planning), Jennifer Otten (School of Public Health) and Anne Taufen (Urban Studies Program, UW Tacoma), with support from Program Manager Teri Thomson Randall. The program was launched in 2016 in collaboration with UW Sustainability and Urban@UW, with foundational support from the Association of Washington Cities, the College of Built Environments, the Department of Urban Design and Planning, and Undergraduate Academic Affairs.

LCY is modeled after the University of Oregon's Sustainable City Year Program, and is a member of the Educational Partnerships for Innovation in Communities Network (EPIC-N), the collection of institutions that have successfully adopted this new model for community innovation and change.

For more information, contact the program at uwlcy@uw.edu.

ABOUT TACOMA

The third largest city in the state of Washington, Tacoma is a diverse, progressive, international gateway to the Pacific Rim. The port city of nearly 210,000 people has evolved considerably over the last two decades, propelled by significant development including the University of Washington Tacoma, the Tacoma Link light rail system, the restored urban waterfront of the Thea Foss Waterway, the expansions of both the MultiCare and CHI Franciscan health systems, and a significant influx of foreign direct investment in its downtown core.

Washington State's highest density of art and history museums are found in Tacoma, which is home to a flourishing creative community of writers, artists, musicians, photographers, filmmakers, chefs, entrepreneurs, and business owners who each add their unique flair to the city's vibrant commercial landscape. The iconic Tacoma Dome has endured as a high-demand venue for some of the largest names in the entertainment industry.

A magnet for families looking for affordable single-family homes in the Puget Sound area, Tacoma also draws those seeking a more urban downtown setting with competitively priced condos and apartments that feature panoramic mountain and water views. The city's natural beauty and proximity to the Puget Sound and Mount Rainier draws hikers, runners, bicyclists, and maritime enthusiasts to the area, while its lively social scene is infused with energy by thousands of students attending the University of Washington Tacoma and other academic institutions.

The City of Tacoma's strategic plan, Tacoma 2025, was adopted in January 2015 following unprecedented public participation and contribution. The plan articulates the City's core values of opportunity, equity, partnerships, and accountability, and expresses the City's deep commitment to apply these values in all of its decisions and programming. Each Livable City Year project ties into the principles and focus areas of this strategic plan. The City of Tacoma is proud of its 2017–2018 Livable City Year partnership with the University of Washington and of the opportunity this brings to its residents.
The Urban Design Program Graphics Package project supports the Livability goal of the Tacoma 2025 Strategic Plan and was sponsored by the City’s Planning and Development Services Department.

Goal #1 Livability
The City of Tacoma will be a city of choice in the region known for connected neighborhoods, accessible and efficient transportation transit options, and vibrant arts and culture. Residents will be healthy and have access to services and community amenities while maintaining affordability.

Goal #2 Economy and Workforce
By 2025, Tacoma will be a growing economy where Tacoma residents can find livable wage jobs in key industry areas. Tacoma will be a place of choice for employers, professionals, and new graduates.

Goal #3 Education
Tacoma will lead the region in educational attainment amongst youth and adults. In addition to producing more graduates from high school and college, more college graduates will find employment in the region. Lifelong learning and access to education will be prioritized and valued.

Goal #4 Civic Engagement
Tacoma residents will be engaged participants in making Tacoma a well-run city. The leadership of the city, both elected and volunteer, will reflect the diversity of the city and residents and will fully participate in community decision-making.

Goal #5 Equity and Accessibility
Tacoma will ensure that all residents are treated equitably and have access to services, facilities, and financial stability. Disaggregated data will be used to make decisions, direct funding, and develop strategies to address disparate outcomes.

RESOURCES
Tacoma 2025 Strategic Plan: https://www.cityoftacoma.org/tacoma_2025
Department of Planning and Development Services: https://www.cityoftacoma.org/government/city_departments/planning_and_development_services
Livable City Year: https://www.washington.edu/livable-city-year/
University of Washington Urban Design and Planning: http://urbdp.bis.washington.edu/
This project was developed as part of Livable City Year, a cooperative endeavor between the City of Tacoma and the University of Washington. The City of Tacoma requested a graphics package that explains basic concepts of urban design – including zoning, land use, and other spatial planning concepts – to the public using maps, diagrams, sketches, photographs and infographics. The graphics package presented here shows different aspects of the public realm in the context of three Tacoma neighborhoods: Hilltop, Proctor, and South Tacoma. While some graphics represent broader pedestrian, bicycle and transit networks at a citywide scale, others address factors like resilience, green infrastructure, access and identity at the scale of a 20-minute walk radius around mixed-use neighborhood centers. Other graphics consider an even closer site scale, illustrating block typologies, concepts of right-of-way and alley design, façade treatment, and activation of under-utilized spaces.

Finally, some graphics provide a visual representation of a process, for example, how one might change a public space such that it retains the intangible heritage of a neighborhood, or affords temporary uses. Ultimately, these graphics intend to inspire creative contextual problem-solving and non-prescriptively guide the future development of the public realm in Tacoma. We hope that the City of Tacoma may use them to support future urban design initiatives.
To enhance the roll-out of The City of Tacoma’s Urban Design Program in 2018, the City partnered with a graduate urban design course at the University of Washington, as part of the Livable City Year program, in order to create a graphics package. The City of Tacoma requested graphics to explain basic concepts of urban design, including maps, diagrams, sketches, photographs, and infographics. The UW group chose to focus on best design practices for a healthy, vital, and resilient urban public realm, especially in the “20-minute neighborhood” walking radius of three of Tacoma’s emerging “mixed-use corridors”: Proctor, at N 26th St.; Hilltop, along MLK Jr. Way, between Kaiser Permanente and St. Joseph Medical Centers; and along South Tacoma Way near the Sounder commuter train station. From an urban development perspective, these neighborhoods embody the challenges of accommodating growth and investment while also protecting and amplifying community and neighborhood character. The UW group also considered ways to enhance environments for pedestrian, bicycle, and transit. While the product delivered to the City was a graphics collection, this document summarizes and describes the graphic content for a wider audience.

INTRODUCTION

City of Tacoma planner Stephen Atkinson reviews student work during the final presentation on June 7, 2018. TERI THOMSON RANDALL
INTRODUCTION
A 20-minute neighborhood provides access to most of one’s daily needs without requiring a car; schools, grocery stores, local/regional businesses, healthcare, libraries and connections to many different modes of transit are all within walking distance. Particularly in the context of community building and social resilience, the concept of the 20-minute neighborhood represents an opportunity to envision places where people feel welcome, supported, and able to live, work and play far into the future. Using the Hilltop, Proctor and South Tacoma neighborhoods as examples, we consider the ways in which resilience, access, identity and belonging can be intentionally cultivated within the existing fabric, nurturing each place’s potential as a 20-minute neighborhood.

RESILIENCE
Resilience is the capacity not only to recover after disruptive events, but also to adapt and grow stronger in the face of community challenges. Resilience has physical, social, and emotional dimensions, often requiring creative and collaborative thinking to understand and address big-picture vulnerabilities and opportunities. This project explores strategies for resilience and the potential to provide multiple benefits within the different types of space found in the 20-minute neighborhood.

SAFE GROUND
Simple arrows and painted ground markings can identify safe spots for people to gather in the event of an emergency.

HEALTH RESOURCE HUBS
Buildings housing hospitals, such as churches, community centers, and schools, would enable efficient centers for emergency operations due to their available space and proximity to health services.

PARKING PLACES
Open spaces for people to gather in the existing fabric and potentially serve as an infrastructure makes neighborhood parks prime locations for safe zones in the event of an emergency.

SCHOOL FOOD PRODUCTION
With open space and an existing social fabric, school playgrounds and adjacent open spaces can serve as community gardens to increase food resilience.

STORMWATER INFRASTRUCTURE
Facilitating the landscape and area well-suited to stormwater infiltration, storage, and treatment can enable slow growth of a stormwater system of solar power. More resilient, decentralized systems can enable creative programming.

SOLAR ORIENTATION
Orienting buildings to take advantage of solar exposure from the south and west can enable microclimates. Multiple buildings can create a more resilient, decentralized system of solar power.

INTEGRATED WATER SYSTEMS
Green roofs provide another opportunity to deal with stormwater at a community scale. See GSI for more strategies.

EMERGENCY COMMUNICATION
Communication about preparedness and emergency preparedness can increase resilience to severe events. The Hilltop, Proctor and South Tacoma neighborhoods enable critical infrastructure to store water, fuel, and food, reducing the overall impact on the community.

PUBLIC SOCIAL SEATING
Comfortable and social seating should be available for residents and groups to create spaces for chance encounters and shared experiences.

CHURCH COLLABORATION
Maximize the ability of faith-based institutions to support their communities through enhanced connection to public services and to one another.

VALUES FOR EXCHANGE
Vacant or open land offers an opportunity for temporary installations and activities, including protests, markets, fairs, and exhibits.

EMERGENCY ROUTES
Clear emergency routes provide a unique opportunity to look into and out from a neighboring neighborhood.

IDENTITY REINFORCEMENT
Public and private spaces can serve as points of reference in a changing community. Roofs offer a unique opportunity to look into and out from a neighborhood.

CLEAR EMERGENCY ROUTES
Neighborhoods should have clear, simple pathways to hospitals within the health centers, as well as points of reference in the surrounding neighborhoods.

STREET TREES
Street trees and other plantings improve air quality, nesting behavior, heat islands, and increase feedback for flood resilience.
Layered Resilience Strategies: Co-Benefits In Context

LAURA DURGERIAN

100% corner at S 11th Street and MLK Jr Way looking south
DAT NGUYEN

100% corner at S 11th Street and MLK Jr Way looking north
DAT NGUYEN

S 56th Street looking & S Pine Street.
DAT NGUYEN

Unknown location
DAT NGUYEN

S 56th Street & S Washington Street looking west
CANON ZOU

N Proctor Street between N 26th & 27th Streets looking east
XUWU PAN

100% corner at N 26th Street and N Proctor Street from southeast
XUWU PAN

N 21st Street & N Adams Street looking south
XUWU PAN

100% corner at N 26th Street & N Proctor Street from northeast
XUWU PAN

S 56th Street & S Washington Street looking north
SEYLA SREENIVASAN
**WHY 20 MINUTES?**
A 20-minute neighborhood allows individuals to fulfill most daily needs within a 20-minute walkshed of a central point in the neighborhood. Building off of this concept, we explored the idea at multiple scales, specifically around a 1-minute walking radius of bus stops, a 5-minute walking radius of light rail stops, and a 10-minute walking radius of commuter rail stops. A complex system of transit stops that are well equipped and integrated into the community can enhance access and amenity in a 20-minute neighborhood. In this way, combining transit with other needs provides the City with another tool to implement their goals of more walkable, resilient communities. Diagrams show a 20 minute walking radius in the Proctor, Hilltop, and South Tacoma contexts, with 1, 5, and 10 minute walksheds of every current and future transit stop mapped for each neighborhood. The dashed line indicates a mixed-use zone, with the light green indicating transit walksheds within them. These transit walksheds within mixed-use zones show the City of Tacoma where transit investments will have the largest impact in fostering a 20-minute neighborhood.

**WHY 1 MINUTE?**
A 1-minute walk is an ideal distance for grabbing a coffee or newspaper while walking for a bus or making a transfer.

**WHY 5 MINUTES?**
A 5-minute walk is a preferred distance for the shopping a corner store, renting a bike, or transferring between transit modes.

**WHY 10 MINUTES?**
A 10-minute walk is an ideal distance for exploring a park, stopping by a grocery store, or connecting to a commuter rail for a trip through town.

**Why 20 minutes?**
A 20-minute neighborhood allows individuals to fulfill most daily needs within a 20-minute walkshed of a central point in the neighborhood. Building off of this concept, we explored the idea at multiple scales, specifically around a 1-minute walking radius of bus stops, a 5-minute walking radius of light rail stops, and a 10-minute walking radius of commuter rail stops. A complex system of transit stops that are well equipped and integrated into the community can enhance access and amenity in a 20-minute neighborhood. In this way, combining transit with other needs provides the City with another tool to implement their goals of more walkable, resilient communities. Diagrams show a 20 minute walking radius in the Proctor, Hilltop, and South Tacoma contexts, with 1, 5, and 10 minute walksheds of every current and future transit stop mapped for each neighborhood. The dashed line indicates a mixed-use zone, with the light green indicating transit walksheds within them. These transit walksheds within mixed-use zones show the City of Tacoma where transit investments will have the largest impact in fostering a 20-minute neighborhood.

**Why 1 minute?**
A 1-minute walk is an ideal distance for grabbing a coffee or newspaper while walking for a bus or making a transfer.

**Why 5 minutes?**
A 5-minute walk is a preferred distance for the shopping a corner store, renting a bike, or transferring between transit modes.

**Why 10 minutes?**
A 10-minute walk is an ideal distance for exploring a park, stopping by a grocery store, or connecting to a commuter rail for a trip through town.

**Why 20 minutes?**
A 20-minute neighborhood allows individuals to fulfill most daily needs within a 20-minute walkshed of a central point in the neighborhood. Building off of this concept, we explored the idea at multiple scales, specifically around a 1-minute walking radius of bus stops, a 5-minute walking radius of light rail stops, and a 10-minute walking radius of commuter rail stops. A complex system of transit stops that are well equipped and integrated into the community can enhance access and amenity in a 20-minute neighborhood. In this way, combining transit with other needs provides the City with another tool to implement their goals of more walkable, resilient communities. Diagrams show a 20 minute walking radius in the Proctor, Hilltop, and South Tacoma contexts, with 1, 5, and 10 minute walksheds of every current and future transit stop mapped for each neighborhood. The dashed line indicates a mixed-use zone, with the light green indicating transit walksheds within them. These transit walksheds within mixed-use zones show the City of Tacoma where transit investments will have the largest impact in fostering a 20-minute neighborhood.

**Why 1 minute?**
A 1-minute walk is an ideal distance for grabbing a coffee or newspaper while walking for a bus or making a transfer.

**Why 5 minutes?**
A 5-minute walk is a preferred distance for the shopping a corner store, renting a bike, or transferring between transit modes.

**Why 10 minutes?**
A 10-minute walk is an ideal distance for exploring a park, stopping by a grocery store, or connecting to a commuter rail for a trip through town.

**Why 20 minutes?**
A 20-minute neighborhood allows individuals to fulfill most daily needs within a 20-minute walkshed of a central point in the neighborhood. Building off of this concept, we explored the idea at multiple scales, specifically around a 1-minute walking radius of bus stops, a 5-minute walking radius of light rail stops, and a 10-minute walking radius of commuter rail stops. A complex system of transit stops that are well equipped and integrated into the community can enhance access and amenity in a 20-minute neighborhood. In this way, combining transit with other needs provides the City with another tool to implement their goals of more walkable, resilient communities. Diagrams show a 20 minute walking radius in the Proctor, Hilltop, and South Tacoma contexts, with 1, 5, and 10 minute walksheds of every current and future transit stop mapped for each neighborhood. The dashed line indicates a mixed-use zone, with the light green indicating transit walksheds within them. These transit walksheds within mixed-use zones show the City of Tacoma where transit investments will have the largest impact in fostering a 20-minute neighborhood.

**Why 1 minute?**
A 1-minute walk is an ideal distance for grabbing a coffee or newspaper while walking for a bus or making a transfer.

**Why 5 minutes?**
A 5-minute walk is a preferred distance for the shopping a corner store, renting a bike, or transferring between transit modes.

**Why 10 minutes?**
A 10-minute walk is an ideal distance for exploring a park, stopping by a grocery store, or connecting to a commuter rail for a trip through town.

**Why 20 minutes?**
A 20-minute neighborhood allows individuals to fulfill most daily needs within a 20-minute walkshed of a central point in the neighborhood. Building off of this concept, we explored the idea at multiple scales, specifically around a 1-minute walking radius of bus stops, a 5-minute walking radius of light rail stops, and a 10-minute walking radius of commuter rail stops. A complex system of transit stops that are well equipped and integrated into the community can enhance access and amenity in a 20-minute neighborhood. In this way, combining transit with other needs provides the City with another tool to implement their goals of more walkable, resilient communities. Diagrams show a 20 minute walking radius in the Proctor, Hilltop, and South Tacoma contexts, with 1, 5, and 10 minute walksheds of every current and future transit stop mapped for each neighborhood. The dashed line indicates a mixed-use zone, with the light green indicating transit walksheds within them. These transit walksheds within mixed-use zones show the City of Tacoma where transit investments will have the largest impact in fostering a 20-minute neighborhood.

**Why 1 minute?**
A 1-minute walk is an ideal distance for grabbing a coffee or newspaper while walking for a bus or making a transfer.

**Why 5 minutes?**
A 5-minute walk is a preferred distance for the shopping a corner store, renting a bike, or transferring between transit modes.

**Why 10 minutes?**
A 10-minute walk is an ideal distance for exploring a park, stopping by a grocery store, or connecting to a commuter rail for a trip through town.

**Why 20 minutes?**
A 20-minute neighborhood allows individuals to fulfill most daily needs within a 20-minute walkshed of a central point in the neighborhood. Building off of this concept, we explored the idea at multiple scales, specifically around a 1-minute walking radius of bus stops, a 5-minute walking radius of light rail stops, and a 10-minute walking radius of commuter rail stops. A complex system of transit stops that are well equipped and integrated into the community can enhance access and amenity in a 20-minute neighborhood. In this way, combining transit with other needs provides the City with another tool to implement their goals of more walkable, resilient communities. Diagrams show a 20 minute walking radius in the Proctor, Hilltop, and South Tacoma contexts, with 1, 5, and 10 minute walksheds of every current and future transit stop mapped for each neighborhood. The dashed line indicates a mixed-use zone, with the light green indicating transit walksheds within them. These transit walksheds within mixed-use zones show the City of Tacoma where transit investments will have the largest impact in fostering a 20-minute neighborhood.

**Why 1 minute?**
A 1-minute walk is an ideal distance for grabbing a coffee or newspaper while walking for a bus or making a transfer.

**Why 5 minutes?**
A 5-minute walk is a preferred distance for the shopping a corner store, renting a bike, or transferring between transit modes.

**Why 10 minutes?**
A 10-minute walk is an ideal distance for exploring a park, stopping by a grocery store, or connecting to a commuter rail for a trip through town.
GREEN INFRASTRUCTURE
While the City of Tacoma has already conducted extensive research on techniques for green stormwater management, the conceptual strategy suggested here would allow better integration of the green stormwater infrastructure into the city’s existing conditions. Presented here are: (i) a flowchart showing the various aspects that would be worth exploring in connection to conventional green stormwater management approaches; (ii) a basic framework for the design, administration, implementation and monitoring of effective GSI; and (iii) a sample toolkit to organize existing and potential innovative green stormwater techniques. Effectively incorporating the urban form aspects of the Green Stormwater Infrastructure strategy can help foster a sense of identity at the 20-minute neighborhood scale while creating opportunities for public participation. Addressing stormwater management in the 20-minute context by designing neighborhood-specific programs fosters trust between members of the public and affords potential economic resource generation. An example is Neighborhood Matching funds.

What Would the Future Be Like?
The occurrence of heavy downpours in the Pacific Northwest has increased by 12%. In the Seattle-Tacoma area, the magnitude of a 24-hour storm is projected to increase 14-28% during the next 50 years. In the light of such predictions by the climate models, would the existing design for storm standards prove sufficient? If not, how are we going to step up our game? How do we get ahead of this changing climate scenario?

HOW DOES GREEN INFRASTRUCTURE FIT IN THE LARGER PICTURE?

FURTHER STUDIES REQUIRED:
Economic Analyses:
- Urban Agriculture: Value Return
- Job Generation Statistics
- Pervious v. Impervious Surfaces
- Energy Cost v. Heat Island Effect
- Implementation Cost v. Combined Sewer Load / Outfall Volume

Environmental quality Analyses:
- Air Quality Measurement
- Aquifer Levels
- Pollution of Run-off into the Bays, Lakes and Streams
- Biodiversity Measures
- Pedestrian Activity - Improvement

24-hour Design Storm for City of Tacoma. Information source for the graphic produced: Stormwater Management Manual, CITY OF TACOMA
Information source for the graphic produced: U.S. ENVIRONMENTAL PROTECTION AGENCY

Slow It down
24-hour Design Storm for City of Tacoma. Information source for the graphic produced: Stormwater Management Manual, CITY OF TACOMA
Information source for the graphic produced: U.S. ENVIRONMENTAL PROTECTION AGENCY
**SOAK IT IN**
- Green Wall
- Urban Agriculture
- Trees

**SLOW IT DOWN**
- Alleywall Piping
- Roof Garden
- Terracing
- Planters

**SPREAD IT OUT**
- Roof Spout
- Roof Spout Disconnection

**PRIVATE REALM**
- Rain Garden
- Hedges
- Native Ground Cover
- Pervious Surfaces
- Cistern
- Underground Tanks
- Catchment Tanks
- Catchment Structure
- Public Building Sculpture
- Freestanding sculpture
- Rain Chains
- Roof to Sculpture
- Roof to Network (Across)
- Covered Channel (Across)
- Underground Pervious Tubes
- Non-apparent channels - Depressions (Along)

**PUBLIC REALM**
- Alleywall Piping
- Roof Garden
- Terracing
- Planters
- Bus Shelter
- Planters
- Roof to Sculpture
- Rain Curtain

**RIGHT OF WAY**
- Bioswale
- Pervious Surfaces

---

**Example: Pervious Surfaces + Planter + Rain Curtain + Covered Channels**

- Inverted, rain-capturing umbrella
- Routing to direct rain water
- Rain curtain
- Planter box
- Rain sculpture (effective in slowing runoff)

**TO INTEGRATED STORMWATER MANAGEMENT**

---

**Example of application of GSI tools:**

- Before and after (Proctor) example of designing bioswales around existing trees.

---

**LAURA DURGERIAN**

- Class interim presentation April 19, 2018.
The “image of the city” reflects how people perceive a place. A clear image is associated with fast and easy navigation and offers emotional support in that people feel they understand where they are. According to Kevin Lynch, the image of the city is composed with five elements: path, edge, nodes, district, and landmark. Through the study of these elements within each 20-minute neighborhood, we can understand and depict existing images, and explore potential improvements for enhanced identity and livability.

Proctor is flat without many obvious disparities in characteristics. Its mixed-use area concentrated in the center and contains many landmarks. The key step for this obvious difference is to create the connection for both sides to find their way. This problem can be solved by adding height to buildings on the edges, leading people on both sides to follow the slope to higher areas or adding new nodes in the intersection by using different colors to lead people to the central mixed-use area, surrounding parks, nodes, and paths; this will better guide people to major streets and desired spaces.

Proctor lacks green open spaces, and not all green areas are open to the public. In order to make better use of existing green land, one method for making better use of existing green land is to create viewpoints around these parks and natural areas. An absence of distinct characteristics in the residential area makes it easy for people to get lost. Green infrastructure provides a solution by improving connections between the central mixed-use area, surrounding parks, nodes, and paths; this will better guide people to major streets and desired spaces.

Hilltop has a distinct topography change in the east. People can take down from the edge, while people in the lower place can only see the slope. The elements in hilltops are quite spread-out but well connected. The grid layout changes from the edge. Adding parks, nodes, and paths; this will better guide people to major streets and desired spaces.

An absence of distinct characteristics in the residential area makes it easy for people to get lost. Green infrastructure provides a solution by improving connections between the central mixed-use area, surrounding parks, nodes, and paths; this will better guide people to major streets and desired spaces.

The key step for this obvious topography change is to create the connection for both sides. Other strategies are to intensify the sense of edge, to strengthen the existing elements of the city image through minor paths and new nodes, and to depict existing images, and explore potential improvements for enhanced identity and livability.
Mobility and Right-of-Way

Mobility is an essential consideration for city development. The public right-of-way, generally the zone between private properties where the street and sidewalk reside, is critical in any discussion of pedestrian, bicycle, vehicle, or public transit mobility. The City of Tacoma is undergoing a significant investment in urban mobility, outlined in the Mobility Master Plan and seen through the proposed bike and pedestrian infrastructure plans and new public transit development. Because of this, we wanted to provide resources for the city to graphically show how these new developments shape the city both geographically and by design. For this project, we analyzed the connectivity of Tacoma's right-of-ways for users on their feet, pedals, and public transit, looking at Tacoma as a whole, as well as the three neighborhoods: Proctor, Hilltop, and South Tacoma. The Mobility and Right-of-Way section of this graphic package focuses specifically on bike, pedestrian, and public transportation.

PROJECT INTRODUCTION

Mobility is an essential consideration for city development. The public right-of-way, generally the zone between private properties where the street and sidewalk reside, is critical in any discussion of pedestrian, bicycle, vehicle, or public transit mobility. The City of Tacoma is undergoing a significant investment in urban mobility, outlined in the Mobility Master Plan and seen through the proposed bike and pedestrian infrastructure plans and new public transit development. Because of this, we wanted to provide resources for the city to graphically show how these new developments shape the city both geographically and by design. For this project, we analyzed the connectivity of Tacoma's right-of-ways for users on their feet, pedals, and public transit, looking at Tacoma as a whole, as well as the three neighborhoods: Proctor, Hilltop, and South Tacoma. The Mobility and Right-of-Way section of this graphic package focuses specifically on bike, pedestrian, and public transportation.

MOBILITY AND RIGHT-OF-WAY

Designed by: Jennie Meulenberg, Manette Stamm, and Lucien Ong

South Tacoma

This neighborhood has very few bike and pedestrian paths. The majority run north-south and do not connect well to the East and West. Proposed future paths will increase connectivity by adding new bike lanes, increasing the number of sidewalks that include the four sidewalk zones in order to create a more complete and welcoming pedestrian pathway network.

Hilltop

The hilltop neighborhood has a fairly developed walking and bicycle network. When taking into consideration proposed pathway development, the neighborhood will have a complete and accessible grid network of bike ways, depicted in the blue and green path colors. However, it will still be lacking dedicated pedestrian and shared user paths. Increasing the number of sidewalks that include the four sidewalk zones is a way to create a more complete and welcoming pedestrian pathway network.

Proctor

Like the Hilltop neighborhood, Proctor is slated to have a more complete bike-way network in the future. There are a few dedicated pedestrian paths in this neighborhood, but they lack connectivity to other mobility networks. Increasing the number of shared-use paths could increase connectivity and take advantage of existing bike systems.

Bike and Pedestrian Trail Network

<table>
<thead>
<tr>
<th>Current</th>
<th>Future</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike Lane</td>
<td>Bike Lane</td>
<td>Bike Lane</td>
</tr>
<tr>
<td>Cycle Track</td>
<td>Cycle Track</td>
<td>Cycle Track</td>
</tr>
<tr>
<td>Pedestrian Path</td>
<td>Pedestrian Path</td>
<td>Pedestrian Path</td>
</tr>
</tbody>
</table>

Bike and Pedestrian Travel in Tacoma

Current and Future Bike and Pedestrian Trails

Below is a breakdown of Tacoma's current and future pathways for those walking and biking, along with a short description of each pathway type.

BIKE AND PEDESTRIAN TRAVEL NETWORK

A path separated from vehicular traffic for pedestrians only

A path separated from vehicular traffic, shared facility for bicyclists and pedestrians

A separated path with the on-street infrastructure of a conventional bike lane.

A hybrid type bicycle facility combining the experience of a conventional bike lane.

A path that uses a combination of bike and pedestrian infrastructure, along with bike and pedestrian lanes.

A path separated from vehicle traffic while facilitating safe and convenient bicycle travel.

Bicycle Boulevards

Bicycle boulevards use a combination of streetscape treatments to slow vehicle traffic while facilitating safe and convenient bicycle travel.

Shared-Use Path

Sharrow

Shared lane markings (also known as “sharrows”) are high-visibility pavement markings that help position bicyclists within a shared vehicle/bicycle travel lane.

Neighborhood Bike & Walk Scores

<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>Bike Score</th>
<th>Walk Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proctor</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>Hilltop</td>
<td>47</td>
<td>59</td>
</tr>
<tr>
<td>South Tacoma</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

How Does Tacoma Compare?

<table>
<thead>
<tr>
<th>Bike &amp; Walk Score</th>
<th>How Does Tacoma Compare?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tacoma</td>
<td>South Tacoma</td>
</tr>
<tr>
<td>Bike Score</td>
<td>Walk Score</td>
</tr>
<tr>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>47</td>
<td>59</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: Only 12 of 24 locations fell within the three neighborhoods. South Tacoma only included one count location.
**Tree Heights in the Right-of-Way**

To prevent interference with pedestrians, cars, or power lines, certain minimum and maximum heights are required for trees along mobility corridors.

- Minimum tree height of 25 feet under power-lines.
- Maximum mature tree height of 25 feet.

**BICYCLE LANE DESIGN STANDARDS**

The National Association of City Transportation Officials (NACTO) identifies three main types of bike lanes in their Urban Bikeway Design Guide. This guide was created to provide cities with a comprehensive, state-of-the-art design guide and is founded in literature research and real-life examples. The designs are permitted under the Manual on Uniform Traffic Control Devices and the Federal Highway Administration has approved all proposed bicycle related treatments. The three examples provided were created based on the NACTO design guidelines and contain elements that are both integral to the bike lane function and add value. Non-integral elements can be added or subtracted from the lane depending on the context in the right-of-way, but most importantly strong consideration of public safety should be applied to all bike lane designs and monitoring is expected to maintain the functionality of the lanes.

- **Standard Bike Lane**
  - Bike lanes are most helpful on streets with ≥ 3,000 motor vehicle average daily traffic, speeds of 35-55 mph, and streets with high pedestrian volumes.
  - Bike lanes can be added to any existing street, but they are most effective on one-way streets with ≤ 2,000 motor vehicle average daily traffic, speeds of ≥ 35 mph, and streets with ≥ 25,000 pedestrian trips per month.
  - Bike lanes are not recommended on one-way streets in residential areas.

- **Protected Bike Lane**
  - Protected bike lanes are the gold standard of bike lanes located in the right-of-way. A physical barrier from moving traffic, even if only a three-foot area marked by paint, can inspire many bicyclists to feel safe on the road and in some cases greatly improve not only the function but also the appearance of the public right-of-way.
  - Separation between parked vehicles and lanes should be maximized to reduce door zone conflicts.
  - Protection includes barriers, planters, a vehicle parking lane, and raising the lane.

- **Shared-use Bike Lane**
  - Shared-use bike lanes, also called bicycle boulevards or sharrows, while not the white option for bicyclists, are a comparatively inexpensive bike lane option for transit agencies.
  - This colored pavement area, called a bike box, provides an area for bicyclists to safely queue ahead of vehicles or a signalized intersection.

**TECHNICAL PEDESTRIAN DESIGN STANDARDS**

The City of Tacoma has identified multiple design standards for pedestrian right-of-way corridors. These can be found in the Tacoma Mobility Master Plan Design Guidelines document published in 2009 and in other City publications, such as the “Planting in the Right-of-Way” online document. The graphics below depict some of these design standards and are useful in visualizing the standards that the City has in place. The graphics show typical street zones, tree height minimums, and planting setback requirements.

**Putting It All Together**

**Applying the Sidewalks Zones Concept**

Sidewalks that exemplify the four integral zones outlined by NACTO are already in use in certain areas and can be used as guides for other sidewalks in Tacoma. The graphic below shows the four zones in the sidewalk in front of Heritage Bank, 5448 S Tacoma Way.

**Inclusive Redesign of Proctor Intersection**

This diagram shows how the intersection of Adams St. and its 25th St. can be made more pedestrian- and activity friendly. The intersection features an elementary school, a historic and small-scale mixed commercial core, so it is already an important node for the surrounding residential areas. By including more green space and space for non-motorized modes of transportation, it could serve the community even better on an everyday basis and be converted to a festival street for special occasions.

**Enhanced/Buffer Zone**

The enhancement/buffer zone is the area immediately adjacent to the building as well as on-street parking and non-occupied portions of the sidewalk. It is often useful for additional pedestrian safety and access to buildings.

**Sidewalk Furniture/Curb Zone**

The sidewalk furniture/curb zone is the area between the curb and the through zone. It may include street furniture and amenities like benches, lighting, newspaper boxes, utility boxes, tree pits, and street furniture. This element can be used to separate the through zone from the sidewalk and from the curb. Maximum raised bed height is two feet.

**Street Furniture Through Zone**

The street furniture through zone is the area between the pedestrian through zone and the street furniture/curb zone. It may include street furniture and amenities like benches, lighting, newspaper boxes, utility boxes, tree pits, and street furniture. This element can be used to separate the through zone from the sidewalk and from the curb. Maximum raised bed height is two feet.

**Public Promenade and Gathering Space**

This colored pavement area, called a bike box, provides an area for bicyclists to safely queue ahead of vehicles or a signalized intersection.

**Shared-use Bike Lane**

Shared-use bike lanes, also called bicycle boulevards or sharrows, while not the white option for bicyclists, are a comparatively inexpensive bike lane option for transit agencies.

- These bike lanes are marked by solid yellow lines on streets with ≥ 3,000 motor vehicle average daily traffic, speeds of ≥ 35 mph, and streets with ≥ 25,000 pedestrian trips per month.
- Bike lanes are not recommended on one-way streets in residential areas.

**Bike Lanes**

- Bike lanes are most helpful on streets with ≥ 3,000 motor vehicle average daily traffic, speeds of ≥ 35 mph, and streets with ≥ 25,000 pedestrian trips per month.
- Bike lanes are not recommended on one-way streets in residential areas.
**TRANSIT**

The passage of Sound Transit 3 in 2016 secured funding for transit expansion in Tacoma. Three main projects are planned: the SR 7 Pacific Avenue Bus Rapid Transit (BRT) that upgrades Pierce County’s busiest transit route to frequent, high-quality BRT; the Central Link Light Rail extension that connects the Tacoma Dome to Federal Way, SeaTac Airport, and Seattle in frequent, all-day service via elevated light rail; and the Tacoma Link Light Rail extension that extends the street-running light rail from Hilltop to Tacoma Community College to serve westside residents.

The multi-modal Tacoma Dome Station will be the gateway to the city for residents, workers and tourists alike, connecting every mode of public transportation available: Street-running and Elevated Light Rail (Tacoma Link and Central Link), Bus Rapid Transit (Pacific Ave BRT), Commuter Rail (Sounder), and local buses (Pierce Transit). This project uses NACTO’s principles of transit streets to guide the potential design and planning of the area surrounding the Tacoma Dome.

**Multi-modal Connections at Tacoma Dome Station**

Tacoma Dome Station will be the gateway to the city for residents, workers, and tourists alike. The multi-modal station will connect every mode of public transportation available: Street-running and Elevated Light Rail (Tacoma Link and Central Link), Bus Rapid Transit (Pacific Ave BRT), Commuter Rail (Sounder), and local buses (Pierce Transit). This project uses NACTO’s principles of transit streets to guide the potential design and planning of the area surrounding the Tacoma Dome.
INTRODUCTION
Tacoma is a city of neighborhoods and people who are proud of their communities. This section offers examples of urban design interventions that support the ideal of the 20-minute neighborhood, where one can fulfill the daily necessities of life within a 20-minute walkshed from a central point in the neighborhood. Feasibility studies and community input are critical next steps prior to adoption of any proposed ideas and strategies.

Looking At History
Historically, development in Tacoma has been pedestrian and transit oriented, moving more towards a suburban car-oriented form. The goal is to be equitable in accommodating building the older sustainable model of development while still accommodating the needs of today. Mixed-use development is popular as ever, but new stock tends to be expensive and rare. Retrofitting older areas to have these characteristics may supplement that supply and foster more sustainable lifestyles.

Residents identified their preferred building types in surveys conducted in the TacHOMEx: Infill tools for a Happy City report. Residents have expressed a general preference for traditional building forms (p. 51).

ELEMENTS
Developing Housing
The design and massing of housing should keep with a neighborhood's existing identity and correspond to neighborhood upon goals as well as the needs of the city for the future.

Add "missing middle housing" forms back into the urban fabric by amending the zoning code. (A comprehensive sampling of building types can be found at Opticas Design's website at missingmiddlehousing.com/category/the-types/)

Rethinking Parking
The city should study whether all the parking in an area is necessary or compatible with its goals of creating vibrant areas.

The city should consider consolidating parking in order to create better neighborhood environments.

Another option is to repurposing excess parking to be temporary or permanent public open space in places with a lack of public space.
WHOLE BLOCKS FOR TACOMA

The following diagrams illustrate potential block typologies that make good use of space and foster a more walking-oriented lifestyle. (The architectural styles shown are not prescriptive and are only intended to suggest general scale and massing.)

### Residential Block

- Allow for intermittent smaller apartment buildings
- Allow for intermittent small retail uses throughout the neighborhood
- Trees can be put into parking lots to provide shade and green
- Utilize alleys for parking and utility access
- Allow for Accessory Dwelling Units to keep neighborhood character while expanding housing supply

### Commercial Retail Block

- Regular street trees and plantings
- Encourage mixed-use developments and conversions that keep with neighborhood character
- Allow unique storage
- Older or smaller retail spaces should be preserved or added
- Continue to add street furniture, plantings, and character lighting
- Unique corner buildings (new or historic) can serve as landmarks
- Fill in street frontages. Parking should be on the street or located at the back or in alleys

### Lowrise Mixed-use Block

- Limit parking to backside of houses and to alleys
- Trees can provide green cover and privacy
- Regular street trees and plantings
- Encourage mixed-use developments and conversions that keep with neighborhood character

### Traditional Commercial Retail Block

- Keep existing alleys for vehicle access and service
- Abandoned or empty lots can be great opportunities for community-led flux spaces
- Allow street vendors and food trucks
- Maintain and develop unique character lighting
- Well-maintained landscaping and street furniture
- Encourage corner lot development with character
- Encourage pedestrian level signage
- Establish a program to fund business facade improvements

- Consolidate parking to the center of the block, away from frontage
- Allow for appropriate signage
- Maximize for edge development or offer pedestrian-friendly open space
- Encourage pedestrian-level signage
- Encourage pedestrian level signage
- Establish a program to fund business facade improvements

- Trees can provide green cover and privacy
- Trees can be put into parking lots to provide shade and green
- Utilize alleys for parking and utility access
- Allow for Accessory Dwelling Units to keep neighborhood character while expanding housing supply
Introduction

Historically, development in Tacoma was pedestrian- and transit-oriented but then began to emphasize a suburban car-oriented built form. In a return to this older sustainable model, equity is a key concern. Since new building stock tends to be expensive, retrofitting of older buildings to create walkable mixed-use areas is a potential way to balance these concerns. This project highlights the need to develop housing that fits within the existing identity and goals for the city’s future, as well as to rethink parking and abandoned or underused spaces in ways that consider neighborhood vibrancy and temporary use.
The three different neighborhoods in Tacoma have vastly different stories behind their origination and their urban fabric. Block typology and adaptability around the 20-minute center focus on preserving character in Proctor, supporting vitality in Hilltop, and attracting amenities in South Tacoma.

**Proctor - Preserving Character**
- Original single-family residential blocks were demolished during urban renewal of Tacoma.
- Large buildings are located around each other on part of blocks with ground level parking. Buildings do not respond to human scale.
- Vacant and underutilized space is common.
- Buildings take up most of blocks and are often attached to parking structures on adjacent blocks. Large scale buildings serve institutional needs over neighborhood vitality.
- Buildings are internally focused with courtyards.
- Potential exists to develop infill housing in interior of block.
- Blocks have diverse building types including both multifamily and single family structures.
- Vacant lots exist with moderate frequency.
- Vacant lots are present, though some have been re-purposed.
- Potential exists to develop infill housing in interior of block.
- Land use is dense.

**Hilltop - Supporting Vitality**
- Original single-family residential blocks were demolished during urban renewal of Tacoma.
- Large buildings are located around each other on part of blocks with ground level parking. Buildings do not respond to human scale.
- Vacant and underutilized space is common.
- Buildings take up most of blocks and are often attached to parking structures on adjacent blocks. Large scale buildings serve institutional needs over neighborhood vitality.
- Buildings are internally focused with courtyards.
- Potential exists to increase density and develop higher buildings.
- Blocks have diverse residential building types including both multifamily and single family structures.
- Vacant lots exist with moderate frequency.
- Vacant lots are present, though some have been re-purposed.
- Potential exists to develop infill housing in interior of block.
- Land use is mixed.

**South Tacoma - Attracting Amenity**
- Long rectangular blocks with single family housing.
- Blocks are surrounded by parking on perimeter streets.
- Buildings are large and multi-family in scale.
- Opportunities for infill development are available on underutilized land along perimeter of block.
- The sites multiple densities are compatible with infill.
- Small storefronts along street accommodate more stores.
- Parking is in rear off service alley or on street.
- Minimal vacant space has potential to be redeveloped.
- Homogeneous single family housing has potential to be developed with backyards, DADUs, cottages, and carriage houses.
- Consistent setbacks are maintained for residential structures.
- Garages are off service alleys.
- Vacant lots are scarce in single family blocks.

**Origin of the Street Grid & Architectural Heritage**
The three different neighborhoods in Tacoma have different stories behind their origination and their urban fabric. Block typology and adaptability around the 20-minute center focus on preserving character in Proctor, supporting vitality in Hilltop, and attracting amenities in South Tacoma.

**Preservation and Utilization**
The maps below depict sites of cultural significance alongside historic sites, infrastructure, and areas of future development.
GUIDELINES FOR NEW FACADES

Rhythm
Horizontal Rhythm
A shared pattern in the distribution of openings and bays on the main facade of the building generates visual order and unity.

Vertical Rhythm
A facade of more than 2 levels vertically consists of 3 parts. From bottom to top are the base, the mainbody, and the crown. Legibility of these parts creates a sense of hierarchy. Aligning the divisions with adjacent buildings creates harmony on the block.

Transparency
The more windows a facade has, the more transparent it is. Transparency can create a more inviting pedestrian environment, offer natural light for users inside, and promote “eyes on the street” safety.

Depth
Architectural elements of the facade can help it from looking dull and confer other benefits.

Compatibility Between Old and New Facades
When new construction takes place next to a building with a facade of value, methods should be taken to keep their facades compatible with each other. Chaos and monotony alike threaten neighborhood character.

HOW CAN HISTORIC FACADES BE INCORPORATED INTO NEW DEVELOPMENT?

Conservation of Existing Facades
Some old facades in the City of Tacoma have unique value, either from historic importance, or unique features of neighborhood character. Neighborhood adaptation must consider many dimensions of these old buildings; their functions may not conform to the needs of local development and may conflict with land use regulation; their facades may be so worn that they visually detract from neighborhood aesthetics; and their structure may no longer safely support their use. Facade preservation should consider whether the physical form or the function of the structure is to be kept. If the original material is significant, then adaptive reuse could revitalize the building; and if only the facade is important, then new construction could take place with a facade easement. For a facade too worn to stand, reconstruction may be appropriate, while restoration is ideal if the city wishes to retain both the building’s use and materiality.

Distinctive Eras
The design of some old buildings is deeply influenced by the trends of their times. This can feature help people recognize the age of the structure. Completely mimicking distinctive historical features causes confusion, and detracts from the historic facade’s legibility.

Unique Additions
Sometimes historic buildings feature embellishments, such as bell towers. These features are usually the key identity of the building, and what make it important. Therefore such features should be used sparingly, adjacent buildings mirroring these features, weakens the visual impact of such features.

Vertical Disconnection
Significant difference between higher and lower levels of the new construction highlights the horizontal conformity along the street rather than the vertical relationship within the building itself.

Shared Pattern
Similarity in window and bay patterns forges a relationship between new construction and existing facades, despite the difference in their massing.

Alignment
Aligned window distribution, floor line, and cornice automatically generates a visual continuity along the street from old facades to the new adjacent constructions.
INTRODUCTION
While intended for public benefit, public space is often not used to its full potential. Reclaiming the public realm in our neighborhoods can build a healthier city experience for residents. Through placemaking, a process of development that prioritizes identity and reinforces place attachments, cities can grow the role of public space as a connector between people and place. In this section, we explore aspects of reshaping under-used space by first identifying those spaces, re-imagining their utilization, and providing creative alternatives that encourage community activation. We hope to guide and revitalize Tacoma’s public spaces by identifying opportunities for enhanced public value within our shared spaces.

Tacoma Neighborhoods

PUBLIC REALM ELEMENTS

Designed by: Irving Chu and Rachel Vickers
**FLUX SPACE FOR INCREMENTAL DEVELOPMENT**

**PROCTOR**

**HILLTOP**

**SOUTH TACOMA**

### Pop-up Cinema

Inflatable movie screens make it possible to host pop-up cinemas nearly anywhere. This makes it possible to complete the life cycle of a vacant space by programming a nighttime activity in a parking lot, park, or vacant commercial parcel.

### Community Garden

Community gardens can vary in size due to land availability. The intention of creating a urban garden is to have a medium to build community and connection to nature. It is best to incorporate a common gathering space in the design to get people outdoor and involve a network of partners invested in the success of the garden.

### Festival Space

Festival spaces are essential for a community to maintain and express its cultural heritage. These spaces generate activity and create opportunities to build social capital as well as instigate economic activity.

### Food Truck Event

Food trucks events are best suited for larger open spaces like vacant lots and parking lots where there is easy access for vehicles. These are opportunities to develop local businesses and bring food to existing community assets and events.

### Flea Market

Flea markets are opportunities for a community to engage with small or local businesses in an area. Besides the benefits of economic development, they support entrepreneurship at a micro level and create value out of an underutilized space. Flea markets are ideally held on festival streets, fields, or parking lots with lots for 30-40 10x12 booths.

### Community Mural Wall

Public art serves as a medium for the voice and aesthetics of a community. It can occur on any surface and capture the use of their property. Non-profit. As an incentive to conserve these spaces for impermanent uses, landowners could be increased to 75%, as that would provide a larger incentive to participate in the program.

### Playfield

Vacant parks can easily be transformed into dynamic multi-use spaces that welcome multi-generational use. These interventions are reversible and can fit many parcel sizes. They are adaptable practices that can make development more thoughtful and responsive to community needs.

### Amphitheater

Amphitheater function in open spaces that have a natural slope or elevation change, creating a stage or area of focus. Bench seating can be built on a sloped hill to sit simultaneously as a terraced landscape, and event seating. A typical stage should be 24’ x 12’ and have flexible seating. A typical stage should be 24’ x 12’ and have flexible seating. A typical stage should be 24’ x 12’ and have flexible seating. A typical stage should be 24’ x 12’ and have flexible seating.

### Why Flux Space?

In a city, some spaces are stable, coherent, and predictable, while others are not. These other spaces are what urban design theorist Gary Hack describes as “flux spaces”. While flux spaces are vulnerable to change, displacement, or undesired uses, they also present an opportunity for positive transformation and community engagement that can guide the future development of a block or neighborhood. With lean and nimble interventions, these transitional areas can be redefined and reincorporated into the public realm. There are opportunities to incorporate mixed life spaces in currently under-utilized parcels in the urban fabric. Mixed life spaces are settings, designed or natural, that support a diversity of people, experiences, and meanings. These spaces are “anti-designed” for overlapping and disparate uses, allowing fine-grained relationships to develop. Such spaces are characterized by community ownership and a freedom to choose what uses will occupy the space, including zones of expression where community can be formed and informed.

### How Can The Process Create Dynamic Spaces?

In order to create productive easements, money from taxes can be used to promote the process of increasing flux spaces. Craig Mulino, the City of Tacoma’s former director of planning, has helped to create a flux space where a family could sell, develop, and construct buildings on their property. Landowners have the opportunity to site some or more of those rights while retaining an owner of the remaining rights, creating an easement with a negotiable timeline. A productive easement would function as a legal agreement between a landowner and a qualified organization like a local non-profit. As an incentive to conserve these spaces for impermanent uses, the property owner would receive tax deductions for excise in the use of their property.

### Site Selection

The site should be in proximity to a commercial corridor, either underutilized or vacant, and be physically capable of accommodating impermanent uses.

### Organization Input

An easement organization should be prepared to provide a plan for programming and use during the time of the lease. These uses should encourage mixed life spaces by developing programming that reaches multi-generational members of the community, and finds diverse uses for a single space.

### Application

Person County currently has an Application for Classification or Redevelopment as Open Space for Current Use Assessment RCW 84.34 that can be adapted to quantify the proposed properties. A robust business plan would create a benefits rating system to benchmark the tax reductions for the landowner. The document is currently being developed, an impetus aims to qualify for a 60% property tax reduction. For productive easements this could be increased to 75%, as that would provide a larger incentive to participate in the program.

### Displacement Prevention

A significant public benefit of productive easements is that by transforming these spaces for local use, they encourage entrepreneurship and civic engagement at a micro level. This provides opportunities for local businesses to develop patrons and serve those that are proximate. Privately owned lands can be protected for specific, economically productive uses generating local income and growing the value of the community without external inputs. This in turn can be a productive space for social capital and economic resilience.

### Property Tax

Landowners can use communities more than undeveloped lands because of the increase in property taxes. By making undeveloped land available for use by local organizations, property taxes are not increased by the new use and the property can continue to be productive until it is dated for development. This is a sustainable practice that can make development more thoughtful and responsive to community needs.

### Flexibility

Preservation easements can be negotiated to lift lots of all sizes and can be tailored to meet the needs of the landowner and leaving party. These spaces can be designed to accomplish nuanced objectives, specific to the neighborhood context, which makes it valuable to communities of different socio-economic makes.
Alleys and the spaces they encompass can be amazing places. Their narrow, segmented form can be leveraged with treatment of expansive walls and dramatic lighting, while green space and pedestrian activation can enhance their appeal as places for everyday life. Considering lighting, pavement, vegetation and seating, this project focuses on the many benefits alleys can bring to the public realm, businesses, and the environment.

Lighting
Lighting goes a long way to creating beautiful and safe places. Alleys can sometimes have the stigma of being unsafe and are often neglected. Better lighting amenities have the potential to reduce those negative characteristics of alleys. Specialized lighting can create an artistic and dramatic experience. Regardless of the intended ambiance, alleyway lighting fixtures should be appropriate for the outdoor and avoid light pollution. Eco-friendly options are abundant as well. What lights can Tacoma add to bring new life to its alleys?

Pavement
Alleys are often among the most under-repaired areas of the city. Newer pavement options can make substantial differences in terms of maintenance needs, as well as resident experiences and environmental impact. Permeable pavers, for example, allow the ground to absorb more water directly, reducing strain on the city’s stormwater infrastructure. Such pavers are also more durable and stylish. Choosing the right combination of colors and materials can reduce unwanted side effects like heat retention.

Vegetation
Improving landscaping and adding vegetation are often the surest ways to change public space for the better. Plants have a wide array of benefits, including improving aesthetics, increasing property value, and contributing to environmental quality. Trees and plants have preferences, however, and it is important to identify which plants thrive in which environments, paying attention to sun, shade, and water requirements. Planting appropriately will reduce maintenance costs for the city, native plants are usually a sure way to provide appropriate, resilient vegetation for an area.

Seating
By providing seating options, a city can help promote recovery of alleys for pedestrians and other users. Benches and chairs afford opportunities for repose and socializing. Smaller seating options could serve as overflow seating for businesses during busy hours. Through the activation of alleys, cities have the chance to advance the public right of way and overall quality of life for locals and visitors.

Current Public Space Areas

Transformed Public Space Areas

**Current Public Space Areas**

- **Unprotected Space / Alleyway**
  - Light Fixtures
  - Public Art
  - Landscaping Trees

- **Unprotected Facade / Wall**
  - Public Art
  - Benches
  - Plants
  - Light Fixtures

- **Unprotected Alley**
  - Green Permeable Pavement
  - Landscaping Trees

- **Unprotected Open Space**
  - Public Art
  - Light Fixtures

**Transformed Public Space Areas**

- **Al Fresco Art Festival / Aylesworth Street Umbrella Art**
  - Art Installation by Sam Ortiz

- **Al fresco Art Festival / Aylesworth Street Painting**
  - Wall Art - ANODE X DETROIT

- **Landmarked Place / Alleyway**
  - Light Fixtures
  - Art Installation by Jax Azra

- **Underutilized Open Space**
  - Landscaping Trees
  - Light Fixtures

- **Underutilized Space / Alleyway**
  - Public Art Installation
  - Light Fixtures

- **Underutilized Facade / Wall**
  - Public Art Installation
  - Light Fixtures

- **Underutilized Alley**
  - Light Fixtures

- **Underutilized Open Space**
  - Light Fixtures

This recent development includes a large, gaping entryway that leaves an odd, unused space to face the public commercial area. Given the breadth and high reverence, this space could be a venue for temporary or permanent public art installations. This unused space could be transformed into a refreshing pocket that greets business owners, their patrons, and residents from around the area.

This lengthy blue wall is a prime location to have local artists display their talent. Blank facades such as this can create an oppressive environment for pedestrians, in providing a place for creativity, an uninviting space can be transformed into a site for expression reflective of the neighborhood.

By providing seating options, a city can help promote recovery of alleys for pedestrians and other users. Benches and chairs afford opportunities for repose and socializing. Smaller seating options could serve as overflow seating for businesses during busy hours. Through the activation of alleys, cities have the chance to advance the public right of way and overall quality of life for locals and visitors.
INTANGIBLE HERITAGE PRESERVATION PROCESSES

This project stems from the idea of protecting and promoting intangible heritage within the communities of Tacoma. Intangible heritage encompasses the living expressions and traditions of communities. The importance of intangible heritage within communities cannot be understated as it provides stepping stones for knowledge and acceptance of all types of cultures within cities. There are four main pillars within intangible heritage, including: being traditional and contemporary all at once, being representative, being community based, and creating an inclusive environment. While planners and policy makers within the City of Tacoma have the breadth of knowledge to help cities function, creating and promoting intangible heritage within communities can be a richer experience when community members are able to make impacts on their neighborhood. The purpose of these graphics is to provide the general public of Tacoma with the basic knowledge to transform underutilized public spaces into areas that promote heritage. There are four different processes to show how spaces can be transformed showing the four pillars of intangible heritage. And while this project is by no means a comprehensive set of graphics, it aims to inspire and empower community members to make the changes they want to see in their neighborhoods.

CHANGING PUBLIC SPACE

Here are four examples of how public space can be changed by community members. Important information has been drawn out of the application process.

Inclusive Design

While adding a parklet to a public space is one of the more expensive projects, it invites community members to enjoy the public right-of-way in ways that they haven’t before. While the business that the parklet is in front of often oversees the project, since these spaces are in the public right-of-way they can be enjoyed by anyone, creating a sense of safety and inclusion.

Traditional and Contemporary Design

As cities continue to evolve, long-time business owners can evolve their storefronts as well. Adding some facade changes such as updated signage, better lighting, or an outdoor cafe are ways to help these businesses engage with the public sphere and local community.

Representative Design

The most affordable and streamlined project that can effect public spaces is a special event, whether it be a block party, concert, parade, farmers market, or community fundraiser. These events are times when all people from the community have a chance to interact and celebrate one another. Application times are generally very short at 60 days.

Community Based Design

The city of Tacoma has ample resources for creating a community garden. Community gardens are important in Tacoma because besides creating community interaction through teamwork, these gardens can be resources for communities that are underserved and don’t have easy access to healthy foods.

COSTS

Before deciding what type of change an individual or group wishes to make to a space, it is useful to know the what the likely cost of the project will be. In the estimates below, permit costs were taken from the City of Tacoma or nearby cities, and the construction, material, and labor costs were based on national averages. While some of the more permanent changes can be costly, there are different community groups and government programs that can help raise funds or sponsor the project.

SUPPORT FROM LOCAL GROUPS

Here is an abbreviated list of some of the groups that belong to the Arts and Culture Coalition of Pierce County. While not all of these groups will provide direct funding, they often provide other types of support that will help save money.

GENERAL PROCESS

While the process for changing public space would be different under many circumstances, there are a few general things to note before and during the application process.

 Identify Location

Identifying a underutilized space is important. A good technique is to survey nearby neighbors for their opinion on the location and proposed development.

Submit Pre Application Request

The application can be done online and is free. Make sure to include a site plan, a description of your proposed project and any questions you may have.

Wait for Email from the City

You can expect a response within 1-2 business days. The email will include answers to questions and directions on how to proceed with your project or why the pre-application was denied.

Before Handing in Permit Application

Be sure to make a checklist of all the items you will need and funds to raise before submitting the permit request.

Permit Costs

There are various items included in these costs. These costs are necessary and important.

 Community Garden

<table>
<thead>
<tr>
<th>$250</th>
<th>$500</th>
<th>$750</th>
<th>$1,000</th>
<th>$1,250</th>
<th>$1,500</th>
<th>$1,750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parklet</td>
<td>Facade Improvements</td>
<td>Special Event</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Material Costs

Material costs are often the most costly portion of this process. The national averages for materials and labor to install new signage varies by almost $500 or so be sure to get multiple quotes.

Insurance Costs

We can add insurance to our permit application.

Labor Costs

Labor costs are often the most costly portion of this process. The national averages for materials and labor to install new signage varies by almost $500 or so be sure to get multiple quotes.

License Costs

License and permits are often the most costly portion of this process. The national averages for materials and labor to install new signage varies by almost $500 or so be sure to get multiple quotes.

Performance Fees

Performance fees are often the most costly portion of this process. The national averages for materials and labor to install new signage varies by almost $500 or so be sure to get multiple quotes.

Insurance Costs

Material and labor costs are often the most costly portion of this process. For this reason, it is important to have insurance in place before starting any project.

Costs for Public Space

Here is an abbreviated list of some of the groups that belong to the Arts and Culture Coalition of Pierce County. While not all of these groups will provide direct funding, they often provide other types of support that will help save money.

General Process

While the process for changing public space would be different under many circumstances, there are a few general things to note before and during the application process.
CONCLUSION

As a collection of graphic resources, this project aims to provide an ongoing resource for the City of Tacoma throughout their implementation of an Urban Design Program. Graphics that detail the 20-Minute Neighborhood concept communicate the city’s broad goal to grow the Proctor, Hilltop and South Tacoma neighborhoods into walkable centers for mixed-uses and public life, while also suggesting specific contextual interventions that may enhance neighborhood resilience, identity and wayfinding. Additionally, the graphics identify places adjacent to transit stops where investments in public infrastructure may have the most impact, while charts and matrices can help inform city decisions by weighing the physical, social and economic aspects of Green Stormwater Infrastructure. Mobility and Right-of-way graphics summarize research into existing standards of right-of-way design, while illustrating existing conditions in each of the three focus neighborhoods and detailing unique conditions and future potentials of specific sites, including primary Proctor intersection and Tacoma Dome Station. The Built Form graphics tell the story of architectural heritage and urban formation over time in Proctor, Hilltop and South Tacoma, highlighting opportunities for block-scale adaptation. Graphics also communicate physical aspects of façade design, while discussing tensions between preservation and densification. Finally, graphics that focus on Public Realm Activation present opportunities for both temporary and permanent change. They identify elements of the public realm in each of the three neighborhoods, focusing on the potential for changes in lighting, pavement, vegetation and seating to enhance the quality of alleyways for all, and for temporary changes in use within public “flux” spaces to better contribute to public life. Finally, to facilitate preservation of intangible heritage, the process by which individuals can change a public space in their neighborhood is communicated through a combination of icon graphics and simple text.

By focusing work on these four topics at a variety of scales, we hope these graphics provide useful and meaningful representations of ways that both the City of Tacoma and its community members can be agents of positive change. With these ideas and graphics, we hope the City is better equipped to communicate ideas to the public and facilitate the growth of equitable, vibrant, connected, and self-sufficient Tacoma neighborhoods.