

ROUTES

611

&

263

Corridor Study

Montgomery County

HATBORO/JENKINTOWN
BOROUGHES
ABINGTON/CHELTENHAM
/UPPER MORELAND
TOWNSHIPS

Implementation Support

Part B
Community
Wayfinding Signing



The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals, and the public with a common vision of making a great region even greater. Shaping the way we live, work, and play, DVRPC builds consensus on improving

transportation, promoting smart growth, protecting the environment, and enhancing the economy. We serve a diverse region of nine counties: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey. DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region — leading the way to a better future.



The symbol in our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

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Project Overview:

Background

The Delaware Valley Regional Planning Commission (DVRPC) completed the *Routes 611 & 263 Corridor Study*, in Eastern Montgomery County, Pennsylvania, in December 2009. That study's thrust was to identify actions to connect the corridor's major land use and transportation assets and integrate its municipalities: Cheltenham Township, the Borough of Jenkintown, Abington Township, Upper Moreland Township, and the Borough of Hatboro (**Figure 1**)—to promote the area as a unique place in which to live and do business.

Locally, the corridor is known as The Old York Road. Variably, PA 611 and PA 263 are named Old York Road or York Road, and their connected alignment through the study area served as a stagecoach route between Philadelphia and New York City in the early 18th century. The area is rich with the history of the Gilded Age, and continues to be a vibrant and diverse suburb of Philadelphia.

One of the *Routes 611 & 263 Corridor Study* recommendations charged DVRPC staff to develop a uniform, coordinated wayfinding signing plan that promotes a unique identity and connects and guides travelers from major highway gateways to major destinations in the corridor—across municipal borders. To supply more utility, staff also provided cost estimates, identified potential funding sources to help pay for the signing plan, and created and supplied tools for decision making.

Research was conducted using the following as principal resources:

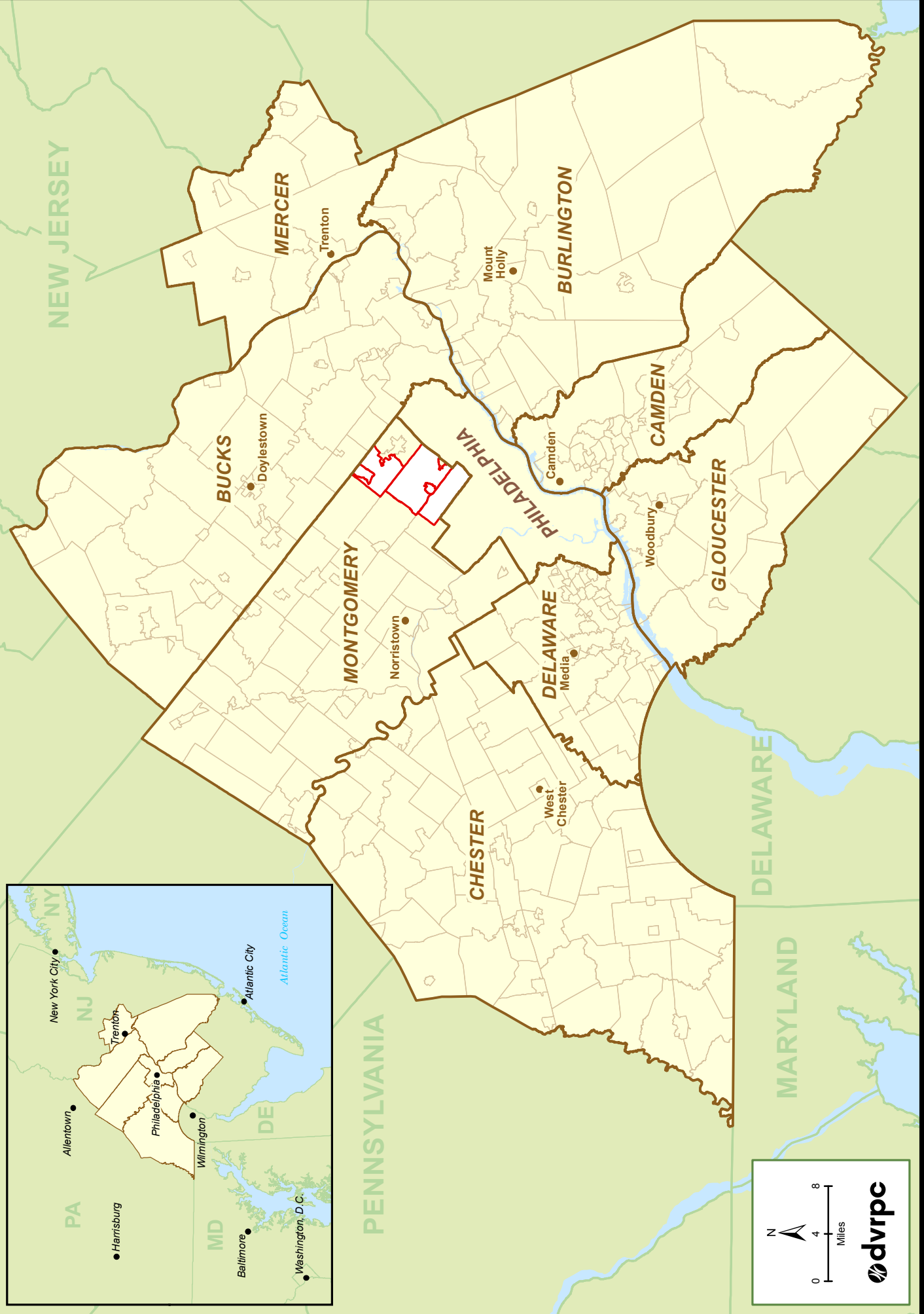
- *Traffic Engineering Manual*, Chapter 2—Signing, PennDOT Publication 46, February 6, 2012;
- *Manual on Uniform Traffic Control Devices* [MUTCD], 2009 edition;
- PennDOT's GIS-Referenced Sign Database for Engineering District 6-0;
- *PennDOT Toolbox for Development of a Wayfinding Signing Region*, undated; and
- PennDOT Engineering District 6-0 Traffic Personnel.

Through the research, it was determined that compliance with the MUTCD is of utmost importance. The MUTCD promotes safe and efficient vehicular travel across the nation. Its standards assure signs:

- have uniform designs;
- have understandable messages;
- are systematically placed;
- use cost-effective materials; and
- are retroreflective and legible.

MUTCD compliance will not jeopardize eligibility for federal-aid funds; does not expose the applicant to increased tort liability; is required by the Pennsylvania Motor Vehicle Code (Title 75) and, as such, pertains to all public access roads and highways in the Commonwealth. PennDOT has adopted the current MUTCD and requires its design standards for area-wide plans that include signs in PennDOT's right-of-way, and thus PennDOT approval of the plan set.

DVRPC prepared the project deliverables to satisfy the MUTCD requirements and design standards. The project and its products provide a resource for planning, decision making, and implementation in The Old York Road Corridor and serve as a template for other municipalities considering community wayfinding signing.



Signing Theory

Wayfinding signing plans can be very simple and developed for a very small area—for example, to guide travelers to the driveway of an individual, locally important attraction from the nearest public roadway. Conversely, they can be elaborately designed to serve very large areas containing multiple activity centers—each with its own set of attractions. It is within the latter category that PA Routes 611 and 263 / The Old York Road Corridor community wayfinding signing project was developed.

MUTCD-compliant community wayfinding guide signs:

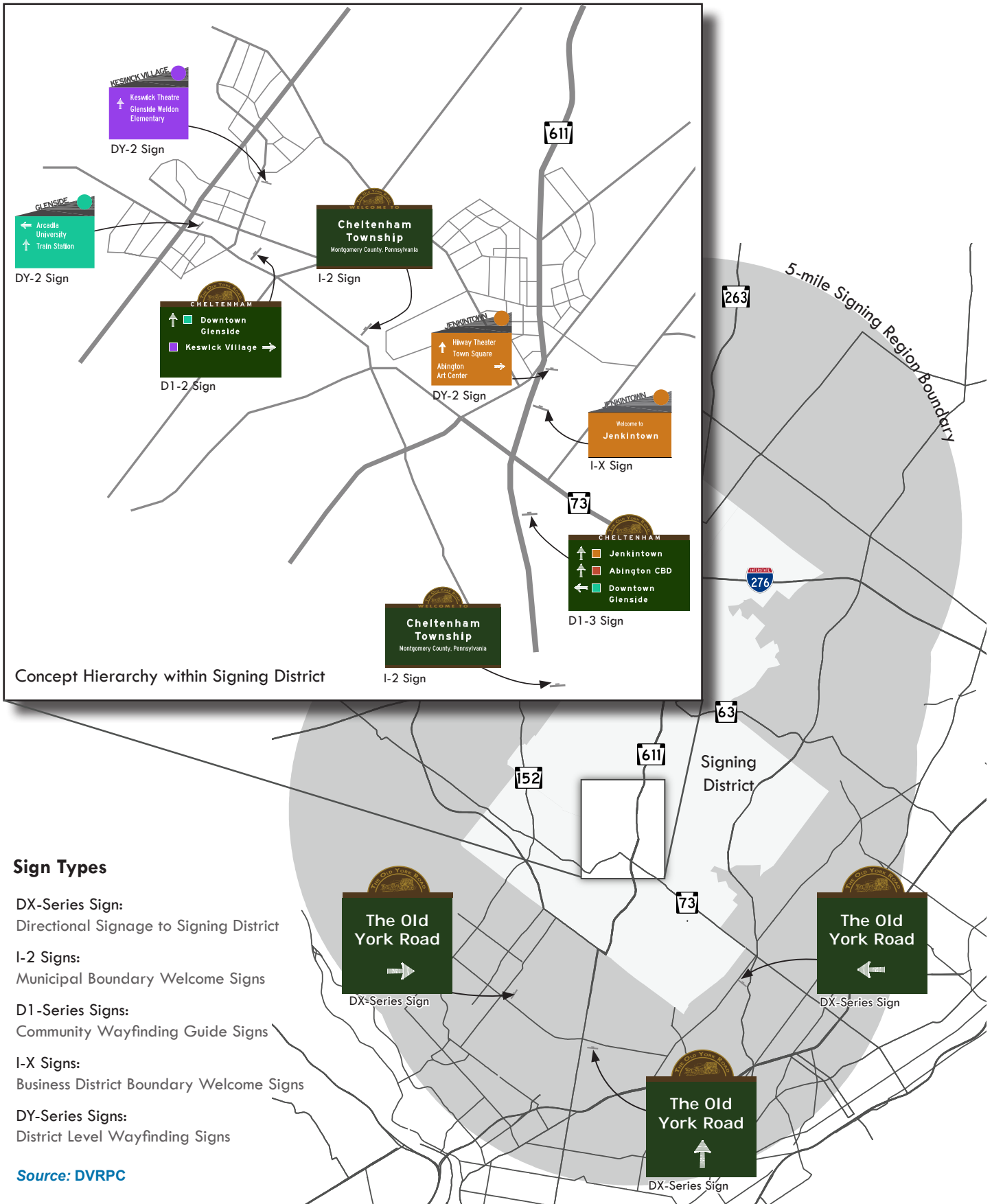
- provide cohesive, uniform signing in a hierarchical structure;
- are part of a coordinated and continuous system of signs that direct tourists and other road users to key civic, cultural, visitor, and recreational attractions within a city or a local urbanized or downtown area; and
- are a type of destination guide sign for conventional roads (i.e., not expressways) with a common color and/or identification enhancement marker for destinations within an overall area-wide signing plan.

A conceptual illustration of a systematic wayfinding signing plan as applied to The Old York Road Corridor is shown on **Figure 2**.

The Signing Region is the largest area for an area-wide signing plan. According to PennDOT's *Toolbox*, the Signing Region's boundary may be five miles from the central attractions. The Signing District, in this case "The Old York Road," comprised of the five participating municipalities, lies at the core of the Signing Region. Contained within the Signing District are the areas or attractions (described later) that are the targets of the system of wayfinding signs.

Each signing layer has its own message for welcoming (I-Type Series Signs) and guiding (D-Type Series Signs) travelers at gateways or decision points, from the regional boundary to the specific destination, along a progressively finer highway network. All signs are recognizably related through the use of a common logo and coordinated color scheme. Design details for the proposed signs are presented later in this report.

Figure 2: Wayfinding Signing Concept

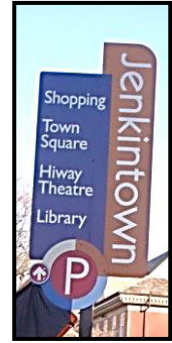


Present Practices

To support commercial districts within their boundaries, Cheltenham and Jenkintown have undertaken streetscaping improvements and installed “creative format” wayfinding guide signs within key business districts. The creative sign formats are not MUTCD-compliant and are not uniform, nor coordinated between the districts.

Upper Moreland and Hatboro are currently pursuing wayfinding signage systems in efforts to revitalize targeted commercial areas.

Abington Township has undertaken streetscaping improvements to help promote its commercial areas—without wayfinding signs. Gateway monuments and themed identification banners draped from stylized streetlight poles define the districts.



Wayfinding sign in Jenkintown (DVRPC)

PennDOT’s practices for destination and informational signing are in line with MUTCD’s standard formats.



Standard jurisdictional boundary / information sign—PennDOT I- Series signs (DVRPC)



Standard 3-line destination / directional sign—PennDOT D- Series signs—northbound PA 611 at the PA 73 intersection (DVRPC)



Standard hospital logo trailblazer sign—PennDOT D9-2 sign (DVRPC)

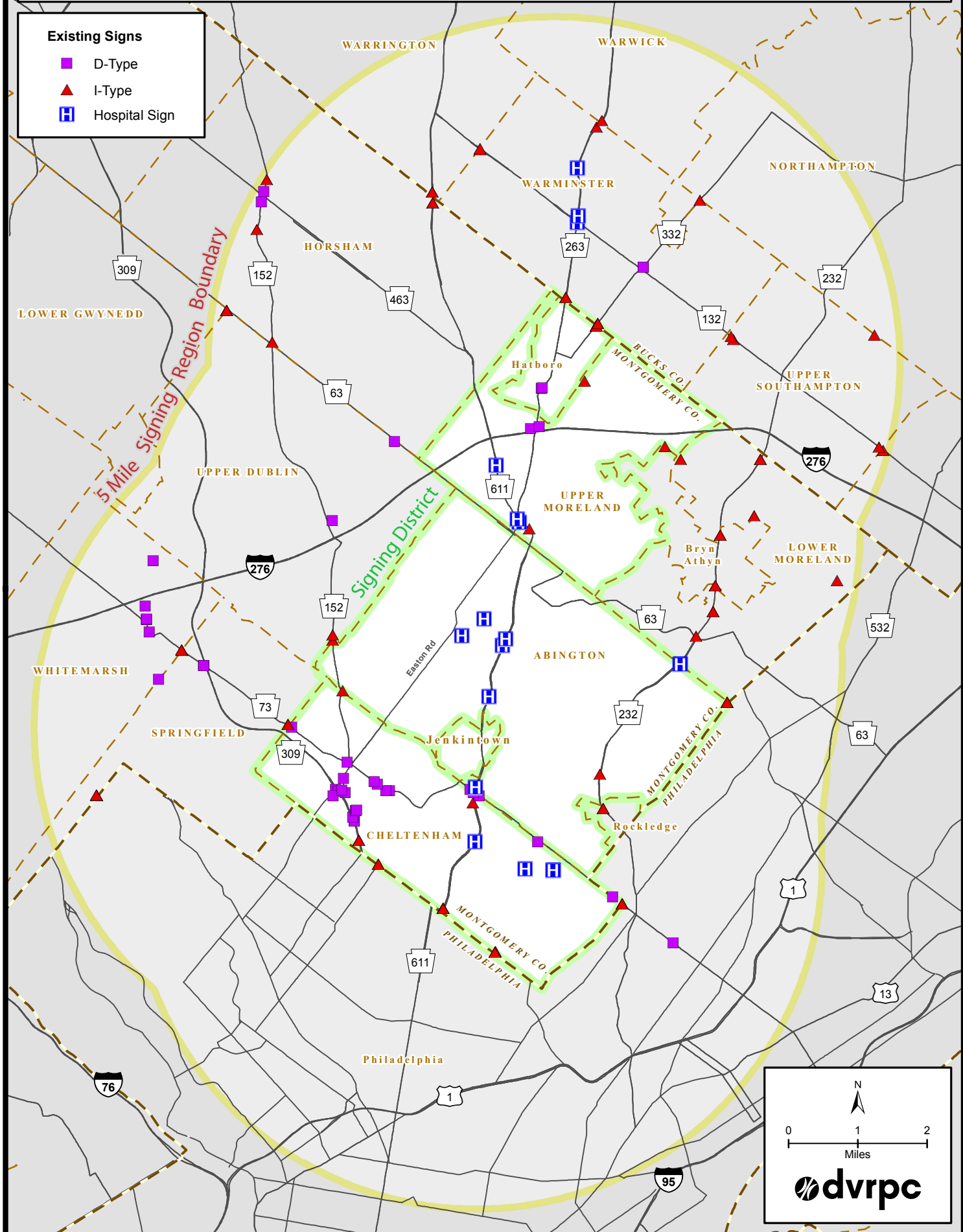
A review of pertinent signs contained in PennDOT’s GIS-Referenced Sign Database for Engineering District 6-0 was conducted within the Signing Region (**Figure 3**). The sign inventory is a maintenance and asset management tool for PennDOT. The City of Philadelphia maintains traffic signs within its boundaries; as such, the database excludes signs within the city limits. Field views were performed to determine directional and jurisdictional signing practices along Cheltenham Avenue (the study area’s southern boundary with the City of Philadelphia) and along Easton Road, a Montgomery County owned and maintained highway. Sign attributes were added to the database. Eventually, signs proposed in the project’s area-wide signing plan were added to complete the database.

PA Routes 611 & 263

Figure 3: Signing Region

Existing Signs

- D-Type
- ▲ I-Type
- H Hospital Sign



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A review of the existing destination / directional (D-Type Series) and jurisdiction / informational (I-Type Series) signs in the inventory reveals a logical and efficient use of signage. There are only 158 signs in the Signing Region; 87 are within in the five-municipality study area (the Signing District).

- 45 or about one third of the signs are destination / directional signs (D-Type Signs) to localities and attractions. Within them are included destinations in the five-municipality study area, including Willow Grove, Cedarbrook Middle School, Cheltenham, Ogontz, Edge Hill, Cheltenham High School, Jenkintown, Arcadia University, Hatboro, and Glenside [29 of the destination signs are within the boundaries of the Signing District].
 - The general practice for directional signs to localities is that directional signs are placed at junctions of major (numbered) routes and subsequent highway route markers serve as trailblazers to the destination.
- Destination / directional signing is present for nearby hospitals [36 – total, 31 – in the District].
- Jurisdictional boundary signs (I-Type Signs) are located at municipal and county lines, at most gateways along major and minor arterial highways [77 – total signs, 27 in the Signing District].

PennDOT and the Pennsylvania Turnpike Commission do not vary from their manuals for major guideway signing along expressways. In the study corridor, these include the PA 309 Expressway and the Pennsylvania Turnpike (I-276). MUTCD-standard highway signing is used by PennDOT and the Turnpike. Intersecting street names or nearby community names are used for interchange exit signs along the freeways. Directional signing for communities and attractions are used to and from the ramps with destinations selected on the basis of proximity, population, activity levels, enrollments, etc.

Each operator has an independent program in which supplemental destinations near the interchanges (i.e., other than those displayed on the major guide signs) may be signed using logos along the mainline and at the exits. General eligibility criteria are available from the Pennsylvania Tourism Signing Trust for PennDOT (www.palogo.org) and Travel Boards Inc. for the Turnpike Commission (www.travelboards.com/Turnpike/pa/).

DVRPC's Products

This project culminated in a series of products detailed in the following section of this report. DVRPC prepared a general framework and conceptual design for a coordinated, hierarchical, area-wide community wayfinding signing plan serving defined communities, business districts, and attractions throughout The Old York Road Corridor. Cost estimates were formulated for the signing plan, and potential sources for funding assistance to implement the plan were identified. Staff also prepared Web-mapping and database tools of the plan's elements for participant decision making.

First and foremost, a coordinated, hierarchical signing plan was prepared for:

- The Signing Region (**Figure 3**, shown previously) – Directional signing: DX–Series Signs for The Old York Road
- The Signing District, comprising the five participating municipalities (**Figure 4**) – Welcome signing: I-2 Signs for Cheltenham Township, the Borough of Jenkintown, Abington Township, Upper Moreland Township, the Borough of Hatboro, and Montgomery County
- Eight established commercial centers or business districts within the Signing District (**Figure 4**) – Directional signing: D1–Series Signs, and Welcome signing: I-X Signs for:
 - 1) Downtown Glenside, Cheltenham Township;
 - 2) Elkins Park (east and west districts consolidated), Cheltenham Township;
 - 3) Jenkintown, the Borough of Jenkintown;
 - 4) Roslyn Valley, Abington Township;
 - 5) Keswick Village, Abington Township;
 - 6) Abington, Abington Township;
 - 7) Willow Grove, Upper Moreland Township and Abington Township; and
 - 8) Downtown Hatboro, the Borough of Hatboro.
- Four local attractions – large trip generators within the Signing District, but outside the boundaries of the eight commercial districts (**Figure 4**) – Directional signing: D1–Series Signs for:
 - 9) Curtis Arboretum, Cheltenham Township;
 - 10) Abington Art Center, Abington Township;
 - 11) Penn State University – Abington Campus, Abington Township; and
 - 12) Willow Grove Industrial Park, Upper Moreland Township.

[A MUTCD-compliant design was prepared for a typical directional wayfinding sign for destinations within the business districts (i.e., DY–Series Signs). However, mapping for these local destinations was not performed, and they are not included in the conceptual plan or the database's tally of signs or cost estimates.]





DVRPC staff also prepared alternative signing treatments for the four local attractions. These may be more easily implemented by the municipalities and therefore removed from the area-wide signing plan.

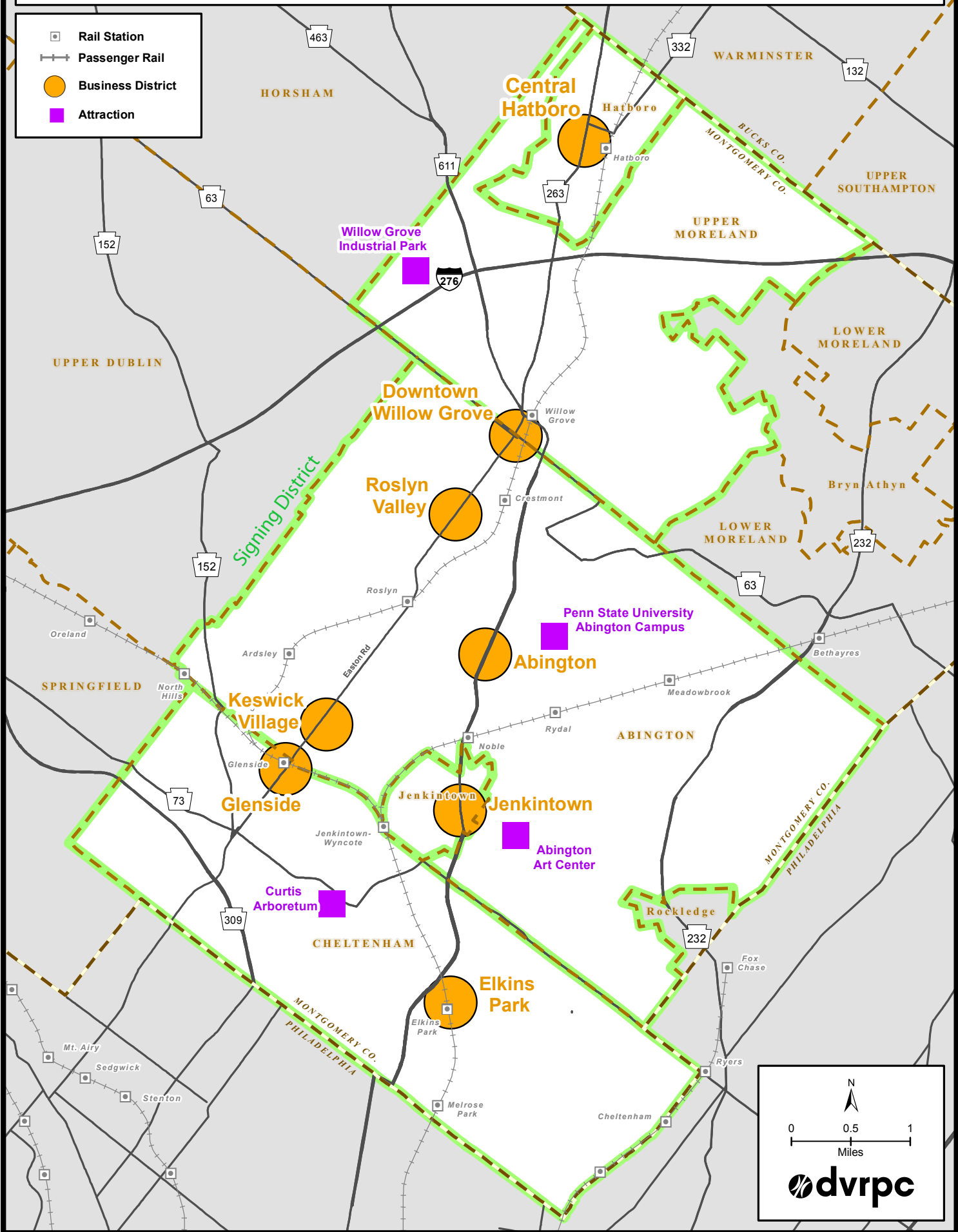
The following related details are also explained in the next section:

1. MUTCD-compliant sign standards template, and sign designs; and a regional logo;
2. Conceptual area-wide signing plan prepared with Geographic Informational System (GIS) mapping software, an integrated project database of all signs (existing and proposed signs formatted like PennDOT's), and an interactive Web-mapping application with instructional video (supplied on CD-ROM); and
3. Flexible database tool for querying and tallying: sign quantities, sign fabrication and installation cost estimates, and stakeholder shares with instructional video (supplied on CD-ROM).

PA Routes 611 & 263

Figure 4: Signing District


-  Rail Station
-  Passenger Rail
-  Business District
-  Attraction



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Project Details:

Community Wayfinding Sign Design Standards

The MUTCD standards guiding the design of the community wayfinding directional signs for The Old York Road Corridor are cited in **Figure 5**. The information supplies a flexible template for these or other municipalities pursuing MUTCD-compliant community wayfinding signs.

Community Wayfinding Sign Formats

MUTCD-compliant sign formats with a regional identifier logo were prepared for five levels of signs:

- DX–Series Signs: Directional signs within The Old York Road Corridor Signing Region (**Figure 6**)
- I-2 Signs: Jurisdictional boundary signs for the municipalities within The Old York Road Signing District (**Figure 7**)
- D1–Series Signs: Community wayfinding directional signs to business districts and local attractions within the Old York Road signing district (**Figure 8**)
- I-X Signs: Business district boundary signs (**Figure 9**)
- DY–Series Signs: Wayfinding directional signs within local business districts (**Figure 10**) – as an example of the coordinated, color-coded design

[Note: a MUTCD-compliant design was prepared for DY–Series Signs for informational purposes only. Mapping for local destinations within the business districts was not performed, nor are the DY–Series Signs included in the conceptual plan or the database’s tally of signs or cost estimates.]

Figure 5:

Sign Design Standards in Pennsylvania

2009 Edition, Manual of Uniform Traffic Control Devices: Adopted by PennDOT in 2011
Governs all new and replacement signs

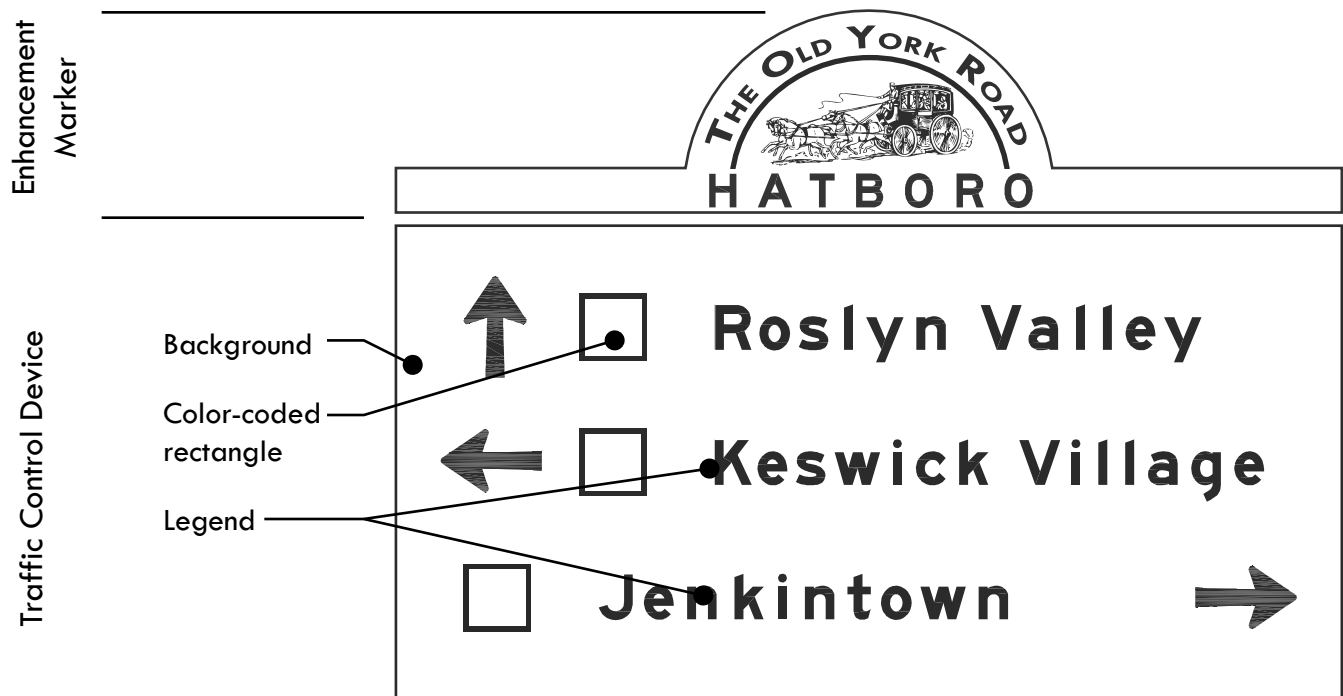
Enhancement Marker Details

Content: consists of a shape, color, and/or pictograph that is used as a visual identifier for the community wayfinding guide signing system for an area.

Size: Equal to or less than 1/5 the surface area of background area of primary control device

Purpose: a means of visually identifying the sign as part of an overall system of community wayfinding signs and destinations.

Retroreflective: Yes



Conceptual sign design to demonstrate sign components

Traffic Control Device General Details

Content: based on sign type

Dimension: regulated by sign type under MUTCD

Background: varies based on sign type, 3:1 luminance ratio to legend color

Legend Lettering: Sentence-case, white

Font Type: Series E(M) 2000 or approved alternative from Standard Alphabets for Highway Signs book.

Font Size: 4-6" based on road speed and volume (greater height and spacing preferred for legibility)

Arrows: Design and location set by MUTCD

Retroreflective: Yes

Other: With the exception of municipal pictograph, legend shall not contain any non approved symbol, including business logos, and other forms of advertising.

Source: DVRPC

Figure 6:

DX-Series Signs: Directional to Signing District

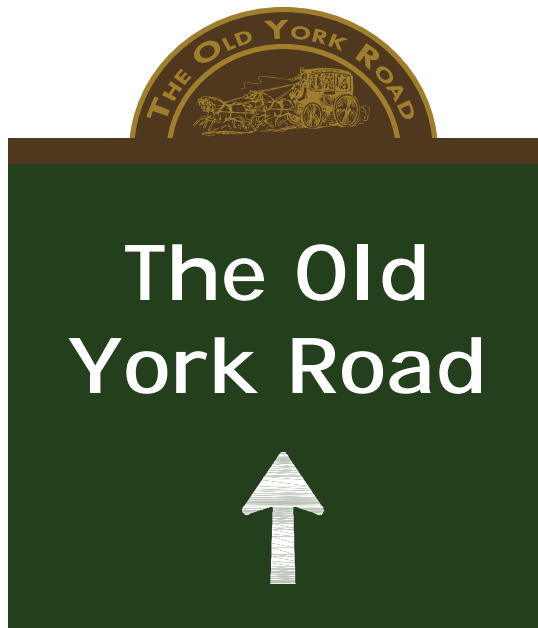
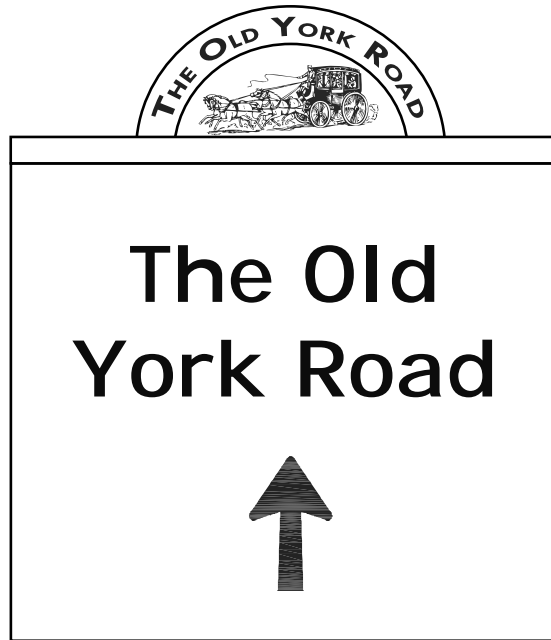
This sign format is intended to provide orientation to the users in the region to the signing district. The sign design is consistent with the format and style of the signs proposed for the signing region. In complying with the standards set by MUTCD standards the legend font style and size is set to match the D1-series signs proposed in this project.

Quick Details:

Font Type: Series E(M) 2000

Font Size: 6"

Legend Content: Directional arrow accompanied by sign district name



Source: DVRPC

Figure 7:

I-2 Signs: Municipal Boundary Welcome Signs

This sign format is intended to identify boundaries between municipal entities within the district. It should be noted font size has been reduced to 4" while maintaining the Series E(M) 2000 which provides the widest set lettering and spacing, which has been shown to increase visibility over the use of taller lettering(see Standard Highway Signs, 2004 ed, pg 8-1). In addition County Locators have been added to provide an additional layer of information. These are displayed in Series C 2000 at a size of 2.5" height.

Quick Details:

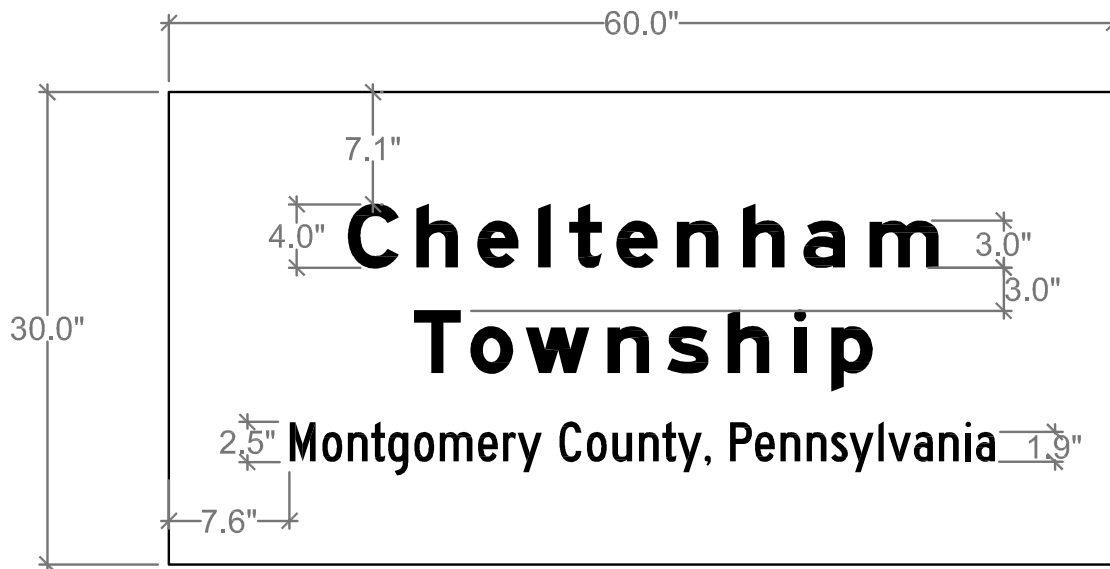
MUTCD Dimension: 30" (h) x varies (w)

Font Type: Series E(M) 2000 (municipal name)

Series C 2000 (county name)

Font Size: 4" (municipal); 2.5" (county)

Legend Content: Municipal Name over County Name



Source: DVRPC

Figure 8:

D1-Series Signs: Community Wayfinding Guide Signs

This sign format is intended to provide orientation for users moving between signing districts or attractions within the signing district. Color coded rectangles provide reference to color scheme of individual business districts. It should be noted font size has been reduced to 4" while maintaining the Series E(M) 2000 which provides the widest set lettering and spacing, which has been shown to increase visibility over the use of taller lettering(see Standard Highway Signs, 2004 ed, pg 8-1).

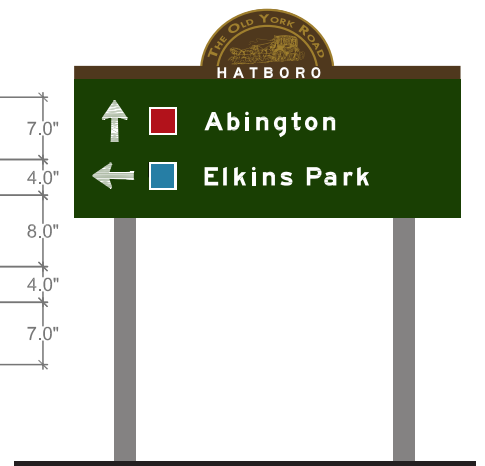
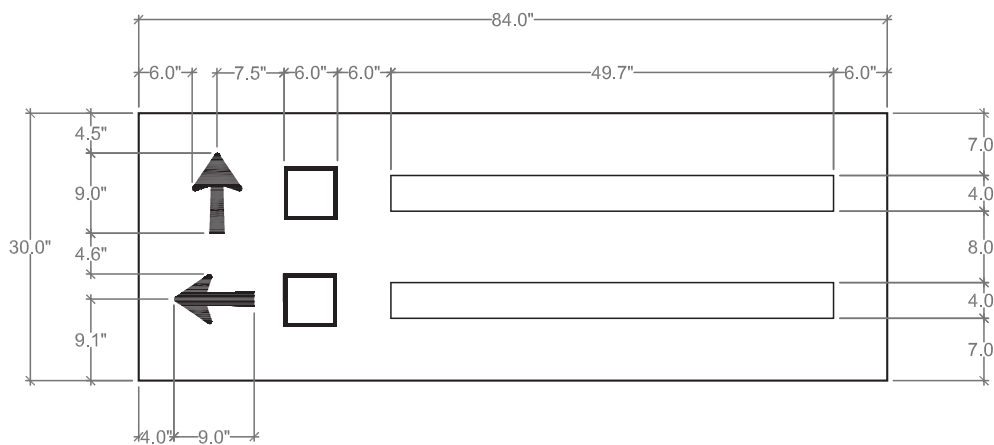
Quick Details:

MUTCD Dimension: 30" (h) x varies (w)

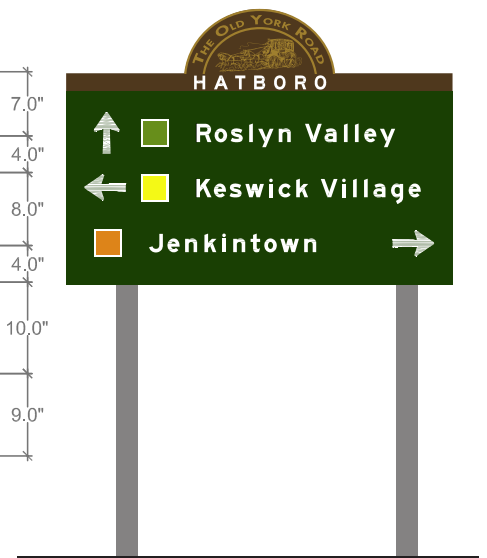
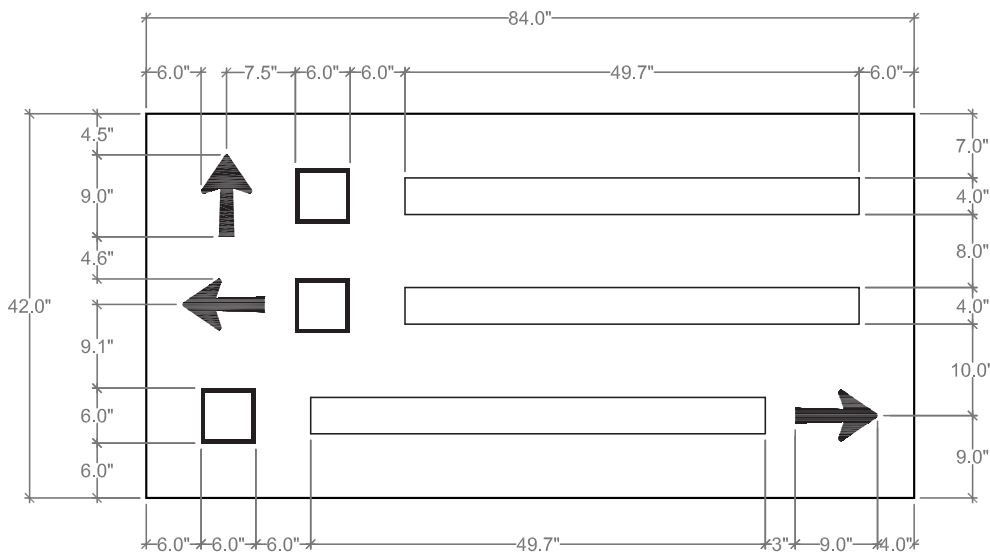
Font Type: Series E(M) 2000

Font Size: 4"

Legend Content: Up to 3 business district names accompanied by direction arrows and color-coded rectangle



D1-2 Destination w/color code



D1-3 Destination w/color code

Source: DVRPC

Figure 9:

I-X Signs: Business District Boundary Welcome Signs

This sign format is intended to identify the boundary and identity of individual business districts. The color of the signs is intended to match the color-coded scheme for the entire district.

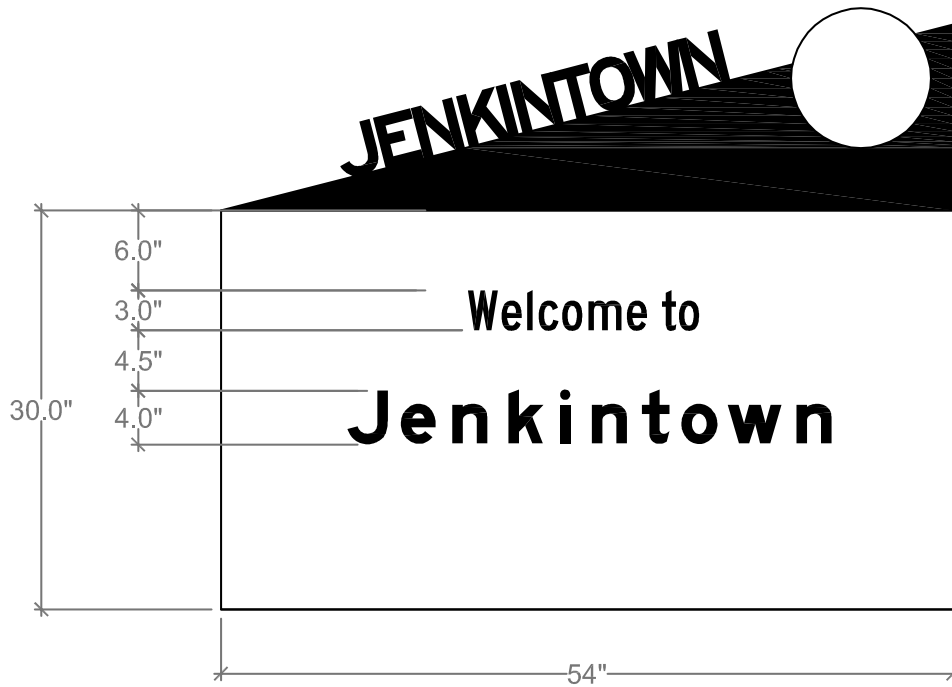
Quick Details:

MUTCD Dimension: 30" (h) x varies (w)

Font Type: Series E(M) 2000 (district)
Series C 2000 ("welcome to")

Font Size: 4" (district); 3" (welcome)

Legend Content: "Welcome to" accompanied by business district name



Source: DVRPC

Figure 10:

DY-Series Sign: Business District Level Wayfinding Guide Signs

This sign format is intended to provide orientation to local amenities within individual business districts. The color of the signs and enhancement marker design is intended to match the color-coded scheme for the entire district. It should be noted that due to the context of these signs, where road right-of-ways are extremely limited the proposal utilizes Series C 2000 font style to limit sign width.

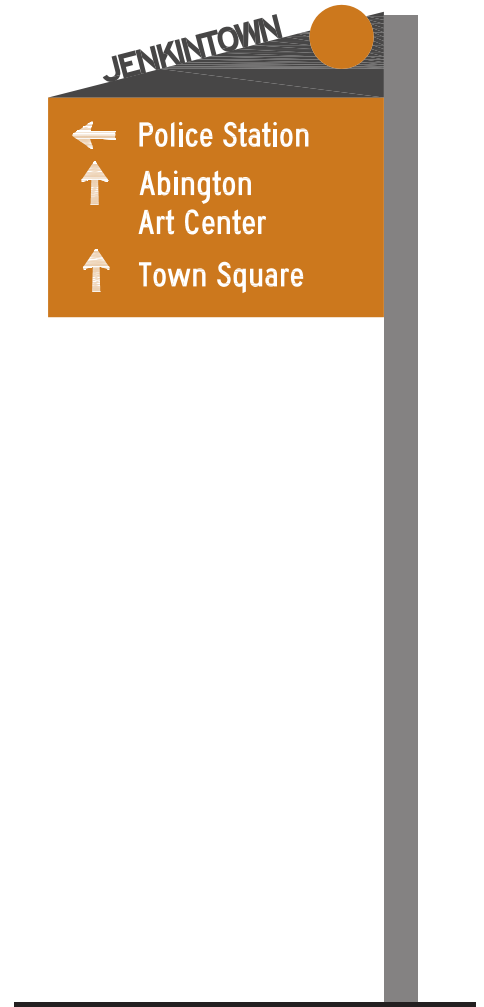
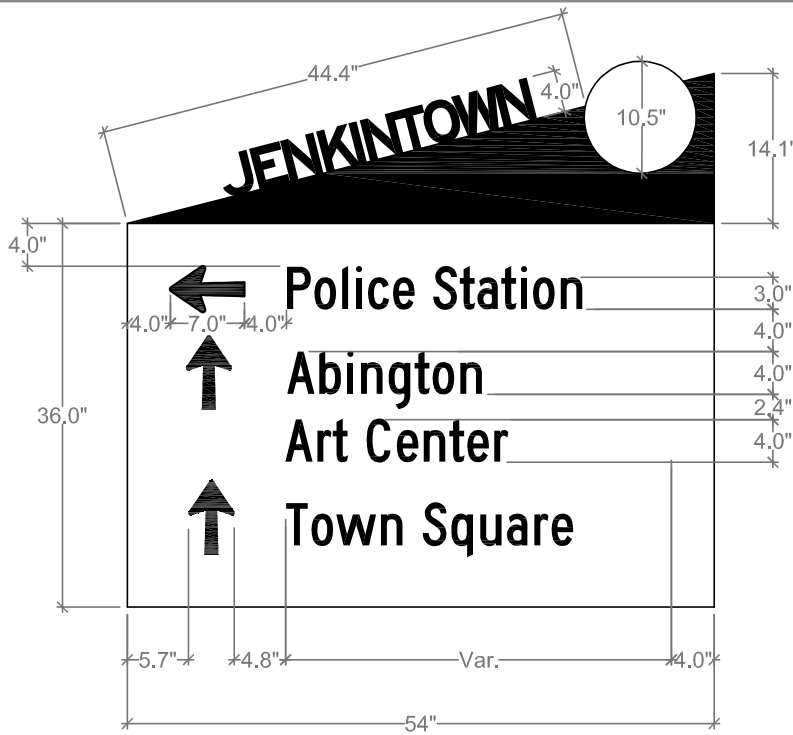
Quick Details:

MUTCD Dimension: 30" (h) x varies (w)

Font Type: Series C 2000

Font Size: 4"

Legend Content: Up to 3 local destinations accompanied by directional arrow



Source: DVRPC

Old York Road Community Wayfinding Signing Plan

A conceptual plan was formulated for the entire Signing Region¹ (**Figure 11**). Proposed sign placement followed general guidance that signs be installed where turns are required or driver reinforcement may be necessary.

The analytical database was expanded to include the plan's proposed signs, including the following attributes: sign type and specific legend information, locational information (latitude and longitude, road or highway name, municipality), and sign placement information (side of highway and facing direction). An interactive GIS-based Web-mapping application was prepared as an interface between the signing plan and the database to serve as a decision-making tool for the project's advisory group members (www.dvrpc.org/webmaps/wayfinding/).

A demonstration of the decision-making tool was delivered in person (and distributed on a CD-ROM) to the advisory group. Tutorial exercises included:

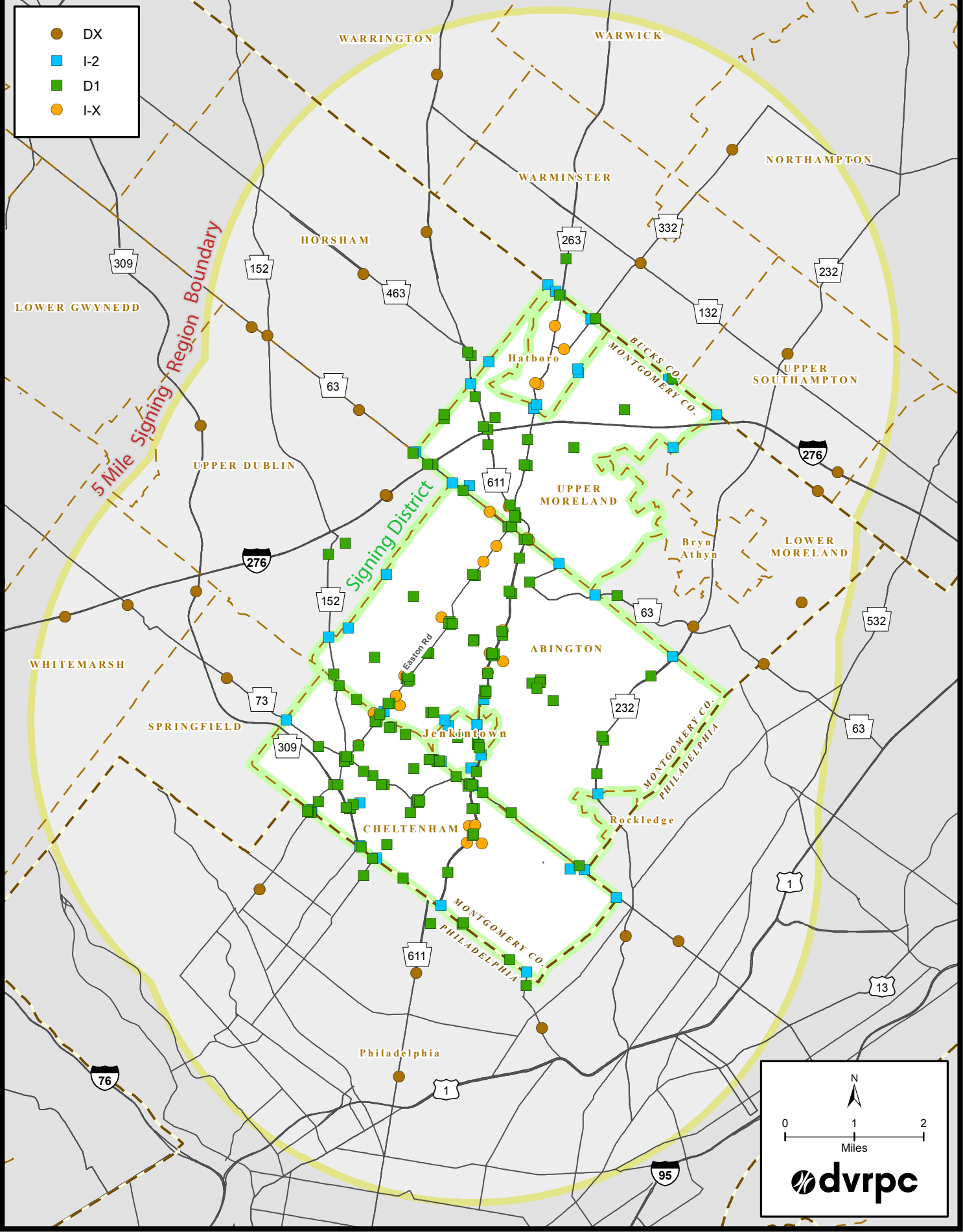
- Select sign type(s), show business districts and local attractions
- Show street view around existing signs (via hot-link to Google Maps' street view)
- View samples of proposed sign designs
- Zoom in and out
- Click on sign icon for attributes in the database

¹ Exclusive of the local business district-level directional (DY-Series) signing

PA Routes 611 & 263

Figure 11: Proposed Wayfinding Signs

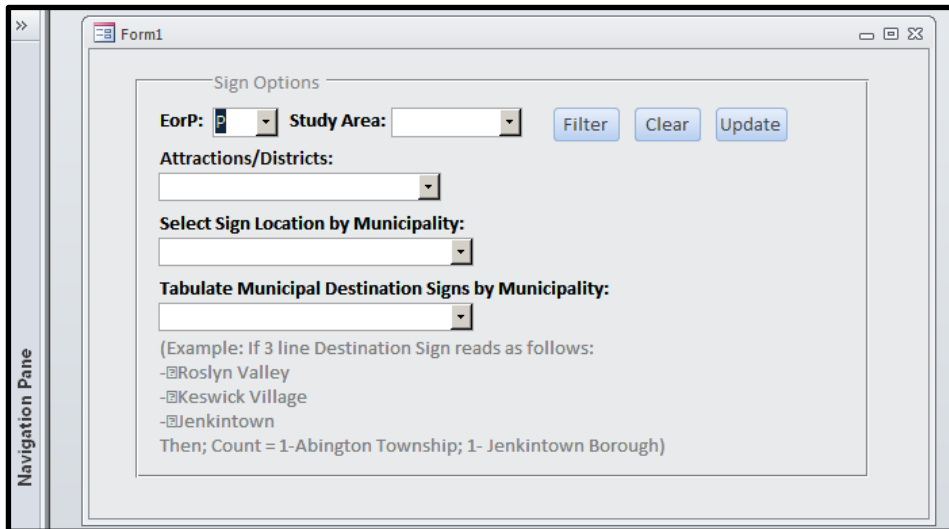
- DX
- I-2
- D1
- I-X



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The project database was demonstrated (and supplied on a CD-ROM) to study advisory group. **Figure 12** illustrates the initial navigation page of the database tool.

Figure 12: 611/263 Signs Database-Navigation Pane



The interface control panel for the database tool (DVRPC)

A simple tutorial was demonstrated in person to the study advisors, and provided on the disk, for independent or more extensive querying for municipal official decision making. Orientation to the database included the following exercises:

Existing Signs (Figure 3, shown previously)

- Double-click on file...yields Navigation Pane (**Figure 12**, above)
- EorP, select E (existing signs), click Filter...yields database of 158 existing signs (data records)
 - Click on sign ID number...yields attributes of the sign in the database > x-out
- Check all > click Report...yields blank page (no cost data for existing signs) > x-out
- Close
- Clear

Proposed Signs (Figure 11, shown previously)

- EorP, select P (proposed signs), click Filter...yields database of 247 total proposed signs (data records)
 - Click on sign ID number...yields attributes of the proposed sign in the database > x-out
- Check all > click Report...yields two cost tables (corresponding to Tables 1 and 2 in the next section) > x-out
- Close
- Clear

Other possible tabulations

- Select, query, and tabulate the number of proposed signs directing to, or supporting a specific business district or local attraction
- Select, query, and tabulate the number of proposed signs within a municipality
- Select, query, and tabulate the number of municipal destination signs by municipality

Cost Estimates and Cost-Sharing

Low-high cost estimates were prepared for fabricating and installing the signs (**Tables 1 and 2**). Summaries were prepared for a community wayfinding signing plan spanning the entire Signing Region (**Table 1**), and a signing plan limited to just the Signing District (**Table 2**).

Table 1: Region-wide Community Wayfinding Sign Tabulation and Cost Estimate

| Sign Type | Signing Region Sign-Count | Cost Per Sign | | Subtotal | |
|--------------|---------------------------|---------------|---------|------------------|--------------------|
| | | low | high | low | high |
| DX | 27 | \$3,500 | \$5,650 | \$94,500 | \$152,550 |
| I-2 | 44 | \$4,600 | \$5,650 | \$202,400 | \$248,600 |
| D1-1 | 57 | \$3,490 | \$5,460 | \$198,930 | \$311,220 |
| D1-2 | 20 | \$3,490 | \$5,460 | \$69,800 | \$109,200 |
| D1-2b | 13 | \$3,570 | \$5,600 | \$46,410 | \$72,800 |
| D1-2c | 1 | \$3,640 | \$5,800 | \$3,640 | \$5,800 |
| D1-3 | 24 | \$3,570 | \$5,600 | \$85,680 | \$134,400 |
| D1-3b | 29 | \$3,640 | \$5,800 | \$105,560 | \$168,200 |
| I-X | 32 | \$4,500 | \$5,600 | \$144,000 | \$179,200 |
| Total | 247 | | | \$950,920 | \$1,381,970 |

Notes for Table 1:

1) All costs in 2012 dollars. Costs include fabrication, posts, painting, and installation. Costs exclude mobilization, MPT during construction, and engineering stakeouts (add: 10% for total installation cost). Add 20% to total installation cost for engineering and design costs estimate.

Sources for Table 1:

- 1) MUTCD (2009 edition)
- 2) Lower Merion Township Business District Signing Plan, Cost Estimates and Bid Prices (Lower Merion Township, and PennDOT 2006)

Source: DVRPC

Table 2: District-wide Community Wayfinding Sign Tabulation and Cost Estimate

| Sign Type | Signing District Sign-Count | Cost Per Sign | | Subtotal | |
|--------------|-----------------------------|---------------|---------|------------------|--------------------|
| | | low | high | low | high |
| DX | 0 | \$3,500 | \$5,650 | \$0 | \$0 |
| I-2 | 44 | \$4,600 | \$5,650 | \$202,400 | \$248,600 |
| D1-1 | 51 | \$3,490 | \$5,460 | \$177,990 | \$278,460 |
| D1-2 | 19 | \$3,490 | \$5,460 | \$66,310 | \$103,740 |
| D1-2b | 12 | \$3,570 | \$5,600 | \$42,840 | \$67,200 |
| D1-2c | 1 | \$3,640 | \$5,800 | \$3,640 | \$5,800 |
| D1-3 | 19 | \$3,570 | \$5,600 | \$67,830 | \$106,400 |
| D1-3b | 23 | \$3,640 | \$5,800 | \$83,720 | \$133,400 |
| I-X | 32 | \$4,500 | \$5,600 | \$144,000 | \$179,200 |
| Total | 201 | | | \$788,730 | \$1,122,800 |

Notes for Table 2:

1) All costs in 2012 dollars. Costs include fabrication, posts, painting, and installation. Costs exclude mobilization, MPT during construction, and engineering stakeouts (add: 10% for total installation cost). Add 20% to total installation cost for engineering and design costs estimate.

Sources for Table 2:

- 1) MUTCD (2009 edition)
- 2) Lower Merion Township Business District Signing Plan, Cost Estimates and Bid Prices (Lower Merion Township, and PennDOT 2006)

Source: DVRPC

A quick summary of the information:

- 247 signs are identified within the Signing Region = \$951,000 to \$1,382,000 (**Table 1**); and
- 201 signs are identified for the Signing District = \$789,000 to \$1,123,000 (**Table 2**).

In contrast with the existing situation, a comprehensive wayfinding signing program would result in a net increase of 145 jurisdictional boundary and destination / directional signs along the highways within the Signing District (*note: hospital trailblazer signs are not included in these figures*).

A cost-sharing exercise was developed and displayed for consideration by the advisory group. Variables were assembled from the project background information and using the analytical tools. **Table 3** contains the resultant information for one possible cost-sharing scenario.

Table 3: Community Wayfinding Sign Cost-Sharing Possibilities

| Municipality | Tabulation of Destination Variables | | | | | |
|----------------|-------------------------------------|-------------|--------------------------|-------------|---|-------------|
| | Number of Business Districts in | | Number of Attractions in | | Number of Business Districts and Attractions in | |
| | # | % | # | % | # | % |
| Abington | 3 | 38% | 2 | 50% | 5 | 42% |
| Cheltenham | 2 | 25% | 1 | 25% | 3 | 25% |
| Hatboro | 1 | 13% | 0 | 0% | 1 | 8% |
| Jenkintown | 1 | 13% | 0 | 0% | 1 | 8% |
| Upper Moreland | 1 | 13% | 1 | 25% | 2 | 17% |
| Total | 8 | 100% | 4 | 100% | 12 | 100% |

| Municipality | Tabulation of Sign Variables | | | | Average of All Variables |
|----------------|-------------------------------|-------------|--------------------------------------|-------------|--------------------------|
| | Number of Individual Signs in | | Number of Signs with Destinations in | | |
| | # | % | # | % | |
| Abington | 83 | 41% | 131 | 42% | 42% |
| Cheltenham | 64 | 32% | 69 | 22% | 26% |
| Hatboro | 9 | 4% | 25 | 8% | 7% |
| Jenkintown | 11 | 5% | 46 | 15% | 8% |
| Upper Moreland | 34 | 17% | 41 | 13% | 17% |
| Total | 201 | 100% | 312 | 100% | 100% |

| Municipality | Tabulation of Costs | | | |
|----------------|--------------------------|--------------------|----------------------------|--------------------|
| | Region-wide Cost Sharing | | District-wide Cost Sharing | |
| | low | high | low | high |
| Abington | \$404,041 | \$587,192 | \$335,127 | \$477,072 |
| Cheltenham | \$245,254 | \$356,427 | \$203,423 | \$289,584 |
| Hatboro | \$63,376 | \$92,105 | \$52,567 | \$74,832 |
| Jenkintown | \$78,070 | \$113,459 | \$64,754 | \$92,181 |
| Upper Moreland | \$160,179 | \$232,788 | \$132,859 | \$189,131 |
| Total | \$950,920 | \$1,381,970 | \$788,730 | \$1,122,800 |

Source: DVRPC

Possible refinements to the querying or the database’s functionality—for costs, cost-sharing, and decision-making tabulations—were discussed, including:

- Reducing the area of signing—use only the Signing District as the basis of the area-wide plan, and reduce installation costs between \$162,000 and \$259,000;
- Reducing number of business districts or local attractions—to focus on what is most important or affordable; and
- Itemizing individual business district or local attraction signs in the municipal destinations tabulation—to assess benefits to business entities or individual destinations to raise private-sector contributions.

Alternative Signage for Four Attractions

Targeted signing treatments were prepared for the four local attractions as alternatives to including them in the area-wide signing plan. They were:

- Curtis Arboretum;
- Abington Art Center;
- Penn State University – Abington Campus; and
- Willow Grove Industrial Park.

These attractions are large trip generators within the study area municipalities (i.e., the Signing District) and are not contained within the boundaries of a defined commercial district. As such, they warranted inclusion as individual attractions within the area-wide signing plan. However, separate signing strategies were also identified as alternatives to including them in the wayfinding signing plan. Separate actions, as explained below, will obviate their inclusion in the area-wide signing plan, simplify it, and reduce its cost.

To create better visibility from multiple directions at Church Road (PA 73) and Greenwood Avenue, a corner monument that fits the character of Curtis Arboretum (**Figure 13**) could be constructed and replace the use of D1-Series wayfinding signs to the attraction. Also, tree trimming around the facility's signs at the main entrance on PA 73 is recommended.

Figure 13: Curtis Arboretum Alternative Signage



Source: DVRPC

Adding destination lines to the street name signs at PA 611 and Greenwood Avenue in Jenkintown can help guide visitors to the Abington Art Center (**Figure 14**). Similar opportunity exists at Meetinghouse Road’s intersection with Township Line Road (PA 73)—on both the Cheltenham and Abington sides. These signing options have been employed elsewhere in the study area and would replace the use of wayfinding to the attraction using D1-Series Signs in the area-wide signing plan.

Figure 14: Abington Art Center Alternative Signage



Source: DVRPC

Adding “Penn State Univ” to the street name sign on the traffic signal mast arm at PA 611 and Woodland Road (**Figure 15**) would provide wayfinding to the attraction instead of destination signs (D1-Series) in the area-wide plan.

Figure 15: Penn State-Abington, Alternative Signage at Woodland Road



Source: DVRPC

Adding a corner monument and revising the street name sign at PA 611 and Maryland Road to include “Willow Grove Industrial Park” (**Figure 16**) would improve visibility and navigation to this generator without the need for some of the D1-Series Signs in the area-wide plan. Similar treatments are recommended at all entrances to create a visual identity for the industrial park.

Figure 16: Willow Grove Industrial Park, Alternative Signage at Maryland Road



Source: DVRPC

The signage components for the four local attractions, described above, are more easily implemented by an individual municipality, and the costs more manageable. Having said that, inter-municipal “agreements” may be necessary to sign across municipal boundaries as would be the case for the Abington Art Center signage. Further, along with fabrication and installation costs, the improved street name signs for the Art Center, Penn State, and Industrial Park locations will necessitate updates of intersection traffic signal condition diagrams and permits. The monuments shown above are conceptual, and while likely expensive, the individual costs are more likely borne by the benefited property.

Two other placemaking ideas emanated from the project and were shared with the study advisors:

- Abington Township: In continuance of its present practices—after Upper Moreland defines its redevelopment placemaking theme for “Willow Grove”—consider adopting the theme and logo, and applying them (with an Abington Township identifier) throughout its portion of the Willow Grove business district. Install themed banners, along with new street lights along Easton Road, on Old Welsh Road, Moreland Road (PA 63), and Old York Road (PA 611).
- Upper Moreland Township: Consider seeking agreements to repaint the Norfolk Southern Morrisville Line’s trestle over PA 263 (S. York Road) as one gateway to its Willow Grove redevelopment area (**Figure 17**).

Figure 17: Gateway to Willow Grove Concept



Source: DVRPC

Potential Funding Sources

- U.S. Department of Housing and Urban Development's Community Development Block Grant Program.
- Pennsylvania Department of Community and Economic Development grants or loans.
- DVRPC's Transportation and Community Development Initiative (TCDI) program. Competitive local-match federal-aid funding program. Eligible activities include: planning, engineering, and design. Next round of projects to be solicited in July 2015.
- Transportation Enhancement Program (federal-aid funding through the TIP). Contingent on programs and authorizations contained in the new surface transportation bill: *Moving Ahead for Progress in the 21st Century* (i.e., MAP-21). Typically applied to the construction phase.
- Montgomery County Economic Development Program's grants and loans.

Conclusions and Next Steps:

This project was undertaken to lend guidance in supplying five eastern Montgomery County, Pennsylvania, municipalities with information necessary to implement a community wayfinding signing plan throughout the PA Routes 611 and 263 Corridor. The goal of the coordinated signing plan would be to promote a unique identity for the area and indicate important destinations across municipal borders.

Much information was generated through the technical and committee work. Given ongoing practices and in light of the required design standards and approval processes, delivery of The Old York Road Community Wayfinding Signing Plan will require a formal and long-term commitment of actions and financial resources that must be recognized and endorsed by the corridor's elected officials before embarking.

1. Formal legal agreements must be established between all participating municipalities and attractions within the defined wayfinding signing area (e.g., the Signing Region, the Signing District, and individual commercial districts)—specifying implementation and maintenance costs, cost-sharing responsibilities, and program administrator—before PennDOT will consider, review, or approve the plan. It makes practical sense, then, that the endorsed area-wide signing plan coincide with the five-municipality Signing District, rather than the Signing Region (20 municipalities). PennDOT does not participate in funding area-wide signing plans with special formats. Other funding assistance streams that have been tapped in the past for these types of projects are competitive, constrained, or uncertain for future availability.
2. Once formally established, the sign formats used within the defined wayfinding signing area become the default design format for all replacement or new directional and destination (D-Type Series) and jurisdictional boundary and information (I-Type series) signs within the boundaries of the official signing plan—including local wayfinding signage within the business districts. Existing destination and jurisdictional boundary signs, and Tourist Oriented Directional Signs (TODS) that correspond with or contradict the proposed signing plan must be replaced or removed.
3. DVRPC signing plans were developed on a conceptual level—as a framework for cost estimation—generally following guidance that signs be installed where turns are required or driver reinforcement may be necessary. While field views were performed for the project, no field verification was undertaken to judge the viability or visibility of individual signs contained within the conceptual plan. All cost estimates are in 2012 dollars and are preliminary. The cost estimates account for sign and post fabrication and installation. Preliminary activities (such as planning, engineering, and design) and construction related activities (including mobilization, on-site engineering, and maintenance and protection of traffic during installation) are additional elements needed to deliver the finished product. These activities are estimated to add 30 percent to the cost estimates shown in the body of this report.
4. DVRPC sign designs were developed for informational purposes following MUTCD criteria and are viable as templates for municipalities that are currently considering wayfinding signing plans. This includes the local area-wide wayfinding signing systems being pursued in the Borough of Hatboro and in the Willow Grove area of Upper Moreland Township.

5. To the degree that it may be desirable, and with PennDOT approval, the jurisdictional boundary (I-Type Series) sign designs may be employed as independent elements of the project, as creative-format municipal welcoming signs—without an inter-municipal agreement or the requirement to convert the format of existing destination and directional signing within the municipality—if a formal coordinated, area-wide signing plan is not pursued.
6. Practical, more easily implementable and affordable signing improvement concepts were identified for four large trip generators in the corridor that are not within the boundaries of existing commercial districts. Implementing these signing strategies independently will simplify the area-wide wayfinding signing plan and reduce its cost.

The names and logos cited in this project (i.e., for the Signing Region, the Signing District, the identified commercial districts, and the local attractions) were expediently developed by DVRPC staff for sign formatting purposes. They are not necessarily official nor endorsed by the participating jurisdictions. Defining a marketable and supported identity for a locality are matters that require serious stakeholder consideration, community input, and public official decision making. The Old York Road Historical Society (www.oyrhs.org), located in Jenkintown, can be a valuable resource in developing theme(s) to promote a corridor identity. Outreach of these kinds was not conducted within this project.

The boundaries of the commercial districts in this project were defined by DVRPC staff guided by 2010 commercial land use cover obtained from in-house GIS files. In actuality, functional boundaries of business districts can and do cross municipal lines—along with Post Office addresses. DVRPC staff attempted to capture this for “Willow Grove” (Upper Moreland and Abington), but similar conditions exist for “Jenkintown” (Jenkintown and Abington) and “Downtown Glenside” (Cheltenham and Abington). The name of the destination business district on the traffic control device portion of the provided sign templates and the actual signed boundaries of the district should be vetted through the local business community and Chambers of Commerce. Variable municipal jurisdiction names that comprise the district can be integrated into the sign template’s enhancement marker area. The direct involvement of the business community, as stakeholders in developing the plan, may lead to private-sector funding streams.

Given that four of the five study area municipalities have or are actively pursuing local wayfinding signage that promote their individual identities and business districts and attractions—and depending on how well those signs are maintained—it may be a decade or more before a unified wayfinding signing plan for The Old York Road Corridor can be delivered. In the interim, given a continued desire to implement a corridor-wide signing plan, inter-municipal communication and unified resolve will need to be solidified, and agreements formalized with PennDOT. The information supplied in this report may then be of value for staging implementation of the broader plan and replacing the local-area wayfinding sign systems as they reach obsolescence.

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Abstract: This study is a continuation of the planning effort that began with the *Routes 611 & 263 Corridor Study* conducted by DVRPC with Phase 1 and Phase 2 completed in 2008 and 2009, respectively. The Phase 2 report presented a list of improvement recommendations for the corridor. The current project developed one of these: to provide a uniform, coordinated community wayfinding signing plan throughout the PA 611 and PA 263 Corridor that promotes a unique identity and indicates destinations across municipal borders. Along with the signing plan, this project provided cost estimates, identified funding sources, and prepared tools for decision making by the municipal and county participants. The project information also serves as a viable template for other municipalities pursuing MUTCD-compliant community wayfinding signing.

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