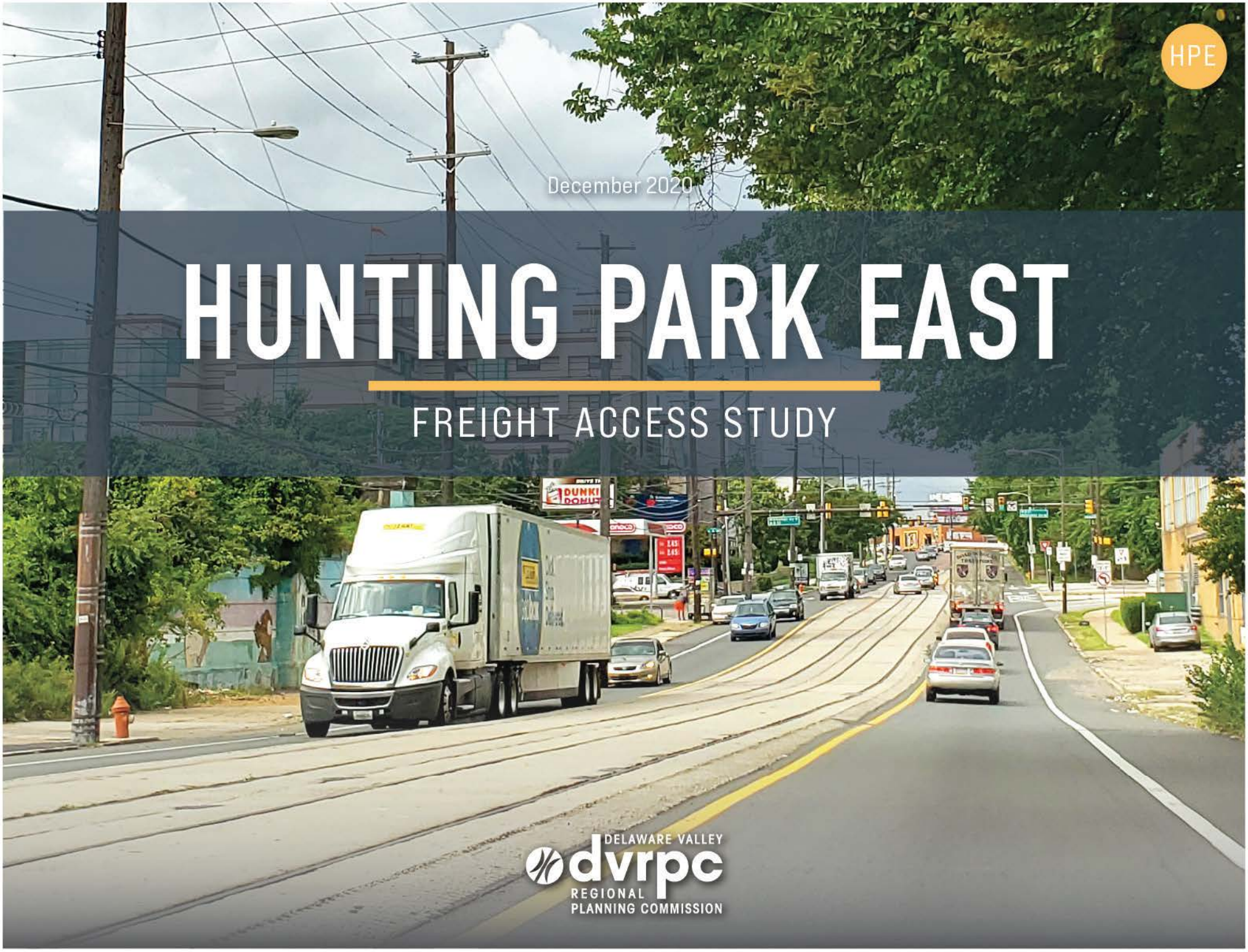
HPE
December 2020
HUNTING PARK EAST
FREIGHT ACCESS STUDY
DELAWARE VALLEY
dvrpc
REGIONAL
PLANNING COMMISSION

The Delaware Valley Regional Planning Commission

is the federally designated Metropolitan Planning Organization for a diverse nine-county region in two states: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey.

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

DVRPC's vision for the Greater Philadelphia Region is a prosperous, innovative, equitable, resilient, and sustainable region that increases mobility choices by investing in a safe and modern transportation system; that protects and preserves our natural resources while creating healthy communities; and that fosters greater opportunities for all.

DVRPC's mission is to achieve this vision by convening the widest array of partners to inform and facilitate data-driven decision-making. We are engaged across the region, and strive to be leaders and innovators, exploring new ideas and creating best practices.

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DVRPC is funded through a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.

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EXECUTIVE SUMMARY

At the request of the City of Philadelphia, the Hunting Park East Freight Access Study was undertaken by the Delaware Valley Regional Planning Commission (DVRPC) with the guidance of a Study Advisory Committee. The purpose was to examine neighborhood freight generation and patterns in more detail and to provide recommendations and strategies that support the industrial economic center while ensuring the safe and efficient movement of both people and goods. The study focused on an area defined in the City of Philadelphia's ***North District Plan*** that identified the Hunting Park East neighborhood approximately between North 5th Street and I Street (west to east) and between Venango Street and Courtland Street (south to north).

This study documents the existing land use and employment patterns that are heavily dominated by the industrial sector, with a significant civic and institutional presence as well. Freight-intensive industries include locally serving manufacturing and distribution facilities ranging from food service and appliances to apparel and chemicals. An analysis of activity and identified trends toward lighter industrial and institutional development in the area highlighted the need to balance the characteristics of an urban industrial center with those of a growing population center in order to maintain a safe and thriving neighborhood. In addition, wide streets that carry truck, personal vehicle, bike, and transit traffic were identified as needing additional truck route planning and design considerations for safely balancing multi-modal activity.

Based on the analysis and findings, this report lays out a set of recommendations that can be undertaken by the City of Philadelphia to address these concerns, including:

- designating and implementing a truck route network;
- implementing complete streets design considerations for future road improvements; and
- increasing clarity of directional and truck restriction signage.

This report concludes with a brief discussion of next steps to be taken by the City of Philadelphia. Action steps for implementation are outlined, along with potential funding sources and resources available to support these recommendations.

CHAPTER 1

INTRODUCTION

The Hunting Park East neighborhood is a freight center characterized by large blocks containing a mix of industrial facilities, retail businesses, and cemeteries, bordered by residential neighborhoods and interspersed with medical, educational, and governmental institutions.

PROJECT OVERVIEW

The Hunting Park East area of the City of Philadelphia is one of a few remaining historic industrial freight centers in the city. Characterized by a patchwork of large blocks holding old industrial buildings, this area of the North District is bordered by residential neighborhoods and a mix of medical, educational, and governmental institutions. This study investigates the local transportation implications, economic impacts, and potential conflicts related to freight and industrial development in the Hunting Park East area of the City of Philadelphia. The study will also provide draft truck network designations for study area roads and design recommendations to mitigate conflicts and provide safe, efficient access for all modes.

PROJECT OBJECTIVES

This study examines the freight generation of the neighborhood and aims to identify recommendations and strategies that can better facilitate truck movements while also addressing key points of conflict to improve the safety of trucks, passenger vehicles, pedestrians, and bicycles. These freight considerations are intended to align with the existing ***Philadelphia Complete Streets Design Handbook*** used by the City of Philadelphia and are based upon the framework established in DVRPC's ***Philadelphia Truck Route Planning Guidebook*** (forthcoming). The objectives of this study are:

- to understand the current and future industrial uses in the Hunting Park East area;
- to define a draft freight access network for Hunting Park East as an example for implementing a truck route designation citywide; and
- to provide design recommendations that improve the safety of all road users.

STUDY ADVISORY COMMITTEE

DVRPC convened a Study Advisory Committee composed of representatives from various offices and departments of the City of Philadelphia. These members helped to guide the purpose and goals of this study and provide critical feedback on the recommendations in this report. The members of the Study Advisory Committee included:

- David Kanthor, Philadelphia City Planning Commission;
- John Haak, Philadelphia City Planning Commission;
- Ariel Diliberto, Philadelphia City Planning Commission;
- Matt Wysong, Philadelphia City Planning Commission;
- Kelley Yemen, City of Philadelphia Office of Transportation, Infrastructure, and Sustainability;
- Liz Lankenau, City of Philadelphia Office of Transportation, Infrastructure, and Sustainability;
- Gus Scheerbaum, City of Philadelphia Streets Department; and
- Altoro Hall, City of Philadelphia Department of Commerce.

REPORT ORGANIZATION

This report provides a summary of the study analysis and findings. It is organized into the following sections:

- **Hunting Park East Background**: documenting existing development patterns and neighborhood context;
- **Existing Transportation Conditions**: detailing the existing transportation system and key activity patterns;
- **Recommendations**: summarizing a series of actions and improvements to be considered by project stakeholders; and
- **Next Steps**: providing guidance on implementation and funding opportunities to advance study recommendations.

RELATED STUDIES

Prior to this study, several planning studies and guides have been developed that were considered over the course of this project. The *North District Plan* identified this study area as a significant location for additional exploration to address concerns that are explored in this report. Additionally, several citywide guides that are published or pending publication have informed the recommendations that are provided in this report. These key studies include the:

- *North District Plan;*
- *Philadelphia Complete Streets Design Handbook*;
- *Philadelphia Pedestrian and Bicycle Guide*; and
- *Philadelphia Truck Route Planning Guidebook* (forthcoming).

NORTH DISTRICT PLAN

This is a comprehensive plan for the North District that takes the citywide vision established in the Philadelphia *2035 Comprehensive Plan* and applies it locally. It was written in 2018 and includes three major products:

- land use and proposed zoning plans to guide zoning map revisions;
- planning focus areas that include the Hunting Park East neighborhood; and
- recommendations for changes to the physical environment, including transit infrastructure and neighborhood facilities, to inform the city's Capital Program.

PHILADELPHIA COMPLETE STREETS DESIGN HANDBOOK

This handbook was written in 2017 by the Mayor's Office of Transportation and Utilities for use by city and state agency staff, design professionals, private developers, community groups, and others involved in the planning and design of complete streets in Philadelphia. Complete streets design considers the interaction of many different roadway users, elements of street design, and surrounding land uses. It is divided into five sections:

- Section 1—Introduction: overview of the handbook and complete street principles;
- Section 2—Philadelphia's Street Planning and Design Process: overview of Philadelphia's street planning and design process and agency responsibilities;
- Section 3—Philadelphia Street Types: description of the street types established in the Philadelphia Pedestrian and Bicycle Plan, map of street type designations, and summary of appropriate design treatments for each street type;
- Section 4—Complete Streets Components and Design Guidance: introduction to the components of complete streets; design fundamentals; and a "toolbox" of design treatments to enhance safety, mobility, access, and vitality; and
- Section 5—Implementation and Enforcement: provides complete streets project review checklists for a variety of applications.

PHILADELPHIA PEDESTRIAN AND BICYCLE GUIDE

This plan, written in 2012 by the Philadelphia City Planning Commission (PCPC), is the city's first Pedestrian Plan and serves as an update to the city's Bicycle Network Plan completed in 2000. It includes recommendations for improvements to the walking and bicycling networks, as well as a framework for pedestrian and bicycle planning, development, and maintenance that includes:

- a street classification system with design standards for sidewalks, which reflects the interplay between roadway function, pedestrian activity, and adjacent land use;
- a set of policies and programs to enhance pedestrian and bicycle facilities and to support walking and bicycling through improved maintenance, monitoring, enforcement, encouragement, and safety education; and
- strategies for implementing bicycle and pedestrian network recommendations.

PHILADELPHIA TRUCK ROUTE PLANNING GUIDEBOOK

This guidebook, currently under development by DVRPC, considers the unique needs of design and control vehicles on truck routes and is intended to supplement the *Philadelphia Complete Streets Design Handbook*. It includes a design matrix that summarizes the suitability of various design treatments along different truck route designations and provides additional design recommendations and considerations for design components.

FREIGHT PLANNING

TRUCK ROUTE PLANNING IN THE DVRPC REGION

Trucks transport the largest share of freight across the country, serving last-mile connections, trans-national movements of commodities, and everything in between. According to the 2016 ***Pennsylvania Statewide Comprehensive Freight Movement Plan***, an estimated 76 percent of all freight moved by weight is transported by truck. As a leading mode of freight transportation nationally, statewide, and regionally, truck issues remain a primary consideration of DVRPC's ongoing regional planning work. The advent of new digital navigation systems, increases in e-commerce-driven deliveries, and an overall growth in population have added to the challenges of managing truck freight at the regional and local levels.

As the demand for truck freight has grown, DVRPC has been involved in various local and regional efforts to identify solutions around truck routing and urban delivery issues. Through this work, DVRPC has created a truck route development framework for local municipalities in an effort to establish a common system of truck routes regionally. This framework was applied to the City of Philadelphia in the ***Philadelphia Truck Route Planning Guidebook*** (forthcoming), which provides resources and education around the various types of truck route components and recommended street design considerations. The guidebook also contains next steps for the city to complete the designation process. The approach encourages engagement of the local community to educate them on the role of trucks in the local economy and ensure proper consideration of trucks in complete streets planning.

URBAN FREIGHT

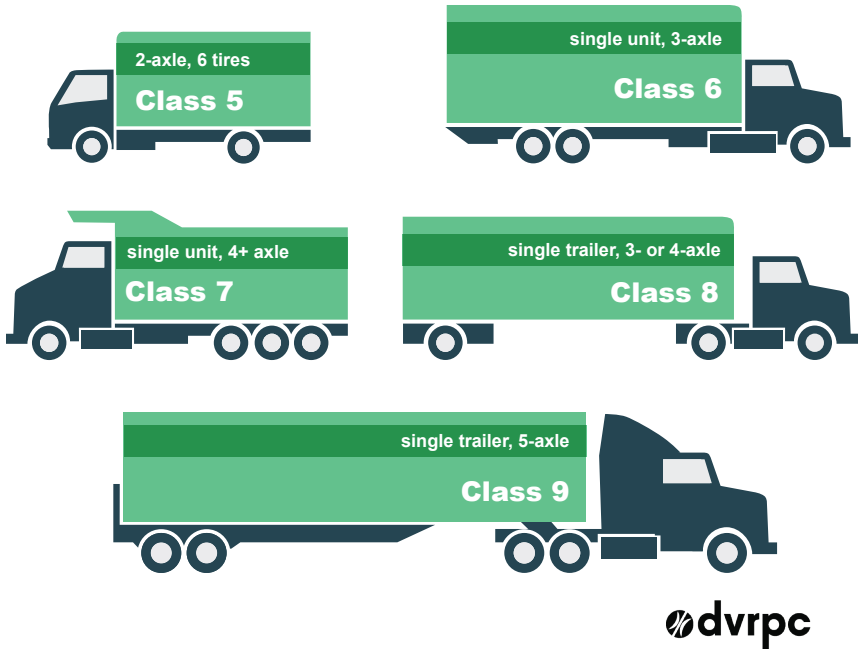
Trucks are critical to maintaining an economically diverse and thriving urban community. Freight vehicles serve to support local businesses, deliver consumer goods to local residents, remove waste, and move goods between manufacturing and warehouse facilities. Trucks have unique challenges that they face when trying to navigate dense, urban areas. These challenges often include traffic congestion, compact lanes and intersection geometry, inadequate routing and directional signage, and unclear lane striping. Many freight vehicles are larger than other road users, requiring more space for navigation and parking. Because of their size, they are also more likely to impact existing road infrastructure and have the potential to cause more road congestion. The challenges that freight vehicles pose cannot be ignored, because they are necessary for supporting local businesses, delivering consumer goods to residents, and creating economically diverse and thriving, livable communities in urban areas.

FREIGHT VEHICLES

Fundamental to truck freight planning is the understanding of the definition of a truck. Throughout this report there are references to trucks. Each community has a different tolerance for various types of trucks, and local economies inform the types of trucks that are present. Given the diversity of manufacturing, distribution, and transportation industries present, the Hunting Park East area experiences a wide variety of truck sizes and body types. These may range from simple van and delivery trucks to 53-foot tractor-trailers.

For the purposes of freight planning regionally, DVRPC utilizes the Federal Highway Administration (FHWA) classification of trucks based on the number of axles and presence of a trailer. When classifying trucks for estimating truck activity, DVRPC utilizes Class 5 single-unit trucks and larger, which are illustrated in Figure 1 . Class 5 trucks can include smaller straight trucks and delivery vehicles with two axles and six tires. Class 6 and Class 7 trucks are single-unit vehicles with three to four axles. These may include dump vehicles or larger straight trucks and dry vans. Class 8 and larger trucks are what are commonly referred to as tractor-trailers. These can range from smaller truck-trailer combination units to large 53-foot tractor-trailers with large sleeper cabs.

FIGURE 1: FHWA TRUCK CLASSIFICATION



Source: FHWA

CHAPTER 2

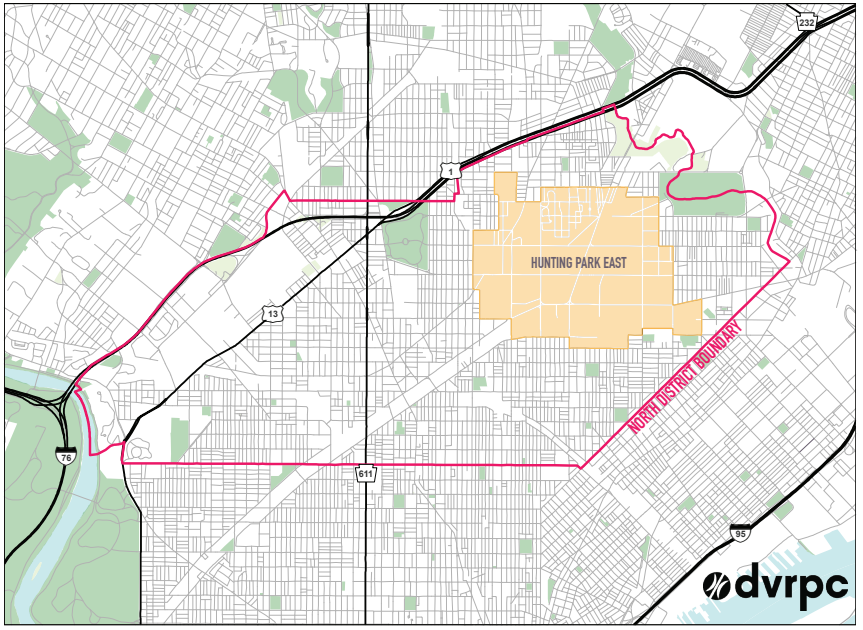
BACKGROUND

This chapter provides an overview of the Hunting Park East study area, including its history as an industrial center in Philadelphia, land use patterns, businesses and institutions, and the economic forces that shape and support its growth.

NORTH DISTRICT PLAN

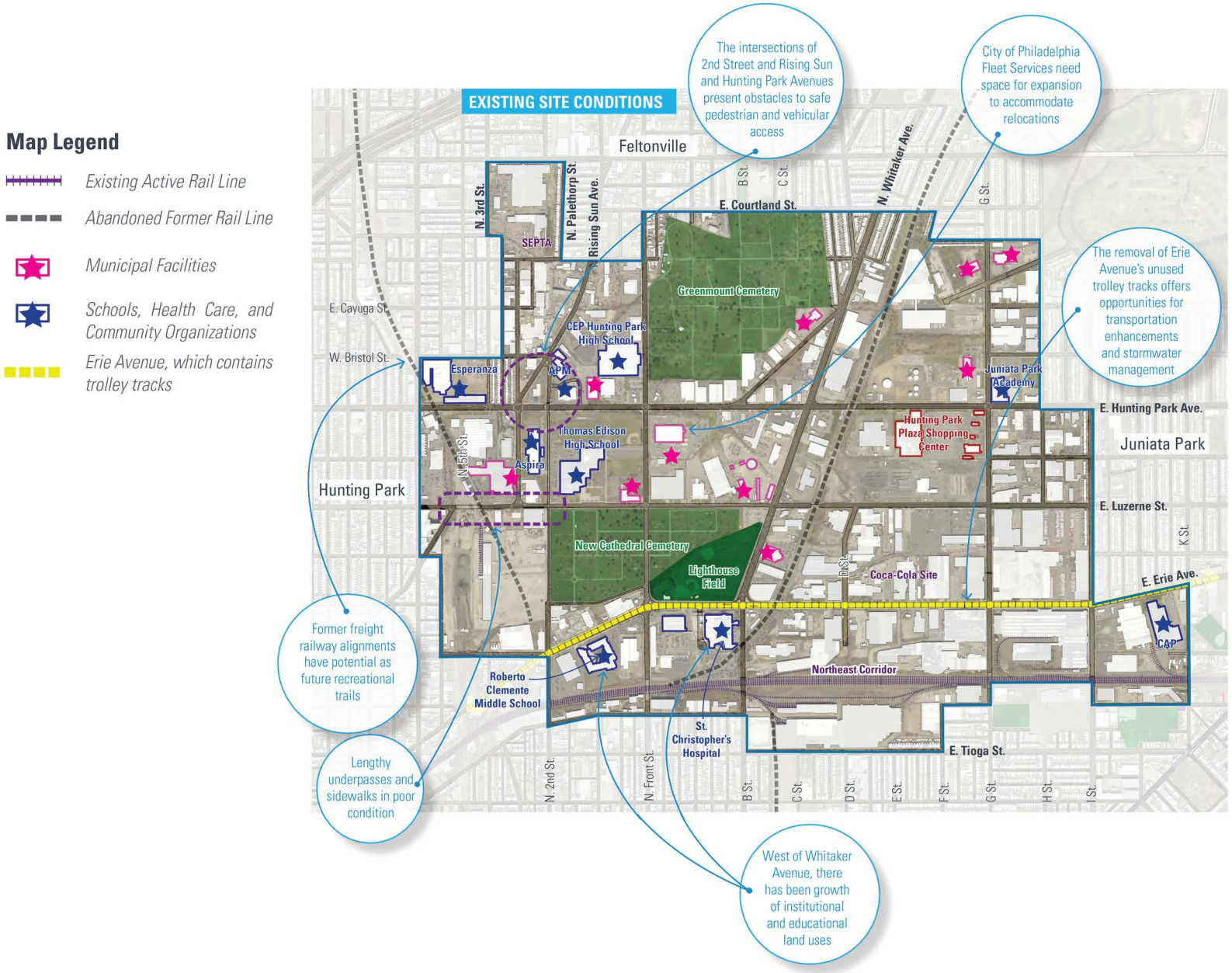
The *North District Plan*, adopted on January 16, 2018, was created during Phase 2 of the PCPC's *2035 Comprehensive Plan*. The plan includes land use and proposed zoning plans to guide zoning map revisions, planning focus areas where interventions are needed, and recommendations for changes to the physical environment (i.e., transit infrastructure and neighborhood facilities) to inform the Capital Program. Figure 2 shows the boundaries of the *North District Plan* with the Hunting Park East neighborhood highlighted. The Hunting Park East focus area boundaries established in the *North District Plan*, shown in Figure 3, were used as the boundaries for this study as well.

FIGURE 2: NORTH DISTRICT BOUNDARIES



Source: PCPC

FIGURE 3: NORTH DISTRICT PLAN HUNTING PARK EAST FOCUS AREA



Source: Phila2035 North District Plan, PCPC

NORTH DISTRICT HISTORY

The North District began its industrial growth in the mid-1800s, when railroads crossing through the area attracted industrial businesses to rail-accessible property. Housing and services for this industrial workforce followed quickly. These early railroads crossing through the area included the Philadelphia Germantown and Norristown Railroad, the Pennsylvania Railroad, and the Reading Railroad. Later, after the northward expansion of the Broad Street Line, World War II wartime industry expanded development eastward toward the current Hunting Park East neighborhood. Increased immigration and the construction of the Roosevelt Expressway in the 1960s led to new development and increased housing density.

In the late 1900s and early 2000s, the development of commercial corridors and housing projects was supported by major community development corporations. Institutions expanded in the area as industry declined, leaving larger land parcels for redevelopment and reuse as large retail stores, schools, medical facilities, places of worship, municipal support facilities, and social services. One of the largest medical facilities in the neighborhood, St. Christopher's Hospital for Children, moved from Lehigh Avenue to Erie Avenue during this time and has since expanded to add a new critical care tower and intensive care unit facilities.

HUNTING PARK EAST FOCUS AREA

Dense residential neighborhoods often abut or are across the street from manufacturing, warehousing, and support facilities. As the focus area continues to change, there is a need to maintain industrial access while also creating a safe and attractive district. The following are goals, opportunities, challenges, and recommendations from the ***North District Plan*** for the Hunting Park East area.

GOALS

- Retain existing and attract new businesses.
- Unify character and enhance curb appeal.
- Improve pedestrian safety and experience:
  - Repair and upgrade sidewalks.
  - Enhance landscaping and greening.

OPPORTUNITIES

- Improve Erie Avenue for public safety and transportation infrastructure.
- Form a partnership between city facilities, industrial businesses, and institutions to manage improvements in the area.
- Support and encourage service and maintenance uses, such as auto-repair and recycling to preserve industrial users.

CHALLENGES

- Balance traffic calming and efficient transportation access for trucking to make roads safer for all users.
- Resolve intersections with traffic conflicts without compromising safety for any mode of travel.
- Improve sidewalk and underpass safety for pedestrians, including students.

RECOMMENDATIONS

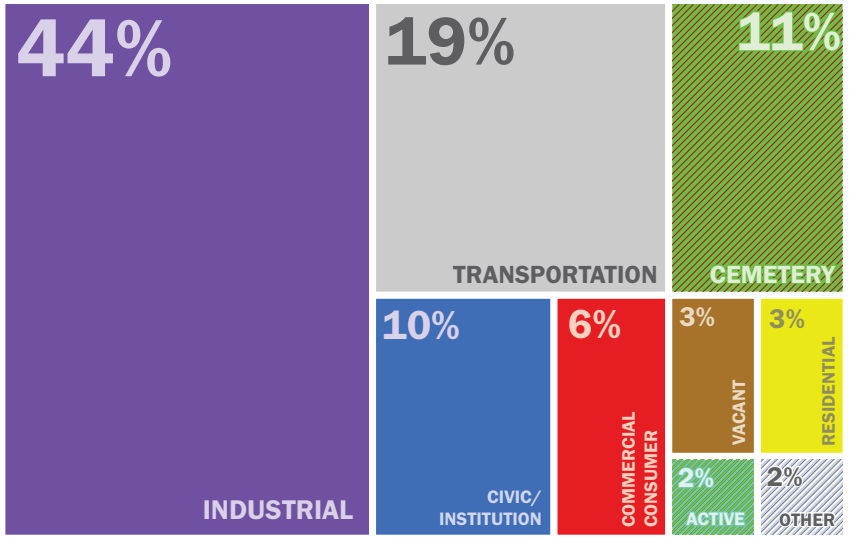
- Improve neighborhood and pedestrian access.
- Maintain or improve industrial and commercial access.
- Evaluate Erie Avenue multi-modal improvements.
- Study one-way traffic routing on 2nd Street.
- Evaluate opportunities for trail development.
- Calm traffic at specified intersections.
- Place midblock crossing on G Street between Luzerne Street and Hunting Park Avenue.

LAND USE

The Hunting Park East study area covers around 1.5 square miles. It includes a mix of land uses that are heavily dominated by Industrial, Transportation, and Civic/Institutional uses, which typically require larger building square footage and larger lot sizes than other land uses. Industrial sites make up almost half of the land use in this area at around 44 percent. Transportation land uses account for 19 percent of the land area, 11 percent is Cemetery, and 10 percent is Civic/Institutional. The remaining study area is occupied by Commercial Consumer (six percent), Vacant (three percent), Residential (three percent), Active Recreation (two percent) and other (two percent) land uses. Figure 4 shows the land use composition, and Figure 5 shows the geographic distribution.

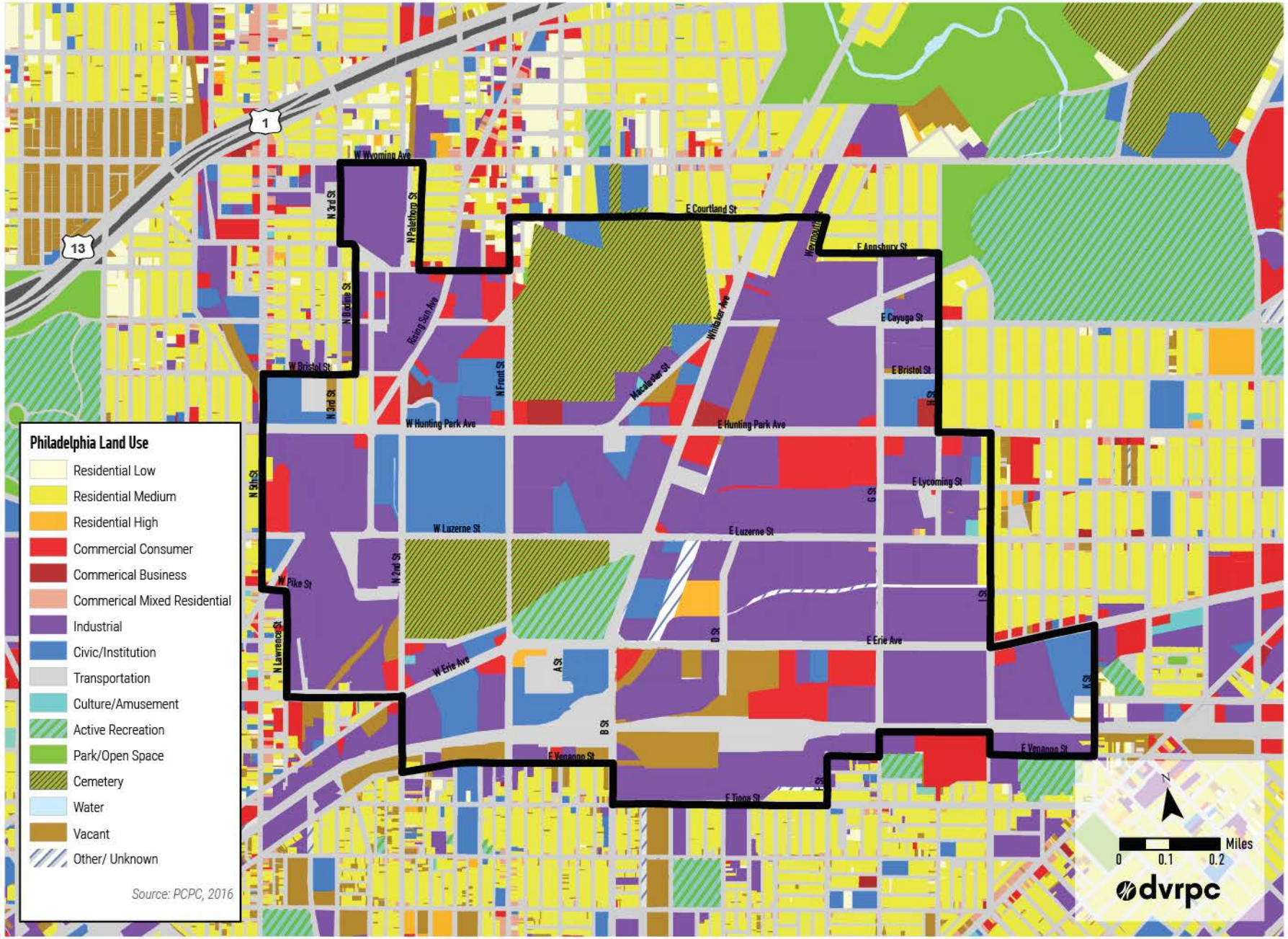
The dominating presence of industrial, transportation, and civic institutions that occupy large buildings and facilities gives this area its industrial character. The surrounding residential development, however, is a reminder that this industrial center is still part of a dense urban neighborhood. The *North District Plan* showed that the Hunting Park East area had one of the highest population increases from 1990 to 2010, indicating that the residential trend for this area is not diminishing.

FIGURE 4: HUNTING PARK EAST LAND USE CHART



Source: PCPC, 2016

FIGURE 5: HUNTING PARK EAST LAND USE MAP



CHANGING DEVELOPMENT PATTERNS

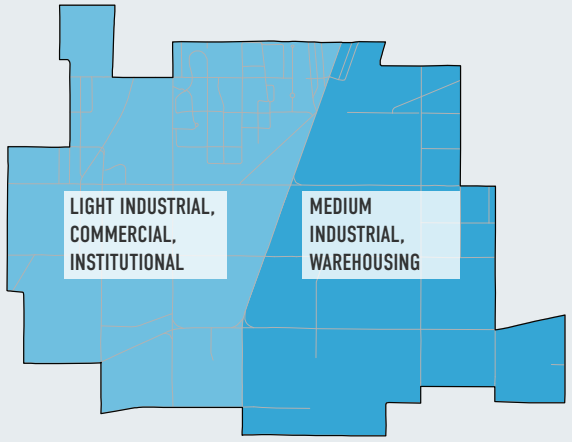
Recent development trends show a shift away from heavy industrial land uses and toward light industrial and adaptive reuse of existing buildings. The mixed-use redevelopment of the property at 956 E. Erie Avenue is an example of adaptive reuse of over 600,000 square feet of former industrial property for creative businesses and community users. Another industrial building at 533 E. Hunting Park Avenue is being converted to a 29,994-square-foot self-storage facility.

The Hunting Park East area remains an industrial center, as well as the center for population growth in the neighborhood. Balancing these two characteristics is key to maintaining a safe and thriving neighborhood. The *North District Plan* proposes shifting the land use designations in this area so that parcels west of Whitaker Avenue are used for Light Industrial, Commercial, and Institutional uses, while parcels east of Whitaker Avenue are maintained for Medium Industrial and Warehousing uses.

The Esperanza Housing and Economic Development (EHED) organization is also leading a neighbor-driven revitalization process in the Hunting Park neighborhood. In 2012, EHED created a Neighborhood Strategic Plan, in collaboration with other community-serving organizations and residents, that studied existing conditions and established broad recommendations for the revitalization of Hunting Park. The three core strategies of this plan were Economic Development, Community Development and Education, and Real Estate Development. As part of their Real Estate Development plans, the Roberto Clemente Homes were completed in 2018 by Esperanza, converting a blighted former factory at the gateway of Hunting Park's 5th Street Corridor into 38 units of affordable rental housing above 5,000 square feet of new commercial space. Redevelopment plans like this follow the trending development west of Whitaker Avenue toward adaptive reuse and less intense industrial uses.

NORTH DISTRICT PLAN INDUSTRIAL LAND RECOMMENDATIONS

- Preserve existing industry and attract new companies to the Hunting Park East Industrial Area.
- Update industrial area boundaries to support commercial and institutional uses west of Whitaker Avenue and protect medium industrial activity east of Whitaker Avenue.
- Develop design standards for signage, building identification, fencing, and street furniture to unify industrial businesses.
- Work with industrial and institutional land owners to establish a Business Improvement or Special Services District to oversee improvements and market the area to new users.



Hunting Park East Proposed Future Land Use
Source: PCPC North District Plan

Rentable Warehouse Space on Erie Avenue
Source: DVRPC

FREIGHT CENTER

The production and distribution of goods is an integral part of the region's economy, requiring dedicated expanses of land in order to meet the needs of businesses and consumers. This land is an essential resource for a prosperous economy and an important part of communities and a source of valuable tax revenues. The goal of the DVRPC Freight Centers inventory is to identify and categorize these key locations to enhance planning necessary to concentrate growth, invest in appropriate transportation infrastructure, and minimize conflict with host communities. For more information on DVRPC's Freight Centers, visit www.dvrpc.org/webmaps/PhillyFreightFinder.

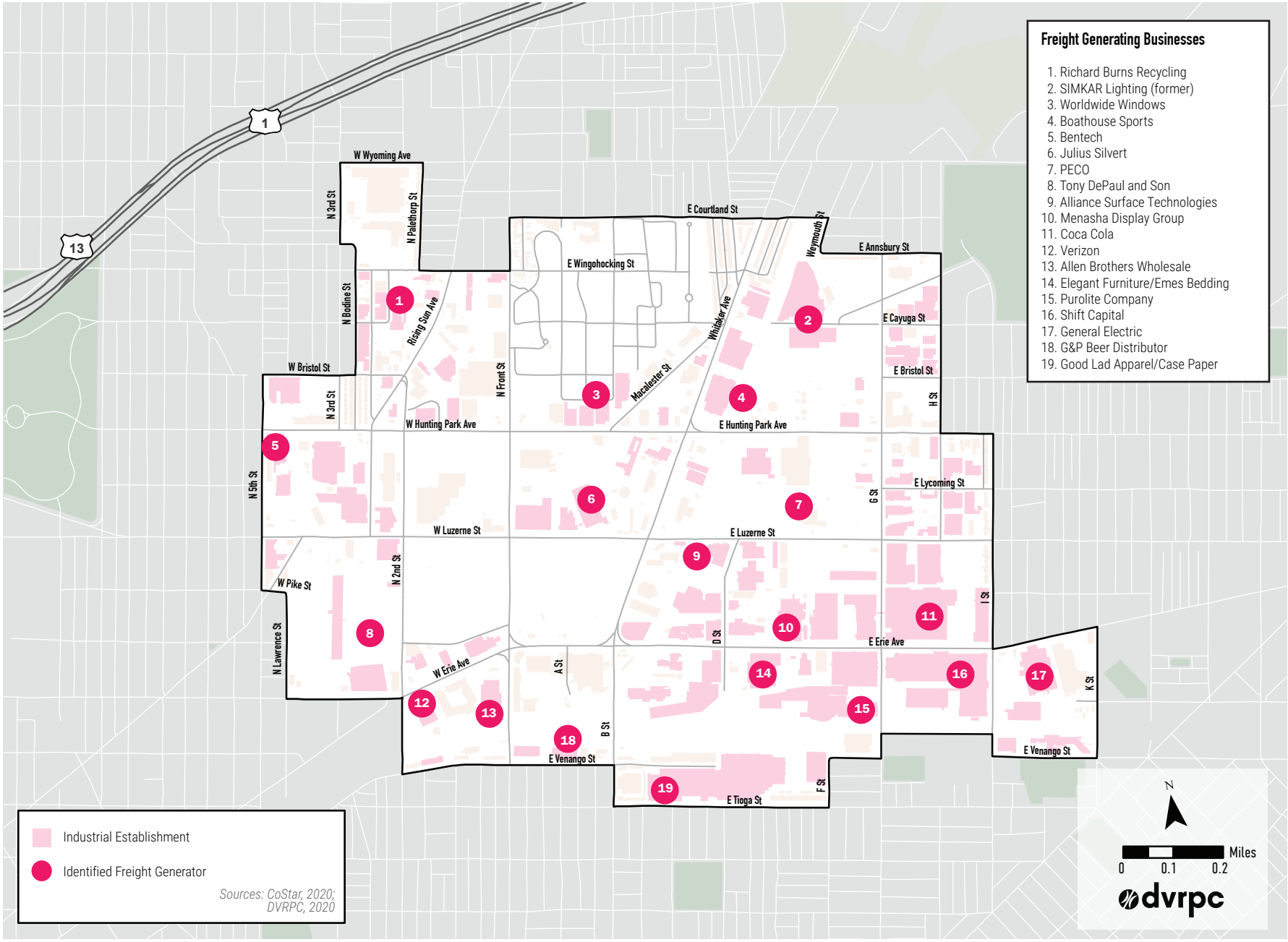
THE HUNTING PARK EAST FREIGHT CENTER

Hunting Park East is one of the DVRPC region's Local Manufacturing and Distribution Centers. A Local Manufacturing and Distribution Center is a node focused around locally serving small manufacturing and distribution facilities. It is less dependent on prime location near interstate interchanges but is well served by smaller highway facilities and proximity to consumer populations. This center typology often comprises densely developed, smaller-footprint warehouses and industrial facilities.

The Hunting Park East Freight Center contains 89 freight-related establishments, which occupy around 400 acres of land and employ around 3,150 people. Figure 6 highlights some of the industrial freight generators that make up the Freight Center. A majority of the buildings used by these businesses were built before 1960 and are used for warehousing and manufacturing. Around 10 percent of industrial space in the neighborhood is currently vacant.

Like many other older Manufacturing and Distribution Centers in the region, the Hunting Park East Freight Center has not seen much development of newer industrial properties. Although niche markets have found ways to make use of the existing building stock and building trade suppliers remain stable, newer development driven by modern manufacturing and e-commerce distribution has not reached this center. These newer operations often require specifications for facilities that old manufacturing properties do not offer, such as plentiful loading docks, open floor space, and high ceilings. Although the Hunting Park East Freight Center may someday see industrial redevelopment as market demand for smaller e-commerce fulfillment centers grow, the land use pressure created by commercial and institutional uses suggest that the center is currently stable but transitioning to new uses. Transportation system investments that preserve and enhance access for trucks can help to encourage future growth and maintain access for the current industries.

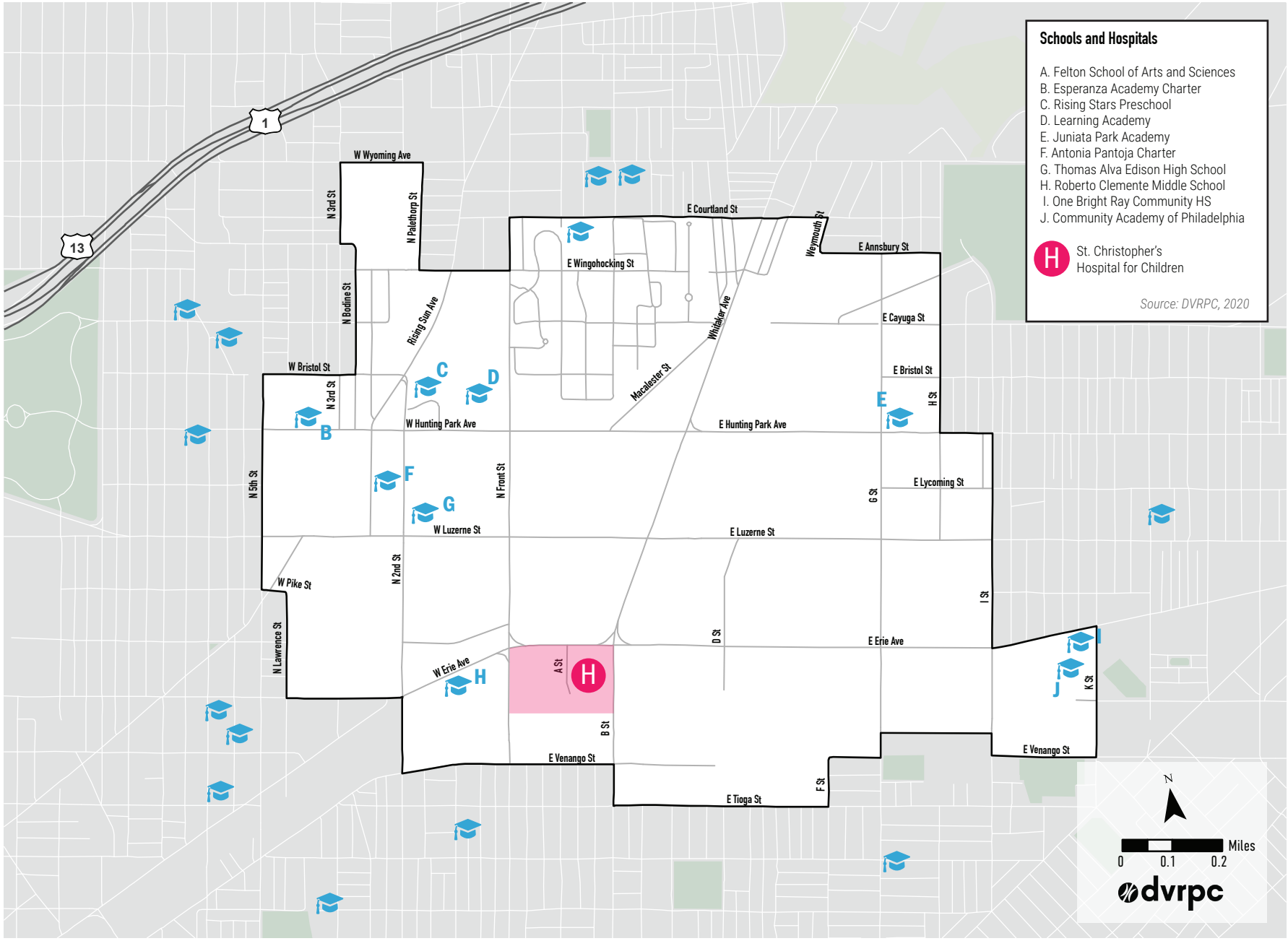
FIGURE 6: HUNTING PARK EAST FREIGHT CENTER AND INDUSTRIAL ESTABLISHMENTS



SCHOOLS AND HOSPITALS

There are 10 schools within the study area and four others nearby. St. Christopher's Hospital for Children also has its campus in the study area at the intersection of Whitaker Avenue and Erie Avenue. These locations, which are seen in Figure 7, are particularly important to note when designating truck routes throughout the study area because there is a higher concentration of children who may be crossing roads in these areas. Truck routes should try to avoid as many school zones as possible, but where it is necessary for a truck route to pass near a school zone, the proper safety infrastructure should be in place. See recommendations in Chapter 4 for locations where pedestrian safety interventions should be used to mitigate conflict between pedestrians and other vehicles.

FIGURE 7: SCHOOL AND HOSPITAL LOCATIONS



CHAPTER 3

EXISTING TRANSPORTATION CONDITIONS

This chapter provides a summary of the collection and analysis of transportation data used in this study. The purpose of outlining these existing conditions in the neighborhood is to evaluate the transportation conditions and highlight the ongoing transportation projects and needs in the area.

TRANSPORTATION INFRASTRUCTURE

STREETS

Many of the roads in this study area are Major and Minor Arterials, some with multiple travel lanes in each direction and wide overall road width, which carry significant traffic volumes. The large block sizes that accommodate larger industrial and retail facilities also create long road spans between intersections. The residential community that surrounds the industrial freight center, however, contains more narrow roads lined with homes that are often local city roads carrying less vehicular traffic.

The major roads identified in this study are those that were under consideration for the draft truck route network within the study area boundaries. These roads traveling east-west include Hunting Park Avenue, Luzerne Street, and Erie Avenue. Roads oriented north-south include 5th Street, 2nd Street, Rising Sun Avenue, Front Street, Whitaker Avenue, B Street, G Street, and I street. The characteristics of these roads are described in Table 1.

Whitaker Avenue acts as a dividing line between the east and west of the study area. Development and land use patterns west of Whitaker Avenue are trending toward light industrial and institutional uses, while properties east of Whitaker Avenue remain as medium industrial uses. Although adjacent to medium industrial uses, land use east of the study area is much more residential. As a result of these differences in development, road characteristics vary from one side of Whitaker Avenue to the other, and residential streets east of the study area have much smaller traffic volumes.

Hunting Park Avenue runs east-west through the study area and is a Major Collector west of Rising Sun Avenue and a Minor Arterial road east of Rising Sun Avenue. Connecting from Route 13 and Hunting Park to Torresdale Avenue near Frankford Creek, Hunting Park Avenue acts as an east-west connector through the North District for freight traffic. This is one of the widest roads in the study area, with four travel lanes and an overall width of 60 feet. In the study area, Hunting Park Avenue has average daily traffic volumes of around 18,000 vehicles.

Luzerne Street is also an east-west road that is classified as a Major Collector west of Front Street and a local street east of Front Street. East of I Street, through truck traffic is restricted; but west of I Street, Luzerne Street carries a significant amount of vehicular traffic: an average of around 14,500 vehicles per day.

Erie Avenue is a Principal Arterial that connects the study area from 22nd Street and Route 13 all the way to Torresdale in northeast Philadelphia. Erie Avenue becomes Torresdale Avenue at the intersection with Kensington Avenue. Although this road has only one travel lane in each direction, the road width is almost 60 feet and parts of Erie Avenue have an average of over 22,000 vehicles traveling on them per day. The speed limit is 30 miles per hour (mph) in Hunting Park East. East of Front Street, Erie Avenue is on the Vision Zero High Injury Network, a network of identified corridors that have the highest fatality and severe injury rates per mile in the city.

5th Street is a north-south Minor Arterial that connects the study area to Roosevelt Boulevard. South of Hunting Park Avenue, 5th Street is on the Vision Zero High Injury Network.

2nd Street is a north-south Principal Arterial that connects the study area to Roosevelt Boulevard. South of Rising Sun Avenue, 2nd Street is on the Vision Zero High Injury Network.

Rising Sun Avenue is a Principal Arterial that, north of Hunting Park Avenue, connects to Roosevelt Boulevard and south of Luzerne Street connects the study area to Broad Street.

Front Street is a north-south Major Collector that carries local freight traffic. It connects the study area to Roosevelt Boulevard in the north and the Kensington neighborhood and Girard Avenue in the south. Front Street is one way north of Rising Sun Avenue and is part of the bike lane network from Tioga Street to Wingohocking Street.

Whitaker Avenue is a Minor Arterial that runs diagonally through the study area, connecting freight traffic to Roosevelt Boulevard. It is the widest street in the study area, with four lanes and an overall width of 77 feet. Within the study area, Whitaker Avenue is on the Vision Zero High Injury Network.

B Street is a north-south Minor Arterial that connects Whitaker Avenue South to Allegheny Avenue. South of Allegheny Avenue, B Street becomes a one-way road.

G Street is a north-south Major Collector with two travel lanes and a speed limit of 30 mph. Within the study area, G Street is a two-way road, but south of E Venango Street it becomes one-way northbound. G street has a conventional bike lane for each travel direction and is also on the Vision Zero High Injury Network.

I Street is a north-south local road with two travel lanes and a speed limit of 25 mph. Through trucks are restricted on I Street from Hunting Park Avenue to Erie Avenue, but south of Erie Avenue truck traffic makes up almost 8 percent of total traffic volume on this road. Within the study area, I Street is on the Vision Zero High Injury Network.

TABLE 1: STREET CHARACTERISTICS IN HUNTING PARK EAST

STREET NAME	TRAVEL LANE COUNT	TOTAL WIDTH (FEET)	SPEED LIMIT (MPH)	ANNUAL AVERAGE DAILY TRAFFIC (AADT)	PENNDOT FUNCTIONAL CLASSIFICATION
E HUNTING PARK AVE	4	60	30	18,269	Minor Arterial
W HUNTING PARK AVE	4	60	30	17,944	Minor Arterial, Major Collector west of Rising Sun Ave
E LUZERNE ST	2	40	30	14,511	Local
E LUZERNE ST (EAST OF I ST)	2	40	30	7,703	Local
W LUZERNE ST	2	40	30		Major Collector, Local east of Front St
E ERIE AVE	2	60	30	20,847	Principal Arterial
E ERIE AVE (EAST OF K ST)	2	60	30	16,517	Principal Arterial
W ERIE AVE	2	64	30	22,103	Principal Arterial
W ERIE AVE (WEST OF 2ND ST)	2	64	30	7,788	Principal Arterial
VENANGO ST	2	34	25		Minor Arterial
5TH ST	2	44	25	9,478	Minor Arterial
RISING SUN AVE	2	44	30		Principal Arterial
2ND ST	2	24	30		Principal Arterial
FRONT ST	2	52	25	13,836	Major Collector
WHITAKER AVE	4	77	30	19,658	Minor Arterial
B ST	2	50	30		Minor Arterial
G ST	2	50	30	8,951	Major Collector
I ST	2	50	25	13,486	Local

Sources: DVRPC and Pennsylvania Department of Transportation (PennDOT)

BIKE FACILITIES

In the Hunting Park East area, there are conventional bike lanes on portions of 5th Street, Rising Sun Avenue, Front Street, B Street, D Street, and G Street. The Philadelphia Pedestrian and Bicycle Plan, published by the PCPC in 2012 with updates added in 2015 and 2019, includes the proposed addition of multiple conventional bike lanes, as well as marked shared lanes on study area streets as a part of the citywide bicycle network.

These existing and proposed bike facilities can be seen in Figure 8.

RAIL ACCESS

The Hunting Park East study area has a series of historic rail rights-of-way that define unique geometries and infrastructure throughout the neighborhood. However, the existing rail operations and rights are limited to properties south of the Northeast Corridor. These properties are served via Conrail's Delair Branch, which runs parallel to the Northeast Corridor. Despite the rich history of freight rail in and around the study area, there are no active freight rail-served properties. The only active switches for local service in the study area provide access to a storage facility that houses a private collection of historic rail cars.

BIKE LANE TYPOLOGIES

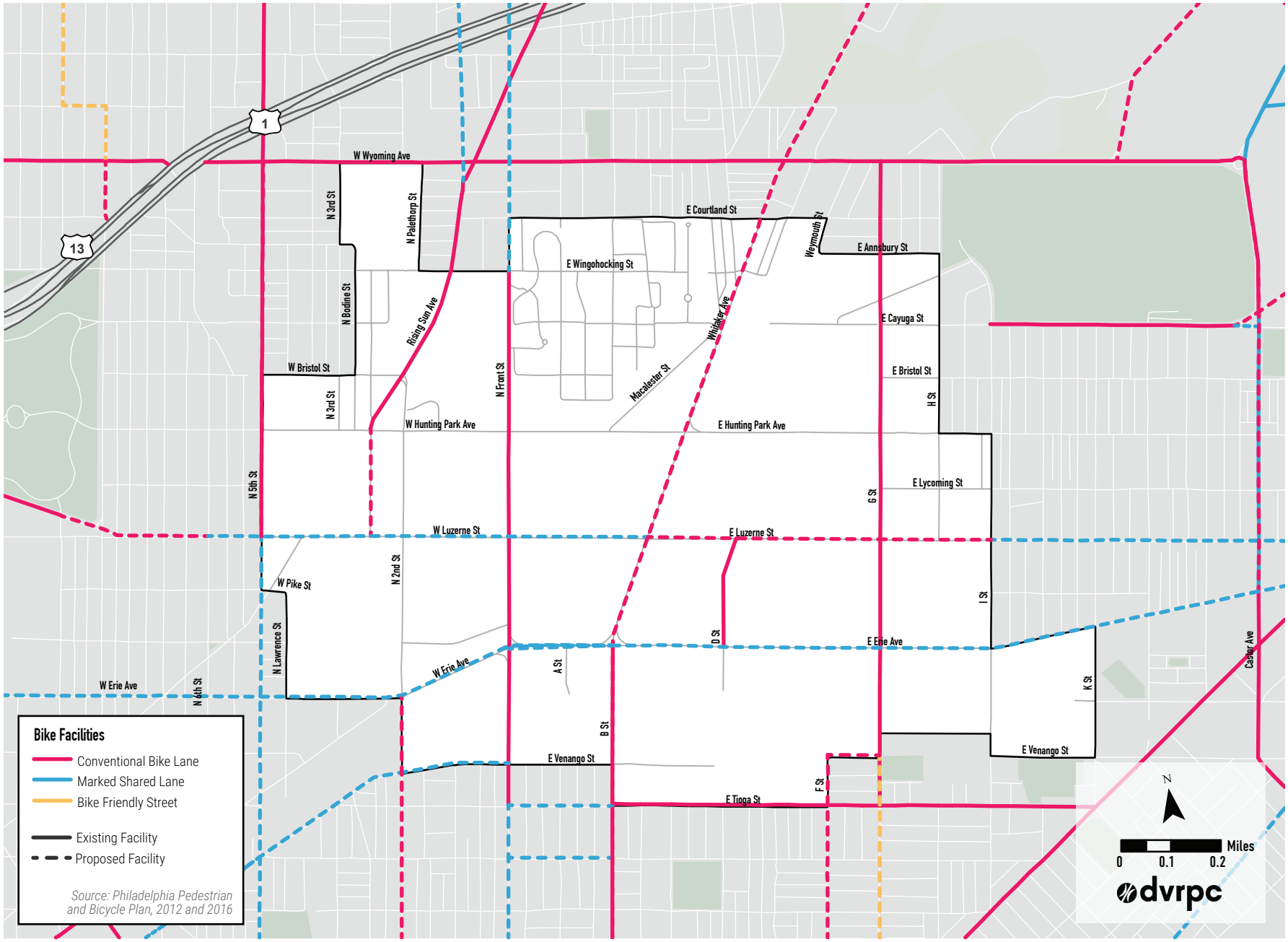
Conventional Bike Lanes:
A bike lane is an established part of the roadway marked and dedicated for exclusive bicycle use. These lanes are typically six feet wide where feasible. Lane widths as narrow as four feet may be considered on roads where speeds are low, there is no on-street parking, and when they are not abutting a vertical curb.

Source: DVRPC

Marked Shared Lanes:
Marked shared lanes use a sharrow pavement marking to designate a bicycle facility on streets without sufficient width for bike lanes. These markings also alert motorists of appropriate bicycle positioning.

Source: DVRPC

FIGURE 8: EXISTING AND PROPOSED BIKE FACILITIES



COMPLETE STREETS

The *Philadelphia Complete Streets Design Handbook* was created in 2017 as a toolbox and guide for community groups looking to improve their neighborhood streets, developers looking to build new projects, and for city employees designing new streets to meet 21st-century transportation standards.

The handbook illustrates preferred multi-modal street design and management practices within the City of Philadelphia. This guide sets forth standards that consider the interaction of many different roadway users, elements of street design, and surrounding land uses since differing conditions and contexts require different design consideration and treatment. Previously the Philadelphia Pedestrian and Bicycle Plan established a new street classification that considers functional roadway classification, land use characteristics, development density, and pedestrian activity level of streets. These new street types, although not meant to replace the city's functional classification system, provide a more context-sensitive designation for complete streets planning that accommodates all roadway users. Figure 9 shows the complete streets road classifications for the Hunting Park East study area.

PHILADELPHIA COMPLETE STREETS DESIGN HANDBOOK: STREET TYPOLOGIES

High-Volume Pedestrian

These streets are important pedestrian destinations and connections in high-density commercial, residential, and mixed-use neighborhoods. High-Volume Pedestrian streets serve more than 1,200 pedestrians per hour during the mid-day. Many of these streets also provide important connections for vehicle traffic and serve high vehicle volumes and must often be designed to prioritize pedestrian movement and accommodate high vehicle traffic volumes.

Civic/Ceremonial Streets

This small group of streets includes some of the first mapped streets in the city (e.g., Broad Street, Market Street). These streets have great symbolic importance, house major ceremonial functions, and play a unique role in the life of the city (e.g., the Parkway). Sidewalks on Civic/Ceremonial streets operate as generous pedestrian promenades. As Major Arterials, these streets also have high vehicle volume significance.

Walkable Comercial Corridor

These streets are active commercial corridors with pedestrian-friendly physical development patterns (e.g., commercial sections of Germantown Avenue and Girard Avenue) On these streets, parking and access needs of local businesses often compete for limited right-of-way with pedestrian and bicycle facility needs. These streets have lower pedestrian volumes than High-Volume Pedestrian streets, but are more pedestrian friendly than Auto-Oriented Commercial areas.

Urban Arterial

Urban Arterials are Major and Minor Arterials that carry high through traffic volumes. These streets usually have surface transit routes and must provide adequate pedestrian facilities to allow safe and comfortable access and waiting areas for transit users. Urban Arterials generally have more travel lanes and higher speeds than City Neighborhood Streets. They may have commercial uses but are not as pedestrian friendly as Walkable Commercial Corridors.

Auto-Oriented Commercial/Industrial

These streets are characterized by an auto-oriented development pattern with buildings set back significantly from the street, generally with parking lots in front of commercial uses. Auto-oriented streets generally do not provide a pedestrian-friendly environment and are not likely to attract high levels of pedestrian activity other than at transit stops and individual activity centers.

Park Road

Park Roads provide transportation routes for vehicles and pedestrians within local parks. These streets typically have lower speed limits compared to Scenic Drives. These streets may include shared-use side paths for pedestrians and bicyclists and/or sidewalks and bike lanes or shared roadway facilities.

Scenic Drive

Scenic Drives are Major or Minor Arterials that provide a scenic view along parks or waterways. These streets typically have higher speeds than Park Roads and Local streets. Scenic Drives often accommodate pedestrian travel via shared-use paths. Shared-use paths and/or bike lanes or shared roadway facilities may be used to accommodate bicyclists.

City Neighborhood

City Neighborhood streets include the majority of the grid streets in older sections of Philadelphia. These streets serve an equally important role for local vehicle and pedestrian traffic. The fronts of buildings on these streets typically meet the street line (edge of sidewalk), unlike Low-Density Residential Streets where dwellings are set back from the sidewalk.

Low-Density Residential

Low-Density Residential streets include most residential streets outside Center City, North Philadelphia, South Philadelphia, and West Philadelphia. These streets were generally constructed more recently than City Neighborhood streets and are characterized by dwellings that are set back from the sidewalk. These streets serve local vehicle, pedestrian, and bicycle traffic.

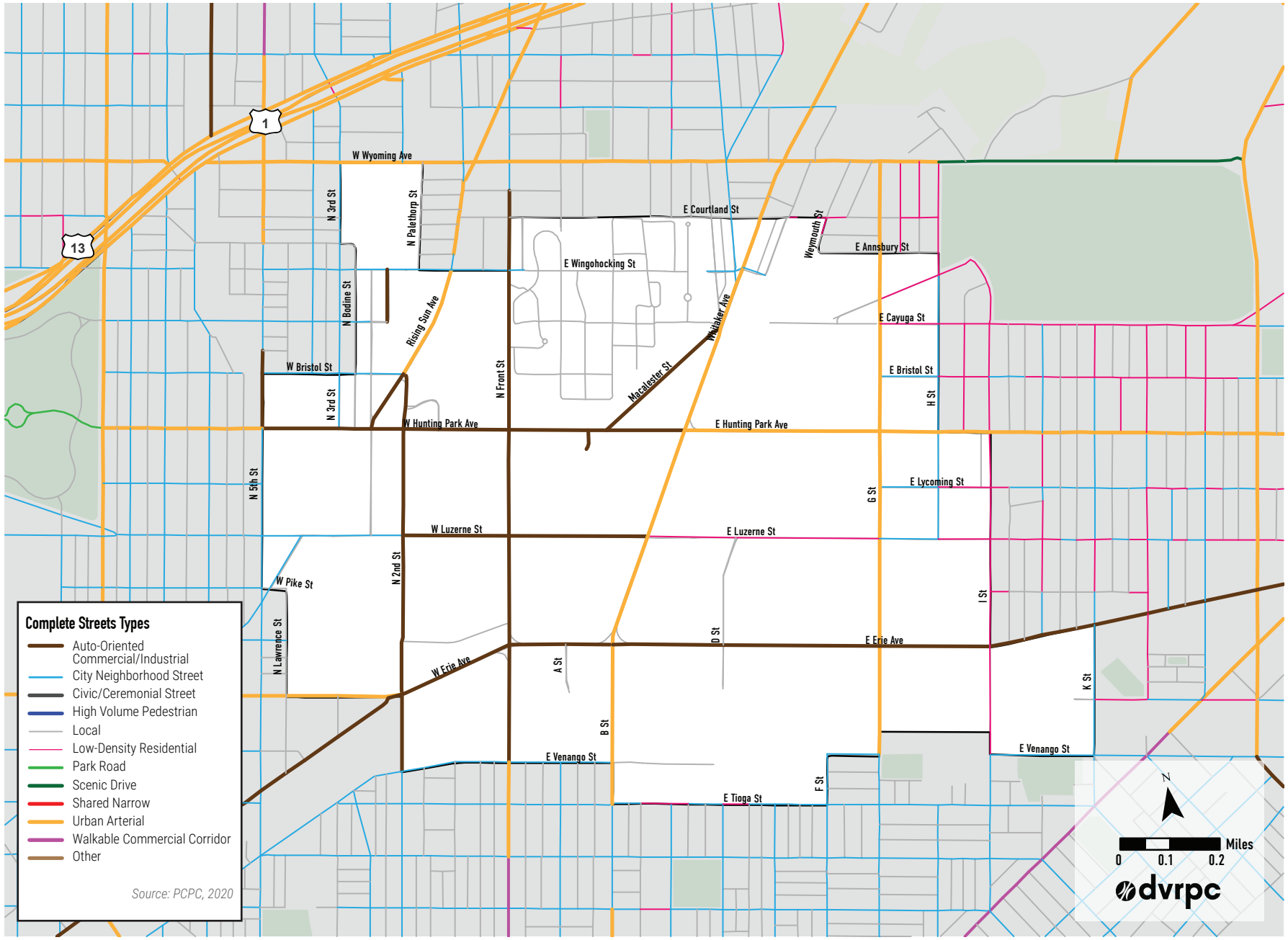
Shared Narrow

These streets are very narrow local streets, primarily located in older areas of the city. Sidewalks also tend to be narrow on these streets, but pedestrians and bicyclists can generally walk and ride comfortably in the street similar to pedestrian priority streets. On-street parking is precluded on streets with cartways of 13 feet or less.

Local

Local streets are streets in residential or non-residential neighborhoods that are smaller than City Neighborhood streets and Low-Density Residential streets. This classification includes service streets and minor residential streets. Parking is provided on at least one side of the street, and sidewalks are usually present.

FIGURE 9: HUNTING PARK EAST COMPLETE STREETS DESIGNATIONS



ONGOING PROJECTS

There are multiple projects in the vicinity of the study area that support transportation enhancement. Figure 11 shows the location of these projects.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The TIP lists all projects that intend to use federal funds, along with non-federally funded projects that are regionally significant. The TIP represents the multi-modal transportation improvement priorities of the region and is required by federal law, currently the Fixing America's Surface Transportation Act. TIP projects are listed by their PennDOT Multimodal Project Management System number.

103562: I-95 ADAMS AVENUE CONNECTOR

As part of PennDOT's work to rebuild and improve I-95, they will be reconstructing and improving 900 feet of Adams Avenue and building a 2,200-foot extension from Ashland Street to Aramingo Avenue. This project, called the Adams Avenue Connector, will provide direct access to I-95 and the Betsy Ross Bridge from Torresdale Avenue. The project locations for the Adams Avenue Connector are shown in Figure 10. With the new connector, freight trucks from the Hunting Park East Industrial Area can use Erie, Torresdale, and Adams avenues instead of 2nd Street and Allegheny Avenue for highway access, relieving some of the truck traffic in residential neighborhoods.

106994: RISING SUN AVENUE SIGNAL IMPROVEMENTS

This project will systematically implement low-cost improvements at signalized intersections, including signage, pedestrian countdown timers, audible pedestrian signals, pavement markings, Americans with Disabilities Act (ADA)-compliant ramps, intersection lighting, and fiber interconnect. Signal design will be improved by upgrading signal heads, control boxes, and mast arms. Installing interconnect to ensure the adequate progression throughout the corridor will help minimize aggressive driving. The project will also include the installation of curb extensions and traffic-calming measures intended to improve pedestrian safety. The limit of the signalized interconnect is Rising Sun Avenue from Wingohocking Street to Olney Avenue.

106995: CASTOR AVENUE SIGNAL IMPROVEMENTS

This project will address vital intersection and pedestrian safety focus areas. The project will also systematically implement low-cost improvements at signalized intersections, including overhead signals, signage, pedestrian countdown timers, audible pedestrian signals where appropriate, pavement markings, ADA-compliant ramps, intersection lighting, and fiber interconnect. Signal design will be improved by upgrading signal heads, control boxes, and mast arms. Installing interconnect to ensure the adequate progression throughout the corridor will help minimize aggressive driving. The project will also include the installation of curb extensions and traffic-calming measures intended to improve pedestrian safety. The limit of the signalized interconnect is Castor Avenue from Aramingo Avenue to Hunting Park Avenue.

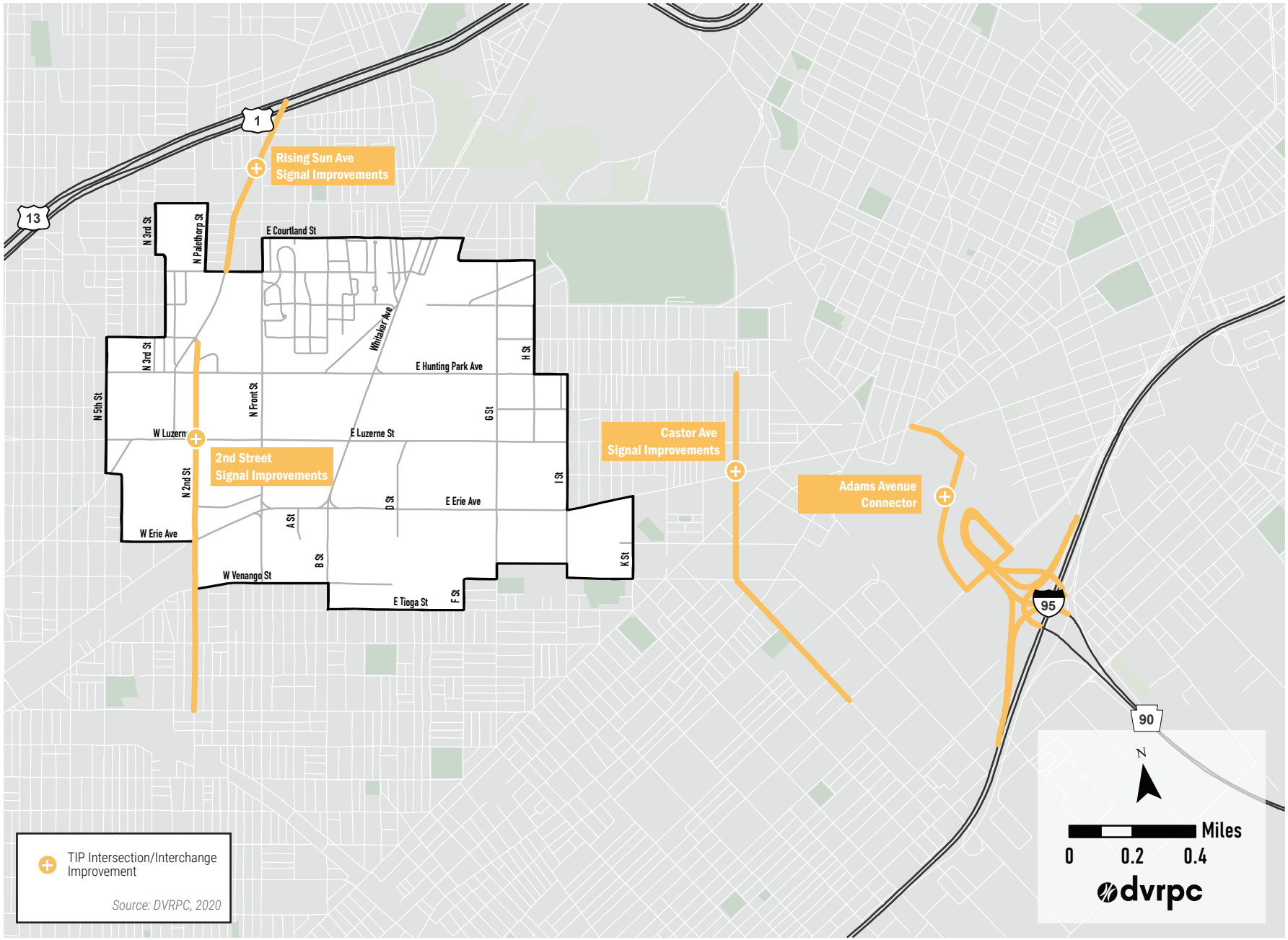
111709: 2ND STREET SIGNAL MODERNIZATION

This project will modernize intersections along the 2nd Street corridor from Callowhill Street to Lehigh Avenue, including but not limited to the installation of traffic controllers, signage and pavement markings, communications equipment to connect back to the city's Traffic Operations Center, and ADA-compliant curb ramps.

FIGURE 10: I-95 ADAMS AVENUE CONNECTOR PROJECT LOCATIONS

Source: PennDOT

FIGURE 11: HUNTING PARK EAST TIP PROJECTS

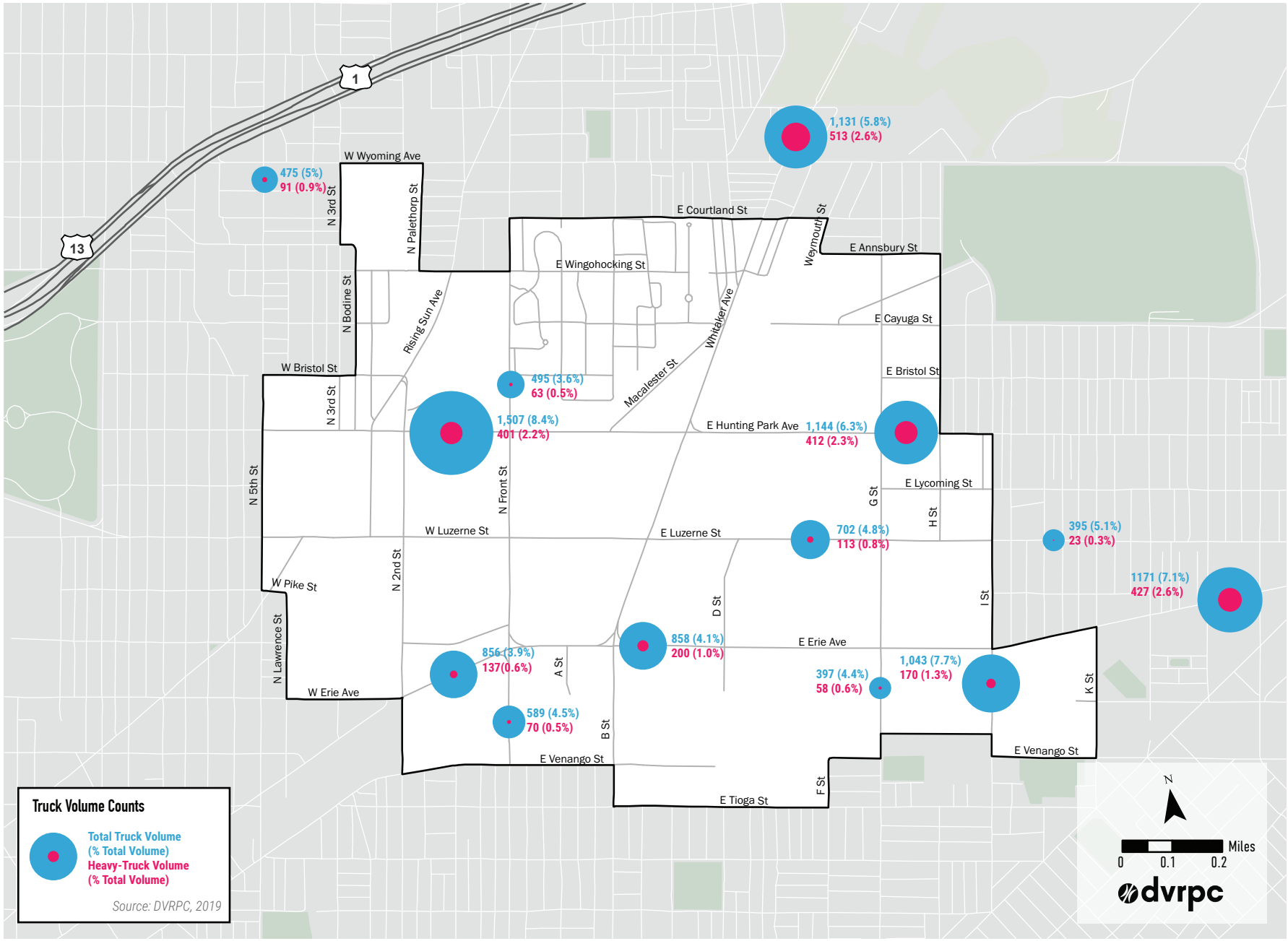


ROAD VOLUMES

To better understand the activity on the study area roads, 24-hour classification counts were conducted by DVRPC in November 2019. These provided hourly counts of the number of vehicles using the roads, by direction and by vehicle class, differentiating between trucks and passenger vehicles. Truck volumes for vehicles in FHWA Class 5 or higher were analyzed, which include single-unit straight trucks, tri-axle dump trucks, and tractor-trailers with three or more axles. Figure 12 shows the summary of the count activity and truck volume percentage for each of the roads on which counts were conducted.

The traffic volume analysis reinforced the role of several major facilities in the study area. Erie Avenue, Whitaker Avenue, and Hunting Park Avenue serve as the heaviest traffic corridors. These facilities also carry the largest share of trucks in the study area, with volumes of 200 to 500 heavy trucks, or tractor-trailers, per day representing significant freight activity for the Hunting Park East community. Currently, these heavy-truck trips only represent between two percent to three percent of all traffic on these major thoroughfares in the study area, demonstrating that these streets are not only critical to truck traffic but also to passenger vehicle and transit movements through the neighborhood. Balancing the needs of these modes while recognizing the large volumes of trucks moving on these facilities is critical for any planned investments and improvements.

FIGURE 12: TRUCK VOLUMES IN THE HUNTING PARK EAST AREA



ORIGIN-DESTINATION (O-D) ANALYSIS

Truck and vehicle volumes in the study area provide an understanding of activity levels by street but do little to explain the distribution of trips as they move across the network. To better inform the understanding of how trips move through the study area, an analysis was conducted utilizing INRIX Trips data. The INRIX data is compiled from global positioning system (GPS) trace trip tour data, categorized between medium and heavy trucks, and was collected over four one-week periods in 2018 that represent each season. These weeks include January 21–27, April 22–28, July 15–21, and October 14–20.

The analysis of these trips focused on activity that originated in, or was destined for, the study area. This O-D analysis provides a clearer definition of where truck trips are originating from when they enter the study area, and where truck trips are heading when they depart the study area.

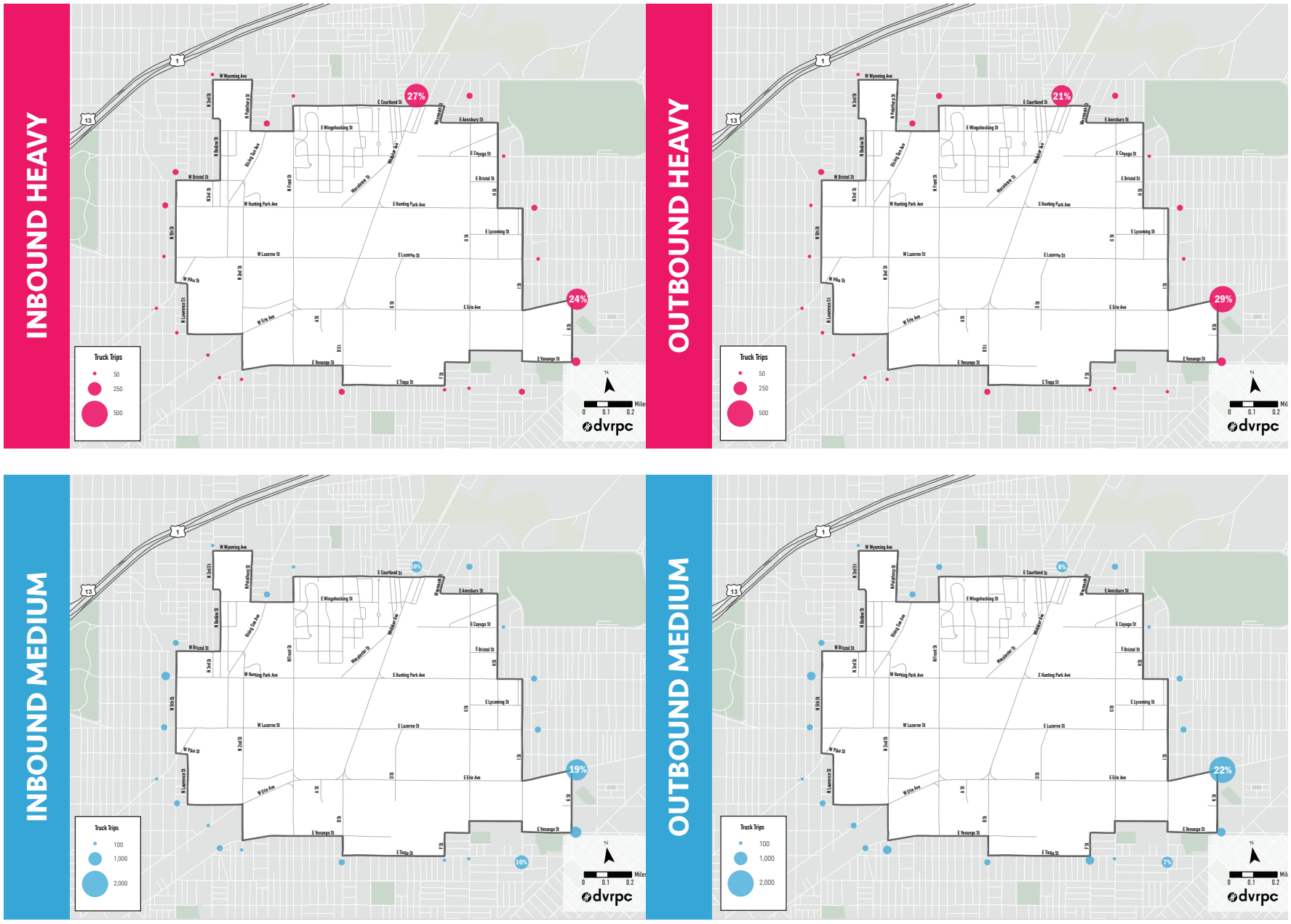
GATEWAYS

Understanding the routes that trucks utilize to access the Hunting Park East area is essential to understanding the distribution of truck activity in the area. To evaluate how trucks access the Hunting Park East area, gateway locations were defined at all of the roads that cross the study area boundary. The gateways were analyzed to calculate the distribution of inbound and outbound trip behavior. Both medium and heavy-truck paths were reviewed, and two dominant entry and exit points were identified: Whitaker Avenue and East Erie Avenue. The medium truck trip activity did exhibit a more broad distribution of trips entering and exiting the study area, although concentrations were apparent on specific facilities as illustrated in Figure 13.

Whitaker Avenue, one of the most direct pathways to Roosevelt Boulevard (US-1), was the gateway for 27 percent of inbound heavy-truck trips and 21 percent of outbound heavy-truck trips. The concentration of activity utilizing Whitaker Avenue gateways was less pronounced for medium trucks, with only 10 percent of inbound and 8 percent of outbound medium truck trips using this route.

The East Erie Avenue gateway, a common route for trucks to access I-95 via Torresdale Avenue and Adams Avenue, was the gateway for 24 percent of inbound and 29 percent of outbound heavy-truck trips. A significant portion of medium truck trips also utilized this gateway, accounting for 19 percent of inbound and 22 percent of outbound trips.

FIGURE 13: GATEWAY TRUCK VOLUMES FOR INBOUND AND OUTBOUND TRUCK TRIPS



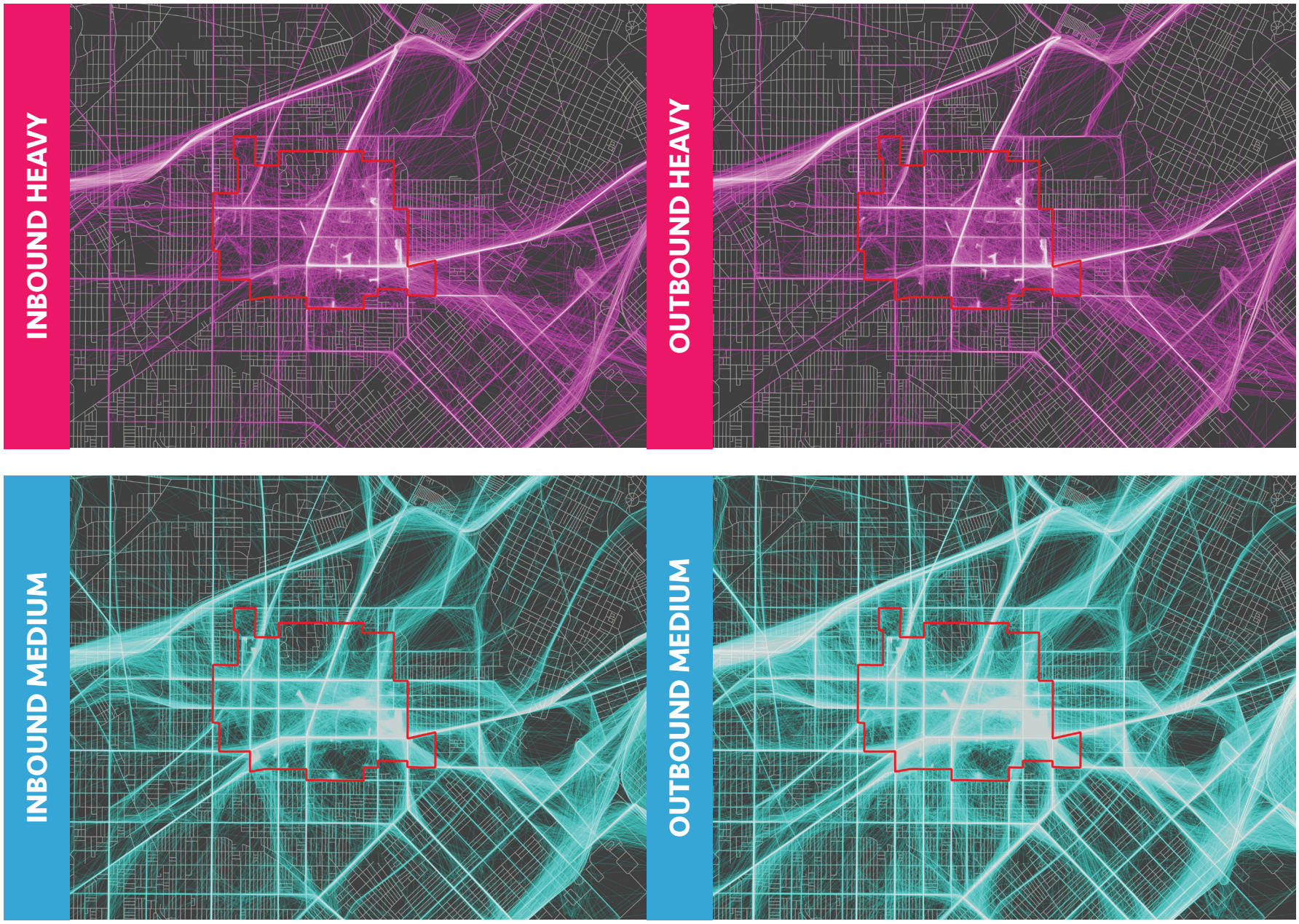
Source: INRIX, 2018

TRIP PATHS

Since the INRIX data is compiled from a collection of data points generated by anonymized GPS devices aboard commercial vehicles, the analysis of the INRIX data can also illustrate the path selection for both medium and heavy trucks. This can be used to look at truck paths beyond the study area to understand how trucks are connecting from local and arterial connectors to primary access highways. Figure 14 shows these paths.

Reflecting the gateway analysis and displaying trip paths beyond the study area boundaries, Figure 14 shows these truck trip paths for medium and heavy trucks traveling inbound and outbound from the Hunting Park East area. A majority of inbound and outbound heavy-truck trips connect to US-1 and I-95 via Erie/Torresdale Avenue and Whitaker Avenue. These trips are presumably more long-haul trips. Inbound and outbound medium truck trips also frequently utilize routes to access US-1 and I-95; however, a larger portion of medium trucks disperse on local roads to other parts of Philadelphia.

FIGURE 14: INRIX TRIP PATHS FOR MEDIUM AND HEAVY TRUCKS



Source: INRIX, 2018

CRASH LOCATIONS AND HIGH INJURY NETWORK

TRUCK CRASHES

From 2014 to 2018, 645 total crashes occurred in the Hunting Park East study area. Of these, 27 (four percent) resulted in one or more serious injuries and 13 (two percent) resulted in a fatality.

Of the 645 total crashes, 103 crashes (16 percent) involved trucks. Density of these truck crashes can be seen in Figure 15. Twenty-five crashes involving one or more heavy trucks and 80 involving one or more small trucks occurred in the study area. Two crashes involved both a heavy truck and a small truck. Four (four percent) of the total truck crashes resulted in one or more serious injuries, and four (four percent) resulted in a fatality. The most common crash types were angle (36 percent) and rear-end (34 percent). The distribution of truck crashes by type in the study area is documented in Table 2.

Four intersections were identified as having the highest density of truck crashes over the five-year period:

- Erie Avenue and Whitaker Avenue;
- Erie Avenue and Front Street;
- Hunting Park Avenue and Whitaker Avenue; and
- Erie Avenue and G Street.

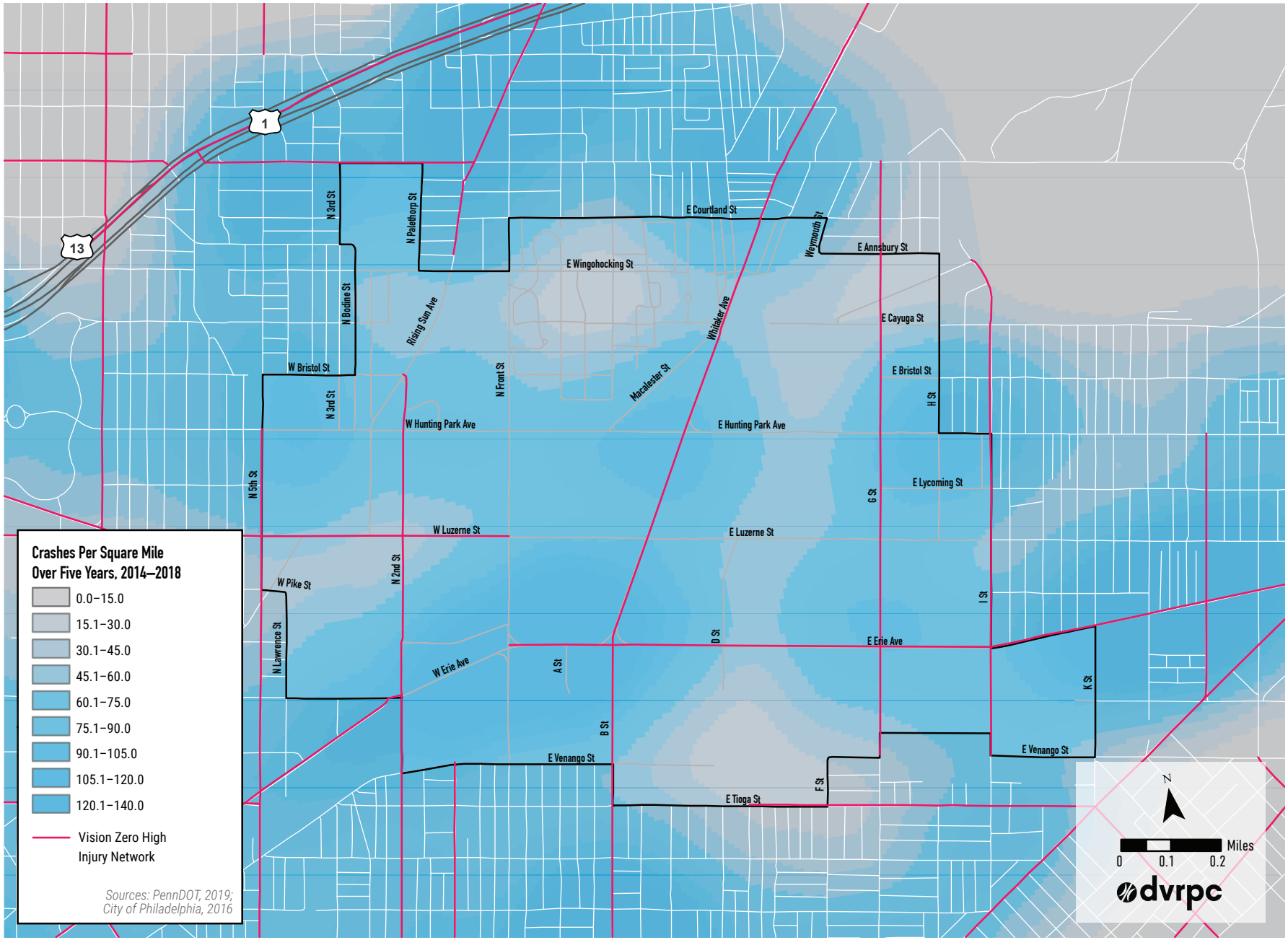
TABLE 2: TOTAL TRUCK CRASHES BY COLLISION TYPE

CRASH TYPE	COUNT	PERCENTAGE OF TOTAL
Rear-End	35	34%
Head-On	4	4%
Backing	2	2%
Angle	37	36%
Sideswipe (Same Dir.)	7	7%
Sideswipe (Opposite Dir.)	5	5%
Hit Fixed Object	3	3%
Hit Pedestrian	10	9%

HIGH INJURY NETWORK

Many streets in the Hunting Park East neighborhood are part of the city's Vision Zero High Injury Network. These identified corridors have the highest fatality and severe injury rates per mile in the city. The High Injury Network addresses 50 percent of the traffic deaths and severe injuries, and these occur on only 12 percent of Philadelphia's streets. Figure 15 shows the streets in pink that are part of this network. As a result, improving traffic safety along the corridors in Hunting Park East is important and critical for creating a thriving place for residents and businesses to coexist.

FIGURE 15: TRUCK CRASHES IN HUNTING PARK EAST



CURRENT TRUCK RESTRICTIONS

BRIDGE WEIGHT RESTRICTIONS

There are nine bridges in the study area: two state bridges and seven local bridges. Bridges can have significant impacts on the circulation of truck traffic through the study area. Weight and height restrictions can limit the options of larger vehicles to make necessary moves to and from facility generators. Only one height-restricted bridge is present in the study area, allowing standard dimensional loads to move freely. However, three bridges have posted weight restrictions. These bridges are identified in Figure 16. The study area also has two grade-separated intersections, one at Second Street and West Hunting Park Avenue and the other at Second and Luzerne streets, limiting moves on and off the north-south Second Street corridor.

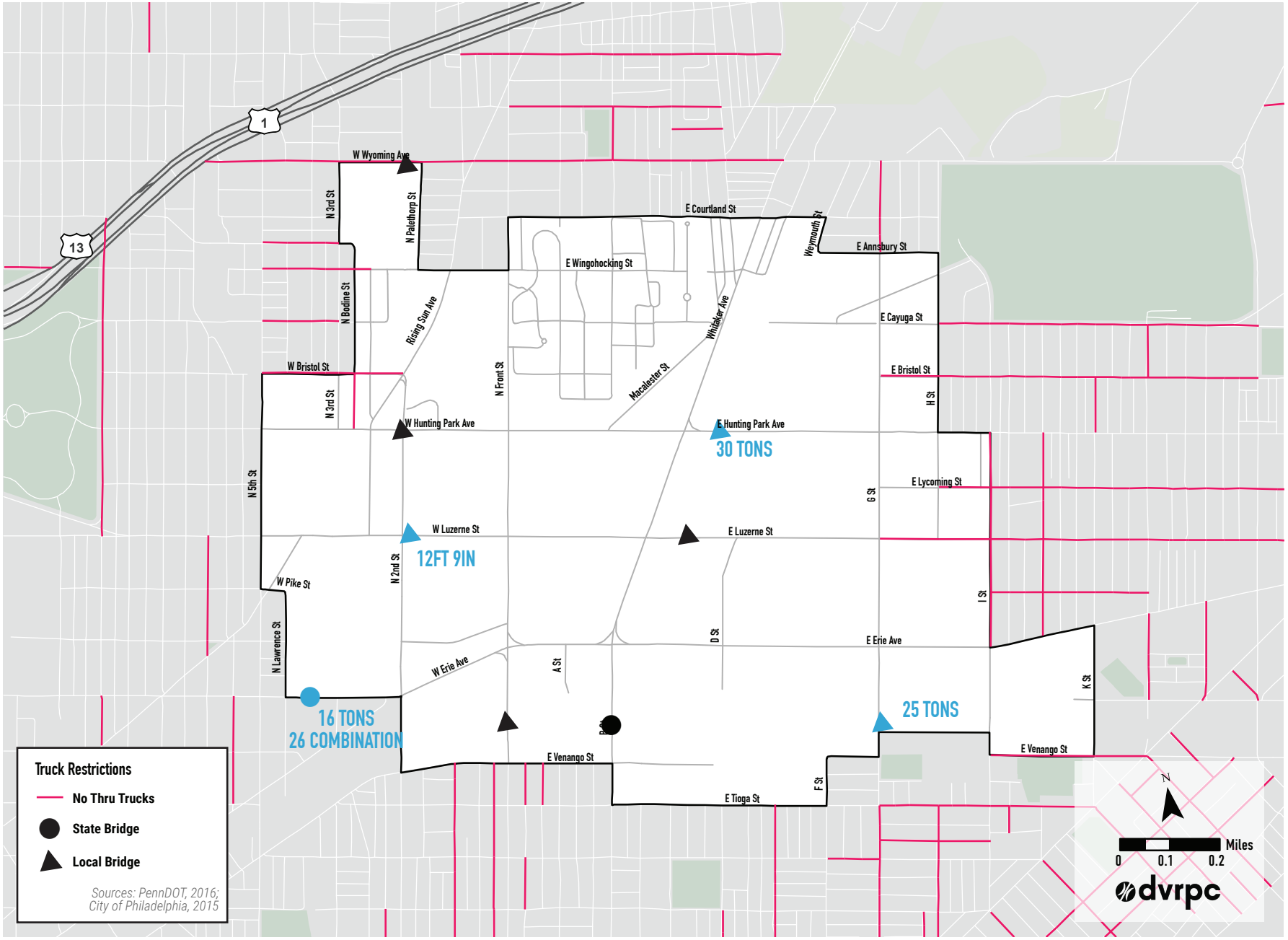
LOCAL RESTRICTIONS

Truck restrictions are an important and necessary component of a comprehensive truck network. To be effective these restrictions must be well planned, adequately justified, and appropriately communicated through signage and other supporting actions. Many of the surrounding residential streets in the Hunting Park East area have local truck restrictions. These are designated using "NO THRU TRUCK" signs. The patchwork of restrictions is communicated through a problematic implementation of restriction signage. Many of these signs leave trucks no choice of available routes upon approaching the intersection and no advance warning of the restriction. These restricted routes and intersections have been identified in Figure 16.

Bridge Weight Restriction on Hunting Park Avenue
Source: DVRPC

Local Truck Restriction on I Street
Source: DVRPC

FIGURE 16: TRUCK RESTRICTIONS



CHAPTER 4

RECOMMENDATIONS

This chapter details a list of recommendations to improve safety, road conditions, and truck maneuverability throughout the study area. These recommendations are not only intended to benefit members of the freight community by maintaining and ensuring access to industrial properties and local businesses, but also to enhance the quality of life for residents and reduce the possibility of conflict between trucks and other road users.

The recommendations in this report focused primarily on the safe and efficient movement of trucks in the context of a diverse set of road users and community types. These recommendations are intended to be achievable through local action and coordination. The core focus of these recommended actions is to better incorporate the considerations around freight into planning and engineering activities in the study area. Although there were additional transportation improvement opportunities that could have been considered, the scope of this study was focused on the truck freight impacts. The improvements and actions outlined in this section are intended to not only benefit the freight community, but also the entire community, by improving the quality of life and safety for all road users.

The recommendations that have been identified in this report can be categorized into three focus areas:

- designating and implementing a truck route network;
- implementing complete streets design considerations for future road improvements; and
- increasing clarity of directional and truck restriction signage.

Failure to incorporate these considerations not only impacts the performance of the network for trucks but can have substantial safety and quality of life impacts for other users.

FREIGHT NETWORK DESIGNATION

This study was established to address concerns around the interaction of trucks with other road users in one of Philadelphia's largest urban industrial centers surrounded by residential neighborhoods and a variety of other institutions. The first step in addressing these concerns is the identification and designation of a truck route network. This truck route network development is a critical step because it serves as the foundation for future geometric improvements and truck wayfinding signage, and informs the development of other road design improvements, ensuring that proper consideration is given to trucks where they are expected. Failure to incorporate these considerations not only impacts the performance of the network for trucks but can have substantial safety and quality of life impacts for other users. Ensuring adequate design considerations for trucks are made on various facilities will also help to preserve the access necessary for job-sustaining industries in the neighborhood.

This study was not intended to designate and approve a truck route network. Rather, it was intended to serve as a starting point for understanding truck route designation across the city. Route designation is a local activity that will require substantial outreach and engagement of the community to ensure appropriate buy-in. More details about truck route network implementation are found in Chapter 5.

The following truck route recommendations outline the process and recommended components of the truck route network that will need to be further refined and adopted locally by the city.

TRUCK NETWORK COMPONENTS

A truck route network is composed of multiple components that form the system. Not all of these components need to be communicated to road users through signage because some may be established primarily for planning purposes. The following recommended components are consistent with the standards established by DVRPC for truck route networks in communities throughout the region.

TRUCK-APPROPRIATE ROUTES

Limited Access Highways/Regional Freight Corridors

This component of the draft truck network represents the highest level of the truck-appropriate routes and is composed of regionally and nationally significant through routes. These include all Primary Highway Freight System components of the network, as well as major limited-access facilities or state and U.S. routes that serve regional travel. These facilities are often high-speed facilities that have limited interaction with pedestrians and other non-vehicular modes. The points at which this network interchanges with the surface street network are significant ingress/egress points for freight traffic to access the study area.

Primary Truck Routes

Primary Truck Routes create redundancy and move trucks from the Regional Freight Corridors network to lower-level routes and final origin/destinations. These routes will require special consideration for the design of transit, bike, and pedestrian activity because they are likely to carry higher volumes of trucks, including tractor-trailers.

Secondary Truck Routes

Secondary Truck Routes fill the gaps in the network, providing key connections to commercial corridors and individual freight generators. Although at a lower intensity than the Primary Truck Routes, this network will need to accommodate trucks that continue to serve commercial and industrial clients. As such, additional consideration should be made in the design of transit, bike, and pedestrian facilities that coexist on these routes.

Last-Mile Connectors

Last-Mile Connectors serve to connect intermodal terminals and high-intensity freight centers to the rest of the freight network. These roads experience high volumes of heavy freight traffic and will need to accommodate significant tractor-trailer volumes.

TRUCK-RESTRICTED ROUTES

Also of importance to the truck route network are truck-restricted routes. These are streets that have been identified and/or signed as restricted for all trucks or some trucks based on size or weight.

Geometric and Weight Restrictions

Geometric restrictions may limit the length, width, or height of a vehicle. The national standard trailer width is 102 inches, and 102-inch-wide trailers are permitted on all state roads in Pennsylvania unless there is a geometric constraint. In Pennsylvania, trailers are restricted to a maximum of 53 feet in length for a single trailer and 28½ feet for a twin trailer combination. Signage must be used to specify the length, width, or height limits of a road constrained beyond these standards.

Weight restrictions are applied to roads that are not structurally adequate to support heavy-truck loads. These restrictions may apply to, and be posted by, the gross load of a vehicle or the axle weight.

Local Restrictions

Local restrictions are those where a municipality may restrict truck traffic using a "No Trucks" sign with the option to allow an exception for local or residential deliveries using an "Except Local/Residential Deliveries" sign. Local truck restrictions can be effective in helping to manage the movement of trucks that are not appropriate for certain streets. It is important that there be clear policy guidance for the use of these restrictions. This policy should include the requirement to undertake analysis about the type of truck behavior being addressed and the impact to distribution of these trips as a result of any new restrictions. Failure to undertake a complete assessment of the goals and impacts of the truck restrictions prior to issuing them can result in more problems than they solve.

TRUCK ROUTE DESIGNATION PROCESS

DVRPC has created an approach to defining and adopting truck routes for municipalities across the region. This process has been refined through various studies, and its application in the City of Philadelphia is the core focus of the *Philadelphia Truck Route Planning Guidebook*. As a component of this study, DVRPC completed the first steps of the designation process that provide a foundation for future work in the Hunting Park East neighborhood.

PRELIMINARY SCREENING

Objective

- Understand primary generators and connectivity.
- Preliminary network matched to existing classification system.

The first step in defining a truck route network is to identify key connectivity and potential route options. This requires identification and mapping of key freight generators and attractors in the area of interest. These locations are the points or corridors that truck trips are directly serving and may include industrial properties, commercial corridors, or intermodal terminals as identified in Chapter 2 of this study. The screening then identifies the primary transportation connectivity of these generators back to the regional and national freight highway systems. The regional and national freight highway system facilities serving Hunting Park East are US-1 and I-95, both located beyond the boundary of the study.

The network defined in this screening is matched to compatible existing classification systems to better match the route function and the current classification of the streets. The reference classification system varies by jurisdiction, and in this study the project team utilized the Philadelphia complete streets systems.

DATA EVALUATION

Objective

- Quantify route segment activity.
- Confirm route segment role/use.

Key Data

- Preliminary network;
- INRIX Trips (truck trajectory data); and
- classification counts.

The second step of the process is the evaluation of the preliminary network to understand activity levels and trip distribution. This data evaluation step is meant to measure the validity of the initial assumptions. It provides quantitative data to the process, measuring the activity levels for each of the draft network facilities. Truck trip trajectory data provides better contextual information on how trucks currently move through the network and guides decisions on the appropriate facilities to be recommended for inclusion in the final network. Throughout this step, assumptions made in the screening step are reconsidered and the initial draft network re-evaluated to ensure appropriate connectivity was maintained.

REVIEW AND ADOPTION

Objective

- Educate the public and promote buy-in on route designation.
- Formally adopt the truck route components.

Key Players

- Local communities/residents;
- freight stakeholders; and
- City Council.

Once a final draft network has been established through the data evaluation step, the network is ready for review and adoption. This is a critical step in the advancement of the network. During this step, internal and external stakeholders have an opportunity to comment and adjust the recommended network. Formal review of the draft network should be conducted by PennDOT, as well as by the Streets Department; PCPC; and Office of Transportation, Infrastructure, and Sustainability. This review should be conducted with public outreach and education. The engagement of community members is an important piece of building support for the adoption of the network. Community education and outreach are intended to aid the public in understanding the what and why of truck routes, and allow for feedback to be considered and modifications to the final network designation to be made.

The final component of the review and adoption of the network is the act of adopting the network designation. The city currently adopts into ordinance truck restrictions, and it would be appropriate to consider the same for truck-appropriate network facilities.

APPLICATION

Objective

- Communicate new route designation to key stakeholders.
- Implement improvements for truck freight.

After adoption of the truck route network, the city must act to ensure the system is implemented. There are several applications for a truck route network. As was specified in the overview of network components, not all components are intended for signage. The primary use of the network is as a planning and design tool. To improve the utility of the truck route network as such a tool, the ***Philadelphia Truck Route Planning Guidebook*** (forthcoming) outlines the utility of the network and how it should be utilized with the ***Philadelphia Complete Streets Design Handbook*** to inform design considerations on various facilities. The network should also be communicated in city transportation maps and supported by a signage plan that reinforces the location of both preferred and restricted routes. Local truck route maps and outreach to key freight generators may also be leveraged to address specific areas of interest or locations where problematic routing was identified in earlier steps. Land use and economic development policies, such as those established in the ***North District Plan***, can also be used to complement truck route network planning.

DRAFT FREIGHT NETWORK

A proposed draft truck network has been identified in this study and is intended as a starting point for the city to consider for adoption. This network, as seen in Figure 17, provides proposed route designations based on the hierarchy of components outlined in the previous section of this report. These routes were identified based on existing movement patterns, trip generators, and key connections to the national network. These route designations, along with their complete streets classification, provide a foundation for understanding the specific considerations for trucks on these facilities. The next section highlights some of the *Philadelphia Truck Route Planning Guidebook* (forthcoming) details on the various treatment considerations for these route typologies.

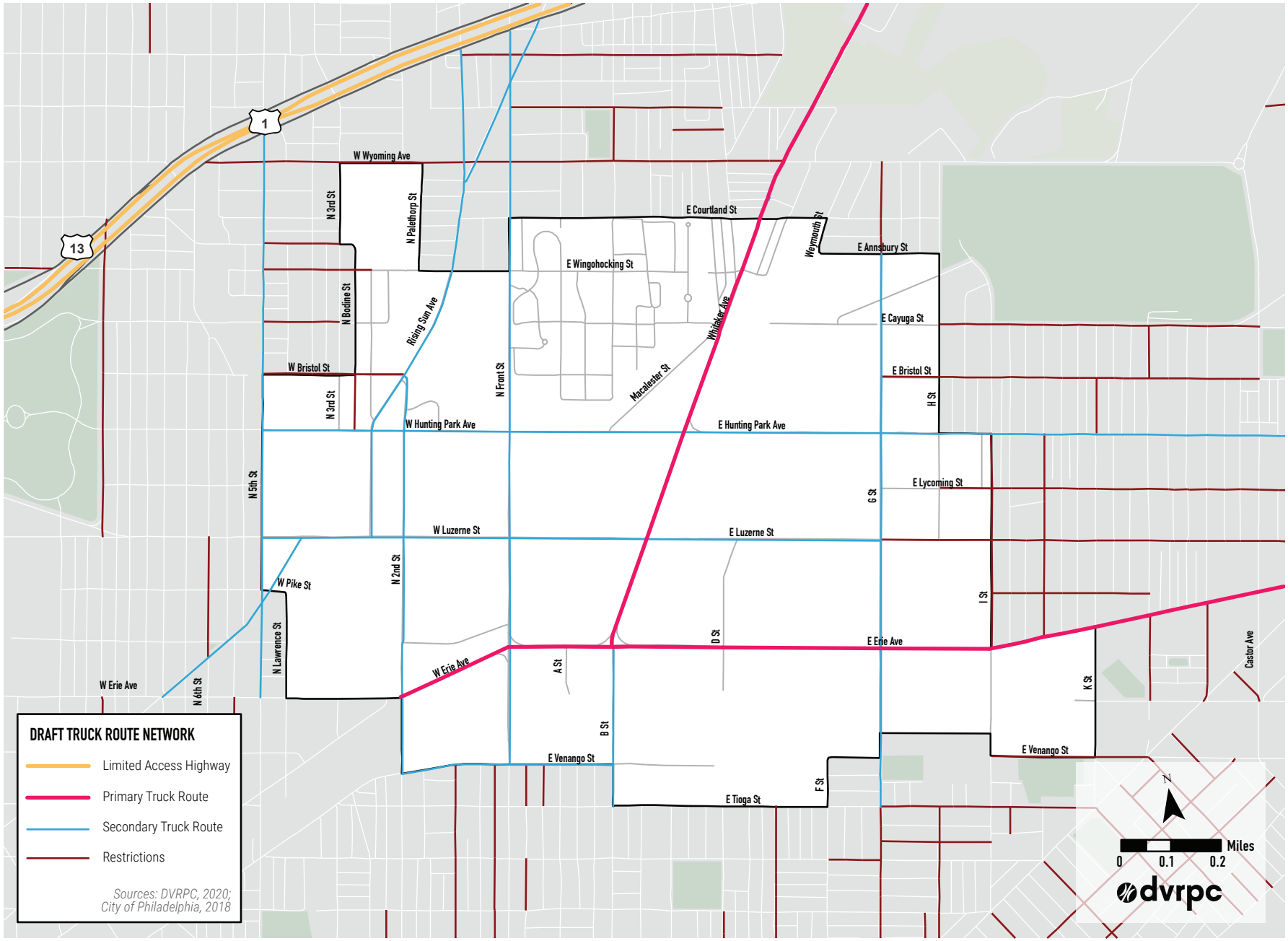
TRUCK-RESTRICTED ROUTES

The draft truck route network includes existing truck-restricted facilities. The routes identified in this draft network are based on existing signage and local designations. The inclusion of these is not validation that they have been appropriately justified, and these facilities should be reviewed by local entities prior to adoption into the network.

TRUCK-APPROPRIATE ROUTES

The draft network of truck-appropriate route components has been created based on existing activity and required network connectivity. This has been created as a starting point for evaluation by the local communities and the truck route working group. Several routes have existing restrictions and may require additional engineering studies to determine feasibility. Due to the timing of improvements and clearing of existing restrictions, it may be necessary to phase the truck route designations to ensure appropriate connectivity is maintained. Proposed truck route components are outlined in Figure 17.

FIGURE 17: HUNTING PARK EAST PROPOSED TRUCK NETWORK



DESIGN CONSIDERATIONS

Truck route designations serve several purposes, one particularly important for the City of Philadelphia being as a planning tool. The identified draft truck routes correspond with different expected levels of activity and varying balances between multiple road users. Understanding the interaction of many different roadway users is critical for selecting appropriate treatments that encourage safe roadway usage and a balance of street functions and space. Consideration of the unique needs of larger vehicles is especially important on truck routes. The *Philadelphia Truck Route Planning Guidebook* (forthcoming) was created with this in mind to recommend road treatments that take trucks into consideration and supplement those found in the *Philadelphia Complete Streets Design Handbook*.

This study serves as a foundation for future improvement plans that will incorporate specific design considerations that address safety concerns around trucks serving the study area while supporting and maintaining access to industrial business sites. One key highlight that analysis of the study area found was the presence of several locations where schools and hospitals are along suggested truck routes, intersections and corridors with high truck crash density, high truck volumes on roads, and a general typology of larger block lengths and wide intersections. To address safety concerns at these locations, design considerations for road treatments are provided as options for the city to pursue.

The design considerations in this section of the study are based on recommendations from the *Philadelphia Truck Route Planning Guidebook* (forthcoming) and are relevant to the road conditions in the Hunting Park East area. These are priority considerations to be incorporated into improvement programs that may be undertaken in the future. Although not always site specific, these considerations will be critical in helping to ensure the safety of all road users throughout the study area. Additional design considerations for truck routes can be found in the *Philadelphia Truck Route Planning Guidebook* (forthcoming). These considerations are organized by the categories outlined in the Design Considerations Matrix:

- Building and Furnishing;
- Bicycle;
- Curbside Management;
- Intersections and Crossings;
- Cartway/Vehicle; and
- Truck Turning Movements.

BUILDING AND FURNISHING

Furnishing Zone Clearance: Elements in the furnishing zone should allow sufficient clearance for mirrors on trucks and buses that are in the extreme right lane of a facility, especially if there is not a buffer between the travel lane and the curb. Examples of roadside elements that should be considered include, but are not limited to, signs and sign supports, trees, landscaping items, and power poles. As the city and community groups seek to improve the streetscapes throughout the study area, careful consideration should be given to the furnishing zone along truck routes so as to ensure the preservation of furnishing zone elements and safe truck access.

Loading Zone Clearance: Where commercial deliveries are expected or loading zones exist, a reasonable distance should be maintained between the parked commercial vehicle and elements of the furnishing zone. This horizontal clearance zone should be maintained along an expected pedestrian delivery path to allow typical dollies, hand carts, pallet jacks, and other equipment that an operator may use to move goods to pass unimpeded.

TD BANK GROUP (TD) GREEN SPACE GRANT

In June 2020, Hunting Park was awarded a $20,000 TD Green Space Grant for innovative urban greening and tree planting projects in underserved areas of the community. This grant is expected to be used to plant new trees in the Hunting Park neighborhood and is an opportunity to use green spaces to create a more vibrant and livable community. Given the amount of freight traffic in the neighborhood, this is also an opportunity to consider the placement of new trees to maintain furnishing zone and loading zone clearance. Proper placement will help to encourage safe curb usage for trucks and the sustainable growth of the new trees.

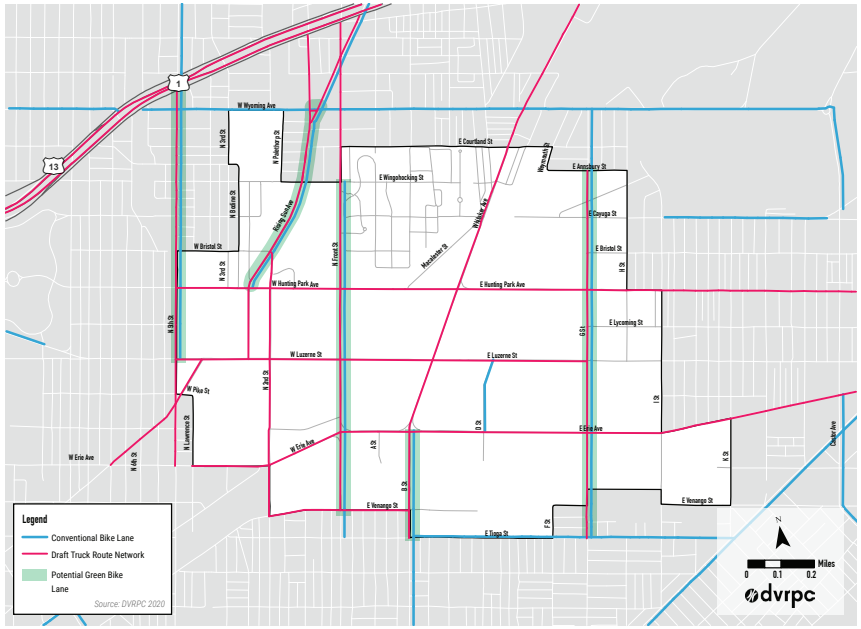
Source: www.esperanza.us/hunting-park-philadelphia-awarded-td-green-space-grant/

BICYCLE

Green-Colored Pavement: Green paint can be used as a spot treatment to delineate areas where conflict may occur at an intersection or at high-volume-generating industrial driveways between cyclists and large vehicle operators. The delineation of conflict areas, especially in the Hunting Park East industrial area, helps to reinforce to truck drivers the presence of the more vulnerable road users. Recommended installation locations for delineated conflict areas are at intersections along truck routes where there is also a dedicated bike lane, such as Front Street and G Street. Figure 18 shows some of these recommended locations.

Buffered Bike Lane: Buffered bicycle lanes may use parking or a buffer space to provide a separate and dedicated bicycle space on wider roadways for cyclists. These can also be helpful in allowing for wider turning movements at intersections by increasing curb radii for large vehicle maneuvers without an additional travel lane or wider street width. Due to the protected nature of these lanes along a street length, it is recommended that conflict areas at intersections, driveways, or alley entrances be delineated to improve safety. When bicycle facilities are desired on Primary Truck Routes, it is recommended that designs seek to incorporate a buffered bike lane or cycle track in lieu of a conventional bike lane where adequate right-of-way is available.

FIGURE 18: POTENTIAL GREEN PAVEMENT LOCATIONS



Source: DVRPC

Buffered Bike Lane on Market Street
Source: DVRPC

CURBSIDE MANAGEMENT

Loading Zone Geometry: Design of loading zones should provide appropriate lane width and access geometry to ensure delivery vehicles can fit into the facility without obstructing adjacent lanes or traversing other modal spaces. Many businesses in the Hunting Park East area have street-facing facilities and some with limited off-street loading. Retrofitting these facilities for alternative service orientation is often expensive and infeasible. Ensuring that the geometry of on-street loading near these businesses accommodates trucks will allow operations that do not obstruct travel lanes.

INTERSECTIONS AND CROSSINGS

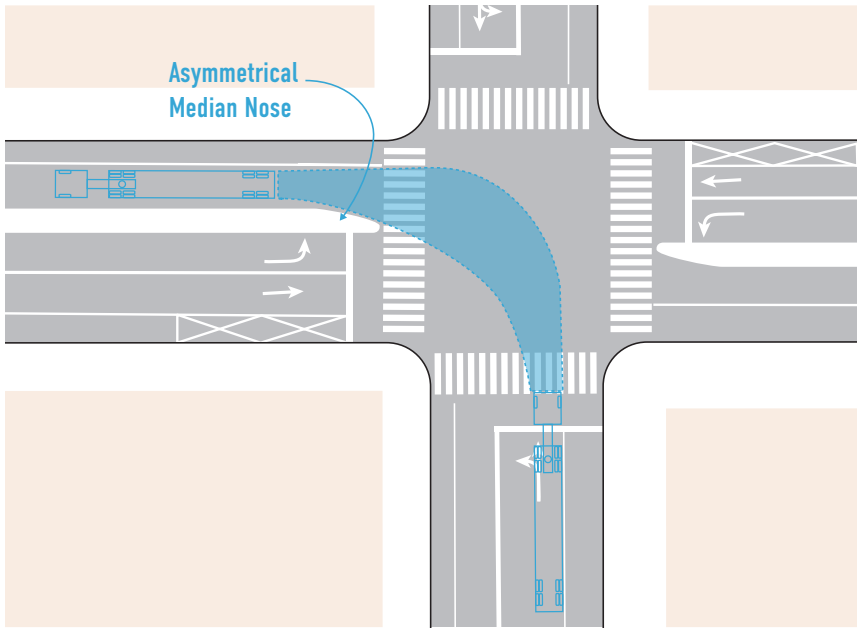
High-Visibility Crosswalks: High-visibility crosswalks use longitudinal ladder markings that can be seen from about twice as far away as the traditional two-transverse-lines marking. The use of PennDOT's R1-6 "In-Street Pedestrian Crossing" signs can also bring extra visibility to the intersection. Recommended installation locations for high-visibility crosswalks are at intersections along all truck routes where there is significant interaction between vehicular and pedestrian traffic, especially near schools. Intersections that occur near a school or hospital facility should be prioritized for high-visibility crosswalk installation. Examples of this already exist in the study area at the intersections of Roberto Clemente Walk and Erie Avenue and St. Chris Drive and Erie Avenue.

High-Visibility Crosswalk at the Intersection of Erie Avenue and Roberto Clemente Walk
Source: DVRPC

CARTWAY/VEHICLE

Alternative Median Island: Median islands are often utilized to create safer crossing distances for pedestrians and help to limit the width of right-of-way for vehicles. When utilized on truck routes in the Hunting Park East study area, consideration should be made for the need to implement mountable curbs or asymmetrical median noses to accommodate larger control vehicles. Figure 19 shows the implementation of an asymmetrical alternative median nose.

FIGURE 19: ALTERNATIVE MEDIAN ISLAND

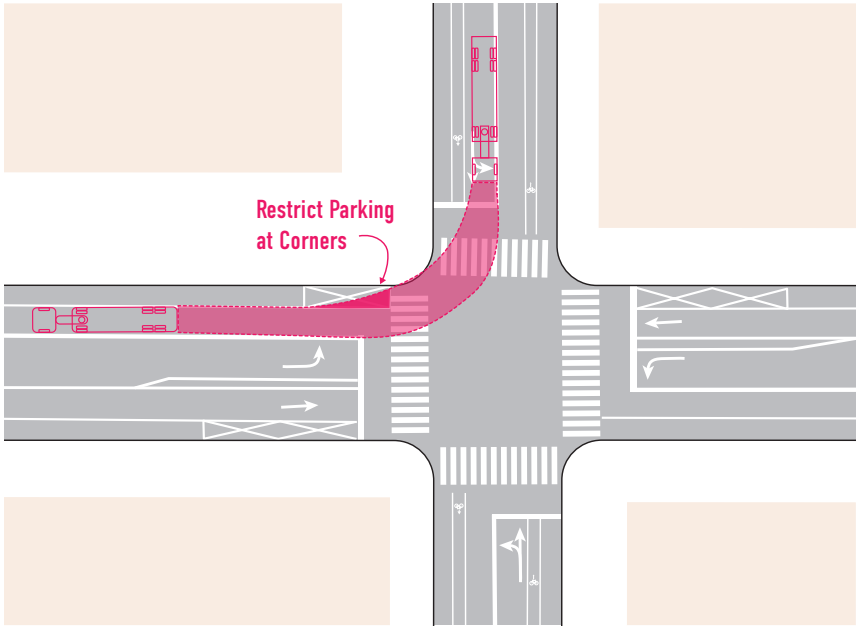


Source: DVRPC

TRUCK TURNING MOVEMENTS

Restricted Parking at Intersections: Restricting parking near intersections can help to provide a clear turning path for freight, transit, and emergency vehicles. Similar restrictions are also effective at midblock curb cuts to allow trucks to access facility driveways and loading areas without stopping traffic to make a multi-point maneuver. Parking can be regulated near intersections with the use of signs, curb markings, or pavement striping to provide motorists with additional visual reference for parking restrictions. These restrictions and setbacks from driveways and intersections have the added benefit of increasing visibility for both turning trucks and pedestrians, helping to alleviate the potential for conflict. Figure 20 shows how restricted parking can provide trucks with a clear turning path.

FIGURE 20: TRUCK TURNING MOVEMENTS



Source: DVRPC

SIGNAGE STANDARDS

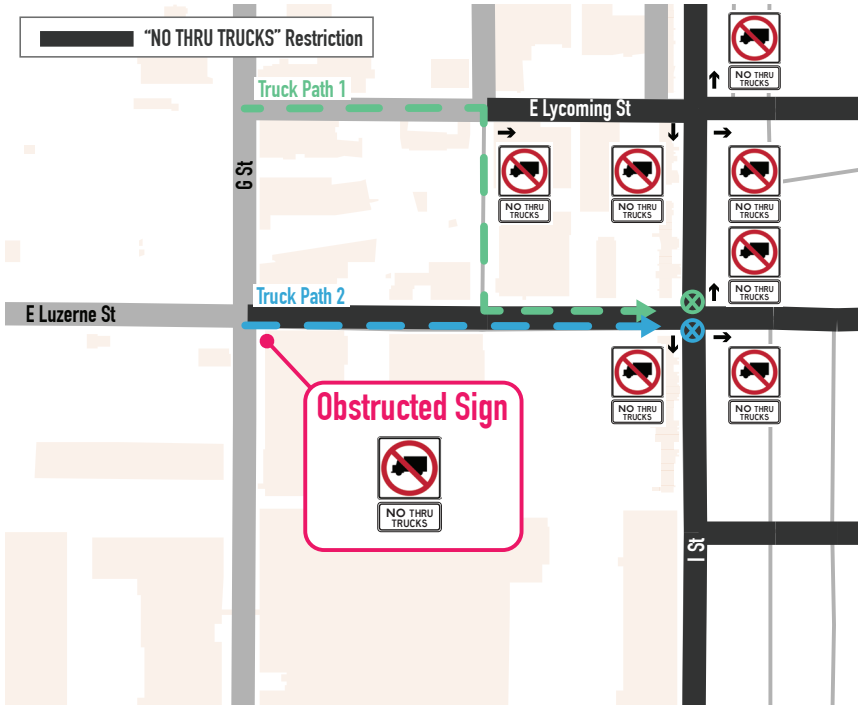
REVIEW LOCATION OF SIGNAGE

Advanced communication of preferred and alternative routes, as well as restrictions, is an essential part of establishing a usable truck wayfinding system. Existing signage restricts trucks on some local streets and provides route guidance on others. However, in some locations the signage is located after the appropriate decision point, leading to drivers committing to a route they should not be on or looking for alternatives on streets that are not appropriate for large trucks. To address these issues, the location of signage should be carefully reviewed. Figure 21 shows the area east of G Street on Lycoming and Luzerne streets, where restrictive signage is located after the decision point. This is an area where signage review is recommended, and advanced signage may be needed at the intersection of G Street and Lycoming Street and the intersection of G Street and Luzerne Street.

SIGNING TRUCK ROUTES

The designation of a network of truck routes is the first step in developing a functional signage plan. Utilizing these designated routes, the city should undertake a plan to install and maintain a series of truck route wayfinding and restriction signs that support the preferred routes identified.

FIGURE 21: EXISTING RESTRICTION SIGNAGE EAST OF G STREET



Source: DVRPC

TRUCK-APPROPRIATE ROUTE SIGNAGE

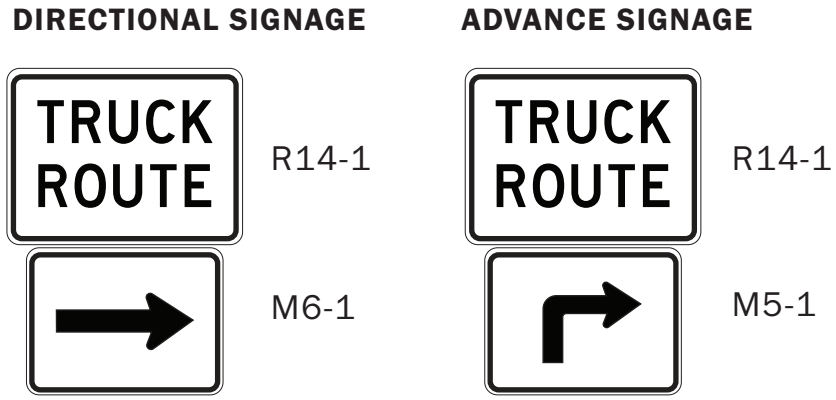
In order to guide trucks onto the roads that are intended to accommodate them, a signage plan should include consistent placement of signs to reinforce the route. This can be done through the use of three types of truck route signs: directional, advance, and on-route. These signs are described in detail in Table 3 and displayed in Figure 22.

In addition to the truck route signage, the signage plan should consider utilizing a "TO Marker" (M4-5) in conjunction with U.S. route or Pennsylvania route markers, along with corresponding arrow plaques to direct truck traffic to major regional freight routes. This helps to supplement the truck route wayfinding and reinforce to drivers that the route provides the necessary highway interchange for their trip. In the Hunting Park Area this could include signage to I-95 and US-1.

TABLE 3: TRUCK ROUTE SIGNS AND RECOMMENDED LOCATIONS

SIGN TYPE	DESCRIPTION	LOCATION
DIRECTIONAL	Truck route sign (R14-1) with 90-degree turn arrow plaque (M6-1R/L) pointing to truck route at intersections or other decision points.	All intersections. Points at which truck routes turn left or right at intersections with non-truck routes. At base of exit ramps. At tunnel and bridge exits.
ADVANCE	Truck route sign (R14-1) with advance 90-degree turn arrow plaque (M5-1R/L) in advance of intersections where trucks have to turn onto truck route.	150 feet before intersection.
ON-ROUTE	Truck route sign (R14-1) reassuring driver that they are on a truck route.	All truck routes. One-half-mile increments.

FIGURE 22: TRUCK ROUTE SIGN CONFIGURATION



Source: DVRPC

TRUCK-RESTRICTION SIGNAGE

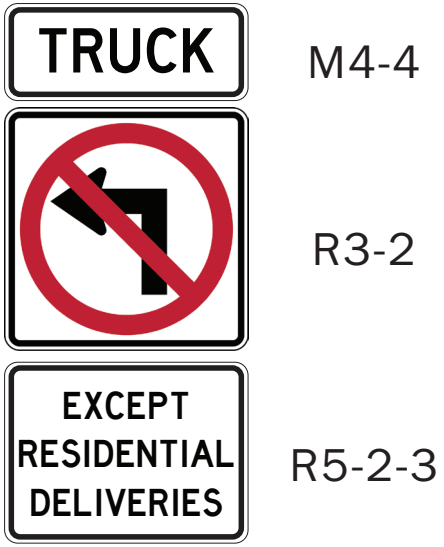
Similar to the application for truck route signs, restriction signage should also be incorporated into the signage plan. The Hunting Park East area predominately uses the "NO THRU TRUCKS" (R5-2) local restriction signage and the bridge weight limit restriction signage "Weight Limit (__) Tons" (R12-1). Restriction signage is fairly consistent across the study area. Advance signage is also common for weight and height restrictions. The two types of signage, advance and restriction signs, are critical to communicating restrictions to drivers and are described in detail in Table 4.

TABLE 4: TRUCK ROUTE RESTRICTION SIGNS AND RECOMMENDED LOCATIONS

SIGN TYPE	DESCRIPTION	LOCATION
ADVANCE	Applicable restriction sign with advance move restriction.	150 feet before intersection.
RESTRICTION	Applicable restriction sign at the intersection marking the beginning of the restricted route.	At intersections nearest the beginning of the restriction, at which point an alternative move is available to the driver.

Although most study area restrictions were signed to standards, some locations may require additional consideration as a part of the review of existing sign locations. The study area would also benefit from consistent and advanced signage for local truck prohibitions on residential streets. To ensure this consistency and provide more advanced notice to drivers, it is recommended that the city utilize the sign standard shown in Figure 23. The inclusion of this signage, on streets in advance of their intersection with restricted routes, will improve the effectiveness of the restriction signage that may already exist but is not visible until a truck has committed to a turning movement onto the restricted route.

FIGURE 23: PENNDOT STANDARD LOCAL TRUCK PROHIBITION ADVANCE SIGNAGE



Source: DVRPC

TRUCK PARKING/QUEUING

Demand for truck parking is high in the Hunting Park East area, given the number of freight-generating businesses. Although many facilities have dedicated parking and off-street loading for their vehicles, others do not have enough off-street space and rely on on-street loading and parking zones for truck queuing, parking, or for loading and offloading.

Just like passenger cars, paying to park a truck for an extended period of time can be an expensive proposition. As a result, and in an attempt to save time and money, truck drivers may seek out free, no-pay parking alternatives on city streets near facilities. The parking of tractor-trailer combinations, unattached tractors, pick-up trucks with snow plows, micro-buses, or other types of commercial vehicles on streets in neighborhoods on an overnight basis or for even longer periods of time is perceived as a nuisance to some city residents and businesses. There are many places where this is legal in the city, and others where "No Truck" Parking signage is used to restrict truck parking.

During DVRPC's targeted outreach to industrial businesses in the area, a few concerns were raised regarding truck parking in the neighborhood. These include:

- queuing outside of facilities causing congestion on roads;
- not enough public truck parking available; and
- often legal street parking near facilities is occupied by parked employee vehicles.

The lack of truck-parking capacity is a regional and national issue. Local action is essential to addressing this shortage and the resulting issues. Industrial areas are locations where action can be focused because they are a primary generator of trips, and transportation infrastructure should be designed to accommodate trucks. In the Hunting Park East study area, most industrial uses are historic or will be the result of reuse of existing buildings. This, along with limited inclusion of truck-parking requirements in the city zoning code, limits the viability of requiring more off-street parking as a part of new development and redevelopment projects. Efforts should be made by the city to discuss gate operations with major generators to maximize the off-street queuing capacity where possible, reducing overflow into public right-of-way.

It is also recommended that the City of Philadelphia pursue opportunities to utilize larger, vacant, or underutilized parcels in the Hunting Park East area for truck parking. This can include more formal facilities with supporting services or temporary facilities on underutilized commercial parking lots. Without the provision of additional capacity for queuing or overnight parking, it is likely illegal truck parking will continue in the study area, regardless of signage and enforcement.

Signage Asking Carriers to Use On-Street Parking
Source: DVRPC

Trucks Using On-Street Parking and Reversible Lane
Source: DVRPC

CHAPTER 5

NEXT STEPS

The recommendations in this report provide an outline for evaluating truck activity and a foundation for designating a truck route network for the Hunting Park East area. Follow-up actions will need to be taken by the city in partnership with local communities to advance these recommendations. This chapter highlights these next steps.

This study identified recommendations that will provide the city with the tools and guidelines to create a transportation system in Hunting Park East that safely and efficiently accommodates truck traffic with other modes. These recommendations will require local action and ongoing coordination to ensure that they are completed. Community participation and engagement will be critical in the development of some of the recommendations, and additional studies will be necessary to refine the design of recommendations. This chapter provides an overview of funding sources that exist for these types of transportation projects, implementation steps for each of the major components of the recommendations, and a summary of the benefits of recommendations and the resources developed as a part of this study.

FUNDING PROGRAMS

Securing funding is a crucial step toward project implementation. There are a number of competitive grant programs available in the DVRPC region to help municipalities cover the cost of the transportation improvements described in this report. Possible funding sources for the improvements identified in this study are detailed below.

TRANSPORTATION AND COMMUNITY DEVELOPMENT INITIATIVE (TCDI)

The TCDI is an opportunity for DVRPC to support growth in individual municipalities of the Delaware Valley through planning initiatives that implement the region's long-range plan. TCDI grants support early stage planning, design, and feasibility studies. Eligible projects reinforce and implement improvements in designated centers and improve the overall character and quality of life within the region. Among the eligible activities are wayfinding plans and mobility elements of master plans. Funding is awarded every two years.

ACT 89 MULTIMODAL TRANSPORTATION FUND (MTF)

The design recommendations in this report are multi-modal in nature, making these improvements eligible for the Act 89 MTF program. The MTF provides grants to encourage economic development and ensure that a safe and reliable system of transportation is available to the residents of the commonwealth. The program is administered by PennDOT and the Department of Community and Economic Development (DCED) under the direction of the Commonwealth Financing Authority (CFA).

MTF—PENNDOT

Eligible projects for PennDOT's MTF program include projects related to streetscape; bicycle and pedestrian facilities; improved signage; and improvements to an integrated transportation corridor in order to improve the productivity, efficiency, and security of goods movement to and from Pennsylvania ports.

MTF—DCED/CFA

On behalf of the CFA, the DCED accepts applications every year between March 1 and July 31 for multi-modal projects. Project eligibility for this funding source is similar to the PennDOT MTF.

DCED MUNICIPAL ASSISTANCE PROGRAM (MAP)

The DCED MAP provides funding to assist local governments to plan for and efficiently implement a variety of services and improvements. Shared service activities and community planning are eligible for MAP funding. Community planning projects that could be funded through MAP include parts of comprehensive plans and land use ordinances. Activities related to the multi-municipal effort to develop updated ordinances and designate the truck route network and wayfinding system could fall under the eligibility of this funding program.

TRANSPORTATION ALTERNATIVES SET-ASIDE PROGRAM (TA)

TA is a federal program administered by PennDOT and DVRPC. TA provides federal funds for community-based "non-traditional" surface transportation projects designed to strengthen the cultural, aesthetic, and environmental aspects of the nation's intermodal system. Projects must be directly related to surface transportation and be accessible to the public. TA funds are provided on a reimbursement basis. Eligible projects include design and construction of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation. Projects must be authorized for construction within two years of the grant notification, and they must have formal community support.

CONGESTION MANAGEMENT AND AIR QUALITY IMPROVEMENT (CMAQ) PROGRAM

The DVRPC Competitive CMAQ Program funds transportation projects that will improve air quality and reduce traffic congestion in the DVRPC region. The implementation of the strategies outlined in this plan has the potential to reduce congestion and the number of idling trucks. Projects that demonstrably reduce air pollution emissions and help the region meet the federal health-based air quality standards are CMAQ-eligible. All CMAQ projects must come from the TIP and the program operates on a reimbursement basis, after the work is completed.

IMPLEMENTATION STEPS

Moving forward, implementation of the recommendations will require coordination between the city and the local community. The following implementation plans help to summarize roles and outline steps for each of the recommendations. These include identification of responsible agencies, the timeline for acting on the recommendation component, and a rough cost estimate.

Project element cost estimates are provided for each of the action steps identified by the project team. The cost estimates are assigned to categories of high ($$$), moderate ($$), and low ($). High-cost steps involve a larger commitment from multiple funding sources and construction of new facilities or signage, and may require several years of lead time in programming the required funds. This category will generally cost in excess of $750,000. Moderate-cost ($$) project elements are smaller construction activities and/or planning and engineering efforts that help to refine implementation components. Components in this category are estimated to cost between $100,000 and $750,000. Low-cost ($) components are small planning projects, maintenance, or communication efforts. These projects could be handled by city staff if capacity exists. These components are estimated to cost less than $100,000. Components without an assigned category for cost are items that will have no cost but will require local action and coordination to complete.

DESIGNATION AND IMPLEMENTATION OF TRUCK ROUTE NETWORK

Truck route network designation and implementation should occur over multiple phases, and the recommendations in this report act as a foundation for the formal designation and implementation that must be advanced by the city. These phases are:

- Designate a Philadelphia Truck Working Group.
- Designate Primary Truck Route Components.
- Designate Secondary Truck Route Components.
- Implement the Truck Route Network.

Tables 5 through 8 outline the priority actions for each of these four phases. Formal designation will require looking at the Primary Truck Route networks at a larger scale, such as the district or city level, before finalizing Secondary Truck Routes in the Hunting Park East area or other neighborhoods. During the designation of the secondary network, it is especially important to conduct community outreach and engagement to ensure that the community has a role in defining the network and clearly understands the various roles of facilities. This sort of engagement and education is critical to building the support for a successful truck route network.

A truck working group, potentially consisting of the members of this steering committee, is recommended to lead the designation and implementation work. For planning and engineering activities related to the truck route network, TCDI and/or MAP could be a source for funding.

TABLE 5: IMPLEMENTATION PHASE 1: DESIGNATE A PHILADELPHIA TRUCK WORKING GROUP

RECOMMENDATION	RESPONSIBLE AGENCY	TIMELINE	COST
Identify members for citywide truck route implementation working group	City of Phila. DVRPC	Short	–
Define clear purpose and role around the evaluation, communication, and designation of truck routes and restrictions	Truck Work Group City of Phila. DVRPC	Short	–
Create an action plan and schedule, building on actions outlined in the Hunting Park East Freight Access Study and the *Philadelphia Truck Route Planning Guidebook*	Truck Work Group City of Phila.	Short	$

TABLE 6: IMPLEMENTATION PHASE 2: DESIGNATE PRIMARY TRUCK ROUTE COMPONENTS

RECOMMENDATION	RESPONSIBLE AGENCY	TIMELINE	COST
Conduct an evaluation of draft primary route designations in a larger scope analysis (district or citywide level) using the purpose and role defined in Phase 1	Truck Work Group PCPC PennDOT	Short-Medium	$–$$
Undertake an inventory and evaluation of all signed geometric restrictions on proposed Primary Truck Routes to ensure proper engineering justification and conduct updated engineering studies where necessary	Truck Work Group Streets Department PennDOT	Short-Medium	$–$$
Update the draft route and restriction designations in response to updated engineering analysis	Truck Work Group City of Phila. PennDOT	Short-Medium	$

TABLE 7: IMPLEMENTATION PHASE 3: DESIGNATE SECONDARY TRUCK ROUTE COMPONENTS

RECOMMENDATION	RESPONSIBLE AGENCY	TIMELINE	COST
Undertake an inventory and evaluation of all signed geometric restrictions on proposed Secondary Truck Routes to ensure proper engineering justification and conduct updated engineering studies where necessary	Truck Work Group Streets Department PennDOT	Short-Medium	$–$$
Conduct additional evaluation of draft route designations, including engineering studies where appropriate to identify any remaining geometric restrictions not scheduled to be addressed in currently programmed projects	Truck Work Group Streets Department PennDOT	Short-Medium	$–$$
Update the draft route and restriction designations in response to updated engineering analysis	Truck Work Group City of Phila. PennDOT	Short-Medium	$
Hold community information sessions and conduct outreach with residents and industry on the draft secondary network to provide education on the purpose and need of the routes, as well as gain feedback on the current designations	Truck Work Group City of Phila.	Short-Medium	$

TABLE 8: IMPLEMENTATION PHASE 4: IMPLEMENT THE TRUCK ROUTE NETWORK

RECOMMENDATION	RESPONSIBLE AGENCY	TIMELINE	COST
Draft and adopt a local ordinance for designation of routes and restrictions	Truck Work Group City of Phila.	Short-Medium	—
Integrate truck routes into municipal maps and share final designations with DVRPC for inclusion in regional network products	City of Phila. DVRPC	Medium	$
Develop printed route guides for distribution to drivers at major freight generators; these can be customized per generator to improve the usability and better reach drivers that frequent the study area	Truck Work Group Freight Generators	Medium	$
Adopt local geometric standards for design and control vehicles on designated truck routes in coordination with PennDOT engineers	Streets Department PennDOT	Medium-Long	$

DESIGN CONSIDERATIONS IMPLEMENTATION

The design considerations in this study are important for promoting a complete streets environment that is safe and efficient for all road users. Their purpose is to help reduce potential conflict between large trucks and other modes, especially at high-traffic intersections. The implementation of these recommended improvements could be funded through grant programs, such as the TA or MTF; incorporated into TIP projects; and/or included as a component of new land development projects. Table 9 outlines the priority actions for advancing these recommendations.

TABLE 9: DESIGN CONSIDERATIONS NEXT STEPS

RECOMMENDATION	RESPONSIBLE AGENCY	TIMELINE	COST
Refine locations for design treatments	City of Phila.	Short	$
Identify and pursue funding for design and construction of design treatments	City of Phila.	Medium	$$
Incorporate design considerations into planned transportation improvement projects	City of Phila. PennDOT	Medium-Long	$$–$$$

EVALUATION OF TRUCK WAYFINDING AND TRUCK NETWORK SIGNAGE

The study recommendations for enhancing the effectiveness of truck-related signage are essential to addressing traffic flow issues, reducing conflicts with other modes, and preserving the quality of life of residents while accommodating the local freight industries and economic generators. The development and implementation of a signage plan will require phased action, as outlined in Table 10. For planning and engineering activities related to truck route signage, TCDI and/or MAP could be a source for funding. Implementation of the final signage plan will require a combination of local funding with support from grant programs, such as MTF and MAP.

TABLE 10: WAYFINDING AND SIGNAGE IMPROVEMENTS NEXT STEPS

RECOMMENDATION	RESPONSIBLE AGENCY	TIMELINE	COST
Confirmation of the truck restrictions signage inventory prepared as a part of the Hunting Park East Freight Access Study	City of Phila.	Short	$
Update local truck restriction signage to be consistent with recommendations in this report, including the deployment of new advance signage for local restrictions	City of Phila. PennDOT	Short-Medium	$$
Undertake a study for the development of a final signage plan with engineering and costs for clear communication of the final designated truck network routes and restrictions	Truck Work Group City of Phila.	Medium	$$
Implement the final signage plan	City of Phila. PennDOT	Medium-Long	$$$

HUNTING PARK EAST

FREIGHT ACCESS STUDY

Publication Number:
20021

Date Published:
December 2020

Geographic Area Covered:
City of Philadelphia, North District, Hunting Park East

Key Words:
Complete Streets, Industrial Development, Freight, Freight Centers, Truck Route

Abstract:
At the request of the City of Philadelphia, the Hunting Park East Freight Access Study was undertaken to examine neighborhood freight generation and patterns in more detail and to provide recommendations and strategies that support the industrial economic center while ensuring the safe and efficient movement of both people and goods. This study documents the existing land use and employment patterns; provides an analysis of activity and identified trends; and lays out a set of recommendations for designating and implementing a truck route network, complete streets design considerations, and increased clarity of directional and truck restriction signage. This report is divided into five chapters: introduction, background, existing transportation conditions, recommendations, and next steps.

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