# **IVY RIDGE STATION** CREATING A HUB FOR MULTIMODAL DEVELOPMENT



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## **Executive Summary**

Ivy Ridge Station is located along the Manayunk/Norristown Line of the Southeastern Pennsylvania Transportation Authority (SEPTA) Regional Rail network. It serves the Lower Northwest District of Philadelphia, which includes the neighborhoods of Manayunk, Roxborough, and Andorra. The station and its immediate environs have undergone substantial changes over the last half century: in particular, increasing service and ridership on SEPTA's Regional Rail, the termination of rail service on the Pennsylvania Railroad Line, and changing land use patterns from industrial to residential. These transformations have generated momentum for SEPTA and local neighborhood groups to consider how the station area should be developed. The Delaware Valley Regional Planning Commission (DVRPC) researched and analyzed the environment around Ivy Ridge Station. This report offers recommendations based on the project team's findings and a path forward for the stakeholders in the area.

Ivy Ridge Station serves as a critical connection between the Lower Northwest District and major job centers in Center City and University City. The local area transitions from a dense, walkable street pattern around Manayunk to neighborhoods that are less dense and more car oriented in parts of Roxborough and Andorra. Close to the station, challenges for future development arise, like sharp elevation changes and zoning that is inconsistent with existing and proposed land uses.

DVRPC recommends a series of phased physical improvements around the station coupled with coordinated policy initiatives to encourage mixed-use development. The first phase of improvements recommends installing pedestrian infrastructure around the station to ensure improved access for different users and a bus feeder loop (Figure 1.1). The second phase proposes how the Ivy Ridge Station area could develop in the long term; this study recommends a preliminary plan for structured parking and mixed-use development, while also preserving an alignment for the planned Ivy Ridge Trail (Figure 1.2). Policy recommendations focus on clarifying SEPTA's role in encouraging transit-oriented development (TOD) and developing a clear policy for transit-supportive investments that SEPTA will make at different Regional Rail stations. The recommendations seek to realize the neighborhood vision of Ivy Ridge Station as a local transportation hub that is attractive, safe, and easily accessible to all users.







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FIGURE 1.2: PHASE TWO STATION AREA IMPROVEMENTS





## Introduction

Ivy Ridge Station is the final Regional Rail stop within the City of Philadelphia on SEPTA's Manayunk/Norristown Line. The station covers approximately five acres. This study explores station design and land use policy in the Ivy Ridge Station area. It is motivated by several factors, including a need for strategic neighborhood growth in Lower Northwest Philadelphia; crowded Regional Rail facilities; and the need for a safe, accessible station design. This combination of factors makes Ivy Ridge Station a high priority for investment within SEPTA's Regional Rail system.

The Philadelphia City Planning Commission's (PCPC) Lower Northwest District Plan (2014) emphasizes Ivy Ridge Station as an area for development potential and a focus area—a place with potential to benefit the entire district and the city as a whole with some land use and zoning changes.<sup>1</sup>

PCPC holds three public meetings for each District Plan and relies on community organizations, block captains, and elected officials to help generate consensus and support for the plan's recommendations. Every District Plan has a steering committee that includes community organizations, city council offices, major landowners, implementing agencies, and other stakeholders who actively participate in the plan. Based on the recommendations of the Lower Northwest District Plan for Ivy Ridge Station, SEPTA requested that DVRPC develop a report that carefully explored design and policy recommendations for the station area. The team was asked to create a concept plan for a redesigned and expanded station, including elements such as: structured parking; integrated bus, auto, and bicycle and pedestrian access; and station area or station-integrated development.

Adding these station facilities and open space is intended to make the station area a neighborhood activity center and multimodal hub. Multimodal hubs are places for people to visit and enjoy a space. They serve as a point of transfer between transit services and provide access to said services via both motorized and active transportation.

The motivating factors, recommendations from the Lower Northwest District Plan, and input of the project steering committee helped the project team establish three study goals: placemaking, mobility, and safety. All of the recommendations in the project aim to fulfill one of these goals.

The study area (see Figure 2.1) was determined based on geographic elements such as the Schuylkill River, major arterials like Henry Avenue, and the catchment areas of Manayunk and Ivy Ridge stations.





<sup>1</sup> PCPC, Philadelphia2035: Lower Northwest District Plan (2014).



Source: DVRPC (2016)

## Goals

A steering committee was created at the start of this study to provide feedback and ensure that the team produced a report that would be relevant and useful for the community. The group was made up of representatives from local civic associations, city agencies, and SEPTA. In collaboration with the steering committee, the project team established three goals to guide the study:

- **Placemaking**: Station area development attracts transit users and fits within the neighborhood context.
- **Mobility**: All people are able to get to and from the station by their chosen mode.
- **Safety:** All station users experience fewer conflicts.

FIGURE 2.2: PCPC'S LOWER NORTHWEST VISION PLAN



These goals respond to demographic and land use shifts that were identified in the Lower Northwest District Plan and by the steering committee.

#### PLACEMAKING

Land use and development expansion around Ivy Ridge Station is irregular and unpredictable. The Lower Northwest District Plan recommends creating a neighborhood center at, and adjacent to, Ivy Ridge Station to organize growth with the station as a unifying feature. This is described further in PCPC's Lower Northwest District Plan and shown in Figure 2.2.

Lower Northwest Philadelphia has in recent years experienced significant housing demand. Residents identified new construction and multifamily conversions throughout the Lower Northwest that are out of context with established neighborhoods as an ongoing problem.

The Lower Northwest District Plan proposed a two-fold strategy to respond to this growing demand. In established residential areas, Neighborhood Conservation Overlays were proposed as zoning amendments to preserve these neighborhoods' established form and density. As a complement, the District Plan recommends guiding the demand for residential development toward areas with easy access to public transit and developable land, such as the Ivy Ridge Station area.

Source: PCPC (2014)

Currently, there is a lack of coordination and community endorsement for some of the new development (see Figure 2.3) in the neighborhood around Ivy Ridge Station. In addition, land uses are primarily devoted to car-oriented services. Umbria Street (see Figure 2.1) is an arterial people use to get through the neighborhood, but not necessarily a place people want to be.

To create a more welcoming atmosphere it is desirable to have transit-supportive street design and services such as TOD, as well as dedicated open space. The existing zoning is not reflective of the current land uses in the area. This is described further in Chapter 3.

#### FIGURE 2.3: RECENT DEVELOPMENT NEAR IVY RIDGE STATION



Source: Google Maps (2017)

## What is Transit-Oriented Development (TOD)?

TOD in the United States typically refers to development that is high density, with lower parking ratios, and a mix of residential and commercial uses near (a quarter to a halfmile) public transit stations. For this study, the project team wanted to understand what would need to change in this neighborhood for TOD to be successful.

While many places naturally developed as TOD in the 19th and early 20th centuries, TOD today is part of a coordinated effort to overcome Euclidian zoning practices, onerous parking requirements, and community perceptions about density and traffic. TOD encourages a healthy lifestyle by promoting walking and biking for daily commutes and errands, frees up money used for personal vehicles to be spent on other needs, and creates a sense of community and place by clustering activities and destinations.

The value of TOD is to create a space where people want to be rather than pass through. They are less dependent on their personal automobile because there is convenient pedestrian access to a variety of destinations: jobs, housing, shops, public transportation, and community assets (such as schools and cultural institutions). TOD is a term that gets applied all too frequently to any new development within a half-mile of a transit station. But in order to truly be a TOD, the development cannot merely be "transit adjacent"; the development must be "transit dependent"—without the transit, the development would not be possible as designed.

Not every transit station is a good candidate for new TOD. SEPTA's Regional Rail stations are in locations across the region with a wide variety of local conditions that make them more or less suitable to successful TOD. The Ivy Ridge Station area and its relationship to the region must be carefully evaluated to see if it is a good location for TOD, or if another use for the area should be pursued, such as structured parking, and pedestrian and bicycle access improvements.\*

\*Note: Recommendations regarding TOD are covered more in depth in Chapter 7.

#### MOBILITY

Ivy Ridge Station's ridership and parking are at capacity. On a typical weekday there are crowded station platforms adding to the station dwell time, standing-only trains, and no open parking spaces by 8:00 AM or earlier. Figure 2.4 shows a typical morning commute on the platform at Ivy Ridge Station. Both the station and the Manayunk/Norristown Line have seen an increase in ridership of 5 percent or more over the past 10 years. This is likely because Ivy Ridge Station is an express stop and also due to increases in neighborhood residential development. SEPTA is aware of the continual increase in ridership on many of their Regional Rail lines. The agency is investigating and evaluating how to accommodate this change. One method will be introducing multilevel train cars. The Manayunk/Norristown Line is being considered for the new train cars.

As a result of the increase in ridership, the station parking lot is also at capacity. A significant portion of the station area consists of surface parking lots reserved for commuters, but it is not enforced. Due to the capacity of the station parking lot, adjacent streets are also lined with passenger vehicles. SEPTA has acknowledged the increase in parking demand along the Manayunk/Norristown Line by dedicating \$27.5 million to its Capital Program (years 2020–2026) to expand parking. Ivy Ridge Station is one of the stations being considered for structured parking. Adding structured parking would likely require a complete station redesign.

#### FIGURE 2.4: IVY RIDGE STATION PLATFORM DURING THE MORNING COMMUTE



Source: DVRPC (2015)

#### SAFETY

Today's Ivy Ridge Station is essentially a patchwork of historic transit facilities, which have been occasionally updated through the years. This lack of cohesiveness creates several safety hazards. The history of the Ivy Ridge Station site sheds light on some of these hazards.

Since the 1800s, the corridor that is now the Manayunk/Norristown Line was served by competing freight and commuter rail providers because of its proximity to the Schuylkill River and Manayunk Canal. In the late 19th century and early 20th century both the Pennsylvania Railroad and the Philadelphia and Reading Railroad provided passenger service through the corridor, with a separate station for each railroad. (See the evidence of this in Figure 2.5 showing the parking lot which is at three different grades, and previously served two railroads). The existing station was not built to accommodate the amount of commuters that use it today and could be redesigned to better serve the passengers using it regularly.

Physical development around the station also contributes to safety hazards. Historically, the area near Ivy Ridge Station included many industrial land uses, which often produce inhospitable environments for pedestrians and cyclists. For instance, Umbria Street has wide lanes, many driveways, inconsistent sidewalks, and high-speed traffic. (See Figure 2.6.)

As a result of this history, the station area feels disconnected, and station facilities are not aligned. The station platforms, parking lots, and access points, in particular, are not linked well for pedestrians, cyclists, or drivers. This condition limits accessible use of the station,

#### FIGURE 2.5: IVY RIDGE STATION PARKING AREAS



Source: DVRPC (2016)

#### FIGURE 2.6: UMBRIA STREET



Source: DVRPC (2016)

in turn creating several safety hazards. These hazards are covered in greater detail in Chapter 4: Station Area Evaluation.

CHAPTER TWO: INTRODUCTION | **11** 



## **Existing Conditions**

Ivy Ridge Station serves a large area in Northwest Philadelphia, including the Roxborough, Manayunk, and Andorra neighborhoods. This area transitions from a dense, urban grid around Manayunk and Central Roxborough to a less dense, suburban street pattern around Andorra and the Montgomery County border. Ivy Ridge Station is located at the transition point between these two development patterns and at the base of the steep ridge that runs parallel to the Schuylkill River.





This chapter identifies several trends that prompted the recommendations for Ivy Ridge Station outlined in the following chapters. Existing conditions are explored at three scales: regional, local, and station area. The scales were selected because they highlight different existing conditions that impact the station. Figure 3.1 shows how the three scales relate to one another. Each scale is described in more detail below.

The chapter is divided into three sections, each of which explores one of these scales of analysis.

The first section addresses economic data that shows growing job centers on the Manayunk/ Norristown Line. The second section looks at how the land use patterns in the neighborhoods surrounding Ivy Ridge Station dictate people's travel choices. The last section focuses on the station area and how topography and zoning have guided the type of development that exists there.

#### FIGURE 3.1: THREE SCALES OF ANALYSIS



**Regional Scale**: The Manayunk/Norristown Line (in pink) is used to access jobs and cultural destinations throughout the region. It drives ridership at Ivy Ridge Station by connecting the area to the regional economy, based primarily in Center City, Philadelphia. **Local Scale**: The neighborhoods around Ivy Ridge Station range in character from dense, urban neighborhoods to suburban areas with larger parcels. The diversity of land use types impacts how people travel to Ivy Ridge Station. **Station Scale**: The site conditions in the station area dictate access for different users—like cars, bicycles and pedestrians—and the potential for new development.

### Ivy Ridge Station and the Regional Economy

The Manayunk/Norristown Line is a critical part of the infrastructure that connects Philadelphia's Lower Northwest District to the rest of the region. Regional Rail passenger travel in Philadelphia is increasing system-wide, including along the Manayunk/Norristown Line. Average daily ridership at Ivy Ridge Station has increased 44 percent over the last nine years.<sup>2</sup> This upward trend in ridership is likely to continue based on projected job growth along the Manayunk/ Norristown Line corridor.

The Central Planning District (which corresponds to Center City) and the University-Southwest Planning District (which includes University City) are located at the end of the Manayunk/ Norristown Line and together accounted for over 350,000 of the jobs in the Philadelphia region in 2010.<sup>3</sup> The desire to access these job hubs is a driving factor for increasing service and ridership at Ivy Ridge Station.

Figure 3.2 shows the distribution of jobs along the Manayunk/Norristown Line. The Central Planning District in Philadelphia has the largest employment total and the highest employment density in the region, with nearly 67 jobs per acre. The University-Southwest Planning District is second with 25.4 jobs per acre. Conshohocken also has high employment density. In contrast, the Lower Northwest District is heavily residential, with low employment density compared to other districts along the line. This

<sup>2</sup> SEPTA, Regional Rail Census (2015).

FIGURE 3.2: MUNICIPALITIES AND PLANNING DISTRICTS SERVED BY THE MANAYUNK/ NORRISTOWN LINE



Source: National Establishment Time-Series (2010)

<sup>&</sup>lt;sup>3</sup> National Establishment Time-Series (2010).

supports the need for efficient transport to job centers from the area around Ivy Ridge Station.

According to DVRPC's Analytical Data Report, 19, from 2013, Center City and University City are projected to continue adding jobs faster than other districts on the Manayunk/Norristown Line over the next 30 years. Employment growth in the Lower Northwest District is forecasted to remain low over the same time period (see Figure 3.3). Philadelphia as a whole is expected to add nearly 50,000 jobs by 2040, although the growth is forecast to slow somewhat after 2030 in most districts. Figure 3.4 shows that 46 percent of these jobs will be located in the Central and University-Southwest districts. Ivy Ridge Station is the connection point for many residents of the Lower Northwest District to these expanding job centers.

### FIGURE 3.3: INCREASES IN EMPLOYMENT BY DISTRICT OR MUNICIPALITY ON THE MANAYUNK/NORRISTOWN LINE, 2010–2040



Source: DVRPC, Analytical Data Report, 19 (2013)

#### FIGURE 3.4: SHARE OF EMPLOYMENT CHANGE IN PHILADELPHIA, 2010–2040



Source: DVRPC, Analytical Data Report, 19 (2013)

# Local Land Use and Transportation

This section looks at trends within the Ivy Ridge Station shed (see Figure 3.5) across three central topics: demographics, land use, and travel choice. Taken together, these trends illustrate the conditions that guide how people access Ivy Ridge Station and the role that changing development patterns play in encouraging particular travel behaviors.

The local study area was defined using the station shed. The station shed —or catchment was determined through a parking shed survey. In order to identify commuter origins, staff surveyed license plates at Ivy Ridge Station. Figure 3.5 shows the resulting origins for the license plates parked at the station.

Using the station shed as a starting point, the local study area is bounded by major streets, political boundaries, and physical boundaries. These boundaries include the Montgomery County border to the north; Henry Avenue and Wissahickon Park to the east; Roxborough, Manayunk, and Leverington avenues to the south; and the Schuylkill River to the west. The local study area includes the neighborhoods of Central Roxborough, Upper Roxborough, Andorra, Shawmont Valley, and the northern end of Manayunk.

#### POPULATION GROWTH

According to the Lower Northwest District Plan, this district is projected to emerge from a multidecade trend of population decline with a 6 percent increase in population by the year 2040. This growth is driven largely by people ages 20-44.

#### FIGURE 3.5: IVY RIDGE STATION SHED



Source: DVRPC (2015)

As more young people move to the Lower Northwest District, the demand for multi-unit developments and rental properties increases. The Lower Northwest District Plan suggests more residential development will be needed to accommodate the projected population growth.<sup>4</sup>

#### LAND USE PATTERNS

Figure 3.6 shows the population density for the local study area in 2010. Northwest of Parker Avenue and west of Ridge Avenue there is a sharp decrease in population density. Central Roxborough in the southeast section of the local study area has a dense street grid and small parcels. West of Hermitage Street, the local study area is characterized by large parcels and cul-de-sacs. This land use pattern tends to encourage people to drive rather than walk. One factor in the change to low-density development is the topography. The terrain northwest of Ivy Ridge Station tends to be very steep, making it difficult to pursue denser development. Instead, the area has developed in a suburban pattern similar to adjacent Montgomery County.

#### **RESIDENTIAL DEVELOPMENT**

Residential development pressure has increased in Roxborough, including both single-family infill development and multifamily development. Figure 3.6 illustrates that recent multi-unit residential development in the local study area is mostly within a mile of Ivy Ridge Station. The majority of this development is located in the southwestern half of the study area, closer to Manayunk and Central Roxborough.

<sup>4</sup> PCPC, Philadelphia2035: Lower Northwest District Plan (2014)

<sup>5</sup> CoStar Database (2016)

These developments represent an increase of 583 residential units in the area around Ivy Ridge Station, with 336 of those units within a half-mile of the station.<sup>5</sup>

The interest in residential development close to the station suggests a strong market for new residential development in the station area.

#### FIGURE 3.6: POPULATION DENSITY



Source: CoStar Database (2016), U.S. Census (2010)

#### **COMMERCIAL DEVELOPMENT**

Typical commercial development in the neighborhoods near Ivy Ridge Station is shown in Figure 3.7. Ridge Avenue is the commercial hub of the local study area. In Central Roxborough, commercial development is characterized by small parcels and a dense street grid. Farther north along Ridge Avenue, this pattern shifts into suburban-style commercial developments like the Ivy Ridge and Andorra shopping centers. At these commercial hubs, stores locate on large parcels that lack a dense network of sidewalk connections to the surrounding neighborhoods. This makes pedestrian access cumbersome. The area around Ivy Ridge Station is characterized by underused industrial parcels alongside limited commercial development served by large parking lots.

#### FIGURE 3.7: TYPICAL COMMERCIAL DEVELOPMENT



Central Roxborough



Ivy Ridge Shopping Center

Source: Google (2016)



Andorra



Umbria Street Northwest of Ivy Ridge Station

#### TRAVEL PATTERNS

Travel patterns in the local study area reflect greater reliance on driving than other parts of Philadelphia. This is not surprising given the land use patterns in the area. In meetings with stakeholders, members of the community identified traffic congestion on Umbria Street outside the station as a major concern. Still, a substantial number of commuters take public transportation to work, and the area has seen some increased interest in investing in facilities that promote walking and biking.

#### **MODE CHOICE**

Most people in the local study area drive to work. Figure 3.8 shows that 16 percent of residents in the local study area use public transportation to get to work compared to 26 percent across all of Philadelphia. Of the residents in the study area that commute via public transportation, more get to work by bus than by Regional Rail. The number of commuters in the local study area that walk to work is 2 percent, also lower compared to all of Philadelphia, which is 8 percent citywide.

#### FIGURE 3.8: COMMUTING PATTERNS IN THE LOCAL STUDY AREA





Source: American Community Survey, 5-Year Estimates (2014)

#### **PUBLIC TRANSPORTATION**

While 16 percent of commuters in the local study area use public transportation to get to work, few appear to use local bus service to reach Ivy Ridge Station. Ivy Ridge Station is located in the southern corner of the local study area, just three-quarters of a mile from Manayunk Station, the next inbound stop. Ivy Ridge is served by express trains, while Manayunk is not. Figure 3.9 shows ridership for



FIGURE 3.9: BUS RIDERSHIP ON ROUTES SERVING IVY RIDGE STATION

Source: SEPTA (2015)

local buses that serve Ivy Ridge, provided by the 35 and 62 bus routes. Route 35 runs in a loop through Roxborough and Manayunk, and Route 62 provides local service from Andorra and Upper Roxborough to Ivy Ridge Station and then express service to Center City. Both routes have approximately 30-minute headways during peak hours. Ridership only exceeds 10 boardings and alightings at a single stop at a few locations on both of these lines. On the other hand, ridership is substantially higher on the express bus routes into Center City, provided by the 9 and 27 bus routes (see Figure 3.10). The majority of stops on the 9 and 27 bus routes surpasses 10 boards and alights. All four routes offer a lower fare than the Regional Rail train to get downtown, but only the 35 and 62 bus routes also serve Ivy Ridge Station.

FIGURE 3.10: EXPRESS BUS ROUTES SEPTA Route 27 SEPTA Route 9 0 1,000 2,000 Feet Ødvrpc Ridge Ave To Center City To Center

Source: DVRPC (2016), SEPTA (2016)

#### **ACTIVE TRANSPORTATION**

Efforts to improve pedestrian and bicycle access in the local study area are ongoing. The City of Philadelphia tracks sidewalk conditions on arterial roads. Compared to Philadelphia overall, the Ivy Ridge study area has twice as many identified sidewalk gaps, although the existing sidewalks are generally in better condition than those found in the rest of the city.<sup>6</sup> The Schuylkill River Trail is a major multi-use path that crosses the west side of the local study area. The Ivy Ridge Trail, shown in Figure 3.11, is a proposed multi-use path that would connect Ivy Ridge Station to the Manayunk Bridge and the Cynwyd Heritage Trail. Part of this project would also include connecting to the Fountain Street Stairs (Figure 3.12), which connect Umbria Street to the Manayunk Canal and Venice Island. The stairs are maintained by the community and are a key connection point between the proposed Ivy Ridge Trail, the Schuylkill River Trail, and the surrounding neighborhood.

<sup>6</sup> City of Philadelphia, Sidewalk Inventory (2010).

#### FIGURE 3.12: FOUNTAIN STREET STAIRS



FIGURE 3.11: IVY RIDGE TRAIL



Source: Whitman, Requardt & Associates, Interface Studio, and A.D. Marble & Company Ruggiero Plante Land Design, Ivy Ridge Trail Feasibility Study (2015)

Source: DVRPC (2016)

### **Station Area Site Conditions**

This section addresses existing conditions in the immediate vicinity of Ivy Ridge Station. The steep topography and disconnect between current land use and zoning in this part of the Lower Northwest District impact the types of interventions that are possible around the station. PCPC's proposed rezoning of the area would help foster a more mixed-use, multimodal character to the station area.

#### TOPOGRAPHY

There are steep elevation changes around Ivy Ridge Station that create development and multimodal access challenges. Figure 3.13 shows how quickly the elevation northeast of the station increases. Slopes greater than 30 percent are too steep to build roads on and difficult for development, as well. Fountain Street and Parker and Paoli avenues provide direct connections between the station and adjacent neighborhoods, but each street is nearly a quarter-mile apart, separated by steep terrain. The steep elevation coupled with suburban development patterns has led to larger parcel development and longer blocks that often deter pedestrians.

#### FIGURE 3.13: SLOPES AROUND IVY RIDGE STATION



Source: DVRPC (2015)

#### Zoning and Land Use

Philadelphia2035: Citywide Vision, Philadelphia's Comprehensive Plan, adopted broad zoning recommendations in 2012. PCPC is using a district planning process to identify where strategic local zoning changes should be made with help from the community. Figure 3.14 is a map of the existing zoning, which is primarily single-family housing and light and medium industrial. In comparison, the existing land use, shown in Figure 3.15, displays the multifamily units, transportation facilities, commercial buildings, and wooded areas that are there now. In the Lower Northwest District Plan, PCPC has recommended changes to the zoning, which are shown in Figure 3.16. This allows for mixed-use, transit-oriented development to occur, where people can live, shop, and travel to their job in a small area with less dependence on a personal vehicle.

The conditions around the station influence access into it. Chapter 4 will explain in detail the challenges and potential opportunities found at the primary access points to Ivy Ridge Station.

*Current zoning for the Ivy Ridge Station area focuses on industrial and residential land use, particularly attached housing.* 

#### FIGURE 3.14: CURRENT ZONING



Source: Philadelphia City Planning Commission (2011)

#### FIGURE 3.15: CURRENT LAND USE



Source: Philadelphia City Planning Commission (2011)

While current zoning emphasizes industrial and medium-density residential development, in reality the area has a mix of commercial and industrial land uses along Umbria Street with mostly detached residential units to the northeast.

#### FIGURE 3.16: PROPOSED ZONING



Source: Philadelphia City Planning Commission (2011)

Proposed zoning for the station area focuses on encouraging mixed-use development with a stronger emphasis on commercial uses. It emphasizes higher-density residential development near the station while acknowledging the lower-density residential pattern that already exists farther away from the station.


# **Station Area Evaluation**

This section evaluates access and movement at Ivy Ridge Station and on the adjacent streets. It includes an evaluation of physical constraints to development on the station property, followed by the project team's field observations of how the site is currently used by passengers. The findings inform the recommendations found in Chapter 6: Station Area Plan.





# **Site Constraints**

Development opportunities and station improvements are limited by two key on-site factors: changes in elevation across the site and existing utility infrastructure.

### **E**LEVATION

Ivy Ridge Station is tightly constrained by both natural and man-made features. Elevation changes are the most visible constraint, both onsite and throughout Manayunk and Roxborough. For purposes of analysis, the station property is divided into three elevation "tiers" (see Figures 4.1A and 4.1B). Each tier represents a man-made change to the naturally steep slopes on site whether for an existing or defunct rail bed, or for another use, such as parking.

These changes in elevation are a limiting factor for pedestrian or bicycle access and greatly influence on-site auto circulation. The elevation changes are also likely to limit any proposed construction on the site.

#### FIGURE 4.1A: ELEVATION TIERS AROUND IVY RIDGE STATION



#### FIGURE 4.1B: ELEVATION TIERS AROUND IVY RIDGE STATION



**Tier 1:** The lowest tier, along the western edge of the site, includes the rail bed and station platforms, along with the recently constructed Station at Manayunk development, immediately adjacent to the station property. This tier is elevated by about 20 feet from the Manayunk Canal and Schuylkill River Trail.



**Tier 2:** Approximately 25 feet higher is the second tier, which includes the "lower" parking lot. The stark difference in elevation is most apparent in the steep slope directly behind the outbound platform, where a staircase leads between the platform and the lower parking lot. This tier includes the former Ivy Ridge Station, once a station on Pennsylvania Railroad's Schuylkill Branch Line and now within the right-of-way for the planned Ivy Ridge Trail.



Above: Steps between Tiers 1 and 2. Source: DVRPC (2016)



Source: DVRPC (2016)

**Tier 3:** The highest tier on the station site contains the upper parking lot, at the southeast corner of the station property. This tier slopes gently downward, parallel to Umbria Street, and meets Tier 2 near the intersection of Umbria Street and Parker Avenue.

### UTILITIES

Several utility lines run aboveground through the station area (shown in Figure 4.2). SEPTA does not entirely control all of these lines, constraining its ability to make changes as part of development at Ivy Ridge Station.

They also present physical constraints to building either new infrastructure, like structured parking, or mixed-use development on the station property. All electrical utilities require a clearance distance from structures. In general, the higher a line's voltage, the greater the clearance required.

#### FIGURE 4.2: UTILITY LINES IN THE STATION AREA



Overhead catenary carries power for the Manayunk/Norristown Line directly over the rail bed.



Immediately adjacent, a taller set of transmission towers carries PECO power lines to the Westmoreland Substation in North Philadelphia. These lines closely follow the Manayunk/ Norristown Line's alignment, and in some cases, the transmission tower structures straddle the right-of-way.



Source: DVRPC (2016)

Along the planned Ivy Ridge Trail Alignment, the catenary structure for the former Schuylkill Branch of the Pennsylvania Railroad carries PECO power lines and backup power for Amtrak. The lines cross the Manayunk Bridge, following the Cynwyd Line before tying into Amtrak's power lines near 52nd Street in West Philadelphia.

# Station Area Observations

In order to understand current circulation patterns and accessibility issues, the project team observed and recorded pedestrian, auto, bicycle, and bus activity during a morning peak period (6:30 AM–9:30 AM) in late September, 2015. Data collectors observed as people entered the station area, and noted what mode of transportation they used to arrive at the station, and what general path they took across the station property. Another observer recorded boardings and alightings on the station platform. All data was recorded in half-hour increments.

The majority of activity in the station area during this period consisted of passengers arriving at Ivy Ridge Station to board trains to Center City. During the observation period, the project team counted 631 boarding or alighting passengers, 97 percent of whom boarded an inbound train to Center City (see Table 4.1).

### Modes of Access

During the morning peak period, nearly twothirds of passengers arrived by car and parked either in the Ivy Ridge Station parking lots or on-street within sight of DVRPC observers. More than a quarter of passengers walked to the station. Another 7 percent of riders were dropped off by drivers, while five passengers arrived by bike and a single passenger by bus (see Figure 4.3).

One important caveat to this data: observers were only able to record passenger access patterns that they were able to see from their positions. Passengers who drove and parked on streets beyond approximately 750 feet of the

	Inbound toward Center City		Outbound toward Norristown	
Time	Boards	Alights	Boards	Alights
6:30–6:59	54	2	1	
7:00–7:29	187	2	3	3
7:30–7:59	212		2	2
8:00-8:29	N/A—N	O TRAIN	3	2
8:30-8:59	158			
Total	611	4	9	7

Source: DVRPC (2015)

FIGURE 4.3: HOW TRANSIT RIDERS GET TO IVY RIDGE STATION



Source: DVRPC (2016)

#### TABLE 4.1: IVY RIDGE MORNING PEAK BOARDS AND ALIGHTS

station area were thus recorded as pedestrians, not drivers. The project team is aware that this reduced the share of drivers recorded in this data.

### AUTO CIRCULATION

Observed driving patterns at Ivy Ridge Station seem to validate the station shed data presented in Chapter 3: passengers appear to be driving from northwest Philadelphia. There are four official entrances to the parking lot and one unofficial entrance. Drivers make use of all five.

Figure 4.4 shows auto access patterns to Ivy Ridge Station observed by the project team.

### PARKING

On the day of observation, legal parking spaces remained available until 7:45 AM. Because of the unusual layout of the Ivy Ridge Station parking lot, many drivers entered the "upper" parking lot, then drove to the "lower" parking lot in search of a space, only to return to the upper lot to either park or exit in search of on-street parking. This was especially common as the parking lot became full.

In addition to commuters parking in striped, legal spaces, there are two types of illegal or informal parking occurring at Ivy Ridge Station. One form is passengers using any available space, in spite of its not being striped for parking. This was particularly common on grassy areas around the lower parking lot (see Figure 4.5), but also occurred immediately adjacent to legal spaces, constraining circulation within the parking lot. In total, 35 cars were observed parking outside of striped spaces.

#### FIGURE 4.4: AUTOMOBILE ACCESS TO IVY RIDGE STATION



Source: DVRPC (2015)

FIGURE 4.5: LOWER PARKING LOT



Source: DVRPC (2016)

#### FIGURE 4.6: UPPER PARKING LOT



Left: The sign reads, "SEPTA commuter parking only. No overnight parking. Violators will be towed at owner's expense."

Source: DVRPC (2016)

#### FIGURE 4.7: PEDESTRIAN ACCESS TO IVY RIDGE STATION



The second type of informal parking behavior is nearby residents using a portion of the upper parking lot for overnight or all-day, noncommuter parking (see Figure 4.6). Seventeen people were observed retrieving cars from this portion of the parking lot during the morning peak period. This freed commuter parking spaces close to the time that the lot became full, suggesting the potential for a shared parking arrangement. Conversely, at least eight cars appeared to have been parked overnight but were not moved by the end of the observation period.

### PEDESTRIAN CIRCULATION AND SAFETY

A significant portion of Ivy Ridge Station passengers arrive by foot, including those who drive to the station area, park on-street, and walk to the station platforms. Figure 4.7 generalizes the paths pedestrians used to access the station on the day of observation. Darker paths were used by more pedestrians.

The most walk-up passengers—76 in total arrived from the south along Umbria Street (Path "D"). These passengers appeared to be Manayunk residents walking from home to the station.

Paths "A," "B," and "C" appeared to be primarily made up of passengers who parked on-street and walked to the platform.

All pedestrians used sidewalks when available and convenient but crossed the parking lot or the Ivy Ridge Trail right-of-way informally when it was more convenient.

Two notable pedestrian safety concerns occurred repeatedly during the observation period. First, at the intersection of Parker Avenue and Umbria Street pedestrians must cross Umbria Street at an unsignalized intersection with only one crosswalk (see Figure 4.8). In spite of signs alerting drivers to the crosswalk, traffic rarely stopped for a pedestrian crossing. High speeds were also observed along Umbria Street, where the speed limit is 25 miles per hour.

Another pedestrian safety concern is access to the inbound platform. Passengers typically arrive via a staircase from the lower parking lot to the outbound platform, then cross the tracks to reach the inbound platform. When an inbound train arrives, it blocks the at-grade track crossing, prompting some passengers to run the length of the train, crossing the tracks at an uncontrolled location, then running back along the inbound platform (see Figure 4.9).

#### FIGURE 4.8: PARKER AVENUE AND UMBRIA STREET



FIGURE 4.9: BLOCKED TRACK CROSSING



Source: DVRPC (2016)



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# **Workshop & Alternatives**

Planning project recommendations are more successful if the stakeholders (such as the local community) understand and take ownership of them. As mentioned in Chapters 2 and 3, PCPC's Lower Northwest District Plan makes recommendations about the Ivy Ridge Station area that were the outcome of public meetings in the community around the station.

Local public support for this project is one of the main reasons why this concept is being studied further. To gain consensus for this project's future design and policy recommendations for the station and station area, the team had a workshop for representatives from the Ivy Ridge neighborhood. This was a forum for the project team to discuss and listen to the stakeholders about what they wanted for the future station and station area. The workshop was held on April 7, 2016, approximately halfway through project. In attendance were representatives from the following private, public, and civic entities: Manayunk Development Corporation; Manayunk Neighborhood Council; Ridge Park Civic Association; Roxborough Development Corporation; PCPC; the City of Philadelphia's Office of Transportation and Infrastructure Systems; Philadelphia Streets Department; SEPTA; and Whitman, Requardt & Associates, LLP (authors of the report *Manayunk Bridge and Ivy Ridge Trail: Making a High-Profile Connection*).

The DVRPC project team shared initial designs for the station and station area that combined the ideas from PCPC's plan and SEPTA's typical station design with stakeholders for further comment via email and at a Ridge Park Civic Association meeting. All of these comments helped frame the recommendations in Chapters 6 and 7.





# **Workshop Activities**

As attendees arrived they were broken up into three groups and asked to participate in two different activities. The project team used the findings from each activity to come up with initial alternatives for the stakeholder group to consider and inform.

### SURVEY

The first activity at the workshop was for each group to complete a survey. The purpose of the survey was to (1) initiate thought and discussion about existing obstacles and priorities for transportation planning; (2) collect data on shared concerns and priorities; (3) introduce low-cost, short-term opportunities for mobility and safety improvements; and (4) help groups to establish goals for the study area. Responses to the survey questions highlighted concerns about unsafe intersections, parking issues, lack

FIGURE 5.1: WORKSHOP SITE DESIGN ACTIVITY

of consistent pedestrian paths, and prioritizing alternative transportation in the area.

# SITE PLANNING

In the second activity each group was given supplies (a map, color pens, string, flags, geometric shapes, call-out tabs, etc.) to define ideal and desired station facilities such as: station and on-street parking, the Ivy Ridge Trail alignment, access points to the station, transfer points, and development sites. One map is shown in Figure 5.1. All three groups agreed that the following strategies should be included in a new design for Ivy Ridge Station.

• Evaluate intersection improvements to create a safer environment for all modes at the intersection of Parker Avenue and Umbria Street.

- Reconstruct station platforms to create a safer and more efficient boarding environment. Recommendation is to raise them and move them farther south.
- Fill in crosswalk and sidewalk gaps along Umbria Street to create a more connected pedestrian setting in the station area.
- Extend the Ivy Ridge Trail to connect with the Ivy Ridge Station area. This will provide a safe off-road connection to the station.
- To manage and understand parking demand, begin charging for Ivy Ridge Station parking.

# **Initial Alternatives**

The project team spent time organizing the feedback from the workshop. Based on the ideas discussed, three initial alternatives were developed for a new station area design. These are rough concepts to help the project team expose the group's preferences before putting together a detailed design.

Each alternative has recommendations based on a distinct concept: *High-Density Development*, *Park-and-Ride Plus*, and *Pedestrian Focus*. Each alternative exemplifies the point of its concept and name. The project team asked the workshop attendees to respond with their preferences for each alternative.



## HIGH-DENSITY DEVELOPMENT ALTERNATIVE

Objective: Make Ivy Ridge Station a place that all neighborhood residents can use.

#### LAND USE

- Encourage high-density, mixed-use development along Umbria and Little Parker streets.
- Promote additional single-family units along Umbria Street.

#### VEHICLE CIRCULATION-PRIMARILY PARKING

- Build a structured parking garage with approximately the same number of spaces as existing surface parking.
- Establish short-term parking on Umbria Street for passenger drop-off and patrons of commercial uses.
- Introduce shared parking in the new garage.

#### **BICYCLE/PEDESTRIAN CIRCULATION**

- Create a new station access point on Parker Street with shared space, a trail head, a passenger drop-off, and short-term parking.
- Create sidewalks that connect pedestrians to the platform and throughout new Ivy Ridge facilities.
- Develop a highly visible Ivy Ridge Trail that creates a shared space for transit users, trail users, and people using the mixed-use development.

#### FIGURE 5.2: HIGH-DENSITY DEVELOPMENT



#### Pedestrian Circulation:

----- Sidewalk

Ivy Ridge Trail

#### Vehicle Circulation:



Land Use:

Commercial Mixed use (CMX)

Residential

- Open space
- Station infrastructure
- Surface parking
- Structured parking

# PARK-AND-RIDE PLUS ALTERNATIVE

Objective: Create a station environment based on prioritizing auto access and parking.

### LAND USE

- Propose open space adjacent to station platforms.
- Promote commercial development along Umbria Street, attached or adjacent to a parking structure.

### **BICYCLE/PEDESTRIAN CIRCULATION**

- Create a safe access to station platforms for pedestrians on Little Parker Street.
- Install an Ivy Ridge Trail head at the south end of the site with pedestrian connections to the station platforms.

#### **VEHICLE CIRCULATION**

• Restripe Umbria Street to provide a leftturn auxiliary lane into the station parking lot, which will remove some on-street parking.

#### PARKING

- Build a structured parking lot with more parking capacity than the existing surface lot.
- Ensure there are multiple dedicated vehicle entrances to the new structure.
- Formalize a bus stop, a bus layover location, and a passenger drop-off area in the existing permit parking lot.
- Suggest shared parking for new retail patrons, trail users, and transit users.

#### FIGURE 5.3: PARK-AND-RIDE PLUS



#### Pedestrian Circulation:

- ---- Sidewalk
- 📕 Ivy Ridge Trail

#### Vehicle Circulation:

- ----- Existing and new connections
- Bus layover area
- 🥯 Drop-off/pick-up area
- Garage or parking area entrance

#### Land Use:

- Commercial Open space
- Surface parking
- Structured parking
- Station infrastructure

# PEDESTRIAN FOCUS ALTERNATIVE

Objective: Create a safe environment for pedestrians with direct access between Umbria Street and the station platforms.

#### LAND USE

- Suggest adding mixed-use development (residential, office space, and retail) along Umbria Street.
- Promote open space adjacent to station platforms, and at the center of the site.

#### **BICYCLE/PEDESTRIAN CIRCULATION**

- Terminate Ivy Ridge Trail at the Parker Avenue and Umbria Street station entrance.
- Add an additional phase to the signal in order to integrate Ivy Ridge Trail into the intersection of Umbria Street and Parker Avenue.

### **VEHICLE CIRCULATION**

- Build a retaining wall between upper and lower levels of the parking lot to create distinct navigation paths for autos and pedestrians throughout the parking lot.
- Create a bus feeder route that serves the neighborhood and the station.

#### PARKING

- Using the existing two-tiered parking footprint, incorporate sidewalks for pedestrians and a bus stop, effectively reducing total parking.
- Formalize a bus stop and layover location within the lower parking lot and next to the platform entrance.
- Create a passenger drop-off location for transit users accessing the station next to the platform entrance.

#### FIGURE 5.4: PEDESTRIAN FOCUS



#### Pedestrian Circulation:

- Sidewalk
- Ivy Ridge Trail

#### Vehicle Circulation:





Garage or parking area entrance

#### Land Use:



- Open space
- Station infrastructure
- Surface parking
- Structured parking

# Conclusion

A discussion emerged from the workshop over trade-offs between a desire for higher-density development around the station and more parking capacity. The group preferred pedestrian safety and access, as well as allowing for denser development around the station, such as TOD. However, there was also concern about the availability of parking at the station and congestion in the neighborhood. (Photos from the group discussion shown in Figure 5.5).

One primary goal of TOD is to decrease the number of people who rely on their personal vehicles for all trips. This is possible with denser development because the proximity between land uses enables people to walk and bike to services and necessities from home rather than using a vehicle.

The feedback at the workshop reflected the different and conflicting roles that neighbors see for the Ivy Ridge neighborhood and station. While residents of the area are interested in a denser downtown or village feel around Ivy Ridge Station, they do not necessarily want less, and more regulated, parking.

Therefore, the project team focused on sitespecific transit supportive improvements that would make the station safer and more accessible to pedestrians, cyclists, and vehicles.

#### FIGURE 5.5: WORKSHOP PHOTOS







Source: DVRPC (2016)





# **Station Area Plan**

This section recommends physical improvements to the Ivy Ridge Station and surrounding area focusing on the project's three goals: placemaking, mobility, and safety. An important component of meeting these goals is ensuring that the rebuilt Ivy Ridge Station is fully Americans with Disabilities Act (ADA) compliant. These physical recommendations are intended to work in tandem with the policy recommendations outlined in Chapter 7.

The recommended physical improvements are suggested in two phases. Phase One (see Figures 6.1 and 6.2) focuses on changes that could and should be made immediately to improve pedestrian safety and offer better access to Ivy Ridge Station. A limited number of parking spaces are repurposed to create a safer environment for all station users. These improvements, including a new traffic signal and a pilot feeder bus, can be made without a major overhaul of the station.

Phase Two (see Figure 6.3) looks forward to higher-intensity changes at Ivy Ridge Station. These recommendations lay out guidance for new station infrastructure (like pedestrian paths and dedicated bus facilities), a mix of land uses, and new public and recreational spaces at Ivy Ridge. Phase Two recommendations anticipate full reconstruction of Ivy Ridge Station with high-level platforms and an elevator-equipped pedestrian bridge. These improvements include structured parking and new mixed-use development intended to grow non-motorized ridership. On-Site, Phase Two builds on Phase One's mobility improvements by incorporating the planned Ivy Ridge Trail and adding additional crosswalks. Many of these recommendations will require continued community engagement to ensure buy-in from stakeholders, particularly with potential areas of concern like changes to the existing parking supply and traffic calming.







# **Phase One Improvements**

TABLE 6.1: PHASE ONE STATION IMPROVEMENTS

Goals:	Safety	Placemaking Dobility		
Recommendee Improvement	" Goals	Opportunities	Challenges	<b>Necessary Investments</b> (Estimated cost)*
Designate a Formalize E 1 Layover and Relocate Parking	Bus 🔼 🔁	<ul> <li>Improves visibility, safety, and convenience for bus-to-train connection</li> <li>Replaces flood-prone Flat Rock Road layover</li> <li>Removes bus zones from Umbria Street, which decreases bus and bicycle conflicts and buses stopping in vehicular lanes</li> </ul>	<ul> <li>Approximately 16 parking spaces from upper parking lot relocated to far south end of lower parking lot.</li> </ul>	<ul> <li>New striping, signage, and pavement (\$325,000)</li> </ul>
2 Create Bus Feeder Loo	р	<ul> <li>Improves bus and train connections</li> <li>Helps mitigate parking demand</li> </ul>	<ul> <li>New scheduling for Routes 35 and 62</li> <li>Providing education on new and changed route alignments for new and existing passengers</li> <li>Prioritizing stops and routes in the neighborhood over others</li> </ul>	<ul> <li>Potential vehicle procurement or bus reassignment</li> </ul>
FormalizePedestrian③Desire LinesWith NewSidewalk**	s	<ul> <li>Increases pedestrian connectivity</li> <li>Improves access to nearby homes and businesses</li> </ul>	<ul> <li>Encouraging existing and new development to build sidewalks and pay for or share the change in cost</li> <li>Loss of 13 parking spaces</li> </ul>	<ul> <li>New sidewalk construction</li> <li>Crosswalk striping (\$250,000)</li> </ul>
4 Close Mid- Block Parki Entrances	ng	<ul><li>Decreases conflicts between modes</li><li>Adds four parking spaces</li><li>Clarifies parking lot circulation</li></ul>	<ul> <li>Fewer entrances to parking lot limits site access</li> </ul>	<ul> <li>New sidewalk construction, cost included in #3</li> </ul>
(5) Add Shelter Facilities	red	<ul> <li>Improves visibility, safety, and convenience for multimodal connections</li> <li>Includes sheltered environments for bike parking and bus passengers</li> </ul>		Cost of new infrastructure

Source: DVRPC (2017)

\*Costs estimated based on comparable regional implementation project costs.

\*\*ADA ramps are not included in this cost. There are 20 in this diagram, which typically cost between \$8,000-\$10,000 in Philadelphia, PA.

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FIGURE 6.2: PHASE ONE SITE PLAN: PARKER AVENUE AND UMBRIA STREET



#### TABLE 6.2: PHASE ONE INTERSECTION IMPROVEMENTS

Goals: A Safety	/	Placemaking Dobility		
Recommended Improvements	Goals	Opportunities	Challenges	<b>Necessary Investments</b> (Estimated cost)*
6 Install Left- Turn Lane		• Improves efficiency for through-traffic (not waiting for turning vehicles)	<ul> <li>Contingent on bus loop to relocate existing bus stop on the north side of Umbria Street</li> </ul>	<ul> <li>New striping (\$20,000)</li> <li>Study to investigate traffic impacts</li> </ul>
Evaluate How 7 to Signalize Intersection	<b>A O</b>	<ul> <li>Improves road safety for all modes</li> <li>Prepares intersection for increased activity from future development</li> <li>Could tailor signal for peak-period volumes or install a hawk signal for pedestrians</li> </ul>	<ul> <li>Intersection has peaked volumes due to train schedule; therefore, a signal could cause additional congestion during off-peak periods if not timed appropriately</li> </ul>	• Study to investigate traffic impacts
8 Add Curb Extensions**	<b>A 2</b>	<ul> <li>Narrows crossing distances for pedestrians</li> <li>Decreased curve radius slows turning vehicles, averting potential crashes</li> <li>This is contingent on #3 being completed</li> </ul>		New sidewalk     construction (\$50,000)
<ul> <li>Stripe Bike</li> <li>Treatments at Intersections</li> </ul>		<ul> <li>Improves road clarity for bicycles and vehicles, avoiding conflicts</li> </ul>	Greater wear and tear from     bus volumes	• New striping <i>(\$2,000)</i>
Introduce Fees for Station Parking Lot		<ul> <li>Generates revenue to pay for station improvements</li> <li>Creates data needed to assess parking demand</li> <li>Benefits from being part of a broader assessment of parking pricing at nearby stations</li> </ul>		<ul><li>SEPTA staff for enforcement</li><li>Parking payment machine</li></ul>

Source: DVRPC (2017)

\*Costs estimated based on comparable regional implementation project costs. \*\*ADA ramps are not included in this cost. There are 10 in this diagram, which typically cost between \$8,000-\$10,000 in Philadelphia, PA.

#### FIGURE 6.3: PHASE TWO SITE PLAN



# **Phase Two Improvements**

TABLE 6.3: PHASE TWO STATION IMPROVEMENTS



Recommended Improvements	Goals Opportunities		Challenges	
1 Relocate and Extend Platforms		<ul> <li>Allows installation of high-level platforms to the east of existing platforms to improve access and operations</li> <li>Avoids train stopping along a curve and creates opportunities for a pedestrian/ADA-compliant bridge</li> </ul>	<ul> <li>Design and build costs</li> <li>Slope limits the allowable width for the new platforms</li> <li>May require acquisition of some private property</li> </ul>	
Design and Build ADA-Compliant Diridge and Elevators to Platform		<ul> <li>Provides ADA-compliant connection and channels pedestrian movements safely and efficiently across tracks</li> <li>Removes reliance on an at-grade crossing</li> </ul>	<ul> <li>Design and build cost</li> <li>May require acquisition of some private property</li> <li>Potential conflicts with high-tension wires crossing the site</li> </ul>	
③ Structured Parking Garage		<ul> <li>Accommodates parking demand at Ivy Ridge Station</li> <li>Frees up space at the station for other uses and needs</li> </ul>	<ul> <li>Design and build cost</li> <li>Site constraints, including fixed utilities and steep slopes</li> <li>Requires coordination with PECO, Amtrak, and SEPTA</li> <li>Will cause short-term disruption to parking supply during construction</li> </ul>	

#### TABLE 6.3: PHASE TWO STATION IMPROVEMENTS (CONT.)

Recommended Improvements	Goals	Opportunities	Challenges
Support Implementation of the Ivy Ridge Trail		<ul> <li>Connect to future trail connections to points north and Shawmont</li> <li>Connections to Umbria Street bike lanes</li> <li>Connection to Ivy Ridge Station provides multi- modal access and transfer opportunities</li> </ul>	<ul> <li>Construction costs</li> <li>Maintenance of the trail</li> <li>Integrating trail with parking garage and steep slopes</li> <li>Resolving conflicts with automobile circulation</li> <li>Resolving trailhead location and connection to Umbria Street</li> </ul>
Encourage Residential and Mixed-Use Development	2	<ul> <li>Creates shared parking opportunities</li> <li>Improves street frontage on Umbria Street</li> <li>Offers convenience for passengers and residents</li> </ul>	<ul> <li>Structuring a partnership agreement with a developer</li> <li>Timing development to match market demand</li> </ul>
6 Develop Trailhead Park	2	<ul> <li>Creates public space to serve neighborhood, station, and trail users</li> </ul>	<ul> <li>Design and build costs</li> <li>Park maintenance</li> <li>Takes away space that could otherwise be used for parking</li> </ul>
Design and Build 7 New Passenger and Operator Facilities	€ &	<ul> <li>Improves passenger and operator service with new bathrooms, ticketing, and a waiting area</li> </ul>	<ul><li>Design and build costs</li><li>Operations costs for staffing and maintenance</li></ul>

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# **Policy Recommendations**

This chapter serves as a resource to facilitate TOD in the area around Ivy Ridge Station and throughout SEPTA's Regional Rail network. It is a complement to the transit-supportive physical investments recommended in Chapter 6: Station Area Plan.

TOD in the United States typically refers to development that is high density, with lower parking ratios, and a mix of residential and commercial development near (within a quarter-to a half-mile) public transit stations. The benefit of building density around a station is to create a space where people are less dependent on their personal automobiles because there is convenient pedestrian access to a variety of destinations: jobs, housing, shops, public transportation, and community assets (such as schools and cultural institutions). This can be effective in reducing congestion and pollution, and creating a safe and comfortable environment for a neighborhood. SEPTA's existing station parking assets can be used in combination with local, state, and regional tools to overcome barriers to TOD in the region, and make TOD projects and partnerships less complicated and more profitable.

Local and state agencies, as well as developers, should coordinate to help TOD investment materialize. To strategically identify places where TOD makes sense, SEPTA will need to identify their long-term vision for each Regional Rail station. One approach is for SEPTA to create an analysis that organizes their goals and strategic plans for development and parking at each station. DVRPC collected case studies to illustrate how SEPTA can identify transitsupportive improvements for stations that create a ripe environment for TOD.





# TOD in the Philadelphia Region

Recent studies published by DVRPC<sup>7</sup>, PCPC<sup>8</sup> and Econsult<sup>9</sup> argue that the DVRPC region is ready for TOD investment. This section identifies some of the barriers that exist to implementing TOD in Philadelphia and recommends tools that could be instrumental in creating a better way to coordinate and build TOD.

# Barriers to Investing in TOD in Philadelphia

A transit-supportive environment is essential to creating successful TOD. This means both creating the physical infrastructure to foster a multimodal atmosphere and nurturing support from development-friendly local officials, agencies, and policies. Barriers to TOD implementation identified by stakeholders during this study include:

- outdated zoning;
- a lack of government promotion and collaboration, as well as public-private partnership ("P3") coordination;
- concerns about congestion and parking associated with new development; and
- SEPTA's regulatory constraints.

<sup>7</sup> DVRPC, Building on Our Strengths: Evaluating Transit-Oriented Development (TOD) Potential in Greater Philadelphia (2017).

<sup>8</sup> PCPC, Philadelphia2035: Lower Northwest District Plan (2014). (2007).

### **Existing Surface Parking Overview**

SEPTA's Regional Rail stations commonly have designated parking spaces for passengers. It is an asset that could be more efficient and effective.

Regional Rail stations vary in terms of parking regulation, pedestrian access, and capacity. As discussed throughout this report, the Ivy Ridge Station parking facility is at capacity, which is consistent with many Regional Rail stations throughout the system. Below are some relevant statistics.

 Sixty-six percent of SEPTA's owned, leased, and operated (daily and permit spaces) Regional Rail parking spaces are regulated (passengers are required to pay a fee).<sup>10</sup> <sup>9</sup> Econsult, Transit-Oriented Development in Philadelphia: Using a proven strategy to create more vibrant, livable neighborhoods (2007).

- Ninety percent of the total parking that is SEPTA owned, leased, and operated is utilized, including regulated and unregulated facilities.<sup>11</sup>
- The surface parking lots on the Manayunk/Norristown Line are 81 percent utilized.<sup>12</sup>

Due to the high demand for parking, SEPTA has an ongoing goal to purchase land and expand parking where their current facilities are at capacity. Other transit agencies have put together strategies of designated station appropriateness for TOD and park-and-ride investments. This way, when opportunities arise (such as upgrades for a Regional Rail station), there is a strategy in place for the station area. Examples of this type of strategy are described in the "Evaluating TransitSupportive Investments" section of this chapter.

<sup>10</sup> SEPTA, Parking Utilization (2015).
 <sup>11</sup> SEPTA, Parking Utilization (2015).
 <sup>12</sup> SEPTA, Parking Utilization (2015).



Above: The parking lot at Ivy Ridge. Source: DVRPC (2016)

#### **Outdated Zoning**

Focused planning coupled with a precise zoning code can create an environment with a mix of activities fit for each community. PCPC's citywide comprehensive planning process, *Philadelphia2035*, recommends zoning changes in neighborhoods to address and manage growth and decline in a community.

Chapters 3 and 4 of this study emphasize the population, employment, and land use changes that have occurred around Ivy Ridge Station. However, zoning has not been updated to reflect these changes. This type of shift can alter what type and where demand for development and redevelopment exists, and thus warrant zoning updates. The Lower Northwest District Plan recommends TOD for the Ivy Ridge Station area, but the higher-density, mixed-use development necessary to successful TOD is not currently permitted there. Zoning updates could change this.

In 2015, a new development was built adjacent to Ivy Ridge Station. The community was surprised by the outcome of this development because the design was different from the neighborhood fabric. With slight modifications to the zoning code this could be avoided in the future.

# Lack of Government Promotion and Collaboration for TOD

Once zoning updates are made that permit TOD, they need to be strongly upheld by local officials. This means adhering to and encouraging roadway and development design that supports TOD-friendly spaces. For example, if a developer would like to build adjacent to the Ivy Ridge Station, but does not pursue high-quality non-motorized access connections, local officials should hold them to adding those connections to ensure coordination with the zoning and regulations.

### Congestion and Parking Concerns Associated with New Development

As noted in earlier chapters of this report, community members identified that vehicle congestion along Umbria Street and parking at, and adjacent to, Ivy Ridge station is considerable during peak hours. This is exacerbated by the steep terrain around the station, which discourages non-motorized forms of transportation. In addition, few people use the bus to access the station area because of the limited frequency of local bus service in the neighborhood.

As a result, new residential and commercial development causes local residents to worry that there will be more congestion in the neighborhood. However, developing a TOD facility with market-appropriate uses would likely have significantly lower car ownership, which could mitigate some of the potential impacts on traffic.

#### **SEPTA's Regulatory Constraints**

SEPTA's enabling legislation language is vague about the agency's right to acquire and manage land for related transportation purposes, including TOD. Therefore, the transit agency is not the lead builder or manager for TOD at or around Regional Rail stations. In the legislation, there is language regarding an opportunity to "explore alternative means of raising revenue including but not limited to, real estate leases..." which can be recommended "by the general manager."<sup>13</sup>

Transit agencies nationwide are the leaders and builders of TOD projects at their facilities. There are two primary methods agencies have used to enable this management role: by arguing that their enabling legislation does not prohibit it, or by "passing legislation explicitly granting agencies TOD development authority."<sup>14</sup> New legislation or amended legislation commonly includes specific limitations and definitions to ensure the transit agency is not going beyond what the regulatory body feels is appropriate.

 <sup>&</sup>lt;sup>13</sup> SEPTA, Enabling Legislation (Updated 2007).
 <sup>14</sup> Legal Research Digest 36, Transit-Oriented and Joint Development: Case Studies and Legal Issues (2011).

## Tools to Encourage TOD Investment in Philadelphia

New policies and coordination between public transit, city, county, and state agencies are needed to create an environment conducive to successful TOD. This report suggests six tools that could help create this context at Regional Rail stations in Philadelphia.

- Continue to have active comprehensive planning and rezoning based on changing demographics and development. PCPC's District Planning process has created a method for updating zoning in Philadelphia in response to ongoing land use changes. Continuing this effort in Philadelphia, and if similar efforts are made throughout the region, neighborhoods that have slowly realized a change in land uses over the past fifty years close to transit facilities will also see revisions in zoning. Zoning updates would reflect what the community is interested in encouraging for development around transit facilities, such as a mix of uses and denser development, making TOD implementation less complicated.
- Encourage collaboration and coordination between city agencies. Neither SEPTA nor the City of Philadelphia, or any single municipality, can create an environment ripe for TOD on its own. Consistent policies and actions need to garner support from all entities.

### Take advantage of Philadelphia's 10-year tax abatement for new

development. Philadelphia's 10-year tax abatement can be used to significantly reduce the cost of new construction and development. In exchange for building new construction in Philadelphia, the property owner only pays taxes on the value of the land, not the structure, for the first 10 years after the property has been developed. This creates a significant tax break, depending on the value of land where the new structure is sited. The abatement encourages new construction, which in turn has helped revitalize communities, provide new jobs, and retain and attract new business and homeowners, as well as provide a significant reduction in cost for new homes and businesses.

 Use Transit Revitalization Investment **District (TRID) Legislation to Implement** TOD. The TRID Act is state legislation that offers municipalities, transit agencies, and developers a flexible approach to plan for and implement TOD. The TRID Act is a useful tool for communities wishing to leverage state funding for planning and implementing TOD. This legislation supports local economic development goals and encourages the use of innovative financing methods, including public-private partnerships. It also allows transit agencies to share in real estate tax revenues to support capital projects and maintenance in designated TRIDs. To this date, no TRID plan has produced a TOD on SEPTA's Regional Rail network.

In 2016, an amendment was made to the TRID Act intended to make the tool more attractive to participants. All relevant actors should take advantage of this legislation to create TOD where the market and context are appropriate. In Philadelphia, the 10year tax abatement makes the TRID Act an unlikely tool since it relies on capturing future real estate taxes.

- Evaluate Act 88 as a means to encourage P3-funded TOD. Pennsylvania Act 88 of 2012 amended Title 74 (Transportation) of the Pennsylvania Consolidated Statutes to provide for public-private transportation partnerships. Along with a related bill, House Bill 3, it provides a broad-based framework that authorizes transportationspecific P3s in an attempt to jumpstart much-needed infrastructure projects within the Commonwealth. It is unclear how effective it is for creating TOD, however, and this should be explored further in future research.
- Pursue new capital projects underwritten by the financial security provided by Act 89. Act 89 of 2013 stabilized SEPTA's budget and reinforced the necessity of its rail network in its entirety. SEPTA has years of catch-up on maintenance and state of good repair projects, but looking forward, it means that SEPTA may have the financial footing to pursue new capital investments that, when combined with private development, include establishing TOD.

It's expected that by investing \$2.3 billion statewide, the Act will generate tens of thousands of jobs and provide a significant boost to the regional economy.<sup>15</sup>

• Consider applying Philadelphia's ammended TOD zoning overlay (Section 14-513 of The Philadelphia Code, entitled "TOD, Transit-Oriented **Development Overlay District**").\* The City of Philadelphia already has a TOD overlay ordinance, but it is not sufficiently user friendly to encourage development. This new version of the TOD zoning overlay simplifies the process of establishing a TOD district. The new zoning overlay allows development within 500 feet of a transit station to be eligible for height bonuses and parking requirement reductions if the station area is approved for an overlay district.<sup>16</sup> This tool could be used to encourage development around Ivy Ridge Station that is less auto oriented.

### Incentives to Invest in TOD Today

There are trends occurring in Philadelphia now that encourage investment in dense new development. The City of Philadelphia and SEPTA have the opportunity to create an environment where TOD can be successful.

• Increasing land value close to Regional Rail stations. Chapter 3 of this report cites DVRPC's *Analytical Data Report, 19,* from 2013, which projects that employment in Center City and University City will continue to grow over the next 30 years. Philadelphia as a whole is expected to add nearly 50,000 jobs by 2040; 46 percent of these jobs will be located in the Central and University-Southwest districts. Ivy Ridge Station is the connection point for many residents between the Lower Northwest District and these expanding job centers. Exploration and analysis regarding TOD has established that the land value close to fixed transportation facilities (e.g., SEPTA's Regional Rail stations) increases when employment increases in Philadelphia.<sup>17</sup>

 New residents of Philadelphia want to live in dense, walkable areas, specifically those from the Millennial generation.
 Evidence suggests that Millennials will be attracted to close-in, mixed-use, and walkable communities that offer good transit connections to central city jobs.<sup>18</sup>
 If this trend continues, there will be more incentive to build mixed-use buildings, including TOD, to accommodate more people and help them to move around.

With these tools and increased coordination, the success of TOD is still based primarily on environment and context. Therefore, long-range planning and market research needs to be conducted to ensure that the right mix of land uses and infrastructure are assembled. This study could help guide capital expenditures toward creating more TOD-friendly stations. Examples of these strategies are described in detail in the next section.

<sup>&</sup>lt;sup>15</sup> PennDOT, Comprehensive Transportation Funding Plan (Act 89) (2013).

<sup>&</sup>lt;sup>16</sup> City Council, City of Philadelphia, "Section 14-513 of The Philadelphia Code, entitled "TOD, Transit-Oriented Development Overlay District" (2017).

<sup>&</sup>lt;sup>17</sup> Econsult, Transit-Oriented Development in Philadelphia: Using a proven strategy to create more vibrant, livable neighborhoods (2007).

<sup>&</sup>lt;sup>18</sup> DVRPC, Planning for Changing Demographics: Millennials in the Delaware Valley (2017).

# Evaluating Transit-Supportive Investments

Transit-supportive investments are capital investments that aim to encourage more use of public transportation. Many of these investments also create the best environment for TOD, such as improved multimodal access to stations. As SEPTA makes transit-supportive investments at stations across its system, like Ivy Ridge, it is important that it consider how to prioritize them. This section evaluates two case studies where a system-wide analysis of transit stations was performed. Each case study provides methodology that SEPTA could use to prioritize transit-supportive capital investments at Regional Rail stations.

DVRPC considered a range of local and national resources to identify best practice approaches for SEPTA. The Bay Area Rapid Transit Authority (BART) offers a useful precedent in its *Station* 

Access Policy, a series of investment guidelines adopted in June 2016.19 The assessment addresses parking capacity and other station access issues through a goal-oriented, systemwide analysis. At the regional level, DVRPC's Building on Our Strengths study analyzes 162 stations in the Philadelphia region for both their TOD potential and existing TOD orientation.<sup>20</sup> SEPTA can use these examples to evaluate their Regional Rail network and identify where and how to invest in multimodal, transit-supportive facilities. A set of guidelines could inform context-specific evaluations of Regional Rail stations like Ivy Ridge, while ensuring that they are also evaluated in terms of their impact on the regional network and the degree to which they support SEPTA's TOD-related goals.

<sup>19</sup> BART, Station Access Policy (2016).

<sup>20</sup> DVRPC, Building on Our Strengths: Evaluating Transit-Oriented Development (TOD) Potential in Greater Philadelphia (2017).

# CASE STUDY: BART STATION ACCESS POLICY

BART's *Station Access Policy* is a series of investment guidelines. The policy establishes a set of actionable goals and strategies for providing equal access by cars, bicyclists, and pedestrians to each station. The investment priorities prescribed in BART's *Station Access Policy* are intended to help realize the set of system-wide goals. These goals include:

- advancing safety, public health, and pollution-reduction goals;
- increasing ridership;
- investing in programs and infrastructure that are efficient and cost effective;
- improving the experience for BART riders;
- ensuring equitable access to BART services; and
- establishing durable partnerships and a reputation as an innovation leader.

To accomplish these goals, strategies that prioritize active transportation first are organized in a station access hierarchy.

The *Station Access Policy* defines five station typologies, each with a unique strategy to guide investments that improve access. Figure 7.1 maps each BART station according to which typology it belongs to. At all stations, active transportation access is the top priority.

#### **Investing in Multimodal Access**

Virtually all stations in SEPTA's Regional Rail network incorporate some form of transit-supportive investment. One of the most common investments is vehicular parking facilities. Other types of facilities can encourage active transportation modes, like walking and biking, to access stations. Many Regional Rail stations incorporate bike parking, which makes it easier for transit riders to access the station by bike.



Above: Bike parking at Bryn Mawr station. Source: SEPTA (2016)

The degree to which specific modes are encouraged, accommodated, or discouraged varies according to how riders currently access the station and whether it is likely to change in the future.

In BART's case, prioritizing investments by typology encourages active and shared modes of transportation for future capital projects. The Station Access Policy identifies an "Aspirational" typology at stations that over time BART hopes will substantially increase their active and shared mobility transportation mode share (see Figure 7.1). Station type (also shown in Figure 7.1) identifies the different role stations have in the regional transportation network. This heterogeneity is important to serving the diverse landscape of riders and land uses in the Bay Area. The strength of BART's Station Access Policy is that it considers parking and other station access investments holistically, with strategic goals guiding the decision-making process.

#### FIGURE 7.1: BART STATION ACCESS POLICY DIAGRAM



Source: Bay Area Rapid Transit (BART) (2016)

# Case Study: Building on Our Strengths

SEPTA plays a crucial role in the effort to foster more TOD in the region as both the operator of the region's largest public transit network and a major landowner at many of its stations. But not every station area is equally prepared to support successful TOD projects. DVRPC's *Building on Our Strengths: Evaluating Transit-Oriented Development (TOD) Potential in Greater Philadelphia* (#16036) delivers a framework that could be used to determine where investments that support TOD make the most sense.

For this study, DVRPC developed a new rating system that evaluated rail transit station areas based on 12 demographic, physical, and real estate factors that influence the potential success of TOD. These factors are divided into two complementary categories: TOD Orientation and TOD Potential. The first category is based on metrics like job access, demographics, and walkability around the station, while the second is based on factors like the availability of land, level of development activity, and market demand. These metrics were developed through a peer review of how other cities have measured TOD Potential. 162 stations in the Philadelphia region were included in the study and scored according to these measures.

Comparing station areas across two categories highlights the relative strengths and weaknesses of individual station areas, transit corridors, and transit modes. Figure 7.2 shows the distribution of transit station areas (including both Regional Rail and rapid transit) across a coordinate system based on the rating they received in each category. The chart does not represent all stations in the region, only the top scoring stations (a total of 65 stations) in the region. Ivy Ridge Station is shown in the upper left quadrant. The station scores close to average in this group on TOD Orientation and well above average for TOD Potential. *Building on Our Strengths* identifies planning strategies to create a better environment for TOD Orientation and, as a result, the likelihood that TOD will be built there. The most important strategy for these stations is investing in infrastructure that allows people to more easily access the station on foot or bike. These connections are crucial prerequisites to developing a less auto-dependent environment around a station and attracting mixed-use development.

The comprehensive, data-driven analysis in *Building on Our Strengths* can help identify locations where TOD can be successful throughout the region. Ivy Ridge Station has potential for TOD, but lacking existing TOD Orientation means that prerequisites like better multimodal access should be the first investment.

#### FIGURE 7.2: TOD RATING SYSTEM DIAGRAM COMPARING IVY RIDGE TO OTHER STATIONS More TOD



Left: All stations being assessed in this study can be plotted onto one of four quadrants of a coordinate system based on the rating they received in each data category. In this case, TOD Orientation scores are shown on the X axis and TOD Potential scores are shown on the Y axis. The axes themselves represent the median scores in each category.

Station areas that fall in Quadrant 1 scored above the median in each category and may represent some of the best opportunities for TOD in the region. Stations in the upper right quadrant of the graph in Figure 7.2 are more likely candidates for TOD investment now, without additional major infrastructure investments. *Building on Our Strengths* offers SEPTA a strong analysis of its stations, which it could use to develop guidelines for short- and long-range transit-supportive capital investments, such as bicycle parking or an ADA-accessible pedestrian overpass.

## NEXT STEPS

This report recommends that SEPTA initiate a comprehensive study of its Regional Rail stations with the goal of devising investment guidelines around transit-supportive improvements to their facilities. BART's Station Access Policy and DVRPC's Building on Our Strengths provide valuable insight into how this policy could be structured. BART's study demonstrates how strategic goals can guide policy and support long-term outcomes desired by both a transit agency and its regional partners. It also shows how considering the role of each station within the larger system enables divergent strategies to be used for different stations, while still supporting the same policy goals. Building on Our Strengths identifies a framework and relevant measures for an evaluation of stations in SEPTA's Regional Rail network, particularly around TOD.

SEPTA can begin drafting investment guidelines for its Regional Rail stations through a multistep process, starting with gathering stakeholders and setting system-wide goals. These steps are outlined below along with consideration for how to ultimately implement the investment guidelines.

#### **Gathering Stakeholders**

Stakeholders in the region should be tapped to participate in the development of the guidelines so that they can inform and establish consensus on the future vision of stations. The Transit First Committee represents the interests of Philadelphia County and is an example of a forum in which to connect SEPTA and City of Philadelphia representatives.

### **Setting Goals**

To determine investment guidelines, SEPTA must establish system-wide goals. DVRPC recommends that SEPTA consider a broad range of goals, including those that would capitalize on the benefits of successful TOD in the region. Some of the goals that SEPTA might consider incorporating into its investment guidelines are listed below.

- GROW: Foster growth in population, employment opportunities, and transit ridership.
- IMPACT: Beneficially impact the local tax base, land use decisions, and development patterns.
- ENCOURAGE: Encourage desired outcomes like less single-occupancy vehicle travel, increased walking, housing affordability, and mixed-use activity centers.
- COORDINATE: Increase regional coordination between local municipalities, counties, and planning bodies on initiatives like zoning and public investments in infrastructure.

### **Implementing Investment Guidelines**

With a system-wide analysis, each station could be analyzed to get a better understanding of its role in the regional transportation network. To determine if a station area has the right context for TOD, SEPTA should conduct a market analysis, including demographic information about residents and businesses, population forecasts, and commercial real estate and market segmentation in order to understand the area's retail, office, industrial, and residential market potential.<sup>21</sup>

A long-term plan focused on transit-supportive facilities coupled with policy initiatives to better incentivize TOD will lay the groundwork for a smart growth strategy that leverages the region's significant public transit assets. Together, these strategies can better encourage TOD to flourish at Regional Rail stations, including Ivy Ridge.

<sup>&</sup>lt;sup>21</sup> DVRPC, Darby Transportation Center: Access and Development Opportunities Study (2017).

# IVY RIDGE STATION: CREATING A HUB FOR MULTIMODAL DEVELOPMENT

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#### **ABSTRACT:**

The Philadelphia City Planning Commission's Lower Northwest District Plan and transformations around Ivy Ridge Station have generated momentum for the Southeastern Pennsylvania Transportation Authority and local neighborhood groups to consider how they should plan for change. The Delaware Valley Regional Planning Commission (DVRPC) analyzed existing conditions at the station and proposed recommendations based on these findings. DVRPC recommends a series of phased physical improvements around the station to improve multimodal access to the station parking lot and platforms, coupled with coordinated policy initiatives to encourage mixed-use development. The recommendations seek to realize the neighborhood vision of Ivy Ridge Station as a local transportation hub that is attractive, safe, and accessible for all users.



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