



MULTIMODAL TRANSPORTATION STUDY



Presented by:
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Project Manager
McMahon Associates, Inc.



Consultant Team



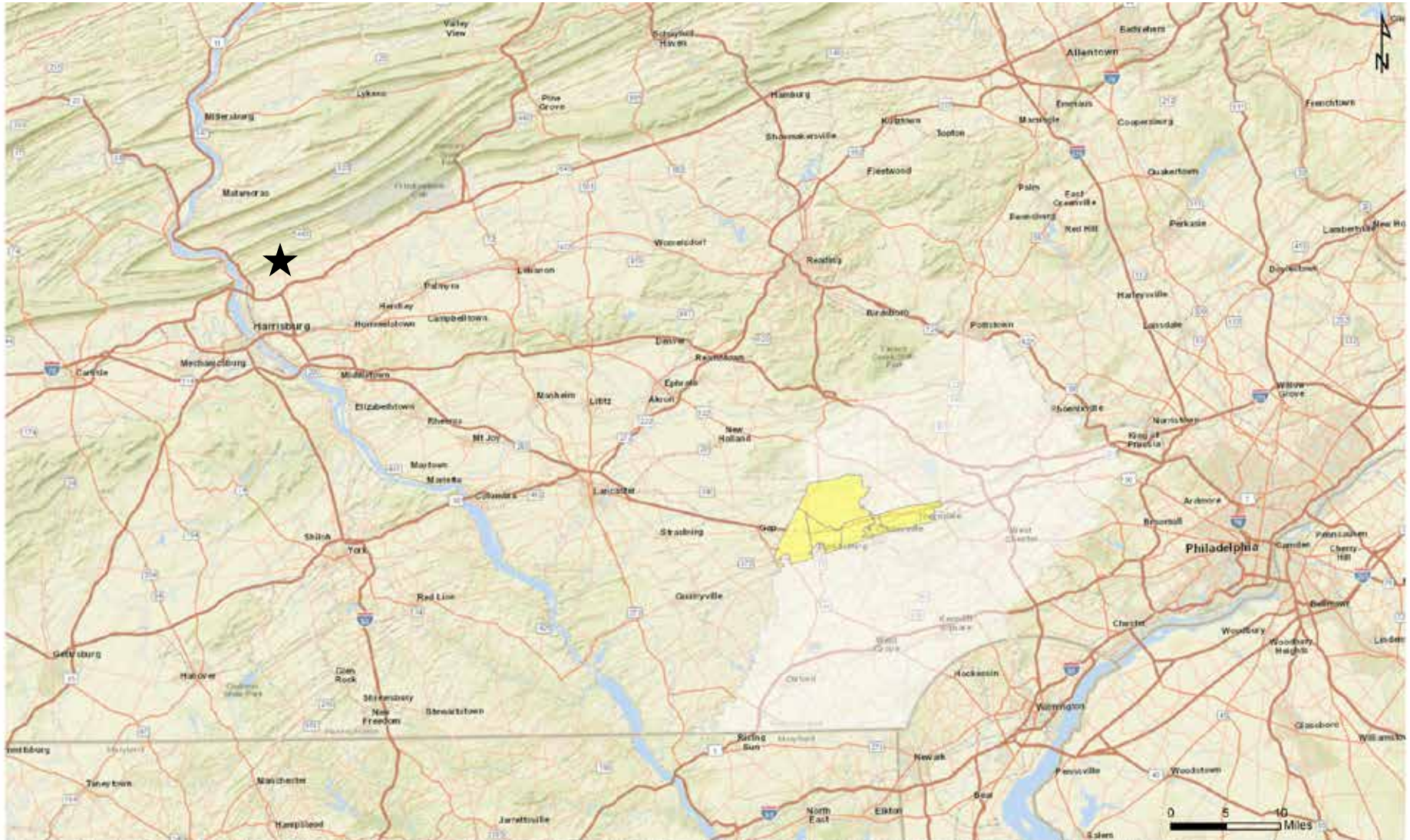
In Association With



REAL ESTATE STRATEGIES, INC.



PROJECT LOCATION

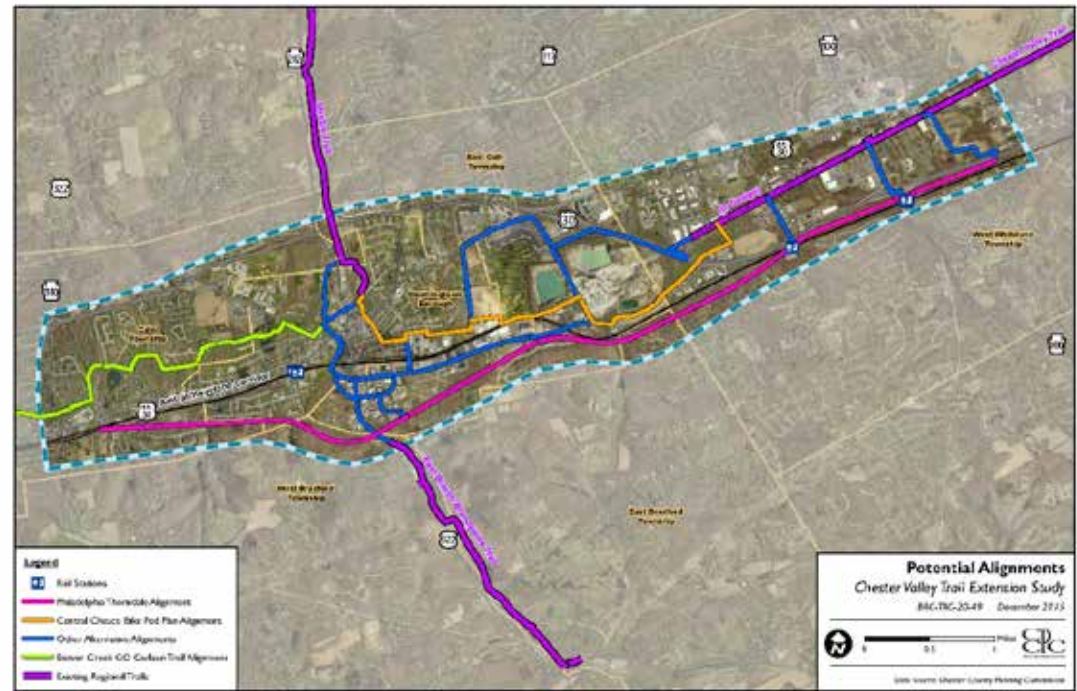
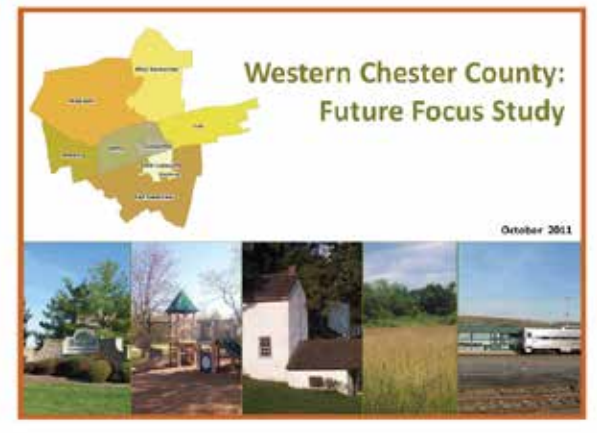


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{BACKGROUND}

- Coatesville – Downingtown Bypass Reconstruction (ongoing)
PennDOT Capital Improvement Project
- Western Chester County: Future Focus Study (2011)
Regional Economic Development Study
- Chester Valley Trail Extension Study (ongoing)

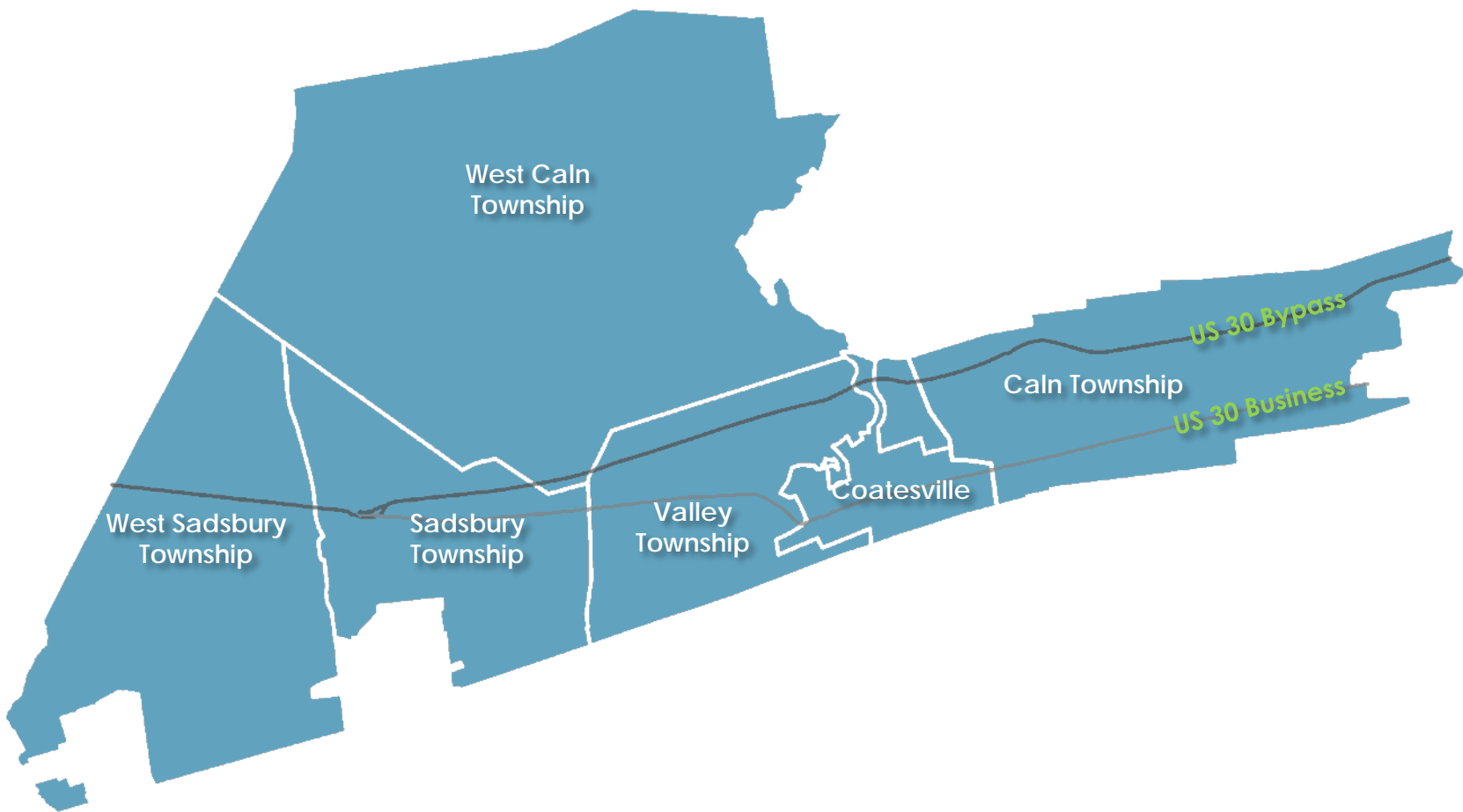




{ STUDY AREA }

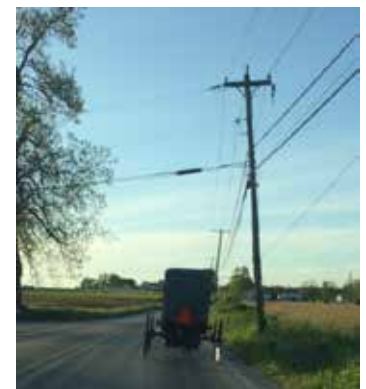
Western Chester County, PA

Six Sponsor Municipalities



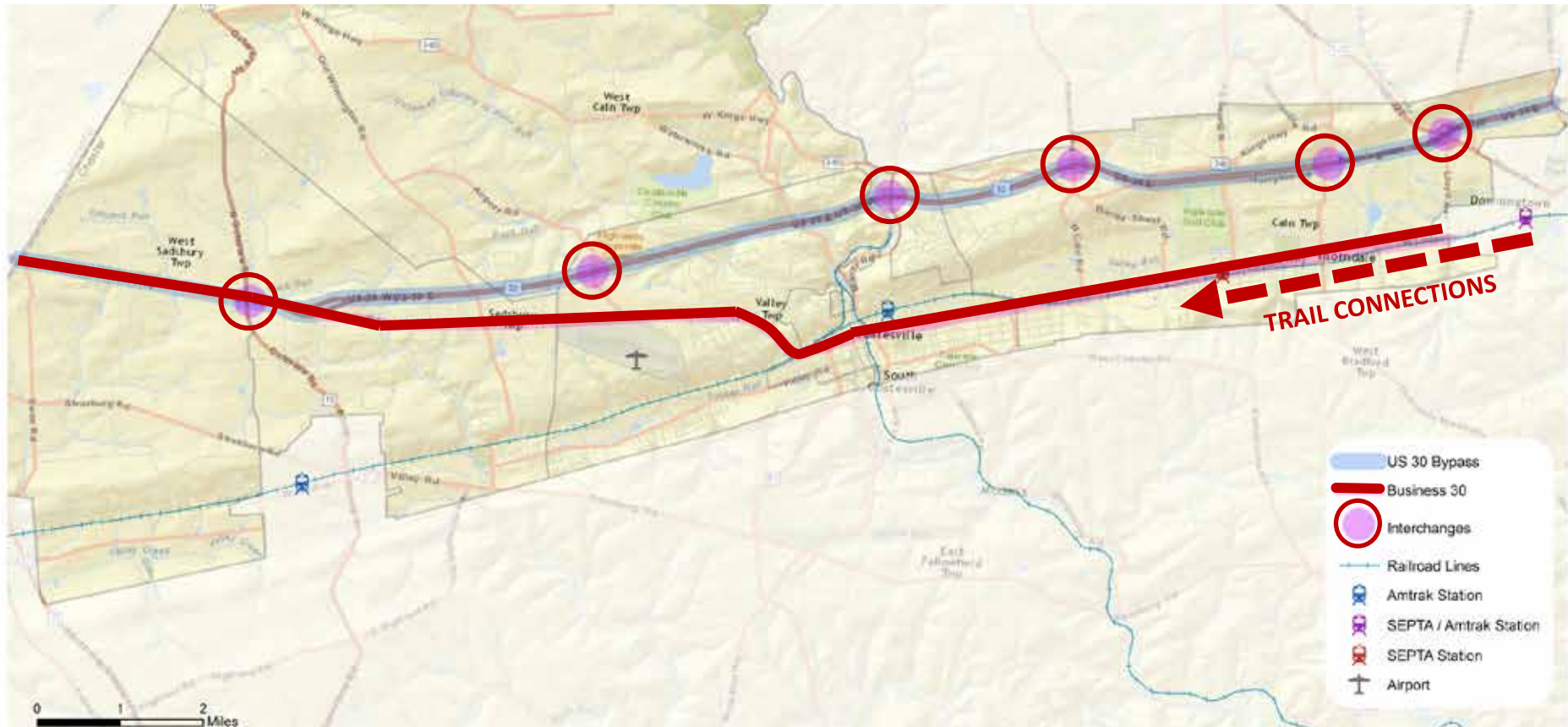


{ MULTIMODAL }





{ FOCUS AREAS }



Focus Areas

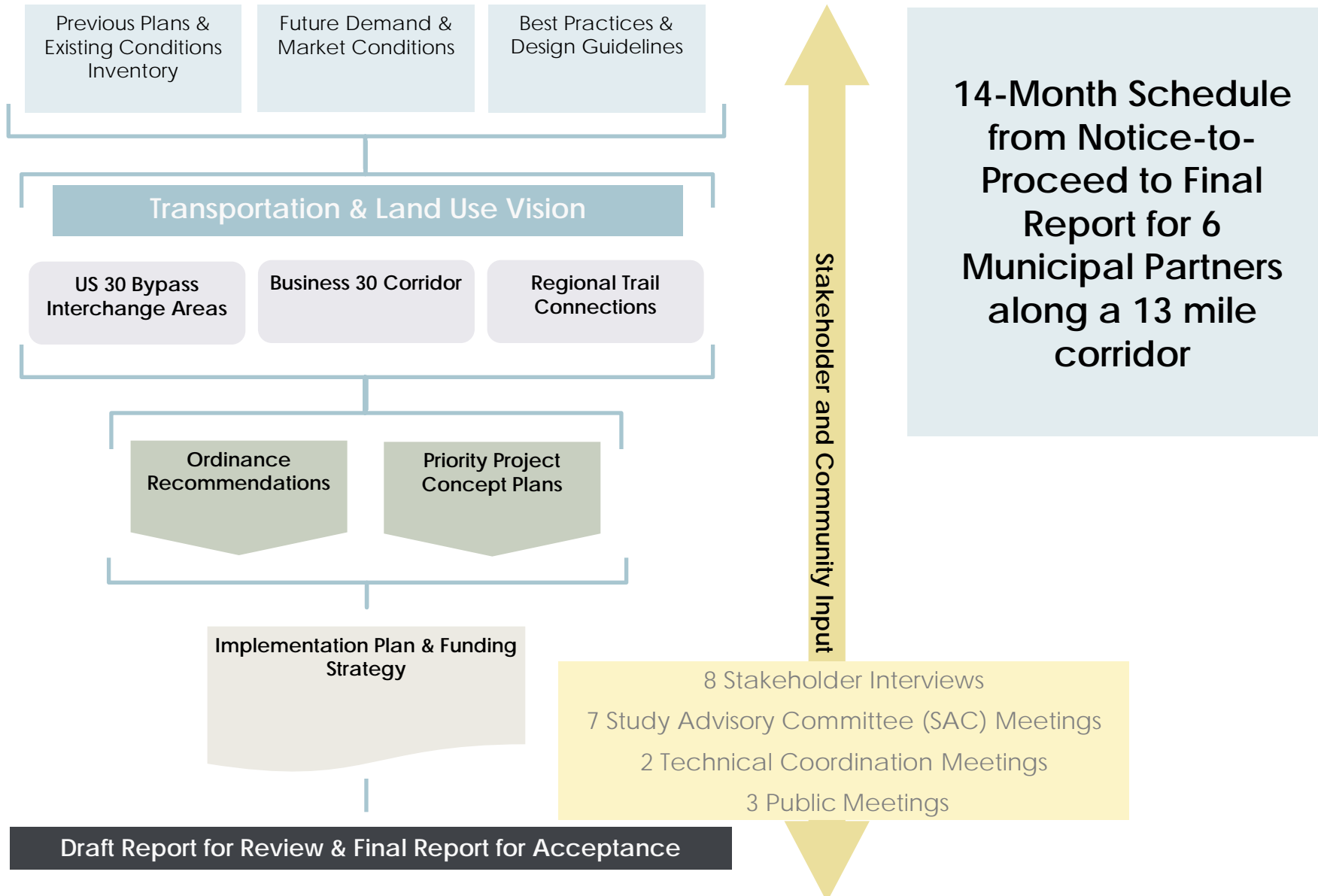
Business 30 Corridor

US 30 Bypass Interchange Areas

Chester Valley Trail Extension & Regional Trails



{ APPROACH }

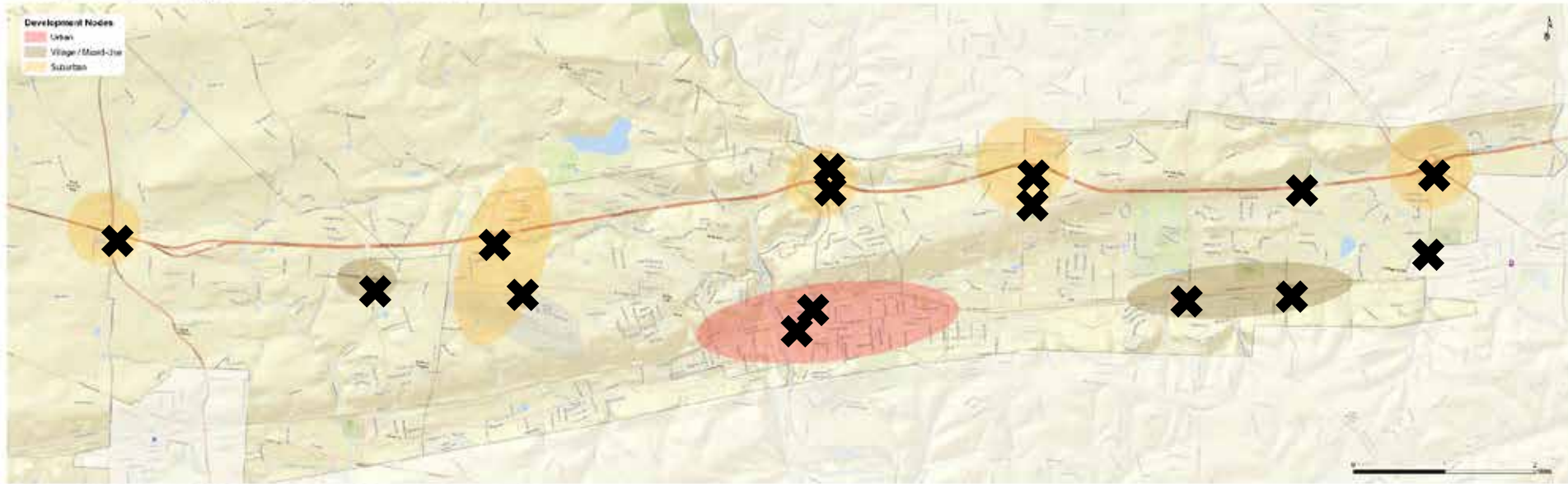




PLANNING CONTEXT



Route 30 Multimodal Transportation Study - Draft Land Use Context





{ KEY ISSUE }

West

Presentation and Greenfield Development



VS.

East

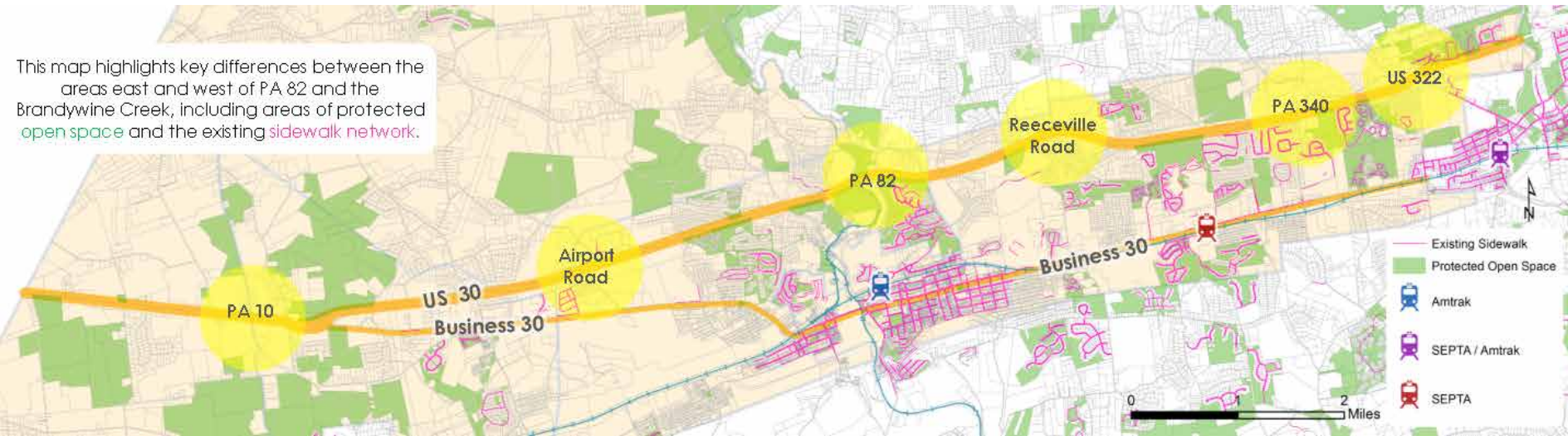
Infill and Redevelopment



In the West...Development is easier, but will bring more congestion, consume more open space and farmland, and require more public infrastructure

In the East...Opportunities for "game changing" development are limited and existing development needs to be supported or revitalized in some areas

This map highlights key differences between the areas east and west of PA 82 and the Brandywine Creek, including areas of protected open space and the existing sidewalk network.





{ KEY ISSUE }

US 30 Bypass

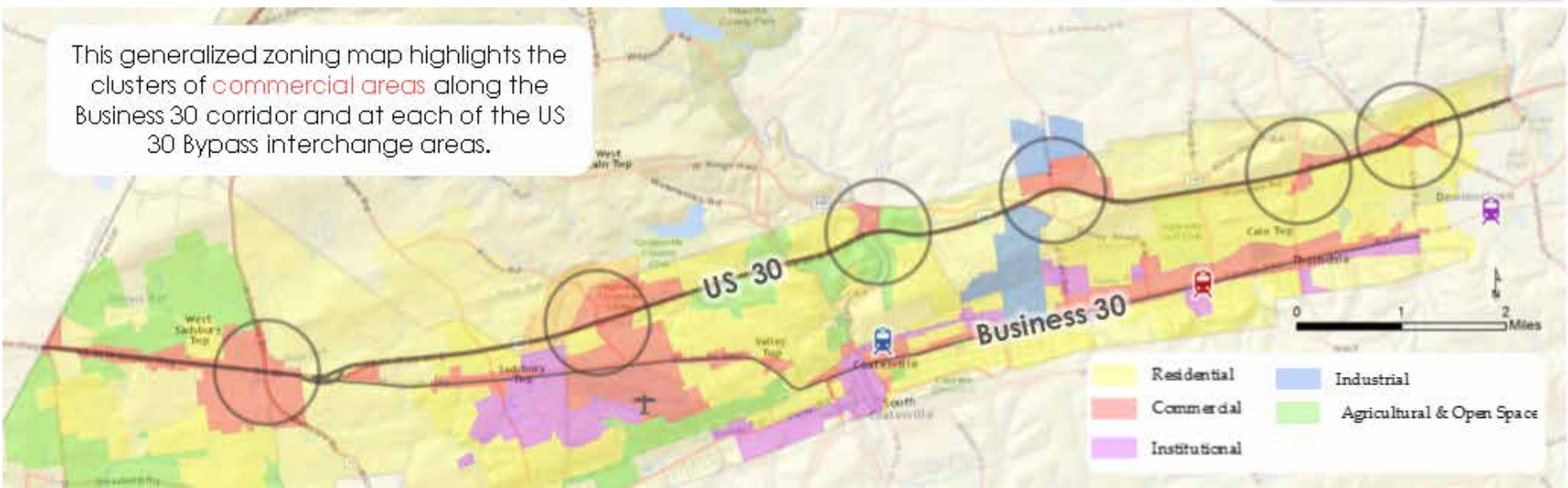


vs.

Business Route 30



This generalized zoning map highlights the clusters of **commercial areas** along the Business 30 corridor and at each of the US 30 Bypass interchange areas.





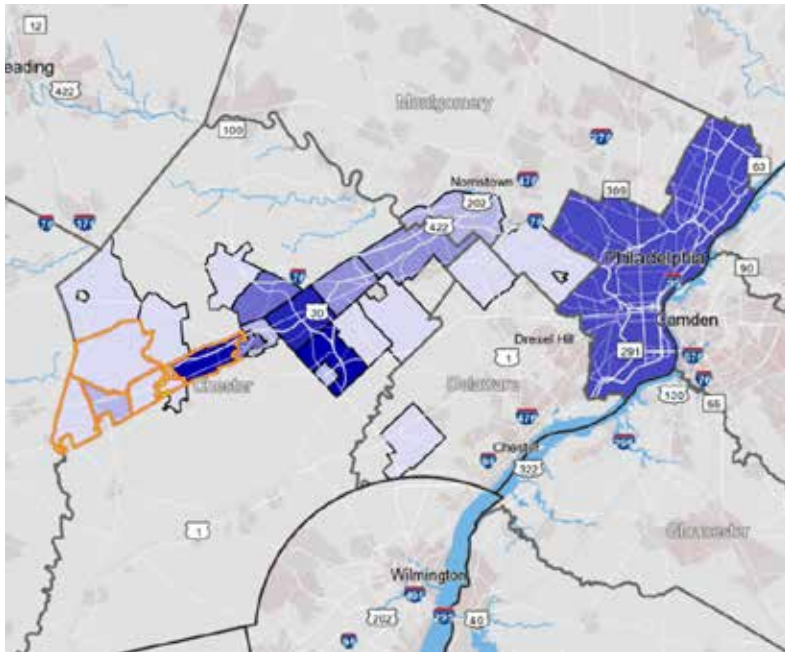
{ KEY ISSUE }

Jobs

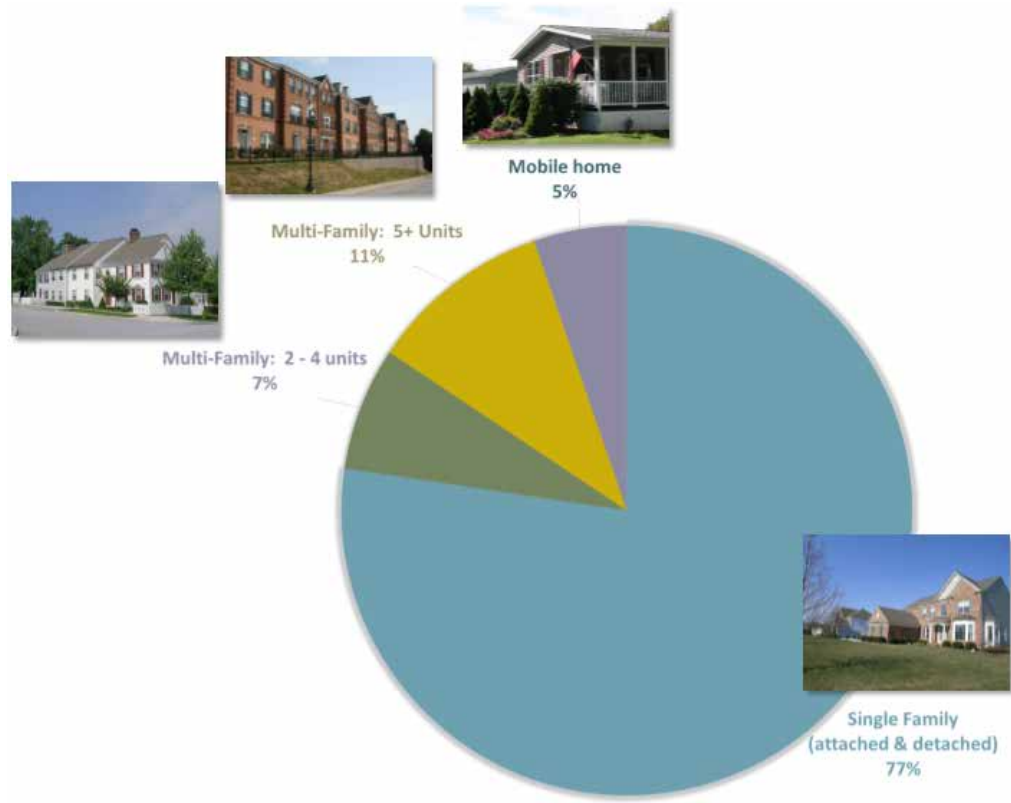
VS.

Housing

Where do residents work?



Source: Census LEHD, 2013



Source: ACS 5-Year Estimates, 2013

Greater diversity and choices in both jobs and housing will enable people to live and work in the study area.



{CORRIDOR VISION}

Cohesive

Complementary

Connected

Expand Options and Opportunities



Jobs



Housing



Transportation



Recreation

Promote and Preserve



Agriculture and Open Space



Brandywine Creek



Historic Districts and Structures



Local Businesses

Leverage Key Assets



Airport



Train Stations



{ CORRIDOR VISION }

US 30 Bypass
Interchange Areas

Suburban Retail

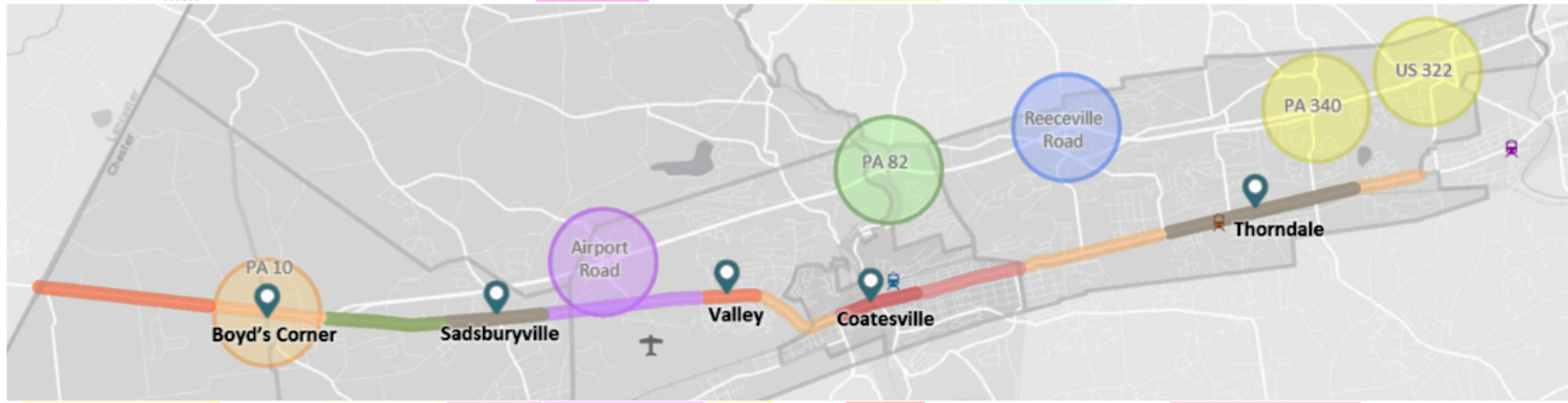
Industrial & Business

Innovation & Recreation

Institutional – Medical & Educational

Established Residential Neighborhood

Suburban Residential



Business 30 Corridor

Neighborhood Services

Suburban Retail Center

Open Space & Agriculture

Historic Village

Industrial & Business

Neighborhood Commercial

Suburban Mixed Use

Urban Core

Urban Neighborhood

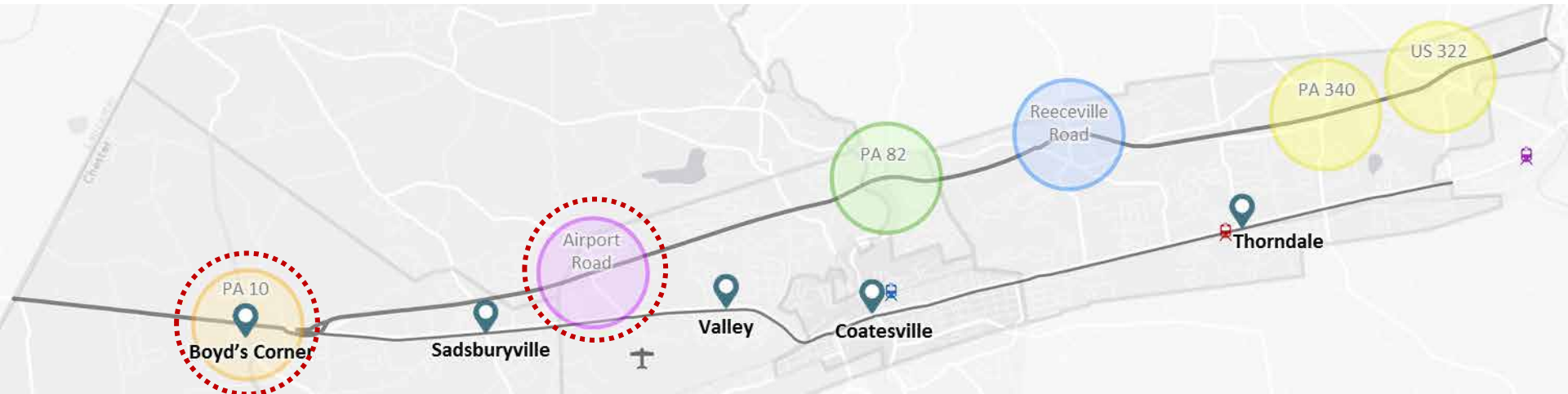
Suburban Commercial

Transit Village

Suburban Mixed Use



US 30 INTERCHANGES



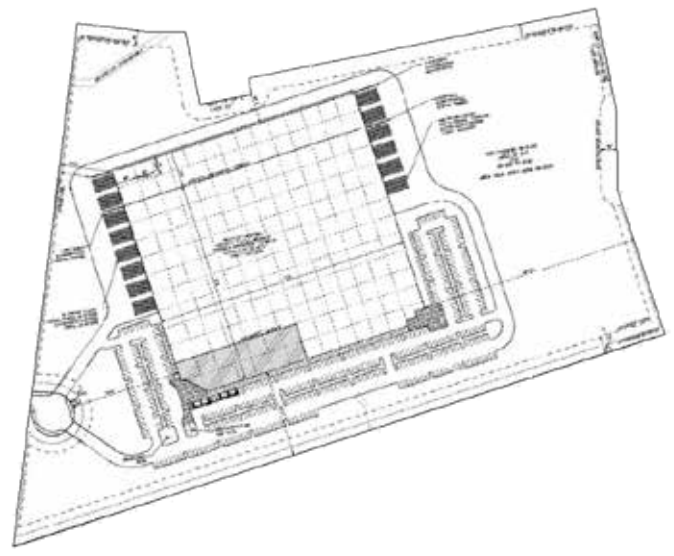
For each interchange area

- q Existing Land Use and Zoning
- q Development Constraints, including Interchange Management Areas
- q Developments in the Pipeline
- q Development Recommendations



DEVELOPMENTS IN THE PIPELINE

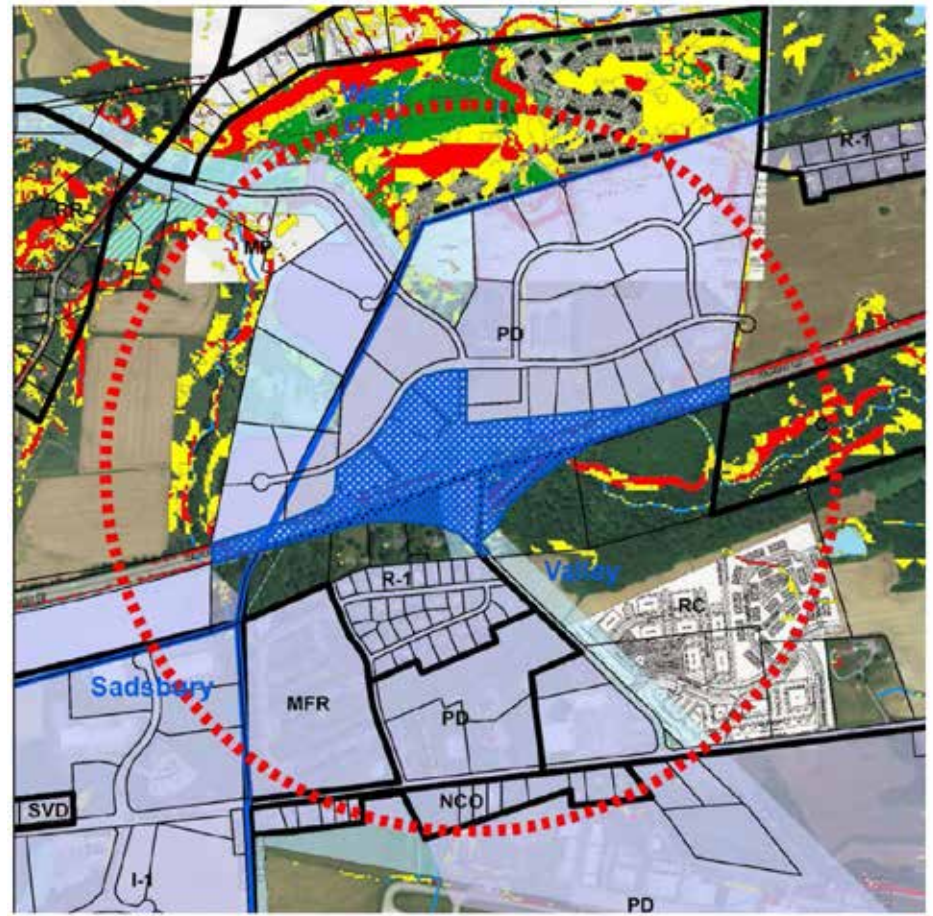
There are over 1,200 residential units and 1.19 million square feet of non-residential development proposed generally within one-half mile of the six US 30 Bypass interchange areas with the limits of this study.





DEVELOPMENT CONSTRAINTS

Airport Road Interchange



-  Interchange Management Area
-  Water only
-  Water and Sewer
-  Steep Slopes
-  Ag preserve/municipal ownership/parks
-  Wetlands

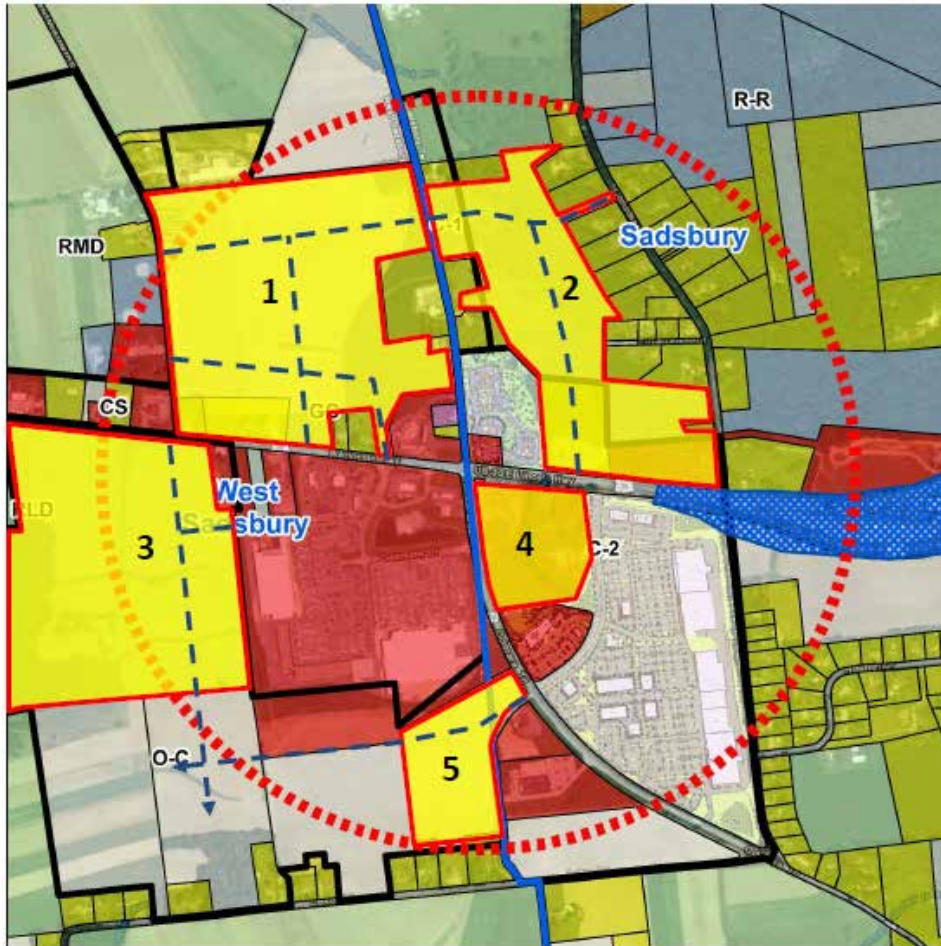


PA 10





PA 10 Land Use Recommendations



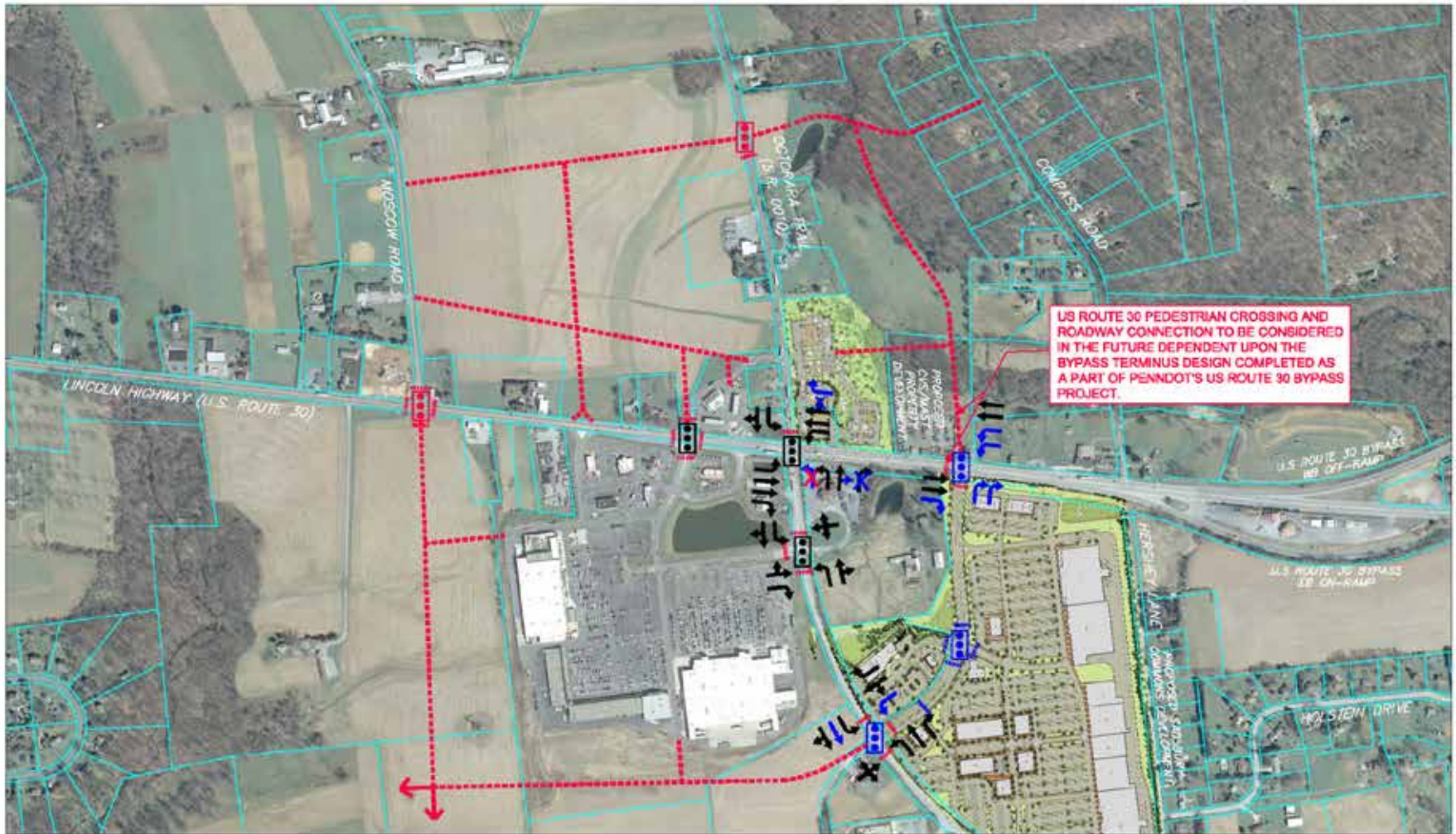
Parcel	Potential Use	Zoning Issues/Considerations
1	Mixed Use Center (Office, Hotel, Apartments, Restaurants, Retail)	Apartments not permitted in GC Promote new roadway connections with flexibility in zoning ordinance
2	Professionally managed multi-family residential	None
3	Office / Commercial	Promote new roadway connections with flexibility in zoning ordinance
4	Retail	None
5	Senior Care Residential Facility	Senior care residential facilities not a permitted use in O-C



PA 10

Transportation Recommendations

Priority Project: Roadway Plan



LEGEND
 EXISTING CONDITIONS
 EXISTING PROPERTY LINE
 PLANNED DEVELOPMENT IMPROVEMENTS
 FUTURE ROADWAY CONNECTIONS

Lane/movement that can be eliminated with provision of connector roads

NOTES: (1) Bypass terminus to be reconstructed as part of PennDOT's U.S. Route 30 Bypass Project.
 (2) Parking spaces within Sadsbury Commons to be made available for park and ride (location to be determined).

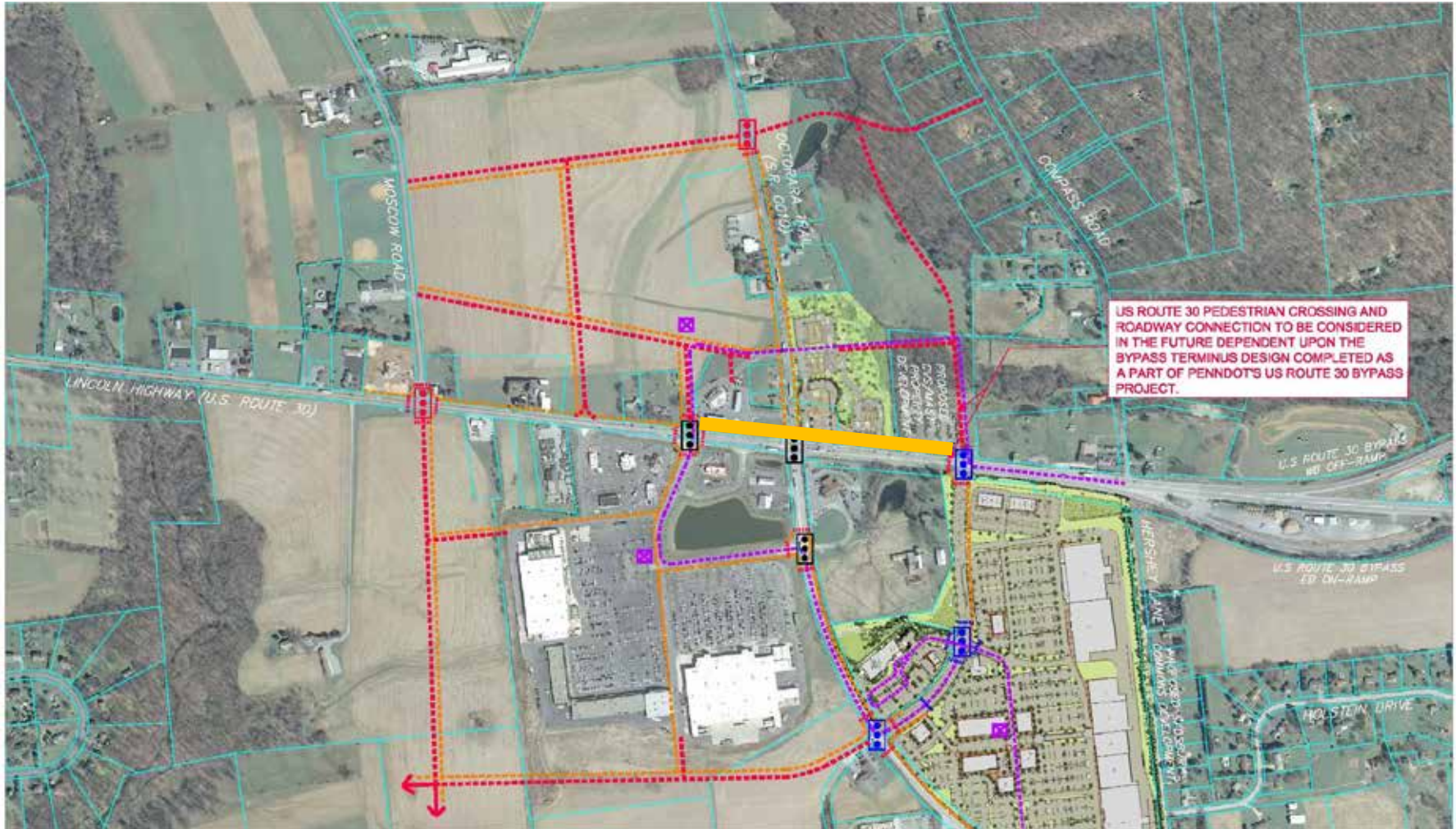




PA 10

Transportation Recommendations

Priority Project: Pedestrian and Transit Plan



LEGEND
 EXISTING CONDITIONS
 EXISTING PROPERTY LINE
 PLANNED DEVELOPMENT IMPROVEMENTS

FUTURE ROADWAY CONNECTIONS
FUTURE PEDESTRIAN FACILITIES
FUTURE TRANSIT ROUTE & FACILITIES
 Bus shelter

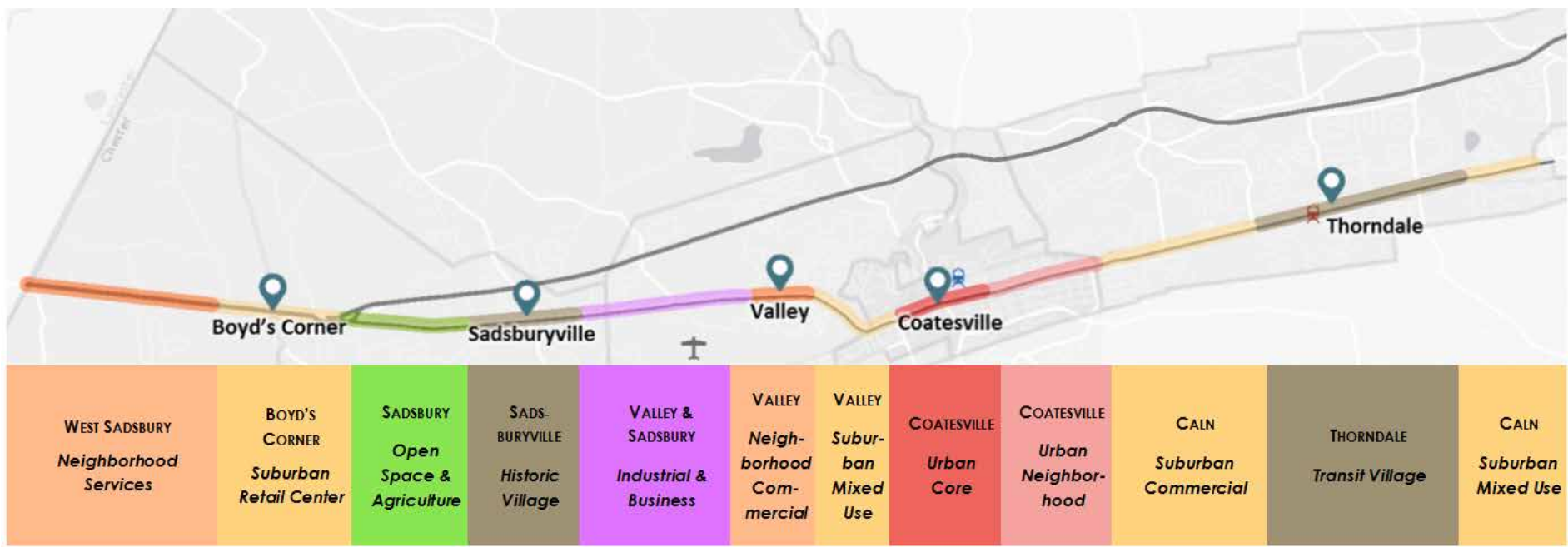
NOTES: (1) Bypass terminus to be reconstructed as part of PennDOT's U.S. Route 30 Bypass Project.
 (2) Parking spaces within Sadsbury Commons to be made available for park and ride (location to be determined).

SCALE
 0 225 450 FEET

MCMAHON
 TRANSPORTATION ENGINEERS & ARCHITECTS



BUSINESS 30 CORRIDOR



For each segment

- q Existing Conditions Summary
- q Land Use and Zoning Recommendations
- q Roadway Cross Sections
- q Key Strategies to Implement Vision



{ PRIORITY PROJECTS }



**US 30 & Swan Road /
County Line Road**
West Sadsbury

US 30 & PA 10
Sadsbury & West Sadsbury

Airport Road Corridor
Valley & West Cain

Business 30 & Airport Road
Valley

PA 82 & Wagontown Road
Coatesville & Valley

**Business 30 between
1st Avenue & Strode Avenue**
Coatesville

**Business 30 between
Barley Sheaf Road & Veterans Drive**
Cain



CALN

Suburban Commercial

CALN Suburban Commercial



Municipalities

Cain Township

Limits

13th Avenue to Barley Sheaf Road

Length

1.5 miles

Existing Zoning

I: Institutional
C-1: Highway Commercial
Lincoln Highway Overlay

Roadway Cross Section

One travel lane in each direction with a center left-turn lane and varying width shoulders. Sidewalks are provided in some areas.

AADT

13,100 - 14,000

Speed Limit

35 - 40 MPH

Legend

Generalized Zoning

Residential	Agricultural & Open Space
Commercial	Protected Open Space
Institutional	Wetlands
Industrial	

Existing Conditions

- Transitional area between the City of Coatesville and Thorndale Village
- Mainly commercial and institutional land uses with some vacant and under-utilized parcels
- Amtrak/SEPTA rail line parallel and south of Lincoln Highway (Business 30) limits roadway connectivity, as well as development opportunities
- Roadway underpass of the rail line at Cain Road is constrained due to narrow width and the short distance between Lincoln Highway and the Amtrak/SEPTA rail line
- Wide, uncontrolled and closely spaced commercial driveways
- Bus service provided by ChescoBus—Krapf's A and Coatesville Link and several bus stops have shelters
- Limited sidewalk connections provided on the north and south sides of Lincoln Highway



Land Use and Zoning

The existing land uses include auto-oriented commercial and retail establishments and institutional uses with Coatesville Senior High School and access to the Coatesville Veterans Affairs Medical Center. There are development/redevelopment opportunities for vacant or under-utilized, but the Amtrak/SEPTA rail line on the south side creates narrow depth parcels and limits access and circulation. The existing Lincoln Highway Overlay District provides flexibility related to setback, parking, and other requirements, particularly for constrained parcels. Access management strategies, include cross access and shared parking, can also help to reduce congestion, improve operations, and support redevelopment.



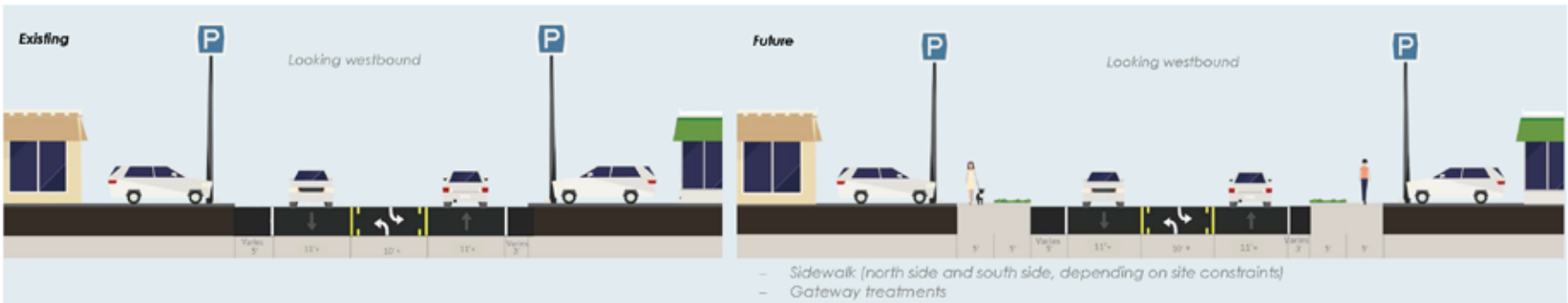


CALN

Suburban Commercial

Roadway Cross Section

The existing cross section includes one travel lane in each direction with a center left-turn lane and varying shoulders along each side. Currently, many parking areas are located immediately adjacent to the existing roadway. In the future, it is recommended to provide grass buffers and sidewalks along both sides, dependent upon site constraints. Additionally, it is recommended to utilize the center lane, where not needed for turning movements, to provide gateway treatments.



Implementing the Corridor Vision

Key Strategies	Recommended Action Items	Partners
Sidewalk connections	<ul style="list-style-type: none"> - Coordinate with property owners/developers to implement sidewalks and streetscape enhancements as part of land development projects (in accordance with existing Township ordinances) - Develop conceptual plans and pursue funding sources for design and construction of missing sidewalk connections that are not likely to be implemented as part of a land development project - See the Priority Project for Business 30 between Veterans Drive and Barley Sheaf Road 	<ul style="list-style-type: none"> - Caln Township
Gateways and improved signage	<ul style="list-style-type: none"> - See the Priority Project for Business 30 between Veterans Drive and Barley Sheaf Road 	<ul style="list-style-type: none"> - Caln Township - PennDOT
Beautification with attractive streetscapes and building facades	<ul style="list-style-type: none"> - Continue to promote the LERTA District as an incentive for property owners to make improvements and implement the Lincoln Highway Streetscapes 	<ul style="list-style-type: none"> - Caln Township - Western Chester County Chamber of Commerce - Chester County Economic Development Council
Access management	<ul style="list-style-type: none"> - Review and evaluate potential updates to access management requirements in Caln Township's SALDO based on PennDOT's <i>Access Management Handbook</i>, including requiring new developments to connect to existing developments or enable future connections to be made 	<ul style="list-style-type: none"> - Caln Township
Plan for a well-connected roadway network	<ul style="list-style-type: none"> - Adopt an official map with new roadway connections 	<ul style="list-style-type: none"> - Caln Township
Support assembly of smaller lots and development/redevelopment of vacant or under-utilized lots	<ul style="list-style-type: none"> - Promote existing LERTA District and Lincoln Highway Overlay District zoning ordinance requirements, including the provision for waiver of some zoning requirements by the Board of Commissioners - Consider form-based zoning 	<ul style="list-style-type: none"> - Caln Township



CALN

Suburban Commercial

PRIORITY PROJECT

Lincoln Highway (Business 30) between Veterans Drive and Barley Sheaf Road

Municipalities

Caln Township

Location

Lincoln Highway (Business 30) between Veterans Drive and Barley Sheaf Road

Summary Description

Completion of sidewalk connections along with streetscape, traffic calming, access management, and bus stop enhancements to improve safety and operations

Existing Conditions

- Vacant and underutilized parcels
- Lack of identity and consistent streetscape treatments
- High traffic volumes and travel speeds
- Numerous wide, uncontrolled, and closely spaced commercial driveways
- Discontinuous and disconnected sidewalks
- Bus stops with limited connecting pedestrian facilities



PRIORITY PROJECT

Key Elements of the Conceptual Plan

- Continuous sidewalk on the north side of Business 30
- Continuous sidewalk on the south side of Business 30 between Veterans Drive and Caln Road
- Enhanced bus stops with amenities and pedestrian connections
- Medians with gateway signs for traffic calming
- Defined and/or consolidated driveways for safety and access management

Recommended Action Items	Suggested Timeframe	Partners	Potential Funding Sources
Coordinate with property owners/developers to implement sidewalk and streetscape enhancements and define/consolidate driveways as part of land	Ongoing	- Caln Township	

Priority Phase: Veterans Drive to Caln Road

- Pursue grant funding for design, right-of-way, and construction

Cost Estimate

Preliminary Engineering	\$ 90,800
Final Design	\$ 136,200
Right-of-Way	\$ 96,000
Utilities	-
Construction + Inspection	\$ 1,041,000
TOTAL	\$ 1,364,000

Near Term (1 – 3 years)

- Caln Township
- PennDOT
- Chester County
- TMACC

- Municipal funds (for required match)
- PennDOT – Multimodal Transportation Fund
- CEA – Multimodal Transportation Fund
- Transportation Alternatives Program (TAP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)



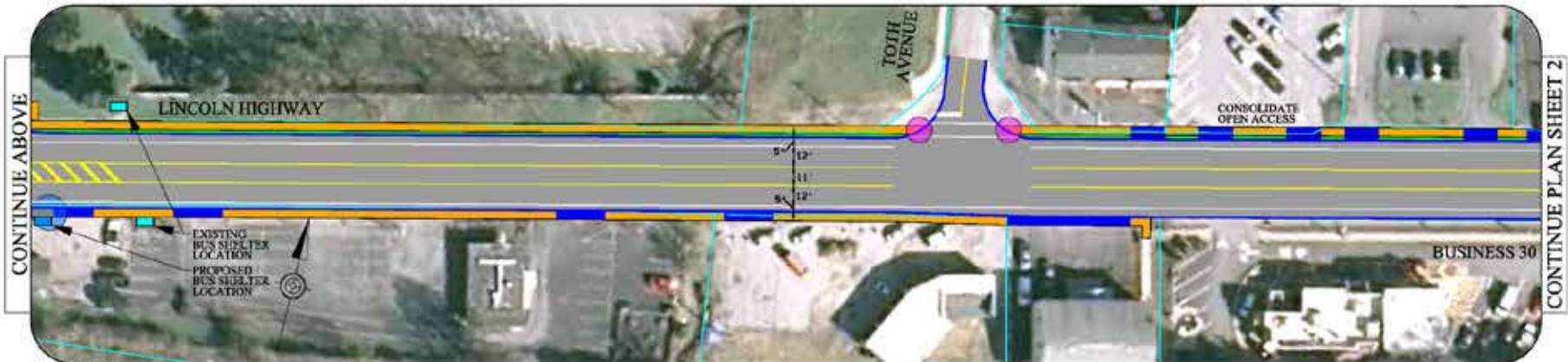
CALN

Suburban Commercial

Priority Project: Lincoln Highway (Business 30) between Veterans Drive and Barley Sheaf Road



CONTINUE BELOW



CONTINUE ABOVE

CONTINUE PLAN SHEET 2

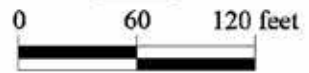
LEGEND

- | | | | |
|---|---|---|---------------------------|
|  | PROPOSED BUFFER AREA |  | EXISTING PROPERTY LINE |
|  | ROADWAY WITH PROPOSED PAVEMENT MARKINGS |  | EDGE OF ROAD |
|  | PROPOSED SIDEWALK |  | PROPOSED CURB |
|  | PROPOSED MEDIAN |  | PROPOSED ADA RAMP UPGRADE |
|  | PROPOSED DRIVEWAY APRON |  | SIGNED BUS STOP |
|  | EXISTING TRAFFIC SIGNAL | | |

CONCEPT PLAN KEY ELEMENTS:

- Continuous sidewalk on north side of Business 30
- Continuous sidewalk on south side of Business 30 between western limit and Caln Road
- Enhanced bus stops with amenities and pedestrian connections
- Medians with gateway signs for traffic calming
- Defined and/or consolidated driveways for safety and access management

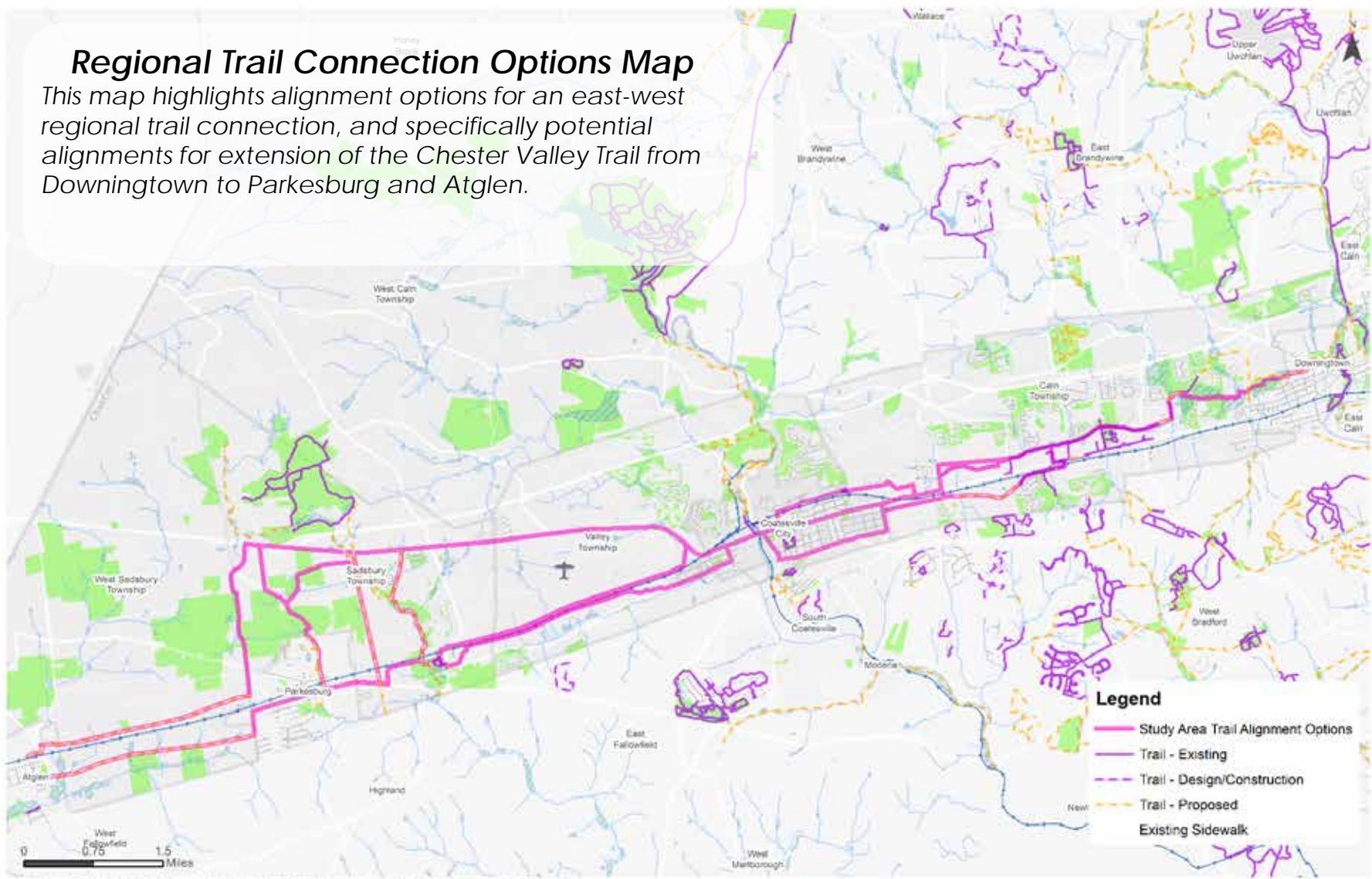
SCALE





Regional Trail Connection Options Map

This map highlights alignment options for an east-west regional trail connection, and specifically potential alignments for extension of the Chester Valley Trail from Downingtown to Parkesburg and Atglen.



Jarrod Lauer, Creative Edge, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS User community, Chester County



ACTION PLAN

RECOMMENDED ACTIONS ITEMS For all study area municipalities

Recommended Action Items	Description and Applicability	Resources, and References
Continue coordination with PennDOT on design of the US 30 Bypass Reconstruction project	Coordinate with PennDOT and neighboring municipalities on the design and construction of US 30 Bypass improvements, including the need for additional capacity on the US 30 Bypass east of Reeceville Road and interchange reconfigurations at US 322, PA 340, Reeceville Road, PA 82, Airport Road, and the bypass terminus near PA 10 to address safety and operational issues <i>Applicable for all study area municipalities</i>	
Initiate and/or support municipal and multi-municipal bicycle/pedestrian/trail planning efforts	Complete regional, municipal, or project specific bicycle, pedestrian, and trail plans to establish a regional trails network. <i>Applicable for all study area municipalities, particularly focused on the feasibility and selection of a preferred alignment for extension of the Chester Valley Trail from Downingtown to Aiglen and additional planning and design for the West Branch Brandywine Trail</i>	
Update Zoning and SALDO Ordinances	Provide or update standards and design requirements particularly related to bicycle, pedestrian, and transit facilities, as well as requirements for traffic impact studies. <i>Applicable for all study area municipalities</i> <ul style="list-style-type: none"> - Business 30 - Intersecting/Connecting roadways between US 30 Bypass and Business 30 <ul style="list-style-type: none"> • PA 10 • Airport Road 	<ul style="list-style-type: none"> - <i>Multi-Modal Circulation Handbook for Chester County, PA</i> (Chester County Planning Commission, 2015) - <i>SEPTA Bus Stop Design Guidelines</i> (DVRPC, 2012) - <i>Access Management: Model Ordinances for Pennsylvania Municipalities Handbook</i> (PennDOT, 2006) - <i>Managing Access along US 30 in Western Chester County</i> (DVRPC, 2010)
Improve traffic signal coordination to reduce congestion	Improve traffic signal coordination through regular maintenance, re-timing, updating traffic signal specifications, and upgrading traffic signal equipment and communication <i>Applicable for all study area municipalities, particularly across municipal borders and along the Business 30 Corridor</i>	<ul style="list-style-type: none"> - PennDOT's Green Light Go Funding Grant Program - PennDOT's Automated Red Light Enforcement (ARLE) Grant Funding Program
Enhance bus stops	Coordinate with TMACC, Krapf, and PennDOT regarding the provision of bus stop enhancements, including pedestrian facility connections and amenities, such as shelters. <i>Applicable for all study area municipalities, particularly along the Business 30 Corridor</i>	<ul style="list-style-type: none"> - <i>Multi-Modal Circulation Handbook for Chester County, PA</i> (Chester County Planning Commission, 2015) - <i>SEPTA Bus Stop Design Guidelines</i> (DVRPC, 2012)
Consider and evaluate adoption of a municipal official map	Tool to identify and express interest in potential acquisition of properties for planned public facilities, including new roadway and trail connections. <i>Applicable in all study area municipalities</i>	<ul style="list-style-type: none"> - <i>The Official Map: A Handbook for Preserving and Providing Public Lands and Facilities</i> (PennDOT, DCNR, DCED, PA Land Trust Association, 2011)
Consider and evaluate options for incorporation of Transferable Development Rights (TDR) into zoning ordinance	Zoning tool and market-based approach to implement land preservation plans and direct development to appropriate areas. <i>Particularly applicable for Sadsbury and West Sadsbury due to the focus on open space/agricultural land preservation and development demands.</i>	<ul style="list-style-type: none"> - <i>Warwick Township, Lancaster County TDR Zoning Ordinance</i>



ACTION PLAN

RECOMMENDED ACTIONS ITEMS Valley Township

US 30 Interchanges	Page
Airport Road	
– Parcel 3: Consider extending Multiple Family Residential Overlay Option to include this parcel or rezone to R-2	33
PA 82	
– Parcel 1: Consider adding to Multiple Family Residential Overlay Option or rezone to R-2	41
– Parcel 6: Coordinate with Coatesville to enact a Memorandum of Agreement in order to preserve the steep slopes and Brandywine Creek for open space conservation with a creek-side public access trail, but allow energy facilities on the relatively flat area of the site, with adequate screening from adjacent development.	41

Business 30 Corridor	Page
– Implement recommendations in <i>Managing Access along US 30 in Western Chester County</i> (DVRPC, 2010)	56, 60, 62, 64, 66, 68, 70
– Coordinate with property owners/developers to implement sidewalks and streetscape enhancements as part of land development projects (in accordance with existing Township ordinances)	68, 70, 82, 83, 89, 91
– Identify key missing gaps in the sidewalk network and develop conceptual plans and pursue funding for design and construction	68, 70
– Inventory and evaluate current shoulder widths to identify constraints for implementing bike lanes	62, 68, 70
– Coordinate with PennDOT to reduce the speed limit, which may require the completion of a Speed Restrictions Engineering and Traffic Study	56, 62, 66
– Coordinate with PennDOT to implement bicycle lanes as part of a future resurfacing project	62, 66, 68, 70, 74
– Implement recommendations in <i>Western Chester County: Future Focus Study</i> (2011), including focusing on planning efforts related to the future municipal complex near Airport Road and the potential re-use and redevelopment of the existing municipal facilities near Front Street	60, 64, 66, 68, 70, 73
– Identify and market key vacant or under-utilized parcels for desired uses	70
– Encourage and support open space and conservation easements	70

Regional Trails	Page
– Complete a municipal and/or multi-municipal bicycle/pedestrian/trail plan to identify potential local connections to the planned regional trail network, including the Chester Valley Trail Extension and West Branch Brandywine Creek Trail <i>Near Term: Complete Mill Trail Plan in coordination with Coatesville, South Coatesville, and Modena</i>	97

Priority Project	Page
Airport Road Corridor, including Lincoln Highway (Business 30) and Airport Road Interchange	
– Adopt an Official Map showing future roadway connections (and Airport Road widening)	35
– Coordinate with the Coatesville Area School District and other property owners on the potential roadway connection between Valley Suburban and Country Club Road. Possibly complete a Roadway Connection Feasibility Study to identify a potential roadway alignment and cost estimate.	35
– Complete a Park and Trail Master Plan for the open space to be dedicated to the Township as part of the Valley Suburban Development	35
– Monitor future demand and continue to coordinate on potential bus service to Highlands Corporate Center	35
– Continue coordination on design of the US 30 Bypass Reconstruction project, including completion of the Airport Road Interchange and identified improvements to the Airport Road Corridor	35
– Coordinate with property owners and developers regarding future improvements to Airport Road, particularly the reservation of right-of-way for future widening	35

See also action items applicable for all study area municipalities on page 96



THANK YOU



Route 30 Multimodal Transportation Study

<http://www.chescowest.com/route-30>

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