

Price Hill **ALTERNATE MOBILITY PLAN**

Actively Reviving Retail: A Street-Level Perspective

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INTRODUCTION

Importance of the Project

Streets are the life of a city and throughout history they have provided great opportunities for people to gather for various activities and engage in commerce. Most importantly, they have made it possible for people and goods to easily move between places. Unfortunately, streets have become rather inhospitable for people and have transformed into domains solely for cars. The wide, high-speed roads have been built with the car in mind and consequently have disregarded all other alternative uses and potential users by making it unsafe or uninviting for anything but the car. This auto-centric view of streets has been a deliberate choice as the car continuously dominates our lives and will continue to shape our urban spaces unless our mindsets can be changed.

The car has impacted the urban fabric of countless cities and neighborhoods and Price Hill has been no different. The once lively and active neighborhood business districts of Price Hill have lessened over time due to the presence of the car and its resulting dominance of the neighborhood's streets. Consequently, many streets have become unsafe for pedestrians and bicyclists with a lack of public spaces for people to gather. In order to switch from a car-oriented neighborhood into a more pedestrian-friendly one, better connections need to be made that allow for easy access to all places in the neighborhood.

Improving the overall connectivity of the neighborhood streets and making places more accessible will not only help to expand transportation opportunities in Price Hill, but improved connectivity and accessibility can also help revive the neighborhood's business districts. To accomplish this, various street design elements can be used to aid in improving connections throughout the neighborhood as well as increasing the attractiveness and safety of places along

the street. Street design is a crucial component in reviving the life of business streets and thoughtfully designed urban spaces have been shown to add value to that area. It has also been shown that higher business revenue can result from improved street design. Therefore, streets should be places that encourage people to gather and interact rather than creating barriers due to the high-speed movement of vehicles.

Street design and connectivity are the core foundations for building a stronger and more vibrant neighborhood. Therefore, if Price Hill wants to bring people back to its business districts, there needs to be increased safety and commercial viability. This project looks at the revitalization of local business districts by creating facilities for people to easily come to Price Hill's neighborhood centers as well as creating more opportunities for those people to stay and interact with each other – thus benefiting local businesses. This will be accomplished through an updated multimodal transportation network and improved street design standards.



Fig. 1: Typical auto-oriented main street¹

¹ <https://www.flickr.com/photos/eridony/17724035229/>

Background of Price Hill

In the past, Price Hill was praised as “one of Cincinnati’s most popular and distinctive suburbs”. Because of its proximity to downtown Cincinnati, it provided a close refuge for people to escape the smell of the city and became a place where people work, lived, and played.

By the late 1800s, Price Hill had become a thriving community thanks to the new mode of transportation – the incline. This incline climbed 350 ft. to the top of the hill between what is today Lower Price Hill and East Price Hill, and this new innovative transportation brought thousands of new residents to the area. In 1893, the city’s 8th Street Viaduct was completed and a year later the city’s streetcar system was extended to Price Hill, which greatly contributed to the success of the neighborhood. It wasn’t until 1901 that the first cars in Price Hill began to appear and since this time, they have greatly influenced and shaped the urban fabric of the neighborhood by bringing noise, speed, and pollution.⁽¹⁾

After a decline in population between 2000 and 2010, the neighborhood has been showing signs of growth once again and continues to attract new investment opportunities. The

Port, “a community and economic development agency that mends broken real estate to promote job creation, homeownership, and equitable development throughout Hamilton County” has been working in Lower, East and West Price Hill since 2012 in coordination with the neighborhood’s community-based organizations. In 2018, The Port identified Price Hill as a neighborhood of focus. Although much of the work is focused on safer housing, they have also been working with “neighborhood stakeholders and organizations to identify strategies to create vibrant commercial corridors and enhanced business opportunities along the Glenway Neighborhood Business District, Warsaw Neighborhood Business District and Lower Price Hill Business District” – the areas of focus for this project.⁽²⁾

With the current focus in Price Hill on economic development projects and improved safety, this Price Hill Alternative Mobility Plan can build on these initiatives as alternative transportation options such as transit, walking and biking can positively impact the economic and social value of an area. Furthermore, this plan can help make Price Hill a well-connected neighborhood again with an expanded bike network, more efficient public transit, and safer walking conditions.



Fig. 2: The old Price Hill incline between Lower Price Hill and East Price Hill.³

¹ <https://www.cincinnatiport.org/projects/price-hill/>

² <http://www.pricehill.org/Price-Hill-History>

³ <https://www.shorpy.com/node/8235>

Vision

Price Hill will become an **active and lively** neighborhood as it once was by continuing to improve **accessibility** and promoting the **safety** of all residents and visitors including transit users, pedestrians, and cyclists. **Expanding mobility options** that are safe and convenient will not only enhance the **connectivity** of Price Hill but will also help revive the neighborhood’s business districts into **vibrant public spaces**. This alternative transportation plan will help **shift the perception of streets** as public spaces rather than corridors of vehicular movement.

Objectives & Goals

Improving the vibrancy of business districts through street design can be accomplished at two levels:

Macro Level: Ease the movement for all walks of life	Micro Level: Revive the dynamic culture by reactivating streets
<ol style="list-style-type: none">1. Develop a multi-modal transportation network that integrates pedestrians, bikes, buses & cars2. Provide opportunities for healthy lifestyles through improved means of walking and biking3. Enhance the bicycle network by expanding bicycle facilities that are safe, comfortable, and easily accessible	<ol style="list-style-type: none">1. Update street design standards to allow for the needs of all forms of transportation2. Make walking and biking a more attractive option for all neighborhood residents

Fig. 3: Connectivity¹

¹ Gw

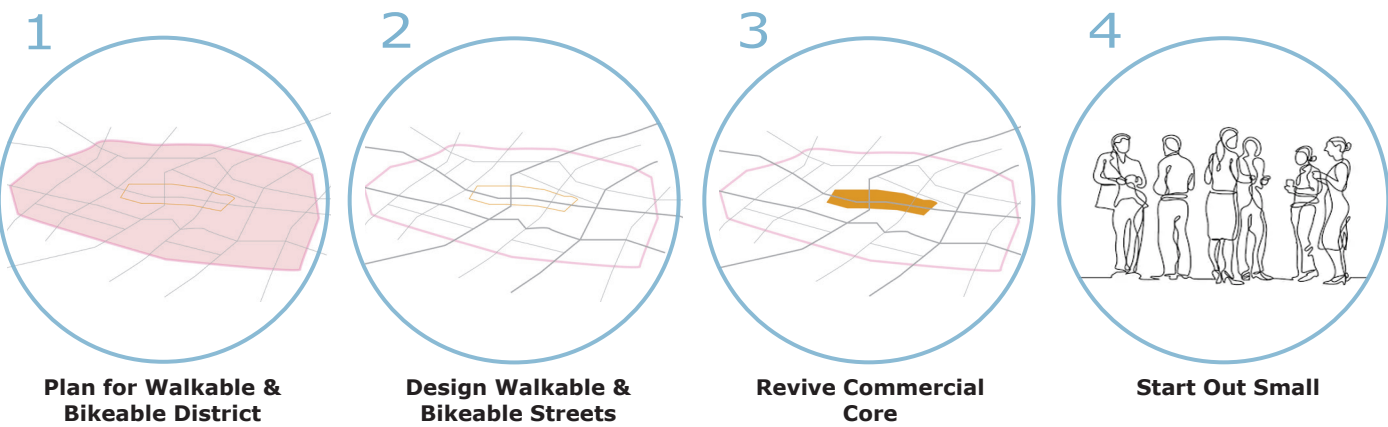
² Eric

Fig. 4: Street design²

Four Levels of Planning

The project’s aim is to attract more people to the neighborhood’s business districts by creating more opportunities for them to safely and conveniently get there. To accomplish this, the project is divided into 4 components:

- 1 **Plan for Walkable and Bikeable Districts** focuses on enhancing the connectivity and efficiency of alternative modes of transportation such as transit, walking & biking. This is at a neighborhood-wide scale.
- 2 **Design Walkable and Bikeable Streets** focuses on ways to redesign different kinds of streets to allow for safer and more convenient walking and biking conditions. This is on a street-level scale.
- 3 **Revive Commercial Core** shows how the street-level designs can be applied to two of the neighborhood's main streets to enhance their overall appeal for potential customers. This component focuses on the Main Street-level.
- 4 **Start Out Small** shows an incremental approach for transforming one of the neighborhood's major streets to accommodate biking. This is on a community-based scale.



Study Area

The area of focus for this plan comprises all three of the Price Hill neighborhoods – Lower Price Hill, East Price Hill, and West Price Hill. The Price Hills make up only a fraction of Cincinnati’s 52 neighborhoods, but they hold important historical significance for the city. Located just west of downtown Cincinnati, these neighborhoods have fostered important connections between downtown and the outer suburbs, especially in the past with its incline and old street cars in the late 1800s. Now, the major roads crossing the neighborhoods act as important thoroughfares for the outlying areas of the city and county. Additionally, Price Hill accommodates varied demographics as well as different housing and transportation opportunities.



Fig. 5: Map of Price Hill (pink) in reference to Cincinnati (light gray) and Hamilton County (dark gray)¹

Lower Price Hill

Squeezed between the hillside to the west and one of Cincinnati’s industrial neighborhoods to the east (Queensgate), much of the same Italianate architecture that can be found in the historic district of Over-the-Rhine in downtown Cincinnati can also be seen in this small but charming Price Hill neighborhood. Lower Price Hill has seen a decline in recent decades with disinvestment and a decline in the quality of the housing stock.

Most of the residents in this Price Hill neighborhood are between the ages of 25 and 29 with Hispanics and African Americans making up a large portion of the overall population. Lower Price Hill has a very low home ownership rate of only 12% as most of the properties are rented. There is essentially no retail in its historic business district along State Avenue and many residents don’t have access to a car. As a result, many people must walk to places and about 18% use public transit.



Fig. 6: Architecture of Lower Price Hill²

¹ Map by Jyutika Bhise

² Picture by Anna Dewey

East Price Hill

Up the steep hill from Lower Price Hill, East Price Hill is Cincinnati’s most ethnically diverse neighborhood. This neighborhood is significantly larger and borders the neighborhoods of South Fairmount to the north and Sedamsville to the south. One of the neighborhood’s main business districts is located along Warsaw Avenue, which is a relatively walkable district with many neighborhood anchor businesses already in place.

Much of the neighborhood is made up of family residences and whites, African Americans, Hispanics, and Asians make up this diverse population. In East Price Hill, 66% of the properties are rented and only 12.5% of the population uses public transit.



Fig. 7: Buildings in East Price Hill¹

West Price Hill

The furthest west of the Price Hills is West Price Hill and borders Delhi Township to the south, Green Township to the west, and the neighborhood of Westwood to the north. West Price Hill has a more suburban feel than the other two and is made up of mostly single-family residential houses. There are two main businesses districts – one along Glenway Avenue and the other along W. 8th Street. Although Glenway Avenue is very auto-oriented, W. 8th Street is more walkable as it was once the end of the old streetcar line.

As in East Price Hill, this neighborhood houses many families; however, most of West Price Hill’s population is white. Furthermore, unlike the other two neighborhoods only 32% of properties in West Price Hill are rented as many of the houses in the neighborhood are owned. As a result of higher property and car ownership, only 11% of the population uses public transit.



Fig. 8: Price Hill chili in West Price Hill²

¹ Image by Anna Dewey

² Pinterest

Data & Observations

To understand the current conditions of the transportation network of Price Hill several pieces of information and data were collected in order to make an informed decision about how the accessibility and connectivity throughout the neighborhoods can be improved. Data collected for the neighborhood-wide analysis included bus stops, bike infrastructure, and the location and frequency of crashes. For bus data, specifics were gathered about the location of bus routes and bus stops as well as the number of passengers boarding at each stop. This information was found through CAGIS (Cincinnati Area GIS) and Cincinnati Metro. For the bike infrastructure data, the location of current bike lanes was found as well as a categorization of other main streets as preferred for biking, use with caution for biking or not recommended for biking. This information was researched by OKI (Ohio-Kentucky-Indiana Regional Council of Governments). Lastly, crash data was collected for which a hot spot analysis was conducted to identify where different types of crashes occur as well as the frequency of crashes throughout the neighborhoods.

This data was collected from the TIMS (Transportation Information Mapping System) website.

For the street-level and Main Street analyses, observations were conducted in four of Price Hill’s business districts – Glenway Avenue, W. 8th Street, Warsaw Avenue, and State Avenue. These on-the-ground observations were done to better understand the current pedestrian and bicycle experiences in these main neighborhood nodes. Information surveyed includes street width, sidewalk width, active vs. inactive facades, building height and sense of enclosure, curb height, presence of street furniture, types of activity on the sidewalk/street, most common mode of transportation used, protection against traffic, noise, and greenery.

The personal observations and secondary data collected from various sources helped inform the initial bike network and street design proposals used for the community engagement meetings. The calculations and raw data/ observations used to create the maps and street designs can be found in Appendix 3 and 4.



Fig. 9: W. 8th Street business district¹

¹ Image by Anna Dewey

PLANNING PROCESS

The planning process was made possible by the collaborative effort of the University of Cincinnati’s Master of Community Planning capstone class with Price Hill Will (a community-based organization) and the City of Cincinnati. Community participation is an important part of planning and it has helped guide this project by providing a better understanding of the needs of the community as well as developing a sense of the residents’ priorities and perspectives. Community input was gathered through in-person meetings, a survey, and online presentations.

First presentation – In-person February 15, 2020

- Conducted in West Price Hill with about 20 attendees.
- Focused on presenting general theories to the community about how street design and transportation can help revitalize neighborhood business districts with best practice case studies as examples.
- The concepts of integrated mobility and street design were introduced.
- The multi-layered model of “Plan for Walkable Districts”, “Design Walkable Streets”, “Revive Commercial Core” and “Start Out Small” was introduced.

Survey – Shared online March 2, 2020

- Community’s general travel behavior and street design priorities for the four neighborhood business districts.

Second presentation – Online March 12, 2020

- Included initial concepts developed for the improvement of the transportation system specific for Price Hill, a neighborhood wide ‘Alternate Mobility Plan’ as well as proposed street design improvements for the business districts.
- Comments from the first meeting and online survey were incorporated.
- Discussed key observations of Price Hill business districts in terms of mobility patterns and street infrastructure as well as probable solutions to improve mobility and accessibility for walking and biking.

Final presentation – Online April 24, 2020

- Presented the final project as a video presentation, a published website and a report containing the specifications of the Price Hill Alternative Mobility Plan.
- Final transportation and street design proposals were presented as well as basic guidelines for the community to implement such infrastructure projects.
- A culmination of the 4-month planning and participation process.

The survey questions & results can be found in Appendix 2.



Fig. 10: First presentation in Price Hill¹

¹ Image by Professor Kickert

EXISTING CONDITIONS

Introduction

Examining the current conditions of Price Hill helps with understanding the needs and major concerns of the community as well as key community assets. Furthermore, the collection of current information, data, and observations helped guide the development of key principles, which were used as foundations for the final the outcomes of the project.

Price Hill’s Context

Price Hill has a unique location with its proximity to Cincinnati’s urban core making it very accessible. At the same time, the physical barriers such as the railroad, highways and hills give it a unique seclusion. At a larger context, it has the benefit of being near a major community-based regional recreational project, the Lick Run Project, to its immediate north in the South Fairmount neighborhood.

The well-connected street fabric of Price Hill provides the neighborhood with good internal connections. However, this internal connectivity can still be strengthened. Along with this, the presence of many parks, many local and chain grocery stores, schools, public libraries and churches makes it an excellent neighborhood for families.

One of the other key factors of Price Hill is its diversity. Most of the neighborhood is quite diverse in terms of ethnicity and race. As a result, the Warsaw Avenue business district has many established community centers, which help people of various backgrounds integrate with the community and develop their skill set. Additionally, Price Hill has many community development corporations, like Price Hill Will, that are continuously striving for quality development of the neighborhood.



Fig. 11: View of downtown Cincinnati from Price Hill¹

¹ <https://foursquare.com/v/olden-view-park/4e6f5cc42271c30ff5a8c9f>

Gateways to Price Hill

Price Hill is connected to the urban core of Cincinnati to the east through major roads like the Ohio River Scenic Byway/U.S. Route 50, W. 8th Street, and Gest Street in Lower Price Hill. The Western Hills Viaduct is also a major connection for Price Hill, although it runs slightly north of the neighborhood. The northern part of the neighborhood

can be accessed by several roads including State Avenue, Grand Avenue, Quebec Road, and Sunset Avenue, which feed off of the Western Hills Viaduct. There are not many entrances to the neighborhood from the south as the hill side creates a major barrier. Lastly, West Price Hill has the major gateways of Glenway Avenue and Rapid Run Road.



Fig. 12: Entering East Price Hill up the hill on Quebec Road from South Fairmount¹

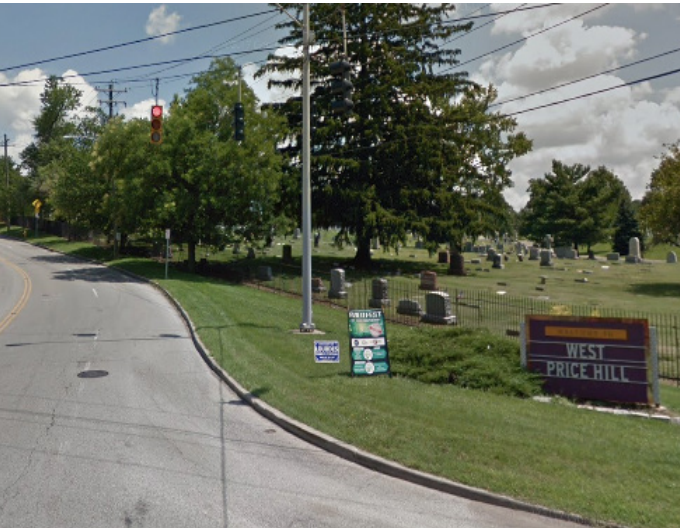


Fig. 13: Entering West Price Hill on Rapid Run Road from Delhi Township²



Fig. 14: Entering Lower Price Hill on Gest Street from Queensgate³



Fig. 15: Entering Lower Price Hill on W. 8th Street from downtown Cincinnati⁴

1, 2, 3 & 4 Google Maps

Current Public Transportation Conditions

Price Hill is connected to the Greater Cincinnati region via two major Metro bus lines – Route 32 and Route 33. These routes connect Price Hill to Cincinnati in the east and Delhi & Green Townships to the west along Warsaw Avenue, Glenway Avenue and W. 8th Street and span about 20.45 miles. Currently, there are a combined 230 stops on both the routes. The map shows all the current bus stops and are categorized according to their average ridership. These bus routes are well planned as they pass through three of the main business districts. However, one key downside is that many of the stops have very low ridership and low

boarding number, which makes the buses less efficient and less dependable.



Fig. 16: Cincinnati Metro bus¹

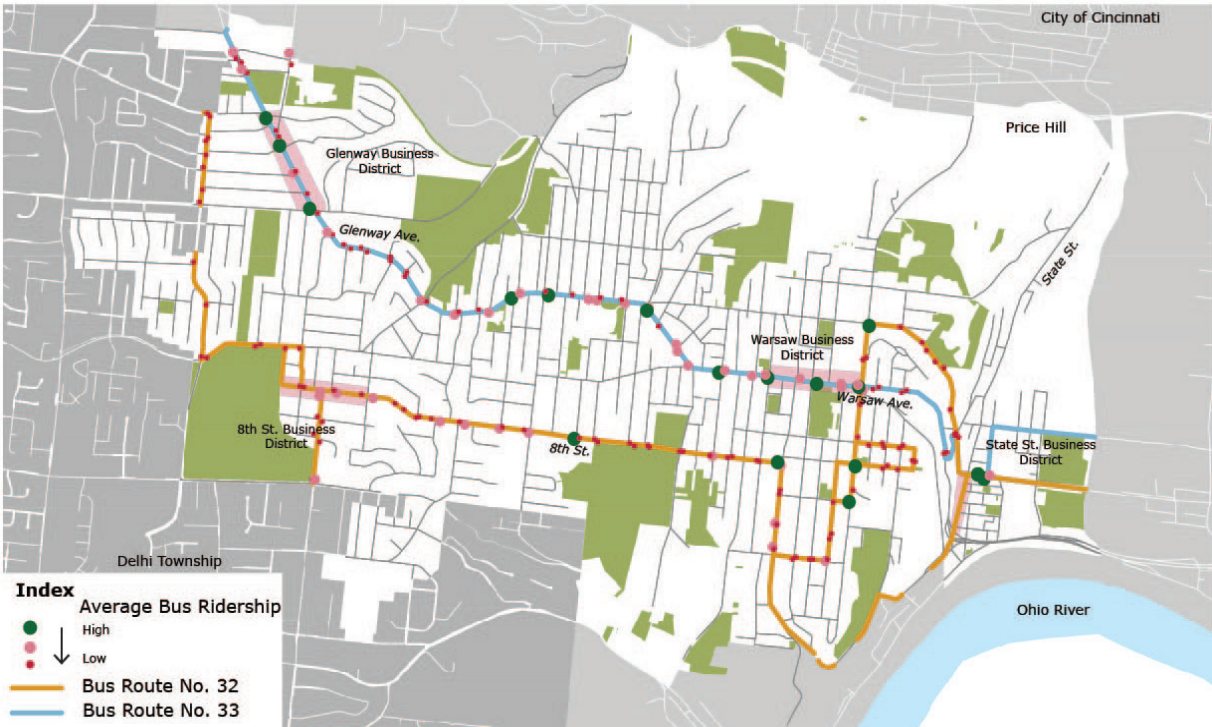


Fig. 17: Current bus stops in Price Hill with average bus ridership²

1 https://everipedia.org/wiki/lang_en/Southwest_Ohio_Regional_Transit_Authority

2 Map by Jyutika Bhise

Biking in Price Hill & Challenges

Cincinnati is a very hilly city and Price Hill is no exception. While the major streets that run east to west like Glenway and W. 8th Street have moderate slopes, the Incline District between Lower Price Hill and East Price Hill is a major barrier with a relatively steep and tall (350 ft.) hillside.

OKI has identified the common biking routes in and around Price Hill. While most of the routes south of Glenway Avenue are preferred biking streets, Glenway Avenue itself is not recommended for biking due to high traffic volume, fast traffic speeds and incomplete street design. Some of the main streets to the north, such as Grand Avenue and Quebec Road, are designated as use with caution for biking due to moderately steep slopes and high traffic speeds. The

only streets that currently have dedicated bike lanes are in Lower Price Hill along Gest Street and W. 8th Street.

In addition to OKI’s data, the Bicycle Compatibility Index (BCI) was used to measure the ease of biking on different types of roads, namely primary arterial and minor arterial roads. These are discussed in more detail in the street design guideline section. This index considers traffic flow, traffic speed, presence of parking, land use, and quality of the road. A lower BCI means the road is more compatible for biking. Alternatively, a higher BCI means the road is not fit for biking. The BCI of primary arterial roads in Price Hill is about 3.68 (Level of Service D) which is classified as moderately low compatibility and the minor arterial roads have a compatibility index of 2.42 (Level of Service C) which is classified as moderate level of compatibility.

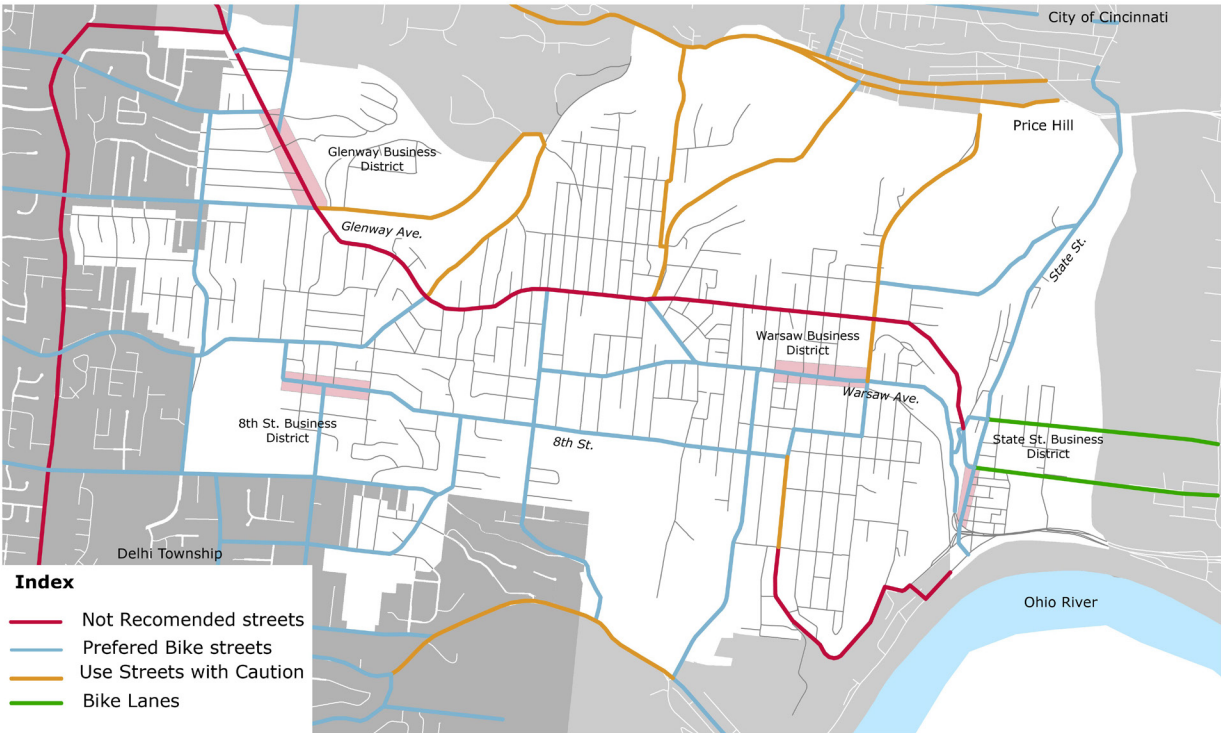


Fig. 18: Biking routes in Price Hill identified and categorized by OKI¹

¹ Map by Jyutika Bhise

Crash Analysis

The crash analysis map of Price Hill shows that the major crashes occur along Glenway Avenue and some along Warsaw Avenue. The main takeaway from this analysis is that the highest concentration of crashes is in the business districts. While most of the crashes are with no reported injuries, it is presumed that the crashes are attributed to high traffic speeds.

LOS	BCI Range	Compatability
A	less than 1.50	Extremely High
B	1.51 - 2.30	Very High
C	2.31-3.40	Moderately High
D	3.41-4.40	Moderately Low
E	4.41-5.30	Very Low
F	more than 5.30	Extremely Low

Fig. 19: Bicycle Comatablity Index ranges associated with Levels of Service (LOS)

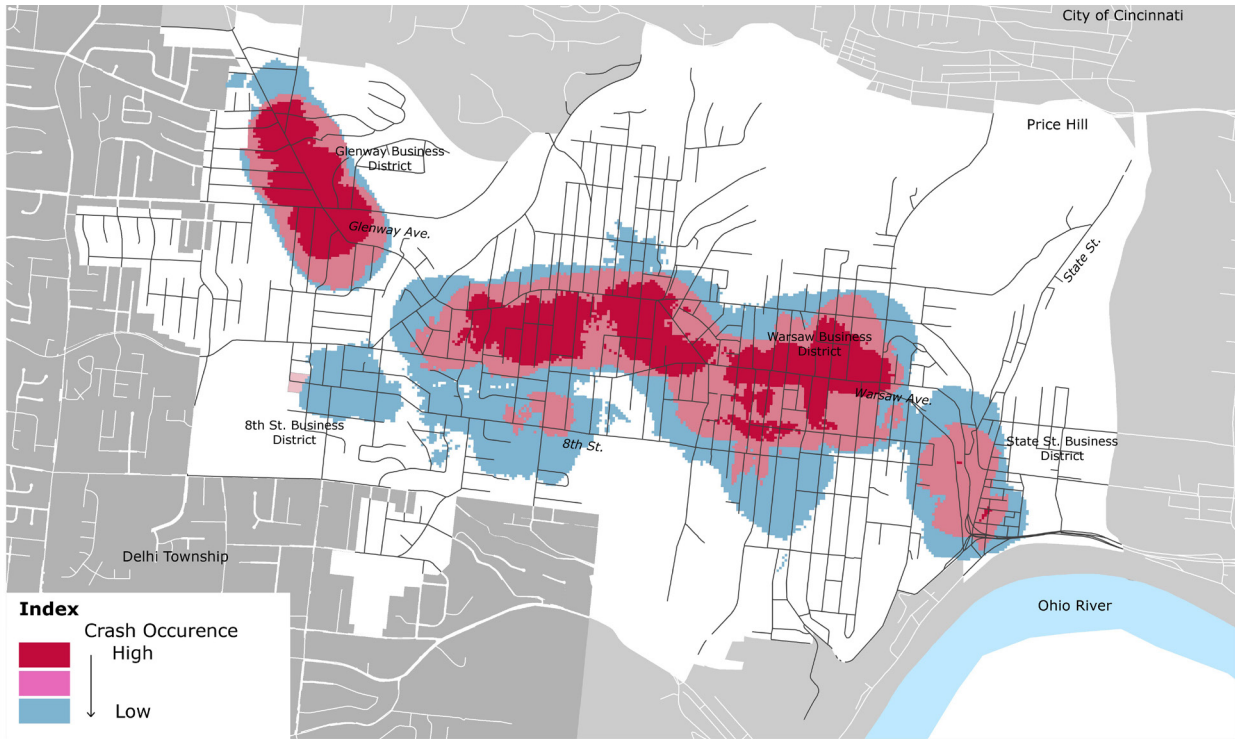


Fig. 20: Crashes in Price Hill 2018¹

¹ Map by Jyutika Bhise

Business District Analysis

The observations carried out in Price Hill’s four business districts were a way to understand with personal experience the current conditions of the streets and public spaces within and along each of the business districts. These in-person surveys helped identify the strengths, opportunities, and weaknesses of each of these main streets as well as what spatial qualities could be valued. All of this information was then taken into consideration for the initial street design proposals. The following are some of the observations made. The recording sheet can be accessed in Appendix 4.

Glenway Avenue - West Price Hill

The Glenway business district is located around a wide road, which disconnects both sides of the business district thus making it harder for people to willingly and safely cross the road. The short buildings coupled with the lack of street trees does not provide a strong sense of enclosure. This aids the speeding of vehicles, which reduces the perceived safety for bikers and pedestrians. Another factor influencing the perceived safety is the lack of buffer between the traffic lanes and the sidewalks, which are at grade with the street.



Fig. 21: Current condition of Glenway Avenue business district

W. 8th Street - West Price Hill

W. 8th Street has a comparatively better sense of enclosure due to the taller buildings; however, there is more open spaces between the buildings. Some of the positive aspects along this street are the wide sidewalks and the wide buffers which make the walking experience for pedestrians more pleasant. This street has potential for the future. Therefore, to allow people to spend time and socialize it in this space, placing more street furniture and activating more facades would be beneficial.



Fig. 22: Current condition of W. 8th Street business district

Warsaw Avenue - East Price Hill

There are many positive aspects of Warsaw’s business street: good branding of the East Price Hill neighborhood, a good sense of enclosure with the street trees along the sidewalks, and the buildings (although there are vacancies) are colorful and inviting. Also, the wide sidewalks make for a pleasant walking experience. This street also seems to have a lot of activity which can be an asset when thinking about its redesign.



Fig. 23: Current condition of Warsaw Avenue business district

State Avenue - Lower Price Hill

State Avenue, we believe, is the best of the business streets in terms of street design because of the wide sidewalks, a good sense of enclosure, hidden gems (the murals) and a glimpse of Cincinnati’s iconic architecture. To make this space even better, there should be more opportunities for people to engage in the street with the primary goal of making this street a new destination to visit in the city.



Fig. 24: Current condition of State Avenue business district

Building on Previous Plans

Over the past years, there have been several plans developed by Price Hill as well as individually by Lower, East and West Price Hill to improve their transportation, infrastructure and public health. In addition, there have been a few plans produced by the city of Cincinnati as well as by OKI Regional Council of Governments that directly or indirectly affect the neighborhood.

The following plans were reviewed to understand major trends and to update and align the neighborhood’s objectives toward alternate transportation and street design improvements.

- Lower Price Hill Resurgence Plan 2019
- OKI 2040 Plan 2019
- Warsaw Alive Action Plan 2018
- Price Hill Plan 2014
- Plan Cincinnati 2012
- Cincinnati Bike Network Plan 2010

These plans have identified efforts that are necessary at the neighborhood-level to make Price Hill a neighborhood of choice for generations to come by developing a live-work-play environment while promoting regional connectivity and safety.



Community of Choice

Price Hill’s plans aspire to create a community of choice that provides spaces for people to engage. The Price Hill Plan of 2014 identifies the need of business districts to be developed as vibrant public spaces that aid in positive social interaction.

Another major objective identified by Price Hill is to build a great neighborhood of choice for generations to come. Looking at it from a transportation and street design perspective, the current trend shows that younger generations prefer to live in places where they can depend on alternate modes of transportation. Additionally, research suggests that companies prefer to establish their businesses in locations that are well connected to public transit. Therefore, this objective strongly supports the development of a multimodal alternate transportation network with street designs that cater to modes other than cars.

Contemporary urban design theories speak about the idea of a “third place” – a place other than work or home, which aids in community interaction and provides a way for people to engage in these meaningful interactions. These plans identify a need for the neighborhood to create a place that encourages diverse interaction for which better street designs and inviting public spaces can easily achieve.

Mobility

The specific neighborhood plans along with city and regional plans identify the need to develop an expanded alternative mobility infrastructure network. While many efforts and plans have been created with the same objective in mind, it is imperative for Price Hill to consider this as one of its priorities due to its dependency on public transit and its proximity to downtown Cincinnati.

Mobility priorities of the community have been identified in many of these plans. According to public engagement sessions, about 23% of people prioritize the need for creating a walkable district, followed by 20% of people who prioritize the development of pedestrian and bicycling infrastructure and 16% who have identified their top priority as improving non-auto connections between Price Hill and other areas of Cincinnati. Along with these points, the need to strengthen the internal connectivity of the neighborhood was also identified.

Another ambition of Price Hill is to work with regional authorities to develop a BRT (bus rapid transit) system and its own biking network. For example, the Lower Price Hill Resurgence Plan identifies the establishment of a bike network in line with the Cincinnati Bicycling Plan to determine potential bike routes in the neighborhood. The bicycle network in the City of Cincinnati’s plan also lays down recommendations for the improvement of the city’s bicycle network by providing guidelines for each neighborhood to identify potential bike routes.

Lastly, another major concerns in the plans for Price Hill is the need for pedestrian safety and therefore, it’s important for the neighborhood to consider improving its urban form and street design. The Lower Price Hill Resurgence Plan identifies the need for walkability and security initiatives,

improvements in traffic and pedestrian safety as well as speed reduction strategies. The Warsaw Alive Action Plan also suggests the need to develop street design guidelines for enhanced pedestrian and vehicular circulation as well as better open spaces and landscaping.



Fig. 25: Rendered street in Lower Price Hill from the the neighborhood’s plan¹

¹ Lower Price Hill Resurgence Plan, 2019

Survey Results

An online survey was conducted during the initial stages of the project in order to get a better understanding of the community's general travel behavior and street design priorities for the four neighborhood business districts.

Travel Preferences

The key insights were that 91% of respondents said they currently drive alone and 82% said that they would like to switch to alternative transportation modes if improvements to the streets were made.

Main Priorities

Although there was a slight variation, the ranking from 1 (highest) to 5 (lowest) of the main priorities that should be addressed when considering the future of all four business districts were:

- Lack of investment in business districts & struggling businesses
- Decreased physical safety of pedestrian & bicyclists due to high vehicle traffic
- Lack of integration of the business districts with the surrounding neighborhoods
- No sense of uniqueness or strong identity of the business districts
- Lack of connections with public transit or other transportation types in the business districts

Important for Street Redesign

In terms of how to improve these streets through redesign, respondents ranked their preferences from 1 (highest) to 5 (lowest):

- Better landscaping & green spaces
- Better outdoor gathering spaces
- Keep on-street parking
- Better sidewalks
- Slow down vehicle traffic

These top priorities and design elements were considered in the street design & transportation network proposals.

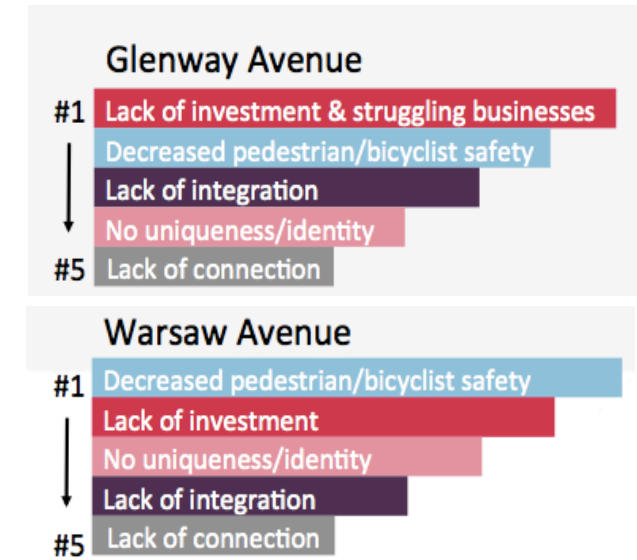


Fig. 26: Survey results for main priorities in Glenway and Warsaw business districts.

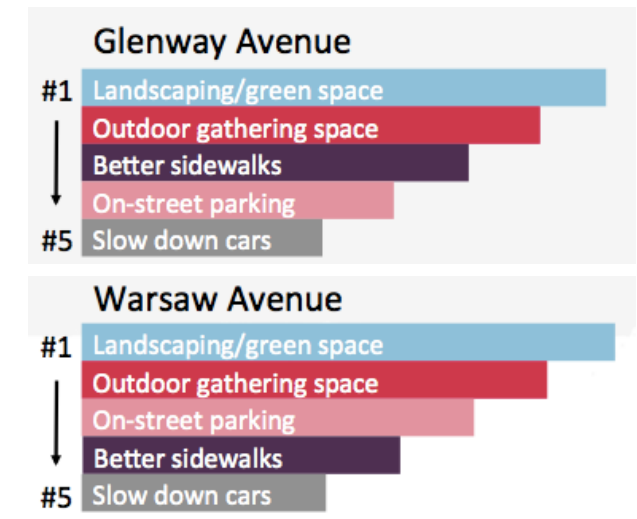


Fig. 27: Survey results for important redesign elements for Glenway and Warsaw business districts.

Moving Forward

Price Hill as an Urban Destination

- The geographic location of Price Hill gives it a unique proximity to the urban core of Cincinnati although it will still maintain a certain disconnect due to natural barriers.
- The expansion of the bike network, more efficient bus routes, and an improved pedestrian experience can help boost the vitality of Price Hill's local businesses.
- In turn, the creation of vibrant business districts can help attract more potential customers and visitors from other places around Cincinnati.

Price Hill and Community

- While Price Hill is currently auto oriented, the underlying urban fabric has a strong potential to be extremely well connected in terms of walking and biking.
- Improved community interaction and overall well-being for its residents can be accomplished through the proposed redesigns of the neighborhood's street.

Price Hill and Mobility

- The demographics of the neighborhood show the high dependency of Price Hill on public transit.
- Improving the efficiency of the bus routes and making better connections between bus stops and walking/biking opportunities will help improve the neighborhood's internal and regional connectivity.
- The alternative mobility network proposed in this project will work on expanding Price Hill's bike network and build on Price Hill's desire for improved bicycle infrastructure.
- Additionally, the proposed street design guidelines will outline ways the various roads in Price Hill can become more pedestrian- and bike-friendly.

Recommendations

This project aims at creating an urban solution for Price Hill which focuses on goals drawn from previous plans, data and observations collected about the current conditions of the neighborhood, and community engagement sessions conducted over four months. This planning process resulted in the formulation of 4 key principles that are incorporated into the final designs:



ALTERNATE MOBILITY PLAN

The Alternate Mobility Plan focuses on developing a robust network of public transit and active transportation to strengthen the internally and externally connectivity of the neighborhood.

The plan works at two levels: plan for public transit in Price Hill and develop active transportation alternatives (walking & biking) for the neighborhood. These support the main aim of the project, which is to revive the business districts. These districts are considered major nodes for transportation connections.

Public Transit in Price Hill

Price Hill currently has a bus network of about 20 miles with 230 stops. The demographic analysis of Price Hill shows that a fair portion of the population depends on public

transit to commute from one place to another, particularly for Lower Price Hill residents. While the transit network is well established, the ridership data indicates that many stops have low boarding numbers, which make the transit system less efficient.

Currently, Price Hill has about 11.24 stops per mile. The Cincinnati Metro FASTop program identifies 4 to 6 stops per mile as an ideal ratio to maintain proper serviceability and operation costs. Therefore, according to this base line of information, the Price Hill bus stop system needs to be considerably optimized.

The FASTop program works on a regional level in Cincinnati to optimize bus stops and make the entire transit system

more efficient. The 3-phased program has already identified certain stops that can be removed on Routes 33 and 32. These identified bus stops are mostly located toward the Lower Price Hill area. The following parameters were formed for the bus stop optimization process:

- FASTop Classification of the bus stop
- Bus ridership
- Distance to the next bus stop
- Available area for bus stop infrastructure
- Proximity to major landmarks like offices and public amenities

Considering the above factors, the number of bus stops in Price Hill can be reduced to 134 giving a ratio of about 6.5

stops per mile. As a result of this process, travel time for the buses can be reduced from 22 minutes to 15 minutes.

The optimization of bus stops will:

- Reduce travel time and improve accessibility for Price Hill. This can help make transit rather than cars an attractive option.
- Help consolidate infrastructure and create transportation nodes for switching from one transit mode to another.
- Help reduce operating costs of the buses thus improving their financial feasibility.
- Help improve efficiency of the curb side lane as the bus will not block traffic every time it stops and will instead facilitate free flow of traffic.

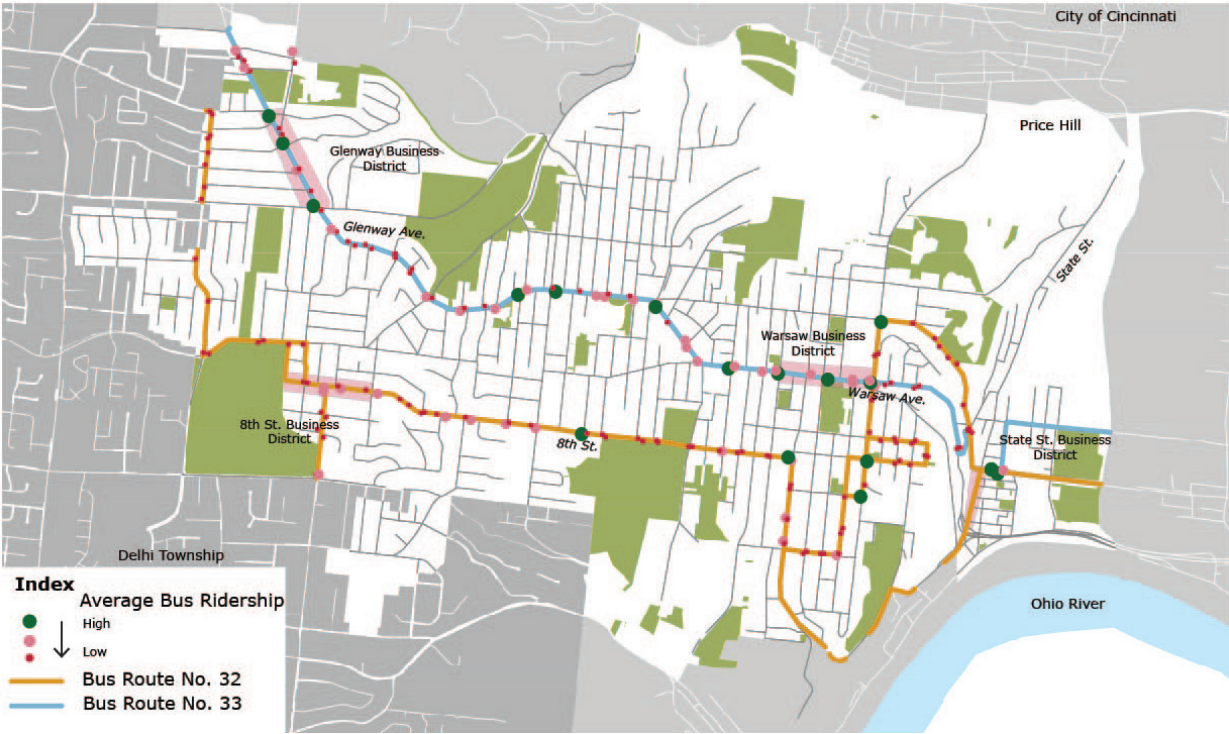


Fig. 28: Current bus stops in Price Hill¹

¹ Map by Jyutika Bhise

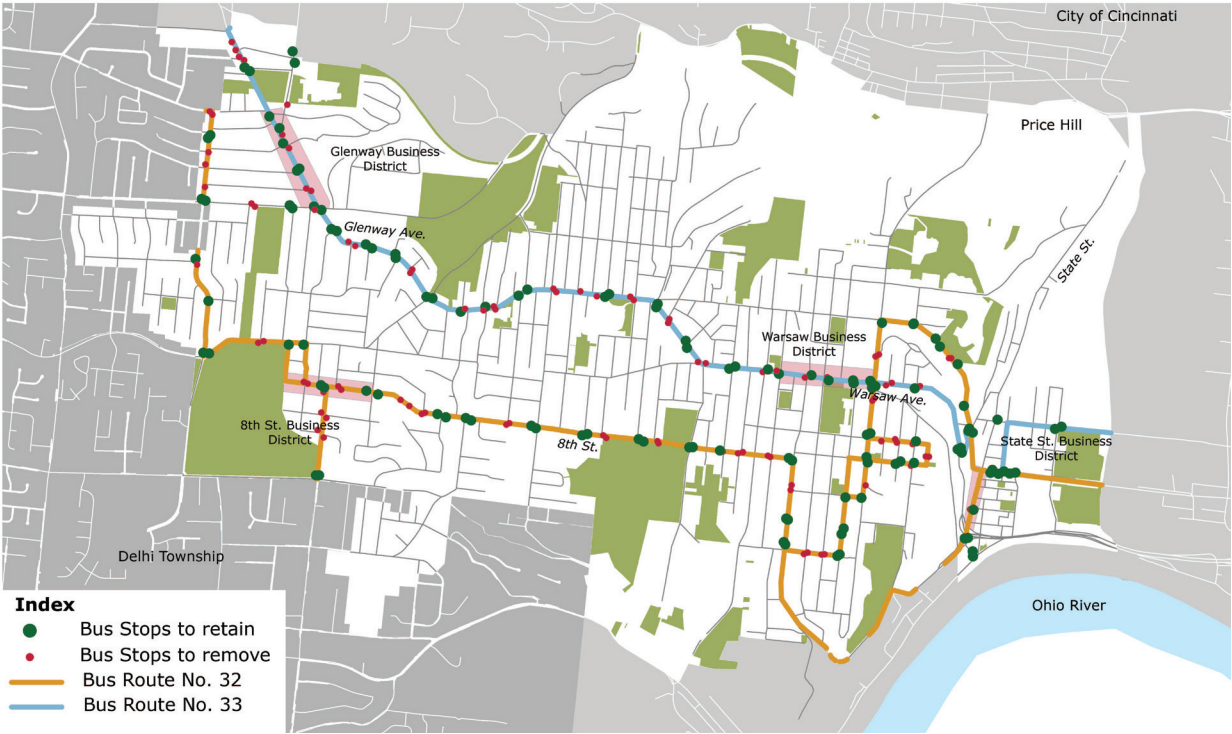


Fig. 29: Map of bus stops to be retained and bus stops to be removed for optimization¹

¹ Map by Jyutika Bhise

Alternate Mobility Network

Price Hill does not currently have a formal biking infrastructure network. As a result, a good portion of the neighborhood is limited in its access to the major bus stops/transit connections. In other words, Price Hill’s two bus routes have a limited service area for cyclists and pedestrians. Figure 32 shows the current access area of the transit system within a 5-minute walking and biking distance. This area covers about 43% of the neighborhood.

The proposed Alternate Mobility Network focuses on developing a biking and walking network in Price Hill. This network has taken into consideration the improved public transit routes discussed in the previous section with the objective of strengthening the north-south connects in the neighborhood to increase the access area around the bus stops. Much of the current infrastructure caters to east-

west connections (bus routes and major roads) without much consideration for the connectivity and accessibility in the north and south directions. Furthermore, improved connections of major destinations around Price Hill such as schools, business districts, grocery stores, and libraries were also considered.

The plan proposes two types of biking infrastructure:

- Dedicated Bike Lanes for major roads that have high daily traffic counts and high speeds
- Bike Priority Lanes for neighborhood roads with lower traffic counts and narrower widths

The map below shows the proposed bike lanes for Price Hill.

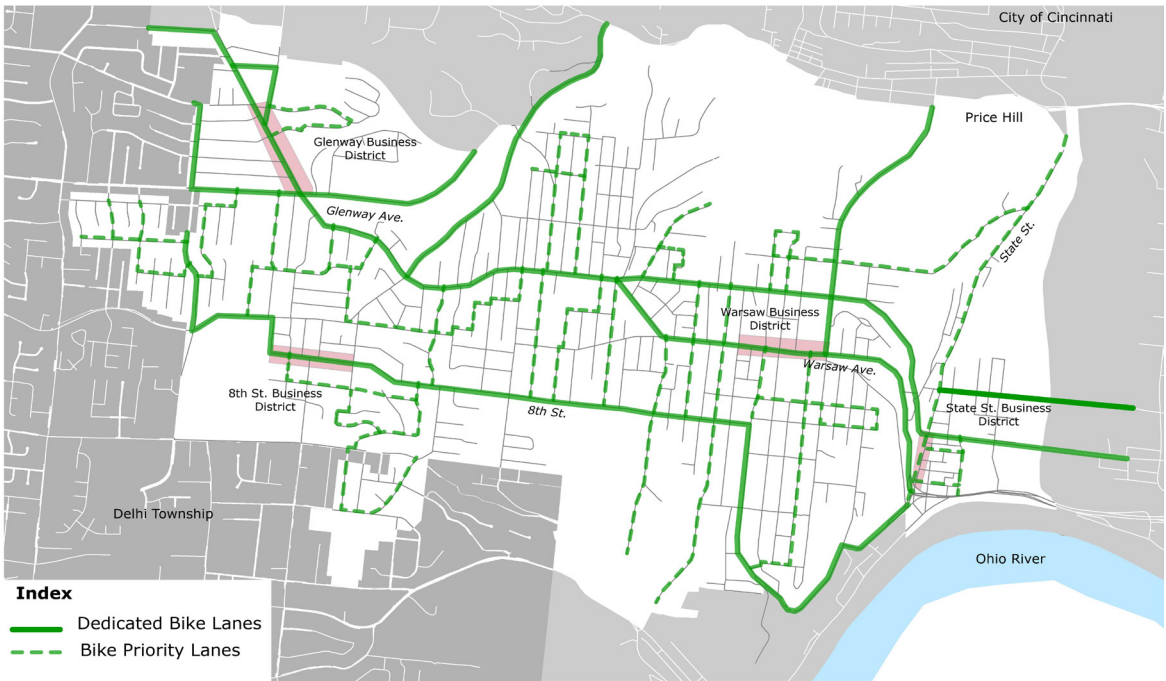


Fig. 30: Proposed bike network map¹

¹ Map by Jyutika Bhise

With the integration of the new bike network and the optimized bus stops, the 5-minute access area by walking and biking now covers 97% of the neighborhood as shown in Figure 33.

The inclusion of bike lanes will considerably improve the bicycling compatibility of Price Hill's roads. For primary arterial roads, the compatibility index can be reduced to as low as 2.42 (Level of Service C – Moderately High), which is an improvement from the current compatibility index of 3.68 (Level of Service D – Moderately Low). Similarly, the minor arterial road biking compatibility can be improved from 3.19 (Level of Service C – Moderately High) to 1.62 (Level of Service B – Very High).

Benefits of a well-connected bike network:

- Provides reliable options for people who cannot depend on private cars and thus improving environmental justice
- Better connections to the regional system and the strengthening of the current bike behavior may encourage more people to bike
- Incorporation of biking lanes adds an additional lower speed lane as a buffer between pedestrians and vehicles thus improving pedestrian safety

Takeaways

- An integrated multimodal transportation system will make the commute within the neighborhood as well as the connection to the urban core of Cincinnati more reliable and comfortable.
- Due to increased connectivity, the community can develop at higher densities.
- Many contemporary business investors like to invest in places with good public transit connections and opportunities for active transportation. Thus, the integrated alternate transportation system can attract outside financial investment for Price Hill.
- The shift to active transportation modes will improve public health and will reduce vehicular emissions thus making the neighborhood more sustainable.

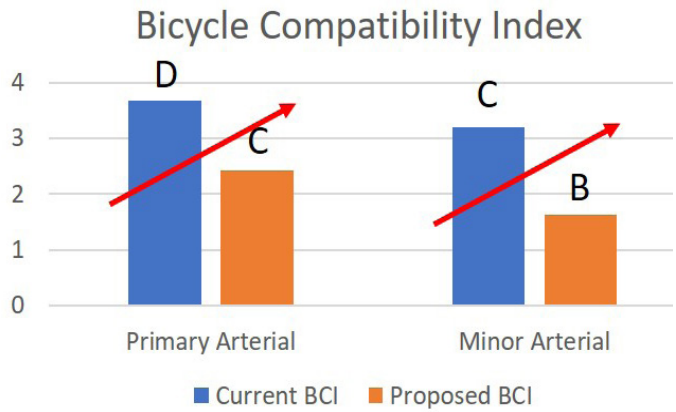


Fig. 31: Comparative graph of BCI for primary arterial and minor arterial roads

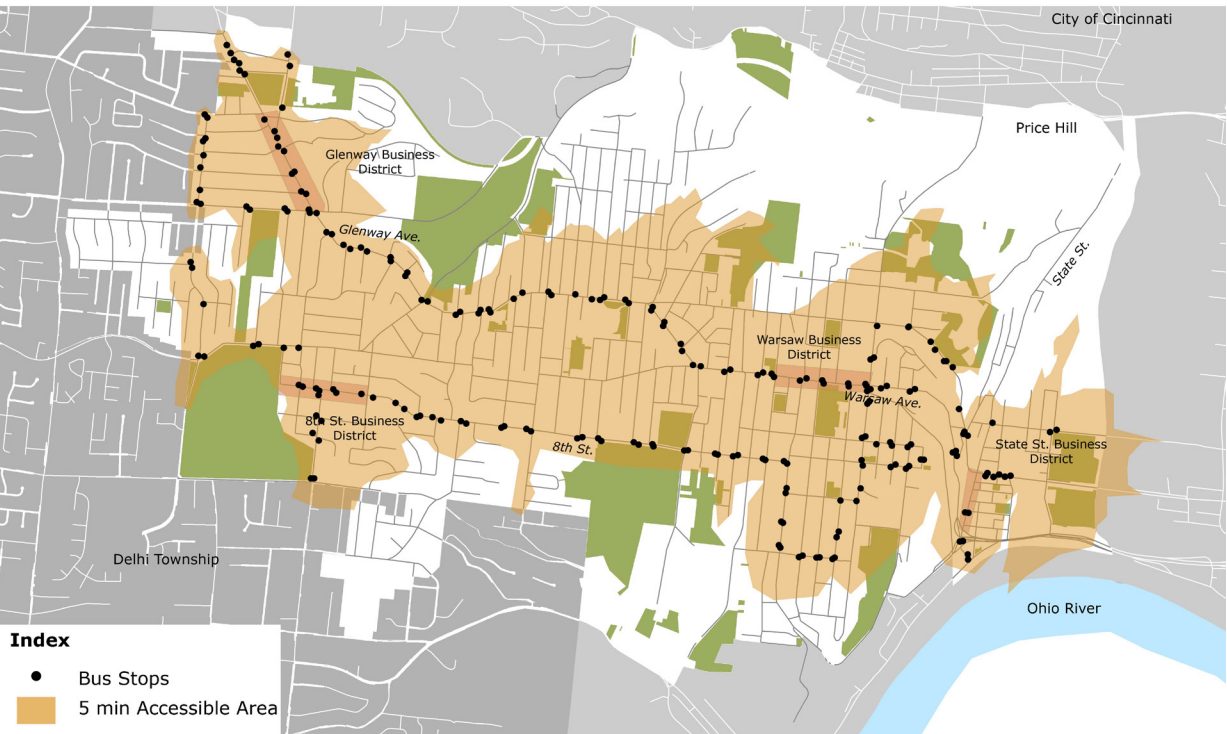


Fig. 32: Current 5-minute access area from bus stops by walking & biking¹

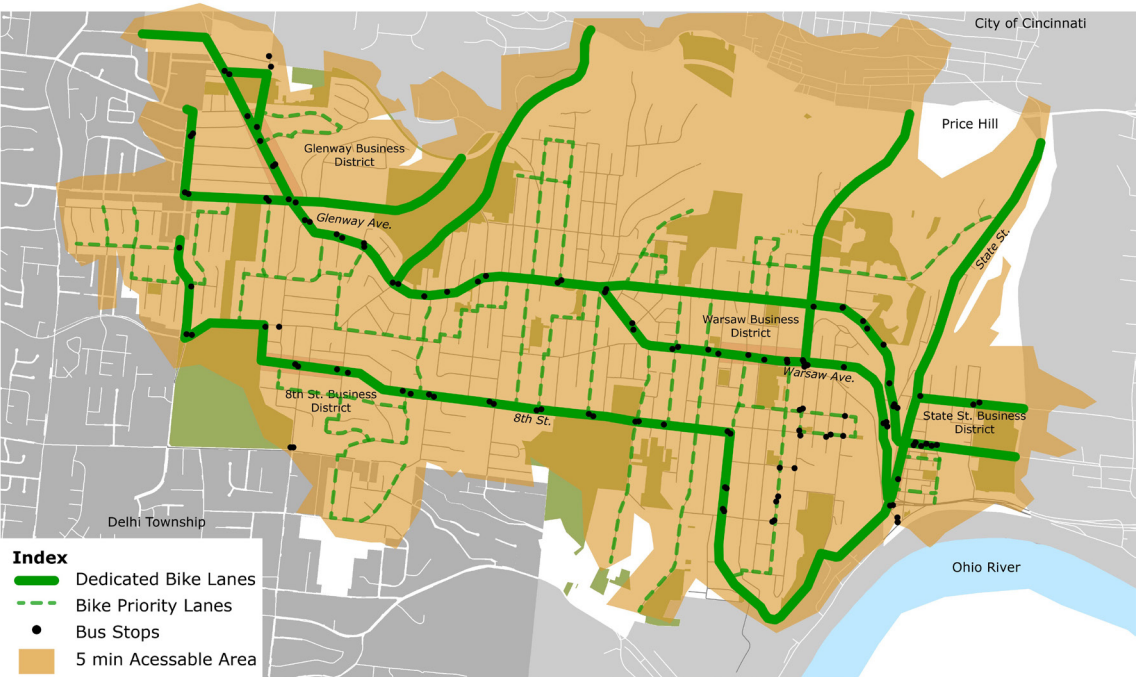


Fig. 33: Forecasted 5-minute access area after implementing Alternate Mobility Plan²

^{1&2} Maps by Jyutika Bhise

STREET DESIGN GUIDE

The Street Design Guidelines for Price Hill’s Alternative Mobility Plan focus on adapting the neighborhood’s streets for biking either by dedicated bike lanes or bike priority lanes (discussed in the previous section). These designs also look at ways to enhance the aesthetics of the street through added street trees and widened green spaces, which also help create better public space environments.

These guidelines look at two levels: the street level, which takes into consideration the hierarchy of roads in Price Hill and alternative ways improvements can be made, and the Main Street level, which specifically looks at how two of Price Hill’s business district streets can utilize the street-level redesign suggestions.

Street-Level

The hierarchy of roads is a categorization of road types according to their function and capacities. The basic hierarchy from highest traffic movement and speed to the lowest is Freeway, Primary Arterial, Minor Arterial, Collector, and Local. The street hierarchy map for Price Hill shows the types of streets found in the neighborhood. Red are major roads that cross the neighborhood linking Price Hill with Cincinnati to the east and Delhi & Green Townships to the west. Blue and purple streets are collector roads that funnel traffic from yellow local neighborhood streets to the major roads. The following pages show examples of recommended street designs for how the various street types can accommodate bikes and slow down traffic speed. More information can be found in Appendix 5.

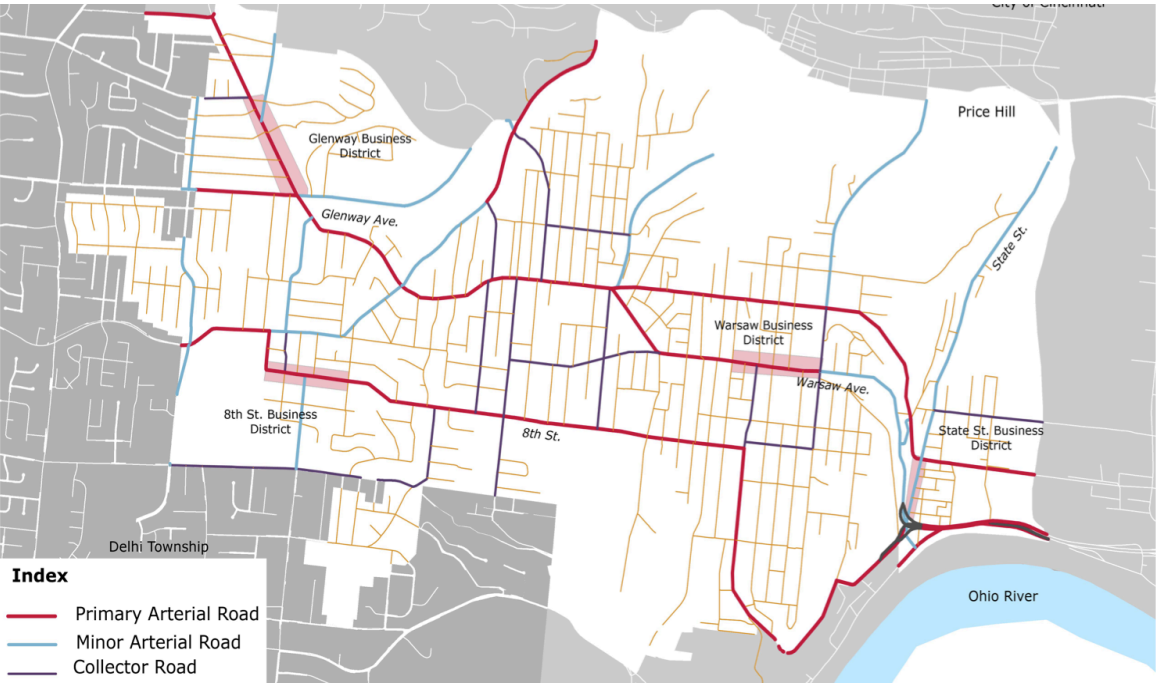


Fig. 34: Street hierarchy map of Price Hill¹

¹ Map by Jyutika Bhise

PRIMARY ARTERIAL ROADS

Primary arterial roads are mainly high traffic thoroughfares that cross Price Hill. The current design of the streets are four driving lanes that allow for higher speed vehicular traffic. This reduces the perception of safety for pedestrians on the sidewalk and prevents cyclists from using the road space. This type of design can be seen on the major business roads such as Glenway Avenue, W. 8th Street and Warsaw Avenue.

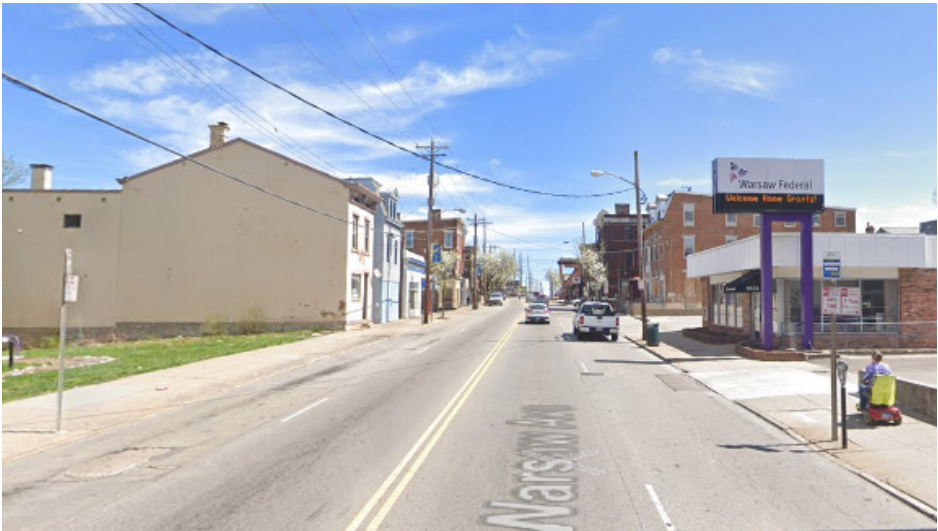


Fig. 35: Current street view of Warsaw Avenue¹

Fig. 36: Street design proposal (right)²

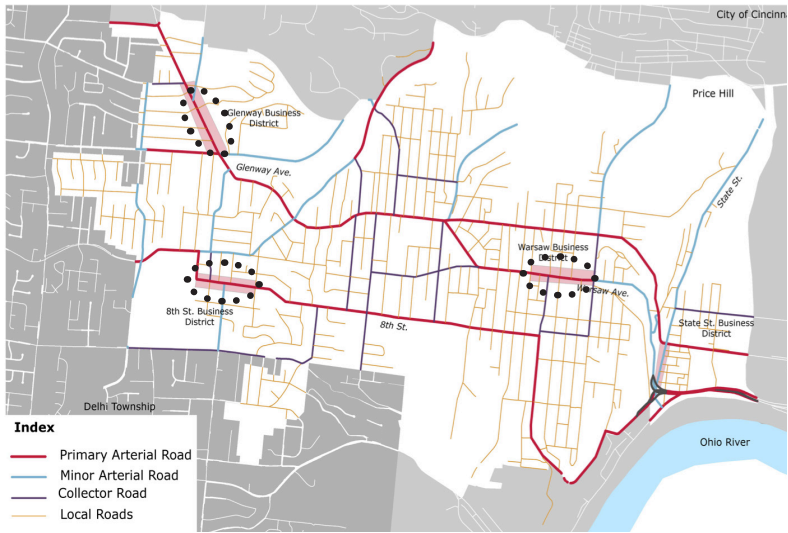
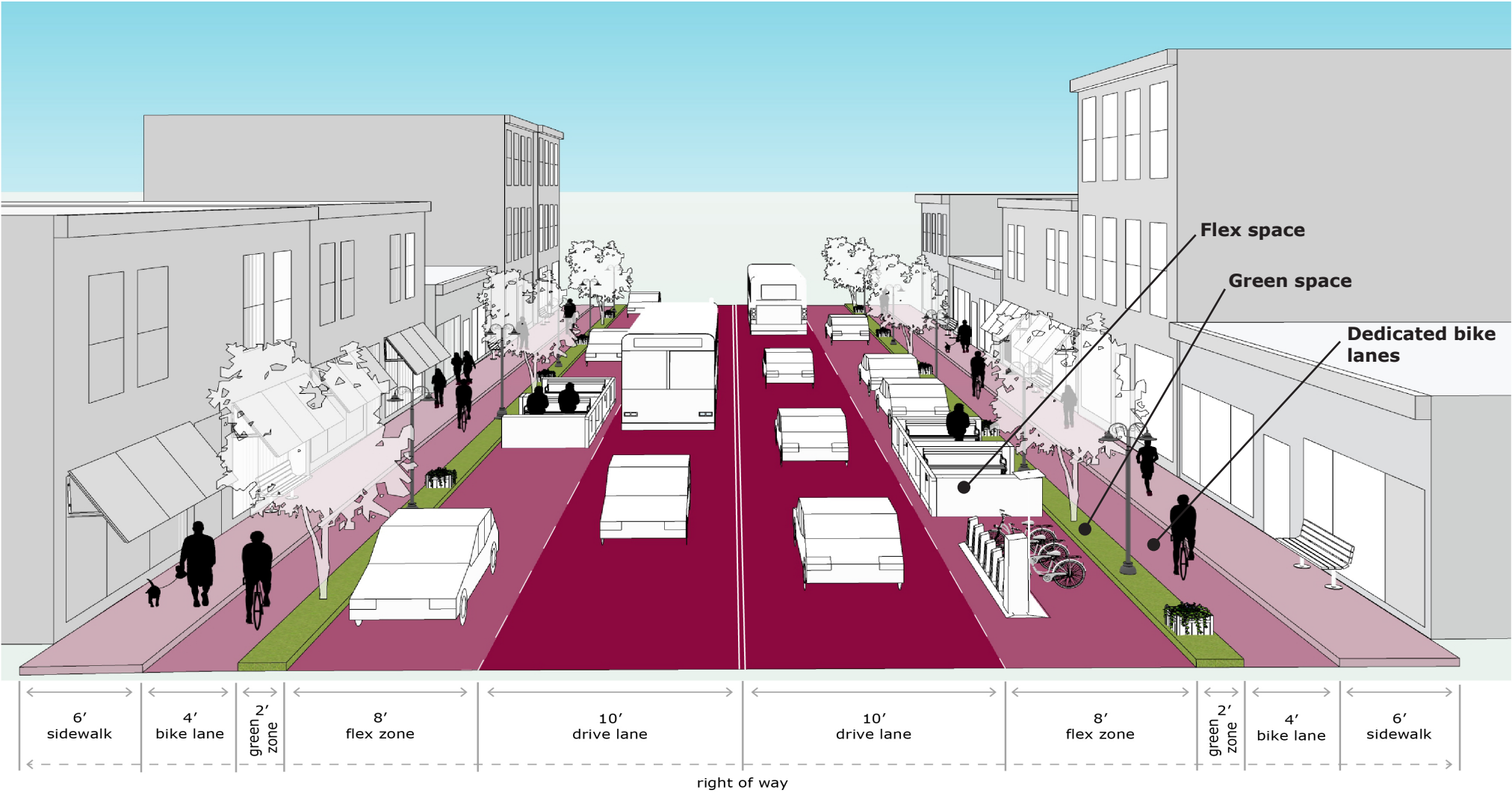


Fig. 37: Street hierarchy map

¹ Google Maps
² Graphic by Anna Dewey



These roads have plenty of space to accommodate bike lanes:

- Reduce drive lanes by 1 ft. and add narrower parking lanes to allow for the construction of dedicated bike lanes on either side of the street.
- Enhance green space, trees and lighting to make the street more aesthetically pleasing and slow down traffic speeds
- Slower speeds will encourage more people to use and engage in the street and will help local businesses to be noticed more

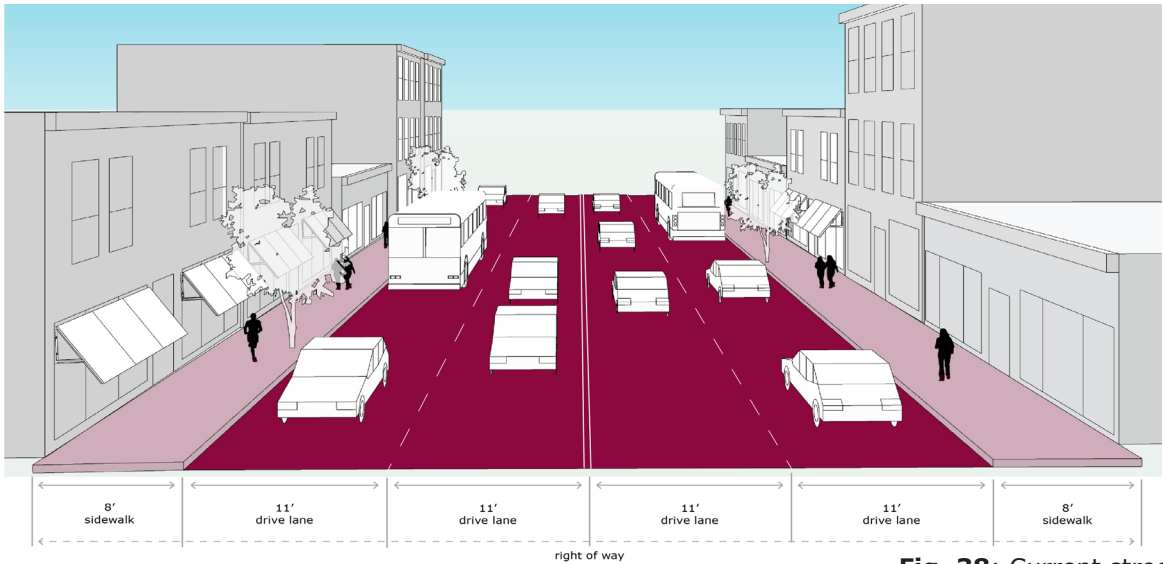


Fig. 38: Current street design¹

¹ Graphic by Anna Dewey

MINOR ARTERIAL ROADS - TYPE 1

Minor arterial roads are similar to the primary arterial ones in that they link Price Hill to the surrounding neighborhoods. Two kinds of minor arterials roads have been identified in Price Hill and this first kind contains two drive lanes and two parking lanes. This type of street design is seen on State Avenue.



Fig. 39: Current street view of State Avenue¹

Fig. 40: Street design proposal (right)²

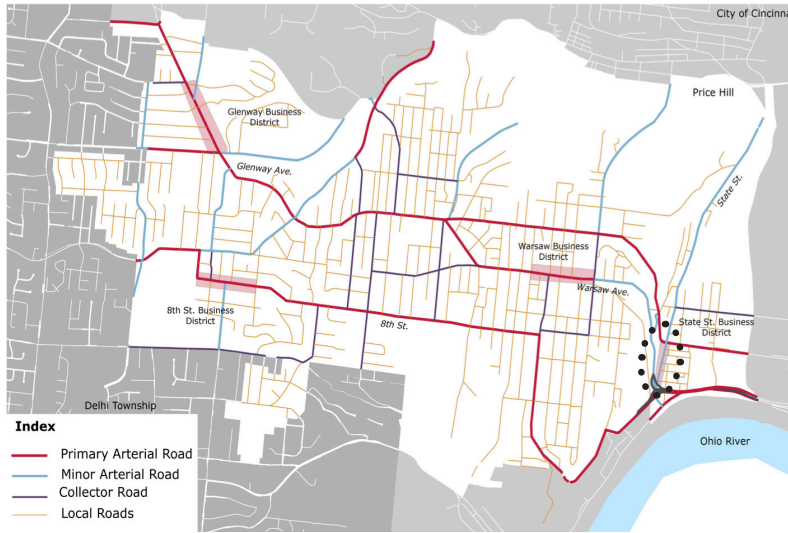
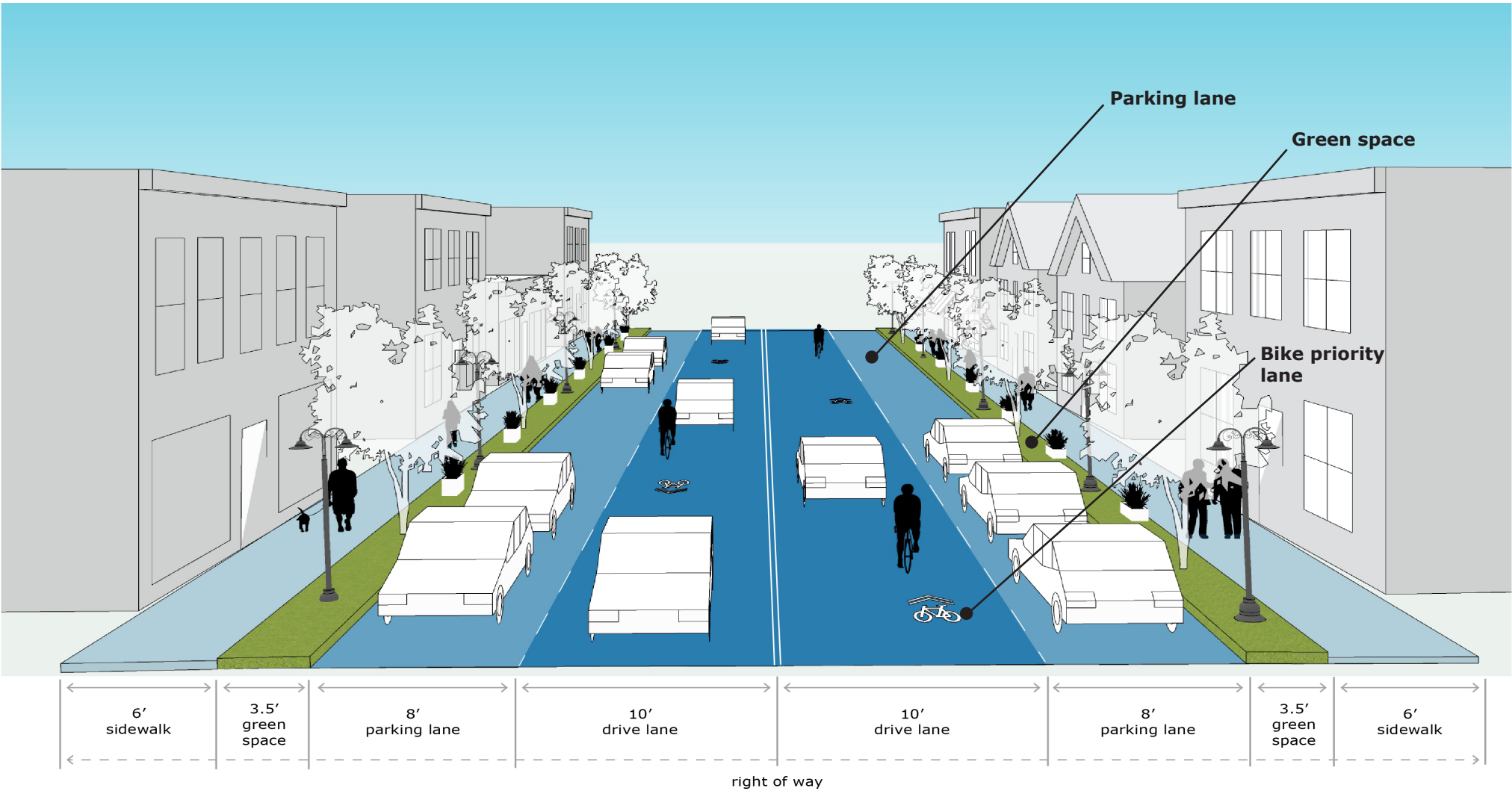


Fig. 41: Street hierarchy map

¹ Google Maps
² Graphic by Anna Dewey

Although there is not enough space to accommodate dedicated bike lanes, improvements can be made:

- Reduce parking lane width by 2 ft. to allow for more green space along the sidewalk
- The widened green space can serve as a space for more street trees and better lighting.
- Trees are not only beneficial for aesthetics and the environment, but they also play a role in reducing the line of sight for drivers, which causes them to slow down.
- With slower traffic speeds, bike priority lanes can be used

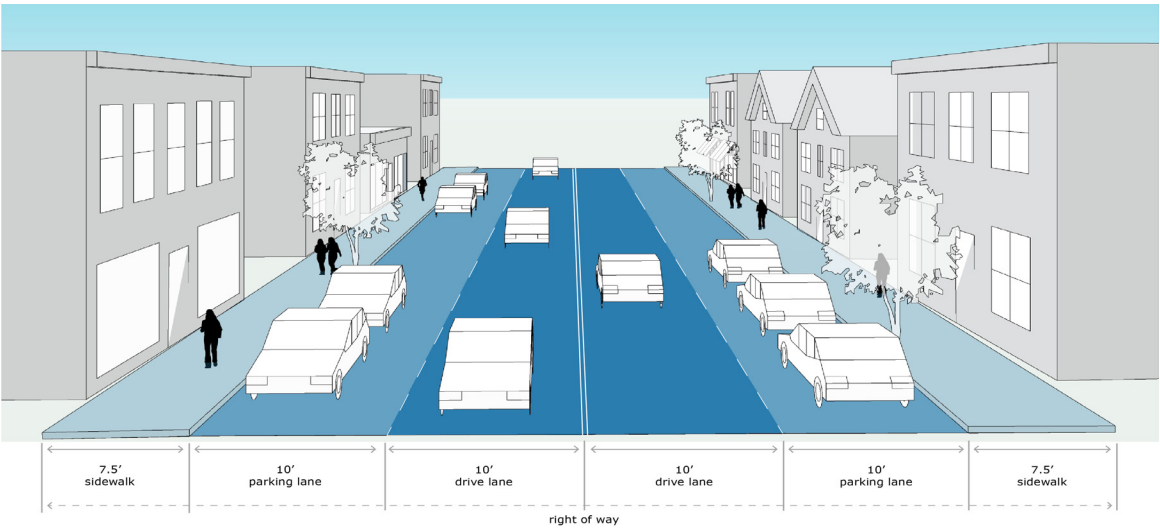


Fig. 42: Current street design¹

¹ Graphic by Anna Dewey

MINOR ARTERIAL ROADS - TYPE 2

The second kind of minor arterial road contains two very wide drive lanes with nondescript sidewalks on either side. This street design is very car-centric and there is a lot of room to incorporate biking infrastructure and make it more pedestrian-friendly.



Fig. 43: Current street view of Grand Avenue¹

Fig. 44: Street design proposal (right)²

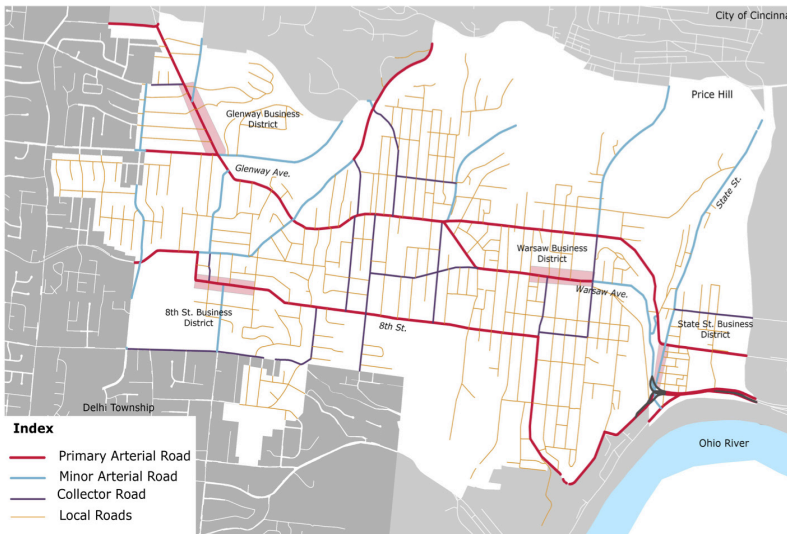
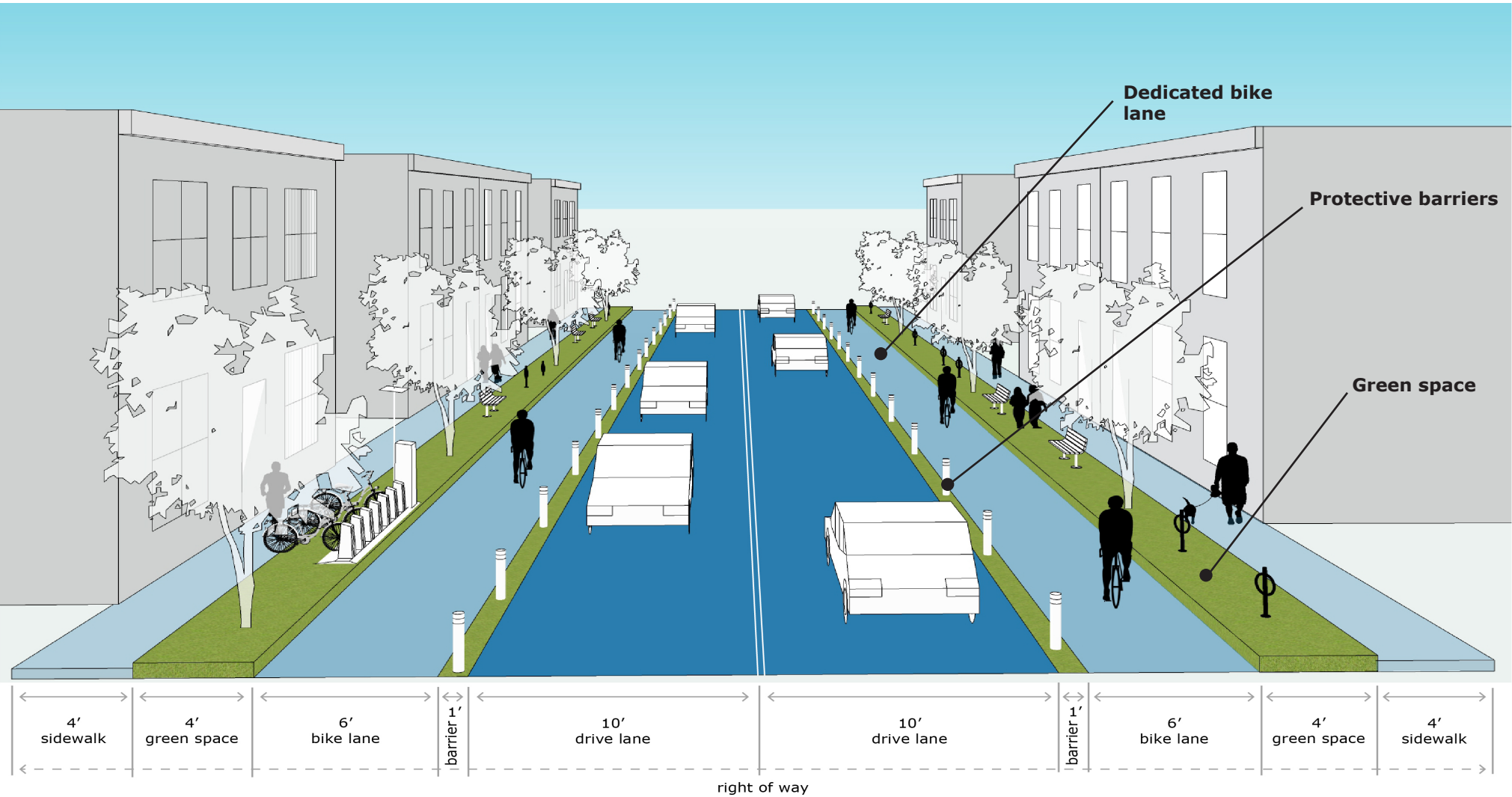


Fig. 45: Street hierarchy map

¹ Google Maps
² Graphic by Anna Dewey



For the redesign of this street type:

- Reduce width of drive lanes from 17 ft. to 10 ft. (a standard width for driving lanes) to allow for dedicated bike lanes on both sides of the street
- Separate the bike lanes and drive lanes with bollards or some other barrier to ensure the safety of bicyclists
- Add more street trees as well as benches for pedestrians to comfortably spend time in the area
- Add a bike station to encourage more people to bike and use the new dedicated bike lanes

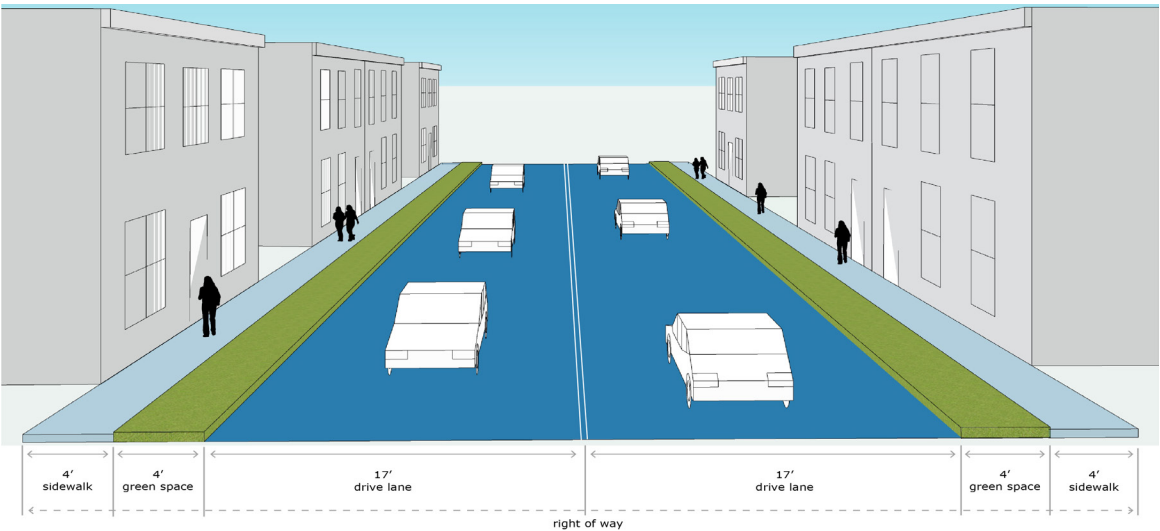


Fig. 46: Current street design¹

¹ Graphic by Anna Dewey

COLLECTOR ROADS - TYPE 1

Collector roads are residential roads that collect residential traffic and directs it to the minor arterial and primary arterial roads. As with the minor arterials, two kinds of collector roads have been identified in Price Hill. The first kind contains two drive lanes with one drive lane expanded to accommodate a parking lane for the residential houses.



Fig. 47: Current street view of Rosemont Avenue¹

Fig. 48: Street design proposal (right)²

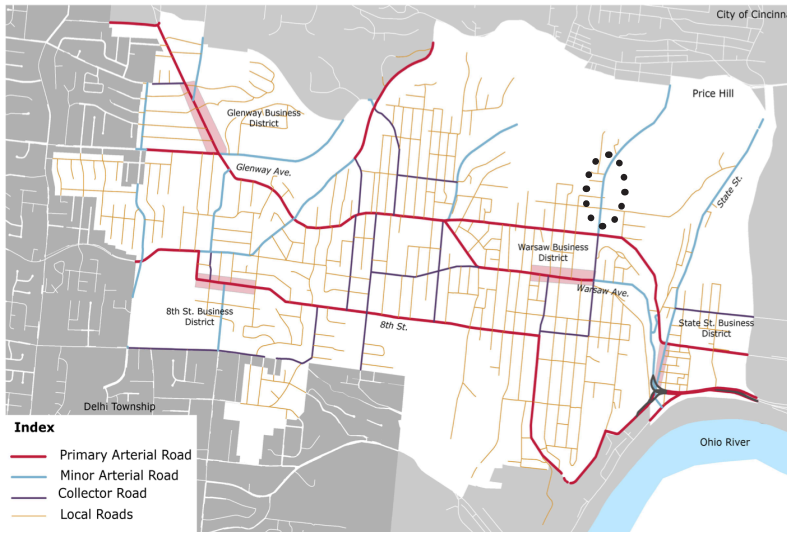
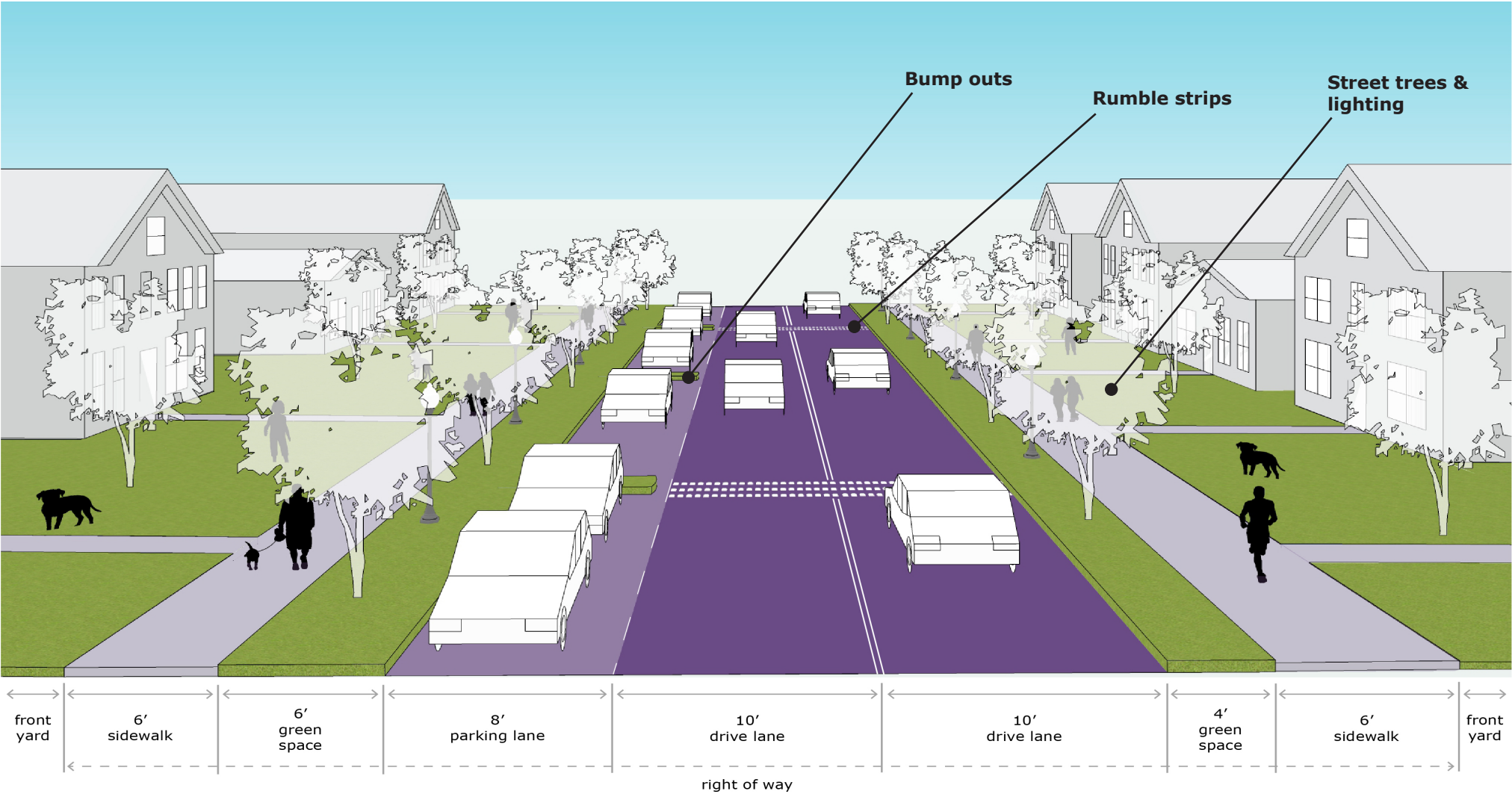


Fig. 49: Street hierarchy map

¹ Google Maps
² Graphic by Anna Dewey



There is not enough room to add dedicated bike lanes to these types of streets, but nevertheless, traffic calming measure can be used:

- Add street trees and streetlights to enhance the aesthetics of the area
- Reduce the parking lane by 2 ft. with incremental bump outs to further help reduce the speed of oncoming cars
- Add rumble strips (grooves in the road or raised pavement marks) that produce noise or vibration to alert drivers to slow down while driving

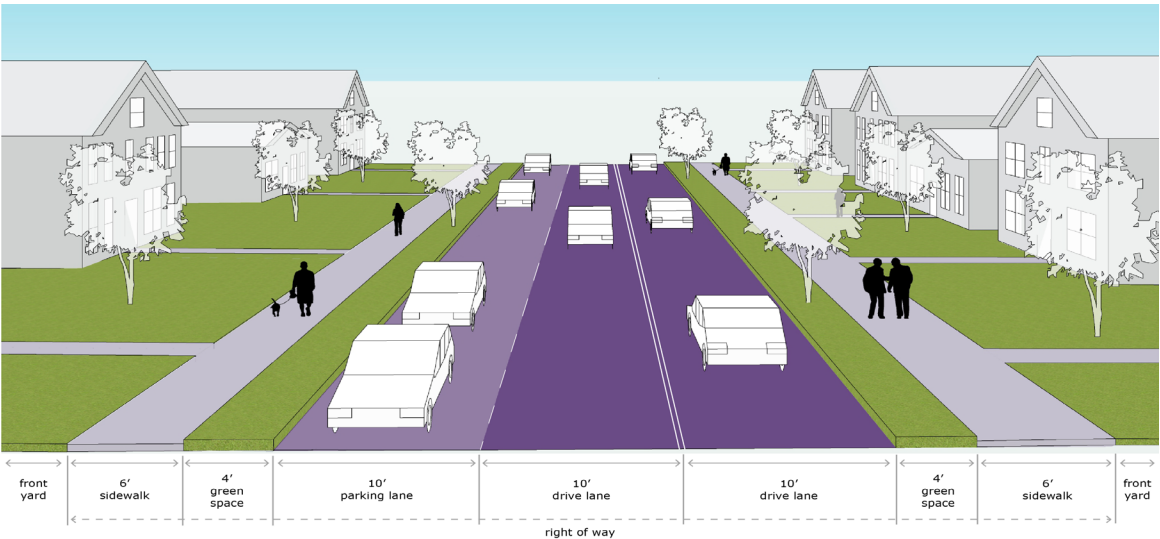


Fig. 50: Current street design¹

¹ Graphic by Anna Dewey

COLLECTOR ROADS - TYPE 2

The second kind of collector road is very similar to the type 2 minor arterial road with two very wide driving lanes. However, this road also has very wide sidewalks with no green space at all along the street. There is only one street where this street design can be found and it's in Lower Price Hill.



Fig. 51: Current street view of Gest Street¹

Fig. 52: Street design proposal (right)²

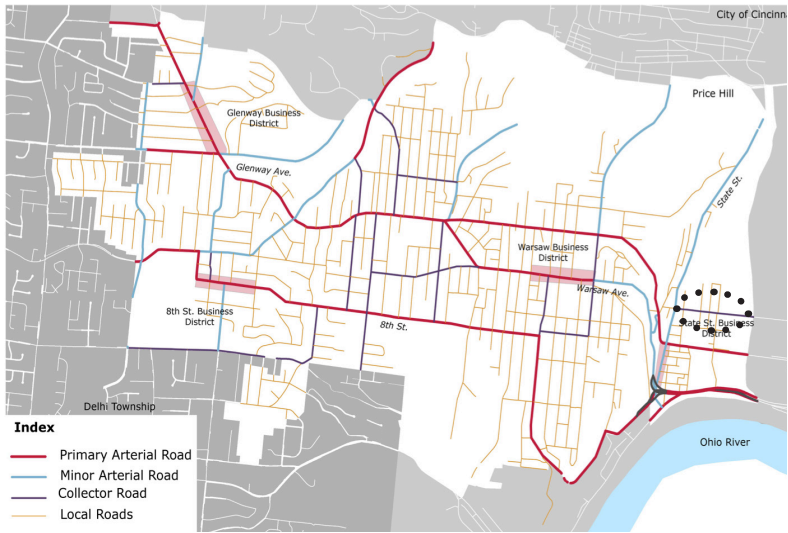
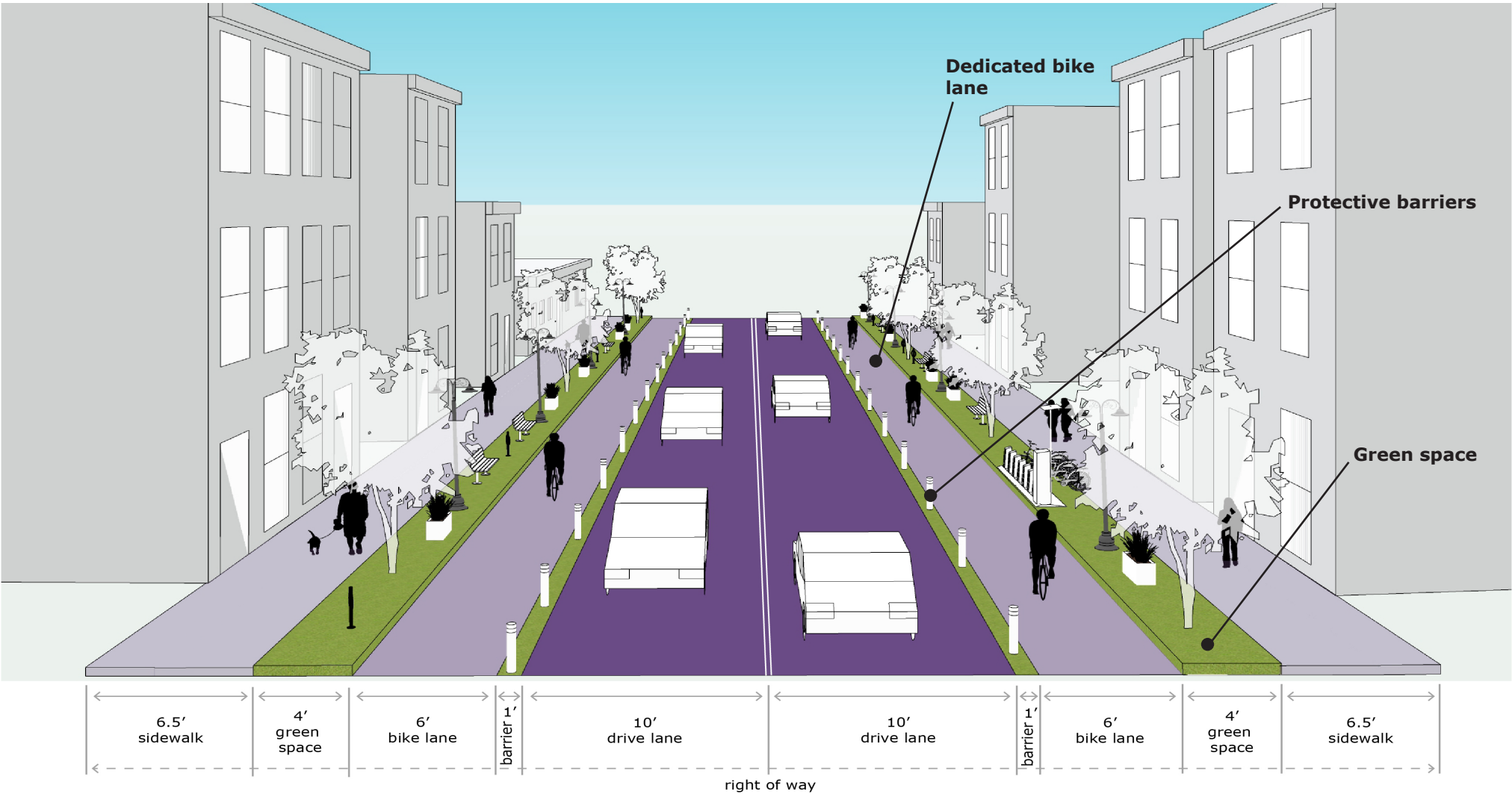


Fig. 53: Street hierarchy map

¹ Google Maps
² Graphic by Anna Dewey

There is a lot of potential to transform this space into a biking and pedestrian street:

- There are already some dedicated bike lanes, but they should be continued down the entirety of the street so it can connect with the rest of this project's proposed bike network
- Reduce width of drive lanes from 17 ft. to 10 ft. in order to add the dedicated bike lanes
- Separate the driving and biking lanes with a barrier for added protection
- Convert 4 ft. of the sidewalk into green space to allow for street trees, lighting, and benches

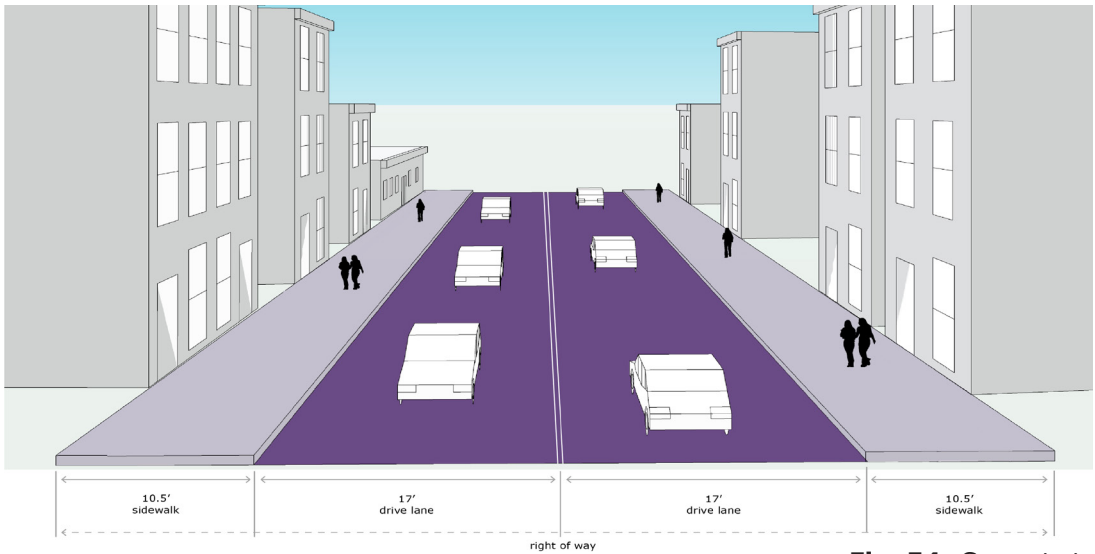


Fig. 54: Current street design¹

¹ Graphic by Anna Dewey

LOCAL ROADS

Local roads are exclusively smaller residential streets. There are many streets like this in Price Hill and this typical residential street can be adjusted to make it even safer and more comfortable for pedestrians and cyclists. Many of the local streets in Price Hill are yield streets. These have only one lane of traffic with both sides used for parking for the residential houses.



Fig. 55: Current street view of Hawthorne Avenue¹

Fig. 56: Street design proposal (right)²

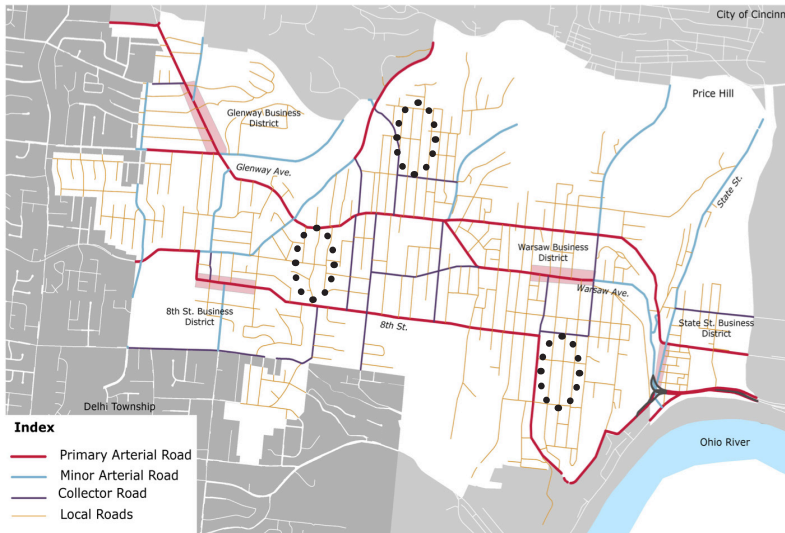
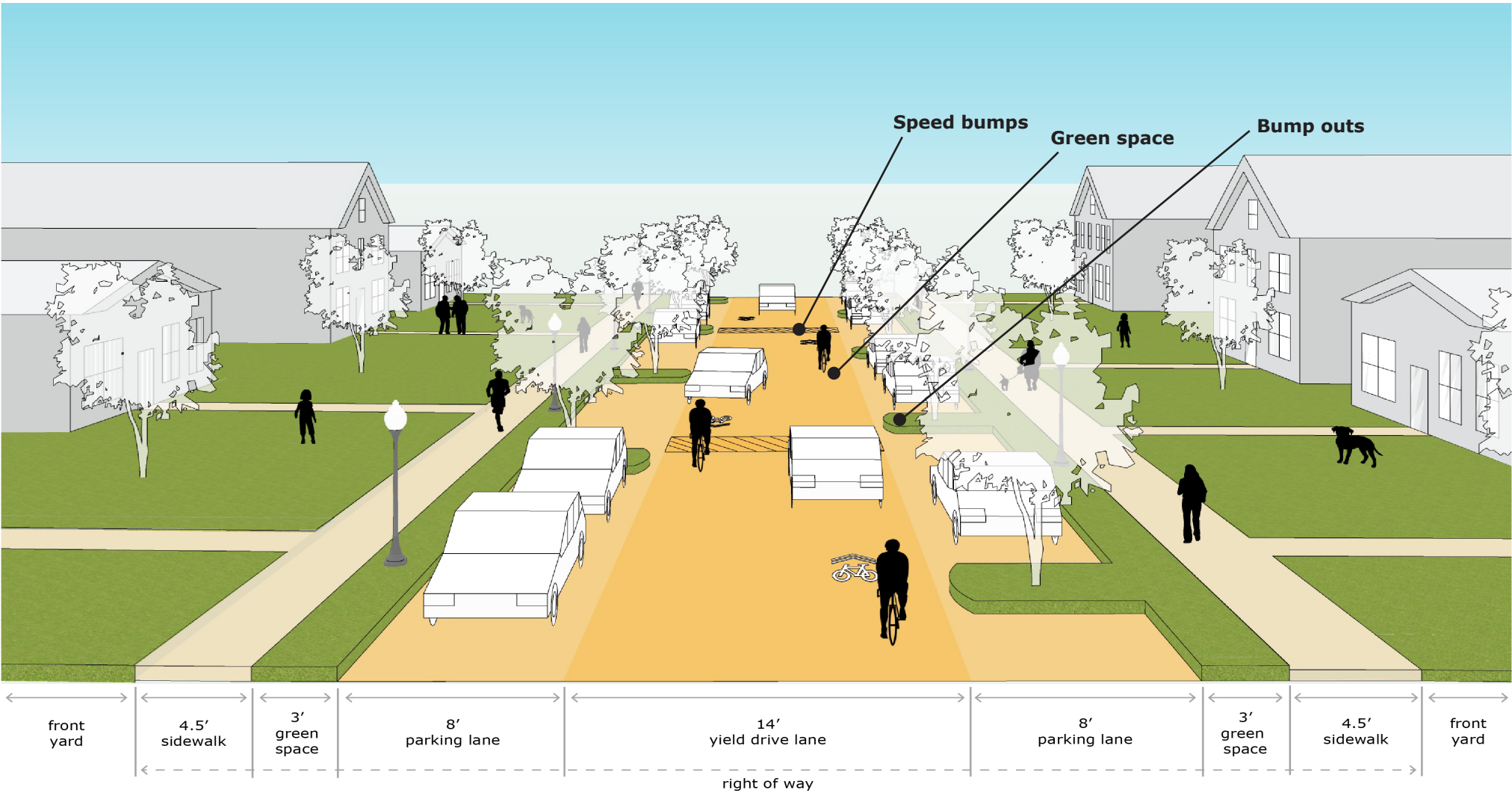


Fig. 57: Street hierarchy map

¹ Google Maps
² Graphic by Anna Dewey



A yield street already helps to reduce a car's speed since there is only one lane of traffic but there is more that can be done:

- Add speed bumps to further assist drivers' awareness of other potential street users
- Widen the drive lane from 10 ft. to 14 ft. to allow for bike priority lanes
- Reduce the parking lanes by 2 ft. and add tree bump outs to further help reduce vehicle speed

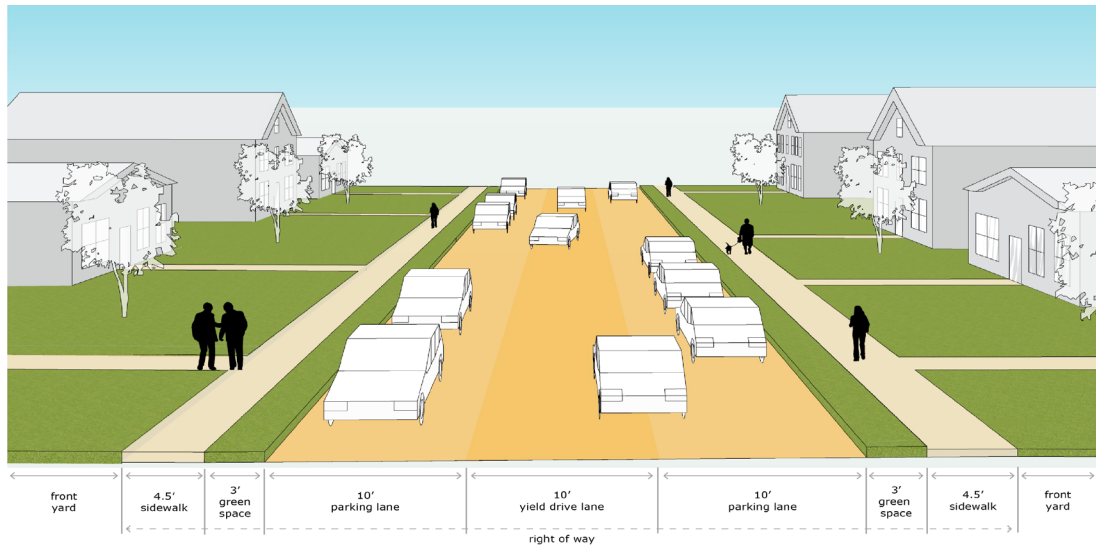


Fig. 58: Current street design¹

¹ Graphic by Anna Dewey

Main Streets

This section highlights two of Price Hill’s main business district streets – Glenway Avenue and State Avenue – to show with an actual image how these streets could look with the primary arterial and minor arterial type 1 redesign proposals, respectively.

Glenway Avenue - West Price Hill

As noted by the onsite observations conducted in the earlier stages of the project, the pedestrian access along Glenway’s business district is limited by the wide streets, which creates a disconnect between the two sides. Additionally, the large number of high-speed vehicles makes it very unpleasant to walk along the street due to the noise and smell of pollution. The lack of a sense of safety and a poor sensory experience can prevent pedestrians from using the sidewalk and the high-speed traffic prevents bicycle use.

Important elements:

- Buffer for the sidewalk from the dedicated bike lane (shown in pink) as well as the strip of elevated green space that protects and separates the bike lane from oncoming vehicles.
- Street trees that will create a safety buffer for sidewalk users will help reduce the unpleasant smell and noise that currently exists
- Shorter amount of time to cross the street making it safer to access both sides of the street due to the added bike lanes and narrower drive lanes

This design will make walking along Glenway Avenue more comfortable and this perceived increase in safety can also help the activity of local businesses.



Fig. 59: Current street design of Glenway Avenue

1 Image by Anna Dewey
2 Graphic by Anna Dewey



Fig. 60: Proposed street design for Glenway Avenue

State Avenue - Lower Price Hill

As noted in the onsite observations, the State Avenue business district is one of Price Hill’s best business streets in terms of street design due to the wide sidewalks and good sense of enclosure from the taller urban buildings. The current street layout offers good protection against oncoming traffic as the parking lanes provide a buffer for those on the sidewalks. Additionally, the business district has been built at a human scale with the taller residential buildings complementing the width of the street. In contrast with the more suburban feel of the Glenway business district, State Avenue has an urban feel to it. However, even with these positive characteristics, there are still improvement that can be made.

Important elements:

- More street furniture accompanied by more street trees to make the space better and to provide opportunities for people to engage and spend time along the street
- Added green space along the sidewalk
- A flex space in the parking lane (striped lines), which can accommodate other types of uses other than parking that can benefit the local community
- During the onsite observations, there were a fair number of people on the sidewalks indicating that there is potential for better community interaction if public spaces along the street can be improved

This design will make the experience along State Avenue more exciting with renewed investment in the area to benefit the local residents and attract new businesses.

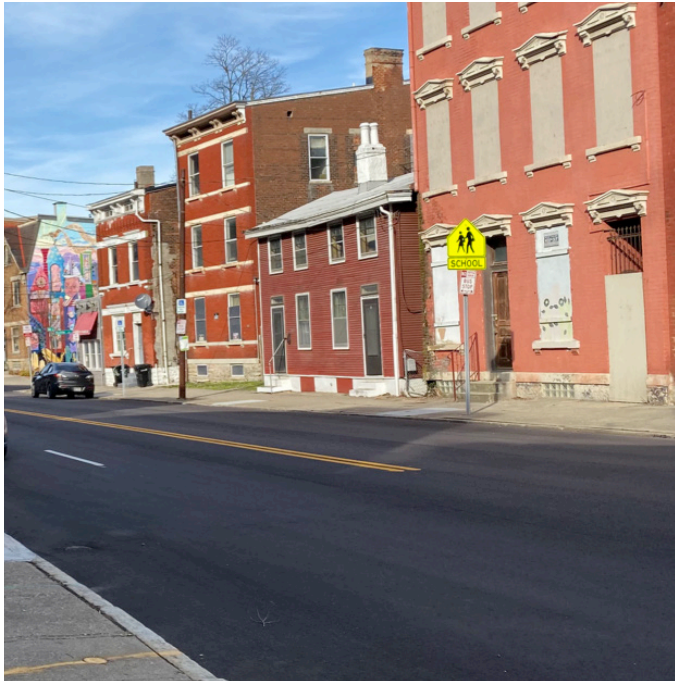


Fig. 61: Current street design of State Avenue

1 Image by Anna Dewey
2 Graphic by Anna Dewey



Fig. 62: Proposed street design for State Avenue

IMPLEMENTATION

Tactical Implementation

The Price Hill Alternate Mobility Plan presents a set of guidelines that can help the community prioritize and implement transportation and street design projects. While immediate capital investment may not be possible for the neighborhood, doing experimental projects that are on a temporary basis can help with the prioritization of the projects for the future as well as getting community input. One key suggestion is to develop a guideline for incremental planning that the Price Hill neighborhoods can follow. The “Tactical Urbanist’s Guide to Materials and Design Version 1.0” created by Street Plans Collaborative can be considered as an excellent example to understand the overall process from conception to final permanent construction.

With the initial template of the “Tactical Urbanist’s Guide”, Price Hill can form its own guideline for developing and implementing this alternative transportation and street design project. MEMFix is an excellent example for tactical urbanism guidelines and it is specifically tailored to the city of Memphis, Tennessee. Having such a guideline can help community members take initiative in conceiving and implementing projects thus ensuring its success.

Glenway Avenue

To take this incremental planning strategy into reality, a current image of Glenway Avenue was taken to provide an example of what the temporary and permanent phases of implementation could look like.

Current

- A typical primary arterial road with two lanes of traffic in each direction
- No sidewalks buffers to protect pedestrians from oncoming traffic

Temporary Phase

To add dedicated bike lanes as was discussed in the street design guidelines for primary arterial roads, forming temporary bike lanes either with or without painted lanes and separated from traffic with non-permanent barriers can be an easy and low-cost initial approach.

For this phase:

- Bike lanes can be temporarily in outer driving lane – the lane proposed to become the parking flex space in the next phase
- The community can then conduct a trial period of having dedicated bike lanes
- After a period of time, the community can decide if they want to keep these bike lanes

If so, they can move on to the permanent phase

Permanent Phase

The permanent phase is likely to come with increased costs as parts of the street may need to be reconstructed to allow for the permanent bike lanes.

For this phase:

- Bike lanes will have their own space
- Parking flex lanes will be between the driving and biking lanes
- Drive lanes will become slightly narrower
- Raised permanent protective green strip will be added between the bike and flex space to protect cyclists
- Additional tree cover and improved lighting will increase the attractiveness and safety of the street and encourage more people to use this renewed public space



Fig. 63: Temporary phase (left) vs. current condition (right) of Glenway Avenue¹



Fig. 64: Permanent phase of Glenway Avenue²

¹ Graphic by Anna Dewey

² Graphic by Anna Dewey

Project Funding

There are several funding opportunities that can be used in developing the Alternative Mobility Plan and improved street infrastructure. Funding can be sourced through:

- Neighborhood funds such as Neighborhood Business District Improvement Programs (NBDIP)
- Tax Increment Financing (TIF) districts – The City of Cincinnati’s current TIF districts include West, East, and Lower Price Hill
- OKI by allocating federal funds to the neighborhood
- Ohio Department of Transportation for the Safe Routes to School Program
- Duke Energy Urban Revitalization Initiative, which provides grant funding for redevelopment projects that stimulate growth, job creation, and investments in Greater Cincinnati’s urban cores

For further information about the cost of designing and implementing complete streets (streets that are planned to accommodate all modes of transportation) the Smart Growth America’s “Complete Streets: Guide to Answering the Costs Question” report is a good source to refer to.

Limitations & Future Research

Limitations

There were a few limitations that were encountered throughout the course of this project. They include:

- Feedback limitations – An online survey was sent out, but only 58 responses out of several thousand residents were recorded. Also, we had a difficult time collecting responses from minority groups in Price Hill.
- Time limitations – The planning process was short and only lasted four months with half of that time required to be conducted online due to the coronavirus. This impacted our ability to effectively engage with the community.
- Data limitations – The most recent data that was found and included in the project was from 2018. This was the latest year for.

Future Research

Although many aspects of public transit, active transportation, and street design were addressed throughout this report, below are opportunities for further the research.

- Tactical implementation is addressed on the surface, but it should be explored further
- The report is more qualitative rather than quantitative as it is based on community aspirations
- Implementation does not talk about who (which agency, organization, etc.) will do what
- Funding sources are only briefly mentioned and should be further investigated

APPENDIX

Appendix 1

First presentation

- The first stage of this project focused on presenting general theories to the community about how street design and transportation can help revitalize neighborhood business districts. Best practice case studies were used as examples.
- Click [here](#) to read the Neighborhood Business Street Design Report for background information about why street design is important and how it could be beneficial for Price Hill's future.

Second presentation

- The second stage of this project involved initial concepts developed for the improvement of the transportation system specific for Price Hill, a neighborhood wide ‘Alternate Mobility Plan’ as well as proposed street design improvements for the business districts.
- Click [here](#) for a larger view of the *Actively Reviving Retail: A Street-Level Perspective* poster created for the second stage of this project
- Follow this link to view presentation #2: <https://www.youtube.com/watch?v=V8j-t86QGnM>

Final presentation

- Follow this link to view the final presentation: <https://www.youtube.com/watch?v=RrrozRWc84s>

5

Actively Reviving Retail: Street-Level Perspective

THE HEARTS OF PRICE HILL - CAPSTONE WORKSHOP - SPRING 2020

Jyutika Bhise and Anna Dewey

Alternative Mobility Plan: Movement for All

This Alternative Mobility Plan aims to reinstate the importance of the business nodes along active transportation lines while at the same time encouraging an increase in ridership among Price Hill residents. Since a considerable number of Price Hill residents do not have easy access to a car, this Plan proposes a safe and equitable solution to provide enhanced mobility and accessibility for all. Furthermore, the intent of this Mobility Plan is to connect with current alternative transportation projects in the Cincinnati region such as the Lick Run Project to the north of Price Hill.

Fig. 1.1.A: Bus routes

Fig. 1.1.B: Bike infrastructure

Fig. 1.1.C: Crash Analysis

Fig. 1.1.D: Proposed Bike Network

Proposed bike lane

Dedicated bike lane

Bike priority street

11% of people use transit in West Price Hill

18.3% of people use transit in Lower Price Hill

32% properties rented in West Price Hill

83% properties rented in Lower Price Hill

Street Design for Business Districts

Streets occupy a significant portion of our urban land and they provide opportunities to address a wide range of problems, such as struggling business districts. To enhance the economic and social value of an area, thoughtfully designed urban spaces have been shown to add value. Various street design elements can increase the attractiveness and establish places for socializing and commerce. The redesign of Price Hill's business districts aims to not only mitigate traffic but to also revive these districts into nodes of activity for residents and visitors. Good urban street design has the potential to add value to Price Hill's neighborhood districts not just for the businesses themselves but also for the overall well-being of the residents.

Implementing through Street Design

1- West 8th Street

Fig. 1.2.A: Existing & proposed street layout for West 8th Street

Lack of investment & lack of integration were top two priorities to be addressed

Landscaping/green space & outdoor spaces were top two design elements to be considered in the street design

2- State Avenue

Fig. 1.2.B: Existing & proposed street layout for State Avenue

Lack of investment & decreased pedestrian safety were top two priorities to be addressed

Landscaping/green space & outdoor spaces were top two design elements to be considered in the street design

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Appendix 2

Survey Questions & Results

- To read the questions that were asked about the community's general travel behavior and street design priorities for the four neighborhood business districts follow this [link](#).

Appendix 3

Transportation Data & Calculations

- For further information and details about the data and calculations for the alternative transportation part of this project follow this [link](#).

Appendix 4

Business District Observations

- For further information and details about the onsite observations conducted in each of Price Hill's business districts follow this [link](#).

Appendix 5

Street Typologies

Typology	Definition	Characteristics	Examples
<i>Primary Arterial</i>	<ul style="list-style-type: none">Widest right-of-wayLocation of business districtsMainly commercialServes through traffic & local traffic	<ul style="list-style-type: none">Lanes: 4+Flow: 2 wayWidth: 50'-80'	<ul style="list-style-type: none">Glenway AvenueW. 8th StreetWarsaw Avenue
Typology	Definition	Characteristics	Examples
<i>Minor Arterial</i>	<ul style="list-style-type: none">Connects commercial areasMostly local traffic, some through trafficMixed-use areas	<ul style="list-style-type: none">Lanes: 2-4Flow: 2 wayWidth: 45'-60'	<ul style="list-style-type: none">State Ave. (Type 1)Grand Ave. (Type 2)
Typology	Definition	Characteristics	Examples
<i>Collector</i>	<ul style="list-style-type: none">Connects residential areasServes local trafficMainly residential	<ul style="list-style-type: none">Lanes: 2-3Flow: 2 wayWidth: 45'-55'	<ul style="list-style-type: none">Rosemont Avenue (Type 1)Trenton Avenue (Type 1)Gest Street (Type 2)
Typology	Definition	Characteristics	Examples
<i>Local</i>	<ul style="list-style-type: none">Almost exclusively local trafficAll residentialConnects to all other street types	<ul style="list-style-type: none">Lanes: 1Flow: 1 or 2 wayWidth: 35'-45'	<ul style="list-style-type: none">Hawthorne AvenueIliiff AvenueKreis Avenue