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# TREDEGAR STREET CORRIDOR PLAN

A STEP TO UNIFYING THE RICHMOND RIVERFRONT



SPRING 2021

CHESLEY DELEON  
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# TREDEGAR STREET CORRIDOR PLAN

## A STEP TO UNIFYING THE RICHMOND RIVERFRONT

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# EXECUTIVE SUMMARY



Have you ever heard this saying before? “Enjoy the journey, not just the destination.” Well, let us interpret that saying in a literal way and apply it to urban planning. Destinations, such as a person’s house, workplace, or favorite park are enjoyable because they provide spaces to live, work, and play. However, the transportation network, such as the roads, sidewalks, and trails that people journey on to get to these destinations, is sometimes unenjoyable. For example, drivers can get stuck in traffic, bicyclists might not have bike lanes to ride on, or pedestrians might not have sidewalks to walk or roll on.

In order to make the journey more enjoyable for all people in all modes of transportation, a transportation network must incorporate three concepts: mobility, connectivity, and accessibility. Mobility is a person’s ability to move, such as if they are non-disabled or disabled or if they are walking or cycling. Connectivity focuses on the quantity of routes that connect destinations, while accessibility focuses on the quality of those routes so that people feel safe and comfortable while traveling.

*The Tredegar Street Corridor Plan: A Step to Unifying the Richmond Riverfront* evaluates and enhances the mobility, connectivity, and accessibility of Tredegar Street and its surrounding area by the James River in Richmond, Virginia. Tredegar Street’s network consists of roads, walking and cycling trails, and pedestrian/cyclist bridges that connect to parks, the river, a museum, office buildings, residential neighborhoods, and Downtown. The network seems well-connected and highly traveled, but does it allow all people in all modes of transportation to travel safely and comfortably?

Based on physical observations and results from a user survey, the answer is no. There are little to no sidewalks which leads to crowding and people walking on the street. The existing sidewalks are uneven and lack curb ramps so pedestrians, especially those with wheelchairs, walkers, or strollers, have difficulty traversing the jarring terrain. Lastly, the street lacks crosswalks, bicycle infrastructure, and signage for drivers and non-drivers which causes congestion and confusion.

As informed by technical research, observations, and analyses of survey results, six goals to enhance the mobility, connectivity, and accessibility of Tredegar Street were developed:

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## MOBILITY

**GOAL 1 :** Enhance the pedestrian and cyclist environment for all users.

**GOAL 2 :** Facilitate efficient and safe circulation of motorists and non-motorists.

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## ACCESSIBILITY

**GOAL 3 :** Ensure the street is accessible and inclusive to all users.

**GOAL 4 :** Strengthen the user experience on the street.

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## CONNECTIVITY

**GOAL 5 :** Build upon the connections to the street.

**GOAL 6 :** Consider the street's role within its larger context.

---

Imperative objectives and actions to accomplish these goals include to: build evenly paved sidewalks on both sides of the street to provide a designated and smooth surface for pedestrians, paint crosswalks and bicycle markings to ensure the safety of pedestrians and cyclists moving among cars and to remind drivers that the road is not just for them, and install signage to clearly and directly communicate with motorists and non-motorists.

If these recommendations are put into action, all ages, abilities, and racial/ethnic identities will be able to travel safely and comfortably in any mode of transportation. The implementation of the *Tredegar Street Corridor Plan: A Step to Unifying the Richmond Riverfront* will have people enjoying not just the destination, but the journey as well.

# 1.0 INTRODUCTION

Tredegar Street is located along the northside of the James River in Richmond, Virginia. Its proximity to the James River, Downtown Richmond, and the City's island parks: Belle Isle and Brown's Island, makes it a nexus for multiple users utilizing various modes of transportation who are traveling between the City's mainland, its islands, and the river. Although Tredegar Street plays a vital role as the conveyer of numerous users and modes of transportation and as the connector between diverse environments, the street itself has not been at the forefront of past plans. Therefore, the street lacks sufficient and efficient mobility, accessibility, and connectivity in relation to its surroundings.

*The Richmond Riverfront Plan*, which was adopted by the Richmond City Council in 2012, was created as part of the City's Master Plan and Downtown Plan. *The Richmond Riverfront Plan* encapsulates both the north and south sides of the James River and extends from Belle Isle in the west to Rockett's Landing in the east. The plan lays out measures that will transform the Richmond Riverfront into "a single unified, cohesive system" (2012, 10).<sup>1</sup>

After the adoption of *The Richmond Riverfront Plan*, two local organizations, Venture Richmond and 3north, went a step further and created a more detailed plan of Brown's Island in 2019, known as the *Brown's Island Improvement Plan*.<sup>2</sup> The plan provides recommendations that will increase and improve the island's visitor engagement through event planning, accessibility, and comfort. Additionally, the *Brown's Island Improvement Plan* states, "Tredegar Street's design is important to the function of the island" (2019,4).<sup>3</sup> However, specific design proposals for Tredegar Street were outside the scope of study, so the plan only includes general suggestions for improving pedestrian connectivity and safety.

## 1.1 PLAN PURPOSE

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The purpose of the *Tredegar Street Corridor Plan: A Step to Unifying the Richmond Riverfront* is to evaluate and enhance the mobility, connectivity, and accessibility of Tredegar Street's network by using human-scaled approaches to reorient the street to the wants and needs of its current and potential users. The plan will provide the co-clients, Venture Richmond and the Richmond Department of Planning and Development Review (PDR), with a site-specific plan that helps achieve the goals and objectives laid out in the *Richmond Riverfront Plan* and the *Brown's Island Improvement Plan*. The plan reimagines the streetscape as an active transportation-friendly, ADA accessible, and people-oriented network. The *Tredegar Street Corridor Plan* is an additional piece to the puzzle of creating a single unified, cohesive Riverfront and will ultimately further the City's Master Plan's goal of improving non-car connectivity by redesigning a walkable and bikeable network that will provide equitable access to open spaces and nature.

## 1.2 CLIENT DESCRIPTION

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The *Tredegar Street Corridor Plan* has two co-clients: Venture Richmond and the City of Richmond’s Department of Planning and Development Review (PDR). Venture Richmond’s mission is to “engage business and community leaders in partnering with the City [of Richmond] to enhance the vitality of the community, particularly Downtown, through economic development, marketing, promotion, advocacy and events.”<sup>4</sup> Additionally, the organization is involved in placemaking efforts throughout Downtown Richmond by implementing small- and large-scale projects and programs, such as “film screenings in outdoor public spaces, decorative street banners, beautification along the Canal Walk and some of our Downtown streets, advocating for accessible transportation and multi-modal options for all, and collaborating with community partners on long-term planning for Downtown and Riverfront public space.”<sup>5</sup>

Richmond PDR is responsible for guiding the building and development in the City and oversees building and trades permitting and inspections, compliance with the property maintenance code, current and long-range planning, enforcement of the Zoning Ordinance, and historic preservation. Their mission statement is: “We act on the genuine belief that we care about creating and maintaining the best quality of life for Richmond’s citizens, businesses, and visitors. To that end, we provide excellent planning and enforcement services to enhance our city’s built and natural environments.”<sup>6</sup>

## 1.3 PLAN OUTLINE

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**SECTION 2.0 ABOUT TREDEGAR STREET** provides an overview of Tredegar Street and its surrounding area. This section describes the area’s history and how the street’s functionality has changed over time.

**SECTION 3.0 EVALUATING TREDEGAR STREET** further explains the three concepts of mobility, connectivity, and accessibility and how they are measured in a transportation network.

**SECTION 4.0 ENGAGING WITH TREDEGAR STREET** describes the plan’s guiding framework and methodology. This section lists the plan’s research questions and the methods that were used to answer these questions, one of which is collecting user input via a survey.

**SECTION 5.0 FINDINGS ON TREDEGAR STREET** covers the findings from the user survey. Based on the survey results, this section explains who uses Tredegar Street, which mode of transportation do they use, and how they feel when traveling to and along the street.

**SECTION 6.0 RECOMMENDATIONS FOR TREDEGAR STREET** outlines and describes the recommended goals, objectives, and actions that were informed by the findings and additional research.

**SECTION 7.0 THE TREDEGAR STREET IMPLEMENTATION PLAN** defines the actions, responsible parties, timeline required to implement the recommendations stated in Section 6.0.

# 2.0 ABOUT TREDEGAR STREET

Located along the northside of the James River, Tredegar Street runs east to west and sits at the bottom of Oregon Hill and Gambles Hill, which are bisected by South Belvidere Street (Figure 1). The street has a length of about 0.7 miles, and its ends are bounded by two privately-owned entities: the Federal Reserve Bank of Richmond and Dominion Energy. The east side of Tredegar Street ends at the South 7th Street Roundabout where the street turns into South 10th Street and becomes privately owned by the Federal Reserve Bank. The west end of the street becomes privately owned by Dominion Energy at the entrance of the Belle Isle Suspension Bridge.

Tredegar Street is intersected by three roadways: Brown's Island Way, South 5th Street, and South 7th Street and by one trailhead, the North Bank Trail. At the top of the hills, Brown's Island Way connects to South 2nd Street, South 5th Street and South 7th Street join to East Byrd Street, and the North Bank Trail leads to Oregon Hill Parkway. Additionally, Tredegar Street is connected to Belle Isle by one pedestrian/cycling bridge that crosses the James River, known as the Belle Isle Suspension Bridge, and to Brown's Island by three pedestrian/cyclist bridges: Haxall Headgate, Halsey Pedestrian Bridge, and South 7th Street Pedestrian Bridge, all of which cross the Haxall Canal. Tredegar Street becomes privately owned at both the east and west end of the street, so the study area is bounded by the South 7th Street Roundabout and the area at the top of Oregon Hill where the North Bank Trail links Oregon Hill Parkway to Tredegar Street.



Figure 1 | Tredegar Street and its surrounding areas

## 2.1 TREDEGAR STREET'S PAST

Although Tredegar Street is largely absent from written history, its transformation can be explained based on the history of its surrounding areas: the American Civil War Museum - Historic Tredegar, Belle Isle, and Brown's Island. These three areas began as sites of industry during the early 19th century. As Richmond transitioned from an industrial city into a modern city, these areas became historic sites of education and recreation. Tredegar Street turned from a street that conveyed factory workers and equipment to a street that transports residents and tourists seeking leisure and recreation.

Beginning in 1815, Belle Isle was home to multiple industrial sites, which included: two iron and nail works, a quarry, a waterworks plant, and a hydroelectric plant. Additionally, there were a couple of dams and one canal that were built on and adjacent to the island in order to power the factories and plants (2012, 20).<sup>7</sup> Similarly to Belle Isle, Brown's Island housed several industrial operations starting in 1860. Some of the operations included: the Confederate States Laboratory, which manufactured weaponry during the Civil War, a coal plant, a hydroelectric plant, and a paper mill (2019, 10).<sup>8</sup> The largest industrial enterprise began in 1837 with the opening of Tredegar Iron Works, which became the largest iron producer in the South by 1860.<sup>9,10</sup> Prior to 1888, Tredegar Street did not exist. Therefore, anything that lied to the west of the Tredegar Iron Works complex could not be accessed by vehicles, including the City's Water Works, which sat on the site where Dominion Energy is currently located. The street was proposed to be built in 1888, and in 1889, it was depicted on a map starting from 7th Street and leading to the Tredegar Iron Works complex (Figure 2).<sup>11,12</sup>

In 1890, the street was extended to Albemarle Paper Mills and ended at the City's Water Works. Therefore, the length of Tredegar Street is the length that was constructed in 1890. The completion of Tredegar Street was seen as a "great convenience" because it provided access to further facilities located along the James River and helped with the conveyance of industrial materials and equipment.<sup>13,14,15</sup>

As the industrial period came to an end, the factories closed and the relationship between people and the river changed. Brown's Island and Belle Isle became known for their scenic and natural landscapes that provided direct access to

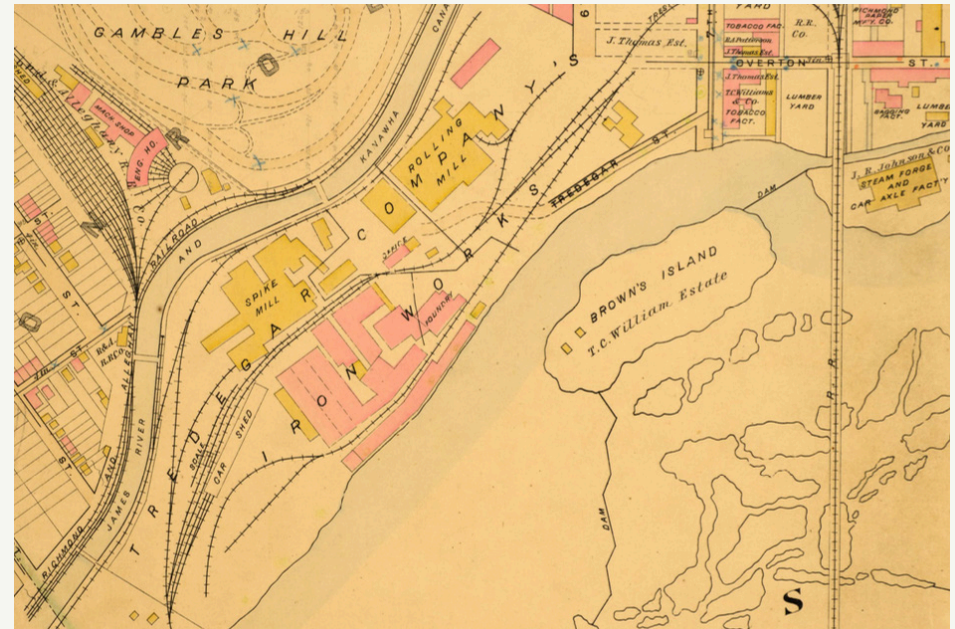


Figure 2 | 1889 map of Tredegar Iron Works and Tredegar Street<sup>20</sup>

the river. Belle Isle became a part of the James River Park System in 1972 and the Belle Isle Suspension Bridge connecting the island to Tredegar Street was built in 1988.<sup>16,17</sup> Brown's Island was incorporated into the James River Park System in 1987 and has become a prime venue for popular Richmond events, such as Friday Cheers and the Richmond Folk Festival. Additionally, the T. Tyler Potterfield Memorial Bridge opened in 2016, providing a walkable and bikeable connection to the Southside of Richmond.<sup>18</sup> In the 2000s, the site of Tredegar Iron Works became the National Park Service's visitor center for the Richmond National Battlefield Park and the American Civil War Museum – Historic Tredegar.<sup>19</sup>

Due to the area's transformation from industrial sites to recreational sites, the purpose and usage of Tredegar Street also changed. The street used to be traveled by factory workers and conveyed machinery and equipment. Now it is traveled by residents and tourists who want to access destinations of education, leisure, and recreation. Just as the uses of the surrounding areas changed, the use of Tredegar Street can also evolve by redesigning the streetscape and points of access. Tredegar Street and its surrounding areas have become a transport network that needs the capacity and design to transport all people in a convenient, safe, and comfortable way.



## 2.2 TREDEGAR STREET'S PRESENT

### 2.2.1 An Interconnected Street

Although Tredegar Street itself only runs less than a mile, its network consists of twelve trails, roadways, and pedestrian/cyclist bridges that extend both east to west and north to south travel (Figure 3). Connection A is the North Bank Trail, which stretches three miles west to Byrd Park Pump House. Connections B and C are sections of the North Bank Trail that connect Oregon Hill Parkway and Tredegar Street. Connection D is Brown's Island Way, which links to South 2nd Street. Connections E and F are South 5th Street and South 7th Street, respectively, and both join to East Byrd Street and lead to Downtown Richmond. Connection K is the Belle Isle Suspension Bridge that crosses the James River and leads to Belle Isle. Connections G, H, and I are Haxall Headgate, Halsey Pedestrian Bridge, and S. 7th Street Pedestrian Bridge, respectively, which cross the Haxall Canal and link to Brown's Island, while Connection L is the T. Tyler Potterfield Memorial Bridge that connects Brown's Island to Manchester in the southside of Richmond. Lastly, Connection J is the Canal Walk that leads from Brown's Island and runs about 2 miles east to the Virginia Capital Trail and Great Shiplock Park. These multiple links make Tredegar Street a vital part of a transportation network that conveys multiple people using various modes of transportation who are traveling between the multiple destinations.

The destinations along and near Tredegar Street include residential, industrial, business, and recreational sites. There are eleven main destinations: North Bank Trail, Oregon Hill, Downtown Richmond, the Dominion Energy Complex, the CoStar Building, the American Civil War Museum – Historic Tredegar, Tredegar Green Amphitheatre, Belle Isle, Brown's Island, the Canal Walk, and the James River.

The number of connections, or links, divided by the number of destinations, or nodes, is known as the link-node ratio. So, twelve links divided by eleven nodes gives Tredegar Street and its surrounding area a link-node ratio of about 1.1. Since some cities have adopted a standard ratio of 1.2, it can be mathematically supported that Tredegar Street is part of a well-connected transportation network.<sup>21</sup>



Figure 3 | Connections to Tredegar Street

## 2.2.2 The Quality of Connections

Even though the link-node ratio of Tredegar Street and its surrounding area is close to an adopted standard, the quality of the links, or connections, can limit and/or restrict access to the street. For example, Connections B and C are the segments of the North Bank Trail that connect Oregon Hill Parkway and Tredegar Street (Figures 4, 5). These connections are pedestrian and/or cycling paths, but the material and condition of the ground can make it difficult for people who have limited mobility (i.e., a child, an elderly individual, an individual who uses a cane, walker, or wheelchair) to travel on.

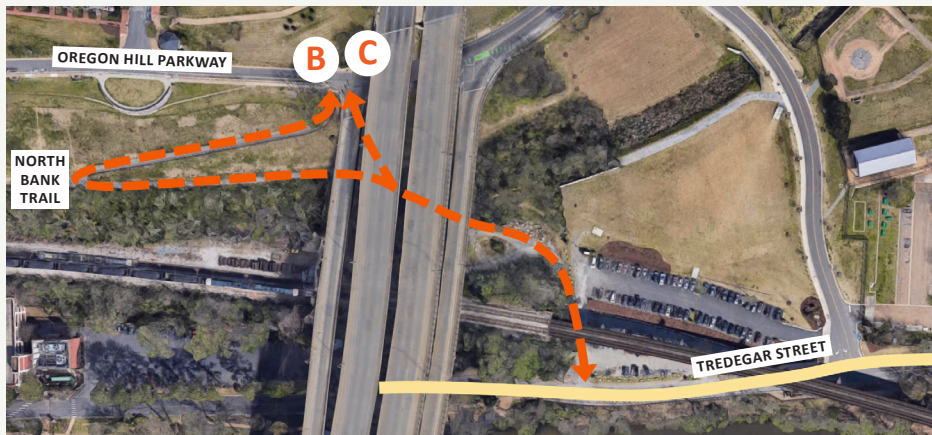


Figure 4 | Connections B and C to Tredegar Street (Aerial View)

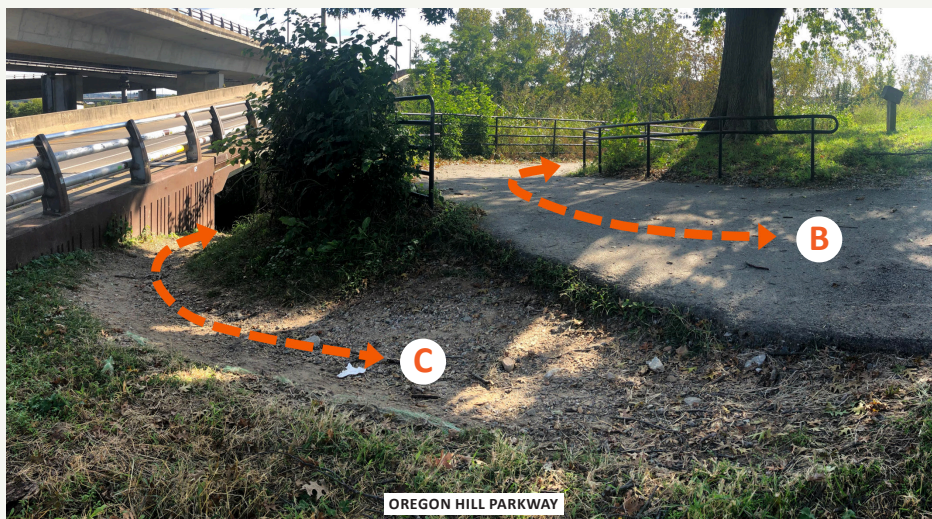


Figure 5 | Connections B and C to Tredegar Street

Connection B is a paved pathway that zigs down the hillside (Figure 6) and zags onto a dirt pathway (Figure 7) that eventually leads down to Tredegar Street. The curvature of the paved pathway might limit access to young and/or novice bicyclists, while the dirt pathway restricts access to people who use mobility aids (i.e., walkers, canes, wheelchairs, etc.), especially after inclement weather when the path becomes muddy.

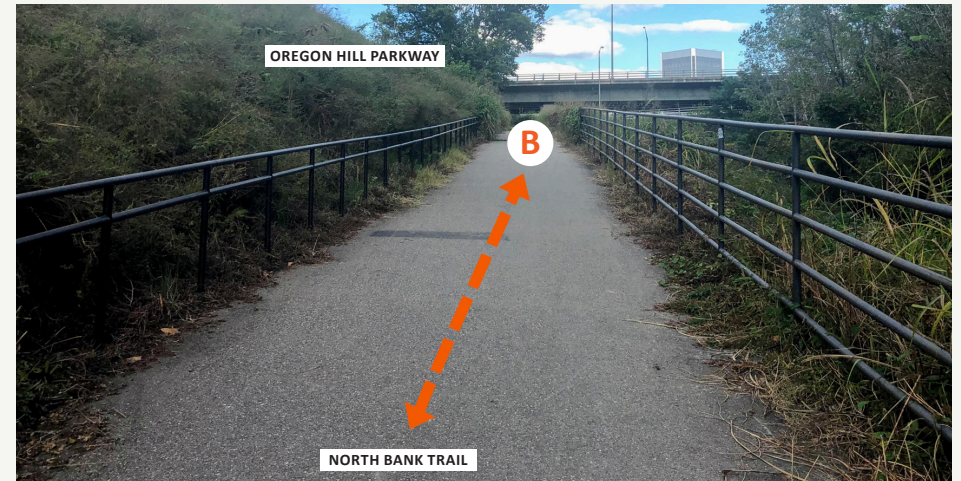


Figure 6 | Connection B leading from Oregon Hill Parkway to North Bank Trail



Figure 7 | Connection B leading from North Bank Trail to Tredegar Street



Figure 8 | Connection C leading from Oregon Hill Parkway to Tredegar Street

Connection C is a steep staircase tucked right underneath the Belvidere Bridge (Figure 8). This staircase restricts access to people who use mobility aids (i.e., walkers, canes, wheelchairs, crutches, etc.), bicyclists, people with baby strollers, and people with limited mobility.

Parking on Tredegar Street is limited to three areas. The Belle Isle Parking Lot on the northwest corner of Tredegar Street and Brown's Island Way is a free, public parking with about fifty available spaces (Figure 10). There is one, paid parking lot at the American Civil War

Museum and free, on street, parallel parking along S. 5th Street (Figures 11, 12). Along with limited parking for motorized vehicles, the street is not serviced by any form of public transportation. The Greater Richmond Transit Company (GRTC) has neither a bus route nor a bus stop on or along Tredegar Street. The nearest routes and stops are all located at the top of the Oregon Hill and Gambles Hill (Figure 9). The location and distance of the stops are inconvenient for people who will have trouble traveling up and/or down the hills to get to Tredegar Street.



Figure 9 | GRTC Bus Stops and Parking Areas near/on Tredegar Street



Figure 10 | Belle Isle Parking Lot



Figure 11 | American Civil War Museum (ACWM) Parking Lot



Figure 12 | S 5th St Parking

Lastly, Tredegar Street has a lack of pedestrian and cycling infrastructure and amenities and traffic calming measures. Sections of the sidewalk on both the north and south sides of the street are narrow, discontinuous, and either unpaved or unevenly paved (Figures 13, 14, 15, 16). There were few curb cuts for wheelchairs, bicycles, scooters, strollers, and other items on wheels (Figure 17) and zero crosswalks or speed humps/bumps/tables. The lack of walkable and bikeable space often causes non-motorists to walk, jog, and bike on the street (Figures 18, 19). In order to improve mobility on Tredegar Street, changes need to be made to the streetscape in order to lessen the dominance of cars and accommodate all modes of transportation and all users.



Figure 13 | Eastbound, uneven sidewalk conditions across from Belle Isle Parking Lot



Figure 14 | Eastbound, uneven sidewalk conditions across from CoStar Building



Figure 15 | Eastbound, uneven sidewalk conditions across from CoStar Building



Figure 16 | Westbound, unpaved sidewalk conditions next to ACWM Parking Lot



Figure 17 | Westbound, no curb ramp on sidewalk heading towards ACWM



Figure 18 | Lack of bicycle lanes and crosswalks



Figure 19 | Lack of crosswalks, adequate sidewalks, and curb ramps

## 2.3 TREDEGAR STREET'S FUTURE

### 2.3.1 Existing Plans

The *Tredegan Street Corridor Plan: A Step to Unifying the Richmond Riverfront* follows in the footsteps of two precedent plans, the *Richmond Riverfront Plan* and the *Brown's Island Improvement Plan*. The *Richmond Riverfront Plan* was adopted by City Council in 2012 as a part of the City's Master Plan and Downtown Plan. The plan provides a strategy to transform both the north and south sides of the James River from Belle Isle in the west to Rockett's Landing in the east into a "single, unified cohesive system" (2012, 10).<sup>22</sup> Additionally, the plan redefines the relationship between the City and the river by "dramatically expanding both visual and direct physical access to the James River" (2012, 6).<sup>23</sup> This increase in accessibility will be prioritized and incrementally implemented into three phases. Phase 1 projects are deemed of top priority and either improve connectivity to the Riverfront or create a positive perception change of the Riverfront - several of which are related to Brown's Island and its surrounding area (2012, 102-103).<sup>24</sup>

Since several of the Phase 1 projects are related to Brown's Island, the *Brown's Island Improvement Plan* was created in 2019 in order to provide the City with a more detailed, conceptual plan that will implement the *Richmond Riverfront Plan's* recommendations for Brown's Island.<sup>25</sup> The plan aims to increase and improve the island's visitor engagement through event planning, accessibility, and comfort. It also recognizes that, as the main right of way adjacent to Brown's Island, "Tredegan Street's design is important to the function of the island" (2019, 76).<sup>26</sup> However, specific design proposals for Tredegan Street were outside the scope of study, so the plan only includes general suggestions for improving pedestrian connectivity and safety. Some of the suggestions include improving and increasing sidewalks and multi-use pathways, adding traffic calming measures and street furniture, reorienting the street's design to prioritize pedestrians and cyclists over motorized vehicles, and potentially closing or limiting the street to vehicular traffic.<sup>27</sup> These recommendations were supported and prioritized by the Brown's Island Improvement Plan Community Survey. This part of the public engagement process drew in 739 respondents who provided their input and rankings on the site's conceptual improvements. The top choices for Tredegan Street included sidewalks, separated bicycle

lanes, river observation/overlook points, and the prioritization of pedestrians and cyclists over vehicles. Additionally, over 300 of the respondents provided their contact information in order to receive future information about the development of Brown's Island.

The *Richmond Riverfront Plan* and the *Brown's Island Improvement Plan* were incredibly influential in establishing guidelines for the transformation of the Riverfront. In fact, Richmond's recently updated Master Plan, *Richmond 300: A Guide for Growth*, which was published in 2020, mentions that any future development of the Riverfront should follow in accordance with the *Richmond Riverfront Plan* (2020, 26).<sup>28</sup> Therefore, the *Tredegan Street Corridor Plan* is influenced and informed by these precedent efforts. It is an additional piece to the puzzle of creating a cohesive and vibrant Riverfront, and ultimately furthers the Master Plan's goal of improving non-car connectivity by redesigning a walkable and bikeable network that will provide equitable access to open spaces and nature (2020, 23).<sup>29</sup>

### 2.3.2 Future Development

Along with the precedent plans of the *Richmond Riverfront Plan*, the *Brown's Island Improvement Plan*, and *Richmond 300: A Guide for Growth*, there are pending projects that will impact the use and traffic flow on Tredegan Street in the near future. Some of the projects are occurring near Tredegan Street, while some are going to happen along Tredegan Street. For example, Richmond's Department of Planning and Development Review (PDR) and their Department of Public Works (DPW) are discussing improvements at Kanawha Plaza, which is on the northeast corner of S. 7th Street and E. Byrd Street. NewMarket Corporation, who owns almost the entire north side of Tredegan Street, have long-term plans for a development on the westside of S. 5th Street and are currently working on selling the property on the east side of S. 5th Street to CoStar. These projects show that Tredegan Street is a part of a larger network that connects it to the rest of the James River and Richmond. The development of these projects will be monitored because their completion will increase the number of people who use Tredegan Street. The *Tredegan Street Corridor Plan's* intent to enhance mobility, connectivity, and accessibility to and along Tredegan Street will inevitably benefit the City's network.

# 3.0 EVALUATING TREDEGAR STREET

Every transport network must be analyzed in order to understand what is not working and what is working. Mobility, connectivity, and accessibility are three main concepts used to measure the performance of a transport network. There is literature that defines and measures each concept individually, or at least pairs two of the concepts together, but there is minimal work that discusses the relationship among all three concepts.<sup>30</sup> However, each concept has an imperative role in a transport network and must be assessed separately and collectively in order to understand how people move about the network, the connections in the network, and how people access the network and their destinations. Defining each of these concepts and focusing on their interrelationships can help assess the performance of a transport network. In particular, evaluating the mobility, connectivity, and accessibility of Tredegar Street and its surrounding area can further explain the street's current assets and limitations while informing future opportunities and improvements.

## 3.1 MOBILITY

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Generally speaking, mobility is the ability to move. In a transport network, it is “the ability to move between different activity sites [or destinations]” (2017, 4).<sup>31</sup> Mobility can be measured by “the ease or speed by which available facilities provide connections among specified points on the network” (2019, 718).<sup>32</sup> “Good” mobility is high mobility because individuals are able to move throughout the network with ease. Some indicators of high mobility include low travel time, low travel cost, low inconvenience, and low travel time reliability. Low mobility is caused by factors that make it difficult to move throughout the network, such as congestion problems or poor road conditions.<sup>33</sup> In order to make movement throughout a transport network easier, the amount of connections linking destinations together must be increased, hence the concept of connectivity. Additionally, mobility in a transport network has to take into account an individual's ability to move their body. A teenager may have a stronger and/or faster ability to move their body compared to the ability of an elderly individual. Additionally, there is a difference between the mobility of an able-bodied person compared to a person with a physical disability or a

person walking compared to a person biking. Therefore, the access to and the quality of connections within a network must be improved, hence the concept of accessibility.

## 3.2 CONNECTIVITY

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The purpose of a transport network “is to connect spatially separated places and to enable movement from one place to another.... The network may provide one connection or many connections, direct connections or indirect connections, connections for all modes or for selected modes of travel” (2003, iv).<sup>34</sup> Connectivity in a transport network is when there are “multiple routes and connections serving the same origins and destinations” (2003, iii).<sup>35</sup> “Good” connectivity means having a high number of direct connections for all modes of transportation. A high number of connections allow for various ways to enter and exit a destination point. Direct connections allow for ease of travel between destinations. Connections that accommodate all modes of transportation allow for a mix of motorized and non-motorized vehicles for all individuals.

There are multiple ways to measure connectivity, such as measuring the length, size, or density of a block, intersection, or street. One common measurement of connectivity is block length, which typically measures the length of a block from curb to curb. If there are short block lengths, that means that there will be more intersections and, therefore, a greater number of connections and shorter travel distances. In terms of motorized vehicles, “typical block length requirements fall in the range of 300 to 600 feet” (2003, 45).<sup>36</sup> However, shorter block lengths are recommended for connections used by pedestrians, bicyclists, and other non-motorists.<sup>37</sup> Another common measurement is the Link-Node ratio, which is a connectivity index that is “the ratio of links to nodes” (2003, 47).<sup>38</sup> The ratio is calculated by counting the number of links and dividing it by the number of nodes. Links are segments of a roadway or pathway that connect one destination to another, while nodes are destinations or intersections. For example, a road segment traveled in between two intersections is a link and the two intersections are the nodes. A grid network has a ratio of 2.5, so a

suggested target for planning purposes is a ratio of 1.4.<sup>39</sup>

The measures of connectivity focus on the quantity of connections. The connections are quantified by measuring the block's length or area or counting the number of intersections and roadways. However, they do not take into account the quality of the connections. Even if there are numerous connections within a transport network, there are several factors that affect the quality of those connections - such as: the presence of sidewalks and bicycle lanes, the current condition of pavement and sidewalks, the slope, the amount of motorized vehicular traffic, and aesthetics.<sup>40</sup> If a street is located on a hill and it is too steep to bike down or a path is poorly paved and the ground is uneven, the connections cannot be easily utilized - which leads to the concept of accessibility.

### 3.3 ACCESSIBILITY

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Accessibility is “the ease of reaching potential destinations, also called ‘opportunities’ or ‘activity sites’” (2017, 4).<sup>41</sup> Although the definition of accessibility sounds similar to the definition of mobility, it focuses more on the quality of the connections and destinations. While individuals are traveling throughout a transport network, do they feel that the infrastructure of the connections (i.e., pavement conditions, amenities, resources) is providing them with easy access to their destinations? It is important to know if and how a destination is reached, as well as why it is being travelled to in the first place. “To take an extreme example, proximity to a butcher shop does not factor into accessibility for vegetarian households.... Accessibility thus means different things to different people with respect to both the type and number of destinations that can be reached and the number of trips to be taken” (2016, 19).<sup>42</sup> Additionally, accessibility needs to take an individual's personal mobility into account. An uneven, narrow sidewalk without a curb cut can still be accessible to an able-bodied pedestrian because they are able to step over the cracks and curb and maneuver through the limited space. However, it is inaccessible to an individual who uses a wheelchair or walker because their mobility aid may be wider than the sidewalk or get stuck in a crack and they will need a curb ramp to actually get on the sidewalk.

# 4.0 ENGAGING WITH TREDEGAR STREET

## 4.1 GUIDING FRAMEWORK

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In order to think of, create, and implement impactful processes and outcomes, a plan must be informed by a planning theory. If a project is rooted in an idea with certain beliefs and guidelines, the planner should adhere to those guidelines in order to “practice what they preach.” The Tredegar Street Corridor Plan is rooted in the Communicative Action, Just City, and New Urbanism theories of planning. Communicative Action theory focuses on “the existence of an open, fair process,” while Just City theory focuses on “whether the outcome of the process (not just of deliberation but of actual implementation) is equitable” (2010, 10).<sup>43</sup> As researched by Karen Christenson, planners “use processes to achieve valued outcomes” (2015, 188).<sup>44</sup> So, the Tredegar Street Corridor Plan equally concentrates on process and outcome by listening to the street’s users and stakeholders and thinking about which changes would benefit them.

Since Communicative Action theory emphasizes an equitable process, it focuses on who is included in policy formulation.<sup>45</sup> The public must be involved in order to gain insight from their personal experience and knowledge.<sup>46</sup> That is why Communicative Action theory will play an important role in not inviting the public to the table but going to their table and seeing what they are eating. Tredegar Street is already familiar to the residents, tourists, employees, and property owners/managers who travel on, work on, and shape the street. It is crucial to talk to, listen to, and learn from these local and technical experts in order to understand how they feel about the street and what they think can be improved.

Since Tredegar Street is a conveyor of people, the people who use it are impacted by the changes that occur on it. Therefore, the Just City theory emphasizes an equitable outcome. Who will benefit from changes that occur on Tredegar Street? The Tredegar Street Corridor Plan creates outcomes that will improve and increase the street’s mobility, connectivity, and accessibility so that current users and new users can travel with safety and ease.

New Urbanism theory affirms “the appeal of compact, mixed use, walkable communities” (2005, 3).<sup>47</sup> It reverts back to the urban design principles that guided the development of cities prior to the popularity of car-oriented and suburban development. Principles that created traditional architecture and building patterns and catered towards walkability and strong urban identities. New Urbanism believes that by finding “the right design formula for the city, we might create the conditions for building better communities” (2005, 51).<sup>48</sup> The combination of the Communicative Action, Just City, and New Urbanism theories of planning led the *Tredegar Street Corridor Plan* to the best human-scaled approaches that enhance the connectivity, accessibility, and mobility of Tredegar Street by reorienting it to the wants and needs of the people who use it and shape it.

## 4.2 RESEARCH QUESTIONS

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The *Tredegar Street Corridor Plan* focuses on an equitable process and outcome to achieve a streetscape that is oriented towards the wants and needs of the street’s users and stakeholders. Therefore, the people who currently and often use Tredegar Street were talked to in order to learn how they feel about the street and what they think can be improved. Additionally, it was imperative that best practices that help a transportation network improve in connectivity, accessibility, and mobility were researched and determined. Therefore, the following questions were answered:

1. How do the street’s users assess the accessibility of Tredegar Street?
2. What are some of the best practices used to make a transportation network improve in connectivity, accessibility, and mobility?

The answers to these questions were collected via various methods. The first question was answered by conducting a user survey. The second question was answered via individual research of streetscape policies and practices. The user input coupled with the best practices research informed the recommendations of the *Tredegar Street Corridor Plan*.



## 4.2 DATA COLLECTION

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The answers to the first research question was solely dependent on listening to and learning from input from others. The input sought was from local experts. The local experts have a firsthand knowledge of traveling to and on Tredegar Street. Therefore, the group was solicited for their thoughts and opinions on the current and future usage of Tredegar Street. Their input helped determine what will not work and what will work on the street.

In order to gather information from local experts, the Tredegar Street User Survey was conducted. Firstly, the survey helped gauge who uses Tredegar Street by asking why they travel to it, how often do they travel to it, what mode of transportation do they use to get there, and which route do they use to access the street. Secondly, it helped understand if the users feel like they are able to travel to and along the street with safety and ease. Lastly, it gained a sense of what the local experts would like to see on Tredegar Street in the future. The User Survey was solicited directly on Tredegar Street via flyers, shown in Appendix A, that had a QR code and a link that led the user to a short, online Google Form survey. The flyer also provided an email address, created by Gmail, and a phone number, created by Google Voice, that collected comments from users who wanted to provide either written or oral feedback and questions.

Once the survey questions were reviewed and finalized, flyers were posted around Tredegar Street as soon as possible in order to take advantage of the high visitorship due to the nice weather. The User Survey collected responses for a three-month span from December to February and was re-solicited online via Venture Richmond's emailing list. Additionally, during the public engagement process of the Brown's Island Improvement Plan, over 300 of the survey respondents provided their contact information in order to receive follow-up information about the future of Brown's Island. Since Tredegar Street is the main right of way adjacent to Brown's Island, these respondents were sent an email with the User Survey during its re-solicitation.

The collective input and opinions of the users was coupled with research done on best practices that help a transportation network improve in connectivity, accessibility, and mobility. In order to determine these best practices, projects, programs, and guidelines were researched. These sources include already

established guidelines created by the Americans with Disabilities Act (ADA), National Association of City Transportation Officials (NACTO), and National Complete Streets Coalition. Additionally, precedent plans for Richmond were referenced in order to build upon already established recommendations that are being implemented throughout the City. This research helped create specific criteria that can be met on Tredegar Street.

# 5.0 FINDINGS ON TREDEGAR STREET

## 5.1 WHO USES TREDEGAR STREET?

The following findings are based on the results of the Tredegar Street User Survey. The survey was opened for about a two-month period and collected a total of 151 responses. The complete survey results can be found in Appendix B.

The respondents of the survey represent a vast majority (90.6%) of people who identify their racial/ethnic identity as White (Figure 20). Every age group was represented with the plurality of respondents (35%) being between the ages of 25 to 34 (Figure 21). The gender identity of respondents is almost evenly split with 51.8% identifying as Female and 46.7% identifying as Male (Figure 22).

The majority of respondents (56.9%) live in the three nearest zip codes that lie to the north of Tredegar Street (Figure 23). The 27.6% of respondents from 23220 mainly live in the Fan District or Oregon Hill, the 18.7% of respondents from 23223 mainly live in the East End, and the 10.6% of respondents from 23219 mainly live in Downtown or Shockoe Bottom.

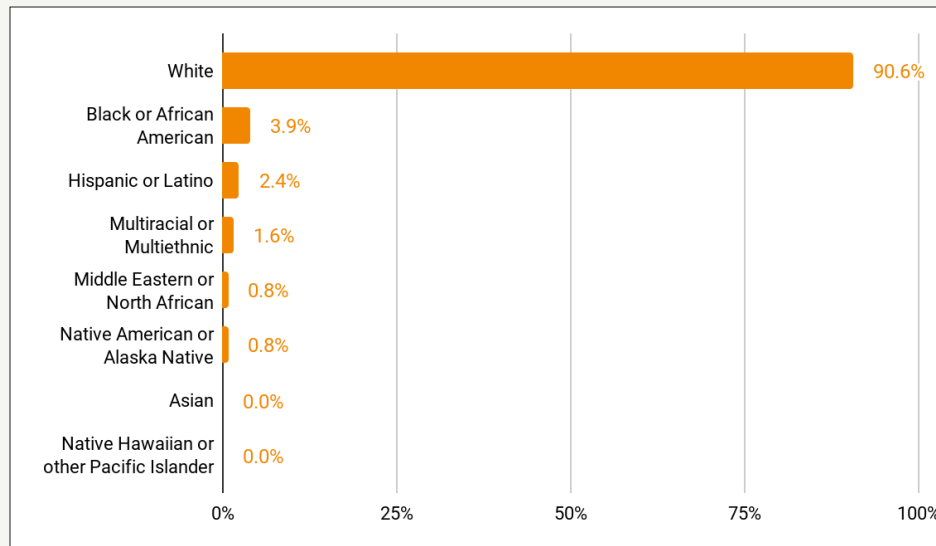


Figure 20 | What is your racial/ethnic identity? (N=127)

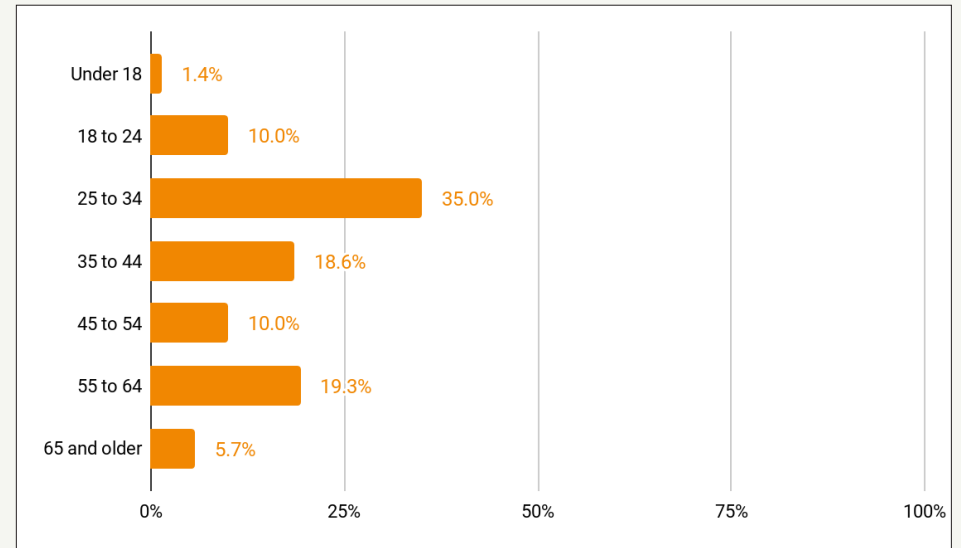


Figure 21 | What is your age range? (N=140)

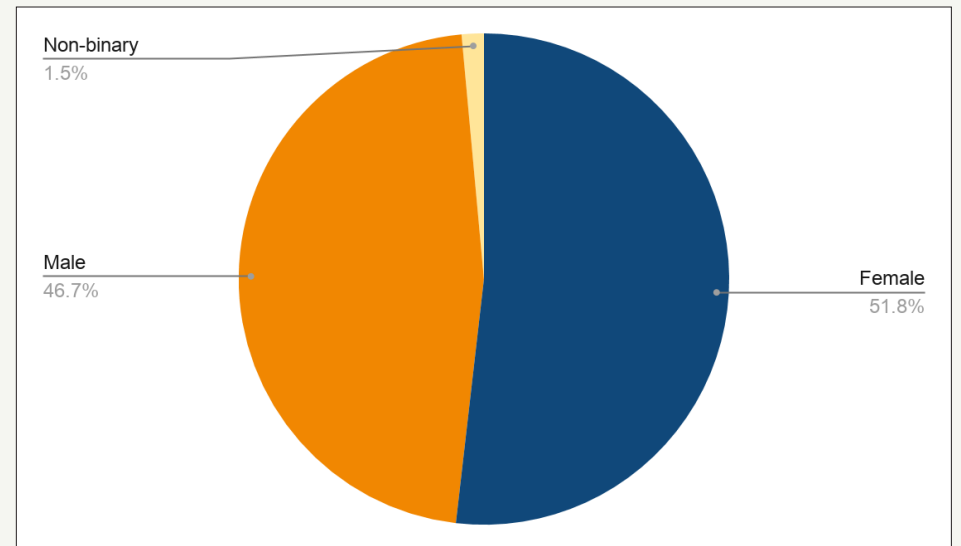


Figure 22 | What is your gender identity? (N=137)

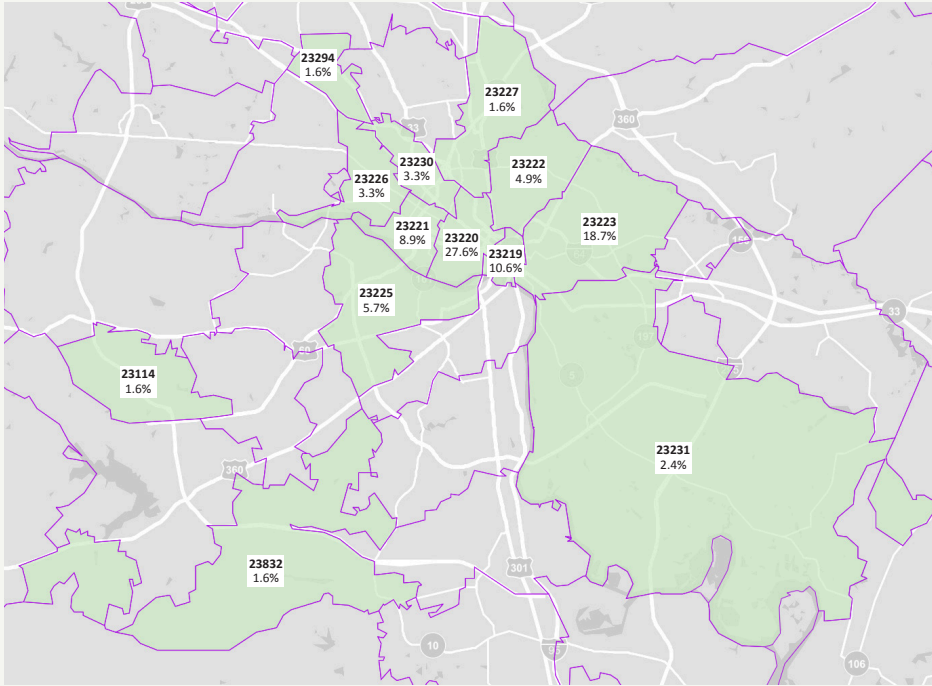


Figure 23 | Zip codes where 2 or more respondents visited from (N=123)

## 5.2 WHY DO USERS GO & HOW DO USERS TRAVEL TO TREDEGAR STREET?

The top four destinations that more than half of the respondents go to Tredegar Street for are: Brown's Island (93.4%), the T. Tyler Potterfield Memorial Bridge (86.1%), Belle Isle (84.8%), and the North Bank Trail (56.3%) (Figure 24). The "Other" responses included the Canal Walk. Most respondents go to Tredegar Street either a few times a month (37.3%) or a few times a week (29.3%), while the minority of them (8%) visit on a daily basis (Figure 25). Based on these results, the current main reason to go to Tredegar Street is for leisure and recreational activity, and it is not part of the respondents' daily routines.

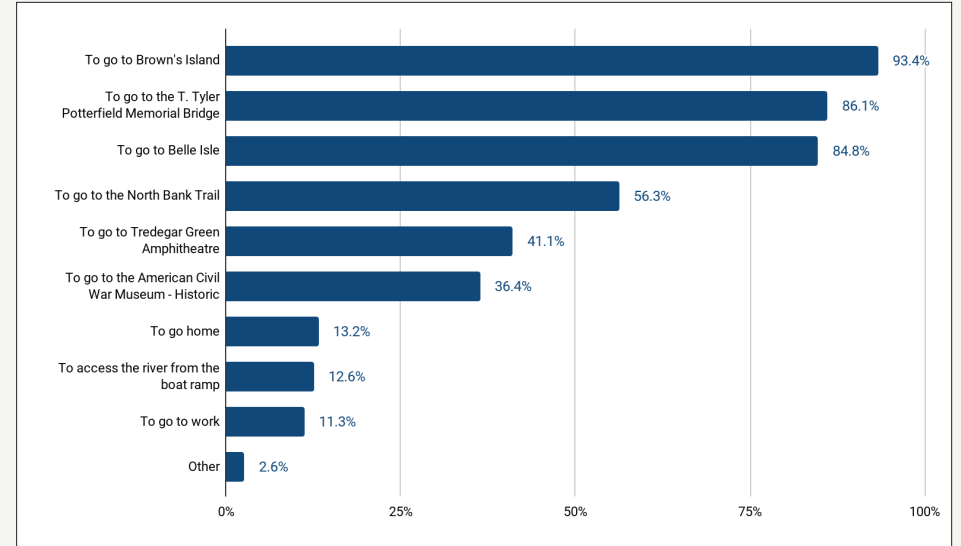


Figure 24 | Why do you travel to Tredegar Street? (Check all that apply.) (N=151)

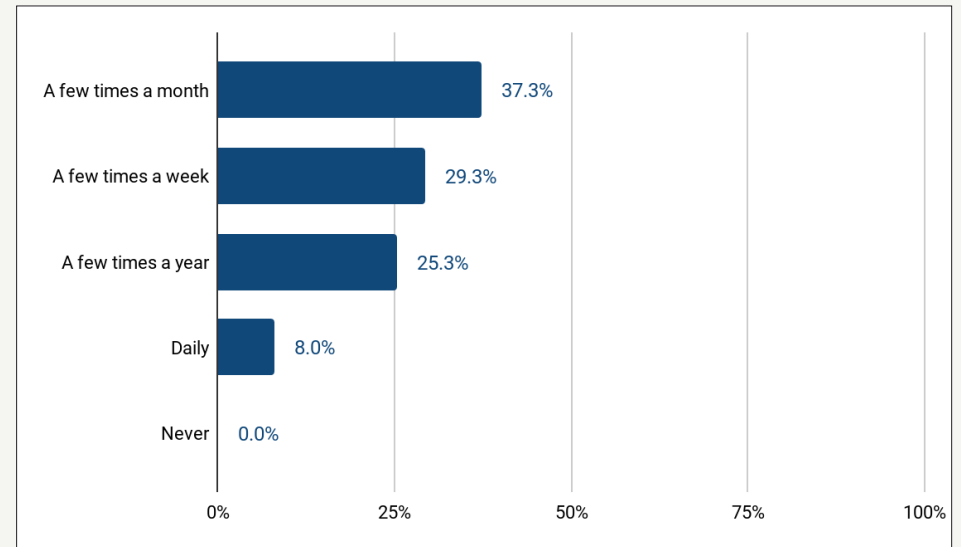


Figure 25 | How often do you travel to Tredegar Street? (N=150)

When asked whether they drive, walk, bike, run, or ride public transportation to get to Tredegar Street, the plurality of respondents (46.4%) normally drive (Figure 26). However, when comparing the number of respondents who drive to Tredegar Street (i.e., motorists) versus the total number of those who do not drive there (i.e., non-motorists), the group is almost evenly divided with 46.4% driving and 53.6% either walking (33.1%), biking (10.6%), running (7.9%), or riding public transportation (2%) (Figure 27).

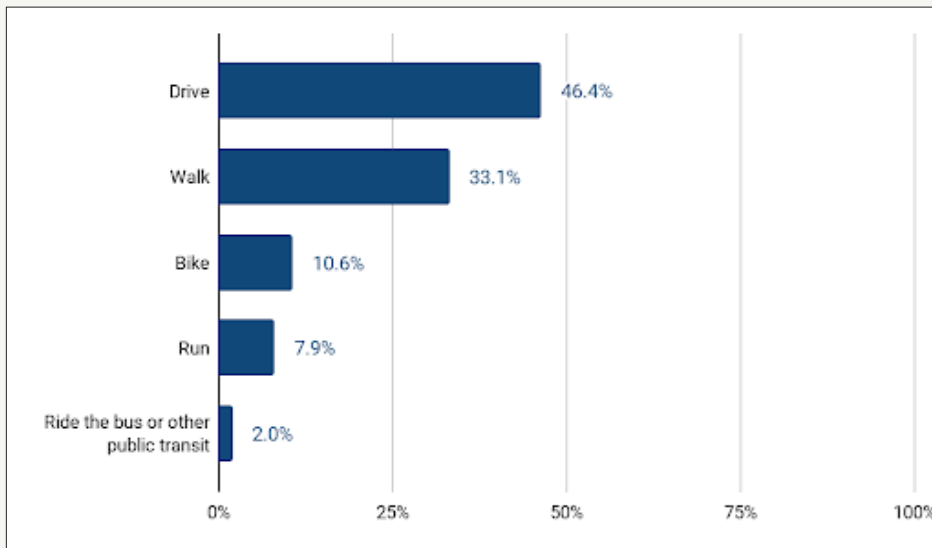


Figure 26 | How do you normally travel to Tredegar Street? (N=151)

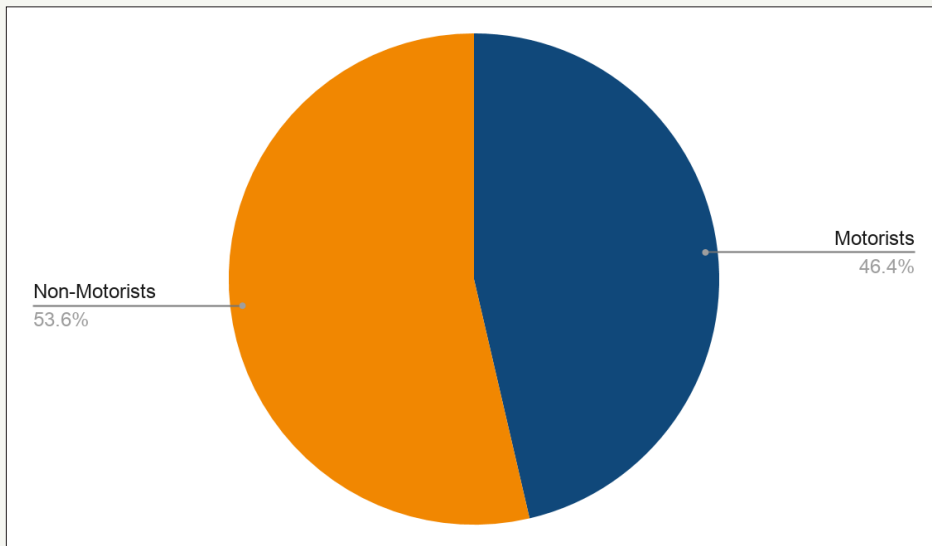


Figure 27 | Motorists vs. Non-Motorists (N=151)

Since there are multiple links that connect to Tredegar Street, respondents were asked which entrance point they normally use to access the street. The top three entrance points that respondents use to access Tredegar Street are: South 5th Street (36.2%), Brown's Island Way (20.8%), and Oregon Hill (16.8%) (Figure 28).

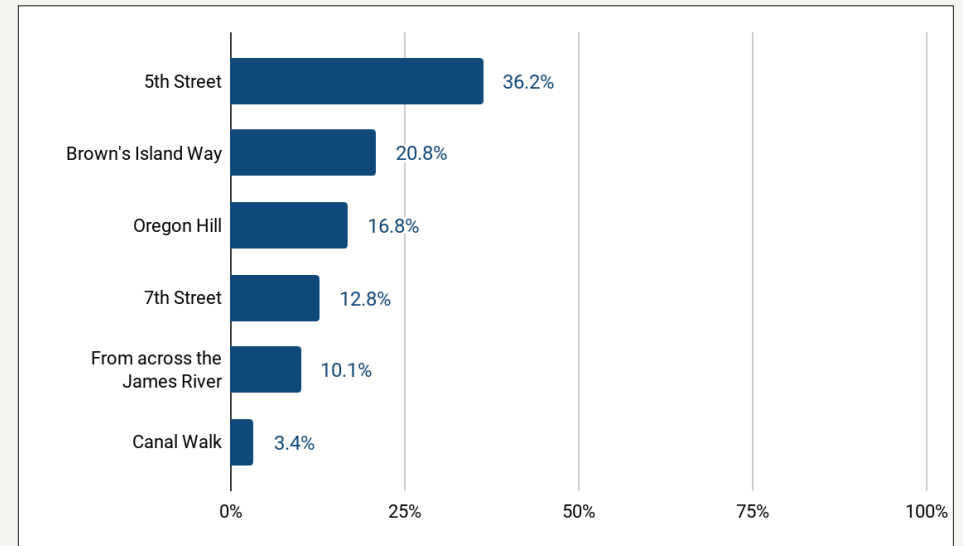


Figure 28 | Which access point do you normally use to enter Tredegar Street? (N=149)

## 5.3 HOW DO USERS FEEL WHEN TRAVELING TO & ALONG TREDEGAR STREET?

The majority of respondents (61.8%) do not have limited mobility nor know someone who has limited mobility (i.e., a child, an elderly individual, an individual who uses a cane, walker, or wheelchair), while 38.2% either know someone who has limited mobility (36.1%) or personally have limited mobility (2.1%) (Figure 29).

No matter their personal mobility, the plurality of respondents (38.7%, 36.7%) only feel somewhat safe and at ease when traveling TO and ALONG Tredegar Street, respectively (Figure 30). When traveling TO Tredegar Street, the majority of respondents (52.7%) feel like it is either "very safe and easy" (20.7%) or "safe and easy" (32.0%), while only 8.7% feel like it is either "difficult and unsafe" (8%) or "very difficult and unsafe" (0.7%). However, when traveling ALONG the street, the respondents' feelings of safety and ease decrease by 16%, while their feelings of unsafety and difficulty increase by 18%.

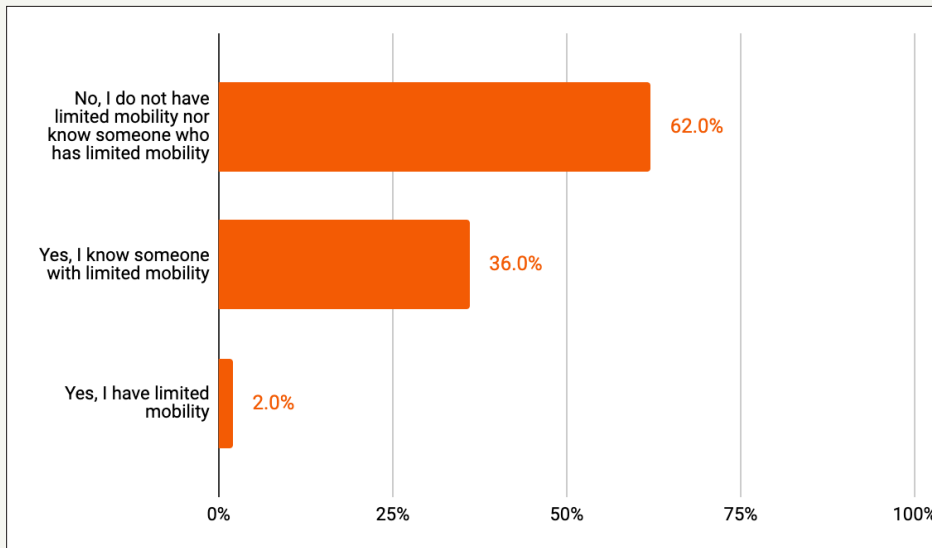


Figure 29 | Do you have limited mobility OR know someone who has limited mobility? (N=150)

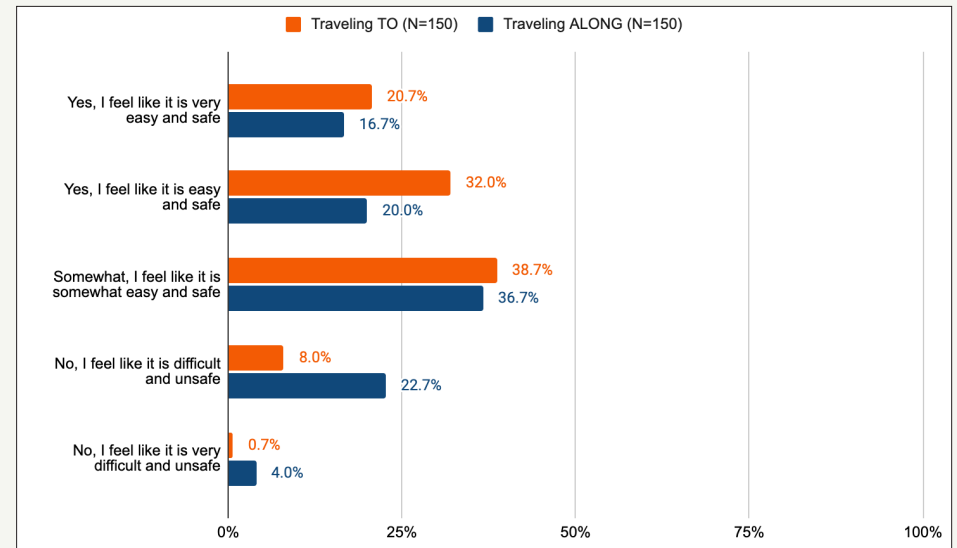


Figure 30 | Do you feel like it is easy and safe to travel TO and ALONG Tredegar Street? (N=150)

### 5.3.1 Why Do Users Feel Unsafe?

When asked the open-ended question, “Why do you feel, or do NOT feel, like it is easy and safe to travel to AND along Tredegar Street?” 96 respondents answered why they do NOT feel like it is easy and safe to travel to and along Tredegar Street. Their responses identified four recurring reasons: Condition of the Sidewalk and Walking Paths (74%), Condition of the Road (51%), Overall Congestion (29.2%), and Condition of Connections to Tredegar Street (16.7%) (Figure 31).

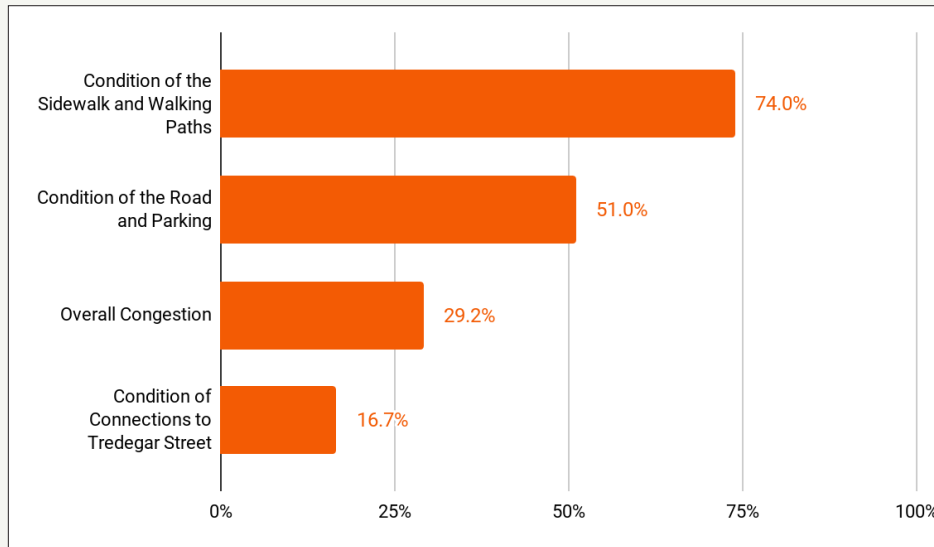


Figure 31 | Reasons why users do not feel safe and at ease when traveling to and along Tredegar Street (N=96)

**Condition of the Sidewalk and Walking Paths** - The majority of responses (74%) stated that the condition of the sidewalk and walking paths along Tredegar Street make respondents feel unsafe. The sidewalk, or lack thereof, was often described as “limited,” “uneven,” and “narrow.” Limited because it does not exist on both sides of the road and it is disconnected and ends without curb ramps. Uneven because the pavement has been uprooted and cracked by tree roots and areas that lack concrete-poured sidewalks have walking paths that are unpaved and made of loose dirt or asphalt. The narrowness does not allow space for wheelchairs and leads to overcrowding of pedestrians. Therefore, people often end up on the road and must be vigilant of cars and bicycles on it.

*“Narrow and bumpy sidewalk with an immediate drop off to the road.”*  
- Survey Respondent

*“The sidewalk is narrow and uneven - there is a lot of foot traffic that gets pushed into the street due to this.”* - Survey Respondent

**Condition of the Road and Parking** - About half of the responses (51%) focused on the condition of the road itself and how the presence of cars, lack of pedestrian and cyclist infrastructure, and change in road material make respondents feel unsafe. Respondents stated that cars on the road often speed, are inattentive to pedestrians and cyclists, and do not stop for pedestrians trying to cross the street. Additionally, the road prioritizes the flow of motorists since there are neither crosswalks for pedestrians nor bicycle lanes for cyclists. A popular spot for cars to park is the Belle Isle Parking Lot at the west end of Tredegar Street because it is free and located right on the street. However, the lot has about fifty available spots and can fill up quickly, which leads to a congestion of cars coming in and out of the parking lot. Lastly, the cobblestones on the street are difficult and uncomfortable to travel on, especially if bicycles, strollers, mobility aids (i.e., walkers and wheelchairs), and other wheeled items need to travel on them.

*“The people who drive down the street are not often on the lookout for pedestrians. There is also a lack of crosswalks where pedestrians can safely move across Tredegar to get to the various attractions.”* - Survey Respondent

*“The cobblestones are very jarring on a bike and I ride a mountain bike. My 5 year old son hates riding over the cobblestones. There is no curb ramp or crosswalk from Browns Island Way to the sidewalk on the southside.”*  
- Survey Respondent

*“Priority is clearly currently being given to cars despite heavier foot traffic.”*  
- Survey Respondent

*“One other cause of traffic is cars “hunting” in the small lot at the end of the street. When cars don’t find parking, they circle until something opens up. It’s like adding extra cars to the street.”* - Survey Respondent

**Overall Congestion** - Due to the high volume of users and the condition of the sidewalks, walking paths, and road, 29.2% of the responses mentioned that there is an overall congestion of motorists and non-motorists on Tredegar Street that makes respondents feel unsafe. The narrow and limited sidewalks and walking paths do not have enough space to accommodate the number of pedestrians in the area, especially during the COVID-19 pandemic when people want to social distance from others. Therefore, some pedestrians end up on the road and have to be aware of cyclists and cars - and vice versa. Additionally, the two-lane road does not provide adequate space for cars, bicyclists, and pedestrians to safely share the road. Overall, the entire street (i.e., the road and the sidewalks and walking paths along it) has limited space that forces non-motorists and motorists to be in uncomfortably close proximity to one another.

**Condition of Connections to Tredegar Street** - Lastly, 16.7% of the responses mentioned that the condition of the connections leading to Tredegar Street make respondents feel unsafe. The four connections to the north of Tredegar Street (i.e., Oregon Hill pathway, Brown's Island Way, S. 5th Street, and S. 7th Street) are on a hill. This makes it difficult for cars, bicycles, wheelchairs, strollers, and other wheeled items to travel uphill and downhill because they have limited control against gravity. Brown's Island Way and S. 5th Street do not have sidewalks on both sides of the road, which restricts users to one side of the road and/or they end up on the road and have to be vigilant of cars and bicycles on it. Additionally, the Oregon Hill pathway is unpaved and made of gravel, which does not offer even and stable ground for pedestrians, bicycles, strollers, mobility aids (i.e., walkers and wheelchairs), and other wheeled items.

*"High volume of people on narrow walking path results in pedestrians/cyclists using roadway, which does not have ample space if vehicle(s) are moving through the area" - Survey Respondent*

*"There are often a lot of people, dogs, and bikes along Tredegar and the nearby area. As a pedestrian or cyclist it can feel very unsafe to have cars traveling along that road, as there is not enough room to move off the road in certain areas. With COVID, this has been especially difficult as we try to distance from other people as well. As a driver, it also feels dangerous to be in that area." - Survey Respondent*

*"Downhill difficult for wheelchairs, also going back up!"  
- Survey Respondent*

*"The changes in grade and texture of the path changes several times. The gravel path under the Lee bridge is eroding." - Survey Respondent*

*"Parking along 5th St, with the incline coming down the hill, makes it challenging with a stroller. Additionally, the sidewalk is only along one side of 5th St, so it can be challenging if you park along the side without one."  
- Survey Respondent*

## 5.4 WHAT DO USERS WANT ON TREDEGAR STREET?

When asked to select which streetscape features would make it easier and safer to travel TO and ALONG Tredegar Street, the top five features that more than half of the respondents chose are: better sidewalks (90%), crosswalks (70%), separated bicycle lanes (64%), ADA accessible routes with ramps and paved pathways (58.7%), and a segment of the street that would be closed to private vehicles and open to pedestrians and cyclists ONLY (53.3%) (Figure 32).

There were a total of 42 responses to the open-ended questions, "Why do you feel, or do NOT feel, like it is easy and safe to travel to AND along Tredegar Street?" and "Do you have any other thoughts or comments that you would like to share about Tredegar Street?" that either further supported the already mentioned streetscape features or listed new opportunities that respondents desire. The four recurring opportunities mentioned were: Enhance Condition of the Sidewalk and Walking Paths (35.7%), Enhance Condition of the Road and Parking (33.3%), Enhance User Experience (31%), and Create a Car-Free Street (16.7%) (Figure 33).

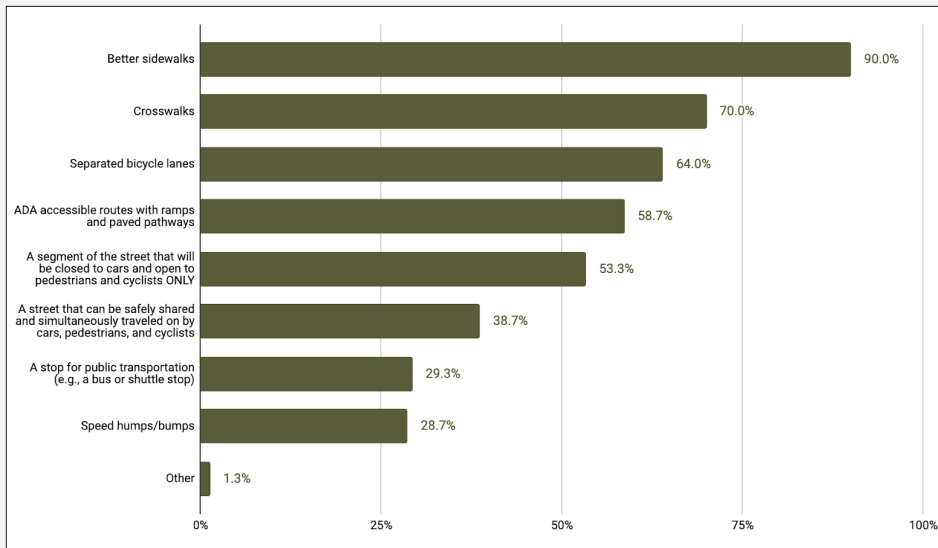


Figure 32 | Which streetscape features would make it easier and safer to travel to AND along Tredegar Street? (Check all that apply.) (N=150)

**Enhance Condition of the Sidewalk and Walking Paths** - The plurality of responses (35.7%) mentioned the desire to enhance the condition of the sidewalk and walking paths along Tredegar Street. Respondents want the sidewalk and walking paths to be wider, evenly paved, on both sides of the street, and continuous with curb ramps at intersections.

*“The street needs sidewalks on both sides, especially for handicapped persons.” - Survey Respondent*

*“Need better and wider sidewalks.” - Survey Respondent*

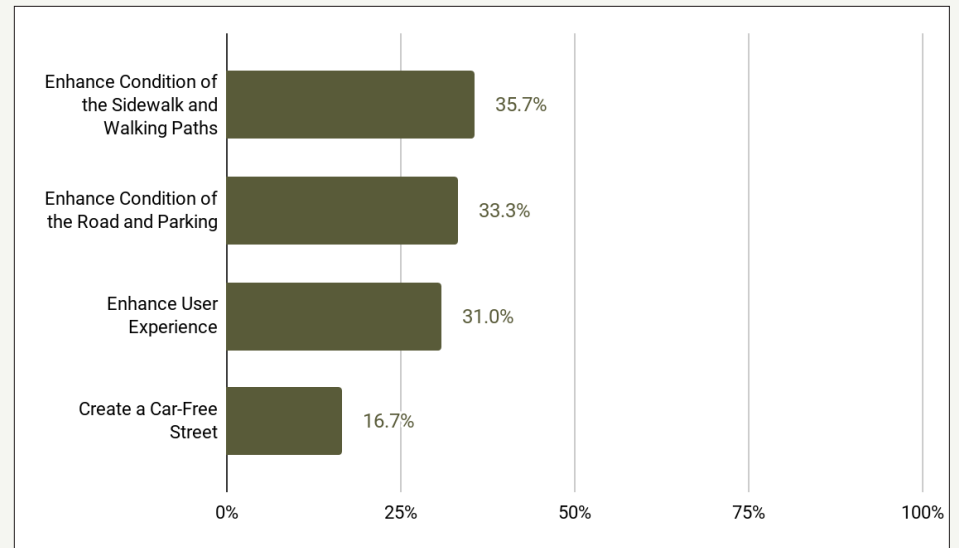


Figure 33 | Opportunities identified by users (N=42)

**Enhance Condition of the Road and Parking** - Thirty three percent of the responses concentrate on enhancing the condition of the road itself and parking along the street. Some respondents want to remove the cobblestone and add crosswalks and/or speed humps, while others mentioned the addition of signage in order to improve traffic flow. A few respondents stated the desire to have more parking options.

*“Cars do not stop for pedestrians. Needs a more visible crosswalk/blinking lights” - Survey Respondent*

*“There is a need for more public parking in this area on weekends.” - Survey Respondent*



**Enhance User Experience and Accessibility** - Thirty one percent of the responses focus on enhancing the user experience when traveling to and along Tredegar Street. Some respondents want the area to be kept clean and well maintained via frequent clean ups and an increase in trash receptacles. Others want to preserve and increase shade in the area by protecting current trees, planting new ones, and creating sheltered seating areas. Additionally, a couple of respondents stated that their experience traveling to Tredegar Street would be enhanced if their access point was improved.

*“Create a coalition of interested parties to help keep it clean and maintain the vistas to the river.” - Survey Respondent*

*“More shady sitting areas” - Survey Respondent*

*“Doing the following would improve our experience and safety: please pave the path from Oregon Hill down to Tredegar...” - Survey Respondent*

**Create a Car-Free Street** - Lastly, 16.7% of the responses reemphasized the want to close either a segment of the street or the entire street to private vehicles and open to pedestrians and cyclists ONLY.

*“Having only a segment from 5th to Browns Island Way closed to cars and the remainder of Tredegar Street converted to shared use streets would help pedestrians and cyclists feel safer.” - Survey Respondent*

*“Ideally, vehicular traffic would be closed between Brown's Island Way and 5th Street, which would still allow for access to parking areas on either side. This could be done only on the weekends, but permanently would be better and avoid the extra work/confusion of constant closing/reopening.”*

*- Survey Respondent*

If a segment of Tredegar Street, specifically between S 5th Street and Brown's Island Way, were to be closed to private vehicles and only open to pedestrians and cyclists, the plurality of respondents (41.1%) want it to be permanently closed (Figure #). The second highest percentage (27.6%) want it to only be closed during special events, such as FolkFest and Friday Cheers. Some respondents expressed concern as to how a partially closed down street would affect parking. However, the segment between S 5th Street and Brown's Island Way will only prohibit access to the American Civil War Museum's Parking Lot. The Belle Isle Parking Lot and parallel parking on S 5th Street would still be accessible. One respondent did express concern that the boat ramp would be blocked “Please don't block vehicle access to the James River boat ramp. This is the only vehicle accessible continuous slope (i.e., not steps) in that specific area. The Tredegar Pool section of the James River is a wonderful flatwater section in the middle of an awesome inner-city whitewater experience. I would love to see the maintenance of this ramp actually increase to make the ramp surface smoother.”

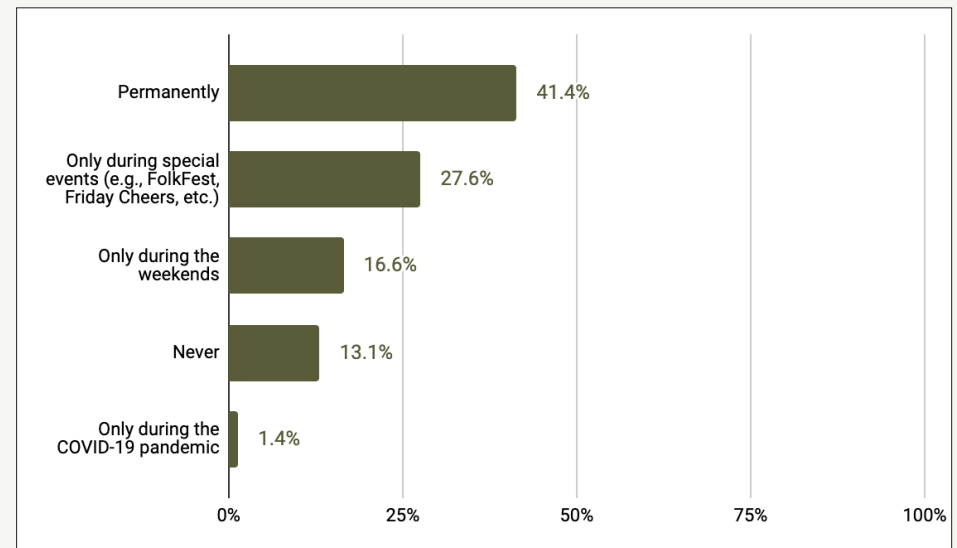


Figure 34 | If a segment of Tredegar Street was closed to cars and open to pedestrians and cyclists ONLY, how often would you want it to be closed? (N=145)

# 6.0 RECOMMENDATIONS FOR TREDEGAR STREET

## 6.1 VISION STATEMENT

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The *Tredegar Street Corridor Plan: A Step to Unifying the Richmond Riverfront* promotes a highly mobile, accessible, and connected network designed with every age, ability, and racial/ethnic identity in mind. If the following recommendations are put into action, Tredegar Street will become a safer and more comfortable street for people to access and use, regardless of their mode of transportation. The implementation of the plan will ultimately lead to a more unified and cohesive riverfront system and contribute to Richmond's health, happiness, and wellbeing.

## 6.2 GOALS, OBJECTIVES, & ACTIONS

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The goals, objectives, and actions were established to provide an outline on how to achieve the vision statement and relate to the three components of evaluating a street network: mobility, accessibility, and connectivity.

### MOBILITY

**GOAL 1 :** Enhance the pedestrian and cyclist environment for all users.

**GOAL 2 :** Facilitate efficient and safe circulation of motorists and non-motorists.

### ACCESSIBILITY

**GOAL 3 :** Ensure the street is accessible and inclusive to all users.

**GOAL 4 :** Strengthen the user experience on the street.

### CONNECTIVITY

**GOAL 5 :** Build upon the connections to the street.

**GOAL 6 :** Consider the street's role within its larger context.

# GOAL 1 : ENHANCE THE PEDESTRIAN AND CYCLIST ENVIRONMENT FOR ALL USERS.

## Objective 1.1 : Build a safe and complete sidewalk network.

Tredegar Street's current sidewalk network is narrow, made of uneven and mixed material, and nonexistent in some areas. This causes users to feel unsafe, uncomfortable, and unwelcomed, especially those with limited mobility. It is critical to develop a sidewalk network that is continuously built on both the north and south sides of the street and made of evenly-poured concrete pavement. Additionally, the sidewalk must be wide enough to accommodate a high volume of visitors and be ADA accessible with curb ramps at each intersection.

### Action 1.1.1 : Develop an inventory of the existing sidewalk conditions to inform future development.

Document and analyze the current sidewalk and walking path conditions along Tredegar Street between S. 7th Street and its western terminus at the Dominion Energy complex (Figure 35).

### Action 1.1.2 : Assess the possibility of widening the sidewalk width given the street's limited right-of-way.

The Federal Highway Administration (FHWA) states that sidewalks require a minimum width of either five feet, if set back from the curb, or six feet, if at the curb face.<sup>49</sup> Any width less than this does not meet the minimum ADA requirements. However, Tredegar Street has a limited right of way. So, explore this possibility with the owners of the land along the north and south sides of the street. NewMarket Corporation and CoStar own land along the north side of Tredegar Street, while the City of Richmond owns land along the south side.

### Action 1.1.3 : Construct sidewalk and follow ADA guidelines.

If the sidewalk cannot be widened to five feet on both sides of the street, identify sections that will be widened to at least seven feet to allow passing space for wheelchair users. Additionally, the sidewalk must have curb ramps at each intersection.



Figure 35 | Area for sidewalk inventory

# GOAL 1 : ENHANCE THE PEDESTRIAN AND CYCLIST ENVIRONMENT FOR ALL USERS.

## Objective 1.2 : Install crosswalks at every access and destination point along the street.

The lack of crosswalks does not allow space for pedestrians to safely cross the street, inhibits the flow of pedestrian traffic, and limits pedestrians from accessing all of the destination points along the street. Coordinating with the City of Richmond’s Department of Public Works, specifically the Transportation Engineering Division and Pedestrian, Bicycling, and Trails Coordinator to implement a mixture of raised and painted crosswalks running both east and west and north and south will enhance pedestrian safety and connectivity. Additionally, the crosswalks must have curb ramps and other ADA features at each end.

### Action 1.2.1 : Implement painted crosswalks at every access and destination point.

Paint three-way crosswalks at both the Tredegar and Brown’s Island Way intersection and Tredegar and S. 5th Street intersection. Additionally, paint a west/east crosswalk at the west side entrance of the Belle Isle Parking Lot, a north/south crosswalk near the entrance of the Belle Isle Suspension Bridge, and a north/south crosswalk at the entrance of the American Civil War Museum’s plaza (Figure 36).



Figure 36 | Potential crosswalk locations

### Action 1.2.2 : Remove the cobblestones at the entrance of Haxall Headgate and replace it with a raised crosswalk.

Remove the cobblestone (Figure 37), as it is an impediment to cyclists and pedestrians, especially those with limited mobility, and replace it with a raised crosswalk. The hump will slow down cars while providing a point for pedestrians to safely cross the street.



Figure 37 | Cobblestone in front of Haxall Headgate

### Action 1.2.3 : Follow ADA guidelines when developing the crosswalks.

Each crosswalk must have curb ramps at each end in order for people with strollers, mobility aids (i.e., walkers and wheelchairs), and other wheeled items to comfortably cross the street.

# GOAL 1 : ENHANCE THE PEDESTRIAN AND CYCLIST ENVIRONMENT FOR ALL USERS.

## Objective 1.3 : Enhance bicycle infrastructure and amenities.

Cyclists traveling on Tredegar Street must share the road with motorized vehicles and pedestrians who are pushed onto the road due to the limited sidewalk network. This crowding makes it an unsafe and uncomfortable environment for all cyclists. Additionally, there is a lack of bicycle parking for users who want to get off their bicycles and walk to other destination points. Painting shared-lane markings, also known as "sharrows," and increasing bicycle parking will create a safer and more welcoming environment that will accommodate cyclists of all ages and experience.

### Action 1.3.1 : Implement shared-lane markings, also known as "sharrows."

Since Tredegar Street is limited in width, it is not ideal to reserve a section of the road solely for a separated bicycle lane. However, painting shared-lane markings, such as the ones on Floyd Avenue in Richmond (Figure 38), will remind motorists that the street is for cyclists as well. Coordinate with the City of Richmond's Department of Public Works, specifically the Transportation Engineering Division and Pedestrian, Bicycling, and Trails Coordinator.



Figure 38 | Shared lane marking

### Action 1.3.2 : Increase bicycle parking along the street.

Since Tredegar Street is connected to various destinations, bicycle parking, specifically near parking lots and destination points (Figure 39), will accommodate a high number of cyclists who want to get off their bicycles and walk to other destinations. Coordinate with the City of Richmond's Department of Public Works, specifically the Transportation Engineering Division and Pedestrian, Bicycling, and Trails Coordinator.



Figure 39 | Potential bicycle rack locations

## GOAL 2 : FACILITATE EFFICIENT AND SAFE CIRCULATION OF MOTORISTS AND NON-MOTORISTS.

### Objective 2.1 : Create a car-free segment of the street.

Being in close proximity to a car while on foot or bicycle can be daunting. However, car-free areas give pedestrians and cyclists the opportunity to safely and comfortably travel on the road without worrying about the presence of motorized vehicles.

#### Action 2.1.1 : Temporarily close a segment of the street to private vehicles.

Tredegar Street already temporarily closes for large events, such as the Richmond Folk Festival, Richmond Marathon, and Dominion Energy Riverrock. However, being closed at least three weekends a year does not benefit users who want to experience a car-free street without an event occurring. In order to introduce more frequent closures, close the segment of the street between S. 5th Street and Brown's Island Way (Figures 40, 41) to private vehicles on every Saturday from June to September for a summer pilot project.



Figure 40 | Car-free street segment

#### Action 2.1.2 : Record the closure's impact on the community.

Gather user feedback by setting up a tent or stand to directly talk with users about the closure and how it has positively or negatively impacted their experience on the street. Based on the data collected, assess whether the street can be closed permanently or seasonally.



Figure 41 | Road closed sign

## GOAL 2 : FACILITATE EFFICIENT AND SAFE CIRCULATION OF MOTORISTS AND NON-MOTORISTS.

### Objective 2.2 : Develop signage to clearly and directly communicate with motorists and non-motorists.

Since Tredegar Street is connected to various access points and destinations, it attracts a high volume of people that use different modes of transportation. The existing signage, or lack thereof, fails to communicate to motorists the heavy presence of pedestrians and cyclists. Additionally, there is inadequate signage on the west end of the street to direct people to the Belle Isle Suspension Bridge or North Bank Trail, especially people who are unfamiliar with the area. The limited signage causes confusion and impedes the circulation of all modes of transportation.

#### Action 2.2.1 : Install stop signs at intersections and crosswalks.

The lack of traffic signs on Tredegar Street gives priority to the flow of vehicular traffic. Installing stop signs to halt vehicular traffic running east and west at intersections and crosswalks will give pedestrians the opportunity to safely cross the street. Coordinate with the City of Richmond's Department of Public Works, specifically the Transportation Engineering Division.



Figure 42 | Belle Isle directional signage

#### Action 2.2.2 : Improve upon directional signage near both the Belle Isle Suspension Bridge and North Bank Trail.

Based on physical observations, some users were confused as to where to go in order to get to Belle Isle and the North Bank Trail. The current James River Park System (JRPS) signage for both destinations are slightly tucked away from the users' direct line of vision (Figure 42). Additionally, the path leading to the North Bank Trail splits into two directions - one way leads to the North Bank Trail, while the other leads to an access route for CSX employees (Figure 43). Coordinate with the JRPS to enhance their current signage in order for it to be more directional for users, especially those who are unfamiliar with the area.



Figure 43 | CSX access road and North Bank Trailhead directional signage

## GOAL 2 : FACILITATE EFFICIENT AND SAFE CIRCULATION OF MOTORISTS AND NON-MOTORISTS.

### Objective 2.3 : Implement strategies to reduce the demand for parking.

The Tredegar Street User Survey results showed that many users choose to drive to Tredegar Street. However, parking along Tredegar Street is limited to three areas: the Belle Isle Parking Lot, the American Civil War Museum Parking Lot, and S. 5th Street. Since motorists are able to reach cost-free and direct access to the street from the Belle Isle Parking Lot, it is often at full capacity. The desire to park at this lot causes vehicular congestion at the west end of the street. Adding parking, especially via the construction of new impervious spaces, is unviable because of Tredegar Street's limited space and because it is not in accordance with the City's goals to reduce overall parking demand and to promote multimodality. Therefore, it is imperative to implement strategies that will reduce the use of private vehicles and, therefore, the demand for parking.

#### Action 2.3.1 : Coordinate with Lyft to establish a discounted fare if users choose to ride with their service to Tredegar Street.

During the construction of the GRTC Pulse bus rapid transit line in 2018, Lyft offered \$5 off two rides that ended with a destination on a segment of Broad Street.<sup>50</sup> Similar to this initiative, Lyft can offer a discounted fare to users whose rides end on Tredegar Street. This can be implemented during the car-free street summer pilot project mentioned in Objective 2.1.

#### Action 2.3.2 : Work with the Greater Richmond Transit Company (GRTC) to add bus stops and wayfinding signage at bus stops.

Since Tredegar Street is located at the bottom of the hill and there is a limited right-of-way, it is not ideal to add a GRTC bus stop on Tredegar Street. However, there are two bus stops at the top of the hill - one on Brown's Island Way and S. 2nd Street and another on 8th Street and E. Byrd Street. Work with GRTC to potentially add a stop on S. 5th Street and E. Byrd Street. Work with Richmond's Department of Planning and Development Review (PDR) to add wayfinding signage, such as the ones located on Tredegar Street, near bus stops so that it directs passengers towards Tredegar Street.

#### Action 2.3.3 : Consider charging non-City residents for parking at the Belle Isle Parking Lot during peak times.

The James River Park System (JRPS) Master Plan recommends a pay-to-park strategy that may include distributing City of Richmond resident decals, requiring visitors without decals (i.e., non-City residents) to pay, installing meters at JRPS parking spaces, and choosing an application to adjust rates and collect fees. Since the Belle Isle Parking Lot is small and has about 50 spaces, it may be a manageable size and ideal location to initially enact paid parking for non-City residents. Further explore the idea with JRPS and the City's Parking Enterprise Fund and Department of Public Works.

#### Action 2.3.4 : Turn nearby, privately-owned parking garages into shared parking garages.

Devise an agreement with the Federal Reserve Bank of Richmond and CoStar that will turn their employee parking garages on Bragg Street into shared parking garages. Tredegar Street users can park in the garages during times when employees are not using them (i.e., after the work day and/or weekends).



# GOAL 3 : ENSURE THE STREET IS ACCESSIBLE AND INCLUSIVE TO ALL USERS.

## Objective 3.1 : Prioritize areas for improvement to ensure access to users of all abilities.

Based on the current conditions of the street (i.e., hilly, uneven terrain, narrow paths, and lack of curb ramps), the street is not conducive to people with limited mobility. Additionally, the Tredegar Street User Survey results showed that there was a substantial gap between the number of respondents who do not have limited mobility (98%) and the number of respondents who do have limited mobility (i.e., a child, an elderly individual, an individual who uses a cane, walker, or wheelchair) (2%). The 2% of respondents who have limited mobility feel like it is difficult and unsafe to travel to and along Tredegar Street. Increase the sense of safety and comfort of users with limited mobility by appropriately complying to ADA guidelines and adding ramps and detectable warning surfaces to new sidewalks and crosswalks.

### Action 3.1.1 : Follow curb ramp design guidelines that will best fit the street's limited right-of-way.

When deciding which curb ramp types to build, consider constructing perpendicular curb ramps (Figure 44) and either blended transitions or depressed corners (Figure 45) at the 3-way intersections of Tredegar Street and Brown's Island Way and Tredegar Street and S. 5th Street.

### Action 3.1.2 : Remove obstacles from the pedestrian paths and include detectable warning surfaces at the bottom of all existing and new ramps.

Remove obstacles from pedestrian paths and areas, such as the large rocks that line the edge of the street (Figure 46). Add detectable warning surfaces to help pedestrians, especially those who are visually impaired, identify the transition between the sidewalk and street (Figure 47).

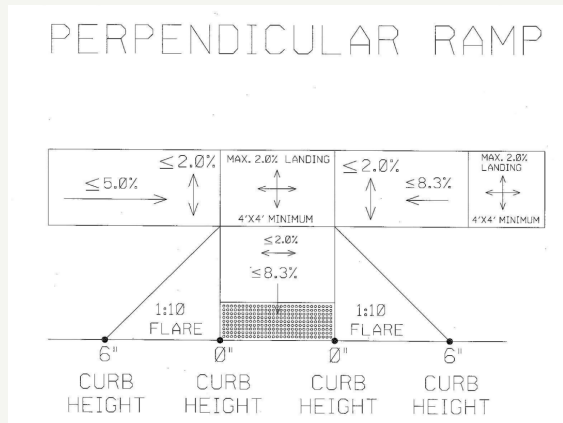


Figure 44 | Perpendicular curb ramp <sup>51</sup>

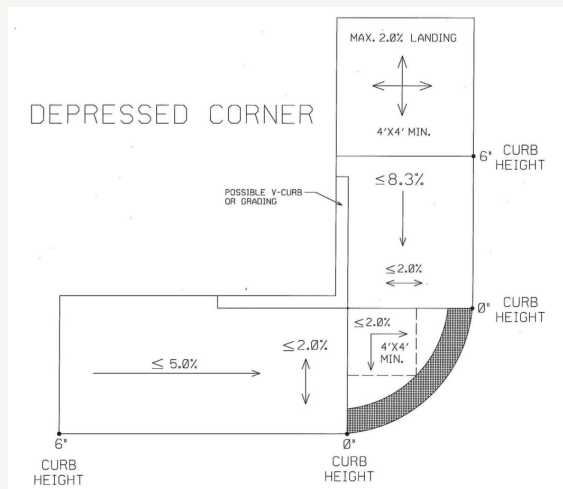


Figure 45 | Depressed corner <sup>52</sup>



Figure 46 | Obstacles on Tredegar Street



Figure 47 | Detectable warning surface

## GOAL 3 : ENSURE THE STREET IS ACCESSIBLE AND INCLUSIVE TO ALL USERS.

### Objective 3.2 : Implement strategies to enhance access to users of all racial and ethnic identities.

Based on the Tredegar Street User Survey results, there was a significant racial/ethnic disparity amongst the respondents. There was an 87% difference between the highest percentage of respondents who identify as White (90%) and the second highest percentage of respondents who identify as Black or African American (4%). The lack of racial and ethnic diversity amongst park visitorship has been researched throughout Richmond before.

The plan, *Increasing Access to the James River Park System: A Community Road Map with the Blackwell, Oak Grove, and Bellemeade Neighborhoods* by Max Ewart, identifies three barriers that limit the visitation of racial and ethnic minorities to the James River Park System (JRPS): a lack of physical connections, activities to engage in, and information.<sup>53</sup> The plan also lists recommendations to break down these barriers and increase access to the JRPS. Since Tredegar Street enables access to parts of the JRPS, tailoring Ewart's strategies specifically to Tredegar Street's network will enhance access to users of all racial and ethnic identities.

#### Action 3.2.1 : Create physical connections to the street by promoting public transportation and shuttles.

Along with further echoing the strategies mentioned in Action 2.3.2 that enhance GRTC bus stops, coordinate with JRPS and the Blue Sky Fund, an organization that connects Richmond elementary, middle, and high school students to natural environments via field trips and outdoor adventure programs, to create a process where community centers/organizations can reserve Blue Sky Fund's shuttle bus for large trips to the JRPS. Ensure that Tredegar Street is included in the shuttle bus stops.

#### Action 3.2.2 : Share information on events, programs, and directions to community organizations.

Create a multilingual brochure or flyer sharing information on events and programs occurring on and near Tredegar Street, as well as directions on how to get to the street via walking, cycling, driving, and public transportation. Share the informational document with community centers and organizations throughout the City.

#### Action 3.2.3 : Increase programming by creating partnerships with community organizations.

Partner with Storefront for Community Design to create a community-led public art installation at Brown's Island or Tredegar Green Amphitheatre.

Collaborate with the JRPS and community centers/organizations to host a JRPS Adventure and Skills Program that will provide community center/organization members an opportunity to partake in beginner mountain biking and/or an adventure hike on the North Bank Trail or Belle Isle.

Develop a partnership with Waterfront, a stand up paddleboard and kayak rental service located on Tredegar Street, and community centers/organizations to create a program that will offer community center/organization members an opportunity to participate in stand up paddleboarding and/or kayaking lessons and trips at a discounted rate.

## GOAL 4 : STRENGTHEN THE USER EXPERIENCE ON THE STREET.

### Objective 4.1 : Keep the street clean and well maintained.

Maintaining the appearance and cleanliness of the street is important to the environment and the comfort of users.

#### Action 4.1.1 : Establish a volunteer clean-up crew.

Partner with Keep Virginia Cozy, Keep Virginia Beautiful, the James River Outdoor Coalition, and/or the Oregon Hill Neighborhood Association to schedule periodic, volunteer cleanups of the street.

#### Action 4.1.2 : Add trash receptacles.

Coordinate with the City of Richmond's Department of Public Works to add more trash receptacles along the street.

### Objective 4.2 : Add a mix of seating options.

Adding a mixture of seating options will provide a more comfortable and inviting environment for visitors, especially for those who cannot stay on their feet as long.

#### Action 4.2.1 : Add benches.

Add benches along walking paths and around trees, specifically on the south side of the street where there is more open space.

#### Action 4.2.2 : Make sure seating areas have shading.

Place the additional seating in conveniently located, shaded areas.

### Objective 4.3 : Preserve and enhance the current vegetation.

Preserving and enhancing the current vegetation, especially the street trees, along Tredegar Street provides multiple benefits for the users. The greenery creates a better physical environment for both the City as a whole and for its people.

#### Action 4.3.1 : Ensure newly built infrastructure, particularly the sidewalk network, will not interfere with the current street trees.

Coordinate with the City's Department of Public Works, Richmond PDR, and abutting property owners (i.e., NewMarket Corporation and CoStar) to map out the sidewalk network without removing the current street trees. Also, ensure that the trees' roots will not uproot and break the sidewalk in the future.

#### Action 4.3.2 : Plant native vegetation.

Plant native vegetation to enhance the appearance of the street, especially along the river.

## GOAL 5 : BUILD UPON THE CONNECTIONS TO THE STREET

### Objective 5.1 : Retrofit access points to enhance the safety and comfort of all users.

Four of the access points lying to the north of Tredegar Street - the Oregon Hill pathway, Brown's Island Way, S. 5th Street, and S. 7th Street - are all located on a hill. The grade of the hill or the makeshift pathways make these access points inaccessible to some non-motorists, especially those with limited mobility, strollers, and bicycles. Creating ways for non-motorists to safely and comfortably travel both uphill and downhill will make the street more accessible and inviting.

**Action 5.1.1 :** Assess how hilly terrain inhibit cyclists and pedestrians, especially those with limited mobility, from using certain access points.

The steepness of Brown's Island Way and S. 5th Street makes these access points feel like an unsafe environment for cyclists and pedestrians, especially those with limited mobility, and deters them from utilizing these access points. However, S. 7th Street has the most gradual change and is a good connector to Kanawha Plaza and Downtown Richmond. Determine a way to highlight that S. 7th Street is the most accessible connection for people walking, cycling, and rolling up and down the hill. Wayfinding signage, such as the ones located on Tredegar Street, can be installed on S. 7th Street and E. Byrd Street to direct Kanawha Plaza and Downtown Richmond visitors towards Tredegar Street (Figure 48).



Figure 48 | S. 7th Street leading to Kanawha Plaza and Downtown Richmond, potential wayfinding signage locations

**Action 5.1.2 :** Pave the pathway connecting Oregon Hill, North Bank Trail, and Tredegar Street.

The pathway connecting Oregon Hill to Tredegar Street is made of loose dirt and gravel (Figure 49). Although the connection can only be used by non-motorists, its rocky and uneven condition makes it inaccessible to individuals with limited mobility. Coordinate with the City of Richmond's Department of Public Works to develop a plan to create a stable and evenly-paved path.



Figure 49 | Unpaved pathway connecting Oregon Hill, North Bank Trail, and Tredegar Street

## GOAL 5 : BUILD UPON THE CONNECTIONS TO THE STREET

### Objective 5.2 : Build upon existing wayfinding along access points to direct and inform people of other destinations.

There is currently little wayfinding materials that direct and inform people of how close they are to various destinations and how connected the north side of the Riverfront is. Increasing wayfinding along access points will bring more awareness to people nearby and attract them to the street.

#### Action 5.2.1 : Improve the directional signage at the entrances of various access points.

Build upon existing the existing wayfinding system created by Richmond PDR (Figure 50) to improve or add human-scaled, directional signage that will direct visitors along the Canal Walk, S. 2nd Street, and E. Byrd Street.

#### Action 5.2.2 : Work on integrating further destinations into existing maps.

The existing wayfinding system on Tredegar Street does not include the North Bank Trail, which leads to Texas Beach, and the section of the Canal Walk after the Turning Basin, which leads to the Virginia Capital Trail and Great Shiplock Park. Incorporating these routes into the existing maps will highlight Tredegar Street's extensive network of paths that run along the riverfront.



Figure 50 | Existing wayfinding signage on Tredegar Street

## GOAL 6 : CONSIDER THE STREET'S ROLE WITHIN ITS LARGER CONTEXT.

**Objective 6.1 : Assess how future private development along the street will impact the street's occupancy.**

There are five private entities that own property on Tredegar Street: Dominion Energy, NewMarket Corporation, CoStar, the Federal Reserve Bank of Richmond, and the American Civil War Museum. Each has already established a large presence along the street and some have continuous efforts to develop more.

**Action 6.1.1 : Monitor upcoming projects occurring on the street.**

In order to gain a sense of the growing development, keep track of and monitor projects that are being proposed along the street.

**Action 6.1.2 : Cultivate mutually beneficial relationships with property owners along the street.**

Talk directly to the property owners along the street to gain a sense of what they think their role is in the development of Tredegar Street. Establish a direct line of communication in order for them to discuss future plans and projects. For example, if CoStar decides to build on their newly acquired land, they can be asked to develop a sidewalk along S. 5th Street that is similar to the existing segment on Tredegar.

**Objective 6.2 : Assess how future development near the street and along the rest of the river will impact the street's occupancy.**

Tredegar Street is surrounded by residential and commercial uses. Projects occurring in Oregon Hill, Downtown, Belle Isle, and Manchester could impact the street's visitorship. Additionally, Tredegar plays a role in the development of Brown's Island, the Richmond Riverfront, and the James River Park System/ So, it is important to establish relationships with other river-related coalitions.

**Action 6.1.1 : Monitor upcoming projects occurring on the street.**

In order to gain a sense of the growing development, keep track of and monitor projects that are being proposed near the street and could potentially increase visitorship to the street.

**Action 6.2.2 : Establish relationships with other river-related coalitions.**

In order for the riverfront to be a unified and cohesive system, there needs to be a clear line of communication between all of the stakeholders along the river. These relationships will ensure that the development of the riverfront will benefit the community.

# 7.0 TREDEGAR STREET IMPLEMENTATION PLAN

The implementation of the *Tredegear Street Corridor Plan* is broken into actions that will occur within three terms. Short-term actions can be accomplished in one to two years, mid-term actions can be achieved in three to four years, and long-term actions will occur for five years and/or more. Goals 1 through 5 can be implemented through short- and/or mid-term actions, while Goal 6 extends into the long term because Tredegear Street must adapt as the Riverfront, James River Park System, and City evolve. The implementation of the plan will take the coordination of Venture Richmond, Richmond’s Department of Planning and Development Review, the James River Park System, the Departments of Public Works and Utilities, private landowners, such as NewMarket Corporation and CoStar, and community organizations.

If these recommendations are put into action, the mobility, connectivity, and accessibility of Tredegear Street’s network will be enhanced by using human-scaled approaches that reorient the street to the wants and needs of its current and potential users. It will become a safer and more comfortable space for all ages, abilities, and racial/ethnic identities using any mode of transportation. The implementation of the *Tredegear Street Corridor Plan: A Step to Unifying the Richmond Riverfront* will ultimately lead to a more unified and cohesive riverfront system and contribute to Richmond’s health, happiness, and wellbeing.

\*For the following implementation matrices, abbreviations were used to indicate responsible parties: DPW = Department of Public Works, JRPS = James River Park System, GRTC = Greater Richmond Transit Company, PDR = Department of Planning and Development Review, and DPU = Department of Public Utilities.



Tredegar Street Implementation Plan		1-2 Years	3-4 Years	5+ Years	Responsible Parties
<b>GOAL 1 : ENHANCE THE PEDESTRIAN AND CYCLIST ENVIRONMENT FOR ALL USERS.</b>					
Objective 1.1 : Build a safe and complete sidewalk network.					
Action 1.1.1 : Develop an inventory of the existing sidewalk conditions to inform future development.					DPW
Action 1.1.2 : Assess the possibility of widening the sidewalk width given the street's limited right-of-way.					DPW, NewMarket Corporation, CoStar
Action 1.1.3 : Construct sidewalk and follow ADA guidelines.					DPW
Objective 1.2 : Install crosswalks at every access and destination point along the street.					
Action 1.2.1 : Implement painted crosswalks at every access and destination point.					DPW
Action 1.2.2 : Remove the cobblestones at the entrance of Haxall Headgate and replace it with a raised crosswalk.					DPW
Action 1.2.3 : Follow ADA guidelines when developing the crosswalks.					DPW
Objective 1.3 : Enhance bicycle infrastructure and amenities.					
Action 1.3.1 : Implement shared-lane markings, also known as "sharrows."					DPW
Action 1.3.2 : Increase bicycle parking along the street.					DPW
<b>GOAL 2 : FACILITATE EFFICIENT AND SAFE CIRCULATION OF MOTORISTS AND NON-MOTORISTS.</b>					
Objective 2.1 : Create a car-free segment of the street.					
Action 2.1.1 : Temporarily close a segment of the street to private vehicles.					Venture Richmond
Action 2.1.2 : Record the closure's impact on the community.					Venture Richmond
Objective 2.2 : Develop signage to clearly and directly communicate with motorists and non-motorists.					
Action 2.2.1 : Install stop signs at intersections and crosswalks.					DPW
Action 2.2.2 : Improve upon directional signage near both the Belle Isle Suspension Bridge and North Bank Trail.					JRPS, Venture Richmond
Objective 2.3 : Implement strategies to reduce the use of private vehicles, and therefore, the demand for parking.					
Action 2.3.1 : Coordinate with Lyft to establish a discounted fare if users choose to ride with their service to Tredegar Street.					Venture Richmond
Action 2.3.2 : Work with the Greater Richmond Transit Company (GRTC) to add bus stops and wayfinding signage at bus stops located near Tredegar Street.					GRTC, Venture Richmond, PDR
Action 2.3.3 : Consider charging non-City residents for parking at the Belle Isle Parking Lot during peak times.					JRPS, DPW, Parking Enterprise Fund
Action 2.3.4 : Turn nearby, privately-owned parking garages into shared parking garages.					Venture Richmond, Federal Reserve Bank, CoStar



Tredegar Street Implementation Plan		1-2 Years	3-4 Years	5+ Years	Responsible Parties
<b>GOAL 3 : ENSURE THE STREET IS ACCESSIBLE AND INCLUSIVE TO ALL USERS.</b>					
Objective 3.1 : Prioritize areas for improvement to ensure access to users of all abilities.					
Action 3.1.1 : Follow curb ramp design guidelines that will best fit the street’s limited right-of-way.					DPW
Action 3.1.2 : Remove obstacles from the pedestrian paths and Include detectable warning surfaces at the bottom of all existing and new ramps.					DPW
Objective 3.2 : Implement strategies to enhance access to users of all racial and ethnic identities.					
Action 3.2.1 : Create physical connections to the street by advocating for public transportation and shuttles.					Community Organizations, Blue Sky Fund
Action 3.2.2 : Increase programming by creating partnerships with community organizations.					Community Organizations, JRPS, Venture Richmond
Action 3.2.3 : Share information on events, programs, and directions to community centers/organizations.					Community Organizations, Venture Richmond
<b>GOAL 4: STRENGTHEN THE USER EXPERIENCE ON THE STREET.</b>					
Objective 4.1 : Keep the street clean and well maintained.					
Action 4.1.1 : Establish a volunteer clean-up crew.					Community Organizations, Venture Richmond
Action 4.1.2 : Add trash receptacles.					DPW
Objective 4.2 : Add a mix of seating options.					
Action 4.2.1 : Add benches.					DPU
Action 4.2.2 : Make sure seating areas have shading.					DPU
Objective 4.3 : Preserve and enhance the current vegetation.					
Action 4.3.1 : Ensure newly built infrastructure, particularly the sidewalk network, will not interfere with the current street trees.					DPW, Richmond PDR, NewMarket Corporation, CoStar
Action 4.3.2 : Plant native vegetation.					Groundwork RVA

Tredegar Street Implementation Plan		1-2 Years	3-4 Years	5+ Years	Responsible Parties
<b>GOAL 5: BUILD UPON THE CONNECTIONS TO THE STREET.</b>					
Objective 5.1 : Retrofit access points to enhance the safety and comfort of all users.					
Action 5.1.1 : Assess how hilly terrain inhibit cyclists and pedestrians, especially those with limited mobility, from using certain access points.					PDR, Venture Richmond
Action 5.1.2 : Pave the pathway connecting Oregon Hill, North Bank Trail, and Tredegar Street.					DPW, JRPS
Objective 5.2 : Build upon existing wayfinding along access points to direct and inform people of other destinations.					
Action 5.2.1 : Improve the directional signage at the entrances of various access points.					PDR, Venture Richmond
Action 5.2.2 : Work on integrating further destinations into existing maps.					PDR, Venture Richmond
<b>GOAL 6 : CONSIDER THE STREET'S ROLE WITHIN ITS LARGER CONTEXT.</b>					
Objective 6.1 : Assess how future private development along the street will impact the street's occupancy.					
Action 6.1.1 : Monitor upcoming projects occurring on the street.					Venture Richmond
Action 6.1.2 : Cultivate mutually beneficial relationships with property owners along the street.					Venture Richmond
Objective 6.2 : Assess how future development near the street and along the rest of the river will impact the street's occupancy.					
Action 6.1.1 : Monitor upcoming projects occurring on the street.					Venture Richmond
Action 6.2.2 : Establish relationships with other river-related coalitions.					Venture Richmond

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# APPENDIX A: USER SURVEY FLYERS

## TREDEGAR ST. USER SURVEY



Photo Source: Alexa Welch Edlund  
<https://richmond.com/aerial-tredegar-ironworks-and-browns-island/image-21f24b4e-7bc2-11e3-b3f7-00126b30931a.html>

INTERESTED IN SHARING YOUR EXPERIENCES ON TREDEGAR STREET?

INTERESTED IN THE FUTURE OF TREDEGAR STREET?

THEN WE WANT TO HEAR FROM YOU!

PLEASE TAKE A FEW MINUTES TO COMPLETE THIS QUICK SURVEY



SCAN WITH YOUR PHONE'S CAMERA OR GO TO [WWW.TINYURL.COM/TREDEGARST](http://WWW.TINYURL.COM/TREDEGARST)

IF YOU HAVE ANY QUESTIONS OR COMMENTS, PLEASE CONTACT [TREDEGARSTREET@GMAIL.COM](mailto:TREDEGARSTREET@GMAIL.COM) OR (804) 556-1816

## COME HERE OFTEN?



Photo Source: Alexa Welch Edlund  
<https://richmond.com/aerial-tredegar-ironworks-and-browns-island/image-21f24b4e-7bc2-11e3-b3f7-00126b30931a.html>

### WE WANT TO HEAR FROM YOU!

TAKE THE TREDEGAR STREET USER SURVEY!

SHARE YOUR EXPERIENCES ON TREDEGAR STREET

SHARE YOUR THOUGHTS ON THE FUTURE OF TREDEGAR STREET

PLEASE TAKE A FEW MINUTES TO COMPLETE THIS QUICK SURVEY



SCAN WITH YOUR PHONE'S CAMERA OR GO TO [WWW.TINYURL.COM/TREDEGARST](http://WWW.TINYURL.COM/TREDEGARST)

IF YOU HAVE ANY QUESTIONS OR COMMENTS, PLEASE CONTACT [TREDEGARSTREET@GMAIL.COM](mailto:TREDEGARSTREET@GMAIL.COM) OR (804) 556-1816

## VISIT OFTEN?



Photo Source: Alexa Welch Edlund  
<https://richmond.com/aerial-tredegar-ironworks-and-browns-island/image-21f24b4e-7bc2-11e3-b3f7-00126b30931a.html>

### WE WANT TO HEAR FROM YOU!

TAKE THE TREDEGAR STREET USER SURVEY!

SHARE YOUR EXPERIENCES ON TREDEGAR STREET

SHARE YOUR THOUGHTS ON THE FUTURE OF TREDEGAR STREET

PLEASE TAKE A FEW MINUTES TO COMPLETE THIS QUICK SURVEY



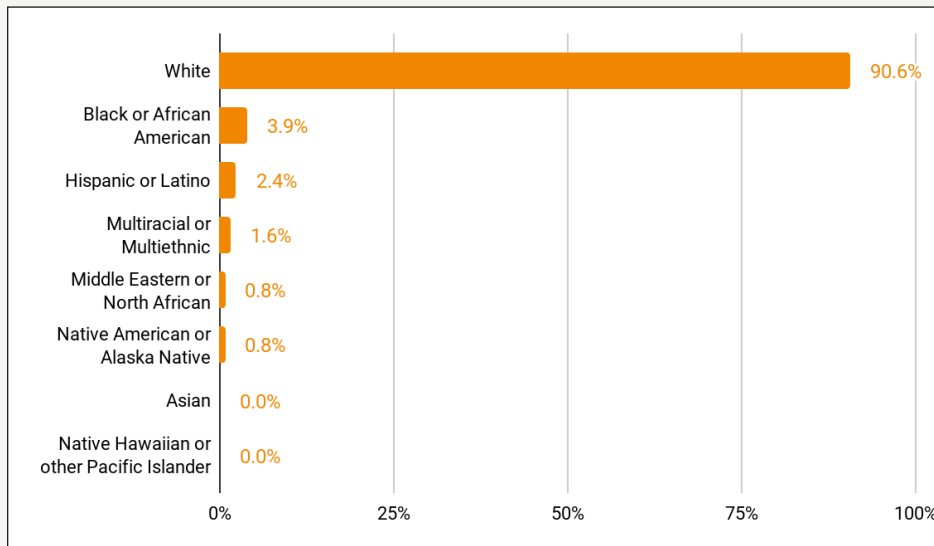
SCAN WITH YOUR PHONE'S CAMERA OR GO TO [WWW.TINYURL.COM/TREDEGARST](http://WWW.TINYURL.COM/TREDEGARST)

IF YOU HAVE ANY QUESTIONS OR COMMENTS, PLEASE CONTACT [TREDEGARSTREET@GMAIL.COM](mailto:TREDEGARSTREET@GMAIL.COM) OR (804) 556-1816

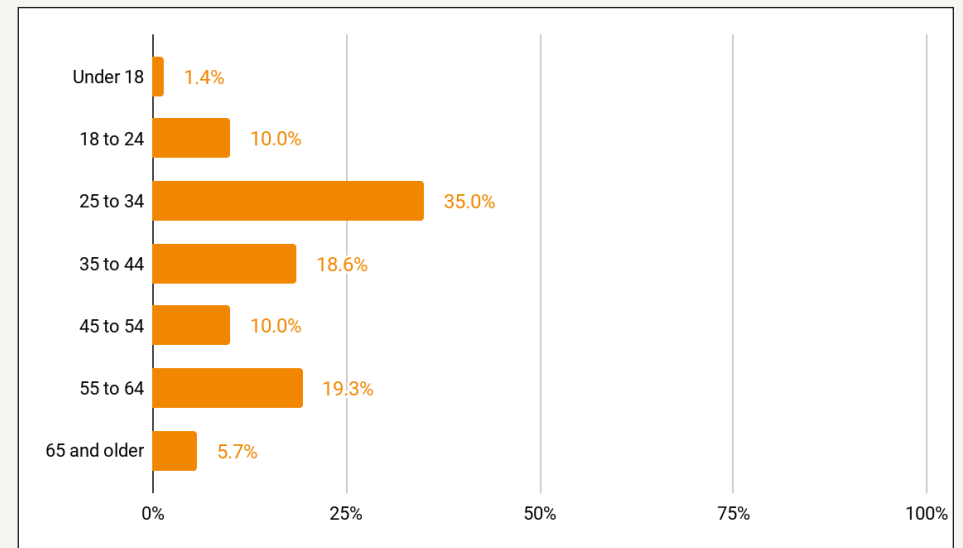
# APPENDIX B: USER SURVEY RESULTS

## WHO USES TREDEGAR STREET?

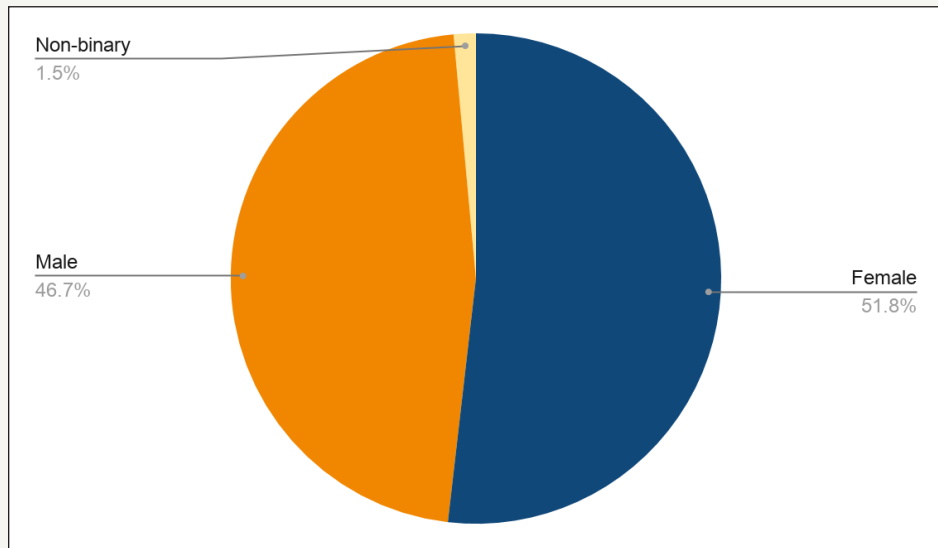
What is your racial/ethnic identity? (N=127)	Frequency	Percent
White	115	90.6%
Black or African American	5	3.9%
Hispanic or Latino	3	2.4%
Multiracial or Multiethnic	2	1.6%
Middle Eastern or North African	1	0.8%
Native American or Alaska Native	1	0.8%
Asian	0	0.0%
Native Hawaiian or other Pacific Islander	0	0.0%
<b>Total</b>	<b>127</b>	<b>100%</b>



What is your age range? (N=140)	Frequency	Percent
Under 18	2	1.4%
18 to 24	14	10.0%
25 to 34	49	35.0%
35 to 44	26	18.6%
45 to 54	14	10.0%
55 to 64	27	19.3%
65 and older	8	5.7%
<b>Total</b>	<b>140</b>	<b>100%</b>



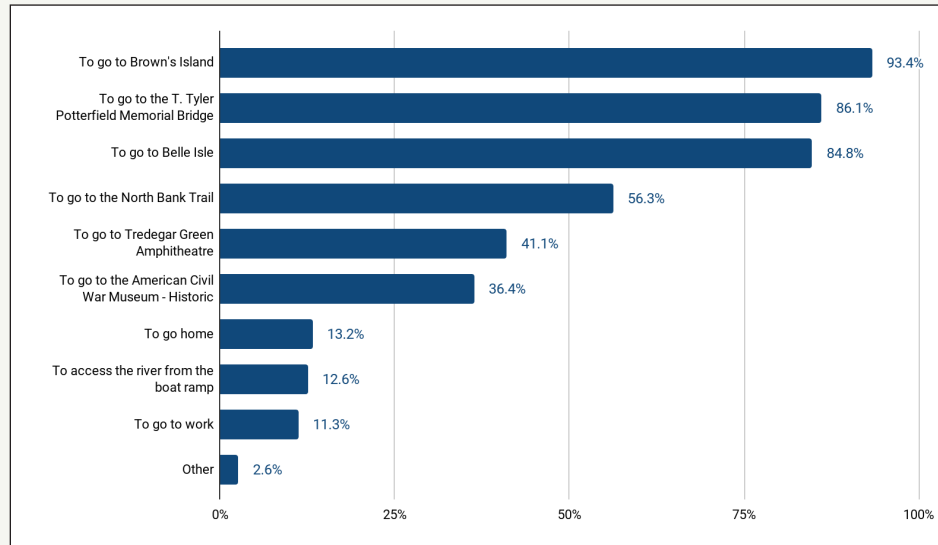
What is your gender identity? (N=137)	Frequency	Percent
Female	71	51.8%
Male	64	46.7%
Non-binary	2	1.5%
Total	137	100%



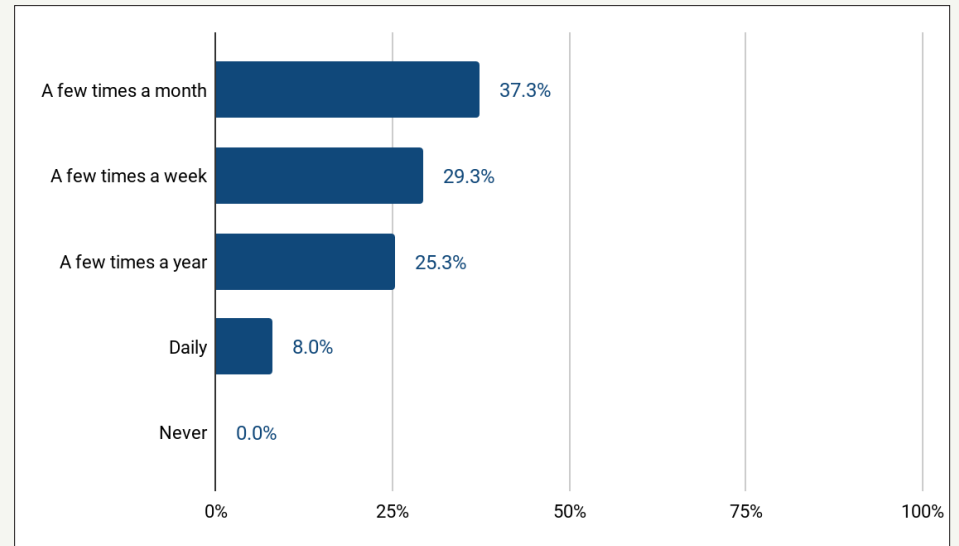
What zip code do you live in? (N=123)	Frequency	Percent
23220	34	27.6%
23223	23	18.7%
23219	13	10.6%
23221	11	8.9%
23225	7	5.7%
23222	6	4.9%
23226	4	3.3%
23230	4	3.3%
23231	3	2.4%
23832	2	1.6%
23294	2	1.6%
23114	2	1.6%
23227	2	1.6%
23234	1	0.8%
23224	1	0.8%
23229	1	0.8%
23005	1	0.8%
22443	1	0.8%
23111	1	0.8%
23059	1	0.8%
23060	1	0.8%
23235	1	0.8%
23106	1	0.8%
Total	123	100%

# WHY DO USERS GO & HOW DO USERS TRAVEL TO TREDEGAR STREET?

Why do you travel to Tredegar Street? (Check all that apply.) (N=151)	Frequency	Percent
To go to Brown's Island	141	93.4%
To go to the T. Tyler Potterfield Memorial Bridge	130	86.1%
To go to Belle Isle	128	84.8%
To go to the North Bank Trail	85	56.3%
To go to Tredegar Green Amphitheatre	62	41.1%
To go to the American Civil War Museum - Historic Tredegar	55	36.4%
To go home	20	13.2%
To access the river from the boat ramp	19	12.6%
To go to work	17	11.3%
Other	4	2.6%

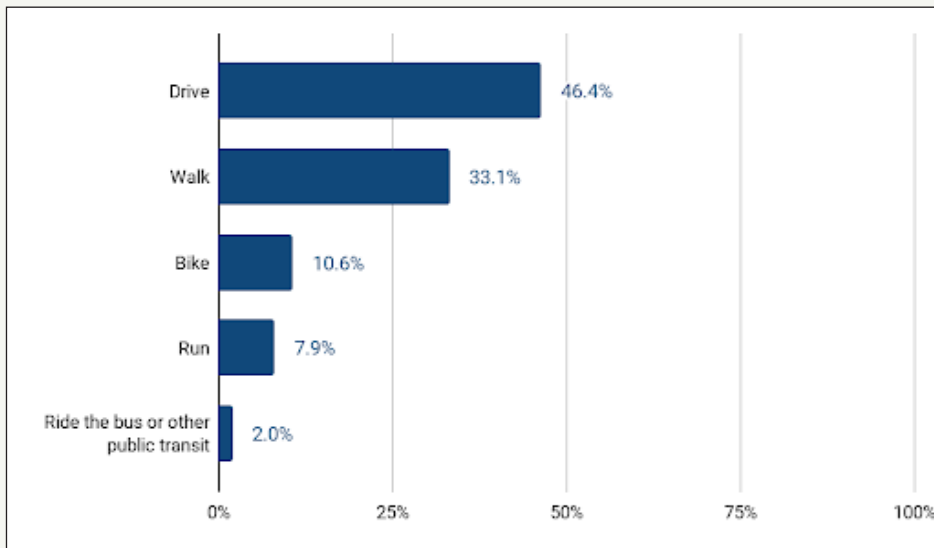


How often do you travel to Tredegar Street? (N=150)	Frequency	Percent
A few times a month	56	37.3%
A few times a week	44	29.3%
A few times a year	38	25.3%
Daily	12	8.0%
Never	0	0.0%
Total	150	100%

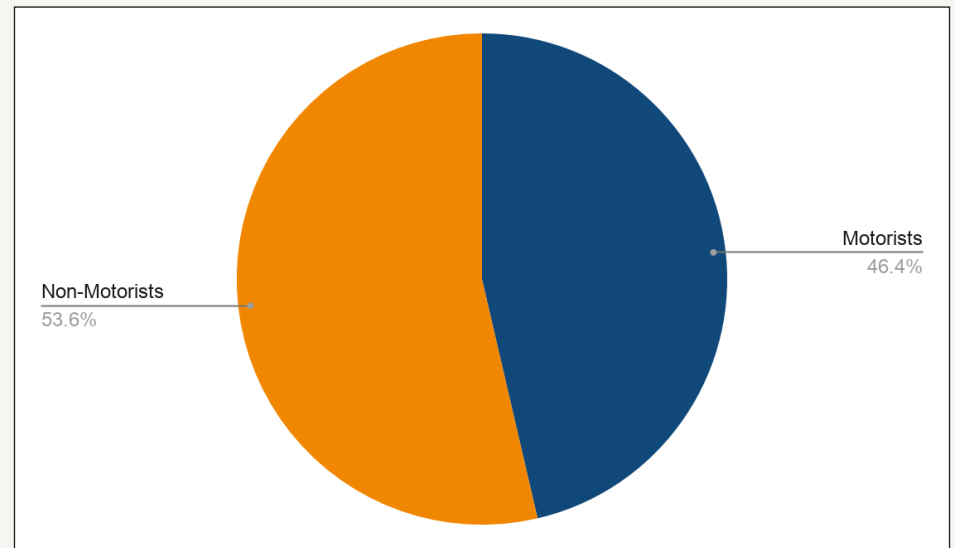




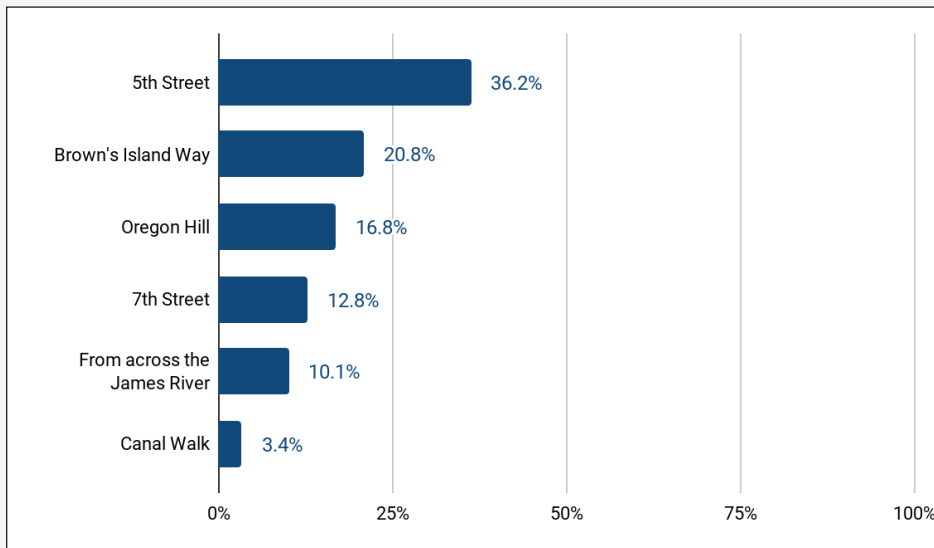
How do you normally travel to Tredegar Street? (N=151)	Frequency	Percent
Drive	70	46.4%
Walk	50	33.1%
Bike	16	10.6%
Run	12	7.9%
Ride the bus or other public transit	3	2.0%
Total	151	100%



Motorists vs. Non-Motorists	Frequency	Percent
Motorists (i.e., those who drive)	70	46.4%
Non-Motorists (i.e., those who walk, cycle, run, or ride public transportation)	81	53.6%
Total	151	100%

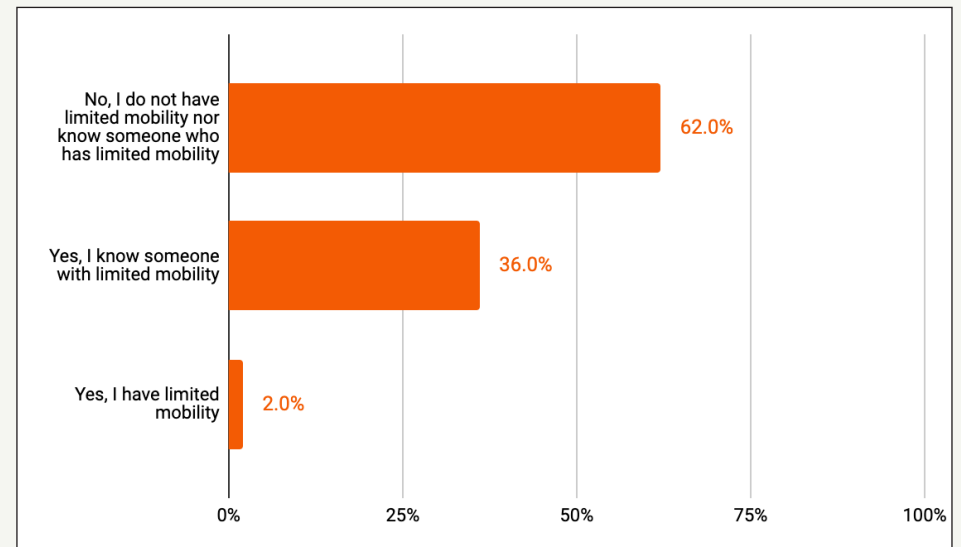


Which access point do you normally use to enter Tredegar Street? (N=149)	Frequency	Percent
5th Street	54	36.2%
Brown's Island Way	31	20.8%
Oregon Hill	25	16.8%
7th Street	19	12.8%
From across the James River	15	10.1%
Canal Walk	5	3.4%
Total	149	100%



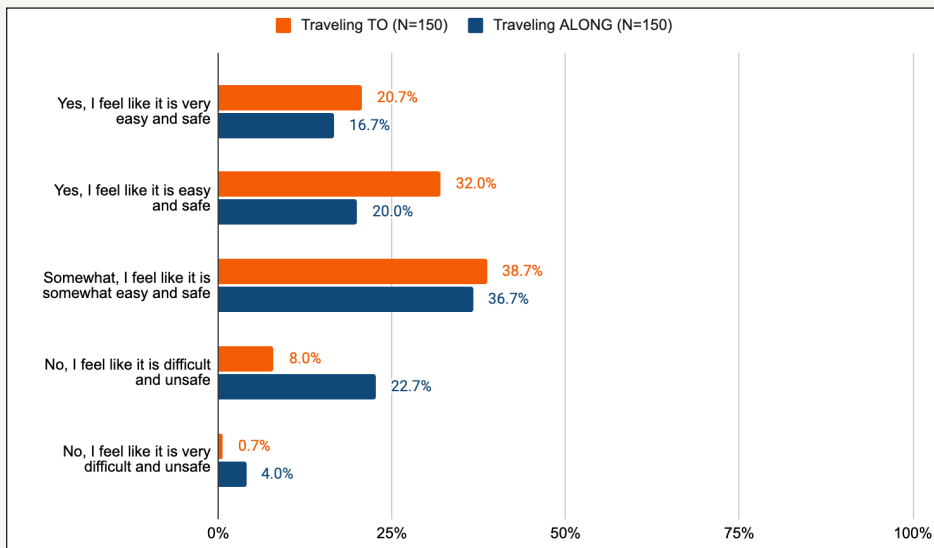
## HOW DO USERS FEEL WHEN TRAVELING TO & ALONG TREDEGAR STREET?

Do you have limited mobility OR know someone who has limited mobility (i.e., a child, an elderly individual, an individual who uses a cane, walker, or wheelchair)? (N=150)	Frequency	Percent
No, I do not have limited mobility nor know someone who has limited mobility	93	62.0%
Yes, I know someone with limited mobility	54	36.0%
Yes, I have limited mobility	3	2.0%
Total	150	100%

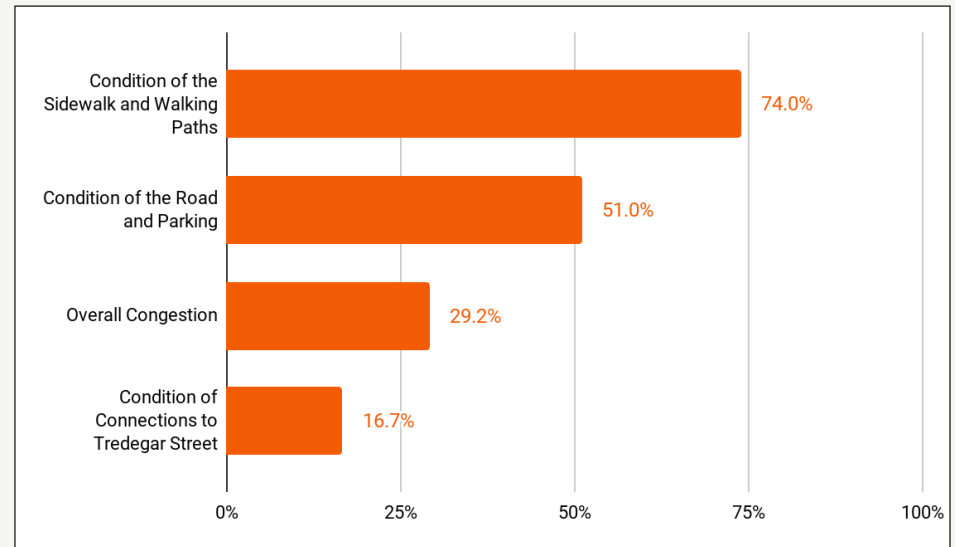


Based on the access point that you normally use to enter Tredegar Street, do you feel like it is easy and safe to travel TO Tredegar Street? (N=150)	Frequency	Percent
Yes, I feel like it is very easy and safe	31	20.7%
Yes, I feel like it is easy and safe	48	32.0%
Somewhat, I feel like it is somewhat easy and safe	58	38.7%
No, I feel like it is difficult and unsafe	12	8.0%
No, I feel like it is very difficult and unsafe	1	0.7%
Total	150	100%

Do you feel like it is easy and safe to travel ALONG Tredegar Street? (N=150)	Frequency	Percent
Yes, I feel like it is very easy and safe	25	16.7%
Yes, I feel like it is easy and safe	30	20.0%
Somewhat, I feel like it is somewhat easy and safe	55	36.7%
No, I feel like it is difficult and unsafe	34	22.7%
No, I feel like it is very difficult and unsafe	6	4.0%
Total	150	100%



Reasons Identified as to Why Users Feel Unsafe When Traveling to and along Tredegar Street? (N=96)	Frequency	Percent
Condition of the Sidewalk and Walking Paths	71	74.0%
Condition of the Road and Parking	49	51.0%
Overall Congestion	28	29.2%
Condition of Connections to Tredegar Street	16	16.7%



Why do you feel, or do NOT feel, like it is easy and safe to travel to AND along Tredegar Street? (N=96)

A lot of traffic
A lot of traffic
A pedestrian/cyclist area would be ideal. There is plenty of parking nearby and with the exception of those with limited mobility, people could park further away and walk or bike down to Brown's Island or Belle Isle. The parking lot at Belle Isle is very small and once its full it causes a lot of traffic as people try to turn around and leave the area. It would be best if that parking area were limited to those with limited mobility or there were signs indicating when it were full so cars wouldn't drive down to that area unnecessarily.
All the Dominion commuters.
Area has open visibility and a well established path if you choose to travel along instead of on the main road surface. Granted the pavement path needs to be resurfaced due to natural degradation especially from tree roots.
Because it's hard to see that side when exiting the parking lot space and turning to the left.
Because you have to around the train trestle and traffic
Cars Typically Speed and theres a lot of backup for parking usually. I have ran into issues on bikes too with the cobblestone and foot traffic thats put me dangerously close to vehicles.
Cobbles, vehicles both direction. Sidewalks end
Crossing to the sidewalk, confusing traffic pattern, I wish for wilder sidewalks and more clear traffic pattern for those unfamiliar with the area
Difficult sidewalks
Difficult sidewalks
Downhill difficult for wheelchairs, also going back up! Uneven sidewalks, cobblestones difficult with walking aids
For walkers it is particularly challenging, driving is fine.
Hilly terrain plus traffic On tredegar
Honestly, I'm thrilled that more people are riding bikes but the bike riders down there are often too aggressive. I'm not sure bikes and pedestrians sharing a path is ever going to feel safe for pedestrians.
I don't personally know somebody with limited mobility, but I feel it might be difficult to access tredegar from my normal route due to the large hill. It also might be nice if the sidewalk/trail was widened near the boat access due to large volume of visitors
I think for people with poor mobility both traveling to and along tregedar is extremely difficult. I don't think that there are many ADA parking spots and I don't feel the roadway is accessible for people with limited mobility. The sidewalks aren't necessarily flat and the cobblestones get in the way of wheels (bikes, wheel chairs, scooters). I mostly feel it isn't safe because wheeled personal vehicles would have a hard time getting around.
It's a small road trying to serve too many purposes, and non-driver features have not been put in place to account for this as the area has become more popular. One other cause of traffic is cars "hunting" for traffic in the small lot at the end of the street. When cars don't find parking, they circle until something opens up. It's like adding extra cars to the street.
Lack of adequate sidewalks, ramps and traffic calming.
Lack of connected sidewalks.
Let's lose the cobblestones, shall we? It's 2021
Limited paths- usually people walk in street. Hard to distance.
Limited pedestrian access areas to maintain appropriate social distancing
Limited sidewalk space/width and clear signage for road users
limited sidewalks
Limited smooth sidewalks
limited vehicular traffic
Maintenance of existing walks, lack of walks on north side, no easy accessible path from parking lots along Tredegar to many points of interest.
Motorists, cyclists, occasional unsavory people, unleashed dogs.
My recollection is that stepping off the curb into the street is necessary at certain points.
Narrow and bumpy sidewalk with an immediate drop off to the road
narrow, uneven sidewalks. Sidewalks are not always on both sides. Cars do not stop for pedestrians. Needs a more visible crosswalk/blinking lights
Need better and wider sidewalks. Also, 4-way stop sign on 5th and Tredegar.

Why do you feel, or do NOT feel, like it is easy and safe to travel to AND along Tredegar Street? (N=96)

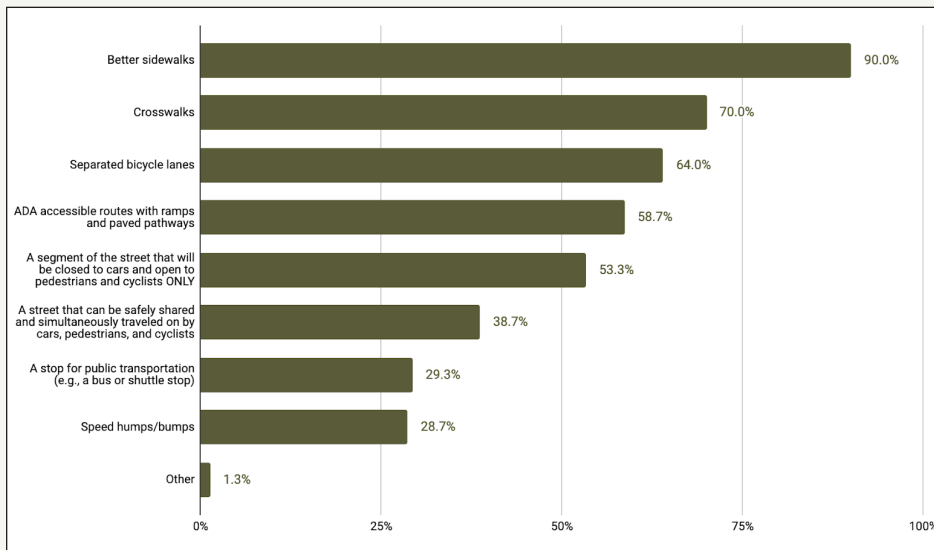
No continuous sidewalks on either side, needs a crosswalk in front on Civil war museum
No continuous sidewalks, no crosswalk
No protected walk areas for wheel chairs
No sidewalks or curb ramps.
No Sidewalks, rough road, steep hill/parking
Not enough or big enough sidewalks
Not enough separated pedestrian/bicycle infrastructure; cars travel too fast
not enough sidewalks that are available to those with limited mobility.
not flat, not ADA compliant
Parking along 5th St, with the incline coming down the hill, makes it challenging with a stroller. Additionally, the sidewalk is only along one side of 5th St, so it can be challenging if you park along the side without one.
Path could be wider, could have more distance between street and edge of walkway, maybe barrier between the street and walkway
Pavement
Pavement
Pedestrian paths along Tredegar Street should be wider.
Pedestrians and cars in close proximity.
People drive very fast down this road and there are no sidewalks.
Poor sidewalk conditions. Very limited access to sidewalks if in wheelchair.
Poor sidewalks and ADA ramps, no bike lanes
Rocks and people and hills
Should have wide sidewalks and many crosswalks but there are none. Cyclists are especially not conscious of pedestrians in this area.
Sidewalk can be narrow at times
Sidewalk can be narrow at times
Sidewalk is broken and uneven
Sidewalk is broken and uneven
Sidewalks are difficult for handicapped people- and road is not safe to roll wheelchairs on.
Sidewalks are in disrepair and are too narrow
Sidewalks are not great
Sidewalks are uneven
Sidewalks are uneven
sidewalks on the north side of the street, where they exist, are not blocked from traffic--I would prefer some sort of barrier/separation
Some of the sidewalks are cracked and uprooted from tree roots. They should be smoothed over. On many occasions, pitched tents are along the James River. I suspect homeless, but do not know that for a fact.
The changes in grade and texture of the path changes several times. The gravel path under the Lee bridge is eroding.
The only thing that makes it feel slightly unsafe along Tredegar is the traffic
The sidewalk is difficult for people in wheelchairs. The street is impossible. If the street were easier to drive on or push a wheelchair on, cars would go faster and it would become even less safe.
The sidewalk is narrow and uneven
The sidewalk is narrow and uneven

**Why do you feel, or do NOT feel, like it is easy and safe to travel to AND along Tredegar Street? (N=96)**

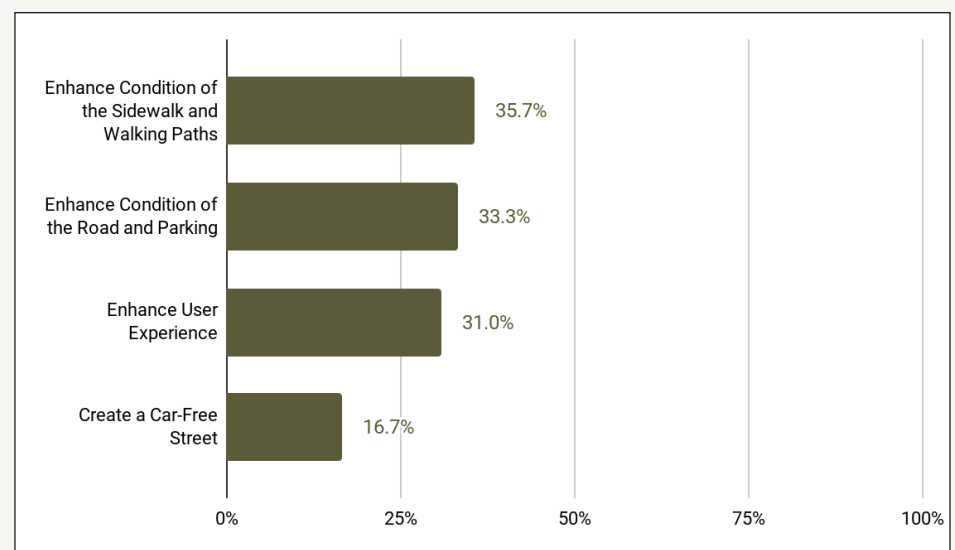
The sidewalk is narrow and uneven, there is a lot of foot traffic that gets pushed into the street due to this. The people who drive down the street are not often on the lookout for pedestrians. There is also a lack of crosswalks where pedestrians can safely move across tredegar to get to the various attractions.
the sidewalk is very close to the road( often the road is trafficy) - also - no ramp etc. for folks coming down the hill in a wheelchair or are elderly or in a stroller.
The sidewalk on the river side is bumpy with roots, there's a bit of a hill at the boat ramp, and its quite skinny in areas (can a wheelchair fit between the fence and light posts?)
The sidewalks are narrow and bumpy, often with obstructions blocking them. Priority is clearly currently being given to cars despite heavier foot traffic. Shared use roads and wider paths would be very helpful
The sidewalks are too narrow and bumpy, on weekends there are so many people they walk in the street. The cobblestones are very jarring on a bike and I ride a mountain bike, My 5 year old son hates riding over the cobblestones, There is no curb ramp or crosswalk from Browns Island Way to the sidewalk on the southside.
The sidewalks are too narrow and there are people riding bikes on the sidewalk.
the sidewalks should be improved
The street needs sidewalks on both sides especially for handicapped persons
The walkways are sometimes in poor condition, and people speed along the street unnecessarily in their cars
There are no sidewalks lining the street. The path near the river is nice, but sometimes congested. A pathway or sidewalk on the Tredegar Iron Works side of the street would be nice.
There are often a lot of people, dogs, and bikes along Tredegar and the nearby area. As a pedestrian or cyclist it can feel very unsafe to have cars traveling along that road as there is not enough room to move off the road in certain areas. With COVID this has been especially difficult as we try to distance from other people as well. As a driver it also feels dangerous to be in that area.
There are sidewalks and things are generally lit well at night. However the sidewalks could use some maintenance
to much congestion
Traffic speed
Traffic, people, cobblestones, obstacles
Uneven cobblestones, potholes in cobblestone area.
Uneven paving
Uneven paving, discontinuous walkway along north side of roadway
Uneven sidewalks
Unsafe for pedestrians and cyclists. High volume of people on narrow walking path results in pedestrians/cyclists using roadway, which does not have ample space if vehicle(s) are moving through the area. Moreover, drivers in this area tend to be distracted.
Vehicular traffic makes it feel unsafe.
Volume of traffic surrounding this entry point (7th Street)
Walkways are not continuous and have an uneven terrain
When cars are parked on the street and there is traffic that area can become congested.
When walking or on bike cars often drive fast. Also lack of sidewalks means peds are in street
Wide street with sidewalks

# WHAT DO USERS WANT ON TREDEGAR STREET?

Which streetscape features would make it easier and safer to travel to AND along Tredegar Street? (Check all that apply.) (N=150)	Frequency	Percent
Better sidewalks (i.e., evenly paved, wide)	135	90.0%
Crosswalks	105	70.0%
Separated bicycle lanes	96	64.0%
ADA accessible routes with ramps and paved pathways	88	58.7%
A segment of the street (from 5th St. to Brown's Island Way) that will be closed to cars (except for emergency vehicles) and open to pedestrians and cyclists ONLY	80	53.3%
A street that can be safely shared and simultaneously traveled on by cars, pedestrians, and cyclists	58	38.7%
A stop for public transportation (e.g., a bus or shuttle stop)	44	29.3%
Speed humps/bumps	43	28.7%
Other	2	1.3%



Opportunities Identified from Responses to the Questions, "Why do you feel, or do NOT feel, like it is easy and safe to travel to AND along Tredegar Street?" and "Why do you feel, or do NOT feel, like it is easy and safe to travel to AND along Tredegar Street?" (N=42)	Frequency	Percent
Enhance Condition of the Sidewalk and Walking Paths	15	35.7%
Enhance Condition of the Road and Parking	14	33.3%
Enhance User Experience	13	31.0%
Create a Car-Free Street	7	16.7%



**Do you have any other thoughts or comments that you would like to share about Tredegar Street? (N=34)**

A pedestrian/cyclist area would be ideal. There is plenty of parking nearby and with the exception of those with limited mobility, people could park further away and walk or bike down to Brown's Island or Belle Isle. The parking lot at Belle Isle is very small and once its full it causes a lot of traffic as people try to turn around and leave the area. It would be best if that parking area were limited to those with limited mobility or there were signs indicating when it were full so cars wouldn't drive down to that area unnecessarily.

because its kinda scary at night, pretty but scary

Clean up trash and graffiti more

Clear path, not super crowded, although sidewalk on the city side would help.

Closing that street to cars would be awesome

Closing Tredegar St, and the parking lot access, only drives pedestrians and cars to park and walk through Oregon Hill making existing parking conditions for the neighborhood worse.

Create a coalition of interested parties to help keep it clean, and maintain the vistas to the river.

Crossing to the side walk, confusing traffic pattern, I wish for wilder sidewalks and more clear traffic pattern for those unfamiliar with the area

Crosswalks and sidewalks on both sides of the street seem like minimum safety features that should be installed regardless of when or if the street is closed.

Dominion should never been allowed to put its headquarters here and build on it. We need to keep height limits in effect. "Tredegar Green Amphitheatre" should not exist. It was never in the public Riverfront Plan. This is more 'fait accompli' crap. Oregon Hill residents were ok with temporary Folk Festival site, but beware what is being forced upon us, against our will. Who is behind this survey?

Don't cut down any more trees!

Have they considered adding picnic shelters for families to have gatherings

I don't personally know somebody with limited mobility, but I feel it might be difficult to access tredegar from my normal route due to the large hill. It also might be nice if the side walk/trail was widened near the boat access due to large volume of visitors

I think Tredegar St should be all pedestrian.

I walk and bike down here with my kids all the time. Doing the following would improve our experience and safety: Please pave the path from Oregon Hill down to tredegar, install speed humps on Tredegar, close the street to the extent possible (weekends etc. as much as you can get away with), remove the cobblestones and make that a raised crosswalk to the new sidewalk coming on the north side, install a crosswalk and curb ramp from browns island way sidewalk to the existing tredegar sidewalk, make the gate entrance to brown's island more open and bike friendly, Make the asphalt path wider and repave it, make the sidewalk wider especially closer to brown's island where light fixtures narrow it further. If you are willing to do a big project and move curbs then consider bike infrastructure but prioritize the things above which could be accomplished in the short term. Thank you for looking into improving this street.

Ideally, vehicular traffic would be closed between Brown's Island Way and 5th Street, which would still allow for access to parking areas on either side. This could be done only on the weekends, but permanently would be better and avoid the extra work/confusion of constant closing/re-opening

Its a wonderful area during the spring and summer to spend time. If its a safer space Im sure there will be more pedestrian and cyclist traffic in the area.

Leave the cobblestones alone

Love the idea of a bus stop!

More lighting and add an emergency telephone. Add another dog water fountain on the eastern end

More parking options

More parking!!!!

More shady sitting areas

Most of the drains along Tredegar street are plugged. I have 311ed this so many times. There are not enough waste containers by benches. I am constantly picking up garbage. The park system cuts down brush, trees, and invasives along the banks of the James River and leaves the debris on the bank. Why can't they complete the job, remove the debris they cut down so it doesn't clog the James. It would be wonderful to see more native vegetation and trees planted for erosion control, natural beauty, and help birds and wildlife.

Graffiti and stickers is an ongoing struggle.

Sad, because it is such a beautiful area. One of my favorite walks is to Belle Isle.

Need more parking

parking is very limited with the CSX area closed. I would like to see CSX allow parking in that area again

Pedestrian street would be great!

Please don't block vehicle access to the James River boat ramp. This is the only vehicle accessible continuous slope (ie not steps) in that specific area. The Tredegar Pool section of the James River is a wonderful flatwater section in the middle of an awesome inner-city whitewater experience. I would love to see this maintenance of this ramp actually increase to make ramp surface smoother.

Really like tredegar but I wish people would leash their dogs.

So where will people park their cars to go to the park if they can't drive down the hill?



**Do you have any other thoughts or comments that you would like to share about Tredegar Street? (N=34)**

The car traffic is minimal and slow. For that reason, I dont think that speed bumps are necessary. Having only a segment from 5th to Browns Island Way closed to cars and the remainder of Tredegar Street converted to shared use streets would help pedestrians and cyclists feel safer.

There are sidewalks from Brown's Island to 5th St along Tredegar which helps. Brighter lighting woudn help.

There is a need for more public parkin this area on weekends

Tredegar street should be the real canal walk as bikes and the differently abled are unwelcome on the actual path.

<b>If the segment of Tredegar Street (from 5th St. to Brown's Island Way) was closed to cars (except for emergency vehicles) and open to pedestrians and cyclists ONLY, how often would you want this street segment to be closed? (N=145)</b>	<b>Frequency</b>	<b>Percent</b>
Permanently	60	41.4%
Only during special events (e.g., FolkFest, Friday Cheers, etc.)	40	27.6%
Only during the weekends	24	16.6%
Never	19	13.1%
Only during the COVID-19 pandemic	2	1.4%
<b>Total</b>	<b>145</b>	<b>100%</b>

